



2019 Corporate Social Responsibility Report



# 2019

## Nuvoton Technology

2019 Corporate Social Responsibility Report



Be a hidden champion in providing green  
semiconductors to enrich human life



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## Be a hidden champion in providing green semiconductors to enrich human life

Looking back at 2019, although the trade war had negatively affected the general environment, Nuvoton Technology's main fields are personal computers, servers, and game consoles where the impact was relatively limited. Instead, the adjusted supply chain driven by the general environment actually generated new market opportunities for our company. In this environment full of challenges and opportunities, Nuvoton continues to develop new applications, launching new technologies, products, and services, while also optimizing the combination of products and customers to showcase the company's solid business power. The development of architectures such as artificial intelligence, 5G networks, and the Internet of Things (IoT) serves to promote the realization of related application products in the fields of smart cities, smart home appliances, smart healthcare, and smart cars. The demand for related technologies will inevitably drive the vigorous development of the technology industry, thereby thrusting the semiconductor industry

to the next peak. In the face of future trends, Nuvoton will seize the opportunity to create a strategic competitive position that is conducive to the company's growth by expanding its semiconductor business scale, expanding global sales channels, enriching human capital, and acquiring stronger research and development capabilities. In the future, Nuvoton will continue to strengthen its own capabilities with active innovation and sustainable operations, expanding its influence in the global semiconductor industry to create maximum value for shareholders, customers, and employees. Nuvoton continues to promote the corporate culture of "sustainable contribution", deepening various policies for sustainable development in three major aspects: economic, environmental, and social. We actively focus on and invest in "corporate governance", "customer service and supplier management", "environment-friendly", "best workplace" and "philanthropy" and other topics to build influence from our company.

## Corporate Governance

We value corporate governance, sustaining the principle of "integrity management" in establishing a robust corporate governance framework, while also continuing to strengthen management functions. In addition, through a robust internal control mechanism, we supervise the internal company operations to ensure financial information transparency while instantly revealing important information to decrease the risks related to corporate management. In terms of overall financial performance, Nuvoton's

2019 consolidated revenue amounted to NTD 10.367 billion, up 3.26% from 2018; net income after taxes amounted to NTD 558 million, down 21.41% from 2018, the main reason of which is due to the increased research and development expenses. Earnings per share (EPS) amounted to NTD 2.53. In the fourth corporate governance evaluation in 2017, Nuvoton ranked in the top 20% in all publically traded companies, affirming our efforts in corporate governance.

## Customer Service and Supplier Management

Nuvoton regards customers and suppliers as important partners and is committed to providing excellent quality to enhance the competitiveness of its customer products. We also implement a series of quality control mechanisms and customer satisfaction

surveys to ensure the quality and reliability of our products. The 2019 customer satisfaction survey shows average satisfaction at above 4 points, and 60% of indicators exceeded that of 2018.

## Environment-Friendly

Complying with environmental laws, regulations, and international standards, Nuvoton is committed to becoming a green enterprise with sustainable development. We are committed to continuous improvement and we strive to reduce the impact of production on the environment and eliminate any foreseeable environmental pollution risks through source reduction and company-wide participation to protect the natural environment. In our production operations and activities, we will continue striving to achieve a level of development that balances economic, social, and ecological factors. We implemented a total of 3 energy conservation measures in 2019. By using the before and after difference and multiplying it to the

estimated running hours, an estimated 450,000 kWh were saved in electricity consumption, demonstrating our commitment to corporate social responsibility. We are also committed to protecting the natural environment. In 2019, the inventory results for greenhouse gas emissions was 69,997 tons, while greenhouse gas emissions per unit of product was 0.780 kilograms carbon dioxide equivalent/square centimeters - wafer mask, a decrease of 9.0% from 2018 and a decrease of 37.9% from the base year 2009.

This demonstrates that we are committed to pursuing the balanced development of economic, social, and ecological factors in our business activities.

## Best Workplace

Employees are the cornerstone of corporate development, and Nuvoton places great importance on talent recruitment. With a comprehensive management system, competitive salary and benefits, as well as an excellent working environment, we attract new talent to join Nuvoton. Through diversified education and training, employees can continue to improve with the company with corporate sustainable development. In 2019, employees at Nuvoton received

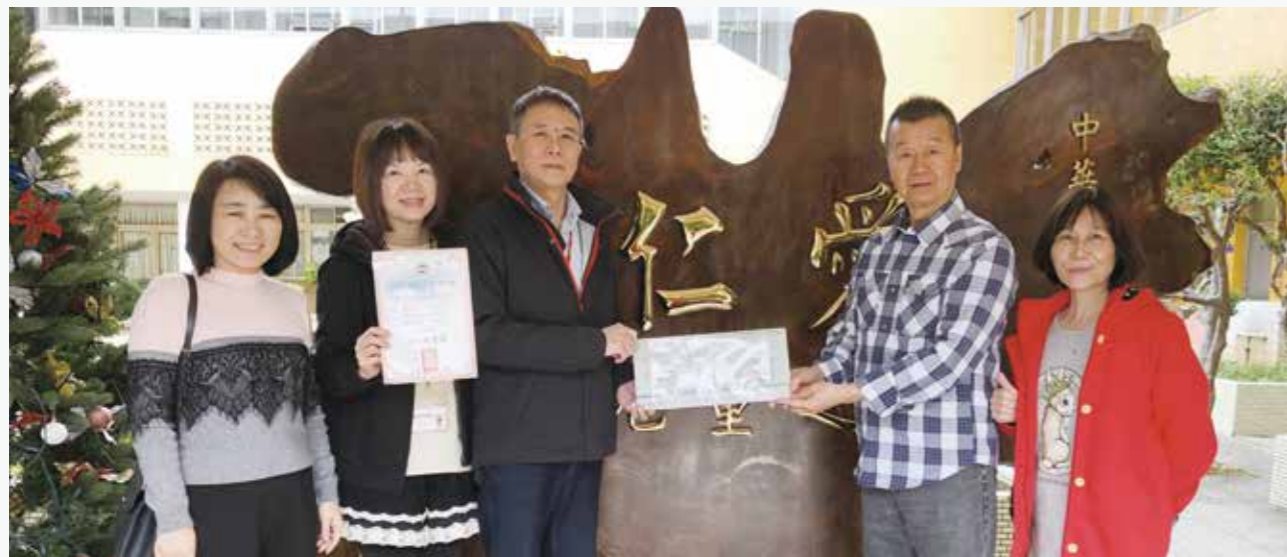
a total of 13,624 hours of training, with a total number of 11,706 attendees. The average training hours are 9.72 hours. In order to create a "work happily, live seriously" LOHAS workplace culture, we promote friendly workplace events, such as celebrity lectures, sports days, social clubs, and company trips to enhance the physical and mental health and workplace happiness of our employees.

## Philanthropy

In 2019, we have continued various public welfare projects, calling up our employees to participate in beach cleaning events for environment protection, as well as continuing to help the disadvantaged groups in society by organizing year-end donation events and used goods donations. The funds raised are mainly used to help Hsinchu City Renai Home, poor students from the Municipal Yuandongguomin Junior High School, disabled patients in Shih Guang Educational and Nursing Institution, etc.

Looking to the incoming future of emerging technology, such as artificial intelligence, big data, Internet of Things (IoT), and cloud computing, Nuvoton continues to improve its research and development energy

while developing various product applications and services. We actively participate in the events of industrial unions and technology alliances to obtain the latest technology in the industry. We believe that we will be able to open up more business opportunities in the future and create long-term stable returns for shareholders, customers, and employees. We also aim to be the best indispensable partner to our customers. Combining our core capabilities and sustainable development strategies, we continuously improve our operational performance in the aspects of corporate governance, environmental protection, and social participation to honor our commitment to corporate sustainability.



Donation to Renai Citizen's Home

## 2019 Corporate Sustainability Performance Summary Sheet

Sustainability Topics		2019 Performance
Economic	Economic Performance	<ul style="list-style-type: none"> <li>Nuvoton's 2019 consolidated revenue amounted to NTD 10.367 billion, up 3.26% from 2018; net income after taxes amounted to NTD 558 million, down 21.41% from 2018, the main reason of which is due to the increased research and development expenses. Earnings per share (EPS) amounted to NTD 2.53.</li> </ul>
	Corporate Governance	In the fifth corporate governance evaluation, Nuvoton ranked in the top 5% in all publicly traded companies
	Customer Satisfaction	<ul style="list-style-type: none"> <li>High customer satisfaction: satisfaction survey shows average satisfaction at above 4 points.</li> </ul>
	Supplier Management	<ul style="list-style-type: none"> <li>In 2019, approximately 90.2% of our supply chain vendors have environmental related certification. Vendors which were unable to obtain certification in time were required to establish a verification schedule.</li> <li>Nuvoton's top 80% packaging and testing plants and raw material vendors (a total of 7 plants and vendors) have conducted corporate social responsibility self-evaluations in 2019. The self-evaluation results comply with the requirements of Nuvoton.</li> <li>As of 2019, all of Nuvoton's outsourced wafer processing manufacturers packaging plants, packaging plants, and raw material suppliers (WF6 gases) have signed the "Statement of Non-use of Conflict Minerals".</li> </ul>
Environmental	Water Conservation	<ul style="list-style-type: none"> <li>Implemented a total of three major energy conservation measures, saving an estimated 450,000 kWh in electricity consumption per year.</li> <li>Nitrogen consumption per unit of product has continued to decrease. It decreased by 65.6% compared to the base year 2009.</li> <li>Sulfuric acid consumption per unit of product has continued to decrease. It decreased by 33.6% compared to the base year 2009.</li> </ul>
	Waste Management	<ul style="list-style-type: none"> <li>The hydrofluoric acid waste liquid that was previously treated by the wastewater treatment plant is now be reused by a recycling manufacturer to promote the normal circulation of substances in the economy or ecology. The amount of hazardous waste reused increased by 47 tons compared to 2018, increasing the recycling rate of waste by 7%.</li> <li>Promotes the source reduction of photoresist strippers in incineration. The amount of waste incineration were reduced by 44 tons and the incineration rate decreased by 6% compared to 2018.</li> </ul>
	Greenhouse Gas Reduction	<ul style="list-style-type: none"> <li>Greenhouse gas intensity decreased by 11.3% from 2018 and by 39.5% compared to the 2009 base year.</li> </ul>
Social	Labor Relations	<ul style="list-style-type: none"> <li>Labor disputes: 0. No discrimination or compulsory labor complaints occurred.</li> <li>The retention rate of employees returning to work at the end of maternity leave in 2019 was 78%. The retention rate of employees returning to work at the end of maternity leave in the previous year was 100%.</li> </ul>
	Occupational Training	<ul style="list-style-type: none"> <li>Total employee training hours: 13,624; total attendees: 11,706. The average training hours are 9.72 hours.</li> <li>All employees completed CSR courses, amounting to a total of 2,853 attendees with a passing rate of 100%</li> </ul>
	Occupational Safety	<ul style="list-style-type: none"> <li>Employees that had completed safety and health education and training reached a total of 3,735 attendees.</li> <li>There were a total of 65 annual emergency drills conducted (including fire alarms, chemical leakage, gas leakage, earthquake, system anomalies, limited operations, emergency evacuations, etc.).</li> <li>In the past three years, there have been no occupational accidents, work injuries or occupational diseases that caused deaths to employees and contractors.</li> </ul>
	Public Welfare Events	<ul style="list-style-type: none"> <li>We called out employees to participate in social welfare activities such as beach cleans, used goods donations, and year-end donations. The total amount of donations by Nuvoton in 2019 amounted to NTD 498,000.</li> </ul>

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## Overview

- » Description
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## Description

In 2014, Nuvoton Technology voluntarily issued its first CSR report to practice corporate social responsibility. We started to regularly issue CSR reports in 2016, providing stakeholders with Nuvoton's efforts and performance in regard to the economy, environment, and society. At the same time, Nuvoton also publishes its report on the CSR area of the company website to establish a transparent and effective channel of communication for all stakeholders.

### Scope

Covering the period from January 1, 2019, to December 31, 2019, this report explains the various aspects of Nuvoton's business and their performance in regard to fulfilling corporate social responsibility. The financial data of this report is drawn from information listed in consolidated financial statements, which are inclusive of Nuvoton's global subsidiaries (including the United States, Israel, China, Hong Kong, and India). Calculated in New Taiwan Dollars (NTD), the financial statements were audited and certified by Deloitte Taiwan. For other categories of content, because the main operation bases of Nuvoton are located in Taiwan, the scope of disclosure in environmental and social issues, such as corporate governance and environmental protection, are specific to Nuvoton's operation base in Taiwan.

### Framework and Guidance

The framework and guidance of this report are based on an analysis of concerns held by Nuvoton's stakeholders, as well as issues considered to be significant during the period covered by this report. We have prepared this report in accordance with the latest GRI Standards

released by the Global Reporting Initiative (GRI) to expose the performance results and management guidelines of the issues at hand. The appendix contains a comparison table of the framework for the reference of readers.

### Warranty

This report has commissioned an independent third party impartial unit, "SGS Taiwan Ltd.", to verify that the content complies with GRI Standards Core Option and AA1000AS TYPE 1 Assurance Engagement. The third-party verification statement can be found in the appendix.

### Release Notes

2018 CSR report: Scheduled to be released in November 2019

2019 CSR report: Scheduled to be released in November 2020.

The previous report was issued in November 2018. To fulfill CSR in regards to environmental conservation, an electronic copy of this report will be published on the company website. This report will be available in Traditional Chinese and English versions.

### Give Feedback to the Report

We welcome your suggestions to the content of this report. You can contact us here:

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## Communication and Participation of the Stakeholders

Nuvoton is focused on sustainable management issues as well as communication with stakeholders to understand the major issues of interest to stakeholders. This report serves as a response to relevant major issues so stakeholders are able to more fully understand the actions and efforts that Nuvoton put into corporate social responsibility.

### Defining the Stakeholders

Taking into consideration foreign and domestic sustainable development and organizational operations, Nuvoton's Corporate Social Responsibility Committee defines the 8 main stakeholders of Nuvoton as the following: employees, customers, shareholders, directors and supervisors, suppliers, the government, community, and media.

### Identified Material Aspects

The Corporate Social Responsibility Management Committee has referred to the Responsible Business Alliance (RBA) Code of Conduct and the Global Reporting Initiative (GRI) on economic, environmental, social, and aspects before consolidating 33 topics of concern for stakeholders. The following describes the process for identifying the concerns of stakeholders:

**Collection :** In accordance with the stakeholders as defined by the Corporate Social Responsibility Management Committee, as well as GRI standards, we consolidated the various topics of concern to stakeholders and divided them into three categories: economic, environmental, social, and product. We listed a total of 33 material aspects for stakeholders.

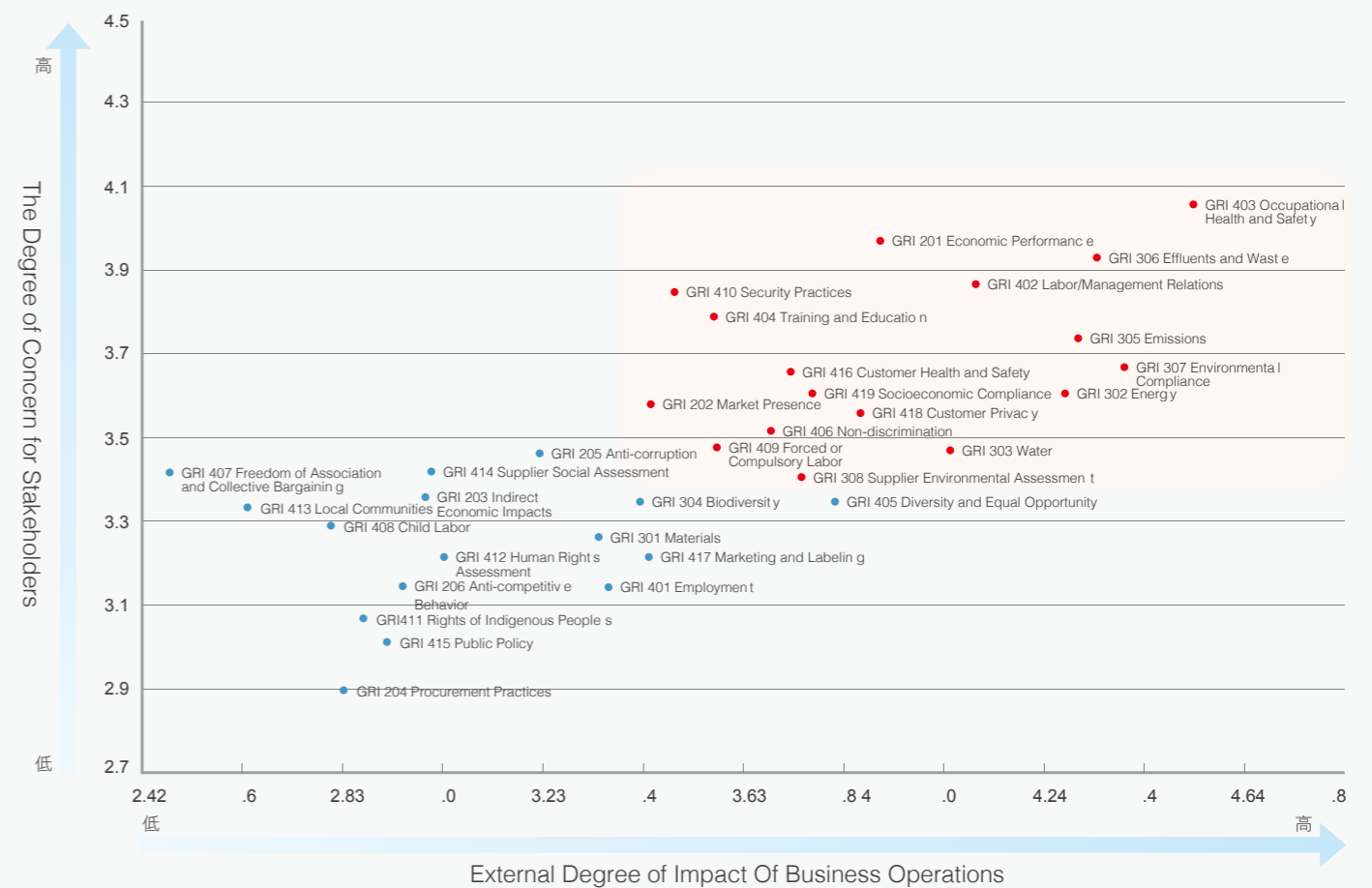
**Survey:** Through the form of questionnaires, stakeholders filled out information regarding their level of concern towards sustainable issues, giving 1 to 5 points (from low to high) depending on their

level of concern. A total of 106 questionnaires were collected on the degree of concern for stakeholders. In addition, Nuvoton's internal Corporate Social Responsibility Management Committee conducted impact degree ratings, giving 1 to 5 points (from low to high) depending on the degree of impact. A total of 14 questionnaires were collected on the external degree of impact of business operations.

**Analysis:** We analyzed the results of the selection (the degree of concern for stakeholders and the external degree of impact of business operations) before identifying and prioritizing topics of concern.

**Submission:** After receiving approval from the Corporate Social Responsibility Management Committee, the results of the analysis laid the framework for this report. Furthermore, Nuvoton has responded to various significant issues and based its goals for further improvement on the results of this analysis. The substantive analysis results are as follows:

### Substantive Analysis Results



**Response to the Significant Topics of Concern**

Based on the results of the material analysis, we have listed 17 significant topics of concern for stakeholders in the following table. This report discloses GRI standards in regards to material aspects, management policies, and related indicators to conduct comprehensive performance disclosure.

Element	Material Aspect	Nuvoton (IC design, wafer fabrication)	External	
			Packaging and Testing	Finished Product Output
Economic GRI 200	GRI 201 Economic Performance	●		
	GRI 202 Market Presence	●		
Environmental GRI 300	GRI 302 Energy	●	●	
	GRI 303 Water	●	●	
	GRI 305 Emissions	●	●	
	GRI 306 Effluents and Waste	●	●	●
	GRI 307 Environmental Compliance	●	●	●
	GRI 308 Supplier Environmental Assessment	●		●
Social GRI 400	GRI 401 Employment	●	●	
	GRI 402 Labor/Management Relations	●	●	
	GRI 403 Occupational Health and Safety	●	●	
	GRI 404 Training and Education	●		
	GRI 406 Non-discrimination	●	●	
	GRI 409 Forced or Compulsory Labor	●		
	GRI 416 Customer Health and Safety	●	●	●
	GRI 418 Customer Privacy	●		
GRI 419 Socioeconomic Compliance	●	●	●	

**Modes of Communications with the Stakeholders**

Nuvoton has collected significant topics of concerns for stakeholders, establishing a diverse and open communication channel so it can provide immediate responses to the expectations and recommendations of stakeholders. Nuvoton also has a corporate social responsibility email, csr@nuvoton.com, so internal and external stakeholders can put forward corporate social responsibility issues.

