



## Unimicron

Customer satisfaction

Industry trend

Urban agriculture

Rehabilitated ex-offender cooperation project

UniCuisine high-quality vegetables

**Unimicron**  
欣興電子股份有限公司



2019 Corporate  
Social Responsibility  
Report



FTSE4Good  
TIP Taiwan ESG Index



FTSE Russell



Taiwan Index Plus  
Corporation

Note: The ESG index constituent refers to the exclusive label of FTSE4Good TIP Taiwan ESG Index constituent.

Unimicron 2019 Corporate Social Responsibility Report

Unimicron Technology Corporation

# Unimicron

## Unimicron Technology

2019 Corporate Social Responsibility Report



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## Statement from the Chairman

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Dear stakeholders,

Thank you for reading this report and continue to pay attention to the progress of Unimicron Technology's sustainable development. While developing its business, Unimicron Technology also strives to face sustainability issues and seek solutions. We have realized that innovation, integrity, and inclusiveness are essential elements of sustainability and the driving force to help stakeholders realize value creation.

At the beginning of 2020, the COVID-19 pandemic broke out globally, and people's health and economy of all countries were severely affected. Under the current social panic and slowing economic growth, Unimicron Technology fully considers the negative impact on people, environment and society, and establishes an operational contingency plan. In fact, we adopt a short-, medium-, and long-term perspective to formulate sustainable development paths and goals, to face and resolve risks arising from social and economic shocks.

Unimicron Technology still delivered outstanding results in economic performance in 2019, and was included in the constituent stocks of the "Taiwan Employment 99 Index" for the first time. The total market value increased by 85% from the previous year, and the earnings per share increased by 95% from the previous year. By the end of 2019, the accumulative number of patents obtained reached 2,061, and the funding for the industry-university cooperative R&D and innovation program also exceeded NT\$10.2 million. In terms of employee care, the overall turnover rate in Taiwan dropped by 1.4% compared with the previous year; the 2019 parental leave without pay rate reached a new high in nearly three years, reaching 81.65%. In order to strengthen employees' professional skills and capabilities of continuous employment, the average training hours in the Taiwan's plants increased by 60% compared with the previous year. We also organized 297 various types of health promotion activities, with a total of 65,086 people participating, to help employees to balance between work and life and grasp their health conditions. Among the 10,216 persons evaluated by the self-examination of overwork, the high load rate was 1.8%, a decrease of 1.8% from the previous year.

In addition, the international community using the United Nations Sustainable Development Goals (SDGs) as the main axis is developing rapidly, and Unimicron Technology will actively participate in solving various problems faced by various operating locations around the world. We will not be satisfied with past achievements, and actively extend the long-term goal to 2023, redefine the six SDGs related to Unimicron Technology's core capabilities, and formulate development strategies and performance indicators. In order to meet these 6 SDGs, Unimicron Technology will continue to reduce emissions and waste generated from production and operations, protect the natural ecosystem, and live in harmony with nature. It establishes climate change adaptation plans to assist cities in climate change adaptation and post-disaster recovery capabilities; it develops green and sustainable products to mitigate the impact of climate change, formulates greenhouse gas reduction targets, improves energy efficiency, and reduces the negative impact of the greenhouse effect on the ecosystem. It actively cooperates with community partners to reduce the harmful effects of cities on the environment. Unimicron Technology implements green procurement, implements sustainable management of the supply chain, enhances the ability to negotiate with customers, and assists suppliers in continuous improvement and monitoring of possible operational disruptions caused by climate change risks. It establishes long-term partnerships with suppliers with excellent environmental performance, requires important suppliers to cooperate with adults for RBA code of conduct, and coaches suppliers to meet the requirements related to RBA and supply chain management.

2019 is also a wonderful and glorious year for us, winning the TOP 50 Platinum Award of the Corporate Sustainability Report Award for the sixth consecutive year. In the same year, it also obtained the "Health Promotion Label" issued by the Health Promotion Administration, MOHW and the "2019 ISO 45001 Plus Award- Occupational Safety and Health Management Model Award" awarded by SGS Taiwan Ltd. The Xinfeng and Hejiang Plants obtained the "Three Years Occupational Safety and Health Management System Performance Approval" from the Occupational Safety and Health Administration of the Ministry of Labor. The subsidiary Qun Hong Technology Inc.'s Dacheng Plant obtained the "New Resident Friendly Workplace" from Taoyuan City Government and the "Health Promotion Label" of the Health Promotion Administration, MOHW, and Qun Hong's Renyi Plant also obtained the "Health Promotion Label" of the Health Promotion Administration, MOHW and many other affirmations.

Behind the halo of these awards, it represents our efforts and persistence in sustainability. Customers choose to cooperate with Unimicron Technology because we have world-class technical quality, service, and good relationships with stakeholders. We are proud to be a strategic partner for many customers. Our job is to provide customers with high-value services and help them stand out in their fields. Our commitment to building a better service is the main key to value creation. With the maturity of the ideals of global citizens, the requirements for corporate sustainability not only come from customers and shareholders, but also more and more from stakeholders outside the market. In recent years, we have been committed to operational excellence and innovation, and we have integrated risk management and opportunities into business development, in order to better meet the expectations of our major stakeholders.

Because of the long-term and far-reaching impact and changes on human social and economic activities due to the epidemic, Unimicron Technology will prioritize the consolidation of core competitiveness based on its corporate governance performance and experience, to spot new opportunities and actively adjust and plan a new vision. We promise to continue to lead the industry on the road of sustainability based on the foundation of winning the trust of customers and the market and the belief that innovative technology will make society better, and work together with stakeholders to create a future of value, happiness, and mutual prosperity.

Chairman and Chief Executive Officer, Unimicron Technology  
Tzzy Jang (T. J.) Tseng



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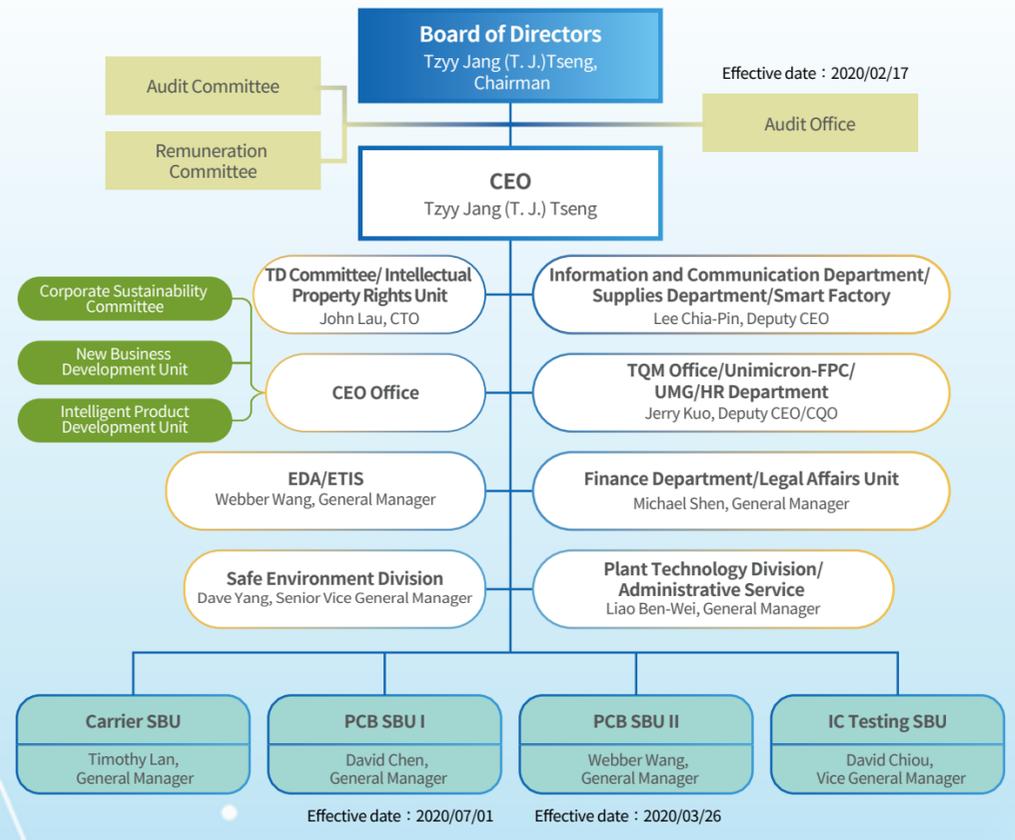
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# About Unimicron Technology

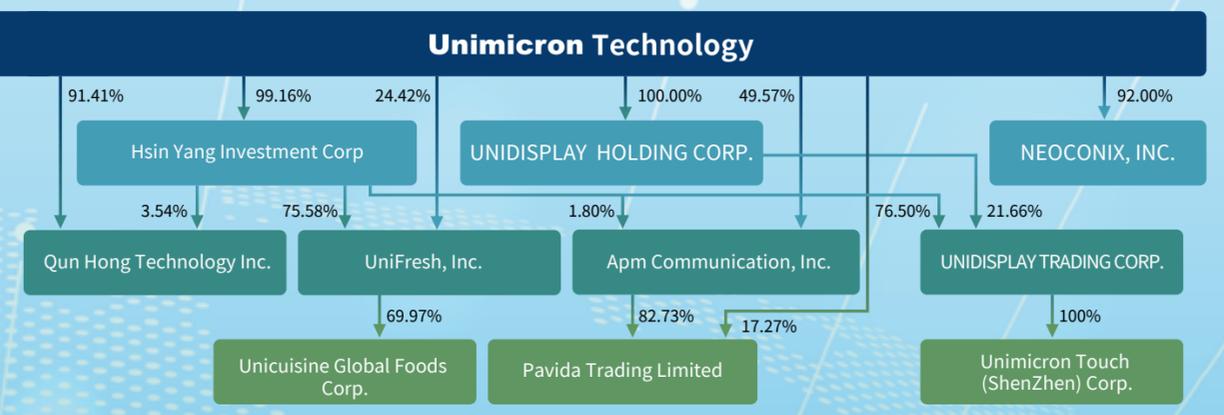
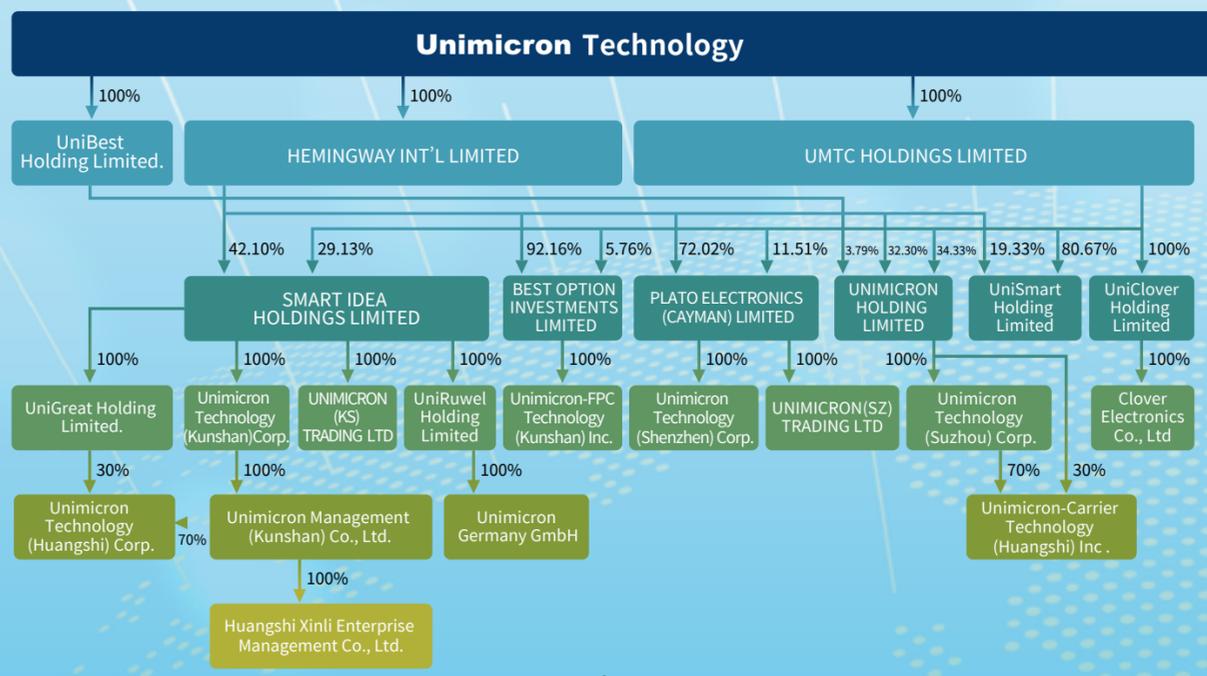


Overview of Unimicron Technology			
Company Name	Unimicron Technology ( Stock code : 3037)		
Date of Establishment	1990.01.25		
Headquarters	No.179, Shanying Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.) (Registered Address: No. 38,Xingbang Road, Guishan Industrial Zone)		
Total Capital	15.05 billion TWD		
Consolidated Sales Revenue	82.54 billion TWD		
Boundary and Scope of the Report	Plants in Taiwan	Taoyuan	Shanying Plant, Luzhu Plant, Hejiang Plant, Zhongyuan Plant, and Qun Hong Technology Inc.
		Hsinchu	Xinfeng Plant and Zhongxing Plant
	Plants in the Mainland China	South China	Unimicron Technology (Shenzhen) Corp.
		East China	Unimicron Technology (Kunshan) Corp., Unimicron-FPC Technology (Kunshan) Corp., and Unimicron Technology (Suzhou) Corp.
	Central China	Unimicron Technology (Huangshi) Corp.	
No. of Employees	30,094 *		
Corporate Vision	Becoming the world's topnotch high-tech company with high value-added, high service quality, high productivity and emphasizes on innovative services.		
Primary Products and Services	Production, processing and sales of printed circuit board (PCB), high density interconnect (HDI) board, flexible printed circuit (FPC) board, rigid-flex circuit board, carrier board, and IC testing and burn-in systems.		
Output Volume	46,615,761 net sqft		

\* Note: The scope of the report is based on the total number of employees in the group as of December 31, 2019 (including Germany and Japan).

## Proportion and the status of the shareholding of the affiliated enterprises

For related information, please refer to pages 83 and 84 of Unimicron Technology Annual Report



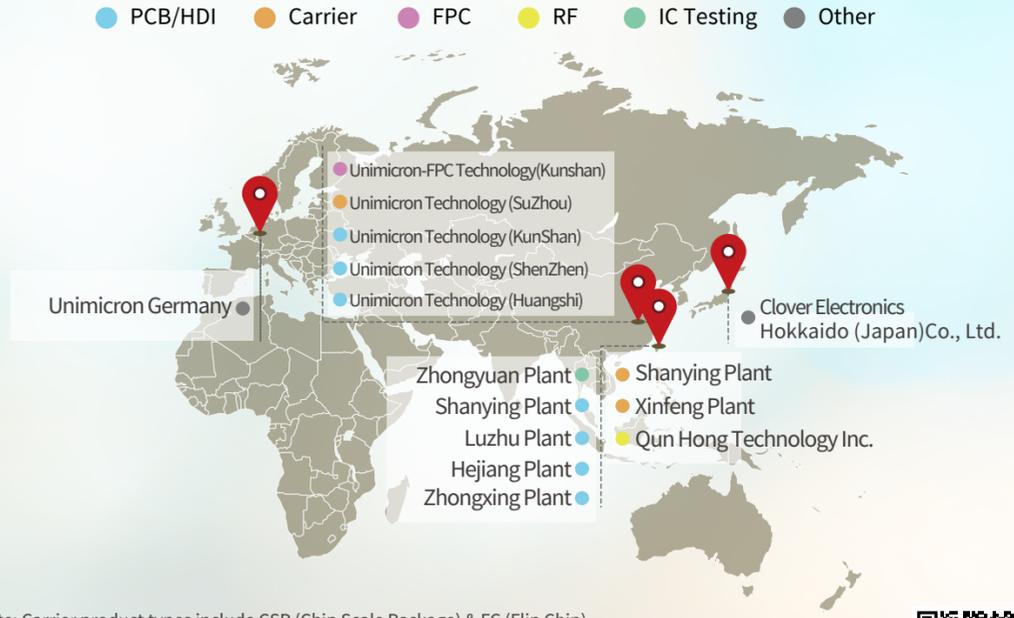
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## Products and Services

Unimicron Technology is mainly composed of three business divisions: Printed circuit boards, carrier boards, and IC testing. It is now the second largest professional printed circuit board (PCB) and carrier board (Carrier) manufacturing service provider in the world by revenue, and Major supplier of mobile HDI boards and carrier boards. Unimicron Technology's production bases are mainly located in factories in Taiwan (Taoyuan and Hsinchu), Shenzhen in South China, Huangshi in Central China, and Kunshan and Suzhou in East China. The mainland factories are mainly for mass production, while Taiwan provides high-end products. In order to provide complete services to customers around the world, Unimicron Technology has business branches and representative offices in the Americas, Europe, and Asia, and production bases in Germany and Japan, to provide customers with more completed services nearby.



Note: Carrier product types include CSP (Chip Scale Package) & FC (Flip Chip).



For related information, please refer to 2019 Annual Report

### 2019

Ranking	PCB supplier	Revenue
1	Zhen Ding	3,889
2	Unimicron	2,781
3	TTM	2,689
4	Nippon Mektron	2,555
5	Dongshan Precision	2,140
6	Compeq	1,820
7	Tripod	1,763
8	Shennan Circuits	1,517
9	PSA Group	1,396
10	SEMCO	1,336

Source: Prismark PCB Q4 2019. Unit: US\$M  
 \* Note that the ranking in 2019 is different from the ranking in the 2018 CSR Report because the 2018 CSR Report is based on estimated values.

### 2018

Ranking	PCB supplier	Revenue
1	Zhen Ding	3,908
2	Nippon Mektron	2,856
3	TTM	2,847
4	Unimicron	2,620
5	Dongshan Precision	1,789
6	Tripod	1,727
7	Compeq	1,681
8	PSA Group	1,480
9	SEMCO	1,346
10	Young Poong Group	1,217

## 2019 Sustainability Highlights (CSR)

### Contributions to Environmental Sustainability



### Steady governance quality



### Social prosperity concept



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## Awards won in 2019

Unimicron Technology invests resources in all aspects, and hopes that through our efforts, we can lead employees and shareholders to promote society to a better future. Therefore, through participating in various external sustainability evaluations, we can understand out effects and results in all aspects of continuous development by external perspectives, responding to the needs and expectations of stakeholders, and allowing us to march towards sustainability

### Social responsibility

Award-winning individual / plant	Award	Award issuing unit
Unimicron	2019 Platinum Award of the Corporate Sustainability Report Award for the electronic information manufacturing industry	Taiwan Institute for Sustainable Energy
Unimicron Technology (KunShan) Corp.	"In 2019, it was awarded the "2018 Excellent Foreign Enterprise" by Kunshan New and Hi-tech Industrial Development Zone High-tech Zone	Party working committee of Kunshan New and Hi-tech Industrial Development Zone and Administrative Committee of Kunshan New and Hi-tech Industrial Development Zone
	"Obtained RBA "Silver Certificate" in 2019	RBA group
	"In 2019, won the "2017~2018 Kunshan Model Workers' Home"	Kunshan City Federation of Trade Unions
Unimicron Technology (Huangshi) Corp.	I have you in my "job"-Top Ten Nominated Enterprise Award	Human Resources and Social Security Department of Huangshi Municipality Huangshi Daily News Agency New Media Center

### Environmental Protection

Award-winning individual / plant	Award	Award issuing unit
Unifley Technology (KunShan)	Reform Demonstration Enterprise of the online public auction co-management mechanism of processing trade leftovers for domestic sales	Suzhou Processing Trade Waste Trading Platform
Unimicron Technology (KunShan) Corp.	Awarded the Annual Environmental and Social Responsibility Enterprise in 2019	China Environmental News Agency
	Won the Outstanding Contribution Award for Public Welfare Promotion Posters on the June Fifth Environment Day in 2019	China Environmental News Agency
Unimicron	Received 2018 Annual Green Procurement Outstanding Enterprise in 2019	Taoyuan City Government
Luzhu Plant II	Received Taoyuan City's 2018 River Adoption Award for Enterprise and Group in 2019	Taoyuan City Government
	2019 Industrial boiler improvement operation subsidy of 1.4 million	Taoyuan City Government
Qun Hong Technolog	2019 Industrial boiler improvement operation subsidy of 1.4 million	Taoyuan City Government
	Received 2018 Annual Green Procurement Outstanding Enterprise in 2019	Department of Environmental Protection, Taoyuan
Unimicron Technology (Shenzhen)	2018 Guangdong Province Environmental Credit Evaluation Green Enterprise	Guangdong Provincial Department of Ecology and Environment

### Safety and Health

Award-winning individual / plant	Award	Award issuing unit
Unimicron	Obtained the 2019 "Health Promotion Label"	Health Promotion Administration, MOHW
	Wu Wenhua from the Department of Safety and Environment was awarded the "Excellent Personnel in the Implementation of Occupational Safety and Health-Merit Award" in 2018	Taoyuan City Government
	Won the 2019 ISO 45001 Plus Award Occupational Safety and Health Management Model Award	SGS Taiwan Ltd. (SGS)
Xinfeng Plant	Obtained three-year occupational safety and health management system performance recognition in 2019	Occupational Safety and Health Administration, Ministry of Labor
Award-winning individual / plant	Award	Award issuing unit

Jingzai Plant III	2019 Cumulative Disaster-Free Working Hours Certificate (cumulative disaster-free working hours reached 5.03 million hours)	Industrial Safety and Health Association of The Republic of China
	Obtained three-year occupational safety and health management system performance recognition in 2019	Occupational Safety and Health Administration, Ministry of Labor

Award-winning individual / plant	Award	Award issuing unit
Shanying Plant I	2019 Cumulative Disaster-Free Working Hours Certificate (cumulative disaster-free working hours reached 7.42 million hours)	Occupational Safety and Health Administration, Ministry of Labor
	Obtained three-year occupational safety and health management system performance recognition in 2019	Occupational Safety and Health Administration, Ministry of Labor
Hejiang Plant	Obtained three-year occupational safety and health management system performance recognition in 2019	Occupational Safety and Health Administration, Ministry of Labor
Dacheng Plant Qun Hong Technology	Acquired the 2019 "New Resident Friendly Workplace"	Taoyuan City Government
	Obtained the 2019 "Health Promotion Label"	Health Promotion Administration, MOHW
Renyi Plant Qun Hong Technology	Obtained the 2019 "Health Promotion Label"	Health Promotion Administration, MOHW
Unimicron Technology (Shenzhen)	2019 Safety Production Standardization Enterprises (level 3) from the Health Promotion Administration, MOHW	Baoan District Emergency Management Bureau
	2019 Global Gold Supplier	Huawei Technologies Co., Ltd.
Qun Hong Technology	Won the "Runner-up in Badminton Competition" and "Second Runner-up in Chess Competition" in the Sports Games of the New & Hi-tech Industrial Development Zone	The Organizing Committee of the 3rd Sports Games of Kunshan New & Hi-tech Industrial Development Zone
	Honor of "Excellent Organization Award" in the 3rd Sports Games of Kunshan New & Hi-tech Industrial Development Zone	The Organizing Committee of the 3rd Sports Games of Kunshan New & Hi-tech Industrial Development Zone
Unimicron Technology (Suzhou)	"Dancing Health, Painted Life-We Are the Healthy Unimicronians" won the 2019 Suzhou Industrial Park Corporate Social Responsibility's "Excellent Case"	Suzhou Industrial Park Administrative Committee
	2019 First Prize of Social Enterprise Safety Production PK Competition in Suzhou Industrial Park	Dongsha Lake Social Work Committee of Suzhou Industrial Park
	2019 Model Cases of Healthy Place Construction in Suzhou City	Suzhou Patriotic Health Campaign and Health Promotion Committee
	2019 Outstanding Organization Award of the Promotion Week of the Production Safety Law	Work Safety Supervision Bureau, SIP High-end Manufacturing and International Trade Zone
Unimicron Technology (KunShan) Corp.	Passed the secondary review of the "standardization for the secondary unit" in 2019 and won a government award of 20,000 yuan	Kunshan Emergency Management Bureau
	In 2019, won the 2018-2019 "Municipal Level Safety Enterprise"	Suzhou "Safe Enterprise" Creation Activity Leading Group
	In 2019, won the Ethic Award of the second "Lanting Cup" basketball league of Kunshan New & Hi-tech Industrial Development Zone	Division of Party and Masses' Affairs at the Kunshan New and Hi-tech Industrial Development Zone, Kunshan City Federation of Trade Unions, Party Committee of Kunshan New and Hi-tech Industrial Development Zone
	"Won the "Third Prize" of Kunshan Workers' Broadcast Gymnastics Competition in 2019	Kunshan City Federation of Trade Unions
Unimicron Technology (Huangshi) Corp.	In 2019, won the "Award for Excellence" of the 11th Dragon Boat Race of Kunshan New & Hi-tech Industrial Development Zone	Publicity Department of CPC Kunshan committee, Administrative Committee of Kunshan New and Hi-tech Industrial Development Zone, and Kunshan Tinglin City Management Office
	In 2019, won the "4th place" in the group score of the 3rd Sports Games of Kunshan New & Hi-tech Industrial Development Zone	The Organizing Committee of the 3rd Sports Games of Kunshan New & Hi-tech Industrial Development Zone
Unimicron Technology (Huangshi) Corp.	Zhou Chunguang from the Department of Safety and Environment in 2019 was awarded the 2018 "Advanced Individual" Honorary Certificate of Safety Production	CPC Committee of Wangrenzhen / People's Government of Wangrenzhen

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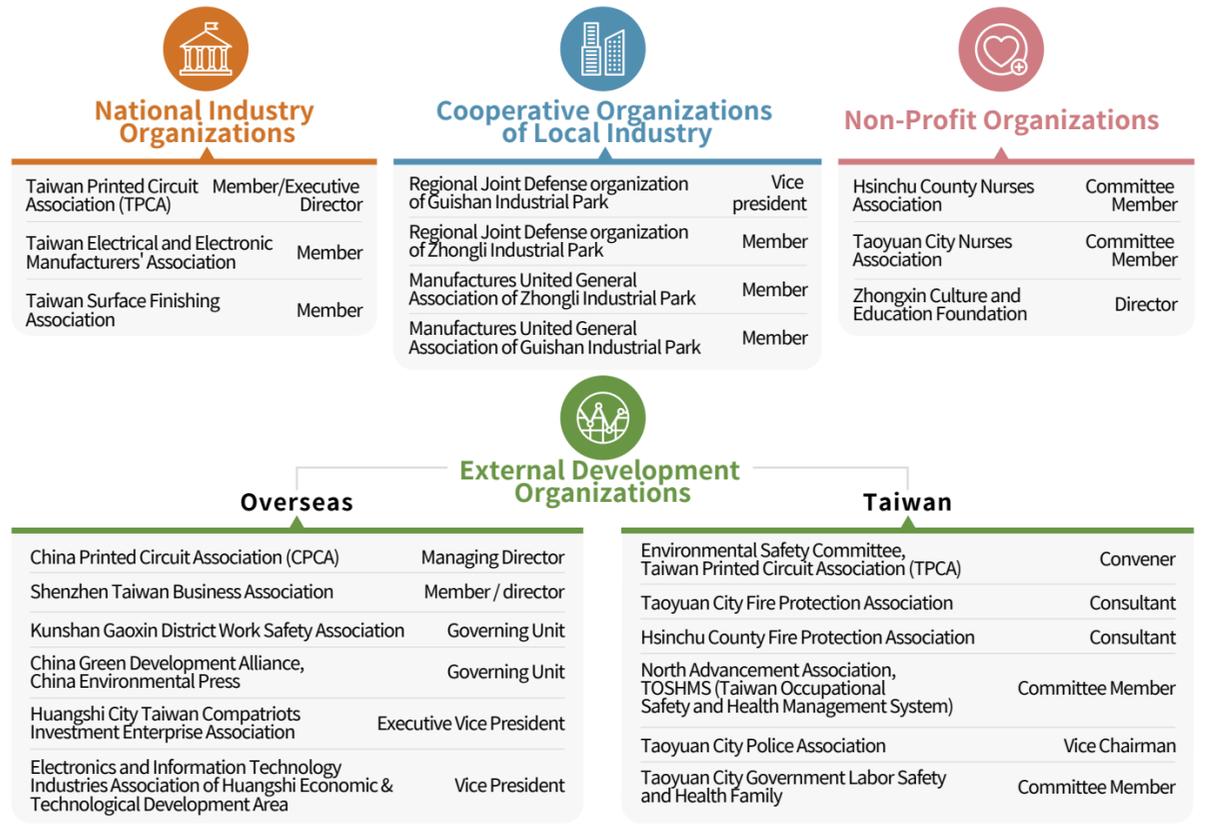
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## Association Participation



Unimicron Technology urged the Taiwan Printed Circuit Association (TPCA) and Taoyuan City Government to sign the "Environmental Safety Declaration," and held the "Environmental Safety Declaration Signing and Fire Protection Equipment Donation" ceremony in October 2018. According to the contents of the Environmental Safety Declaration, the Taoyuan City Government and TPCA will regularly organize activities related to environmental safety policy advocacy, training, and seminars between industry and government, and support the industry to promote environmental safety standards, counseling and related projects. Unimicron Technology will also actively respond to the above initiative.

In March 2019 Unimicron Technology assisted the Taiwan Printed Circuit Association (TPCA) and central government agencies such as the Industrial Development Bureau, National Fire Agency, Environmental Protection Administration, Construction and Planning Agency, and Occupational Safety and Health Administration to sign the "Printed Circuit Board Industry Sustainability and Safety Declaration." During the ceremony, the representative of Unimicron Technology gave a special speech, combined with the strength of the industry and government to improve the industrial environmental protection and occupational safety and health standards. In the same year, Unimicron Technology hosted several seminars or forums on environmental safety and health on behalf of TPCA, and continued to lead the formulation of industrial equipment safety standards.



## Special Report - Circular Economy

- Origination background**  
The 300 million tons of edible food discarded by retailers and consumers in industrialized countries every year shows that the current problem of "leftover food" is serious. Many surface-damaged and poorly presented foods may become discarded targets, resulting in a waste of food resources. We have completed the development of the know-how to make good use of bread without commercial value and damaged appearance (Note), and regenerate them into "hand craft beer." Our aim is to have no food waste and pursue sustainable environment and resource reuse. In 2019, 60 kilograms of bread were recycled to make beer.
  - Main goal**  
In the future, a brewery will be established and bread with no commercial value will be purchased from other bakeries to promote the concept of no waste of ingredients and environmental sustainability.
  - Execution content**  
Using Bistro181's uncommercially valuable bread mixed with barley malt as the brewing raw material, after saccharification, boiling, fermentation and ripening, the Bistro181 hand-crafted whiskey is completed. In addition to using special ripening technology to increase the aging flavor, it also introduces a variety of local Taiwanese elements, and uses raw materials such as acacia wood and Alishan mountain tea from Taiwan to optimize the whiskey flavor. (Alcohol production license has not been obtained in 2019, so no sales are allowed; because the law stipulates that no more than 100 kilograms of privately-brewed alcohol can be stored at a single premise, we only use trials for trial production and tasting).
  - Innovative features**  
It emphasizes the green circular economy, and there are no similar products on the market
  - Invested resources**  
A variety of local elements from Taiwan has been introduced to the plant technology research and development to continuously improve and modify the ripening technology and increase the flavor. In the future, we will continue to carry out hand-crafted whiskey flavored local Taiwanese series.
- Note: Bread without commercial value refers to products that include overnight, leftovers and off-grade products.

### Economic benefits

In the future, if a brewery is established and successfully applied for a brewing license, it is expected to produce 20L of whiskey and 600L of craft beer each month. The output value is calculated at NTD 500 and 59/bottle, respectively, and revenue of NTD 110,000/month can be obtained.

### Environmental benefits

We transform the off-grade bread that originally needed to be scrapped into a saleable product through remanufacturing technology, reducing food waste and achieving the concept of circular economy and green sustainability.

### Social benefits

We can transfer this technology to interested enterprises, so that more breweries can use this technology in the future to reduce the problem of leftover food and resource waste, achieving a circular economy and also conforming to the concept

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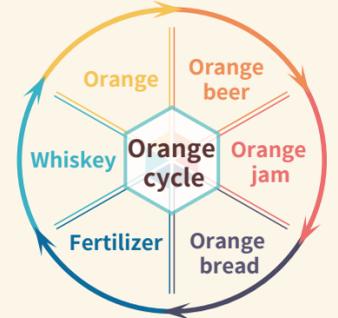
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# Special Report - Value of Orange<sup>N</sup>

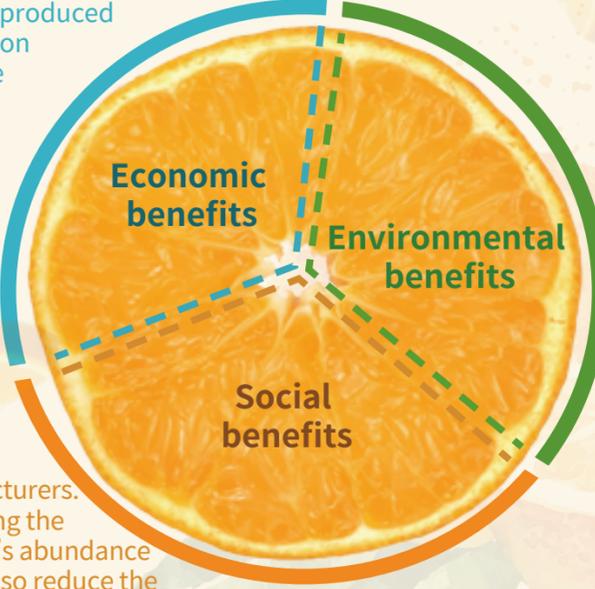
**Origination background**

The average production of oranges in Taiwan in the past five years is 146,000 metric tons, and there is often a problem of overproduction and oversupply. Therefore, farmers are also actively developing different ways of eating to promote orange sales. Among them, the consumption of freshly squeezed fruit juice has increased the most, and the quantity of oranges used is large (on average, 1 catty of oranges can squeeze 350 cc of juice). Unicusine Huoli Zhan also follows the trend to introduce fresh fruit juicers to provide employees with freshly squeezed juices. However, the accompany problem is the handling of pomace. Existing companies mostly use the pomace to be processed into fertilizer or feed. The Plant Technology R&D team of Unimicron Technology hopes to increase the reuse rate of pomace to increase its value, and design the orange recycling chain (Figure 1). The orange pomace and off-grade bread are fermented to make orange beer, and the fermented orange pomace is reprocessed into orange jam. In addition to being sold directly, orange jam can also be made into orange bread. The unsold orange bread can be made into bread whiskey, and the vinasse from the mix with pomace and bread is made into compost for soil improvement, which is friendly to the land and protects the environment. (In 2019, 60 kg of pomace was used for trial production of orange beer and orange jam.)



- Main goal**  
Promote the concept of simple recycling and environmental sustainability.
- Execution content**  
The orange pomace and off-grade bread are fermented to make orange beer. The fermented orange pomace can be cooked and processed into orange jam for sale, increasing turnover. In addition, part of the jam is also made into orange bread, which increases the bread items and saves the purchase of raw materials; the vinasse mixed by the final pomace and bread can be used as compost, which is mixed soil for soil improvement.
- Innovative features**  
Emphasize the recycling of resources, and provide the products to Bistro 181 as ingredients, so that more people can taste the special flavor.
- Invested resources**  
Use processing equipment to add value to the N-th power of oranges

It is estimated that 6 liters of orange jam can be produced every week. Based on NTD 120 / 300g, the revenue can be NTD 2,400/month. (Development started in December 2019)



**Economic benefits**

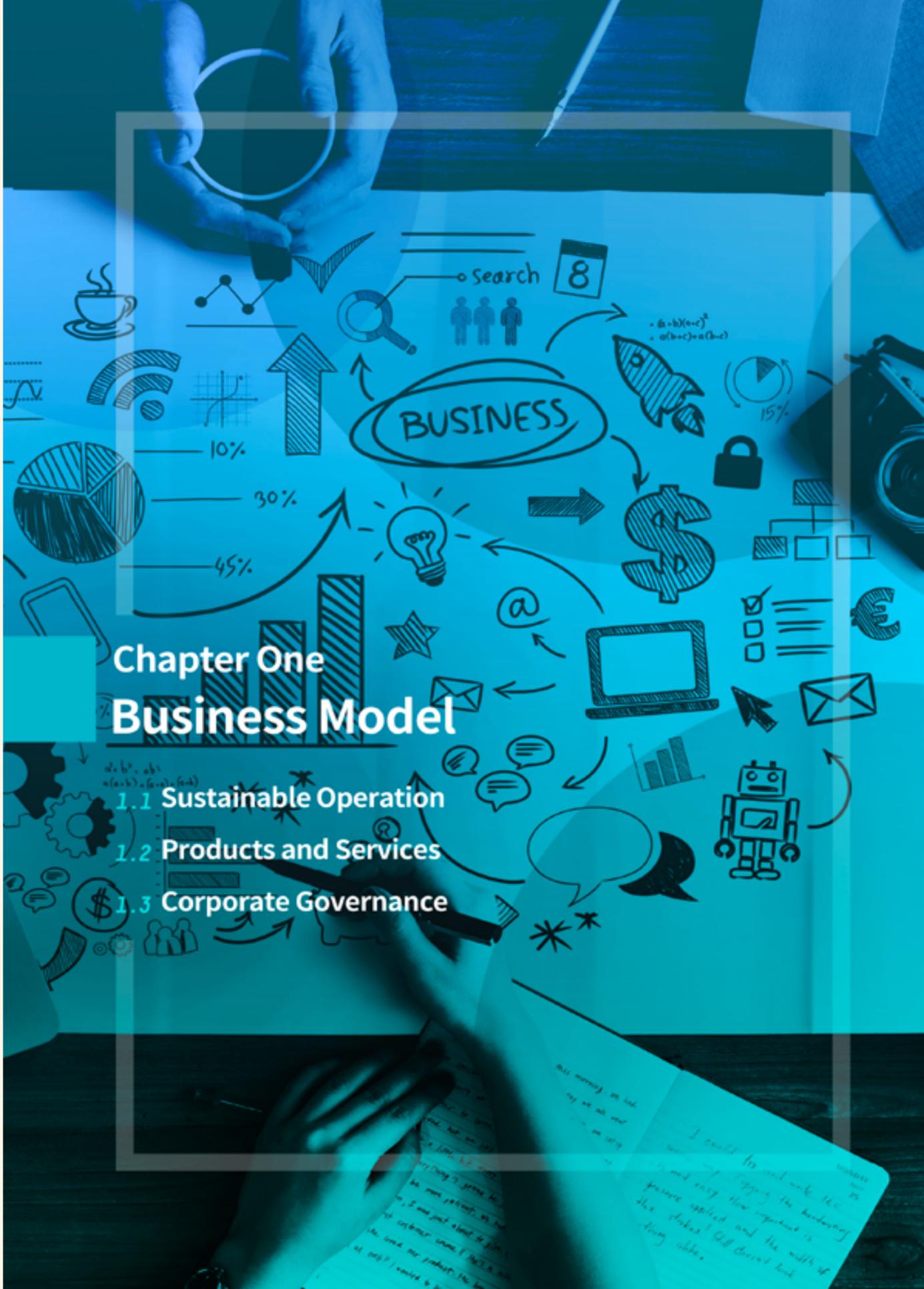
**Environmental benefits**

**Social benefits**

In addition to reducing waste disposal costs, the residvues of all final products can be used as soil conditioners and fertilizers, which is friendly to the land.

Unimicron Technology hopes to transfer this technology to interested manufacturers. In addition to solving the problem of Taiwan's abundance of oranges, it can also reduce the disposal cost of orange waste and achieve the goal of green economy and sustainable environment.

Note: Orange<sup>N</sup> refers to the Nth power of orange.



## Chapter One Business Model

- 1.1 Sustainable Operation
- 1.2 Products and Services
- 1.3 Corporate Governance

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## 1.1 Sustainable Operation

### 1.1.1 Vision and future development direction

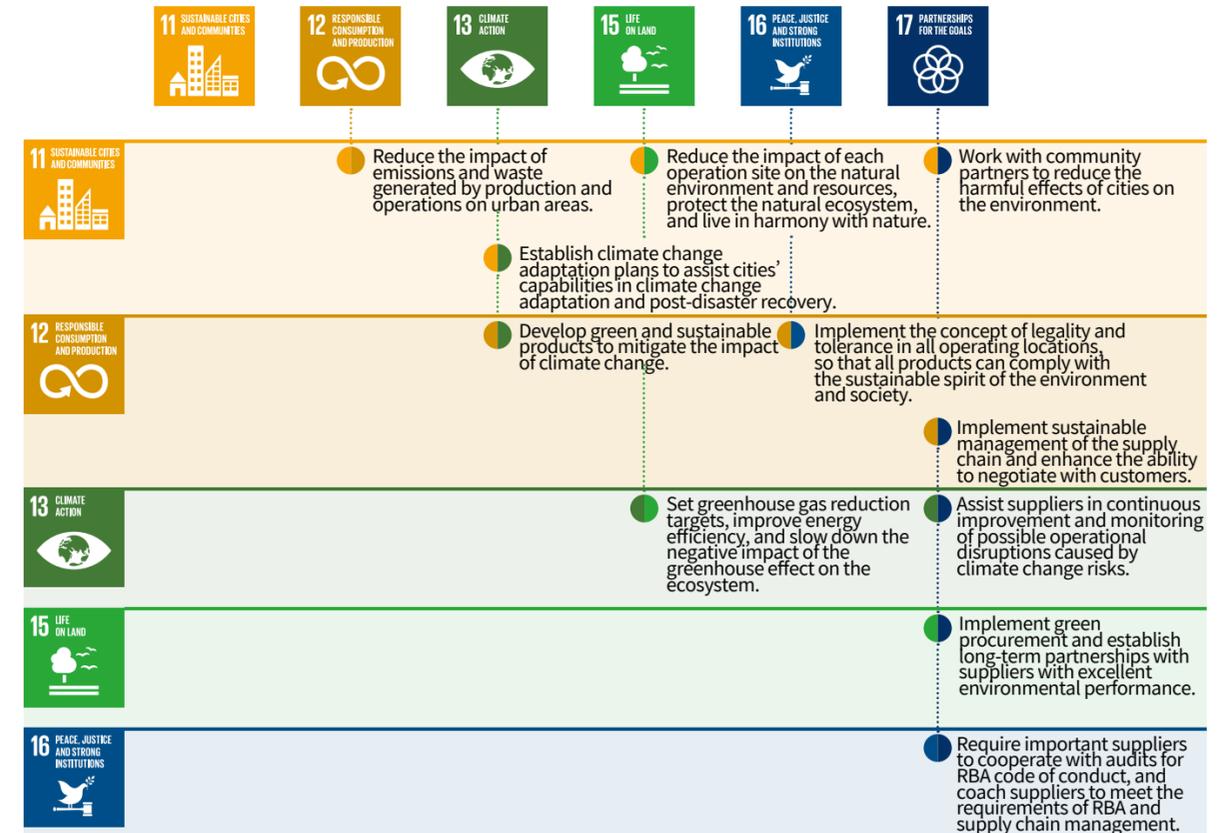
In the process of sustainable development, Unimicron takes the United Nations Sustainable Development Goals (SDGs) as its long-term strategy for sustainable development, and strives to integrate 17 UN Sustainable Development Goals (SDGs) into its operational activities. It responds to the core concepts of SDGs in the overall value chain of product design and development, raw material procurement, manufacturing, and sales. In order to further strengthen the spirit of corporate sustainability, the "Corporate Social Responsibility Policy" was specially formulated, through the three main pillars of "Caring for the Planet (Planet), Respecting People (People), and Pursuing Performance (Performance)" and seven major commitments to create positive value for employees, shareholders and all stakeholders, and gradually implement the corporate vision of a "world-class, high-tech company with high value-added, high quality, high productivity and emphasizes on innovative service" and "pursuing the satisfaction of customers, employees, and shareholders and fulfilling their responsibilities," taking into account the sustainable growth and development of the company.

