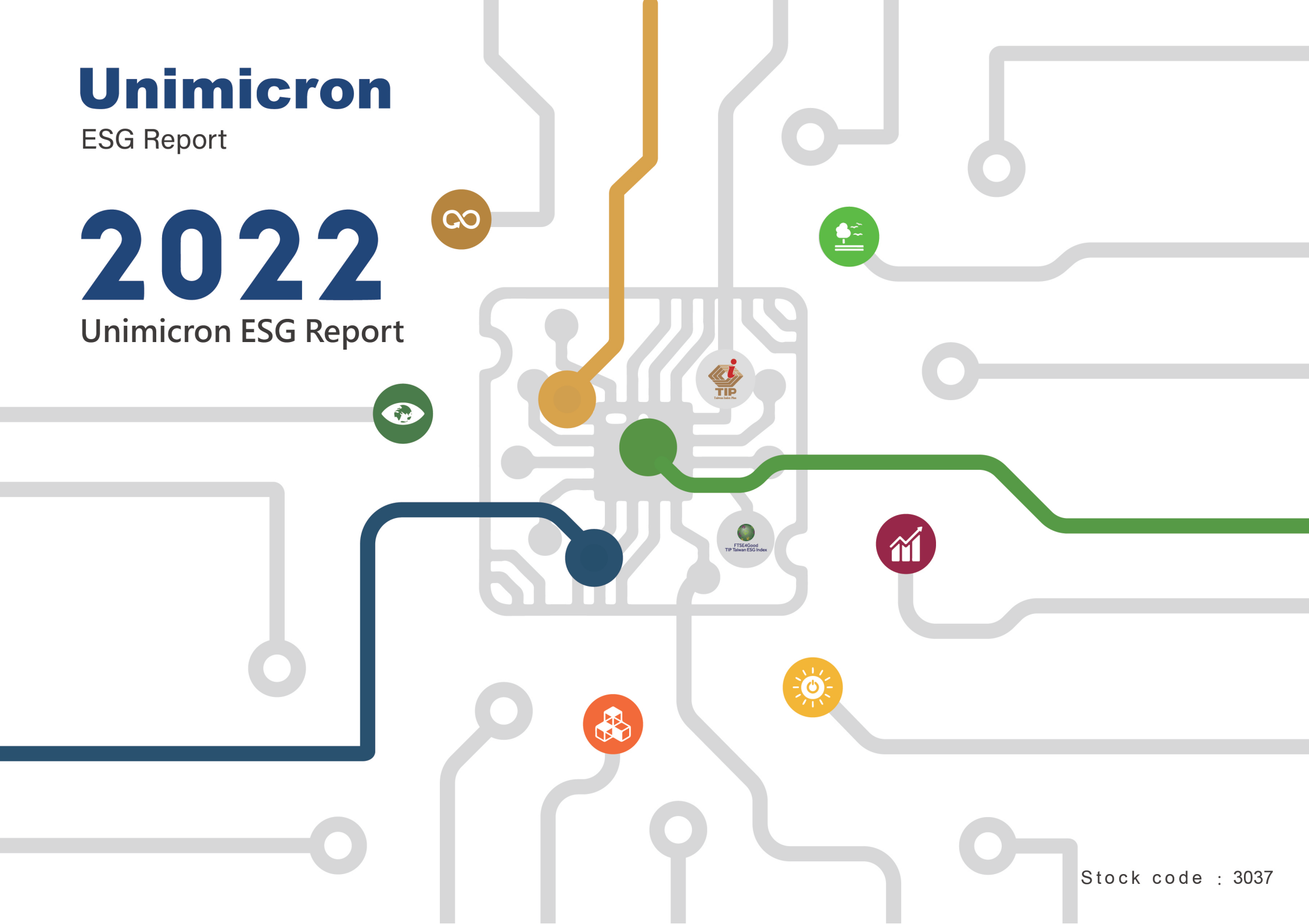
Unimicron

ESG Report

2022

Unimicron ESG Report



Stock code : 3037

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https://www.unimicron.com/en/index.html

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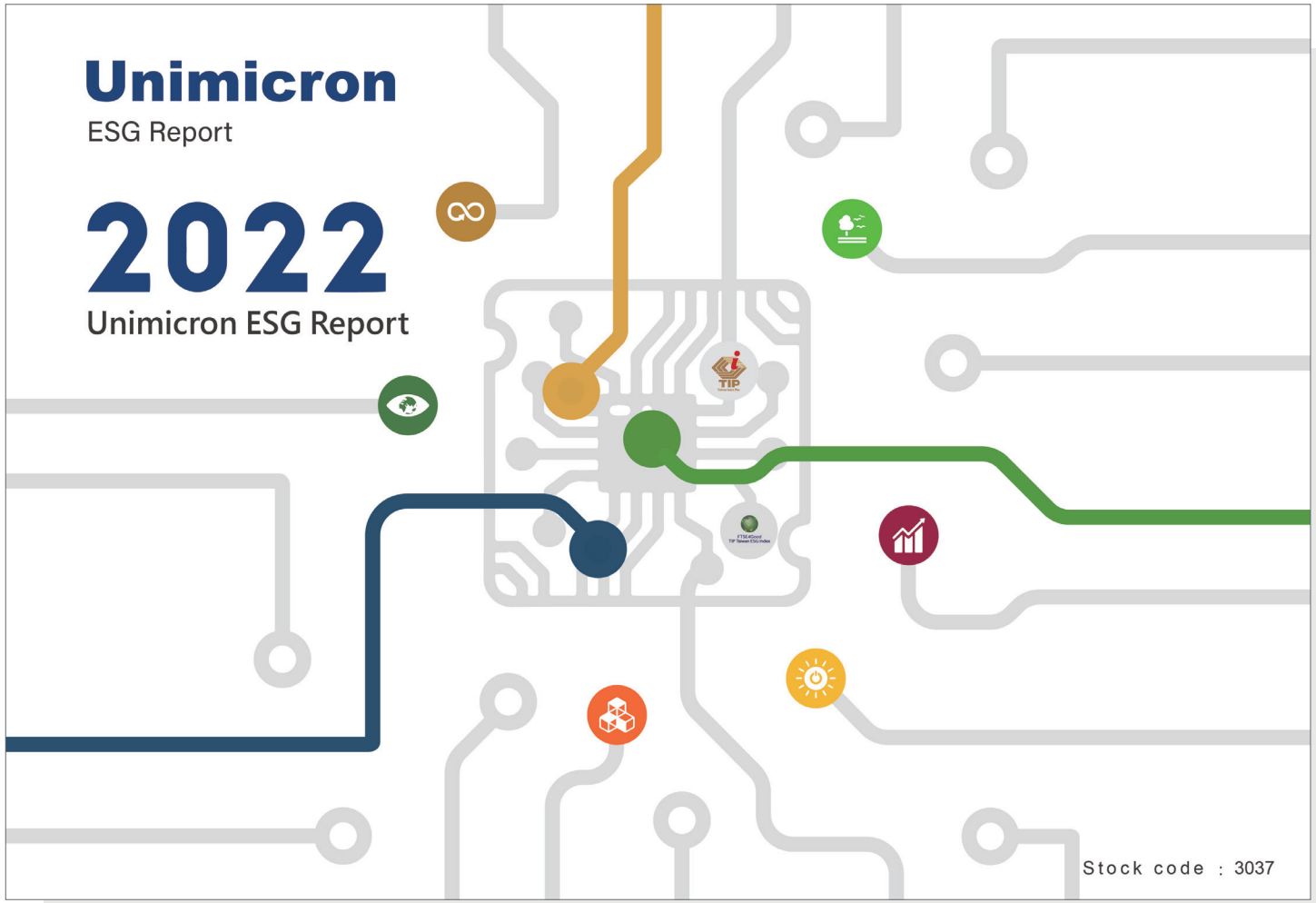
Overview



Design Concept

The green, orange, and blue lines represent the ESG, and the middle symbolizes the Carrier, with lines linking the SDGs, representing that we deepen the concept of sustainable development into our operations.

About This Report

Unimicron Technology Corp. (Unimicron) has issued a Corporate Social Responsibility Report (renamed as ESG Report in 2021). In a spirit of transparency and openness, we publish our ESG Report annually to report our commitments, goals, practices and performance of environmental, social and governance to all stakeholders. In 2023, Unimicron prepared the ESG report with the same rigorous attitude, the previous ESG report was published in June 2022, and the next report is expected to be released in June 2024.

Compilation Principles

This report is completed based on the GRI Universal Standards 2021, AA1000 AS V3 TYPE II high assurance standards and refer to the United Nations Sustainable Development Goals (SDGs), the Task Force on Climate-related Financial Disclosures (TCFD) and the Sustainability Accounting Standards Board (SASB), to report sustainability performance and results to stakeholders.

Boundary and Data

The reporting period is between January 1, 2022, and December 31, 2022. The boundary of this Report for the disclosure[Note] includes Unimicron's Taiwan facilities (Shanying Plant, Shanying II Plant, Luzhu II Plant, Luzhu III Plant, Hejiang Plant, Hejiang II Plant, Chungyuan Plant, Yangmei Plant, Hsinfeng Plant, and Chung Hsing Plant), subsidiaries QunHong Technology Inc., Unimicron (Shenzhen), Unimicron (Kunshan), Unimicron-FPC (Kunshan), Unimicron (Suzhou), and Unimicron (Huangshi) and there is no significant change from the previous year. The Special Report covers information about our subsidiary Unicuisine Global Foods Corp. Unless otherwise stated, all monetary units stated in this Report are in New Taiwanese Dollars (NTD). Changes in data boundary or measurement calculation method from the previous version will be noted in the paragraph or below the figure and table.

Management Process

In accordance with the "Procedures for the Preparation and Validation of Sustainability Report", the content of this report is compiled by the relevant units, confirmed by the head of the unit, and submitted to the ESG Team for compilation, discussion with external consultants and refinement of the content. After inspection by the third party and finally approved by the ESG Committee for the annual report to be published.

External Verification

Information Disclosure	• Financial Information: Audited and Certified by PwC Taiwan • ESG Report: Acquired an Assurance Statement from SGS
Economic	• ISO 27001 Information Security Management System • ISO 9001 Quality Management System • QC 080000 Hazardous Substance Process Management System • IATF 16949 Automotive Quality Management System
Environment	• ISO 14001 Environmental Management System • ISO 14064-1 Greenhouse Gases Inventory • ISO 50001 Energy Management System • Alliance for Water Stewardship (AWS) • Responsible Business Alliance Code of Conduct
Society	• ISO 45001 & TOSHMS Occupational Health and Safety Management System • Responsible Business Alliance Code of Conduct

Financial Information

Annual Report

ESG Report

Certificates

(For more information, please refer to the Official Website)

Contact

If you have any suggestions or questions, please feel free to contact the ESG Committee.

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Address : No.179, Shanying Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)
Tel : +886-3-3500386#11767
Email : ESG@unimicron.com

Note: If the revenue of a subsidiary in the consolidated financial statements exceeds 2% of the consolidated revenue and the disclosure boundaries cover at least 95% of the consolidated revenue, it is included in the ESG report. For consolidated financial information of Unimicron, please refer to the related information in the annual report.

Letter from the Chairperson

Looking back to 2022, the environment is full of changes and challenges that will test the resilience of enterprises' operations and capabilities to manage sustainability. In the face of challenges such as interest rate hikes, inventory adjustments, the Russia-Ukraine war, inflation and geopolitics, we continue to work with our customers in the area of high-end carrier technology and production expansion, and continue to refine our product portfolio and improve yields. With the concerted efforts of all employees, we will achieve remarkable operating results in 2022, with the consolidated revenue of NT$140.489 billion, an increase of 34% over 2021, and the consolidated net income of NT$31.226 billion, an increase of 131% over 2021. The total market capitalization reached NT$260.9 billion, a 32% increase over 2021, setting a new record for the Company. Over the years, Unimicron has been operating in a stable and solid manner, emphasizing communication with stakeholders and contributing to the environment and society, and has established a Corporate Social Responsibility Committee (CSR Committee) since 2011 to take root in sustainable actions. In recent years, ESG has become an important topic in the field of social responsibility and in the capital market. Therefore, Compay renamed the CSR Committee to ESG Committee in 2021, continuing to adopt a sustainable and innovative mindset to focus on social responsibility, corporate governance, and possible risks and opportunities in response to the love of the Earth, employees, and shareholders.

Due to the impact of long-term carbon emissions on the Earth's extreme climate and the unstable domestic supply of water and electricity in Taiwan, it is very important for companies to show their green power by reducing carbon, mitigating climate change, and integrating sustainability issues in their business strategies, finding a balance between humans and nature. In order to pursue the goals of stable power supply, diversified power sources, and energy saving and carbon reduction, the Board of Directors of Unimicron approved the establishment of an innovative energy project of "hydrogen fuel cell" in 2022, together with the plans of "improving energy efficiency" and "installing energy storage and solar photovoltaic" to reduce the greenhouse gas emissions caused by operations. In addition, in line with the government's policy, Unimicron is doing its best to create a green environment and has been awarded the "Taoyuan Green Procurement Outstanding Enterprise". In the future, the Company will continue to work together with suppliers to build a strong competitive supply chain and encourage its employees to participate in energy saving, mitigation, waste reduction, tree planting, and beach cleaning activities, in order to move towards the goal of "carbon neutrality by 2050."

Employees are the backbone of enterprises. For our employees, we provide excellent compensation and benefits (e.g. 2022 salary increase and bonus), the principle of equal employment, a safe workplace environment, care for employees' physical and mental health, and career development opportunities to build a harmonious employee relationship so that employees can grow together with the company. In recent years, the declining labor force due to the low birth rate and aging has highlighted the importance of maternal health protection. In 2022, Unimicron received the "National Healthy Workplace - Maternal Health Friendly Award" for implementing comprehensive maternity protection measures. In addition, Unimicron promotes social welfare, emergency relief activities and various public welfare activities with the concept of "what is taken from the community and what is used in the community". At the same time, the paid volunteer leave mechanism encourages employees to engage in community care and participate in public welfare activities, so that each employee can realize the essence of CSR in a natural way in their daily work, building an ESG culture together.

In terms of corporate governance, we have been upholding the corporate vision of “a world-class high-tech company with high added value, high quality, high productivity, and a focus on innovation and service” and “pursuing the satisfaction of customers, employees and shareholders and responsibility”. In the process of becoming a “world-class manufacturer leader”, we are committed to corporate citizenship, integrating CSR with our business strategy from our core values, enhancing our sustainable competitiveness, and continuously strengthening information transparency. The Company has also been recognized by the outside world and has been selected as a constituent of the MSCI Taiwan Index, the FTSE4Good TIP Taiwan ESG Index, TWSE Corporate Governance 100 Index, the TIP Taiwan Environmental Sustainability 50 Index, and the FTSE TWSE Taiwan 50 Index, etc. In addition, the Company has received five gold awards and two platinum awards from the Taiwan Corporate Sustainability Report Awards for the electronic manufacturing industry from 2016 to 2022, and our sustainability achievements have been repeatedly recognized by various sectors.

Chairperson, Unimicron Tzyy Jang (T. J.) Tseng

We continue to listen to the voices of our shareholders, customers, suppliers, employees, and other stakeholders and have included ESG in our business strategy. We have set five major goals for the period 2024 to 2026, including " Collaborate with customers to create blue ocean markets and products", " Establish A+ management team to build world-class competitiveness", " Make good use of digital operations to establish efficient and intelligent operations and services", "Agile Risk Management", and " Press ahead on ESG, care for the earth and company sustainability". The entire company is committed to breaking through the existing action plans and responding to the expectations of all sectors by strengthening the fulfillment of corporate social responsibility while the company continues to grow.

Facing a future full of opportunities and challenges, Unimicron will continue to be innovative and pragmatic, implement our ESG strategy, work together with our employees and upstream and downstream partners, respond promptly to the needs of our customers and the market, work together with the environment, and continue to achieve operational success, take care of our employees, give back to our shareholders and society, and make a positive impact! We expect to consolidate our competitive advantage and leading position in the industry.

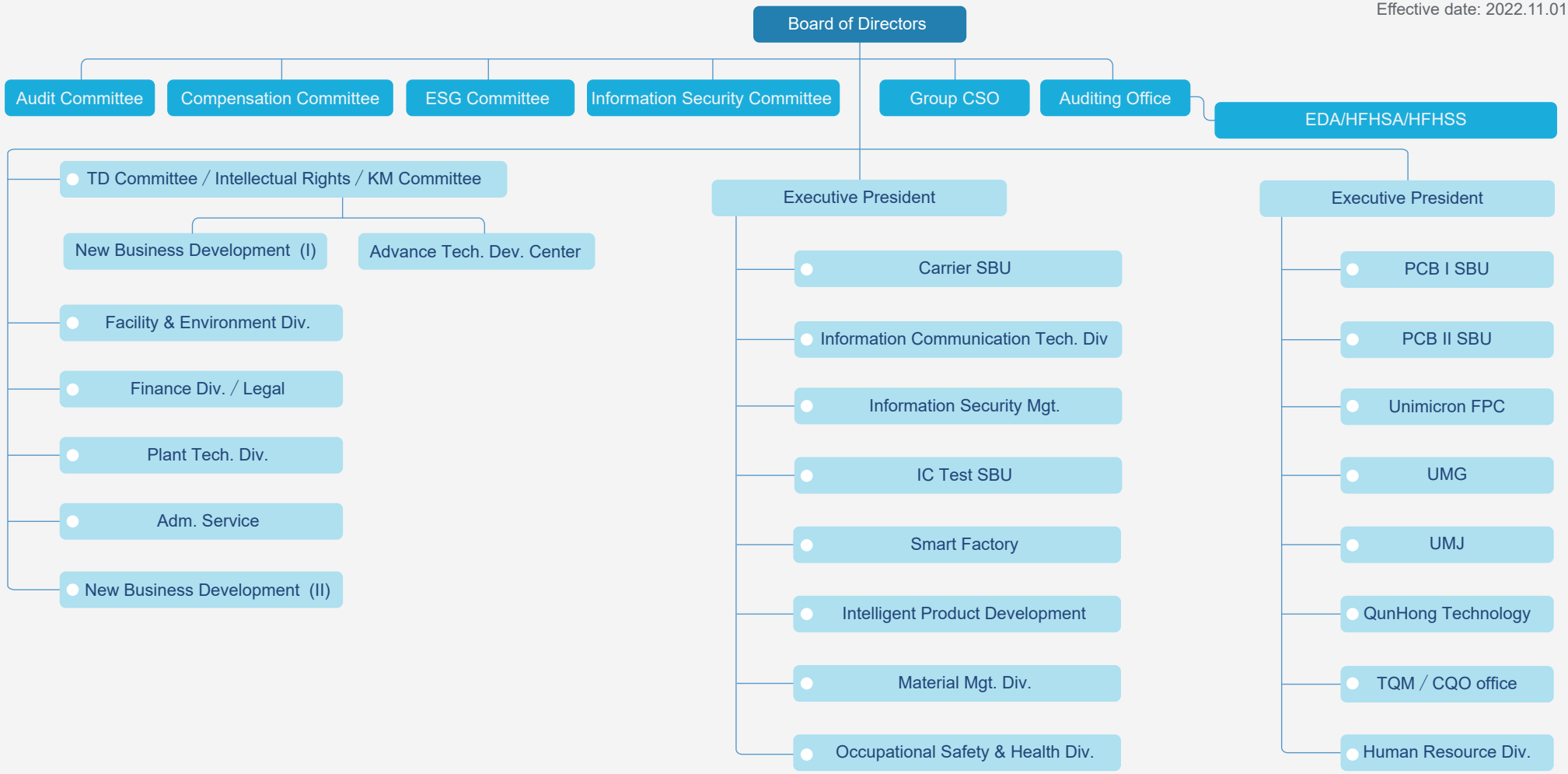
About Unimicron

Overview

To integrate resources and enhance organizational efficiency, Unimicron will merge its 91.41% owned subsidiary, QunHong Technology Inc., to achieve operational and financial benefits in 2023.

Organizational Chart

Effective date: 2022.11.01



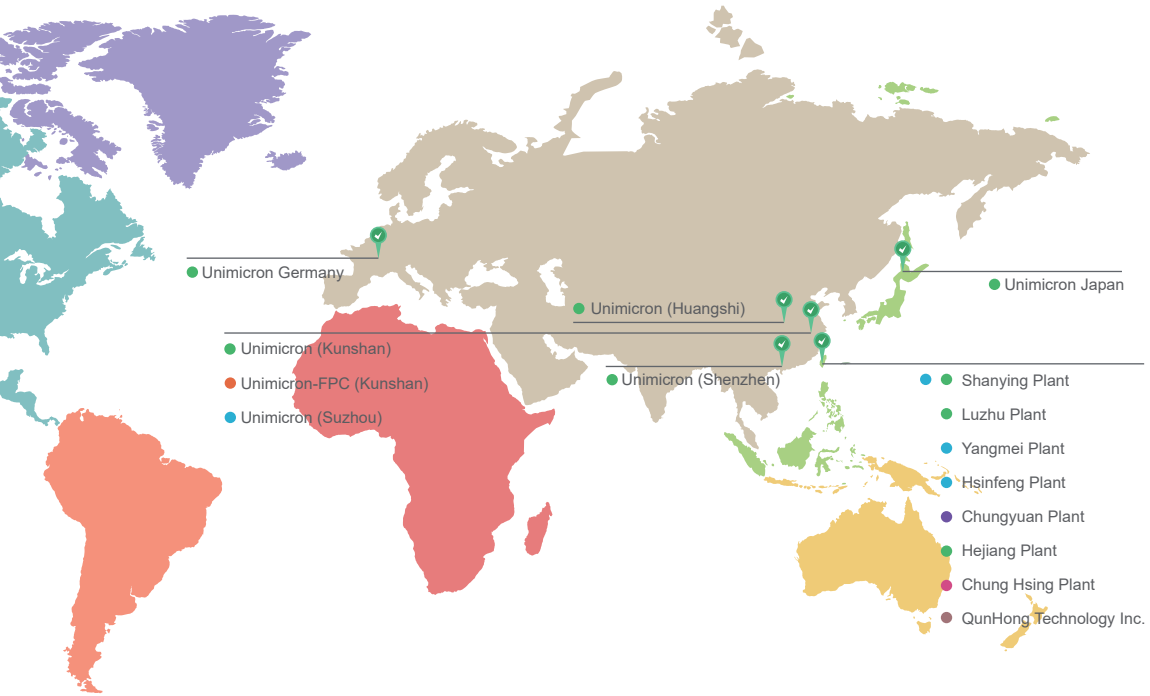
Management Policy for 2022~2023	Medium-term Management Plan for 2024~2026 Smart Manufacturing, Innovative, and Steady Growth
Develop blue ocean products, optimize product mix, and maximize production value	Collaborate with customers to create blue ocean markets and products
Implement APQP and strengthen the development of high-frequency and high-speed products	Establish A+ management team to build world-class competitiveness
Improve big data and intelligent automation to pursue the best quality and benefit	Make good use of digital operations to establish efficient and intelligent operations and services
Lean digital management and enhance the competitiveness of the group company	Agile Risk Management
Establish an A+ management team to strengthen the operation of Mother Plant and BKM	Press ahead on ESG, care for the earth and company sustainability
Press ahead on ESG, prevent disasters, save energy and reduce carbon	

Overview of Unimicron			
Company Name	Unimicron (Stock code: 3037)		
Date of Establishment	1990.01.25		
Headquarters	No.179, Shanying Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)		
Total Capital	NT$14.78 billion[Note 1]		
Consolidated Sales Revenue	NT$140.49 billion		
Boundary and Scope of the Report	Taiwan Facilities	Taoyuan	Shanying Plant, Shanying II Plant, Luzhu II Plant, Luzhu III Plant, Hejiang Plant, Hejiang II Plant, Chungyuan Plant, Yangmei Plant, QunHong Technology Inc.
		Hsinchu	Hsinfeng Plant, Zhongxing Plant
	Mainland China Facilities	South China	Unimicron (Shenzhen)
		East China	Unimicron-FPC (Kunshan), Unimicron (Kunshan), Unimicron (Suzhou)
		Central China	Unimicron (Huangshi)
No. of Employees	28,402[Note 2]		
Corporate Vision	• Becoming the worldwide top-notch high-tech Company with high value-added, high service quality, high productivity and emphasis on innovative services • Commitment to customer, employee and shareholder satisfaction and social responsibility		
Primary Products and Services	Production, processing and sales of Printed Circuit Board (PCB), High-Density Interconnect Printed Circuit Board (HDI PCB), Flexible Printed Circuits (FPC), Rigid-flex Printed Circuit Board (RF PCB), Carrier, and IC testing and burn-in systems		
Output Volume	36,674,620 sqft		
Plant Area	• Taiwan Facilities: 617,118 m^2 [Note 3] • QunHong Technology Inc.: 60,116 m^2 • Overseas Facilities: 341,407.5 m^2 • Total: 1,018,641.5 m^2		
Self-Manufactured (%)	100%		

Note 1: Total capital same as in the 2022 annual report; in addition, the total capital as of January 6, 2023, is 15.24 billion due to the conversion and issuance of new shares of SUBTRON Technology Co., Ltd.
Note 2: The scope of the report is based on the total number of employees in the group as of December 31, 2022 (not including Germany and Japan).
Note 3: The correction of the misplanting value in last year's with no material impact.
Note 4: About the Affiliates Information please refer to the Organization of Affiliated Enterprises in the 2022 Annual Report.

Products and Services

Unimicron mainly consists of three SBUs including Printed Circuit Board (PCB), Carrier, and IC testing systems. We are now the world's second-largest PCB and Carrier manufacturer in terms of revenue, and the main supplier of mobile High-Density Interconnect (HDI) and Carrier boards. Unimicron's main production bases are in Taiwan (Taoyuan and Hsinchu), South China (Shenzhen), Central China (Huangshi), and East China (Kunshan and Suzhou). Our Mainland China plants focus on mass production, whereas Taiwan facilities offer high-end products. Unimicron has business divisions and representative offices in America, Europe and Asia, and production bases in Germany and Japan to provide comprehensive services to our customers nearby.



- PCB / HDI PCB
- Carrier
- FPC
- RF PCB
- IC Testing
- Others

The Global Printed Circuit Board Market

(Unit: US$ million)

	2019		2020		2021		2022	
1st	Zhen Ding	3,889	Zhen Ding	4,442	Zhen Ding	5,534	Zhen Ding	5,704
2nd	Unimicron	2,781	Unimicron	3,117	Unimicron	3,920	Unimicron	4,826
3rd	TTM	2,689	Nippon Mektron	2,594	Dongshan Precision	3,180	Dongshan Precision	3,262
4th	Nippon Mektron	2,555	Dongshan Precision	2,731	Nippon Mektron	2,795	Nippon Mektron	2,591
5th	Dongshan Precision	2,140	TTM	2,105	Compeq	2,260	Compeq	2,560
6th	Compeq	1,820	Compeq	2,063	Tripod	2,257	TTM	2,495
7th	Tripod	1,763	Tripod	1,891	TTM	2,249	Tripod	2,218
8th	Shennan Circuits	1,522	Shennan Circuits	1,679	Shennan Circuits	2,163	Nan Ya PCB	2,167
9th	HannStar	1,396	HannStar	1,557	IBIDEN	2,055	Shennan Circuits	2,081
10th	SEMCO	1,383	SEMCO	1,504	HannStar	2,042	AT&S	2,033

Note: Source from Prismark PCB Feb. 2023. Unit: US$ million.

Industry Overview and Global Market

PCBs are a key component of various electronic products. They are used in computers, communications, and various consumer electronic products and equipment. In recent years, they have been widely used in the automotive, industrial, medical, military and aerospace industries. Therefore, the development of this industry is driven by the advancement of modern science and technology and is closely related to the demand for various end products. In 2022, due to the prosperous development of 5G, AIoT, high-performance computing, etc., the company's substrate product portfolio optimization and yield continued to improve, and operational performance improved significantly with the cooperation with customers in the field of high-end substrate technology expansion and the development of long-term relationships have improved the future and stability of the company; Other product lines such as substrate-like, HDI and PCB, actively develop new clients and improve the yield. Looking forward to 2023, due to the ongoing impact of high interested rates, inventory correction, Russia Ukraine War, global inflation, and geopolitical tension, uncertainties in the global economy still remain, market situation may not recover completely. However, under the huge business opportunities of 5G, AIoT, high-frequency, high-speed demand, and high-performance computing applications in the future, it will diversify and broaden the application of PCB industry, especially high-end substrate.

Development Trends of Products

The mainstream applications of end electronic products are multi-performance integration, high speed computing, large screens, energy saving and miniaturization. The growth potential of market applications comes from network communication products such as servers, data centers, automotive electronics driven by development of electric vehicles and smart cars, and new applications of 5G, AIoT, etc. With the introduction of high speed computing products and 5G related devices, the demand for high-end carrier processes has increased significantly. The Company shall improve customers' design freedom and product reliability; so that the stability, speed and low latency technologies of product signal transmission can be continuously improved and upgraded. The demand for FPC and RF products mainly benefited from the trend of multifunctional, light and thin handheld electronic devices. Customers' designs largely adopt FPC unique features such as lightness, thinness, and flexural strength to connect the signal transmission between the modules and the motherboard in a limited space, in order to effectively reduce the internal space and weight of the device.

As the complexity of end products increases, the packaging technology's requirements for high frequency, high performance, and low power consumption make the chip design move toward high I/O density and fine pitch, high heat dissipation, and superior electrical characteristics, which in turn drive the related carrier requirements of 3D system packaging, embedded components, ultra-fine lines, low power consumption and others. Some products are affected by market competition and structural changes, and the demand for low cost solutions cannot be ignored. However, in terms of overall technology trends, in conjunction with the next generation of process development in the semiconductor industry, the carrier industry continues to develop relevant high level processes and cooperate with customers to expand product applications.

Major Products' Sales by Region

Unit: NT$ Thousand

Years		2019		2020		2021		2022	
Sales Regions		Amount	%	Amount	%	Amount	%	Amount	%
Domestic		18,586,998	23%	18,516,445	21%	21,188,108	20%	33,997,844	24%
Exports	Asia	56,470,465	67%	62,665,798	71%	76,202,891	73%	98,197,671	70%
	Americas	2,099,195	3%	2,094,416	3%	2,553,529	2%	3,683,318	3%
	Other	5,378,895	7%	4,616,162	5%	4,618,219	5%	4,610,339	3%
	Subtotal	63,948,555	77%	69,376,376	79%	83,374,639	80%	106,491,328	76%
Total		82,535,553	100%	87,892,821	100%	104,562,747	100%	140,489,172	100%

Note: There are no products or services that are banned in certain markets.

Sales Volume and Value

Main	2019		2020		2021		2022	
Product	Amount	Value	Amount	Value	Amount	Value	Amount	Value
PCBs	93,846,000	46,615,761	93,574,000	43,447,778	93,060,000	45,673,845	99,089,910	36,666,244
Others	-	-	-	8,381	-	8,806	-	8,376
Total	93,846,000	46,615,761	93,574,000	43,456,159	93,060,000	45,682,651	99,089,910	36,674,620

Note: Consolidated information. The production capacity of this table is in gross square feet and the output volume is in net square feet. Product assembly highly affects the output volume, and the production capacity. is for reference only.

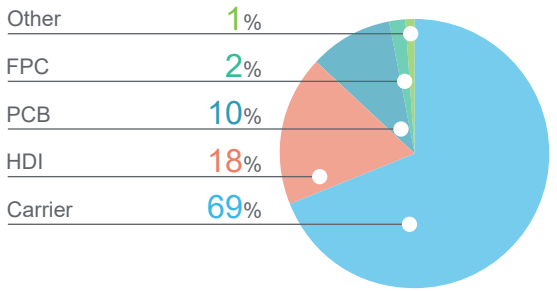
Financial Performance

Unimicron's consolidated revenue for 2021 is NT$140,489 million and its consolidated net income is NT$31,226 million. Unimicron is a professional manufacturer of PCBs. According to Prismark's production value data, Unimicron's consolidated PCB revenue will account for approximately 5.7% of the global PCB production value in 2022.

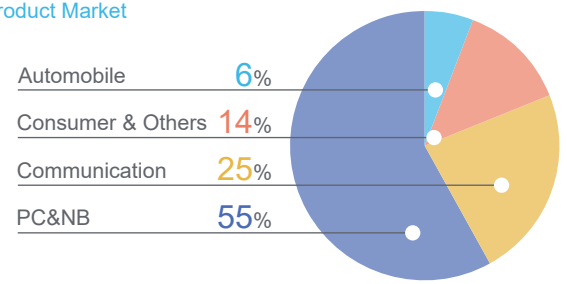
Item	Unit	2019	2020	2021	2022
Global PCB Output Value	USD Million	61,311	65,219	80,449	83,256
Market Share of Unimicron's Consolidated PCB Operating Revenue	%	4.3%	4.5%	4.6%	5.7%

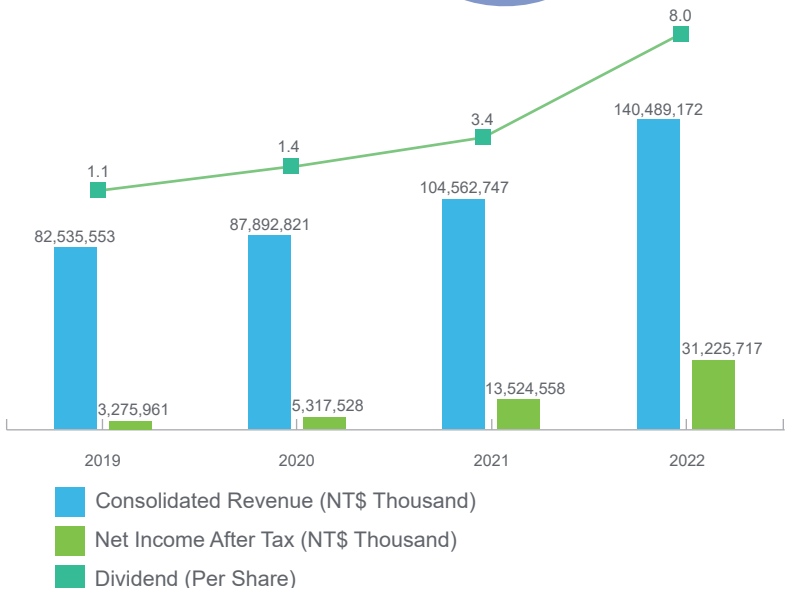
In 2022, due to the prosperous development of 5G, AIoT, high-performance computing, etc., the company's substrate product portfolio optimization and yield continued to improve, and operational performance improved significantly with the cooperation with customers in the field of high-end substrate technology expansion and the development of long-term relationships have improved the future and stability of the company. Other product lines such as substrate-like, HDI and PCB, actively develop new clients and improve the yield. PCBs are key components of various electronic products, which are used in computers, communications, and various consumer electronic products and devices, and in recent years, they are widely used in automotive, industrial, medical, military, and aerospace fields, etc.

2022 Production



2022 Terminal Product Market





Item	Unit	2019	2020	2021	2022	Note
Debt to Asset Ratio	%	56.12	57.42	61.47	57.63	Consolidated
Equity to Assets Ratio	%	43.88	42.58	38.53	42.37	Consolidated
Earnings Per Share (EPS)	NT$	2.24	3.74	8.98	20.08	Consolidated
Non-consolidated Income Tax (Expense) Benefit	NT$ million	(557)	(773)	(2,704)	(7,142)	
Consolidated Income Tax (Expense)	NT$ million	(763)	(917)	(3,104)	(8,649)	
Non-consolidated Total Assets	NT$ million	86,091	100,419	135,229	173,492	
Consolidated Total Assets	NT$ million	110,202	124,710	170,055	218,663	
Capital	NT$ million	15,047	15,047	14,753	14,784	Paid-in
Non-consolidated Total Revenue	NT$ million	47,405	54,076	69,338	100,178	
Consolidated Total Revenue	NT$ million	82,536	87,893	104,563	140,489	
Non-consolidated Net Profit Before Tax	NT$ million	3,817	6,235	15,926	36,760	
Consolidated Net Profit Before Tax	NT$ million	4,038	6,234	16,629	39,875	
Total Market Capitalization	NT$ million	54,140	94,603	197,006	260,931	Based on the stock price at the end of each year (Calculated based on annual average price)
Non-consolidated Operating Expense	NT$ million	4,180	5,212	6,669	8,343	
Consolidated Operating Expense	NT$ million	7,811	8,859	10,629	12,366	
Retained Earnings	NT$ million	21,877	25,707	36,897	61,632	
Employee Benefit Expense	NT$ million	19,037	21,546	24,042	29,589	Consolidated
Average Employee Revenue	NT$ million	2.71	2.81	3.59	4.79	Consolidated
Dividend (Per Share)	NT$	1.1	1.4	3.4	8.0	
Donation Expenses	NT$ million	2.6	4.7	14.6	9.4	Individual

Note 1: Total market capitalization = average stock price × weighted average number of shares.
Note 2: Average Employee Revenue = Consolidated Total Revenue / Number of employees in 2022 Annual Report.

2022 Sustainability Highlights

Environmental

26%	Reduction in GHG emissions (per unit of revenue) by 26% compared to 2021
21%	Reduction in water use intensity (per unit of revenue) by 21% compared to 2021
18%	Decrease wastewater output intensity (per unit of revenue) by 18% compared to 2021
29%	Reduction in waste output intensity (per unit of revenue) by 29% compared to 2021
91%	Waste reuse rate of 91%

Social

90%	The retention rate of 90% for top-performing engineers
15.37	The rate of ROI for training cost was 15.37
455 million	NT$455 million was invested in OSH Project
12.85 million	Total investment in social projects NT$12.85 million
2,850 hours	Volunteer services exceeded 2,850 hours

Governance

32%	Total market value increased by 32% compared to 2021
124%	Earnings per share increased by 124% compared to 2021
2,599	The cumulative number of patents granted has reached 2,599
1,584 million	The amount of R&D expensed NT$ 1,584 million
27%	Average Compensation for full-time employees in non-management positions increased by 27% compared to the previous year

Awards Won in 2022

Sustainability Development

- The MSCI Taiwan Index
- FTSE4Good TIP Taiwan ESG Index
- The TIP Taiwan Environmental Sustainability 50 Index
- TWSE Corporate Governance 100 Index
- The 8th Corporate Governance Evaluation 6%~20%

Corporate Governance

Site	Award	Award Issuing Unit
Unimicron	• Platinum Award of the "Corporate Sustainability Report Award" for the Electronic Information Manufacturing Industry	• Taiwan Institute for Sustainable Energy
Unimicron (Kunshan)	• Stable Quality and Supply Contribution Award * • The 2nd Quality Improvement Competition - Outstanding Project	• Sony Digital Products (Wuxi) Co., Ltd. • Xiaomi Communication Technology Co., Ltd.
Unimicron (Huangshi)	• Leading Enterprise of High-Quality Industry Development • Huangshi City Foreign Trade Export - New Enterprises Top 10	• Economic and Technological Development Zone in Huangshi • Business Bureau of Huangshi City

Social Responsibility

Site	Award	Award Issuing Unit
Unimicron (Kunshan)	• Outstanding Enterprise of the Year	• The Institute of Social Science Survey (ISSS) of Peking University
	• Top 10 Enterprises in Terms of Efficiency *	• The Management Committee of Kunshan New & High-Tech Industrial Development Zone
	• Workers Vanguard	• Trade Union of Kunshan City
Unimicron-FPC (Kunshan)	• Labor Relations and Harmonious Enterprise of Suzhou	• Suzhou Tripartite for Coordinating Labor Relations Committee
Unimicron (Suzhou)	• Outstanding Training Organization Award	• Trade Union of Suzhou Industrial Park
	• The Class 5A for Labor Security Credit Unit	• The Human Resources and Society Security Bureau of Suzhou Industrial Park
	• The Class 2A Labor Protection Unit	• The Human Resources and Society Security Bureau of Suzhou City

Note: *Awarded in 2022 for the year 2021.

Health and Safety

Site	Award	Award Issuing Unit
Unimicron	• Maternity Health-Friendly Workplace Award	• Health Promotion Administration
	• Corporate Sustainability Report Disclosure of Occupational Health and Safety Indicators - Excellent	• Occupational Safty and Health Administration, Ministry of Labor
Unimicron Hejiang II Plant	• The Certificate of Cumulative Disaster-Free Working Hours	• Industrial Safety and Health Association of the R.O.C.
Unimicron Zhongxing Plant	• The Certificate of Cumulative Disaster-Free Working Hours	• Industrial Safety and Health Association of the R.O.C.
Unimicron S2 Plant	• Occupational Safety and Health Poster Contest-Honorable Mention	• North Association of TOSHMS
Unimicron (Kunshan)	• Occupational Health Technical Knowledge Contest - Individual Awards	• Trade Union of Kunshan & Health Care Committee of Kunshan
	• Safety Improvement Project Award *	• Kunshan New & High-Tech Industrial Development Zone
Unimicron (Suzhou)	• Safety Production and Labor Protection Competition - 3rd	• Suzhou Industrial Park Shengpu Street Union
	• Fire Fighting Skills Competition - 3rd	• Suzhou Industrial Park High-Trade Zone Safety Supervision Bureau
	• Occupational Disease Prevention and Control Paradigm	• Health Care Committee of Suzhou City
	• "Safety Production Law" Knowledge Contest - 3rd	• Suzhou High-Tech Zone Management Committee
Unimicron (Shenzhen)	• Special Equipment Safety Standardization - Level 2	• Shenzhen Specialized Equipment Industry Association

Environmental Protection

Site	Award	Award Issuing Unit
Unimicron	• Green Procurement Outstanding Enterprise*	• Taoyuan City Government
Unimicron Luzhu II Plant	• River Adoption "Superior Award" *	• Taoyuan City Government
QunHong Technology (Dacheng)	• UL-2799 Zero Waste to Landfill Gold Level Certification	• UL Taiwan
	• Green Procurement Outstanding Enterprise*	• Taoyuan City Government
Unimicron (Shenzhen)	• Environmental Credit Rating-Blue	• Shenzhen Environmental Protection Bureau
Unimicron (Huangshi)	• Water-Saving Enterprise	• Hubei Provincial Department of Housing and Urban-Rural Development

COVID-19 Response Highlights

Unimicron has worked with its stakeholders to implement preventive measures by following the epidemic prevention regulations of the National Central Epidemic Command Center to strengthen the health management of its employees and respond to SDG3: Good health and well-being to build a resilient enterprise with sustainable operations.

Interdepartmental Command Center	In response to COVID-19, Unimicron has established an internal cross-departmental command center, composed of six units to perform work according to responsibilities. The Executive President serves as the commander and the HR Director serves as the executive secretary. The responsible of the command center include gathering prevention information, controlling supplier information, and holding meetings (regular and irregular) to handle the situation of domestic and overseas operating bases, reducing operational risks, and ensuring operations without interruption to protect the rights and interests of internal and external stakeholders.
Continuous Improvement Strategy	Unimicron has set up the “Guidelines for Unimicron COVID-19 Prevention Plan ", which developed plans such as visitor entry procedures, route planning, split operations, and emergency response planning. Crowd control or capacity limit at dining halls, offices, elevators, meeting rooms, splitting employees into groups to take turns to come into the office and work from home, and supplier control. Also, we adjusted measures by following the epidemic prevention regulations of the National CECC.
Employee Management	Establishing employee management plan, such as vaccination leave (with pay), employee care plan, vaccination, and health education promotion or courses.
Pandemic Prevention Technology Network	• Developing Uni life APP : Employees can quickly access epidemic prevention news, knowledge, internal epidemic prevention announcements, and abnormal temperature notification process in Chinese and English; also, it can conveniently fill out health declarations and body temperature twice a day, to strengthen the prevention ability of all employees and implement the epidemic prevention of the contractor, and monitoring the health status of the personnel in the factory. • Adding UV lamp : Set up automated UV lamps in elevators and large regional offices that will activate when no one is in the elevator. • Installing Plasma Air Purifiers : Installing air purifiers in large regional offices to reduce the risk of virus transmission. • Installing Infrared Thermal Imager : A warning is displayed if an employee’s temperature is above the standard. The employee’s ear temperature is then measured, and if a fever is confirmed, the employee is prohibited from entering the factory and requested to seek medical attention and follow up on his or her status as soon as possible. • Other measures : Enforce crowd controls via video conference and prepare alcohol disinfection machine oximeter and testing equipment in the factory and dormitory.

Unimicron Committee of Disease Control (UCDC)

Convener Tzyy Jang Tseng, Chairperson Commander Chia Pin Lee, Executive President Deputy Commander Jerry Kuo, Executive President		Personnel Management and Promotion Team Director Shyr
Strategic Business Unit	Carrier SBU President Lan PCB I SBU President Cheng PCB II SBU President Wang	• Command and execution of pandemic prevention. • SBU’s internal management & information control / communication with customers. • Human and resource scheduling. • Travel management.
PR / Material Information to Outside Parties	General Manager Shen	• Unified spokesperson of the Company’s “ information.
Human Resources Division	Senior Director Pon	• Establish an information center to regularly updates pandemic situation. • Policy advocacy. • Health care. • Grasp of information on overseas employees.
Administration Service Department	Senior Deputy Manager Cheng	• Access control to the plant. • Material preparation/dispatch. • Environmental disinfection/maintenance.
Environmental / Industrial Safety and Health Management	Senior Vice President Yang	• Communicates with and reports to the competent authority. • Formulation of supplier/vendor policies and self-management and monitoring.
Supply Chain Management	Senior Director Liu	• Advocacy of supplier/vendor policies and self-management and monitoring. • Resource scheduling assistance.

Special Report Circular Economy

Background

Unimicron has accumulated a lot of wooden pallets in the factory due to the frequent incoming of materials and equipment every month. These pallets cannot be reused due to the limitation of weight and material, so we have to entrust other firms to incinerate or bury them in the way of general business waste. However, the Earth's resources are getting depleted. Breaking away from linear economic thinking, Unimicron is thinking about how to manage resources with the concept of "sustainable resource recovery and recycling" to achieve SDG 8 (Decent Work and Economic Growth), SDG 12 (Responsible Consumption and Production) and SDG 15 (Life on Land).

Main Goals

In cooperation with Taipei Prison (carpentry class), the dismantled wood pallets have been sorted and rebuilt into recycled furniture according to characteristics for reducing tree removal and practicing the concept of the circular economy.

Executive Content

Through cross-disciplinary cooperation, we reuse wood pallets into indoor furniture and introduce Unimicron's standard operating procedures and quality management concepts to assist manufacturers in breaking down wood pallets in the factories. They are sorted by major assembly materials, minor assembly materials, and reinforcement materials, and the defective materials are screened out. Through pre-processing operations such as polishing and sawing, the wood is processed into a reusable state. According to the needs of Sunshine Electronics' employee dormitories, it is made into recycled furniture such as wooden chairs, wooden tables, bunk beds, and wardrobes, giving wooden pallets a new life.

Innovative Features

We use wood pallets to recycle furniture products and emphasize the concept of a recycling economy. Also, we identify the needs of external stakeholders and donate recycled furniture, tables, and chairs to those in need, to expand sustainability.

Wooden Chairs with Recycled Wood Pallets

Desks and Chairs Donated to Hing-fu Elementary School by Unimicron

Resources Invested

The research and development of plant technology have introduced a variety of standardized documents and quality control management to improve the recycling rate of wood pallets and produce various kinds of standardized furniture, which can also reduce the number of trees cut down for furniture and indirectly achieve the effect of protecting forestry.

Economic Benefits

- In 2022, a total of about 3,760 wooden pallets were processed, saving the cost of processing wooden pallets and purchasing dormitory furniture. It is estimated that by 2022, the benefit will be about NT$ 818,938.

Environmental Benefits

- The total weight of recycled wood pallets in 2022 was 67,675 kg, reducing CO_2 emissions by 203,000 kg (Note) and helping to mitigate the climate crisis.
- It transforms pallets that are originally scrapped into furniture products that can be reused/repurposed through new technologies of resource recovery and reuse. From the traditional "waste reduction", resources can be reused and recycled to achieve the concept of circular economy and green sustainability.

Social Benefits

- In 2022, the revenue of Taipei Prison (carpentry class) increased by about NT$ 1.39 million, which will increase the income of rehabilitated inmates and provide confidence in future employment.
- Unimicron will also promote this standardized technology to the nearby interested private enterprises and the "Guishan Industrial Zone Manufacturers Association" to jointly respond to the business model of recycling and circular economy of waste wood pallets and fulfill the social responsibility together.

Note: Calculated on the basis that recycling 1 kg of waste wood can reduce 3 kg-CO_2.

Special Report The Taipei Metro vs UniFresh

Background

The Taipei Metro has been supporting the development of urban living, working, leisure and transportation for many years. After evaluation, it has decided to collaborate with Unimicron's UniFresh plant factory to build the first MRT plant factory "Metro Fresh" on the B1 interchange of Nanjing Fuxing Station, where the two lines of the Songshan-Xindian Line and Wenhu Line intersect. We are leveraging our resources and responding to stakeholder concerns on climate change to achieve SDG 3 (Good Health and Well-Being), SDG 4 (Quality Education), SDG 11 (Sustainable Cities and Communities) and SDG 12 (Responsible Consumption and Production).

Main Goals

In response to recent environmental changes, extreme climate, and water shortage crises, the "UniCuisine Plant Factory" focuses on the concepts of non-toxic diet and food and agriculture education, and showcases the agricultural technology of the plant factory in the MRT. It uses LED light sources and industrial-grade clean cultivation and strictly controls temperature and humidity so that vegetables grow in a pure, healthy, and pollution-free environment. We will actively create a sustainable ecosphere, promote low-carbon, green vegetables to the public, meet modern human health needs, and achieve the goal of environmental education.

Executive Content

We have integrated the group's resources and built a plant factory in the metro station complete with environmental control equipment and cultivation management technologies to grow not only the commonly seen green lettuce but also a variety of lettuce in other colors and herbs. We have also made a crop display area to grow uncommon crops and share knowledge concerning sustainability, environmental friendliness and food and agriculture education with the public.

Innovative Features

With innovative agricultural technologies, we engaged in an interdisciplinary collaboration with the Taipei Metro to grow plants that are pesticide-free and organic inside a metro station to promote the concept of organic food and agriculture education to create a friendly, green and beautiful public environment.

Resources Invested

We have developed and introduced various standardized documents and quality control management measures to stabilize the production of various vegetables and crops, and used simple labels and electronic displays to introduce concepts pertaining to crop growth, environmental control and sustainable living to the public.

Economic Benefits

- Through Metro Fresh, we provide citizens in Taipei and New Taipei City with pesticide-free, healthy and safe fruits and vegetables. However, Unimicron and Taipei Metro, based on the purpose of public welfare and ESG promotion, are selling the products at Taipei Metro's exhibition and sales points at preferential prices for health promotion, with an estimated annual benefit of about NT$ 500,000.

Environmental Benefits

- With on-site sales of the plant factory's products, reducing fuel consumption during transportation, and reducing carbon footprint, crop supply is more environmentally friendly and fresh.
- It saves the use of water and chemical fertilizers, allows year-round production without regard to climate change, increases food diversity, and reduces resource consumption and environmental pollution.
- In the midst of the urban concrete forest, it makes the station hardware space green to bring greenery back to people's daily lives and improve the air quality in MRT stations.
- According to the technical parameters of greening design of the Ministry of the Interior, the amount of hydroponic vegetables produced in Metro Fresh's field can sequester 18.14 kg-CO_2e per year.

Social Benefits

- In the press conference for the opening of Metro Fresh in 2022, school children were invited to experience planting in the "Smart Farming Showcase", where vegetable seedlings were transplanted onto planting plates for them to carefully observe the growth of vegetables and cultivate ESG DNA. It is hoped that children will learn about environmental protection knowledge such as safe food and environmental technology, and the concept of energy saving, carbon reduction and natural environment protection will start from "cultivating seedlings of the next generation". In 2022, 7 plant factory introductions and tours were held for 120 people (including students) to pass on environmental awareness to the next generation.
- To extend the sustainability concept of Unimicron, the technology is expected to be transferred to interested companies for multiple applications in different fields to achieve the impact of environmental sustainability and energy saving and carbon reduction.

Metro Fresh in Taipei MRT Station


Unimicron's Plant Factory

01 Sustainability Strategy

Sustainability Strategy

1.1 ESG Strategy

ESG Vision & Mission

ESG policy of Unimicron is based on the "3P" which are "Concern for the Planet, Respect for People, and Pursuit for Performance". We expect that through our humanity based management approach and mission to protect the environment, we will ensure our sustainable growth and become a model citizen in the global village.

1.1.1 ESG Themes

To further strengthen the spirit of corporate sustainability, we have formulated an “ESG Policy” with “Concern for the Planet, Respect for People, and Pursuit for Performance” as the three pillars, along with seven commitments. We create positive value for employees, shareholders and all stakeholders, and gradually implement the corporate vision of an excellent, high-tech Company with high benefits, high quality, high productivity and an emphasis on innovative service. We also pursue customer, employee, and shareholder satisfaction, and fulfill our social responsibility, thereby ensuring our sustainable growth.

Concern for the Planet

We are committed to the concept of Plant, People and Performance to measure the impact of climate change. The Company implements the concept of complete pollution prevention in compliance with local regulations and promotes full-range environmental action in the plants. Unimicron aims to be customers’ best partner and insists on providing high-quality and environmentally friendly products.

Respect for People

- Creating fair and diverse employment opportunities for all operation sites to promote local economic growth. Unimicron raises the Company’s growth momentum through various recruitment channels. We have established complete recruitment standards and mechanisms to ensure that employees can develop their talents and perform jobs they are apt for through appropriate tests and interviews.
- Unimicron adheres to the principle of "taking from society and giving back to society," combining internal and external resources of the group, to actively promote the four main social welfare pillars of “Neighborhood Care”, ”Care for the Disadvantaged”, ”Inject Educational Resources” and “Environmental Protection”. The Company hopes to exert positive social influence, bring warmth to more people, and exert more influence that is positive.

Pursuit for Performance

Governance:Maintain cooperative relations with material and equipment suppliers around the world, and have close cooperation with domestic and foreign research units and academia. Develop products that meet market trends and customer needs; win customer satisfaction and trust through R&D resources and high interaction with customers, to ensure that products are in the leading position in the world.

Environmental : To implement green procurement and manufacturing strategies to make our products comply with non-hazardous substance regulations, and to improve the efficiency of energy resources use, waste reuse rate, and wastewater treatment efficiency to reduce raw material consumption and environmental emissions, thereby reducing operating costs and environmental impact.

Social : Formulate labor policies by the labor laws and regulations of the location of the operating base, cooperate with global customers’ regulations and international standards, and improve the management mechanisms for talent retention, training, and Occupational Safety and Health (OSH) to build an equal, safe and stable employment and development environment.

1.1.2 The implementation of the SDGs

In response to the United Nations Sustainable Development Goals (SDGs), Unimicron has integrated six SDGs into our operational activities including the value chain of product development, raw material procurement, manufacturing, and sales, as our long-term strategy for sustainable development. These include SDG 7 (Affordable and Clean Energy), SDG 8 (Decent Work and Economic Growth), SDG 9 (Industry, Innovation and Infrastructure), SDG 12 (Responsible Consumption and Production), SDG 13 (Climate Action), and SDG 15 (Life on Land), and to link the three ESG Theme and ESG policy as a sustainable development strategy to achieve a more productive investment of resources.

Unimicorn Value Chain

Unimicron works in harmony with the natural environment, values the expectations of its stakeholders, continues to innovate technologies with which the Company's core businesses and capabilities can be linked, and actively pursues the sustainability goals expected by the SDGs through establishing the development plans and performance indicators.

Concern for the Planet | Respect for People | Pursuit for Performance

PROCUREMENT	OPERATIONS	CUSTOMER
(The Purchasing of raw materials, equipment, and related services)	(PCB and Carrier manufacturer)	(Computers, communications, various consumer electronic products, automotive, industrial, medical, military, and aerospace fields, etc.)

- To enforce corporate governance, improve information transparency, protect and respect the interests of shareholders and stakeholders.
- To manage the company with high ethical standards, require all employees to abide by laws and maintain their integrity, respect human rights, protect intellectual property, and prevent fraudulent conveyance jeopardizing the rights of the company, customers, and suppliers.
- To comply with local labor laws, customer requirements, the Responsible Business Alliance Code of Conduct and other international standards; ensure equal employment opportunities, humane treatment, employee communication, and working conditions ...etc., and provide employees with diversified development / training, as well as reasonable salary and welfare.
- To establish a sustainable supply chain management system and standards, by regularly communicate with suppliers to ensure a stable, sustainable, and win-win partnership, to procure environmental friendly products and follow the management principles of the OECD, and prohibit the use of raw materials containing conflict minerals from high-risk conflict areas.
- To participate in social welfare and emergency relief activities based on the philosophy of “Taking from the Community and Giving back to the Community,” to spread love, to give back to the community, and to fulfill our responsibilities as a corporate citizen.
- Follow HSF Quality Policy and Hazardous Substance Management systems, to continuously enhance our technology standards and innovate to meet customer and market demands and be actively involved in environmental initiatives and to lower production costs to solidify our core competency.
- Follow the occupational safety and health policy, comply with the requirements of occupational safety, fire protection and other relevant laws and regulations, provide a friendly occupational safety and health working environment, and create a safe and appropriate healthy working environment.
- Follow the environmental resources policy, implement the operation of the environmental management system and comply with the requirements of laws and regulations, strive for environmental sustainability and circular economy, and actively invest in energy conservation, carbon reduction, pollution prevention and waste reduction and reuse to meet the challenges of climate change.

Note: The "ESG Policy" was revised on July 8, 2022, and approved by the Chairperson.

1.1.3 ESG Committee

Unimicron is committed to practice in corporate social responsibility. We established the Corporate Sustainability Committee, which was renamed the ESG Committee in 2022, as a functional committee under the Board of Directors. The ESG Committee is composed of the Chairperson, Executive President, and SBU President. There are five sub-committees, including the Corporate Governance Subcommittee, the Employee and Social Relationship Subcommittee, the Energy Conservation and Carbon Reduction Subcommittee, the Occupational Safety and Health Subcommittee, and the Supply Chain Management Subcommittee, which set strategies, goals, plans, and regular reviews the performance of their implementation. We also have a Corporate Sustainability Team, which is responsible for communicating and coordinating with the subcommittees, publishing ESG Reports, and conducting ESG-related audits.