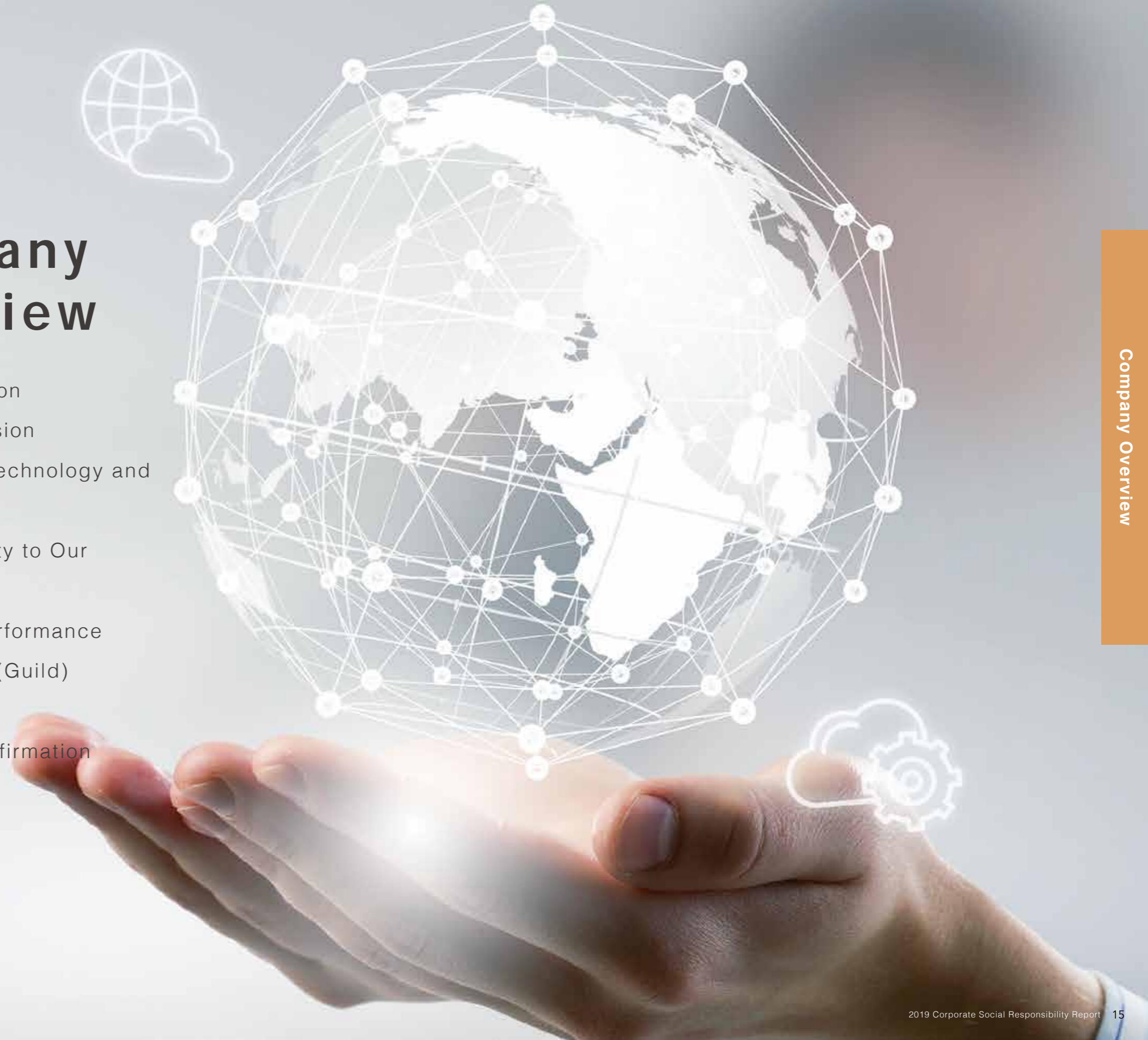
Stakeholder	Topics of Concern	Communication Channel	Communication Frequency
Employees	Employer-Employee Relationship Labor/Capital Relationship Occupational Health and Safety Education and Training Diversification and Equal Opportunity No Discrimination	Labor-Management Meetings	Quarterly
		Executives Management Sharing Meetings	Quarterly
		Executives Management Sharing Meetings	Quarterly
		Employee Welfare Committee	Quarterly
		Employee Suggestion Box	Irregularly
		Grievance Mailbox and Hotline	As needed
		Intranet	Irregularly
		Irregular Meetings within the Organizations	Irregularly
Customers	Anti-corruption Occupational Health and Safety Supplier Social Assessment Customer Privacy Customer Health and Safety	Training Courses	Irregularly
		Customer Satisfaction Surveys	Annually
		Customer Survey or Site Audits	Irregularly
		Company Website - Members Zone	Irregularly
		Technical Seminars	Irregularly
		Phone and email	As needed
Shareholders	Economic Performance	Sewage and Waste	Annually
		Legal Compliance on Environmental Protection Regulations	Every six months
		Occupational Health and Safety	Annually
		Customer Health and Safety	Irregularly
Directors and Supervisors		Board of Directors Meetings	Quarterly
Suppliers	Sewage and Waste Legal Compliance on Environmental Protection Regulations Occupational Health and Safety Customer Health and Safety	Supplier Evaluations	Every six months
		Supplier CSR Surveys	Annually
Government	Sewage and Waste Legal Compliance on Environmental Protection Regulations	Official Notices	Irregularly
		Legal Rules Conferences	As needed
		Communication with the Competent Authorities through the Allied Association for Science Park Industries	As needed
Communities	Sewage and Waste Discharge Legal Compliance on Environmental Protection Regulations Local Communities	Company Website	As needed
		Email	As needed
Media		Press Conferences/Irregular interviews Press Conferences/Irregular interviews	Irregularly
		Press Releases	Irregularly
		Company Website	Irregularly



# 3

## Company Overview

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### About Nuvoton

Nuvoton was established to bring innovative solutions to the semiconductor industry. Nuvoton was founded in 2008. In July of that year, it was spun-off from Winbond Electronics' Corporation Logic IC business unit and officially launched its own operations. In 2010, Nuvoton became publicly listed on the Taiwan Stock Exchange. With a focus on the development of micro control/micro processing, as well as IC products for smart home and cloud security related applications, the company holds a leading position in the industrial electronics, consumer electronics, and computer markets. Furthermore, Nuvoton owns a semiconductor foundry that provides customized analog and power management product manufacturing processes. Apart from its in-house IC products, Nuvoton also offers a part of its capacity for foundry services.

Nuvoton provides products with high performance/cost ratio for its customers by leveraging flexible technologies, advanced design capabilities, and the integration of digital/analog technologies. Nuvoton values long-term collaborative relationships with its customers and partners, and strives for continuous innovation in its products, processes, and customer services. Nuvoton also has subsidiaries in the U.S.A., China, Israel, and India to strengthen regional customer support and facilitate global operations management. For more information on global locations, please refer to the official website of Nuvoton Technology (<https://www.nuvoton.com/about-nuvoton/company-profile/world-wide-location/>) .

Company Name	Nuvoton Technology Corporation
Founded	2008
Capital	NTD 2,875,544,000
Main products and technologies	Our operational focus lies in the design and sales of integrated circuits, as well as the foundry industry
Number of Employees	1,402
Headquarters Address	No. 4, Creation 3rd Road, East District, Hsinchu City, Taiwan

### Company Vision - Joy of Innovation

Due to the development of semiconductor technology, the breakthrough in transmission bandwidth and the popularity of information sharing has caused cloud computing to become the developmental focus of digital life. With worsening global warming, limited natural resources, and the pressure to maintain an ecological balance, green technology has become the key to sustaining human civilization. We can experience infinite possibilities in the aforementioned development space. With courageous, like-minded partners that love learning, our organization is a passionate and

creative team, constructing a competitive advantage with innovation as its core. Nuvoton is committed to creating a happy work environment where employees can have the freedom to imagine and invent, as well as achieve their ideals or learn from failure. The purpose of innovation is to create user value. The manifestation of value is not confined to a single form or source. We set out to create innovation with our customers and partners, driving the development of our industry, while giving back to our employees, shareholders, and community so we can share the joy of innovation.

### Innovative Technology and Products

#### IC Industry Value Chain



In the IC industry value chain, Nuvoton's operational focus lies in the design and sales of integrated circuits (IC), as well as the foundry industry. Backend raw material procurement, outsourced manufacturing, and packaging testing are carried out by the suppliers. General purpose IC remains the principal item of Nuvoton's integrated circuits, but the scope of application is extensive, including microcontroller (MCU) applications, as well as smart home and cloud security products. In addition, the company also owns a 6" wafer fab with monthly production capacity for 45,000 pieces featured with a diversity of process capacity for foundry service. Nuvoton's main products and services are as follows:

#### General Purpose IC

Nuvoton's general purpose IC products include microcontrollers (MCU) applications, as well as smart home and cloud security products. Nuvoton's microcontroller applications utilize a complete product platform, including the 8-bit product line and 32-bit product line. With ultra-low power consumption, high precision, high anti-interference, rich peripheral resources, and high security and confidentiality requirements, it satisfies the market needs of the Internet of Things (IoT), health care electronic products, industrial control, consumer electronics, and communication products.

Smart home products include Audio CODEC, Arm® Cortex®-M0/M4, Audio MCU with 4/8-bit MCU as the core, and Class D Speaker Amplifiers. The target market includes diversified applications such as smart

toys, smart robots, smart audio, consumer electronics, as well as automotive and industrial markets.

For cloud security products, Nuvoton utilizes a top-down approach in the industrial ecosystem, from cross-border data centers, supercomputer servers, edge computing to computer-related smart devices. Focusing on the integrated field specialty, Nuvoton jointly develops innovative features with long-term clients which includes communication interfaces, security framework, and energy management, providing brand manufacturers and outsourced manufacturers with specialized server-use baseboard management controllers, power management controllers, trust platform modules, Super I/O, and embedded controllers.

#### Semiconductor Foundry

Nuvoton owns an advanced 6" semiconductor foundry. With more than 25 years of experience in wafer fabrication, the foundry upholds the spirit of innovation and transcendence, continuing to provide a long-term and stable production capacity, excellent product quality, and timely deliveries. With a strong R&D team and semiconductor supply chain resource integration services, we utilize the innovative thinking of "More-Than-Foundry" to create added value for customers, becoming an indispensable partner for our clients in this competitive market.

### Technologies and Products Developed in 2019:

Year	Results
2019	The new product USB Type-C port controller (TCPC) combined with notebook embedded controller (NB EC) was successfully introduced into the Chromebook platform.
	We launched the latest TPM2.0 security chip products that comply with the latest specifications of the PC client TPM 2.0 formulated by the Trusted Computing Group (TCG), and passed the Common Criteria (CC) EAL 4+ security level certification and the United States The Federal Information Processing Standard Publication FIPS 140-2 level 2 password security certification. Our products were directly utilized by OEM brands of major computer platforms (NB, DT, Server) worldwide.
	Released the first smart amplifier product, which has been gradually introduced into the development of new products for our main customer group
	Launched M261/M262/M263 series of microcontrollers with low power consumption and safety for the new generation of IoT applications
	Released NuMicro® M2351 IoT security microcontroller - the first FreeRTOS real-time operating system that supports Arm® Cortex®-M23 core
	Launched the new Arm® Cortex®-M0 MCU NUC029 series for the industrial control application market
	Exhibiting the world's first microcontroller based on Arm® Cortex®-M23 core that has also passed Arm® PSA Certified Level 1 and PSA Functional API Certified, serving the global IoT security market

### Market Analysis

Nuvoton's main products are sold across the world. Asia was the main sales region for 2019.

#### \* Main Products (Services) Sales (Supply) Regions

Sales Region	2019	
	Amount (Thousand NTD)	Percentage(%)
Asia	9,950,563	96%
America	267,851	3%
Europe	146,703	1%
Other	2,152	0%
Total	10,367,269	100%

#### \* Production Value Table

Main Products	2019			
	Production Capacity* (Thousand)	Production		Output Value (Thousand NTD)
		Wafer (Thousand)	Die (Thousand)	
General Purpose IC	500	1	918,358	4,685,862
Foundry		411	-	1,288,782
Other		-	-	12,870
Total		412	918,358	5,987,514

\*Note: Production capacity is expressed through 6" wafers.

### Responsibility to Our Investors

With innovation as the foundation for its operational guidelines, Nuvoton is committed to the development of new fields of application, and the expansion and strengthening of the company's capacities and technologies. Every year since Nuvoton became publicly listed in 2010, we have been continuously creating value for investors through dividend payouts and the maintenance of a stable financial structure.

To quickly share material information with our investors, we host investor conferences every half year to enhance communication and help them fully understand our quarterly financial figures and business condition. After the event, video recordings of the conference are uploaded to our website to serve as a reference. Additionally, major company activities, important events, and other related information can be found in the investor's area of Nuvoton's official website (<http://www.nuvoton.com/>).

### Financial Performance

Economic Performance Management Policies	
Importance	Continue to create corporate surpluses to create maximum benefits for shareholders and enhance corporate value
Policies/Commitments	Master industry development trends to develop high value-added products and improve corporate governance and operational performance, becoming an industry benchmark which practices corporate sustainability
Goals	Continue to focus on product optimization and increase market share to enhance competitive niche
Promotion Priorities and Practices	Continue to track various financial performance indicators for risk analysis and assessment
Performance Results	Gross margin amounted to 39%, profit margin 5%, and earnings per share (EPS) of NTD 2.53.

Nuvoton's 2019 consolidated revenue amounted to NTD 10.367 billion, up 3% from 2018; net income after taxes amounted to NTD 558 million, down 21.41% from 2018.

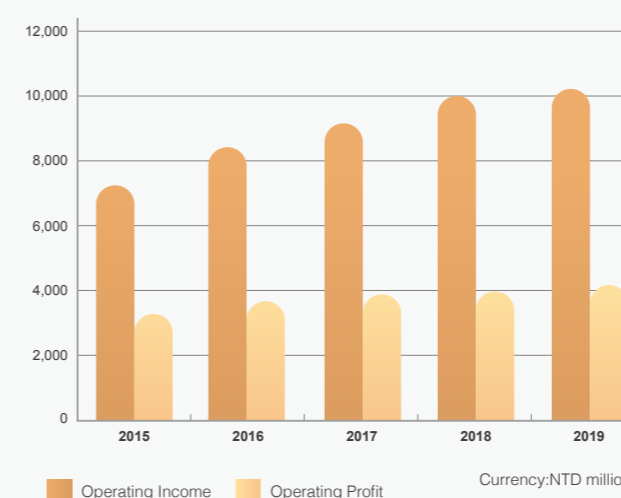
For both 2019 and 2020, Nuvoton allocated earnings from the previous year. For these two years, the cash dividends issued were NTD 2.5 and NTD 1.2, respectively. For 2018 and 2019, the earnings per share (EPS) were NTD 3.42 and NTD 2.53, respectively.

### Financial Performance over the Past Five Years

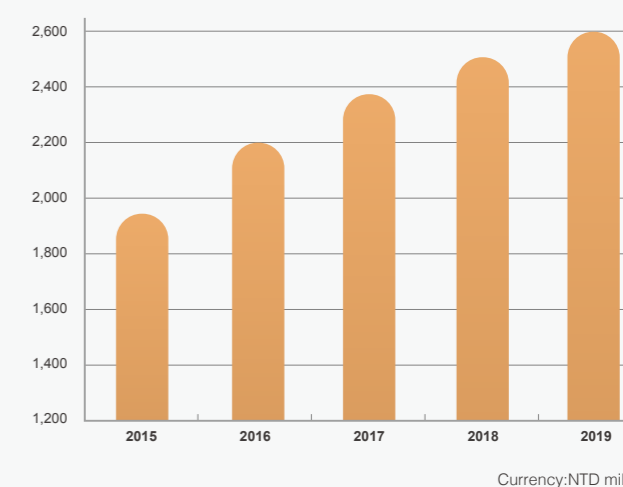
Currency:NTD million

	2015	2016	2017	2018	2019
Operating Income	7,313	8,329	9,235	10,040	10,367
Operating Cost	4,263	4,921	5,503	6,127	6,239
Operating Profit	3,050	3,408	3,732	3,913	4,128
Net Profit Before Tax	572	709	799	839	667
Income Tax Expense	103	96	111	128	109
Net Profit After Tax	469	613	688	711	558
R&D Expense	1,970	2,216	2,388	2,524	2,823
Employee Benefits Expense	2,348	2,534	2,696	2,760	2,880
Total Assets	5,292	5,898	6,149	6,118	11,156
Retained Earnings	921	1,127	1,298	1,426	1,459
Total Equity	3,122	3,378	3,663	3,734	7,392

### Consolidated Operating Income and Profit



### Consolidated R&D Expense





### Association (Guild) Membership

Nuvoton actively participates in industry associations, guilds, and technology alliances to obtain the industry's latest technology and establish good relationships with relevant units, contributing to the overall development of the industry.

#### External Organizations that Nuvoton are Involved with in 2019:

Item	Name of Association (Guild)	Membership
1	The Allied Association for Science Park Industries	●
2	Taiwan Electrical and Electronics Manufacturers' Association	●
3	Friends of The Second Special Police Corps	●

### Glory and Affirmation

In addition to performing exceptionally well in its main area of business, Nuvoton also adheres to the concept of sustainable development in the working environment. The awards and recognition received between 2014 and 2018 are listed in the table below:

#### 2019

- » Passed the inspection of DQS UL (Deutsche Gesellschaft zur Zertifizierung von Managementsystemen) and obtained the occupational health and safety management system certification in accordance with ISO 45001-2018.
- » We launched the latest TPM2.0 security chip products that comply with the latest specifications of the PC client TPM 2.0 formulated by the Trusted Computing Group (TCG), and passed the Common Criteria (CC) EAL 4+ security level certification and the United States The Federal Information Processing Standard Publication FIPS 140-2 level 2 password security certification. Our products were directly utilized by OEM brands of major computer platforms (NB, DT, Server) worldwide.
- » Launched M261/M262/M263 series of microcontrollers with low power consumption and safety.
- » Released NuMicro® M2351 IoT security microcontroller - the first FreeRTOS real-time operating system that supports Arm® Cortex®-M23 core
- » Launched the new Arm® Cortex®-M0 MCU NUC029 series
- » Exhibited the world's first microcontroller based on Arm® Cortex®-M23 core that has also passed Arm® PSA Certified Level 1 and PSA Functional API Certified, serving the global IoT security market

#### 2018

- » Audio controller and audio codec components have successfully expanded to the customers of front-line game consoles
- » Launched the NuMicro® M2351 series of microcontrollers focused on IoT security with built-in TrustZone® technology.
- » Actively reduced electricity consumption in our plant area, and won the "Energy Conservation Elite" award from the Ministry of Economic Affairs.
- » Cooperated with SEGGER to provide dedicated emWin embedded GUI software
- » Launched the NuMicro® M480 series Arm Cortex®-M4 microcontrollers that combines high performance with secure boot mechanism and hardware encryption
- » The BMC server remote management control chip product is supported by the Open Compute Project (OCP) OpenBMC open source firmware support, which can share BMC firmware development results with OCP members to concoct powerful computing performance.
- » TPM security chip products jointly collaborated with the American software company, OnBoard Security Software, to jointly promote the complete security solutions of IoT software and hardware. This ensures that applications are protected from malicious hackers and have the highest level TPM2.0 safety certification for hardware.

#### 2017

- » Actively participated in environmental training activities, becoming the "2017 Environmental Education Partner" of the Hsinchu Science and Industrial Park.
- » Launched the new high-performance TPM2.0 chip (NPCT75x), which supports the latest specifications of TCG 2017, and has passed the Microsoft Win10 RS3 security chip performance test certification.
- » The air pollution prevention and control personnel received the "Excellent Environmental Protection Personnel" award by the Hsinchu Science and Industrial Park.
- » Introduced the new third-generation BMC (baseboard management controller) products. It supports the Intel

- » Purley server platform, using the highest performance Cortex A9 dual-core processor and supporting BMC secure boot to prevent firmware attacks. The series of products has already been utilized by numerous international firms.
- » Launched the 1T 8051 microcontroller - N76E003 with high specifications and low pins

#### 2016

- » Launched security chip NPCT6xx which obtained TPM 2.0 Common Criteria certification.
- » Nuvoton's innovative Internet of Things (IoT) development platform achieved ARM mbed OS certification.
- » Ranked in the top 20% in the 3rd corporate governance evaluation. Recognized as a good water conservation unit by the Water Resources Agency of the Ministry of Economic Affairs.
- » Received the good water conservation vendor award by the Science Park Administration of the Ministry of Science and Technology. The emission reduction for the Environmental Protection Administration's Advanced Program has amounted to 46,198 tons.
- » Recognized as good occupational safety and health personnel by the Hsinchu Science Park Bureau.

#### 2015

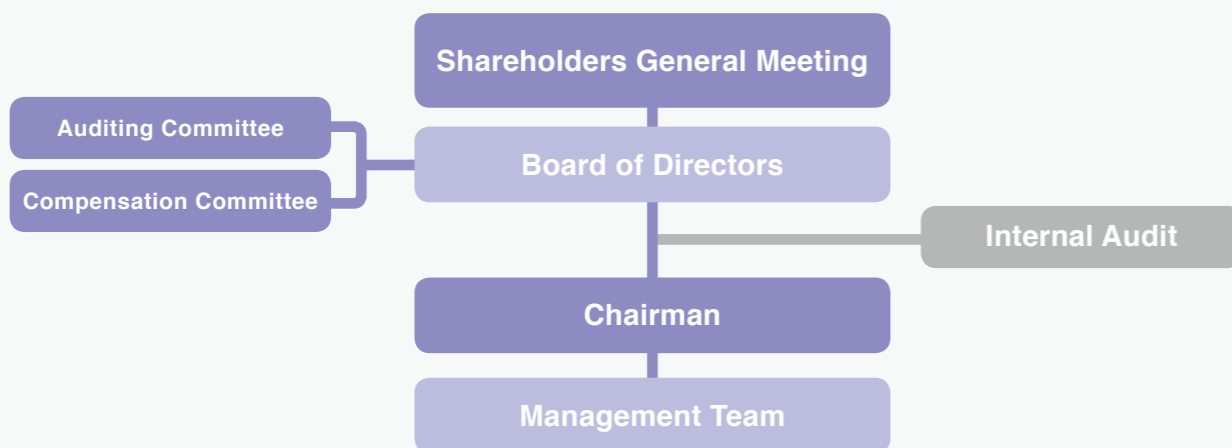
- » Launched first security chip in the world to obtain Common Criteria, FIPS and TCG certification at the same time.
- » Launched world's first SIO and EC that supports both LPC and eSPI. Equipped with high performance 32-bit ARM based Cortex-M4 computing core, it provides the best solution to the platform management of PC, NB, and Chromebook.
- » The 3rd "Taiwan MITTELSTAND Award".
- » Hsinchu Science Park Corporate Environmental Excellence Award
- » Honorary Mention, Nursing Room Competition (Workplace Division)
- » Taiwan Corporate Sustainability Report Bronze Award

# 4

## Corporate Governance

- » Corporate Governance Framework
- » Board of Directors
- » Corporate Social Responsibility Committee
- » Ethical Conduct and Internal Auditing System
- » Regulatory Compliance
- » Risk Management

## Corporate Governance



## Board of Directors

### Board of Directors Organization

Nuvoton's Board of Directors utilizes a candidate nomination system. The directors are elected through a list of nominees at shareholders' meetings. The 6th Board of Directors is comprised of 9 directors, among which 4 are independent directors, and 1 director is a woman.

Nuvoton's Board of Directors is comprised of directors with professional backgrounds and technical experience. We rely on the knowledge, personal insight, and business acumen of each director in assuming responsibility for the operation and supervision of the company. The board members' background information, academic qualifications, and concurrent positions in other companies, Board of Directors, and functional committees are disclosed in the company's annual report. Information on the company's annual report can be found on the Market Observation Post System and Nuvoton's official website ([www.nuvoton.com](http://www.nuvoton.com)). To improve supervision functions and strengthen management functions, in addition to the Board of Directors, we have also set up an Auditing Committee and the Salaries and Remuneration Committee to strengthen the structure of corporate governance.

### Board Member Responsibilities

Nuvoton's Board of Directors is responsible for defining the company's operating principles, long-term and short-term plans for development, annual business plan, and approving budgets and supervising the execution of company policies, as well as other material issues raised during shareholders' meetings or board meetings. The board's primary responsibility is to monitor compliance, financial transparency, the immediate disclosure of important information, internal corruption, and other such areas. To fulfill its oversight responsibilities, the Board has established a variety of organizations and avenues, such as a Compensation Committee and internal auditors.

Nuvoton's management team must report the company's operating conditions and other important issues to the Board of Directors, and provide information and comments for the board's reference. Board meetings must be held at least once every quarter. 11 board meetings were held in 2019. Important resolutions are also immediately announced on the Market Observation Post System. As a response to the increasing international emphasis on corporate governance and corporate social responsibility development in recent years, in addition to scheduling annual training courses for the directors, Nuvoton also

### Nuvoton Board Members

Title	Name	Gender
Chairman	Representative of Winbond Electronics Corp.: Yuan-Mou Su *	Male
Director	Arthur Yu-Cheng Chiao	Male
Director	Yung Chin	Female
Director	Ken-Shew Lu	Male
Director	Chi-Lin Wei	Male
Independent Director	Royce Yu-Chun Hong	Male
Independent Director	Allen Hsu	Male
Independent Director	David Shu-Chyuan Tu	Male
Independent Director	Jei-Li Xu	Male

\*Note 1: Mr. Yuan-Mou Su began to serve as chairman of Nuvoton Technology in February 2020

irregularly provides directors with professional training course information held by external units. More information is available on the Market Observation Post System.