### 1.1.2 Responding to SDGs and making sustainability commitments

Through the materiality analysis process, we link and rank major issues and SDGs, distinguish three different levels, and identify 17 SDGs most relevant to Unimicron Technology's core operations to formulate sustainability commitments and goals. The highest level is those linked to the company's core business, and can meet the sustainability goals of SDGs through the formulation of management policies. The second is risk management, which aims to reduce the negative impact that the company may have on global sustainable development in the course of its operations. Therefore, Unimicron Technology has established a management and measurement mechanism to mitigate various potential impacts. Those SDGs that are not directly related to the company's current development are defined as the lowest level, but may evolve into company-related sustainability issues in the future due to the development of the international situation, and therefore they will continue to be concerned. In addition, for the 6 SDGs related to Unimicron Technology's core competences, we further searched for the interrelationships between them to make the company's resource investment more effective.



## Interaction between core competence and the corresponding SDGs



## Unimicron Technology's sustainability commitments

- Implement corporate governance, improve information transparency, and protect and respect the rights and interests of shareholders and stakeholders. **1.3 Corporate governance**
- Promote company management with high ethical standards, require all employees to fully abide by laws and integrity codes, respect human rights, protect intellectual property rights, and prevent improper transfer of benefits from harming the rights and interests of the company, customers, and suppliers. **1.3 Corporate governance**, **3.2 Customers**, **3.5 Employees**
- Strictly abide by international regulations such as labor laws and regulations of the operation locations, customer requirements, and the Responsible Business Alliance Code of Conduct, and ensure fair employment, humane treatment, employee communication, working conditions and other requirements. **3.3 Supply chain**, **3.5 Employees**
- Establish supplier management systems and specifications, and communicate with them regularly to establish a stable and sustainable development of a win-win strategic partnership. Expand the procurement of environmental friendly products and prohibit the use of conflict mineral products. **3.3 Supply chain**
- In line with the concept of "Take from society, Give back to society," participate in public interest and emergency relief activities, share love, give back to the society, and fulfill social civic responsibilities. **3.6 Society**
- Continue to deepen technology and innovation to meet customer and market needs in accordance with the HSF quality policy; actively invest in green environmental protection and low-cost manufacturing processes to consolidate core competitiveness. **3.3 Supply chain**, **3.4 Environment**
- In accordance with occupational safety and health, environmental protection and energy policies, implement the organization and operation of the environmental and hazardous substance management system, comply with the requirements of environmental protection and industrial safety regulations, respond to the green environmental protection movement of "reduce use, reuse, and recycle", implement energy conservation and waste reduction, and construction a safe and comfortable working environment. **3.4 Environment**, **3.5 Employees**

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## Sustainability goals

### Economic aspect

#### Issue: Technology and R&D

##### Operational importance

Maintain close cooperative relations with the material and equipment suppliers around the world, and have close cooperation with domestic and foreign research units and academia; and then cooperate with first-class industrial peers to develop products that meet market trends and customer needs; win customer satisfaction and trust through effective R&D resources and high interaction with customers, to ensure that products are in the leading position in the world.

##### Long-term goals (2023)

	2019 goals	Whether to achieve 2019 goals	2020 goals
KPI.1 ETS fine line development: L/S=5/5um	L/S=6/8	✓	L/S=5/5
KPI.2 Fine bump pitch development: 80um bump pitch	90	✓	80
KPI.3 Extreme Body Size development: >100mm*100mm	77.5*77.5	✓	100*100
KPI.4 2.1D development: L/ S=2/2um	Process settings	✓	Parameter setting

##### Operational importance

Actively develop and construct technologies required for high-frequency and high-speed, and target the new 5G blue ocean market with excellent signal integrity, good heat dissipation, and high-reliability technology platform.

##### Long-term goals (2023)

	2019 goals	Whether to achieve 2019 goals	2020 goals
KPI.1 Ratio of mass production ratio introduced with 5G related technology reaches 100%	3.5%(Note 1)	✓	10%

#### Issue: Product quality

##### Operational importance

Provide high-quality products at reasonable prices and competitive delivery and service to satisfy customers.

##### Long-term goals (2023)

	2019 goals	Whether to achieve 2019 goals	2020 goals
KPI.1 Number of returns by customers for HSF non-compliance: 0	0	✓	0
KPI.2 Achievement rate of planning course (implementation rate and satisfaction) 88%	P: 4.5 points C: 3 points	P: ✓ C: ✓	P: 4.6 points C: 3.5 points

#### Issue: Customer relationship management

##### Operational importance

Through regular visits and satisfaction surveys to establish good customer relationships, we can actually grasp customer needs and market pulses, meet customer requirements, and then adjust the company's business strategy and development.

##### Long-term goals (2023)

	2019 goals	Whether to achieve 2019 goals	2020 goals
KPI.1 Number of critical deficiencies in CSR/RBA audit: 0	P: 0 C: 0	P: ✓ C: ✓	P: 0 C: 0
KPI.2 Number of customer privacy violations: 0	P: 0 C: 0	P: ✓ C: ✓	P: 0 C: 0

#### Issue: Supplier sustainable management

##### Operational importance

Committed to the sustainable operation of the enterprise, comply with the requirements of laws and customers' regulations, implement supplier management, reduce supply risks, and hope that suppliers comply with the principle of sustainable operation and mutual prosperity.

##### Long-term goals (2023)

	2019 goals	Whether to achieve 2019 goals	2020 goals
KPI.1 Hold the supplier sustainability promotion conference	Once	✓	Once
KPI.2 CSR Sustainability and Co-prosperity Award	2 suppliers	✓	2 suppliers
KPI.3 Number of suppliers be on-site audited	12 suppliers	✓	12 suppliers
KPI.4 Continue to promote the changes related to HSF raw materials	100%	✓	100%
KPI.5 3TGs comply with RMAP certification	100%	✓	100%

#### Issue: Professional ethics

##### Operational importance

As a result of the small CSR audit, the formulation of SOPs related to overseas risk management and code of conduct is messy. Therefore, legal/financial affairs will formulate a basic guideline to facilitate to unify the group's ethics and risk management policies. (Note 2)

##### Long-term goals (2023)

	2019 goals	Whether to achieve 2019 goals	2020 goals
KPI.1 Submit a copy of the "Framework Draft" and submit it to the CSR team for review	100%	✗	One copy
KPI.2 A copy of "Unimicron Technology Risk Management and Code of Conduct Guidelines"	100%	✗	One copy
KPI.3 After being sent to the CSR team for review and approval, release it to overseas factories	100%	✗	One copy
KPI.4 Readjust the formulation principle after the feedback from factories	100%	✗	One copy

**Note1:** Due to the impact of the general environment and technology, the progress of the 5G part is different from the original target set for 2019. Therefore, Unimicron Technology also adjusted the target operation and management in response to changes in market conditions, and has downward revised the proportion of 5G-related technology introduced in mass production.

**Note2:** Immediately targeting the IATF 16949 & QC080000 quality system in response to customer requirements, the Information and Communication Department will execute this BCM (Business Continuity Management) plan for the cyber hacker attack; the legal affairs team and the CSR team assist in planning and integrating drill records. Due to the need to complete the BCM drill first, the relevant goals have not been completed.

### Environmental aspect

#### Issue: Greenhouse gas management

##### Operational importance

Reduce production carbon emissions by improving energy resource usage efficiency, thereby reducing operational shock risks

##### Long-term goals (2023)

	2019 goals	Whether to achieve 2019 goals	2020 goals
KPI.1 The greenhouse gas emission intensity per unit of revenue remains below 12	12	✓	The greenhouse gas emission intensity per unit of revenue remains below 12

#### Issue: Waste management

##### Operational importance

Improve waste recycling rate and wastewater treatment efficiency to reduce raw material consumption and environmental emissions, thereby reducing operating costs and environmental impact.

##### Long-term goals (2023)

	2019 goals	Whether to achieve 2019 goals	2020 goals
KPI.1 Maintain waste recycling rate above 90%	90%	✓	Maintain waste recycling rate above 90%
KPI.2 The total copper ion intensity of wastewater discharge per unit of revenue	0.15	✓	The total copper ion intensity of wastewater discharge per unit of revenue is below 0.15

#### Issue: Green products

##### Operational importance

Through green procurement and manufacturing, the company's products comply with the regulations and customers' regulations on no hazardous substances, as well as the expectations of stakeholders, in order to strengthen environmental protection and reduce operational risks.

##### Long-term goals (2023)

	2019 goals	Whether to achieve 2019 goals	2020 goals
KPI.1 Customer's HSF quality satisfaction	4.3	✓	4.3
KPI.2 Achievement rate of real-time update of regulations	100%	✓	100%
KPI.3 XRF inspection compliance rate of incoming materials and finished products	100%	✓	100%
KPI.4 Supplier's HSF quality audit compliance rate	100%	✓	100%

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### Issue: Air pollution prevention and control

#### Operational importance

Improve the efficiency of air pollution prevention and treatment to reduce air pollutant emissions, thereby reducing the environmental impact caused by operations.

#### Long-term goals (2023)

**KPI.1** The total air pollution emission intensity per unit of revenue is below 1.0

2019 goals	Whether to achieve 2019 goals	2020 goals
1	✗	The total air pollution emission intensity per unit of revenue is below 1.0

### Issue: Water resources management

#### Operational importance

Through the improvement of production process and equipment, improve the efficiency of water use and the amount of water recovered, thereby reducing water costs.

#### Long-term goals (2023)

**KPI.1** Water consumption intensity per unit revenue is maintained to be below 310.

2019 goals	Whether to achieve 2019 goals	2020 goals
315	✓	Water consumption intensity per unit revenue is maintained to be below 310.

### Issue: Energy resource management

#### Operational importance

Use project management mechanism and data analysis to strengthen equipment and capacity operation efficiency, improve energy resource utilization efficiency and reduce cost consumption.

#### Long-term goals (2023)

**KPI.1** The electricity consumption intensity per unit revenue is remained to be below 18.

2019 goals	Whether to achieve 2019 goals	2020 goals
18.2	✓	The electricity consumption intensity per unit revenue is remained to be below 18.

### Social aspect

### Issue: Occupational safety and health

#### Operational importance

Through the operation of the occupational safety and health management system and continuous improvement measures, improve the company's occupational safety and health operation performance, to avoid major accidents that affect shipments and cause company losses.

#### Long-term goals (2023)

**KPI.1** Obtained the Industrial Safety and Health-related Excellence Award: 5

**KPI.2** Implement the prevention and reduction of three industrial safety disasters: 0 major disasters

**KPI.3** Control FSI (Frequency-Severity Indicator) : 50% lower than the three-year average of the printed circuit board FSI (if the value is higher than 0.1, the target is 0.1)

**KPI.4** Completion of the Group's occupational safety and health performance evaluation: 100% participation

2019 goals	Whether to achieve 2019 goals	2020 goals
4	✓	4
0	✓	0
Below 0.1	✓	Below 0.1
100%	✓	100%

### Issue: Employee development and training

#### Operational importance

Through the operation of the occupational safety and health management system and continuous improvement measures, improve the company's occupational safety and health operation performance to avoid major incidents that affect shipments and cause company losses.

#### Long-term goals (2023)

**KPI.1** Each factory's/department's manpower maturity achievement rate is 82%

**KPI.2** Achievement rate of course planning (implementation rate and satisfaction) 88%

2019 goals	Whether to achieve 2019 goals	2020 goals
80.30%	✓	82.55%
Number of courses offered Cumulative: 10 lessons Satisfaction: 85%	✓	Number of courses offered Cumulative: 15 lessons Satisfaction: 90%

### Issue: Human rights

#### Operational importance

Formulate labor policies in accordance with the labor laws and regulations of the location of the operating base, cooperate with global customers and international standards and regulations, to build an equal, safe and stable employment and development environment.

#### Long-term goals (2023)

**KPI.1** Completion rate of the promotion of human rights protection training: 98%

2019 goals	Whether to achieve 2019 goals	2020 goals
95%	✓	99.5%

### Issue: Talent attraction and retention

#### Operational importance

Talents are the key to a company's success in the global market competition. Innovative products, technologies and services all rely on outstanding talents to be delivered.

#### Long-term goals (2023)

**KPI.1** DL/IDL registration number 4500

**KPI.2** Retention rate of excellent engineers: 90%

2019 goals	Whether to achieve 2019 goals	2020 goals
DL 3500 persons ; IDL 500 persons	✓	DL 3700 persons IDL 800 persons
89.50%	✓	90%

## 1.1.3 Operation of the Sustainability Committee

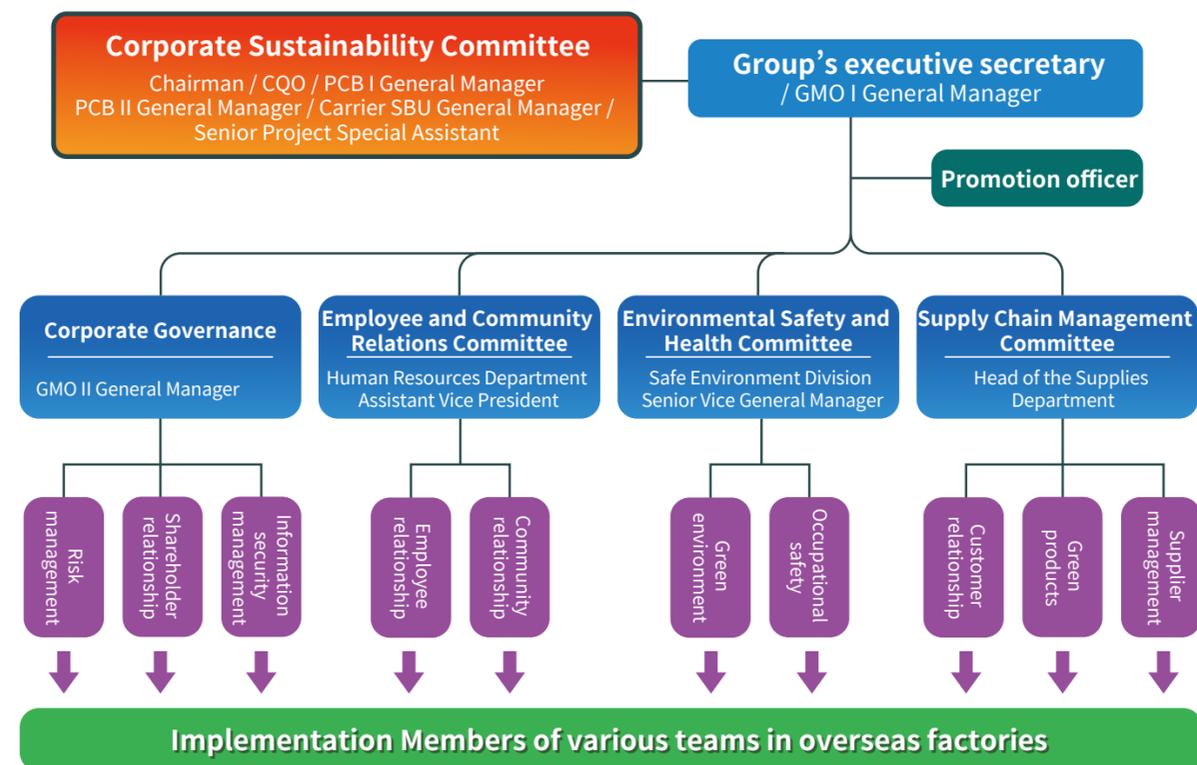
Respond to SDGs and make sustainability commitments

In order to specifically implement corporate social responsibility, in addition to establishing the "Corporate Sustainability Committee," Unimicron Technology has also set up a dedicated unit in the CEO Office- the Corporate Sustainability Task Force, with 3 dedicated personnel responsible for planning, coordination and communication the operation of the various functional committees under the committee and CSR-related business audits, demonstrating our commitment to corporate social responsibility.

The "Corporate Sustainability Committee" consists of the chairman and general managers of each business unit, serving as steering members. Each unit head is responsible for the operation of the four major committees under its jurisdiction. The members of each committee include department representatives from all operating units of the company and are responsible for confirming the management guidelines and implementation of CSR issues. In order to ensure the full implementation of the sustainability pillar and commitments, through the semi-annual regular meeting review mechanism, it confirms and analyzes the overall strategy, direction and goals, and proposes reviews and improvement measures for unfulfilled items; the committee is also responsible for the content review of the annual report, whose final approval is made by the chairman of the board.

In order to further strengthen the board's participation in the sustainability management mechanism and decision-making, since August 2017, Unimicron Technology officially includes the Corporate Sustainability Committee Achievement Report on the board of directors' agenda, and the Committee reports to the board of directors on the CSR related implementation results of the previous year in the first quarter of each year.

## Organizational Chart of Corporate Sustainability Committee



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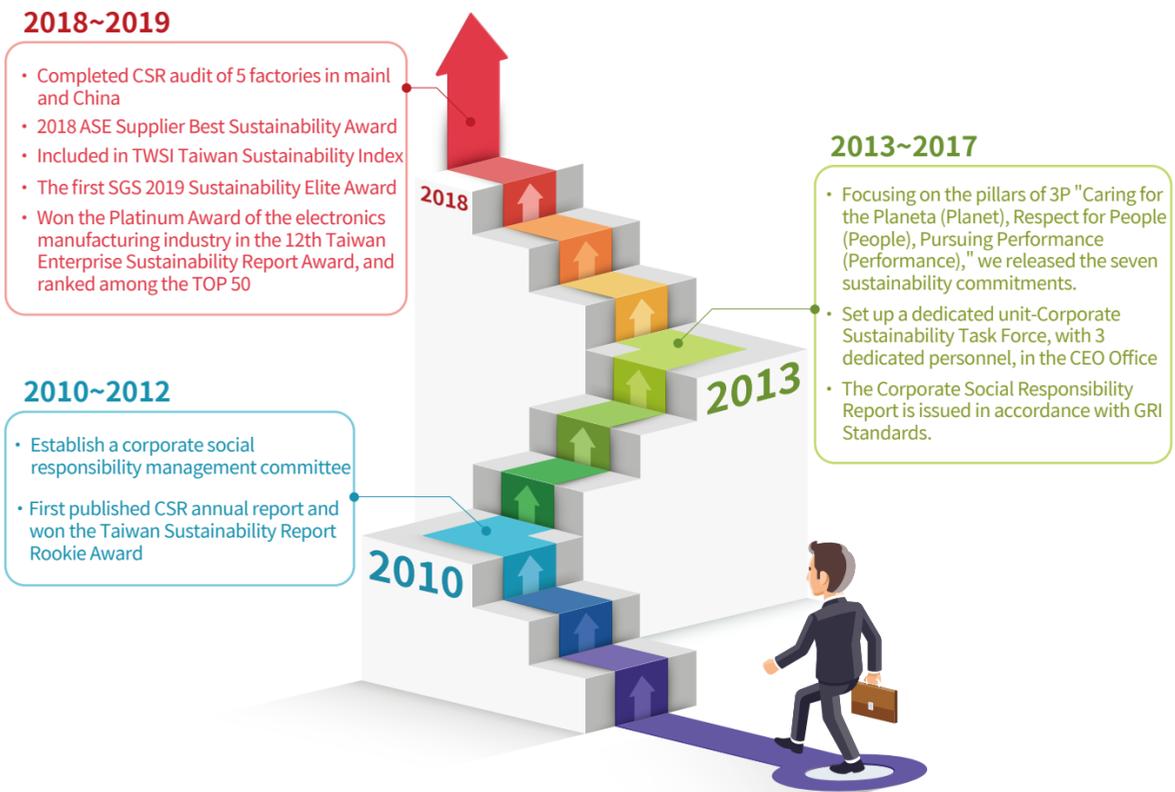
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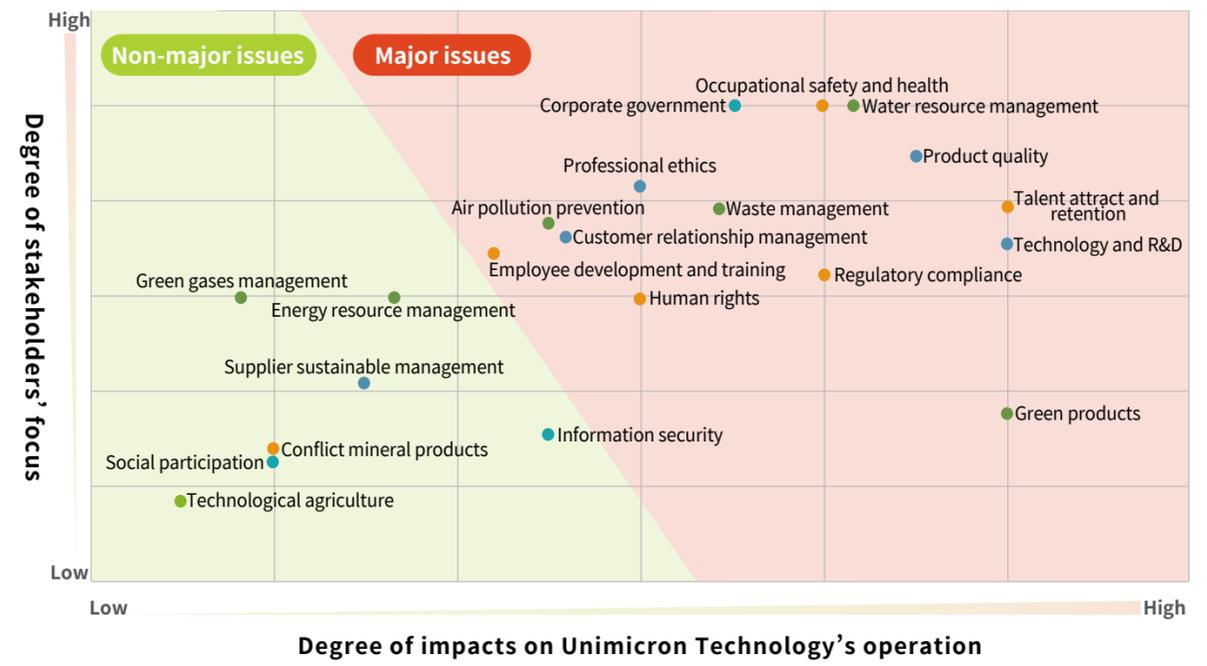
## Important CSR milestones



### 1.1.4 Materiality analysis

#### Six steps of the analysis process

In order to achieve effective communication between the report and stakeholders and reflect the impact of the operation process on the economy, environment and society, Unimicron Technology establishes a systematic analysis framework based on six major steps and decides on the materiality issues, boundaries of data collection, and stakeholders of the 2019 Corporate Social Responsibility Report. At the same time, it establishes a risk management mechanism for major issues and builds the company's operational resilience and sustainable value to meet the expectations of stakeholders on Unimicron Technology.



## Major issues, specific topics and impact boundaries

Economic aspect	Major issue	Corresponding GRI	Procurement	Production and manufacturing	Customer's use
	Corporate government	GRI 102-4			
Professional ethics	Anti-corruption and anti-competition		✓	✓	
Customer relationship management	Customer privacy, marketing and labeling				✓
Technology and R&D	Unimicron specific		✓	✓	
Product quality	Customer health and safety			✓	✓
Regulatory compliance	Compliance with environmental protection regulations, social and economic regulations			✓	

Environmental aspect	Major issue	Corresponding GRI	Procurement	Production and manufacturing	Customer's use
	Water resource management	Water			✓
Waste management	Waste water and wastes			✓	
Air pollution prevention	Emission			✓	
Green products	Unimicron specific			✓	✓

Social aspect	Major issue	Corresponding GRI	Procurement	Production and manufacturing	Customer's use
	Occupational safety and health	Occupational safety and health			✓
Talent attraction and retention	Market position, labor-employment relationship, employee diversity and equal opportunities			✓	
Employee development and training	Training and education			✓	
Human rights	Labor-management relationship, non-discrimination, child labor, forced or compulsory labor, and human rights assessment		✓	✓	

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## Stakeholder communication

Stakeholder	Communication channels	The most concerned issues in each aspect	Communication frequency	Unimicron Technology's responses
<b>Customers</b>	Audit, hazardous substance questionnaire to customers, guarantee letter, questionnaire survey, and RBA platform	Corporate governance, greenhouse gas management, and occupational safety and health	Regular and irregular	<ul style="list-style-type: none"> <li>- Conduct risk surveys to various responsible units in accordance with the "Risk Management Operating Procedures" and present them in the Continuity Operation Plan Report</li> <li>- Confirm the compliance of the 3rd party's lab test report of the customer's product materials</li> <li>- Provide a letter of guarantee.</li> <li>- Continue to pass the verification of the occupational safety management</li> <li>- Annual fire maintenance reporting and training drills.</li> <li>- Continuous work safety "Sangen Shugi" (Gemba, Genchi, and Genbutsu) and project inspections.</li> <li>- Set greenhouse gas reduction plans and targets and disclose them</li> </ul>
<b>Investors</b>	Shareholders' meetings, institutional investor conferences, annual reports, investment forum, telephone, Market Observation Post System	Corporate governance, water resource management, and talent attraction and retention	Regular and irregular	<ul style="list-style-type: none"> <li>- Self-organize institutional investor conferences twice a year, and participate in at least one public forum organized by others</li> <li>- Disclose CDP-related information regularly and include the impact of water intake and drainage into operational risk management</li> <li>- The occupational safety management system continues to operate and improve.</li> <li>- Continuous work safety "Sangen Shugi" and project inspection system</li> </ul>
<b>Employees</b>	Shareholders' meetings, institutional investor conferences, annual reports, investment forum, telephone, Market Observation Post System	Corporate governance, water resource management, and talent attraction and retention	Regular and irregular	<ul style="list-style-type: none"> <li>- Various health promotion activities and services, care for the physical and mental health of each employee, and create a friendly workplace for safe and happy work</li> <li>- Perform education and training and keep records.</li> <li>- Regular implementation of environmental testing strategy planning and testing</li> <li>- Improve the intrinsic safety of machinery and the standardization of safe operation.</li> <li>- Perform emergency drills regularly</li> <li>- Formulate water resources management plans and goals to strengthen water efficiency and cost</li> </ul>
<b>Suppliers</b>	Shareholders' meetings, institutional investor conferences, annual reports, investment forum, telephone, Market Observation Post System	Corporate governance, water resource management, and talent attraction and retention	Monthly and irregular	<ul style="list-style-type: none"> <li>- Organize supplier conferences, provide a supplier consulting platform, and promote suppliers to meet the requirements of the customer's RBA code of conduct</li> <li>- Arrange to perform supplier RBA audits every year and continue to track supplier improvement measures</li> <li>- Issue requirements of hazardous substances free management</li> <li>- Sign the guarantee letter of non-use of hazardous substances</li> <li>- Chemical suppliers are required to provide correct SDS and GHS materials in Chinese and English, and contractors are required to participate in the company's basic factory entry training, hazard notification, and agreement organization, in order to reduce and prevent the risk of violations of occupational safety and health.</li> </ul>
<b>Government</b>	Official letters, on-site inspections, regular reporting for reference and registration	Corporate governance, water resource management, and occupational safety and health	Irregular	<ul style="list-style-type: none"> <li>- Continue to operate and improve the occupational safety management system</li> <li>- Implement occupational safety and fire risk management practices and emergency response</li> <li>- Inspection, registration and reporting for reference of occupational safety and health, fire protection, buildings</li> <li>- Water use control, strengthen water use efficiency and reduce consumption</li> </ul>
<b>Community/Industrial Zone Management Center/NGO</b>	Official letters, company website, and telephone	Professional ethics, greenhouse gas management, and human rights	Irregular	<ul style="list-style-type: none"> <li>- Continue to operate and improve the occupational safety management system</li> <li>- Proactively participate in related activities of associations</li> <li>- Proactively participate in occupational safety and health seminars</li> <li>- Proactively participate in regional mutual aid groups</li> <li>- Continue to implement greenhouse gas reduction measures and disclose them regularly</li> </ul>

## Impact assessment of major issues

Unimicron Technology expects that the promotion of corporate social responsibility will not only have an impact on society, but also have a positive impact on the company's revenue, cost, R&D innovation, customer satisfaction and employee coherence. Therefore, we identify each major issue and the impacts on Unimicron Technology's operations, clearly understand the practice of promoting corporate social responsibility, link business objectives and corporate social responsibility, incorporate sustainable development as part of business decision-making, and gradually move towards the future of sustainable beauty

### Aspect : Economic aspect

Major issues	Corresponding SDGs	Chapter/ Page	Unimicron Technology's corresponding strategy	Importance to Unimicron Technology's operations				
				Increase in revenue	Reduction in cost	R&D and innovation	Customer's satisfaction	Employee coherence
Corporate governance	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	1.3 - P.36	Improve corporate governance efficiency, continue to innovate and adhere to product quality, abide by all relevant regulations, and maintain customer loyalty.	✓			✓	✓
Technology and R&D	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	1.2 - P.31		✓		✓	✓	
Product quality	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	1.2 - P.27		✓			✓	
Customer relationship management	17 PARTNERSHIPS FOR GROWTH	3.2 - P.53		✓			✓	
Professional ethics	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	1.3 - P.36					✓	✓
Regulatory compliance	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	1.3 - P.36					✓	✓

### Aspect : Environmental aspect

Major issues	Corresponding SDGs	Chapter/ Page	Unimicron Technology's corresponding strategy	Importance to Unimicron Technology's operations				
				Increase in revenue	Reduction in cost	R&D and innovation	Customer's satisfaction	Employee coherence
Green products	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	2.1 - P.42	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			✓	✓	
Air pollution prevention	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	2.5 - P.46			✓		✓	
Water resource management	6 CLEAN WATER AND SANITATION, 12 RESPONSIBLE CONSUMPTION AND PRODUCTION	2.5 - P.46			✓			
Waste management	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	2.5 - P.46		✓	✓			

### Aspect : Social aspect

Major issues	Corresponding SDGs	Chapter/ Page	Unimicron Technology's corresponding strategy	Importance to Unimicron Technology's operations				
				Increase in revenue	Reduction in cost	R&D and innovation	Customer's satisfaction	Employee coherence
Occupational safety and health	3 GOOD HEALTH AND WELL-BEING, 8 DECENT WORK AND ECONOMIC GROWTH	2.7 - P.50	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 protection to the entire company.		✓			✓
Employee development and training	4 QUALITY EDUCATION	3.5 - P.79					✓	✓
Talent attract and retention	8 DECENT WORK AND ECONOMIC GROWTH	3.5 - P.72			✓			✓
Human rights	8 DECENT WORK AND ECONOMIC GROWTH, 10 AFFORDABLE AND CLEAN ENERGY, 16 PEACE, JUSTICE AND STRONG INSTITUTIONS	3.5 - P.74						✓

✓ Highly correlated    ✓ Moderately related

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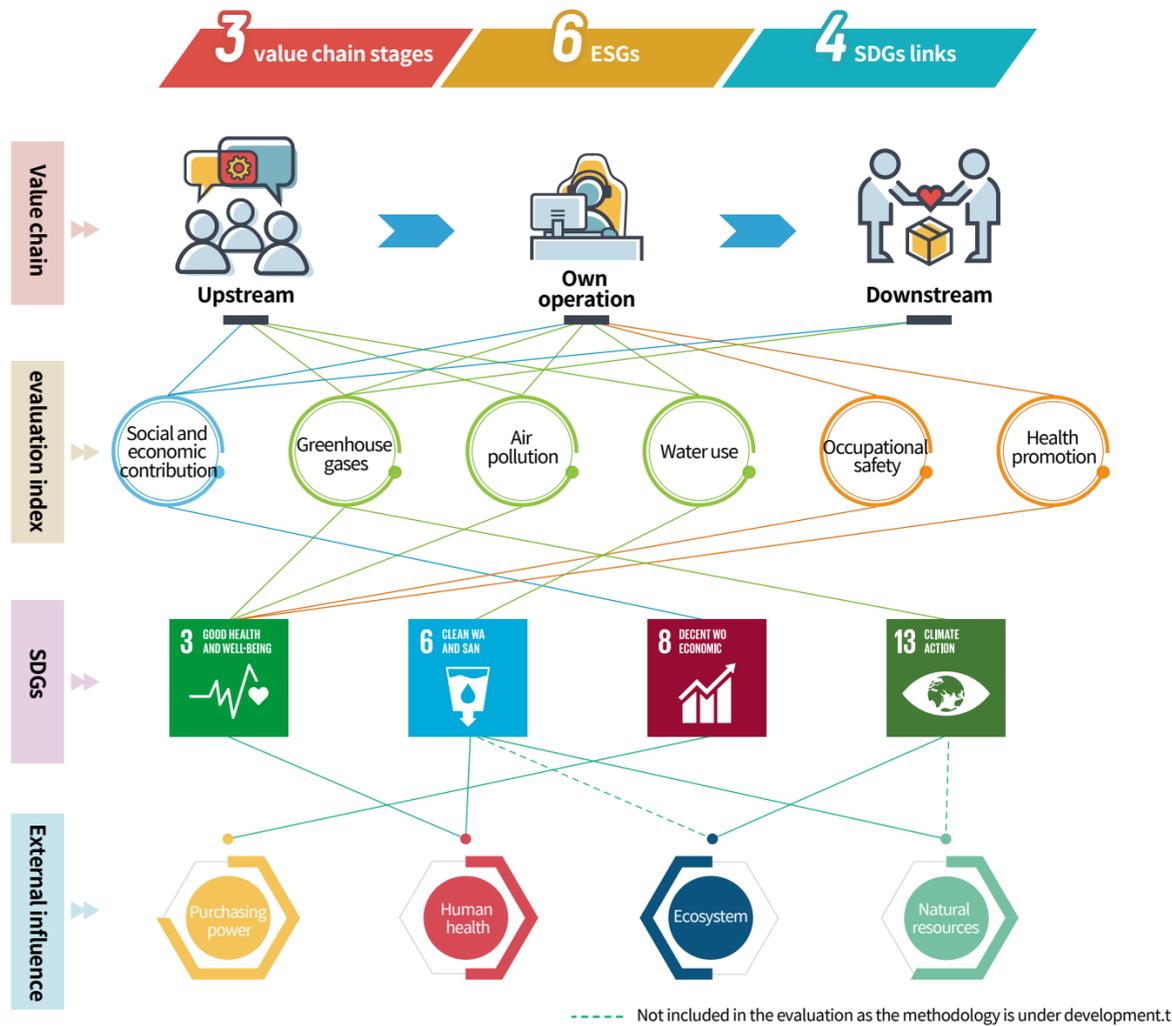
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## 1.1.5 Sustainability influence

In the process of business operation, in addition to profit, understanding the internal and external impacts caused by the operation is also an indispensable element for the company to move towards sustainable development. Therefore, Unimicron Technology invests relevant resources and cooperates with external academic units to evaluate the sustainability influence, and uses the impact pathway approach to depict the external impact of value chain activities on the environment and society. It also presents the extent of Unimicron Technology's contribution to society in the form of monetization, and provides important information to the management in the decision-making process of the company's sustainability promotion process, so as to grasp the sustainability trends and risks in advance.

### Unimicron Technology's Impact Assessment Framework



Boundary	Scope	Operational activities	External influence	Description on methodology
Upstream	Economic aspect	Supplier procurement	Socio-economic contribution	Using Input-Output Analysis to evaluate the indirect economic value created by the interdependence of procurement activities on the industrial chain, and the external cost per unit pollutant of its own operation is used to evaluate the environmental impacts such as supply chain greenhouse gas emissions, waste (incineration), water pollution, and air pollution (PM2.5, NOx, SOx, VOC). References: Directorate General of Budget, Accounting and Statistics (2015), Directorate General of Budget, Accounting and Statistics (2019), Bureau of Energy (2019), US EPA (2016), UNEP/SETAC (2017), and PWC UK (2015)
	Environmental aspect	Supplier procurement	Carbon social cost Human health damage	
Own operations	Economic aspect	Financial revenue and expenditure	Socio-economic contribution	In order to evaluate the social-economic benefits created by operating activities for stakeholders, in addition to revenue, we also consider expenses such as salary (employees), dividends (shareholders/investors), taxes (government), depreciation (suppliers), etc. as positive economic value. Reference: the company's annual report
	Environmental aspect	Greenhouse gases emission Use of water resources Air pollution discharge Waste water discharge Waste output	Carbon social cost Human health damage	
	Social aspect	Occupational safety Health promotion	Socioeconomic contribution Social cost of lost working hours Avoid medical costs of illness	
Downstream	Economic aspect	Product sales	Socio-economic contributions	Due to the wide range of social aspects and the immature methodologies of most issues, only the issues such as social costs of occupational accidents and the promotion of health promotion activities to reduce abnormal health risks of employees are considered. References: He Junjie (2005), Li Jiexian (2009), and WHO (2008)

Note 1: The methodology is mainly taken reference from the evaluation framework of ISO 14008:2019 and White Paper: Operationalizing Impact Valuation (2017).  
Note 2: Currency value conversion takes into account the inflation coefficient based on 2017 and the exchange rate of New Taiwan dollar against foreign currency.

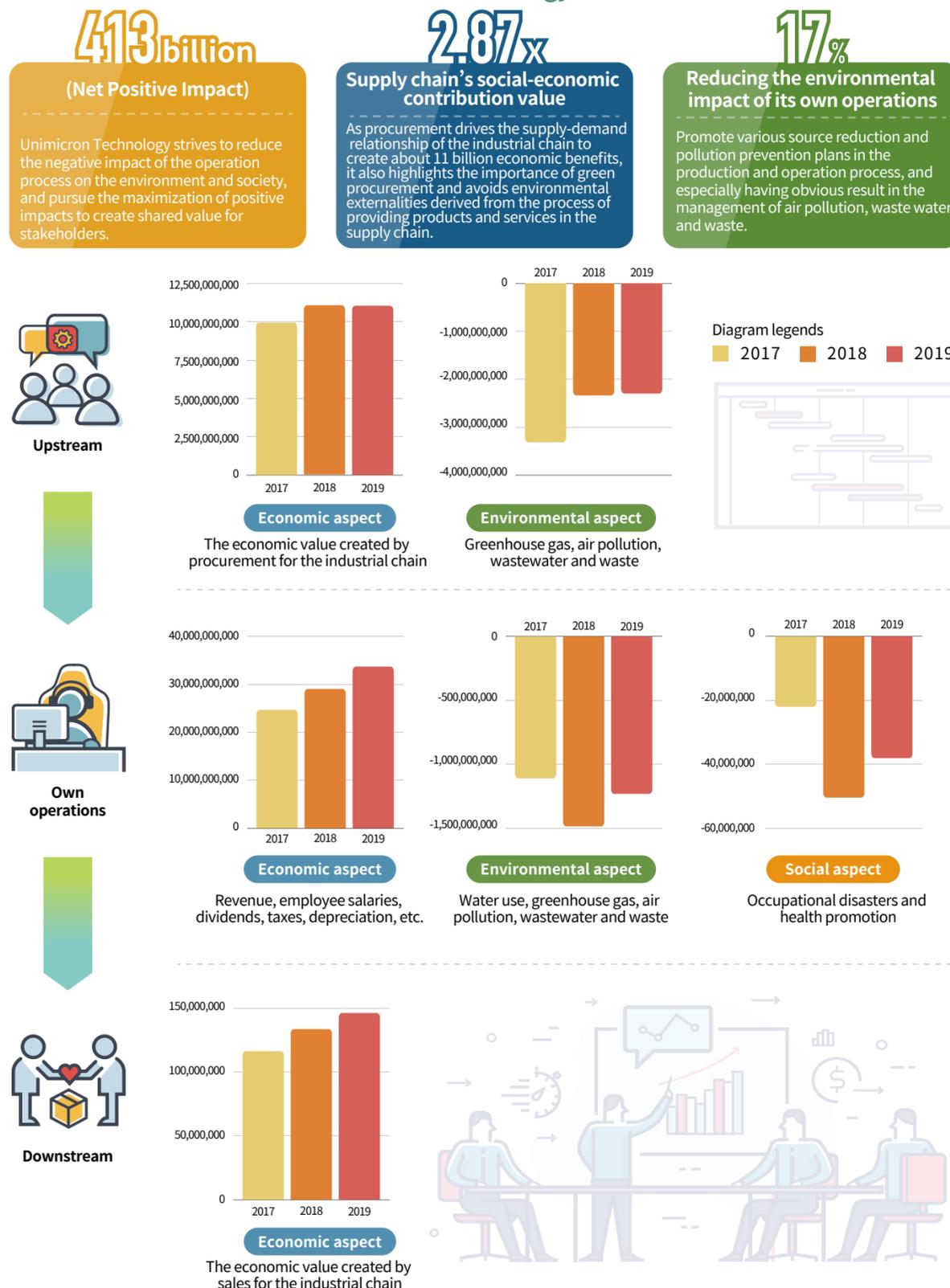


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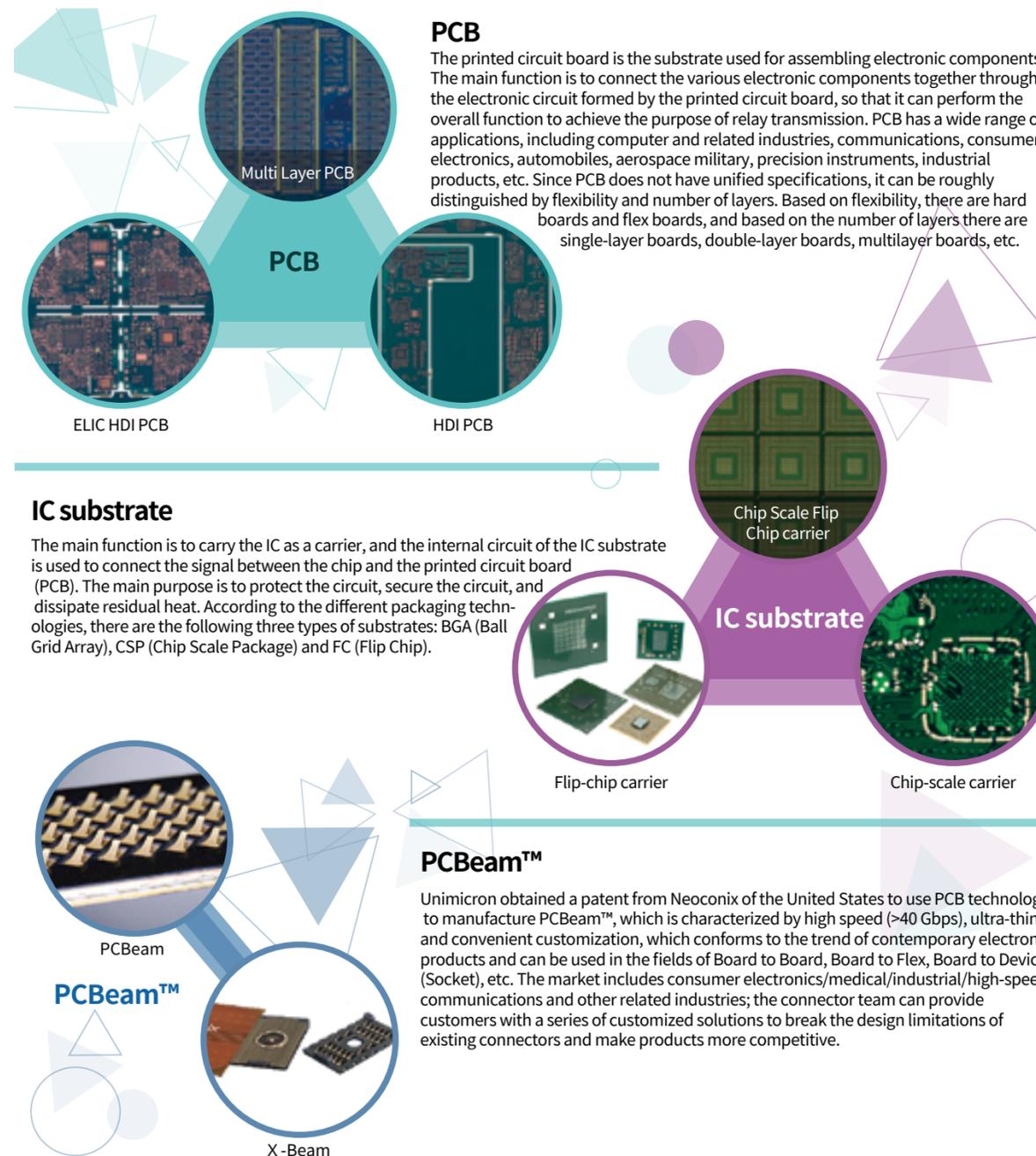
## 2019 Evaluation Results of Unimicron Technology's Influences



## 1.2 Products and services

### 1.2.1 Product manufacturing and application

Unimicron Technology's main business items are engaged in 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 printed circuit boards (including carriers) and IC testing and burn-in, etc.