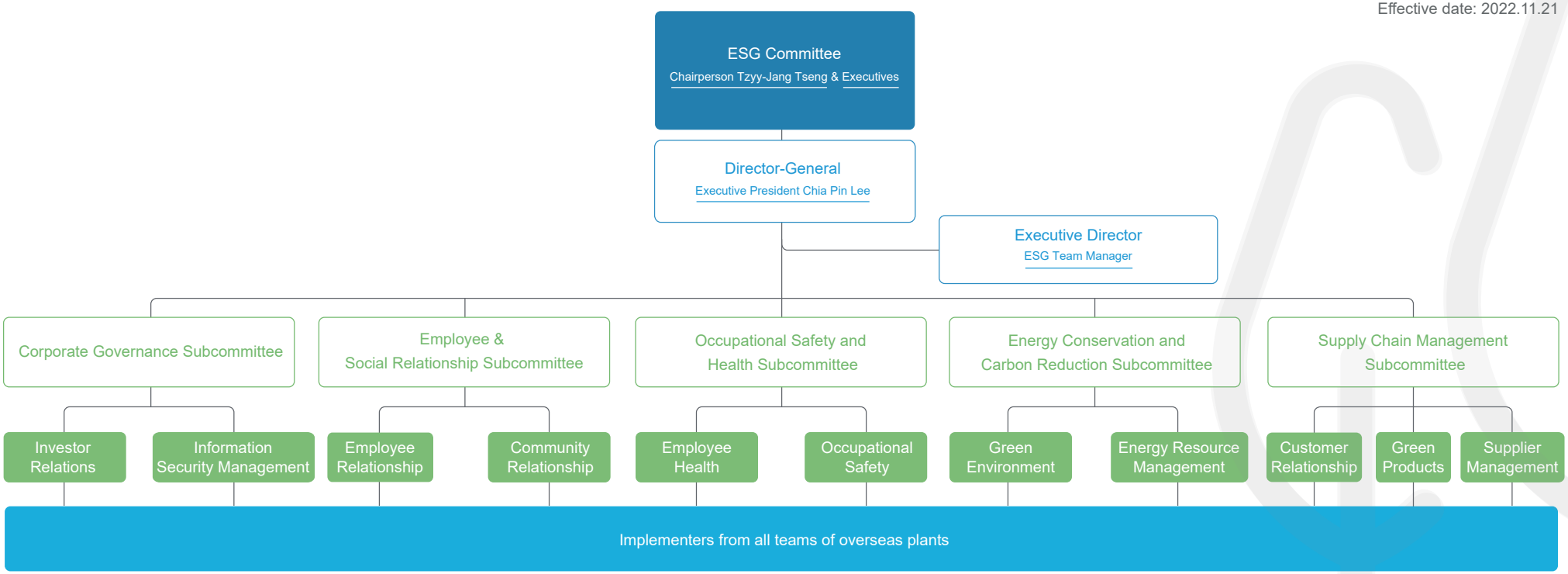
To ensure compliance with the ESG Theme and commitments, the ESG Committee reviews the overall ESG strategy, actions, and goals through regular once every six months and unscheduled meetings, and proposes improvement measures for those items that do not meet the goals to ensure that the ESG strategy is implemented in daily operations. The ESG Committee reports to the Board of Directors at least once a year on the results of planning and performance and is reviewed and guided by the Board of Directors. In 2022, The ESG Committee held four meetings to set sustainability goals and review their implementation, it also, reported to the Board of Directors on ESG-related issues, results, and priorities in the future, for four meetings.

Deepening the ESG Concept for Employees to Foster Sustainable Talent

In order to practice ESG, Unimicron not only lists the promotion of ESG as a short-, medium- and long-term business policies, but also regards sustainable talents as an important part of the Company's future core competitiveness; in order to improve the ESG knowledge of senior executives and employees, the concept of sustainability is integrated into its primary business. In 2022, the Company will promote reading clubs for senior executives and sustainability-related courses, with a total of 13,451 participants and 13,569 hours of class hours, to foster sustainable competitiveness.

Unimicron ESG Committee

Effective date: 2022.11.21



ESG Milestones

2010~2015

- Establish the Corporate Social Responsibility Management Committee and set up a dedicated unit, the Corporate Sustainability Task Force
- Issued the first CSR Report based on the GRI Standards and received the Taiwan Sustainability Report Outstanding Newcomer Award
- Focusing on the pillars of 3P "Caring for the Planet (Planet), Respect for People (People), Pursuing Performance (Performance)," we released the seven sustainability commitments

2016~2021

- 2018 & 2019 ASE Supplier Best Sustainability Award
- 2019 & 2020 the SGS Sustainability Elite Award
- The Platinum Award of the electronics manufacturing industry in the 12th TCSA Taiwan Enterprise Sustainability Report Award, and ranked among the TOP 50
- Received The Alliance for Water Stewardship (AWS) certifications
- Selected as FTSE4Good TIP Taiwan ESG Index
- Selected as MSCI Taiwan Index
- The 7th Corporate Governance Evaluation - Top 6%~20%

2022

- The 8th Corporate Governance Evaluation - Top 6%~20%
- Selected as MSCI Taiwan Index
- Selected as FTSE4Good TIP Taiwan ESG Index
- Selected as TWSE Corporate Governance 100 Index
- Selected as TIP Environmental Sustainability 50 Index
- Selected as Taiwan 50 Index
- Corporate Sustainability Report Award in Electronic Information Manufacturing Industry-Platinum

Overseas ESG Committee

1.2 Materiality Analysis and Stakeholder Communication

1.2.1 Materiality Analysis

In order to achieve effective communication between the Report and stakeholders, and to respond to the impact of the operation process on governance, the environment and society, Unimicron has formulated the Operational Procedure for Preparation of the Sustainability Report, identified the major themes and boundaries data collection of this year's sustainability report, stakeholders, etc., to strengthen the Company's operational resilience and sustainable value.

6 Steps of Analysis Process

1 Identification of Stakeholders 7 Key Stakeholders	Unimicron has identified key stakeholders, customers, governments, suppliers/contractors, employees, investors/shareholders, community/NGOs/Non-Profit Organizations and academic institutions, based on the five quantitative aspects of the AA1000 SES: 2015 Stakeholder Engagement Standard, including dependency, responsibility, tension, influence and diverse perspectives.
2 Collection of Sustainability Issues 43 Sustainability Issues	In order to ensure the completeness of the issues covered and to fully understand the issues of concern to our stakeholders, we made reference to international sustainability standards (MSCI, SASB, GRI), SDGs, the issues of concern to Unimicron in the previous year, corporate governance evaluation requirements, and stakeholder feedback, etc., for the relevant responsible units to conduct discussions and identification of each issue, and consulted with external consultants to identify 43 sustainability issues and summarize them into 18 issues.
3 Investigate the Concerns of External Stakeholders 85 Stakeholders	85 stakeholders' opinions on sustainability issues were collected from online survey as defined in Step 1.
4 Identify the Impact of Sustainability Issues 16 Units Participated in the Internal Impact Assessment	There are 16 units to identify the impact of sustainability issues, the time frame of the impact, and assess the impact boundaries to the degree of involvement in the value chain.
5 Assess the Significance of the Impacts Assess the Significance of the Impact of the 18 Material Topics	The 18 Material Topics have assessed the impact on the economic, environment and people (human rights), in terms of "severity" and "frequency of occurrence" by each responsible unit with references such as regulatory/legal requirements, management systems, internal audits, opinions from grievance mechanisms and media.
6 Prioritize the Most Significant Impacts for Reporting 17 GRI Topics, 5 Specific Topics	Based on the impact assessment results, the ESG Committee identified a total of 18 major themes for this year. In accordance with the GRI Universal Standards, the ESG Committee prioritized the major themes and assigned them to 17 GRI standards themes and 5 Unimicron-specific themes to reveal the management approach, mechanism, implementation status and performance results of the major themes.

External Survey on Sustainability Issues and Results of Identification

Unimicron uses the questionnaire on ESG sustainable issues to understand the degree of concern of stakeholders on ESG issues. A total of 85 valid responses were collected in 2022. Analysis shows that the top two issues of concern to external stakeholders are Chemical Safety and Occupational Safety and Health, followed by Product Safety and Quality, Business Ethics, Information Security and Human Rights, and the degree of concern for all issues scored above 3 (on a 4-point scale). In addition, we used the impact assessment table to identify the impact situation and impact time of the 18 issues, and to assess the impact boundary and the degree of involvement of the value chain.

Aspect	Topics	The Concern of External Stakeholders	Impacts Identification			Boundaries					SDGs
			Actual	Potential	Time Frame	Supplier	Unimicron	Customer	Investor / Shareholder	Community	
Governance	Corporate Governance	3.28		✓	long-term	■	●	■	▲	■	16 12
	Business Ethics	3.45		✓	short-term	▲	▲	▲	●	▲	12
	Customer Relationship Management	3.36	✓		long-term	■ ●	■ ●	■ ●	▲	■ ●	12
	Technology and R&D	3.22	✓		medium-term	■	▲	●	■	■	9
	Product Safety and Quality	3.46	✓		long-term	●	●	▲	▲	●	12
	Sustainable Supply Chain	3.35	✓		short-term	■	■	■	■	■	9
	Information Security	3.38	✓		short-term	■	●	■	-	■	9
Environmental	Water Resource Management	3.35	✓		long-term	■	●	■	●	■	12
	GHG Management	3.31	✓		long-term	■	●	■	●	■	7 13
	Energy Resource Management	3.28		✓	long-term	■	●	■	■	■	7 12
	Waste Management	3.35	✓		medium-term	■	●	■	■	■	12 15
	Chemical Safety	3.47	✓		short-term	●	●	▲	▲	●	12
	Climate Change Risk Management	3.18	✓		long-term	■	●	■	■	■	11 13
Social	Occupational Safety and Health	3.47	✓		short-term	▲	▲	●	-	▲	3 8
	Talent Attraction and Retention	3.28	✓	✓	short- and medium-term	▲	▲	-	●	▲	4
	Employee Development and Training	3.31	✓		short-term	-	▲	-	-	-	8
	Human Rights	3.38	✓		short-term	-	▲	-	●	-	5 8
	Social Engagement/ Community Relations	3.07	✓		long-term	▲	▲	▲	▲	▲	8 17

■ Cause impact ; ▲ Contribute to impact ; ● Being directly linked to impact

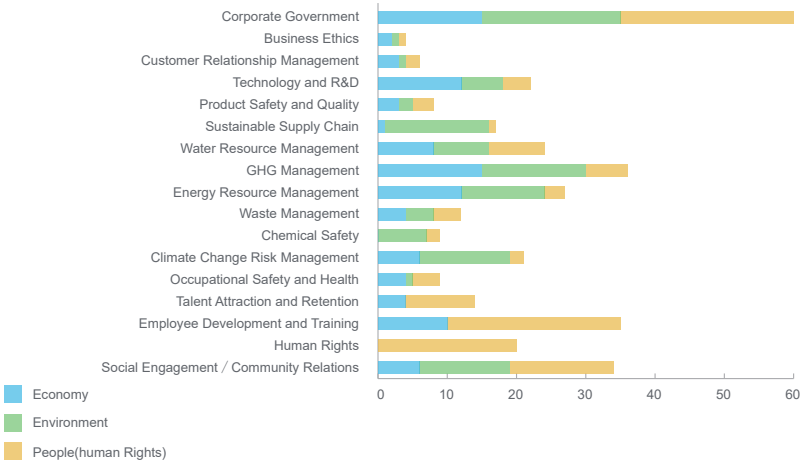
Significance and Prioritize of the Material Topics

Each responsible unit evaluates the impact of the issues on the economy, environment and people by taking into account information such as regulatory/legal requirements, management systems, internal audits, opinions from the grievance mechanisms, and media reports to score the degree of impact and frequency of occurrence. At the same time, considering the degree of concern of stakeholders, the assessment results of major impacts, and the "dynamic" nature of sustainable issues, it listed 18 sustainable issues as Material Topics for 2022, and they were confirmed by the ESG Committee.

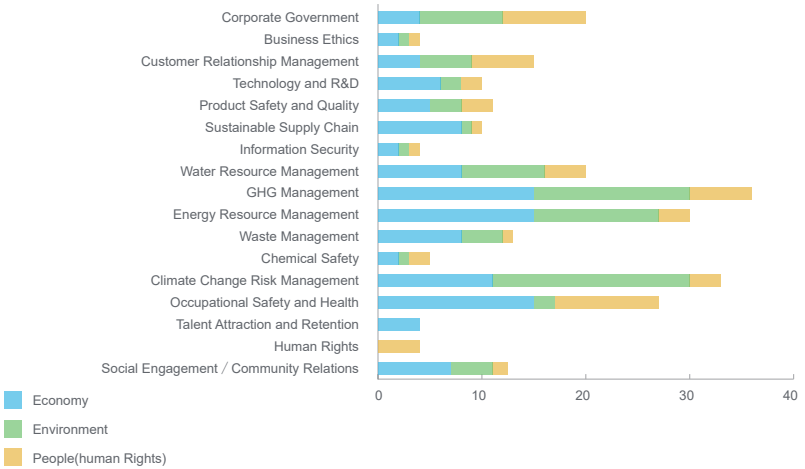
Aspect	Material Topics	GRI Standards / Specific Topics	Chapter/Page
Governance	Corporate Government	Unimicron specific	Corporate Governance Framework/P.28
	Business Ethics	Anti-corruption and anti-competitive behavior	Ethics and Integrity/P.32
	Customer Relationship Management	Unimicron specific	Customer Relationship/P.59
	Technology and R&D	Unimicron specific	Innovative Capacity/P.45
	Product Safety and Quality	Unimicron specific	Customer Relationship/P.59
	Sustainable Supply Chain	Procurement practices	Sustainable Supply Chain/P.41
	Information Security	Customer privacy	Information Security/P.37
Environmental	Water Resource Management	Water and effluents	Water Management/P.72
	GHG Management	Emissions	GHG Emissions/P.68
	Energy Resource Management	Energy	Energy Management/P.69
	Waste Management	Waste	Waste Management/P.75
	Chemical Safety	Unimicron specific	Green Product Management/P.52
	Climate Change Risk Management	Economic performance	Climate Action/P.63
Social	Occupational Safety and Health	Occupational health and safety	Occupational Safety and Health Management/P.92
	Talent Attraction and Retention	Market presence, employment, employee diversity and equal opportunity	Talent Attraction and Retention/ P.83
	Employee Development and Training	Training and education	Career Development and Training/ P.89
	Human Rights	Labor/Management relations, Non-discrimination	Human Rights/P.80
	Social Engagement/ Community Relations	Local communities	Inclusive Society/P.104

Note: Above 21 scores are extremely high risk/opportunity; 13~20 scores are high risk/opportunity; 5~12 scores are medium risk/opportunity; and below 4 scores are low risk/opportunity.

Positive Impacts



Negative Impacts



Risk and Opportunities for Material Topics

We expect our corporate sustainability-related initiatives to have a positive impact not only on society but on revenue, costs, R&D innovation, customer satisfaction, and employee motivation. Therefore, we identify the impacts of each material issue on operations and sustainable development as part of our business decisions to move towards a sustainable future.

Aspect	Material Topics	Importance to Operations: Revenue Growth	Cost Reduction	R&D and Innovation	Customer's Satisfaction	Employee Coherence	Potential Risk	Potential Opportunity	Strategies
Governance	Corporate Government	▲			▲	■	• Lose investors' trust • Lose potential customers • Damage to reputation	• Gain investors' trust • Increasing the stability of customer cooperation opportunities	Improve corporate governance efficiency, continue to innovate and adhere to product quality, abide by all relevant regulations, and maintain stakeholders' loyalty
	Business Ethics	▲		■	▲		• Increasing the risk of non-compliance with laws and decreasing stakeholder's trust	• Gain customers' trust • Enhance the Company's positive image	
	Customer Relationship Management	▲			▲		• The decline in customer satisfaction and order volume	• Increase customer satisfaction and the order quantity	
	Technology and R&D	▲		■	▲		• It needs to continuously improve its products, research and innovate product development according to customer needs, otherwise it will lose its competitiveness	• Grasp market demand and technical trends, to gain customer trust	
	Product Safety and Quality	▲		■	▲		• Product quality defects occur, resulting in customer dissatisfaction. If the return of goods resulting in a full refund, it will lead to the loss of orders	• Grasp the status of customer satisfaction, gain customer trust, and enhance the positive image of the Company	
	Sustainable Supply Chain	▲	■		▲		• Affect the goodwill of the Company and customers • Increase handling costs for abnormal quality • Delay in delivery time for abnormal processing	• Comply with customer requirements, improve customer satisfaction, and increase cooperation opportunities • Reduce abnormal handling costs to reduce costs and increase revenue	
	Information Security				■		• The trust and satisfaction of customers have decreased • The leak of company and customer information • Damage to reputation or loss of operations	• Increased customer trust and satisfaction	
Environmental	Water Resource Management		▲				• Increase the risk of non-compliance with laws and decrease stakeholder's trust • Fined by the authorities	• Reduce environmental pollution • Enhancing corporate image • Improve customers' satisfaction	From the perspective of the whole life cycle, assess the impact of the operation process on the environment. Committed to slowing down the generation of pollutants in the value chain, optimizing the effective use of resources, and developing green products
	GHG Management	■	▲	■	■				
	Energy Resource Management		▲						
	Waste Management	▲	▲				• If there is no regular inspection of the outsourced removal/ disposal firms, in case of violation of waste related regulations, not only the offending firm will be punished, but also the responsible person of the business, which is the source of generation, may also be at risk of being punished	• Grasp and classify the waste generated in the production process, confirm the possibility of reuse in the factory, promote the sustainable circulation of materials, and reduce the cost of material purchase	
	Chemical Safety	■	■	■	▲		• Violate customer rules and regulations, resulting in a decrease in customer satisfaction and risk of compensation	• Increase customer trust and satisfaction • Enhance the positive image of the Company	
	Climate Change Risk Management	▲	▲	■	▲		• The government has announced the 2050 net-zero emission target. The Company needs to invest in the purchase of green electricity and other costs in response to low-carbon transformation, which will affect profits	• Responding to the government's request that users with a contracted capacity of 800kW or more should have an annual electricity saving rate of 1%, achieve carbon emission reduction through the environmental and energy management system to reduce operating costs	
Social	Occupational Safety and Health		■			▲	• Affects customer orders • Fined by the authorities • Employees or contractors injured on the job • Production interruptions due to fire or chemical accidents	• Gaining customers' trust • Good corporate image • Influence the performance of the industry in occupational safety and security • Improving employee centripetal force and retention	Continue to interact with employees, provide a caring working environment, establish a complete and transparent training and retention system, and extend the concept of human rights to the entire Company
	Talent Attraction and Retention		■			▲	• Operations were affected as production capacity could not meet customer demands • Increased workload due to high turnover rate	• Knowledge and experience could be transferred effectively • Improve employee engagement and promote operational growth • Retained outstanding talents, creating more productivity and value	
	Employee Development and Training				■	▲	• Work efficiency cannot be improved • Increase in a quality abnormal rate • Loss of competitiveness in product technology	• The ability of talents can be enhanced to obtain leading opportunities and strengthen the Company's body • Employees with Career Development and work quality can be continuously enhanced so that they could obtain the best functions to enhance personal and corporate productivity	
	Human Rights				▲	▲	• Risk of non-compliance leading to fines and business interruption • Decrease in corporate image • Illegal violations occur	• Increased employee satisfaction and reduced turnover rate • Improved corporate image • Meeting customer expectations • Increased employee motivation	
	Social Engagement/Community Relations				■	▲	• Impact on corporate image	• The factory and community continue to engage in welfare activities to show our influence	

▲ : Highly Connected ; ■ : Moderately Connected

1.2.2 ESG Performance and Targets

Governance

Topics	Importance of operations	KPI	2022 Targets	2022 Achievements	2023 Targets	2026 Goals
Corporate Government	To develop a solid corporate governance measure, establish an overall corporate vision, and control risks to fulfill the responsibilities of business operators. Also, enhance shareholders' trust and stakeholders to maintain market competitiveness.	Corporate Governance Evaluation Ranking	Corporate Governance Evaluation 6%~20%	✓	Maintain Corporate Governance Evaluation 6%~20%	Enhance corporate governance and improve operating profitability to achieve the interests of stakeholders
Business Ethics	Establish good business conduct and ethics, shape a corporate culture of integrity, and enhance employees' awareness of professional ethics and compliance with laws and regulations, so as to deepen good internal professional ethics and ensure sustainable operation.	Personnel Code of Conduct and Antitrust Training[Note 2]	The completion rate was >95%	✓	The completion rate was >95%	The completion rate was 100%
		Issued Integrity Notification to Supplier	Twice a year	✓	Twice a year	Twice a year
Customer Relationship Management	Establish good relationships with customers through regular visits and satisfaction surveys to keep tabs on customer needs and market trends, respond to customer needs, and adjust the Company's business strategy and development direction.	Customer Satisfaction	PCB SBU 4.6 Carrier SBU 3.6	✓	PCB SBU 4.6 Carrier SBU 3.6	PCB SBU 4.65 Carrier SBU 3.7
		Case of Customer Privacy Violations	0	✓	0	0
Technology and R&D	Maintain cooperation with tier 1 suppliers (materials and equipment), and work closely with domestic and overseas research institutes and academics to develop products that meet market trends and customer demands. Through the R&D integration and customer interaction that satisfy customer needs and ensure the product's leading position.	ETS Fine Line Development	L / S = 5 / 5 um AOI yield > 85%	✓	L / S = 5 / 5 um Customer Sample Verification (TV)	L / S = 5 / 5 um Mass production (HVM)
		Fine Bump Pitch Development	POC for 80um pitch w / via bump	✓	Engineering Sample Certification (TD/Cert)	Mass production (HVM)
		Hybrid Substrate Development	Thin film RDL bonded organic substrates 2/2um L/S	✓	Passed EVT and DVT	Mass production (HVM)
	Actively develop the technology to build high-frequency and high-speed products. Enter the 5G technology market with excellent signal transmission, fast heat dissipation, and reliable technology platforms.	Mass Production Ratio of 5G Technology	30%	✓	45%	100%
	To protect R&D results and intellectual property.	Number of Patent Applications	100	✓	110	130
Product Safety and Quality	We provide excellent quality products at reasonable prices with suitable delivery time and service to satisfy customers.	Case of Critical Deficiencies in ESG/RBA Audit	0	✓	0	0
		Cases of Returning Goods Caused by Non-compliance with HSF Regulations	0	✓	0	0
Sustainable Supply Chain	Establish a supplier management system and standard, communicate with suppliers every year, and implement supplier management to reduce risks and establish a sustainable win-win strategic partnership.	The Completion Rate for Signing Supplier Corporate Social Responsibility Letter of Commitment	85%	✓	87%	90%
Information Security	Protect customer data and Unimicron's trade secrets, and implement information security risk management to avoid possible information leakage that impacts operations.	Number of Material Information Security Incidents	0	✓	0	0

Note 1: ✓ as achieving 2022 Targets and ▲ as without achieving 2022 Targets.

Note 2: We will conduct RBA-related (e.g. Code of Ethics, Antitrust) education and training in the following years, following the completion of the RBA Commitment Letter in 2021.

Environmental

Topics	Importance of operations	KPI	2022 Targets	2022 Achievements	2023 Targets	2026 Goals
Water Resource Management	Improve water efficiency and water recovery through the production process and equipment improvements to reduce water consumption.	Water Consumption Intensity Based on Revenue	<310	✓	<300	<290
		Copper Ion Intensity of Wastewater Discharge Based on Revenue	<0.15	✓	<0.1	<0.09
GHG Management	Reduce carbon emissions by improving energy efficiency to reduce operational risks.	GHG Emission Intensity Based on Revenue	<12	✓	<11	<10
Energy Resource Management	We use management mechanisms and data analysis to enhance equipment and production capacity, improve energy efficiency and reduce costs.	Electricity Consumption Intensity Based on Revenue	<18	✓	<17	<16
Waste Management	Reduce raw material consumption and environment discharge by improving waste reuse rate to reduce operating costs and environmental impact.	Waste Recycling Rate	>90%	✓	>90%	>90%
Chemical Safety	To protect health and environmental safety through green purchasing and manufacturing to ensure that the company's products comply with hazardous substance free regulations and customer compliance, as well as stakeholder expectations.	Customer Satisfaction Rate with HSF Quality	4.48	✓	4.4	4.5
		Achievement Rate of Immediate Legal Updates	100%	✓	100%	100%
		XRF Testing Pass Rate of Incoming Materials and Finished Products	100%	✓	100%	100%
		Supplier's HSF Quality Audit Pass Rate	100%	✓	100%	100%
Climate Change Risk Management	To disclose climate governance information and improve ESG transparency by TCFD framework.	Climate Risks and Opportunities Identification	Once a year	✓	Once a year	Once a year

Social

Topics	Importance of operations	KPI	2022 Targets	2022 Achievements	2023 Targets	2026 Goals
Occupational Safety and Health	Through the operation and improvement measures of the OSH management system to improve Company's OSH performance, avoiding critical accidents that may affect shipping and cause losses.	Obtained OSH Awards	4	✓	5	5
		Work Accidents	0	▲	0 critical accident	0 critical accident
		Frequency-Severity Indicator (FSI) (Below 50% of the Three-year Average for the PCB Industry)	0.1	▲	0.1	0.1
		Disabling Injury Frequency Rate (F.R.) (Below 50% of the Three-year Average for the PCB Industry)	0.63	▲	0.5	0.5
		Disabling Severity Rate (S.R.) (Below 50% of the Three-year Average for the PCB Industry)	16	✓	14	13
		Completion of the OSH Performance Evaluation	100%	✓	100%	100%
		Employee Satisfaction with Health Promotion Activities	96%	✓	97%	97%
Employee Development and Training	Provide a comprehensive training system and career development direction to attract and retain talents that expand and maintain our productivity and competitiveness.	Completion Rate of People Capability Maturity in Each Plant	75%	✓	82%	85%
		Course Completion Rate (Courses Held and Satisfaction Rating)	Number of courses held: 15	✓	Number of courses held: 15	Number of courses held: 20
			Satisfaction rating: 90%	✓	Satisfaction rating: 90%	Satisfaction rating: 90%
Talent Attraction and Retention	For us, talent is the key to ensuring success in the world. Innovation, technologies, and services require talented individuals.	Number of New DL/IDL	DL 2,900 IDL 950	✓	DL 3,600 IDL 1,100	DL 4,000 IDL 1,200
		Excellent Engineers Retention Rate	90%	✓	90%	91%
Human Rights	To create a more equal, inclusive, and Positive working environment in response to the talent pool and the market.	Incidents of Discrimination	0	✓	0	0
		Completion Rate of Human Rights Training	>98%	✓	>98%	>98%
Social Engagement/ Community Relations	We will continue to help establish a more sustainable and inclusive society by leveraging internal resources.	Volunteer Service Hours	1,000 hours	✓	2,000 hours	3,000 hours

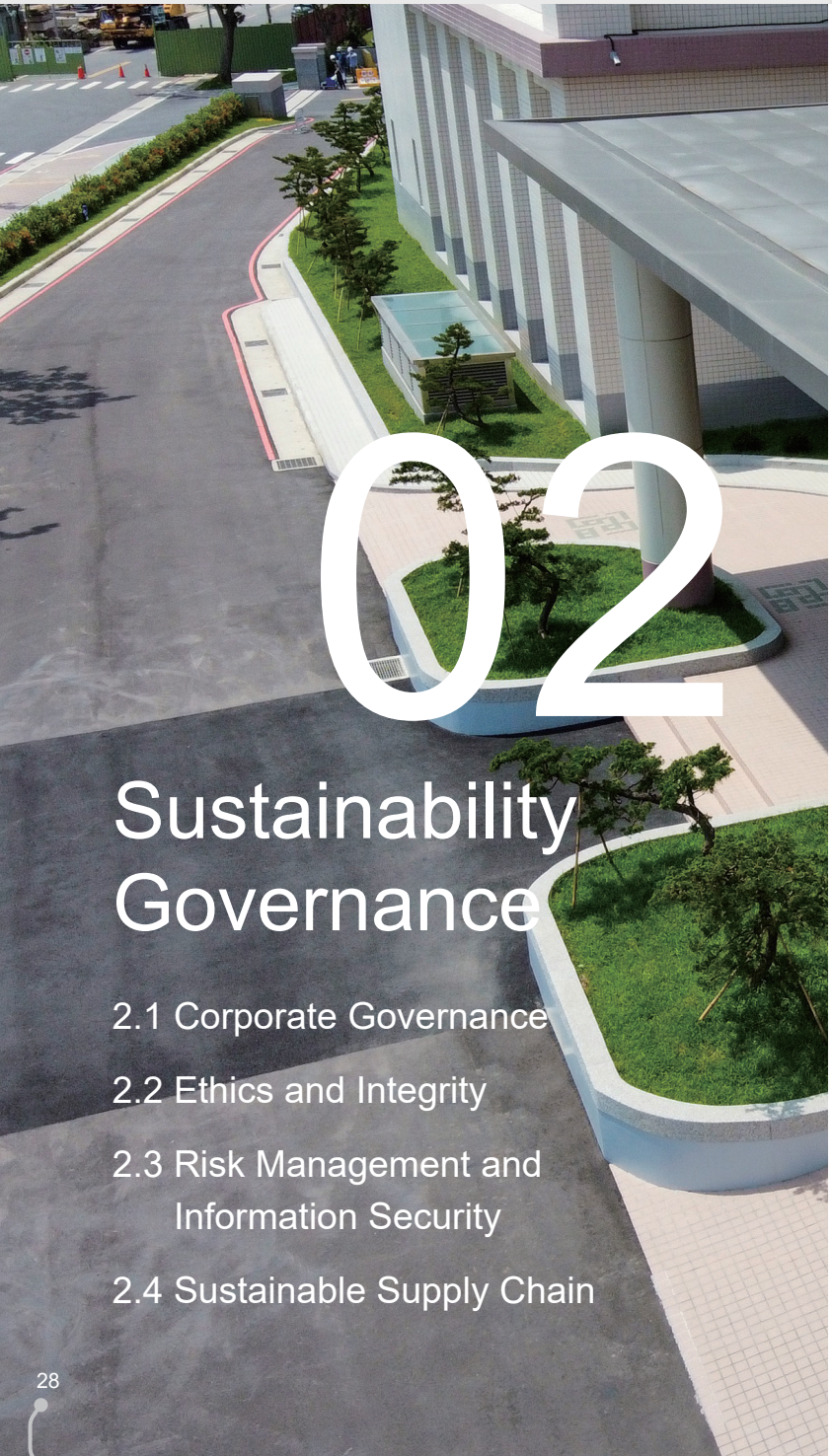
Note: In 2022, there were 4 occupational accidents in Taiwan. The FSI for 2022 was 0.134 due to the increase in the number of days lost in occupational accidents, but the number of occupational accidents is down compared to 2021. The F.R. for 2022 was 1.2, a decrease from 2021, but did not achieve the target of below 50% of the three-year average for the PCB industry. (Please refer to Chapter 6.4).

1.2.3 Stakeholder Communication

Importance of Stakeholders

Issues	Main Content in 2022	Possible Human Rights Impact	Engagement: Participation	Engagement: Consultation	Engagement: Information	Responses from Unimicron
Customers — To become the best business partner for our customers, Unimicron strives to provide high-quality products and services to build a satisfactory and trusting relationship with our customers.						
• Corporate Governance • Risk Management • GHG Management • Occupational Safety and Health • Energy Resource Management • Water Management • Human Rights • Information Security • Climate Change Risk Management • Chemical Safety	• Risk management & contingency plan • Requirements of RoHS/REACH SVHC • Hazardous substances free guarantee for products • Requirements for disclosure of hazardous substances in products • Obtain OSH Management System certificate by third party • Implement disaster prevention and emergency response measures • GHG emission management measures • Energy resource management measures • The impact of the revised Environmental and Energy Resources Act on us	• Failure to properly manage commercial information and personal data and information of customers when dealing with customers.	• Audit (As needed) • Hazardous Substance Questionnaire from Customers (GM system, E-mail, daily) • Certificate of Non-use for Hazardous Substances (GM system, E-mail, irregularly) • Questionnaire Survey (As needed) • Information Security Industry Association • Information Security Assessment from Customer (As needed)	• Telephone / E-mail (Aperiodic)	• RBA Platform (Annually) • Documents Reviewed by Customers (As needed)	• Assess risk by following the "Risk Management Operating Procedures". • Reply to customer survey form (regarding REACH) twice a year. • Confirm the materials test report from 3rd party's lab. • Provide certification of Non-use for Hazardous Substances. • Maintain the verification of the OSH management by 3rd party. • Maintain regular operation of Fire-protection, life safety systems, and fire drills. • Continue to implement occupational safety and project audits. • Set GHG reduction plans and targets. • Set energy resource management targets. • Through industry exchanges and sharing, strengthen the blind spots of the Company's internal protection mechanism, and improve the level of information security assessment to meet customer requirements.
Government — Unimicron complies with the environmental and corporate governance regulations issued by the Government and implements them in its operations.						
• Corporate Governance • Occupational Safety and Health • Energy Resource Management • Water Resources Management • Human Rights • Information Security • Climate Change Risk Management	• Compliance with fire and OSH laws • Critical occupational safety or fire incidents • Participate in OSH seminars • Reduce water usage • Reduce energy consumption	• The occurrence of major OSH hazards will affect the physical and mental health of workers.	• On-site Audit (As needed) • Regular Reporting and Notification (As needed, annually)		• The Official Document (As needed)	• Continue to operate and improve the occupational safety management system. • Maintain regular operation of Fire-protection, life safety systems, and fire drills. • Implementing inspection, registration and reporting of OSH, fire prevention, and buildings by following the regulations. Participate in seminars to understand the key of the law changes and revise the SOP. • Conduct annual internal audits in each Plant, including occupational safety, fire safety, and accident audits, and correct deficiencies. • Increasing water and energy efficiency and reduce consumption. • Established in the 2nd quarter of 2022 with a Chief Information Security Officer and a dedicated information security unit (at least 2 personnel).
Suppliers/Contractors — Collaborate with suppliers to promote ESG and enhance supply chain value.						
• Corporate Governance • Waste Management • Occupational Safety and Health • Human Rights • Sustainable Supply Chain • Climate Change Risk Management • Chemical Safety	• Understand Unimicron's requirement for hazardous substance free management • Supplier compliance with customer or RBA code of conduct • Fined for violating OSH laws	• If the supplier does not pay attention to labor human rights, it may cause illegal incidents, which will indirectly affect the goodwill of Unimicron, and affect the willingness of customers to place orders.			• Supplier Management Platform (As needed) • E-mail (As needed) • Training Course (As needed) • Audit (As needed)	• Promote suppliers to meet the requirements of the customer's or RBA Code of Conduct by Supplier Management Platform. • Strengthen the control of hot work, increase the protection requirements according to the risk classification, and reduce the risk before/during/after the operation. • Arrange to perform supplier RBA audit every year and track supplier improvement measures. • Supplier Response to Hazardous Substance Survey Statement/REACH Compliance Statement. • Chemical suppliers are required to provide SDS and GHS materials in Chinese and English, and contractors are required to participate in hazard notification training and agreement organization to reduce the risk of OSH.

Issues	Main Content in 2022	Possible Human Rights Impact	Engagement: Participation	Engagement: Consultation	Engagement: Information	Responses from Unimicron
Employees — Talent is the foundation of Unimicron's sustainable development and one of our most important assets.						
• Corporate Governance • Occupational Safety and Health • Water Resources Management • Human Right • Talent Attraction and Retention • Employee Development and Training	• Comprehensive health management • Whether the concentration of hazardous chemicals is harmful to health • No occupational injured • The actual implementation of accident response and evacuation • Water risk management	• Chemicals leak, causing harm to employees' health. • Sexual harassment or workplace bullying. • If overtime is not paid on time, it will affect labor rights and benefits.		• Health Management Center (Quarterly) • Supervisors (Aperiodic)	• Employee Opinion Box(As needed) • Website & Notice Board (As needed) • Labor-Management Meetings (Quarterly) • Welfare Committee (Quarterly) • Training Course (As needed)	• Through various health promotion events and services, the physical and mental health of each employee is cared for, creating a friendly and safe workplace. • Implement human rights management measures and related education and training, and provide diversified communication channels for employees. • Increase requirements for high-risk facilities, machines, environment and operation inspections, to prevent machine operations, human operations and site setting errors. • Have inter-departmental cooperation to strengthen the acceptance mechanism of new equipment to enhance the intrinsic safety of the machine. • Add courses on professional and personnel dangerous operations, strengthen skill certification and operation qualification license operations. • Establish an occupational safety news column and a proposal improvement system, so that employees can receive and brainstorm about occupational safety and health related issues anywhere, and enhance safety awareness. • Optimize fire protection system and emergency response facilities, and implement maintenance management mechanism. • Strengthen professional knowledge and capability training, improve the ability to respond to accidents, and reduce direct and indirect losses. • Planning and conducting the environmental testing strategy for half a year. • Formulate water resources management plans and goals to strengthen water efficiency and cost down.
Shareholders/Investors — Investors and shareholders provide capital, which is the strength of Unimicron's steady growth.						
• Corporate Governance • Water Resources Management • Talent Attraction and Retention • Climate Change Risk Management • Chemical Safety	• Disclose information to external investors to understand the operation • The impact of climate change and water risks on operations and related mitigation strategies • Critical occupational safety incidents • Major ticket violation • The impact of carbon emissions and water risks on operations and related mitigation strategies	• If the information is not disclosed in accordance with the law, it will affect the investor's judgment and cause losses, and the investment rights and interests will be damaged. • Failure to actively address environmental-related issues may affect people's basic human rights such as the right to work, the right to health, and the environmental right.	• Investment Forum (As needed)	• Telephone / E-mail (As needed)	• Shareholders' Meetings (Annually) • Institutional Investor Conferences (Half year) • Annual Reports (Annually) • Market Observation Post System (As needed)	• Self-organize institutional investor conferences twice a year and participate in public forum per year. • Continue to implement and improve the OSH system. • Disclose CDP's climate change/water information annually and manage the risks of carbon emissions and water use.
Community/NGOs/Non-Profit Organizations — Based on the concept of "taking from society and giving back to society", we listen and respond to the community and cooperate with NGOs to contribute to the community and enhance social influence.						
• Business Ethics • GHG Management • Human Rights • Social Engagement/ Community Relations	• Support the development of OSH in the industry • Participate in OSH seminars • Join regional prevention organizations • Reduce GHG emissions	• Accidents or violations of environmental protection issues in the Company will affect the quality of life of local residents.	• Seminar (As needed) • Participate in Prevention Organizations (As needed)	• Telephone (As needed)	• The Official Document (As needed) • Unimicron Website (Periodic, Aperiodic)	• Continuous operation, effectiveness, and improvement of OSH management system. • Participate in the activities of industry organizations. • Participate in seminars related to OSH issues. • Participate in regional prevention organizations. • Implement and disclose GHG reduction measures. • Continuously conduct environmental protection activities in each plant to maintain the relationship with the community.
Academic Institutions — We collaborate with academic institutions to develop new technologies, and through industry-academia cooperation to strengthen our patent and nurture R&D talents.						
• Technology and R&D • Talent Attraction and Retention	• Industry-Academia Collaborative Research Project • Cooperative Education Program • Summer Internship Program	• Failure to provide sound workplace education and training will cause students to lose confidence.	• Campus Recruiting Events (Periodic)	• Telephone / E-mail (As needed)	• The Official Document (As needed) • Unimicron Website (Aperiodic)	• Build long-term partnerships with universities. • Annual Cooperative Education Program, with a total of 12 schools and 110 students in 2022.



02

Sustainability Governance

Sustainability Governance

2.1 Corporate Governance

Topics	Corporate Governance
Policy	• Unimicron Corporate Governance Best Practice Principles
Commitment	• Build corporate governance structure • Protect the shareholders' interests • Strengthen the functions of the Board of Directors • Exert the functions of the Audit Committee • Respect stakeholders' rights and interests • Improve information disclosure
Division	• Division Resources Invested
Resources Invested	• All group
Grievance Mechanism	• Whistleblower hotline: +886-3-3500386 ext.13307 • Whistleblower mailbox: whistleblower@unimicron.com
2022 Targets	• Maintain 6% to 20% of corporate governance evaluation. Provide resources with existing governance capabilities to support and strengthen the management capabilities for driving Company growth
Actions	• Formulate relevant regulations on corporate governance • Conduct performance evaluation of the Board of Directors every year (including self-evaluation of the Board of Directors, self-evaluation of members, self-evaluation of functional committees, etc.), and entrust an external independent agency to conduct performance evaluation of the Board of Directors in 2022 • Review and improve the unscored items of corporate governance evaluation indicators every year
2022 Achievements	✓ Ranked top 6% ～ 20% of Corporate Governance Evaluation

Management Philosophy

- Pursue Excellence, Continuous Growth
- Otstanding Leadership, Develop Talents
- Quality First, Creative Innovation
- Cheerful Attitude, Energic Team
- Collaborative Spirit, Mutual Trust

2.1.1 Corporate Governance Framework

Unimicron implements corporate governance based on the Company's vision of “a world-class high-tech Company with high added value, high quality, high productivity, and an emphasis on innovation and service” and “pursuing customer, employee, shareholder satisfaction and social responsibility”. The Company follows the six criteria in the implementation of specific actions. At the same time, to innovate corporate value, we have set five goals for the period from 2022 to 2025, including “Collaborate with customers to create blue ocean markets and products”, "Developing 5G products to prepare for 6G technology", “Establish A+ management team to build world-class competitiveness”, “Make good use of digital operations to establish efficient and intelligent operations and services ", “Press ahead on ESG, care for the earth and company sustainability” to implement sustainable corporate governance.

Operation of the Board of Directors

Unimicron's Board of Directors is composed of 9 directors with different professional backgrounds (including one female director), who are responsible for the Company's operations and supervision. For information about the composition of the Board of Directors and the implementation of the diversity policy, please refer to Page 8 of the 2022 Annual Report and the Company’s website. The 12th term of directors was elected on June 19, 2020, for a term of three years, with three independent directors, two individual directors, and four legal person director representatives on the Board of Directors, and only the Chairman of the Board of Directors, who is concurrently serving as the Group Chief Strategist, is also a managerial officer’s the Company, among the nine directors. The three independent directors are concurrently serving as independent directors of no more than three other public companies. 9 board meetings were held in 2022, with an average attendance rate of 96%.

Functional committees such as the ESG Committee and the Business Continuity and Risk Management Committee report to the Board of Directors on a regular basis once a year, reporting on ESG-related issues such as sustainability performance indicators, greenhouse gas inventory and committee operations. If there are any negative events affecting the stakeholders, the responsible unit shall report to the Board of Directors. In 2022, there were five ESG cases reported to the Board of Directors.

Election of Directors

The election of directors is based on the "Rules for Election of Directors", adopting a system of nomination of candidates for election by the shareholders' meeting, and a registered cumulative voting system whereby each share has the same number of votes as the number of directors to be elected, and the votes may be allocated to just one person or a number of persons. Based on the number of seats in accordance with the Company's Articles of Incorporation and related announcements, the candidates who receive more votes shall be elected as directors and independent directors in order, respectively.

The composition of Unimicron's Board of Directors refers to the provisions of Article 20 of "Corporate Governance Best Practice Principles", and considers the operation type and development needs to formulate an appropriate diversity policy, including but not limited to the following two major aspects of the standards:

1.Basic conditions and values: Gender, age, nationality, culture, etc.

2.Professional knowledge and skills: Professional background, professional skills, industry experience, etc.

Board members should possess the knowledge, skills and literacy necessary to perform their duties, including operational judgment, accounting and financial analysis, management skills, crisis management, industry knowledge, international market perspective, leadership and decision-making skills.

The independent directors of Unimicron shall concurrently serve as independent directors of no more than three other public companies, and at least one of them shall have accounting or financial expertise. Each director shall not have a spouse or a relative relationship within the second degree of affinity.

Unimicron established the "Methods to Evaluate Performance of the Board" in 2020 to conduct regular performance evaluations of the Board, Board members, and functional committees on an annual basis, and at least once every three years by an external professional and independent organization or a team of external experts and academics. The results of the Board performance evaluation will be used as a reference for the selection or nomination of directors.

Board of Directors

The members of the Board of Directors are elected by all shareholders at the shareholders' meeting in accordance with the "Rules for Election of Directors" in accordance with the law and the Company's Articles of Incorporation. The committees of the Board of Directors are nominated and selected by the Board of Directors in accordance with their organizational procedures. All three independent directors meet the requirements of professional qualifications, working experience, restrictions on concurrently serving as an independent director and independence under the “Regulations Governing Appointment of Independent Directors and Compliance Matters for Public Companies.”

In order to improve the functions of directors and encourage directors to actively participate in training courses, the Company arranges training courses from time to time. In 2022, the total number of training hours for all directors was 76 hours. Each director has 6 hours of advanced training, with an average of about 8 hours of training. The training content covers low-carbon economy, corporate governance, corporate sustainability, ESG, corporate mergers and acquisitions, risk management, legal practices, etc., so as to strengthen the functions of the Board of Directors. Directors' training in 2022 was disclosed on Page 22 of Unimicron's 2022 Annual Report.

Professional and Background of Directors

Name/Criteria	Gender	Age	Professional and Background[Note 1]	Independence Status[Note 2]	Number of Companies also Serves as Independent Director for
Tzyy-Jang Tseng	Male	71~80	Physical engineering and strategic management, Electronics-related industry experience	-	0
SC Chien	Male	61~70	Engineering technology and organizational leadership, Electronics-related industry experience	-	0
Chi-Tung Liu	Male	51~60	Financial accounting and strategic management, Electronics-related industry experience	-	0
Louis Chien	Male	61~70	Company operations management and organizational leadership, Electronics-related industry experience	-	0
Yen-Shen Hsieh	Male	71~80	Investment and operating decisions, Biotechnology and medical related industry experience	-	1
Ting-Yu Lin	Male	51~60	Financial accounting and strategic management, Banking Finance and business policy-making, Electronics-related industry experience	-	0
Grace Li	Female	51~60	Financial accounting and strategic management, Semiconductor-related industry experience	Meet the independence criteria	1
Lai-Juh Chen	Male	51~60	Corporate management decision and corporate sustainability, Electronics-related industry experience		2
Terry Wang	Male	51~60	Financial accounting and risk (insurance) management, Electronics-related industry experience		0

Note 1: All directors are not under any condition pursuant to Article 30 of the Company Act. Please refer to Pages 4-5 of the Annual Report & the Company's website for Directors' relevant industrial experience.

Note 2: None of the Independent Directors of the Company, their spouses, or relatives within the second degree of kinship serve as directors, supervisors or employees of the company or its affiliates or having a specific relationship with the Company. None of them (or in the name of others) hold any shares of the Company. In the last two years, they do not receive any remuneration for providing business, legal, financial, accounting and other services to the Company or its affiliates.

The Diversity & Independence of the Board of Directors

Diversity

The board of directors of the company consists of directors with different professional backgrounds, whose professional backgrounds cover business management, financial accounting, chemical industry, physics, investment and other fields. The members include general managers and chief financial officers of listed companies, operators of technology industry and investment companies, semiconductor and Professionals with relevant experience in the electronics industry, chairman of the Taiwan Digital Federation of Enterprises, etc., in addition to having basic conditions and professional knowledge and skills, through the operation of functional committees, the experience of directors can be used in corporate governance, environmental sustainability, and corporate society. In the supervision and decision-making of responsibilities and compliance with laws and regulations, we provide professional advice and opinions in different aspects from diversified industry experience, which are quite helpful to the company's business plan and policy formulation. The board of directors is the highest governance unit of the company, and its main functions and powers include reviewing business performance, preventing conflicts of interest, and implementing laws and regulations. The Company holds board meetings at least once a quarter and operates in accordance with the Company's "Rules and Procedures of Board of Directors Meetings". For more information, please refer to the Directors' information, the director's professional competence matrix and Unimicron's website.

Independence

The board of directors of the company is composed of nine directors with different professional backgrounds. There are three independent directors (including one female director), accounting for one-third of all directors, and their terms of office shall not exceed three terms. The company pays attention to the independence and gender equality of board members, sets a target of at least three independent directors and at least one female director, and continues to maintain a 100% achievement rate for this goal.

Board Performance Evaluation Linked with Sustainability Performance

Unimicron regularly executes the performance evaluation of the Board, Functional Committees, and Individual Directors every year by following “Methods to Evaluate Performance of the Board”. To improve the effectiveness of the Board of Directors, Unimicron’s financial department (stock affairs) collects the operating information of the Board of Directors before mid-January each year, sends the questionnaire to all directors (including independent directors) by email for self-evaluation, and collect and compile the questionnaires at the end of January. The results of the performance evaluation of the Board are reported to the directors regularly before the first quarter of each year, and the implementation and evaluation methods are disclosed in the annual report. In addition to the internal evaluation, at least once every three years, the Finance Department (Stock Affairs) will request an external evaluation agency or experts to evaluate the performance of the Board of Directors.

The evaluation results of the Board and Functional Committee (including Audit Committee and Remuneration Committee) self-assessment and self-assessment of directors members in 2022 were “excellent”. The Company engaged with an external independent institution, Taiwan Corporate Governance Association, to conduct an assessment of board performance, and completed the evaluation in 2022. The assessment comprised 8 scopes including Composition, Direction, Authorization, Monitoring, Communication, Internal control, Risk management, Discipline of the Board and Others, and was executed through online self-assessment and video interview. The assessment report was released on February 18, 2023, and reported to the Nominating Committee and the Board on March 13, 2023. Please refer to the Company’s website “Investors/Corporate Governance”.

The Company’s policies, standards, and packages for payment of remuneration and the procedures for determining remuneration are mainly implemented in accordance with personnel-related regulations of the Company and the “Remuneration Committee Charter”. Please see Pages 18-19 of the 2022 Annual Report for more information. Remuneration to Directors and employees is distributed in accordance with the “Articles of Incorporation”. These are submitted to the Remuneration Committee for resolution, approved by the Board of Directors and then reported at the shareholders’ meeting. The remuneration of directors and managing officers of the Company takes into consideration industry standards, as well as the reasonableness of the connection between remuneration and individual performance, the Company's business performance, and future risk exposure. As for employee remuneration, it takes into account industry standards, as well as the competitiveness of the Company’s talents in the industry. The Company’s overall business performance and profit, budget planning and performance review of various units, occupational disaster prevention, environmental indicators, market planning, and future operational risk evaluations are all important bases for distribution. When evaluating directors' compensation or remuneration each year, the Payroll Section of the Human Resources Department determines individual directors' compensation based on the results of their performance evaluations, and the linkage between the Board's remuneration and sustainable performance is as follows:

- Establish the Company’s core values (discipline, mission, honor, vision, etc.) and be able to set all of the Company’s strategic goals
- Have regular and efficient performance evaluations on the Board of Directors, Board members, and functional committees
- Understand and monitor the Company's accounting system, financial status and financial reports, audit reports and their tracking status
- Scrupulously integrate the risk assessment and control of the management into the Company's decision-making process
- Scrupulously evaluate and monitor the Company’s existing or potential risks, and discuss the implementation and tracking status of the internal control system

Conflict of Interest Management

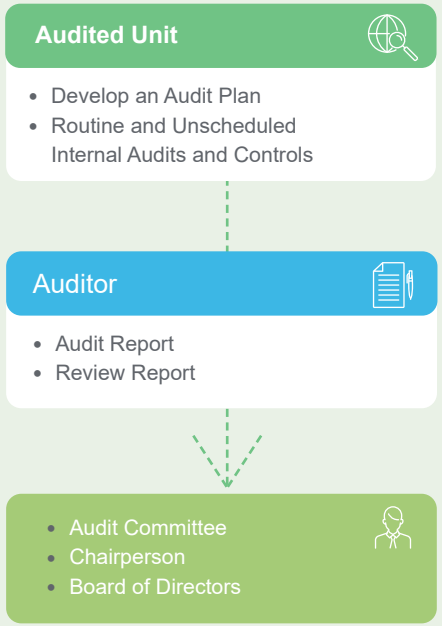
Unimicron's “Rules and Procedures of Board of Directors Meetings”, “Audit Committee Charter” and “Remuneration Committee Charter” all stipulate the provisions of conflicts of interest, stating that directors themselves or the legal persons they represent who have an interest in the matters of the meeting shall make an explanation at the current board meeting. If it has the likelihood to be detrimental to the interests of the Company, he/she shall not participate in the discussion and vote, shall recuse himself/herself from the discussion and vote, and shall not be a proxy on behalf of other directors to exercise their voting rights.

Functional Committee

In order to enable the Board of Directors to carry out its supervisory, audit and management functions, Unimicron has established “Remuneration Committee” and “Audit Committee” under the Board of Directors to effectively carry out the duties of each functional committee and to implement the authority and responsibility of management and supervisory. For members and major resolutions of the "Remuneration Committee" and "Audit Committee", please refer to Operation of the Remuneration Committee on Page 36 and Operation of the Audit Committee on Page 23 of the 2022 Annual Report.

2.1.2 Internal Control

The audit office executes the annual internal audits and controls based on audit plans regularly and irregularly. There are 1 audit supervisor and 8 full-time auditors. The auditors attend courses at educational institutions, regular meetings and seminars held by the Internal Audit Association and the Computer Audit Association every year. In 2022, 60 audits were conducted, and 10 operational deficiencies were found. The deficiencies were tracked and reviewed on a quarterly basis, and the improvement rate was 100%. Based on the audit results, the audit supervisor will report to the board of directors and the Audit Committee on a regular basis to confirm the effectiveness of the internal control system.



2.2 Ethics and Integrity

Topics	Business Ethics
Policy	• Code of Conduct
Commitment	• Comply with the "Fair Trading Act" • Implement the integrity requirements of the "Code of Ethics"
Division	• Company-wide • Employees and suppliers
Resources Invested	• E－learning • Investigate integrity-related complaints
Grievance Mechanism	• Whistleblower hotline and mailbox
2022 Targets	• Completion of education and training on Code of Conduct and Antitrust training >95% • Issued integrity notification to the supplier twice a year
Actions	• Training • Supplier Integrity Notification Letter and Whistleblower Mechanism • Receiving and investigating integrity-related cases
2022 Achievements	✓ Completion rate of training on Personnel Code of Conduct: 99.42% ✓ Completion rate of Antitrust Training: 99.96% ✓ Supplier Integrity Notification Letter and Whistleblower Mechanism: 0 cases of integrity-related cases received and investigated in 2022

2.2.1 Behavioral Specifications

Unimicron upholds the principle of compliance to operate the business, and has formulated the “Legal and Other Requirements Identification Procedure” and the “Guides to the US Antitrust Law.”, it also requires all divisions to conduct regular reviews, improvements and cooperate with the auditing operations to ensure full implementation of regulatory requirements. We regularly communicate with suppliers about our Anti-corruption Policy through Email and other channels and disclose Anti-corruption Statements on our website.

Unimicron operates in strict compliance with laws and regulations. Under strict management, Unimicron has not been fined a large amount (over NT$1 million) by the authorities for violating laws and regulations in 2022. There were no corruption or anti-competitive incidents in 2022. The violations of the Occupational Safety and Health Act in 2022 were mainly related to the installation of facilities. In response to the violations, the Company has removed the unsuitable facilities and strengthened the safety devices on site and the safety of the tools used in the workplace. In response to the violations of the Labor Standards Act, the main reason was the poor control of working hours, and the company has fully reiterated the working hour regulations to prevent the recurrence of the same violation.

Fine for Violation in 2021 & 2022

Year	Act	Event（Cases）	Penalty（NT $）
2021	Labor Standards Act	3	270,000
	Water Pollution Control Act	1	52,500
	Total	4	322,500
2022	Labor Standards Act	3	400,000
	Waste Disposal Act	1	1,200
	Occupational Safety and Health Act	4	320,000
	Total	8	721,200

Code of Conduct

Unimicron creates "Integrity Regulations" and "Personnel Code of Conduct" for all employees, clearly sets rules for the employment of relatives and associated suppliers, and upholds integrity in dealing with customers. Unimicron will also ensure the implementation of the mechanism through the following measures every year, and the relevant practices cover Taiwan Facilities and Mainland China Facilities. All stakeholders can report various opinions to the Company through the grievance mechanism, and various communication channels link to Contact Us on Unimicron's website.

New Recruit

The "Company Integrity Regulations" are taught during the training of new recruits, and the relevant terms are included in the employment contract.

Manager Level[Note]

Supervisors above the manager level sign the "Employee Integrity Code Compliance Contract" every year, and the signing rate in 2022 reached 100%.

Above of Engineer ／ Administrator

Every year, we conduct "Integrity Survey" and "Investment and Employment Status of Employees and Relatives in the Company, Associating Suppliers, or Competitors" for personnel above the engineer/administrator level of each unit. Respondents who accepted the survey of employment of relatives and integrity regulations in 2022 were personnel in engineering management positions in Taiwan, whereas personnel in Mainland China were different for each plant; the number of people surveyed was 5,461 from Taiwan Facilities and 12,228 from the overseas Facilities, without any violations.

Grievance and Whistleblowing Mechanism

If employees find any violation of ethical corporate management, they can file whistleblowing or grievance anonymously to Unimicron's Audit Team or Human Resources Division through telephone, email or suggestion box in accordance with the "Code of Integrity" (the information on the grievance channel is posted on the Company's intranet site, and is also promoted at the same time during the new employee education and training), or raise the issue at labor-management meetings/employee discussion forums in each factory, and the handling unit shall set up a task force to investigate.

Grievance Handling Process

Grievance Channel
- Telephone, email, or employees' suggestion box
- Human Resources Division's supervisor grievance hotline
- Labor-management meeting/ each factory's employee discussion forum
- Audit Office's grievance (appeal) hotline

Clarification ／ Acceptance ／ Investigation
- Human Resources Division
- Audit Office
- Chairperson of the ESG Committee
- Handling team formed by relevant persons invited on a case-by-case basis

Reporting and Decision
- Employee Grievance Investigation Record and Closing Report
- Punishment for violations of the "Work Rules"
- Strengthen internal and external advocacy and education training
- Refer the grievant to professional counseling or medical institutions if counseling or medical treatment is necessary

Whistleblowing handling process

Whistleblowing Channel
- Whistleblowing hotline: +886 － 3 － 3500386 ext.13307
- Whistleblowing email address: whistleblower@unimicron.com
- (Emails to this email address will be automatically forwarded to the level 1 supervisor of Audit Division and the level 1 supervisor of Human Resources Division.)