In order to implement corporate governance and enhance the functions of the Board of Directors, Nuvoton stipulated the "Measures for the Compensation and Performance Evaluation of Directors" to strengthen performance assessment. Since December 2017, the directors have been evaluated on board operations, personal participation, and continuing education. The results of the assessment are summarized by the Compensation Committee and the Board of Directors, measuring the strategic direction of the Board of Directors while supervising the company operation management to for the benefit of long-term value for shareholders. The 2019 Board of Directors' self-evaluation results can be found in Nuvoton's 2019 annual report.



### The Auditing Committee

Nuvoton established the Auditing Committee in June 2016. The committee members are mainly responsible for assisting the board in implementing and supervising the company in the quality and integrity of accounting, auditing, the financial reporting process, and financial control. For external investors, the committee represents an independent body that supervises the company to actively protect the rights of investors.

Nuvoton's Auditing Committee is fully comprised of independent directors. There are currently 4 members, of which one is the convener. At least 1 member must have accounting or financial expertise. An Auditing Committee meeting is held at least once every quarter. Meetings are to be convened on an as-needed basis. 9 meetings were held in 2019.

### Nuvoton's Auditing Committee Members

Title	Name
Independent Director Auditing Committee Chairman	Allen Hsu
Independent Director Auditing Committee Chairman	Royce Yu-Chun Hong
Independent Director Auditing Committee Chairman	David Shu-Chyuan Tu
Independent Director Auditing Committee Chairman	Jei-Li Xu

### Compensation Committee

Nuvoton established the Compensation Committee in 2011. Members of the Compensation Committee are appointed by the Board of Directors. Through a professional and objective perspective, this committee assesses, established and regular reviews the policies, system, standards, and structure of compensation for directors, supervisors, and managers of the company according to defined policies and systems, and makes recommendations to the board to serve as a reference for its decisions.

According to the "Compensation Committee Charter", the committee must be comprised of 3 or more members. Currently comprised of 4 independent directors, the Compensation Committee holds a general meeting at least once every six months. 4 meetings were held in 2019. More information about the Compensation Committee meetings can be found in Nuvoton's 2019 annual report. The committee's articles of association are published in the investor's area of the company's website.

### Nuvoton's Compensation Committee Members

職稱	姓名
Independent Director Auditing Committee Member	David Shu-Chyuan Tu
Independent Director Auditing Committee Member	Royce Yu-Chun Hong
Independent Director Auditing Committee Member	Allen Hsu
Independent Director Auditing Committee Member	Jei-Li Xu

## Corporate Social Responsibility Committee

Nuvoton established the Corporate Social Responsibility Management Committee in 2012 to improve the management of corporate social responsibility. The committee is responsible for corporate social responsibility policies, systems, and related management policies, as well as the formulation, implementation, and promotion of plans.

The chairman has designated a high-level supervisor to serve as the chair of the committee to convene functional groups that are responsible for promoting and implementing

corporate social responsibility policies. Each year, the Corporate Social Responsibility Committee will set CSR performance objectives and project implementation measures. A regular meeting is held every six months to examine corporate social responsibility compliance and the implementation results of the various programs. Since 2016, the Corporate Social Responsibility Committee has given an annual CSR performance report to the Board of Directors every year.



## Code of Conduct and Regulatory Compliance

2019 從業道德與法規遵循管理方針	
Importance	Nuvoton complies with various domestic and foreign regulations to prevent its operations from being exposed to risks. We also avoid engaging in illegal and unfair competition to establish a good corporate image and ensure legal operation
Policies / Commitments	To ensure the implementation of integrity management and regulatory compliance, Nuvoton continues to focus on domestic and foreign policies and laws that may affect its businesses and finances, and regularly promote the core values of integrity management
2020 Goals	To have over 95% completion rate of the annual code of conduct and regulatory compliance. No major violations (fines exceeding NTD 1 million) of the law.
Medium and long-term goals	To have over 99% completion rate of the annual code of conduct and regulatory compliance. No major violations (fines exceeding NTD 1 million) of the law.
Promotion Priorities and Practices	Through educational training and communication, Nuvoton continues to strengthen correct professional ethics and legal concepts of employees. An internal control system was established for regulatory compliance based on the implementation and measurements, including the effectiveness of the current control system covering all company operations. Conduct regular regulatory tracking, identification, and implementation to comply with relevant regulations.
Performance Results	The completion rate for the annual corporate social responsibility related regulation compliance staff training was 100%. There were no violations of local laws or major lawsuits in 2019.

## Adherence to Ethical Values

Nuvoton complies with domestic and foreign ethics laws and regulations, and pays close attention to updates or changes made to regulations and decrees. Nuvoton regularly stipulates or amends internal related work practices or measures. "Corporate Social Responsibility Best Practice Principles", "Ethical Corporate Management Best Practice Principles", "Integrity Management Breach Measures", and "Corporate Social Responsibility Code of Conduct" requires Nuvoton's overall operating activities to comply with relevant laws and regulations. We conduct annual corporate integrity educational training courses every year on "corporate social responsibility policies" and "integrity

management". Each employee is provided with a "Corporate Social Responsibility Policy and Statement Promotion Card" to strengthen corporate social responsibility and the ethical values of all employees.

Under Nuvoton's Corporate Social Responsibility Code of Conduct, Ethical Business Conduct Guidelines (hereinafter referred to as "Guidelines") are defined that require all employees of Nuvoton to abide by the highest standards of integrity, and to ensure compliance with all laws and regulations. The guidelines are as follows:

- 》 Comply with all relevant government regulations and international norms.
- 》 Ensure business integrity, and prohibit all acts of bribery, corruption, extortion, and embezzlement.
- 》 Do not offer or accept improper benefits, and avoid conflicts of interest.
- 》 Emphasize corporate governance, disclose company information in accordance with laws and regulations, and avoid being hypocritical.
- 》 Comply with principles of good faith and fair trade. Do not conduct exaggerated/false advertising and marketing.
- 》 Provide a safe and healthy working environment.
- 》 Implement "Customs-Trade Partnership Against Terrorism (C-TPAT)" program guidelines in daily operations.
- 》 Respect internationally-recognized labor principles and rights. Do not hire people under the ages of 15 or involuntary personnel (through coercion, mortgage, debt, indentured servitude, enslavement, or human trafficking).
- 》 Ensure that all employees enjoy equal rights without discrimination.
- 》 Do not harass, unlawfully discriminate, coerce, or inhumanely treat employees (including prospective employees).
- 》 Do not use internationally banned substances in the production processes.
- 》 Comply with all relevant environmental protection regulations and laws.
- 》 Respect intellectual property rights and protect the personal information of those who do business with us.
- 》 Require suppliers to comply with all relevant laws while emphasizing corporate social responsibility.

## Training

To help employees establish correct legal concepts and enhance their understanding of corporate social responsibility, Nuvoton regularly holds business integrity educational training courses on "Corporate Social Responsibility Policies" and "Integrity Management". The courses explain the regulations in a clear and easy way, and employees are required to take tests after the courses to enhance their understanding of related legal compliance.

### The 2019 educational training data on the compliance of relevant laws and regulations of corporate social responsibility are as follows:

#### \* New Staff Training Data:

	Corporate Social Responsibility Code of Conduct	Integrity Management
Number of Trainees	78 人	78 人
Completion Rate	100%	100%

#### \* General staff training data:

	Corporate Social Responsibility Code of Conduct	Integrity Management
Number of Trainees	1,255 人	1,255 人
Completion Rate	100%	100%

**Grievance Mechanism**

We have also set up many grievance channels, such as a physical suggestion box and an inbox for internal disclosure of illegal activities. Nuvoton has also established reporting areas on internal and external websites, so if there are any unjust or unfair illegal acts, internal or external personnel can conduct anonymous or named reports through various grievance channels. When a complaint is received, a specialized group will start an investigation. No complaints were received during 2019.

**Internal Auditing System**

Nuvoton has set up an internal auditing unit under the board of directors. In accordance with the company size, business conditions, management needs, and other relevant laws and regulations, Nuvoton has appointed a total of two full-time internal auditors. Nuvoton established its internal control system according to laws and regulations, which is based on the implementation and measurement of all Nuvoton business operations as well as the effectiveness of the current internal control system of Nuvoton and its subsidiaries.

The internal auditing unit prepares an annual audit plan based on the results of the risk assessment, which are then approved by the Auditing Committee and the board of directors. The internal auditing unit operates according to the auditing plans.

The internal auditing unit reviews Nuvoton's internal control system and various operations through the aforementioned auditing work, assisting the board and the management to reasonably confirm the achievement of related objectives such as operation, reporting and compliance: the effectiveness and efficiency of operations include achieving operational and financial performance objectives and maintaining asset security, as well as the reliability, timeliness, transparency of internal and external financial reporting and non-financial reporting and its compliance with relevant laws and regulations.

The internal auditing unit supervises the various units and subsidiaries in their annual self-inspections of the effectiveness of their internal control systems. Then, the internal auditing unit reviews the self-inspection reports of all units and subsidiaries, as well as the effectiveness of their internal control systems. The consolidated self-inspection results serve as a basis for the board and president in their Internal Control Systems Statement.

**Regulatory Compliance**

Nuvoton has customers from all over the world. To ensure the implementation of integrity management and regulatory compliance, we continue to pay attention to domestic and foreign policies and regulations that may affect Nuvoton's businesses and finances. We also regularly promote the core values of integrity management.

Nuvoton complies with the Company Act, Securities and Exchange Act, Business Entity Accounting Act, Political Donations Act, Anti-Corruption Act, Fair Trade Act, and other related laws. Furthermore, Nuvoton has stipulated corporate governance rules and procedures for employees to follow.

Furthermore, Nuvoton has launched compliance-related programs and courses to provide employees with a better understanding of intellectual property rights. The courses also stress the importance of protecting trade secrets, helping employees become more familiar with the latest laws and regulations. Nuvoton employees can check relevant training course information and promotional materials on the internal website to further ensure our commitment to compliance.

All Nuvoton employees participate in compliance policies. Cooperation between various departments improves execution performance.

**Regulatory Identification and Inspection**

In order to monitor and identify the applicability and compliances of labor, ethics, environmental protection, health, corporate governance related laws and regulations, and other requirements, Nuvoton has a dedicated unit which conducts applicability identification and conformity checks on the relevant laws and regulations of newly added or revised rules on a regular basis every six months. The results of the identification tests will be reported at the Corporate Social Responsibility Committee meetings, and the relevant information will be updated on the Nuvoton's internal corporate social responsibility website for reference. Nuvoton complies with the Responsible Business Alliance's (RBA) Code of Conduct to conduct regulatory inspections on a quarterly basis. The 2019 applicable laws and changed compliance identification results were both compliant.

Applicable Laws and Changed Compliance Identification Tests	
Legal Period	Testing Results
First Half of 2019	Compliant
Second Half of 2019	Compliant

**Risk Management**

<b>Financial Risk</b>	<p>» <b>The influence of interest rate fluctuations:</b> At present, Nuvoton uses its own funds for operating expenses, so interest rate fluctuations will not have a significant impact on operations. Furthermore, Nuvoton maintains good relationships with multiple financial institutions and can receive lower interest rates when needed. Therefore, interest rates will not have a significant impact on company operating costs.</p> <p>» <b>The influence of exchange rate fluctuations:</b> Nuvoton's exchange rate risk is mainly attributable to the business activities. For the exchange rate risk arising from purchases or sales, there's a general offset of foreign currency income and foreign currency expenditure. We also maintain close relations with financial institutions and continuously observe exchange rate changes to reduce the risk of exchange rate fluctuations. We continue to implement the following response measures against exchange rate fluctuation risks:</p> <p>A. We utilize the transactions of derivative financial products, and our selection of trading commodities are mainly based on hedging risks arising from our business operations. In addition, when selecting the trading targets, we first take into account credit risk to avoid loss caused by default. In selecting transaction targets, we select from financial institutions that we have a good relationship with and that can provide professional information.</p> <p>B. Nuvoton keeps abreast of financial market information, evaluates trends, and is familiar with financial products, regulations, and operational skills to provide sufficient and timely information to the management and relevant departments for reference.</p> <p>C. The maximum unrealized loss of all contracts undertaken by Nuvoton for derivative financial commodity transactions is limited to 20% of the total contract amount, or 3% of the owner's equity, whichever is lower. The financial unit conducts periodic monthly evaluations and prepares a report, which is reported to the head of the financial unit and senior executives authorized by the board of directors to predict the risks and possible profits and losses of each transaction.</p> <p>» <b>The influence of inflation:</b> Nuvoton will continue to actively manage costs and operating expenses in the future to mitigate the impact of inflation on operations. Currently, there has not yet been any significant inflation in domestic or foreign markets that have had any significant impact on Nuvoton</p>
<b>Information Security Risk</b>	Nuvoton has stipulated "Nuvoton Security Policies" and "Information Security Management Measures", and has established control measures to protect Nuvoton 's information and information systems from theft, computer crime, industrial espionage or other forms of damage or loss. In view of new cyberattacks and the constant threat of security, Nuvoton regularly holds information security management meetings. In addition, we also analyze and evaluate information security risks to establish management plans and regular tracking for projects that may cause risks. To enhance employee awareness of information security, Nuvoton arranges employees to take online learning courses in information security online, and also conducts social engineering exercises from time to time. These measures serve to continuously improve our ability to protect against information security risks.
<b>Risks to Health and Safety</b>	Nuvoton has set up a company-wide "Environmental Security and Risk Management Committee". The committee holds a meeting every quarter to discuss daily health and safety management issues and to promote occupational safety and health, health management, environmental protection and damage prevention results, regulatory compliance, and constant improvement plans. The meetings serve to implement safety and health communication.
<b>Supplier Risk</b>	Vendors with stable levels of supplies are an important part of maintaining competitiveness. With current degrees of globalization, a natural disaster or accident might affect the stability of the entire supply chain. As a result, we uphold the principle of "many suppliers from many locations" in establishing sources for materials. Long-term agreements with major raw material suppliers not only help increase our own inventory, but also enables zero risk delivery through consignment. If we are unable to establish a second supplier for a particular item, then we request vendors and distributors to prepare safety stock, while using the Just-in-time (JIT) method to reduce supply risk.



# 5

## Customer Service and Supplier Management

- » Customer Service and Satisfaction
- » Customer Satisfaction Survey
- » Protecting Customer Privacy
- » Regulatory Compliance for Products
- » Sustainable Supply Chain Management

## Customer Service and Supplier Management

### 2019 Customer Service and Privacy Management Policies

Importance	Adhering to the philosophy of meeting customer needs, Nuvoton provides excellent and competitive product quality and services to gain the trust of customers. Nuvoton is committed to protecting the confidential information of customers to ensure the rights of the company and its customers.
Policies / Commitments	To guarantee that the quality and reliability of its products will completely satisfy the needs of its customers, Nuvoton is committed to delivering competitive products with "zero defects".
Goals	Provide excellent service and good quality to become the best partner for customers.
Promotion Priorities and Practices	<ul style="list-style-type: none"> <li>•Customer Service: Implement a range of quality control mechanisms and regular customer satisfaction surveys to ensure product quality and reliability.</li> <li>•Customer Confidential Information: Nuvoton signs confidentiality agreements with customers to protect confidential customer information. We also have a confidential data protection program to prevent data from being leaked, properly protecting customer privacy.</li> </ul>
Performance Results	<p>The 2019 customer satisfaction survey shows average satisfaction at above 4 points, and 60% of indicators exceeded that of the previous year (2018).</p> <p>In 2019, there have been no occasions in which products or services have violated relevant health, safety, or voluntary guidelines (products and services still within their life cycle).</p> <p>In 2019, there have been no complaints about proven breaches of customer privacy or loss of customer data.</p> <p>In 2019, there have been no significant fines or violations of the law/regulations regarding the distribution or use of products or services.</p>

### Customer Service and Satisfaction

To guarantee that the quality and reliability of its products will completely satisfy the needs of its customers, Nuvoton is committed to delivering competitive products with "zero defects". Methods used include quality control, reliability assurance, and failure analysis.

#### Quality Control

Nuvoton implements a series of quality control mechanisms that covers every step of the production process. The main steps to its quality control operations include raw material inspection, wafer fabrication process, electrical characteristics test, and die packaging. Nuvoton continuously monitors every step of the manufacturing process. By doing so, Nuvoton is able to gather information about every layer of feedback,

detect problems quickly and efficiently, and conduct an assessment analysis followed by corrective measures. The company emphasizes that every step of the manufacturing process must be "done right the first time" to result in an output with "zero defects", thereby establishing high quality and reliable product lines.

#### Reliability Assurance

At Nuvoton, the purpose of the reliability assurance test is to ensure high-end product performance throughout the expected product life cycle. Each manufacturing stage undergoes constant review, analysis, and evaluation. Amendments are made to improve quality and reliability.

### Failure Analysis

Customers may return defective products to Nuvoton. In the event of this, Nuvoton discusses with the customer the most appropriate method to replace, replenish, or offer a discount to compensate for any loss incurred by the customer. Meanwhile, Nuvoton completes a comprehensive physical and electrical test as well as a failure analysis on any defective integrated circuits (IC) to determine the root causes of product failure, and responds with corrective actions and measures for improvement. Furthermore, Nuvoton closely monitors this process to ensure that measures for improvement are effectively implemented, and also provides customers with a detailed written report of the failure analysis.

### Customer Satisfaction Survey

Nuvoton's quality assurance unit regularly gathers customer feedback to gain valuable suggestions and insight into the level of customer satisfaction in regards to new product marketing/sales, delivery, quality improvement, technical support, and customer service. Targets include the purchasing, quality assurance, and research and development units of customers.

The Quality Assurance Department summarizes customer reviews, complaints, satisfactions, and suggestions for improvement before convening the Business Department,

Sales Department, R&D Department, and Production Management Department to answer each customer feedback and draw up improvement plans. They are required to propose improvement plans within a month to serve as Nuvoton's performance goal and respond to customers so customers can receive direct and immediate feedback. The quality assurance unit delivers the final consolidated results to management to serve as a resource to continue improving satisfaction.

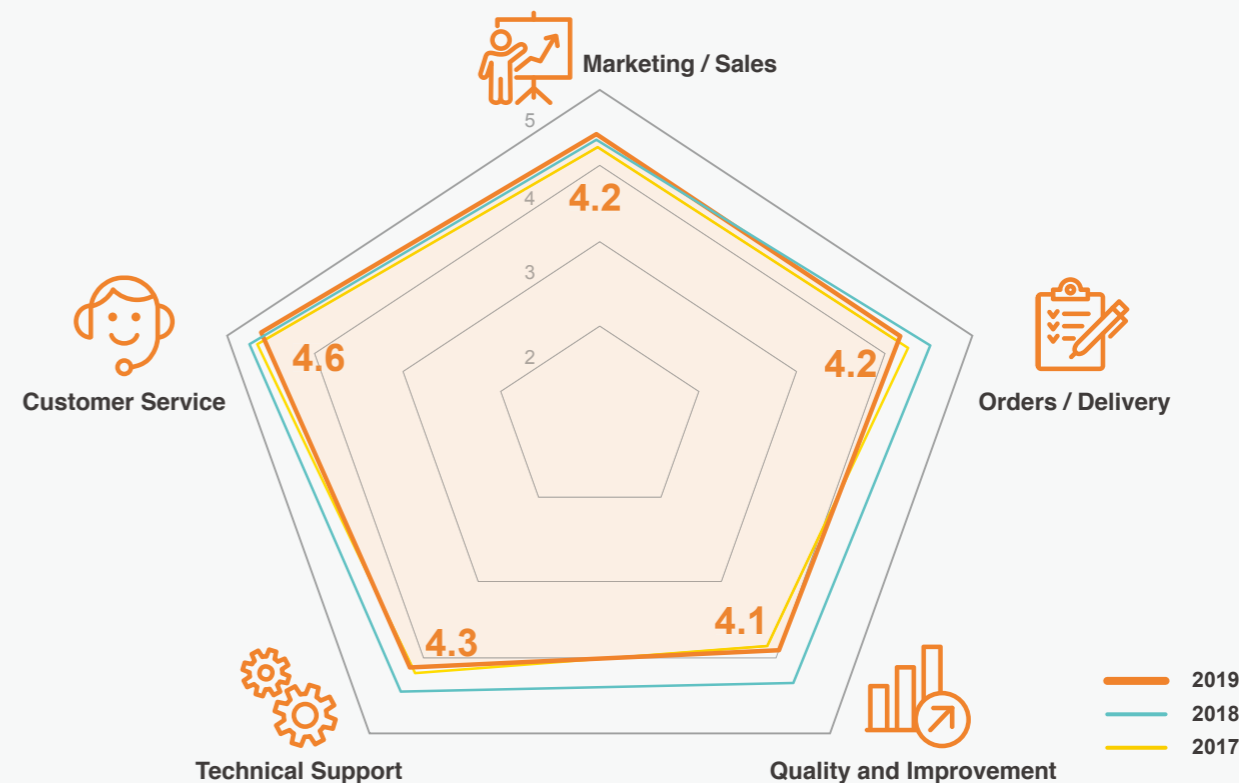
### Customer Satisfaction Survey Results

The assessments of each satisfaction indicators include the following items:

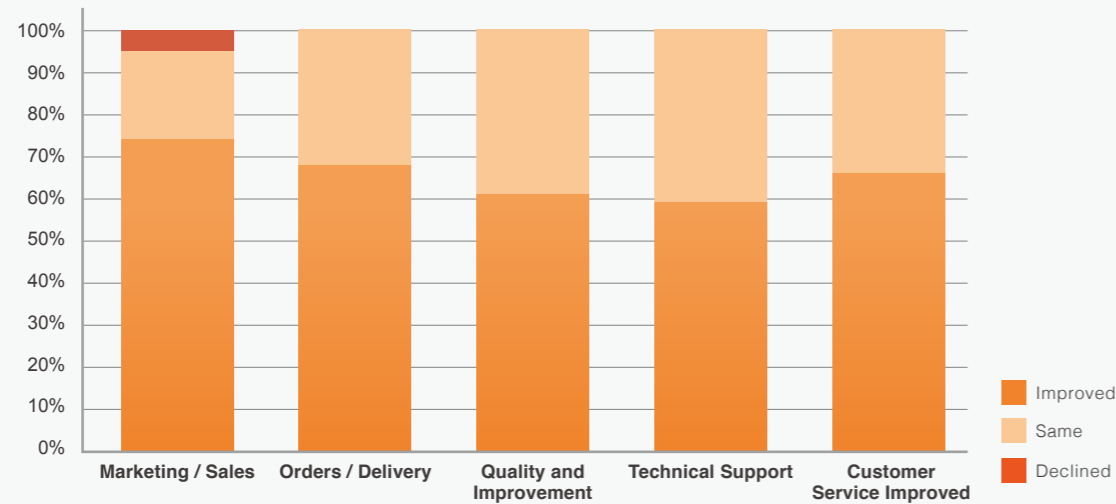
- A. Marketing / Sales:** Development speed of new products, application files, new product features / breadth, new product information / promotion / propagation
- B. Orders / Delivery:** Flexibility of receiving orders, response time for orders, on-time delivery, product packaging
- C. Quality and Improvement:** Defect rate, sample quality, analysis of defects, improvement measures
- D. Technical support:** Prompt technical support, analysis capabilities, development flexibility
- E. Customer Service:** communication channels, service attitude, response speed, professional knowledge, processing returned purchases

Lowest rating: 1. Highest: 5.

Ratings are classified as follows: (1) Very Unsatisfied, (2) Unsatisfied, (3) Average, (4) Satisfied, (5) Very Satisfied.