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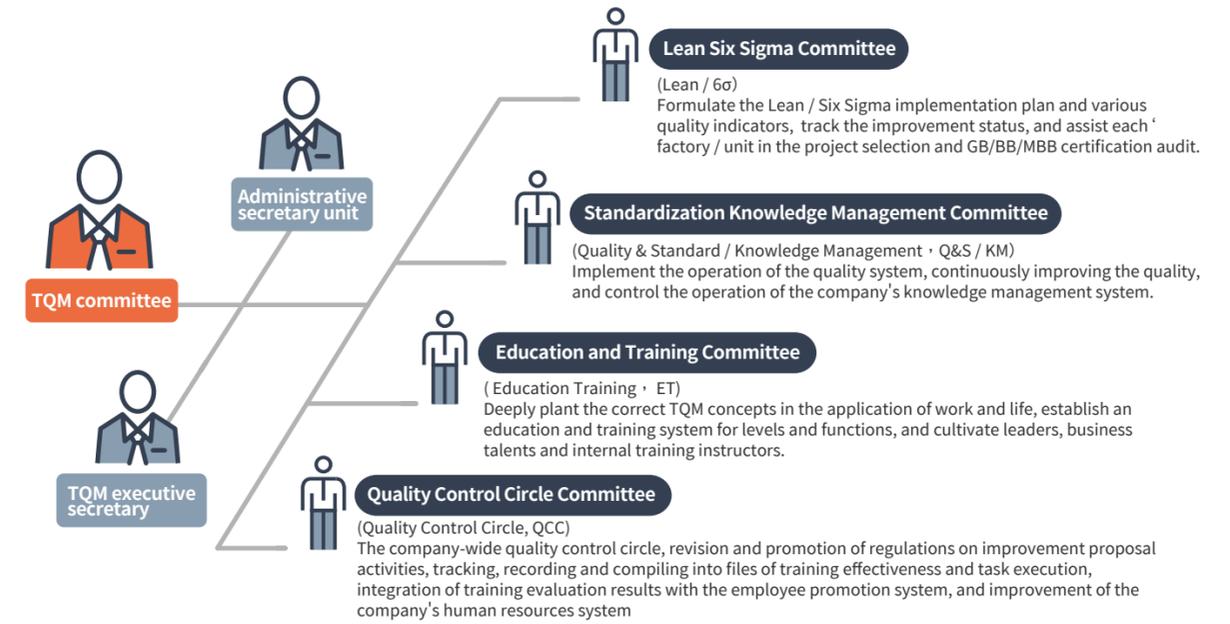
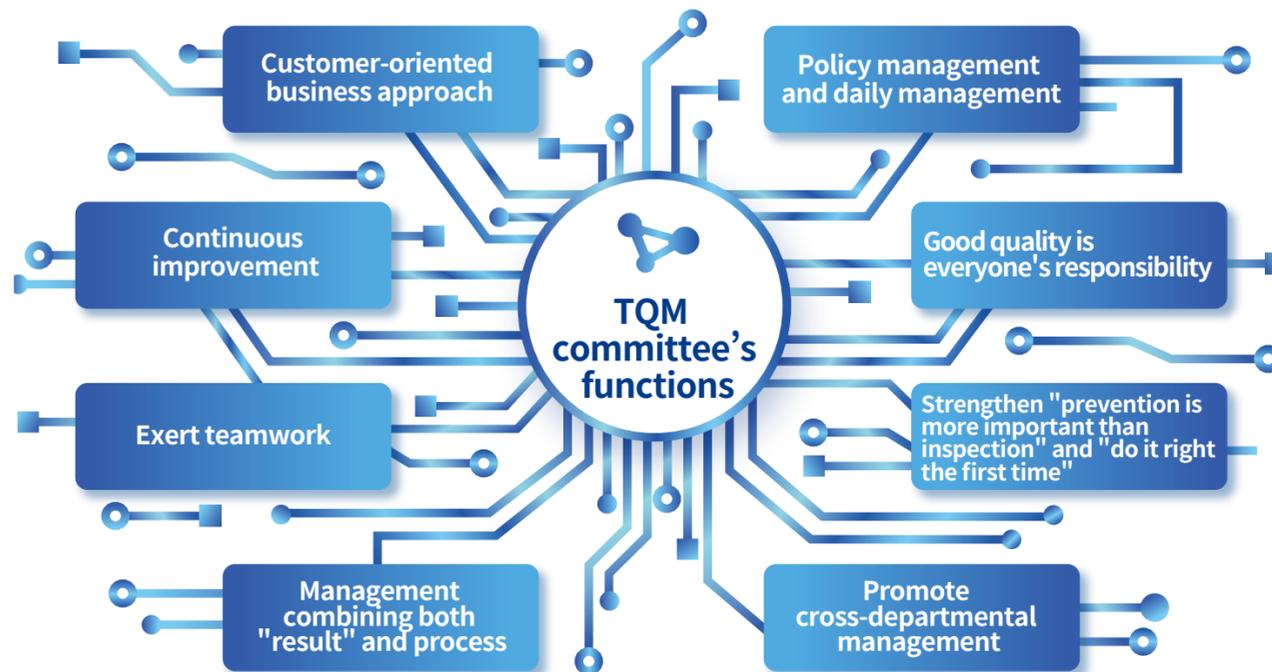
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## 1.2.2 Quality management

Unimicron Technology 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 service."



Total Quality Management (TQM) is an important part of Unimicron Technology's operations. We use a customer-oriented business approach, exert teamwork, and promote cross-departmental management. Since 1996, the TQM committee has been established to conduct total quality management. There are four sub-committees under it, including the Quality Control Circle Committee, the Education and Training Committee, the Standardization Knowledge Management Committee, and the Lean Six Sigma Committee, to comprehensively and perfectly promote quality management.



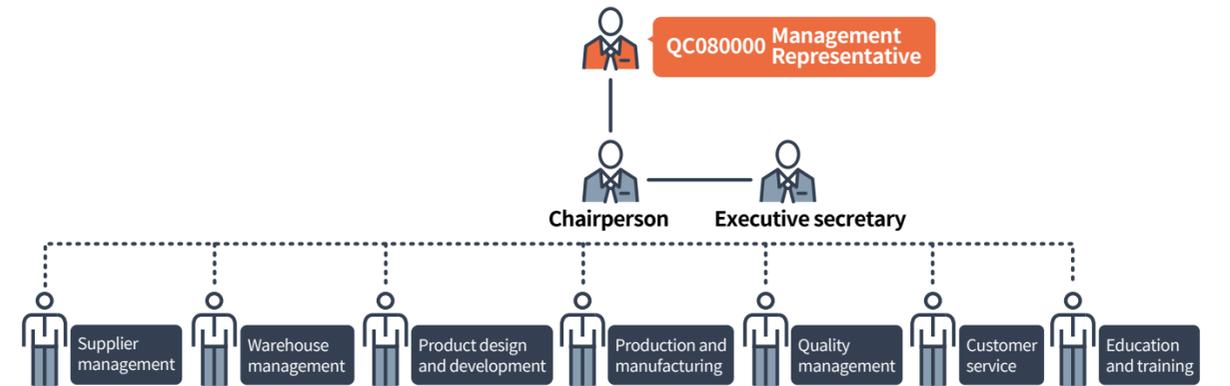
In order to expand the application range of our products, we are committed to the establishment and implementation of the ISO 9001 system, and promote the IATF 16949 automotive quality management system and the QC 080000 hazardous substance management system, pursue continuous quality improvement to enhance competitiveness, and drive all employees to improve their work performance, achieving the goal of overall quality improvement.

## 1.2.3 Green product management

Unimicron Technology is committed to the implementation of green product management, with the three principles of "compliance with green standards and requirements," "green procurement," and "green supply chain," and sets the quality target of Hazardous Substances Free (HSF). Products have been banned from using environmentally hazardous substances, and quality management, materials, products, R&D, manufacturing, business and other departments are integrated, and green materials are taken into consideration at the process design end. The purchased raw materials comply with international laws and regulations, such as RoHS, REACH, Packaging Materials Directive, China RoHS, California Act 65, Montreal Convention, etc. The products are 100% compliant with RoHS and REACH regulations, in order to implement the purpose of green products and continuous improvement, meet the requirements of customers and meet the requirements of international environmental protection regulations for green products, contributing to the global environment.

### Green Product Committee

Based on the QC080000 IECQ HSPM (Hazardous Substances Process Management) system, Unimicron Technology establishes the Green Product Committee to set HSF quality policies and goals, to have complete control of the four major processes, quality planning, supply chain and material process, manufacturing, and quality assurance, of hazardous substances to ensure that products meet customer requirements, while complying with relevant laws and regulations and green product specifications, meeting quality requirements and customer satisfaction requirements.



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## HSF quality policy

In order to implement the four major principles of HSF quality policy, Unimicron Technology has established various indicators to regularly track performance and achievement rates, in order to ensure that the policies are implemented and meet customer needs. From 2013 to 2019, the achievement rate of all HSF quality indicators was 100%, and there were no returns from customers due to HSF noncompliance.



## HSF quality indicators and performance

Indicator	2019 target value	2019 achievement rate	2020 target value
Number of customer returns due to HSF noncompliance	0	100%	0
Real-time update completion rate of international hazardous substances regulations/customer' regulations	100%	100%	100%
Testing compliance rate of hazardous substances testing by the in-house unit and commissioned third-party notary unit from incoming to outbound	100%	100%	100%
Deficiency improvement completion rate of regular and irregular HSF internal/external audit	100%	100%	100%
HSF regular training completion rate	100%	100%	100%

## Hazardous substance survey

"100% green products in compliance with international regulations, industry standards and customers' requirements" is Unimicron Technology's commitment to green products. We follow the management system specifications, conduct source and finished product management, and require suppliers to take the hazardous substance survey, to ensure that raw materials comply with the requirements for hazardous substances management of EU's RoHS (Restriction the use of Certain of Hazardous Substances in Electrical and Electronic) and REACH (Registration, Evaluation, Authorization, and Restriction of Chemical).

## Green product management mechanism

Stage	Operation description	Implementation effectiveness
Source management	<ol style="list-style-type: none"> <li>E-Pr system                             <ul style="list-style-type: none"> <li>Unimicron Technology's hazardous substance management required documents for suppliers and the announcement of related green requirements are issued to assist suppliers in understanding the requirements on hazardous substances in environmental laws, regulations and markets, and to prevent materials containing hazardous substances from flowing into Unimicron Technology and being used by Unimicron Technology, reducing the impacts of harmful substances on human health and the environment.</li> <li>The hazardous substance non-use guarantee statements signed by suppliers and REACH questionnaires are managed to ensure that the products provided by suppliers meet Unimicron Technology's requirements.</li> </ul> </li> <li>Suppliers are required to provide third-party testing reports and update them once a year, in order to ensure that the products they provide meet Unimicron Technology's green procurement requirements.</li> <li>Only use materials approved by the Green Product Committee.</li> </ol>	<ul style="list-style-type: none"> <li>The procurement rate of green materials (compliance with RoHS) is 100%.</li> <li>The compliance rate of suppliers' testing reports by third-party notary units is 100%.</li> <li>The compliance rate of products' RoHS review is 100%.</li> </ul>
Process management	<ol style="list-style-type: none"> <li>The whole process uses "direct materials of halogen-free" and "lead-free," unless the customer specifies the use of materials; for the materials specified by the customer, they are all identified and effectively managed and used in the processes from the incoming, picking, manufacturing, and finished good check-in.</li> <li>Set up XRF testing equipment to conduct hazardous substance testing for incoming materials and finished goods, in order to ensure that the delivered goods meet hazardous substance management requirements.</li> </ol>	<ul style="list-style-type: none"> <li>The XRF inspection compliance rate of finished product is 100%.</li> <li>The XRF inspection compliance rate of incoming is 100%.</li> <li>The Outsourcing inspection compliance rate is 100%</li> </ul>
Customer-end management	<ol style="list-style-type: none"> <li>Regularly conduct surveys on customer satisfaction with Unimicron Technology's HSF quality as a basis for continuous improvement.</li> <li>Cooperate with customers' requirements, complete the survey of related hazardous substances, and submit hazardous substance testing reports from third-party notary units when necessary.</li> </ol>	<ul style="list-style-type: none"> <li>2019 Customers' HSF quality satisfaction: 4.47 (out of 5 points)</li> <li>The 2020 target value is 4.3.</li> </ul>

Note: The REACH SVHC substance list can be inquired on the [ECHA](#) website.



## 1.2.4 Innovative technology R&D

In order to continuously enhance the value of the company, Unimicron Technology actively takes reference to and participates in the formulation of the technical blueprint for the international industry, and formulates five major strategies to meet the needs of various future products. Through the three strategies of 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.

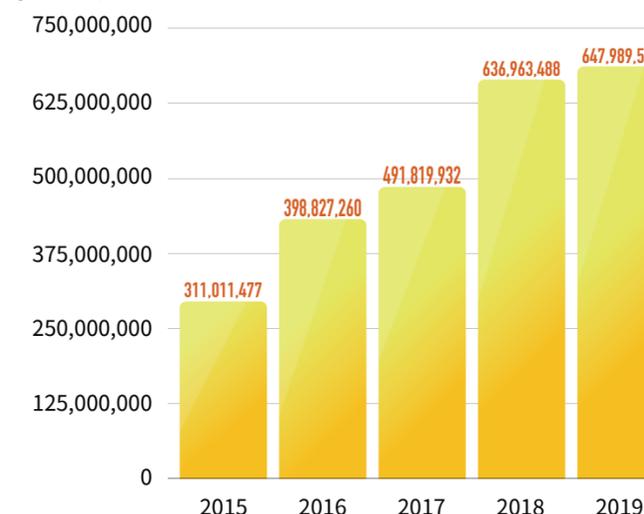


## Patent portfolio

Based on the strategy of establishing a foothold in Taiwan and deploying globally, Unimicron Technology has established R&D bases in Taoyuan and Hsinchu, Taiwan, focusing on customer-required technologies and forward-looking innovative technologies in the next three to five years, and is committed to investing in the development of different innovative R&D focuses.

In addition to its commitment to introducing advanced equipment and recruiting outstanding R&D talents in the industry, Unimicron Technology also invests a large amount of R&D funds. Currently, the annual R&D expenditure invested is about 2~3% of the current year's operating revenue. The research and development funds invested in recent years have grown in a geometric manner year by year, creating the number of patents and technical capabilities of various products.

R&D expenses (New Taiwan Dollars)



R&D expenses increased in 2019 due to the purchase of new equipment and the expansion of the RD organization, which increased in 2019 compared to 2018.

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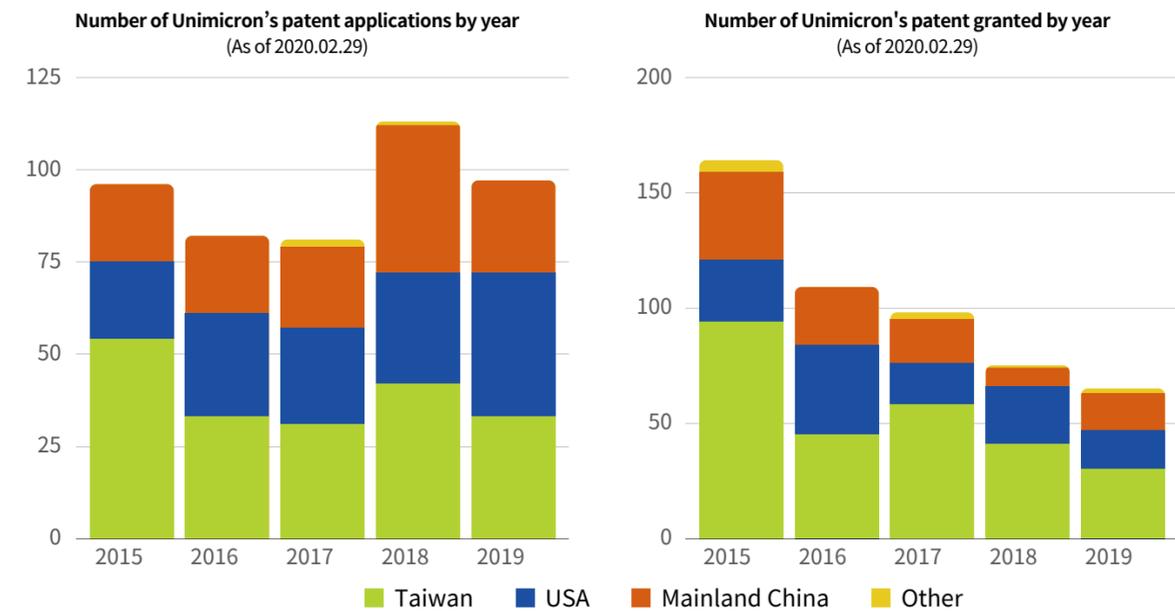
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### Technological development

In response to major industry trends in the future, Unimicron Technology continues to invest in research and development energy, and deeply cultivates high-end product technology platforms, such as 5G high-frequency high-speed PCB products, ultra-fine pitch LED module development, Cool PCB (High Thermal Conductive) module development, NF (Nick-Free surface finished) new technology development and high-end Photovia PCB new technology development.

After years of technical development and investment in research and development capacity, results have been gradually achieved; in the Internet of Things product development plan, Unimicron Technology has researched and developed "Cavity" PCB materials and their design, which is also one of the best solutions for Internet of Things products with SiP (System in Package) technology. After the Cavity PCB board material and its design technology mature, huge business opportunities are expected to take place. At this stage, facing that the fifth-generation (5G) mobile communications are about to enter the global commercial stage in 2020, Unimicron Technology focuses on the R&D fields of high-frequency AiP circuit boards, mobile phone boards and array antennas, optoelectronic communication boards for optical modules, and high-speed circuit boards for various server switches and routers.

Relying on its expertise and experience in large panel manufacturing of printed circuit boards/IC carriers, Unimicron Technology is equipped with the existing Coreless technology, based on the platform innovative multilayer film wiring technology, to integrates materials and equipment manufacturers in the semiconductor and panel industries to form a research and development alliance. It develops the advanced packaging technology of Panel-level Fan-Out (PFO) with RDL first (Die last) and ultra-fine circuit lines (2µm/2µm line width/line spacing) to break industrial problems and technical challenges of FOPLP (Fan-Out Panel Level Package), driving the development of the overall industrial chain. ETS carrier board technology continues to break through the bottleneck of fine lines and establishes a technology platform of L/S: 6/8 µm, laying the foundation for the next communication generation. As for the development of thick-board PCB technology, Unimicron Technology took the lead in developing the TLPS docking technology platform board with a board docking alignment degree of <60 µm, quickly extending the thick-board technology from 3 mm to 6 mm.

Item	Difference analysis between 2019 and the previous year
2/2 µm Fan-out technology	Completed the reliability verification of the 2/2 µm Fan-out new technology platform. Die Slices Fan-Out module integration and electrical testing. Completed TEG package module integration verification: electrical test yield> 80%
New technology development of ETS fine line	ETS fine line technical capability improved from L/S: 8/10 µm to L/S: 6/8 µm
TLPS docking technology platform development	Completed TLPS docking technology platform reliability verification and prototype sample development for 2 board docking alignment degree <60 µm.

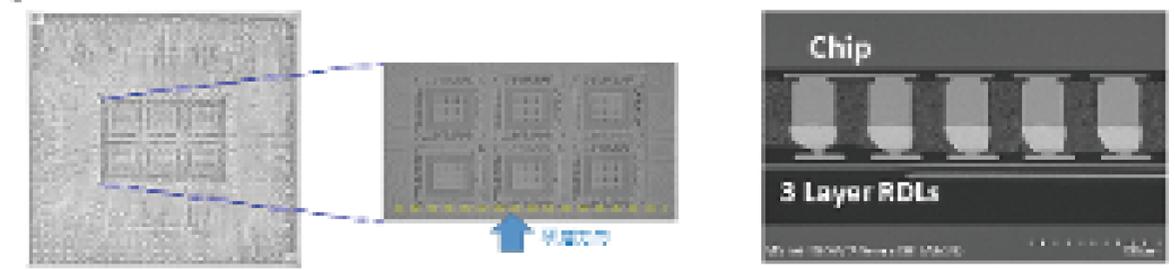
### 2/2 µm Fan-out technology

A4.3 Complete TEG package module integration verification: electrical test yield rate >80%; Completed TEG package module integration reliability verification: conditions Pre-conlevel3 & TCT 500X

- Electrical test yield rate : 87%
- Completed the electric log of TEG package module reliability verification

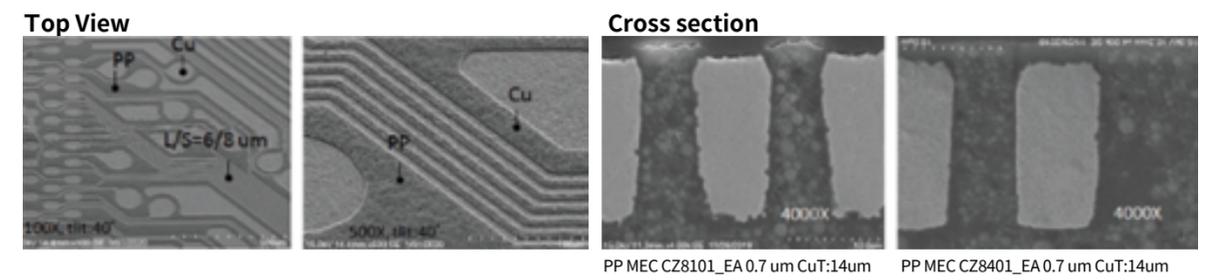


### X-ray & Cross-Section Check :

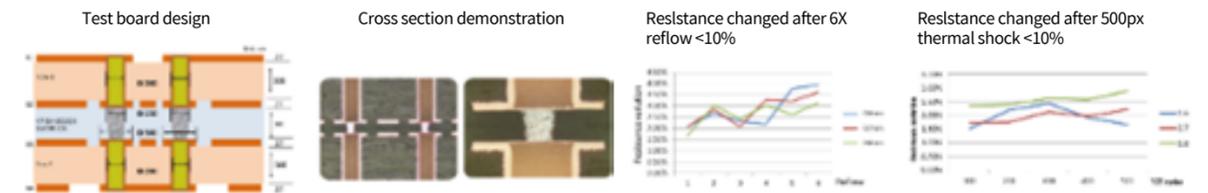


Result explanation: TEG package module's electrical testing can pass Pre-con level3 and TCT 500X reliability test, with an electrical test yield rate of 87% (>80%). In addition, X-ray observation is free of abnormality, SEM cross section shows MUF at the contact has a good filling state, and the interface of each material is also normal

### New technology development of ETS fine lines



### TLPS docking reliability verification



### Technological cooperation

Unimicron Technology recognizes the importance of value chain cooperation in driving the industry towards sustainable innovation. In addition to cooperating with international vendor customers to develop the next generation of high-end IC carrier boards, it also communicates with customers, synchronously understands customers' needs for technology and next-generation products, masters the development blueprint of customers' future products, strengthens cross-field cooperation in domestic industries, develops independent industries and equipment products, and strengthens the research and development relationship among industry, academia and research. It encourages and pushes the industry to set new specifications, drives the transformation/optimization of the industrial structure, continues to meet customer expectations with the best quality and service model, and leads the overall industry chain to move forward and expand broader value.

R&D cooperation plan and cooperation with suppliers can ensure that products are in the leading position in the world. We maintain close cooperation with world-class material and equipment suppliers, introduce high-performance materials and cutting-edge equipment for new product development, and cooperate with domestic equipment vendors.

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### Strengthening cross-field cooperation in the domestic industries

From 2016 to 2019, Unimicron Technology had two "A+ Industrial Innovation R&D Programs (Program A)" approved by the Ministry of Economic Affairs. Unimicron Technology led one of them, with a total of five companies participated in the cooperation, and received government grants of more than NT\$86.46 million, for the development of panel-level ultra-fine circuit Fan-out technology.



### Creating our country's independent industrial and equipment products

There are many large-scale companies in the semiconductor industry that have supplies from major manufacturers from Japan, South Korea, Europe and the United States. Unimicron Technology looks forward to accelerating R&D and assisting equipment and material manufacturers to create their own R&D capacity. Thus, the technology of equipment and materials can be self-sufficient in the domestic industry, forming a complete supply chain, increasing the overall output value of the semiconductor industry, and strengthening the overall output value of the domestic semiconductor industry to be against the emerging red supply chain.

### Strengthening the new research and development relationship of domestic industry, academia, and research

Unimicron Technology has long-term cooperation plans with domestic universities such as Tsing Hua University. In 2016, the amount of cooperation reached NT\$9.32 million. The amount was NT\$9.2 million in 2017, NT\$8.2 million in 2018, and reached NT\$ 10.2 million in 2019. Unimicron Technology hopes to provide a model example of strengthening the new research and development relationship between our industry, academia, and research. Unimicron Technology hopes to effectively use the research results of academia to shorten the learning curve. At the same time, it also activates the research capability of domestic research institutes and academia, promotes basic science, and integrates and stimulates the innovative insights.



### Encouraging the industry to set new specifications

Unimicron's R&D Department's 5G IoT product development plan and ultra-small-pitch LED display module development plan are all new plans. The industry has not yet set a standard for product quality certification or testing. Through Unimicron Technology's effort, once the next generation product quality certification or testing is reached, new specifications can be set for the industry, which will form a technology entry barrier, preventing other competitors from easily entering this field and protecting commercial interests. Unimicron Technology is also willing to share it with the industry.

### Promoting the transformation or optimization of the industrial structure

It developed new technologies for radar 77GHz and high-speed optical module (OM) in 2019, focusing on the development of 5G high-frequency and high-speed PCB and AiP-substrate new product technologies. At the same time, it cooperates with the Industrial Technology Research Institute to develop high-frequency and high-speed new technologies. Currently it has completed the ETS L/S: 6/8 μm technology; the development of TLPS docking technology with thick PCB board docking alignment degree <math><60\ \mu\text{m}</math>, and development of panel-level fan-out advanced packaging technology with ultra-fine lines (2μm/2μm line width/line spacing). It is hoped that through the cooperation of various manufacturers, the synergy effects can be used to improve the competitiveness and profit of the industry, strengthen the international competitiveness of Taiwan's industries, and bring a huge niche to the domestic industry in response to the challenges of Japan, South Korea and the red supply chain.

## R&D cooperation plan

### Cooperation with suppliers

In order to ensure that the product is in the leading position in the world, we maintain close cooperation with world-class material and equipment suppliers, introduce high-performance materials and cutting-edge equipment for new product development, and cooperate with domestic equipment firms.

### Cooperation with academia

Maintain close cooperation with domestic and foreign research institutions and academia, and join the system packaging technology research and development alliance initiated by the Industrial Technology Research Institute, German IZM and Georgia Institute of Technology in the United States to jointly develop several new products and new technologies; maintain close cooperation with National Taiwan University and National Tsing Hua University, National Chiao Tung University, National Central University, Yuan Ze University, Chang Gung University and Chung Hua University, and set up cross-departmental research and development projects at National Tsing Hua University and Yuan Ze University, accumulating R&D capability.

### Cooperation with the government

Obtain tax relief from the government on research and development, investment deductions and incentives on equipment, and Industrial TDP grants. From 2016 to 2019, Unimicron Technology had two "A+ Industrial Innovation R&D Programs (Program A)" approved by the Ministry of Economic Affairs. Unimicron Technology led one of them, with a total of five companies participated in the cooperation, and received government grants of more than NT\$86.46 million, for the development of panel-level ultra-fine circuit Fan-out technology.

## 1.2.5 Global market sales

### Industry status and development

PCB is a key component of various electronic products. Products are used in computers, communications, and various consumer electronic products and equipment. In recent years, they have been more widely used in automotive, industrial, medical, military and aerospace fields. Therefore, the development of this industry is driven by modern technological progress and is closely related to the demand for various end products. According to data from Prismark Research Institute, the global PCB output value in 2019 is approximately US\$61,311 million, with an annual decline of approximately 1.7%.

Benefiting from the deployment of 5G communication infrastructure equipment and more 5G emerging applications, the growth of high-end PCB and IC substrates in 2019 will be promoted. However, we still need to be cautious in facing the impact of external environmental factors such as US-China trade war, Brexit, and Japan-South Korea trade conflict. In 2019, due to the continuous optimization of the company's IC carrier board product portfolio, improved technology and yield rate, and stable market demand, the company's operating performance improved significantly. Although substrate-like PCBs, HDI, and rigid-flex boards are still affected by the seasonal off-season in the first half of the year, with the peak season in the second half of the year and the introduction of new models, revenue has improved significantly. Looking forward to 2020, with the continuous US-China trade shock and the effect of the COVID-19 epidemic, the global economy will be revised downwards. Prismark estimates that the global PCB industry will grow at an annual growth rate of approximately 2.0% in 2020. However, with consumer products' peak season in the second half of the year and the business opportunities of future 5G, AIoT, HPC and big data development, the electronics-related industries will promote the growth of the PCB industry by expanding related application products.

### Various development trends of products

Prismark Research Institute estimates that the overall PCB industry will grow by about 2.0% in 2020. The application mainstream of terminal electronic products is multi-performance integration, high-speed computing, large screen, energy saving and miniaturization. The growth potential of market application products comes from servers, data centers and other network communication products, automotive electronics control units driven by electric vehicles and smart cars, and future new applications such as 5G and AIoT. With the introduction of high-speed computing products and 5G-related equipment, the demand for high-end carrier board manufacturing processes has increased significantly, to enhance customers' design freedom and product reliability, allowing continuous improvements and upgrades in the stability, speed, and low-latency technology of product signal transmission.

The demand for flex boards and Rigid-flex boards has increased significantly, mainly due to the trend of multi-function, lighter and thinner handheld electronic products. Customers design with a large number of unique features such as lightness, thinness, and bending resistance of flexible boards, to connect the signal transmission between the modules and the motherboard within a limited space, effectively saving the internal space and weight of the device.

As the complexity of packaging technology increasing with end products, its requirements of high frequency, high performance, and low power consumption make chip design move toward high I/O density, fine pitch, high heat dissipation, and superior electrical characteristics, which in turn drives 3D systems packaging, embedded components, ultra-fine lines, low power loss and other related carrier board requirements; 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 line with the next-generation process development of the semiconductor industry, the carrier board industry also continues to develop related high-end processes and cooperates with customers to expand product application areas.

### Major Products' Sales by Region (Unit : In thousands of New Taiwan Dollars)

Year		2019		2018		2017	
Sales regions		Amount	%	Amount	%	Amount	%
Domestic		18,586,998	23%	16,574,136	22%	13,186,322	20%
Exports	Asia	56,470,465	68%	52,964,511	70%	46,629,923	72%
	Americas	2,099,195	2%	1,508,351	2%	980,522	2%
	Other	5,378,895	7%	4,685,782	6%	4,195,991	6%
	Subtotal	63,948,555	77%	59,158,644	78%	51,806,436	80%
Total		82,535,553	100%	75,732,780	100%	64,992,758	100%

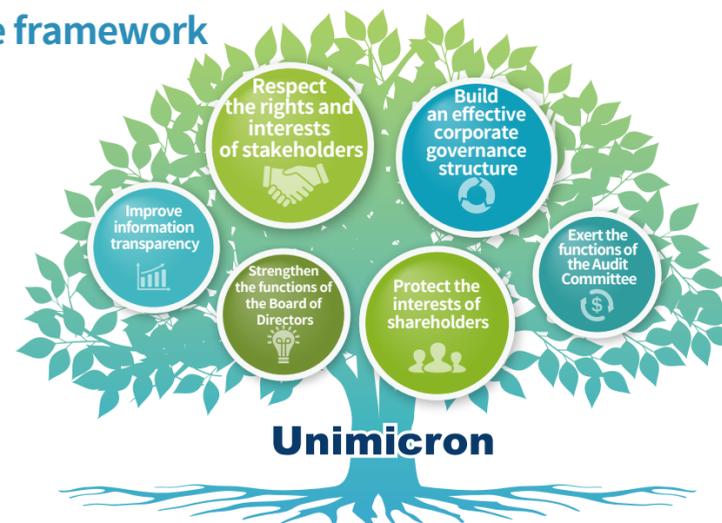
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## 1.3 Corporate Governance

### 1.3.1 Corporate governance framework

Unimicron Technology takes "the world-class high-tech company with high added value, high quality, high productivity, and focusing on innovation and service" and "pursuing the satisfaction of customers, employees, and shareholders and fulfilling social responsibilities" as the company's vision, and adheres to six principles, and takes specific implementation of relevant actions to implement corporate governance. At the same time, in order to innovate corporate value, Unimicron Technology sets 2021-2022 to master the new blue ocean product market, become the best partner of world-class leading customers, develop high-frequency and high-speed application technologies, reach the five goals of creating product advantages, cultivating all-round talents, establishing a new generation of intelligent production plants, innovating corporate governance, and implementing sustainability vision, and implement the company's sustainability governance.



### Operation of the board of directors

Unimicron's Board of Directors is comprised of nine directors, including three independent directors. There are four directors aged 51-60 and five directors aged over 60 years old. The term of the director is three years. One of the directors was dismissed naturally on August 8, 2019. The selection of the directors is in accordance with the Company's provisions of "Regulations on Director Election." Unimicron has adopted a nomination system for directors. The candidates will be elected at the Shareholders' Meeting from a list of candidates. Cumulative voting is used to elect the Company's directors. A shareholder is entitled to one vote per share multiplied by the number of directors to be elected. The votes can be cast to one candidate or be distributed to multiple candidates. The number of directors to be elected is in accordance with the stipulations of the Company's Articles of Association and related announcements. Candidates with most votes will be designated as the non-independent directors, followed by independent directors. In order to strengthen operational and management efficiency, the chairman also serves concurrently as the chief executive officer, in order to enhance the corporate governance synergy. For information on board members, please refer to the information on P.4-P.5 of the 2019 Annual Report.



### Board governance principles

The board of directors meets at least once a quarter, in compliance with the Company's "Rules and Procedures of Board of Directors Meetings," to review business performance and discuss major investment issues and future development strategies, etc. A total of 7 board meetings were convened in 2019, with an average attendance rate of 88%. The major issues passed at the board meeting will be immediately disclosed in the "Market Observation Post System." The "Rules and Procedures of Board of Directors Meetings" clearly stipulate the guidance on recusal due to conflicts of interest. If the director himself/herself or his/her legal representative has an interest in the meeting matter, the director or the legal representative shall provide an explanation on the matter at the said board meeting. If it may be harmful to the Company's interests, they shall not participate in the discussion and voting, shall be recused during discussion and voting, and shall not represent other directors in exercising their voting rights. Unimicron's shareholders are also able to exercise their voting rights at the shareholders' meeting by e-voting. In 2019, the voting rights exercised by electronic voting accounted for 54.99% of Unimicron's total issued shares, and accounted for 64.79% of the attendance rate of the shareholders' meeting in the current year.



### Director diversity

Two of the independent directors in Unimicron's Board of Directors are female. The professional backgrounds of the members of the Board of Directors cover business management, finance, science and engineering, psychology, and other fields, and their titles include professor of information technology management, chief financial officers in listed companies, proprietors in the technology industry, etc. With the rich industrial and academic experience and diverse professional expertise, the directors can provide professional advice from different perspectives, which is extremely beneficial for the corporate governance. In order to enhance the competency of the directors, we also encourage the directors to actively participate in refresher courses, and training sessions are scheduled irregularly. The training topics include strengthening the directors' professional knowledge related to corporate governance, business operation, and risk, such as legal risks of business considerations in business management decisions corporate. We also organize a corporate governance forum to talk about how to implement the independent director system and enhance the value of corporate governance. In 2019, the Securities and Futures Institute was commissioned to organize the "Advanced Seminar in (Independent) Directors' Practice" for a 3-hour training session. The total annual training hours for all directors (excluding the naturally dismissed director) in 2019 was 66 hours, and the director's average training hours were 8.25 hours.

### Functional committees

In order to enable the Board to implement the monitoring, auditing and management functions, Unimicron has a "Remuneration Committee" and an "Audit Committee" under the Board of Directors, effectively performing the duties of each functional committee, and implementing the powers and responsibilities of management and supervision.

**Remuneration Committee**

**Convener** Wu Ling-Ling **Members** Li Ya-Jing and Li and Lai-Zhu Chen

- There meetings were held in 2019, and the committee members' attendance rate was 100%.
- There were no major motions in 2019, and all were general routine motions.

**Audit Committee**

**Convener** Wu Ling-Ling **Members** Li Ya-Jing and Li and Lai-Zhu Chen

- Seven meetings were held in 2019, with an average attendance rate of 90.48%
- Resolution of major agenda in 2019: Change of attest CPA

### Internal control

Unimicron's Audit Office formulates an audit plan based on the enterprise's annual risk, conducts routine and irregular internal audit and control, and has one audit supervisor and 6 full-time auditors. In 2019, Unimicron conducted audit on 53 operation type audits, and found deficiencies in 9 operation types. Quarterly tracking and reviews were conducted for those deficiency items, and the completion rate of tracking and review improvement was 100%. The audit supervisors shall attend the board meeting of directors to report the audit results regularly to the board of directors and the audit committee, in order to implement the effectiveness of the internal control system.

### 1.3.2 Ethical Corporate Management

#### Code of Conduct

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." In addition to regular inspections by legal affair unit, it also requires all business management units to conduct regular system review and improvement, and cooperate with the auditing operations of the audit unit to ensure full implementation of regulatory requirements. Under strict management, in 2019, Unimicron was never punished by a large fine (more than NT\$1 million) by the competency authorities due to violation of regulations. There was no corruption and anti-competitive behavior taking place in 2019.

#### Professional Ethics Guidelines

Unimicron Technology has "Integrity Regulations" and "Employees' Professional Ethics Guidelines and Code of Conduct" for all employees, clearly sets rules for the employment of relatives and associated suppliers, and upholds integrity in dealing with customers. From 2012 to 2019, no cases of corruption and bribery occurred in any business unit. Unimicron Technology will also ensure the implementation of the mechanism through the following measures every year, and the relevant practices cover various factories in Taiwan and mainland China.

- The "Company Integrity Regulations" are taught during the training of new recruits, and the relevant terms are included in the employment contract.
- Supervisors above the manager level sign the "Employee Integrity Code Compliance Contract" every year, and the signing rate in 2019 reached 100%.
- 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 2019 were personnel in engineering management positions in Taiwan, whereas personnel in the mainland China different for each plant; the number of people surveyed was 3,473 from the plants in Taiwan and 15,668 from the overseas plants, without any violations.



If employees find any violations of ethical management, they can submit an anonymous whistleblowing report or complaint to the Unimicron Technology Audit Team or the Human Resources Department via telephone or suggestion box in accordance with the provisions of the Integrity Code. The undertaking unit will set up a special project team to investigate. If the whistleblowing report involves a director or senior executive, the undertaking unit shall report it to the independent director or supervisor of the Group. In 2019, no ethics-related whistleblowing reports were received.

### Regulatory compliance

#### Information Disclosure

In accordance with the regulations of the competent authority, investors can inquire about company-related information through the "Market Observation Post System." In addition to disclosing Unimicron Technology's basic information, technology research and development, and corporate social responsibility, the company's website also has an investor relations area to provide company financial information and corporate governance and other related written documents and regulations. We hold regularly institutional investor conferences every quarter to explain quarterly consolidated financial figures, operating conditions and future prospects, and provide relevant information and video files of the conference on the company's website and the "Market Observation Post System" for investors' reference. The company also specifically communicates with investors through various investment conferences, overseas visits and investor relations contacts. In 2019, Unimicron Technology participated in 16 external or self-organized institutional investor conferences and participated in more than 100 institutional investor interview meetings.

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<b>Market Observation Post System</b>	<b>Investor Relations Zone</b>	<b>Institutional Investor Conference</b>	<b>Stakeholders Zone</b>
Can provide access to Unimicron Technology-related information	Provide written documents and regulations related to the company's financial information and corporate governance.	Regularly hold an institutional investor conference every quarter to explain quarterly consolidated financial figures, operating conditions and future prospects.	Provide special feedback channels for major stakeholders to implement communication and negotiation with stakeholders

### Education and training on governmental and regulatory regulations

Unimicron Technology has formulated the "Advocacy Operation Procedures of Prohibition of Insider Trading and Listed Companies' Insider Equity Transaction Compliance Specifications," and implements courses on the prevention of insider trading. In 2019, the number of people who completed the education and training on prevention of insider trading was 3,867, with a completion rate of 89.9%, which was a significant increase from the previous year. We will actively promote the relevant awareness to our employees. In addition, Unimicron Technology also conducts an advocacy course on the ethical corporate management best practice principles. As of the end of 2019, there were 326 people who have completed the ethical corporate management education training (the completion rate + coverage rate are as shown in the table below). The company also provides reminders of relevant regulations from time to time, and has a consultation channel so that the regulated objects can understand the laws and regulations and comply with them accordingly. In order to strengthen employees' understanding of international ethical standards, antitrust law training has been included in the new recruits training curriculum since 2016, and retraining has been carried out in batches for middle and high-level existing employees since 2018.

Course title	Re-training requirements	Participants	Number of persons to receive training	Number of persons completed training	Training completion rate
RBA (Note 1)	Everyone should receive re-training every year	All of the company's employees must be trained (Including Taiwanese employees stationed in the mainland China)	8,053	8,029	99.70%
Professional ethics best practice principles	Only the training only needs to be taken once. However, everyone should be re-trained if there is any revision.	Same as above	9,757	9,725	99.67%
Integrity best practice principles	Same as above	Same as above	9,757	9,725	99.67%
Prevention of insider trading (Note 2)	Same as above	Job level 5 (inclusive) and higher in Taiwan (including DL) (Including Taiwanese employees stationed in the mainland China)	3,859	3,829	99.22%
Advocacy of the ethical corporate management best practice principles (Note 3)	Same as above	Employees with job level 9 (inclusive) and higher (Including Taiwanese employees stationed in the mainland China)	345	326	94.49%
Antitrust Law (Note 4)	Everyone should receive re-training every year	1. Supervisors with job level 11 and higher 2. PCB and Carrier's business/strategic market: Employees with job level 7 and higher in plants in Taiwan and the mainland China	203	3	1.48%
Analysis on the law and ethics of business secrets	Everyone should receive re-training every year	Employees with job level 5 (inclusive) and higher	2,611	2602	99.66%

Note 1: RBA, professional ethics best practice principles, and integrity best practice principles have all been planned to be included in new employees' training courses to implement the training mechanism and increase the training rate. Some expatriates and senior executives have not been trained. We will strengthen course promotion and reminder operations, and provide expatriates with training opportunities to increase the training completion rate.

Note 2: The prevention of insider trading has been included in the new employees' training course in 2019, and the overall training completion rate has increased significantly compared with 2018 (60.99% > 99.22%).

Note 3: The completion rates of the courses of the advocacy of the ethical corporate management best practice principles, the antitrust law, and the analysis on the law and ethics of business secrets are relatively lower. It is due to the difficulty to control the time the employees with job level 9 (inclusive) or higher or supervisors with plant manager level or higher domestic or overseas can receive training. In the future, electronic teaching materials will be provided to overseas factories, and human resources will be requested to assist in training.

Note 4: The antitrust course has been re-provided in 2020. The training unit will ask the responsible department to follow up on the completion rate of the course for the effectiveness of the course training.