Clarification ／ Acceptance ／ Investigation
- Clarify whistleblowing/complaints and general whistleblowing/complaints of violations of professional ethics (involving fraud, anti-corruption, and antitrust). Whistleblowing/complaints of violations of professional ethics are accepted and verified by the Audit Office

Reporting and Decision
- Take punitive and follow-up measures according to the severity of the case, if necessary, report to the competent authorities or referred to the judicial authorities for investigation
- If the whistleblowing matter involves a director or senior executive, the handling unit shall report the matter to the independent director or supervisor of the Group

Protection Mechanism

The identity of the whistleblower/grievant is kept confidential. Appropriate protection measures are taken to protect the personal information and privacy of the whistleblower/ grievant in accordance with the law, and the whistleblower/ grievant is protected from improper disposal due to whistleblowing/grievance matters. In order to ensure that the whistleblower is reprimanded for his or her kindness in whistleblowing, the Company's acceptance unit must take the initiative to concern the whistleblower/grievant by telephone or mail whether the whistleblower/grievant is reprimanded; once a complaint of retaliation is received and there is concrete evidence, it will be called to the police immediately. The total number of grievances received in 2022 was 8. No ethical management-related grievances were received, and no corruption and bribery cases occurred.

Grievance Cases in Recent Years

(Unit： Cases)

Region	2019	2020	2021	2022
Taiwan	7	7	7	5
Mainland China	1	3	6	3

2022 Grievance Cases

Region	Type	Cases	Improvement	Case Closed
Taiwan	Work Management	3	Immediately improve and strengthen advocacy	✓
	Work ／ Public Environment	2	Immediate repair and reinforcement and regular inspection	✓
Mainland China	Accommodation Management	1	Strengthen the management and punish the violators according to the management rules	✓
	Training and Development	1	According to the Company's regulations, employees can improve their own qualifications to meet the standards	✓
	Salary and Benefits	1	According to the company's regulations, regular reference to industry standards and re-examination	✓

Note: Unimicron organizes regular professional ethics training courses. Regarding the professional ethics training courses for members of the relevant governance units, as the COVID-19 pandemic was still spreading in 2022, considering the pandemic, the Company advocated it to the members of the Board of Directors by e-mail.

2.2.2 Public Disclosure

In compliance with the regulations of the competent authorities, investors can access Company-related information through the Market Observation Post System. In addition to disclosing our general information, technology R&D, and ESG, the Unimicron website also has an investor relations section, providing relevant documents and regulations on our financial information and corporate governance.

We hold Institutional Investor Seminars semiannually to explain the consolidated financial results, operational status, and prospects of every quarter. We also provide relevant information and video recordings on Unimicron's website and the "Market Observation Post System" for investors. The Company also communicates with investors through various investor meetings, overseas visits, and investor relations points of contact. In 2022, we participated in 29 external and self-organized investor conferences, for more than 200 meetings, including interviews with investors. There were no material violations caused by competent authorities for environmental protection, OSH, and Labor/management relations/human rights in 2022 and after examination and confirmation, all deficiencies have been improved.

Market Observation Post System
Provide access to Unimicron-related information

Corporate Governance Zone
Provide documents and regulations related to the corporate governance

Institutional Investor Conference
Regularly hold an institutional investor conference semiannually to explain quarterly consolidated financial figures, operating conditions and prospects

Financial Information
Quarterly or full-year financial information

Stakeholders Zone
Communication channels such as shareholders/investors, employees, authorities and communities, suppliers, whistleblower system, ESG Committee, etc.

Training of Laws and Regulations

There are many integrity management regulations in Unimicron, and we hold relevant training courses every year. The Company also provides reminders of relevant regulations from time to time and creates a consultation channel so that the regulated objects can understand and comply with them.

Course	Content	Participants	Employees Should Be Trained	Employees Trained	Region	Type	Total Employees Trained	Completion Ratio (%)
Personnel Code of Conduct	• Purpose • Applicable objects • Environmental, safety and health policies • For the society • For investors • For customers • For suppliers • For the business market • Commitment to employees • Expectations for practitioners • Whistleblower system and grievance system • Discipline	All of the employees must be trained (Including Taiwanese stationed in Mainland China who have been employed for 3 months)	13,376	13,298	Taiwan	DL	9,388	99.42%
						IDL	3,733	
					Mainland China	DL	15	
						IDL	162	
The RBA Code of Conduct	• The Responsible Business Alliance (RBA) Code of Conduct • ESG Executive Summary		13,376	13,298	Taiwan	DL	9,388	99.42%
						IDL	3,733	
					Mainland China	DL	15	
						IDL	162	
Integrity Best Practice Principles	Code of Integrity		13,376	13,298	Taiwan	DL	9,388	99.42%
						IDL	3,733	
					Mainland China	DL	15	
						IDL	162	
Antitrust Law	• Case study • Unimicron standard operating procedure • Fair Trade Act	Job level 5 (inclusive) and higher in Taiwan (including DL and Taiwanese employees stationed in Mainland China who have been employed for 3 months) *Job level 11 and higher in QunHong Technology Inc.	4,733	4,731	Taiwan	DL	1,019	99.96%
						IDL	3,545	
					Mainland China	DL	5	
						IDL	162	
Advocacy of the Ethical Corporate Management Best Practice Principles	Code of Conduct on Integrity	Job level 5 (inclusive) and higher in Taiwan (including DL and Taiwanese employees stationed in Mainland China) *Job level 9 and higher (Not including DL) in QunHong Technology Inc.	4,753	4,751	Taiwan	DL	1,019	99.96%
						IDL	3,565	
					Mainland China	DL	5	
						IDL	162	
The Law and Ethics of Trade Secrets	• Example of leakage of trade secrets • Trade Secrets Act • The introduction of tortious act • Other civil and criminal liabilities • Confidentiality obligations of employees • The concept of Non-competition • Summary	Job level 5 (inclusive) and higher in Taiwan (including DL and Taiwanese employees stationed in Mainland China who have been employed for 3 months) *Job level 5 and higher (Not including DL) in QunHong Technology Inc.	4,936	4,929	Taiwan	DL	1,019	99.86%
						IDL	3,743	
					Mainland China	DL	5	
						IDL	162	
Prevention of Insider Trading	• Equity trading regulations for senior management • The elements of Insider Trading • Legal liability of Insider Trading • Case study		4,936	4,929	Taiwan	DL	1,019	99.86%
						IDL	3,743	
					Mainland China	DL	5	
						IDL	162	

Note 1: RBA, Personnel Code of Conduct, Code of Integrity and Prevention of Insider Trading have all been planned to be included in new employees' training courses to implement the training mechanism and increase the training rate. Those who have not completed the training in 2022 will be included in the training list for the following year.

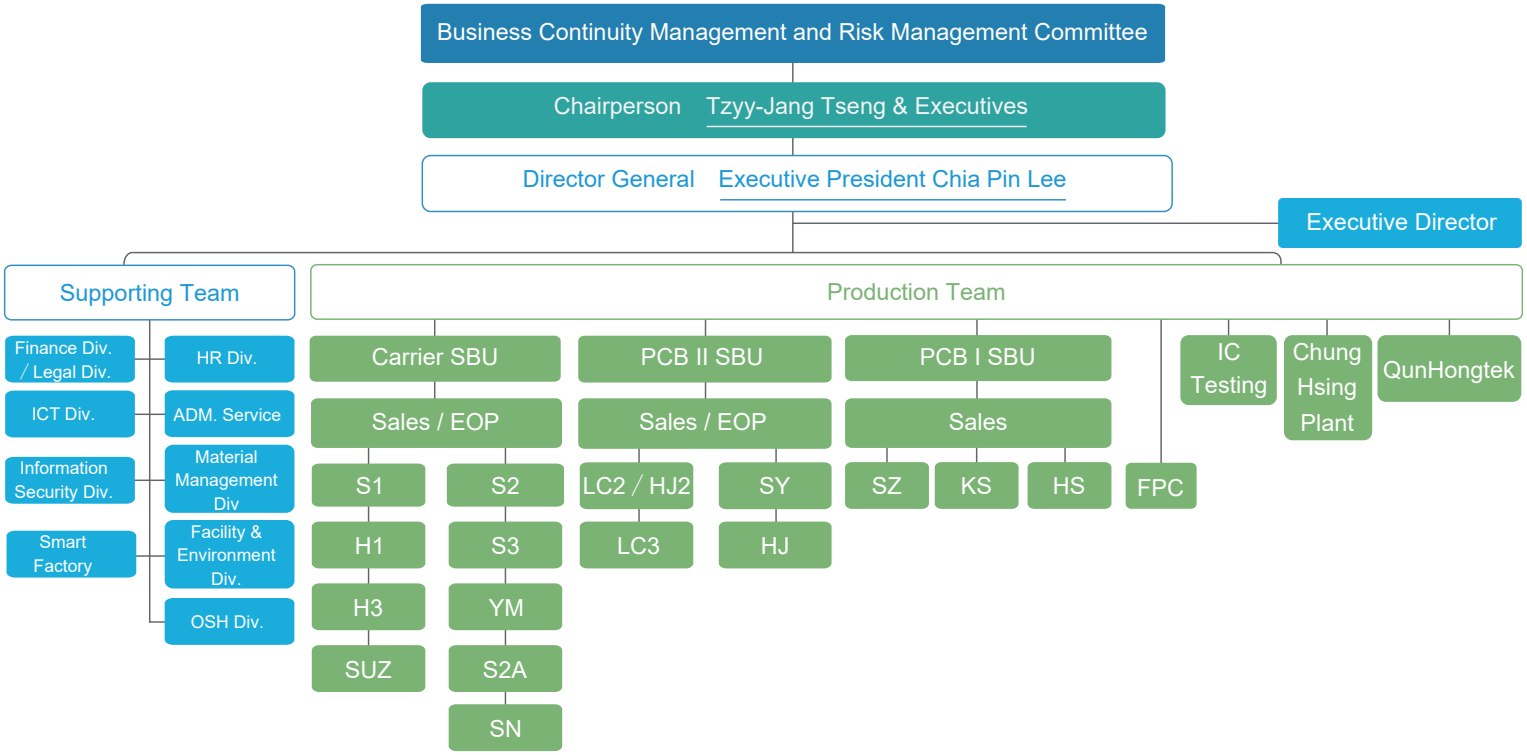
Note 2: The training starts from July to Sep. in 2022.

Note 3: The scope of the above table includes QunHong Technology Inc.

2.3 Risk Management and Information Security

2.3.1 Business Continuity and Risk Management

In response to several risks that may influence operation, Uinimicron established the “Business Continuity Management and Risk Management Committee” in 2021, and regularly reports to the Board of Directors at least once every year. To prevent and control corporate risks effectively, we have established the "Business Continuity Management & Risk Management Policy" approved by the Board of Directors and 14 relevant operating rules and regulations to address and manage related risks according to departmental authority and responsibility. We regularly perform risk assessment, risk mitigation, and regular follow-up reviews, and formulate and adopt corresponding risk management plans to enhance the resilience of sustainable management.



Business Continuity Management & Risk Management Policy

Unimicron, through the three main pillars of “Caring for the Planet, Respecting People, and Pursuing Performance” creates positive value for employees and all shareholders, and gradually implements the corporate vision of a “world-class, high-tech Company with high value-added, high quality, high productivity and emphases on innovative service” and “pursuing the satisfaction of customers, employees, and shareholders and fulfilling their responsibilities,” taking into account the sustainable growth of enterprises as the highest purpose of continuous management. Committed to proactively maintaining risk and crisis management, through the operation of business continuity management organization, the implementation of operational impact analysis and risk assessment in the event of changes in the operating situations, based on the formulation of operational continuity strategies, objectives, and contingency mechanisms, adequate resources to support and implement, continue to review and improvement. When disasters or shocks occur, in accordance with the operational strategy of rapid response, maintain and resume operations, to keep good communication with customers and stakeholders, and ensure their best interests.

Note: Policy discussed and approved by the board of directors on December 19, 2022.

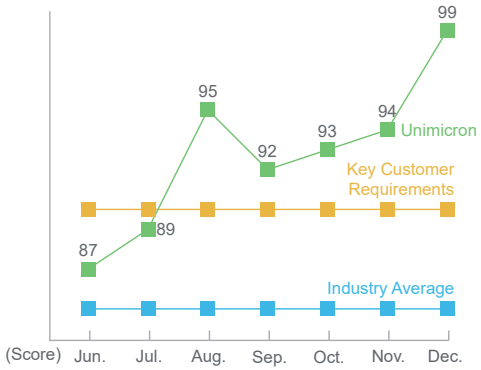
Scope of Risk Management	Risk Management Mechanism	Operation
• Operational Risk: The risk of uncertainties in the Company's operations affecting normal operations, such as material shortage or improper production scheduling, product quality risk, labor dispute risk, and information system risk. • Financial Risk:Financial and business risks caused by economic and industrial changes, such as interest rate, exchange rate, liquidity and credit risks. • Strategic Risk:Losses caused by wrong strategies, such as over-concentration of sales territories, over-concentration of customers and mergers and acquisitions. • Hazard:The risk of loss caused by major natural or man-made disasters (such as Climate change, earthquakes, fires, chemical spills and epidemic infectious diseases). • Compliance Risk: The potential loss resulting from failure to comply with government regulations.	• Risk Assessment and Risk Mitigation: Review various potential risks every year, classify them and score them according to the established risk index. Then, prioritize mitigation plans for those with higher assessed risks. To avoid the losses caused by risks, Unimicron has purchased a complete variety of insurance (such as property insurance, operation interruption insurance, installation engineering insurance, cargo transportation insurance, product liability insurance, etc.) to ensure that when risks occur, Unimicron still has sufficient capacity and resources to carry out subsequent operation restoration, and indeed to fulfill all commitments to our customers. • Contingency Plan: In response to a major disaster, Unimicron has formulated the organization and resource planning of the corresponding crisis management team, and established a contingency plan to enhance response efficiency shorten recovery time and reduce the impact on operations after the event. • Drill and Continuous Improvement: Each department conducts a single or comprehensive drill in accordance with the plan for unexpected situations and makes recommendations for review and improvement. Through regular drills, point inspections, and mutual support of group resources, we could ensure continuity of operation within the maximum scope under a state of distress, minimizing the affected time and impact.	**2021** ✓ Establishment of the Business Continuity and Risk Management Committee. ✓ Formulation of the “Business Continuity and Risk Management Policy”. ✓ Formulation of the “Constitution and Operation of the Business Continuity and Risk Management Committee“. ✓ Establishment of “Risk Management Procedure” for each division to conduct risk assessment and prepare mitigation plans. **2022** ✓ Completed risk assessment and mitigation plan. ✓ For COVID-19, the Material Management Division conducted the investigation, evaluation, and management of suppliers following the "Procurement Risk Management Procedures". There were no incidents affecting production. ✓ Reported to the Board of Directors.

2.3.2 Information Security

Topics	Information Security
Policy	• Information Security Policy
Commitment	• Dedicated to ESG Governance Strategy, enhancing customer satisfaction and trust, and strengthening sustainable development
Division	• Information Security Committee
Resources Invested	• Cross-departmental collaboration through biweekly meetings to continuously review results
Grievance Mechanism	• Representatives from Information Security Committee
2022 Targets	• Major information security incidents: 0
Actions	• Strengthen the security of critical supply chain information and promote Transport Layer Security (TLS)
2022 Achievements	✓ Major information security incidents: 0

Protecting customers' intellectual property rights and business information is the focus of our business and business ethics management. Through a comprehensive "Information Security Policy" and the control of ISO 27001 Information Security Management System, Unimicron's main focus of information security in 2022 is supply chain information security management. As a key partner in our customers' upstream supply chain, Unimicron is committed to enhancing customer confidence and achieving better than industry average and key customer requirements through various third-party information security audit platforms, proving Unimicron's information security maturity is better than the standard.

Information Security Maturity Assessment for the Second Half of 2022



Information Security Goals

In order to maintain the confidentiality, integrity and availability of the Company’s information assets, and to protect the privacy of customers and personal data, Unimicron has formulated an information security policy and hopes to achieve the following goals through the joint efforts of all employees in the Company:

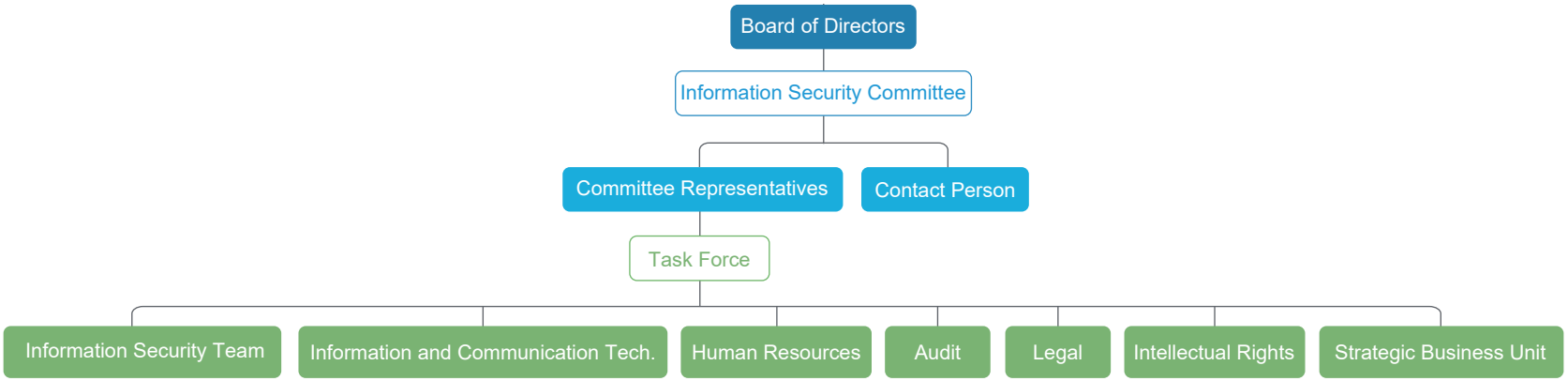
Confidentiality：Ensure that only authorized personnel can obtain information and avoid information leakage.

Integrity：Ensure that information is not subject to unauthorized tampering and the correctness of information processing methods.

Availability：Ensure that authorized users can obtain information and use related assets when needed.

Information Security Committee

Unimicron has set up an Information Security Committee to manage the information protection mechanism at the corporate level. In 2022, the Company established a Chief Information Security Officer (CISO) and a dedicated information security unit to lead biweekly information security meetings and improve operations through PDCA rolling reviews, including mechanisms such as internal information security advocacy and drills, asset inventory and classification, data access control, information security alerts, etc., regularly providing information security reports to the Chairperson of the Board of Directors and senior executives of our business divisions and obtaining international information security certification, to reduce information security risks and protect customer privacy.



The Role & Responsibility of Information Security SIG

Information Security Team	• Host security meetings • Formulating security policies and strategies
Information and Communication Tech.	• Systems and technical management assessment • Security system maintenance and permission adjustment
Human Resources	• Training scheduling and announcement • Staff regulations and reward/punishment process
Audit	• Effectiveness assessments of security policies • Security incidents escalation and following
Legal	• Security related laws and regulations following • Legal interpretation and consulting
Intellectual Rights	• Trade secret and patents asset review and value definition assistance • Trade secret and patents system maintenance
Strategic Business Unit	• Promoting security policies to departments and keep following • Submit feedback from departments and be bridges between business units and committee • Respond to security incidents in business units

Information Security Management Plan

To protect customers' intellectual property rights and confidential corporate documents, in addition to a comprehensive information security policy and annual ISO/IEC 27001 Information Security Management System certification, Unimicron develops specific management related to the six major aspects of Risk Assessment, Terminal Computer Management, Computer Room Management, Anti-virus and Anti-hacking Management, System and Network Security Management, and Training to properly maintain customer data and information security.

During the pandemic period, the email application was promoted to cloud services, and virtualized desktops were used to support the operational resilience of remote working during the pandemic period. At the same time, a web application firewall was built to actively protect the information security vulnerabilities of the Group's external websites. In response to the full termination of support for Microsoft's IE browser, corrections of internal system compatibility were made, and Managed Detection and Response (MDR) service was also provided to strengthen Unimicron's overall information security protection and mitigate risks.

Risk Assessment	Measures: We review risks and management measures through ISO 27001 Information Security Management System and company-wide bi-weekly Information Security Committee meetings, and submit bi-monthly reports. Achievements: Build a web application firewall, define and strengthen machine risks in the factory area, correct compatibility of various systems in response to the elimination of IE platform, promote email encryption in the upstream supply chain, strengthen the identification of watermarks of smart business machines, gradually replace client operations system, etc.
Training	Through physical and digital E-based courses, regularly conduct 3 training and verification of "information security," "trade secret protection" and "patent and copyright protection" to employees, to establish employees' awareness of sensitive information protection, and implement trade secrets inventory and classification management every year to protect Company and customer data.
System and Network Security Management	Completed 12 vulnerability scans and bug fixes according to Information Security Control Guidelines for Listed and OTC Companies and customer requirements.
Terminal Computer Management	Utilize the Managed Detection and Response (MDR) service to establish an advanced continuous threat detection mechanism to quickly detect abnormal behaviors of the system's information security.
Computer Room Management	Use the following three sets of systems to support each other to construct a secure physical computer room environment and to protect the system and customer data security: Central Access Control System: Control the entrance and exit of the computer room, allowing only authorized employees to access, while retaining the entry and exit records and integrating face recognition system gradually. CCTV System: Have 24-hour full-area video monitoring of the computer room, and through the sensing mechanism, automatically send out an alarm when an abnormal intrusion occurs. Environmental Control System: Monitor the environment (temperature, humidity, power) of the computer room 24 hours a day.
Anti-Virus and Anti-hacking Management	Strengthen the Machine Protection: Introduce the machine virus-free certificate management mechanism. The firm supplying the machine shall submit a virus-free certificate, and the machine can only be connected to the network after it is checked by Unimicron to be virus-free. Regular anti-virus audits shall be conducted on the machines. Network Firewalls and Hacker Intrusion Detection and Defense Systems: To detect, block and alert about external threats and with the help of external information security organizations, provide Security Operation Center (SOC) services, 24-hour round-the-clock information security incident analysis mechanism.

2022 Information Security Management Results

Supply Chain Information Security Management	Key suppliers are required to set up email Sender Policy Framework (SPF) and Transport Layer Security (TLS) to ensure secure data exchange. We have also strengthened the depth of organizational defense through various third-party information security audit platforms, and the rating of the Group exceeds industry standards and key customer requirements on each platform.
Security Operation Center (SOC)	Complete the establishment of the Security Operation Center (SOC) service in Taiwan for rapid response to information security incidents by 2022.
Definition of Factory and Machine Risk and Strengthening	According to the protection and resilience, the machines are classified into four risk levels, such as A, B, C, and D in Taiwan. 360 high-risk (A class) machines have been mitigated and will be continuously improved in 2023.
Internal Information Security Advocacy and Drill	We hold regular information security advocacy and testing for employees, in 2022, we issued 4 announcements, held 9 unannounced social attack drills (phishing email), and conduct a companywide e-Learning information security course in the fourth quarter of each year to deepen employees' information security awareness through experience.

Email Drill	Test Subjects	Result	Enhancement Measures
First Test	Employees with Email accounts	Open malicious link and enter account password: 0.6% (2.2% in 2021 / 3.1% in 2020)	For employees who failed the test, Unimicron has completed the second propaganda and arranged a test
Retest	Employees who failed the first test (217 employees failed the test)	Open the malicious link and enter account password: 4 employees failed the test	Individual training by the supervisor

2022 Information Security Training Course

Course	Participants	Employees Should Be Trained	Employees Trained	Completion Rate (%)	Course Hours
Information Security Advocate	Job level 5 (inclusive) and higher in Taiwan and Taiwanese employees stationed in Mainland China (including DL)	4,561	4,559	99.96	1 hour
The Law and Ethics of Trade Secrets					1 hour
Trade Secret Advanced Course					1 hour
Intellectual Property Rights					1 hour

Note 1: The employees on board since April 1, 2022, who have not completed the training will be included in the training list for the following year.
Note 2: 2 employees who have not completed training, 1 employee was on long-term sick leave, and 1 employee was on maternity leave.
Note 3: The training starts from July 1 to Sep. 16, 2022, employees who should be trained are Taiwanese and Taiwanese employees (including DL) stationed in Mainland China at level 5 (or above) who have arrived at least three months before March 31, 2022.

Information Security Incident Notification Process

Occurrence of Incident

Report immediately in accordance with "Unimicron's Information Security Incident Notification Management Procedures".

Reporting

- The unit head reports to the Information Security Officer.
- The Information Security Officer classifies incidents according to internal Information Security regulations, whether the case is a major anomaly, whether the case is a breach of confidentiality, and whether the case involves a first-level supervisor.

Handing of Leakages

It shall be reported to the supervisor at that level and the responsible unit. If it is a major event, it must be reported to the first-level supervisor and the president of the business division, Chief Information Security Officer and the Executive President. If it is a major abnormality and suspected leak event, it shall be reported to the Human Resources Department and the Audit Office.

Handling of the Information Security Incident

It shall be handled by the Legal / Human Resources Department under law or regulations.

Case Closure

If it is an information security incident of level 3 or higher, the "Information Anomaly Incident Report" must be filled out and submitted to the Information Security Officer or higher.

Information Security Incident

Description	Unit	2019	2020	2021	2022
Major Information Security Concerns	Case	0	1	0	0
Breaches of Customer Privacy	Case	0	0	0	0
Customers Affected by Data Breaches	Customer	0	0	0	0
Total Monetary Value of Significant Fines for Non-compliance with Information Security Concerns	NTD	0	0	0	0

Important Information Security Project

In response to the increasing complexity of external attacks, Unimicron has adopted a defense-in-depth concept for information security protection by adopting protection mechanisms of deploying firewalls, mail filtering, endpoint security protection, Multi-Factor Authentication, and other protection mechanisms to protect information assets. We also use an external third-party information security testing platform as an objective basis to measure the maturity of information security. In 2022, we introduced Security Operation Center (SOC) mechanism to enhance the visibility of each information link and accelerate the response speed to information security incidents and adjusted the information security framework through regular audits to meet the requirements of continuous operations and regulatory authorities.

2022 Information Security Enhancement Measures

In 2022, in order to enhance the company's overall information security capabilities, the following management plans have been strengthened and completed.

- Flow Control: Strengthen internal and external cross-plant firewall and abnormal flow detection and analysis capabilities, endpoint computer data output record check and analysis.
- Account Control: Strengthen multi-factor authentication and authorization control of bastion hosts.
- Backup Optimization: Data backup and instant recovery structure improvement.
- Governance Policy: Enhancing vulnerability scanning, 24H service, and Security Operation Center (SOC), USB management, hand-held mobile camera device management, information classification security system, printing control, employee information security training and phishing drills, etc.
- Investing Resources: Set up the Chief Information Security Officer (CISO) and a dedicated information security organization, and join the information security sharing organization Taiwan Computer Emergency Response Team / Coordination Center (TWCERT).

2.4 Sustainable Supply Chain

Topics	Sustainable Supply Chain
Policy	• Fulfill the Responsible Business Alliance's "RBA Code of Conduct" as the basic principle for conducting business activities
Commitment	• Sustainability and co-prosperity, providing total quality that meets customers' satisfaction
Division	• ESG Committee • Supply Chain Subcommittee • Sales, Customer Service, Materials Management Division and Quality Management Division
Resources Invested	• Organize a supplier conference • On-site audit of CSR suppliers and deficiency counseling materials • Daily advocacy
Grievance Mechanism	• Whistleblower hotline and mailbox
2022 Targets	• Upstream and downstream supply chain management meeting the requirements of quality/cost/delivery/service/technology and CSR management system and fulfillment of CSR commitments
Actions	• Meet customers' requirement • Advocacy to suppliers/Supplier evaluation/Supplier audit/Supplier assessment
2022 Achievements	✓ The completion rate for signing Supplier Corporate Social Responsibility Commitment Letter: 96%

Sustainable Supplier Management

Unimicron promises to establish a supplier management system and specifications and communicate with them every year to establish a stable and sustainable development of a win-win strategic partnership. To promote the sustainable management of suppliers and build a more resilient supply chain, Unimicron has included aspects of ESG policy, RBA Code of Conduct, supply chain continuity operations, finances, conflict minerals, etc. in the sustainable supply chain management issues and jointly mitigates supply chain risks. In addition, a cross-departmental "Supply Chain Management Subcommittee" assists suppliers in improving and upgrading quality systems, environmental protection, green procurement, safety, human rights, ethics and supply chain, and building supplier sustainability.

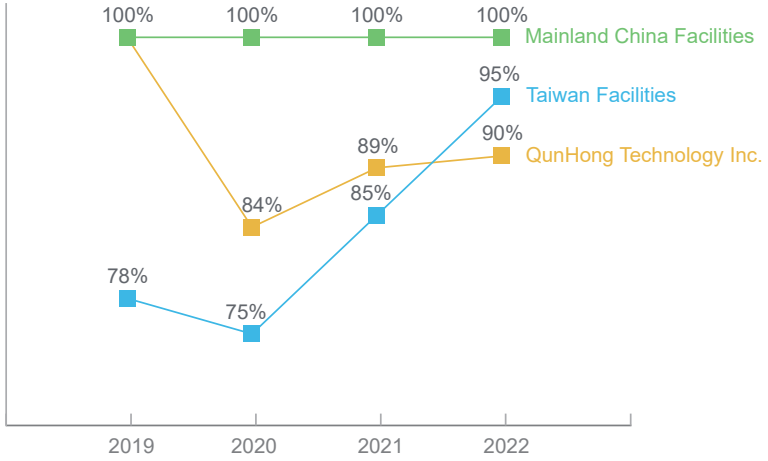
Unimicron integrates the management system with the procurement process in promoting sustainable supplier management, and requires raw material and equipment suppliers to sign a "Supplier Corporate Social Responsibility Commitment Letter". The content of the commitment letter is based on the RBA Code of Conduct, the International Labor Organization Convention, and the Social Responsibility SA 8000 standards, and the content covers ethics, human rights, the environment, and health and safety considerations.

2.4.1 Supply Chain Overview

Unimicron's suppliers mainly include seven categories of raw material suppliers, equipment, engineering suppliers, waste disposal companies, on-site companies (such as security), human resources brokers, and land, sea, and airfreight forwarders. Which, both raw material and equipment suppliers in Taiwan are the most important supplier categories, totaling 582 companies. For the major raw material suppliers and equipment suppliers (including strategy key suppliers) involved in the manufacturing of our products, we have developed sound quality management and CSR management model for corporate social responsibility, financial risks, conflict minerals, and Business Continuity Plan to meet the principles of corporate sustainable development. At the same time, we have established positive partnerships with suppliers to oversee their CSR-related risks, strengthen audit management, and coach and assist in improvement, all to lead the overall supply chain toward a sustainable future.

Unimicron follows customers' requirements and is committed to the improvement and refinement of the CSR management system. In addition to self-requirements, it also hopes that suppliers can co-prosper and maintain sustainability with Unimicron. Regarding the risk management of sustainable business operations, in addition to the continuous implementation of supply chain management, we began to include the RBA Code of Conduct, regulations and other supply chain potential risks in the assessment items at the end of 2018. The mitigation plan for high-risk factors is included in the mandatory targets of the Material Division, and continuous improvement and monitoring have been carried out to meet the targets.

Signature Rate of Supplier Corporate Social Responsibility Commitment Letter (Unit: %)



2022 Supply Chain Management

Supplier Profile Analysis in Taiwan Facilities	Raw Material Supplier	Equipment Supplier
Definition	• Raw material suppliers for the production of unit products	• Provide process production and quality inspection equipment
Management Policy	• For raw material supply partners, adopt comprehensive Q/C/D/S/T management strategies and major supplier RBA supply chain management strategies, in order to ensure that the quality of supply meets customer expectations	• Initial technical exchanges, joint development, equipment maintenance and provision of major suppliers RBA Code of Conduct management strategies
Importance	• Provide Unimicron with timely and appropriate amounts of raw materials to manufacture products that meet customer requirements	• Provide advanced equipment and technology to assist Unimicron in producing high-quality products with a positive yield rate that meets customer requirements
Number of Suppliers per Procurement Category (Suppliers)	418	164
Proportion of Suppliers per Procurement Category (%)	72%	28%
Percentage of Transaction Amount per Procurement Category (%)	62%	38%
Difference Analysis with 2021	The number of suppliers decreased by 36, and the proportion of the transaction value increased by 14%, due to the change of product type, the increase of high-end products, the difference in the selection of manufacturers and the amount.	The number of suppliers decreased by 18, and the proportion of the transaction value increased by 14%, due to lower capital expenditures.

Aspects of the Supplier Corporate Social Responsibility Commitment Letter

- Business ethics compliance statement
- Statement of social responsibility
- Warranty of non-infringement
- Environmental hazardous substances non-use declaration
- Commitment to the non-usage of illegally mined raw materials

Local Procurement

Unimicron adheres to the principle of sustainable corporate social responsibility and hopes to promote the sustainable development of the entire supply chain. Therefore, to promote operational activities and local economic development, Unimicron actively implements localization of materials and supports the development of local suppliers, all to reduce unnecessary air and water freight costs, as well as the carbon footprint generated during material transportation. In 2022, the local procurement ratio of raw materials purchased by Unimicron in Taiwan was 69%. QunHong Technology Inc. had a local procurement ratio of 91%, and Mainland China Facilities had a local procurement ratio of 81%. The local procurement amount of the Taiwan Facilities in 2022 decreased by 3% compared to 2021, mainly due to the change in product structure and the increase of high-end products, which influenced the increase of the procurement amount of major materials imported from abroad. Although the local procurement amount decreased in 2022, the Taiwan Facilities have actively communicated with an important Japanese substrate supplier partner in recent years to set up a plant in Taiwan, and the substrates originally purchased directly from Japan have been partially produced and delivered from the plant in Taiwan. The contribution rate of the purchase amount increased by 66%, compared with 2021.

Percentage of Local Procurement Amount (Unit: %)

Year	Taiwan Facilities	QunHong Technology Inc.	Mainland China Facilities
2019	67	81	84
2020	73	83	84
2021	72	87	84
2022	69	91	81

Note: Local scope includes local suppliers and Taiwan agents.

2.4.2 Supply Chain Risk Management

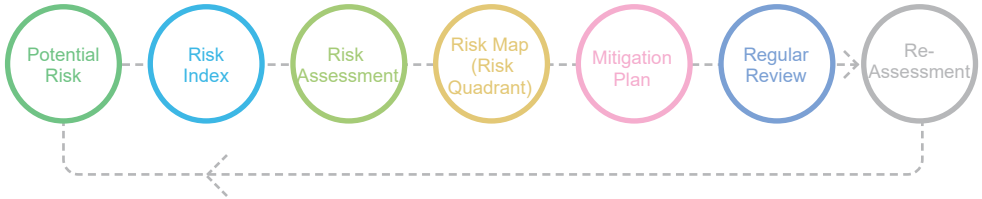
Procurement Risk Management

To strengthen the sustainability risk management of the supply chain, Unimicron gradually strengthens the sustainability performance of the supply chain, especially through four steps to review and improve the sustainability risks faced by the supply chain.

We integrate supply chain risk management into daily procurement operations and construct a Procurement Risk Management Procedure under the supply chain risk management framework. Using the PDCA cycle process, we continuously review the risk status and compile the risk index through the results of quantitative risk analysis. At the same time, the risk heat map is drawn, and the risk occurrence frequency and the degree of impact are used as the assessment basis to formulate the periodic review of the mitigation plan and to implement control of the supply chain's sustainability risk.

Finally, we communicate and cooperate with suppliers, and through the establishment of mitigation plans, we can gradually reduce the risks faced by supply chain by targeting any high-risk factors that may cause continuous business interruptions, such as single supplier, regional policy changes, and insufficient production capacity, through introducing alternative suppliers or conducting second-supplier or second-origin certification programs according to their supplier attributes.

Procurement Risk Management Process



Procurement Risk Assessment Factors

Risk Type	Risk Factor (Tier 1)	Risk Factor (Tier 2)
Internal Risk	Purchasing Risk	Integrity Requirements
External Risk	Regulatory Risk	Supplier CSR Risk
		Supplier Infringement
		Hazardous Substances Risk
Supply Chain Disruption	Business Continuity Risk	Supply Disruption
	Cost Risk	Raw Material Price
	Supplier Conflict Minerals Management Risk	Smelting Plant RMAP Conformity Management
	Financial Risk	Financial Data Monitoring

2.4.3 Supplier Sustainability Audit and Advocacy

Unimicron has been conducting on-site audits of suppliers since 2011 and has been increasing the number of suppliers audited year by year. In 2022, Unimicron conducted 44 on-site audits of key suppliers in Taiwan and China (the audits were conducted by Unimicron and its subsidiaries), and the results of the on-site audits showed that although there were still deficiencies, no suppliers were classified as high-risk. The main audited deficiencies of suppliers in Taiwan and China were in the aspects of labor, health and safety and supplier risk management.

Unimicron requires audited suppliers to complete or propose improvement plans within the improvement deadline, and by the end of 2022, the suppliers' deficiency cure rate was 45% in Taiwan and 100% in China. For suppliers who have not completed the improvement or proposed improvement plans, Unimicron will continue to ask suppliers to complete the improvement and uphold the spirit of coexistence and co-prosperity, cooperate with suppliers to promote ESG works, and jointly move towards the goal of sustainable development.

Supplier Sustainability Audit Process

01	02	03	04	05
Suppliers Self-Evaluate and Provide Written Supporting Information	Unimicron Conducts a Document Review	Unimicron Conducts on-Site Audit	Suppliers Make Improvements Based on Audit Results	Unimicron Verifies Improvement Results and Closes the Case

Aspects of Supplier Audit

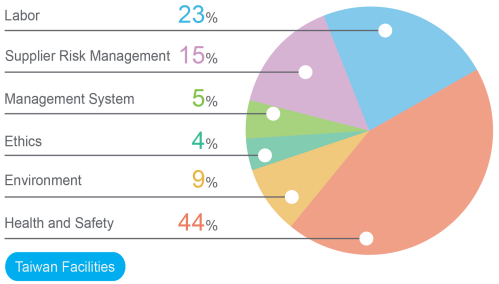
Labor, Environment, Management System, Health and Safety, Ethics, Supply Chain Risk Management

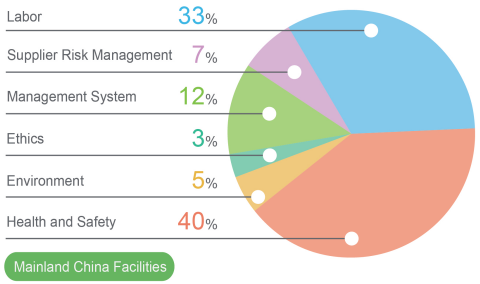
Supplier Sustainability Audit – On-Site Audit

(Unit: times)

Region	2019	2020	2021	2022
Taiwan Facilities	15	15	6	6
Mainland China Facilities	34	36	37	38
Total	49	51	43	44

2022 Supplier Audit Violations





Supplier Communication Platform Shares Sustainable Information to Drive Supply Chain Sustainability

Unimicron follows international standards and regulations such as the RBA Code of Conduct, ISO 14001, ISO 45001, and QC 080000. We have also established comprehensive supplier management regulations based on the environment, human rights, safety, health, and ethical principles outlined in the above international standards to promote CSR. We launch campaigns on quality/green products, OSH, information safety, and sustainable management, and communicate with suppliers to create a win-win partnership. Since the COVID-19 pandemic has not yet subsided, the annual suppliers' meeting in Taiwan had been changed to an online advocacy through the suppliers' platform, and it was held in the form of supplier commitment letters and emails for factories in China. All suppliers who have business dealings with Unimicron are the subjects of the advocacy and the advocacy had completed 100%.

Supplier Propaganda Theme of 2022 Supply Chain Platform

- Introduction of ESG Supply Chain Management
- RBA Code of Conduct and Sustainability Audit
- Supplier Information Security
- Occupational Safety and Health
- Energy Resources
- Hazardous Substances Free (HSF) of Raw Materials

Findings and Improvement Actions of 2022 Supplier Audit in Taiwan Facilities

Categories	Item	Main Findings	Improvement Actions
Labor	• Working hours • Compensation and benefits • Non-discrimination	• Lack of physiological leave and paternity leave • Deducting salary as a means of punishment • Items on the interview resume that involve discrimination	✓ Add family care leave, paternity leave, physiological leave, etc. to the leave list as required by law ✓ Amend the penalty for deducting salary ✓ Revise the item on the resume that involves discrimination
Health and Safety	• Occupational safety • Emergency Preparedness • Occupational injuries and diseases • Sanitation and Accommodation	• Insufficient OSH staff and emergency personnel • The risk of Fire-fighting facilities being blocked • The contents of the first aid kit have expired • No water quality inspection report and regular inspection records	✓ Hire more necessary OSH personnel (including emergency personnel) ✓ Set up a checklist and clear the channel ✓ Renew the form for “Effective date” ✓ Inspection regularly
Management System	• Development goals • Training	• No annual organizational goals and tracking performance • No RBA-related training records	✓ Setting annual organizational goals and tracking performance ✓ RBA training on a regular basis
Raw Material Supply Risk Management	• Supplier RBA Code of Conduct compliance and its supply chain-related communication	• The RBA Code of Conduct is not included in the Supply Chain Management Procedures	✓ Suppliers should establish Supplier Management Procedures that require their supply chain to commit to and sign the RBA Code of Conduct

The Process of Mineral Management

Establish Strong Company Management Systems → Identify and Assess Risks in the Supply Chain → Design and Implement a Strategy to Respond to Identified Risks → Carry Out Independent Third-Party Audit of Supply Chain Due Diligence → Report Annually on Supply Chain Due Diligence

Distribution of Refineries and Smelters of 3TGs

(Unit: %)

Countries	2019	2020	2021	2022
Belgium	7	9	9	7
Bolivia	7	9	9	7
Brazil	7	9	9	7
China	14	18	18	13
Indonesia	36	18	18	27
Japan	7	9	9	13
Malaysia	7	9	9	7
Peru	7	9	9	7
Thailand	7	9	9	7
Taiwan	NA	NA	NA	7

2.4.4 Responsible Mineral Sourcing

Unimicron complies with the RBA Code of Conduct, and the Organization for Economic Co-operation and Development (OECD), and works together with customers promising not to use metals extracted from armed conflict areas, illegal mining, and mining in poor working environments. Meanwhile, we require our suppliers to fulfill their social and environmental responsibility and trace the sources of Conflict Minerals (3TG) such as gold (Au), tin (Sn), tantalum (Ta), and tungsten (W) contained in all products to ensure that these metals are not from Conflict regions. We have also required all of our suppliers to share this requirement with their upstream suppliers in order to eradicate such behavior with market mechanisms and brought out our influence on the supply chain by requesting smelters to be certified by the Minerals Assurance Process (RMAP), as to fulfill our commitments with practical actions.

All smelters and refineries of 3TGs used by Unimicron’s Taiwan Facilities have obtained the RMAP certification and meet the RBA requirements. The conflict minerals used in plants in Mainland China and QunHong Technology Inc. all meet the RBA Code of Conduct. In response to the Responsible Minerals Initiative (RMI) Standard, the mining management of the metal "cobalt" has been added to the scope of conflict minerals. Therefore, we actively promote and incorporate them into the training materials. In addition to requiring all suppliers of 3TGs raw materials (gold/tin/tantalum/tungsten) to comply with the RMAP certification requirement for smelters, at the same time, suppliers of raw materials that contain "cobalt" are required to participate in the RMAP certification plan. We also started to investigate mica, copper, nickel, zinc, etc. in accordance with RMI Standards (2021 version) and provided it to customers according to RMI in 2022.

03 Innovation Services

Innovative Capacity

3.1 Innovation Services

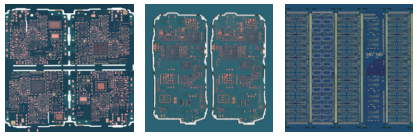
Topics	Technology and R&D
Policy	• Formulate correct R&D strategies, effectively integrate factory resources, and exert synergy • Protect research and development results and defend the Company's intellectual property rights
Commitment	• Develop new products, providing the basis for sustainable management of the Company • Protect our own intellectual property rights and respect the intellectual property rights of others
Division	• R&D Div. and New Business Development Div. • Intellectual Right Div.
Resources Invested	• Invest funds in research and development and invest in new equipment to cultivate research and development talents • Purchase patent search engine and intellectual property related training courses
Grievance Mechanism	• Whistleblower hotline and mailbox
2022 Targets	• ETS fine line development: L/S = 5/5 um AOI yield > 85% • Fine bump pitch development: POC for 80um pitch w/via bump • Hybrid substrate development: Thin film RDL bonded organic substrates 2/2um L/S • Mass production ratio of 5G technology: 30% • Number of patent applications: 100
Actions	• Implement performance management according to BP, review progress weekly, and review results monthly • Quarterly review of the patent situation
2022 Achievements	✓ ETS fine line development: L/S = 5/5 um AOI yield > 86.5% Cooperate with suppliers to develop Cu pillar and solder mask thinning process ✓ Fine bump pitch development: POC for 80um pitch w/via bump. Evaluation and selection Via Bump production technology ✓ Hybrid substrate development: Thin film RDL bonded organic substrates 2/2um L/S ✓ Mass production ratio of 5G technology: 30% ✓ Number of patent applications: 170

3.1.1 Products and Quality

Unimicron's main business items are engaged in the development, manufacturing, processing and sales of Printed Circuit Boards (PCB), High-Density Interconnect Printed Circuit Boards (HDI PCB), Flexible Printed Circuits (FPC), rigid-flex PCB, Carriers and IC test and burn-in system. The main products are the manufacturing and processing of PCBs (including Carriers) and IC testing and burn-in, etc.

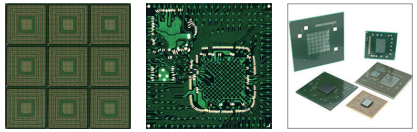
PCB

Substrates are used for assembling electronic components the main purpose is to connect each electronic component to form an electric circuit on the PCB so that it can function and relay transmissions. The applications of PCBs are wide-ranging including but not limited to computers and related industries, communications, consumer electronics, automotive parts, aerospace, precision instruments, and industrial products. Since PCBs do not have uniform specifications that can be roughly distinguished by softness and the number of layers. They can be classified by softness, i.e., flexible and rigid-flex boards, and by the number of layers, i.e., single-layer boards, double-layer boards, and multi-layer boards.



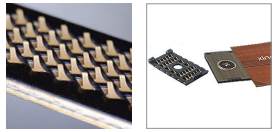
PCBeam™

Unimicron has obtained a patent from US Neoconix to manufacture PCBeam™. It is high-speed (>40Gbps), ultra-thin, and easily customizable, following the trends of modern electronic products. It can be used in fields such as Board-to-Board, Board to Flex, Board-to-Device (Socket), and its markets include industries such as consumer electronics, healthcare, industrial use, and high-speed communications. The PCBeam™ team provides a range of customized solutions to customers, breaking the current restrictions on connector designs and making our products more competitive.



IC Substrate

Their main function is to hold the IC chip and connect the signal between the chip and the PCB through the internal circuits of the IC substrate. Their main purpose is to protect the electric circuit, set the wires in place, and dissipate heat. Depending on the packaging technology, IC substrates can be divided into Ball Grid Array (BGA), Chip Scale Package (CSP), and Flip Chip (FC).



3.1.2 Innovative Technology R&D

To continuously enhance our corporate value, we actively refer to and develop the technical blueprint of the international industry to meet the needs of various future products. Through the three strategies of the patent portfolio, technological development and technological cooperation, we actively invest in environmental protection and low-cost manufacturing processes and establish an industry centered on technological innovation and intellectual autonomy, to open up new business opportunities through innovation.

Breakthrough Innovation

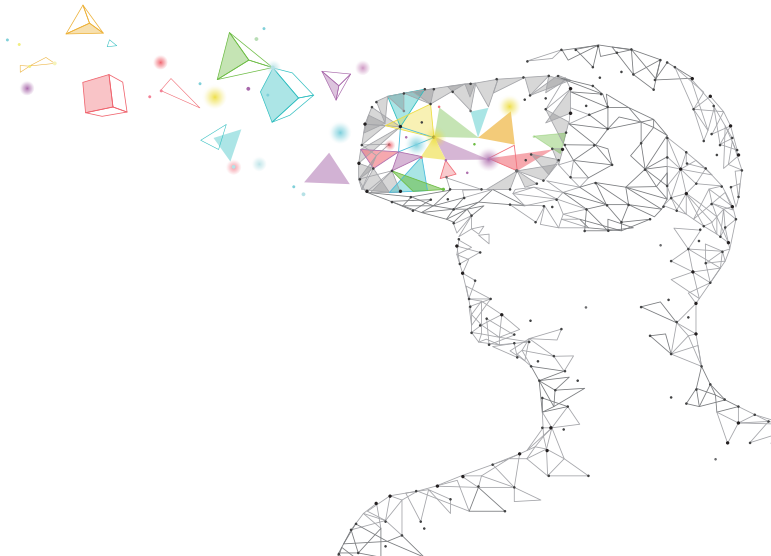
- Establishing Technology and Product Innovation Platforms
- Resources and Teamwork Integration
- Strategic Benchmarking Learning with Partners
- Refine System Processes and Management

Discover New Business Opportunities

- Gain Insight Into Industry Development Opportunities
- Mastering Technology Market
- Rapid Response to Market and Customer Needs

Enhance Corporate Value

- Environmental Protection and Sustainability
- Fulfillment of Corporate Social Responsibility



Patent Portfolio Strategies

We have formulated three major patent management strategies “Innovative Technology Protection, Patent Strategy Development, Patent Map Compilation” to strengthen Unimicron's position as a leader in the market and plan a Patent Portfolio to enhance Unimicron's value and competitiveness. Actively developing Heterogeneous Integration technology and applying for multiple patents to protect our technology assets.

To further capture R&D achievements with customers and suppliers, and to hold patents, Unimicron protects our R&D achievements through internal patent application system tools, and leverages our Portfolio to enhance our value and competitiveness, to solidify our leading position in the market in the era of the knowledge economy.

Innovative Technology Protection

- Application for R&D Innovation Retention
- Share the Results of Industry-Academia Cooperation with Partners
- Jointly Hold Patented Technology with Partner

Patent Strategy Development

- Advanced Technology Development
- Patent Strategy Research and Layout
- Patent Risk Assessment and Avoidance

Patent Map Compilation

- Patent Classification Control Mechanism
- Periodic Review of Patent Assets
- License Utility Expansion

Patent Achievements

(Unit: Cases)

Region	Type	2018	2019	2020	2021
Taiwan	Patent Applications	34	48	62	56
	Patent Granted	32	34	57	61
America	Patent Applications	39	41	50	55
	Patent Granted	21	31	33	38
Mainland China	Patent Applications	30	45	40	59
	Patent Granted	19	24	45	40
Others	Patent Applications	0	2	0	0
	Patent Granted	7	8	3	0

Technological Development

In response to future industry trends, Unimicron will continue to invest in research and development, and cultivate high-end product technology platforms, such as 5G high-frequency high-speed PCB products, ultra-small distance pitch LED module development, Cool PCB (High Thermal Conductive) module development, Nick-Free (NF) new technology development, and high-end Photovia PCB technology development.

At this stage, we are facing the global commercialization of 5G mobile communications. We are focusing on four major areas in research and development, which are smart phone/NB HDIs; antenna-in-package high-frequency PCBs, radar boards, and antenna arrays; optoelectronic telecommunication boards for optical modules; and PCBs with high layer count and high-speed PCBs for various servers, network switches, and routers. The heart of technological development for PCBs includes the mSAP (L/S=18/22 μm) fine line process, embedded Cu inlay technology with quick heat dissipation, coaxial via-low energy loss technology, the mechanical drilling and copper plating technology for boards with a thickness of 5.4mm and a high aspect ratio (32:1).

Relying on its expertise and experience in large panel manufacturing of PCBs/IC Carriers, Unimicron is equipped with the existing Coreless technology, based on the platform of innovative multilayer film wiring technology, to integrate materials and equipment manufacturers in the semiconductor and panel industries to form a research and development alliance. We develop the advanced packaging technology of Panel-level Fan-Out (PFO) with RDL first (Die last) and fine line process (2μm/2μm line width/line spacing) to break industrial problems and technical challenges of Fan-Out Panel Level Package (FOPLP), driving the development of the overall industrial chain. In addition, in response to the future trend of high-density multi-functional chip systemization, based on the original platform of ultra-fine circuit technology, we adopted Multichip Heterogeneous Integration Packaging Technology, and the packaging size will be expanded from 20mm x 20mm to 55mm x 55mm.

Regarding the technology development of Embedded Trace Substrate (ETS), we have adopted new equipment and liquid medicines research in the redevelopment plan of the S1 Plant and strengthened the freight handling and FM control to improve the L/S 6/8um to the customer's certification level. We are also working with VIP customers to develop the L/S 5/5um platform in advance, with a variety of dry film and exposure machines, as well as the testing of surface treatment chemicals to lay the foundation for the next generation of mobile communication.

Research and Innovation

With Unimicron’s strategy to stay rooted in Taiwan and expand globally, we have set up R&D centers in Taoyuan (including Shanying II Plant and Yangmei Plan) and Hsinchu, with different R&D strategies that are focused on developing technologies to satisfy customers’ needs and developing innovative technologies for the next three to five years. In addition to introducing advanced equipment and recruiting R&D talents of the industry, Unimicron has also invested heavily in research and development. Currently, the annual investment in research and development is about 1% of the annual revenue. The R&D expenditures invested in the past years have grown gradually in order to maintain and strengthen our competitiveness and customer satisfaction by creating proprietary, leading-edge, and stable technologies. At the same time, we are actively investing in environmental protection and advanced manufacturing processes to establish an industry with technological innovation and intellectual autonomy.

R&D Expenses

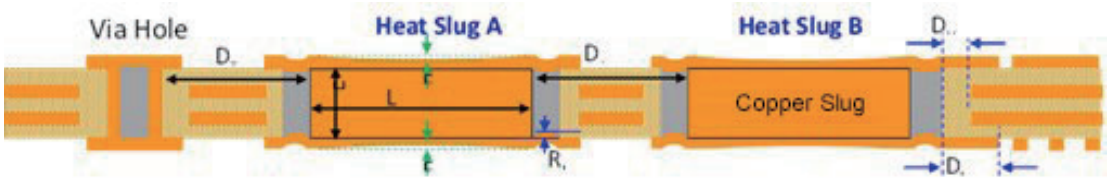
Year	2019	2020	2021	2022
R&D Expenses (NTD in 100 million)	6.48	9.79	11.06	15.84
Ratio (%)	0.8	1.1	1.1	1.1

Note 1: The scope of patent fee includes Carrier SBU, PCB SBU and New Business Development (NBD) Team.

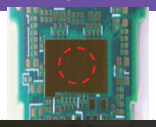
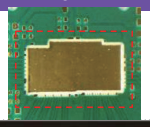
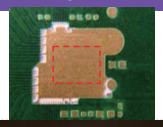
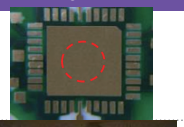
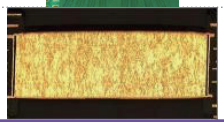
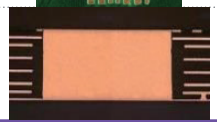
Note 2: The increase in the 2022 patent fee mainly was invested in new facilities and expansion of the R&D organization. Therefore, the 2022 patent fee is higher than 2021.

Item	Comparison with the Previous Year
Fine Line Process Technology	We completed the composite substrate technology platform (RDL+HDI, RDL+BGA) and reliability verification as well as the multi-chip heterogeneous integration package on composite substrates, with a package size of 20mm x 20mm to 50mm x 50mm, 5 redistribution layers, and a minimum line width of 2μm.
Technological Development of Embedded Trace Substrate (ETS) Fine Line	In response to the need for high-density packaging and interconnection of chip nodes below 2 nm, we developed a Cu pillar and solder-mask thinning process on the L/S 5/5 um platform in cooperation with our supplier, making a Cu Pillar with a height of about 4~10 um on the bump pad exposed to the solder mask layer.
Technological Development of Hybrid CU Inlay	Cu Coin 0.2~2mm, Dimension< 6x15mm embedded technology development

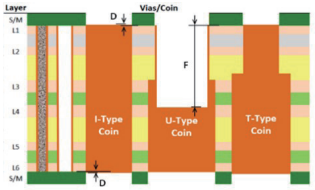
Single-shape Cu Inlay



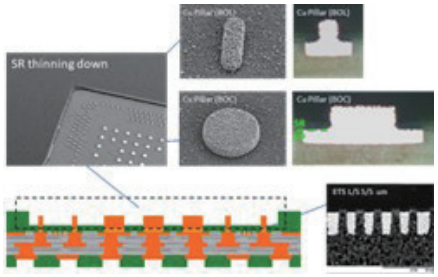
Embedded Heat Slug

Board thickness	1.0 mm	1.0 mm	1.0 mm	2.0 mm
Top view				
Side view				

Hybrid Cu Inlay



Technological development of Embedded Trace Substrate (ETS) fine line (Cu Pillar and Thinning Anti-Solder)

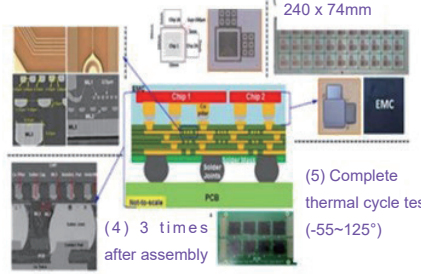


2/2 μm Fan-out Technology

(1) L/S=2/2μm
Via= ϕ 20μm 4+1 layer

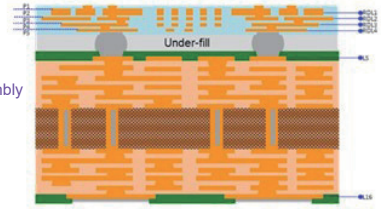
(2) 3 chips connection
20mm x 20mm

(3) The size of assembly
240 x 74mm



(4) 3 times after assembly

(5) Complete thermal cycle testing (-55~125°)



- BGA substrate: 5/2/5
- PRIS layer count: 4 RDLs+5 PIDs
- Surface finish: ENEPIG
- PRIS: 82 mm x 87 mm (assembly)
- BGA substrate size for assembly: 85 mm x 90 mm

Technological Cooperation

Unimicron recognizes that cooperation with the value chain plays is the key to driving toward sustainable innovation. In addition to working with international manufacturers to develop next-generation high-end IC Carriers and interacting with customers, the Company also knows customer needs for technology and next-generation products, and keeps tabs on the blueprint for customers' future products. We strengthen cross-sector cooperation among domestic industries, create industry and products, strengthen research and development relationships between industry, academia, and research institutes, drive the industry to set new specifications, and promote industrial optimization. We will continue to meet customer expectations with the best quality and service model, lead the overall value chain forward, and create more value.