Compared with Last Year



- All items have satisfied ratings (4 and above). All indicators scored better than that of last year (2018).
- Customers were most satisfied with Customer Service, which continues to gain satisfaction ratings from customers.

### Protecting Customer Privacy

Nuvoton has taken appropriate measures to ensure compliance with the "Personal Data Protection Act", the General Data Protection Regulation (GDPR) from the European Union, and the California Consumer Privacy Act (CCPA) from California, US, and other such privacy protection laws. Nuvoton has not received any complaints regarding about customer privacy or loss of customer information during this year.

### The Degree of Customer Privacy Protection and Product Compliance in 2019:

2019 Indicators	Results
Total number of occasions in which products or services have violated relevant health, safety, and voluntary guidelines (products and services still within their life cycle)a	0
Total number of complaints about customer privacy or loss of customer information	0
Total number of significant fines due to violations of the law and/or regulations regarding the distribution and/or use of products or services	0

### Regulatory Compliance for Products

Nuvoton requests that all products use materials that comply with the European Union Restriction of Hazardous Substances Directive (EU ROHS), REACH, and halogen-free requirements. Nuvoton has also reduced the use of chemical substances in its manufacturing process. There were no violations of laws or regulations between 2019, meeting both international regulations and customer requirements.

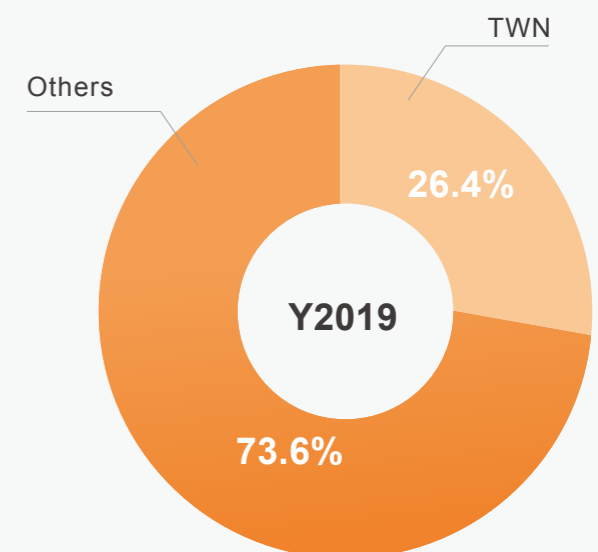
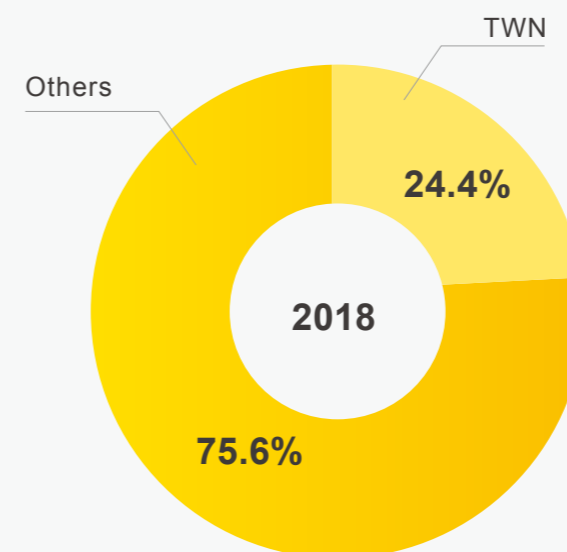
### Sustainable Supply Chain Management

Sustainable Supply Chain Management Policies	
Importance	Establish a stable and secure supply chain to ensure the quality of raw materials and provide customers with quality services.
Policies / Commitments	Nuvoton treats suppliers as partners to build a stable supply chain. In recent years, Nuvoton has been committed to the local production of raw materials for the purpose of reducing transportation costs, diversifying risk, and reducing carbon emissions. Furthermore, Nuvoton hopes to increase employment opportunities by cultivating local production.
Goals	Nuvoton adopts the Responsible Business Alliance's (RBA) Code of Conduct and is committed to the promotion of corporate social responsibility. In addition to quality, delivery and price, Nuvoton also confirms that suppliers' labor, ethics, environment, management system, and health and safety regulations comply with the latest regulations. We seek to fulfill our CSR vision of "providing a sense of safety, reassurance, and empathy".
Promotion Priorities and Practices	The selection, regular evaluation, and coaching of existing suppliers ensure that partner suppliers meet the requirements of Nuvoton.
Performance Results	In 2019, the monetary proportion of raw materials purchased in local areas was 26.4%, up 2.0% from 2018. In 2019, approximately 90.2% of our supply chain vendors have environmental related certification. Vendors that were unable to obtain certification in time were required to establish a verification schedule. Nuvoton's top 80% packaging and testing plants and raw material vendors (a total of 7 plants and vendors) have conducted corporate social responsibility self-evaluations in 2019. The self-evaluation results comply with the requirements of Nuvoton. In 2019, all of Nuvoton's outsourced wafer processing manufacturers packaging plants, packaging plants, and raw material suppliers (WF6 gases) have signed the "Statement of Non-use of Conflict Minerals".

### Localized procurement

Since its inception, Nuvoton has always considered its suppliers as long-term partners towards achieving the common goal of establishing a stable semiconductor supply chain. In recent years, Nuvoton has been committed to the local production of raw materials for the purpose of reducing transportation costs, diversifying risk, and reducing carbon emissions. Furthermore, Nuvoton hopes to increase employment opportunities by cultivating

local production. In 2019, the monetary proportion of raw materials purchased in local areas was 26.4%, up 2.0% from 2018. However, due to industrial limitations, Nuvoton will still maintain close relationships with local suppliers in the future, while striving to reduce overall costs and risks together by achieving win-win situations. Localized procurement is an important strategy for Nuvoton when choosing suppliers.



Customer Service and Satisfaction  
Customer Satisfaction Survey  
Protecting Customer Privacy  
Regulatory Compliance for Products  
Sustainable Supply Chain Management

### Supply Chain Management

Nuvoton stands firm in its commitment to promoting corporate social responsibility. In addition to the factors of quality, delivery, and price, Nuvoton also takes the following approaches to managing its suppliers in order to confirm that the labors, ethics, environment, management systems, health, and safety of suppliers meet the latest regulations, so we can fulfill our corporate social responsibility vision of “providing a sense of safety, reassurance, and empathy”.

- » In addition to complying with industrial safety and environmental protection requirements, Nuvoton also requires suppliers to focus on promoting CSR together.
- » Based on principles for the protection of human rights, Nuvoton pays close attention to the issue of conflict minerals. For the raw materials in its production processes, Nuvoton is committed to avoiding the use of minerals obtained from illegal mining operations that stand in violation of human rights.
- » Nuvoton pays close attention to how labor rights are respected throughout its supply chain, and requires suppliers to comply with the laws of the countries they operate in and relevant international industry practices, including Code of Conduct by the Responsible Business Alliance (RBA) as well as any subsequent changes or amendments.

### Supply Chain Management Method

To establish a supply chain management mechanism with sustainable growth, Nuvoton utilizes the following three methods for control and counseling for its supply chain management:



### Selection of New Suppliers

Nuvoton assesses quality, price, environmental protection, and other such factors in selecting vendors. Vendors must meet our requirements to become a qualified supplier for Nuvoton. In 2019 a total of 4 vendors were selected.

#### \* Environmental Management System Certification

Nuvoton requires its supply chain vendors to obtain international certification, such as the Environmental Management Systems Standard ISO 14001. If a vendor is unable to obtain certification immediately, they are required to establish a schedule to do so. To date, approximately 90.2% of our supply chain vendors have environmental related certification.

#### \* Ethical Requirements

Nuvoton actively adopts the Responsible Business Alliance’s (RBA) Code of Conduct. Nuvoton requires each vendor to sign an “Agreement to Comply with Business Code of Conduct” and a “Confidentiality Agreement”,

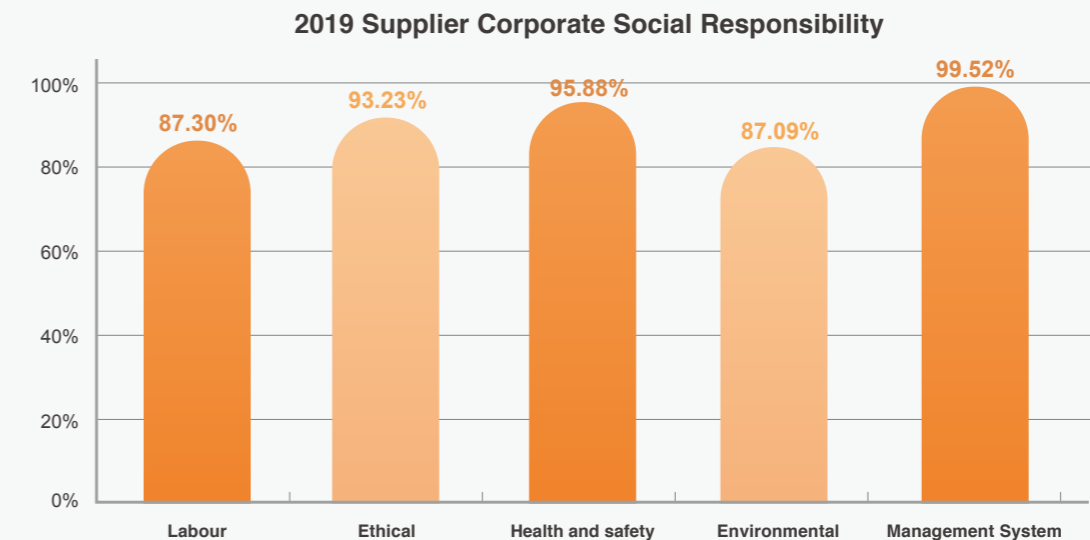
which compel them to trade and transact honestly without undermining the interests or image of Nuvoton.

#### \* Conflict Minerals Management

Nuvoton requires related vendors, including outsourced wafer processing manufacturers, packaging plants, and raw material suppliers (WF6 gasses) to sign a “Statement of Non-use of Conflict Minerals”.

#### Supplier Assessment

Supplier Corporate Social Responsibility Self-evaluations: In 2019, Nuvoton had its packaging and testing plants and top 80% of raw material vendors (a total of 7 plants and vendors) conduct corporate social responsibility self-evaluations. The self-evaluations scores were all higher than 80, which meet Nuvoton requirements. The proportion of each 2019 evaluation indicator to the full score is indicated below. The chart shows that each manufacturer attaches the most importance to the issue of CSR-related management systems, while environmental-related management systems accounts for the lowest proportion.



Conflict Mineral Investigation Reports: Nuvoton requires related vendors, including outsourced wafer processing manufacturers, packaging plants, and raw material suppliers (WF6 gasses), to investigate and disclose conflict minerals in a due diligence report. Survey intervals are conducted in accordance with the Responsible Business Alliance’s (RBA) Code of Conduct. Nuvoton conducts conflict mineral investigations for the above suppliers (including outsourcers), and the suppliers are all in compliance with relevant regulations.

### Supplier Counseling

If the CSR self-assessment scores are below 80, educational training will be conducted for suppliers to strengthen the understanding of basic CSR concepts to facilitate follow-up CSR implementation. There were no underscored supplier CSR self-assessments in 2019.

# 6

## Environment-Friendly

- » Environmental Management
- » Cherishing our Resources
- » Pollution Prevention
- » Greenhouse Gas Management
- » Green Products

## Environment-Friendly

Complying with environmental laws, regulations, and international standards, Nuvoton is committed to becoming a green enterprise with sustainable development. We are also committed to continuous improvement. We strive to reduce the impact of production on the environment, and eliminate any foreseeable environmental pollution risks through source reduction and company-wide participation to protect the natural environment. In our production operations and activities, we will continue striving to achieve a level of development that balances economic, social, and ecological factors.



## Environmental Management

### Environmental Management System

Nuvoton strives towards its goal of "continuous improving to become a green business with sustainable development". Nuvoton draws from the spirit of ISO 14001 and OHSAS 18001 P-D-C-A to continuously improve our Environment, Safety, and Health (ESH) Management System. Through process optimization and company-wide participation, we continue to reduce the use of key raw materials and the emission of pollutants in accordance with environmental regulations. We obtained ISO14001 and OHSAS18001 certifications when Nuvoton was founded in 2008. In 2016, we passed ISO14001: 2015 certification, incorporating the concept of life cycles into our environmental management system. In 2019, we passed ISO45001: 2018 Occupational health and safety management systems certification, which replaces the OHSAS18001 management systems.

In addition to promoting daily environmental management related businesses through organization, Nuvoton has also set up an ESH and Risk Management Committee to regularly address and review law compliance, issues of interest to stakeholders, and

programs for continuous improvement of the environment. The committee has organized specific groups, such as the energy-saving and greenhouse gas reduction group, to research reduction targets and guidelines for important environmental issues, and implement various related reduction programs.

### Environmental Management Strategy

With an environmentally friendly attitude, Nuvoton has stipulated three major environmental protection strategy items: "cherishing resources", "reducing emissions", and "developing green products". Through the promotion of cleaner production and the continuous improvement of the ESH system, Nuvoton strives to reduce the impact that products and production activities have on the environment. Nuvoton actively promotes cleaner production. In 2015, Nuvoton obtained the "Cleaner Production Evaluation System" certification from the Industrial Development Bureau, Ministry of Economic Affairs. In 2018, we passed the extension application review, and we effectively and actively utilize resources to prevent pollution and reduce the impact of production on the environment.

## Cherishing Resources

2019 Energy Management Policies	
Importance	The world is in a state of resource shortage. Thus, Nuvoton strives to improve the efficiency of energy use and recycling to achieve a stable energy supply, and thereby accomplish sustainable business and environmental sustainability goals.
Policies / Commitments	<ol style="list-style-type: none"> <li>1. Continue to improve energy and resource efficiency by complying with energy laws and regulations.</li> <li>2. Give priority to energy-saving or energy-efficient products and services to ensure access to information resources and improve energy efficiency.</li> <li>3. Advocate full participation in energy conservation and carbon reduction, and reducing greenhouse gas emissions.</li> <li>4. Effectively control energy use, and conduct annual reviews to reduce energy use.</li> </ol>
Goals	Effectively control energy use, and conduct annual reviews to reduce energy use.
Promotion Priorities and Practices	<p>For the energy resources used - electricity, diesel, natural gas and chemical raw materials, Nuvoton utilizes the following promotional methods:</p> <ol style="list-style-type: none"> <li>1. Establish energy management measures, such as: air-conditioning zone management (factory, office area), setting up maintenance plans, improving the service life of equipment and reducing power consumption, prioritizing energy conservation when using or purchasing equipment, etc., in order to enhance the concept of energy conservation and sustainable development.</li> <li>2. Effectively control the energy use of energy-consuming equipment in factories, and regularly review and formulate improvements through the Environmental Safety Committee or the cost down meetings.</li> <li>3. Cooperate with the government's philosophy to effectively execute and implement energy conservation and carbon reduction.</li> </ol>
Performance Results	<p>Implemented a total of 3 power-saving measures, reducing electricity consumption by 450,000 kWh/year</p> <p>Nitrogen consumption per unit of product continued to decrease, which was reduced by 65.6% compared to base year 2009.</p> <p>The use of sulfuric acid per unit of product continued to decrease, which was also reduced by 33.6% compared to base year 2009.</p>

Nowadays, with the increasing advancement of technology, aggravating energy consumption is accompanied by the threat of global warming and climate change. It is necessary to cherish existing resources and prevent the crisis of energy exhaustion in order to maintain a sustainable environment. Optimized adjustment, source reduction and reducing water, electricity, energy, and key chemical raw materials have always been one of Nuvoton's most important environmental strategies. Reduced usage can decrease the impact on the environment and also cut cost, achieving a win-win situation of environmental protection and economic benefit.

**Energy Conservation**

Nuvoton mainly draws its energy from purchased electricity, followed by natural gas and a small amount of diesel fuel and gasoline. Taiwan's energy supply sources are mainly from oil, coal, natural gas, nuclear power, and hydropower. Other energy sources such as solar energy, wind energy, geothermal energy, and biomass energy are still the minority. Thus, the majority of Taiwan's energy supply structure and power generation structure are high carbon types, which cannot be replenished after they are mined. Furthermore, pollution generated by the burning of fossil fuels will not

only affect the environment, but also destroy the complex regulatory mechanisms of nature, causing climate anomalies. Thus, energy conservation should be a goal for every corporation.

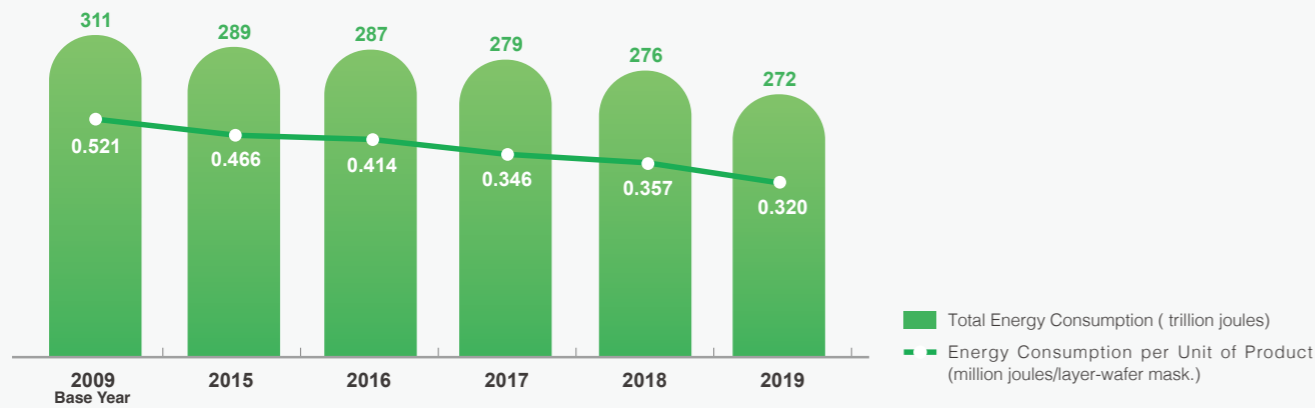
**Energy Consumption**

Nuvoton's energy consumption in 2019 was mainly electricity, which accounted for approximately 96.4% of total energy consumption; gas (natural gas and liquefied petroleum gas) accounted for approximately 3.6% and fuel (diesel and car gasoline) accounted for less than 0.1%.

**Energy Intensity**

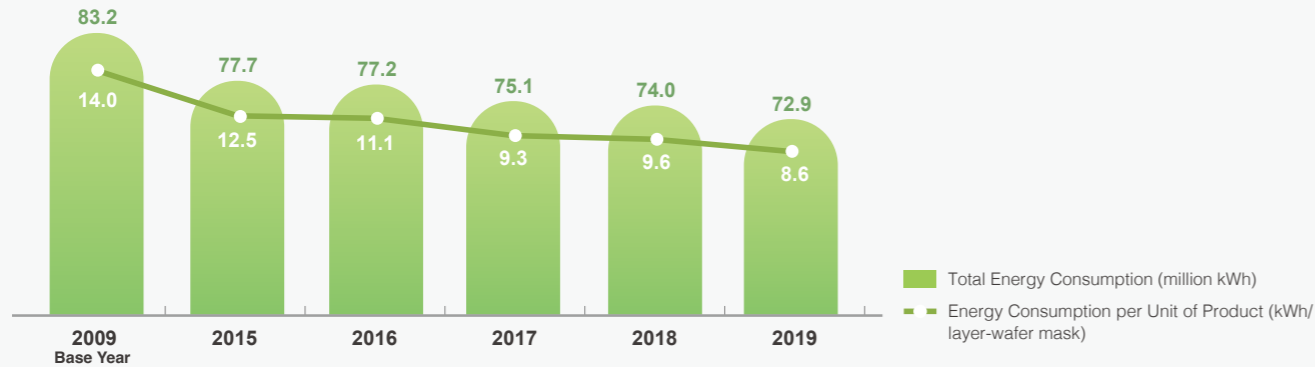
» **Energy Consumption Statistics**

Nuvoton's total energy consumption in 2019 amounted to 272 trillion joules, and energy consumption per unit of product amounted to 0.320 million joules/layer-wafer mask.



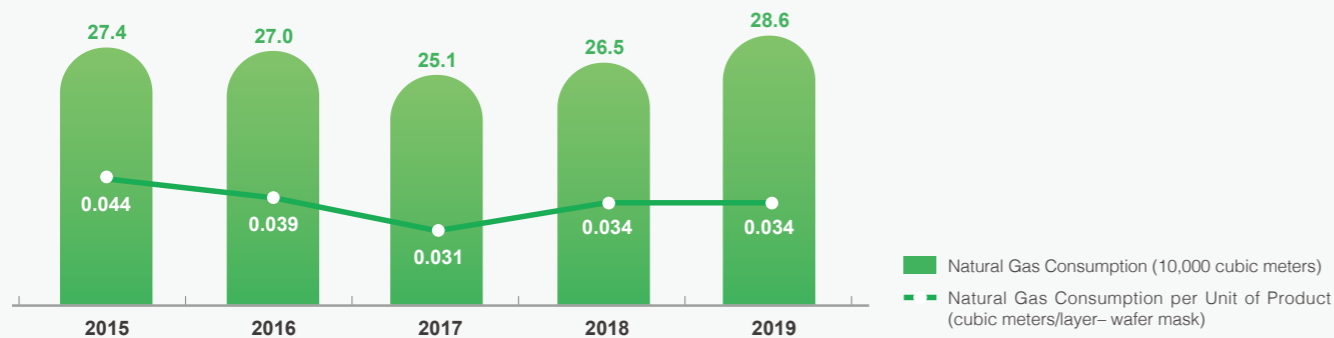
» **Electricity Consumption Statistics:**

Nuvoton's total electricity consumption in 2018 amounted to 72.9 million kWh, and energy consumption per unit of product amounted to 8.6 kWh/layer-wafer mask, down 10.7% compared to 2018. This is mainly due to the decline in total electricity consumption as production capacity increased.



» **Natural Gas Consumption Statistics:**

Nuvoton has been using natural gas since 2011. Natural gas consumption in 2019 amounted to 28.6 thousand cubic meters; natural gas consumption per unit of product amounted to 0.034 cubic meters/layer-wafer mask.



**Energy Conservation Measures**

Nuvoton's main energy conservation policy is to reduce the demand for energy, reduce energy consumption, and improve operating efficiency. For our main methods of saving electricity, we have implemented temperature and humidity optimization control range to reduce electricity consumption in our semiconductor foundry, testing facilities, finished products, and raw material warehouses, all of which use a larger proportion of electricity consumption. In our offices and laboratories, we have promoted energy-saving habits such as turning off the lights, air conditioning, and machines when getting off work. For natural gas usage, we implemented optimized combustion of organic waste exhaust, and also recycle waste to reduce the overall use of natural gas. To improve power efficiency, we added refrigerant polarizers to the water-cooled chillers, set up an exhaust windmill frequency converter, added cooling ducts to the cooling tower, and adjusted the electric boiler to an optimized pressure to avoid excessive heating and enhance power efficiency. In our office areas, we adjusted the ice water pressure and the minimum temperature of air conditioning to avoid setting the temperature too low. We have also adjusted lighting configurations and have been gradually replacing lights with LED lighting. We are also planning to replace the high-consumption air-cooled and water-cooled chillers. In 2019, we completed replacing the second set of water-cooled chillers, and we installed variable-frequency drive (VFD) and variable flow control in the ice water system to improve energy efficiency. For process equipment, we installed variable-frequency drive (VFD) controllers on the pumps with lower operating frequency to reduce power consumption during standby.