## 1.3.3 Risk and opportunity management

### Risk management framework

Unimicron Technology has set up a "Risk Management Committee" under the Corporate Sustainability Committee to respond to various risks that may cause operational interruption at any time. It is composed of the Safe Environment Division, the general manager of each business unit, the highest supervisors of the Human Resources Department, the Supplies Department, the Information and Communication Department, and related departments. The risk management committee regularly conducts various operational risk assessments, and formulates risk mitigation and disaster recovery plans. Each department then conducts individual or comprehensive drills for emergency situations such as material outages, lack of work, information system failure, natural disasters or man-made destruction according to the plans, and proposes review and improvement suggestions.

In addition, in order to monitor the overall operating risks of Unimicron Technology, the annual risk assessment and plan of the "Risk Management Committee" will be further consolidated by the "Corporate Governance Committee" under the "Corporate Sustainability Committee" for the said year's "Continuing Operations Report." In addition to regularly reporting and monitoring risks, it also provides customers with the results of the report, understands their suggestions and feedback, and gives feedback to the responsible department of the "Risk Management Committee" to conduct corresponding reviews and plans to control and mitigate risks, making enterprises more sustainable.

The "Risk Management Committee" is subordinate to the "Corporate Governance Committee" under the Corporate Sustainability Committee, and is committed to reducing or eliminating risks and impacts related to company operations in order to respond to requirements and expectations from regulations, customers, society and the company. It also enables the company to adjust its business strategy in a timely manner in accordance with changes in the environment. The relevant specific operation specifications are included in the "Risk Management Operating Procedures," which integrates the operation continuity related regulations of the six important risk control departments to uniformly identify the company's operational risks.



### Response mechanism

Unimicron Technology's risk management and identification system, covering all units and departments, is a comprehensive management system, and the priority focus is on the most relevant to operation and production, such as manpower, environmental safety, materials, and information, and PCB and Carrier Product business units for the control and management. Through the annual "Continuing Operations Report", the six major departments are required to observe their daily operation needs, identify risks related to the company's operations constantly, put them under control, and evaluate their risk indexes, in order to determine the priority of processing. According to different risk indexes, four quadrants are classified, from low to high, namely the first quadrant, the second quadrant, the third quadrant and the fourth limit of high risk. Especially when the third or fourth quadrant risk occurs, the mitigation plan will be forcefully initiated and the effectiveness will be monitored every six months until it is eliminated. In 2019, through regular requirements to implement risk mitigation, and gradually implement effective corresponding strategies into internal operating procedures, except for natural disasters or external force majeure risks, all risks have been effectively controlled below moderate risks.

Unimicron Technology conducts a routine reassessment of all operational risks every year and updates its mitigation and contingency plans in order to have a complete grasp of operational risks. At the same time, we understand that no matter how perfect the regulations and plans are formulated, risks may still occur. In order to avoid losses caused by risks, Unimicron Technology carries various insurances (such as property insurance, operation interruption insurance, installation engineering insurance, marine insurance, fire insurance, etc.) to ensure that when a risk occurs, Unimicron Technology still has enough capability and resources to carry out the follow-up business recovery matters, and indeed take up the commitments to customers.

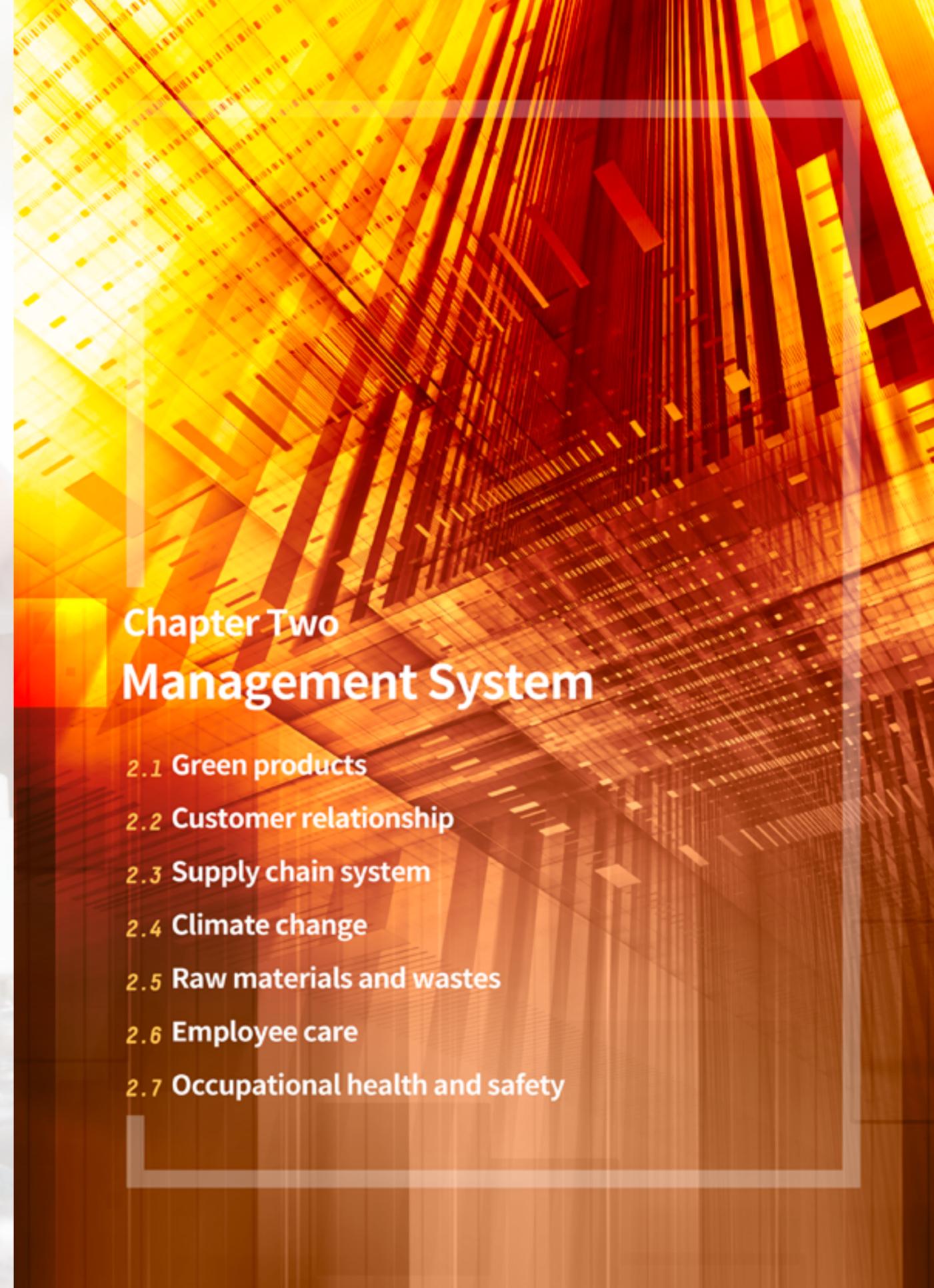
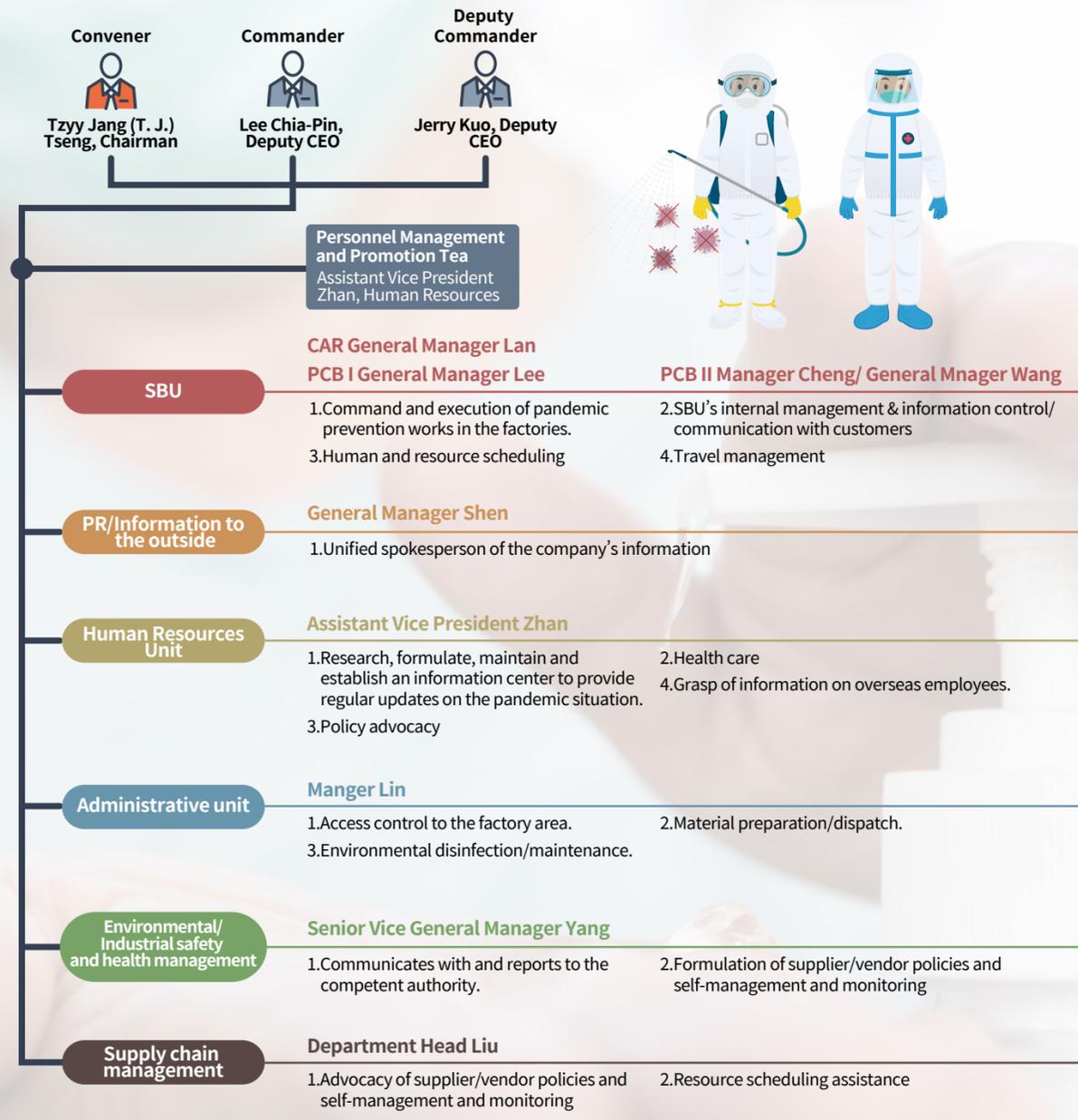
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## Unimicron Technology's COVID-19 Pandemic Prevention Organization Chart

In response to the COVID-19 pandemic in early 2020, Unimicron Technology has operating bases all over the world, and immediately established an internal cross-departmental command center, composed of six major units to perform epidemic prevention work according to their powers and responsibilities. In the command center, the deputy CEO serves as the commander, and the Assistant General Manager serves as the executive secretary. The command center is responsible for gathering epidemic prevention information, grasping supplier information, and holding weekly review meetings to grasp the status of each operating base, reduce operational risks, and ensure operations without interruption, and at the same time provides the information required by employees and customers at each base to protect the rights and interests of internal and external stakeholders.



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## 2.1 Green products

In order to actively move towards sustainable development and integrate major issues into its daily operations, Unimicron Technology has set up a complete management policy and system for the major issues in the economic, environmental and social aspects, continuously improving, refining, and implementing sustainable development.

### Description of green product management policy

Policy	Commitment	Responsible unit	Grievance mechanism	Action plan
HSF quality policy	Green products that 100% comply with international regulations, industry standards and customers' requirements	Green Product (Management) Committee	Audit Office's Customer Complaint Mailbox System	*Source management *Process management *Customer-end management
<b>Invested resources</b>		<b>Objective</b>		
1. Establish a testing report management system. 2. Establish an announcement and return system of suppliers' hazardous substance declaration documents 3. Set up hazardous substance testing equipment (XRF)		1. The procurement rate of green materials (compliance with RoHS) is 100%. 2. The compliance rate of suppliers' testing reports by third notary units is 100%. 3. Products' RoHS inspection compliance rate is 100%. 4. Finished goods' XRF inspection compliance rate is 100%. 5. Incoming materials' XRF inspection compliance rate is 100%. 6. The outsourced inspection compliance rate is 100%. 7. Customers' HSF quality satisfaction: 4.3 (out of 5 points)		
<b>Other response measures</b>				
-				

### International system certification

- Management system: The company has passed ISO9001 and QC080000 hazardous substance process management process system certification.
- Green material procurement: The raw materials purchased by the company comply with international laws and regulations, such as RoHS, REACH, packaging materials directive, China RoHS, California Act 65, Montreal Convention, etc., and the compliance is ensured by submitting the third notary unit testing report every year. In addition to self-inspection of incoming materials and finished products, the company also regularly commissions third-party notary to conduct testing, providing customers with assurance that there are no harmful substances.

## 2.2 Customer relations

### Description of customer relationship management policy

Policy	Commitment	Responsible unit	Grievance mechanism	Action plan
Three principles of quality policy: customer orientation, quality first, and continuous breakthrough	Commitment to sustainability, embodying co-prosperity and sharing	PCB CSR Customer Service Implementation Officer	Telephone, E-MAIL, and communication software	1. Compliance with CSR regulations: Reduce major deficiencies in customer CSR / RBA audits 2. Strictly abide by customers' privacy requirements: No complaints from customers due to infringement of customers' privacy or loss of customer information
<b>Invested resources</b>		<b>Objective</b>		
Business Unit / Factory Manufacturing Department / Factory Product Department / Factory Quality Control / Customer Service Department /HR/ Environmental Safety /CSR		Carrier target / PCB target 1. Number of major deficiencies in CSR / RBA audit: 0 2. Number of violations of customers' privacy: 0		
<b>Other response measures</b>				
Reply of major deficiencies & confirmation of improvement effects				

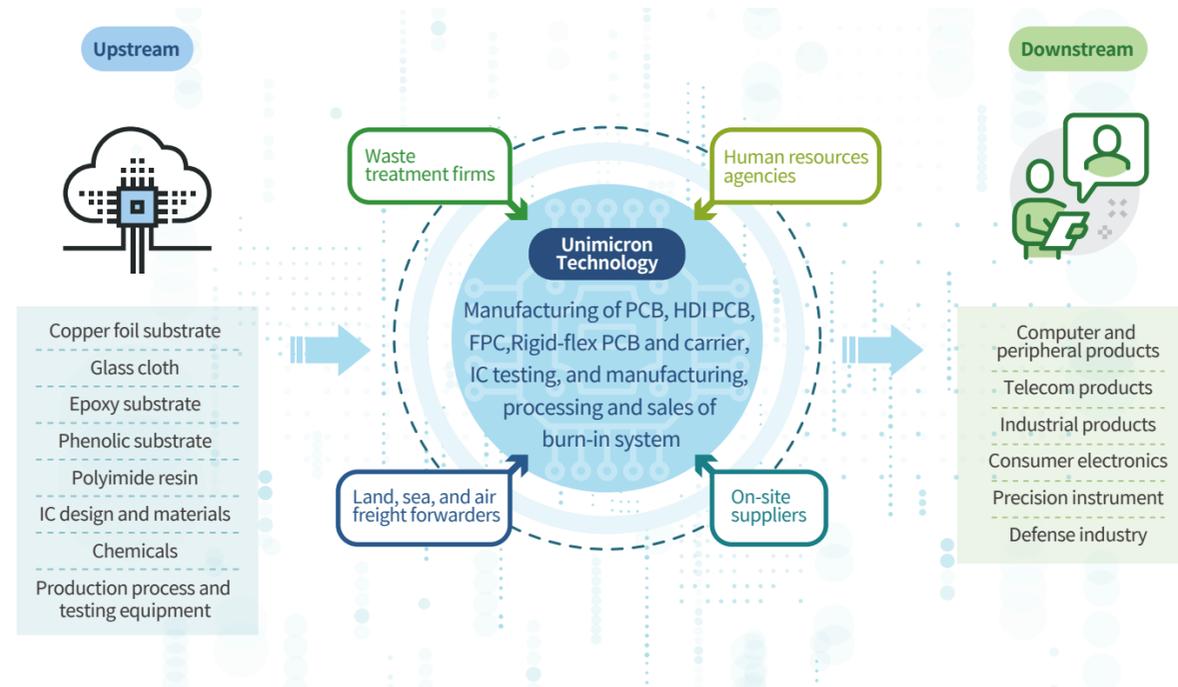
## 2.3 Supply Chain System

### Description of supply chain management policy

Policy	Commitment	Responsible unit	Grievance mechanism	Action plan
Fulfill the Responsible Business Alliance's "RBA Code of Conduct" as the basic principle for conducting business activities.	Sustainability and co-prosperity, providing total quality (TQM) that meets customers' satisfaction	1. CSR Committee 2. CSR Supply Chain Subcommittee 3. Materials 4. Quality management and Unimicron Technology's internal units	Audit Office's complaint hotline 0930-351-557	1. Meet customers' requirements 2. Advocacy to suppliers / Supplier evaluation / Supplier audit / Supplier assessment
<b>Invested resource</b>		<b>Objective</b>		
1. Organize a supplier conference 2. On-site audit of CSR suppliers and deficiency counseling materials 3. Daily advocacy		Upstream and downstream supply chain management meeting the requirements of quality/cost/delivery/service/technology and CSR management system		
<b>Other response measures</b>				
Unimicron Technology 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 Q/C/D/S/T management, we began to include RBA code of conduct, regulations and other supply chain potential risks in the assessment items at the end of 2018, and included the mitigation plan (BCP) of high-risk factors in the materials department's 2019 KPI, continuing to improve and monitor in order to effectively achieve the goals.				

### International specifications implementation

Unimicron Technology abides by the RBA code of conduct and expects suppliers to abide by the relevant RBA code of conduct requirements such on labor/health and safety/environment/ethics management systems. It regularly communicates the latest version of the RBA code of conduct to suppliers, requires major suppliers to cooperate with the RBA code of conduct audits, and coaches suppliers to meet RBA and other requirements for supply chain management; in addition, in view of the supply chain risk, it also monitors the financial status of major suppliers, and counsels suppliers on the management of business continuity planning and the management of conflict minerals, in order to reduce the supply chain risk.



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## 2.4 Climate Change

### Description of climate change policy

Policy	Commitment	Responsible unit	Grievance mechanism	Action plan
Cooperate with the company's business philosophy and confirm that the activities, products, service nature, scale, environmental impacts, and energy use within the scope defined by the management system are appropriate. In order to achieve sustainable operation, in addition to the pursuit of product quality improvement, fulfill its responsibility for the environment and greenhouse gas management in production activities.	Respond to various green environmental protection actions, cherish resources, and create a safe working environment internally, take various pollution prevention measures, and deeply implant environmental safety and health culture.	Safe Environment Division	Via the mailbox on the CSR website	Implement annual mitigation and adjustment projects with the long-term goal of "environmental sustainable development"
Invested resource		Objective		
Establish all aspects of adaptation capability		Carbon saving of 1% and water saving of 3%		
Other response measures				
-				

### International system certification

In order to fulfill the commitment to environmental sustainability and climate change mitigation, Unimicron has set up an environmental management system with clear rights and responsibilities and strong execution. We set up an "Environmental Safety and Health Committee," participated by environmental management representatives assigned by each factory; the company-wide goal is to follow local regulations, implement a complete pollution prevention concept and action blueprints, and actively seek and promote 360-degree environmental actions in the factories. Since the establishment of the factory, the potential environmental impacts and risks of production activities have been carefully considered and designed, and implementation risks have been reduced through standardization. With the changes in environmental sustainability, we actively respond to and promote the introduction of cleaner production and international management systems, in order to reduce environmental impact. With the requirements of the new version of ISO 14001 in 2015, we actively understand the company's current situation and the stakeholders' needs and expectations, and determine the environmental management system to implement the operation of the environmental management system.

International or national standards	Scope	Explanation of the planning of future expansion
ISO 14001 : 2015	All factories in Taiwan Qun Hong Technology Inc.	All existing factories have passed the verification, and new factories will be included in the verification standards in the future.
ISO 14064-1 : 2006	All factories in Taiwan Qun Hong Technology Inc. All factories in the Mainland China	All existing factories have passed the verification, and new factories will be included in the verification standards in the future.
ISO 50001 : 2011	Luzhu Plant II	In the future, implementation will be promoted according to operating conditions.
PAS 2050 : 2008	Xinfeng Plant I	There is no such planning for the current situation.
Cleaner production evaluation system China's cleaner production standards	All factories in the Mainland China	All existing factories have passed the verification, and new factories will be included in the verification standards in the future.

### Energy management

After passing the Greenhouse Gas Reduction and Management Act, Taiwan will continue to formulate climate change adaptation strategies to reduce and manage greenhouse gas emissions. Unimicron Technology manages greenhouse gas emissions through the operation of the "Energy Conservation and Carbon Reduction Management Committee." The chairman of the board serves as the chairman of the committee, and senior management is appointed as environmental and energy management representatives. The highest supervisor in each factory serves as implementation officers, and the participating departments cover the factory affairs, environmental regulations, manufacturing, products, quality management, equipment, materials, and administration. With the support of internal senior executives and top-down promotion, as well as the implementation of various management mechanisms, analyses and projects, Unimicron ensures that energy is used reasonably and efficiently. For various energy use facilities, equipment, systems, and processes, Unimicron grasps the impact on energy consumption, and establishes goals, targets, and action plans based on them. In the future, we will continue to aim to reduce energy use, improve energy efficiency, and find clean alternative energy sources, and achieve energy management goals in the most appropriate way.

## Climate change

Unimicron Technology formulates a greenhouse gas policy, clearly specifying that the reduction strategy is for various related departments to carry out various energy-saving plans in cooperation. Through employees starting from a small place, it is hoped to achieve a reduction strategy by full mobilization. The "Energy Conservation and Carbon Reduction Committee" is the company's greenhouse gas management review committee, under which there are a chairperson and an executive secretary, and major business units and related offices are responsible for reviewing the company's greenhouse gas management related matters. Unimicron also continues to follow the ISO 14064-1 standards to check the greenhouse gas emissions of each factory and to prepare emissions reports and disclose them to the public, in order to demonstrate the company's management strategy and determination on greenhouse gas emissions. Under the trend of climate change, through the identification process of risks and opportunities, we have grasped the impact of transformation, regulations and physical risks on the company's strategy, operations, and finances; at the same time, the company looks for future opportunities from the aspects of resource efficiency, energy sources, products and services, and resilience. For the identified risks and opportunities, Unimicron Technology formulates corresponding management practices to reduce the impact of risks and increase the benefits of opportunities. Thus, Unimicron Technology strives to reduce the greenhouse gas footprint of its operations and products, and saves the carbon costs required for operations, creating differentiated low-carbon business opportunities.

Main risks and opportunities of climate change		Impact item	Scope of impacts	Unimicron's management practices	
Risk	Transformation	<ul style="list-style-type: none"> <li>New technology investment</li> <li>Changes in customers' behavior</li> <li>Changes in customer preferences</li> </ul>	<ul style="list-style-type: none"> <li>Increase operating cost</li> <li>Increase R&amp;D cost</li> </ul>	<ul style="list-style-type: none"> <li>Products or services</li> <li>Company personnel</li> <li>Company's facilities</li> </ul>	Understand customers' needs for technology and next-generation products, grasp the blueprint for the development of customers' future products, and continue to meet customers' expectations with the best service model.
	Regulations	<ul style="list-style-type: none"> <li>Air pollution control</li> <li>Environmental regulations</li> <li>Uncertainty of new regulations</li> </ul>	<ul style="list-style-type: none"> <li>Increase operating cost</li> <li>Increase R&amp;D cost</li> </ul>	<ul style="list-style-type: none"> <li>Products or services</li> <li>Company personnel</li> <li>Company's facilities</li> </ul>	Grasp the trends and information required by relevant laws and regulations and stakeholders so that operations can indeed comply with regulations and other requirements.
	Physical	<ul style="list-style-type: none"> <li>Changes in rainfall patterns and distribution</li> <li>Extreme rainfall and drought</li> <li>Change in average rainfall</li> </ul>	<ul style="list-style-type: none"> <li>Reduce operating revenue</li> <li>Increase operating cost</li> <li>Lost existing customers</li> <li>Operational failure of the company</li> <li>Supply chain disruption</li> <li>Decline in stock price</li> <li>Reduce production capacity</li> <li>Disruption of sales</li> <li>Water supply disruption</li> </ul>	<ul style="list-style-type: none"> <li>Products or services</li> <li>Company personnel</li> <li>Company's facilities</li> <li>Upstream of the value chain</li> <li>Downstream of the value chain</li> </ul>	Establish an operation continuity plan to reduce the impact of business disruption caused by risks and emergencies. Ensure the normal water supply and electricity supply in each factory and maintain the safety of production and operation in the factory so that the operation continuity plan can operate effectively.
Opportunity	Resource efficiency	<ul style="list-style-type: none"> <li>Production process</li> <li>Recycled materials</li> <li>Use of water resources</li> </ul>	<ul style="list-style-type: none"> <li>Increase operating revenue</li> <li>Reduce operating cost</li> <li>Improve operational efficiency</li> <li>Improve competitiveness</li> <li>Climate change adaptation</li> </ul>	<ul style="list-style-type: none"> <li>Products or services</li> <li>Company personnel</li> <li>Company's facilities</li> </ul>	Implement the localization of materials and support the development of local suppliers. Reduce unnecessary shipping costs and reduce the carbon footprint generated during material transportation. Strive to recycle packaging materials and trays. Actively reduce water consumption in the manufacturing process, and continuously improve process technology to reduce water consumption and pollutants in the production process.
	Energy source	<ul style="list-style-type: none"> <li>Low carbon energy</li> <li>Policy rewards</li> <li>New technology adoption</li> <li>Participation in the carbon market</li> </ul>	<ul style="list-style-type: none"> <li>Climate change adaptation</li> </ul>	<ul style="list-style-type: none"> <li>Products or services</li> </ul>	Continue to aim to reduce energy use, improve energy efficiency, and find clean alternative energy.
	Products and services	<ul style="list-style-type: none"> <li>R&amp;D and innovation</li> </ul>	<ul style="list-style-type: none"> <li>Increase operating revenue</li> <li>Climate change adaptation</li> </ul>	<ul style="list-style-type: none"> <li>Products or services</li> <li>Upstream of the value chain</li> <li>Downstream of the value chain</li> </ul>	Continue to accumulate and improve the conditions of R&D resources such as manpower, equipment, and funding, continuously strengthen and accumulate technological strength, and deepen technology and innovation.
	Resilience	<ul style="list-style-type: none"> <li>Energy efficiency improvement</li> <li>Alternative or diversified resources</li> </ul>	<ul style="list-style-type: none"> <li>Increase operating revenue</li> <li>Reduce operating cost</li> <li>Improve competitiveness</li> <li>Climate change adaptation</li> </ul>	<ul style="list-style-type: none"> <li>Products or services</li> <li>Company personnel</li> <li>Company's facilities</li> </ul>	With the support of senior executives and top-down promotion, as well as the implementation of various management mechanisms, analyses and projects, Unimicron ensures that energy is used reasonably and efficiently.

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## 2.5 Raw materials and wastes

### Description of raw material management policy

Policy	Commitment	Responsible unit	Grievance mechanism	Action plan
HSF quality policy	Green products that 100% comply with international laws and regulations, industry standards and customers' requirements	Green Product (Management) Committee	Audit Office's mailbox	Source management
Invested resource		Objective		
<ul style="list-style-type: none"> <li>Build a testing report management system.</li> <li>Establish an announcement and return system of suppliers' hazardous substance declaration documents</li> <li>Set up hazardous substance testing equipment (XRF)</li> </ul>		<ul style="list-style-type: none"> <li>The green material procurement ratio is 100%.</li> <li>The validity of suppliers' testing reports by third notary units</li> <li>The compliance rate of incoming XRF inspection is 100%.</li> </ul>		
Other response measures				
-				

### Description of waste management policy

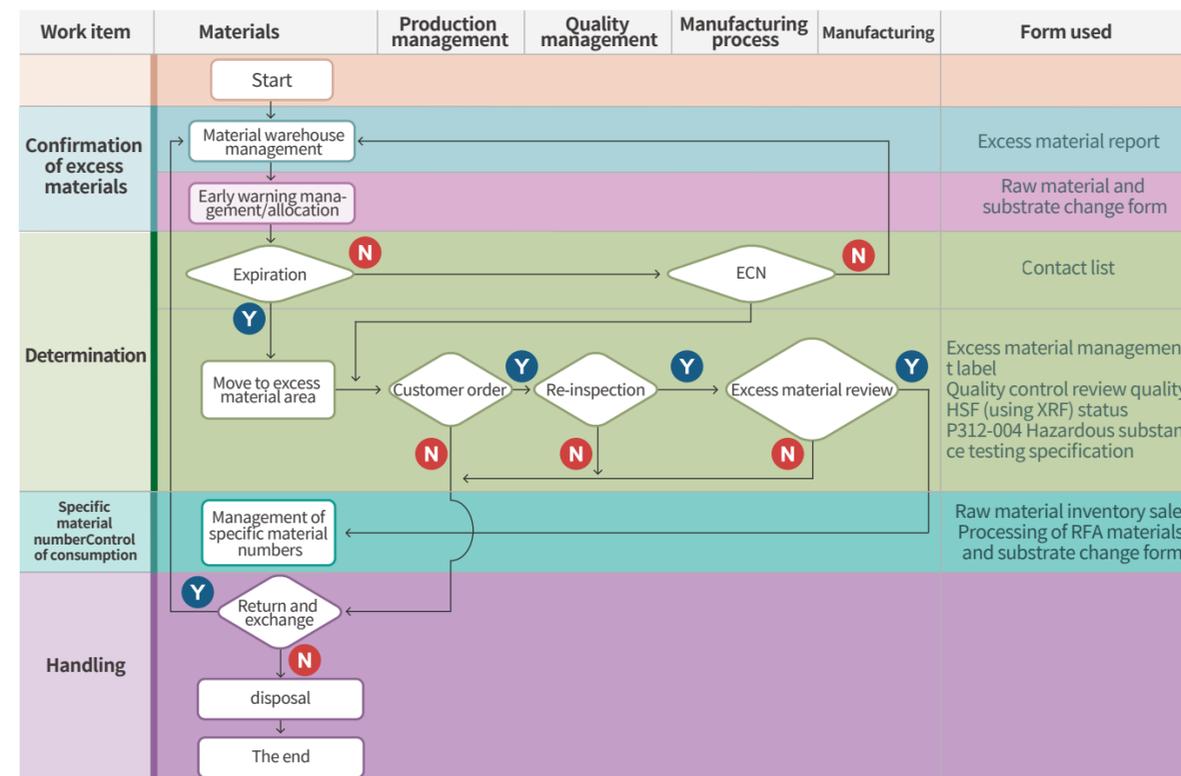
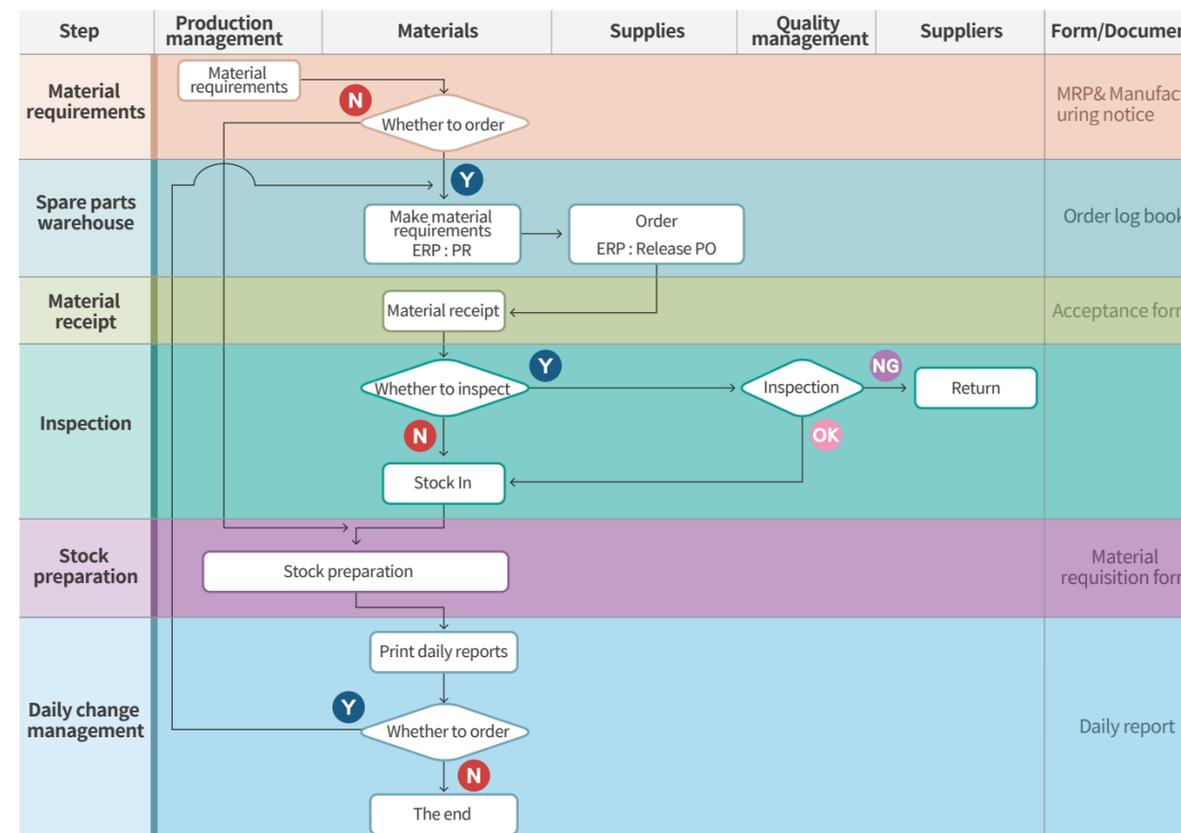
Policy	Commitment	Responsible unit	Grievance mechanism	Action plan
Carry out continuous improvement, prevent the occurrence of pollution, injury, and unhealthy factors, in order to reduce the cost of risk control, and support green procurement.	Improve process technology to reduce the pollutants generated from production processes	Safe Environment Division	Through the mailbox on the CSR website	Maintain the overall reutilization ratio
Invested resource		Objective		
Improve process technology to reduce the pollutants generated from production processes		Overall utilization rate of 85%		
Other response measures				
-				

### International system certification

Unimicron uses the source management method, through the ISO 9001 and QC 080000 hazardous substance process management process systems to carry out the quality management of raw materials, in order to ensure that the environmental impact of the back-end waste can be minimized. Therefore, the purchased raw materials are 100% in compliance with relevant requirements, including RoHS, REACH, Packaging Materials Directive, China RoHS, California Act 65, Montreal Convention and other international laws and regulations, and compliance is ensured by the submission of the testing reports by a third-party notary unit every year. In addition to self-inspection of the incoming materials and finished goods, the company also regularly commissions third-party notary units for testing to provide customers with assurance that there are no hazardous substances. In terms of managing the waste from operations, ISO 14001 is introduced to really review the company's environmental risk and grasp relevant impacts, in order to formulate corresponding management systems.

### Resource management

In order to maximize the use of resources, Unimicron Technology has formulated a complete management process for the use of materials at all stages. For material preparation, the control points of the material plan are based on the S/S and WIP tables, with daily, weekly, and monthly operations, in order to achieve the goals of having minimum inventory and minimum shortage. In addition, in order to avoid raw materials from producing sluggish materials and causing wastage, early warning management and allocation of raw materials with expiry dates are indeed carried out. For yield improvement, it is determined in accordance with the factory's policy objectives and customers' needs. Through the joint efforts of the yield team, the manufacturing department, the process department and the quality control department, the yield improvement is achieved and the waste of resources is avoided.



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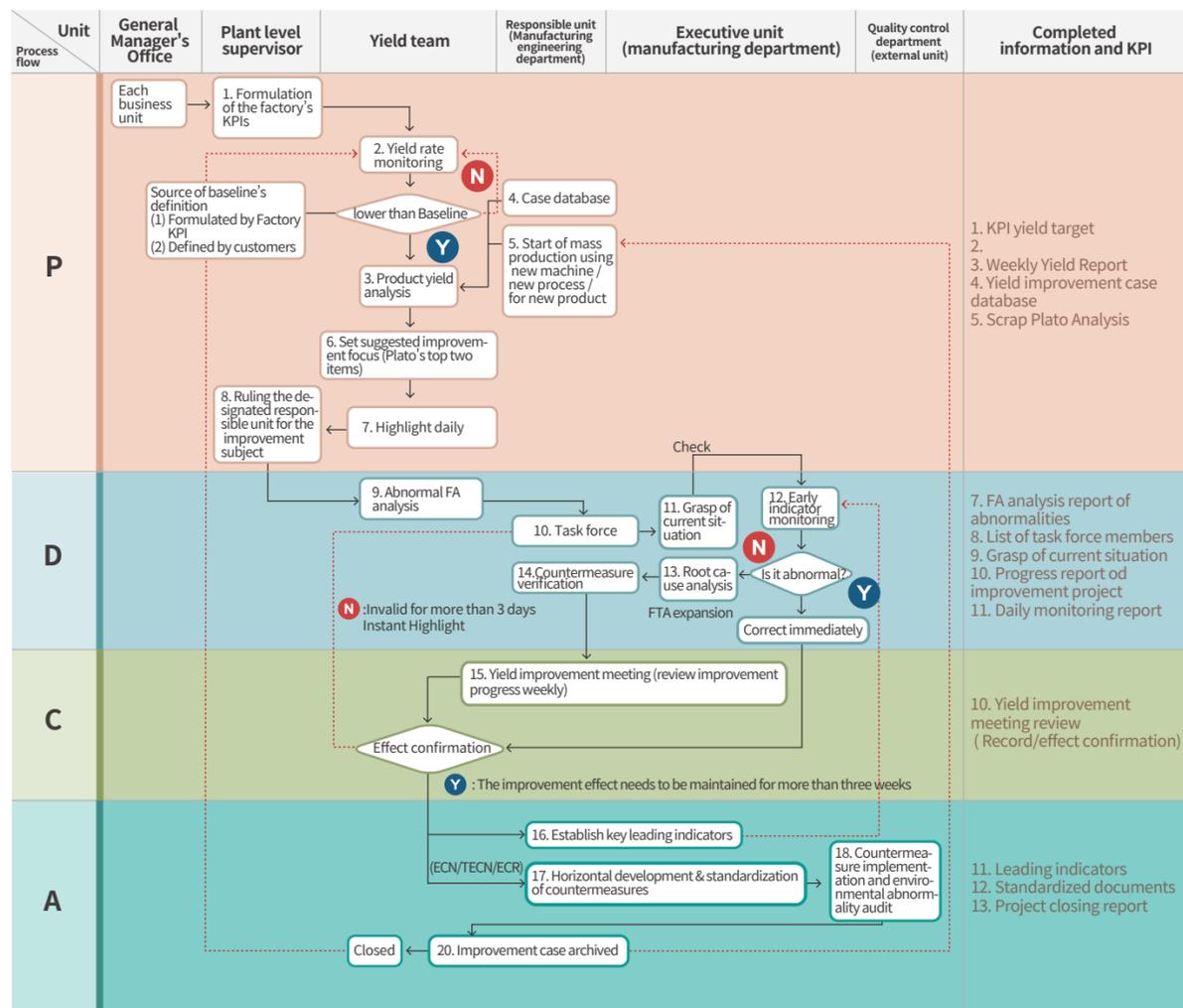
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## Waste and emission management

Unimicron implements reduction, control or prevention plans for waste, air pollution and wastewater generated from operations. Through continuous project execution every year, we continuously improve environmental pollution reduction, reduce energy resource consumption, innovate reuses, and reduce the potential environmental impact of the company's operating activities. In terms of waste, the main goal is reduction and reuse; in terms of air pollution, the increase in the removal efficiency of pollutants by adding or improving equipment is emphasized. In addition to reducing the amount of discharge for waste water treatment, a biological treatment center and a reclaimed water recovery system have been set up. In addition, we have introduced the concept of cleaner production, and promoted various environmental pollution resolution technologies and management to reduce the generation of back-end pollutants and the consumption of energy resources, and actively move towards the goal of green industry.

Waste reduction	Air pollution control	Wastewater pollution prevention
<ol style="list-style-type: none"> <li>Based on the principle of "balance of quality and quantity," implement waste reduction project actions and reuse proportions.</li> <li>Use the derivative recovered from the waste copper chloride to replace the sodium chloride used in water production, in order to reduce waste and volume.</li> <li>Continue to promote nickel waste reduction to achieve waste reduction and volume reduction.</li> <li>Continuously introduce the electrolytic copper device to reduce the amount of high-concentration waste liquid.</li> <li>Improve the self-disposal capacity of the stripping waste liquid.</li> <li>Implement the recovery and reduction project of low-concentration palladium waste liquid.</li> </ol>	<ol style="list-style-type: none"> <li>Design and improve the scrubbing layer to increase the removal efficiency of waste gas treatment.</li> <li>Install high-pressure fine mist nozzles and add multi-layer sieve plates to improve the dust collection efficiency of cyclone scrubbers.</li> <li>Combine cyclone dust collector and washing tower to replace filter bag dust cleaning.</li> <li>The new gas-liquid separator reduces the total amount of air pollution discharged from the terminal scrubber.</li> <li>Increase the reduction rate of VOC treatment facilities to reduce emissions.</li> </ol>	<ol style="list-style-type: none"> <li>Set up a bioprocessing center to reduce the total discharge of wastewater pollution.</li> <li>Establish biological monitoring indicators.</li> <li>Add a wastewater biological treatment center in the Xinfeng factory area.</li> <li>Promote the recycling of in-line water used by the manufacturing process.</li> <li>Recycle low-concentration wastewater to reduce wastewater discharge.</li> </ol>

## 2.6 Employee care

### Employee care management guidelines

Policy	Commitment	Responsible unit	Grievance mechanism	Action plan
Health management	Achieve work-life balance	Human Resources Department	<ul style="list-style-type: none"> <li>Employee suggestion box</li> <li>Labor-management meeting</li> <li>E-MAIL</li> <li>Grievance hotline</li> <li>Satisfaction survey questionnaire</li> </ul>	<ul style="list-style-type: none"> <li>Interview by on-site physician</li> <li>Job redesign project</li> <li>Masseur service</li> <li>Female employee care program</li> <li>Health promotion activities</li> <li>Four cancer screening</li> <li>Disease prevention and vaccination</li> <li>Health lecture</li> </ul>

Invested resource	Objective
Two on-site physicians, 12 nurses, and funding for health promotion activities	Health promotion satisfaction
Other response measures	

Policy	Commitment	Responsible unit	Grievance mechanism	Action plan
New employee care	Caring about the adaptability of new employees	Human Resources Department	<ul style="list-style-type: none"> <li>Employee suggestion box</li> <li>Labor-management meeting</li> <li>E-MAIL</li> <li>Grievance hotline</li> <li>New employee survey questionnaire</li> </ul>	<ul style="list-style-type: none"> <li>Caring interviews with new overseas employees</li> <li>Caring interviews with new engineers</li> <li>Team consensus camp activity (Winning Team)</li> <li>Establish a counselor mechanism</li> </ul>

Invested resource	Objective
Contact of employee relation project	Retention rate of outstanding personnel
Other response measures	

### International specifications implementation

We comply with the RBA (formerly known as EICC) Code of Conduct. In order to comply with international standards, we have established relevant documents and standards :

- Free choice of employment**
  - Working rules
  - Professional Code of Conduct
  - Personnel employment process
  - Management Measures for Foreign Migrant Workers
- Young labor**
  - Working rules
  - Personnel employment process
  - Safety and Health Protection Measures for Women and Workers under the Age of 18
- Working time**
  - Working rules
  - Working time regulations
  - Attendance and leave regulations
- Salary and welfare**
  - Salary regulations for domestic employees
  - Salary regulations for overseas employees
  - Measures for Administrative Rewards and Punishments
- Human treatment**
  - Working rules
  - Measures for Administrative Rewards and Punishments
  - Grievance and Sexual Harassment Handling Measures
- Human treatment**
  - Working rules
  - Personnel employment process
  - Grievance and Sexual Harassment Handling Measures
- Freedom of Association**
  - Professional Code of Conduct
  - Labor-Management Meeting Implementation Measures
  - Labor Human Rights Corporate Social Responsibility Code

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## 2.7 Occupational health and safety

### Description of occupational health and safety management policy

Policy	Commitment	Responsible unit	Grievance mechanism	Action plan
Occupational safety and health, and environmental protection and energy policies	Proactive compliance	Safe Environment Division	<ul style="list-style-type: none"> <li>Employee suggestion box</li> <li>Labor-management meeting</li> <li>E-MAIL</li> <li>Grievance hotline</li> <li>Quarterly Occupational Safety and Health Committee</li> </ul>	Various management plans and implementation of annual safety and environmental month (See the table below)
Invested resource		Objective		
See the table below		Zero major incidents, and zero fines		
Other response measures				
Regularly track the implementation of the management policy, and when necessary, propose necessary PDCA improvement measures to ensure that the goals set by the management policy can be achieved on time.				