Strengthen Cross-Sector Partnerships	AIoT and 5G drive diverse industrial applications, requiring higher heterogeneous integration technologies to meet performance demands. Now, semiconductor manufacturers around the world are accelerating the development of heterogenous chip integration processes. In 2025, the world will enter the 2nm advanced wafer node and the substrate interconnection pitch will be ≦ 40μm, which will require more System-in-Package(SiP), small chips, and heterogeneous integrated package. Unimicron can provide a heterogeneous integration platform that supports advanced substrates for IC carriers. In 2021, we began the development of a multi-chip heterogeneous integration package technology platform. The size of the package will gradually expand from the current 20mm x 20mm to 55mm x 55mm after 2022.
Develop Industry and Products	The COVID-19 pandemic in the first half of 2020 and the border controls adopted by various countries had a strong impact on the global supply chain. Also, in response to the risks posed by climate change, net-zero emission targets have been established in countries around the world, which has led to major brands in the IT and communications industry demanding their supply chain to comply with RE100, which asks for 100% green energy use. The carbon rights and taxes that will follow these initiatives will affect where manufacturers set up their plants, and suppliers who do not develop clear carbon reduction strategies will be gradually eliminated from the industry chain in the future. The global industry chain will shift from being linked by geographic location and trade costs to being linked by environmental values and national security costs. In the semiconductor industry, many large-scale companies are using major manufacturers from Japan, Korea, Europe, and the United States. Unimicron has been working with equipment manufacturers (e.g. copper plating machines, etching machines) and material manufacturers (e.g. 5G substrate material manufacturers and anti-solder materials suppliers) to accelerate R&D on low carbon technologies for equipment and materials as well as to gain the capacity for independent R&D in order to strengthen the market competitiveness of products in response to market risks caused by climate change.
Strengthen Research and Development Relationships between Industry, Academia and Research Institutes	In response to the rise of the red supply chain and the localization of materials and equipment, the Company has adopted the model of joint development with industry, academia and research institutes to strengthen the investment in the plans of developing new technologies and new equipment; for example, joint development of new laser cleaning technologies and AI inspection technologies with academic institutions, and joint development of new self-alignment Pick & Place equipment with equipment manufacturers. In addition, we cooperate with the School of Electrical and Mechanical Engineering of a university to jointly develop new products. The school designs the test circuit, the Company produces and conducts electrical tests, and the research and development results are passed through the customer’s pipeline to conduct actual verification of new product packaging and testing, creating a new product blue ocean.
Drive the Industry to Set New Specifications	The platform development plan for 5G high-speed and high-frequency applications, advanced substrate platform for heterogeneous integrated IC carriers, high-end micro-LED carriers, Optoelectronic Module, and Radar Antenna Module are all brand-new projects. The industry has yet to establish a set of quality certification specifications or testing standards. We will continue to invest our development resources according to our client’s development schedule to be the first to meet our client’s standards and to become the industry benchmark for this technology platform so that the industry will make this technology platform the standard process for the industry. In 2022, we collaborated with customers to develop Radar Antenna Module and exhibited it at the TPCA show.

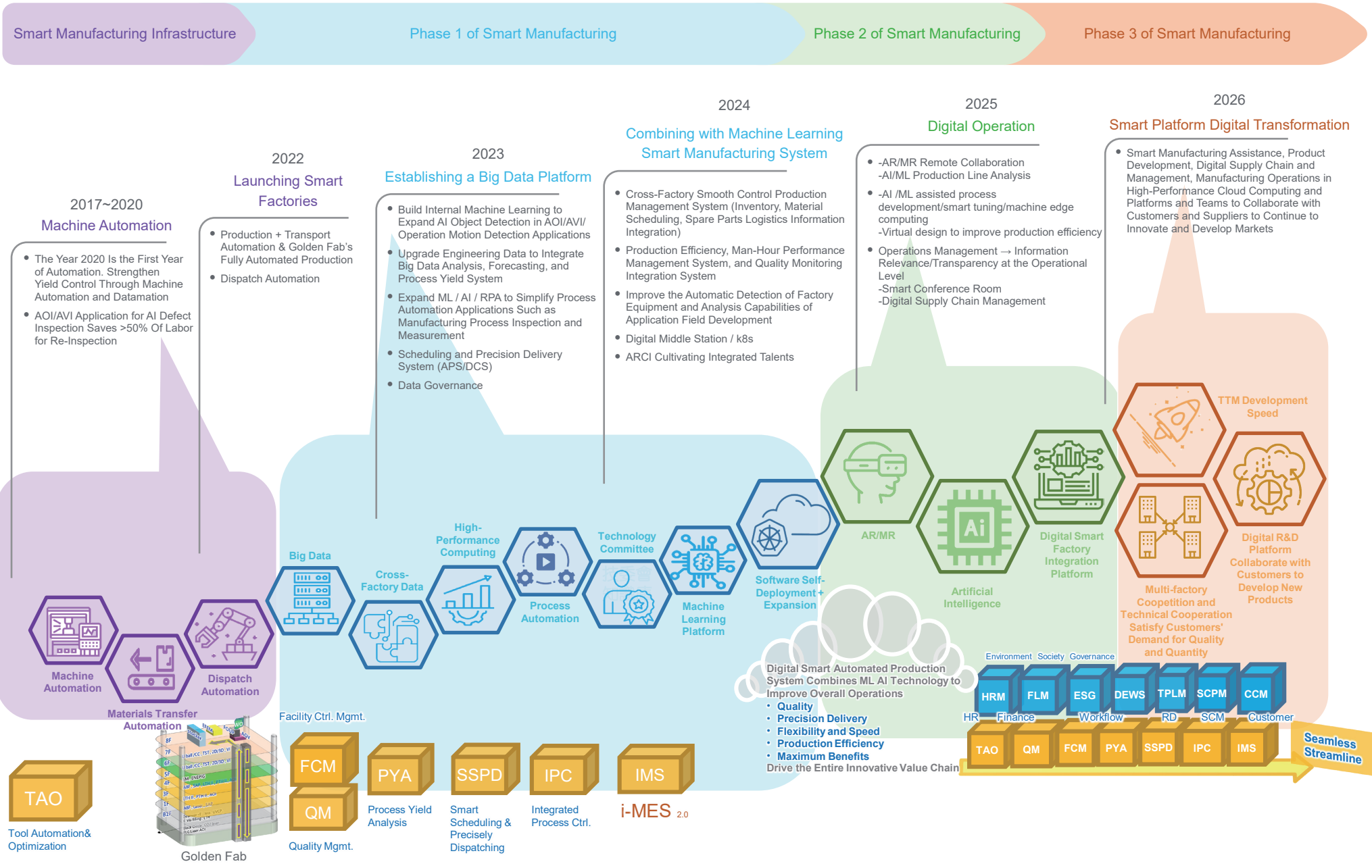
R&D Cooperation Plan

Unimicron continuously collaborates with Suppliers, Academia, and Government to ensure that the product is in the leading position in the world.

Cooperation		Benefits
Cooperation with Suppliers	We maintain close cooperation with excellent material and equipment suppliers, introduce high-performance materials and cutting-edge equipment for new product development, and cooperate with domestic equipment firms. Especially, 5G higher-frequency communications and the Low Df material process of high frequencies signal loss need to cooperate with material suppliers early.	The global supply chain market is highly competitive, and the outcome of Unimicron and our suppliers' joint effort in development has resulted in the advanced attainment of future key technologies, helping us to maintain a leading position in the industry. At the same time, it also helps to ensure that related industries in Taiwan can continue to remain to stand and in turn obtain key positions in the midst of fierce competition and industry chains in various countries becoming more autonomous and grouped.
Cooperation with Academia	To strengthen new R&D relationships with industry, academia, and research, we have been cooperating with Taiwan University, Tsinghua University, National Central University, and Yuan Ze University for a long time with NT$ 22.95 million in the Industry-Academy Cooperation program. It is hoped that this will effectively utilize the research results of the academic community, activate the domestic research capacity, and encourage cross-field basic scientific research, so as to shorten the learning curve of the Company's R&D, and at the same time cultivate future scientific and technological elites.	By combining academic theories with industrial production and development practices, the difference between theory and practice can be quickly reduced, and allow advanced academic research results to be effectively and seamlessly integrated into industrial technology. Also, an important part of industry-academia collaboration is the overall planning of the collaboration, including faculty, equipment exchange, graduate student training, and funding. By operating the research environment independently under the regulations of each academic unit, the academic community can make reasonable profits and attract more outstanding academic teams to join in, forming a virtuous cycle.
Cooperation with the Government	We received tax exemptions, investment tax credits and incentives for equipment, industry-specific subsidies, and R&D investment credits from the government. Following the government's priority counseling program, we proposed a new technology development plan and gained industry-specific grants.	Government funding accelerates the development of Unimicron technologies and strengthens product competitiveness, such as introducing panel-level ETS fine line fan-out to the development of the multi-chip heterogeneous integrated packaging technology platform, which expands package size and will be applied to 5G high-frequency and high-speed communications as well as improve electrical performance. What's more, the government can gain a good understanding of the R&D potential and development difficulties of domestic industries through this partnership, which will serve as the basis for future technology development policies.

3.1.3 Smart Manufacturing

With the speed of disruptive technological advances such as Industry 4.0 and AIOT, the concept of smart manufacturing is being put into practice, not only in the manufacturing industry but also in different industries. As a leading manufacturer in the PCB industry, while facing the challenges of smart manufacturing trends, Unimicron is looking forward to grasping the opportunity of ICT technology advancement to improve the operational capabilities of the speed, quality, cost, and technology of our factories, and to build a manufacturing eco-service system to provide customers with amazing value.


Smart Manufacturing Infrastructure
Phase 1 of Smart Manufacturing
Phase 2 of Smart Manufacturing
Phase 3 of Smart Manufacturing
2017~2020
Machine Automation
The Year 2020 Is the First Year of Automation. Strengthen Yield Control Through Machine Automation and Datamation
AOI/AVI Application for AI Defect Inspection Saves >50% Of Labor for Re-Inspection
2022
Launching Smart Factories
Production + Transport Automation & Golden Fab's Fully Automated Production
Dispatch Automation
2023
Establishing a Big Data Platform
Build Internal Machine Learning to Expand AI Object Detection in AOI/AVI/ Operation Motion Detection Applications
Upgrade Engineering Data to Integrate Big Data Analysis, Forecasting, and Process Yield System
Expand ML / AI / RPA to Simplify Process Automation Applications Such as Manufacturing Process Inspection and Measurement
Scheduling and Precision Delivery System (APS/DCS)
Data Governance
2024
Combining with Machine Learning Smart Manufacturing System
Cross-Factory Smooth Control Production Management System (Inventory, Material Scheduling, Spare Parts Logistics Information Integration)
Production Efficiency, Man-Hour Performance Management System, and Quality Monitoring Integration System
Improve the Automatic Detection of Factory Equipment and Analysis Capabilities of Application Field Development
Digital Middle Station / k8s
ARCI Cultivating Integrated Talents
2025
Digital Operation
-AR/MR Remote Collaboration
-AI/ML Production Line Analysis
-AI /ML assisted process development/smart tuning/machine edge computing
-Virtual design to improve production efficiency
Operations Management → Information Relevance/Transparency at the Operational Level
-Smart Conference Room
-Digital Supply Chain Management
2026
Smart Platform Digital Transformation
Smart Manufacturing Assistance, Product Development, Digital Supply Chain and Management, Manufacturing Operations in High-Performance Cloud Computing and Platforms and Teams to Collaborate with Customers and Suppliers to Continue to Innovate and Develop Markets
Machine Automation
Materials Transfer Automation
Dispatch Automation
Big Data
Cross-Factory Data
High-Performance Computing
Process Automation
Technology Committee
Machine Learning Platform
Software Self-Deployment + Expansion
AR/MR
Artificial Intelligence
Digital Smart Factory Integration Platform
TTM Development Speed
Digital R&D Platform Collaborate with Customers to Develop New Products
Multi-factory Coopetition and Technical Cooperation Satisfy Customers' Demand for Quality and Quantity
Digital Smart Automated Production System Combines ML AI Technology to Improve Overall Operations
Quality
Precision Delivery
Flexibility and Speed
Production Efficiency
Maximum Benefits
Drive the Entire Innovative Value Chain
Environment Society Governance
HRM FLM ESG DEWS TPLM SCPM CCM
HR Finance Workflow RD SCM Customer
TAO QM FCM PYA SSPD IPC IMS
Seamless Streamline
Facility Ctrl. Mgmt.
TAO
Tool Automation& Optimization
Golden Fab
FCM
QM
Quality Mgmt.
PYA
Process Yield Analysis
SSPD
Smart Scheduling & Precisely Dispatching
IPC
Integrated Process Ctrl.
IMS
i-MES 2.0

Exploration Period – Automation and Internet of Equipment

In 2017, Unimicron participated in the establishment of the PCB Smart Manufacturing (A-Team), a government-supported group of software and hardware companies and PCB manufacturing companies, to introduce standard communication protocols and common platforms, and develop a vertically integrated solution platform by combining software and hardware companies, academic research teams, and research institutions, providing PCB manufacturers with suggestions to meet the smart manufacturing planning. In 2020, we established the Smart Manufacturing Promotion Organization based on the smart transformation team members who participated in the PCB Smart Manufacturing (A-Team). Starting from the internet of machines to intelligent application tool projects, by improving the production process to save manpower and enhancing quality analysis capability, we are entering Unimicron's first year of smart manufacturing.

Infrastructure Construction Period - Smart Manufacturing Golden Fab Construction and Big Data Platform

In 2021, we started to expand our AI image technology research team and develop our own AI defect detection technology, which were introduced into AOI/AVI inspection equipment and other inspection equipment, to successfully reduce the number of re-inspection workers by >50%. At the same time, we expanded the level of technology to each factory, and in 2022, we completed the construction of AI models for 117 machines in 7 factories and put them into mass production. We completed the development of 108 intelligent solutions in accordance with the smart development blueprint and expand them to 18 factories. In 2022, after achieving the stage goal of AI saving manpower and efficiency, the intelligent manufacturing task force started the next stage of AI application. Extending from self-developed AI image technology, the application field is expanded to work safety and no-code AI platform, providing factories, providing rapid and independent deployment in factories, and moving forward for the road of AI for all.

As the number of factories continues to expand, in response to the demand for cross-factory collaboration services and big data applications, we have initiated hardware upgrades, MES, information security, data governance, and other basic engineering optimizations to ensure the stability, efficiency, and security (information security) of the maintenance system. At the same time, we also see the benefits of data normalization and data sharing, such as the integration of multiple data through foundation construction and breaking the limitation of " information island" to provide engineers with a data analysis service platform to help quickly analyze the causes of abnormalities, which can be completed in 5 minutes, solving the troubles and limitations of engineers' analysis and reducing the impact on production efficiency and quality.

With Unimicron's announced vision of improving the operational capabilities of the speed, quality, cost, and technology of our factories and providing amazing value to our customers, Unimicron introduced the SECS communication protocol infrastructure and completed two demonstration factories in the Taoyuan area equipped with production machines, material transportation, production scheduling, and dispatch automation, and will enter mass production in 2022. Based on the Golden Fab, we will continue to introduce and update various smart and innovative solutions to realize energy-saving and environmentally friendly smart manufacturing factories.

3.2 Green Product Management

Topics	Chemical Safety
Policy	HSF Quality Policy
Commitment	Green products that 100% comply with international regulations, industry standards and customers' requirements
Division	Green Material Committee
Resources Invested	• Establish QC 080000 Hazardous Substance Management System • Establish a testing report management system • Establish an announcement and return system of suppliers' hazardous substance declaration documents • Set up XRF analyzer to test hazardous substance
Grievance Mechanism	• Customer Service System, Whistleblower hotline and mailbox
2022 Targets	• Customer satisfaction rate with HSF quality: 4.48 (out of 5) • Achievement rate of immediate legal updates: 100% • XRF testing pass rate of incoming materials and finished products: 100% • Supplier's HSF quality audit pass rate: 100%
Actions	• Source management • Process management • Customer relationship management
2022 Achievements	✓ Customer satisfaction rate with HSF quality: 4.8 (out of 5) ✓ Achievement rate of immediate legal updates: 100% ✓ XRF testing pass rate of incoming materials and finished products: 100% ✓ Supplier's HSF quality audit pass rate: 100%

3.2.1 Quality Management

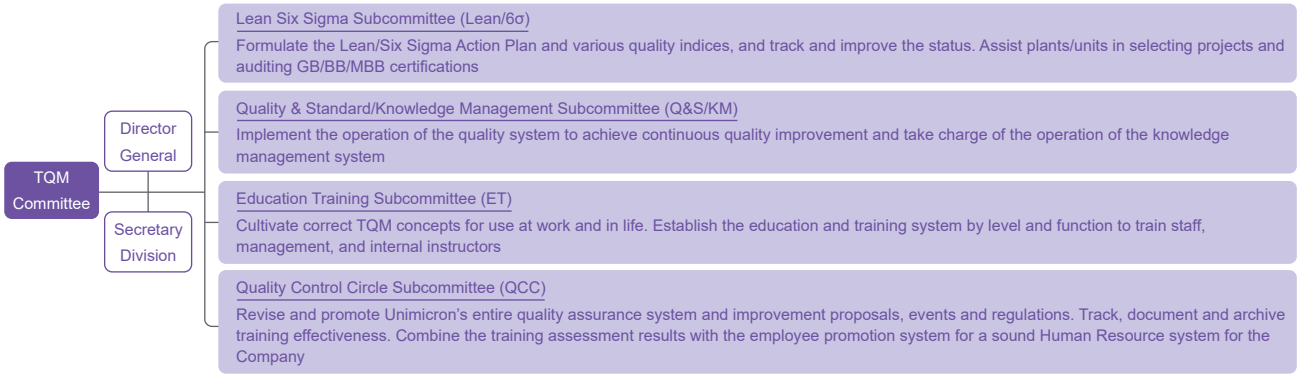
Unimicron is committed to providing high-quality and reasonable-priced products and competitive delivery and services. It has a quality policy of "customer-oriented, quality first and continuous breakthrough," integrating high-quality culture into the core of the Company to meet customer expectations and achieve the vision of "a world-class high-tech Company with high value-added, high quality, high productivity, and emphasis on innovation and services."

Customer Orientation / Dedication Towards Quality / Continuous Breakthrough

- Commitment, Support and Leadership of Senior Managers
- Customer Satisfaction Management
- Company-wide Participation in Continuous Improvement
- Application and Management of Process Flow and Quality Information
- Employees' Education, Training and Growth
- Construction of the Quality Management System
- Adopt Best Practices
- Adopt Refined Policy Management to Move towards Becoming a World-Class Company

Total Quality Management (TQM) Committee

Total Quality Management (TQM) is deemed an important part of Unimicron's operations. We use customer-oriented management to promote team cooperation and cross-departmental management. Since 1996, the Total Quality Management Committee has been established to implement total quality management, with four subcommittees under it, including the Lean/6σ, the Quality & Standard/Knowledge Management, the Education Training, and the Quality Control Circle. The Knowledge Management subcommittee will introduce new systems and intelligent development to improve quality management.



TQM Committee's Functions

- Customer-Oriented Management
- Continuous Improvement
- Promote Team Cooperation
- Take Care of Both Processes and Results
- Policy Management and Daily Management
- Making Quality Products Is Everyone's Responsibility
- Emphasize "Prevention Is More Important Than Inspection" and "Do It Right the First Time"
- Promote Cross-Departmental Management

To expand the application range of our products, we are committed to the establishment and implementation of the ISO 9001 Quality management system, the IATF 16949 Automotive Quality Management System and the QC 080000 Hazardous Substance Process Management System, pursue continuous quality improvement to enhance competitiveness, and drive all employees to improve their work performance, achieving the goal of overall quality improvement. Unimicron strives to be a world-class supplier of electronic parts and materials. Our quality policy aims to be customer-oriented, quality-oriented, and continuous breakthrough, and to create a dynamic environment where employees enjoy working. With this philosophy, Unimicron has been promoting company-wide quality control circle related activities since 1996, so that all employees can work together as a team to increase cohesion, brainstorm and learn from each other, improve employees' problem-solving capability, move towards diversified development, and grow and thrive together with the Company.

2022 Honored of Golden Tower Award of TCIA

Golden Tower - Great Leap Forward in the Yield Rate of New Generation Products - Improving the Appearance Yield Rate of ABF Carrier Boards

- Award: Perfection Group Self-Improvement (Quality) Category-Golden Tower
- Project: Great Leap Forward in the Yield Rate of New Generation Products - Improving the Appearance Yield Rate of ABF Carrier Boards
- The award-winning team, Xinyue Circle, is from the S2 factory of Unimicron's Carrier Board Division. The factory mainly produces advanced IC carrier boards to meet the demand of new-generation chips. In recent years, with the rise of cloud network applications, a large number of network data centers and workstations have been built, leading to an increase in demand for servers and switches, and IC carriers are widely used in high computing performance products, which have long been inseparable from everyone's life. With the concept of continuous breakthrough and excellence, we have continuously used PDCA improvement to achieve better management and quality and become the world's largest IC carrier board supplier.

  The theme of this project is "New Generation Product Yield Improvement - Improving ABF carrier board appearance yield". The project was to design through experiments to find the best solution, introduce new process technology, modify machines, self-make production jigs, design new carriers and establish a prediction system through big data analysis, to improve production efficiency and overcome capacity bottleneck. We successfully solved the problem of quality and yield within one year and shipped the products to achieve a win-win situation for both customers and the Company. Looking into the future, Unimicron is committed to integrating intelligent production into the industry by expanding our production bases around the world and centering on Taiwan. Adhering to the customer-oriented management method, we will continue to promote QCC quality control circle activities and insist on total quality management culture. With the participation of all employees and taking into account the quality of both results and processes, we will continue to develop our technology, leap into the world, and pursue excellence to continue to be a leading company in the industry.

- Award: Perfection Group Indirect Department Category-Golden Tower
- Project: Increasing Water Recovery in the SY plant, towards the Goal of Water Sustainability
- The award-winning team, the Environmental Circle, comes from the Facility & Environment Div. of Unimicron, and integrates the resources of the plant's Energy Conservation and Carbon Reduction Subcommittee, Equipment Div., supplier and TQM, with the topic of "Increasing water recovery in the SY plant area, towards the goal of water sustainability", forward sustainability efforts.

  Because of the limitation of industrial characteristics, Unimicron must rely on stable water resources. Therefore, the stability of water quality and quantity is one of the most important keys to the company's continuous operations. In Taiwan, there is a significant difference in rainfall during wet and dry seasons. Moreover, Taiwan had many phenomena of extreme weather and hydrological extremes in recent years. In order to ensure the factories operation and avoid an immediate crisis of water shortage which is due to a lack of water resources, the factory must improve the risk tolerance of water shortage. Therefore, tracking the storage of reservoirs in various regions and monitoring the water management status of each factory is a daily routine.

  To reduce the consumption of water resources, we continuously increase water recovery systems that reclaim low-pollution water generated from various processes, to replace industrial production water. Continue to promote effective management, environmental-friendly and energy-efficient ways to let every drop of water resources that are from the front end to the final discharge move toward the sustainable goal of zero waste of water. Adhering to the 3P principles of Planet, People, and Performance, we continue to improve water-saving technologies to increase water efficiency and practice our commitment to environmental sustainability.

Golden Tower - Increasing Water Recovery in the SY plant, towards the Goal of Water Sustainability

Best Innovation Award & Golden Tower - Improve the Job Retention Rate of Dun-Pin High School Students after Leaving School, to Fulfill Corporate Social Responsibilities

- Award: Special Group of ESG Sustainability Best Innovation Award & Golden Tower
- Project: Improve the Job Retention Rate of Dun-Pin High School Students after Leaving School, to Fulfill Corporate Social Responsibilities
- The award-winning team, Xin Xiang Quan, came from the Administrative Services Department of Unimicron's Shanying Plant, integrating the resources of the Human Resources Division, Plant Technology Department, and TQM within the plant, while inviting the Qingxiang Youth Care Association and OK Stores for cross-industry cooperation. With the theme of "Enhancing the job retention rate of Dunpin High School students after they leave school to fulfill the corporate social responsibility", we will do our part for social responsibility together.

  Unimicron's Administrative Service Department and the Taipei Prison of the Agency of Corrections, Ministry of Justice have formed a relationship through cooperation on the "work release program." In 2022, Xin Xiang Quan took root further down, combining Unimicron's ESG policy- a better society in social responsibility with the Agency of Corrections, Ministry of Justice (Dunpin High School), hoping that through the cooperation, we can start a social reintegration program for students and nurture their work ethics and future development.

  The project is full of challenges and hardships, and Xin Xiang Quan hopes to strengthen the function of youth counseling and bridging employment through the close connection of all parties, so that juvenile delinquency can have a stable job and normal work and rest after leaving school, and adapt to social life. In the process of activities, QCC spirit and methods are also introduced to instill students' quality concepts in experience and technology during the project activities, so as to increase students' self-confidence in job seeking and employment after leaving school, and to stabilize their economic income and turn their lives around to regain hope.

  Due to the inadequate establishment and lack of resources, juvenile reformatory schools have been restructured into juvenile correctional schools. With the successful experience of cooperation between Dun-Pin High School and Unimicron, we have expanded the program to four major correctional schools in Taiwan. Young people are the seeds of social progress and national prosperity. Unimicron hopes to join hands with other major enterprises to support, stabilize, warm and help juvenile delinquency, and create social harmony values together.

3.2.2 Green Product Management

Unimicron is committed to the implementation of green product management with the three principles of “compliance with green specifications and requirements”, “green procurement”, and “green supply chain”, and sets the quality target of HSF. The use of environmentally hazardous substances on products is strictly prohibited, which considers green materials in the process design. The purchased raw materials comply with the requirements of international laws and regulations such as the Restriction of Hazardous Substances Directive (RoHS), Registration, Evaluation, Authorization, and Restriction of Chemical (REACH), Directive of Packaging and Packaging Waste, China RoHS, California Proposition 65, Montreal Convention, etc. 100% products comply with the requirements of RoHS and REACH. The principles of green products and continuous improvement are implemented, to satisfy customers and comply with the requirements for green materials by international environmental protection regulations and fulfill the social responsibility of environmental protection.

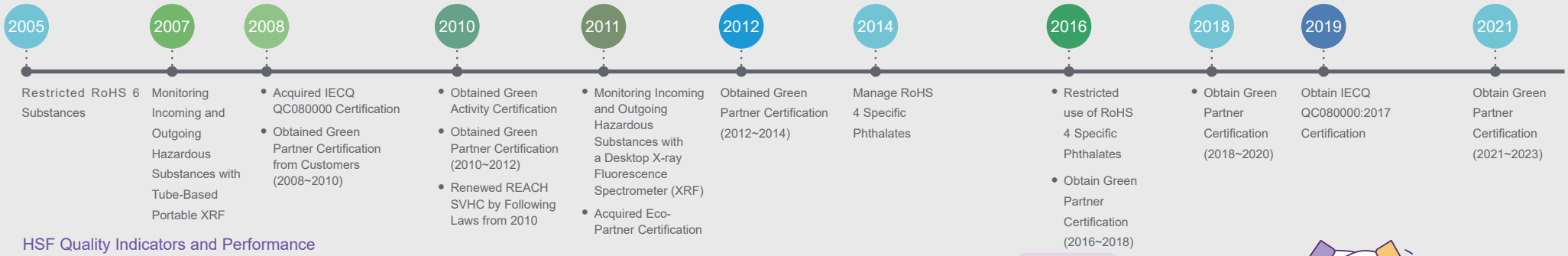
Green Material Committee

Unimicron is the second largest professional PCB and carrier board manufacturer in the world in terms of revenue. In order to comply with customer requirements and international laws and regulations, we have established a Green Material Committee in the Printed Circuit Board and Carrier Board Division, which integrates the departments of quality management, materials, products, R&D, manufacturing, and business. Green materials are taken into consideration in the process design, and harmful substances are fully controlled in four major processes, including quality planning, supply chain and material flow, manufacturing, and quality assurance. Internal operations are carried out, and the status and requirements the Company's green products is continuously confirmed through the QC080000 management system. In the event of changes or amendments to customers’ specifications or international regulations, we will conduct internal evaluations, adjust control standards and operating modes, and notify the relevant units by way of announcements to ensure that products meet customer requirements and comply with relevant laws and regulations and green product regulations, to meet quality requirements and customer satisfaction.

HSF Quality Policy

To implement the four major principles of HSF quality policy, Unimicron has established various indicators to regularly track performance and achievement rates, to ensure that the policies are implemented and meet customer needs. From 2013 to 2022, the achievement rate of all HSF quality indicators was 100%, and there were no returns from customers due to HSF non-compliance.

Establish HSF Management System



HSF Quality Indicators and Performance

Indicator	2022 Targets	2022 Achievements	2023 Targets
Number of Returned Goods Due to Conformity With HSF (Cases)	0	100	0
Real-Time Update Completion Rate of International/Customer Regulations on Hazardous Substances (%)	100	100	100
The Pass Rate of Hazardous Substance Inspection Conducted Internally From Incoming to Shipping and by a Commissioned Third-Party Certification Body (%)	100	100	100
Deficiency Improvement Rate of Regular and Irregular HSF Internal/External Audit (%)	100	100	100
Completion Rate of HSF Regular Training (%)	100	100	100

3.2.3 Hazardous Substances Management

All raw materials, packaging materials and chemicals required in the manufacturing process of products are incorporated into the management system to achieve comprehensive management. In order to fulfill our responsibility and contribution as a global citizen, we are committed to not using banned environmental management substances, while complying with the current laws and regulations, meeting the needs of our customers, and protecting the global environment to reduce the impact on the ecosystem. We established measures for source, process, and finished product management to comply with international standards and customer requirements for controlled substances, and to curb the environmental and social hazards caused by the life cycle of our products.

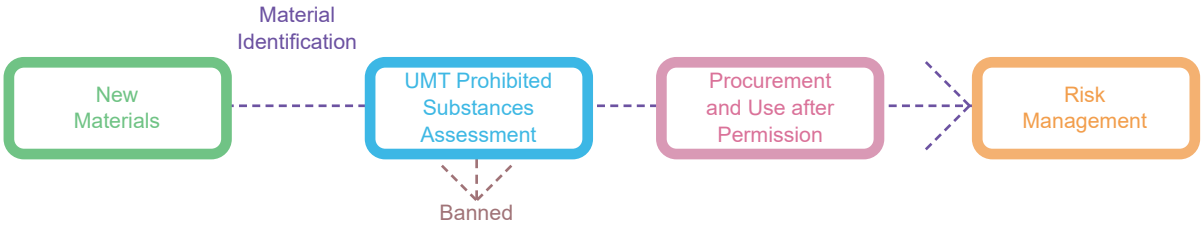
#	Mechanism	Implementation Measures	2022 Results
1	Source Management	• Establish and regularly update the Hazardous Substance List. • Register and evaluate the use of raw materials, and conduct chemical audits during the procurement. • The supplier shall provide us with a third-party inspection report, which shall be updated annually. • Only use materials that have been approved by the Green Material Committee.	✓ Approximately 1,140 items are on the raw material management list ✓ New raw materials are 100% reviewed ✓ The compliance rate of RoHS testing is 100% ✓ Suppliers' third-party testing reports a pass rate of 100%. ✓ 100% green material procurement rate (in compliance with RoHS)
2	Process Management	• Test incoming materials and products for Hazardous substances by XRF analyzer. • "Halogen-free" and "lead-free" are used for the entire production process unless specified by the customer. • Identify and manage customers' specified materials from incoming materials, receiving materials, and manufacturing to warehousing of finished products.	✓ 4,099 incoming materials passed by XRF testing, 100% passed
3	Product Testing	• Test incoming materials and products for Hazardous substances by XRF analyzer. • Samples of products tested for RoHS, Hazardous Substances, etc. by third party. • Regularly survey customer satisfaction with HSF quality for continuous improvement.	✓ 100% passed by third-party inspection ✓ 4,329 finished products passed by XRF testing, 100% passed ✓ Customer HSF quality satisfaction of 4.8 is higher than the target of 4.48 (out of 5)

Note: The scope includes PCB and Carrier SBU in Taiwan.

1. Source Management

To implement the source management of green products, Unimicron has developed a complete internal control process and operation regulations for hazardous substances, established a raw material audit mechanism, adopted the E-Pr system for management, and required suppliers to provide third-party testing reports and updates annually. We published the green procurement requirements and conflict minerals investigation form. Also, request suppliers to confirm/reply with a non-use (banned and restricted substances) guarantee letter and conflict-free minerals. Materials are required to comply with EU regulations such as RoHS, REACH, halogen-free, conflict-free minerals, etc., and listed in the Qualified Materials List after passing Unimicron's internal audit. If there are specific requirements by the customer, we will comply with the customer's control standards and supplier management regulations to fulfill our commitment to "100% compliance with international regulations, industry standards and customer requirements for green products".

Review Process



Control Measure

Hazardous Substance List and Reduction Plan : Based on RoHS, REACH Substances of Very High Concern (SVHC), IEC 62474, customer regulations and other international regulations, we develop a Hazardous Substance Control List and related reduction plan to control the use of substances in the list. When necessary, through the monitoring of the list of hazardous substances and the reduction plan, implement reduction or declaration according to customer needs.

REACH Compliance Declaration : Investigate the compliance of suppliers with REACH and implement source management of raw materials.

Restriction of Hazardous Substances Operational Procedures : To regulate the Standard Operating Procedures of division in handling hazardous substances.

Raw Material Survey

“100% Green Products in accordance with International Regulations, Industry Standards, and Customer Requirements” is Unimicron's commitment to green products. In order to comply with the requirements of the RoHS and REACH, Unimicron carried source and finished product management according to the specifications of the management systems and requested suppliers to survey hazardous substances to ensure that the raw materials were complied with the hazardous substances by RoHS and REACH. In 2022, there were 1,358 RoHS reports from Taiwan facilities for managing and reviewing suppliers, including 574 for direct materials, 638 for indirect materials, and 146 for packaging materials, which were 100% completed.

Hazardous Substance Control

In order to promote green product management and product safety, Unimicron's products are currently banned to use environmentally hazardous substances, and in accordance with EU regulations (e.g. RoHS, REACH, IEC 62474, etc.), a total of 1,140 substances are listed in 11 regulatory directives and customer-specific requirements, including GADSL (274 substances) and Prop65 (970 substances), which are mainly published on the official website of the regulations.

Unimicron’s products are one of the components of complex electronic products, and the most important concern for customers is the EU REACH SVHC and RoHS hazardous substances restriction directive. Unimicron’s products give priority to green materials that comply with regulations and customer requirements. Except for customer-specified materials, there are two main hazardous substances in products, including brominated flame retardants and bisphenol A. The content ratio of 4.37% based on the total sales amount of the products, corresponds to the material declaration limit value of IEC 62474 for electrical and electronic products.

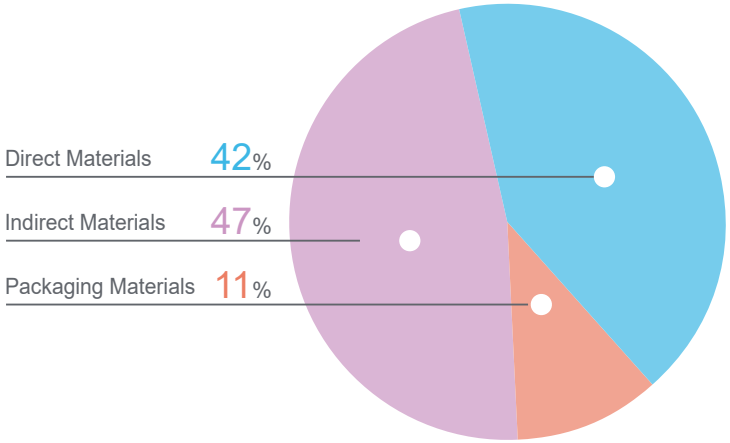
Hazardous Substance Survey

Unimicron is disclosing hazardous substances to its customers by means of supplier hazardous substance surveys. After informing suppliers of the new hazardous substance control items, Unimicron requires suppliers to provide a letter of assurance of non-use of banned and restricted substances and a declaration of REACH compliance to ensure compliance with the law and Unimicron's regulations, and to keep track of the use of all materials containing banned and restricted substances and SVHCs. According to the customer's material number that uses SVHC, we reply to the customer survey form and implement source management. In 2022, we cooperated with customers in the investigation of hazardous substances of PCB and Carrier SBU in Taiwan, we conducted a total of 387 supplier surveys, with a response rate of 100%, and completed a total of 818 surveys of hazardous substances required by customers, with a completion rate of 100%.

2. Process Management

- Test incoming materials and products for Hazardous substances by XRF analyzer. There are 6 XRF analyzers to control the Hazardous Substances of incoming materials, products and package materials.
- "Halogen-free" and "lead-free" are used for the entire production process unless specified by the customer.
- Identify and manage customers' specified materials from incoming materials, receiving materials, and manufacturing to warehousing of finished products.

2022 RoHS Management Items



Reduction Plan of Hazardous Substances in Products

Improvement Plan

In order to enhance product safety, Unimicron is committed to reducing the environmental and human health hazards of the substances in our products. For example, Bisphenol A (BPA) is a chemical substance regulated by international standards and Taiwanese government regulations. To reduce the impact of hazardous substances on the environment, the products of PCB II SBU are 100% compliant with REACH SVHC for BPA concentration. The products of Carrier SBU contain Bisphenol A (BPA) under REACH SVHC according to the customer's specified substrate. If the concentration of BPA in the finished product is higher than the standard, we must notify the customer in accordance with REACH requirements.

Substitution Plan

The Carrier SBU and PCB II SBU have implemented substitution programs and phased out Cobalt (II) chloride (wetness indicator card and desiccant in packages), Arsenic trioxide and Arsenic pentoxide.

Operational Chemical Safety Management

In order to strengthen the safety management of chemical operations, Unimicron has drafted the "Chemical Management Regulations" to regulate the chemical safety in each plant from purchase, unloading, handling, disposal, use, storage, labeling, Chemical Dispense System Operations, etc. The following are the relevant measures:

Mechanism	Measures	2022 Results
Chemical Risk Control	• The "Priority Management Chemicals" or "Controlled Chemicals" used in the plant are regularly inventoried and audited every year that are reported on the OSHA platform to obtain the reporting certificate to comply with Chemical Substances Registration of government. • All chemicals are stored in secondary containers to prevent leakage or spill. • All chemicals stored at the line are limited to one day's usage. • All drums/tanks are stored in secondary containers (such as dikes, spillage trays, etc.) and are set at 110% of capacity to prevent chemical leaks or spills. • Emergency showers and related first aid kits (such as Diphoterine, etc.) are installed.	✓ Inventory taking the Group-wide chemicals, there were 750 priority management chemicals and no controlled chemicals. In 2022, all 13 factories in Taiwan completed the declaration before September 30, 2022. ✓ All chemical storage requirements have been standardized and included in the daily management items of the factory, with 100% completion of inspection. ✓ In addition to emergency showers, as required by law, Diphoterine have been installed in high-risk areas, with 100% completion rate.
Safety Regulations for Tank Car Loading ／ Unloading Operation	• Software Management: Regular independent inspection of liquid leakage sensors in the tank area, unlocking of tank car by authorized personnel before operation, wearing acid and alkali-resistant chemical protective clothing when supply operations, and checking by authorized personnel after chemical supply. • Hardware Protection: Establish protection mechanisms for the tank, liquid level control, dosing tank, filling port, etc.	✓ It specially set up inspections for tanker loading/unloading operations, and 624 inspections were completed in 2022. All inspection deficiencies were about chemical management and legal requirements, which all have been improved, and the degree of compliance is 100%. ✓ The Company has completed 11 plant improvements in 2022 for the tanker filling protection mechanism. • Filling Port : It is designed with "1 Chemical, 1 Box", and set up by zone according to the hazard characteristics and restricted by using non-combination locks, universal locks and universal keys to avoid mistakes in dosing. • Dosing Process : It is controlled by an electric pump with independent power supply, and chained break with liquid level monitoring, and monitor is installed to avoid forced supply or abnormal situations. • Personnel Safety : Personal protective gears, wheel chocks and related emergency response facilities (e.g., fire extinguishers and liquid-absorbing cotton) should be put on during the dosing process, and liquid collection ditches should be set up in the area to avoid the safety risk of personnel.
Chemical Dispense System (CDS) in New Plant	• Occupational Disasters Prevention: Planning the automatic Chemical Dispense System, designing the storage cabinet and electric control switch for different types of medication with leakage protection to reduce the risk of electric induction. • Fire Prevention: According to the acid/alkali nature of chemicals, storage is divided into layers to reduce the risk of the reaction of chemicals. • Chemical Accident Prevention: Preventive measures such as automatic Chemical Dispense System and foolproof design mechanisms are established.	✓ The new plant (Shanying II, Yangmei Plant) was built 100%. ✓ Other new plants are being built.
Workplace Monitoring	• Every half year, each plant aggregates speciality chemical, organic, dust, noise, lighting and other items and checkpoint locations to monitor the workplace environment and ensure employees' safety. • Regularly announce the workplace-monitoring plan and monitoring results every half year.	✓ In 2022 physical and chemical factors were monitored at 4,912 positions, with 22 abnormal positions, all of which are physical factors (noise) exceeding the standard, and the current dealing is to strengthen the wearing of earplugs first.
Health Examination	• Employees complete regular general and special health checks every year.	✓ Please refer to Chapter 6.4.
Personal Protective Equipment	• Develop specifications for Personal Protective Equipment (PPE) in accordance with international standards or CNS, and evaluate the comfort and applicability of use. • Formulate the type and quantity of PPE to be equipped at each workplace. • Promote and check the use of equipment from time to time at the workplace to ensure implementation.	✓ In 2022, the specifications, types and on-site use specifications of 7 types of personal protective equipment (hard hats, backpack safety belts, rear-opening gowns, acid and alkali-resistant gloves, cut-resistant gloves, safety shoes, and goggles) will be formulated. ✓ Cooperate with the factory's three reality checks and the headquarters audit to confirm the usage status, with a factory implementation rate of 100%.
Chemical Detection Systems	• Install fixed gas detectors and alarm devices in speciality chemical gas workplaces to ensure on-site operational safety. • Annual inspection, maintenance, repair, testing and calibration of the detector function.	✓ 330 units installed erected in the factory, and 24 new units installed in 2022, to be included in the unified management and control of the factory's instrument calibration room.

3. Product Testing

To ensure that the products produced by Unimicron comply with the green product standards, we not only test incoming materials and products for Hazardous substances by XRF analyzer but also sample products to third-party for hazardous substance testing every year to ensure that the products meet the hazardous substance management requirements. In 2022, the Carrier SBU focused on the 10 substances of RoHS, including halogen (F, Cl, Br, I), antimony (Sb), beryllium (Be), perfluorooctane sulfonate (PFOS), perfluorooctanoic acid (PFOA), Phthalates (DINP, DNOP), Hexabromocyclododecane (HBCDD). The PCB II SBU focused on 10 substances of RoHS and halogens (Cl, Br). Please refer to the ESG website for test reports.

Analysis Type	Analysis Item	RoHS	Halogen-Free Specification	Others
Third-Party Inspection	Finished products	Cd, Pb, Hg, Cr^{6+}, PBBs, PBDEs,BBP, DBP, DIBP, DEHP	Br, Cl	Sb, Be,PFOS, PFOA,HBCDD,DINP, DNOP
X-Ray Fluorescence (XRF) Analysis	Raw materials, finished products, packaging materials	Cd, Pb, Hg, Cr	Br, Cl	Sb, As

3.3 Customer Relationship

Topics	Product Safety and Quality	Customer Relationship Management
Policy	• Customer orientation, dedication to quality, and continuous breakthrough	
Commitment	• Jointly commit towards sustainability to create common prosperity	
Division	• ESG Committee	• Customer Service Implementation Officer
Resources Invested	• ESG / RBA audits by customers	• Semi-annual customer satisfaction survey • Quarterly Non-Disclosure Agreement (NDA) as required by customers
Grievance Mechanism	• Whistleblower hotline, mailbox and Communication Software	
2022 Targets	• Case of critical deficiencies in CSR/RBA audit: 0 • Cases of returning goods caused by non-compliance with HSF regulations: 0	• Case of customer privacy violations: 0 • Customer satisfaction: PCB SBU (including HDI and FPC) > 4.6 points and Carrier SBU > 3.6 points
Actions	• Compliance with CSR regulations: Reduce critical deficiencies in customer CSR/RBA audits	• Strict compliance with customer privacy requirements: No case of customer complaints due to violation of customer privacy or loss of customer information
2022 Achievements	✓ Case of critical deficiencies in ESG/RBA audit: 0 ✓ Cases of returning goods caused by non-compliance with HSF regulations: 0	✓ Case of customer privacy violations: 0 ✓ Customer satisfaction: PCB SBU (including HDI and FPC) was 4.63 and Carrier SBU was 4.16

3.3.1 Customer Services

As a world-class supplier of the PCB and Carrier industry, Unimicron's customers are located all over the world. The goal of Unimicron is to become the best business partner for our customers, and we are committed to technological innovation and providing the best products. Unimicron uses several communication channels and actively communicates to understand customers' needs. We are committed to providing perfect services and establishing a relationship of customer satisfaction and trust.

Regular Communication

- Setting up a customer service contact point and a customer service VIP team (leaders are plant general managers, conducting weekly customer feedback discussions), quarterly meetings, regular visits, and occasional contacts
- The issues of customer concern include Product quality/HSF quality and service, technology, price, delivery date, and ESG

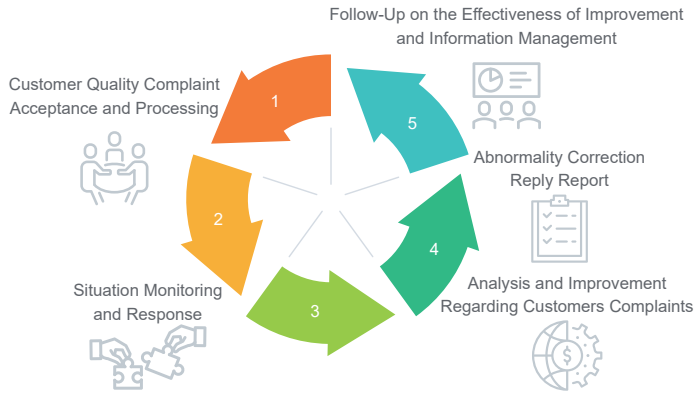
Communicating ESG Issues

- Communicating ideas and practical experiences through the opportunities of customer-to-factory audit and communication
- Guiding customers to inspect Unimicron's plant equipment, and communicating with customers about management systems and measures to let them understand Unimicron's efforts regarding ESG issues
- 0 critical deficiencies in the 2022 CSR/RBA audit

3.3.2 Complaint Mechanism and Handling

Unimicron pays considerable attention to the opinions given by our customers. We view customer complaints and comments as opportunities to assist us in continuous improvement. Thus, Unimicron has built a complete mechanism to ensure the effective communication, processing and response of customer complaints and opinions through a comprehensive, systematic and standardized processing procedure, in order to protect customer rights and interests.

Customer Complaint Response Process



PCB SBU

Customer Satisfaction Survey

We fully understand and satisfy the needs and expectations of our customers through customer satisfaction surveys, as a way to improve service/HSF quality, and as a basis to adjust the Company's business strategy and development direction

VIP Customer Service Team Member Evaluation

The leader of each department of the VIP customer service team needs to regularly evaluate and review the skills of members, and educate or adjust the members' abilities to reach the requirements and improve the service and competitiveness of the VIP customer service team

Customer Complaint Management

To enhance our customer service, we conduct immediate investigations on the problems raised when using our products and take appropriate measures to improve satisfaction with our products and services

Customer Service Management

To provide fast, efficient and thoughtful service to customers, and with the hopes of improving customer satisfaction and loyalty, this procedure is implemented for various types of services

Carrier SBU

Customer Satisfaction Survey

We keep tabs on customer needs and market trends based on customer satisfaction surveys, as a way to improve service quality and as a basis to adjust the Company's business strategy and development direction

Customer Complaint Management

Establish customer complaint classification corresponding to the management procedures of the plant-managing unit to reduce customer complaints and provide timely responses to improve customer satisfaction, at the same time, continuously improving quality to meet customer needs

Sales Return

To provide customers with complete services by clearly and effectively handling customer returns

Unimicron categorized customer complaints into three types - “Critical”, “Major” and “Minor” - based on their severity level, with which the cases are reported, handled and have their progress tracked accordingly. It is expected that all complaints can be handled and responded to properly, with the most efficient use and allocation of resources. 100% response to customer complaints received in 2022.

Customer Complaint Notification and Management

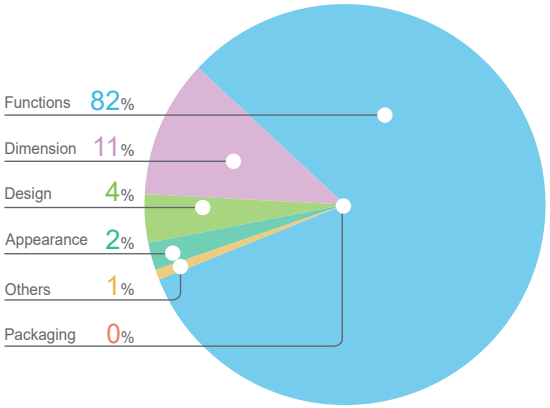
Type	Definition	Notification Levels	Processing Levels	Tracking Frequency
Critical	• Violation of customer HSF quality standards and items listed in WEEE and RoHS, regardless of the amount of loss • Quality incidents reported by the customer, with a loss amount exceeding NT$5 million	Chairperson CEO	VIP(Executive President ／ SBU President/ Vice President)	Report progress to the highest level twice a week
Major	• Quality incidents reported by customers, affecting product function/reliability	Vice President	Plant Director/ Responsibility (Manager/ Deputy Manager)	Each factory quality assurance unit tracks the progress of customer complaints daily
Minor	• Quality incidents reported by customers, no affecting product function/reliability	Plant Director	Responsibility Manager, Deputy Manager	

Explanation for 2022 Customer Complaint

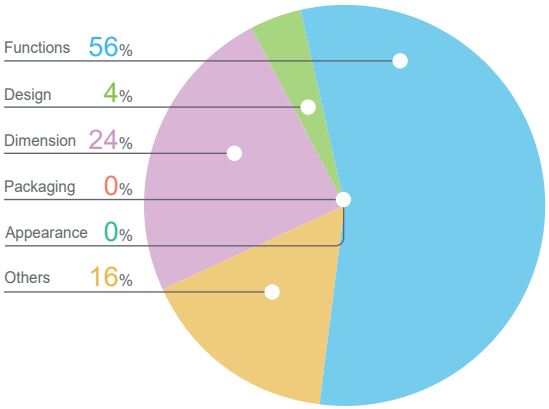
SBU	Description	Improvements
PCB SBU	In 2022, the PCB SBU received 163 complaints of Critical and Major, decreasing 70 cases compared to 2021 (233 cases), and there were caused by functional and dimensional abnormalities (decreasing 63 cases compared to 2021).	✓ Through continuous improvement in the factory and timely reply related corrective actions to customers ✓ The relevant solutions have all been closed and no recurrence has occurred
Carrier SBU	In 2022, Carrier SBU received 99 complaints of Critical and Major, decreasing 47 cases compared to 2021 (146 cases), and there were caused by Functional and Dimensional abnormalities (decreasing 37 cases compared to 2021).	✓ Evaluate the effectiveness of CA and PA to avoid recurrence ✓ Effective countermeasures for each BKM plant ✓ No recurrence of the same true cause

2022 Customer Complaint Issues

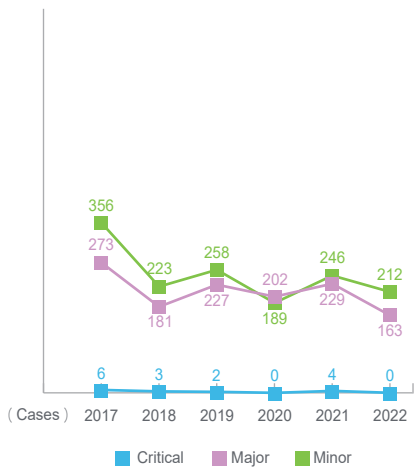
PCB SBU



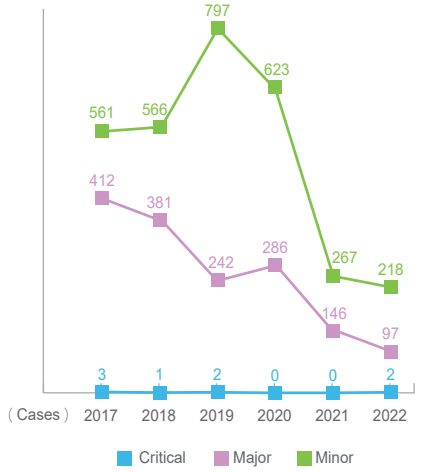
Carrier SBU



Customer Complaint Trend for PCB SBU Products



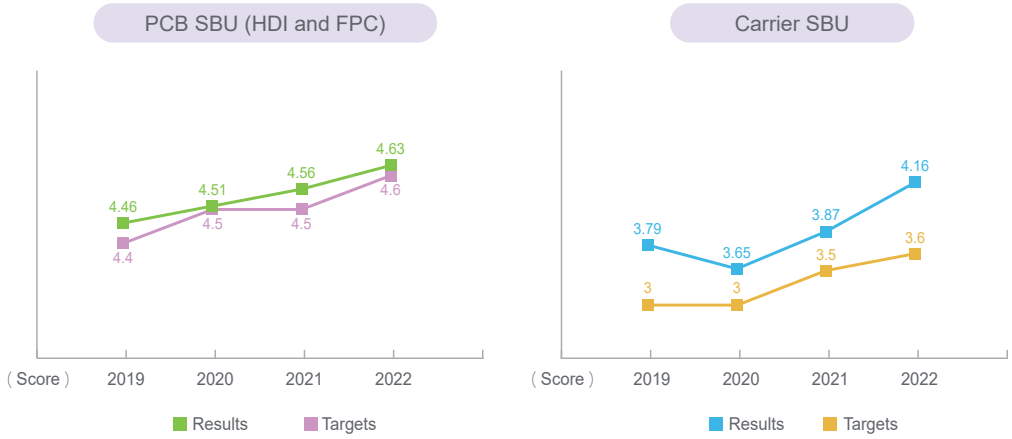
Customer Complaint Trend for Carrier SBU Products



3.3.3 Satisfaction Survey

In order to know customer needs and provide quality services, Unimicron actively conducts customer satisfaction surveys every year, and we keep tabs on customer needs and market trends based on customer satisfaction survey results, as a way to improve service quality and adjust the Company's business strategy and development direction. To truly grasp customer expectations, the plants in Taiwan, South China, and East China conduct customer satisfaction surveys for VIP customers every 6 months and important customers every year. The survey items include price, delivery date, technology, quality, HSF quality, customer service, etc. Customer satisfaction is scored on a 5-point scale. It is required to review a single item that is below the average score of 3.5 points in PCB (HDI and FPC) or 3 points in Carrier SBU.

Customer Satisfaction



2022 Customer Satisfaction Survey Results (Unit: Score)

Type	PCB SBU	Carrier SBU
Technology	4.68	4.28
Quality	4.71	4.22
HSF Quality	4.83	4.69
Service	4.70	4.62
Delivery Date	4.65	4.15
Price	4.22	3.04

Explanation for 2022 Customer Satisfaction

Type	Difference from the previous year	Description	Improvement
PCB SBU	+0.07	• Meet customer needs for technical services of important products • Meet customer's demand for quality improvement	Continue to communicate with customers, provide new technologies and respond to customers' related needs immediately
Carrier SBU	+0.29	HSF's quality, service, technology, quality, delivery, and price are as customers expected, resulting in increased customer satisfaction	Not only Continuously explain market conditions and Company strategies but also provide relevant plans and suggestions to customers

In order to improve customer service, in addition to based on the customer satisfaction survey results, we will also compile and analyze the quarterly business review scores of customers and discuss improvement plans and related response measures in the meeting, and include them in the performance management indicators of relevant departments to improve service standards, establish competitive advantages and win the trust of customers.

The protection of customers' intellectual property and information is the key to our business and business ethics management. In addition, Unimicron complies with the information security policy and implements programs to protect customers' privacy and personal information, such as terminal computer management, data center management, anti-virus and anti-hacking management, training, and network security system management. Unimicron has not been complained by customers for violation of customer privacy or loss of customer information in 2022.

04 Climate Action

4.1 Climate-Related Risks and Opportunities

4.2 Climate Scenario Analysis

Climate Action

4.1 Climate-Related Risks and Opportunities

4.1.1 TCFD Disclosure Framework

Unimicron focuses on global trends related to climate action and has been building a governance framework to incorporate climate change into risk management since 2018, with reference to the Recommendations of the Task Force on Climate-related Financial Disclosures. In 2022, incorporating climate change risk issues into ESG Material Topics and combining them with the Company's business strategy, we developed adaptation and mitigation strategies by analyzing risks and opportunities in the aspects of policies and regulations, market and technology changes, goodwill and entities, and disclosed climate change-related financial information, demonstrating Unimicron's resilience and due responsibilities in the face of climate risks, improving communication with stakeholders, and committing to carbon neutrality by 2050.