Nuvoton implemented a total of 3 energy conservation measures in 2019. By using the before and after difference and multiplying it to the estimated running hours, an estimated 450,000 kWh were saved in electricity consumption.

2019 Energy Conservation Measures	
1	Added variable-frequency drive (VFD) control to the ice water system
2	Continue to replace lights with LED lights
3	Production operation server integration

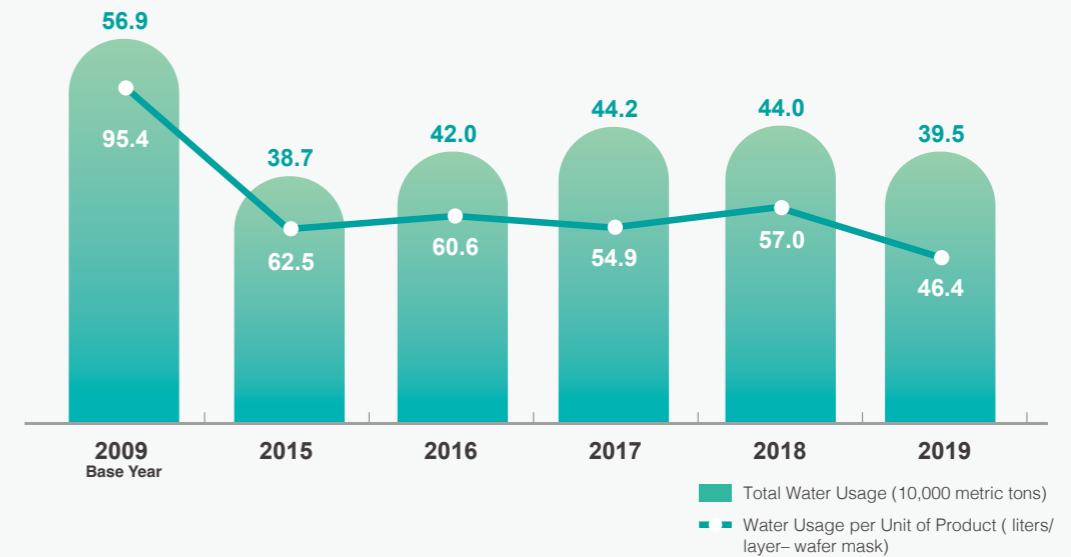
**Water Conservation**

Precipitation patterns have changed drastically in recent years due to climate change. Thus, the issue of water scarcity has begun to receive international attention. The manufacturing processes in the semiconductor industry require a lot of water. Nuvoton uses the tap water provided by a water company. Furthermore, Nuvoton also recycles a small amount of rain and air conditioning condensate to use as a secondary water source. Our two main water conservation strategies are to prioritize source reduction and increase back-end recycling utilization to reduce the consumption of water resources.

We have optimized the process water flow rate, adjusted the frequency of water changes, extended the backwash frequency of the water purification system, installed water conservation facilities for domestic water supply, and adjusted the gardening irrigation frequency to reduce water consumption. We gather and utilize various facilities to process wastewater in accordance with water quality classifications. We recycle water with high degrees of purity, optimally processing and recycling the water for process use. In addition, we have also set up an air conditioning condensate and rainwater collection and recycling system for secondary water usage.

**Tap Water Usage**

Nuvoton's total tap water usage in 2019 was approximately 395,000 metric tons. Water usage per unit of product was approximately 46.4 liters/layer-wafer mask.





**Water Recovery Rate and Total Amount**

Nuvoton's plant is an old plant built before 1994. Our total plant's water recovery rate is much higher than the "Hsinchu Science and Industrial Park's Construction Time Corresponding Recovery Rate Standard". Although we have encountered difficulties such as modifying the pipelines in our old plant and having no space to set up a recycling facility, we still continue to make efforts towards improvement.

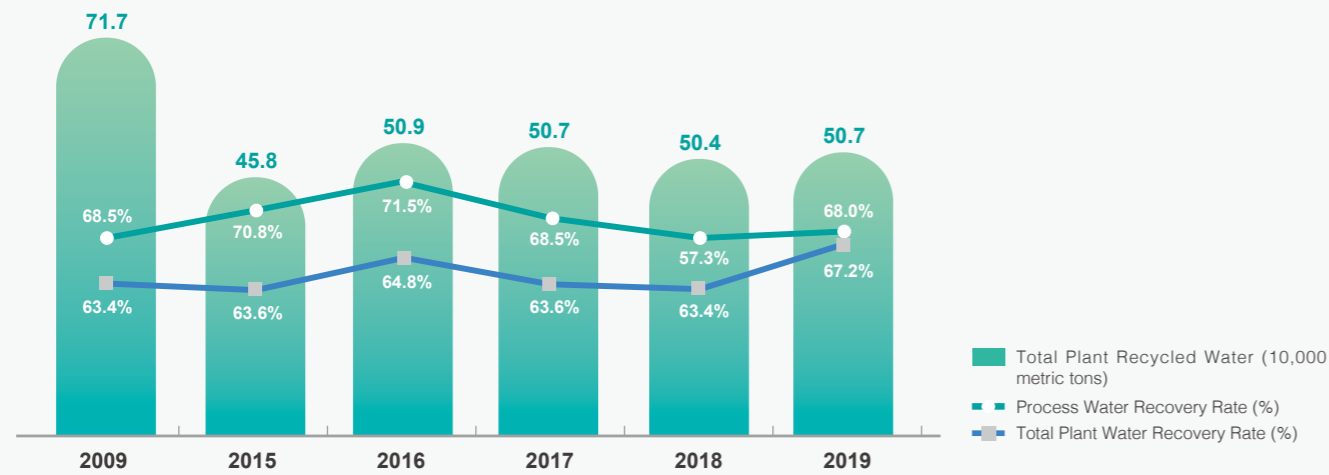
» **Nuvoton's 2019 Water Recovery Rate**

	2019	Recovery Rate Standard
Process Water Recovery Rate	68.0%	> 50%
Total Plant Water Recovery Rate	67.2%	> 30%

Note: The water recovery rate standard is in accordance with the "plants built before 1994" standard as stipulated in the "Hsinchu Science and Industrial Park's Construction Time Corresponding Recovery Rate Standard".

» **Water Recovery Rate and Total Amount**

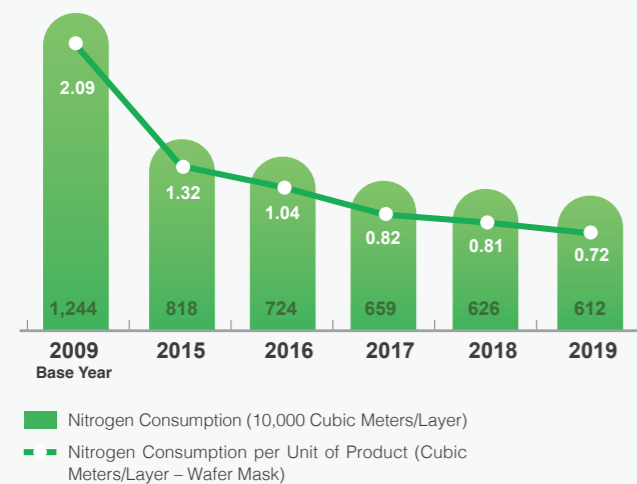
Nuvoton's recycled process water in 2019 was 426,000 metric tons, and the process water rate was 68.0%; the total plant recycled water was 507,000 metric tons, and the total plant water recovery rate was 67.2%.



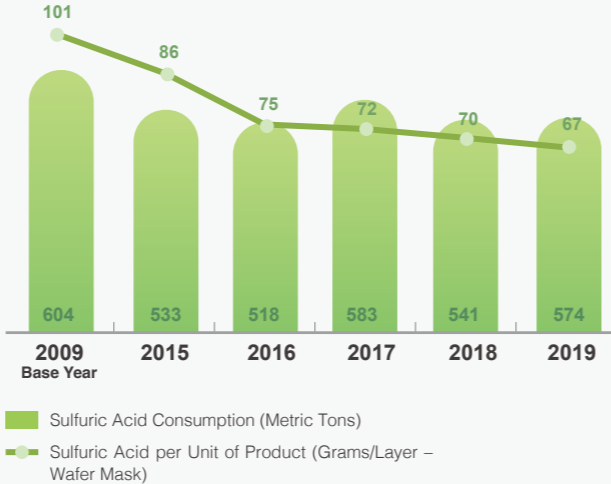
**Other Key Chemical Raw Materials**

According to Nuvoton's 2009 carbon footprint inventory results, we discovered that supplier usage of nitrogen and sulfuric acid has significant impact on the carbon emissions during the overall product life cycles. This part belongs to scope three - indirect emissions. We list these two chemical raw materials as the main targets for long-term monitoring and mitigation, and set 2009 as the base year to actively promote reduction. The successful results of our efforts can be seen when compared to the base year. The nitrogen consumption per unit of product in 2019 amounted to 0.72 cubic meters/layer - wafer mask; the amount has decreased by 65.6% compared to the base year 2009. The sulfuric acid consumption per unit of product in 2019 amounted to 67 gram/layer - wafer mask; the amount has decreased by 33.6% compared to the base year 2009.

» **Nitrogen Consumption**



» **Sulfuric Acid Consumption**



**Pollution Prevention**

2019 Waste Water and Waste Management Policies	
Importance	Environmental pollution issues are no longer confined to specific locales due to the spreading of pollutants through the atmosphere, water, and the importing/exporting of goods. Therefore, major global environmental issues including acid rain, ozone depletion, global warming, air pollution, water/marine pollution, and transboundary movement of hazardous wastes now either directly or indirectly impact all countries. There are currently over 100 different international environment related conventions, some of which utilize measures such as trade sanctions, demonstrating the dire need for environmental protection. Pollution prevention has become one of the most important requirements during production processes.
Policies/Commitments	Compliance with relevant government and international regulations and committing to the continuous reduction of pollutant emissions.
Goals	Reduce emissions of major pollutants and reduce the environmental impact of emissions.
Promotion Priorities and Practices	Starting from optimization of production processes and the reduction of material required to reduce the production of pollutants; Fumes and waste water are discharged only after processing by pollution prevention and control facilities in adherence to regulation standards; Waste material is preferentially treated and reused to reduce environmental impact; Stringent management of air pollutants released, recovery and reuse of wastewater, recycling of waste material and reduction of waste allow for the continuous development of environment friendly processes.
Performance Results	Starting from 2018, a part of hydrofluoric acid waste liquid in our plant is processed by our factory wastewater treatment plant before it becomes reused by other vendors. This promotes the normal circulation of materials in the economic circle and ecology, and increases the waste recycling rate. Compared to 2018, waste recycling has increased by 47 metric tons and waste recycling rate has increased 7%. In 2018, we began to promote the source reduction of photoresist strippers in incineration to decrease waste incineration. Compared to 2017, waste incineration decreased by 44 metric tons and incineration rate decreased by 6%.

**Environmental Law Compliance and Grievance Channels**

Nuvoton has no records of penalties or other dispositions for violating environmental laws and regulations nor had any instances of oil/fuel/waste/chemical material leakage in 2019. We stringently practice and comply with environmental laws and regulations. Every six months, we conduct a regular review of the relevant laws and regulations to confirm that the company complies with the existing laws. In response to the frequent changes in the Taiwan's environmental laws and regulations, we regularly collect new or revised environmental regulations each month for assessment. This is to avoid accidental noncompliance due to changes in laws.

Nuvoton has established a "Contact Us" email on its official website. Stakeholders interested in our environmental issues can email us with the subject of "corporate social responsibility" to raise any issues, or call us to provide comments or file complaints on environmental related issues. There have been no grievance cases in 2019.

**Air Pollution Control**

Air pollutants generated during Nuvoton's production processes include volatile organic compounds (VOCS),

nitrogen oxides, sulfur oxides, ammonia, chlorine, hydrochloric acid, nitric acid, and phosphoric acids. Our air pollution treatment strategy is comprised of source control, utilizing optimized process dosage to reduce the generation of air pollutants. Parts of generated exhaust streams are processed using a local scrubber system for first stage high concentration effective treatment, then according to the exhaust gas classifications, sealed and collected for processing in a central scrubber system for second stage terminal treatment. In addition to stringent monitoring within the factory, certified 3rd party laboratories are also commissioned for further testing annually, all test results are reported to competent authorities. Items tested include non-methane hydrocarbons (NMHC), acid and alkali gases including sulfuric acid (H2SO4), hydrochloric acid (HCl), nitric acid (HNO3), hydrofluoric acid (HF), phosphoric acid (H3PO4, chlorine (Cl2), ammonia (NH3), and etc. The pollutant concentration levels found during past annual tests for exhaust produced by Nuvoton have all been vastly lower than those prescribed by emission standards.

Nuvoton's air pollutant treatment system operates 24 hours a day, 365 days a year. System monitoring and processing

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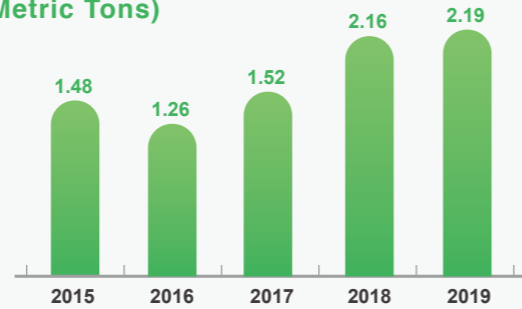


are conducted continuously to maintain normal operation. Exhaust gases are processed separately in accordance to their characteristics:

(1) The flammable, poisonous and FCs gasses are specially treated on the processing equipment end through scrubbing systems, absorption, electrothermal methods, or on-site washing facilities to reduce hazards. Exhaust gasses are then discharged to the central waste washing tower for processing further processing according to their PH levels.

(2) Exhaust gas containing volatile organic compounds are first absorbed using disk-type rotor s before being discharged to incinerators. High-boiling point organic waste gas are condensed, collected, and processed through temperature difference. Tested every year, the emission per year are all less than 0.6 kg/hr. The total emissions of volatile organic compounds continuously monitored in 2019

» Total Emissions of Volatile Organic Gasses (Metric Tons)



amounted to 2.19 metric tons. In addition, NOx and SOx emissions are estimated in accordance with the Environmental Protection Administration's emissions coefficient. Nuvoton's NOx and SOx emissions in 2019 amounted to 2.772 and 2.125 metric tons, respectively.



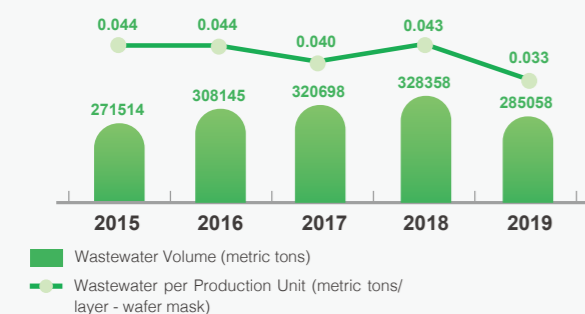
The Discharged Water Quality Standards in Hsinchu Science and Industrial Park Sewerage implemented the third phase of ammonia nitrogen emission standards in 2017. The third phase of changes reduced the regulatory limit for ammonia nitrogen emission from 75mg/L to 50mg/L. Therefore, ammonia nitrogen monitoring equipment was added for the monitoring of ammonia nitrogen levels in discharge water. Utilizing newly added equipment, we developed an optimized process for reduction management measures to meet the improved standards described above. In 2019, molybdenum and tin were added to the water quality test items, and their test results also met the standards for nanotubes.



Water Pollution Control

The wastewater produced by Nuvoton is primarily comprised of process and domestic wastewater. The source of wastewater from process operations can be roughly divided into processes such as cleansing, film formation, etching, development, and diffusion. The wastewater is divided into acid-base wastewater, fluorine-containing wastewater and grinding wastewater. According to the their characteristics, either acid-base neutralization is conducted or calcium chloride is added to fluorine-containing wastewater. Afterwards, coagulation sedimentation and other related treatment technologies are collocated to comply with park management standards before being discharged to Hsinchu Science and Industrial Park's sewage treatment plant for processing. Then, through specialized pipes, the wastewater is discharged into Keya Creek. Domestic wastewater is discharged directly through the sewers to the park's sewage treatment plant.

The total wastewater of the entire foundry in 2019 was 285,058 tons. Discharged water quality meets the requirements of the "Discharged Water Quality Standards



in Hsinchu Science and Industrial Park Sewerage". Wastewater generated per production unit was 0.033 (metric tons)/layer - wafer mask.

Two water quality tests are performed every year according to the "Water Pollution Control Measures and Test Reporting Management Regulations". The tests are conducted in the first half of the year and second half of the year, respectively. The results of the tests in 2019 were in line with water quality standards for Hsinchu Science Park.

Test Item	Management Standard	First Half of the Year - Test Result	Second Half of the Year - Test Result
Temperature (°C)	35	25.1	27.7
pH	5~9	6.8	6.7
Suspended particles(mg/L)	300	11.1	9.6
COD (mg/L)	500	44.0	53.7
Flourine Salt (mg/L)	15	7.6	7.4
Ammonia Nitrogen (mg/L)	50	16.2	13.7
Nitrate Nitrogen (mg/L)	50	2.5	4.2
Anion Interface Active Agent (mg/L)	10	ND	ND
Copper (mg/L)	1	0.006	ND
Zinc (mg/L)	5	0.011	0.014
Boron (mg/L)	1	0.148	0.221
Molybdenum (mg/L)	1.2	NA	0.001
Tin (mg/L)	NA	NA	0.223

Note 1: Note: Levels of "cadmium, chromium, lead, nickel, mercury, hexavalent chromium, cyanide and arsenic" were lower than the minimum detection limits of detection methods used, application for exemption from testing for these items was approved by the Hsinchu Bureau of Environmental Protection in 2008.  
 Note 2: ND is less than the laboratory's detection limit of 0.005 (mg / L).  
 Note 3: Molybdenum and tin were officially added to the test items on in 2019 March.

Waste Management

Nuvoton's waste management strategy is to implement source classification and reduction, and reduce the amount of waste generated per unit of product as well as strengthen the recycling of waste. Our disposal prioritizes reuse and treatment, reducing incineration and burial methods that cause relatively high environmental impacts, so as to achieve the maximum benefit of waste recycling and sustainable use.

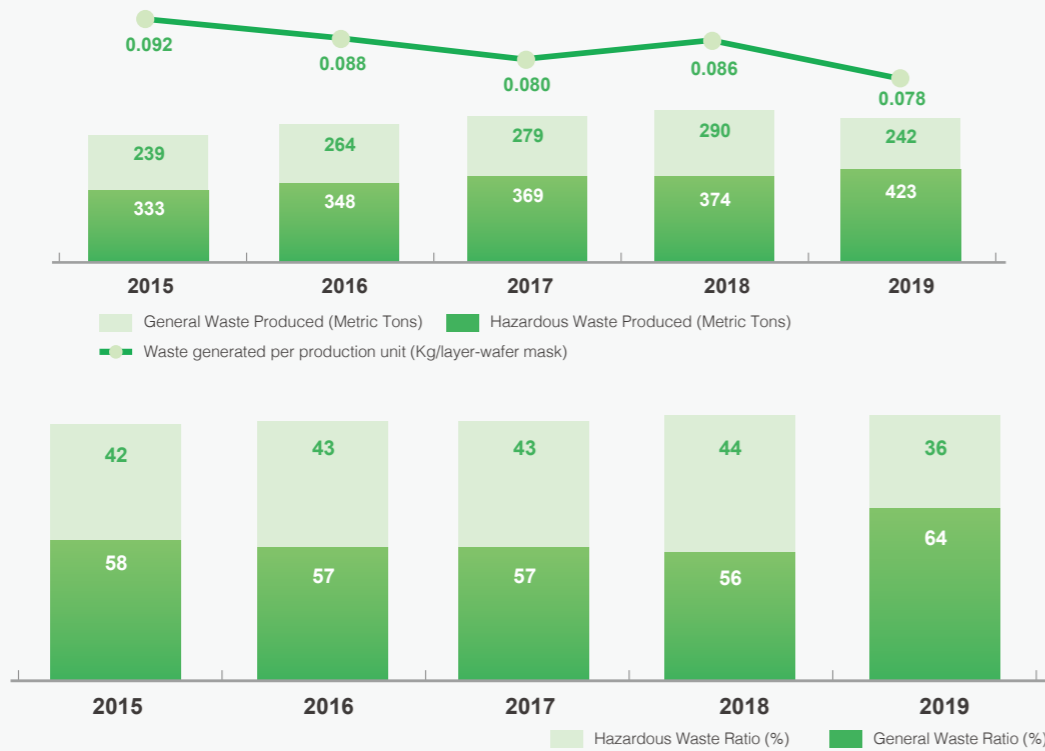
In-plant audits are carried out in accordance with our autonomous management mechanism to ensure waste management within the plant. This allows for complete and comprehensive management of production sources and on-site processes. These measures have further helped to improve production processes resulting in cleaner production and waste reduction as well as ensuring regulatory compliance. We carefully select legal waste cleaning and recycling companies licensed by the government to properly dispose of waste. In addition, we supervise the vendor waste removal and perform annual environmental impact assessments to evaluate environmental impact risk levels. The probability levels are evaluated in accordance with their scores. Then, a different audit frequency is scheduled every 1 to 3 years based on the severity and probability risk matrix. We

then formulate an annual waste audit plan to audit the removal services providers' on-site operations, treatment plants' processing and storage, documentation checks, and other such items. Then, we immediately track GPS data to ensure proper waste disposal and to fulfill the responsibility of waste production. In 2019, a total of 18 audits were conducted on removal services providers and waste management treatment plants to confirm legal compliance. There were no vendors that have been suspended of cooperation due to violations of laws or related regulations.

Severity Level	Risk Level			
	1	2	3	4
1	3 years	2years	1years	1years
2	2years	1years	1years	1years
3	1years	1years	1years	Half-year
4	1years	1years	Half-year	Quarterly

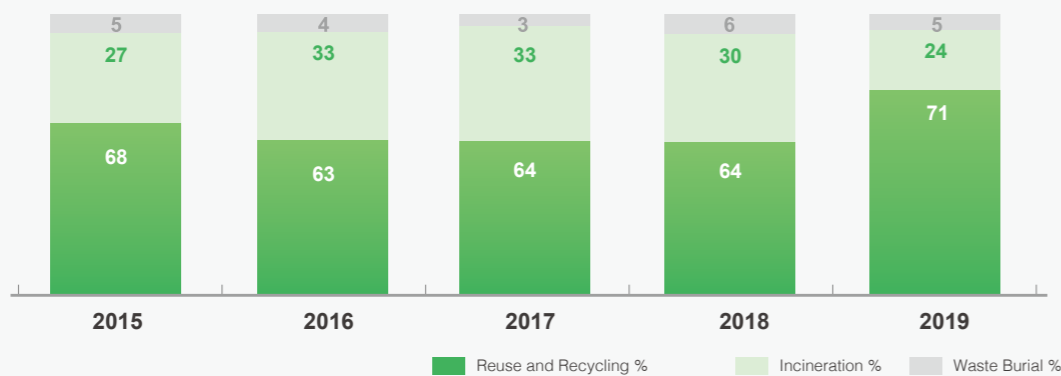
**\* Production of Waste**

The waste generated by Nuvoton can be divided into general business waste (includes recycled waste and domestic waste generated by offices) and hazardous business waste. In 2019, total corporate waste amounted to approximately 665 metric tons, of which general waste accounted for approximately 242 metric tons (36%) and hazardous waste accounted for approximately 423 metric tons (64%); waste generated per unit of product amounted to 0.078 kilograms/layer – wafer mask. The amount of waste generated per unit of product in 2019 increased by 8% from 2018. Since 2018, hydrofluoric acid waste liquid, which was previously treated by the wastewater treatment plant, is now reused by a recycling manufacturer, promoting the normal circulation of materials in ecology and the economic circle. Compared with 2018, the amount of waste generated per unit product in 2019 was reduced by 9.3%, mainly because the plant promotion of photoresist waste liquid source reduction that started in 2018.