### 2019 safety and health funding / manpower input

Item	Effectiveness	Item	Effectiveness
Invested funds (New Taiwan dollars)	179,028,012	Occupational safety and health project investment (New Taiwan dollars)	18,099,741
Industrial Safety Officer (person)	495	Occupational safety and health promotion sessions	1,441

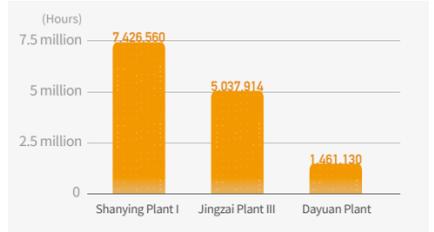
### International system certification

A sound occupational safety and health management mechanism is built on the spirit of self-management and systematic actions. In response to this, we actively introduced the OHSAS 18001 management system in each factory, and implemented the spirit of continuous improvement of PDCA through the e-management interface, and improved the efficiency of the system.

#### Unimicron Introduction and results of occupational safety and health system

- 1.100% obtained ISO45001:2018 certification, and regularly verified by a third-party certification agency every year.
- 2.According to the CNS45001:2018 of the Republic of China, certified by the "Taiwan Occupational Safety and Health Management System" (TOSHMS).
- 3.Shanying Plant I, Jingzai Plant III, and Dayuan Plant obtained the Goal Achievement Certificate of the Cumulative Disaster-free Working Hours.
- 4.Xinfeng Plant I and Hejiang Plant have obtained the three-year occupational safety and health management system performance recognition from the Occupational Safety and Health Administration of the Ministry of Labor: (1)Xinfeng Plant I (2)Hejiang Plant
- 5.Xinfeng Plant I and Qun Hong's Dacheng Plant and Renyi Plant obtained the 2019 Health Promotion Label" of the National Health Administration of the Ministry of Health and Welfare (2019/12/31).
- 6.Qun Hong's Dacheng Plant obtained the 2019 "New Resident Friendly Workplace" from Taoyuan City Government (2019/12/31).
- 7.Wu Wenhua from the Safe Environment Division was awarded the Excellent Personnel in the Implementation of Occupational Safety and Health-Merit Award" by the Taoyuan City Government in 2018 (2019/7/9).
- 8.Unimicron Technology became the first PCB company in Taiwan to pass the dual certification of occupational safety and health management system ISO45001&CNS45001 SGS by Taiwan Ltd. (SGS) (2019/7/12).
- 9.Unimicron Technology was awarded the 2019 ISO 45001 Plus Award Occupational Safety and Health Management Model Award by Taiwan Ltd. (SGS) (2019/11/15).

Factories in Taiwan



Factories in the Mainland China

- 1.100% obtained OHSAS 18001: 2007 certification, and regularly verified by a third-party certification agency every year.
- 2.Unimicron Technology (Kunshan) continues to maintain after passing the "standardization for the secondary unit" verification.
- 3.Unimicron Technology (Suzhou) was awarded the First Prize of Social Enterprise Safety Production PK Competition in by the Dongsha Lake Social Work Committee of the Suzhou Industrial Park.
- 4.Unimicron Technology (Suzhou) won the 2019 Model Cases of Healthy Place Construction in Suzhou City.
- 5.Unimicron Technology (Suzhou) won the 2019 Outstanding Organization Award of the Promotion Week of the Production Safety Law of the Suzhou Industrial Park.
- 6.Unimicron Technology (Shenzhen) becomes level three standardization safety production enterprise (machinery) of safety production standardization enterprise.
- 7.Zhou Chunguang from the Safe Environment Division was awarded the 2018 "Advanced Individual" Honorary Certificate of Safety Production.



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## 3.1 Economy

### 3.1.1 Industry overview

According to data from Prismark Research Institute, benefiting from 5G communication infrastructure deployment requirements and more 5G emerging applications, it has boosted the growth of high-end PCB and IC carriers in 2019. However, due to external environmental factors such as US-China trade war, Brexit, and Japan-South Korea trade conflicts, the global PCB output value in 2019 was approximately US\$61,311 million, with an annual decline of approximately 1.7%.

In 2019, the company's IC carrier had a significant improvement in operating performance due to the continuous optimization of its product portfolio, improvement of its technical level and yield, and stable market demand. Substrate-like PCBs, HDIs, and rigid-flex boards are still affected by the seasonal off-season in the first half of the year; however, with the peak season in the second half of the year and the launch of new models, the revenue will continue to increase.

Looking forward to 2020, although the global economy is still affected by the continued impact of the US-China trade war and the negative impact of the COVID-19 pandemic, Prismark estimates that the global PCB industry will grow at an annual growth rate of approximately 2.0% in 2020. However, due to consumer products and other products expecting for the peak season in the second half of the year, and future business opportunities for 5G, AIoT, HPC and big data development, it is expected to drive the growth of the PCB industry.

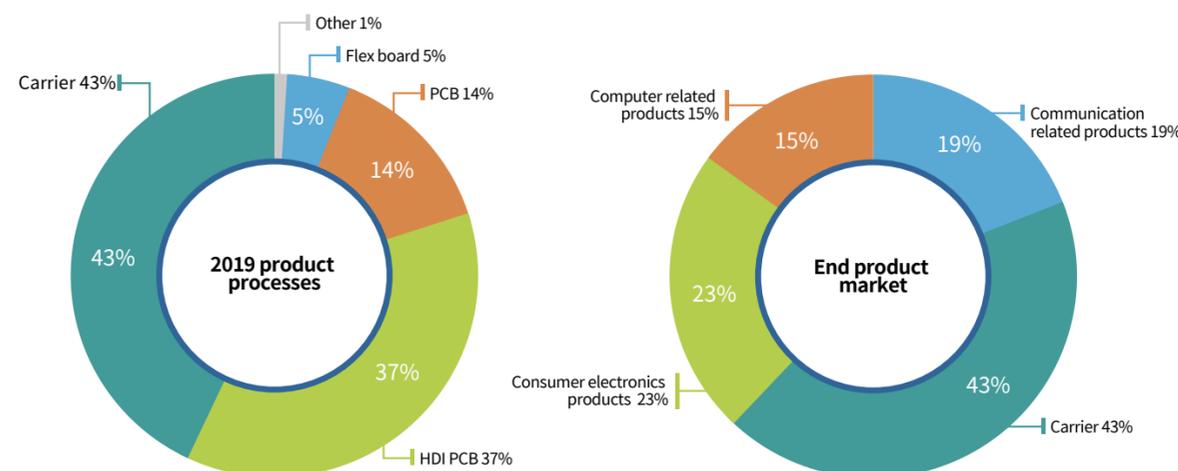
### 3.1.2 Financial performance

Unimicron's consolidated revenue in 2019 was NT\$82,536 million, and its consolidated net income was NT\$3,276 million. Unimicron is a professional manufacturer of printed circuit boards. Based on the output value data of Prismark Research Institute, Unimicron's consolidated operating revenue of printed circuit boards in 2019 accounted for approximately 4.3% of the global PCB output value.

Year	2017	2018	2019
Global PCB output value (unit: USD million)	58,843	62,396	61,311
Market share of Unimicron's consolidated PCB operating revenue	3.6%	4.0%	4.3%

Note: The source of the global PCB output value data is Prismark Institute's research report in February 2020.

In 2019, the company's IC carrier had a significant improvement in operating performance due to the continuous optimization of its product portfolio, improvement of its technical level and yield, and stable market demand. Substrate-like PCBs, HDIs, and rigid-flex boards are still affected by the seasonal off-season in the first half of the year; however, with the peak season in the second half of the year and the launch of new models, the revenue will continue to increase. In the application of end products, the products we manufacture are the key components of various electronic products, which are mainly used in computers, communications, various consumer electronic products and equipment, and are widely used in automobiles, industrial, medical, military and aviation fields



## Financial performance by year

Year	2019	2018	2017	2016	Unit	Remarks
Debt to asset ratio	56.1%	55.4%	55.2%	52.1%	%	Consolidated
EPS (Earnings per share)	2.24	1.15	0.28	0.01	NTD	Consolidated
Stand-alone income tax (expense) benefit	(557)	(310)	128	46	Million NTD	
Consolidated income tax (expense)	(763)	(452)	(385)	(436)	Million NTD	
Stand-alone total assets	86,091	81,726	79,434	79,520	Million NTD	
Consolidated total assets	110,201	104,616	104,236	96,320	Million NTD	
Capital amount	15,047	15,049	15,291	15,280	Million NTD	Consolidated
Stand-alone total operating revenue	47,405	43,682	38,732	40,853	Million NTD	
Consolidated total operating revenue	82,536	75,733	64,993	62,638	Million NTD	
Stand-alone profit before tax	3,817	2,016	286	(34)	Million NTD	
Consolidated profit before tax	4,038	2,282	1,077	691	Million NTD	
Total market value <sup>(Note)</sup>	54,140	29,194	26,239	20,964	Million NTD	Based on the stock price at the end of each year (Calculated based on annual average price)
Stand-alone operating expense	4,180	3,581	2,823	2,644	Million NTD	
Consolidated operating expense	7,811	7,001	5,896	5,629	Million NTD	
Retained earnings	21,877	19,840	18,797	19,000	Million NTD	
Employee benefit expense	19,037	17,064	14,579	13,250	Million NTD	Consolidated
Average revenue per employee	2.71	2.74	2.35	2.52	Million NTD	
Dividend (per share)	1.1	0.8	0.5	0.3	NTD	
Donation expense	3.4	5.1	4.5	2.8	Million NTD	

Note: Total market value = average stock price \* weighted average number of shares

## 3.2 Customers

### 3.2.1 Customer services

As a world-class supplier in the PCB and carrier industry, Unimicron has customers all over the world. Unimicron Technology pursues the goal of becoming customers' best business partner, and is committed to technological innovation and providing the best products. Unimicron Technology understands customers' needs through various communication channels and proactive communication, and is committed to providing comprehensive services to establish a relationship with customer satisfaction and trust.

#### Regular communication

- Set up a fixed point of contact for customer service, set up a customer service VIP team (led by personnel at the factory manager level to discuss customers' feedback every week), quarterly meetings, regular visits and irregular contacts.
- Issued concerned by customers: Product quality/HSF quality and service, technology, price, delivery time, and CSR.

#### Opinion exchange on CSR issues

- Communicate ideas and practical experience through the opportunity of customers' visits to the factory for audit and communication.
- Guide customers to visit the equipment in Unimicron Technology's factories, and communicate on the management system and measures, so that customers can understand Unimicron Technology's investment and efforts on CSR issues.

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### Unimicron's customer service management

#### PCB customer relationship management

##### Customer satisfaction evaluation

In order to implement the market-oriented concept, based on customer satisfaction surveys to fully understand customers' needs and expectations and satisfy customers, as a basis for improving service and quality/HSF quality and adjusting the company's business strategy and development direction

##### Customer complaint handling

In order to strengthen the service to customers, the problems raised or reacted when using the company's products can be quickly investigated, and appropriate countermeasures can be taken to enhance the satisfaction with the company's products and services.

##### Evaluation of VIP customer service team members

Department Leaders of the VIP customer service team need to regularly evaluate and review the skills of their members, and provide education, training or adjustments to the members' capabilities that do not meet the requirements, in order to enhance the service and combat effectiveness of the VIP customer service team.VIP

##### Customer service management

In order to serve customers quickly, efficiently and carefully in order to increase customer satisfaction and loyalty, this procedure is thus formulated for various services to comply with.



#### Carrier customer relationship management

##### Customer satisfaction survey

In order to ensure that customer satisfaction requirements are consistent with the company's business management goals, based on customer satisfaction surveys, we can actually grasp customer needs and market pulses as a basis for improving service quality and adjusting company business strategies and development directions.

##### Sales return

In order to clarify and effectively handle customers' returns, provide customers with complete services.

##### Customer complaint management

In order to clarify and effectively handle customers' returns, provide customers with complete services.



### 3.2.2 Satisfaction survey

In order to understand customers' needs and provide better services, Unimicron Technology proactively conducts customer satisfaction surveys every year, and based on customer survey results, grasps customers' needs and market fluctuations, as a basis for improving service quality and adjusting the company's business strategy and development direction. In order to accurately grasp customer expectations, factories in Taiwan, South China and East China conduct the "customer satisfaction assessment operation" for VIP customers every six months and important customers every year. The survey items include price, delivery, technology, quality, HSF quality, customer service, etc. Customer satisfaction is scored on a 5-point scale. If a single item score is lower than 3.5 points (target value) on average in PCB (including HDI and FPC), and lower than 3 points (target value) on average in Carrier, PDCA review is required.

In order to improve customer service, in addition to the customer satisfaction survey results, the QBR (Quarterly Business Review) score sheet for customers will be compiled and analyzed, and improvement plans will be discussed in the meeting to promote relevant response measures. It is also be included into relevant departments' performance management indicators, in order to improve various service standards, establish a competitive advantage, and win the trust of customers.



### PCB's customer satisfaction

Item	1H 2017	2H 2017	1H 2018	2H 2018	1H 2019	2H 2019	
Questionnaire A	Price	4.28	4.33	4.33	4.2	4.16	4.31
	Delivery time	4.63	4.64	4.4	4.49	4.53	4.45
	Service	4.45	4.54	4.5	4.5	4.55	4.66
Questionnaire B	HSF /Quality	4.70	4.63	4.52	4.56	4.42	4.66
	Technology	4.51	4.56	4.54	4.57	4.41	4.50
Total score	4.53		4.46		4.46		

Customer Satisfaction Questionnaire (A): Divided into price, delivery time, communication, and service, the sales are responsible for providing a survey list of procurement contacts to be logged in to the system. Customer Satisfaction Questionnaire (B): Divided into technology, quality/HSF quality, the customer service is responsible for providing the MQE, SQE, IQC, CTE, SQA survey list to be logged in the system.

### Explanation of differences in 2019 PCB satisfaction

Item	2019 differences	Explanation	Improvement countermeasures
Technology	-0.11	The improvement of new product technology did not meet customers' needs, resulting in a drop in score.	When developing new products, sales should promptly ask customers to provide relevant design and quality standards to facilitate the quality control in the factory, in order to improve customer satisfaction.
Delivery time	+0.04	The delivery schedule met customers' needs, so the annual score had increased.	The sales continue to coordinate with customers for delivery time and meet customers' needs.
Service	+0.11	The technical services of important products met customers' needs, so the annual score had increased.	Continue to maintain good communication with customers on new technologies and respond to customers' related needs immediately.

### Carrier's customer satisfaction

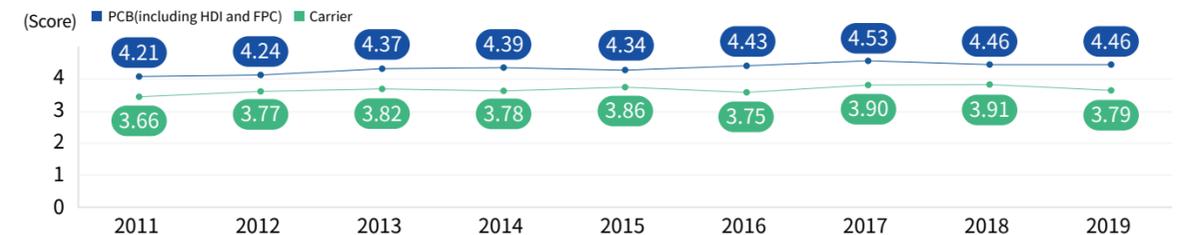
Item	1H 2017	2H 2017	1H 2018	2H 2018	1H 2019	2H 2019	
Questionnaire A	Delivery time	3.77	4.2	3.7	3.97	4.04	3.86
	Technology	4.07	4.1	3.9	3.92	3.98	4.14
	Price	3.43	3.5	3.58	3.76	2.93	3.24
Questionnaire B	HSF	4.06	4.5	4.23	4.25	4.27	4
	Service	3.96	3.89	4.12	4.18	3.96	4.11
	Quality	3.67	3.22	3.79	3.6	3.53	3.45
	Total score	3.9		3.91		3.79	

Customer Satisfaction Questionnaire (A): Divided into price, delivery time, and technology, and sent by the sales to the customer procurement point of contact. Customer Satisfaction Questionnaire (B): Divided into quality/HSF quality, and customer service, and sent by the customer service to the customer IQA point of contact.

### Explanation of declines in 2019 Carrier satisfaction

Item	2019 differences	Explanation	Improvement countermeasures
Price	-0.58	In response to market demand, prices have increased.	Will strengthen the communication with customers on price adjustment matters to reduce the probability of customers being dissatisfied with the price adjustment.
Quality	-0.20	Abnormal appearance quality	Increase the cleaning frequency of the defect laser marking machine carrier and optimize the visual inspection VI personnel's inspection method.

### PCB and Carrier satisfaction by year



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### 3.2.3 Complaint mechanism and handling

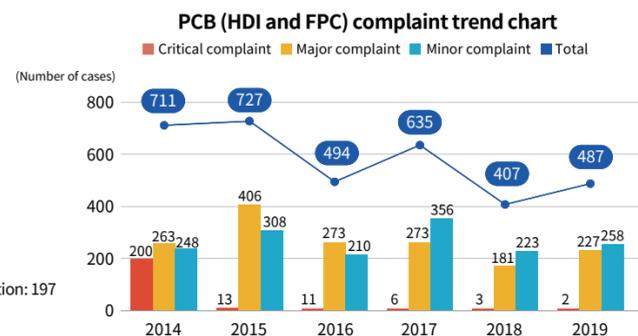
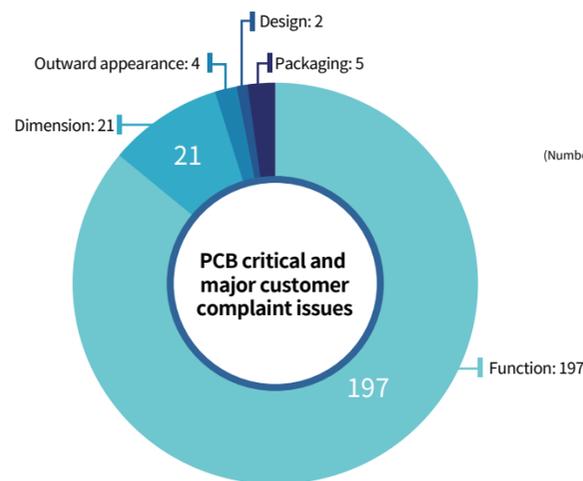
Customers' opinions are the driving force behind our continuous improvement, and Unimicron Technology regards customer complaints and opinions as opportunities to assist us in continuous improvement. In this regard, Unimicron Technology has established a comprehensive customer complaint mechanism to ensure that customer complaints and opinions can be effectively communicated, processed and responded to through a complete, systematic and standardized handling process, to actually protect customer rights.

#### Customer complaint response process

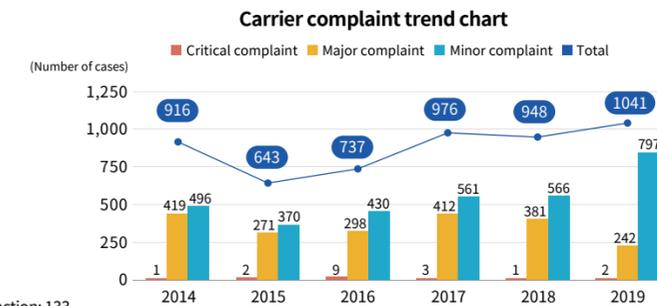
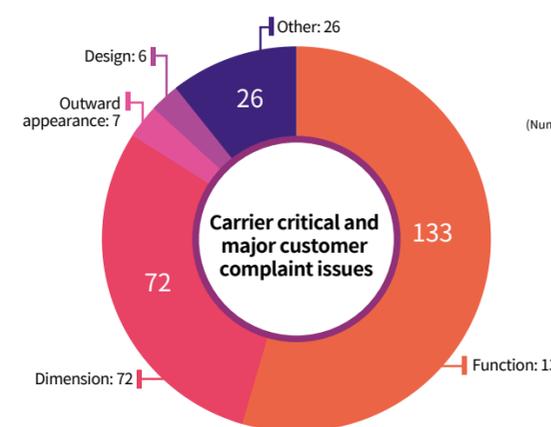


According to the seriousness of the content of customer complaints, Unimicron Technology divides customer complaints into three categories: Critical, Major and Minor. According to different categories, it sets the reporting and handling level and progress tracking frequency. It is expected that under the most effective use of resource allocation conditions, all complaints can be handled and responded to in the most appropriate manner.

In 2019, PCB received a total of 229 critical and major customer complaints, an increase of 45 from 2018 (184 cases). The main reason for the increase in customer complaints was the problem of abnormal functions, which increased by 43 cases compared with 2018. After improvement in the factory and immediate response of customer solutions within the time limit requested by customers, all cases have been closed and there are no recurring incidents.



In 2019, Carrier received a total of 244 critical and major customer complaints, a decrease of 138 from 2018 (382 cases). Among them, customer complaints on dimension problems dropped the most, with a decrease of 60 cases, mainly due to the integration of the in-plant and inter-plant measurement systems in 2018 to ensure the consistency of the level of measurement detection capabilities, which will continue until 2019. In addition, carrier's overall number of customer complaints increased in 2019, mainly due to the increase in minor customer complaints due to outward appearance problems. Therefore, the key improvement policy in 2020 is to understand the customer end's inspection/testing process, grasp the customer's change information, and ensure internal quality inspection mechanism being consistent with the customer's.



### 3.2.4 Customer information protection

The protection of customers' intellectual property rights and business information is the focus of our business and business ethics management. Through the control of the ISO 27001 management system, Unimicron Technology has not been complained by customers for infringement of customer privacy or loss of customer information in 2019. No product or service violated the law and suffered huge fines in 2019.

#### Information security policy

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 Technology 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 specific management plan

In order to implement the Unimicron Technology's information security policy, we have fully implemented the mobile device access control to the factory, ensuring that information will not be arbitrarily carried out. In addition, Unimicron Technology develops specific management solutions related to the five major aspects of terminal computer management, computer room management, computer room management, system and network security management, and education and training to properly maintain customer data and information security.

Terminal computer management	Use the computer access control system to perform 3 software and hardware asset (hardware change notification, software authorization, and software function restriction) and 6 access behaviors (USB, CD burning, network storage, printing, Bluetooth, and wireless network card) control.
Information facility 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: <ul style="list-style-type: none"> <li>● 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.</li> <li>● CCTV system: Have 24-hour full-area video monitoring of the computer room, and through the sensing mechanism, automatically send out alarm when an abnormal intrusion occurs.</li> <li>● Environmental control system: Monitor the environment (temperature, humidity, power) of the computer room 24 hours a day.</li> </ul>
Anti-virus and anti-hack management	Use 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, providing Security Operation Center (SOC) services, provide 24-hour round-the-clock information security incident analysis mechanism.
Education training	Through physical and digital E-based courses, regularly conduct three education training and verification of "information security," "trade secret protection" and "patent and copyright protection" to employees, in order 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	According to the vulnerability database defined by CERT (Computer Emergency Response Team) and SCAP (Security Content Automation Protocol), conduct two system vulnerability scans and vulnerability repairs every year.

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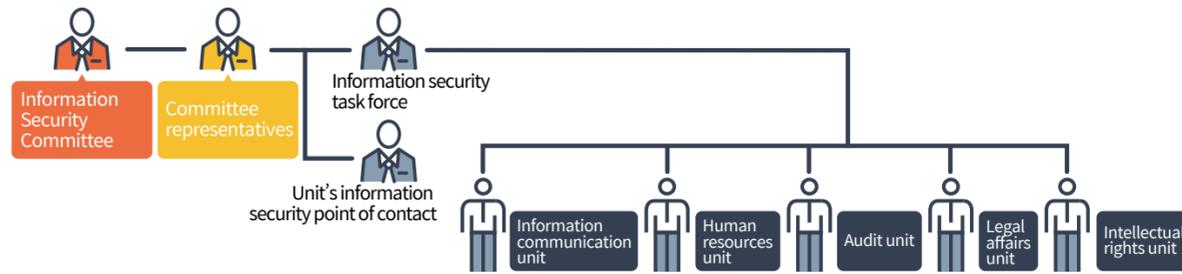
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### Operation of Information Security Committee

Unimicron Technology manages the company-level information protection mechanism through the Information Security Management Committee to protect customer privacy. Through the acquisition of relevant international certifications, internal information security advocacy and drills, data inventory and drills, and data access control and information security early warning mechanisms, we regularly provide information security reports to the chairman of the board and senior managers of business units, to reduce information security risk.



#### International security system certification

Unimicron Technology's Taiwan and Mainland China factories have obtained ISO 27001 information security management system certification, with a coverage rate of 100%, and have established complete information security standards and management procedures to ensure the security of the information environment. At the same time, one affiliated company had been coached to complete ISO 27001 certification in 2019.

#### Information security advocacy and drill

In addition to regular information security advocacy and testing for employees, an unannounced social attack drill (phishing email) was also launched in 2019 to deepen employees' information security awareness through actual experience.

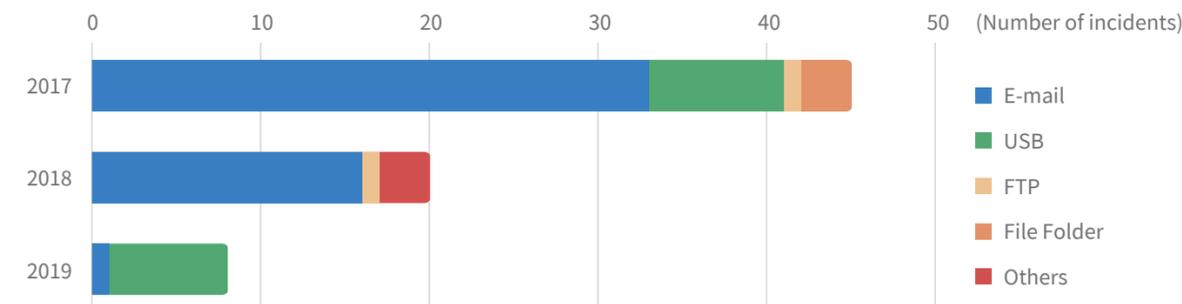
Stage	Number of people tested	Ratio to be hacked	Measures to strengthen information security awareness
First test	Employees with Email accounts	Open malicious link and enter account password: 5.25%	Employees who failed the test
Retest	Employees who failed the first test	Open malicious link and enter account password: 0%	Employees will actively report abnormal emails

#### Data inventory and classification

Unimicron Technology has completed the advocacy and inventory of the company's business secret information in 2019 so as to effectively declare the scope of the company's confidential information.

#### Data access control and information security warning

Use computer access control tools to lock computer transmission media (email, USB, FTP, web, file folder, etc.). If it is needed for work, separate application for activation is needed and it must be supervised by the information security early warning mechanism. All file access and data transmission abnormalities are detected and alarmed by the system, and the information security committee is notified to perform related audits, reports and handling. In 2019, the number of abnormal access incidents by employees was 8. Compared with the number of incidents during the initial establishment of the Information Security Committee in 2017, the abnormal incidents dropped by 82.6%.



#### Issuance of information security report

The Information Security Management Committee regularly issues reports to the chairman and senior executives of the business units, exposing the company's information security incident handling, information security project promotion and response measures, and through the PDCA cycle management mechanism, carries out horizontal promotion within the Group to strengthen the security of customer information.

## 3.3 Supply chain

### 3.3.1 Supply chain overview

Unimicron Technology'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 air freight forwarders. In which, raw material and equipment suppliers are the most important supplier categories, totaling 568 companies. For the main raw material suppliers and equipment suppliers (including strategic suppliers) that have been put into product production, we have formulated a sound quality management and CSR management model for corporate social responsibility, financial risk, conflict minerals and BCP continuity operation management to meet the corporate sustainable development. At the same time, we establish a good partnership with suppliers, grasp supplier CSR related risks, strengthen audit management, coach and assist in improvement, hoping to drive the overall supply chain towards a sustainable growth future.

### Description of 2019 supply chain management

Supplier profile analysis	Raw material supplier	Equipment supplier
<b>Number of companies by purchase category (companies)</b>	459	109
<b>Proportion of companies by purchase category (%)</b>	81%	19%
<b>Proportion of transaction amount by purchase category (%)</b>	67%	33%
<b>Strategic suppliers (number of companies) by purchase category <sup>(Note)</sup></b>	22	11
<b>Proportion of strategic suppliers in the purchase category (%)</b>	5%	10%
<b>Proportion of transaction amount by strategic suppliers accounted for in the purchase category (%)</b>	53%	55%
<b>Importance</b>	Provide Unimicron Technology with timely and appropriate amount of raw materials to meet customers' requirements for product production.	Provide advanced equipment and technology to assist Unimicron Technology to produce high-quality and yield products in order to meet customers' requirements.
<b>Management policy</b>	For raw material supply partners, adopt comprehensive QCDST management strategies and major supplier CSR supply chain management strategies, in order to ensure that the quality of supply meets customer expectations.	Preliminary technical exchanges, joint development, equipment maintenance and provision of major suppliers RBA code of conduct management strategies.

**Note: Strategic Suppliers: Suppliers with important status to Unimicron Technology's operations (including those designated by customers) or suppliers of important manufacturing processes.**

### 3.3.2 Sustainable supplier management

Unimicron Technology promises to establish a supplier management system and specifications, and communicate with them regularly, in order to establish a stable and sustainable development of a win-win strategic partnership. In order to promote the sustainable management of suppliers and build a more resilient supply chain, Unimicron Technology has included aspects of supply chain risks, continuity operations, finances, and conflict minerals in the CSR sustainable supply chain management issues, and jointly mitigates supply chain risks. There is also a cross-departmental "Supply Chain Management Committee" that assists suppliers in improving and upgrading quality systems, environmental protection, green procurement, and factory safety through regular coaching and auditing, building supplier sustainability. Unimicron Technology integrates the management system with the procurement process in promoting sustainable supplier management, and requires raw material suppliers to sign "Supplier Commitment Letter." The content of this commitment letter is based on the Code of Conduct of the Responsible Business Alliance, the International Labor Organization Convention and the Social Responsibility SA 8000 standards, and the content covers ethics, human rights, and environmental considerations.

In response to the 2018 EICC Code of Conduct has been renamed the Responsible Business Alliance, Unimicron requires suppliers to re-sign the Unimicron Technology Supplier Commitment Letter. As of December 2019, participating suppliers accounted for 97% of the transaction amount in 2019, and completed signatories reached 78% of the participating signatories. Suppliers who have not completed the signing will continue to be coordinated for the completion of the signing. 100% of the supplier commitment letters of the factories in the Mainland China (Unimicron Technology (ShenZhen)/ Unimicron Technology (KunShan)/ Huangshi Xinyixing Technology/ Unimicron Technology (Suzhou)/ Unifley Technology (KunShan)) have been signed; the suppliers of Qun Hong Technology have also been signed 100%.

### 2019 Signing rate of supplier commitment

Raw material supplier	Factories in Taiwan	Factories in the Mainland China (Unimicron Technology (ShenZhen)/ Unimicron Technology (KunShan)/ Huangshi Xinyixing Technology/ Unimicron Technology (Suzhou)/ Unifley Technology (KunShan))	Qun Hong Technology
RBA Commitment Letter	78%	100%	100%

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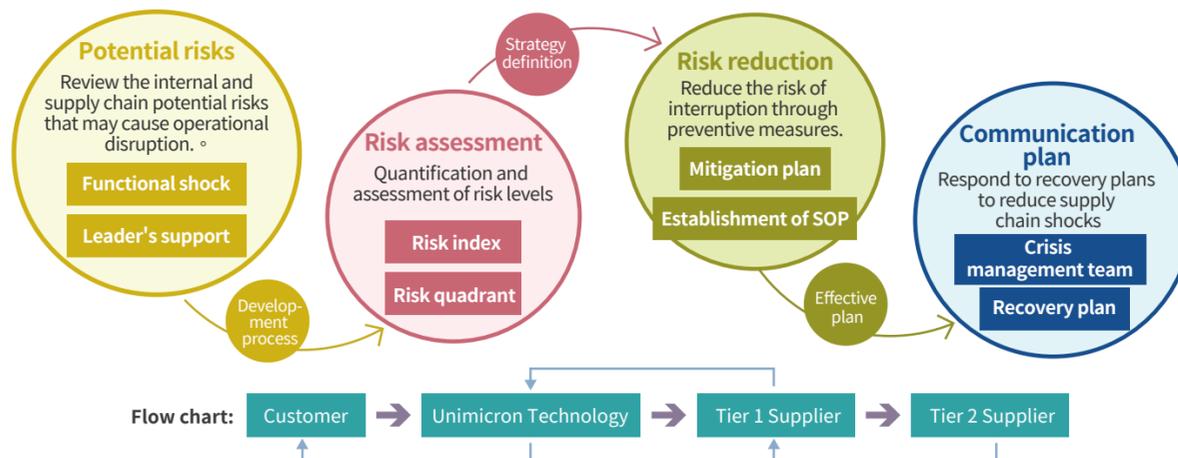
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### Sustainable supplier risk management framework

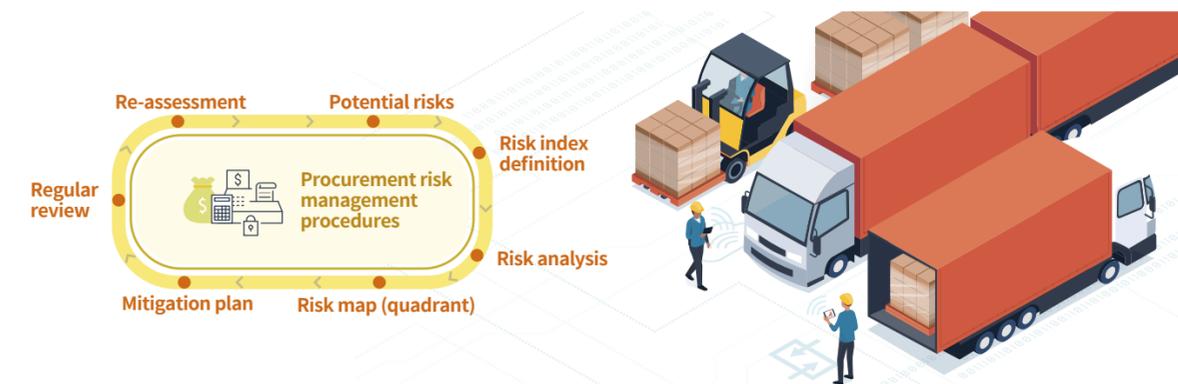
In order to strengthen the sustainability risk management of the supply chain, Unimicron Technology gradually strengthens the sustainability performance of the supply chain, especially through four steps to review and improve the sustainability risks faced by the supply chain. First, we conduct a risk review to examine possible risk issues in procurement, and then through risk assessment, we quantify and classify risks, identify major key risks, and implement risk mitigation measures after the results are analyzed. Through the deployment of risk mitigation measures, supplemented by the establishment of standard operating procedures (SOPs), we finally communicate and cooperate with suppliers, through the establishment of recovery plans, the sustainability risks faced by the supply chain are gradually reduced.

### Unimicron Technology's BCP concepts



### Procurement risk management procedures

We have integrated risk management and control into our daily procurement operations, constructed procurement risk management procedures, and continuously reviewed the potential risk conditions faced with the PDCA cycle process. Through the quantitative definition of risk indexes, risk analysis is carried out, and the assessment results are further drawn to risk maps. The possible risk frequency and the degree of impact that may be caused are used as the assessment and mitigation benchmarks, and mitigation plans are formulated for regular reviews in order to implement the sustainability risk of the supply chain.



Purchase risk assessment factor		
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
		HS risk
Supply chain risk	Business continuity risk	Supply disruption
	Cost risk	Raw material price
	Supplier conflict minerals management risk	Conflict minerals management
	Financial risk	Financial data monitoring

### Supplier sustainability risk assessment

In order to enhance the sustainable development of the supply chain, Unimicron Technology has established CSR evaluation conditions for new suppliers who meet the screening conditions, and requires new suppliers to complete the "Unimicron Technology Corporate Social Responsibility Evaluation Form." For existing suppliers, we encourage the top 50 suppliers in annual transactions to actively participate in self-evaluation. At the same time, for key suppliers, we also proactively send out RBA SAQ, which will be reviewed by the supply chain management team, and follow-up risk management and control is conducted. As of the end of 2019, the response rate of supplier self-evaluation questionnaire was 88%, of which 66% met the company's requirements.

### Supplier sustainability audit and advocacy

In 2019, we conducted a total of 50 on-site audits for important suppliers, including 12 Unimicron's and 4 Qun Hong's suppliers in Taiwan and 34 suppliers in the mainland China. Although the suppliers still have deficiencies, none of the suppliers are included in the high-risk level internally recognized by Unimicron. The main audit deficiencies of suppliers in Taiwan and the mainland China are in the aspects of labor, health and safety, material supplier risk management, and general rules (employee and supplier education and training). Unimicron requires audited suppliers to complete or propose improvement plans within the improvement deadline. The improvement completion rate of 12 Unimicron's suppliers was 51.3%, and that of 34 Qun Hong's suppliers and suppliers in the mainland China was 92.6%. It is expected to conduct interviews and provide considerable assistance to suppliers that have not completed the deficiencies improvement or drafted plans in the second half of 2020. Unimicron will continue to require suppliers to implement audit deficiencies improvements and continue to coach suppliers to comply with the RBA code of conduct, in order to reduce supply chain risks and promote supply chain growth. Based on the actual audit and improvement delay scores, two suppliers with excellent performance in the audit results in 2019 (need to cooperate with the on-site audit and complete the improvement) will be selected from them to be awarded with the top "Sustainable Co-Prosperity Award" at the 2020 Supplier Conference, as the model for other suppliers to learn from.

### Supplier CSR audit process



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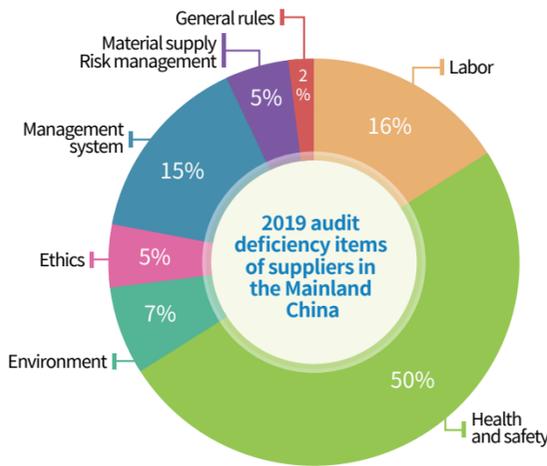
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Deficiency item	Item statistics	Percentage
Labor	31	16%
Health and safety	85	45%
Environment	15	8%
Ethics	3	2%
Management system	6	3%
Material supply and risk management	31	17%
General rules	16	9%
Total	187	100%

\* There are only suggestion items, no deficiencies, for Qun Hong's suppliers.  
 \* According to the audit results of suppliers in Taiwan, in the labor aspect, there are no child labor related deficiencies, only two suppliers are involved in the risk of possibly violating forced labor regulations, and the deficiency is to keep foreign migrant workers' passports; five suppliers are involved in the risk of possible discrimination, and the deficiency is that the resume has no optional items (age, hometown, and blood type) designed; relevant suppliers have completed the improvement, revised operating procedures, management methods and resumes, and the cases are closed; there are no major deficiencies in the environmental aspect.  
 \* Major deficiencies refer to deficiencies that are critical according to the audit standards and must be improved within seven days.



Deficiency item	Item statistics	Percentage
Labor	20	16%
Health and safety	62	50%
Environment	8	7%
Ethics	6	5%
Management system	19	15%
Material supply and risk management	6	5%
General rules	2	2%
Total	123	100%

\* According to the audit results of suppliers in the Mainland China, in the labor aspect, there are no child labor related deficiencies; there are no major deficiencies in the environmental aspect.  
 \* Major deficiencies refer to deficiencies that are critical according to the audit standards and must be improved within seven days.

### Findings and improvement actions of 2019 supplier audit

Classification	RBA classification	Main findings	Improvement action
Labor	<ul style="list-style-type: none"> <li>Free choice of employment</li> <li>Salary and welfare</li> <li>ndiscrimination</li> </ul>	<ul style="list-style-type: none"> <li>Keeping of the foreign employees' passports and the number of days of the advance notice for employees' resignation do not comply with laws and regulations</li> <li>Using salary deductions a mean of punishment</li> <li>Entry items in the interview resume involve discrimination</li> </ul>	<ul style="list-style-type: none"> <li>Immediately return the passports of foreign employees, and revise the number of days of the advance notice for employees' resignation to comply with the regulations.</li> <li>Correct the punishment items of salary deduction</li> <li>Revise the resume form involving discriminatory items to comply with regulations.</li> </ul>
Health and safety	<ul style="list-style-type: none"> <li>Occupational safety</li> <li>Industrial hygiene</li> <li>Health and safety communication</li> </ul>	<ul style="list-style-type: none"> <li>Insufficient number of occupational safety and health personnel; insufficient number of first aid personnel</li> <li>Function abnormality of fire-fighting facilities</li> <li>Insufficient hazard labeling and GHS labeling</li> </ul>	<ul style="list-style-type: none"> <li>Strengthen independent management and maintenance</li> <li>Fill vacant necessary occupational safety and health personnel (including emergency personnel)</li> </ul>
Environment	<ul style="list-style-type: none"> <li>Pollution prevention and resource reduction</li> </ul>	<ul style="list-style-type: none"> <li>Waste temporary storage and removal management does not comply with the specifications</li> <li>Rainwater discharge management has not been implemented</li> <li>There is no reduction plan and target for energy resource consumption management.</li> </ul>	<ul style="list-style-type: none"> <li>Improve according to regulations and implement waste management</li> <li>Implement rainwater discharge management and develop standardized procedures</li> <li>Formulate annual energy resource consumption targets and implement reduction plans</li> </ul>
Ethics	<ul style="list-style-type: none"> <li>Fair business, advertising and competition</li> </ul>	<ul style="list-style-type: none"> <li>There is a requirement to declare fair trade/competition (antitrust), but there is a lack of detailed education.</li> </ul>	<ul style="list-style-type: none"> <li>Promote relevant regulations and recommend to have internal lecture records for at least two years (decree changes)</li> </ul>

Classification	RBA classification	Main findings	Improvement action
Management system	<ul style="list-style-type: none"> <li>Company commitment</li> <li>Management accountability and responsibility</li> </ul>	<ul style="list-style-type: none"> <li>There is no CSR policy and organization formulated</li> </ul>	<ul style="list-style-type: none"> <li>Create a point of contact to let the management understand CSR/RBA</li> <li>Formulate policy commitments, sign by senior management and announce on the bulletin board</li> </ul>
Material supply Risk management	<ul style="list-style-type: none"> <li>Supplier RBA code of conduct compliance and its supply chain related communication</li> </ul>	<ul style="list-style-type: none"> <li>Suppliers still do not fully understand the RBA Code of Conduct</li> <li>The RBA code of conduct to be complied with for the supply chain is not listed in the supply chain management procedures.</li> </ul>	<ul style="list-style-type: none"> <li>Questionnaire feedback after the supplier conference</li> <li>Strengthen advocacy (supplier conference / teaching material announcement)</li> <li>Suppliers should establish supplier management procedures, requiring their supply chain to commit to abide by the RBA code of conduct and sign it.</li> </ul>
General rules	<ul style="list-style-type: none"> <li>CSR/RBA training</li> </ul>	<ul style="list-style-type: none"> <li>Having weak awareness of CSR/RBA, there are no relevant education and training on CSR/RBA code of conduct.</li> </ul>	<ul style="list-style-type: none"> <li>Provide relevant teaching materials for training and request to return training records</li> </ul>

### CSR audit practices and number of factories audited in Taiwan by year

Year	Practice	Implementation results
2011	Official site actual CSR audit	2
2012		7
2013		7
2014	As of 2019, 120 copies of Unimicron Technology's Corporate Social Evaluation Form have been issued and 108 copies have been recovered (including the number of on-site audits by year)	On-site audit 8 companies
2015		On-site audit 8 companies
2016		On-site audit 8 companies
2017		On-site audit 12 companies (re-audit 6 companies + initial audit 6 companies)
2018		On-site audit 12 companies (re-audit 6 companies + initial audit 6 companies (including equipment suppliers))
2019		On-site audit 12 companies (re-audit 6 companies + initial audit 6 companies (including equipment suppliers))
2020 target		Target : On-site audit 12 companies (re-audit 6 companies + initial audit 6 companies (including equipment suppliers))

The 2020 supplier audit plan is expected to audit 12 critical suppliers, including the selection of 6 suppliers for re-auditing, confirming whether the suppliers have indeed improved and the effectiveness of continuous implementation, and the selection of 6 critical suppliers that have not conducted on-site audits for auditing, in order to implement the promotion and implementation of the supply chain in line with the RBA code of conduct.