Framework	Strategies and Actions
Governance	• Board of Directors: As the highest unit to oversee climate change management, it is responsible for reviewing sustainable management strategies, key guidelines, risk management, annual implementation results, etc. • ESG Committee: It is served by the Chairperson, executive president and general manager of each business group as members of the committee, and they supervise five sub-committees to set management strategies, goals and specific promotion plans (including climate change-related issues). It regularly reports to the Board of Directors on climate change-related plans and operational results every year. In 2022, a total of 4 climate change-related issues were reported to the Board of Directors. • Energy Conservation and Carbon Reduction Subcommittee: It is a sub-committee of the ESG Committee, and its main responsibilities include assessing and/or managing climate-related issues, management review of key performance indicators, and setting short-, medium- and long-term goals. The strategies include improving energy efficiency, evaluating the use of renewable energy, carbon emission management, etc., and actively implementing green management effectiveness.
Strategy	• We regard climate action as one of our key corporate missions and integrate it with our core business and operations. We are committed to the introduction and development of various green technologies, actively responding to climate change and reducing greenhouse gas emissions, and focusing on the issue of sustainable management of natural resources. Guided by ESG Policy and environmental resources policies, we plan and implement actions to mitigate climate change, focus on global trends related to climate action, and continue to move towards carbon neutrality. • Identify and assess short-term (1-3 years), medium (3-5 years), and long-term (5-10 years) climate-related risks and opportunities based on the TCFD framework. For details, please refer to Page 64-66. • In order to understand the extent to which the Company is impacted by climate change, for those high frequency and high impact items, Unimicron considers the difficulty of obtaining data from common international climate scenario methodologies and applies the Network for Greening the Financial System, using the three scenarios of Net Zeros 2050, Nationally Determined Contributions(NDCs) and Current Policies, to assess the impact of climate change, reduce the operational and financial impact of climate change, and improve organizational climate resilience. For details, please refer to Page 67.
Risk Management	• Relevant departments in the ESG Committee identify risks and opportunities of climate change based on possible issues within their business scope, consider the scope and status of impacts, and perform materiality assessments of entity and transformation risks. The frequency of occurrence and the degree of impact are scored on a five-point scale, with a maximum of five points and a minimum of one point, and ranked according to the score. For items with high frequency of occurrence and high impact, management measures are developed through interdepartmental discussions and the results are reported to the ESG Committee.
Metrics & Targets	**Targets** • The target of reducing carbon emissions by 8% in 2025 compared to the projected peak. • The target of reducing carbon emissions by 30% in carbon emissions in 2030 compared to the projected peak. • The target of achieving carbon neutrality in 2050. **Metrics** • Renewable Energy Use : Renewable energy use increases by 30% by 2030. • Greenhouse Gas : The greenhouse gas emission intensity per unit revenue will be kept below 11 in 2023 and below 10 in 2025 • Water Resources : The water consumption intensity per unit revenue will be kept below 300 in 2023 and below 290 in 2025. • Energy Management : The power consumption intensity per unit revenue will be kept below 17 in 2023 and below 16 in 2025. • Waste Management : The waste reuse rate will be maintained above 90% in 2023 and 2025. **Management Mechanisms** Risks Related to Greenhouse Gas Emissions : Relevant emission information has been carried out in accordance with the GHG Protocol and ISO 14064-1 Specification for greenhouse gas inventory, and a third party has been entrusted to verify the data. It continues to promote mitigation measures. For details, please refer to Page 68-69. Scope 1 : The main source of emissions is the natural gas used in boiler steam in the manufacturing process stage. Due to the addition of Shanying II Plant and Yangmei Plant in Taiwan, the increase in usage affects its emissions. Scope 2 : The source of emissions is the emissions generated by purchased electricity, which is mainly related to the emissions from the use of electricity. Due to the addition of Shanying II Plant and Yangmei Plant in Taiwan, the emissions are affected. Developing Internal Carbon Pricing: Internal carbon pricing is a necessary management tool for the Company to move towards carbon neutrality, and the Company has set the goal of achieving carbon neutrality by 2050. The Company has started to develop a phased introduction of internal carbon pricing to drive active carbon reduction within the Company and reduce external carbon costs.

4.1.2 Identification and Assessment of Climate-Related Risks

Since 2018, relevant departments of Unimicron's ESG Committee have identified risks and opportunities of climate change based on the issues that may be faced within their business scope. This year, based on the probability of occurrence (5 levels) and the degree of impact (5 levels) of each risk and opportunity, we drew a matrix to grasp major risks and opportunities, to formulate management methods in order to reduce, transfer, or avoid potential impacts.

Risk Identification and Assessment

The results of the matrix analysis of the climate change risk assessment show that there are 5 high transition risks, namely increased GHG emissions, enhanced emissions-reporting obligations, Cap and Trade, increase in energy costs, and Energy Tax / Renewable Energy Regulations / Carbon Fee. There are 5 Medium risks including failure to unsuccessful investment in new technologies, costs to transition to lower emissions technology, uncertainty in market signals, changing customer behavior, stigmatization of sector. The physical risks of extreme rainfall and drought, changes in precipitation patterns, extreme weather events such as cyclones and floods, and extreme temperature changes are the 4 risks in the medium risk category.

Unimicron Climate Change Risk Matrix

Financial information of the Unimicron Climate Change Initiative

In 2022, the Company has already invested 0.06% of its annual revenue in energy-saving improvement and the purchase of energy-saving products in response to climate change.

From 2023 to 2026, We expect to invest NT$5.565 billion in energy-saving and carbon reduction improvement projects, green energy storage equipment, hydrogen fuel cell, etc.

Physical Risks

Item	Identified Risks	Period	Sites	Level	Impact	Strategy	Potential Financial Impact
Acute	Extreme Rainfall and Drought	Short-term	▲ ■	Medium	• Extreme rainfall or drought events may cause abnormal water supply and equipment or supply chain disruptions, resulting in production delays or operational disruptions.	✓ Regularly monitor water shortage tendencies and develop contingency measures. ✓ The emergency response meeting shall be held during the drought period. ✓ The emergency response water dispatch team is in charge of water trucks, water tanks, water sources, and other matters regarding water resources dispatching, to ensure uninterrupted operations.	Reduced revenue from decreased production capacity (e.g., transport difficulties, supply chain interruptions)
	Extreme Weather Events Such as Cyclones and Floods	Medium-term	▲ ■	Medium	• The factory system is damaged, resulting in property loss.	✓ Flood warning mechanism and emergency response preparation. ✓ Existing plant buildings are equipped with water barriers, the base of the new factory is raised, etc. ✓ Emergency response procedures for natural disasters have been established and will be implemented in stages.	
Chronic	Changes in Precipitation Patterns	Long-term	▲	Medium	• Rainfall is mostly concentrated in some areas, leading to water shortages.	✓ In the use and retention of water resources had been evaluated at the initial stage of establishing each of Unimicron's facilities. Not only set up storage tanks but the water storage capacity of each regional reservoir and the water consumption status of each plant is monitored and managed during normal times. ✓ The emergency response water dispatch team is in charge of water trucks, water tanks, water sources, and other matters regarding water resources dispatching, to ensure uninterrupted operations. ✓ The AWS International Water Stewardship Standard was introduced for sustainable and systematic water management. ✓ Water usage efficiency can be increased in two major aspects: production processes and equipment upgrades. ✓ A project that recycles water from production line equipment improved the water recycling and reuse rate.	Increased production costs (Water saving facilities and water recycling systems)
	Extreme Variability in Weather Patterns	Long-term	▲ ■	Medium	• With the rising average temperature in the summer, to maintain the temperature and humidity conditions in the plant, more air conditioning systems need to be turned on to meet the production demand.	✓ Improve the efficiency of the air conditioning system and add inverters with control, reducing energy use and reducing greenhouse gas emissions. ✓ Fully use products with energy-saving labels and environmental protection labels.	Increased operating costs

▲ Taiwan Facilities ■ Mainland China Facilities

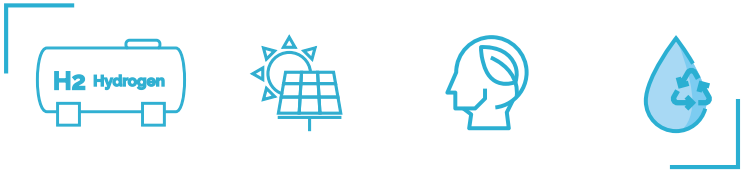
Transition Risks

Item	Identified Risks	Period	Sites	Level	Impact	Strategy	Potential Financial Impact
Policy and Legal	Increased GHG Emissions	Short-term	▲ ■	High	• Greenhouse gas emissions are mainly from electricity consumption. If electricity consumption increases, emissions will increase	✓ Continuously grasp the energy efficiency of equipment through the energy management system ✓ Invest in green electricity and energy-saving and carbon-reducing equipment	Increased operating costs
	Enhanced Emissions-Reporting Obligations	Short-term	▲ ■	High	• Corporate Governance 3.0 blueprint to mandate listed companies to complete GHG inventories of subsidiaries and report emissions information by 2025 • Investors and customers demand disclosure of carbon emissions information	✓ Conducting greenhouse gas inventories ✓ Disclosing information on the company's official website, annual report, ESG report, the Market Observation Post System and the media	
	Cap and Trade	Medium-term	▲ ■	High	• Shenzhen City, Mainland China, took the lead in launching carbon emissions trading in June 2013. Unimicron (Shenzhen) began to join the Shenzhen carbon trading mechanism in 2014. As we deal with more stringent carbon caps in the future and a carbon trading market that has grown more sophisticated. If the scale of our operations and production capacity increase in the future, the carbon cost of operation will rise if our quota cannot cover our total carbon emissions	✓ Implement greenhouse gas inventory in accordance with ISO 14064, and continuously monitor and manage to reduce carbon emission intensity ✓ Continue to expand R&D capabilities, and cooperate with equipment manufacturers and material manufacturers to develop low-carbon technologies	
	Regulations: Energy Tax / Renewable Energy Regulations / Carbon Fee	Medium-term	▲	High	• Energy Tax: When the Energy Tax is imposed, it will increase the Company's operating expenses • Renewable Energy Regulations: Taiwan plants are required by law to install/use renewable energy in accordance with the Renewable Energy Development Act, which will increase the Company's capital expenditure • Carbon Fee - In the future, Taiwan will impose a carbon fee in accordance with the Climate Change Response Act, which will limit capacity expansion and increase operating costs - Installation and operation of carbon reduction equipment, resulting in increased operating costs	Energy Tax ✓ Pay attention to changes in regulations and establish response measures in advance to meet regulatory requirements ✓ Improve energy efficiency through equipment improvement and renewal Renewable Energy Regulations ✓ Plan renewable energy use and evaluate solar photovoltaic facilities based on demand by 2025 Carbon Fee ✓ Implement inventory and continuous monitoring management to reduce carbon intensity in accordance with ISO 14064 greenhouse gas inventory standards ✓ Continuously expand R&D capacity and cooperate with equipment and material manufacturers to develop low-carbon technologies ✓ Set carbon reduction targets, continuously evaluate and plan carbon offset strategies, moving toward carbon neutrality ✓ Continue to pay attention to the implementation content of laws and regulations	
Technology	Unsuccessful Investment in New Technologies	Long-term	▲ ■	Medium	• Customers may reduce orders because the Company has not met the goals set forth in the regulations and, if necessary, require additional tax payments from the Company	✓ For low-carbon products and new product development, the R&D department is responsible for the development of new equipment or new technologies, and reports the progress and work results to the senior executives every week	R&D expenditures in new and alternative technologies
	Costs to Transition to Lower Emissions Technology	Medium-term	▲ ■	Medium	• Invest in hydrogen fuel cells for power generation, increasing operating costs	✓ Set up hydrogen fuel cells	
Market	Increase in Energy Costs	Short-term	▲ ■	High	• Electricity prices are increasing year by year, and the cost of obtaining energy is increasing • In response to the government's 2050 net zero target, and the proportion of renewable energy will reach 60%-70% by 2050 • The cost of green electricity is higher than that of general electricity	✓ Improve energy use efficiency ✓ Look for renewable energy suppliers ✓ Use renewable energy and set renewable energy promotion goals	Increased production costs due to changing input prices (e.g., energy, water) and output requirements (e.g., waste treatment)
	Uncertainty in Market Signals	Medium-term	▲ ■	Medium	• Because of the uncertainty of global or regional market information, especially in relation to climate change issues, it is difficult to grasp the future market demand for products or services	✓ Low carbon emission business operation model has been a global consensus. Although it is a customized product, we can still integrate low carbon materials and promote low carbon emission technology at the development stage, and at the same time cooperate with relevant units of the Group to build a low carbon supply chain	Change in revenue mix and sources
	Changing Customer Behavior	Medium-to-long term	▲ ■	Medium	• Medium-term: Customers prefer to use low-carbon and green products (such as using green electricity); customers transfer orders to other brands, resulting in the risk of revenue reduction • Long-term: Increased operating costs due to customer requests for increased green power	Medium-term ✓ Actively invest in the development of high-end manufacturing processes, establish an industry with innovative technology and intellectual autonomy, and develop new products that are high-end, low-carbon and environmentally friendly to achieve the carbon reduction goals set by law Long-term ✓ Planning the purchase of green electricity and assessing the installation of photovoltaic	• Medium-term: Reduced demand for goods and services due to shift in consumer preferences • Long-term: The cost of green power and photovoltaics
Reputation	Stigmatization of Sector	Short-term	▲ ■	Medium	• The production process will produce pollutants, subject to government supervision	✓ Set energy-saving and high-efficiency equipment ✓ Intelligent control to improve efficiency ✓ Improving waste reuse	• Reduction in capital availability

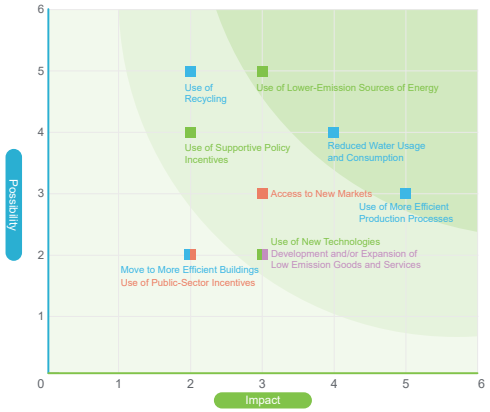
▲ Taiwan Facilities ■ Mainland China Facilities

Opportunity Identification and Assessment

According to the results of the matrix analysis of climate change opportunities, the 3 most influential factors in response to climate change are reduced water usage and consumption, use of lower-emission sources of energy, and use of more efficient production processes. The next 5 items are the use of recycling, access to new markets, use of supportive policy incentives, use of new technologies, and development and/or expansion of low emission goods and services.



Unimicron Climate Change Opportunity Matrix



Item	Identified Opportunities	Period	Sites	Level	Impact	Strategy	Potential Financial Impact
Resource Efficiency	Use of More Efficient Production Processes	Long-term	▲ ■	High	• Reduce the defective rate of products to reduce the cost of scrapping. • Reduce the consumption of other chemical liquids to reduce the cost of chemical liquids.	✓ Introduce circular economy thinking to reduce carbon emissions and use of energy resources. ✓ Introduce new chemical liquids in electroplating process.	Reduced operating costs (e.g., through efficiency gains and cost reductions)
	Reduced Water Usage and Consumption	Short-term	▲ ■	High	• Improve water resource utilization efficiency and reduce dependence on raw water.	✓ Recycle water from manufacturing, monitor the quality of recycled water, and divert and reuse it to related systems to continuously improve the recycling rate of water resources.	
	Use of Recycling	Short-term	▲	Medium	• Reduce resource waste and mining, while creating circular economic value: • Package ecycling: Carrier SBU has been advocating the use of recycled carriers since 2018. • Use of gold salt material from gold recycling: PCB SBU Shanying Plant has introduced the use of gold salt made from recycled gold since 2021 and Luzhu Plant since 2022. • Use of recycled copper materials: PCB SBU Shanying Plant and Luzhu II Plant will introduce it first in 2023.	✓ Prioritize the purchase of reusable carriers, and for the Tray used in the shipment of carriers, the supplier will collect the carriers from the customer for reuse after shipment to the customer. ✓ Introduce gold salts made from 100% recycled gold for use in related processes, and have the discharged gold waste recycled by the gold salt supplier to provide gold salts to Unimicron after re-refining. ✓ Shanying Plant and Luzhu II Plant will be the first to introduce recycled copper.	Promote circular economy and enhance customer satisfaction
Energy Source	Use of Lower-Emission Sources of Energy	Short-term	▲	High	• Some of the boilers in the plant used to be fueled by fuel oil and diesel, etc., and gradually changed the fuel source to natural gas, which can effectively reduce the greenhouse gas emissions generated by burning fossil fuels.	✓ Continuously replace high energy-consuming equipment, improve energy efficiency, and incorporate low-carbon energy-saving measures into the design of new plants. ✓ We will continue to replace energy-consuming equipment and improve energy efficiency by 2025, and we plan to use renewable energy and solar photovoltaic facilities by 2030. We will continue to pay attention to the development of laws and policies to implement improvement plans to reduce carbon and save energy.	Reduced operational costs (e.g., through use of lowest cost abatement)
	Use of Supportive Policy Incentives	Long-term	▲	Medium	• Invest in low-carbon energy improvements and apply for government subsidies.	✓ Cooperate with the Industrial Development Bureau /TPCA Association to implement relevant low-carbon projects.	
	Use of New Technologies	Medium-term	▲	Medium	• Medium-term: Strengthen the green environmental process by considering and designing the technical aspects of production to reduce the negative impact of production on the environment. • Long-term: Introduce the use of hydrogen fuel cells for power generation to increase the diversity of power supply sources.	Medium-term ✓ Strengthen its investment in the development of new technologies and equipment through a tripartite model of joint development between industry, academia and research. For example, in 2022, the Company spent a total of NT$22.95 million on joint development with five universities, and the results of the development will be introduced one by one internally. Long-term ✓ Install hydrogen fuel cells.	• Reduced operational costs (e.g., through use of lowest cost abatement) • The benefits of investing in low carbon technologies
Products and Services	Development and/or Expansion of Low Emission Goods and Services	Medium-term	▲ ■	Medium	• Expand into new markets and transform industries, and help reduce or adapt to the impact of global climate change risks through product or service innovation, strengthening market position and competitiveness.	✓ In the future, products will be developed towards low-carbon, and it will be transformed to use renewable energy for production. Through quantitative data, immediacy and transparency, connect research and development, manufacturing, quality management and construction affairs and other units to establish a sustainable business ecosystem. ✓ After the Strategic Marketing Department has formulated a low-carbon product development strategy for the year, the R&D Department will work with material suppliers to develop new low-carbon products according to the Advanced Product Quality Planning (APQP) process.	Increased revenue through demand for lower emissions products and services
Markets	Access to New Markets	Medium-term	▲ ■	Medium	• The investment in the coming year will still focus on improving the competitiveness of the PCB industry, supplemented by the reinforcement of existing investments, and new investments will be more cautious.	✓ By cooperating with government administrative regulations and combining with the Group's core development strategy, effectively allocate the Group's resources, implement the goal of low-carbon transformation, gain the recognition of new and regular customers, and increase the Group's revenue and profit.	Increased revenues through access to new and emerging markets (e.g., partnerships with governments, development banks)

▲ Taiwan Facilities ■ Mainland China Facilities

4.2 Climate Scenario Analysis

4.2.1 Scenario Analysis – Transition Risks

The Network for Greening the Financial System (NGFS) is a group of central banks and supervisors, that published its third version of climate change scenarios in September 2022, using the three scenarios of 2050 Net Zero (a policy target of 1.5˚C warming by the end of the century), NDCs and Current Policy. The three scenarios of 2050 Net Zero (policy target of 1.5˚C by the end of the century), NDCs, and Current Policy are used to assess the potential financial impacts of transition risks.

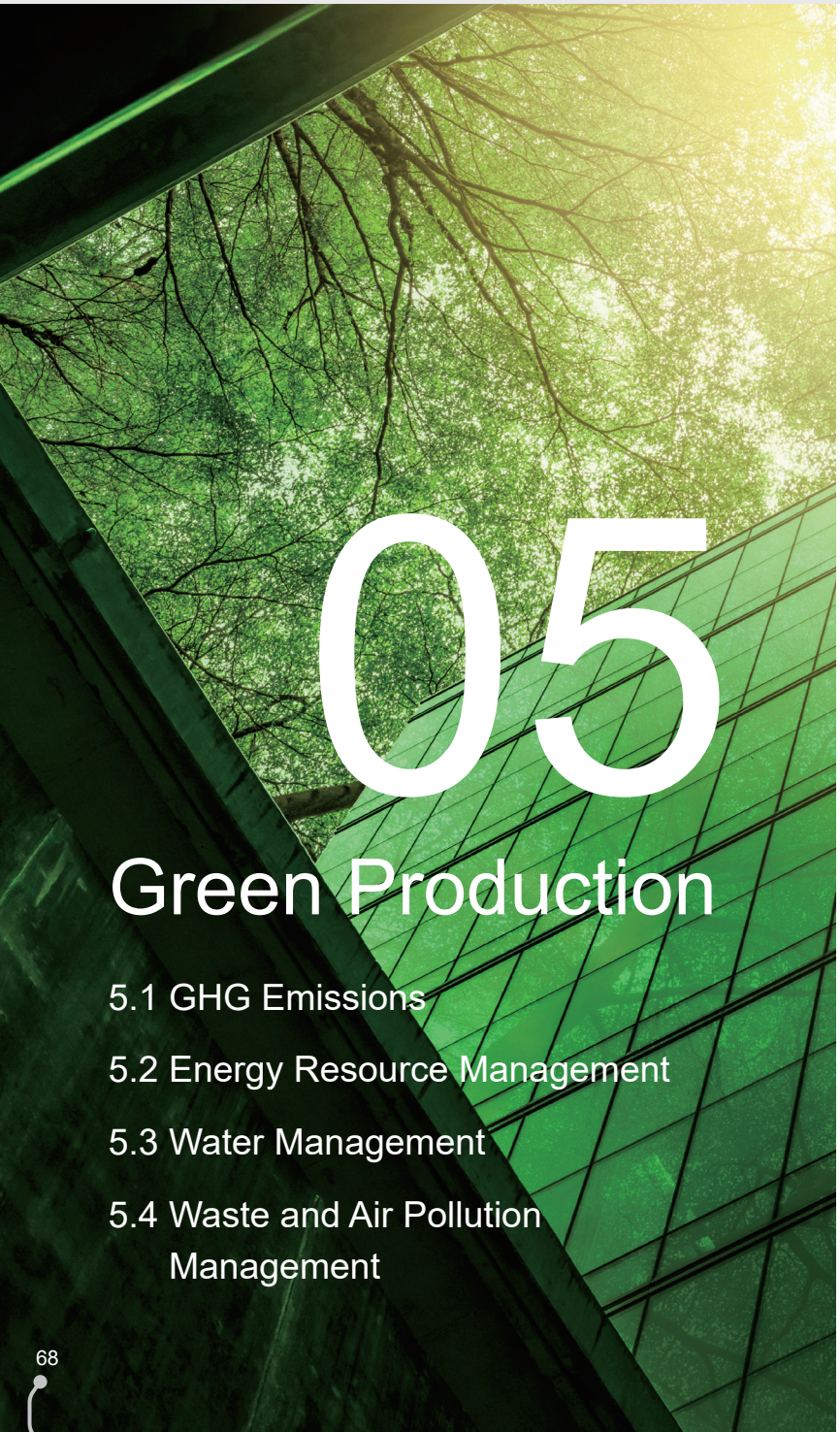
Scenario	Description	Financial Implications 2030	Financial Implications 2050
2050 Net-Zero	• Carbon price of US$95.48/tonne by 2030 and US$563.38/tonne by 2050 in Taiwan • Carbon price of US$96.27/tonne by 2030 and US$689.91/tonne by 2050 in Mainland China	Percentage of Rrevenue: 2.75%	Percentage of Revenue: 15.19%
Nationally Determined Contributions (NDCs)	• Carbon price of US$0.41/tonne in Taiwan and Mainland China by 2030 and 2050	Percentage of Revenue: 0.01%	Percentage of Revenue: 0.01%
Current Policy	• Carbon price of US$0/tonne in Taiwan and Mainland China by 2030 and 2050	Percentage of Revenue: 0%	Percentage of Revenue: 0%

Note: The data of carbon price is based on NGFS Phase 3 Scenario Explorer.

4.2.2 Scenario Analysis – Physical Risks

Physical Risks uses NGFS's scenario simulation of the current policy with a temperature increase of more than 3°C by the end of this century to assess the possible financial impact.

Type	Scenario Analysis	Impact	Strategies	Financial Impact Assessment
Extreme Variability in Weather Patterns and Extreme Weather Events Such as Cyclones and Floods	• For the risk of extreme rainfall and changes in rainfall patterns, Unimicron took into account the information published by the National Science and Technology Center for Disaster Reduction (NCDR) in the Climate Change and Disaster Risk Adaptation Platform to inventory the potential for flooding at each site and identify the level of flooding risk at each site. According to the estimated data, some of the plants are located in areas with accumulated rainfall of 600 mm or more in 24 hours, which is a flood disaster area during extreme rainfall or heavy rainfall. • Meanwhile, according to the future climate trend of Taiwan, the total annual rainfall will increase by 8% and 15% in 2030 and 2050, respectively, under the worst case scenario of SSP5-8.5. The number of typhoons will decrease by about 15% and the proportion of severe typhoons will increase by about 100% during the century.	• The Guishan Plant is located in the area with potential 24-hour rainfall of 650 mm. The risk of flooding in Lujhu, Chungli, and Xinfeng areas is comparable to that of the base period (1976-2005) and the disaster risk level of 5 in most global climate models (2036~2065) under RCP8.5 scenarios, indicating that the disaster risk in this area is relatively high, which may lead to damage to plant and equipment and interruption of operations.	✓ All factories, regardless of the level of disaster risk, have completed contingency drills according to the plan. ✓ Strengthen the disaster resistance capacity of factory buildings in the Guishan area where the risk of flooding is relatively high. ✓ Each plant will hold disaster prevention drills through internal management to reduce or avoid the possible impact of flooding in response to sudden natural disaster events.	• Historically, there have been no incidents of damage to equipment due to extreme rainfall at the sites of Unimicron Factories; enhanced measures have been taken to minimize disruption to operations or production at sites with relatively high risk of flooding. • According to the scenario where the NGFS policy maintains the status quo, the impact assessment is estimated, and the estimated annual expected losses due to typhoons in Taiwan: - By 2030, there will be increase of 2.6% compared to 2020. - By 2050, there will be increase of 6.7% compared to 2020.
Drought and Extreme Temperature Changes	• In response to the risk of drought and extreme temperature change, the average annual temperature in Taiwan has increased by about 1.6°C over the past 110 years (1911-2020), and the temperature increase has accelerated in the past 50 and 30 years; the length of summer increased to about 120-150 days in the early 21st century, and the winter shortened to about 70 days; in recent years, the winter has shortened to about 20-40 days. • With reference to the future climate trend projections for Taiwan, under the worst case scenario of SSP5-8.5, the annual average temperature will increase by more than 0.9˚C and 1.8˚C in 2030 and 2050, respectively; the number of days with extremely high temperatures above 36˚C will increase by about 6 days and 8.5 days in 2030 and 2050, respectively; and the number of days with maximum continuous rainfall will increase by about 2% and 12.4% in 2030 and 2050, respectively.	• The average temperature in summer has risen, and the probability of drought and water shortage has increased.	✓ Improve the efficiency of the air conditioning system and add inverters with control, reducing energy use and reducing greenhouse gas emissions. ✓ The emergency response water dispatch team is in charge of water trucks, water tanks, water sources, and other matters regarding water resources dispatching, to ensure uninterrupted operations. ✓ Use of energy-saving and eco-label products.	• According to the scenario where the NGFS policy maintains the status quo, the impact assessment is estimated, and the labor productivity caused by the heat wave in Taiwan: - By 2030, there will be decrease of 0.7% compared to 2020. - By 2050, there will be decrease of 1.9% compared to 2020. • According to the highlights of IPCC AR6 Climate Science Report, Taiwan's future climate trend projection information estimates that: - In 2030, the cost of emergency water purchase and increase in annual electricity consumption for air conditioning accounts for 0.179% of revenue. - In 2050, the cost of emergency water purchase and increase in annual electricity consumption for air-conditioning accounts for 0.230% of revenue.



05

Green Production

5.1 GHG Emissions

5.2 Energy Resource Management

5.3 Water Management

5.4 Waste and Air Pollution Management

Green Production

5.1 GHG Emissions

Topics	GHG Management
Policy	• Comply with laws, customers and other relevant requirements, and create an environment-friendly and energy-saving working environment
Commitment	• Managers at all levels implement environment/energy/water resources/resource management, and cherish energy and natural resources
Division	• All Divisions/Facility & Environment Division
Resources Invested	• Retirement of inefficient equipment and introduction of energy-efficient facilities
Grievance Mechanism	• There is a hotline/mailbox for whistleblowing, which will be forwarded by each contact person to the responsible unit for confirmation and then respond to the interested party
2022 Targets	• GHG emission intensity based on revenue <12 (ton/million in revenue)
Actions	• Replace high energy-consuming facilities, use energy-saving equipment, and introduce intelligent control and energy management systems • Set energy resource management goals and plans, and conduct impact and response assessments in accordance with international trends and laws and regulations
2022 Achievements	✓ GHG emission intensity based on revenue: 6.71 (ton/million in revenue)

Note: The base year for greenhouse gas emissions is 2020, and 2025 is set as the target year for carbon peaking. Scope 1 & Scope 2 emissions are used as the reduction targets.

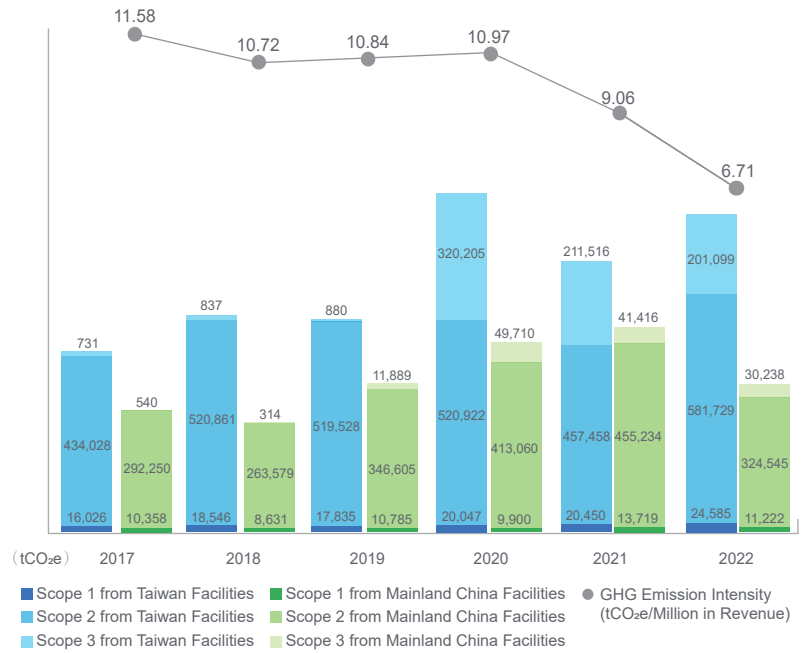
5.1.1 Inventory and Reduction

Unimicron follows the ISO 14064-1:2018 greenhouse gas inventory standard to perform inventory operations, and the boundary area includes its factories in Taiwan and China, so as to grasp the overall greenhouse gas emissions situation, and then review and set carbon reduction targets. In addition to monitoring the carbon emission intensity of each factory every year, Unimicron also formulates a three-stage long-term carbon reduction plan based on international trends and government policies. The first phase is from 2021 to 2025, and 2025 is set as the carbon peak year by taking into account the Group's expansion plan. During which we will continue to implement energy-saving improvements at our plants and build energy storage facilities, with the goal of reducing carbon emissions by 8% in 2025 compared to the projected peak. The second phase is from 2026 to 2030, with a target of 30% reduction in carbon emissions in 2030 compared to the projected peak, through the purchase of renewable energy and the installation of green power facilities. The third phase is from 2031 to 2050, with a target of achieving carbon neutrality in 2050, by increasing the purchase of renewable energy in addition to continuing to promote energy conservation improvements. According to statistics, the total emissions of Scope 1 and 2 in 2022 was 942,080 tons of CO_2e, a decrease of 0.5% compared with 2021, and a decrease of 2% compared with the base year of 2020. GHG emissions intensity per million revenue decreased by 26% compared to 2021 and 39% compared to the base year 2020, due to improved production efficiency and increased Group turnover, resulting in a reduction in GHG emissions intensity within the Group.

5.1.2 Participation in Carbon Trading

Shenzhen City in Mainland China took the lead in launching carbon emissions trading in June 2013. For companies included in the key energy consumption statistics (monthly emissions> 10,000 tons of carbon emissions, Unimicron (Shenzhen)'s has an average of 15,000 tons/month in 10-12 years) and must conduct compulsory carbon emissions trading (i.e., emission control units). Therefore, Unimicron (Shenzhen) began to join the Shenzhen carbon trading mechanism in 2014. As of 2021, the cumulative carbon emissions were approximately 901,600 tons. Based on industrial value-added, retrospectively, they could get quota in 2021 was about 73,200 tons, and the total cumulative quota was about 1,037,500 tons from 2013 to 2021. After offset, there is still a balance of 135,800 tons, which is temporarily retained without trading. Unimicron (Shenzhen)'s annual carbon emissions have exceeded the carbon emission quotas in recent years, and the remaining carbon emission quotas in the future will be used to offset Unimicron (Shenzhen)'s annual carbon emissions. The 2022 carbon trading mechanism would be implemented in Aug. 2023.

GHG Emissions and Intensity



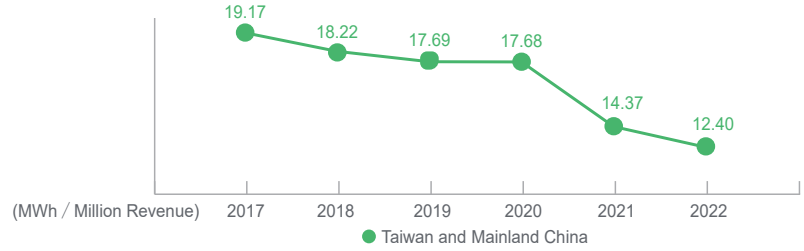
Note 1: The data of Taiwan Facilities for 2017~2021 does not include Chungyuan Plant, Chung Hsing Plant, Yangmei Plant and Shanying II Plant in Taiwan. The data for 2022 does not include Chungyuan Plant, Chung Hsing Plant and Nanshan Plant.

Note 2: Scope 2 is mainly the use of electricity, and the emission factors are 0.509, 0.58, and 0.581 kg of CO_2e/kWh for Taiwan, Eastern China, and Central China in 2022, and 0.5271 kg of CO_2e/kWh for Southern China in 2021. For other years, please refer to the Sustainability Report.

Note 3: The base year for carbon emissions is 2020 for the Group's carbon emissions management.

Note 4: GWP value of AR5 is used in Taiwan and Unimicron (Shenzhen), the GWP value of AR6 is used in QunHong Technology Inc., Unimicron-FPC (Kunshan), Unimicron (Huangshi), Unimicron (Suzhou), and Unimicron (Kunshan).

Electricity Consumption Intensity



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5.2 Energy Resource Management

Topics	Energy Resource Management
Policy	• Comply with laws, customers and other relevant requirements, and create an environment-friendly and energy-saving working environment
Commitment	• Managers at all levels implement environment/energy/water resources/resource management, and cherish energy and natural resources
Division	• All Divisions/Facility & Environment Division
Resources Invested	• Retirement of inefficient equipment and introduction of energy-efficient facilities
Grievance Mechanism	• There is a hotline/mailbox for whistleblowing, which will be forwarded by each contact person to the responsible unit for confirmation and then respond to the interested party
2022 Targets	• Electricity consumption intensity based on revenue <18 (MWh/million in revenue)
Actions	• Replace high energy-consuming facilities, use energy-saving equipment, and introduce intelligent control and energy management systems • Set energy resource management goals and plans, and conduct impact and response assessments in accordance with international trends and laws and regulations
2022 Achievements	✓ Electricity consumption intensity based on revenue: 12.40 (MWh/million in revenue)

5.2.1 Energy Management

Unimicron is committed to pursuing the best efficiency in the use of energy and resources. Through the Energy Saving and Carbon Reduction Management Committee, Unimicron has formulated energy management plans and targets, and continues to implement management strategies such as electricity saving measures, energy efficiency improvement, energy management system introduction, and renewable energy use planning, effectively reducing the environmental impact caused by greenhouse gas emissions in response to future climate change risks. In 2022, electricity consumption intensity was 12.40 and carbon emission intensity was remaining at 6.7, both meeting annual targets.

Unimicron's energy use is mainly purchased electricity, which is used in the production process and factory system, followed by the consumption of natural gas, which is mainly used in the pressing process. The rest are purchased steam for heating and gasoline and diesel fuel for business vehicles and goods delivery vehicles. The fossil fuels used in 2022 included gasoline ($0.0019X10^9$ MJ), diesel ($0.0223X10^9$ MJ), natural gas ($0.4082X10^9$ MJ), and indirect energies are electricity ($6.3X10^9$ MJ) and steam ($0.00003X10^9$ MJ); the total energy consumption is $6.7X10^9$ MJ, and the intensity of consumption is $0.47X10^5$ MJ/million revenue.

In recent years, the cost of power generation has increased and insufficient hydroelectric power generation in China due to high coal prices and low rainfall in high temperature and drought, which has led to a policy of restricting power supply. In order to meet the government's policy and objectives, the plants use power generation units to maintain the stability of the basic maintenance system, and also adjust production hours or schedules through capacity deployment to reduce the impact on production capacity. Since 2021, a number of major power outages have occurred in Taiwan, highlighting the risk of power shortage and unstable power supply in Taiwan. The PCB industry is a highly energy-consuming industry, and electricity is our main source of energy. In order to pursue the goals of stable power, diversified power sources, and energy saving and carbon reduction, the Company's Board of Directors resolved in December 2022 to establish a new innovative energy "hydrogen fuel cell," and it is expected to complete the installation by 2026, with an investment of over NT$4 billion.

Promotion of Renewable Energy Use

In addition to continuously improving energy efficiency, we are also planning for the use of renewable energy. It is expected that by 2025, we will continue to replace energy-consuming equipment to save energy and evaluate the use of energy storage facilities to stabilize electric power while curbing peak electricity consumption at the same time. We plan to use renewable energy and photovoltaic systems by 2030 to reduce GHG emissions caused by operations.

Energy Consumption

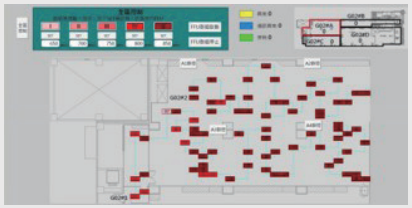
Type	Region	Unit	2017	2018	2019	2020	2021	2022
Gasoline	Taiwan	KL	13	15	11	11	5	15
	Mainland China		119	112	87	60	55	44
	Total		132	127	98	71	60	59
Diesel Fuel	Taiwan	KL	411	182	77	128	130	218
	Mainland China		302	532	332	335	912	407
	Total		713	714	409	463	1,043	625
Fuel Oil	Taiwan	KL	488	512	0	0	0	0
	Mainland China		0	0	0	0	0	0
	Total		488	512	0	0	0	0
Natural Gas	Taiwan	m^3	6,005,930	7,531,420	7,881,489	7,780,200	8,298,755	7,887,744
	Mainland China		2,119,135	2,528,663	3,126,236	2,926,580	3,812,358	3,279,877
	Total		8,125,065	10,060,083	11,007,725	10,706,780	12,111,113	11,167,621
Liquefied Petroleum Gas	Taiwan	Kg	0	0	0	0	0	0
	Mainland China		68,200	64,620	0	0	0	0
	Total		68,200	64,620	0	0	0	0
Electricity	Taiwan	MWh	872,660	940,182	974,724	1,023,422	911,027	1,195,071
	Mainland China		373,535	439,656	401,664	530,285	591,180	546,748
	Total		1,246,195	1,379,837	1,376,388	1,553,707	1,502,207	1,741,819
Steam	Taiwan	Tons	0	0	0	0	0	0
	Mainland China		14,488	19,654	20,362	27,912	41,452	59,165
	Total		14,488	19,654	20,362	27,912	41,452	59,165

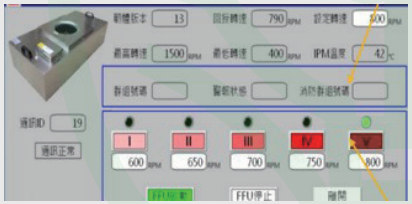
Note 1: The data of Taiwan Facilities for 2017~2021 does not include Chungyuan Plant, Chung Hsing Plant, Yangmei Plant and Shanying II Plant in Taiwan. The data for 2022 does not include Chungyuan Plant, Chung Hsing Plant and Nanshan Plant.

Note 2: The data resource of calculation factor from The 2015 Energy Statistical Annual Reports issued by the Bureau of Energy, Ministry of Economic Affairs and the 2017 China Energy Statistical Yearbook. The heating of various energy sources is as follows: gasoline (Taiwan: 32,635,200 KJ/KL, and Mainland China: 33,379,250 KJ/KL), diesel fuel (Taiwan: 35,145,600 KJ/KL, and Mainland China: 36,040,940 KJ/KL), fuel oil (Taiwan: 40,166,400 KJ/KL), natural gas (Taiwan: 35,564 KJ/m^3, and Mainland China: 38,931 KJ/m^3), liquefied petroleum gas (Mainland China: 50,179 Kg/m^3), electricity (Taiwan and Mainland China: 3,600,000 KJ/MWh), and steam (Mainland China: 2,762.9 KJ/ton).

2022 Electricity Saving Project

- Title：Real-time adjustment of the factory-wide FFU group control to reduce energy waste
- Content：The traditional plant FFU control has to be manually adjusted by a single unit on site, but now it is changed to remote FMCS joint control logic, which can save manpower and shorten the time of abnormality finding.
- 2022 Achievements：Cost of NT$7.5 million and annual electricity savings of 630,676 kWh





Energy Saving Program in Taiwan Facilities

In response to future energy and carbon risks, Unimicron continues to implement energy reduction plans that focus on reducing electricity consumption and reducing energy consumption in the production process. Taiwan Facilities are also actively engaged in energy saving and power saving activities, with the priority of improving energy efficiency, introducing high efficiency equipment, introducing intelligent control systems, deploying production and setting equipment energy saving modes in each plant, and promoting energy saving and carbon reduction through plant utilities and production processes.

Results of Reduction Plans

Item	Unit	2017	2018	2019	2020	2021	2022
Annual Electricity Saving	MWh	30,423	31,718	26,281	12,057	13,204	963,300
Annual Electricity Saving	GJ	109,523	114,184	94,615	43,406	47,493	3,467,882
Annual GHG Reduction	Tons of CO_2e / MWh	17,944	18,100	14,039	6,501	7,258	490,584

2022 Energy Saving Plan in Taiwan Facilities

Type	Content	Benefits	
		Energy Saving (MWh/year)	Emissions Reduction (tCO_2e / year)
Process Modification	Improve production processes and increase efficiency to reduce inefficient energy consumption	19,111	9,728
Equipment Modification or Renovation	Upgrade equipment systems to improve energy efficiency	763,506	388,889
Others	Reduce the use of non-essential energy resources	180,683	91,968

5.2.2 Raw Materials

Unimicron always aims to provide high-quality and environmentally friendly products to our customers around the world. Our procurement philosophy for raw materials is also mainly based on environmental friendliness. The three major raw materials used for product production are Substrates, Potassium Gold Cyanide, and Prepreg. The usage in 2022 was about 2.531 million sheets/13.10 million PNL, 2,961 kg, and 197,000 rolls/2.703 million PNL, respectively.

Main Raw Material

Type	Region	Unit	2017	2018	2019	2020	2021	2022
Substrate	Taiwan	Sheet	1,062,604	1,012,188	1,236,896	1,446,932	1,578,821	1,357,188
		PNL	3,706,742	4,082,477	3,940,471	3,956,729	3,464,808	3,423,380
	Mainland China	Sheet	1,787,085	1,608,995	1,586,119	1,478,611	1,542,596	1,174,105
		PNL	6,434,883	7,813,582	9,120,964	9,157,368	10,704,519	9,677,492
	Total	Sheet	2,849,689	2,621,183	2,823,015	2,925,543	3,121,417	2,531,293
		PNL	10,141,625	11,896,059	13,061,435	13,114,097	14,169,327	13,100,872
Potassium Gold Cyanide	Raw material in Taiwan	Kg	1,369	1,363	1,177	1,232	1,127	911
	Recycled material in Taiwan	Kg	-	-	-	-	59	179
	Raw material in Mainland China	Kg	1,732	1,886	1,878	1,694	2,100	1,871
	Total	Kg	3,101	3,249	3,055	2,926	3,285	2,961
Prepreg	Taiwan	Roll	137,072	93,157	98,444	116,903	146,554	137,064
		PNL	1,943,241	2,525,704	2,292,503	2,573,127	2,089,393	1,966,170
	Mainland China	Roll	44,992	53,245	58,707	58,917	69,520	60,258
		PNL	1,003,492	1,170,074	1,315,514	1,020,782	1,030,902	736,874
	Total	Roll	182,064	146,402	157,150	175,820	216,074	197,322
		PNL	2,946,733	3,695,778	3,608,017	3,593,909	3,120,295	2,703,044

Note: There are two units for Substrate and Prepreg to measure, which cannot be calculated together and are presented separately.

Circular Economy and Sustainability

With the rising awareness of global environmental protection, Unimicron recognizes that it has been entrusted with the mission of reducing waste and mining while creating the value of circular economy. Since 2018, the Carrier SBU continued to use recycled trays, and in 2021, the PCB SBU used gold salts made from recycled gold in Shanying Plant.

Recycled Tray

We are committed to recycling packaging materials and have been recognized by Carrier SBU's customers. We give priority to purchasing the reused trays and request suppliers to recycle the trays shipped to customers for reuse. In 2022, the use of recycled carriers will decrease by 21% compared to 2021, mainly due to the increase in precision of customers' products, and for quality consideration, customers require the use of new Tray to reduce the risk of quality abnormalities.

Recycled Tray Procurement Ratio (Unit: %)

Item	2018	2019	2020	2021	2022
Recycled Tray Procurement Ratio	40	52	51	59	32

Recycled Potassium Gold Cyanide

In 2022, we launched the use of Potassium Gold Cyanide made from 100% recycled Gold in the PCB SBU Shanying Plant and Luzhu Plant, in addition, the supplier recycles and refines the waste liquid which will be provided to Unimicron to achieve a circular economy. In 2022, 16% of purchases of Potassium Gold Cyanide in Taiwan.

5.3 Water Management

Topics	Water Resource Management
Policy	• Environmental Policy
Commitment	• Implement daily water measures, value energy and natural resources, and maintain water operation systems to improve performance and management results
Division	• All Divisions/Facility & Environment Division
Resources Invested	• Improve the production process and equipment to improve water efficiency and water recovery • Training for Environmental Specialists
Grievance Mechanism	• There is a hotline/mailbox for whistleblowing, which will be forwarded by each contact person to the responsible unit for confirmation and then respond to the interested party
2022 Targets	• Water consumption intensity based on revenue <310 ton/million in revenue • Copper Ion intensity of wastewater discharge based on revenue <0.15
Actions	• Upgrade wastewater treatment facilities, reduce source pollutants, and develop internal wastewater discharge control standards that are better than the law • Process improvements to reduce freshwater usage
2022 Achievements	✓ Water consumption intensity based on revenue: 152 ton/million in revenue ✓ Copper Ion intensity of wastewater discharge based on revenue:0.146

Achieved Platinum Certification from the AWS (Alliance for Water Stewardship Standard)

In order to effectively manage water resources and reduce environmental and ecological impacts, as well as to keep enhancing the efficiency of water use, Shanying Plant became the first to utilize the AWS International Water Stewardship Standard in 2020 and has been certified by a third party to have achieved Platinum status. By adhering to Green Ecology, Green Competitiveness, and Green Humanity, our three environmental values, we have been practicing sustainable and systematic water management, and have demonstrated five major achievements.

- ✓ Good water management system: Comprehensive personnel training mechanism, comprehensive and effective procedures
- ✓ Sustainable water balance: Open and quantifiable water efficiency targets and current status, continuous improvement and enhancement of water efficiency
- ✓ Excellent water quality: Independent and effective testing and monitoring, stable water discharge quality that is superior to regulation quality
- ✓ Health of important drainage areas: Environmental education for critical drainage areas helps environmental awareness take root
- ✓ Safe water, environment and personal hygiene: Provision of a safe, hygienic environment and drinking water for people at the plant

In response to the challenges of climate change and resource scarcity in the future, every drop of water that comes into, is used by, and leaves our plant is cherished as well as effectively and precisely managed in an environmentally friendly way so that we can move towards sustainability goal of zero water waste.

Limited by the industry's characteristics of relying on stable water resources, water source and volume have become one of the most important keys to the continued operation of Unimicron. There are significant differences in rainfall and flow volume in the current high-water period and low-water period in Taiwan, and many meteorological and hydrological extremes have occurred. In response to the risk of a water shortage caused by Taiwan's topography and climate change, the use and retention of water resources had been evaluated at the initial stage of establishing each of Unimicron's facilities. Not only set up Storage tanks but the water storage capacity of each regional reservoir and the water consumption status of each plant is monitored and managed during normal times to ensure that the plant does not have an immediate water shortage crisis due to lack of water resources, and the ability to withstand water shortages is improved.

All of Unimicron's plants are not located in areas with frequent water shortages and drought, and the main water source is tap water. Unimicron's Taiwan Facilities still use well water and rainwater. However, because it is not easy to collect information about the impact of well water and rainwater, the assessment was not included this year. In 2022, the water consumption of each plant accounts for a small proportion of the water supply in the water intake area, and there was no significant impact on the water intake area (>5% of the water supply in the intake area is a significant impact).

Water Assessment Results

	Upstream	Unimicron	Downstream (Packaging)
The Potential Impact of Water Use	• Increase in the quantity of water discharge • Heavy metals in the discharged water	• Large quantity of water intake • Large quantity of water discharge containing heavy metal	The downstream manufacturers are packaging plants, which are not highly water-consuming industries, and thus it is judged to have no impact
The Type of Impact	• Legal compliance • Water and soil pollution, biodiversity, and human health	• Conflict of interest with stakeholders in shared water resources • Water and soil pollution, biodiversity, and human health	
Strategies	• Obtain discharge permits issued by local governments under the law and complete reporting • Implement wastewater treatment and discharge water monitoring management, reducing the impact of pollution in the watershed	• Monitor the water use situation in the plant and back up the water supply from other sources. Reduce water resource consumption by recycling water for production. Communicate with stakeholders in times of water shortage • Use water discharge monitoring and management to effectively reduce the impact of pollution in the watershed	The downstream manufacturers are packaging plants, which have no impact on water intake/discharge, and it is judged to not need mitigation measures

Water Resource Dispatching Measures in Taiwan Facilities

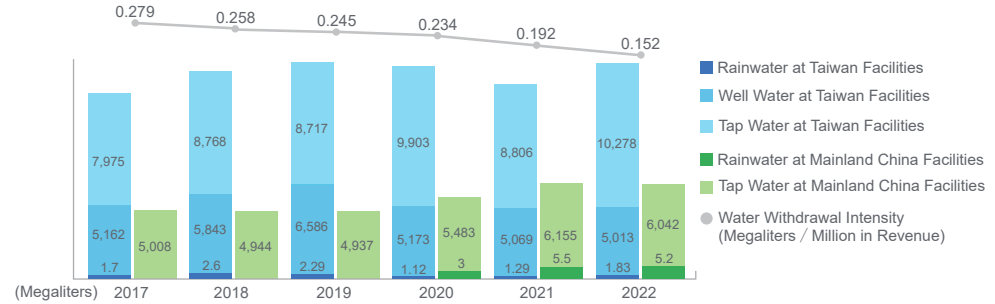
There was no emergency event activated due to water issues in 2022 but we still establish contingency measures for water resources dispatch for drought periods. We actively carry out water resources standardization and management through the tracking of regime lights. The emergency response water dispatch team is in charge of water trucks, water tanks, water sources, and other matters regarding water resources dispatching, to ensure uninterrupted operations.

Drought Monitoring Signal	Government Measures	Unimicron's Contingency Plan
Stable Supply	Stable supply	Water monitoring in various regions/water use management in each plant
Tight Supply	Agricultural fallow	Establishing an emergency water scheduling team/drawing up an emergency water plan
Stage One	Decompression of water supply at a specific time	Responding by water saving in production/ water trucks/responding by reserving water source backup
Stage Two	Reduced supply of industrial water	Emergency response water scheduling team operation/implementing water restriction response measures at various stages
Stage Three	Suspended water supply by zone and time slot	Emergency response water scheduling team operation/implementing water restriction response measures at various stages

5.3.1 Water Resources Use

In 2022, the proportion of water resources used by the plants in Taiwan accounted for about 71.7%, and they were 4.6% for the plants in South China, and 23.7% for the four plants in East China/Central China. The total water intake volume in 2022 was 21,340.80 megaliters, rainwater only accounted for 0.03%, well water and tap water accounted for 23% and 76.7% of the total water intake volume, respectively. The average usage of well water in the past two years was about 5,041 megaliters, and the average usage of tap water in the past two years was about 15,642 megaliters. 7.03 megaliters of rainwater were recycled in 2022 to replace tap water for watering landscaping, etc. We hope to achieve the function of water conservation and distribution by storing and utilizing rainwater. In terms of the total water intake intensity per unit of revenue, there was a decreasing trend in the last five years, with a reduction of about 21% in 2022 compared to 2021, which is a significant improvement in water intake efficiency.

Water Withdrawal and Intensity



Note 1: The above information does not include the Nanshan plant.

Note 2: The water sources of the Kunshan and Suzhou plants are Yangcheng Lake and Taihu Lake, and the water sources of the Shenzhen plant are Songgang Wuzhipa Reservoir.

Note 3: Calculation method of rainwater recovery : average annual rainfall in each region × catchment area.

Note 4: The definition of Groundwater is a depth of over 700 meters.

Note 5: Rainwater and well water are surface water and tap water is a third-party supply.

Water Resources

(Unit: Megaliters)

Resources	2017	2018	2019	2020	2021	2022
Water Withdrawal	18,148.786	19,559.094	20,244.000	20,564.217	20,039.114	21,340.802
Water Discharge	15,986.433	15,256.234	18,277.353	18,964.822	18,717.472	20,554.080
Water Consumption	2,162.353	4,302.860	1,966.647	1,599.395	1,321.642	786.722

Note: Freshwater is the source of intake and discharge.

Unimicron's Annual Water Intake Volume as a Percentage of the Water Supply District's Annual Intake Volume

(Unit: %)

Main Source	Region	2018	2019	2020	2021	2022
Shimen Reservoir	Taoyuan	1.02	1.05	1.23	1.22	2.10
Lung-En Weir	Hsinchu	2.02	3.80	4.01	2.99	3.56

Note 1:The data source is the "Statistics of Water Intake from Reservoirs and Weirs" of the Northern Region Water Resources Office, WRA, MOEA, and the water intake is the average total for the last five years.

Note 2:The source of water supply for the plants in Taoyuan is Shimen Reservoir. The water intake from the reservoir includes Taoyuan Dazun (Taoyuan Irrigation Association), Taoyuan Dazun (Water Supply Corporation, etc.), Shimen Dazun (Shimen Irrigation Association), and Shimen Dazun (Water Supply Corporation, etc.).

Note 3:The source of water supply for the plants in Hsinchu is the Lung-En Weir catchment area, and the regional water intake includes Lung-En Weir (Water Supply Corporation) and Lung-En Weir (Lung-En-Zun irrigation area).

Note 4:The ratio of Unimicron's annual water intake to annual water intake in the water supply area = annual tap water consumption of the plants in the area/annual average total water intake in the regional water supply area×100%.

5.3.2 Water Recycling

Cause of climate change, climatic characteristics such as temperature and rainfall will change. In addition to increasing temperature, rainfall may be unevenly distributed in time and space. For example, the increase in rainfall during the high-water period and the decrease in the rainfall during the low-water period have led to a larger monthly difference in river flow, which may further lead to an imbalance in the water supply and demand system. Unimicron continuously improves water-saving to increase water efficiency and rainwater recovery storage tanks are installed in each plant to reduce water consumption. In addition, we continuously add water-recycling systems to reduce the consumption of water resources by recycling low-polluting water sources produced in various processes and treating them to replace the water used for industrial production. The recycling rate of water resources in 2022 was 29% (6,204 megaliters), and the average recycling rate in the past two years was 28%.

Water Resource Recovery Ratio

(Unit: %)

Region	2017	2018	2019	2020	2021	2022
Taiwan	9	10	9	9	11	15
Mainland China	25	36	62	62	63	65
Total	13	17	16	23	27	29

Note 1: Recovery rate (%): Total water recovered/Total water consumption.

Note 2: The definition of Water Resource Recovery is reclaimed water.

2022 Water Conservation Program

We value water resource management, and water resources play an important role in the PCB industry. In 2022, we renew the "production process" and "equipment" to improve water efficiency and water recycling, and implement several projects to save 556.8 megaliters of water in 2022.

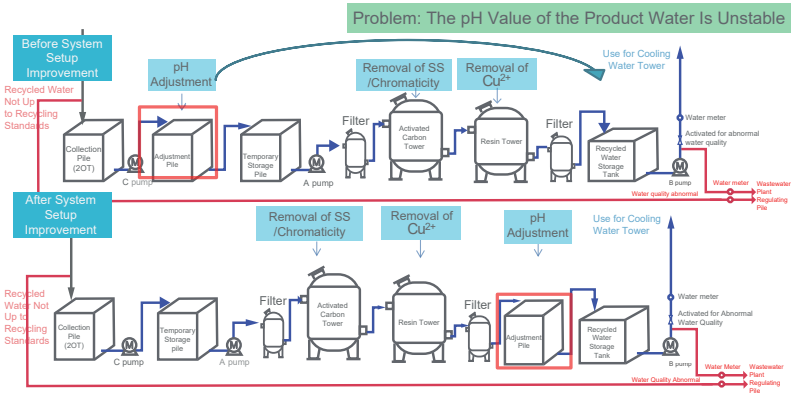
Type	Contents	Benefits: Water Conservation (Megaliters)	Benefits: Emissions Reduction(t-CO_2e)
Process Modification	Improve production processes and increase efficiency to reduce inefficient water consumption	221.4	43.3
Equipment Modification or Renovation	Upgrade equipment systems to improve water efficiency	286.9	36.4
Change Employees' Behavior	Improve management and behavior patterns to save water	0.2	0.0
Others	Reduce the use of non-essential water resources	48.3	11.3

2022 Water Conservation Projects

- Title：Increase water recycling at the flagship plant and move towards the goal of water sustainability.
- Content：We continue to add a water recycling system to reduce water consumption by recovering low-pollution water generated in various processes to replace industrial production water after treatment. Every drop of water resources will be taken from the front end, used in the process, and released in the end. We will continue to move towards the sustainable goal of zero water waste through effective and precise management, friendly environment and ecology, and cherishing energy resources.
- 2022 Achievements：Cost of NT$30 million and water recovery of 947.9 megaliters.