**\* Waste Disposal Methods Statistics**

Nuvoton's waste treatment prioritizes reuse. The following table shows the types and applications of reuse. Waste that currently cannot be reused are incinerated and buried. In 2019, 71% of waste produced by Nuvoton was reused (recycled waste included), 24% of waste was incinerated, and 5% was buried. Since 2014, due to market elimination in the photoresist stripper market, no suitable vendors were available for the recycling and reuse of affected materials, so we switched from physical treatment to incineration treatment. We started promoting the source reduction of photoresist strippers in 2018, and started improving equipment and optimizing operating conditions to reduce the output of photoresist to waste liquid. In 2019, general waste incineration amounted to 138 tons, reduced by 44 tons compared to 2018, while incineration rate decreased by 6%. In addition, our plant's hydrofluoric acid waste liquid is now reused by a recycling manufacturer. In 2019, 401 tons of hazardous waste were reused, an increase of 47 tons compared to 2018, while recycling rate has increased by 7%.



**\* Nuvoton's Waste Reuse / Recycling Treatment Description**

Waste Type	Waste Reuse / Recycling Treatment Description
Waste Sulfuric Acid	Vendor recycles and dilutes into industrial-grade sulfuric acid
Waste Hydrofluoric Acid	Vendors recycle processed industrial sodium fluorocarbonate raw materials
Waste Isopropanol	Vendors recycle and distil into industrial-grade isopropanol
Waste NMP	NMP Vendors recycle and distil into industrial-grade NMP
Lubricating Oil	Recycled by vendor and distilled to produce secondary lubricants
Emptied Chemical Waste Barrels	Emptied chemical waste barrels are either washed and reused, or crushed and made into plastic or glass materials
Waste Photomasks	After the vendor removes all patterns, waste photomasks are either made into new ones or optical materials
Waste Lead-Acid Batteries	Vendor retrieves for processing, lead blocks, plastic, etc. are recycled after processing
Waste Mixed Metal Scraps	Vendor processes the scraps, and recycles the metal
Fluorescent Lights	Vendor processes the lights, then recycles any metals, non-metals, glass, etc
Waste Mercury	Vendor uses mercury vaporization equipment to process the mercury and vaporize it for reuse
Recycling Waste	Waste paper, glass, aluminum scraps, styrofoam scraps, aluminum foil bags, plastic bottles, plastic waste, etc. are reused by recycling vendors

**» Waste Disposal Method Amount/Rate of the Entire Company:**

Units: Total Amount (Tons); Ratio: (%)

Waste Category	Disposal method	2015		2016		2017		2018		2019	
		Total Amount	Ratio	Total Amount	Ratio	Total Amount	Ratio	Total Amount	Ratio	Total Amount	Ratio
General Waste	Incineration	148	26	182	30	201	31	182	27	138	21
	Waste Burial	29	5	27	4	17	3	35	5	31	5
	Reuses (Includes Recycle)	62	11	54	9	61	9	74	11	73	11
Hazardous Waste	Incineration	6	1	17	3	15	2	17	3	20	3
	Solidified then Processed	0	0	0	0	1	0	1	0	2	0
	Reused	327	57	332	54	353	55	354	53	401	60

**Greenhouse Gas Management**

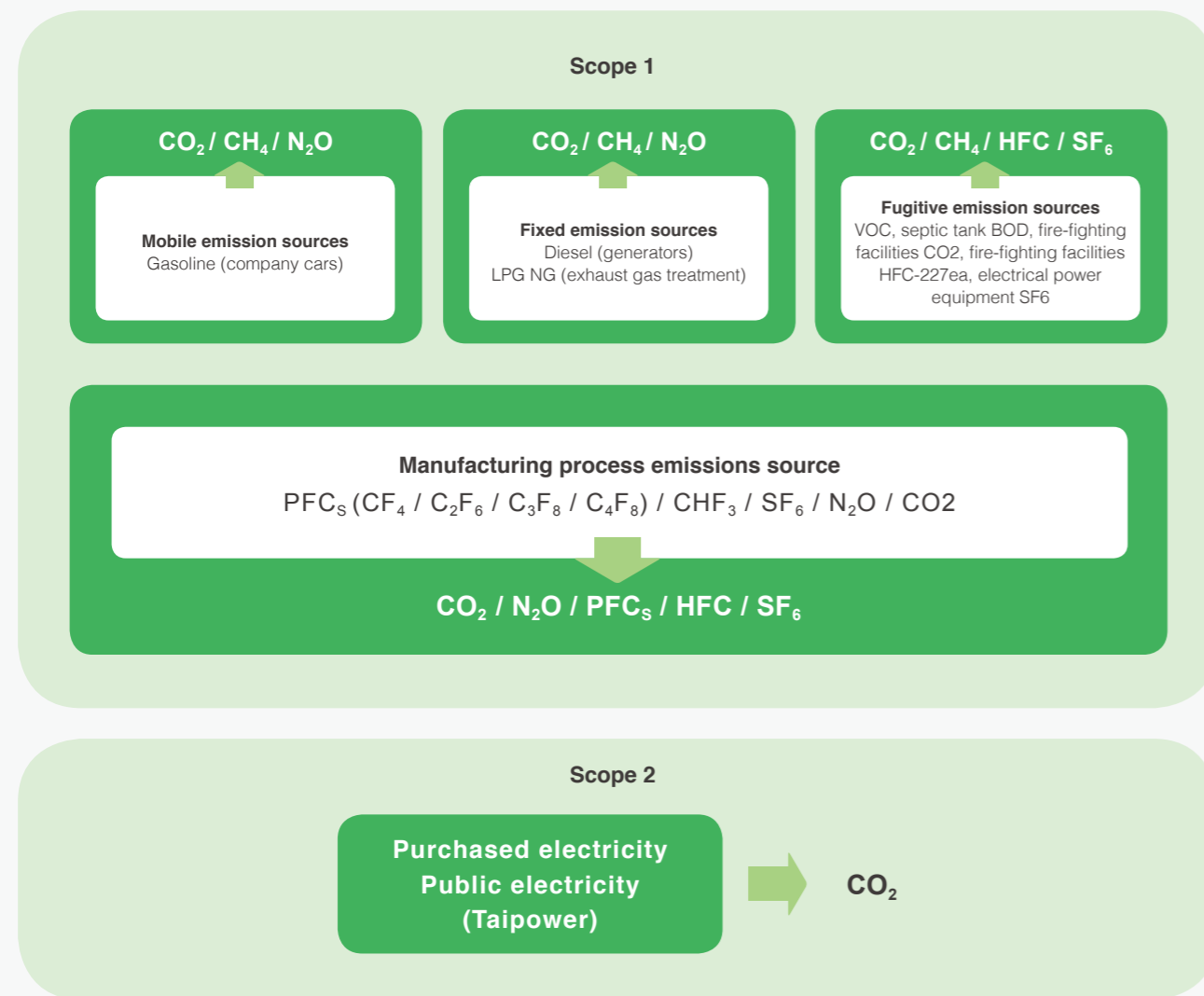
2019 Greenhouse Gas Management Policy	
Importance	In response to global climate change concerns and international carbon cutting trends, a "Greenhouse Gas Reduction and Management Act" was announced domestically in 2015 to meet client concerns and increase competitiveness by reducing the emission of greenhouse gases.
Policies/Commitments	Commitment to continuous improvement and reduction of greenhouse gas emissions during production processes.
Goals	Greenhouse emissions generated per production unit (kilograms carbon dioxide equivalent /square centimeters - wafer mask) in 2030 decreased by 30% in comparison to 2009.
Promotion Priorities and Practices	Establish greenhouse gas emission inventory policies, focus on the reduction of major emission sources such as fuel, SF6 and FCs.
Performance Results	In 2019, greenhouse gas emissions generated per production unit was 0.761 kilograms carbon dioxide equivalent/ square centimeters - wafer mask, a 11.3% decrease from 2018, and a 39.5% decrease from the base year of 2009.

Due to the rise in surface temperatures, climate change has directly affected the manufacturing and operation of the manufacturing industry in recent years, causing flooding, water interruption, power supply shortage, increased raw material costs, and other such problems. The Paris Climate Conference (COP21) was held in 2015 to reduce greenhouse gas emissions, mitigate climate change, and improve the adaptability to climate change. Thus, reducing greenhouse gas emissions is an important issue for the sustainable development of enterprises. Through greenhouse gas inventory, Nuvoton examines the main sources of greenhouse gas emissions to actively implement mitigation and adaptation actions. Nuvoton's greenhouse gas management strategy consists of first conducting greenhouse gas inventory and registration in accordance with the Environmental Protection Administration's regulations. Then, through inventory checks to understand the main sources of emissions, Nuvoton actively takes relevant mitigation and adaptation actions.

**Greenhouse Gas Inventory**

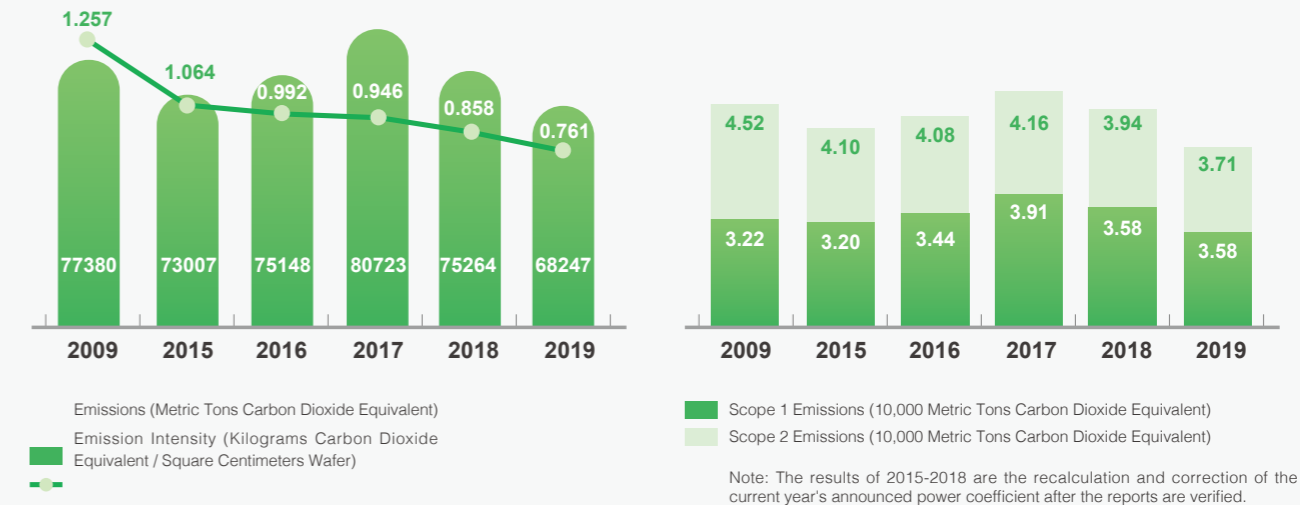
In order to grasp the status of the company's greenhouse gas-related activities and develop reduction targets and priorities, in 2009 Nuvoton established a greenhouse gas inventory mechanism in accordance with ISO14064-1 and the Environmental Protection Administration's Greenhouse Gas Emissions Inspection and Registration Guidelines. Nuvoton conducts annual inventory of greenhouse gas emissions in the plant area, setting 2009 as the base year for greenhouse gas emissions. The content of the examination includes Scope 1 – "Direct greenhouse gas emissions"; Scope 2 – "Indirect greenhouse gas emissions from energy use", which does not include Scope 3 – "Indirect greenhouse gas emissions". Since 2009, the data from Nuvoton's greenhouse gas inventories have always passed inspections and obtained verification statements by third-party verification agencies based on ISO14064-1 standards.

**Greenhouse Gas Emission Categories**



**\* Greenhouse Gas Emissions Inventory Results**

Since 2009, Nuvoton's greenhouse gas emissions inventory results have been checked by DNV GL Business Assurance. In 2019, the inventory results for greenhouse gas emissions was 68,247 tons, while greenhouse gas emissions per unit of product was 0.761 kilograms carbon dioxide equivalent/square centimeters - wafer mask, a decrease of 11.3% from 2018 and a decrease of 39.5% from the base year 2009.



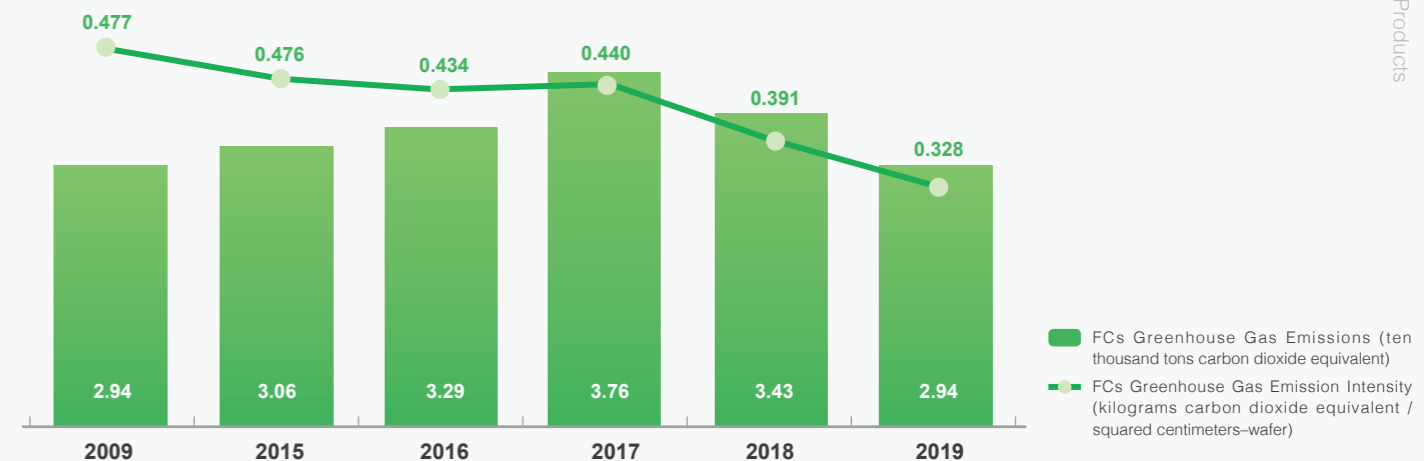
**Greenhouse Gas Reduction**

The results of the inventory reveal that the majority of emissions are generated from electrical consumption, followed by the FCs fluorinated greenhouse gasses used in the manufacturing process, such as tetrafluoromethane (CF<sub>4</sub>), hexafluoroethane (C<sub>2</sub>F<sub>6</sub>), sulfur hexafluoride (SF<sub>6</sub>), fluoroform (CHF<sub>3</sub>), octafluoropropane (C<sub>3</sub>F<sub>8</sub>), and octafluorocyclobutane (C<sub>4</sub>F<sub>8</sub>). These two items account for more than 90% of our total emissions. Nuvoton's greenhouse gas reduction measures include setting annual energy efficiency targets to enhance electricity efficiency and reduce carbon emissions, as well as conceiving clean manufacturing for specific production. Electricity reduction measures have been described in section 6.2.1 above. Greenhouse gas emissions were reduced by approximately 231 tons of carbon dioxide equivalent. To reduce the FCs used in manufacturing, we mainly utilized gas replacements in the beginning. We use the greenhouse gas, C<sub>3</sub>F<sub>8</sub>, which has a lower Global Warming Potential (GWP), to replace CF<sub>4</sub> and C<sub>2</sub>F<sub>6</sub> used in thin film processing to reduce the equivalent carbon dioxide emissions of FCs. For 2019, our primary reduction strategy was adjusting the process

parameters to reduce emissions. Continuing our 2018 plan, we are replacing the C<sub>3</sub>F<sub>8</sub> used in the thin film process with C<sub>4</sub>F<sub>8</sub>, which has an ever lower greenhouse Global Warming Potential (GWP).

**\* Process FCs Carbon Dioxide Equivalent Emission and Intensity**

According to the inventory results, the process-used FCs greenhouse gas emission intensity has shown a trend of increasing since 2015. The main reason for this is due to changes in product combinations and the development of new processes. Nuvoton strives to make adjustments and improvements from the manufacturing process according to the results of the inventory. In 2019, manufacturing related FCs greenhouse gas emissions amounted to the carbon dioxide equivalent of 29.4 thousand tons, and the emission intensity amounted to 0.328 kilograms/squared centimeters-wafer. The emission intensity has reduced by 31% compared to the 2009 base year, a 16% reduction from 2018. This is mainly due to the benefits of replacing C<sub>3</sub>F<sub>8</sub> with C<sub>4</sub>F<sub>8</sub> in the film process in 2019.



Green Products

2019 Green Product and Client Health and Safety Management Policy	
Importance	In response to international environmental friendly trends and client needs, Nuvoton is committed to designing low-toxicity, low-carbon, and low-energy green products, increasing global competitiveness by meeting client needs for environmentally friendly products.
Policies/Commitments	Nuvoton strives to design, purchase, manufacture and sell products which do not contain harmful substances and are in compliance with international regulations to meet client needs. Nuvoton further believes in the fulfillment of their social and civic responsibility of environmental protection.
Goals	Products provided by Nuvoton are in 100% compliance with non-hazardous substances regulations and client requirements.
Promotion Priorities and Practices	Nuvoton established the hazardous substances management system, QC 080000, in 2008. It utilizes a systematic approach in coordinating all internal and external green product-related matters to assist sales, purchasing, research and development, and manufacturing in the phases of design, production, and shipping, effectively monitoring the management processes of environmental product development. Furthermore, we comply with international regulations and customer requirements for environmental assessments and imports. We establish and implement green directives and requirements of customers, promote green product continuous improvement projects, control harmful substances, and conduct green product audits to ensure the effectiveness of Nuvoton's green policies.
Performance Results	None of Nuvoton's products were involved with any illegal or non-compliance matters in 2019, meeting international regulations and customer requirements.

Green Product Policies

In response to international environmental trends and customer needs, Nuvoton is committed to designing green products with low toxicity, low carbon, and low energy consumption, so as to enhance green competitiveness and grasp global business opportunities. These policies apply to all product-related activities of Nuvoton. From the company's internal design stage to external supplier sourcing and the manufacturing and transportation phases, Nuvoton promotes and implements the green concept to the overall value chain. Nuvoton conducts project planning, execution, inspection, and action in each phase using the PDCA management cycle to ensure that all phases meet policy specifications and goals. In addition, an important part of the policy is to make employees understand the importance of environmental protection. Through educational training and advocacy communication, we incorporate the green concept into our daily work.

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Nuvoton ensures that the products it designs, manufactures, and sells are able to meet or exceed the standards of international environmental regulations. Furthermore,

Nuvoton requires upstream raw material suppliers and downstream packaging and testing firms to work together to reduce their various impacts on the environment and comply with the following international environmental regulations:

- » The European Union's (EU) Restriction of Hazardous Substances Directive (RoHS 2.0, 2011/65/EU): Limits the amount of lead (<1,000ppm), cadmium (<100ppm), mercury (<1,000ppm), hexavalent chromium (<1,000ppm), polybrominated biphenyls (<1,000ppm), polybrominated diphenyl ethers (<1,000ppm), DEHP (<1,000ppm), BBP (<1,000ppm), DBP (<1,000ppm), and DIBP (<1,000ppm) in products.
- » Halogen-free requirements for electronic products: In general, a halogen-free product by customer definitions means that the volumes of bromine and chlorine are each <900ppm, respectively, with total content <1,500ppm. All the products of Nuvoton comply with both requirements.
- » EU's Registration, Evaluation, Authorization and Restriction of Chemicals (EU REACH): Regarding the hazardous substances and subsequent Substance of Very High Concern (SVHC) announced by EU Reach, all products of Nuvoton comply with the requirements of this regulation.
- » Limits for perfluorooctane sulfonate (PROS): Nuvoton prohibits the use of raw materials which contain PFOS in the manufacturing process.

In addition to current international laws and customer requirements, Nuvoton will also continue to focus on potential regulatory requirements for the future, and proceed with all appropriate preparations. None of Nuvoton's products were involved with any illegal or non-compliance matters in 2018, meeting international regulations and customer requirements.

Nuvoton's Hazardous Substances Management:

» Declaring a Non-hazardous Substances Policy

Nuvoton focuses on designing, purchasing, manufacturing, and selling products with no hazardous substances to comply with international regulations and meet the needs of customers. Nuvoton also strives to protect the environment to fulfill its social responsibility.

» Creating a List of Controlled Hazardous Substances

Nuvoton has created a list of controlled substances in accordance with international environmental regulations and customer needs, including banned substances, restricted substances, and declarable substances. The list is amended every year in accordance with current conditions.

» New Material Evaluation System

To establish a new material evaluation process, it is necessary to confirm that the newly developed products and materials comply with Nuvoton's hazardous substance management procedures and environmental safety and health requirements.

» Green Procurement and Supplier Management

Raw material suppliers and contract manufacturers must sign a "Certification of Non-use of Hazardous Substances", and be inspected by a third party every year or as needed to ensure that their products meet international environmental requirements.

» IECQ QC 080000 Hazardous Substance Management System Certification

Nuvoton received the hazardous material management standards IECQ QC 080000 from the International Electrotechnical Commission (IEC), which was developed in accordance with its electronic components quality evaluation system. Nuvoton received the hazardous material management standards IECQ QC080000 from the International Electrotechnical Commission (IEC), which was developed in accordance with its electronic components quality evaluation system. Built on the ISO 9001 and ISO / TS 16949 management systems, it utilizes a "process-oriented" approach to reduce or eliminate harmful substances contained in the organization's products. In addition, it systematically manages hazardous substances to reduce or avoid the production of harmful substances. At the same time, it meets RoHS, REACH, WEEE, and other special customer needs. We completed the completed the IECQ QC 080000: 2017 transition audit in 2019 to ensure the effective operation of our hazardous material management system.

» SONY Green Partner Certification

Nuvoton has been a SONY-certified green business partner since 2009. Nuvoton still continues to pass the regular verification to date.

» Detection of Hazardous Substances

In addition to managing factory materials and process raw materials through supplier sources, Nuvoton sample tests harmful substances in wafer and IC products every year. The tests are conducted by a fair third-party, measuring and monitoring raw materials and products that have an impact on the environment, as well as harmful and banned substances.