### Construct a supplier communication platform and capacity building

Unimicron Technology complies with the RBA Code of Conduct, ISO 14001, ISO 45001, QC080000, and other international standards or regulations such as the prohibition of conflict minerals; establishes a comprehensive supplier management system and management specifications based on the principles of environmental protection, human rights, safety and health; regularly holds supplier conferences; promotes CSR; promotes quality/green products/industry safety/CSR supply chain management promotion; communicates with suppliers and delivers messages, creating a win-win partnership. The factories in Taiwan held a supplier conference in July 2019, inviting 75 suppliers, with 59 participants from 57 suppliers attending; the participation rate reached 76%. In addition to promoting quality, industrial safety, environmental safety and other related issues during the conference, it will also strengthen the promotion of green procurement, sustainable supply chain management, CSR implementation results and RBA standards. After the conference, all information will be e-mailed to all suppliers and placed onto the supplier platform as a reference for supplier improvement. Unimicron Technology (Shenzhen) also held a supplier conference in southern China. A total of 51 suppliers participated. Other factories in eastern China promote through supplier commitment letters and e-mails.

### 2019 Supplier conference themes



### Local procurement

Unimicron Technology upholds the principle of corporate social responsibility and hopes to drive the sustainable development of the entire supply chain. Therefore, in order to promote operational activities and promote local economic development, Unimicron actively implements the localization of materials and supports the development of local suppliers. At the same time, it reduces unnecessary air and shipping costs, and reduces the carbon footprint generated during material transportation. In 2019, the proportion of raw materials used by Unimicron was 67% locally procured in Taiwan, Qun Hong Technology's local procurement rate was 81%, and the local procurement rate of the factories in the mainland China was 84%

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### Percentage of local procurement amount

Year	2017	2018	2019
Factories in Taiwan	67%	68%	67%
Qun Hong Technology	77%	82%	81%
Factories in China	80%	81%	84%

\*Local scope includes local suppliers and Taiwan agents.  
 \*The decrease in the local procurement ratio in Taiwan is due to the improvement of terminal product functions, which require raw materials of higher technology, high reliability, and high-quality. In response to customer needs, foreign raw materials must be purchased from abroad.

At the same time, we also promote the recycling of packaging materials. For the trays used when the carrier is shipped, the trays will be recycled after the carrier is shipped to the customer by the Unimicron's supplier. Unimicron's priority is given to purchasing reusable trays. In 2019, the purchase of recycled trays accounted for approximately 52% of the usage.



### Recycle of trays

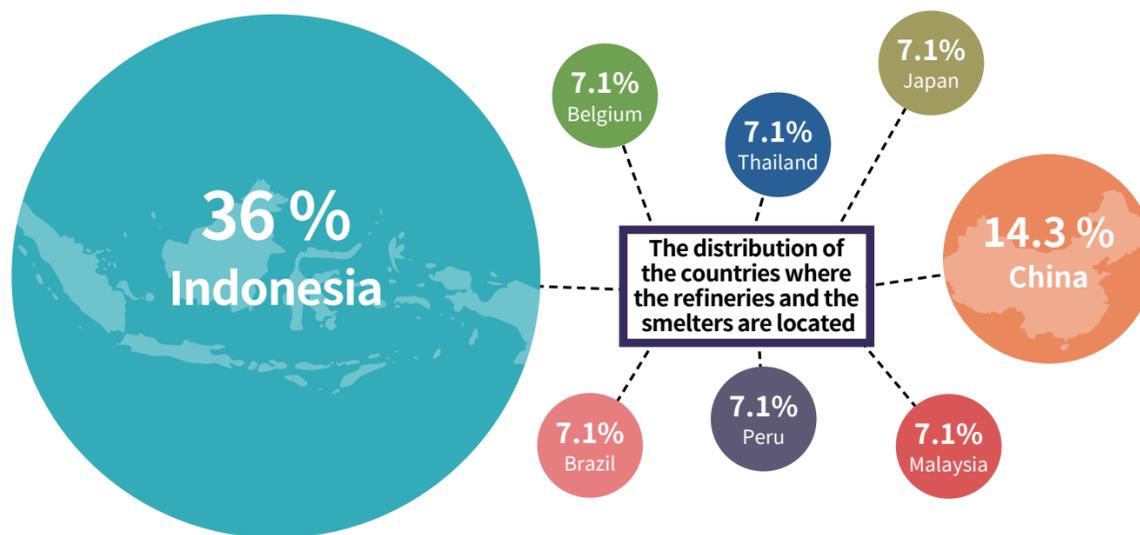
Year	2016	2017	2018	2019
Ratio of recycled tray procurement (%)	49	42	40	52

### 3.3.3 Conflict mineral management

Unimicron has incorporated the prohibition of "conflict minerals" into its supplier management policy, and has responded with customers, promising not to use metals from armed conflicts, illegal mining and poor working environments. At the same time, suppliers are required to fulfill their social responsibilities and trace the sources of gold (Au), tin (Sn), tantalum (Ta) and tungsten (W) in 3TGs contained in all products to ensure that these metals do not come from "conflict mining areas" or "Blood Mine"; at the same time, suppliers are required to communicate this requirement to their upstream suppliers and use market mechanisms to prevent such behaviors.

We also exert the influence of the supply chain, requiring smelters to complete the RMAP (Responsible Minerals Assurance Process) certification for conflict-free smelters, fulfilling our commitments with practical actions. In mid-2019, RMI (Responsible Minerals Initiative) notified members of conflict minerals that some RMAP-compliant smelters have been shutdown, and it is expected to consider removing them when the website is updated in early 2020. Unimicron immediately launched a supply chain investigation, required suppliers to take inventory, and required that the shutdown smelters must be removed in early 2020, and it was implemented simultaneously with RMI's official website. All the smelters and refineries of the 3TGs used in Unimicron Technology' factories in Taiwan have obtained RMAP certification and meet RBA requirements; the conflict minerals used by the factories in the mainland China and Qun Hong Technology are in compliance with RBA requirements.

In response to RMI regulations, 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 of the supplier conference. 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 simultaneously require their smelters to participate in RMAP certification plan.



## 3.4 Environment

Adhering to the environmental sustainability action pillars of green ecology (Planet), green humanities (People), and green competitiveness (Performance), Unimicron Technology has formulated and promoted various environmental protection programs and formulated performance targets for environmental issues. The concepts of pollution control and clean production are introduced in all operations, and the reduction and management of greenhouse gases, energy and resource conservation management, and waste recycling are actively promoted to mitigate environmental impacts. In accordance with the "Unimicron Environmental Sustainability Development Blueprint," the actual annual action of each factory is combined, and it continues to implement its commitment to environmental sustainability and implements an environmental management system to reduce possible environmental risks. Following the changes in the global environmental sustainability trend, we have introduced concepts such as green buildings and ecological construction methods in new factories to promote environmentally sustainable operations. Since the company has set up an environmental management system with clear responsibilities and strong execution, it can fully consider and design the environmental impacts and risks that may be caused by production activities. In order to internalize environmental management into daily operations, standardization is adopted to reduce risk. There were no major environmental violations in 2019 (with a fine of more than NT\$1 million). There was one incident which was not a major violation, and after review and confirmation, all deficiencies have been corrected and there is no danger of another violation. Regarding the channels for complaints and suggestions related to environmental issues, stakeholders can report through the CSR website mailbox, CSR@unimicron.com.

### 3.4.1 Energy and resource consumption

#### Raw materials

Unimicron aims to be customers' best partner and insists on providing high-quality and environmentally friendly products. The purchasing thinking of raw materials is also based on environmental friendliness as the main consideration. The top three raw materials used in production are substrates, potassium gold cyanide (PGC), and prepregs. The usage in 2019 was about 2.823 million sheets / 13.06 million PNL, 3,055 kg and 157,000 rolls / 3.608 million PNL, respectively. There are 100% virgin materials, and no recycled materials are used. At the same time, we also promote the recycling of packaging materials. For the trays used when the carrier is shipped, we will give priority to the purchase for repeated use, and after shipped to customers they will be recycled by Unimicron's suppliers for reuse. In 2019, the purchased quantity of recycled trays accounted for approximately 52% of the total purchased trays.

#### Main raw material usage

Type of raw materials	Area used	Unit	2014	2015	2016	2017	2018	2019
Substrate	Taiwan	Sheet	3,256,432	1,465,202	1,306,665	1,062,604	1,012,188	1,236,896
		PNL	3,516,572	3,011,416	3,432,666	3,706,742	4,082,477	3,940,471
	Mainland China	Sheet	2,438,560	1,975,013	1,984,420	1,787,085	1,608,995	1,586,119
		PNL	6,623,648	6,126,228	5,262,779	6,434,883	7,813,582	9,120,964
Total	Sheet	5,694,992	3,440,215	3,291,085	2,849,689	2,621,183	2,823,015	
	PNL	10,140,220	9,137,644	8,695,445	10,141,625	11,896,059	13,061,435	
PGC	Taiwan	Kg	2,959	1,419	1,378	1,369	1,363	1,177
	Mainland China	Kg	1,818	1,645	1,777	1,732	1,886	1,878
	Total	Kg	4,777	3,064	3,155	3,101	3,249	3,055
Prepreg	Taiwan	Roll	50,099	40,759	157,115	157,115	93,157	98,444
		PNL	2,909,184	2,052,812	2,431,719	2,431,719	2,525,704	2,292,503
	Mainland China	Roll	37,380	37,448	119,552	119,552	53,245	58,707
		PNL	6,084,456	3,873,073	2,410,550	2,410,550	1,170,074	1,315,514
Total	Roll	87,479	78,207	276,667	276,667	146,402	157,150	
	PNL	8,993,640	5,925,885	4,842,269	4,842,269	3,695,778	3,608,017	

Note 1: There are two measurement units for substrates and prepregs, which cannot be unified and then totaled. Therefore, it is presented in separated totals

#### Energy

The fossil fuel used by Unimicron Technology in 2019 includes gasoline (0.003 X 109 million joules), diesel fuel (0.015 X 109 million joules), and natural gas (0.402 X 109 million joules), and indirect energy is electricity (5.0 X 109 million joules) and steam (0.0001 X 109 million joules); the total energy consumption is 5.4X109 million joules, and the consumption intensity is 0.65X105 million joules / million revenue. Among them, the direct energy consumption is highest in natural gas, and the indirect energy consumption is the highest in purchased power.

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Gasoline is mainly used in official vehicles, diesel is for trucks and generators, fuel oil and natural gas are used in boilers, and liquefied petroleum gas is used in boilers and kitchens of Unimicron Technology (Shenzhen)'s factory in mainland China. However, starting from 2019, the factory's liquefied petroleum gas has been replaced by electricity. Since 2014, the Group has gradually changed the fuel of boilers from diesel to cleaner natural gas. As of 2019, the total consumption of diesel fuel has been reduced by 77% compared with 2014. In terms of power consumption, absolute usage continued to rise from 2015 to 2018, and in 2019 it was slightly reduced by 0.3% compared to 2018. As for the intensity of electricity consumption, it increased year by year from 2015 to 2017, and continued to decline in 2018 and 2019. The intensity value in 2019 was 6% lower than in 2015. The reason comes from the increase in production capacity and the improvement of energy efficiency.

### Energy consumption

Type of energy	Consumption unit	Consumption area	2015	2016	2017	2018	2019
gasoline	kiloliter	Taiwan	5	9	13	15	11
		Mainland China	150	167	119	112	87
		<b>Total</b>	<b>155</b>	<b>176</b>	<b>132</b>	<b>127</b>	<b>98</b>
Diesel fuel	kiloliter	Taiwan	724	450	411	182	77
		Mainland China	374	269	302	532	332
		<b>Total</b>	<b>1,098</b>	<b>719</b>	<b>713</b>	<b>714</b>	<b>409</b>
Fuel oil	kiloliter	Taiwan	422	450	488	512	0
		Mainland China	0	0	0	0	0
		<b>Total</b>	<b>422</b>	<b>445</b>	<b>488</b>	<b>512</b>	<b>0</b>
Natural gas	Cubic meter	Taiwan	5,690,240	6,147,126	6,005,930	7,531,420	7,881,489
		Mainland China	2,421,077	2,328,477	2,119,135	2,528,663	3126236
		<b>Total</b>	<b>8,111,317</b>	<b>8,475,603</b>	<b>8,125,065</b>	<b>10,060,083</b>	<b>11,007,725</b>
Liquefied petroleum gas	Kg	Taiwan	0	0	0	0	0
		Mainland China	109,445	90,14	68,200	64,620	0
		<b>Total</b>	<b>109,445</b>	<b>90,14</b>	<b>68,200</b>	<b>64,620</b>	<b>0</b>
Electricity	kWh	Taiwan	780,390	784,638	872,660	940,182	974,724
		Mainland China	368,440	370,880	373,535	439,656	401,664
		<b>Total</b>	<b>1,148,830</b>	<b>1,155,518</b>	<b>1,246,195</b>	<b>1,379,837</b>	<b>1,376,388</b>
Steam	Ton	Taiwan	0	0	0	0	0
		Mainland China	13,781.35	13,277.60	14,488	19,654	20,362
		<b>Total</b>	<b>13,781.35</b>	<b>13,277.60</b>	<b>14,488</b>	<b>19,654</b>	<b>20,362</b>

Note 1: The above data does not include Zhongxing Plant and Zhongyuan Plant in Taiwan.  
 Note 2: Calculation factor: 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/m3, and Mainland China: 38,931 KJ/m3), liquefied petroleum gas (Mainland China: 50,179 Kg/m3), electricity (Taiwan and Mainland China: 3,600,000 KJ/MWh), and steam (Mainland China: 2,762.9 KJ/ton).  
 Note 3: The data of the mainland plants in 2019 has not been verified by a third party.

### Electricity consumption intensity

Intensity unit	Consumption area	2015	2016	2017	2018	2019
kWh / million revenue	Taiwan + Mainland China	17.77	18.45	19.17	18.22	16.68

Note 1: The unit of revenue is represented in New Taiwan Dollars.



### Water resources

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 continuity operation of Unimicron Technology. 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 also occurred. In response to the risk of 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 Technology's factories. Storage tanks have been set up in the factory areas, and the water storage capacity of each regional reservoir and the water consumption status of each factory area are monitored and managed in normal times to ensure that the factory area 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 Technology's factories are not located in areas with frequent water shortage and drought, and the main water source is tap water. Taiwan factories still also use well water and rainwater. In 2019, the water consumption of each factory area accounts for a small proportion of the water supply in the water intake area, and there is no significant impact on the water intake area (>5%).

Area	Main water supply	Ratio of annual water consumption to annual water intake in the water supply area
Factories in Taoyuan	Shimen Reservoir	1.05%
Factories in Hsinchu	Lung-En Weir	3.80%

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 from 2014 to 2018.  
 Note 2: The source of water supply for the factories in Taoyuan is Shimen Reservoir. The water intake from the reservoir includes Taoyuan Dazun (Taoyuan Irrigation Association), Taoyuan Dazun (Water Company, etc.), Shimen Dazun (Shimen Irrigation Association), and Shimen Dazun (Water Company, etc.).  
 Note 3: The source of water supply for the factories in Hsinchu is the Lung-En Weir catchment area, and the regional water intake includes Lung-En Weir (Water Company) and Lung-En Weir (Lung-En-Zun irrigation area).  
 Note 4: The ratio of annual water consumption to annual water intake in the water supply area = annual tap water consumption of the factories in the area / annual average total water intake in the regional water supply area.

The company adjusts water use in accordance with government policies. Although the areas where the factories are located are less likely to have losses and disasters due to insufficient water sources or excess rainfall, contingency measures are still established for water resource scheduling during drought periods. Through the tracking of the government's published water supply monitoring lights, the standardized management of water resources is actively carried out, and the emergency water scheduling team will carry out water trucks, tanks, water sources and other water resources scheduling related matters to ensure undisrupted operations.

Water supply monitoring light	Government measures	Unimicron Technology's contingency measures
● Stable supply	Stable supply	Regional water supply monitoring / water use status management in each factory
● Tight supply	Agricultural fallow	Establishing an emergency water scheduling team / drawing up an emergency water plan
● Stage one	Decompression water supply at specific time	Responding by water saving in production / demanding 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

In 2019, the proportion of water use was about 67.6% in factories in Taiwan, 5.4% in factories in Southern China, and 27% in the three factories in Eastern China, respectively. The total water consumption in 2019 was 20,244,000 cubic meters, and the proportion of rainwater was extremely low (0.01%). Well water and tap water respectively accounted for 33% and 67% of the total water consumption. The average consumption of well water in the past five years was about 722±3.02 million cubic meters, and the average consumption of tap water in the past five years was 12.57±1.26 million cubic meters. The use of recycled rainwater in 2019 was 2,297 metric tons to replace tap water for watering landscape plants and trees. It is hoped that rainwater storage and utilization will achieve the function of saving and deploying water. From the perspective of the total water use intensity per unit of revenue, the past five years has shown a trend of declining year by year. In 2019, it has decreased by about 4.7% compared with 2018, and has decreased by 32% in the past five years. The improvement in water efficiency is quite significant.

### Water resource consumption and intensity

Water resources	Unit	Consumption area	2015	2016	2017	2018	2019
Rainwater	Cubic meter	Taiwan	1,368	2,394	1,741	2,605	2,297
		Mainland China	0	0	0	0	0
Subtotal			1,368	2,394	1,741	2,605	2,297
Well water	Cubic meter	Taiwan	12,554,450	5,954,861	5,162,935	5,843,627	6,586,375
		Mainland China	0	0	0	0	0
Subtotal			12,554,450	5,954,861	5,162,935	5,843,627	6,586,375
Tap water	Cubic meter	Taiwan	6,202,277	7,103,851	7,975,816	8,768,336	8,717,858
		Mainland China	4,668,421	4,545,804	5,008,294	4,944,526	4,937,470
Subtotal			10,870,698	11,649,655	12,984,110	13,712,862	13,655,328
Total			23,426,516	17,606,910	18,148,786	19,559,094	20,244,000
Water consumption intensity (Ton/ NT\$ million)	Cubic meter / Million revenue	Taiwan + Mainland China	362	281	279	258	245

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Note 1: The above data does not include Zhongxing Plant and Zhongyuan Plant in Taiwan.  
 Note 2: Calculation method of rainwater recovery: average annual rainfall in each region \* catchment area.  
 Note 3: The water sources of the Kunshan and Suzhou factories are Yangcheng Lake and Taihu Lake, and the water sources of the Shenzhen factory are Songgang Wuzhipa Reservoir.  
 Note 4: Total water consumption = rainwater + well water + tap water.  
 Note 5: The unit of revenue is represented in New Taiwan Dollars.  
 Note 6: Due to the adjustment in the calculation method of total water consumption in 2019, the water recovery rate data from 2015 to 2018 are revised.

Under climate change, climatic characteristics such as temperature and rainfall will change. In addition to increasing temperature, rainfall will also 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 Technology continues to improve water-saving technology to increase water efficiency, and rainwater recovery storage tanks are installed in each factory to reduce consumption of water resources. In addition, we continue to add water recycling systems to reduce consumption of water resources by recycling low-polluting water sources produced in various processes and treating them to replace water used for industrial production. The recycling rate of water resources in 2019 was 16% (3,253,380 cubic meters), and the average recycling rate in the past five years was 15%.

### Water resource recovery rate

Unit	Consumption area	2015	2016	2017	2018	2019
%	Taiwan	7%	11%	9%	10%	9%
	Mainland China	35%	23%	25%	36%	62%
Total		13%	14%	13%	17%	16%

Note 1: The above data does not include Zhongxing Plant and Zhongyuan Plant in Taiwan.  
 Note 2: Water resource recovery rate% = total recovered water / total water consumption (excluding rainwater recovery)  
 Note 3: Water sources include tap water, well water, recycled rainwater, and recycled water.  
 Note 4: Due to the adjustment in the calculation method of total water consumption in 2019, the water recovery rate data from 2015 to 2018 are revised.

### 3.4.2 Greenhouse gases emission

The annual greenhouse gas inventory is conducted in accordance with the ISO 14064-1:2006 standards. The boundary includes all factories in Taiwan and the mainland China, and the base year varies with the characteristics of each factory. The total emissions of Scope 1 and 2 in 2019 were 887,810 tons of CO<sub>2</sub>e, an increase of 9% compared to 2018. There is an increase of 0.4% shown by the calculation of the intensity value per million revenue. The main reason for the increase in carbon emissions and intensity is that Huangshi Xinyixing Technology's factory in the mainland China began to collect greenhouse gas data by the expansion of the inventory boundary in 2019. In order to reduce greenhouse gas emissions caused by direct energy use, Luzhu Plant II and Qun Hong Technology's Dacheng Plant in Taiwan have changed the boiler oil system to natural gas fuel.

### Greenhouse gas emissions and intensity

Scope type	Unit	Discharge area	2015	2016	2017	2018	2019
1	Tonne of carbon dioxide equivalent	Taiwan	15,324	16,350	16,026	18,546	17,835
		Mainland China	8482	13156	10,358	8,631	10,375
Subtotal			24,305	29,506	26,384	27,177	28,210
2	Tonne of carbon dioxide equivalent	Taiwan	406,583	414,532	434,028	520,861	519,528
		Mainland China	317,694	316,853	292,250	263,579	340,072
Subtotal			724,277	731,385	726,278	784,439	859,600
1+2	Tonne of carbon dioxide equivalent	Taiwan	421,907	430,882	450,054	539,406	537,363
		Mainland China	326176	330009	302,608	272,210	350,447
Total			748,582	760,891	752,662	811,616	887,810
1+2	Tonne of carbon dioxide equivalent/million revenue	Taiwan + Mainland China	11.58	12.15	11.58	10.72	10.76
3	Tonne of carbon dioxide equivalent	Taiwan	423	320	731	837	880
		Mainland China	267	314	540	314	364
Total			690	634	1,271	1,151	12,44

Note 1: Scope 2 is the use of electricity, and the emission factors in Taiwan are 0.522 (2014), 0.521 (2015), 0.528 (2016), 0.529 (2017), 0.554 (2018), and 0.533 (2019) kg CO<sub>2</sub> equivalent/kWh.  
 Note 2: Scope 2 is the use of electricity, and the emission factors for the factories in the mainland China are 0.8095 (2015), 0.8112 (2016), 0.7035 (2017), 0.7035 (2018), and 0.7035 (2019) ton of carbon dioxide equivalent per kWh in the Eastern China; 0.9183 (2015), 0.8959 (2016), 0.8959 (2017), 0.5271 (2018), and 0.5271 (2019) tons of carbon dioxide equivalent per degree in the Southern China.  
 Note 3: The unit of revenue is represented in New Taiwan Dollars.  
 Note 4: According to ISO14064:2006, the emissions of scope 3 are for employees' business flights. Since 2017, there are newly added items of the electricity paid by the employees in the accommodation and the oil and refrigerant for the company's rental car in Taiwan. In 2018, the refrigerants for rental cars in Taiwan are added (a total of four items).  
 Note 5: The source of GWP value is IPCC 2007 AR4.  
 Note 6: The emission data before 2018 did not include Huangshi Xinyixing and Zhongxing plants, and after 2019, he data from Huangshi Xinyixing is included.  
 Note 7: The data of the factories in the mainland China in 2019 has not been verified by a third party.

### Base year of each factory's greenhouse gas scope 1 + 2

Area	Factory	Base year	Emissions (tonne of carbon dioxide equivalent)
			Scope 1 + 2
Taiwan	Unimicron Technology	2017	438,040
	Qun Hong Technology	2018	76,446
Mainland China	Unimicron Technology (Shenzhen)	2011	136,545
	Unimicron Technology (Kunshan)	2013	128,395
	Unimicron-FPC Technology (Kunshan)	2011	29,755
	Unimicron Technology (Suzhou)	2016	48,923
	Huangshi Xinyixing Technology	2019	70,493

Note: The data of the factories in the mainland China in 2019 has not been verified by a third party.

### Energy saving plan

Over the years, the reduction plan has focused on the use of electricity and gasoline, and the implementation of the energy-saving plan for the factories in Taiwan has focused on improving efficiency. In order to reduce the risk of future energy or carbon price fluctuations and restrictions, we also actively promote energy-saving and power-saving actions in various factories, and factories have successively promoted plans such as rectifier improvement, frequency conversion energy saving, production allocation, equipment energy-saving mode setting, etc.

### Effectiveness of energy saving plan by year

Reduction item	2016	2017	2018	2019
Annual electricity saving (kWh)	17,498	30,423	181,934	26,281
Annual electricity savings (billion joules)	62,992	109,523	31,498	94,615
Annual greenhouse gas reduction (tonne of carbon dioxide equivalent)	9,787	17,944	10,789	14,039
Implementation projects in the factories in Taiwan	<ul style="list-style-type: none"> <li>Improve production process and increase efficiency to reduce waste of energy</li> <li>Replace the old equipment system and improve energy efficiency</li> <li>Improve management and behavior patterns to avoid waste of energy and resources</li> </ul>			

Note 1: The emission factor for electricity use in Taiwan is 0.529 (2016 and 2017), 0.528 (2018), and 0.533 (2019) kg CO<sub>2</sub> equivalent/kWh.  
 Note 2: The emission factors for the mainland China are 0.8112 (2016), 0.7035 (2017), 0.7035 (2018), and 0.7035 (2019) ton CO<sub>2</sub> equivalent per kWh in the eastern China; 0.8959 (2016), 0.8959 (2017), 0.5271 (2018), 0.5271 (2019) tons of carbon dioxide equivalent per kWh in the Southern China.

### Participation in carbon trading

Shenzhen City, the 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 Technology (ShenZhen)'s factory has an average of 15,000 tons/month in 10-12 years) must conduct compulsory carbon emissions trading (i.e., emission control units), and by 2017 the threshold has been reduced to 3,000 tons of carbon emissions. Therefore, Unimicron Technology (ShenZhen)'s factory began to join the Shenzhen carbon trading mechanism in 2014. As of 2018, the cumulative carbon emissions were approximately 626,600 tons. Based on industrial added value, retrospectively, the due quota in 2018 was about 66,600 tons, and the total cumulative quota was about 780,500 tons (2014~2018). After offset, there is still a balance of about 154,500 tons, which is temporarily retained without trading. Since 2016, Unimicron Technology (ShenZhen)'s annual carbon emissions have exceeded the carbon emission quotas, and the remaining carbon emission quotas in the future will be used to offset Unimicron Technology (ShenZhen)'s annual carbon emissions. The 2019 carbon trading mechanism was temporarily closed due to the impact of the pandemic, and data will be disclosed after government agencies open the mechanism for trading.

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### 3.4.3 Pollution and hazardous substances

#### Air pollutant control

The air pollutants produced in the printed circuit board 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 Technology over the years is lower than the government's environmental protection laws and regulations. The results of the air pollution prevention and control research and development over the years include: Rectification of the previous stage of the acid scrubber, the removal of sulfuric acid mist can reach 75-96%, and the removal efficiency of hydrochloric acid mist can reach 91-98%; the use of the high vapor pressure of organic waste gas and the low vapor pressure of ice brine, combined with the newly designed scrubber body structure to effectively supplement the organic waste gas, the removal efficiency can reach 90%. Due to the use of natural gas to replace diesel fuel in the Luzhu Plant II and Qun Hong Technology's Dacheng Plant in Taiwan, the emission of sulfur oxides was effectively reduced by 33% in 2019 compared with 2018. The Xinfeng Plant changed its emission calculation method at the request of the local environmental protection agency, resulting in an increase of volatile organic compounds by 137% compared to the previous year. The total air pollution emission intensity per unit of revenue in 2019 was 1.50 kg/million revenue on average, an increase of 40% from the previous year's 1.07 kg/million revenue, and the overall total air pollution emission intensity in the past five years has decreased 9%.

#### Air pollutant emissions and intensity

Pollutants	Unit	Discharge area	2015	2016	2017	2018	2019
Nitrogen oxides	Kg	Taiwan	17,295	6,349	4,059	4,106	2,498
		Mainland China	8,184	7,853	6,192	13,410	11,919
	Total	25,479	14,202	10,251	17,516	14,417	
	Kg / Million revenue	Taiwan + Mainland China	0.39	0.23	0.16	0.23	0.17
Sulfur oxides	Kg	Taiwan	8,188	4,235	4,642	4,638	0
		Mainland China	5,332	1,539	894	4,136	433
	Total	13,520	5,774	5,536	8,774	433	
	Kg / Million revenue	Taiwan + Mainland China	0.21	0.09	0.09	0.12	0.01
Volatile organic compound	Kg	Taiwan	40,375	36,694	30,545	40,144	100,323
		Mainland China	4,370	7,880	8,390	5,937	4,183
	Total	44,745	44,574	38,935	46,081	104,506	
	Kg / Million revenue	Taiwan + Mainland China	0.69	0.71	0.60	0.61	1.27
Aerosol	Kg	Taiwan	2,962	11,105	3,186	4,589	2,760
		Mainland China	19,612	6,282	4,506	3,161	1,484
	Total	22,574	17,387	76,92	7,750	4,244	
		Taiwan + Mainland China	0.35	0.28	0.12	0.10	0.05

Note 1: The revenue unit is represented in New Taiwan Dollars.  
Note 2: The historical total data of various pollutants is updated due to statistical errors.  
Note 3: The above data does not include Zhongyuan and Zhongxing Plants.

#### Wastewater treatment

The total wastewater discharge in 2019 was approximately 18.28 million tonnes, an increase of approximately 20% over 2018, and the emission intensity per unit of revenue increased by 10%. In 2019, the amount of wastewater discharged from factories in Taiwan and mainland China was approximately 14.38 million tonnes and 3.9 million tonnes, respectively, accounting for 79% and 21% of the total emissions. The waste water discharged from Unimicron Technology's operating locations is treated by waste water facilities and confirmed to meet the effluent standards before it is discharged into designated streams or incorporated into the local sewage treatment plant. After treatment, wastewater from various factories in Taiwan is finally legally discharged into streams and incorporated into local sewage treatment plants, including Nankan Creek, Laojie Creek, Dongmen Creek and Xinfeng Creek; the wastewater from the factories in mainland China are included in the sewage treatment plants in

the local special area, and after treatment, they are finally discharged legally to Maozhou River, Wusong River and Taicang Pond. Wastewater from the factories in Taiwan and mainland China are treated and discharged, which will not pose any threat to the ecology of the local river basin or natural water bodies. In order to confirm the results of waste water treatment, we actively review and improve the wastewater pollution prevention system in the factories. At present, the discharge standards of the factories in Taiwan and the mainland China are maintained far below the standards approved by local regulations, and we proactively announce the quarterly third-party testing data of wastewater discharge and description of wastewater treatment process on the company's official website. In response to the wastewater discharge standards stipulated by the environmental protection laws and regulations will be tighten in the future, the factories in Taiwan have already evaluated the effectiveness of existing wastewater treatment facilities so that the current treatments can meet future discharge standards. In order to avoid the impact of stricter environmental protection laws and standards, we will continue to invest in wastewater treatment facilities to improve the efficiency and expand, reduce source pollutants, and establish internal wastewater discharge control standards that are superior to laws, in order to reduce environmental pollution and operational production impacts.

#### Wastewater discharge volume and discharge intensity

Discharge area	Emission destination	Unit	2015	2016	2017	2018	2019
Taiwan	Surface water body + local sewage treatment facility	Cubic meter	9,481,066	8,038,160	12,350,424	11,426,257	14,379,609
Mainland China			Total wastewater discharge intensity	3,641,469	10,835,433	3,636,009	3,829,977
Total			13,122,535	18,873,593	15,986,433	15,256,234	18,277,353
Total wastewater discharge intensity		Cubic meter / Million revenue	203	301	245	201	221

Note 1: The revenue unit is represented in New Taiwan Dollars.  
Note 2: The above data does not include Zhongyuan and Zhongxing Plants.

#### Waste output and reduction

The waste produced is divided into two categories: general industrial waste and hazardous industrial waste. In 2019, the output of general industrial waste was approximately 36,000 tons, an increase of 4.8% over 2018; the hazardous industrial waste was 71,000 tons, a decrease of approximately 2% over 2018. In terms of total waste output intensity per unit of revenue, it was 1.3 metric tons/million revenue in 2019, which was 8.2% lower than that of 1.42 metric tons/million revenue in 2018. The output intensity in the past five years is decreased by 31%. Since printed circuit boards produce solid waste and high-concentration liquid waste during the manufacturing process, if they cannot be properly disposed of, they will be harmful to the environment. Therefore, we attach great importance to the operation of the waste management system inside and outside the factory, as well as waste storage, removal and disposal, to strictly prevent pollution and hazards. Especially in waste management, we select and commission qualified companies for the process, and set up strict company review and audit mechanisms; internally, waste of raw materials in the process is reduced, and volume reduction is carried out at the source.

#### Waste output and intensity

Category	Subcategory	Unit	Production area	Output volume				
				2015	2016	2017	2018	2019
General industrial waste	Reuse	Tonne	Taiwan	22,447	18,719	19,826	21,676	21,456
			Mainland China	19,153	19,918	11,697	6,815	9,591
	Not reusable		Taiwan	3,482	2,925	2,050	3,223	2,102
			Mainland China	8,430	9,017	1,825	3,090	3,322
Total			53,511	50,579	35,398	34,804	36,471	
Hazardous industrial waste	Reuse	Tonne	Taiwan	24,848	15,542	15,988	14,729	15,469
			Mainland China	41,393	39,631	40,184	54,988	52,301
	Not reusable		Taiwan	86	51	412	1,286	659
			Mainland China	2,095	1,464	1,143	1,388	2,381
Total			68,422	56,688	57,727	72,391	70,810	
General + hazardous industrial waste	Reuse + Not reusable	Tonne	Taiwan	50,863	37,237	38,275	40,914	39,686
			Mainland China	71,070	70,029	55,256	66,281	67,595
Total			121,933	107,266	93,531	107,195	107,281	
Total waste output intensity	Reuse + Not reusable	Tonne / Million revenue	Taiwan + Mainland China	1.89	1.71	1.44	1.42	1.30
Total			1.89	1.71	1.44	1.42	1.30	

Note 1: The disposal methods for the not-reusable are incineration or landfill.  
Note 2: The revenue unit is represented in New Taiwan Dollars.  
Note 3: The above data does not include Zhongyuan and Zhongxing Plants.

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## 3.5 Employees

Unimicron Technology has operating bases all over the world. In this highly competitive industry, professionals are the winning key to the sustainable development of Unimicron Technology. We support and respect the principles and spirit of the "International Labor Organization Tripartite Declaration of Principles," "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 Technology Labor Policy" is formulated and related measures is implemented to create a happy workplace and provide employees with a place where they can fully utilize their abilities.



- Fair Employment** - Regardless of recruitment, promotion, assessment and promotion, there must be no discrimination
- Humane treatment** - Maintain employees' employment equality and human dignity
- Employee communication** - Encourage employees to make suggestions and protect the rights of grievant
- Improving employee working conditions** - Provide a sound salary and welfare system, strengthen employees' functional training, and enhance competitiveness
- Integrity code** - Uphold the principles of integrity and fairness

### 3.5.1 Employment and retention

#### Employment status

Unimicron Technology adheres to the principle of fair and divers employment, and treats employees of different ages, genders, races, religions, political stances, marital status, trade unions and other backgrounds equally in the recruitment, promotion, evaluation and promotion of employees. Taking the right person in the right place as the main consideration, Unimicron Technology provides employment opportunities in various operating locations around the world to promote economic growth in various regions. In 2019, Unimicron had 30,094 employees on both sides of the strait. Because the industrial process tends to be semi-automated, some of the processes still rely on manual work and require high physical exertion at work, and some works require exposure to chemicals, so the proportion of male employees is higher than that of female employees. In addition, in 2019, all of Unimicron Technology's overseas employees in Taiwan are from the Philippines. The main reason is that the Philippines is an English-speaking country, and the communication can be rather smooth. Most of the employees in the mainland China have a high school education or below, mainly because 80% of the employees in the mainland China are direct employees engaged in technical positions.

#### 2019 Unimicron Technology manpower structure

Category / Item / Region		Taiwan				Mainland China			
Category	Item	Male	Female	Total	Ratio to the total	Male	Female	Total	Ratio to the total
Number of employees	Total number of persons	9,674	6,290	15,964	-	8,776	5,354	14,130	-
Irregular contract	Direct labor	5018	3191	8209	51.42%	6,610	4,202	10,812	76.52%
	Indirect labor	2,665	1,138	3,803	23.82%	1,784	993	2,777	19.65%
Regular contract	(Dispatch) Contract worker	279	213	492	3.08%	382	159	541	3.83%
	Contract personnel	0	4	4	0.03%	0	0	0	0.00%
	Foreign national employees	1,605	1,712	3,317	20.78%	0	0	0	0.00%
Age	Student Trainee	107	32	139	0.87%	0	0	0	0.00%
	Under 30 years old	3,010	2,109	5,119	32.07%	4,568	2,523	7,091	50.18%
	30-50 years old	6,338	3,879	10,217	64.00%	4,123	2,825	6,948	49.17%
Rank distribution	Over 50 years old	326	302	628	3.93%	85	6	91	0.64%
	Above the deputy general manager level	38	1	39	0.24%	7	0	7	0.05%
	Assistant general manager level	81	10	91	0.57%	32	2	34	0.24%
	Manager and assistant manager level	730	168	898	5.63%	96	42	138	0.98%
	General employees	8,825	6,111	14,936	93.56%	8,641	5,310	13,951	98.73%

Note 1. Above the deputy general manager level: Chairperson / Deputy CEO / General Manager of Business Division / Functional General Manager / (Senior) (Executive) Deputy General Manager / Chief Quality Officer / Chief Technical Officer / Senior (Project) Special Assistant

Note 2. Assistant general manager level: Senior (Project) Special Assistant / Assistant general manager / Factory Manager / Department head / (Senior) Deputy Factory Manager / Deputy department head

Note 3. Manager and assistant manager level: (Senior) Manager / (Senior) Project Manager / (Senior) Deputy assistant manager / (Senior) Project assistant manager

Note 4. General employees: (Senior) Section Chief / (Senior) Project Section Chief / Foreman / Deputy Foreman / (Senior / Senior) Engineer / (Senior) Administrator / (Senior) Clerk / (Senior) Technician / (Senior) Technical Engineer / Assistant (Technical) Engineer / Assistant administrator / Technician / Clerk / Foreigner / Work-study student / Student Trainee / Contract worker

Note 5. Student trainee: It refers to the student who is employed in contractual relationship with a school's cooperative education, combined with the two-way flow of education and industry, to cultivate a student's vocational skills while taking educational courses.

Note 6. Direct labor: Front-line employees; indirect labor: Other employees

Item	2017		2018		2019	
	Taiwan	Mainland China	Taiwan	Mainland China	Taiwan	Mainland China
Number of local residents as senior executives	86	0	91	3	128	12
Total number of senior executives	86	28	93	31	130	41
Ratio	100	0	97.85	9.67	98.46	29.27
Ratio of female employees (%)	41.28	37.02	40.03	37.93	39.40	37.89
Ratio of female supervisors (%) (the denominator is all supervisors)	18.15	19.84	18.61	21.07	17.41	24.58
Ratio of female senior executives (%) (the denominator is senior executives)	9.30	9.30	8.61	6.45	8.46	4.88
Ratio of female entry-level supervisors (%) (the denominator is entry-level supervisors)	19.21	19.21	19.86	25.47	18.71	30.43

Note 1: Senior supervisor refers to assistant general manager level (inclusive) and higher; local residents refer to the nationals of the country where the factory is located.  
Note 2: All supervisors refer to the manager and assistant manager level (inclusive) and higher; the entry-level supervisors refer to the manager and assistant manager level.

#### Talent recruitment and retention

Unimicron Technology recruits the company's growth momentum through various recruitment channels, and has a comprehensive recruitment standard mechanism. Through relevant tests and interviews, it ensures that employees are able to perform their talents and having right person in the right place. The main recruitment channels include various recruitment channels such as campus recruitment, cooperation with neighboring schools' departments, scholarship programs, summer internship opportunities, and research and development substitute service personnel, hoping to inject continuous momentum into the company.

#### Care for new employees and talent retention

For new recruits, Unimicron Technology has counselors to provide work and technical assistance, and through various methods to help newcomers integrate and adapt to the new environment faster.

#### Assistance and counseling for new colleagues



Regularly need to talk to new recruits to understand their adaptation to the environment.



Assist in completing professional certifications such as license identification, etc.



Discover new employees' learning problems and react and communicate.

#### New manpower status in 2019

Area		Taiwan			Mainland China		
Age	Gender	New employees	Number of employees	Ratio of new employees	New employees	Number of employees	Ratio of new employees
Under 30 years old	Male	939	3,010	5.88%	5,855	4,568	41.44%
	Female	476	2,109	2.98%	3,041	2,523	21.52%
	Total	1,415	5,119	8.86%	8,896	7,091	62.96%
30-50 years old	Male	764	6,338	4.79%	2,616	4,123	18.51%
	Female	372	3,879	2.33%	1,610	2,825	11.39%
	Total	1,136	10,217	7.12%	4,226	6,948	29.91%
Over 50 years old	Male	17	326	0.11%	4	85	0.03%
	Female	1	302	0.01%	0	6	0.00%
	Total	18	628	0.11%	4	91	0.03%

Note: Ratio of new employees = Annual total number of new employees (new irregular employees who have been employed for more than 3 months) / year-end (December 31) number of employees (irregular employees)

In terms of turnover management, after an employee makes a departure request, in addition to being immediately interviewed by the relevant supervisor, the employee will also be one-on-one interviewed by the human resources department, in order to understand the reasons for the employee's resignation and make work adjustments or care as needed. If the company has major operating changes, the minimum period of advance notice will be implemented in accordance with labor laws and regulations. In Taiwan, according to the Labor Standards Act, the minimum period of advance notice is 10-30 days based on the length of service, while the factories in the mainland China follow the Labor Contract Law, and the minimum period of advance notice is 30 days.

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### Retention plan

Optimize salary competitiveness and ensure the retention of high-performance talents

- Special salary adjustment based on performance
- Retention signing bonus

T-type talents represent the combination of "the breadth of knowledge" and "the depth of technology and knowledge," with both deep professional knowledge and broad knowledge base, for the diverse development of talents with deep and broad knowledge.