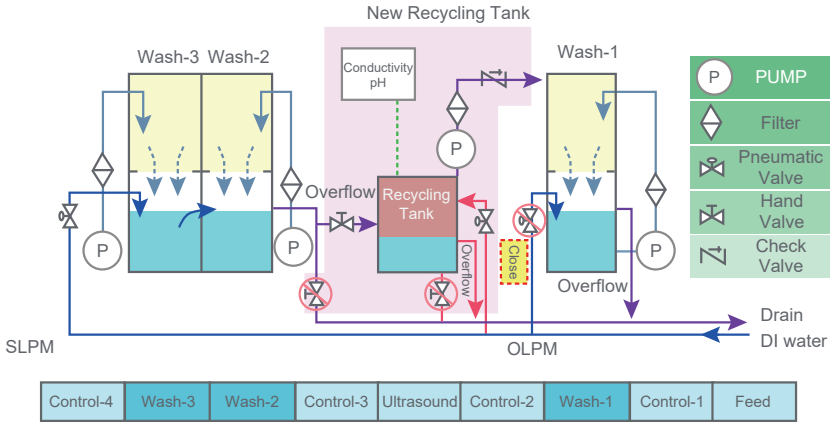
pH Stabilization Improvement Project of Water Recovery System

After the system was built, it was discovered during the test run that the water quality of the effluent into the cooling water tower could not be effectively controlled at pH 6.5~8.5. After discussing with the system equipment supplier, it was confirmed that the activated carbon tower and resin tower will not be affected by the acidity and alkali of the water quality to have any impact on the quality of the water treated. Therefore, we applied the ECRS rule, used the optimized work order of the system to rearrange, changed the pH adjustment tank from the front of the activated carbon tower to the rear of the resin tower, and controlled the quality of the produced water at pH 6.5~8.5 before entering the cooling water tower.



In-Line Water Recycling System

The design principle of the in-line recycling water installation is to use the original overflow water from Wash-2 and return it to the new recycling tank, which is equipped with conductivity and pH monitoring. When the water quality is normal and meets the recovery conditions, the recovered water is pumped/filtered and then used in Wash-1. The new water replenishment in Wash-1 can be turned off.



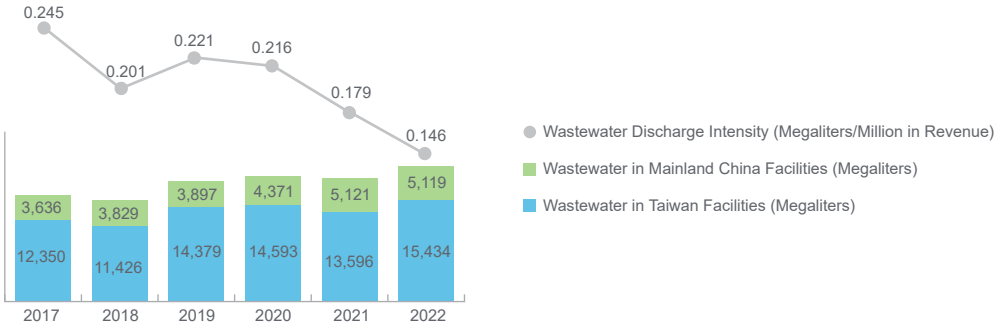
5.3.3 Wastewater Treatment

Total wastewater discharge in 2022 was approximately 20,554.080 megaliters, an increase of 10% compared to 2021, and a decrease of approximately 18% in discharge intensity per unit of revenue. In 2022, wastewater discharges from the plants in Taiwan and China were approximately 15,434 megaliters and 5,120 megaliters, accounting for 75% and 25% of total discharges, respectively. The wastewater discharged from Unimicron's operating sites has been treated at wastewater facilities and confirmed to meet discharge standards before being discharged into designated streams or incorporated into local wastewater treatment plants.

After treatment, the wastewater from our plants in Taiwan will be legally discharged into the streams and incorporated into the local sewage treatment plants, including Nankan River, Laojie River, Dongmen River, and Xinfeng River. The wastewater from our plants in Mainland China is discharged to the local exclusive sewage treatment plants, and after treatment, they are finally legally discharged to Maozhou River, Wusong River, and Taicangtang. The right to water is an indispensable right for the realization of human dignity life and health. The wastewater from the plants in Taiwan and China is discharged after treatment and will not pose a threat to the ecology of the local watersheds or natural water bodies, nor will it have any negative impacts on the local communities access to safe drinking water.

In order to eliminate the stigma of the high-pollution industry of printed circuit boards, we have established strict internal control standards for wastewater discharge "Environmental Protection Internal Audit and Notification Operation Measures", and complied with local regulations and requirements "Water Quality Standards for Discharged Water from the Printed Circuit Board Manufacturing Industry." Taking Hsinfeng Plant as an example: The internal control standard of chemical oxygen demand is 108ppm, with the regulatory standard being 120ppm, and the copper internal control standard is 1.2ppm, with the regulatory standard being 1.5ppm. At present, the discharge levels of plants in both Taiwan and China are far below the approved standards of local regulations (the permissible value of chemical oxygen demand is 4.19 megaliters, and the permissible value of copper is 0.19 megaliters), and the wastewater quality is in compliance with the discharge standards of the relevant local laws and regulations. We publish quarterly testing data on wastewater discharge by third-party and disclose the wastewater treatment process on the Company's official website. In response to the stricter revision of wastewater discharge standards in the environmental protection laws in the future, the plants in Taiwan have evaluated the performance of the existing wastewater treatment facilities and the current treatment can meet the future discharge standards. To avoid the impacts of stricter environmental protection regulations in the future, we will continue to reduce source pollutants and develop internal wastewater discharge control standards that are superior to laws and regulations to reduce pollution.

Wastewater Discharge and Intensity



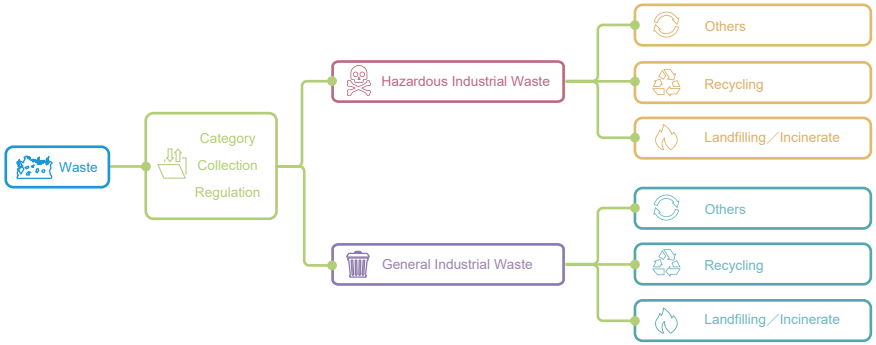
Note: The wastewater from the plants in Taiwan is discharged to surface water and local wastewater treatment facilities, and the wastewater from the plants in mainland China is discharged to local wastewater/treatment facilities.

5.4 Waste and Air Pollution Management

Topics	Waste Management
Policy	• ESG Policy and Environmental Policy
Commitment	• Comply with the environmental regulations, respond to the concept of "reduce, reuse and recycle", implement energy-saving and waste reduction, and support green procurement
Division	• All Divisions/Facility & Environment Division
Resources Invested	• Improve process technology to reduce the pollutants in the production process • Training Environmental Specialists
Grievance Mechanism	• There is a hotline/mailbox for whistleblowing, which will be forwarded by each contact person to the responsible unit for confirmation and then respond to the interested party
2022 Targets	• Waste recycling rate >90%
Actions	• Reduce raw material consumption and the amount of waste • Increase the rate of waste recycled
2022 Achievements	✓ Waste recycling rate: 91.3%

5.4.1 Waste Management

Unimicron's main businesses are the manufacturing, processing and sales of printed circuit boards, high-density interconnect printed circuit boards, flexible printed circuit boards, rigid-flex PCBs, carrier boards, and IC test and pre-burning systems. In order to grasp its impact on the environment in the value chain, the Company evaluates the process from raw material procurement, product design, manufacturing process to waste generation, searches for environmentally friendly materials, reduces waste in its own manufacturing process, and implements waste sorting and recycling, reducing the impact of operations on the environment.



The manufacturing process of printed circuit boards generates solid waste and highly concentrated waste liquids, which can be harmful to the environment if not properly handled. Therefore, we attach great importance to the operation of waste management system, and storage, transportation and disposal of waste inside and outside the factory to prevent pollution and hazards from occurring. In particular, in waste management, qualified firms are screened and commissioned to handle waste, and a strict firm review and audit mechanism is in place. In 2022, a total of 62 waste firms were audited, and the treatment was in full compliance with relevant laws and regulations, and no waste leakage occurred. Since Unimicron is not the manufacturer of end products, it is not easy to track the final disposal methods or the recycling status of the products used, so we cannot quantify the relevant data.

Waste Assessment Results

Type		Upstream	Unimicron	Downstream (Packaging)
The Type of Impact	General Industrial Waste	• Arbitrary disposal of General Industrial Waste harms the environment	• Inability to dispose of garbage due to the incinerator undergoing maintenance • Having garbage returned from the incinerator due to incorrect sorting	• Inability to dispose of garbage due to the incinerator undergoing maintenance • Having garbage returned from the incinerator due to incorrect sorting
	Hazardous Industrial Waste	• Arbitrary disposal of Hazardous Industrial Waste harming water quality and soil • Failure to obtain the relevant permits and make declarations as required by law will violate the Waste Disposal Act and will give rise to the possibility of penalties • Failure to hand over the waste to qualified companies for disposal will violate the Waste Disposal Act and will give rise to the possibility of penalties		
Strategies	General Industrial Waste	• Requiring suppliers to have a waste removal proposal in accordance with the law • Verifying the legality of waste removal methods by suppliers through supplier auditing	• Retrain factory personnel to strengthen the concept of sorting • Enhancing garbage sorting and recycling to reduce the amount of waste to be incinerated	• Packaging materials and General Industrial Waste produced by supplying products to downstream are recycled and reused
	Hazardous Industrial Waste		• Effectively manage the types of waste in the plant. If there are changes, they should be implemented in accordance with the law and meet the regulatory requirements • Conduct audits of waste disposal companies from time to time to confirm legality	• Downstream vendors are package plants, so there's no impact caused by Hazardous Industrial Waste

The waste generated in the plant is divided into two major categories, General Industrial Waste and Hazardous Industrial Waste, and the quantities are recorded by weighing. In 2022, the total output of various types of waste was 121,000 tons, and the volume of General Industrial Waste was 39,000 tons, of which 35,000 tons (90.0%) was the weight of waste diverted from disposal and 4,000 tons was the weight of waste directed to disposal; the volume of Hazardous Industrial Waste was 82,000 tons, of which 75,000 tons (91.9%) was the weight of waste diverted from disposal and 7,000 tons was the weight of waste directed to disposal, with an overall reuse rate of 91.3%. In order to promote the sustainable cycle of resources, we adopt the thinking of circular economy to effectively recycle resources and reuse waste plastics, reduce the waste of raw materials in the manufacturing process, and reduce the consumption of raw materials. Due to the increase in production capacity in some plants in Taiwan, the amount of Hazardous Industrial Waste produced has increased. In terms of total waste generation intensity per unit of revenue, it was 0.86 metric tons per million of revenue in 2022, a 29% decrease from 2021.

Waste Generation and Waste Recycling

Item	Region	Unit	2021	2022
Waste Generation	Taiwan and Mainland China	Metric Ton/Million in Revenue	1.21	0.86
Waste Recycling		%	91.6	91.3

Note: In 2021, the classification of waste was revised, so the data was revised retrospectively.

Waste Generation

(Unit: Metric Ton)

Region	Category	Directed to Disposal 2021	Directed to Disposal 2022	Diverted From Disposal 2021	Diverted From Disposal 2022	Total Waste 2021	Total Waste 2022
Taiwan	General Industrial Waste	1,458	1,205	27,578	26,736	29,036	27,941
	Hazardous Industrial Waste	3,921	4,580	23,532	30,938	27,453	35,518
	Subtotal	5,379	5,785	51,110	57,674	56,489	63,459
Mainland China	General Industrial Waste	2,654	2,699	10,474	8,431	13,128	11,130
	Hazardous Industrial Waste	2,539	2,063	54,338	44,473	56,877	46,536
	Subtotal	5,193	4,762	64,812	52,904	70,005	57,666
	Total	10,572	10,547	115,922	110,578	126,494	121,125

Waste Diverted from Disposal

(Unit: Metric Ton)

Region	Category	Sub-category	Onsite 2021	Onsite 2022	Offsite 2021	Offsite 2022	Total 2021	Total 2022
Taiwan	General Industrial Waste	Reuse	0	0	0	0	0	0
		Recycling	0	0	0	0	0	0
		Others	0	0	27,578	26,736	27,578	26,736
		Subtotal	0	0	27,578	26,736	27,578	26,736
	Hazardous Industrial Waste	Reuse	0	0	0	0	0	0
		Recycling	0	0	0	0	0	0
		Others	0	0	23,532	30,938	23,532	30,938
		Subtotal	0	0	23,532	30,938	23,532	30,938
	Total		0	0	51,110	57,674	51,110	57,674
Mainland China	General Industrial Waste	Reuse	0	0	0	0	0	0
		Recycling	2	0	5,189	6,890	5,191	6,890
		Others	3,348	0	1,935	1,541	5,283	1,541
		Subtotal	3,350	0	7,124	8,431	10,474	8,431
	Hazardous Industrial Waste	Reuse	0	0	390	326	390	326
		Recycling	6,901	5,586	37,004	37,098	43,905	42,684
		Others	9,316	676	727	788	10,043	1,464
		Subtotal	16,217	6,262	38,121	38,211	54,338	44,473
	Total		19,567	6,262	45,245	46,642	64,812	52,904

Note 1:In 2021, the classification of waste was revised, so the data was revised retrospectively.

Note 2:The definition of Reuse is checking, cleaning, or repairing operations, by which products or components of products that have become waste are prepared to be put to use for the same purpose for which they were conceived. The definition of Recycling is reprocessing of products or components of products that have become waste, to make new materials. Others include resource recovery, electrolytic recovery, chemical replacement, and refining recovery.

Note 3:Onsite means within the report boundary of the Unimicron Facilities. Offsite means the scope that Unimicron entrusts to external suppliers.

Note 4:We separate the waste by “The Waste Disposal Act" in Taiwan Facilities and “The Law of the People's Republic of China on the Prevention and Control of Environment Pollution Caused by Solid Wastes” in Mainland China Facilities. The hazardous waste in Mainland China is equal to Hazardous Industrial Waste in Taiwan.

Waste Directed to Disposal

(Unit: Metric Ton)

Region	Category	Sub-category	Total 2021	Total 2022
Taiwan	General Industrial Waste	Incineration (with energy recovery)	1,196	1,097
		Incineration (without energy recovery)	0.22	15
		Landfilling	261	93
		Other Disposal Operations	0	0
		Subtotal	1,458	1,205
	Hazardous Industrial Waste	Incineration (with energy recovery)	2,077	2,653
		Incineration (without energy recovery)	0	0
		Landfilling	1,656	1,790
		Other Disposal Operations	188	137
		Subtotal	3,921	4,580
	Total		5,379	5,785
Mainland China	General Industrial Waste	Incineration (with energy recovery)	0	0
		Incineration (without energy recovery)	2,024	2,268
		Landfilling	0	0
		Other Disposal Operations	630	431
		Subtotal	2,654	2,699
	Hazardous Industrial Waste	Incineration (with energy recovery)	0	0
		Incineration (without energy recovery)	2,539	2,063
		Landfilling	0	0
		Other Disposal Operations	0	0
		Subtotal	2,539	2,063
	Total		5,193	4,762

Note 1: Other disposal operations are defined as solidification.

Note 2: Unimicron's direct disposal of waste in 2021 and 2022 was entrusted to external supplier for cleaning and disposal.

5.4.2 Waste Reduction

2022 Waste Reduction and Outcomes

Site	Strategies	Contents	Outcomes	Unit
Unimicron	Introduction of SRF treatment method: Reduce the amount of waste incineration.	Reduce the amount of incineration	849	Metric Ton/ Month
	Precious metal recycling improvement: Introduce palladium plate-containing precious metal recycling treatment.	Increase the amount of palladium recovered	7.7	Kg/Month
Unimicron (Shenzhen)	ENIG adjustment of nitrate tank: Reduce outsourcing disposal cost of nitrate waste liquid.	Reduce outsourcing	9	Metric Ton/ Month
Unimicron (Suzhou)	Acid waste reuse: Evaluate and introduce acidic palladium recovery equipment.	Increase the amount of palladium recovered	1,635	G/Month
	Filter waste reduction: Introduce the filter-drying machine, with a weight reduction rate of 47.5%.	Reduce the weight of filter waste	87	Metric Ton/ Month
	Nickel waste reduction: Introduce the nickel concentration system, with a weight reduction rate of 90.4%.	Reduce the weight of nickel waste liquid	19	Metric Ton/ Month
	Film residue reduction: Introduce the steam film residue dryer, with a weight reduction rate of 63.0%.	Reduce the weight of film residue	58	Metric Ton/ Month
	Waste liquid reduction: Introduce a three-effect evaporation system, with a weight reduction rate of 90.4%.	Reduce the weight of high organic waste liquid	8,207	Metric Ton/ Month
Unimicron (Kunshan)	Concentration system for nickel-containing waste liquid: Reduce the outsourcing disposal cost of nickel waste liquid.	Reduce outsourcing	128	Metric Ton/ Year
	Drying equipment for waste film residue: Reduce the outsourcing disposal cost of waste film residue.	Reduce outsourcing	215	Metric Ton/ Year
Unimicron (Huangshi)	Add a filter spin dryer.	Reduce outsourcing	12	Metric Ton/ Month
QunHong Technology	Introduce palladium resin recovery in the palladium washing sink body of the production line.	Increase the amount of precious metals recovered	344	Kg/Month
	Increase the recycling benefits of gold tailings.	Increase the amount of precious metals recovered	100	Kg/Month

2023 Waste Reduction Strategies and Expected Outcomes

Site	Strategies	Expected Outcomes
Unimicron	Continue to introduce SRF treatment to reduce the amount of waste incineration.	Reduce incineration
	Introduce film slag acidification and dehydration facilities to reduce the water content of film residue outsourced for treatment.	Reduce outsourcing
Unimicron-FPC (Kunshan)	Introduce nickel reduction facilities to reduce outsourcing disposal costs for nickel waste liquid.	Reduce outsourcing
QunHong Technology	Sorting and recycling of bakelite boards.	Increase the weight of recycled bakelite boards
	Newly added paper container recycling items.	Reduce the weight of general garbage disposal

2022 Waste Reduction Projects

- Title：Reduce the amount of general waste incineration.
- Content：In order to reduce the dependence on incineration of company-wide general waste, review and improve the treatment of incineration waste.
  - Elimination of recyclables in general waste → Revision of general waste sorting criteria
  - Introduction of new recycling technology for bakelite boards → Introduction of SRF production to bakelite boards
  - Increase the amount of plastic waste from the process to be reused → Introduction of SRF production to plastic waste
- 2022 Achievements：Reduced waste incineration and landfill by 1,216.8 tons/year.

5.4.3 Air Pollutant Control

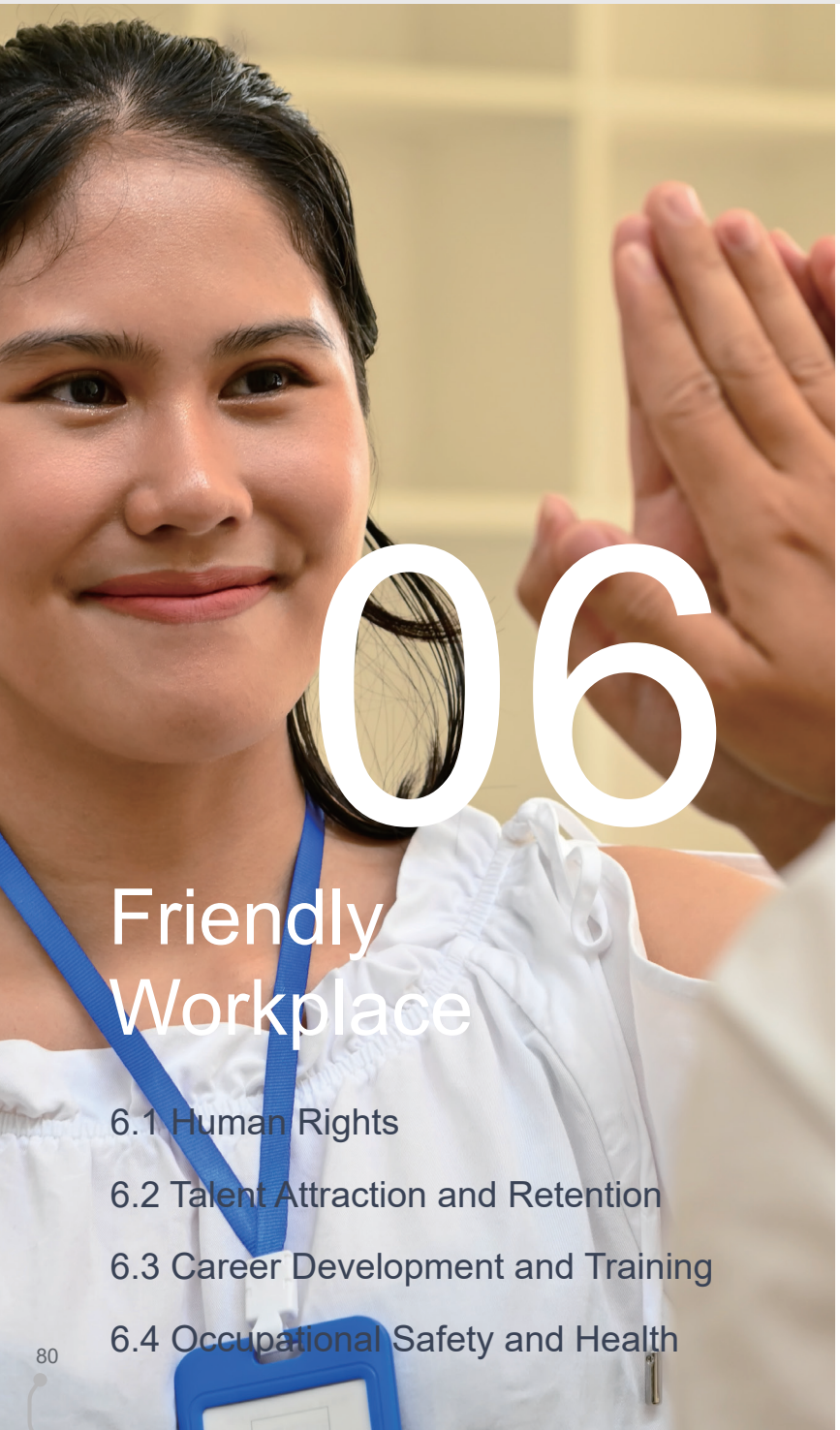
The air pollutants produced in the PCB manufacturing process mainly include acid, alkaline waste gas, and volatile organic waste gas. All of them can be treated by high-efficiency air pollution prevention and treatment equipment so that the pollutant content detected by Unimicron over the years is lower than the government's environmental protection laws and regulations.

In 2022, sulfur oxide emission was reduced by 51% compared with 2021, mainly due to the difference caused by a fire in 2021, which was reported as leakage in accordance with the requirements of the Department of Environmental Protection. Emissions of volatile organic compounds from the Taiwan plant increased by 19% in 2022 compared to the previous year as the process lines and raw material types increased, which was mainly due to the change in the calculation of emissions from some plants. Total air pollution emissions per unit of revenue averaged 3.5 kg/million revenue in 2022, a 13% decrease from the previous year.

Air Pollutant Emissions and Intensity

Pollutants	Region	Unit	2017	2018	2019	2020	2021	2022
Nitrogen Oxides	Taiwan	Kg	4,059	4,106	2,498	13,277	12,046	12,223
	Mainland China		6,192	13,410	11,919	12,101	16,873	15,224
	Total		10,251	17,516	14,417	25,378	28,919	27,447
	Taiwan and Mainland China	Kg/Million in Revenue	0.16	0.23	0.17	0.29	0.28	0.20
Sulfur Oxides	Taiwan	Kg	4,642	4,638	0	121	908	232
	Mainland China		894	4,136	433	1,461	259	341
	Total		5,536	8,774	433	1,582	1,167	573
	Taiwan and Mainland China	Kg/Million in Revenue	0.09	0.12	0.01	0.02	0.01	0.00
Volatile Organic Compound	Taiwan	Kg	30,545	40,144	100,323	216,603	378,521	451,990
	Mainland China		8,390	5,937	4,183	2,942	2,300	1,912
	Total		38,935	46,081	104,506	219,545	380,821	453,902
	Taiwan and Mainland China	Kg/Million in Revenue	0.60	0.61	1.27	2.50	3.64	3.23
Particulate Matter	Taiwan	Kg	3,186	4,589	2,760	1,996	1,062	1,154
	Mainland China		4,506	3,161	1,484	5,431	6,230	6,768
	Total		7,692	7,750	4,244	7,427	7,292	7,922
	Taiwan and Mainland China	Kg/Million in Revenue	0.12	0.10	0.05	0.08	0.07	0.06

Note: In 2020, the plants in Taiwan changed the emission calculation method in response to the request of local environmental protection authorities, resulting in an increase in the value.



06

Friendly Workplace

Friendly Workplace

6.1 Human Rights

Unimicron's business locations can be found all over the world. In this highly competitive industry, talent is the key to a Company's success in the global market. We support and respect the principles and spirit of the "International Labor Organization Tripartite Declaration of Principles," "The United Nations Universal Declaration of Human Rights", and "The United Nations Global Compact," and follow the "RBA Code of Conduct" and other related international norms, as well as the labor laws and regulations of the locations where our operations are located, the "Unimicron Labor Policy" is formulated on 01 January 2011 and related measures are implemented to create a friendly workplace for employees with a place where they can fully utilize their abilities. To make timely adjustments to its business strategies in response to global changes, we annually assess the risks and impacts of labor rights in accordance with the "Human Resources Division's Continuous Planning Procedures", to meet the requirements and expectations of the law, customers, society, international regulations, and Unimicron's internal stakeholders.

Topics	Human Rights
Policy	• Fair Employment • Humane Treatment • Employee Communication • Improving working conditions • Personal Code of Conduct
Commitment	• No discrimination in recruitment, promotion, evaluation and advancement • Protect the work equality and dignity of employees • Encourage employees to voice their opinions and protect the rights of the grievant • Provide a sound salary and benefits system and strengthen employee training to enhance competitiveness • Uphold the principles of integrity and fairness
Division	• Human Resource Division
Resources Invested	• Establishment of relevant regulations as a basis for implementation • Employee Relations Project Contacts
Grievance Mechanism	• Employee suggestion box, Labor-management meeting, OSH committee, Whistleblower hotline and mailbox
2022 Targets	• Incidents of Discrimination 0 case • Completion Rate of Human Rights Training >98%
Actions	• Education and training • Provide diversified communication channels for employees • Company Intranet and Bulletin Board
2022 Achievements	✓ Incidents of Discrimination 0 case ✓ Completion Rate of Human Rights Training: 99.42%

6.1.1 Human Rights Management

Unimicron values human rights; upholds a fair and respectful attitude in implementation of labor policies and their spirit; established a culture of equality, tolerance and open communication; and created a workplace that protects human rights to ensure that the spirit is incorporated into corporate culture.

Unimicron believes that everyone should be treated fairly and with respect and has publicly pledged its support for "The UN Guiding Principles on Business and Human Rights", "The ILO Declaration of Fundamental Principles and Rights at Work", "UN Universal Declaration of Human Rights" and "Responsible Business Alliance" to establish regulations. HR is responsible for the identification, assessment, and discussion regarding employee relations, and then each unit identifies human rights risks and assesses the impact. For each issue, management measures, as well as related training, are implemented through the "Rules on Labor Rights and Corporate Social Responsibility". Various communication channels are provided to employees, such as employee suggestion boxes, labor-management meetings, a hotline and a mailbox for reporting incidents, and quarterly OSH committees. Every year, each issue is identified according to laws and regulations and the Company policies to ensure the protection of human rights. In 2022, no child labor, forced labor, or discrimination occurred in Unimicron 's plants in Taiwan and mainland China.

2022 Human Rights Related Training

Course Title	Participants	Employees Should Be Trained	Employees Trained	Training Rate (%)	Total Hours (Man-Hour)
Sexual Harassment Prevention Act Act of Gender Equality in Employment Personnel Code of Conduct Responsible Business Alliance Code of Conduct	The entire Company (for employees employed for longer than 3 months, including staff in Taiwan and the Taiwanese staff dispatched to Mainland China)	13,376	13,298	99.42%	13,298

Note 1: The above courses have been planned among the orientation to implement the training mechanism and increase the training rate.

Note 2: The training rate of courses such as the "Sexual Harassment Prevention Act", "Act of Gender Equality in Employment", "Personnel Code of Conduct" and "RBA Code of Conduct" includes QunHong Technology Inc.

Note 3: The annual training is held in July, therefore, some employees who have not completed the training will be included in next year's training list.

Issue	Assessment Method	Management Measures
Prohibit Child Labor and Youth Labor Protection	• Audit and assessment of the misuse of child labor • Assessment of young workers' job protection	✓ Implementation of "Regulations Protection of Health and Safety for Women and Workers under 18 Years of Age" ✓ Enhancing the auditing and management of the personnel appointment process ✓ Revising procedures and enhancing remedial measures for misuse of child labor ✓ Specifying prohibited types of work and limiting work hours for young workers ✓ Enhancing daily management and internal auditing
Prohibit Forced Labor	• Audit and assessment of migrant workers' recruitment, employment, and rights	✓ "Regulations Governing the Selection of migrant workers for Employment" and "Personnel Code of Conduct" ✓ Ensuring the rights of migrant workers through appointment and work rules ✓ Organizing briefing sessions for migrant workers before their departure and investigating whether they were charged inordinate fees or other violations ✓ Providing freedom-from-retaliation feedback cards and communication channels with the Company
Working Time	• Audit of overtime • Audit of daily overtime working hours • Audit of weekly overtime working hours	✓ Specifying rules on attendance, leave and working hours ✓ Providing cards with work hours regulations written on them ✓ Notifying abnormal working hours by mail ✓ Regular monthly meetings at each plant for reports and education
Compensation and Benefits	• Investigation on wage deductions or reductions for disciplinary reasons	✓ Specifying the "Rules on Salary for Local and Foreign Employees" ✓ Regularly performing annual internal audits and employee interviews to detect potential misconduct
Freedom of Association	• Employee feedback • Evaluation through labor-management meetings and employee grievance mechanism	✓ Specifying the "Personnel Code of Conduct" ✓ Quarterly labor-management meetings are held to actively assess and improve through suggestions made by employees
Non-discrimination	• Audit and evaluation of recruitment conditions • Evaluation of workplace abuse grievance reporting mechanism	✓ Specifying the "Regulations Governing the Handling of Grievances and Sexual Harassment" ✓ Organizing education and training courses on sexual harassment in the workplace ✓ Conducting RBA human rights compliance training at events such as orientation and annual sessions
Humane Treatment	• Evaluation of workplace abuse grievance reporting mechanism	✓ Enforcing regulations on the prevention and management of abuse suffered while carrying out duties ✓ Providing a variety of communication channels for employees, including paper, e-mail, LINE@, etc.
Safe and Healthy Workplace	• OSH Assessment • Smooth communication channels for employee • Physical and mental health of employees	✓ Recording workplace injury statistics and enhancing OSH training ✓ Introducing the EAP to provide employees with psychological counseling and channels for expressing thoughts

6.1.2 Employee Relations and Communications

Unimicron values its communication with employees and provides diverse ways of communication for all employees so that they can give feedback or consult at any time. We also set exclusive e-mail/Complaint Box for anonymous grievances and complaints to assist employees in solving problems and provide comprehensive assistance.

All employees

Supervisors at All Levels of the Department
- Monthly/Irregular meetings of all plants and departments
- Internal activities
- Employee care interviews

Dedicated Personnel of Human Resources Division
- Dedicated personnel of HR provides services
- Employee forums/Regular employer/employee meetings
- Health Management Center

System / Employee Welfare Committee
- Grievance channels for employees
- Employee suggestion mailbox
- Corporate website/Corporate bulletin board
- Employee Welfare Committee

To understand the work and living conditions of expatriate employees in Mainland China Facilities and to improve retention rate, the Company conducts surveys 3 months and 18 months after their dispatch. In addition, a forum is held every quarter to solve issues related to living conditions, it invites department heads to participate in the forum, care for employees' problems and suggestions regarding work and local life, and provide relevant assistance. Concerning employee feedback and questions, Unimicron invites relevant departments to respond and follow up on those cases. In 2022, 521 cases were formally submitted through the employee communication channel in Taiwan Facilities, while 367 cases were submitted in Mainland China Facilities, and 100% of them have been solved. All cases have been responded to and sent back to the employees through the communication channel.

Unimicron currently has no labor union but conducts bilateral communication through regular labor-management meetings, and respects the right of all employees to participate in collective negotiation and peaceful gatherings. After the labor-management meeting quarterly, important matters and the advocated matters shall be sent to all units, so that every employee can accurately and simultaneously understand the latest policies and handling of related issues, to enhance their cohesion and professionalism. If the Company has major operational changes, advance notice shall be given in accordance with the labor laws and regulations.

Taiwan

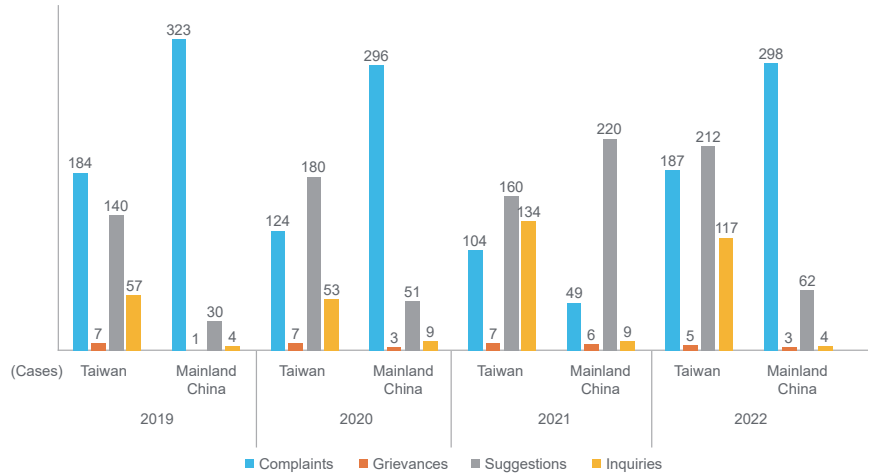
Where an employer terminates a labor contract pursuant to "Labor Standards Act", the provisions set forth below shall govern the minimum period of advance notice.

- Where a worker has worked continuously for more than three months but less than one year, the notice shall be given ten days in advance.
- Where a worker has worked continuously for more than one year but less than three years, the notice shall be given twenty days in advance.
- Where a worker has worked continuously for more than three years, the notice shall be given thirty days in advance.

Mainland China

30 days notice period in accordance with "The Labor Contract Law"

Employee Feedback



(Unit: Cases)

Type	2019 Taiwan	2019 Mainland China	2020 Taiwan	2020 Mainland China	2021 Taiwan	2021 Mainland China	2022 Taiwan	2022 Mainland China
Workplace	173	33	133	48	145	35	187	47
Transportation	55	30	73	26	31	23	72	70
System and Culture	40	6	69	14	90	11	66	3
Food	35	126	42	119	41	55	100	142
Employee Welfare Committee	11	2	12	0	3	0	31	5
Compensation and Benefits	18	8	11	8	26	10	19	6
Information Management	17	2	10	2	8	0	24	2
Training	3	0	6	2	5	3	2	5
Entertainment	4	0	5	0	0	0	0	1
Clothing	2	2	2	2	1	2	9	2
Accommodation	2	149	1	138	20	145	7	82
Job Management	26	0	0	0	35	0	4	2
Total	386	358	364	359	405	284	521	367

6.2 Talent Attraction and Retention

Topics	Talent Attraction and Retention
Policy	• Increasing the arrival and retention of talent
Commitment	• Implement the caring mechanism for new employees, plan the retention mechanism for new employees and outstanding performance, so as to improve the willingness of employees to stay and exert their immediate combat power
Division	• Human Resource Division
Resources Invested	• HR Project Contacts
Grievance Mechanism	• Employee suggestion box, Labor-management meeting, OSH committee, Whistleblower hotline and mailbox
2022 Targets	• New hire: Direct Labor (DL) 2,900, Indirect Labor (IDL) 950 • Excellent Engineers Retention Rate: 90%
Actions	• Caring interviews for new foreign employees • Caring interviews for new engineers • Team consensus camp activities • Enhancement of counselor mechanism • Merit retention bonus • Signing bonus for outstanding personnel • Referral bonus • Rotation mechanism
2022 Achievements	✓ New hire: Direct Labor (DL) 2,962, Indirect Labor (IDL) 951 ✓ Excellent Engineers Retention Rate: 90%

6.2.1 Human Resource Distribution

Unimicron encourages a diverse and open workplace culture and respects the uniqueness of each employee. In terms of recruitment, employment, evaluation, and promotion selection regardless of age, gender, race, religion, political beliefs, marital status, labor union affiliations, and background are treated fairly and equally, where the only considerations are finding the appropriate candidate for the appropriate position, and creating fair and diverse employment opportunities for all operation sites to promote local economic growth. By the end of 2022, the total number of formal employees at Unimicron was 28,402, the same as the previous period. The number of new employees and the deployment of dispatched manpower are adjusted on a rolling basis according to the current year's order situation, and a healthy turnover rate is maintained. As industrial production is semi-automated, some processes still rely on manual and labor-intensive work. Therefore, the proportion of male employees is higher than that of female employees. In 2022, migrant workers in Unimicron's Taiwan Facilities are from the Philippines; as the Philippines is an English-speaking country, it is relatively easier to communicate. There 78% of the employees at our plants in Mainland China are direct technical laborers.

2022 Employment Status

(Unit: People)

Category / Type / Region		Taiwan					Mainland China				
Category	Type	Male	Female	Other*	Total	Ratio to the total	Male	Female	Other*	Total	Ratio to the total
Employees	Total	9,948	6,381	0	16,329	100%	7,305	4,768	0	12,073	100%
Non-fixed-Term Contract	Direct Labor	4,811	3,064	0	7,875	48.22%	5,588	3,633	0	9,221	76.38%
	Indirect Labor	3,200	1,357	0	4,557	27.91%	1,606	1,051	0	2,657	22.01%
Fixed-Term Contract	Migrant Worker	1,812	1,869	0	3,681	22.54%	0	0	0	0	0%
	Student Trainee	3	10	0	13	0.08%	0	0	0	0	0%
(Dispatch) Contract Worker		122	81	0	203	1.24%	111	84	0	195	1.62%
Age	Under 30	2,066	1,458	0	3,524	21.58%	2,374	1,357	0	3,731	30.90%
	30-50	7,371	4,537	0	11,908	72.93%	4,799	3,405	0	8,204	67.95%
	Above 50	511	386	0	897	5.49%	132	6	0	138	1.14%

Note 1: * Gender as specified by the employees themselves.

Note 2: Outsourced workers include security, cleaning, and catering workers working in the plants. There are 428 workers in the Taiwan Facilities and 504 workers in the China Facilities in 2022.

2022 Job Category

Category		Taiwan				Mainland China				Total			
		Male	Female	Other*	Total	Male	Female	Other*	Total	Male	Female	Other*	Total
Manager	People	1,113	254	0	1,367	479	255	0	734	1,592	509	0	2,101
Level	%	81.42	18.58	0	100	65.26	34.74	0	100	75.77	24.23	0	100
Technical	People	8,741	5,708	0	14,449	6,661	4,241	0	10,902	15,402	9,949	0	25,351
Staff	%	60.50	39.50	0	100	61.10	38.90	0	100	60.75	39.25	0	100
Others	People	94	419	0	513	165	272	0	437	259	691	0	950
	%	18.32	81.68	0	100	37.76	62.24	0	100	27.26	72.74	0	100

Local Employment

Type	2019 Taiwan	2019 Mainland China	2020 Taiwan	2020 Mainland China	2021 Taiwan	2021 Mainland China	2022 Taiwan	2022 Mainland China
Local Residents as Senior Executives (People)	128	3	140	4	115	4	115	4
Senior Executives (People)	130	41	142	40	116	33	116	36
Ratio (%)	98.46	7.32	98.59	10.00	99.14	12.12	99.14	11.11

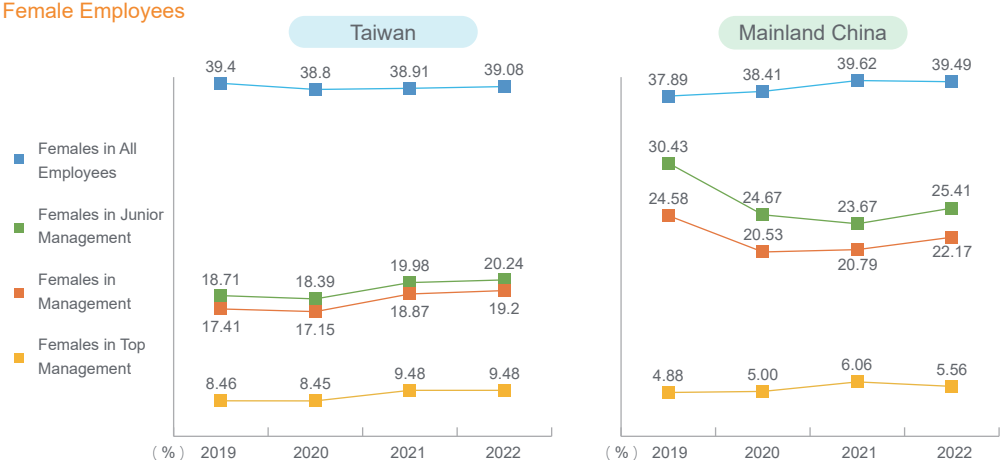
Note: Senior executives refer to Sr.Director level (inclusive) or higher employees. Local resident means an employee of the same nationality as the Plant location.

2022 New Employees

Region		Taiwan			Mainland China		
Category	Gender	Number of New Hires	Number of Current Employees	New Hire Rate	Number of New Hires	Number of Current Employees	New Hire Rate
Under 30	Male	538	1,572	34.22%	959	2,288	41.91%
	Female	271	919	29.49%	518	1,291	40.12%
	Total	809	2,491	32.48%	1,477	3,579	41.27%
30-50	Male	737	5,932	12.42%	634	4,774	13.28%
	Female	384	3,117	12.32%	489	3,387	14.44%
	Total	1,121	9,049	12.39%	1,123	8,161	13.76%
Above 50	Male	37	507	7.30%	6	132	4.55%
	Female	17	385	4.42%	0	6	0.00%
	Total	54	892	6.05%	6	138	4.35%

Note: Rate = Annual new hires (non-fixed-term new hires employed for longer than three months) / Number of current employees (non-fixed-termemployees) in the age category at year-end (December 31).

Female Employees



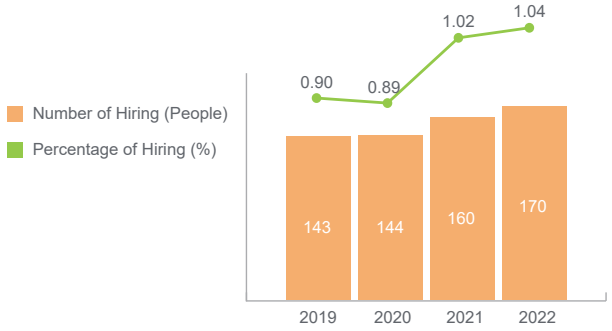
Note1: All management refers to deputy manager/manager level (inclusive) or higher. Junior management refers to the deputy manager or manager level.

Note2:The denominator of the proportion of female management is all management; the denominator of the proportion of female top management is all top management; the denominator of the proportion of female junior management is all junior management.

Disability Employment at Taiwan Facilities

We support the employment of people with physical and mental disabilities, and employed 170 people with physical and mental disabilities in 2022, achieving our planned ratio. In addition to evaluating the work duties and providing employment opportunities for people with physical and mental disabilities, care for staff health by the Physicians regularly, we also actively cooperated with the Ministry of Labor's job redesign program; installed wheelchair ramps and handrails in toilets; and provided assistive devices to build a friendly workplace.

Employment of People with Disabilities



6.2.2 Talent Retention

In addition to establishing a competitive salary and compensation system and talent retention system, Unimicron offers a variety of measures and bonus systems that are better than the law requires, and provides employee protection through a comprehensive salary and benefit structure, while emphasizing gender equality. In order to enhance the recruitment and retention of female employees, the Company attaches great importance to the maternal health protection system, implements comprehensive maternal protection measures, and provides a variety of rich and complete health promotion activities. In 2022, the Company received the National Award for Healthy Workplace - Maternal Health Friendly Award and established a comprehensive sexual harassment prevention mechanism to create a friendlier workplace environment.

Main Talent Recruitment Channel

Unimicron has a comprehensive recruitment standard mechanism that combined various recruitment channels, continuously recruits talents, and injected continuous momentum to offer students good opportunities and implement corporate sustainable responsibility.

- Job Bank
- Campus Recruitment
- Staff Introduction
- Industry-Academia Collaboration Projects

Assistance and Guidance for New-Employees

For New-Employees, counselors will provide work and technical assistance, and through various methods to help New-employee adapt to the new workplace faster.

- Regularly need to talk to New-Employees to adapt to the new workplace
- Assist in completing professional certifications such as license identification, etc.
- Discover new employees' learning problems, react, and communicate with them
- Implementation of counselor mechanism

Retention Plan

Retention Strategies

Optimize Compensation Competitiveness and Ensure the Retention of Outstanding Talents

- Compensation Adjustment Due to Excellent Performance
- Retention Bonus

Strengthen the Rotation Mechanism and Cultivate T-Shaped Talents

T-shaped talents represent the width of their knowledge and depth of technique and know-how. The combination of the two accounts for deeper professional understanding, a broader knowledge base, and cross-disciplinary abilities

Retention Strategies

- Year-End Bonus
- Annual Salary Adjustment
- Stock-Based Compensation
- Patent Bonus
- Performance Retention Bonus
- Retention Bonus for Key-Talent
- Employee Remuneration
- Achievement Bonus
- Retention bonus for New Hire

2022 Excellent Engineers Retention Rate

In 2022, the retention rate of excellent engineers was 90%, effectively achieving the purpose of attracting and retaining talents, and at the same time promoting the sustainable development of the Group.

(Unit: %)

Item	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
Excellent Engineers Retention Rate	100	99	98	96	94	93	92	92	91	91	91	90

Note: Excellent Engineers Retention Rate=the number of employees with "excellent" or above performance in the second half of the previous year who were still on board at the end of the month/the total number of employees with "excellent" or above performance in the second half of the previous year * 100%.

Employee Turnover Management

In terms of employee turnover management, the turnover rate fluctuates slightly, but remains at a fixed level. Unimicron will continue to invest in employee retention planning to provide better benefits and salaries to retain talent. When the employee requests to resign, the relevant supervisor will immediately interview, and the HR Division will conduct a one-on-one interview to concern the reasons, and make work adjustments or care as needed. In 2022, 41 staff were successfully Internal Transfer.

Employee Turnover Rate

(Unit: %)

Item	2019		2020		2021		2022	
	Taiwan	Mainland China	Taiwan	Mainland China	Taiwan	Mainland China	Taiwan	Mainland China
Overall Turnover Rate	10.35	32.92	11.31	26.48	20.27	35.10	17.06	31.57
Voluntary Turnover Rate	9.61	32.78	10.11	26.47	19.36	34.90	15.80	31.57

Note: Voluntary Turnover Rate= Annual total number of turnovers (irregular employees who leave the Company after working for more than 3 months)- involuntary turnover (irregular employees who leave the Company after working for more than 3 months)/ year-end (Dec. 31) number of employees (non-fixed-term employees).

2022 Turnover Statistics

Type		Taiwan			Mainland China		
Age	Gender	Number of Departures	Number of Current Employees	Turnover Rate(%)	Number of Departures	Number of Current Employees	Turnover Rate(%)
Under 30	Male	487	1,572	30.98%	1,145	2,288	50.04%
	Female	270	919	29.38%	625	1,291	48.41%
	Total	757	2,491	30.39%	1,770	3,579	49.46%
30-50	Male	832	5,932	14.03%	1,115	4,774	23.36%
	Female	450	3,117	14.44%	854	3,387	25.21%
	Total	1,282	9,049	14.17%	1,969	8,161	24.13%
Above 50	Male	49	507	9.66%	6	132	4.55%
	Female	33	385	8.57%	5	6	83.33%
	Total	82	892	9.19%	11	138	7.97%

Note: Turnover Rate= Annual number of departures (non-fixed-term resigning employees employed for longer than three months) / year-end (Dec. 31) number of current employees of category by age (non-fixed-term employees).

Parental Leave

In 2022, a total of 162 employees in the Taiwan Facilities applied for nursery leave without pay, and the expected number of nursery leave reinstatement for the whole year was 163, of which 140 were reinstated as scheduled or ahead of schedule, with a return rate of 85.89%; in terms of retention rate for reinstated employees, of the 101 employees who were reinstated in 2021, 77 were still working at the end of 2022, with a retention rate of 76.24%. Compared with the previous period, the retention rate has decreased by 14.17%. 80% of the employees who left after one year of reinstatement were female employees, and the reasons for leaving were mainly family factors.

Pregnancy Gifts

Pregnancy Care

Parental Leave in Taiwan

Item	Gender	2019	2020	2021	2022
Total Eligible Number for Parental Leave (A)	Male	464	508	641	724
	Female	333	378	477	544
	Total	797	886	1,118	1,268
Actual Number of Applicants (B)	Male	48	21	49	61
	Female	108	93	132	101
	Total	156	114	181	162
Application Rate (B/A)	Male	10.34%	4.13%	7.64%	8.43%
	Female	32.43%	24.60%	27.67%	18.57%
	Total	19.57%	12.87%	16.19%	12.78%
Number of Applicants Qualified for Reinstatement (C)	Male	44	19	38	48
	Female	100	87	87	115
	Total	144	106	125	163
Actual Number of Reinstatements (D)	Male	23	14	30	48
	Female	69	59	71	92
	Total	92	73	101	140
Reinstatement Rate (D/C)	Male	52.27%	73.68%	78.95%	100.00%
	Female	69.00%	67.82%	81.61%	80.00%
	Total	63.89%	68.87%	82.40%	85.89%
Number of Reinstatements in the Previous Year (E)	Male	24	23	14	30
	Female	85	69	59	71
	Total	109	92	73	101
Number of People Reinstated for One Year in the Previous Year (F)	Male	18	18	14	23
	Female	71	61	52	54
	Total	89	79	66	77
Retention Rate (F/E)	Male	75.00%	78.26%	100.00%	76.67%
	Female	83.53%	88.41%	88.14%	76.06%
	Total	81.65%	85.87%	90.41%	76.24%

Note 1: Mainland China does not implement the system of parental leave without pay, so it is not included in the statistics.

Note 2: Calculated based on the employees who have applied for maternity leave and paternity leave from 1/1/2019 to 12/31/2022.

6.2.3 Compensation and Benefits

To attract more talent, Unimicron sets incentive systems to attract and retain outstanding employees. The Company conducts performance evaluations on all employees every year as a reference for compensation adjustment and promotion. We also participate in external compensation and benefits surveys every year to regularly review the relation between compensation/benefit measures and the market, and adjust employees' salaries promptly to let more talented employees create value for Unimicron.

Compensation-Performance Link

The total compensation of an employee is determined based on the employee's professional knowledge and skills, job mastery, academic background, work experience, and individual performance, all combined with the Company's operating objectives to determine their overall compensation. There is no difference in salary regardless of gender, race, religion, political views, marital status, etc. To promote cohesion of the Company, in addition to the basic salary and annual salary adjustment, Unimicron also flexibly adjusts variable compensation according to the Company's operations and profit to improve morale and encourage outstanding employees.

To improve employees' work performance, understand the capabilities, and work adaptability of the organization's members, we perform two times of employee performance evaluations every year, so that supervisors can effectively feedback to subordinates through objective evaluations and continue to teach subordinates to improve their work capability, to achieve the department's goal and the Company's overall goal.

2022 Performance Evaluation (Unit: People)

Term	Category	Taiwan		Mainland China		Total	Ratio (%)
		Male	Female	Male	Female		
Mid-Term	Vice President	28	1	5	0	34	100%
	Sr. Director	64	9	22	2	97	100%
	Deputy Manager / Manager	789	192	75	4	1,060	100%
	General	7,973	5,351	60	17	13,401	100%
End of Term	Vice President	29	1	5	0	35	100%
	Sr. Director	67	9	21	2	99	100%
	Deputy Manager / Manager	827	210	81	4	1,122	100%
	General	8,367	5,712	62	18	14,159	100%

Note 1:Evaluation subject: It refers to the permanent employees after the probation period is completed including Taiwan and overseas Taiwan cadres. Contract workers, rotating students, part-time workers and interns are not included in the evaluation.

Note 2:Those who have applied for resignation, those who have not been reinstated for leave without pay, and those who have been employed for less than 3 months in the assessment period do not need to participate in the assessment.

Note 3:The supervisor of the previous unit will assess those who have changed their positions for less than three months; otherwise, the supervisor of the current unit will assess those who have changed their positions for three months or more.

2022 Female and Male Employees' Basic Salary Ratio

Region	Taiwan		Southern China-Shenzhen		Eastern China-Suzhou		Eastern China-Kunshan		Central China-Huangshi	
Category	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Vice President	1	1.08	-	-	-	-	-	-	-	-
Sr. Director	1	0.99	-	-	-	-	-	-	-	-
Deputy Manager /Manager	1	0.94	1	1.11	1	1.09	1	1	1	0.89
General	1	0.90	1	1.05	1	1.04	1	0.94	1	0.88

2022 Female and Male Employees' Compensation Ratio

Region	Taiwan		Southern China-Shenzhen		Eastern China-Suzhou		Eastern China-Kunshan		Central China-Huangshi	
Category	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Vice President	1	1.91	-	-	-	-	-	-	-	-
Sr. Director	1	0.99	-	-	-	-	-	-	-	-
Deputy Manager /Manager	1	0.93	1	1.14	1	1	1	1	1	0.83
General	1	0.88	1	0.99	1	1.03	1	0.94	1	0.89

Note 1: The basic compensation is the basic monthly compensation, excluding the variable remuneration; compensation is the total annual salary. Statistics do not include expatriates because the senior executives (Sr.Director or higher) of the Mainland China Facilities are all-male Taiwanese.

Note 2: Because there are 25 male managers above the vice president level and only 1 female manager in Taiwan, there is a discrepancy in compensation.

2022 Starting Salary for Entry-level Personnel to Local Basic Salary Ratio

Region	Ratio of Basic Salary for Unimicron's General Employees	Local Base Salary Ratio
Taiwan	1.02	1
Southern China-Shenzhen	1.00	1
Eastern China-Suzhou	1.58	1
Eastern China-Kunshan	1.41	1
Central China-Huangshi	1.66	1

Note: The basic salary includes the base salary and other allowances, excluding overtime pay. Basic salary is represented by region due to differences in each plant in Mainland China.

Compensation of Full-time Employees in Non-Management Positions

Item	2019	2020	2021	2022	2022 Compared to Previous Year
Total Full-Time Non-managerial Staff Numbered (People)	10,693	10,863	12,358	13,143	+6%
Average Compensation (NT$)	727,269	753,000	866,000	1,099,000	+27%
Median Compensation (NT$)	614,268	646,000	689,000	795,000	+15%

Note: Not include QunHong Technology Inc.

All Employee Benefits

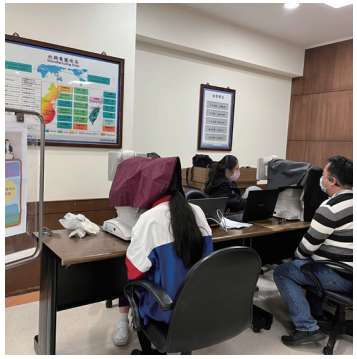
Unimicron attaches great importance to the physical and mental balance of all employees. In the workplace, varieties of welfare systems are planned. In addition to providing various insurance benefits and pension fund contributions following local laws and regulations, it also provides group insurance that is superior to that required by law to ensure the safety of employees at work and in life, and dependents can be included in the plan at their own expense. In the past two years, due to the impact of the pandemic, health promotion activities have been appropriately adjusted to replace physical activities with online activities, such as health awareness advocacy, online health training and health/mental health seminars, which can still take care of the physical and mental health of employees in a timely manner.

Diversified Employee Benefits

- Gifts and bonuses for the three major festivals
- Birthday gift vouchers and subsidies for weddings and funerals provided by the Employee Welfare Committee
- Employees' dividend system
- On-the-job education
- Club subsidy
- Pension contribution
- Labor and health group insurance
- Employee general health examination
- Monthly meal allowance for employees' restaurant
- Established lactation rooms for female staff
- Massage services provided by visually impaired masseurs
- Free ultrasound, ophthalmoscope, and bone density screening

Health Promotion Activities


Bone Density Screening


Ophthalmoscopy

Retirement Benefits Plan

Unimicron has, according to the statutory pension system, set aside pensions for each employee, and 100% of employees participate in the pension plan. According to the "Labor Standards Act" and the "Labor Pension Act" in Taiwan, employees who joined the Company before June 30, 2005 (inclusive) are entitled to the old pension seniority system. Unimicron deposits the escrow amount as stipulated by relevant laws and regulations, and commissions actuaries at the end of each year to conduct calculations and ensure that the retirement reserve appropriated is enough to satisfy and safeguard the rights and benefits of the employees' future pensions.

Region		Retirement Plan	Pension Contribution Ratio	Pension Participation Ratio
Taiwan		Pension in the old system: Company Pension Account	Employer 2%, Employee 0%	0.4%
		Pension in the new system: Individual Pension Account	Employer 6%, Employee 0~6%	99.6%
Mainland China	Southern China	Endowment Insurance (Employee's Account)	Employer 14~15%	100%
	Eastern China		Employer 13~16%, Employee 8%	
	Central China		Employer 16%, Employee 8%	

2022 Benefit Measures Performance

NT$ 61,860,700
The total subsidy from the Employee Welfare Committee allowance

NT$ 2,297,017
The total subsidy amount of on-the-job education recommended by the supervisor

NT$ 287,500
On-the-job training subsidy applied by employees

100%
Completion rate of regular health examination

437
The total person-times of visually impaired massage service

NT$ 908,604
The amount of club subsidy reached

NT$ 7.83 million
The total discounts for employees of Ching-Shian Charity Convenience Store

100%
Free group insurance

235
The total person-times of people who received pregnancy care and postpartum care

6.3 Career Development and Training

Topics	Employee Development and Training
Policy	• Deepen the training of professional talents and grasp market trends and technical needs
Commitment	• Provide a comprehensive training mechanism and career development direction to attract and retain top talents, expanding and reserving corporate talent pipelines
Division	• Training and Development Dept.
Resources Invested	• High-Frequency and High-Speed Unit training resources from the office of Chief Strategy Officer
Grievance Mechanism	• Satisfaction Survey
2022 Targets	• Completion rate of people capability maturity in each plant: 75% • Course completion rate: 15 courses were held • Satisfaction rating: 90%
Actions	• Planning and execution of high-frequency and high-speed course training
2022 Achievements	✓ Completion rate of people capability maturity in each plant: 75% ✓ Course completion rate: 26 courses were held, 1,086 participants ✓ Satisfaction rating: 91.63%

6.3.1 Talent Cultivation

According to the needs of new employees, general employees, and management positions, we have planned different Unimicron educational training structures. In addition to implementing an educational training plan, we have also established a maturity mechanism for the engineering manpower in each plant, so that we can take stock in real time to enhance engineering quality and improve organizational effectiveness. We also design leadership and management-relevant training for existing and potential leaders. Together with the planning for and execution of the rotation and promotion systems, Unimicron has managed to increase the number of potential talents.