# 7

## Best Workplace

- » Human Resources Structure
- » Talent Management
- » Salary and Benefits
- » Learning and Developing
- » A Lohas Work Culture
- » Employee Welfare Committee
- » Occupational Health and Safety
- » Health Management Program



2019 Talent Appointment and Educational Training Management Policies	
Importance	Employees are the cornerstones of a company's development. Nuvoton places great importance in talent recruitment by having a comprehensive management system, providing competitive salaries and benefits as well as the best possible working environment to attract talented individuals. Nuvoton's comprehensive and diverse education and employee training system further allows employees to continue improving themselves after joining the company, which facilitates the sustainable development of the Company.
Policy/Commitment	For talent recruitment, Nuvoton fully complies with all relevant labor standards and regulations, as well as the Responsible Business Alliance (RBA) Code of Conduct for the recruitment of suitable talents into the Company. In regards to personnel training, Nuvoton recognizes the importance of employee learning and development, and makes available a large number of learning channels which utilize a diversity of learning methods as we strive to create a continuously improving learning culture.
2020 Goals	For employee turnover rate to be between 7% and 12% No discrimination or forced labor complaints Average training hours per person should be 7 hours
Medium and Long-term Goals	Create an organization with a large amount of room for development as well as a friendly workplace environment to continue attracting talented individuals to Nuvoton. For employee turnover rate to be between 5% and 10% 0 labor disputes; discrimination free, no forced labor complaint incidents Average training hours per person should be 9 hours
Key Initiatives and Implementation Methods	Encourage candidates to join Nuvoton by providing competitive salaries and benefits as well as a safe and comfortable working environment.
Performance and Results	1. 0 labor disputes; discrimination free, no forced labor complaint incidents 2. A total of 10,883 employees participated in the completion of 12,517 hours of employee training. Average training hours: 8.93 hours.

## Human Resources Structure

As of December 31, 2019, Nuvoton Technology had a total of 1,402 employees, comprised of 156 managerial, 863 professional, and 393 technical personnel. Amongst management personnel, there were 39 senior executives at the director level or higher. At the end of 2019, 44% of our total workforce was comprised of female personnel. The male to female ratio among managerial and professional personnel is approximately 3:1, which is consistent with the fact that the students majoring in engineering fields relevant to this industry in Taiwan are still mostly male, with the aforementioned ratio illustrating this phenomenon.

Category	Division	Male		Female		Subtotals and Proportions by Division	
		No.	In Proportion to the Division	No.	In Proportion to the Division	No.	In Proportion to the Division
Position	Management	136	87%	20	13%	156	11%
	Professional	626	73%	237	27%	863	62%
	Technical	27	7%	356	93%	383	27%
Total						1,402	

Note: Subdivision managers and higher are considered management.

Regarding age distribution, Nuvoton Technology abides by the regulations of the "Labor Standards Act", and does not hire individuals under the ages of 15. Furthermore, we also do not hire underage people between the ages of 15 and 16. Employees between the ages of 16 and 40 account for 50% of our total workforce. In terms of academic qualifications, more than 39% of employees have obtained a master's degree or higher. For managerial and professional personnel,

this percentage rises to 53%. Concerning the types of Nuvoton employees, except for fixed term contractors, 99% of our workforce comprises staff and operators who are full-time employees. In order to establish a direct communication channel with our employees, Nuvoton holds regular labor-management meetings on a quarterly basis. Four labor-management meetings in total were held in 2019.

Category	Division	Male		Female		Subtotals and Proportions by Division	
		No.	In Proportion to the Division	No.	In Proportion to the Division	No.	In Proportion to the Division
Age	21~30	149	56%	119	44%	268	19%
	31~40	273	64%	154	36%	427	30%
	41~50	249	51%	238	49%	487	35%
	51~60	117	54%	101	46%	218	16%
	61~	1	50%	1	50%	2	0%
Education	PhD	17	100%	0	0%	17	1%
	Master's	445	85%	79	15%	524	37%
	Bachelor's	262	61%	168	39%	430	31%
	Vocational School	51	36%	92	64%	143	10%
	Senior High School	12	4%	265	96%	277	20%
Below Senior High School		2	18%	9	82%	11	1%
Employment Type	Full-Time Employees	758	75%	253	25%	1011	72%
	Staff	27	7%	356	93%	383	27%
	Operators	4	50%	4	50%	8	1%
	Part-time and Temporary Employees						
	Fixed-term Contract						

Note: The above human resources structure does not include 9 appointed consultants, nor the 33 outsourced catering, cleaning, security, maintenance, and information desk and information services

## Talent Employment Practices

Nuvoton Technology has always regarded employees as our most important asset, and strives to attract new applicants by providing competitive compensation and benefits, comprehensive education and training, and a comfortable and safe working environment. Nuvoton is in full compliance with the rules of the Labor Standards Act, and abides by the labor rights provisions of the EICC Code of Conduct. When hiring new employees, it does not employ people under the age of 15 or involuntary workers (such as those by coercion, mortgage, debt, indentured servitude, enslavement or human trafficking). Nuvoton further ensures that all employees enjoy equal rights without discrimination, and that the Company shall not unlawfully discriminate against any employees

or prospective employees for reasons such as ethnicity or nationality, skin color, age, sex, sexual orientation, gender identity, disability, pregnancy, religion, political stance, corporate background, veteran status, protected genetic information, or marital status. In 2019, no discrimination or forced labor complaints were filed against Nuvoton. New employee recruitment and hiring rates in 2019 differ only slightly from 2018, with a total change of less than 1%. The majority of newly recruited employees are between the ages of 21 and 40. The ages of those leaving the company also generally follows a normal bell shaped distribution. Overall, Nuvoton's employee structure remains quite stable.

## 2019 Turnover and hiring rates by age group

Age Group	No. of New Employees		In Proportion to the Total No. of Employees		Turnover		In Proportion to the Total No. of Employees	
	Male	Female	Male	Female	Male	Female	Male	Female
18~20	0	0	0.0%	0.0%	0	0	0.0%	0.0%
21~30	40	28	14.9%	10.4%	28	17	10.4%	6.3%
31~40	26	13	6.1%	3.0%	29	11	6.8%	2.6%
41~50	8	6	1.6%	1.2%	12	7	2.5%	1.4%
51~60	3	0	1.4%	0.0%	6	12	2.8%	5.5%
61~	1	0	50.0%	0.0%	1	0	50.0%	0.0%
小計	78	47	-	-	76	47	-	-

Note 1. Age: Age of employee on first day / last day of employment

Note 2. Number of new employees includes first-time employees, and does not include returning or reinstated employees / Turnover includes only the number of resignations and retirements, and does not include dismissals or jobs placed on hold

Note 3. Total number of company employees as described in the above table is based on numbers on retrieved on the day of December 31, 2018



## Salary and Benefits

Nuvoton Technology employee salaries are in compliance to the minimum wage rules of the Labor Standards Act, and the salaries of the lowest paid direct employees are at least 1.1 times higher than the minimum stipulated by the Labor Standards Act. In order to provide employees with a workplace in which they can develop both mentally and physically in a balanced manner, we implemented a pre-planned vacation management system to assist employees in planning their vacations. And we also actively remind employees to take adequate vacation time as to promote the concept of healthy work environment. In terms of benefits, Nuvoton provides insurance and pension benefits that are in compliance with local laws and regulations across the globe. Nuvoton further provides group insurance benefits that are above and beyond the requirements of the law to ensure the work and life safety of its employees. To encourage marriage and birth rates, we provide designated expectant mother priority parking spaces,

lactation rooms, maternity gift packets, maternity leave, paternity leave, family care leave, marriage leave, and a cash gift from the employee welfare committee for each birth.

We further abide by the "Gender Equality in Employment Act", which gives male and female employees the right to apply for maternity and paternity leave. In 2010, 18 female employees applied for maternity leave, and 80% returned after the end of their leave period; and 26 male employees applied for paternity leave, and 100% returned after the end of their leave period. The aforementioned female employees who did not return directly to Nuvoton after their maternity leaves applied for unpaid maternity leave under the "Act of Gender Equality in Employment", with nearly 78% returning after their maternity leave. Furthermore, 100% of employees who began their maternity or paternity leave during the previous year returned to work this year.

### Maternity/Paternity Leave Statistics for Nuvoton Employees

Year	No. of Female Employees	No. of Male Employees	No. of Employees taking Maternity Leave	No. of Employees taking Paternity Leave	No. of Employees Qualifying for Parental Leave
2015	601	712	27	51	221
2016	613	754	16	29	192
2017	616	775	19	44	186
2018	618	790	18	21	147
2019	613	789	26	26	154

Note : Year of the first day of maternal/paternal leave was used to decide year of each paternal/maternal leave.

### Nuvoton Post-Maternity / Post- Paternity Leave Employee Retention Rates

Year	Employees Returning After Maternity Leave		Employees Returning After Paternity Leave		Resigned Within 1 Year of Maternity Leave		Resigned Within 1 Year of Paternity Leave	
	No.	Percentage	No.	Percentage	No.	Percentage	No.	Percentage
2015	24	89%	51	100%	1	4%	7	14%
2016	15	94%	29	100%	0	0%	4	14%
2017	15	79%	44	100%	0	0%	4	9%
2018	14	78%	21	100%	0	0%	1	5%
2019	20	77%	26	100%	1	4%	2	8%

Note 1: The number of employees who return to work after parental leave does not include those who apply for parental leave within one week of finishing parental leave.  
 Note 2: The number of employees leaving within one year of parental leave includes those that remain on extended parental leave as well as those transferring within the Company upon their return.  
 Note 3: The percentage of those returning after parental leave = number retained / total number of people that took parental leave  
 The percentage of employees that leave the company within a year after their parental leave = number of employees that resign (excluding those taking extended leave) / total number of employees taking parental leave.

### Nuvoton Post-Parental Leave Job Return Rate

Year	No. Employees that Applied for Leave		No. of Employees Forecast to Return During Current Year		No. of Employees Returning to Work After Parental Leave			No. of Employees Retained After 1 Year of Returning From Parental Leave		
	Male	Female	Male	Female	Male	Female	Reinstatement Rate	Male	Female	Retention Rate
2015	1	13	1	12	1	8	69%	0	6	86%
2016	0	13	0	11	0	11	100%	0	7	78%
2017	3	13	2	17	1	14	79%	0	11	100%
2018	0	7	2	13	1	12	87%	1	14	100%
2019	0	13	0	9	0	7	78%	1	12	100%

Note: Reinstatement rate = number of people returning to work after parental leave in current year / number of people expected to return to work in current year  
 Retention rate = number of people that remain an employee 1 year after taking parental leave / number of people taking parental leave in the previous year

### Comprehensive Retirement Policy

To ensure the quality of life after retirement of our employees to enhance their service spirit, Nuvoton Technology has formulated an Employee Retirement Management Plan in accordance with the Labor Standards Act. The Plan clarifies retirement conditions, payment standards, application procedures and other matters, as well as setting up an employee retirement fund supervision committee according to law. According to Article 56, Provision 1 of the Labor Standards Act, Nuvoton shall on a monthly basis allocate funds to an employee retirement fund at the Bank of Taiwan. Ant according to Provision 2 of the same Act and Article, the

company shall estimate the number of employees expected to meet retirement conditions by the fourth quarter of each year, assess the current balance of the retirement fund, and make up the difference required to fund the retirement payments. In addition, all employees applicable to the Labor Pension Act are required to make payments of 6% of their monthly salary to their individual Bureau of Labor Insurance pension fund account in accordance with regulations. Currently 14.3% of employees have opted to take part in the previous retirement policy whereas 85.7% of employees have instead opted for the new retirement policy.

## Learning and Development

In a highly competitive industrial environment, nurturing talented people is the key to strengthening our core competitiveness. Nuvoton values the learning and development of each employee. We offer a wide range of learning channels and diversified learning styles, focusing on rich and practical learning content, integrating internal and external learning and development resources, and encouraging active learning and the sharing of skills and knowledge, in order to provide employees with a complete, continuous, diverse and broad-based learning environment and development platform. We are dedicated to creating a working environment that encourages knowledge sharing and growth.

### A Wide Range of Learning Channels

Nuvoton offers a variety of learning channels and diverse ways of development to meet the various learning and growth needs of employees at all levels, including: course learning (internal and external training courses / practical experience sharing seminars /online learning), practical learning (on-the-job training, task or project assignment, work rotation), and learning from others (work instruction, peer learning) to enhance employees' personal performance and stimulate their potential.

### Course Learning

Internal and external training courses  
practical experience sharing seminars  
online learning

### Practical Learning

On-the-job training  
task or project assignment  
work rotation

### Learning from Others

work instruction  
peer learning

**Courses - Classroom Style Courses**

Pertaining to different work positions, we arrange for lecturers to share knowledge and practical experience for specialized courses based on the work skill needs of employees. We systematically plan the learning and development map of each employee, launching a diversified cultivation plan to provide internal/external training resources, and encourage employees to continue to enhance professional knowledge and cross-field learning.

For current employees, according to different positions and ranks, we provide on-the-job training, self-study and other opportunities and channels to integrate employee growth with corporate development goals. For management personnel, a multistep management improvement program is provided according to different manager levels and functions, includes management training, management case study competitions, active applied learning, and training seminars. Specifically for high-level managers, lectures are held on a topic-specific basis to share practical experience or discuss industrial and economic trends. This can allow them to understand the latest industry developments and learn from external benchmarked enterprises and talent, in order to absorb new knowledge, expand their horizons, and establish a network of professionals in the field.

**Courses - Online Learning**

In 2013, Nuvoton launched its Cloud Learning platform. The platform includes: an Innovation Academy, Cloud Academy, LOHAS College, Green Technology Academy and other various types of learning content. Establishing this platform has increased the resources and channels available to employees for online learning, and ensuring education is no longer subject to time and space constraints. The company can also integrate all training data from the platform to facilitate training management and record tracking. Employees can choose courses according to their business needs or their own interests. Each Nuvoton employee will be able to embrace challenges and maintain their enthusiasm for learning, as well as and gain insight into social trends and learn faster than competitors. This fosters a working environment that values knowledge sharing and mutual teaching.

As of the end of 2019, the Nuvoton Cloud Learning platform offers a total of 2,241 online courses, featuring different categories that cover new employee training, communication, management, and professional skills, and language learning.

**On-The-Job Training & Mutual Learning**

In addition to classroom learning, an effective learning method is through on-the-job-training (learning through doing), by being provided with a contextual experience, and by following the guidance of a supervisor or expert to speed up the learning effect. Therefore, we arrange for each new employee to be guided in their department by at least

one experienced expert Furthermore, we also encourage participation in cross-departmental projects or organizational assignments, and to accept work rotation or interaction with peers in other fields. This allows

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**Rich Learning Contents**

Nuvoton has constructed a complete and diversified education and training system, with appropriate learning content available for all different employee levels, job functions and development needs, from newcomers to senior executives. The system includes diversified training categories, solid content and an emphasis on interactive learning and shared discussion, while adding importance to post-learning practical application, so that employees can continue to enhance their knowledge and skills in order to more effectively accomplish the tasks assigned by the company.

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**Strategic Leader** | Senior Executive Seminars

**Strategic Leader  
Operation Leader  
People Leader** | Quarterly Business Intelligence Sharing Meeting



**Training Categories**

**\* New Employee Training**

As soon as new employees arrive, we provide complete training courses to help employees quickly integrate into the company culture and work environment. In addition to 13 online courses for new employees, we also arrange physical training courses for newcomers to understand the corporate vision and culture, organizational profile, rules and regulations, and various business groups and their products, as well as the basic knowledge and skills required for work so that newcomers can become familiar with the our company's business and related operations as soon as possible. At the same time, we also care for new employees and provide them with necessary information and support through the establishment of the Buddy system and other assistance mechanisms. This allows new employees to quickly and effectively build an interpersonal connection network and support system.



**\* Management Training**

Nuvoton Technology defines the management competencies that should be possessed by a manager at every different level. To enable managers to possess the necessary competencies required at each level according to the different functions and roles of their job, we provide corresponding training courses on a function-by-function basis. Taking high-level managers as an example, in order for managers to be able to grasp the latest trends and developments in domestic and foreign industries, we hold an advanced series of lectures on "Topic-Specific Practical Experience Sharing" quarterly to provide knowledge exchange and learn from internal and external experts so Nuvoton's development can be more in line with the industry.

**\* Professional and technical training**

In order to promote the learning of professional knowledge or skills to employees in different job positions, and to assist in the development of its business and project plans, each organizational unit will arrange on-the-job training within its department per its own specialized fields. Various courses, special lectures, seminars, experience sharing and other technical and professional training will also be provided. The fields of training provided include direct personnel training (workstation skills training), engineering, research and development, marketing / business, finance, import / export / procurement, information technology, and legal services training.

**\* Universal Training**

In order to comply with the requirements of laws, regulations and company policies, we arrange universal basic training. The training, for which all employees are required to attend, includes content about the company's vision and mission, corporate culture and values, corporate social responsibilities, customer satisfaction, quality management, environmental, safety and health requirements (including environmental protection, fire drills etc.) and other courses . The course content does not vary across employee hierarchy or departmental function. Among the courses, in order to promote the philosophy of "being a good corporate citizen" and with the expectation that employees can implement this philosophy in their daily work, Nuvoton has also arranged Corporate Social Responsibility related courses such as the "CSR Code of Conduct" and "How to DoBusiness with Integrity". In 2019, a total of 2,666 employees completed CSR-related courses, accounting for 100% of all employees.



### Training Quality and Results

In order to ensure the quality of training, Nuvoton has established "Education and Training Management Procedures" to standardize the differentiation of training needs, the formulation of training plans, the management of training courses and the participation process. In addition, it establishes a training follow-up supervision model to ensure that learned skills and knowledge are actually gained and implemented. This model includes: understanding the previous situation of trainees through interviews or surveys conducted before the training, which serve as basic information for curriculum design and curriculum effectiveness; and then conducting post-course surveys and effectiveness tracking, collecting trainee feedback and practical application information to understand the challenges and difficulties of real-world implementation. These are utilized as a follow-up diligence policy to improve employee learning effectiveness in order to improve learning outcomes.

### Employee Education and Training Results for 2019

In 2019, Nuvoton Technology provided a total of 12,517 hours of training to its employees, with a total employee attendance of 10,883 attendees. The average duration of training per employee was 8.93 hours. Employee training statistics in 2019 are summarized below:

2019 Employee Training Statistics by Gender and Hours									
Personnel Type	Male			Femal			Total		
	Training Hours	Employee No.	Average Hours Per Person	Training Hours	Employee No.	Average Hours Per Person	Training Hours	Employee No.	Average Hours Per Person
Technical	79.63	27	2.95	405.53	356	1.14	485.16	383	1.27
Management	2,179.42	136	16.03	166.35	20	8.32	2,345.77	156	15.04
Professional	7,134.71	626	11.40	2,551.53	237	10.77	9686.24	863	11.22
Subtotal	9,393.76	789	11.91	3,123.41	613	5.10	12,517.17	1,402	8.93

Note 1: The number of employees counted as the number of active employees at the end of 2018

Note 2: Average hours per staff = training hours / number of employees

Note 3: The above hourly statistics include include internal classroom courses and online training courses, but excludes physical drill courses handled by environmental, safety, and health.

All Nuvoton training courses are held in full consideration of organization/job needs, gender equality, and equal opportunity principles. We hope that by providing diverse learning channels, including physical classroom learning and online learning, as well as a wide variety of learning resources and opportunities and integrating external and internal learning resources to continuously foster talent within our workforce, we can create an environment which allows our employees to grow along with the Company.

### Talent Cultivation - Campus Outreach Program

In order to prepare early and cultivate talents that meet the needs of our industry, and also shorten the adaptation period for students to enter the

workplace and strengthen the competitiveness of the IC industry, Nuvoton continues to deepen campus relationships and cultivate key talents. In addition to participating in campus recruitment activities, we also plan campus projects such as arranging department heads to give lectures on campus, or combining current trends and introducing students on how to become cutting-edge IC design talent in the AI era. At the same time, students are introduced to Nuvoton's corporate vision, company culture, salary and benefits system, primary products and their applications, and more, so that visiting students could gain a better understanding of the technologies used and developed by Nuvoton and their latest applications.



### A LOHAS Work Culture

Employees are important assets of the company. In order to help colleagues create a healthy and happy workplace, in addition to taking care of the health of employees, the LOHAS team carefully plans different themed activities. In 2019, the LOHAS team held 2 private hall movie appreciations. Employees brought their families with them, creating good memories for parents and children. In addition, Mr. Yeh Chi Wei, an expert in Hualien, was specially invited to introduce everyone to exploring the beautiful secrets of Hualien and provide employees with in-depth travel plans to relax the mind and body. Nutritionist Liu Yili taught employees to choose food smartly as well as the principles of eating out to achieve balanced nutrition. In the second half of the year, we organized Comedians workshop art activities, providing colleagues in Taipei, Hsinchu, and Tainan office areas to bring their families to enjoy the humorous and themed content of talking, learning, teasing, and singing, which were very well received. We strive to create a diversified and happy workplace environment so

that employees can take care of their family, as well as their physical and mental health after work. Together, we work to create a happy, energetic, and healthy workplace environment. Our longstanding annual "Five Event Teambuilding Tournament" is a classic tournament for to bond and make friends. For 2019, the selected sporting events were: badminton, billiards, basketball, shrimp fishing, and bridge. In order to win, the players worked hard to practice and formulate strategies. With the show of tolerance, communication, and teamwork, the cheerleaders cheered on the players, creating a lively atmosphere for everyone involved. This event not only gave employees a chance to show a different side of themselves, but also served as an excellent team building opportunity. The intensity of the competing teams during the tournament was mirrored by the fans and cheerleaders for each team cheering their team on, creating a lively atmosphere for everyone involved.

### 2019 LOHAS Evetns - Montage

Private Movie Theater Screening  
Family Fun

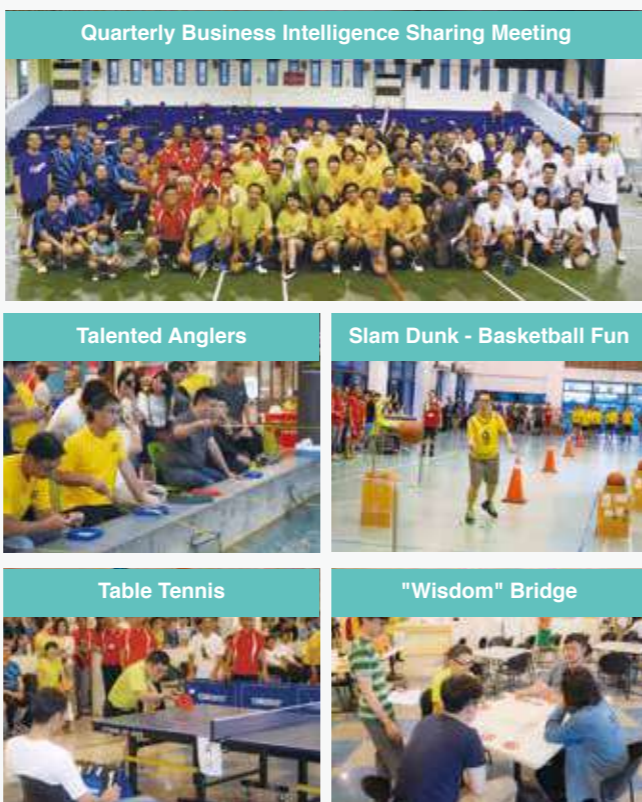
LOHAS Lectures



Art and Culture Events



Teambuilding Tournament Montage:



Employee Welfare Committee

To continue the theme of a LOHAS workplace, we select various regional welfare committees to handle employee welfare-related tasks, formulating annual plans and budgeting every year to provide various subsidies for marriage, childbirth, funerals, and accidents, in addition to: New Year gift vouchers, birthday gift vouchers, organizing group activities, travel plans, club activities, etc. Nuvoton also continues to cooperate with manufacturers to so discounted merchants can be found via mobile application, providing electronic identification and special deal vendors (about 3,228 special deal vendors), as well as food trucks and group buying, making it more convenient for Nuvoton employees to enjoy discounts and order food. Thus ensures that employees can enjoy the benefits of food, clothing, housing, transportation, education, and entertainment in daily life in their lives outside of work.