Strengthen the rotation mechanism and foster cultivate T-type talents

### 2019 turnover statistics

Area	Item	Taiwan			Mainland China		
		Number of departures	Number of employees	Turnover rate	Number of departures	Number of employees	Turnover rate
Under 30 years old		500	3,010	3.13%	1,932	4,123	13.67%
		255	2,109	1.60%	1,124	2,825	7.95%
	Total	755	5,119	4.73%	3,056	6,948	21.63%
30-50 years old		578	6,338	3.62%	985	4,568	7.25%
		280	3,879	1.75%	606	2,523	4.46%
	Total	858	10,217	5.37%	1,591	7,091	11.71%
Over 50 years old		19	326	0.12%	2	85	0.01%
		21	302	0.13%	3	6	0.02%
	Total	40	628	0.25%	5	91	0.04%

Note 1: Turnover rate = Annual total number of turnovers (irregular employees who leave the company after working for more than 3 months) / year-end (December 31) number of employees (irregular employees)  
 Note 2: Due to the loss of new employees (direct personnel under 30) caused by Unimicron-FPC Technology (Kunshan)'s adjustment of factory policy in the Mainland China, the turnover rate is relatively higher.

### Employee turnover statistics

Regarding the turnover rate, through our management and planning, the turnover rate in Taiwan and the mainland China has been decreasing over the years in the past three years, which also shows that Unimicron Technology's investment in human recruitment and retention has been recognized by employees and has also retained outstanding talents for the company, creating more productivity and value.

Year	2017		2018		2019	
	Mainland China	Taiwan	Mainland China	Taiwan	Mainland China	Taiwan
Overall turnover rate	45.67%	20.19%	42.15%	11.90%	32.92%	10.35%
Voluntary turnover rate	45.48%	19.82%	41.95%	11.59%	32.78%	9.61%

Voluntary turnover rate = Annual total number of turnovers (irregular employees who leave the company after working for more than 3 months)-number of involuntary turnovers (irregular employees who leave the company after working for more than 3 months) / year-end (December 31) number of employees (irregular employees)

### Potential new recruitment / cooperative education / industry-university win-win

Unimicron Technology has long been engaged in industry-university cooperation with relevant technology schools to provide students with a good working and learning environment. For example, comprehensive grant and care measures are planned for students during their studies and employment, including independent accommodation space, work and life adaptation assessment, consultation interviews, tuition and miscellaneous fee grants, award contracts, winter and summer internship opportunities, etc. In 2019, Unimicron Technology cooperated with 11 schools in total, with a total of 231 students. Industry-university cooperation provides an excellent medium. In addition to providing channels for students to join Unimicron after graduation, it also enables the company to have stable production manpower and continuous growth, while creating an extraordinary life for students. In the future, Unimicron Technology will uphold the spirit of corporate social responsibility, continue to develop cooperation with schools, recruit outstanding talents, and create a win-win

School	Ranking of number of persons in the industry-university cooperation
St. John's University	1
Ta Hwa University of Science and Technology	2
Minghsin University of Science and Technology	3
Yuanpei University of Medical Technology	4
National Taipei University of Technology	5

### 3.5.2 Salary benefits and rights

In order to attract more outstanding talents, Unimicron Technology has established an incentive system to attract and retain outstanding employees, and conducts annual performance assessment as a reference basis for salary and promotion. We will also conduct external industry salary and welfare surveys, regularly review the market segments of salary and welfare measures, and adjust employee salaries in due course. Thus, more talents create value for Unimicron Technology and more employees who can work at ease can be brought to Unimicron Technology.

#### Salary-performance link

The salary level at Unimicron Technology is based on employees' professional knowledge and technology, academic background and personal performance, as well as the company's operating goals to determine their overall salary, regardless of gender, race, religion, political stance, marital status, etc. In order to consolidate the employees' coherence to Unimicron Technology, in addition to the basic salary and annual salary adjustment, Unimicron Technology will also make flexible salary adjustments based on the company's current operating conditions in order to motivate morale and encourage outstanding employees. In order to improve employees' work performance and understand the capabilities and work adaptability of the organization's members, we perform two employee performance assessments every year, so that supervisors can effectively feedback to subordinates through objective evaluations and continue to teach subordinates to improve their work capability, in order to achieve the department's goal and the company's overall goal.

2019 performance assessment	Number of persons	Ratio (%)
Interim	11,058	100
End of period	10,897	100

1. Assessment subject: It refers to the permanent employees after the probation period is completed.  
 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.  
 3. Those who have changed their positions for less than three months will be assessed by the supervisor of the previous unit; otherwise, those who have changed their positions for three months or more will be assessed by the supervisor of the current unit.

Year-end performance bonus

Annual salary adjustment

Stock rewards

Patent bonus

Performance retention bonus

Key performance signing bonus

Employee compensation

Achieving bonus

#### Average basic salary ratio of female and male employees at all levels

Area	Factories in Taiwan		Southern China- Unimicron Technology (Shenzhen)		Eastern China- Suzhou		Eastern China- Kunshan		Central China- Huangshi	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Job type										
Deputy general manager and higher	0.97	1	---	---	---	---	---	---	---	---
Assistant general manager	0.97	1	---	---	---	---	---	---	---	---
Manager and assistant manager	0.94	1	1.06	1	1.14	1	0.95	1	0.70	1
General	0.92	1	1.11	1	1.03	1	0.96	1	0.91	1

#### Average salary ratio of female and male employees at all levels

Area	Factories in Taiwan		Southern China- Unimicron Technology (Shenzhen)		Eastern China- Suzhou		Eastern China- Kunshan		Central China- Huangshi	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Job type										
Deputy general manager and higher	1.24	1	---	---	---	---	---	---	---	---
Assistant general manager	0.97	1	---	---	---	---	---	---	---	---
Manager and assistant manager	0.93	1	1.03	1	1.21	1	0.95	1	0.73	1
General	0.90	1	1.03	1	1.04	1	0.94	1	0.92	1

Basic salary is basic monthly salary, excluding variable salary; salary is total annual salary. The scope of statistics does not include expatriates, because the senior supervisors (assistant general manager level and higher) in the factories in the Mainland China are all Taiwanese and all male.

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## The ratio of the entry-level personnel's starting salary to the local basic salary

	Factories in Taiwan	Southern China	Eastern China (Suzhou)	Eastern China (Kunshan)	Central China-Huangshi
Basic starting salary for Unimicron Technology's general employees	1.1	1	1.61	1.23	1.37

Note:  
1. The basic salary includes the base salary and other allowances, excluding overtime.  
2. Due to different basic wages in factories in the Mainland China, they are presented by region.

### Employee benefits

Employee benefits Unimicron Technology attaches great importance to the physical and mental balance of employees. In the workplace, a variety of welfare systems are planned. In addition to providing various insurance benefits and pension fund contributions in accordance with 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 life, and dependents can be included in the plan at their own expense. Unimicron Technology also values employees' leisure life, and regularly organizes parties and family day activities to promote parent-child interactions between families and enhance employee morale.

Salary information for full-time employees who are not in supervisory positions (unit: NTD)

Item /Year	2018	2019	Increase/(decrease) rate %
Number of people	9,720	10,693	10.0%
Average salary	688,656	727,269	5.6%
Median salary	605,994	614,268	1.4%

Note: The salary statistics of full-time employees who are not in supervisory positions do not include those in the subsidiary, Qun Hong Technology. (The scope verified by the CPA is for Unimicron.)

### Unimicron Welfare measures



Unimicron Technology contributes retirement pensions for all permanent employees in accordance with the statutory retirement system in each location, and the employees' participation rate in the retirement plan is 100%. In accordance with the Labor Standards Act and Labor Pension Act, employees who joined the company before June 30, 2005 (inclusive) in Taiwan are entitled to have the years of service in old system. Unimicron Technology also contributes the amount in accordance with relevant laws and regulations, and appoints actuaries to conduct actuarial calculations at the end of each year to protect the rights and interests of employees in applying for retirement pensions in the future, and to ensure full contribution.

Factories	Retirement plan	Ratio of pension contributions to salary	Extent of employees' participating in retirement plans
Taiwan	Old system pension: Company's pension account	Employer 2% ; Employee 0%	1%
	New system pension: Personal pension account	Employer 6% ; Employee 0~6%	99%
Mainland China	Endowment insurance (Employee's account)	(Southern China) Employer 13~14%; employee 8%	100%
		(Eastern China) Employer 13~19%; employee 8%	
		(Central China) Employer 19%; employee 8%	

Basic benefits for permanent employees	Effectiveness
Welfare Committee allowance	Birthday gift money, festival gift certificates, and subsidies of varying amounts based on different events such as weddings and funerals, training, hospitalization, occupational injuries, etc., are provided, and the total subsidy in 2019 for birthday gift money, festival gift certificates, and subsidies for weddings and funerals was NT\$38,008,059.
Overseas group insurance	A comprehensive group insurance package is provided for employees stationed abroad.
Free group insurance	It includes life insurance, accident insurance, medical insurance, cancer insurance, and preferential family insurance.
Visually impaired massage service	Massage rooms are set up in each factory area, and a total of 16 visually impaired masseurs are hired to provide employee massage services for employees to relax. In 2019, employees used massage services for a total of 1,840 person-times and 1,329 hours in total.
Female employee care	lactation rooms and care measures during pregnancy (face-to-face health education, medical consultation, work environment and content suitability assessment, and schedule adjustments) are provided in each factory in Taiwan. In 2019, a total of 188 people received pregnancy care and postpartum care.
General employee health checkup	Regular health check-ups and special workplace health check-ups are carried out every year, four-cancer screenings, breast ultrasound examinations, and abdominal ultrasound examinations are held in each factory, and self-health management programs are provided for employees. In accordance with the statutory health examination regulations, the number of people who should be examined and the actual number of people examined in 2019 were both 6,820, and the examination rate was 100%.
Club activities	The company has 16 clubs, and the company also provides subsidies to allow employees to choose suitable groups according to their interests. In 2019, the amount of club subsidy reached NT\$556,847.
On-the-job education subsidy	<ul style="list-style-type: none"> <li>● Supervisor recommendation: On-the-job education subsidies for colleges, universities and higher degrees are provided in each academic year. The maximum subsidy amount is 50% of the tuition, and the maximum subsidy per semester is NT\$15,000. From 2016 to 2019, a total of 9 employees had applied for the total subsidy amount of NT\$1,573,940.               <ol style="list-style-type: none"> <li>1. Doctoral, master, bachelor, and junior college classes: A total of 7 employees applied for a total subsidy of NT\$272,896. (A total of 3 new applications were added in 2019).</li> <li>2. Executive part-time EMBA degree: A total of 2 senior executives have applied for and obtained the degree, with a total subsidy of NT\$ 1,301,044. (50% subsidy during enrollment, and 50% subsidy after obtaining a degree)</li> </ol> </li> <li>● Employees' self-application: On-the-job education subsidies for high school, college, university and higher degrees are provided in each academic year. The average subsidy per semester is between NT\$2,500 and NT\$8,500. In 2019, a total of 80 people applied for the total subsidy amount of NT\$234,500. Senior executives' domestic and foreign EMBA tuitions and fees are fully subsidized. From 2016 up to date, a total of 6 employees have applied for a total subsidy of NT\$782,825.</li> </ul>
Special event activities	Activity information of contracted merchants engaged in food, clothing, accommodation, and transportation is provided, events from time to time are organized, and purchase services of various special discounted tickets are provided.
24-hour convenience store	Xuri convenience store is a 24-hour convenience store in the Shanying Plant in Taoyuan. It provides discounts for employees. The total amount of discounts for the year of 2019 reached NT\$8.19 million.

### Statistics on parental leave in Taiwan

Item	Gender	2017	2018	2019
Number of people eligible for parental leave (A)	Female	707	709	464
	Male	496	486	333
	Total	1,203	1,195	797
Actual number of applicants (B)	Female	46	32	48
	Male	104	99	108
	Total	150	131	156
Application rate (B/A)	Female	6.51%	4.51%	10.34%
	Male	20.97%	20.37%	32.43%
	Total	12.47%	10.96%	19.57%
Number of people to be reinstated (C)	Female	42	32	44
	Male	126	124	100
	Total	168	156	144
Actual number of people reinstated (D)	Female	32	24	23
	Male	89	85	69
	Total	121	109	92

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Reinstatement rate (D/C)	Gender	2017	2018	2019
		Total	76.19%	75%
Number of persons reinstated in the previous year (E)	Female	17	32	24
	Male	73	89	85
	Total	90	121	109
Item	Gender	2017	2018	2019
Number of people reinstated for one year or longer in the previous year (F)	Female	11	25	18
	Male	47	71	71
	Total	58	96	89
Retention rate (F/E)	Female	64.71%	78.13%	75.00%
	Male	64.38%	79.78%	83.53%
	Total	64.44%	71.07%	81.65%

Note: The parental leave without pay system is not implemented in the Mainland, so it is not included in the statistics.  
 Note: The number of people eligible for parental leave is estimated based on the number of applicants for maternity leave/paternity leave in the past 3 years.

### Smooth communication channels

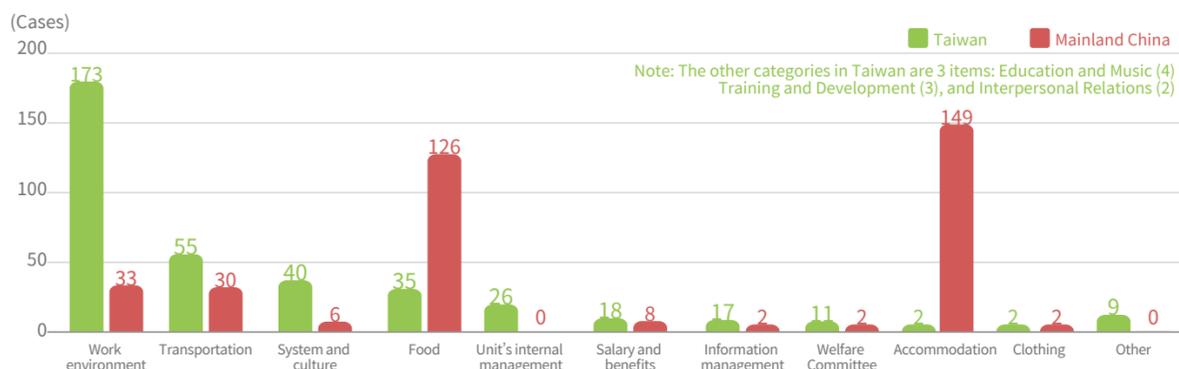
Unimicron Technology values the communication with employees very much and provides diverse communication channels, allowing employees to provide feedback or consult at any time. We also provide a dedicated e-mail address for anonymous complaints to help employees solve various problems and provide comprehensive assistance.



In order to understand the work and living conditions of the employees and increase the retention rate for the expatriate employees at the mainland factories, we will conduct a phased care questionnaire survey for the newly expatriate employees who have served for 3 months and 1.5 years. In addition, a forum is held every quarter. In addition to solving living-related issues, department heads are invited to participate in the forum, caring for employees' problems and suggestions in work and local life, and providing relevant assistance. In response to employee feedback and questions, Unimicron Technology will ask relevant departments to respond and for follow up handling. Taking the factories in Taiwan as an example, in 2019, a total of 388 cases were formally filed in the Taiwan area and 358 cases in the Mainland China area via the employee opinion communication channels, and 100% of the cases have been responded. The improvement has been made based on the content of the grievance cases and it has been responded to employees through communication channels. Unimicron Technology currently has no labor union organization, and it conducts two-way communication by holding regular labor-management meetings and respects the rights of all employees to participate in assemblies and collective bargaining. For the content of the quarterly labor-management meeting, important matters and advocacy content will be sent to all units after the meeting, so that every employee can learn about the company's latest policies and the handling of related issues, so as to enhance employees' coherence and dedication.

### Feedback opinions of employees in Taiwan and the Mainland China in 2019

Area	Complaints	Suggestions	Inquiries	Grievances	Total
Taiwan	184	140	57	7	388
Mainland China	323	30	4	1	358



In order to establish a culture of equality, tolerance, and open communication, Unimicron Technology continues to practice labor policies and its spirit in a fair and respectful manner, and conducts relevant training to ensure the implementation of the spirit of human rights.

## Human rights related training

Course title	Participants	Number of personnel to be trained	Number of personnel trained	Training rate (%)	Total hours (person hours)
Sexual Harassment Prevention Act / Act of Gender Equality in Employment	Whole company (employees who have been employed for three months and longer)	7,479	7,465	99.81%	14,930
Code of Professional Ethics	All employees of the company must be trained (including Taiwanese employees expatriated to the Mainland China)	9,757	9,725	99.67%	9,725

Note 1: The above courses have been planned to be trained in the new employee training courses to implement the training mechanism and increase the training rate. Some of the overseas expatriate employees and senior executives have not been trained. We will strengthen course promotion and reminder operations, and provide opportunities for overseas expatriate personnel to participate in training in order to increase the training completion rate to 100%.  
 Note 2: The training rate of courses such as the Sexual Harassment Prevention Act / Act of Gender Equality in Employment, and Code of Professional Ethics does not include that of the subsidiary, Qun Hong Technology.

Taking the prohibition of child labor as an example, we will review the age data of employees in each factory in the mainland China. If it is found that there are cases not reaching statutory age for employment, the following processing will be carried out to ensure the rights and interests of both the employer and the employee, including:

1. Retain the party's work right until he/she reaches the legal age of employment.
2. The party can choose to return to his/her guardian's home or stay in the company to receive training and complete compulsory education until the party reaches the legal age for employment.
3. Provide the following cost subsidies:
  - Continue for six months or until the party reaches the legal age for employment, whichever is longer.
  - Tuition and fees before reaching the legal age for employment
  - Transportation expenses for returning to the guardian's home
  - Original salary before reaching the legal age
4. If the party chooses to stay in the company for training, Unimicron Technology will still pay their wages. If the party is a student trainee and has signed a contract with the company, Unimicron Technology will still pay related subsidies according to the content of the contract during the training period.

### 3.5.3 Occupational development and training

Unimicron Technology plans a comprehensive training system and career development directions, and provides multiple learning channels, so that employees have the opportunity to participate in cross-field and cross-technology project cooperation, and strengthen employee interaction. Through the team work model, brainstorming and mutual learning from each other, a diverse, independent and high-quality learning culture is formed, so that employees' career and work quality can be continuously improved. Thus, each of Unimicron Technology's employees has the best function, strengthening the individual and business productivity.

We provide complete education and training resources, regardless of direct or indirect personnel, planning four categories of courses: general, technical, quality, and management, to provide training according to personnel' working experience, hoping that our employees will gradually improve in their work, cultivate multiple functions and stimulate personal potential. In 2020, the management function evaluation system will be updated to achieve specialization in the management field. Managers can use the functional perspective to understand the responsibilities and powers within the organization to determine the quality and knowledge structure of management personnel. It also conducts the planning and implementation of courses across 5G technology fields, cultivating engineers with new technical capabilities.

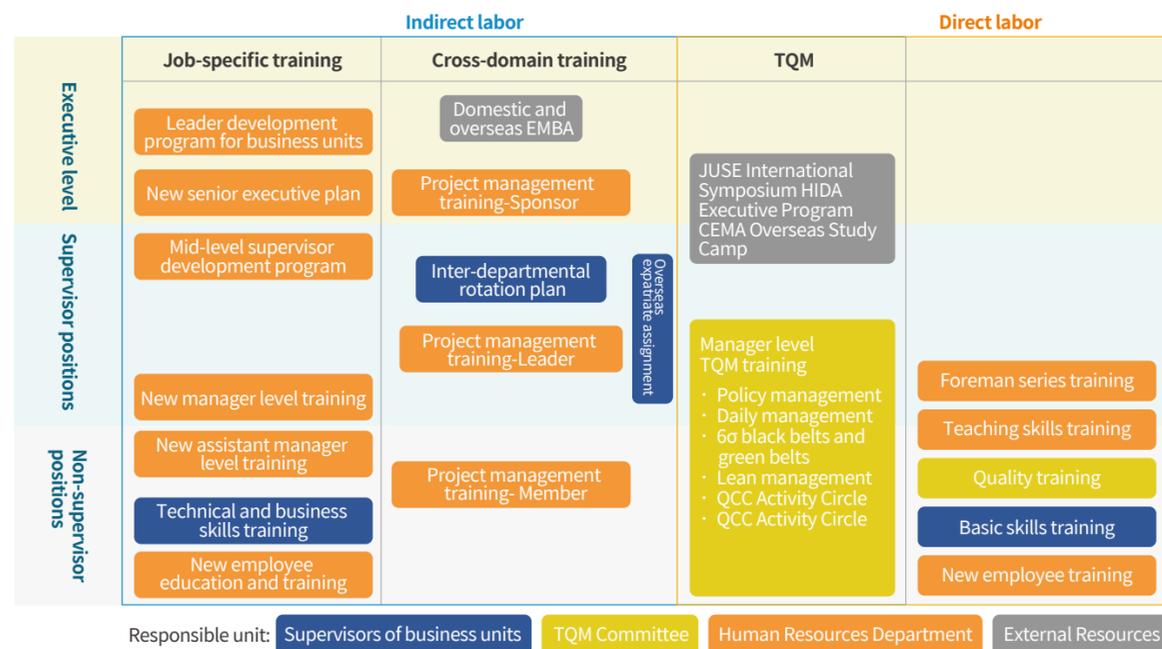
Function development project	Applicable employees	Benefits	Ratio of personnel in project training to total full-time employees %
DL Training Roadmap	Direct labor	The rate of new employees obtaining the licenses of their job is 99.8%. As the rate of obtaining licenses is high, the stability of production operations is high, and the non-performing rate is relatively reduced.	<ul style="list-style-type: none"> <li>· Number of DL in Taiwan: 12,160</li> <li>· Total number of employees in Taiwan: 15,964</li> <li>· Ratio of personnel in project training to total full-time employees in Taiwan 76.2%</li> <li>· Number of DL in the mainland China: 11,353</li> <li>· Total number of employees in Mainland China: 14,130</li> <li>· Ratio of personnel in project training to total full-time employees in the Mainland China 80.3%</li> </ul>
Engineers Training Roadmap	Engineers	The license passing rate of new engineers (IDL) is 99.9%. As the rate of obtaining licenses is high, the stability of production operations is high, and the non-performing rate is relatively reduced.	<ul style="list-style-type: none"> <li>· Number of IDL in Taiwan: 3,804</li> <li>· Total number of employees in Taiwan: 15,964</li> <li>· Ratio of personnel in project training to total full-time employees in Taiwan 23.8%</li> <li>· Number of IDL in the mainland China: 2,777</li> <li>· Total number of employees in Mainland China: 14,130</li> <li>· Ratio of personnel in project training to total full-time employees in the Mainland China 19.7%</li> </ul>

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## Solid talent cultivation system

Unimicron Technology's education training system plans different training structures according to the needs of new employees, general employees and management positions. In addition to implementing the annual education and training plan, we will also design leadership and management-related training programs for current leaders and potential future leaders based on the needs of the operational strategy. At the same time, it is coordinated with the planning and implementation of the rotation schedule and promotion system to continuously improve potential talents, given them leading development opportunities, and at the same time strengthen the company's human resource quality. In terms of the investment in education and training resources in 2019, the total amount of employee training totaled NT\$18 million, accounting for 0.0218% of total revenue. Under the intensive supervisor training, 51% of personnel above the manager level are promoted internally, showing Unimicron Technology's effort in the cultivation and promotion of talents.



## Employees' average training hours

Factory	Gender	Training	2017	2018	2019
Taiwan Note 1	Female	Training hours	79,187	83,003	155,860
		Number of people	6,119	5,804	6,290
		Average training hours	12.9	14.3	24.8
	Male	Training hours	159,738	180,722	302,803
		Number of people	8,703	8,695	9,674
		Average training hours	18.4	20.8	31.3
Total average hours		14.1	17.5	28.0	
Mainland China	Female	Training hours	85,712	92,695	180,620
		Number of people	4,521	4,355	5,354
		Average training hours	19.0	21.3	34.0
	Male	Training hours	150,060	157,686	282,442
		Number of people	7,691	7,128	8,776
		Average training hours	19.5	22.1	32
Total average hours		19.6	21.7	33	

Note 1 : Total average hours = Total training hours / total number of people

Note 2 : The average hours have increased compared with the previous year:

A · Establish a series of managerial strategy management courses at the factory level (inclusive)

B · A series of industry 4.0 courses and a series of PCB process related courses for supervisors of section level (inclusive) or higher

Note 3 : 2019 Intensive training of management and quality courses by internal lecturers

## Training hours for each position level

Area	Position level	Male			Female		
		Total number of hours	Total number of people	Average training hours per person	Total number of hours	Total number of people	Average training hours per person
Taiwan	Deputy general manager and higher	967.5	38	25.46	95.5	1	95.50
	Assistant general manager	2,492.5	81	30.77	415.0	10	41.50
	Manager and assistant manager	26,055.7	730	35.69	5,418.4	168	32.25
	General employees	273,287.2	8,825	30.97	149,930.6	6,111	24.53
	Direct labor	191,868.9	7,008	27.38	113,339.2	5,152	22.00
	Indirect labor	110,934.0	2,666	41.61	42,520.2	1,138	37.36
Mainland China	Deputy general manager and higher	5.5	7.0	0.8	-	-	-
	Assistant general manager	235.0	32.0	7.3	7.5	2.0	3.8
	Manager and assistant manager	1,687.5	96.0	17.6	1,164.5	42.0	27.7
	General employees	257,145.6	8,641.0	29.8	170,547.8	5,310.0	32.1
	Direct labor	189,829.2	6,992.0	27.1	129,101.6	4,361.0	29.6
	Indirect labor	92,612.0	1,784.0	51.9	51,518.5	993.0	51.9

Note 1: Factories in both Taiwan and Mainland China include workers of regular and irregular contract types.

## Complete new talent cultivation mechanism

To enable new employees to familiarize themselves with the environment, understand job content, and quickly integrate into the corporate culture, the dedicated training development unit regularly conducts pre-employment training courses for new employees, and adjusts the frequency and hours flexibly according to actual needs. The pre-employment training courses for new employees include six aspects and a total of 12 hours of courses.

In addition, we also arrange a series of courses for new employees, including statistical process control, seven basic tools for problem-based quality management, professional license certification, winning team training courses, etc., through dynamic competition activities, let employees experience the company's business philosophy, values and goals, and then link personal values with team values.

## Resources invested for new employee training

Area	Item	2017	2018	2019
Taiwan	Training course expense (NTD)	1,640,000	2,370,000	2,212,853
	Hours of training courses (hours)	2,221	2,324	2,307
Mainland China	Training course expense (NTD)	800,000	390,000	514,372
	Hours of training courses (hours)	81,332	41,031	17,184

Taiwan:

Note 1 : The course scope includes courses such as pre-employment training for new employees, SPC, QC, and winning teams; training course expenses do not include internal lecturer fees.

Note 2 : Expenses are related to the number of time of the courses and the number of houses offered, not necessarily related to the number of people.

Note 3 : The total number of new employees is the number of people still in service at the end of the year.

## 3.5.4 Health and safety

Unimicron Technology promises to provide employees with an excellent, safe, healthy and comfortable working environment. We continue to invest relevant resources to promote various measures and actions, and respond to the concerns of competent authorities, customers and employees on occupational safety and health issues. We continue to improve the management system, and spare no effort to share management practices with industrial peers and related organizations, to implement the shared value of occupational safety and health.

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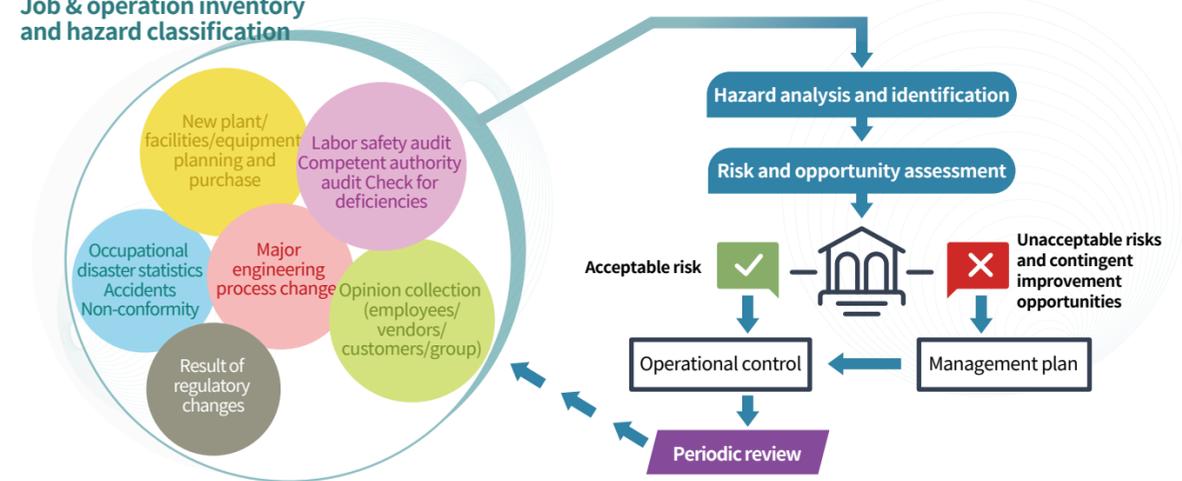
Each factory of Unimicron Technology has an occupational safety and health management system. Since December 2004, each factory has successively passed the international system certification of OHSAS 18001 occupational safety and health management system, and since January 2012, each factory in Taiwan has passed Taiwan occupational safety and health management system (formerly TOSHMS) certification.

In order to maintain the effective operation and continuous improvement of the occupational safety and health related management system, the certification by external certification agencies is regularly performed every year to ensure the completeness and soundness of the company's health, safety and environmental protection management mechanism, including the consultation and participation of workers and their representatives, and actually control the internal and external (stakeholders) information flow. At the same time, in conjunction with the announcement of the international occupational safety and health management system ISO45001 in 2018, the company's Taiwan factories completed the conversion certification of OHSAS 18001 to ISO 45001 in 2019, and the mainland factories will complete the conversion certification before March 2021.

All occupational safety and health management personnel in each of Unimicron Technology's factories are full-time permanent personnel, and all factories in Taiwan have established occupational safety and health management units and personnel in compliance with occupational safety and health 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 in accordance with the work items planned by the occupational safety and health management unit, and coordinate and guide the relevant personnel to implement. All workers in the company perform related matters in accordance with the occupational safety and health management standards.

The scope of operation of Unimicron Technology's Occupational Safety and Health Management System includes production and non-production sites, areas, equipment, and routine and non-routine operations in the operation activity area under the jurisdiction of the company, including all the activities of external units entering the company's factories and workplaces, the activities operated in the company with the facilities and equipment provided by external units, as well as all operations by contractors (including meal suppliers and raw material suppliers) entering the company's areas to engage in operations.

### Job & operation inventory and hazard classification



### Occupational safety and health hazard identification and risk assessment operation process

All personnel who conduct occupational safety and health hazard identification and risk opportunity assessment in each unit have received professional training in occupational safety management system and passed the assessment. When there are any changes or abnormality occurred in operation activities, the hazard identification and risk assessment shall be re-executed for the operation activity. For the major negative impacts on occupational safety and health with risk assessment result showing an unacceptable high-risk (major/high-risk), there will be an improvement sequence based on elimination, replacement, engineering improvement, administrative management, and personal protective equipment to seek the best risk reduction improvement plan and to implement continuous improvement.

All workers in the company shall abide by the standards regulated by the results of the hazard identification and risk assessment process. According to the Occupational Safety and Health Act, for workers who discover or report incidents, hazards, risks and opportunities, and leave work conditions that they believe may cause hazards or diseases, or report hazards or dangerous conditions to worker representatives, employers, or supervisory authorities, the company has to protect the workers' right to work during their employment, and protect them from intentional retaliatory behaviors such as discrimination and promotion-related disadvantages.

Unimicron Technology has set up occupational safety and health committees in factories in both Taiwan and mainland China, and regularly convenes the committee meetings with the participation from management and labor. The content of the meeting includes the requirements by the Occupational Safety and Health Act and related matters for communication, participation and consultation. The ratio of labor representatives in the safety committees of factories in Taiwan is higher than the law requires. The average ratio of labor representatives is 57% in Taiwan, and the ratio of labor representatives in the mainland factories is also up to 63%. This shows how much we value the participation of employees.

### Ratio of labor representatives in each factory

Factory	Shanying factory area	Hejiang factory area	Luzhu factory area	Hsinchu factory area	Qun Hong Technology	Factories in the Mainland China
Ratio of labor representatives	67%	42%	44%	60%	57%	63%

Regulatory requirements	33.3%	-
Note 1: The whole year statistics as of 2019. Note 2: The Shanying factory area covers: Shanying Plant, Jingzai Plant I, Jingzai Plant II, Jingzai Plant III, and Shanying Wenhua Plant. The Hejiang factory area covers: Hejiang Plant, Hejiang Plant II, and Zhongli Plant. The Luzhu factory area covers: Luzhu Plant, Luzhu Plant II, and Dayuan Plant. The Hsinchu factory area covers: Xinfeng Plant I and Zhongxing Plant. Qun Hong Technology covers: Qun Hong Dacheng Plant and Qun Hong Renyi Plant. Factories in the Mainland China cover: Unimicron Technology (Kunshan), Unimicron-FPC Technology (Kunshan), Unimicron Technology (Suzhou),		

In order to avoid work-related incidents, Unimicron Technology continues to implement high-risk work safety assessment and safety observation and evaluation in all factories, strengthen occupational incident prevention and improvement projects, and educate and strengthen employees' awareness of self-safety. There are 51 items of noise, ionizing radiation, manganese, lead, nickel, dust, etc., in Unimicron Technology's specific hazardous workplaces in the factories in Taiwan and the mainland China, and regular special workplace health checkups are conducted every year. In 2019, there were 9,767 special health check-ups in factories in Taiwan, with 4,097 in second-level management and 108 in fourth-level management of special health check-ups. All the employees in second-level management have completed the health education courses, and all the employees in the fourth-level management have been interviewed by the on-site physicians to complete the reconfirmation of work competence. The number of special health checkups in the factories in the mainland China was 8,546, with 61 employees with abnormality, and they have been tracked and improvement has been made. In 2019, the checkup rate of special health examinations for employees was 100%, and the company will continue to strengthen employees' health management. There were no severe occupational injuries in Unimicron Technology in 2019. The disability severity rate (SR) in Taiwan decreased by 14% compared with 2018, and the disabling frequency rate (FR) increased by 22% compared with 2018. The main reason for the increase was that employees' insufficient safety culture awareness has caused many minor injuries. According to analysis, in 2019, there were 30 cases of Taiwanese factory workers who asked for more than one day of leave due to work injuries. The main types of incidents were 10 cases (33%) of falls/slips/trips/falls, 6 cases (20%) of crush injuries, 5 cases (17%) of injuries due to impacts, 3 cases (10%) of chemical contact injuries, 2 cases (7%) of cutting injuries, and 4 cases (13%) of other physical injuries. Regarding the overall prevention of injuries, we will continue to promote safety culture and proactive safety protection for all employees every year during the Safety and Environment Month, and implement a six-hour occupational safety and health retraining course to injured employees, who must pass tests and assessments.

### The Group's injury statistics

Year	Disabling frequency rate (F.R.) by year						Disabling severity rate (S.R.) by year											
	Company-wide		Dispatch workers		Factories in the Mainland China		Company-wide		Dispatch workers		Factories in the Mainland China							
	Employees	Contractors	Dispatch workers	Employees	Contractors	Dispatch workers	Employees	Contractors	Dispatch workers	Employees	Contractors	Dispatch workers						
2017	0.65	0	0	0.98	0	0	0.37	0	0	9	0	0	11	0	0	8	0	0
2018	0.76	0	0	0.79	0	0	0.74	0	0	6	0	0	7	0	0	5	0	0
2019	0.95	0	0	0.96	0	0	0.94	0	0	11	0	0	6	0	0	17	0	0

Note 1: Disabling frequency rate (F.R.) = Number of disability injuries \* 106 / Total working hours  
 Disabling severity rate (S.R.) = (Number of disability injuries \* total lost days) \* 106 / Total working hours  
 The definition of the number of persons with disability injuries: The number of cases where workers cannot return to work for more than one day (inclusive) due to occupational injuries.  
 Definition of total lost days: The number of days where a worker cannot return to work due to occupational injuries is more than one day (inclusive). The total number of lost days does not include the calendar day of injury and the calendar day of return to work.  
 Note 2: The definition of severe occupational injury: It refers to the "severe occupational incidents" regulated by Article 31 of the Enforcement Rules of the Labor Inspection Act in Taiwan; it refers to the "larger accidents" specified in Article 3 of the Byelaw Governing Reporting, Investigation and Handling of Production Safety Accidents in the Mainland China.

Unimicron Technology has recordable occupational injuries (including work-related injuries, mercurochrome, and false alarm incidents) in 2019, a total of 1709 cases. Based on the severity and frequency of occupational incidents, this information will be used to implement the continuous improvement and the performance review of occupational safety and health of incidents.

### The Group's recordable occupational injury statistics

Category	Area	(Hr)	Recordable occupational injuries (cases)	Recordable occupational injury rate (injury rate (IR))
Employees	Factories in Taiwan	35,168,109	1,709	10
	Factories in the Mainland China	35,802,349	1,607	9
	Total	70,970,458	3,316	9
Contractors	Factories in Taiwan	1,238,144	0	0
	Factories in the Mainland China	576,800	0	0
	Total	1,814,944	0	0

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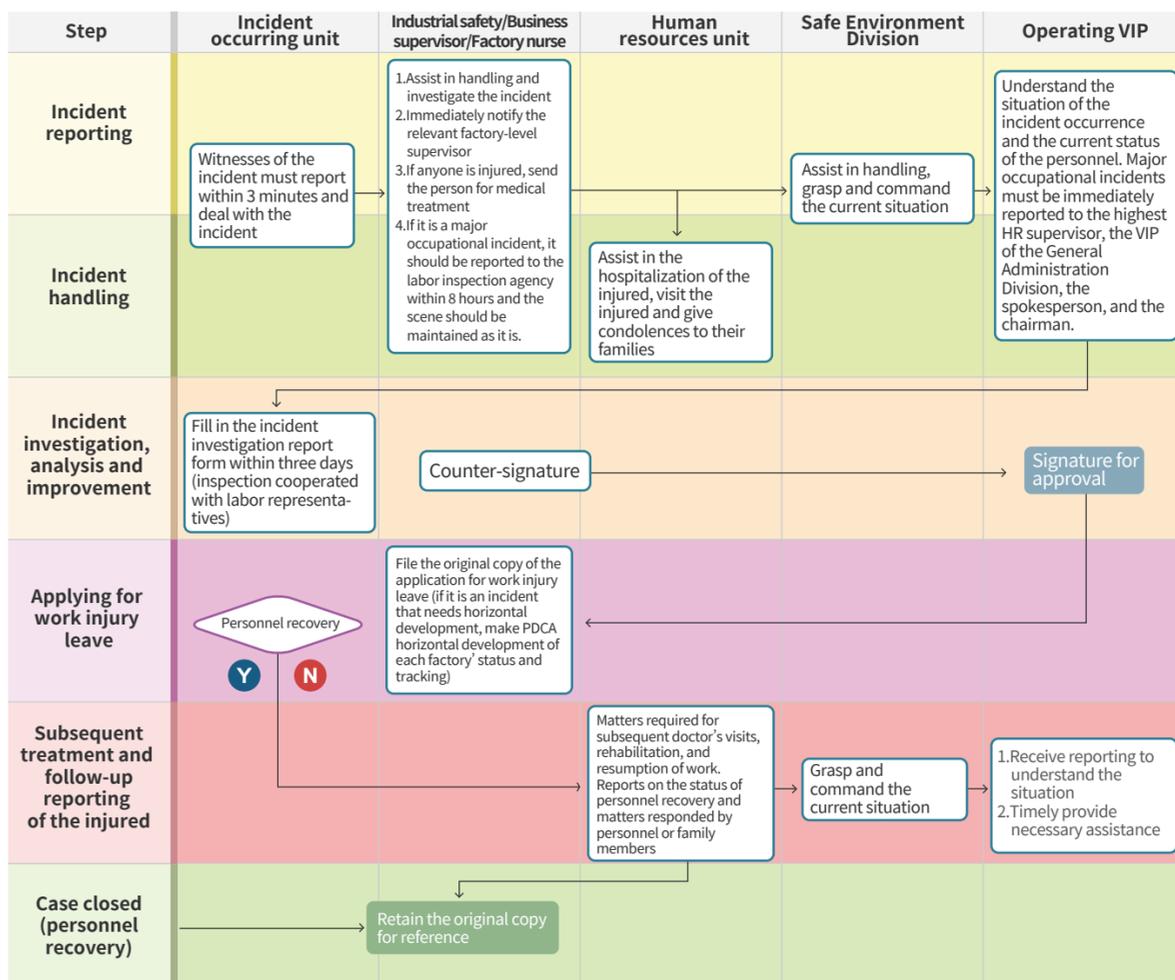
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Category	Area	(Hr)	Recordable occupational injuries (cases)	Recordable occupational injury rate (injury rate (IR))
Dispatch workers	Factories in Taiwan	3,936	0	0
	Factories in the Mainland China	4,328	0	0
	Total	8,264	0	0

Injury rate (IR) = Total number of injuries / total working hours × 200,000\*



Unimicron Technology formulates occupational incident reporting, investigation and improvement procedures in accordance with the occupational safety management system specifications. The incident investigation includes the hazard identification and risk assessment of the incident operation process and the improvement measures required by the occupational safety and health management system. Unimicron Technology values safety and health culture very much. In addition to investing in relevant resources specified by laws and regulations, it also sets up industrial safety officers in all factories and units. In 2019, there were a total of 495 employees serving as industrial safety officers in the factories in Taiwan and Mainland China, which was about 1 for every 61 employees. In addition to holding regular monthly meetings for two-way communication, advocacy, and consultation, the industrial safety officer also assists in the promotion of various occupational safety and health activities, strengthening all employees' concept of safety and health.

Unimicron Technology establishes an annual occupational safety and health education and training program for employees (including contractors) every year. In addition to physical courses, the courses are also placed on the online learning platform, so that employees can go to Unimicron's e-Academy anytime and anywhere to improve their safety and health awareness. In addition, in order to prevent the occurrence of various emergencies, emergency drills are scheduled for each factory and each unit to implement every year. The themes of the drills include fire, chemical incidents, occupational incidents, fire protection, natural disasters (earthquakes, floods, etc.), etc., and strengthen all personnel response skills to ensure the stability of operations.