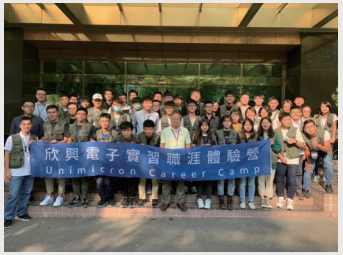
	Indirect Employees			Direct Employees
	Functional Training	Cross-Disciplinary Training	TQM Training	
Executive	SBU Leader Development Plan New Executives Program	Domestic and Overseas EMBA	JUSE International Seminar HIDA Executive Program CEMA Overseas Study Program	
Managerial Role	Mid-Level Supervisor Development Plan Training for New Managers	Cross-Division Rotation Plan Project Management Training - Leader Overseas Dispatch	TQM Training for Managers • Guidelines Management • Daily Management • 6σ Black and Green Belt • Lean Management • QCC Activity Circle • QC Fundamental Courses	Leader Training Technical Instruction Training
Non-Managerial Role	New Deputy Managers Training Technical and Business Skills Training New Employee Orientation	Project Management Training - Member		Quality Related Training Fundamental Skills Training Orientation

Responsible Unit: Supervisors of Business Units | TQM Committee | Human Resources Division | External Resources

Talent Cultivation Project

- Project：Internship Career Camp
- Content：

Provide internship opportunities for university and graduate school students to learn professional skills during summer vacation, and arrange a series of activities in conjunction with career camps for students to understand the organizational culture of Unimicron through group recreational activities.



- Project：Unimicron ESG Poster Contest
- Content：

In order to promote cooperation and exchange between industry and academia, the Company encourages students to engage in research on green topics in the circuit board production process and apply it to the Company's energy-saving and environmental protection technology, and jointly think about innovative ESG corporate sustainability solutions.

- Project：Social Media Experience Sharing
- Content：

Invite supervisors and senior students to share their work and workplace stories on social media, so that students can get a glimpse of the workplace and understand the skills required for the job.

Diversified Talent Training Mechanism

Facing the impact of the COVID-19 pandemic, Unimicron continues to stand firm and cultivate professional talents, and respond immediately by expanding diversified learning methods and actively implementing digital transformation, building organizational strength, and enhancing competitiveness through practical actions. In terms of the investment in education and training resources in 2022, the total amount of employee training totaled NT$ 11 million. Under the intensive supervisor training, 78% of personnel above the manager level are promoted internally, showing Unimicron's effort in the cultivation and promotion of talents.

Average Employee Training Hour

Region	Gender	Item	2019	2020	2021	2022
Taiwan	Male	Training Hours (Hours)	302,803	299,258	159,525	188,759
		Employees (People)	9,674	9,845	9,575	9,948
		Average Training Hours (Hours)	31.3	30.4	16.7	19.0
	Female	Training Hours (Hours)	155,860	179,206	64,211	83,924
		Employees (People)	6,290	6,341	6,099	6,381
		Average Training Hours (Hours)	24.8	28.3	10.5	13.2
	Average Training Hours per Person		28.0	29.6	14.3	16.7
Mainland China	Male	Training Hours (Hours)	282,442	131,591	97,500	104,074
		Employees (People)	8,776	8,302	7,622	7,305
		Average Training Hours (Hours)	32	15.9	12.8	14.3
	Female	Training Hours (Hours)	180,620	74,494	59,728	68,773
		Employees (People)	5,354	5,231	5,001	4,768
		Average Training Hours (Hours)	34.0	14.2	11.9	14.4
	Average Training Hours per Person		33	15.2	12.5	14.3

Note 1: Average Training Hours per Person = training hours/ number of employees.

Note 2:In response to the COVID-19 pandemic, some training courses have been converted to online courses or suspended.

2022 Employee Training Hours

Region	Category	Male			Female		
		Hours	People	Average Training Hours per Person	Hours	People	Average Training Hours per Person
Taiwan	Vice President or Higher	517.0	30	17.2	38.0	2	19.0
	Sr.Director	2,064.6	75	27.5	183.0	9	20.4
	Deputy Manager/ Manager	33,876.2	859	39.4	6,994.6	218	32.1
	General	152,301.5	8,984	17.0	76,708.3	6,152	12.5
	Direct Labor	61,780.9	6,748	9.2	39,138.5	5,024	7.8
	Indirect Labor	126,978.4	3,200	39.7	44,785.9	1,357	33.0
Mainland China	Vice President or Higher	32.0	5	6.4	0.0	0	0.0
	Sr.Director	458.0	26	17.6	0.0	2	0.0
	Deputy Manager/ Manager	2,089.0	141	14.8	1,139.5	47	24.2
	General	101,495.4	7,133	14.2	67,633.7	4,719	14.3
	Direct Labor	63,460.4	5,620	11.3	41,865.0	3,644	11.5
	Indirect Labor	40,614.0	1,685	24.1	26,908.2	1,124	23.9

Note: The statistics include both fixed-term and non-fixed-term contract workers.

New-Employee Orientation

For new employees to be familiar with the environment, know their job content, and quickly adapt to the corporate culture, the designated training development unit shall hold regular pre-employment training for new employees, and the training frequency and hours shall be adjusted flexibly according to the actual needs. The pre-employment training is oriented towards six major aspects and amounts to a total of 12 hours. Besides, we also hold a series of courses for new employees, including statistical process control, seven techniques for problematic quality management, certification of professional licenses, and winning teamwork training. By holding dynamic competitions, Unimicron enables employees to understand the Company's business philosophy, values, and goals, and to further connect their values to the team values.

Resources for New-Employee Orientation

Region	Item	2019	2020	2021	2022
Taiwan	Training Cost (NT$)	2,212,853	2,337,316	1,363,240	663,118
	Training Hours (Hours)	2,307	3,593	56,117.50	74,933.34
Mainland China	Training Cost (NT$)	514,372	1,408,708	283,429	249,305
	Training Hours (Hours)	17,184	25,122	126,371	59,670

Note 1:The scope of courses includes employee pre-employment training, SPC, QC, and winning camp training.

Note 2:Due to the epidemic prevention policy, some external training courses are suspended or converted to online courses.

Note 3:The cost depends on the number of courses offered and the training hours, not the number of participants.

Industry-Academia Collaboration to Create Win-Win

In 2022, Unimicron cooperated with 12 schools in total, with 110 students. In the future, Unimicron will uphold the spirit of CSR, continue to develop cooperation with schools, recruit outstanding talents, and create a win-win.

Top 5 by the Number of Students in Industry-Academia Collaboration	1	2	3	4	5
School	Lunghwa University of Technology	MING CHI University of Technology	Minghsin University of Science and Technology	Fan Shu Vocational School	National Taipei University of Technology

Industry-Academia Collaboration	2019	2020	2021	2022
School	11	10	13	12
Student (People)	231	207	123	110

Benefits for Unimicron

- Industry-Academia Cooperation provides an excellent medium through that Unimicron has a stable human source
- Give students good learning opportunities, reduce the gap between Industry-Academia, and improve training efficiency

Benefits for Students

- We provide a good workplace to the students for the learning environment and full care measures such as safe and convenient accommodation, counselors for work and life, consultation interviews, and internship opportunities
- Students can get work experience early to improve their work competencies

6.3.2 Talent Development

Unimicron plans a comprehensive training system and career orientation, and provides multi-learning channels to give employees the opportunity to participate in cross-disciplinary and cross-technology project cooperation. The Company strengthens employee interaction, and employees can learn from each other through teamwork and brainstorming. A diverse, independent, high-quality learning culture is formed so that employees' careers and work quality can be continuously improved, each employee is able to perform their duties to their best, and the productivity of individuals and the Company can be enhanced. We provide complete training resources for both direct and indirect employees, and plan training blueprints for the four major job categories, years of experience, and job functions. In addition to providing key training to employees at all levels according to the training blueprint, we also plan and execute courses across 5G technology fields and smart plants in response to industry needs, cultivating engineers' capability with new technologies and ensuring effective transfer of knowledge and experience through various learning channels.

We regularly track data on the effectiveness of education and training, and review the effectiveness of training and employees' learning through the Kirkpatrick Model and Human Capital ROI indicators, in order to continuously refine, respond to the rapid changes in the industry, and accelerate employees' improvement in functions. In 2022, we continue to update our domestic and overseas e-learning systems to optimize the learning environment for our employees, provide accurate and effective training to facilitate their progressive growth and development in their work, as well as to develop multiple functions and stimulate their potential.

Indicator	2020	2021	2022	2022 Compared to Previous Year
Human Capital ROI	14.15	13.83	15.37	+1.54%

Note: Human Capital ROI indicators = (annual revenue - (operating expenses - employee salaries and benefits))/employee salaries and benefits.

Careers Development Programmes

Level	Item	Quality Control Circle Activities	Lean Project
Level 1 Reaction	Evaluation Item	Course Satisfaction	Course Satisfaction
	Evaluation Method	Satisfaction Survey	Satisfaction Survey
	Target in 2022	85%	90%
	Result in 2022	94.89%	92.06%
	Target in 2023	88%	90%
Level 2 Learning	Evaluation Item	Pass Rates	Pass Rates
	Evaluation Method	After-class Test	After-class Test
	Target in 2022	85%	76%
	Result in 2022	94.03%	75.16%
	Target in 2023	88%	85%
Level 3 Behavior	Evaluation Item	Every Plant Establish QCC	Project Execution
	Evaluation Method	QCC Competition	Number of Projects Completed
	Target in 2022	200	352 Cases
	Result in 2022	195	481 Cases
	Target in 2023	200	466 Cases
Level 4 Result	Evaluation Item	The Rate of Quality Control Circle (QCC) Activities Achievement	Project Benefits
	Evaluation Method	Through the Result of Every Circle Improvement Activity to Calculate the Rate of QCC. Formula: 100% Completion Quality Circle/Total Quality Circle.	Project Financial Review
	Target in 2022	The KPI of QCC activities results >80%	NT$ 4,241,850,000
	Result in 2022	• The KPI of QCC activities results is 91.3% • Save NT$ 0.89 billion	NT$ 8,057,412,229
	Target in 2023	The KPI of QCC Activities Results >90%	NT$ 4,550,815,991
Course Objectives		Through the implementation of QC training courses and QCC activities, we strengthen the quality awareness of all employees, prioritize quality improvement, encourage the development of team intelligence and individual potential, and build Company culture and morale.	Project management tools and techniques.
Benefits		• Through the operation of solidarity circle activities, we can enhance the connotation of the overall quality culture, improve the problem-solving capability of employees and continuously refine the related quality management system and methods. • In 2023, we will refine and detail the continuous quality management training courses, and extract the key practical cases from the field to meet the practical needs of our employees and implement the training transfer, so that our employees can get concrete benefits in the real work.	• We use professional methodology and related statistical methods to carry out project improvement so that all employees can work together in a continuous project mode to improve, reduce business management costs and improve product yields. • Since 2021, in addition to physical courses (lectures, case studies, and software application demonstrations), we have continued to refine and transform course materials and into e-learning materials, using a variety of resource channels to help employees to learn and apply what they learn immediately.
2022 Trainees		DL with Job Level 2 to 5 and IDL with Job Level 4 to 11	Job Level 5 to 11
2022 Participants (People)		2,957	649
Coverage Rate (%)		168%	128%

Note 1:Coverage Rate = number of students who have completed training up to the current year / total number of students who should be trained in the current year x100%.

Note 2:The Career Development Program is a series of courses, and the training is conducted in stages depending on the target audience and completion requirements. Therefore, the coverage rate exceeds 100% because the series of courses are relevant to promotion, and employees complete the courses in advance to meet promotion requirements.

6.4 Occupational Safety and Health

Topics	Occupational Safety and Health
Policy	• Labor Policy • Occupational Safety and Health, Environmental Protection and Energy Policy
Commitment	• Achieving Work-Life Balance • Proactive Compliance
Division	• Human Resource Division • Occupational Safety & Health Division
Resources Invested	• 7 Occupational physicians • 18 Registered Nurse • Funding for Health Promotion Activities • Occupational Safety Officer • OSH Project Investment • OSH Promotion
Grievance Mechanism	• Employee suggestion box, Labor-management meeting, LINE@, EAP hotline/email, OSH committee, Whistleblower hotline and email
2022 Targets	• Employee satisfaction with health promotion activities: 96% • Obtained OSH awards: 4 cases • Work accidents: 0 case • Frequency-Severity Indicator (FSI) (Below 50% of the Three-year Average for the PCB Industry): 0.1 • Disabling Injury Frequency Rate (F.R.) (Below 50% of the Three-year Average for the PCB Industry): 0.63 • Disabling Severity Rate (S.R.) (Below 50% of the Three-year Average for the PCB Industry): 16 • Completion of the OSH performance evaluation: 100%
Actions	• Female employee care program, maternal health, and prenatal Care • Human factors engineering management, abnormal load management, workplace violence prevention, and Job redesign project • Four types of cancer screenings, disease prevention vaccination, health promotion activities, health lecture, interview with occupational physicians, massage service, Employee Assistance Program (EAP) • Prevention and Control of COVID-19 • Various OSH management programs and annual EHS Month
2022 Achievements	✓ Employee satisfaction with health promotion activities: 96% ✓ Obtained OSH awards: 10 cases ✓ Work accidents: 3 cases ✓ Frequency-Severity Indicator (FSI) (Below 50% of the Three-year Average for the PCB Industry): 0.133 ✓ Disabling Injury Frequency Rate (F.R.) (Below 50% of the Three-year Average for the PCB Industry): 1.17 ✓ Disabling Severity Rate (S.R.) (Below 50% of the Three-year Average for the PCB Industry): 15 ✓ Completion of the OSH performance evaluation: 100%

6.4.1 Occupational Safety and Health Management

Unimicron is committed to providing employees with a quality, safe, healthy and comfortable workplace, which includes production and non-production areas and routine and non-routine operations in employment sites under our purview, plus the operations of all external stakeholders (including food suppliers, raw material suppliers and contractors) entering Unimicron' employment sites as well as facilities and equipment provided by external units operating in the premises of Unimicron plants. In order to improve the overall operating effectiveness of OSH organization, we established the Occupational Health and Safety Division in 2021, and have continued to invest resources and promoted various actions. In 2022, aiming at strengthening the fire protection function and improving the fire risk management and control mechanism, the Company ensured fire safety, to demonstrate the Company's continuous refinement and improvement of the occupational safety management system.

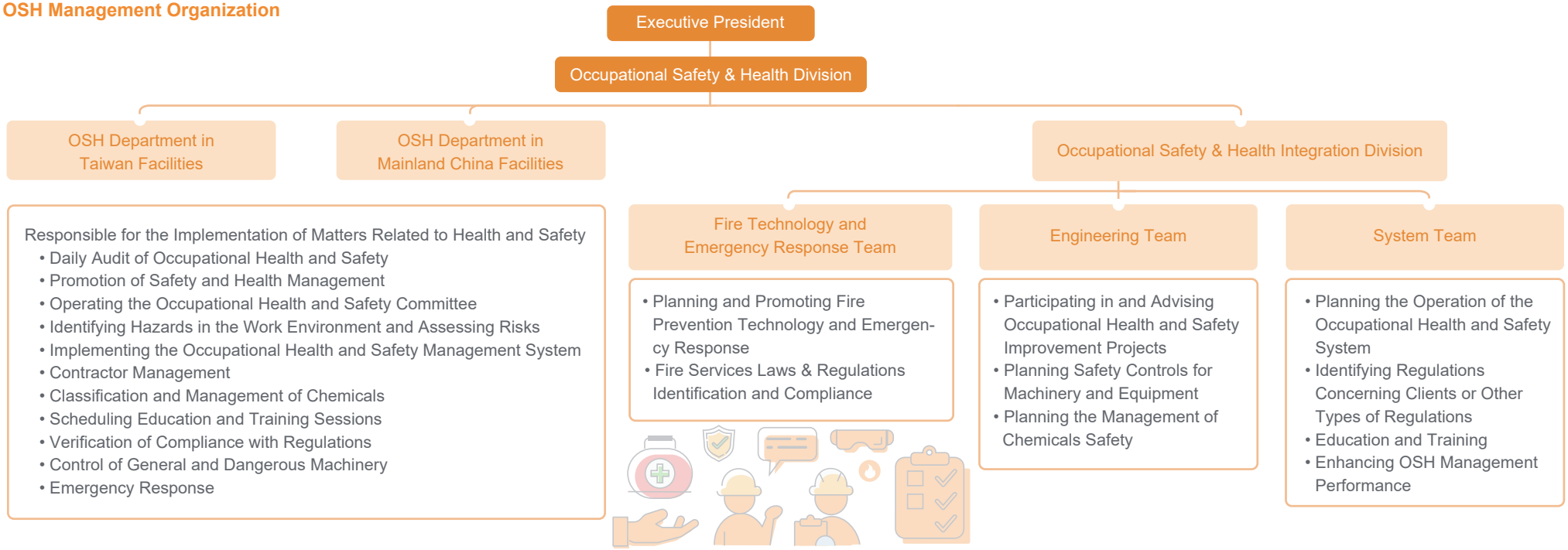
- 2012.01 Unimicron's Taiwan Facilities have passed TOSHMS certification
- 2019 Taiwan Facilities completed the conversion certification of OHSAS 18001 to ISO 45001 Mainland China Facilities have completed the conversion certification before March 2021
- 2020 Unimicron won the 2020 National Occupational Safety and Health Award issued by the Ministry of Labor
- 2021 In order to improve the overall operating efficiency of our occupational safety organization and actively implement monitoring and control, the Occupational Safety & Health Division was established
- 2022 Set up a professional fire-fighting team in 2021, strengthen and improve the fire-fighting mechanism in 2022, and establish Emergency Response Teams (ERTs) in all plants.

Safety and Health Resource Input

Item	2019	2020	2021	2022
Occupational Safety Officer (People)	495	535	569	533
Funding (NT$)[Note]	179,028,012	274,658,768	402,422,384	455,399,581
OSH Project Input (NT$) [Note]	18,099,741	32,354,037	76,896,334	69,697,846
OSH Advocacy (Session)	1,441	1,602	1,581	1,088

Note: We invested funds in the maintenance and inspection of hardware and facilities, the addition of equipment, education and training, and the verification of the management system. The exchange rate for RMB : NTD = 1 : 4.4144, quoted from the National Taxation Bureau of Taipei.

OSH Management Organization



2022 Achievements

Taiwan

- 100% obtained ISO 45001:2018 certification, and regularly verified by a third-party certification agency every year
- According to the CNS 45001:2018 of the Republic of China, certified by the TOSHMS
- Obtained the Goal Achievement Certificate of the Cumulative Disaster-free Working Hours: Hejiang II Plant and Chung Hsing Plant
- Occupational Safety and Health Poster Contest Award (2 cases) – S2 Plant, North District Promotion Association of the TOSHMS
- Corporate Sustainability Report Disclosure of Occupational Health and Safety Indicators - Excellent, Occupational Safty and Health Administration, Ministry of Labor

Mainland China

- 100% obtained ISO 45001:2018 certification, and regularly verified by a third-party certification agency every year
- Unimicron (Suzhou) :
  - Safety Production and Labor Protection Competition - 3rd, Suzhou Industrial Park Shengpu Street Union
  - Fire Fighting Skills Competition - 3rd, Suzhou Industrial Park High-Trade Zone Safety Supervision Bureau
  - Occupational Disease Prevention and Control Paradigm, Health Care Committee of Suzhou City
  - "Safety Production Law" Knowledge Contest - 3rd, Suzhou High-Tech Zone Management Committee
- Unimicron (Kunshan) :
  - Occupational Health Technical Knowledge Contest - Individual Awards, Trade Union of Kunshan & Health Care Committee of Kunshan
  - Safety Improvement Project Award, Kunshan New & High-Tech Industrial Development Zone*
- Unimicron (Shenzhen) :
  - Special Equipment Safety Standardization - Level 2, Shenzhen Specialized Equipment Industry Association

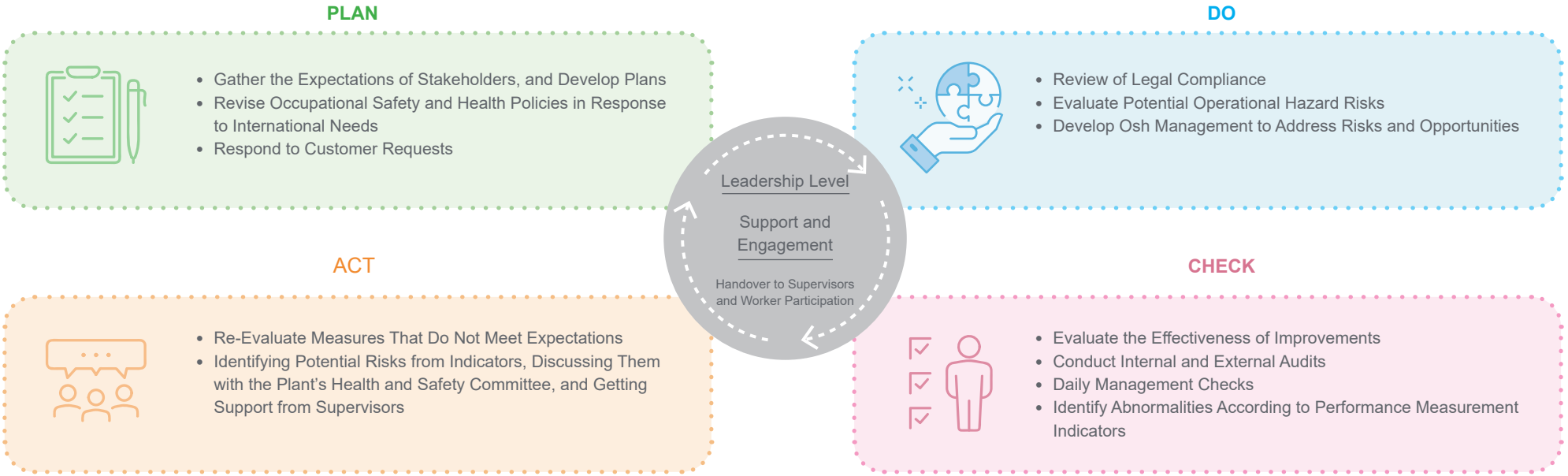
Note: *Awarded in 2022 for the year 2021.

Corporate Sustainability Report Disclosure of Occupational Health and Safety Indicators - Excellent, Occupational Safty and Health Administration, Ministry of Labor

Fire Fighting Skills Competition - 3rd, Suzhou Industrial Park High-Trade Zone Safety Supervision Bureau

The International Certification

A comprehensive Occupational Health and Safety Management mechanism is built on the spirit of self-management and systematic actions. Therefore, we actively introduced the ISO 45001 Occupational Health and Safety Management System at each of the plants and implemented the spirit of PDCA continuous improvement through the e-management interface to enhance the effectiveness of the management system.



Management Organization

All OSH management personnel in each of Unimicron facilities are full-time permanent personnel, and all Taiwan facilities have established OSH management units and personnel in compliance with "Occupational Safety and Health Act" and relevant regulations; the person in charge of each workplace and supervisors at all levels will direct and supervise the implementation of safety and health management matters according to their responsibilities and powers following the work items planned by the OSH management unit, and coordinate and guide the relevant personnel to implement. All workers in the Company perform related matters following the OSH management standards.

All employees of the Company are expected to comply with the standards set by the results of the hazard identification and risk assessment process. According to the Unimicron OSH Management Measures, Unimicron would protect workers from revenge that may affect their right to work or promotion during their employment, or protect them from being discriminated against if they report or notify incidents, hazards, risks, or opportunities by written document and Email; leave work conditions that are likely to cause harm or disease; or report hazards or dangerous situations to worker representatives, employers, or regulatory authorities.

To cultivate OSH culture in the workplace, we not only input resources to comply with regulations, but set an Occupational Safety Officer in each unit in each plant to assist in advocacy and implementation of OSH activities, inspect related facilities and equipment, conduct training and related audits to facilitate communication between planning and execution. In 2022, there were 533 Occupational Safety Officers in Taiwan Facilities and Mainland China Facilities, 1 in 47 employees on average in Taiwan Facilities, and 1 in 59 employees on average in Mainland China Facilities.

Unimicron has established the OSH Committee and regularly holds committee quarterly meetings in Taiwan facilities and monthly meetings in Mainland China facilities. Both employer and employees participate in meetings, which involve the requirements of the "Occupational Safety and Health Act" such as communication, participation, consultation, and related matters. The ratio of the labor representatives in the committee is superior to regulatory requirements in Taiwan facilities, with an average ratio of 52% in 2022. The ratio of labor representatives in Mainland China facilities also reached 61%, showing how much we value employees' opinions and participation.

Hazard Identification and Control

All personnel responsible for the Identification of OSH Hazard and Risk Assessment have taken OSH System training and have passed assessments. When any work activity changes or abnormalities occur, they should be able to re-execute hazard identification and risk assessments. If risk assessment is classified as an unacceptable OSH risk (major/high risk) with major negative impacts, there will be an improvement plan based on elimination, replacement, engineering improvement, administrative management, and personal protective equipment to seek the best method of risk reduction and perform continuous improvement.

To avoid work-related incidents, Unimicron continues to implement high-risk work safety assessment and safety observation and evaluation in all Facilities, strengthen occupational incident prevention and improvement projects, and educate and strengthen employees' awareness of self-safety. There are 64 types of specific hazardous workplaces, including noise, ionizing radiation, manganese, lead, nickel, and fine dust in Unimicron Facilities in Taiwan and Mainland China, and regular specific workplace health examinations are carried out every year. After assessment, there were no cases of occupational diseases as defined in the regulations in 2022.

2022 Proportion of Labor Representatives or Occupational Safety Officers

Plants	Ratio of Labor Representatives or Occupational Safety Officer	Regulatory Requirements
Shanying	61%	33.3%
Yangmei	53%	33.3%
Hejiang	48%	33.3%
Luzhu	42%	33.3%
Hsinchu	66%	33.3%
QunHong Technology Inc.	44%	33.3%
Mainland China	61%	-

Note:

The Shanying includes Shanying Plant, Precision S1 Plant, Precision S2 Plant, Precision S3 Plant, Shanying Wenhua Plant and Shanying II Plant.

The Hejiang includes Hejiang Plant, Hejiang II Plant and Chungli Plant.

The Luzhu includes Luzhu II Plant and Luzhu III Plant.

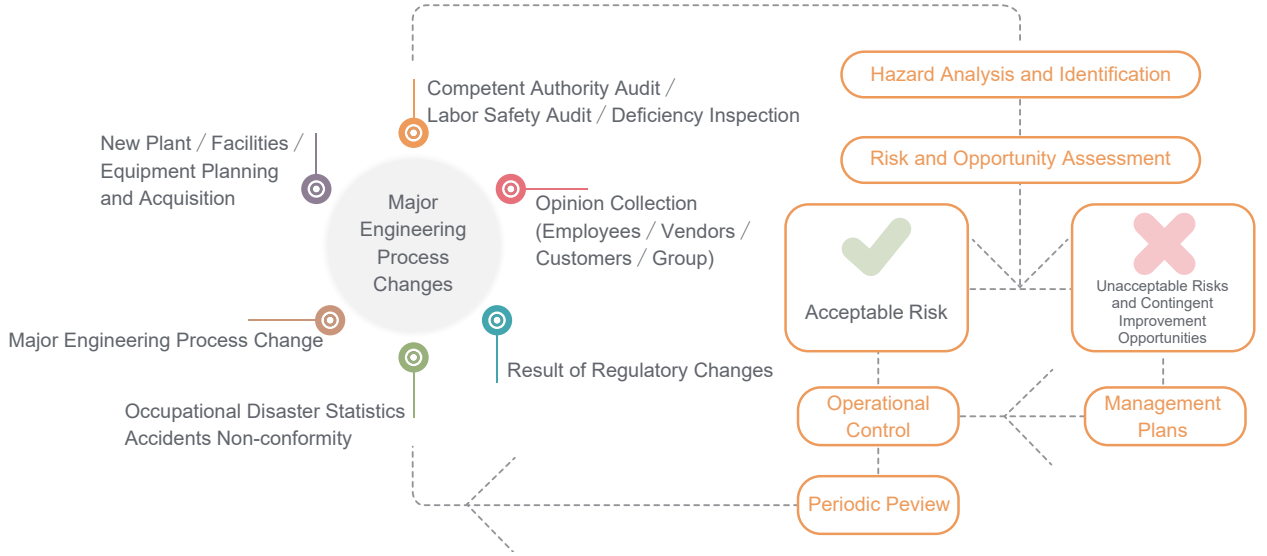
The Yangmei includes Yangmei Plant.

The Hsinchu includes Hsinfeng I Plant and Chung Hsing Plant.

QunHong Technology Inc. includes QunHong Dacheng Plant and QunHong Renyi Plant.

Mainland China includes Unimicron (Kunshan), Unimicron-FPC (Kunshan), Unimicron (Suzhou), Unimicron (Shenzhen), and Unimicron (Huangshi).

OSH Hazard Identification and Risk Assessment Operation Process



2022 Health Examination and Occupational Disease Prevention and Control

Taiwan

- Special Health Examination: 5,778 people
- Second-Level Management of Special Health Examination: 4,384 have completed health education courses
- Fourth-Level Management of Special Health Examination: All 54 employees with abnormal hearing have been interviewed by the on-site physicians to complete the reconfirmation of work competence
- Management Measures: For areas that are noisy, regular environmental tests are conducted every six months. If the noise level exceeds 90 decibels in the work area, sound-absorbing foam will be installed to control noise levels and personal protective gear will be provided. For management staff at Annual Noise Level 2 or above, training is provided; for management staff at Noise Level 4, on-site assessments by occupational medicine specialists will be arranged, and one-on-one interviews will be conducted to control hazards, adjust work content, or change work hours based on the results of the interview.

Mainland China

- Special Health Examination: 4,616 people
- Employees with Abnormality: 71 people, of which 47 were abnormal hearing, 24 were abnormal in other, all of which have been tracked and improved
- Management Measures: The personnel who passed their physical examination before and during their shifts can continue to work as usual; the personnel who receive abnormal results from their physical examination or reexaminations are transferred to different posts, and their results and work duties are analyzed. Most personnel have hearing abnormality in their physical exam results, and the hazardous factor that is causing that issue in their work is noise. Therefore, we take measures to improve job environments that deal with noise, such as equipment noise reduction, enhancing inspections, replacing and repairing equipment immediately as soon as it makes abnormal noises, holding OSH training sessions, using noise detectors, and doing noise inspection in the workplace from time to time.

2022 OSH Improvement Project

Project	Content		2022 Outcomes
Established Channels to disseminate Health and Safety	Raise the safety awareness of internal employees. - Build multiple channels (occupational safety and health website and APP) - Implement monthly online quizzes to regularly test safety knowledge.		• 15,159 responses to questionnaires were collected by using the website and APP to promote safety and health awareness. • The annual average score is 95.37, and the monthly average score is over 80.
Established a Health and Safety Improvement Proposal System	Set up the KPI of each plant and establish the incentive mechanism to encourage the Company's employees to make more proposals. Invite employees to participate in the proposal improvement plan to achieve the effect of full participation.		• Collected 2,400 improvement proposals. • Conducted the overall evaluation of the Company and selected the most valuable proposals and launched them horizontally.
Internal Audits, Performance Evaluations and Grading Systems	Perform internal audits of plant safety and health every year, assess the performance of each plant in accordance with the results of the current year, and then rate them to performance assessments of safety and health.		• The internal audit of safety and health has been completed in 14 plants. • Set 5 indicators. After quantifying the indicators and adding up the totals for rating, the performance of each plant reaches 70 points or more.
Enhancing Fire Safety	Fire Prevention	• Safety interlock and overheat protection mechanism for oven and wet process (including electric heating). • Regular infrared thermal image inspection to ensure electrical safety. • Strengthen hot work management and monitor operation safety.	• Fire prevention: 0 serious fire accidents related to electrical accidents and hot work.
	Very Early Smoke Detection	• Establish a very early warning system in high-risk areas. • Build a partial discharge monitoring system in high and low voltage substations. • Strengthen the ability of personnel to search for fires in a timely manner, and clarify the principle of division of powers and responsibilities.	• Complete the construction of the Aspiration Smoke Detector Systems in the two plants, and install them gradually in the existing plants (the new plant has been included). • Complete the construction of the partial discharge monitoring system in the substations of the 4 plants, and continue to install them gradually in the existing plants (the new plant has been included). • Conducted 6 courses on searching for abnormality, with 202 people and a total of 404 hours.
	Prevention of Extended Burning	• Heat exhaust ducts are made of metal with individually dedicated. • Improve the burning risk of acid-base plastic air ducts with process exhaust ≥ 10 inches. -New/reconstructed plant: Change the quality of air ducts to metal with corrosion resistant coating. -Existing plant building: An automatic sprinkler system is built in the air duct, with annual and phased improvements. • Strengthen and maintain the fire protection zone of the span bridge connecting two buildings to improve the protection capacity of buildings. • Wet process safety protection: Newly installed wet process tanks are made of flame-resistant materials.	• Existing plants have completed separate and dedicated hot exhaust ducts. • Two new/reconstructed plants have been improved by changing the quality of air ducts to metal with corrosion resistant coating; one existing plant has been completed with additional water spreading equipment inside the plastic air ducts and protection has been activated. • Complete the integrity of the double-sided normally open fire doors of the span bridge across buildings in the existing plant (the new plant building has been included in the construction plan). • The newly installed wet process tank is made of flame-resistant materials or uses a changed heating method for the process.
	Fire Fighting and Emergency Response	• Set up automatic fire extinguishing equipment in high-risk areas. • Establishment of ERT in each plant - Prepare emergency equipment and equipment. - Establish ERTs and drills in each plant. - Focus on deepening the field commander's system contingency decision-making capability. • Each plant implements fire drills (including nighttime) and escape and evacuation every six months to strengthen the golden-hour disaster relief capabilities.	• Complete the construction of gas fire extinguishing equipment (FM200) in the ICT rooms of 9 existing plants and 2 plants substations. • Establishment of ERT in each plant - Standardize 114 emergency response equipment cabinets on site, equipped with emergency response equipment, and implement regular inspections. - Conducted 18 ERT training courses, with 379 trainees and 1,137 hours (annual re-testing). - Completed the ERT emergency response drill of 12 plants, with a total of 96 participants. - Conducted one high-level commander course, with 22 trainees and 44 hours. • Each plant continues to implement plant-level and department-level fire drills every six months.

2023 OSH Improvement Project

Project	Content		Expected Outcomes
Build an E- Patrol Inspection and Accident Management System	Strengthen the timeliness of patrol inspection and simplify the accident management process. - Use the tablet to perform real-time checks. - Electronicize the accident reporting and handling process to facilitate management and reduce paper usage.		• Timeliness of information when the system is completed.
Enhance the Search Efficiency of Abnormality	• Build the central control room and on-site pillar marking. • Update the existing switchboard to an addressing type and update the system diagram. • Division of powers and responsibilities in the on-site area, and establishment of an emergency contact line.	• On-site personnel education and training • Establish a pressure testing mechanism	• The plant mechanism is established, and the abnormality search must be completed within 10 minutes to meet the golden time for disaster relief.

Incident Analysis

In 2022, Unimicron's employee disabling frequency rate (F.R.) decreased by 7% compared with 2021, and the employee disabling severity rate (S.R.) increased by 25% compared with 2021. The increase was mainly due to the increase in the severity of accidents and the increase in the number of lost days. According to the analysis, there were 52 cases in which workers in Taiwan Facilities took more than one day off from work due to work-related injuries, among which there were three major occupational accidents. In the review after the incident, it was confirmed that the main cause was the improper installation of facilities and the lack of safety awareness of personnel. Therefore, in strengthening the safety of facility installation, in addition to removing the improperly installed facilities at the incident site, the review was carried out in parallel to see if the same conditions existed in other areas of the factory in order to prevent the occurrence of the same situation. In order to enhance the safety awareness of personnel, in addition to education and training, we have also set up relevant operating regulations, requiring personnel to obtain qualified operating licenses before they can apply for and perform relevant operations. Compared with 2021, the employee disabling frequency rate (F.R.) decreased by 22% and the employee disabling severity rate (S.R.) increased by 36%, with the main types of accidents being 17 cases (33%) of careless walking, 9 cases (17%) of equipment clamping/rolling/crushing injuries, 8 cases (15%) of smashing injuries, and 6 cases (12%) of tool stabbing/cutting injuries.

The total number of workers in the plants in mainland China who took more than one day's leave due to work-related injuries was 22. Compared with 2021, the disabling severity rate (S.R.) of employees decreased by 9% and the disabling frequency rate (F.R.) of employees increased by 20%. The main types of accidents were 10 cases of careless walking (45%), 4 cases of smashing (18%), and 4 cases of equipment clamping/rolling/crushing injuries (18%). For the overall prevention of injuries, we will continue to promote a culture of safety and active safety protection for all employees every year during Safety Month, and implement a 6-hour occupational safety and health retraining course for injured employees, requiring them to pass a test.

Strengthening the Ability to Prevent Fire Damage

In response to the three fire incidents at Unimicron in recent years, we conducted a review of damage prevention and emergency response, improved on-site equipment and plant facilities, and supervised from daily management to headquarters audits, in order to strengthen emergency organization capabilities and damage risk control.

- Complete safety interlock and overheat protection mechanism for wet process electric heaters and ovens, and require the use of flame-resistant grade or change of process heating method for electric heating tanks.
- Regularly organize IR scan professional training to enhance the electrical accident prevention ability of professionals, and strengthen electrical safety through the improvement of detection and tracking prevention.
- Establish an Aspiration Smoke Detector System (ASD) in high-risk areas and partial discharge monitoring in substations.
- Improve the risk of burning acid-base plastic air ducts with process exhaust ≥ 10 inches.
- Set up automatic fire extinguishing equipment in high-risk areas.
- Establish ERT and regular drills for each plant.
- In addition to the daily management of the plant, the Occupational Safety Office conducts audits on damage prevention and emergency response every six months to ensure that the plant implements.

Work Injury

Year	Disabling Injury Frequency Rate (FR)			Disabling Injury Severity Rate (SR)		
Region	Taiwan	Mainland China	Group-Wide	Taiwan	Mainland China	Group-Wide
2019	0.96	0.94	0.95	6	17	11
2020	1.28	0.68	0.99	17	24	21
2021	1.92	0.65	1.26	14	11	12
2022	1.49	0.78	1.17	19	10	15

Note1: Disabling Injuries Frequency Rate (FR) = Number of disabling injuries × 10^6/Number of hours worked.
Disabling Injuries Severity Rate (SR) = (Number of workdays lost) × 10^6/Number of hours worked.
The number of work injuries is defined as the number of cases in which a worker could not resume work after an occupational injury for more than one day (inclusive).
The total number of workdays lost is defined as the number of days in which the worker could not resume work after an occupational injury for more than one day (inclusive).
The total number of days lost does not include the calendar days of the day of the injury and the day of resuming work.

Note2: The definition of high-consequence injury includes fatalities, or does not or is not expected to recover fully to pre-injury health status within 6 months.

Note3: Disabling Injuries Frequency Rate (FR) and Disabling Severity Rate (SR) of contractors and dispatch were 0 from 2019 to 2022.

In 2022, recordable occupational injuries totaled 74 cases. The OSH of the accidents will be improved and reviewed in order of occurrence based on the severity and frequency of occupational disasters.

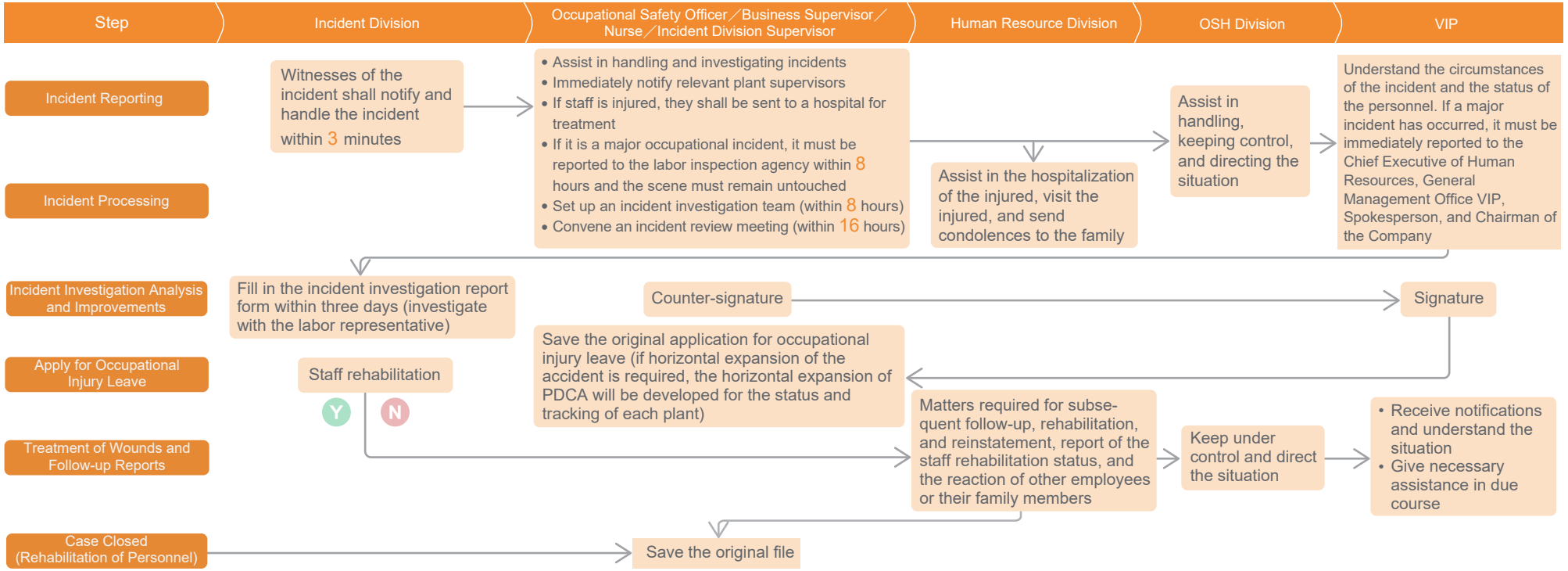
2022 The Group's Recordable Occupational Injury Statistics

Region	Category	Work Hours (Hours)	Recordable Occupational Injuries (Cases)	Recordable Work-Related Injury Rate (IR)
Taiwan	Employees	34,810,894	52	0.29
	Contractors	2,233,696	0	0
	Dispatch	1,313,592	0	0
Mainland China	Employees	28,181,013	22	0.15
	Contractors	402,024	0	0
	Dispatch	0	0	0
Total	Employees	62,991,907	74	0.23
	Contractors	2,635,720	0	0
	Dispatch	1,313,592	0	0

Note1: Injury rate (IR) = Number of recordable work-related injuries/number of hours worked × 200,000.

Note2: Revise the definition of recordable occupational injuries in 2022. The number of recordable occupational injuries refers to occupational injuries with a loss of more than one day.

Unimicron has established an occupational accident reporting, investigation, and improvement process in accordance with the Occupational Safety and Health Management System Regulations. The accident investigation includes hazard identification and risk assessment of the accidental workflow, as well as improvement measures required by the OSHMS.



OSH Training

Each year we set the annual OSH education and training plans for employees (including contractors). Apart from physical courses, we also provide relevant courses on the e-learning platform, enabling employees to study online at the Unimicron E-College. In addition, to prevent all types of emergencies, each plant and unit shall implement emergency drills for disasters such as fire, chemical disaster, occupational disaster, fire safety, natural disaster (e.g., earthquakes and floods), equipment fires, fire evacuation drills, chemical spillage, work-related injuries, confined space operations of each year, to enhance all staff's emergency response capability and ensure the stability of operations.

2022 Occupational Safety Training

Region	Item	Ten-minute Education and Training	Occupational Safety Officer Training	New Employee Training	Occupational Safety on-the-Job Training	OSH Training	Management System Training	License Training	Fire Fighting Courses
Taiwan	Sessions	946	146	362	126	78	2	60	36
	Participants	161,177	40,905	4,718	4,949	5,433	81	571	952
	Hours	27,399	40,381	22,985	10,045	6,699	486	3,697	2,011
Mainland China	Sessions	79	13	102	72	41	2	112	1
	Participants	24,857	864	23,728	67,309	11,389	70	1,550	56
	Hours	146,507	755	6,167	216,370	7,139	42	273	28
Total	Sessions	1,025	159	464	198	119	4	172	37
	Participants	307,684	41,660	10,885	221,319	12,572	123	844	1,008
	Hours	52,256	41,245	46,713	77,354	18,088	556	5,247	2,039

Contractors' OSH Training

Region	Item	2019	2020	2021	2022
Taiwan	Sessions	148	180	248	172
	Participants	3,310	5,738	6,445	5,600
Mainland China	Sessions	19	17	17	26
	Participants	474	2,961	994	3,183
Total	Sessions	167	197	265	198
	Participants	3,784	8,699	7,439	8,783

Emergency Response Drills

Region	Item	2019	2020	2021	2022
Taiwan	Sessions	529	549	444	631
	Participants	22,395	20,722	10,290	18,910
Mainland China	Sessions	321	352	385	332
	Participants	25,678	21,728	4,943	17,642
Total	Sessions	850	901	829	963
	Participants	48,073	42,450	15,233	36,552

2022 Types of Emergency Response Drills

Drills	Sessions	Participants (Include Supplier)	Man-hours (Hours)
Drills of Whole Area Evacuation for Large-Scale Incidents	15	5,772	15,475
Drills of Whole Area Evacuation Triggered by Natural Disasters	32	17,997	30,876
Regional Contingency Drills for Fire Incidents	226	1,652	1,613
Regional Contingency Drills for Chemical Incidents	360	6,156	4,961
Regional Contingency Drills Triggered by Natural Disasters	178	2,541	1,859
Others (Including Injury, Poisoning, Hazards from Confinement)	132	1,697	1,163
Emergency Response Team (ERT)	20	737	1,613
Total	963	36,552	57,561

Emergency Response Team (ERT) Drill

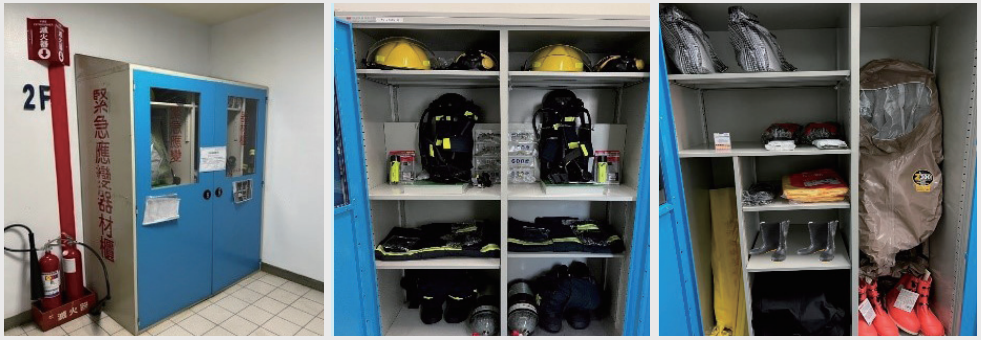
From 2021 to the present, Unimicron has been focused on deepening the field commander's response and decision-making capabilities, strengthening the commander's response, decision-making, sand-table deduction, and dispatching capabilities and establishing an Emergency Response Team (ERT) in each plant to strengthen the emergency response capabilities in the field.

- In the emergency response process, when the unit in the abnormal area and the responsible unit cannot complete the rescue right away, the commander must convene and command the emergency response team, issue relevant disaster relief instructions, and evacuate the plant. The plant commander conducts the initiation of the emergency response team and takes evacuation action. If the emergency response team cannot effectively control the disaster condition, while the fire brigade is arriving at the scene, the plant commander needs to provide relevant information. By 2022, the number of plant supervisors trained in fire command and response training reached 627 in the plant's self-defense and firefighting team.
- Each plant has established an Emergency Response Team (ERT), to effectively improve the responders' on-site search, emergency response, fire-fighting equipment suit and Self-Contained Breathing Apparatus (SCBA) wearing, the use of fire hose nozzles, and the response, decision-making and dispatching capabilities. By 2022, there are 374 employees who have completed ERT training.

Enhanced Emergency Response Management

Unimicron implements the self-guard fire protection grouping in accordance with national regulations and the Company's emergency response operations, and conducts the emergency response evacuation and drills twice each year, including disaster scenario simulation, enhancement of logistics support capabilities, and the wearing familiarity of emergency response equipment.

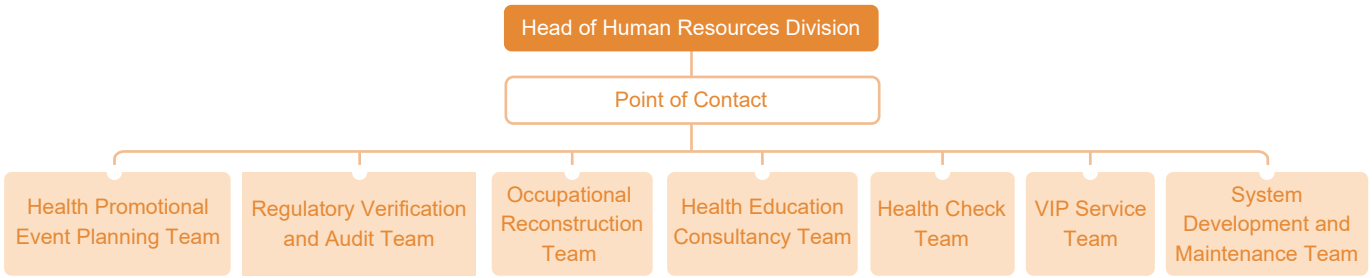
We have standardized emergency response equipment and facilities to maintain the functionality of the equipment so that we can be familiar with the use of emergency response equipment and facilities to strengthen the Emergency Response Team (ERT)



Emergency Preparedness Storage Cabinet

6.4.2 Health Promotion

Unimicron established the "Health Management Center" in 2014 in Taiwan, with the concept that prevention is more important than treatment, includes employee health examination, health education, health consultation and evaluation, health promotion questionnaire survey, improvement of the workplace, and evaluation of return to work/assignment after injury/illness. Through various health promotion activities and services, we implement Employee Assistance Programs (EAP) since 2021, which care for the physical and mental health of each employee and create a friendly workplace where safe and happy work is done. In 2022, we have 18 full-time nurses and it has provided a total of 108,967 services, taking full care of employees' health issues in the workplace and non-workplaces, and protecting their physical and mental health. In addition, we awarded the "2022 National Award for Healthy Workplace - Maternal Health-Friendly Award".



Item	2019	2020	2021	2022
Physicians (People)	5	7	7	7
Registered Nurse (People)	17	19	21	18
Service Sessions (Session)	348	330	422	394
Service Hours (Hours)	1,044	990	1,266	1,185

2022 Performance of Health Management Center

Type	Taiwan		Mainland China	
Special Protection	• 235 employees of maternal health care assessment • 13,616 employees of ergonomic hazard prevention and control management • 13,702 employees of overwork self-test evaluation • 4% person who overworks are at high risk	• There are 0.43% of persons with ten-year cardiovascular disease prevention management • A total of 215 person-times for the three hyper screening consultation • 16,153 employees managed by COVID-19 prevention and control APP	• 176 employees of maternal health care assessment • 323 employees of ergonomic hazard prevention and control management • 2,114 employees participated in overwork prevention health promotion activities • A total of 821 person-times for the three hyper screening consultation	• 2,451 employees of cardiovascular disease prevention • 11,816 employees of employees who joined coronavirus (COVID-19) prevention activity • 1,193 employee care and self-protection
Health Care	• 182 supervisors completed the supervisor health checkup • 223 employees who participated in the four-cancer prevention and control screening • 713 people who received free Ultrasound scan • 1,372 people who join Ophthalmoscopy for free • 4,697 people who received work assignments, resume work, and health consultation	• 156 employees who had been concerned for special operation • 11,579 employees (100%) who completed regular health examination • 1,657 employees who were vaccinated against the flu • 2,617 COVID-19 vaccination	• 345 supervisors had completed the supervisor health examination • 2,000 people participate in the cancer prevention • 4,191 employees who joined employee-friendly workplace activity • 301 employees who received health consultant service • 6,728 employees who completed regular health examination	• 6,616 visits to health stations • 3,319 occupational health examinations • 485 free clinic • 1,706 medical examinations for women of childbearing age
Health Promotion	• 437 of using onsite massage service • 35,667 participants in health knowledge promotion • 4,083 employees who completed the online health course	• 499 participants in the health/mental lecture • 50 employees who used the Employee Assistance Program (EAP) • 1,114 employees who donated blood	• 7,416 employees who joined health promotion activities • 171 participants in health knowledge promotion • 240 participants in the health/mental lecture • 691 employees who donated blood	

Employee Assistance Program (EAP)

In 2021, Unimicron implemented the Employee Assistance Program (EAP) and collaborated with Lifeline to provide employees with psychological, medical and financial planning services to show our employees that we care, to improve their physical and mental health, and to help them resolve issues that may affect their work performance. Each employee is entitled to two free-of-charge, one-on-one professional counseling sessions per year, and the Health Management Center will provide assistance for cases with special needs or in case of extraordinary events. In addition, appropriate training courses and seminars are held for different groups to take care of the physical and mental health of employees.

Proactive prevention and care

Sensitivity training and EAP service-related education training for the Health Management Center, the Human Resources Division and lower-level managers.

Sensitivity training courses for corporate staff and supervisors

Enhancing the communication skills of front-line content persons (e.g., nursing staff, employee relations managers/lower-level managers) to help in the assessment or immediate management of employee health problems.

Mental health seminars for employees

Providing mental health courses on various topics such as marriage management and communication, interpersonal/workplace communication and self-growth, focusing on issues that can affect employees' work, life, and family.

Through the EAP online briefing and the distribution of the Chinese and English versions of cards promoting EAP services to employees, a total of 157 people used EAP services by the end of 2022 since its launch in August 2021. In the future, Unimicron will continue to care for the physical and mental health of employees through this program.

Five-Heart Level Maternal Health Protection Management

In addition to promoting the maternal health protection program in accordance with the "Regulations Governing the Implementation of Protection of Maternal Health of Female Laborers," Unimicron has also established a pregnancy notification platform for pregnant employees, with online notification by unit supervisors, and the Health Management Center will immediately activate the five-heart level maternal health protection management mechanism, implementing comprehensive maternal protection measures. In 2022, Unimicron provided 208 person-times of pregnancy care.

Conscientiousness	Pregnancy notification	The unit supervisor or the person herself will report online, the Human Resources Division will confirm the shift, and the staff nurse will provide pregnancy care, a guardian station handbook for the new mother, a pregnancy armband (for quick identification to avoid danger) and a pregnancy goodie bag.
Caring	On-site visit	Arrange for occupational physicians to conduct health consultation, hazard identification and assessment, visit work sites, and confirm risk levels.
Peace of mind	Implementation management	Implement management measures according to the risk classification, provide preventive and improvement measures. The third-level management employees will be visited by the occupational doctors on site, appropriate job placement is provided, and the occupational nurses will continue to follow up.
Thoughtfulness	Pregnancy tracking	The Company provides continuous care and management measures during pregnancy, organizes pregnancy health education seminars, arranges exclusive parking spaces for cars and motorcycles, sets up special rest chairs for pregnant women at work sites, opens up elevator access for pregnant employees, and provides a flexible leave system for maternity leave, paternity leave and accompanying prenatal checkup leave.
Enthusiasm	Postpartum caring	The Company provides postpartum counseling, care and return to work assessment, breastfeeding guidance and breastfeeding manual. There are 10 comfortable and safe breastfeeding rooms throughout the Company; we provide psychological stress relief (EAP counseling/stress relief seminars/massage services), seminars on diversified issues (parenting education/ and parenthood classes), four-cancer screening and HPV vaccination activities.

National Award for Healthy Workplace - Maternal Health-Friendly Award


Lactation Room

6.4.3 Unimicron's EHS Month

Unimicron always puts safety first. Since 2004, we have held the Environment, Health, Safety Month (EHS Month) event in the third quarter of each year. The CEO attends the opening and closing ceremonies, with participation from Taiwan Facilities and Mainland China Facilities. It is hoped that the high-level management's declaration and attention to safety shall promote all employees to value and care for the OSH in the workplace.