## 2019 Occupational safety training

Occupational safety training course		Ten-minute education and training	Work safety officer training	New employee training	Occupational incident case advocacy	Occupational safety on-the-job training	Occupational safety management system training	Occupational safety license training
Factories in Taiwan	Number of sessions	512	94	369	111	367	11	101
	Number of person-times	138,835	2,987	5,417	7,539	30,187	237	513
	Number of hours	23,602	3,113	38,305	16,286	5,842	1,540	3,939
Factories in the Mainland China	Number of sessions	83	14	157	51	10	4	75
	Number of person-times	130,047	495	7,875	44,351	20,382	154	3,578
	Number of hours	44,050	597	63,298	24,644	13,022	922	9,189
Occupational safety training course		Ten-minute education and training	Work safety officer training	New employee training	Occupational incident case advocacy	Occupational safety on-the-job training	Occupational safety management system training	Occupational safety license training
Total	Number of sessions	595	108	526	162	377	15	176
	Number of person-times	268,882	2,460	13,085	21,425	56,049	226	25
	Number of hours	67,652	2,911	41,578	3,559	114,554	1,434	285

## Contractors' occupational safety and health education and training

Item	Factory/Person	Factories in Taiwan	Factories in the Mainland China	Total
Contractors' occupational safety and health education and training	Number of sessions	148	19	167
	Number of person-times	3,310	474	3,784

## Number of emergency drills and number of participants

Factory/Person	Factories in Taiwan	Factories in the Mainland China	Total
Number of sessions	529	321	850
Number of person-times	22,395	25,678	48,073
Drill theme	Emergency response to natural disasters such as equipment fire incidents, fire evacuation drills, chemical leakage treatment, work injuries, entrapment from confined space operations, floods, earthquakes, etc.		
Occupational safety and health and fire emergency response training drills	Number of sessions	Number of participants (including contractors)	Number of person-hours (hours)
Drills of whole area evacuation for large-scale incidents	75	28,093	103,348
Drills of whole area evacuation triggered by natural disasters	27	12,019	48,076
Regional fire drills	233	3,057	3,057
Regional contingency drills for chemical incidents	164	1,897	1,897
Regional contingency drills triggered by natural disasters	235	1,516	1,516
Others (including injury, poisoning, hazards from confinement)	116	1,491	1,491
Subtotal	850	48,073	159,385

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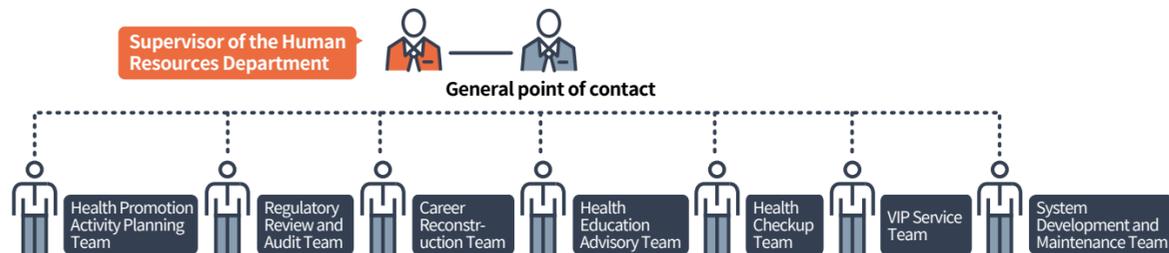
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### Health promotion platform- Unimicron Technology Health Management Center

Unimicron Technology established the "Health Management Center" in 2014, with the concept that prevention is more important than treatment. Through various health promotion activities and services, it cares for the physical and mental health of each employee and creates a friendly workplace where safe and happy work is done. Since its establishment, it has served a total of 318,609 person-times, taking full care of employees' health issues in the workplace and non-workplaces, and protecting their physical and mental health.



### Unimicron Health Management Center

Number of occupational specialists employed	Number of nurses employed	Number of service sessions	Total service hours
5	17	348	1,044 hours
Service content	Employee health checkups, health education, health consultation and evaluation, health promotion questionnaire, improvement of work hazards in the workplace environment, and evaluation of resumption of work/work assignment after injury or illness.		
Results	The factories in Taiwan held 297 health promotion activities of various types, with a total of 65,086 participants; the factories in the Mainland China held 101 sessions with a total of 21,990 participants in the annual health promotion activities. Online health education training courses, a total of 12,730 people participated in the online health education courses in 2019.		

### Special protection

<b>Maternal care measures</b> Evaluation and management of 188 pregnant women-times	<b>Ergonomic hazard prevention and control management</b> 10,216 people evaluated, with an abnormal rate of 4% (The anomaly rates were both 4% in 2018 and 2019)	<b>Overwork self-test evaluation</b> 10,216 people evaluated, with a high load rate of 1.8% Steady decline over years
<b>Cardiovascular disease prevention</b> There are 13 persons with ten-year cardiovascular risk assessment greater than 10%, accounting for 0.2% of the people receiving physical examination	<b>Prevention management of the three hyperts for middle-and old-age adults</b> A total of 1,293 person-times for the three hyperts screening consultation	

### Health care

<b>Supervisor health check</b> A total of 151 people have completed the supervisor health checkup	<b>On-site service mechanism</b> A total of 1,301 people received work assignment, resume work and health consultation 186 site inspections	<b>Four cancer prevention screening</b> A total of 837 people participated in the prevention and control screening in the first half of the year
<b>Care for disabled employees</b> Regulations require the employment of 122 people, new employees with disabilities Special operation care for 39 people	<b>2019 influenza vaccine delivery</b> There were 1,779 people signed up for the immunization this year	<b>2019 employee health checkup</b> A total of 6,820 people completed health checkups

### Health promotion

<b>Online health education training</b> 12,730 person-times of training sessions were completed	<b>Onsite massage service</b> It is used for 1,840 person-times	<b>Health knowledge advocacy</b> Q1-Q4 Health knowledge reading participated by 15,046 person-times	<b>Health/Mental health lecture</b> Multiple stress relief activities were held in each factory area this year A total of 339 people participated
<b>Large-scale outdoor activities</b> 95% A total of 2,156 person-times participated in the year with a satisfaction rate of 95%			

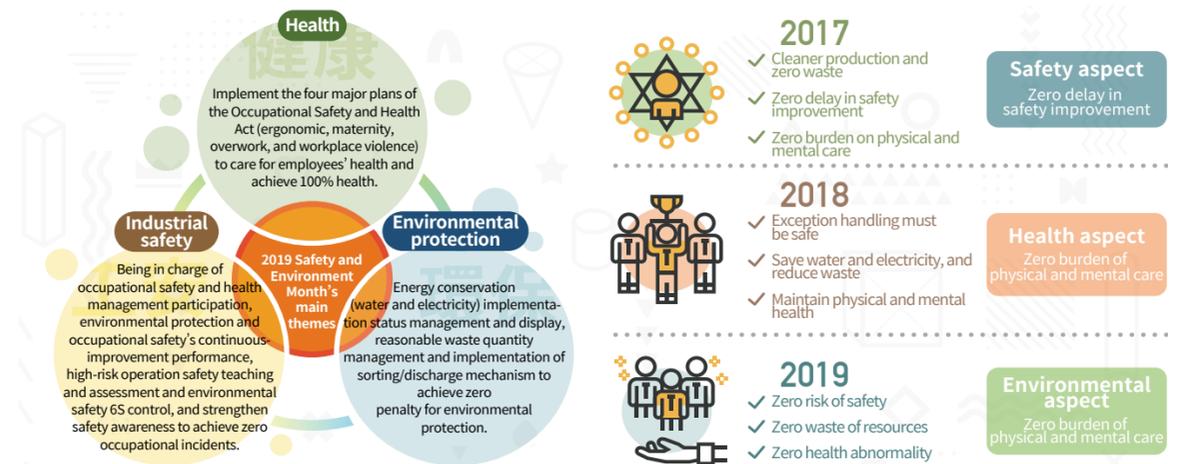
### Health promotion questionnaire

Since 2015, a periodic health management questionnaire survey is conducted every year through the "Personal Health Management Questionnaire Platform," which are analyzed by professional specialist physicians and factory nurses to effectively grasp the occupational health risks of employees and take further mitigation measures earlier.

Questionnaire topic	2019 results
Musculoskeletal	Carry out the ergonomic engineering evaluation and, if necessary, work with industrial safety employees to evaluate employees' work site, provide medical and life advice and improve operation mode. In 2019, there were 10,216 people participating in the investigation. The abnormal rate in 2018 and 2019 was stable at 4%.
Stress (overwork)	In 2019, there were 10,216 persons participated in self-assessment, of which 1.8% were self-assessed with high load, and the abnormal rate decreased steadily over years. Combining the results of the employee's health checkup report to assess cardiovascular risks, high-risk personnel are arranged to have one-on-one consultations with physicians and medical referrals as needed. A total of 190 people completed one-on-one health consultations and received proper health management.
Self-assessment of eye-using lifestyle	Use the new health knowledge to promote the improvement of employees' habits against employees' bad eye-using habits.

### Unimicron's Safety and Environment Month

Unimicron Technology has always put safety first. Since 2004, it has held safety and environmental month activities in the third quarter of each year, with the CEO attending the opening and closing ceremonies. The scope includes Unimicron Technology Group's factories in the mainland China and Taiwan. Through the senior level's declaration and emphasis on safety, Unimicron Technology's attention and dedication to environmental safety and health are implemented to create a safe and healthy working environment.



### 2019 Safety and Environment Month's Evaluation Excellent Units



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### Actively participating in external negotiations and sharing promotion experience

In terms of occupational safety and health management, Unimicron Technology not only rigorously manages internally, but also actively participates in external non-governmental organizations' occupational safety and health initiatives, hoping to contribute to the promotion of occupational safety and health in the industry; the organizations the company mainly participates include the Taiwan Printed Circuit Association (TPCA) and the North District Promotion Association of Taiwan Occupational Safety and Health Management System (TOSHMS), and the occupational safety and health counseling volunteer project organized by the Occupational Safety and Health Administration of the Ministry of Labor.

Since 2013, Unimicron Technology has been responsible as the convener of the Environmental Safety Committee of Taiwan Printed Circuit Association (TPCA), assisting in the discussion and implementation of occupational safety and health related guidelines, plans or projects in the printed circuit board industry. In 2019, the company assisted the North District Promotion Association of Taiwan Occupational Safety and Health Management System (TOSHMS) to compile and complete the "Contract Management Case Manual II of the Occupational Safety and Health Management System," and assisted in project implementation, observation activities, etc. In 2019, the company continued to serve as the promotion officer of the North District Promotion Association of Taiwan Occupational Safety and Health Management System (TOSHMS). Through the sharing and exchange of experience, the company promotes and enhances the excellent occupational safety and health culture in the industry.

In order to improve domestic occupational safety standards, Unimicron Technology assists the public sector in promoting occupational safety and health. Since 2015, it continues to participate in the small and medium-sized enterprise counseling volunteer project of the Occupational Safety and Health Administration of the Ministry of Labor, assisting small and medium-sized enterprises in the improvement of on-site occupational safety and health (including chemical management) and the improvement of the occupational safety and health management system. In 2019, we cooperated with the Ministry of Labor to assist small and medium-sized enterprises to establish occupational safety and health management systems for a total of 13 sessions. By the end of 2019, Unimicron had invested a total of 11 people in the volunteer counseling project and assisted in 77 counseling visits.

### Taiwan Printed Circuit Association (TPCA)

3 sessions of committee meetings | 10 seminars | 5 questionnaires/surveys | 2 visits/receptions  
 4 sessions of government hearings/expert meetings | 4 sessions of PCB equipment safety standards

**Taiwan Occupational Safety and Health Management System (TOSHMS)**

2 sessions of staff meetings  
 4 sessions of educational study and observation activities  
 2 sessions of case manual compilation

**North District Promotion Association**

**SME Counseling Volunteer Project of the Occupational Safety and Health Administration, Ministry of Labor**

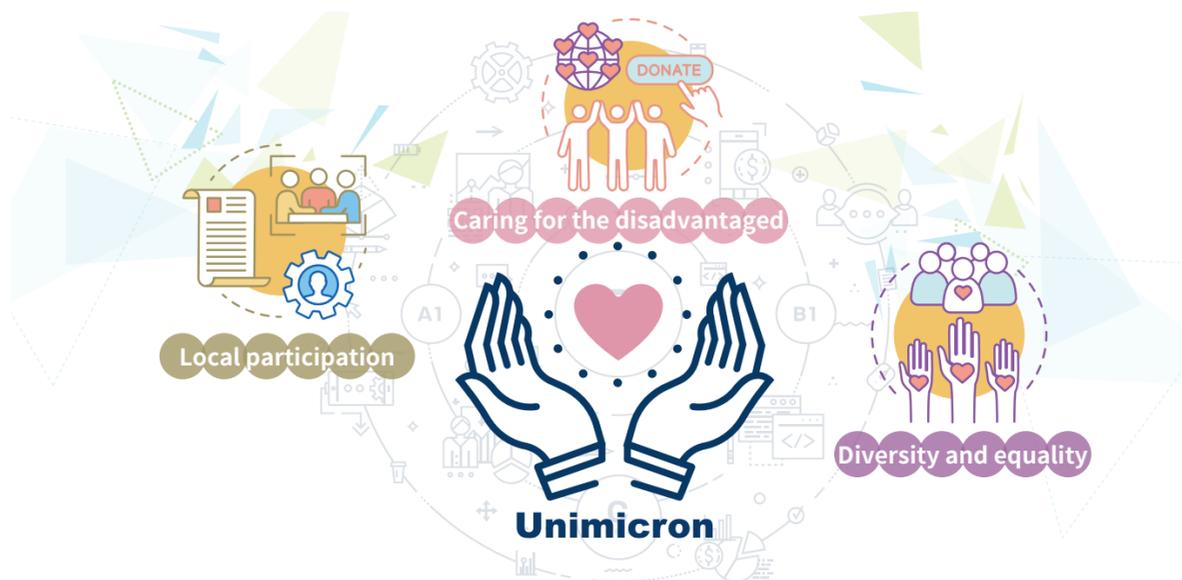
11 companies and 12 sessions in the SME manufacturing industry  
 2 sessions of chemical classification management guidance on



## 3.6 Society

### 3.6.1 Pillars of Unimicron Technology's public welfare activities

Unimicron Technology adheres to the principle of "taking from society and giving back to society," with long-term investment, combining internal and external resources of the group and cooperating with stakeholders, to actively promote the three main social welfare pillars of local participation, caring for the disadvantaged, and diversity and equality. The company hopes to exert positive social influence, drive continuous progress of the society, bring warmth to more people, and exert more positive influence.



Pillar	Vision	Promotion content	Unimicron Technology's role
Local participation	<ul style="list-style-type: none"> <li>Support local environmental protection activities.</li> <li>Enhance the sports atmosphere among the local youth</li> <li>Promote the concept of circular economy and resource reuse</li> </ul>	<ul style="list-style-type: none"> <li>Green Award public welfare</li> <li>Support physical education</li> <li>Technological agriculture promotion</li> </ul>	<ul style="list-style-type: none"> <li>Sponsor the "Green Award" to provide funding environmental protection public welfare organizations to implement the award-winning plans.</li> <li>Provide NT\$300,000 to the baseball team every year, and provide 2 players whose grades are in the top 50 of the whole academic year with a scholarship of NT\$15,000 per semester per person.</li> <li>Combine the concept of urban farming and circular economy with the teaching content of civic education in high school</li> </ul>
Caring for the disadvantaged	<ul style="list-style-type: none"> <li>Provide education opportunities to disadvantaged students</li> <li>Caring</li> </ul>	<ul style="list-style-type: none"> <li>Sponsorship to help students</li> <li>New Year and festival donation</li> </ul>	<ul style="list-style-type: none"> <li>Visit poor students with excellent college entrance examination scores at their homes in Shaanxi, mainland China, and sponsor their tuitions.</li> <li>Provide New Year gift boxes for disadvantaged students to send warmth and love.</li> </ul>
Diversity and equality	<ul style="list-style-type: none"> <li>Assist the relatively disadvantaged groups in the society to pursue diversity and equality.</li> </ul>	<ul style="list-style-type: none"> <li>Xuri convenience store</li> </ul>	<ul style="list-style-type: none"> <li>Provide employment opportunities at the Xuri convenience store, provide discounts on employee consumption, and donate all the profits of the convenience store to charity, allowing the cycle of good to be uninterrupted.</li> </ul>

### 3.6.2 Social influence

As a member of the global corporate citizens, Unimicron Technology also pursues fulfilling its responsibilities and actively cares for the society and contributes while engaging in business operation. Through the spirit of caring and giving back to the society, the company organizes and participates in many activities, puts in resources, provides diverse and equal opportunities, creates opportunities for people in need, and drives continuous progress in society. We start from the locations of our operating bases and expand the scope to carry out caring activities across borders. Whether for the sponsorship of social welfare or the input of volunteers, we actively provide more resources and hope for the society and local communities, hoping to inject positive force into society. In the past three years, Unimicron Technology has invested about NT\$6,765,111 into the society, and the number of volunteers participating has also been increasing. We will continue to invest human and material resources to bring more social influence.

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## 2019 overview of Unimicron Technology's social participation

Area	Description	Donation amount	Number of participants	Man hours invested	
Taiwan	United Daily News Cultural Foundation	TWD 250,000	-	-	
	Hsinchu County Environmental Protection Bureau's Beach Cleanup Activity	-	47	164.5	
	A total of 773 people participated in blood donation, and the total amount of blood donated was 237,500 cc.	-	773	-	
	Gui-Shan Junior High Baseball Team	TWD 330,000	-	-	
	Donation to Tsinghua University's Volunteer Group (Kenya)	TWD 50,000	-	-	
	Donation to the Taoyuan Reform School of the Agency of Corrections, Ministry of Justice	TWD 100,000	-	-	
	Donation to the Taoyuan Reform School of the Agency of Corrections, Ministry of Justice	TWD 100,000	-	-	
	Donation to Shanding Elementary School in Guishan District	TWD 100,000	-	-	
	Donation to Sino Shepherds Youth Care Association	TWD 391,092	-	-	
	Donation to Chengzheng Middle School (baking class) of the Agency of Corrections, Ministry of Justice	TWD 100,000	-	-	
Unimicron Technology (Suzhou)	Volunteer Service for the 9th Jinji Lake Marathon in 2019	---	45	360	
	Union Activities in 2019 - Blood Drive	---	121	484	
	SIP SEA Charity Event: Let love no longer be "idle"	RMB 3275.5	238	---	
Unimicron Technology (Kunshan)	2019 Tzu Chi Year-end Donation	RMB 100,000	6	18	
	Donation to Shanxi Yuncheng School (2 sets of air conditioners were donated)	RMB 11,762	1	6	
	Donation the school-enterprise scholarship of Shanxi Yuncheng University	RMB 14,610	-	-	
	Zhou Huosheng Volunteer Association's charity education assistance activities (visits to students in difficulties in Dabie Mountain)	-	1	32	
	2019 Fall Semester Care and Aid Project (30 schoolbags and 230 copies of books were denoted)	RMB 3,000	7	28	
	Donation to needy households from Kunshan Volunteer Federation (50 quilts were denoted by the union)	RMB 3,800	-	2	
	Volunteer service for release of aquatic biological resources of Dianshan Lake	-	3	24	
	Volunteer service for garbage sorting in Kunshan High-tech Zone (Charity sale of handmade environmental bags)	RMB 425	3	12	
	Blood drive, with 18,600ml of blood donated	-	59	-	
	74 community public welfare activities, serving 2,472 person-times	-	179	533	
	Unimicron-FPC Technology (Kunshan)	Blood drive, with 20,000ml of blood donated	-	123	60
		Community public welfare activities (the elderly birthday parties and visits during the Dragon Boat Festival, Mid-Autumn Festival and Chinese New Year Festival)	RMB 17,478	25	50
	Unimicron Technology (Shenzhen)	Blood donation activity in Shenzhen's Baoan Xinqiao Civic Square, with 8,400 cc of blood donated	-	28	-
2019 charitable education aid activities in Ziyang County, Shaanxi		RMB 35,000	1	40	
"Coming together to fight the epidemic" Volunteers to assist community express delivery sorting, temperature taking, etc.		-	3	44	
River protection and garbage sorting activities in Yonghe		-	80	160	
Big hand in small hand traffic civilization directing and persuasion		-	24	12	
Huangshi Xinyixing Technology	Volunteer participation of 241 person-times and 651 hours	-	241	653	
	Sponsorship of the 2019 10th Tour of China International Road Cycling Race	RMB 60,000	-	-	
	2019 Huangshi Taiwan Association-Sponsorship of public welfare activities for needy families in the community	RMB 3,000	-	-	
	<b>Total</b>	<b>2,073,223</b>	<b>2,008</b>	<b>2,682.5</b>	

Note: It is converted by 1RMB=4.225 TWD.

## Sponsoring the 2019 4th Green Award Public Welfare Event

In response to the "Green Award" sponsorship project initiated by United Microelectronics (hereinafter referred to as UMC), Unimicron Technology provides funding to environmental protection public interest groups to implement their award-winning plans, and jointly supports meaningful environmental protection actions to implement the practice of corporate social responsibility. Through the interactive platform constructed by the "Green Award," scholars, experts, conservationists, and companies can exchange and share resources in many ways, and work together to maintain Taiwan's ecology.



## Promotion course of "urban technological agriculture and circular economy"

Unimicron Technology actively promotes the "urban technological agriculture and circular economy concept," hoping to integrate the concept of urban farming and circular economy through a lively and diverse model with civic education in high schools and vocational schools. The company promotes "having a vegetable garden in every family" and provides guidance of simple hydroponic cultivation techniques, so that students can plant themselves and experience the fun of the gardening and harvesting pesticide-free crops, promoting environmental sustainability.

We provide students with activities such as on-site visits, course explanations, etc., so that visiting students can understand the actual operation of urban agriculture and the concept and application of circular economy, promoting the concept of protecting the Earth and sustainable environmental protection. Since 2019, we have been promoting this course and cooperating with high schools, vocational schools, and Taoyuan City Government to promote environmental education courses. In addition to the courses covering environmental education, circular economy and plant cultivation, a total of 5 sessions were promoted in 2019, with about 200 students taught, allowing environmental education to take root in the youth and driving the concept of circular economy.

## Mid-autumn gift boxes to send love

The Mid-Autumn Festival is one of the three major festivals for the Chinese people. When the autumn season begins and the weather is pleasant, family reunion and moon watching is an excellent activity to enhance parent-child relationship. In response, Unimicron Technology paid a special visit the neighboring Shanding Elementary School in September 2019, sending a gift of 120 Mid-Autumn Festival gift boxes to be forwarded to disadvantaged students in the school by the school administration so that all students can have a happy Mid-Autumn Festival holiday.

## Supporting physical education

Unimicron Technology actively supports the national sports of baseball. Since 2014, the company has started to sponsor the Guishan Junior High School baseball team in Taoyuan City, where the company is located, and promises to donate NT\$1.8 million to assist the baseball team in various training tasks for five years (2019-2023). Starting from 2019, we will donate NT\$300,000 each year, and award scholarships of NT\$15,000 to 2 students with excellent academic performance each year as encouragement, looking forward to cultivating more outstanding stars of tomorrow for the country.

## Pathway to dream from rehabilitation - Inmates' work release programs

In order to improve the society's power to move upward, Unimicron Technology has cooperated with the Taipei Prison of the Agency of Correction since October 2017 to assist those who are about to be released on parole or from prison after serving the term within one year to quickly integrate with society, and provide employment opportunities. The Taipei Prison will select inmates who will be released on parole or will be released from prison after serving the term within one year, to sign a contract with Unimicron Technology; the inmates go out to work at Unimicron Technology during the day, and return to prison at night to serve their terms, providing eight hours of labor daily; Unimicron Technology provides the inmates with salary, labor insurance, employment insurance, group insurance and labor pensions, so that inmates can adapt to social life as soon as possible.

This project is a model example of enterprises' fulfilling their social responsibilities, looking forward to reducing the social disorder atmosphere and helping rehabilitated inmates to take the right path and make no more mistakes. It encourages rehabilitated inmates to connect and interact with the society early to support them to bravely embark on the path of rebirth. As of the end of December 2019, Unimicron Technology has successively hired two inmates to help rehabilitated inmates live normal and stable lives as soon as possible.

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### 3.6.3 Diverse public welfare

Unimicron Technology has launched the "Unimicron Technology Xuri convenience store" project at the Shanying Plant in 2014. The Xuri convenience store's employees are all from disadvantaged families and people with disabilities assisted by the Sino Shepherds Youth Care Association. The number of employees at the convenience store has grown over years in the past three years, helping more people in need. For the convenience store's operation, Unimicron Technology waives all rents and utility bills, and provides employees with consumption discounts. It also donates all the profits from the convenience store to charity, assisting more people in need and making the cycle of good in the public welfare convenience store uninterrupted. We will continue to invest relevant resources, provide more opportunities to disadvantaged people, and bring more warmth and positive power to the society.

Operational performance		2017 amount	2018 amount	2019 amount
Annual operating costs (rent, utilities, decoration, equipment, etc.)		869,913	960,624	2,581,407
Convenience store's annual sales		36,195,671	38,975,818	50,664,585
Cumulative discounts given to employees		7,643,356	5,979,704	8,190,328

Receiver of donation	2017		2018		2019	
	Amount	Number of beneficiaries	Amount	Number of beneficiaries	Amount	Number of beneficiaries
Shanding Elementary School of Taoyuan City	100,000	400	100,000	380	100,000	400
Taoyuan Reform School	100,000	380	100,000	300	100,000	380
Chengzheng Middle School in Hsinchu	100,000	270	100,000	250	100,000	250
Sino Shepherds Youth Care Association	415,420	530	558,389	650	391,092	530
<b>Total</b>	<b>715,420</b>	<b>1,580</b>	<b>858,389</b>	<b>1,580</b>	<b>691,092</b>	<b>1,560</b>

People assisted by the Xuri public welfare convenience store	(Number of people)		
	2017	2018	2019
Single mother	19	21	29
Disabled	5	7	4
Disadvantaged youth	6	3	10
<b>Total</b>	<b>30</b>	<b>31</b>	<b>43</b>

Teaching content provided by the convenience store	(Hours)		
	2017	2018	2019
Self-exploration, emotional management, empathy, gender education, youth flying, and energy medicine	14	14	14
Stage one, initial familiarity with store operations	56	52	54
Stage two, store operation and ordering operation	48	40	45
Stage three, store operation analysis and improvement and personal potential and self-discovery by the Sino Shepherds Youth Care Association	48	40	45
Education, and potential education and training (irregular)	6	6	6
<b>Total</b>	<b>172</b>	<b>152</b>	<b>164</b>



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## About this report

In 2020, Unimicron Technology prepared the CSR report with the same rigorous attitude, from the three main aspects of the company's steady management, value chain and circular economy development, and the multi-party interaction and communication with customers, employees and the society, to explain our sustainability commitments, goals, management and performance to all stakeholders. The previous corporate social responsibility report was published in June 2019, and the next report is expected to be released in June 2021.

## Compilation Principles

This report is completed based on the core options of the Global Reporting Initiative (GRI) Standards, and the disclosure content has passed the verification in accordance with the cores of the GRI Standards and AA1000 AS 2008 TYPE II high assurance standards.

## Boundary and Data

The boundary of this report for the information disclosure in the organization is Unimicron's factories in Taiwan (Shanying Plant, Luzhu Plant, Hejiang Plant, Zhongyuan Plant, Xinfeng Plant, and Renyi Plant) and in the Mainland China (Unimicron Technology (Shenzhen), Unimicron Technology (Kunshan), Unimicron-FPC Technology (Kunshan), and Unimicron Technology (Suzhou), and Huangshi Xinyixing Technology) and subsidiaries (Qun Hong Technology Inc.). The number of employees and revenues covered in such boundary account for 100% of Unimicron's total number of employees and consolidated revenue. The information coverage is mainly from January 1, 2019 to December 31, 2019. The impacts affecting the subsidiaries within the organization and the value chain (purchasing, manufacturing, and customer use) outside of the organization are mainly for the disclosure on Unimicron's management, strategic, or future management planning. Therefore, there are no significant changes in information disclosure boundary setting and the supply chain from the previous year. If there are changes in data boundary or measurement calculation method from the previous version, it will be noted in the paragraph or below the figure and table.

## Report Management

The management unit of this report is "Unimicron Technology Corporate Sustainability Committee," with the management serves as the supervising advisors, and the senior executives are responsible for the operation of various subordinate functional committees. The sub-committee team members come from all the operating units, including representatives of finance, investor relations, human resources, environmental protection, safety and health, information, supplies, business, etc., and are responsible for confirming the management guidelines and implementation of CSR issues. The committee annually confirms and analyzes the company's CSR report and overall strategy, direction and objectives, and reports the implementation results of the review and improvement measures for the unachieved project items to the Chairman of the board.

All the information disclosed in the report is provided and compiled by Unimicron Technology's various departments. After the basic drafts are produced, through discussion with the external consultant team, the structure compilation and disclosure direction are edited and revised. The finalized version is reviewed by each department head, and finally approved by the general manager for the annual report to be published.

In addition, the financial report data disclosed is the financial report data that has been attested by the PwC Taiwan and presented in the New Taiwan Dollars, accounting firm and is presented in NT dollars. Greenhouse Gas Emissions (ISO 14064-1), Environmental Management System (ISO 14001), Energy Management System (ISO 50001), and Occupational Safety and Health Management System (OHSAS 18001) have all been verified by a fair third party.

## Contact

If you have any suggestions or questions about the content of this report or the company's sustainable development, please contact Huang Lincheng at the Secretariat of the Corporate Sustainability Committee.

- Address : No.179, Shanying Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)
- Telephone : 03-3500386#11390
- Email : CSR@unimicron.com



2019CSR Report

## GRI indicator comparison table

Core requirements	GRI No.	Disclosure No.	Disclosure title	Chapter / Section	Chapter / Section title	Page No.	Mission/remarks (● is core disclosures, and the rest are voluntary disclosures)
Core		102-1	Name of the organization		About Unimicron	4	●
Core		102-2	Activities, brands, products, and services		About Unimicron	4	●
Core		102-3	Location of headquarters		About Unimicron	4	●
Core		102-4	Location of operations		About Unimicron	4	●
Core		102-5	Ownership and legal form		About Unimicron	4	●
Core		102-6	Markets served	1.2	Products and services	27	●
Core		102-7	Scale of the organization		About Unimicron	5	●
Core		102-8	Information on employees and other workers	3.5.1	Employment and retention	72	●
Core		102-9	Supply chain	3.3.1	Supply chain overview	59	●
Core		102-10	Significant changes to the organization and its supply chain		About this report	94	●
Core		102-11	Precautionary principle or approach	1.3.3	Risk and opportunity management	39	●
Core		102-12	External initiatives		Association participation	10	●
Core		102-13	Membership of associations		Association participation	10	●
Core		102-14	Statement from senior decision-maker		Statement from the Chairman	2	●
Core		102-15	Key impacts, risks and opportunities	1.3.3	Risk and opportunity management	39	●
Core		102-16	Values, principles, standards, and norms of behavior	1.3.2	Ethical corporate management	37	●
Core		102-17	Mechanisms for advice and concerns about ethics	1.3.2	Ethical corporate management	37	●
Core		102-18	Governance structure	1.3.1	Governance framework	36	●
Core		102-19	Delegating authority	1.1.3	Sustainability committee operation	19	
		102-20	Executive-level responsibility for economic, environmental, and social topics	1.1.3	Sustainability committee operation	19	
		102-21	Consulting stakeholders on economic, environmental, and social topics	1.1.3	Sustainability committee operation	19	
		102-22	Composition of the highest governance body and its committees	1.3.1	Governance framework	36	
		102-23	Chair of the highest governance body	1.3.1	Governance framework	36	
		102-24	Nominating and selecting the highest governance body	1.3.1	Governance framework	36	
		102-25	Conflicts of interest	1.3.1	Governance framework	36	
		102-26	Role of highest governance body in setting purpose, values, and strategy	1.3.1	Governance framework	36	
		102-27	Collective knowledge of highest governance body	1.3.1	Governance framework	36	
		102-28	Evaluating the highest governance body's performance	1.3.1	Governance framework	36	
		102-29	Identifying and managing economic, environmental, and social impacts	1.1.3	Sustainability committee operation	19	
		102-30	Effectiveness of risk management processes	1.1.3	Sustainability committee operation	19	
		102-31	Review of economic, environmental, and social topics	1.1.3	Sustainability committee operation	19	
		102-32	Highest governance body's role in sustainability reporting	1.1.3	Sustainability committee operation	19	
		102-33	Communicating critical concerns	1.1.3	Sustainability committee operation	19	
Core		102-40	List of stakeholder groups	1.1.4	Materiality analysis	20	●
Core		102-41	Collective bargaining agreements		Unimicron Technology has not signed collective bargaining agreements.		●
Core		102-42	Identifying and selecting stakeholders	1.1.4	Materiality analysis	20	●
Core		102-43	Approach to stakeholder engagement	1.1.4	Materiality analysis	20	●
Core		102-44	Key topics and concerns raised	1.1.4	Materiality analysis	20	●
Core		102-45	Entities included in the consolidated financial statements		About this report	94	●
Core		102-46	Defining report content and topic boundaries	1.1.4	Materiality analysis	20	●
Core		102-47	List of material topics	1.1.4	Materiality analysis	20	●
Core		102-48	Restatements of information				●
Core		102-49	Changes in reporting	1.1.4	Materiality analysis	20	●
Core		102-50	Reporting period		About this report	94	●
Core		102-51	Date of most recent report		About this report	94	●
Core		102-52	Reporting cycle		About this report	94	●
Core		102-53	Contact point for questions regarding the report		About this report	94	●
Core		102-54	Claims of reporting in accordance with the GRI Standards		About this report	94	●
Core		102-55	GRI content index		GRI indicator comparison table	95	●
Core		102-56	External assurance		Assurance Statement	97	●
Core	GRI 103	103-1	Explanation of the material topic and its Boundary	1.1.4	Materiality analysis	20	●
				2	Management system	41	●
Core	GRI 103	103-2	The management approach and its components	1.1.4	Materiality analysis	20	●
				2	Management system	41	●
Core	GRI 103	103-3	Evaluation of the management approach	1.1.4	Materiality analysis	20	●
				2	Management system	41	●
	GRI 201	201-1	Direct economic value generated and distributed	3.1.2	Financial performance	52	
	Economic Performance	201-3	Defined benefit plan obligations and other retirement plans	3.5.2	Salary benefits and rights	75	
		201-4	Financial assistance received from government	1.2.4	Innovative technology R&D	31	
Materiality issues	GRI 202	202-1	Ratios of standard entry level wage by gender compared to local minimum wage	3.5.2	Salary benefits and rights	75	●
	Market Presence	202-2	Proportion of senior management hired from the local community	3.5.2	Salary benefits and rights	75	●
		203-1	Infrastructure investments and services supported	3.6.1	Social investment	89	
	GRI 203	203-2	Significant indirect economic impacts	3.3.2	Sustainable supplier management	59	
	Indirect Economic Impacts			3.5.2	Salary benefits and rights	75	
				3.6.1	Social investment	89	
	GRI 204	204-1	Proportion of spending on local suppliers.	3.3.2	Sustainable supplier management	59	●
Materiality issues	GRI 205	205-2	Communication and training about anti-corruption policies and procedures	1.3.2	Ethical corporate management	37	●
	Anti-corruption	205-3	Confirmed incidents of corruption and actions taken		No related incidents in 2019		●
Materiality issues	GRI 206	206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices.		No related incidents in 2019		●
	Anti-Competitive Behavior						
	GRI 301	301-1	Materials used by weight or volume	3.4.1	Energy and resource consumption	65	
	Materials	301-3	Reclaimed products and their packaging materials	3.4.1	Energy and resource consumption	65	

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Core requirements	GRI No.	Disclosure No.	Disclosure title	Chapter / Section	Chapter / Section title	Page No.	Omission/remarks (● is core disclosures, and the rest are voluntary disclosures)
	GRI 302 Energy	302-1	Energy consumption within the organization	3.4.1	Energy and resource consumption	65	
		302-3	Energy intensity	3.4.1	Energy and resource consumption	65	
		302-4	Reduction of energy consumption	3.4.1	Energy and resource consumption	65	
Materiality issues	GRI 303 Water	303-1	Water withdrawal by source	3.4.1	Energy and resource consumption	65	●
		303-3	Water recycled and reused	3.4.1	Energy and resource consumption	65	●
Materiality issues	GRI 305 Emissions	305-1	Direct (Scope 1) GHG emissions	3.4.2	Greenhouse gases emission	68	
		305-2	Energy indirect (Scope 2) GHG emissions	3.4.2	Greenhouse gases emission	68	
		305-3	Other indirect (Scope 3) GHG emissions	3.4.2	Greenhouse gases emission	68	
		305-4	GHG emissions intensity	3.4.2	Greenhouse gases emission	68	
		305-5	Reduction of GHG emissions	3.4.2	Greenhouse gases emission	68	
		305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	3.4.3	Pollution and hazardous substances	70	●
Materiality issues	GRI 306 Effluents and Waste	306-1	Water discharge by quality and destination	3.4.3	Pollution and hazardous substances	70	●
		306-2	Waste by type and disposal method	3.4.3	Pollution and hazardous substances	70	●
		306-5	Water bodies affected by water discharges and/or runoff	3.4.3	Pollution and hazardous substances	70	●
Materiality issues	GRI 307 Environmental Compliance	307-1	Non-compliance with environmental laws and regulations	3.4	Environment	65	●
Materiality issues	GRI 308 Supplier Environmental Assessment	308-1	New suppliers that were screened using environmental criteria	3.3.2	Sustainable supplier management	59	
		308-2	Negative environmental impacts in the supply chain and actions taken	3.3.2	Sustainable supplier management	59	
Materiality issues	GRI 401 Employment	401-1	New employee hires and employee turnover	3.5.1	Employment and retention	72	●
		401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	3.5.1	Employment and retention	72	●
		401-3	Parental leave	3.5.2	Salary benefits and rights	75	●
Materiality issues	GRI 402 Labor/Management Relations	402-1	Minimum notice periods regarding operational changes	3.5.1	Employment and retention	72	●
Materiality issues	GRI 403* Occupational Health and Safety	403-1	Occupational health and safety management system	3.5.4	Health and safety	81	●
		403-2	Hazard identification, risk assessment, and incident investigation	3.5.4	Health and safety	81	●
		403-3	Occupational health services	3.5.4	Health and safety	81	●
		403-4	Worker participation, consultation, and communication on occupational health and safety	3.5.4	Health and safety	81	●
		403-5	Worker training on occupational health and safety	3.5.4	Health and safety	81	●
		403-6	Promotion of worker health	3.5.4	Health and safety	81	●
		403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	3.5.4	Health and safety	81	●
		403-8	Workers covered by an occupational health and safety management system	3.5.4	Health and safety	81	●
		403-9	Work-related injuries	3.5.4	Health and safety The information on "the number of severe occupational injuries" is not available.	81	●
		403-10	Work-related ill health	3.5.4	Health and safety	81	●
Materiality issues	GRI 404 Training and Education	404-1	Average hours of training per year per employee	3.5.3	Occupational development and training	79	●
		404-2	Programs for upgrading employee skills and transition assistance programs	3.5.3	Occupational development and training	79	●
		404-3	Percentage of employees receiving regular performance and career development reviews	3.5.3	Occupational development and training	79	●
Materiality issues	GRI 405 Diversity and Equal Opportunity	405-1	Diversity of governance bodies and employees	3.5.1, 1.3.1	Employment and retention Governance framework	72 36	●
		405-2	Ratio of basic salary and remuneration of women to men	3.5.2	Salary benefits and rights	75	●
Materiality issues	GRI 406 Non-discrimination	406-1	Incidents of discrimination and corrective actions taken		No related incidents in 2019		●
Materiality issues	GRI 407 Freedom of Association and Collective Bargaining	407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	3.5.2, 3.3.2	Salary benefits and rights Sustainable supplier management	75 59	●
		408-1	Operations and suppliers at significant risk for incidents of child labor	3.3.2	Sustainable supplier management	59	●
Materiality issues	GRI 409 Forced or Compulsory Labor	409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	3.3.2	Sustainable supplier management	59	●
Materiality issues	GRI 412 Human Rights Assessment	412-2	Employee training on human rights policies or procedures	3.5.2	Salary benefits and rights	75	●
	GRI 413 Local Communities	413-1	Operations with local community engagement, impact assessments, and development programs	3.6.1	Social investment	89	
		414-1	New suppliers that were screened using social criteria	3.3.2	Sustainable supplier management	59	
	GRI 414 Supplier Social Assessment	414-2	Negative social impacts in the supply chain and actions taken	3.3.2	Sustainable supplier management	59	
		416-1	Assessment of the health and safety impacts of product and service categories	1.2.3	Green product management	29	●
Materiality issues	GRI 416 Customer Health and Safety	416-2	Incidents of non-compliance concerning the health and safety impacts of products and services		No related incidents in 2019		●
		417-2	Incidents of non-compliance concerning product and service information and labeling		No related incidents in 2019		●
Materiality issues	GRI 417 Marketing and Labeling	417-2	Incidents of non-compliance concerning marketing communications		No related incidents in 2019		●
Materiality issues	GRI 418 Customer Privacy	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data		No related incidents in 2019		●
Materiality issues	GRI 419 Socioeconomic Compliance	419-1	Non-compliance with laws and regulations in the social and economic area		No material events occurred in 2019. The company defines material events in accordance with the material events stipulated in Subparagraph 26, Paragraph 1, Article 4 of Taipei Exchange Procedures for Verification and Disclosure of Material Information of Companies with TPEX Listed Securities, as where administrative fines cumulatively reach NT\$1 million or more for a single event.		●
Materiality issues	Technology and R&D	Unimicron specific	Investing in manpower and resources, focusing on technology and R&D to provide leading technology and solutions	1.2.4	Innovative technology R&D	31	●
Materiality issues	Green products	Unimicron specific	Producing green products that meet international regulations, industry standards and customer requirements	1.2.3	Green product management	29	●

All disclosure items quote the 2016 version of GRI Standards.

## Assurance Statement



### ASSURANCE STATEMENT

#### SGS TAIWAN LTD. 'S REPORT ON SUSTAINABILITY ACTIVITIES IN THE UNIMICRON TECHNOLOGY CORP.'S CORPORATE SOCIAL RESPONSIBILITY REPORT FOR 2019

##### 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 Corporate Social Responsibility Report for 2019 (hereinafter referred to as CSR Report). The scope of the assurance, based on the SGS Sustainability Report Assurance methodology, included the sampled text, and data in accompanying tables, contained in the report presented during on-site verification (2020/05/06~2020/05/15). 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.

The information in the UNIMICRON's CSR Report of 2019 and its presentation are the responsibility of the management of UNIMICRON. SGS has not been involved in the preparation of any of the material included in UNIMICRON's CSR Report of 2019.

Our responsibility is to express an opinion on the text, data, graphs and statements within the scope of verification with the intention to inform all UNIMICRON's stakeholders.

The SGS protocols are based upon internationally recognized guidance, including the Principles contained within the Global Reporting Initiative Sustainability Reporting Standards (GRI Standards) 101: Foundation 2016 for accuracy and reliability and the guidance on levels of assurance contained within the AA1000 series of standards and guidance for Assurance Providers.

This report has been assured using our protocols for:

- 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 (2008) Type 2 evaluation of the report content and supporting management systems against the AA1000 Accountability Principles (2008); and
- evaluation of the report against the requirements of Global Reporting Initiative Sustainability Reporting Standards (100, 200, 300 and 400 series) claimed in the GRI content index as material and in accordance with.

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

Financial data drawn directly from independently audited financial accounts, greenhouse gas emissions and sustainability impact (assessed by Impact Pathway Approach) have 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.

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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 information and data contained within UNIMICRON's CSR Report of 2019 verified is accurate, reliable and provides a fair and balanced representation of UNIMICRON sustainability activities in 01/01/2019 to 12/31/2019.

The assurance team is of the opinion that the Report can be used by the Reporting Organisation's Stakeholders. We believe that the organisation has chosen an appropriate level of assurance for this stage in their reporting. In our opinion, the contents of the report meet the requirements of GRI Standards in accordance with Core Option and AA1000 Assurance Standard (2008) Type 2, High level assurance.

### AA1000 ACCOUNTABILITY PRINCIPLES (2008) 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, CSR experts, and other stakeholders are implemented to underpin the organization's understanding of stakeholder concerns.

#### 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.

### GLOBAL REPORTING INITIATIVE REPORTING STANDARDS CONCLUSIONS, FINDINGS AND RECOMMENDATIONS

The report, UNIMICRON's CSR Report of 2019, is adequately in line with the GRI Standards in accordance with Core Option. The material topics and their boundaries within and outside of the organization are properly defined in accordance with GRI's Reporting Principles for Defining Report Content. Disclosures of identified material topics and boundaries, and stakeholder engagement, GRI 102-40 to GRI 102-47, are correctly located in content index and report. For GRI 404-1, it is highly proposed to use total number of employees in category as denominator to calculate rate of new employee hires and employee turnover by age or gender. This calculation method could detect uneven pattern incompatibility or potential inequity in the workplace, which is more in line with the reporting purpose. For GRI 307-1 and 419-1, it is recommended to re-evaluate the suitability and adequacy of current significant fines threshold.

#### Signed:

For and on behalf of SGS Taiwan Ltd.



David Huang  
Senior Director  
Taipei, Taiwan  
29 May, 2020  
WWW.SGS.COM