2019
Zero Risk of Safety
Zero Waste of Resources
Zero Health Abnormality

2020
New Safety Thought
Saving Resources, Preserving Nature
New Health Life

2021
Occupational Safety Cooperation
Water and Environment Conservation
Sustainable Health Care

2022
Promoting Occupational Safety Together
Saving Resources Together
Epidemic Prevention Together

2022 EHS Month Execution Results

Theme		Performance
Health	• Promote health care and optimize workplace safety results with the four major programs (human factors, motherhood, overwork, and workplace violence) as the focus. • In-plant pandemic prevention mechanism (formulation of countermeasures, contingency measures, and health care demonstration).	✓ Comprehensive advocacy of various activities and complete presentation of effective results. ✓ Diversified health promotion activities, and complete and innovative presentation of pandemic prevention and management. ✓ Through the collection of employees' opinions, the activities are diversified and creative according to the framework of four major plans. ✓ Complete pandemic prevention mechanism and emergency response plan, with diversified and abundant activities of various themes. ✓ Dedicated to improving human factors engineering and carrying out psychological health care for employees to enhance workplace temperature. ✓ Introduce Automated Guided Vehicle (AGV) in factory operation to reduce the safety risk of human-powered transportation.
Safety	• The implementation of preventive measures for three disasters (occupational, fire, and chemical disasters) and traffic accidents and the demonstration of performance improvement results. • In-plant safety activities (Promotion of safety awareness for all employees, mastery of the Group's occupational safety issues, and display of event features).	✓ Wet process area is equipped with a number of simple liquid leak detectors to enhance chemical disaster prevention capabilities. ✓ Introduce automatic packaging, integrate it with warehouse operation, and establish an automatic warehouse to reduce the risk of personnel handling. ✓ Use animated multimedia to promote occupational safety information, with lively and diverse activities. ✓ Promote commuting high-risk maps, and conduct tire pressure (car/motorcycle) self-installation testing for employees. ✓ Improve fire detection mechanism in unoccupied/ less crowded areas (return air walls/tube wells, etc.). ✓ Establish a fire alarm response system to realize functions such as no-warning drills and real-time reporting of responsibility areas.
Environmental	• Reduce carbon emissions and improve waste recycling rate as the main focus of implementation, promote the reduction of energy resources (water, electricity, gas, oil, raw materials) and demonstrate waste sorting optimization/ reduction results. • Advocate the promotion of environmental protection knowledge (degree of promotion of environmental protection knowledge advocacy, mastery of the Group's environmental issues, and demonstration of activity features).	✓ Environmental protectors and reduction vanguards, energy reduction and waste sorting optimization, active promotion of energy saving at source, and waste reduction. ✓ Cooperate with new product process improvement, raw material improvement and process improvement to reduce waste generation. ✓ Implement the urban mine project, gradually introducing the use of recycled metal raw materials for recycling and reuse. ✓ Actively procure energy-saving synergistic products, grasp the green power supply market and enhance local procurement to gradually reduce carbon emissions. ✓ Secondary reuse of discarded filter elements reduces purchase and transportation costs. ✓ Concentrate and reduce the amount of nickel-containing waste liquid to reduce outsourcing disposal costs. ✓ Introduce energy saving and carbon reduction measures. ✓ The water resources management has passed the government certification and won the Hubei Province water-saving enterprise certification. ✓ Reuse packaging materials and thermometers (extended to the workplace), and hold beach cleaning and household power saving activities.

2022 EHS Month's Evaluation Excellent Division

Awards	Taiwan Facilities		Mainland China Facilities
	Plant	Indirect Unit	
The High Distinction Award	Hsinfeng I Plant	Carrier SBU (EOP)	Unimicron (Suzhou)
The Excellence Award	Luzhu II Plant, Hejiang II Plant and Precision S2 Plant	Material Management Divison	Unimicron (Huangshi)
The Honorable Mention Award	Precision S3 Plant and Hsinfeng I Plant	-	-

6.4.4 Active Participation in External Engagement and Experience Sharing

In terms of OSH management, besides our strict internal management, Unimicron also actively participates in OSH activities of external, and private organizations, hoping to contribute to the promotion of OSH in the industry. Unimicron is mainly involved in TPCA and the North District Promotion Association of the TOSHMS, and volunteers for the occupational safety counseling organized by the OSH Administration, Ministry of Labor.

Since 2013, Unimicron serves as the convener of the OSH Committee of the TPCA to assist in relevant guidance, as well as discussion and implementation of relevant plans or projects of the PCB industry. In 2022, Unimicron's Senior Advisor continued to serve as Chairperson of TPCA to promote and improve sustainability through experience sharing and exchange.

In 2022, the Company assisted TOSHMS Northern Region Promotion Association to compile an overview of COVID-19 management cases, assisted in project implementation and participated in observation activities. In the same year, the Company continued to serve as the activity implementation officer of TOSHMS North Region Promotion Association and the lecturer of the second education seminar to share the SDGs disclosure practice for sustainable health and safety in the workplace. Through experience sharing and exchange, the Company promoted and enhanced the excellent OSH culture in the industry. This year, we actively participated in the Occupational Safety and Health Poster Contest and submitted a total of 18 entries.

To improve the domestic occupational safety standards and assist the public sector to promote OSH, since 2015, Unimicron has continued to participate in the SME Counseling Volunteer Program of the OSH Administration, Ministry of Labor, to assist the improvement of on-site OSH (including chemical management) and the upgrade of the OSH management systems in small and medium-sized enterprises. In 2022, in cooperation with the Ministry of Labor's guidance of the SMEs to assist small and medium-sized enterprises to establish occupational safety and health management systems for a total of 4 sessions. By the end of 2022, Unimicron had invested a total of 21 people in the volunteer counseling project and assisted in 93 counseling visits.

2022 OSH Administration's Summit on Industry Smart Intrinsic Safety Promotion – TPCA Chairperson promotes the safety of the industry

2022 Achievements

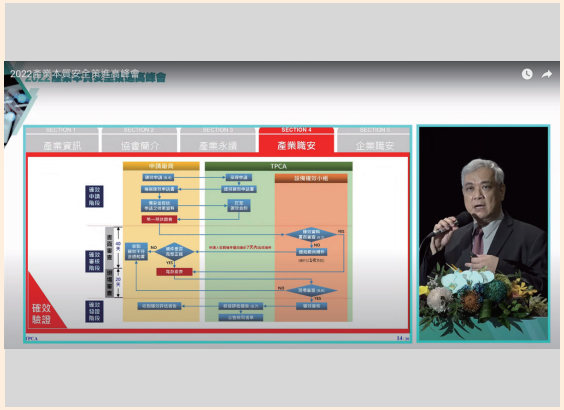
Taiwan Printed Circuit Association (TPCA)

- 3 Safety Working Group and Environmental Safety Committee Meeting
- 10 sessions of government seminars
- 1 session of the OSH Administration's Summit on Industry Smart Intrinsic Safety Promotion
- 1 session of the Occupational Safety and Health Administration's Industry Self-Management Standard Expert Review Meeting

North District Promotion Association of the TOSHMS

- 2 officer meetings
- 3 educational research and observation (with 2 remote meetings)
- 1 session of case manual compilation

Participation in the TPCA Net Zero Strategy Expert Workshop



2022 OSH Administration's Summit on Industry Smart Intrinsic Safety Promotion – Representatives of Unimicron participated in the sharing session

07 Inclusive Society

7.1 Social Contribution

7.2 Neighborhood Care

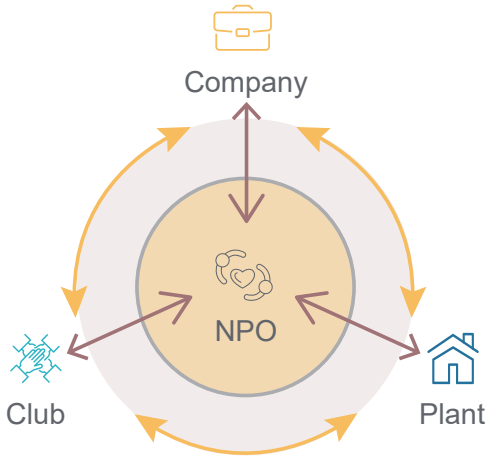
7.3 Care for the Disadvantaged

7.4 Inject Educational Resources

7.5 Environmental Protection

Inclusive Society

Topics	Social Engagement/Community Relations
Policy	• ESG Policy
Commitment	• Based on the concept of “Taking from Society and Giving Back to Society”, we participate in community outreach and emergency relief activities to share love, give back to society, and fulfill social responsibilities
Division	• ESG Committee
Resources Invested	• Invest in the Group's resources and budget for welfare activities • Implement welfare activities through four partnerships (company, plant, clubs, and NPOs) • Provide Paid Volunteer leave to encourage employees to engage in welfare activities • Engage with affiliated companies and supplier partners
Grievance Mechanism	• Whistleblower hotline, mailbox and ESG committee mailbox ESG@unimicron.com
2022 Targets	• Implement charity projects, increase internal staff participation in charity activities and external beneficiaries • Unimicron volunteer service exceeded 1,000 hours
Actions	• Focusing on the four main axes of social welfare: “Neighborhood Care”, ”Care for the Disadvantaged”,”Inject Educational Resources” and “Environmental Protection”. Through visits, listening and interactions to identify the needs and promote welfare activities through four partnerships (company, plant, clubs and NPOs)
2022 Achievements	✓ Unimicron volunteer service exceeded 2,850 hours



7.1 Social Contribution

Being a global corporate citizen, Unimicron not only pursues profitability but commits to social progress and social responsibility through caring and giving back to the community by devoting resources and providing diverse and equal job opportunities. In 2021, we have set up volunteer leave to encourage employees to engage in welfare activities, starting from each operating base to the community to identify the needs of society and local communities and cooperate with organizations or enterprises to organize welfare projects. In 2022, Unimicron volunteers provide services at least 2,850 times and 11,726 beneficiaries from our program. We refer to the London Benchmark Group's (LBG) Framework to examine and analyze the overall status of resources invested and the allocative efficiency of resources. In recent years, Unimicron has gradually increased investment in Community Investment. Through long-term, strategies to support public welfare organizations or local communities, we strengthen the link between resources and the core of our operations, promote operational development and public welfare to respond to multiple stakeholders, and create more shared value.

Social Charity Activities Investment

Activity	2019		2020		2021		2022	
	Cost (NT$)	%	Cost (NT$)	%	Cost (NT$)	%	Cost (NT$)	%
Charitable Donations	1,328,015	19.58%	2,008,520	17.55%	1,451,341	7.72%	2,355,195	18.32%
Community Investments	1,280,895	18.88%	1,469,564	12.84%	7,067,825	37.57%	5,653,360	43.97%
Commercial Initiatives	4,174,939	61.54%	7,964,884	69.61%	10,290,990	54.71%	4,847,481	37.71%
Total	6,783,849	100.0%	11,442,968	100.0%	18,810,156	100%	12,856,036	100%

7.2 Neighborhood Care

Community Building - Local Community Wellness Program

Unimicron adheres to the concept of stable operation and fulfills its social responsibility. It has been deeply involved in the Taoyuan area for a long time. Through companionship, environmental cleaning, after-school programs, and donations, we care for community residents, the elderly, young students, and disadvantaged families of foreign spouses, bringing love to the community.

In 2022, we collaborated with the "Taoyuan Community Services Care Association", a long-standing community organization, to promote a three-part family integrity program, including "Part I - Care for the Disadvantaged Elderly", "Part II - Child and Youth Development Program", and "Part III - Care for Disadvantaged Families of Foreign Spouses".

Investments	2019		2020		2021		2022	
	Cost (NT$)	%	Cost (NT$)	%	Cost (NT$)	%	Cost (NT$)	%
Cash Donation	3,916,807	57.74%	8,667,406	75.74%	13,631,296	72.47%	9,528,799	74.12%
In-kind Giving	83,176	1.23%	2,501,417	21.86%	3,779,945	20.10%	2,431,366	18.91%
Time Contributions	202,459	2.98%	274,145	2.40%	538,248	2.86%	467,748	3.64%
Management Overheads	2,581,407	38.05%	-	0.00%	860,666	4.58%	428,123	3.33%
Total	6,783,849	100.0%	11,442,968	100.0%	18,810,156	100%	12,856,036	100%

Part 1 - Care for the Disadvantaged Elderly

In order to provide the elderly with the care they need, regular and irregular volunteer visits and companionship activities are organized to provide the elderly with more care and help them establish a healthy silver-haired life circle. Unimicron 9 volunteers participated in a volunteer course to learn service skills and interactive companionship through practical exercises. After training, 50 elderly were invited to participate in elderly care activity which is designed to strengthen the interaction between the elderly and others by encouraging them to participate in interactive activities such as singing, handicrafts, and rhythmic exercises.

Volunteers Shared Reflections on Service

I am grateful to the Company for giving us this opportunity to serve the elderly in the community. I believe that today is just a starting point, and we are a seed that will continue to spread this love in the future, starting from the smallest unit in the community, and then expanding to every corner of the community.

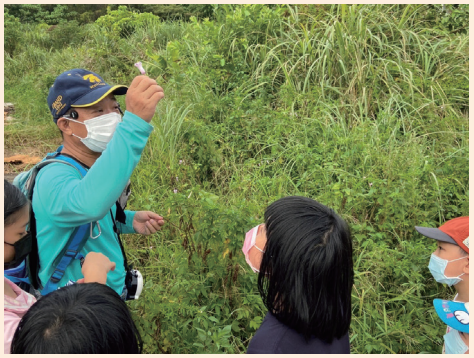

Photo with Elderly and Volunteers


Volunteers Accompany the Elderly to Draw Patterns


Group Photo with Elderly and Volunteers

Part II - Child and Youth Development Program

In order to provide children and youth with the care they need, we provide regular and occasional family visits, scholarships, and summer camps to guide children from disadvantaged families to receive more care and companionship during their formative years. The four-day Bianzhou Village Children and Youth Summer Camp was held from July 28 to July 31, with about 35 children and youths participating in the camp. The camp encouraged children to actively participate in activities and enhance their willingness to learn through a variety of modes, such as rhythm classes, group recreation activities, calisthenics, and breakthrough games, improving the willingness to learn actively, and awarding prizes to strengthen children's learning confidence and cultivate the ability of unity and cooperation.



Volunteers Introduced the Ecological Environment to the Children

The Children Participated in Recreation Activities

Group Photo of Volunteers and Children in the Community

Part III - Care for Disadvantaged Families of Foreign Spouses

In order to help foreign spouses who have come to Taiwan from abroad to strengthen their social adaptability and stabilize their family relationships, and in turn generate social stability, we visit foreign spouses and conduct family spiritual exchange banquets to enhance the close ties between families and communities, with a view to making family and community relationships healthier.

Diving Deep in Community Engagement - Care With Love

We take the idea of helping local care as our purpose, and expect ourselves to continue to invest in social work while pursuing corporate output value, so as to enhance the sustainable value of the Company. In 2022, Unimicron and its subsidiaries jointly promoted a series of love and care activities, including meal delivery, blood donation and community care, to promote the sustainable development of the community.

Meal Delivery

Unimicron aims to help disadvantaged groups in society. By integrating the company's resources and collaborating with the Taoyuan Ping'an Branch of the Zenan Homeless Social Welfare Foundation and the Taoyuan Anxin Care Association, we delivered meals to those who needed them in 2022. In order to continue our work in taking care of the poor and helping them reintegrate into society, we collaborated with the Zenan Homeless Social Welfare Foundation in 2022 to use existing resources to cook a total of 5,700 meal boxes in our central kitchen, delivered them to Taoyuan Ping'an Branch of the Zenan Homeless Social Welfare Foundation, and shared them with people in need. In the future, we will continue to identify the needs of the communities around plants and integrate internal and external resources to devote to charity events, so that we can spread warmth to all corners of society and create a common good.

Unimicron Delivered Meals to Those Who Needed

Blood Donation

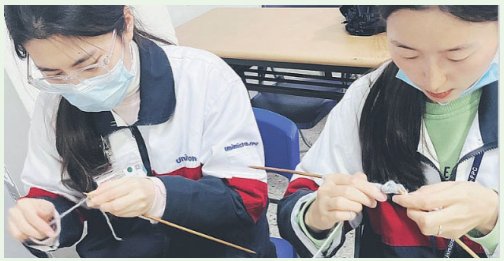
In order to spread the power of goodness and kindness, and to promote the kindness idea of donating a bag of blood to save a life, we uphold the mission of giving back to society and continued to participate in voluntary blood donation activities in 2022. A total of 1,805 people have participated in blood donation activities at our plants in Taiwan, subsidiary Unimicron-FPC (Kunshan) and Unimicron (Suzhou), expressing love for society with practical actions.

Employees of Unimicron-FPC (Kunshan) Participated in the Blood Donation Activity

Employees of Unimicron (Suzhou) Participated in the Blood Donation Activity

Community Care

We value the development of good neighborliness and caring communities. We actively promote and participate in community activities in our domestic and overseas plants, such as the activities of subsidiaries, Unimicron (Kunshan)'s participation in community care activities in 2022, Unimicron-FPC (Kunshan)'s participation in community charity activities and the Citywide Love 2022 Kunshan Warmth Campaign, Unimicron (Shenzhen)'s participation as volunteers in community COVID testing and traffic advisory activities around the plant, etc. In addition to strengthening the communal relationship between the community and us, we also receive the priceless smiles of the residents.



Unimicron-FPC (Kunshan) Join Kunshan Warmth Campaign

Unimicron (Kunshan) Participates in Community Care Activities

7.3 Care for the Disadvantaged

On the Basis of "Human" - Ching-Shiang Charity Convenience Store

Unimicron employs a strategic sustainable responsibility mindset to develop an innovative charity model to create a three-win shared value among the enterprises, NPO, and recipients. In 2014, we opened the "Unimicron Ching-Shiang Charity Convenience Store" (Name change in 2022) in Shanying Plant, manifesting our enterprise charity model with a new mindset of involving in charity events and augmenting the benefits of love. We, instead of simply donating provisions like enterprises used to do, changing the concept of "offering donation" into "providing means" on the basis of "human." The employees of Ching-Shiang Charity Convenience Store are all from disadvantaged families or physically disabled and are supported by the Ching-Shiang Youth Care Association. Unimicron provides rent and water and electricity fees free of charge, employee discounts, and profits from the convenience store are donated to charity to help more people who need it, creating a never-ending virtuous cycle at our charity convenience store. We will continue investing in related resources and hope to expand the operations and beneficial scope to bring more positive energy to society and help more disadvantaged people.

Gratitude Certificate from Dun Pin High School

Disadvantaged Families and Youth

- Provide minority groups, single-parent families and youths with secure employment environment
- Increase their vocational experiences while helping them get involved in the society

Ching-Shiang Youth Care Association

- Surplus is donated to NGOs to assist more people who need help, enhancing the sustainability of welfare

Chengjheng High School and Dun Pin High School

- Donate the surplus of 2022 to Chengjheng High School and Dun Pin High School

Unimicron Employees

- Unimicron also encourages consumption and provides employees with 15% discount for most of the products
- Employees are directly benefited from discounts and provide them with the "consume to do charity"

(Unit: people)

Type	2018	2019	2020	2021	2022
Single Mother	21	29	9	10	12
People with Physical / Mental Difficulties	7	4	2	4	4
Underprivileged Youth	3	10	14	19	23
Total	31	43	25	33	39

Innovative Charitable Activities - Building Regenerated Furniture from Waste Wooden Pallets

Unimicron's Administrative Service Department worked with Taipei Prison before on a project that allows prisoners to serve their sentences outside of prison, we found that possibilities for collaboration could be had between the internal operations of the Taipei Prison and the recycling of our corporate waste, thus the two parties began a collaboration for inmates at Taipei Prison to create furniture from waste wooden pallets. This not only reduces the cost of processing corporate waste but also greatly reduces waste generation and environmental pollution to reduce forest damage and protect forests. Unimicron also introduced the QCC to the carpentry class in Taipei Prison, which significantly raised the inmates' sense of quality in terms of experience and skills as well as increased their self-confidence. During the collaboration, the sale of wooden furniture increased funds for the carpentry class of Taipei Prison and also the income of the inmates, which helped with their family's expenses.

In 2022, to expand the concept of sustainable sharing and its positive impact, we identify the needs of charitable organizations in Taoyuan actively. We donated recycled furniture from waste wood pallets to the Guanyin Love Home towards SDG 17 that spread the concept of circular economy, environmental sustainability, and vulnerable care throughout society.

The Wooden Furniture Made from Waste Wooden Pallets Donated by Unimicron to Guanyin Love Home

Recipient	Guanyin Love Home
Donation	• 10 standard wooden chairs, 2 special specification wooden chairs, 13 bed partition cabinets, and 1 screen
Benefits	55 peoples

Gratitude Certificate from the Guanyin Love Home

Caring With Heart - Starting From Local Communities

In 2022, the Unimicron Love Sharing Club and Luzhu III Plant continued to serve the underprivileged in the neighborhood. In addition to recruiting 23 volunteers with expertise in renovation and repair to Muhsiang Home in 2021, repairing water and electricity, cleaning the environment within the home and donating NT$50,000, they also invited teachers and students of Muhsiang Home to enjoy a meal at a restaurant on Christmas Day for a memorable occasion. In addition, because the trees next to Muhsiang Home have not been repaired for many years, in order to avoid accidents caused by broken branches and maintain the safety of teachers and students, Unimicron's employees launched a tree trimming fundraising campaign to relatives and friends to help the orphanage create a safe environment. In the future, Unimicron will uphold the heart of caring for the society and continue to create a cycle of goodness. In addition, Unimicron's Yangmei Plant upholds the purpose of transmitting the value of a happy life and promoting sustainable homes. In 2022, it gave full play to its enthusiasm for service by providing essential goods to Reindeer Children's Home and serving as volunteers to sort invoices at Guanyin Love Home, starting from the small places with real needs, caring for local nurseries and love homes, and giving back to society the spirit of sustainable management.


Guanyin Love Home Organized a Charity Sale at Unimicron's Plant


Unimicron Volunteers Sorted Out Invoices at Guanyin Love Home


Unimicron Volunteers Cleaned the Environment of Muhsiang Home


Unimicron Volunteers Cleaned the Environment of Muhsiang Home

Recipient	Input
Muhsiang Home	184 Hours of Volunteering Time
Reindeer Children Home	Donate the Necessary Resources
Guanyin Love Home	48 Hours of Volunteering Time

Greenbox Association - Paddy Fields and Experiences Farming Life Together

After meeting with the Waiting Baby Social Welfare Association, we learned that there are many infants and babies in Taiwan who have lost their original families and entered orphanages. Most of these children come from vulnerable families, and many of them have severe allergies and hyperactivity symptoms. Vegetables and fruits are the most natural source of refreshments, but they are a necessity that few people donate. In addition, farmers' crops can be lost in a natural disaster. For this reason, this year Unimicron participated in the Paddy Fields and Experiences Farming Life Together Project, which focuses on adopting agricultural products. It not only helps small farmers survive the unstable growth period of agricultural production, but also donates the harvested crops to children in orphanages, multiplying and expanding the benefits of public welfare. In addition, Unimicron also served as volunteers at YOGA Farm in Longtan, Taoyuan in October 2022 and January 2023, respectively, accompanying the students of Children of Adolescents' Home, Taoyuan, Prison Fellowship Taiwan to learn about organic and friendly farming, and participate in farming in the fields, so that the students can experience it personally of the touch of doing one's best for another group, planting the seeds of goodness in each other's hearts.

Group Photo of Volunteers and Students of Adolescents' Home, Taoyuan, Prison Fellowship Taiwan


Group Photo of Volunteers and Students of Adolescents' Home, Taoyuan, Prison Fellowship Taiwan


Volunteers and Students Experience Agricultural Activities Together


An Ice-Breaking Interactive Game Between Volunteers and Students

Social Care Practice - Make a Positive Impact

In order to realize the concept of social care, through multiple practical methods, Unimicron continues to support TPCA's donation of assistive devices for early intervention and goods donations to Fuxing. Unimicron (Kunshan) also participates in public welfare donation activities organized by external organizations, and Unimicron-FPC (Kunshan) supports the Poverty Alleviation and Farmer Benefit Agreement, etc. We hope to pool the strengths of our subsidiaries to create positive values together.In order to strengthen the implementation of public welfare activities, we encourage each club to initiate public welfare activities and support public welfare organizations through physical participation and donations. In 2022, the clubs initiated a number of charity activities, including the Baseball Club providing scholarships for underprivileged players, the Multimedia Club participating in the Taipei Metro Competition charity sale, the Badminton Club donating application fees to the House of Dreams Education Foundation, the Basketball Club donating shoes, the Running Club and the Bicycling Club participating in charity sales, etc., contributing to the environment and society.

Running Club Participating in Charity Sales


Basketball Club Participating in Charity Sales

7.4 Inject Educational Resources

Professionals Skills - Donating the Lights to Remote Schools

Unimicron adheres to the principle of "taking from society and giving back to society, highlighting the core values of the company. Since the year before last, Unimicron has been observing social issues in depth. When discussing with stakeholders, Unimicron understands that although the government and enterprises have strengthened social resources in rural areas in recent years, some areas are still under-resourced. Therefore, this year, we continue to visit rural areas and understand the needs of remote schools – Kui Hui Elementary School in Taoyuan and Ruifeng Elementary School in Hsinchu. After the assessment, we donated LED lights made by our Subsidiary Company-apm Communication, Inc. to spread love to the remote school. In addition, the supplier, Xuan-Tong System Integration Co., Ltd., and its staff showed their social responsibility by supporting the event, with professional volunteers working for 259.5 hours to create a healthy, safe, and low-carbon learning environment for the students.

Title	Donation	Volunteers
Taoyuan Kui Hui Elementary School	• 353 LED flat lamps • 113 LED tubes • 48 LED ceiling lamps	19 volunteers with a total of 152 hours
Hsinchu County Ruifeng Elementary School	• 254 LED light steel frame lamps • 8 LED Ceiling Lights • 44 LED E27 lamps	14 volunteers with a total of 107.5 hours


Photo of Completed Installation of LED Lighting Fixtures in the Classroom at Kui Hui Elementary School


Photo of LED Lightening Installation at Rueifong Elementary School

Learning Companion Programs - Bring Hope to Remote Schools

The gap between urban and rural areas and the gap between the rich and the poor is getting bigger, and children who are disadvantaged have less chance to get a good education. Therefore, Unimicron is turning its love and care into actions that help children gain an education.

Precision III Plant of Shanying Plant donates NT$ 50,000 to Boyo Social Welfare Foundation in 2022, led by Unimicron Executive General Manager, Mr. ChiaPin Lee since 2021, and accompanies children to read picture books through after-school tutoring for developing their self-confidence and ability.

Education is human's project of hope and learning is the way to achieve hope. In the future, Unimicron will continue to promote volunteer services for underprivileged schoolchildren, and go deep into rural areas to provide educational resources; in the part of higher education counseling, students tutored by the foundation can also be referred to work at Unimicron, improving the employment rate of students after graduation so that children's learning and employment will no longer be Equality, but Equity.


Unimicron Employees Serve as After-School Volunteers

Creating a Safe Space - Happiness Volunteer Team

Adhering to the concept of “Taking from Society and Giving Back to Society”, Unimicron’s Administrative Service Department has long paid attention to the needs of the schools around the factory. In 2021, Unimicron volunteers and supplier partners worked together to improve the wooden flooring in the kindergarten and renovate the leaking pipes of the outdoor sink. In 2022, Unimicron invited its subcontractor, Love-Energy Industrial and Shanying Plant to work together as repair volunteers at the nearby Hsing-Fu Elementary School.

In order to improve the learning environment in classrooms and to provide students with cool fans and bright classrooms on hot summer days, we are striving to use environmentally friendly and energy-saving products, replacing 48 energy-saving circulating fans and 12 sets of energy-saving lamps for Hsing-Fu Elementary School, in order to make parents feel relieved, teachers feel at ease, and children feel happy so that the students of Hsing-Fu Elementary School will learn more happily and the concept of environmental protection and energy saving will be deeply planted in their hearts.

Photo of Hsing-Fu Elementary School and Unimicron Happiness Volunteer Team


Unimicron and Love-Energy Industrial Cooperation in Construction


Unimicron and Love-Energy Industrial Cooperation in Construction

Feedback from Hing-fu Elementary School:

Your assistance (Unimicron) is like wings of energy, giving us strength and benefiting the children in learning. Although education is a slow and lonely process, we are convinced that every effort will bring us closer to a beautiful future.

Injecting Resources - Strengthening Educational Resources

Education is the foundation of everything, and an essential building block for sustainable development. In order to help cultivate students who will achieve themselves in the society of tomorrow, the 2022 program includes:

- Promote support activities in neighboring schools and award scholarships to underprivileged children at Hing-fu Elementary School.
- Subsidiaries promoted the "Zhou Huosheng Difficult Care and Aid Project,” participated in the customer's "Sincerity and Aid" program, and participated in the "Love and Assistance" program, respectively, to shorten the gap in resources.
- Support TPCA, and promote environmental education curriculum to achieve the next generation of green talents.
- Sponsor the Dongshi High School’s baseball team, allowing students who love baseball to pursue their dreams and win glory for the country.
- Inject educational resources in colleges and universities, promote industry-university cooperation, and cultivate professional talents.

In the future, we will continue to focus on education issues and use resource injection and volunteer participation to help create an environment conducive to learning, so that education can take root and internalize it into diverse abilities that students can take with them.


Scholarships for Disadvantaged Children in Hing-Fu Elementary School


Unimicron (Kunshan) Join Zhou Huosheng Difficult Care and Aid Project

7.5 Environmental Protection

Collaboration with Suppliers - Conserving Coastal Biodiversity

Unimicron believes that the environment is the foundation of all things and should be protected in the long term. Therefore, we have been planting trees in each plant since its establishment to purify the air and beautify the environment. In recent years, the impact of climate change has intensified, and as a part of the global supply chain, we are aware that it is not enough to improve the internal environment of our facilities. Therefore, we are gradually expanding the concept of conservation outside of facilities and seeking solutions to urgent environmental issues through communication and cooperation with external NGOs, government agencies, and suppliers.

To solve the pressing environmental issues and mitigate the decline of the coastline, Unimicron adopted a piece of land along the Miaoli coastline and 1,000 saplings and invited 18 suppliers to plant windbreak forests on March 26th. More than 50 volunteers, led by Unimicron Executive General Manager, Mr. ChiaPin Lee, led volunteers, suppliers, and their families to plant saplings and protect the coastline together.

The activity not only conveyed our determination but also planted the seeds of environmental protection in the hearts of volunteers, just as if the saplings planted by ourselves, slowly sprouted, branched, and bore fruit for action further.

Group Photo of Unimicron and Suppliers

The Sponsorship Program - ECO ECHO Awards

In response to the "Eco Echo Award" sponsorship program initiated by United Microelectronics Corporation (UMC), Unimicron supports environmental protection actions to fulfill corporate social responsibility. With the original intention to protect our home, we continue to support the "Eco Echo Award" initiative to demonstrate our response and support for biodiversity and to promote the harmonious co-existence between humans and nature. We hope that through the interactive platform established by the "Eco Echo Award", scholars, experts, environmentalists, and enterprises could share resources and protect the environment.

Global Citizen - Protecting the Environment

With “Concern for the Planet” and “Biodiversity” as the concept, Unimicron has initiated environmental and ecological conservation activities to fulfill the sustainable responsibility of global citizens. Through the cooperation of each plant, club, and supplier, we take actions to protect the environment, including tree planting, garbage collection, weeding, garbage removal, etc. A total of 1,204 volunteers and 1,150 saplings were planted in 2022. We also toward green production, green consumption, source reduction, and resource recycling to bring more influence that is positive to society.

Type	Title	Area	Volunteers
Street Cleanup	Shanying Plant	Neighborhoods	1,204 hours
	Hsinfeng Plant	Neighboring Streets	
	Hejiang Plant	Neighboring Streets	
Beach Cleanup	Shanying Plant	Xinwu Kejian	
	13 clubs	Hsinchu Zhubei New Moon Beach, Potou Fishing Port, Yong’an, North Coast in Tamsui, Nanliao, Western Coast, Zhuwei Fishing Harbor, etc.	
Mountain Cleanup	Bicycle Club & Running Club	Jiali Mountain, Shitou Mountain, Eighteen Peaks Mountain	
River Cleanup	Lohas Club	Touchong River	
	Unimicron (Shenzhen)	Ha Chung River	
	Unimicron (Huangshi)	Daye Lake	
Tree Planting	Unimicron	Miaoli Coast	
	Yangmei Plant	Pond surroundings	

Note: The 13 clubs include RYM Club, PG Club, Multimedia Club, Badminton Club, Excursion Club, Baking Club, Camping Club, Bicycle Club, Environmental Volunteers Club, Softball Club, Basketball Club, Caring Club and Love Sharing Club.

Unimicron's Chairperson, Senior Executives, and the Head of Yangmei District Office Led the Employees to Plant Trees

The Employees Planted Cherry Blossoms Around the Ecological Pond That Belongs to Shimen Water Conservancy Association Led by Unimicron’s Chairperson

Bicycle Club and Unity Running Club Jointly Organized the Mountain Cleanup Activity

Appendix

Global Reporting Initiative (GRI) Index

Statement of Use	The 2022 ESG Report has been prepared in accordance with the GRI Universal Standards 2021 for the period from 1 Jan. to 31 Dec. 2022.
GRI 1 Used	GRI 1 Foundation 2021
Applicable GRI Sector Standard(s)	There is currently no corresponding GRI Sector Standard(s)

GRI	Disclosure		Section title	Page
GRI 2: GENERAL DISCLOSURES 2021	2-1	Organizational details	About Unimicron	6
	2-2	Entities included in the organization's sustainability reporting	About This Report	3
	2-3	Reporting period, frequency and contact point	About This Report	3
	2-4	Restatements of information	About Unimicron: Revision of Taiwan plant area, no significant impact	6
	2-5	External assurance	About This Report Appendix	3, 118
	2-6	Activities, value chain and other business relationships	About Unimicron 2.4.1 Supply Chain Overview	8, 41
	2-7	Employees	About Unimicron 6.2.1 Human Resource Distribution	6, 83
	2-8	Workers who are not employees	6.2.1 Human Resource Distribution	83
	2-9	Governance structure and composition	2.1.1 Corporate Governance Framework	30
	2-10	Nomination and selection of the highest governance body	2.1.1 Corporate Governance Framework	30
	2-11	Chair of the highest governance body	2.1.1 Corporate Governance Framework	29-31
	2-12	Role of the highest governance body in overseeing the management of impacts	1.1.3 ESG Committee 2.1.1 Corporate Governance Framework	18, 29
	2-13	Delegation of responsibility for managing impacts	1.1.3 ESG Committee	18
	2-14	Role of the highest governance body in sustainability reporting	1.1.3 ESG Committee	18
	2-15	Conflicts of interest	2.1.1 Corporate Governance Framework	31
	2-16	Communication of critical concerns	1.1.3 ESG Committee 1.2.1 Materiality Analysis 2.1.1 Corporate Governance Framework	18, 22, 32
	2-17	Collective knowledge of the highest governance body	2.1.1 Corporate Governance Framework	29
	2-18	Evaluation of the performance of the highest governance body	2.1.1 Corporate Governance Framework	30
	2-19	Remuneration policies	2.1.1 Corporate Governance Framework	31
	2-20	Process to determine remuneration	2.1.1 Corporate Governance Framework	31
	2-21	Annual total compensation ratio	Confidential Information	-
	2-22	Statement on sustainable development strategy	Letter from the Chairperson	4
	2-23	Policy commitments	1.1 ESG Strategy	17
	2-24	Embedding policy commitments	1.1.3 ESG Committee	17, 18
	2-25	Processes to remediate negative impacts	2.2.1 Behavioral Specifications	33
	2-26	Mechanisms for seeking advice and raising concerns	2.2.1 Behavioral Specifications	33
	2-27	Compliance with laws and regulations	2.2.1 Behavioral Specifications	32
	2-28	Membership associations	Association Participation	116
	2-29	Approach to stakeholder engagement	1.2 Materiality Analysis and Stakeholder Communication	20, 26-27
	2-30	Collective bargaining agreements	No Bargaining Agreement	-
GRI 3: MATERIAL TOPICS 2021	3-1	Process to determine material topics	1.2.1 Materiality Analysis	20-23
	3-2	List of material topics	1.2.1 Materiality Analysis	22, 116
	3-3	Management of material topics	Each Chapter 1.2 Materiality Analysis and Stakeholder Communication	-

Material Topics	GRI	Disclosure		Section title	Page
Corporate Government	Unimicron Specific	-	Develop a corporate governance system, establish corporate vision, grasp the risks and operational direction, and implement the responsibilities	2.1 Corporate Governance	28-31
Business Ethics	GRI 205: ANTI-CORRUPTION 2016	205-2	Communication and training about anti-corruption policies and procedures	2.2 Ethics and Integrity 2.2.2 Public Disclosure	32, 34
		205-3	Confirmed incidents of corruption and actions taken	No related incidents in 2022	-
	GRI 206: ANTI-COMPETITIVE BEHAVIOR 2016	206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	No related incidents in 2022	-
Customer Relationship Management	Unimicron Specific	-	Understand customer needs, provide perfect services, and build customer satisfaction and trust	3.3 Customer Relationship	59-62
Technology and R&D	Unimicron Specific	-	Investing in manpower and resources, focusing on technology and R&D to provide leading technology and solutions	3.1.2Innovative Technology R&D	46-52
Product Safety and Quality	Unimicron Specific	-	Provide excellent quality, reasonable price, competitive delivery, and service to enhance customer satisfaction; the topic is also included in the Hardware industry category of SASB	3.2 Green Product Management	59-62
Sustainable Supply Chain	GRI 204: PROCUREMENT PRACTICES 2016	204-1	Proportion of spending on local suppliers	2.4.1Supply Chain Overview	42
Information Security	GRI 418: CUSTOMER PRIVACY 2016	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	No related incidents in 2022	-
Water Resource Management	GRI 303: WATER AND EFFLUENTS 2018	303-1	Interactions with water as a shared resource	5.3 Water Resources Management	72
		303-2	Management of water discharge-related impacts	5.3.3 Wastewater Treatment	75
		303-3	Water withdrawal	5.3.1 Water Resources Use	73
		303-4	Water discharge	5.3.3 Wastewater Treatment	73, 75
		303-5	Water consumption	5.3.1 Water Resources Use	73
GHG Management	GRI 305: EMISSIONS 2016	305-1	Direct (Scope 1) GHG emissions	5.1.1 Inventory and Reduction	68-69
		305-2	Energy indirect (Scope 2) GHG emissions	5.1.1 Inventory and Reduction	68-69
		305-3	Other indirect (Scope 3) GHG emissions	5.1.1 Inventory and Reduction	68-69
		305-4	GHG emissions intensity	5.1.1 Inventory and Reduction	68-69
		305-5	Reduction of GHG emissions	5.1.1 Inventory and Reduction	68
		305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	5.4.3 Air Pollutant Control	79
Energy Resource Management	GRI 302: ENERGY 2016	302-1	Energy consumption within the organization	5.2.1 Energy Management	69-70
		302-3	Energy intensity	5.2.1 Energy Management	69
		302-4	Reduction of energy consumption	5.2.1 Energy Management	69-70
Waste Management	GRI 306: WASTE 2020	306-1	Waste generation and significant waste-related impacts	5.4.1 Waste Management	75
		306-2	Management of significant waste-related impacts	5.4.1 Waste Management	71, 75-76
		306-3	Waste generated	5.4.1 Waste Management	76
		306-4	Waste diverted from disposal	5.4.1 Waste Management	77
		306-5	Waste directed to disposal	5.4.1 Waste Management	77
Chemical Safety	Unimicron Specific	-	Strengthening the chemical management mechanism to reduce the potential impact of hazardous substances and chemicals	3.2 Green Product Management	52-59
Climate Change Risk Management	GRI 201: ECONOMIC PERFORMANCE 2016	201-2	Financial implications and other risks and opportunities due to climate change	4. Climate Action	63-67

Material Topics	GRI	Disclosure		Section title	Page
Occupational Safety and Health	GRI 403: OCCUPATIONAL HEALTH AND SAFETY 2018	403-1	Occupational health and safety management system	6.4.1 Occupational Safety and Health Management	92
		403-2	Hazard identification, risk assessment, and incident investigation	6.4.1 Occupational Safety and Health Management	95
		403-3	Occupational health services	6.4.1 Occupational Safety and Health Management	95
		403-4	Worker participation, consultation, and communication on occupational health and safety	6.4.1 Occupational Safety and Health Management	94
		403-5	Worker training on occupational health and safety	6.4.1 Occupational Safety and Health Management	98-99
		403-6	Promotion of worker health	6.4.2 Health Promotion	100
		403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	6.4.1 Occupational Safety and Health Management	95
		403-8	Workers covered by an occupational health and safety management system	6.4.1 Occupational Safety and Health Management	92
		403-9	Work-related injuries	6.4.1 Occupational Safety and Health Management	97
		403-10	Work-related ill health	6.4.1 Occupational Safety and Health Management	95
Talent Attraction and Retention	GRI 202: MARKET PRESENCE 2016EMPLOYMENT 2016	202-1	Ratios of standard entry level wage by gender compared to local minimum wage	6.2.3 Compensation and Benefits	87
		202-2	Proportion of senior management hired from the local community	6.2.1 Human Resource Status	84
	GRI 401: EMPLOYMENT 2016	401-1	New employee hires and employee turnover	6.2.2 Talent Retention	85
		401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	6.2.3 Compensation and Benefits	87-88
		401-3	Parental leave	6.2.3 Compensation and Benefits	86
	GRI 405: DIVERSITY AND EQUAL OPPORTUNITY 2016	405-1	Diversity of governance bodies and employees	2.1.1 Corporate Governance Framework 6.2.1 Human Resource Status	30, 83
		405-2	Ratio of basic salary and remuneration of women to men	6.2.3 Compensation and Benefits	87
Employee Development and Training	GRI 404: TRAINING AND EDUCATION 2016	404-1	Average hours of training per year per employee	6.3.1 Talent Cultivation	90
		404-3	Percentage of employees receiving regular performance and career development reviews	6.2.3 Compensation and Benefits	87
Human Rights	GRI 402: LABOR/ MANAGEMENT RELATIONS 2016	402-1	Minimum notice periods regarding operational changes	6.1.2 Employee Relations and Communications	82
	GRI 406: NON-DISCRIMINATION 2016	406-1	Incidents of discrimination and corrective actions taken	6.1.1 Human Rights Management No related incidents in 2022	81
Social Engagement /Community Relations	GRI 413: LOCAL COMMUNITIES 2016	413-1	Operations with local community engagement, impact assessments, and development programs	7.1 Social Contribution 7.2 Neighborhood Care 7.3 Care for the Disadvantaged 7.4 Inject Educational Resources 7.5 Environmental Protection	104-113

Association Participation

In order to cultivate professional talents, promote industry unity and co-prosperity, enhance corporate competitiveness, assist in disaster prevention and relief, and fulfill social responsibilities, Unimicron actively participates in various domestic and international associations and other organizations to make substantial contributions to society, industry, and sustainability issues. The key associations and organizations in which Unimicron participated in 2022 were as follows:

Type	Organization	Title
Industry Organizations	Taiwan Printed Circuit Association (TPCA)	President/Convener of Environmental Safety Committee/Member
	Suzhou Industrial Park Taiwan Compatriots Investment Enterprise Association	Member
	Suzhou Industrial Park PCB Association	Member
	Huangshi Economic-Technological Development Area Electronic Information Industry Association	Vice President
Cooperative Organizations	SEMI	Member
	Taoyuan Enterprise Chamber	Supervisor
	Chinese Society for Quality	Member
	Chinese Excellent Management Association	Honorary President/Supervisor/ Member
	North Association of TOSHMS	Member
	Hukou Industrial Park Joint Prevention Organization	Member
	Taiwan Compatriot Investment Enterprises Association of Kunshan (Branch of National New & High-Tech Industrial Development Zone)	Member
	Taiwan Merchant Association Shenzhen	Director
	Shajing Xinqiao Friendship Association	Member
	Bao'an District Top 100 Enterprises Federation of Five Categories	Member
	Shenzhen Customs Brokers Association in Guangdong	Member
	Golden Consulting	Member
	Shenzhen Precursor Chemicals Industry Association	Member
	Suzhou Industrial Park Multinational Company Investment Enterprise Association	Director
	Taiwan Compatriots Investment Enterprise Association of Huangshi City	Executive Vice President
Non-Profit Organizations	TPCA Environment Foundation	Consultant
	Taoyuan City Police Association	Vice President
	Taoyuan City Fire Protection Association	Consultant
	Hsinchu County Fire Protection Association (The 1 & 2 Department)	Consultant
	Kunshan Volunteer Federation	Member
	Bao'an District Federation of Trade Union	Member
	Suzhou Industrial Park Volunteer Federation	Member
	Suzhou Industrial Park Trade Union Committee	Member

List of Material Topic Changes for 2022

Compared to 2021, 'Sustainable Supply Chain', 'Climate Change Risk Management' and 'Social Engagement/Community Relations' have been added, and 'Regulatory Compliance' has been out of Material Topics which is included in the management of daily operations.

Aspect	2022 Material Topics	2021 Material Topics	Explanation of Changes	Reasons
Governance	Corporate Government	Corporate Government	Not changed	Not changed
	Business Ethics	Professional Ethics	Not changed	Modify topic name
	Customer Relationship Management	Customer Relationship Management	Not changed	Not changed
	Technology and R&D	Technology and R&D	Not changed	Not changed
	Product Safety and Quality	Product Quality	Modify Name	Responding to SASB industry-specific issues and modifying topic names
	-	Regulatory Compliance	Delete	Because of the adjustment of the new version of GRI Universal Standards 2021 to general disclosures, we removed this topic, but we will continue to disclose relevant information
	Sustainable Supply Chain	-	New	In 2021, this is the secondary issue, but investors, customers, and suppliers are becoming increasingly concerned
	Information Security	Information Security	Not changed	Not changed
Environmental	Water Resource Management	Water Resource Management	Not changed	Not changed
	GHG Management	GHG Management	Not changed	Not changed
	Energy Resource Management	Energy Resource Management	Not changed	Not changed
	Waste Management	Waste Management	Not changed	Not changed
	Chemical Safety	Green Products	Modify Name	This is a topic of high interest to investors and we modified the title of the topic
	Climate Change Risk Management	-	New	In 2021, this is the secondary issue, but global trends and increased stakeholder concerns that we add this topic to Material Topics in 2022
Social	Occupational Safety and Health	Occupational Safety and Health	Not changed	Not changed
	Talent Attraction and Retention	Talent Attraction and Retention	Not changed	Not changed
	Employee Development and Training	Employee Development and Training	Not changed	Not changed
	Human Rights	Human Rights	Not changed	Not changed
	Social Engagement/ Community Relations	-	New	In 2021, this is the secondary issue. To deepen relations with the community or disadvantaged groups we adding this topic to Material Topics

Sustainability Accounting Standards Board (SASB) Index

Topic	Code	Accounting Metric	Section Title	Page
Product Security	TC-HW-230a.1	Description of approach to identifying and addressing data security risks in products	This indicator can not be applied to Unimicron	-
Employee Diversity & Inclusion	TC-HW-330a.1	Percentage of gender and racial/ethnic group representation for (1) management, (2) technical staff, and (3) all other employees	6.2.1 Human Resource Status	83
Product Lifecycle Management	TC-HW-410a.1	Percentage of products by revenue that contain IEC 62474 declarable substances	3.2.3 Hazardous Substances Management	57
	TC-HW-410a.2	Percentage of eligible products, by revenue, meeting the requirements for EPEAT registration or equivalent	This indicator can not be applied to Unimicron, which is a non-terminal manufacturer	-
	TC-HW-410a.3	Percentage of eligible products, by revenue, meeting ENERGY STAR® criteria		-
	TC-HW-410a.4	Weight of end-of-life products and e-waste recovered, percentage recycled	5.4.1 Waste Management	76-77
Supply Chain Management	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	2.4.2 Supply Chain Risk Management	43-44
	TC-HW-430a.2	Tier 1 suppliers' (1) non-conformance rate with the RBA Validated Audit Process (VAP) or equivalent, and (2) associated corrective action rate for (a) priority non-conformances and (b) other non-conformances		43-44
Materials Sourcing	TC-HW-440a.1	Description of the management of risks associated with the use of critical materials	2.4.2 Supply Chain Risk Management 2.4.4 Responsible Mineral Sourcing	43-44
Activity Metric	TC-HW-000.A	Number of units produced by product category	About Unimicron	6, 8
	TC-HW-000.B	Area of manufacturing facilities	About Unimicron	6
	TC-HW-000.C	Percentage of production from owned facilities	About Unimicron	6

Taiwan Stock Exchange Corporation Rules Governing the Preparation and Filing of Sustainability Reports- Sustainabil-ity Indicator

#	Metric	Category	2022 Summary	Unit
1	Total energy consumption, percentage of purchased electricity, and the percentage of renewable energy usage	Quantitative	Total energy consumption: 6,696,580 GJ	Billion joules (GJ)
			Percentage of purchased electricity: 100%	Percentage (%)
			Percentage of renewable energy usage: 0	Percentage (%)
2	Total water withdrawal and total water consumption	Quantitative	Total water withdrawal: 21,340.80	Thousand cubic meters (m^3)
			Total water consumption: 786.722	Thousand cubic meters (m^3)
3	The weight of hazardous waste output, and the percentage of recycling	Quantitative	Total hazardous waste output: 82,054	Metric ton (t)
			The hazardous waste recycling rate: 92%	Percentage (%)
4	The occupational injury categories, number of people and percentages	Quantitative	Categories: Includes walking accidents, being struck by an object, equipment pinching/ curling/crushing, etc.	-
			No. of people: 52 cases (persons) in Taiwan and 22 cases (persons) in Mainland China, totaling 74 cases (persons)	Quantity
			People with occupational injuries rate: 0.27%	Percentage (%)
5	Disclosure of product life cycle management: Including weight of scrap products and electronic waste, and percentage of recycling [Note]	Quantitative	Weight: 1,808.8312 metric tons	Metric ton (t)
			Percentage of recycling: 100%	Percentage (%)
6	Description of the risk management associated with the use of key materials	Discussion and Analysis	2.4.2 Supply Chain Risk Management 2.4.4 Responsible Mineral Sourcing	-
7	The total amount of monetary losses as a result of legal proceedings associated with anti-competitive behavior regulations	Quantitative	0	New Taiwan Dollar
8	Total production	Quantitative	Please refer to Page 8 About Unimicron -Sales Volume and Value	Depends on product type

Note: Including the sale of scrap or other recycling processing, should be provided information.

Taiwan Stock Exchange Corporation Rules Governing the Preparation and Filing of Sustainability Reports-Climate-Re-lated Risks and Opportunities

Item	Location
1. Description of the Board and Management's oversight and governance of climate-related risks and opportunities	4.1.1 TCFD Disclosure Framework - Governance
2. Description of how the identified climate risks and opportunities impact the company's business, strategies, and finance (short, mid, long-term)	4.1.1 TCFD Disclosure Framework - Strategy
3. Description of the impact extreme climate events and transitional actions have on finance	4.1.2 Identification and Assessment of Climate-Related Risks
4. Description of how the climate risk identification, assessment, and management process is integrat-ed into the overall risk management system	4.1.1 TCFD Disclosure Framework - Risk Management
5. Should scenario analysis is used to assess the Company's resilience in face of climate change risks, explanations of the scenario, parameters, hypothesis, analysis factors and major financial impacts should be provided	4.2 Climate Scenario Analysis
6. Should there be transitional programs in response to managing climate-related risks, please explain the program's content and metrics and targets used to identify and manage physical and transitional risks	4.1.1 TCFD Disclosure Framework - Metrics & Targets 4.1.2 Identification and Assessment of Climate-Related Risks
7. Should internal carbon pricing is used as the planning tool, the pricing mechanism should be explained	4.1.1TCFD Disclosure Framework - Metrics & Targets
8. Should climate-related targets be set, information such as their scope of action, GHG emissions, planned timeline, and yearly achieved progress should be stated; for targets achieved through carbon offset and RECs, the source of offset amount and number of RECs should be stated	4.1.1TCFD Disclosure Framework - Metrics & Targets 5.1.1Inventory and Reduction
9. Carbon inventory and assurance efforts (1-1)	Please refer to the table below

1-1 GHG Inventory and Assurance

Scope	Area	Total Emissions (metric tons CO_2e)	Emission Intensity (metric tons CO_2e//NT$ thousand)	Assurance Institutes	Assurance Efforts
Scope 1	The Parent Company	23,444.37	0.000166870	SGS Taiwan Ltd.	Reasonable level
	Subsidiary	12,361.98	0.000087992	SGS Taiwan Ltd., Centre Testing International, China Classification Society	
	Total	35,805.35	0.000254862	-	
Scope 2	The Parent Company	547,449.84	0.003896740	SGS Taiwan Ltd.	
	Subsidiary	358,824.26	0.002554106	SGS Taiwan Ltd., Centre Testing International, China Classification Society	
	Total	906,274.10	0.006450847	-	
Scope 3	The Parent Company	187,372.74	0.001333717	SGS Taiwan Ltd.	
	Subsidiary	43,964.83	0.000312941	SGS Taiwan Ltd., Centre Testing International, China Classification Society	
	Total	231,337.57	0.001646658	-	

Note: Parent company refers to Unimicron's 12 plants in Taiwan, excluding Chungyuan Plant, Chung Hsing Plant and Nanshan Plant. Subsidiaries include QunHong Technology Inc., Unimicron (Shenzhen), Unimicron (Kunshan), Unimicron-FPC (Kunshan), Unimicron (Suzhou), and Unimicron (Huangshi).

Independent Third Party Assurance Statement

SGS

ASSURANCE STATEMENT

SGS TAIWAN LTD.'S REPORT ON SUSTAINABILITY ACTIVITIES IN THE UNIMICRON TECHNOLOGY CORP.'s ESG REPORT FOR 2022

NATURE AND SCOPE OF THE ASSURANCE/VERIFICATION
SGS Taiwan Ltd. (hereinafter referred to as SGS) was commissioned by UNIMICRON TECHNOLOGY CORP. (hereinafter referred to as Unimicron) to conduct an independent assurance of the ESG Report for 2022. The scope of the assurance, based on the SGS Sustainability Report Assurance methodology, included the sampled text, and data in accompanying tables, contained in the report presented during verification (2023/04/14~2023/05/19). SGS reserves the right to update the assurance statement from time to time depending on the level of report content discrepancy of the published version from the agreed standards requirements.

INTENDED USERS OF THIS ASSURANCE STATEMENT
This Assurance Statement is provided with the intention of informing all Unimicron's Stakeholders.

RESPONSIBILITIES
The information in the Unimicron's ESG Report of 2022 and its presentation are the responsibility of the directors or governing body (as applicable) and management of Unimicron. SGS has not been involved in the preparation of any of the material included in the Unimicron's ESG Report.

Our responsibility is to express an opinion on the report content within the scope of verification with the intention to inform all Unimicron's stakeholders.

ASSURANCE STANDARDS, TYPE AND LEVEL OF ASSURANCE

The SGS ESG & Sustainability Report Assurance protocols used to conduct assurance are based upon internationally recognized assurance guidance and standards including the principles of reporting process contained within the Global Reporting Initiative Sustainability Reporting Standards (GRI Standards) GRI 1: Foundation 2021 for report quality, GRI 2 General Disclosure 2021 for organisation's reporting practices and other organizational detail, GRI 3 2021 for organisation's process of determining material topics, its list of material topics and how to manages each topic, and the guidance on levels of assurance contained within the AA1000 series of standards and/or ISAE3000.

The assurance of this report has been conducted according to the following Assurance Standards:

Assurance Standard Options	Level of Assurance	
A	SGS ESG & SRA Assurance Protocols (based on GRI Principles and guidance in AA1000)	n/a
B	AA1000ASv3 Type 2 (AA1000AP Evaluation plus evaluation of Specified Performance Information)	High

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SCOPE OF ASSURANCE AND REPORTING CRITERIA
The scope of the assurance included evaluation of quality, accuracy and reliability of specified performance information as detailed below and evaluation of adherence to the following reporting criteria:

Reporting Criteria Options	
1	GRI Universal Standard (2021) (In Accordance with)
2	AA1000 Accountability Principles (2018)

- evaluation of content veracity of the sustainability performance information based on the materiality determination at a high level of scrutiny for Unimicron and moderate level of scrutiny for subsidiaries, joint ventures, and applicable aspect boundaries outside of the organization covered by this report;
- AA1000 Assurance Standard v3 Type 2 evaluation of the report content and supporting management systems against the AA1000 Accountability Principles (2018); and
- evaluation of the report against the requirements of Global Reporting Initiative Universal Standard 2021 (GRI 2, GRI 3, 200, 300 and 400 series) claimed in the GRI content index as material and in accordance with.

ASSURANCE METHODOLOGY
The assurance comprised a combination of pre-assurance research, interviews with relevant employees, superintendents, ESG committee members and the senior management in Taiwan; documentation and record review and validation with external bodies and/or stakeholders where relevant.

LIMITATIONS AND MITIGATION
Financial data drawn directly from independently audited financial accounts, Task Force on Climate-related Financial Disclosures (TCFD) and SASB related disclosures has not been checked back to source as part of this assurance process.

STATEMENT OF INDEPENDENCE AND COMPETENCE
The SGS Group of companies is the world leader in inspection, testing and verification, operating in more than 140 countries and providing services including management systems and service certification; quality, environmental, social and ethical auditing and training; environmental, social and sustainability report assurance. SGS affirm our independence from Unimicron, being free from bias and conflicts of interest with the organisation, its subsidiaries and stakeholders.

The assurance team was assembled based on their knowledge, experience and qualifications for this assignment, and comprised auditors registered with ISO 26000, ISO 20121, ISO 50001, SA8000, RBA, QMS, EMS, SMS, GPMS, CFP, WFP, GHG Verification and GHG Validation Lead Auditors and experience on the SRA Assurance service provisions.

VERIFICATION/ ASSURANCE OPINION
On the basis of the methodology described and the verification work performed, we are satisfied that the specified performance information included in the scope of assurance is accurate, reliable, has been fairly stated and has been prepared, in all material respects, in accordance with the reporting criteria.

We believe that the organisation has chosen an appropriate level of assurance for this stage in their reporting.

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AA1000 ACCOUNTABILITY PRINCIPLES (2018) CONCLUSIONS, FINDINGS AND RECOMMENDATIONS

Inclusivity
Unimicron has demonstrated a good commitment to stakeholder inclusivity and stakeholder engagement. A variety of engagement efforts such as survey and communication to employees, customers, investors, suppliers, sustainability experts, and other stakeholders are implemented to underpin the organization's understanding of stakeholder concerns. For future reporting, Unimicron may proactively consider having more direct two-ways involvement of stakeholders during future engagement.
Materiality
Unimicron has established effective processes for determining issues that are material to the business. Formal review has identified stakeholders and those issues that are material to each group and the report addresses these at an appropriate level to reflect their importance and priority to these stakeholders.
Responsiveness
The report includes coverage given to stakeholder engagement and channels for stakeholder feedback.
Impact
Unimicron has demonstrated a process on identify and fairly represented impacts that encompass a range of environmental, social and governance topics from wide range of sources, such as activities, policies, programs, decisions and products and services, as well as any related performance. Measurement and evaluation of its impacts related to material topic were in place at target setting with combination of qualitative and quantitative measurements.

GLOBAL REPORTING INITIATIVE REPORTING STANDARDS CONCLUSIONS, FINDINGS AND RECOMMENDATIONS

The report, Unimicron's ESG Report of 2022, complies with the Requirements for reporting with reference to the GRI Standards set out in Section 3 of GRI 1. The significant impacts are assessed and disclosed with reference to the guidance defined in GRI 3: Material Topic 2021. The report has properly disclosed information related to Unimicron's contributions to sustainability development. For future reporting, it is recommended to disclose information of GRI 2-21 and to address conflicts arising from diverging or conflicting expectations regarding material topics with more details and corrective measures.

Signed:
For and on behalf of SGS Taiwan Ltd.

AA1000
Licensed Report
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Stephen Pao
Knowledge Deputy General Manager
Taipei, Taiwan
30 May, 2023
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Unimicron
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