Employee Clubs

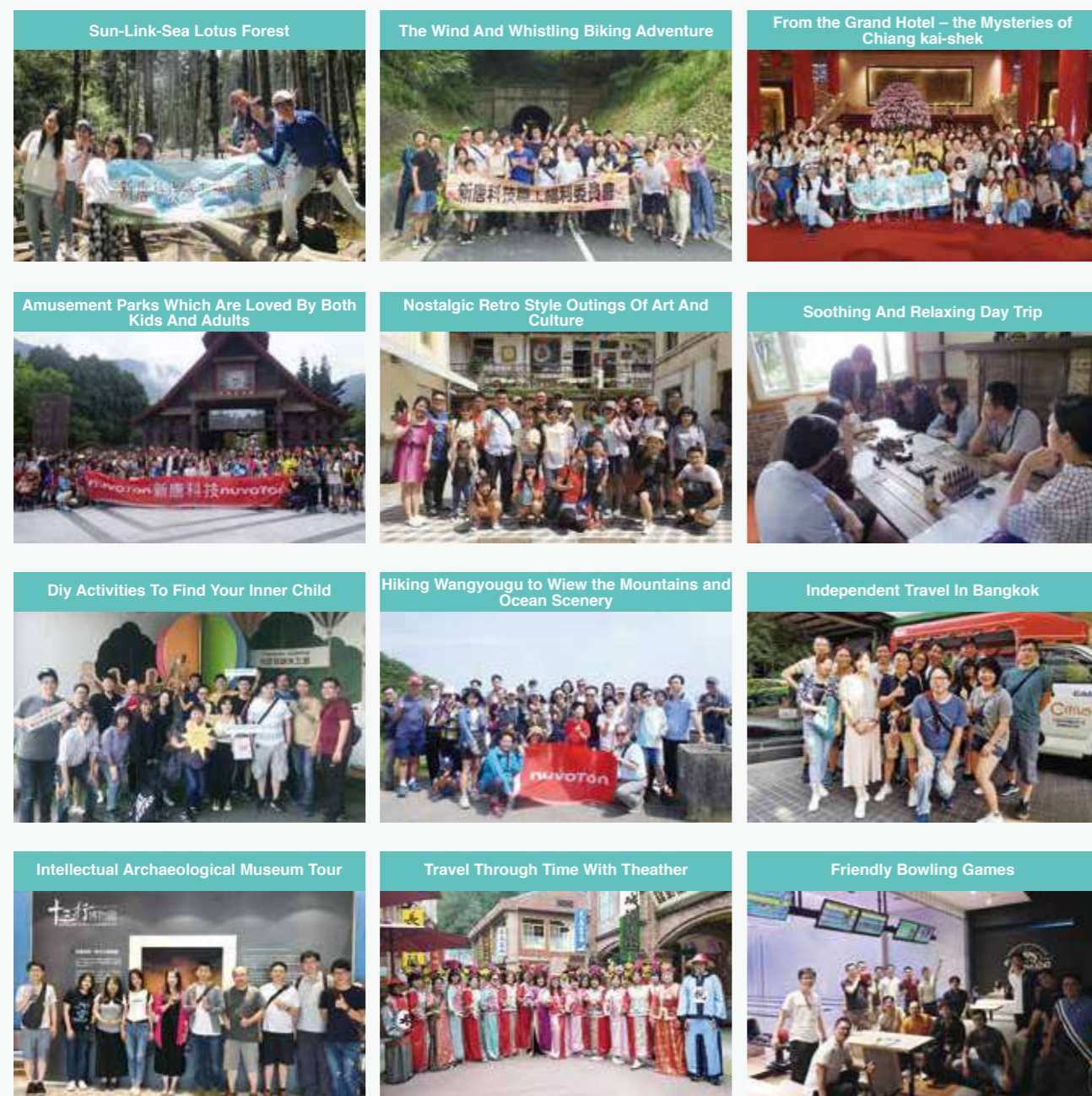
The 17 self-generated employee clubs include a guitar club, bicycle club, runners club, basketball club, softball club, badminton club, volleyball club, table tennis club, yoga club, bridge club, board games club, baking club, aerobics club, coffee appreciation club, mixed sports club, health club, and Internazionale club. The club subsidy system, helps company employees enhance friendships through fellowship. Through our club evaluation system, outstanding clubs are awarded funding to cover operational costs to encourage clubs to actively host events and promote member participation.



**Company Vacations**

Company vacations are the most anticipated activity by Nuvoton employees. In 2019, there were 3 additional themed activities jointly organized by the staff committee and travel agencies, including: strolls in the picturesque "Lotus Forest", the "the wind and whistling biking adventure" for the whole family, and the world's only secret road "From the Grand Hotel – the mysteries of Chiang Kai-shek. Each event was accompanied by a committee member to ensure the quality of the event and respond to any problems immediately. Employees and their family members were able to participate in safe and happy travels. A total of 154 people participated in 3 events. Through a travel subsidy system, employees can form groups to go on vacation together, creating closer bonds and relationships between

company members. Accompanying family members are also welcome and allow the families of our employees to gain a better understanding of the Company. A diversity of options are available for these trips, with a wide variety of selections suitable for all ages to attend, including amusement parks which are loved by both kids and adults, nostalgic retro style outings of art and culture, soothing and relaxing day trips, DIY activities to find your inner child, hiking Wangyougu to view the mountains and ocean scenery, independent travel in Bangkok, static and intellectual archaeological museum tours, travel through time with theater, friendly bowling games, and more, for a total of 47 such events to select from and 1,119 participating Nuvoton employees.



**Occupational Health and Safety**

2019 Occupational Health and Safety Management Policies	
Importance	The physical and mental health of our employees is an area of great importance to Nuvoton Technology, and is the first point of consideration during the planning of all operations. At Nuvoton, we are fully committed to meeting progressive international safety, hygiene, and health promotion concepts.
Policy/ Commitment	Commit to the providing, maintaining, and continuous improvement of a work environment that fully complies with all relevant regulations; prevent in all ways possible the occurrence of incidents that may harm our employees in any way; promote and implement LOHAS concepts in employee care, commit to the creation of a happy corporate workplace environment.
Goals	Creating a safe working environment to serve as the foundation for sustainable development. With the continuation of our "zero workplace disasters" record as the goal of our occupational safety and health management policy.
Key Initiatives and Implementation Methods	<ol style="list-style-type: none"> <li>Promote a safe culture: through observation of our operations, environmental safety management contribution rewards, regular work environment monitoring, management change mechanisms, and the promotion of safety management platforms for all areas, we facilitate a safe working environment for employees.</li> <li>Establish comprehensive health management: implement occupational disease prevention, and work with industrial hygiene, occupational nurses, and occupational doctors to comprehensively improve the health and wellbeing of employees.</li> </ol>
Performance and Results	<ol style="list-style-type: none"> <li>Area Industrial Safety Committees: According to different safety, health, and environmental issues related to each area, 4 different area Industrial Safety Committees were established to continuously work on the promotion of comprehensive industrial safety practices to improve workplace safety.</li> <li>Contractor Management and Operational Safety Control: Strengthened operational safety precautions are combined with routine inspections and the adoption of mobile management to fully carry out safety policies. Contractor disability injury rate has remained at zero for the past five years.</li> <li>Various Emergency Response Drills: In 2019, a total of 65 emergency response drills (including fire drills, chemical leak drills, gas leak drills and emergency evacuation drills) were held.</li> <li>Occupational Accident Indicators: Injury statistics do not include incidents resulting from traffic accidents from and to work. For five consecutive years, both the Disabling Frequency Rate (FR) and the Disabling Severity Rate (SR) were zero.</li> </ol>

**Promoting a a Safety Conscious Culture**

To Nuvoton, ensuring zero occupational accidents and promoting employee health are obligatory responsibilities. We are actively establishing and promoting a culture of environmental protection, safety, and health: "Before engaging in any activity, service, or production, environmental protection, safety, and health concerns must be considered first."

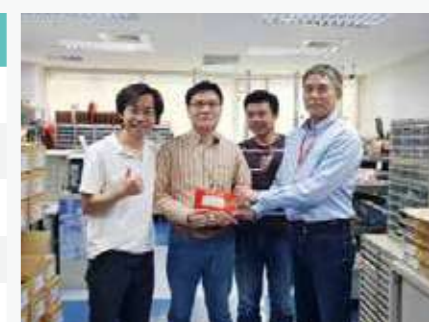
supervisors of all levels to discover potential risks and make improvements to improve the safety of work operations and the workplace environment. Personnel safety training and knowledge is not only a basic part of health and safety management, but it is also the main basis for enhancing a culture of safety first in the workplace. All employees who participate in regular EHS training, emergency response training and other related kinds of training can enhance their safety awareness and resilience. Therefore, the EHS management unit established a "EHS Management Promotion Performance" scoring system, to confirm the active contribution of all units in providing a safe and comfortable work environment. An evaluation of the "EHS Management Promotion Performance" is conducted quarterly, with awards and recognition given during each plant section's health and safety meeting.

**Positive Reinforcement Measures for EHS Management Contributions and Incentives**

To date, the EHS (Environmental, Health and Safety) management unit has continued to follow the P-D-C-A method and the spirit of continuous improvement to maintain our environmental, health and safety management system. Nuvoton is committed to advancing a culture of safety first in the workplace, with implementation from top to bottom to promote regular inspections by

**In 2019, each sector pushed forth their "EHS Management Promotion Performance" evaluation items**

Evaluation Items	Wafer Foundry Unit	Testing Unit	R&D Unit	Administration/ Support Unit
Supervisor inspection and observation of operations	✓	✓	✓	✓
Emergency response professional skills test	✓	✓		
Education and training participation rate	✓	✓	✓	✓
EHS system audit	✓	✓		✓
EHS issues QA	✓		✓	
Occurrence of accident or loss	✓	✓		✓



2019 Winners of the EHS Management Promotion Performance Award (Research and Development Division)

Human Resources | Talent Management | Salary and Benefits | Learning and Developing | A Lohas Work Culture | Employee Welfare Committee | Occupational Health and Safety | Health Management Program

**Establishment of a EHS Committee to Implement a Communication Mechanism**

In order to implement comprehensive safety and health management, Nuvoton has established a company-wide "EHS and Risk Management Committee". Chaired by the General Manager of Nuvoton, the committee consists of occupational safety and health personnel, supervisors, medical staff and labor representatives, of which labor representatives account for more than one-third of the members.

The committee meets quarterly and the main items discussed are as follows:

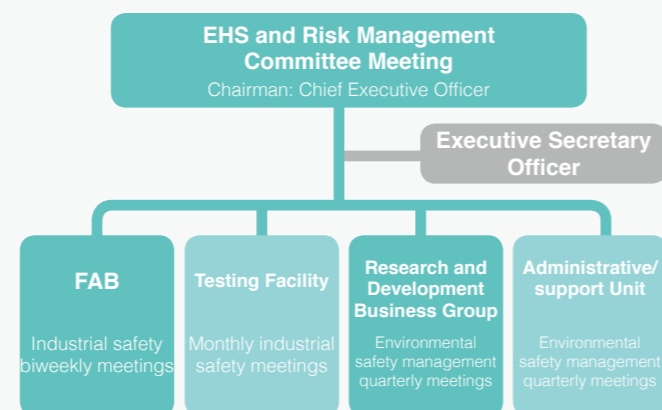
- » Daily health and safety management issues
- » Promote occupational EHS, employee health management, environmental protection and damage prevention
- » Regulatory compliance
- » Continuous improvement programs
- » Implementation of EHS communication

In addition, according to different safety, health and environmental issues, different periods and safety mechanisms most suitable for each segment are brought forward for discussion through the labor representatives with their respective committee, continuously making improvements to create a healthy and safe environment. Through a comprehensive management system and the active participation of all employees, disaster and loss prevent is able to be achieved.

**EHS and Risk Management Committee Meeting**



**Nuvoton Technology - EHS and Risk Management Committee Organization Chart**



**Working Environment Monitoring**

- » In order to establish the quality standard of the working environment and provide workers with a more comfortable and healthy working environment, Nuvoton regularly implements working environment monitoring every six months, and commissions qualified testing agencies to conduct testing to ensure the validity of the data. If there is any abnormality in the monitoring data of the working environment, the industrial safety department will formulate relevant improvement plans or administrative management to ensure that employees will work in a safe working environment. The monitoring results of the labor working environment shall be archived and kept by the industrial safety department as the basis for the follow-up special labor health checks and to be used as reference for the supervisors of each unit to dispatch workers to prevent the occurrence of occupational diseases in the plant.
- » The testing items include methanol, acetone, isopropanol, 1,2-dichloroethylene, sulfuric acid, hydrochloric acid, hydrofluoric acid, etc. There were 71 monitoring points in the first half of 2019. In the second half of the year, we added new machines as well as exposure monitoring during hydrofluoric acid and isopropanol operations,

bringing the total monitoring points to 74. The monitoring results in the first and second half of the year have all passed qualifications.

**Contractor Management and Operational Safety Control**

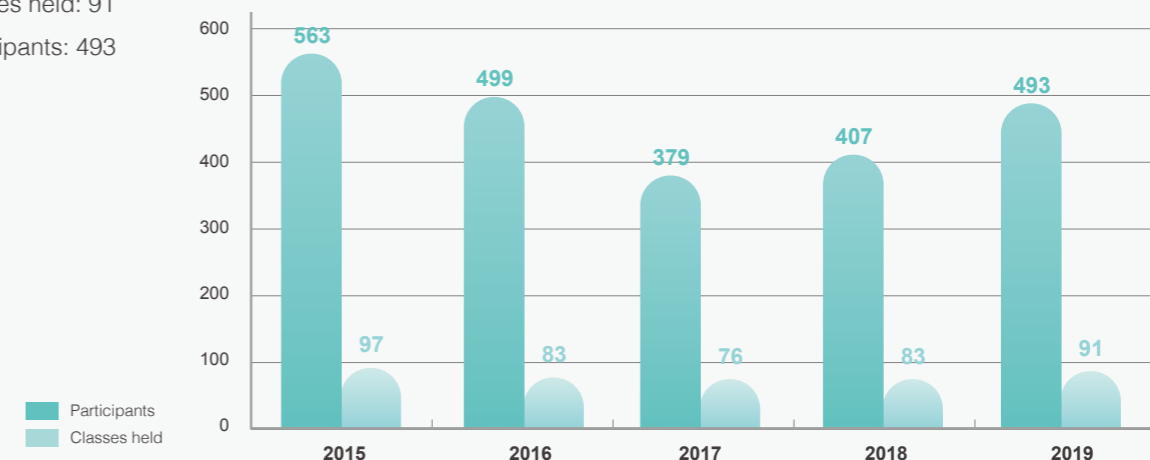
In order to ensure the health and safety of contractors, we have established clearly defined environmental, health and safety protocols for vendors during visits to the foundry. A requirement to apply for a construction safety permit allows for the management of construction operations and risks. Contractors are further required to undergo relevant education and training, or be informed of hazard factors, operating environment hazard risks and relevant health and safety regulations, which will help to strengthen operational safety precautions and emergency procedures. These measures are combined with routine inspections and the adoption of mobile management to fully carry out safety policies. High-risk operations are further controlled by construction permits. Special operations include hot work, lifting and lowering of heavy loads, working with limited space, working above ground level, drainage or handling of special gasses or chemicals, demolition or other such operations, requiring on-site authorization to ensure the safety of workers at each job station as well as to avoid environmental impact.

**Nuvoton contractors have reported zero number of disabling occupational accidents in the past five years.**

Contractor	2015		2016		2017		2018		2019	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Disabling Injury No.	0	0	0	0	0	0	0	0	0	0

**Contractor Education and Training Results for 2019:**

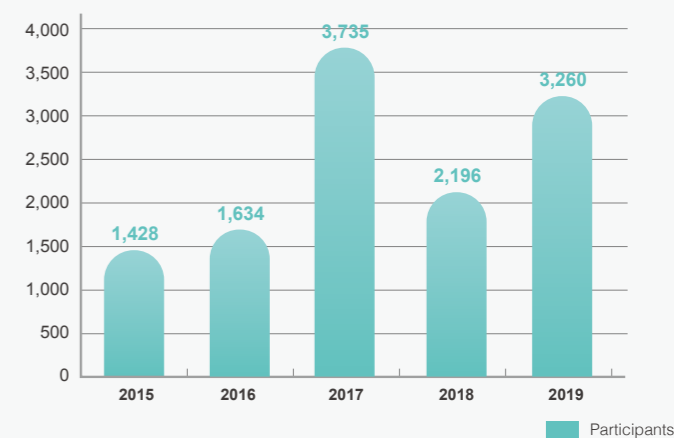
- » Classes held: 91
- » Participants: 493



**Change Management Systems**

Concerning change management, the most crucial element is to fully inform everyone about these changes at an early stage. In order to maintain the safety of various operations such as process events or services, such as changes or modifications that cause the operating conditions or the environment to deviate from the original safety scope and control measures, Nuvoton requires that all units take the initiative of reporting changes. In addition, we have also systemized applications for changing risk assessment cases, sample material identification procedures, material supplier PCN (Process / Product Change Notices), production process or equipment change review meetings (Process Change Review Board), as well as purchasing and other management systems in order to rapidly manage change. Related departments will also carry out a preliminary risk and impact assessment. Considering the requirements of safety and health laws and regulations, if the addition or change is assessed as having a significant risk or impact, then relevant precautions will be taken. When confirming if the necessary precautions are completed, if there are derivative work control requirements, relevant documents should be set or amended, and relevant personnel should be informed and trained. In 2019, there were a total of 12 PCNs for raw material suppliers and 21 applications for risk assessment changes.

Based on each year's training plan, we conduct physical or online learning courses on a regular or irregular basis to strengthen the knowledge and skills of employees on risk awareness, hazard prevention, and emergency response capabilities. This serves to cultivate employees' emergency response capabilities and safety concepts. Every 3 years, Nuvoton employees should undergo firefighting training, including the use of fire extinguishers, fire hydrants and emergency smoke escape suits, to strengthen their awareness of disaster prevention and escape.

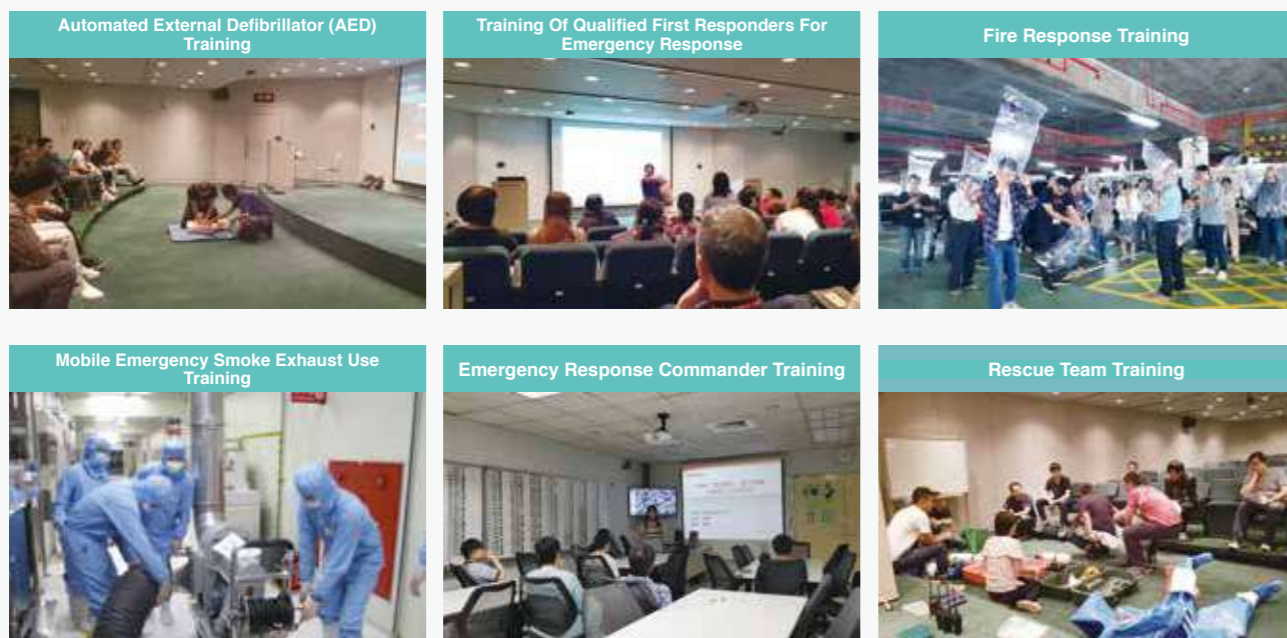


**Employee Training and Emergency Response Management**

places emphasis on safety and sanitation training. Through the organization of educational training courses for new employees, special operations, chemical use personnel, and other such personnel, we teach concepts such as work safety and protection, and advocate emergency response skills in case of emergencies to enhance the correct understanding of safety and health related knowledge

In addition, every year emergency response drills are held to cover a variety of accidents that may occur at Nuvoton, and every 2 years emergency response teams conduct recurrent training to help familiarize employees with notification and reporting procedures, site control, first aid, as well as disaster rescue equipment operation methods and support.

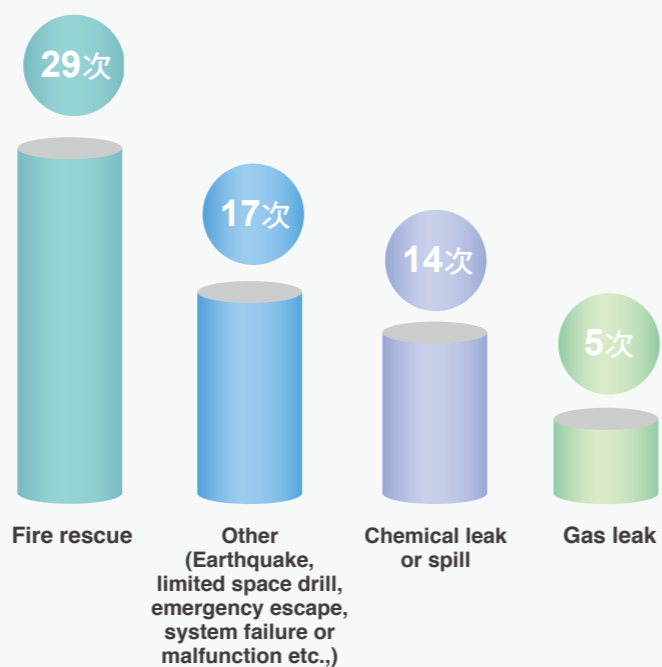
2019 Safety and Sanitation Education and Training Performance: Classes held: 83; Participants: 3260



Various Emergency Response Drills During 2019

In response to possible emergencies that could occur such as internal accidents in various areas or natural disasters, Nuvoton has formulated emergency response procedures that provide a basis for internal departments to formulate contingency plans for individual situations, emergency response team formation, and holding drills and training. These procedures will minimize the impact of personal injuries, property damage and disruptions caused by various emergencies that could occur.

In 2019, a total of 65 emergency response drills (including fire drills, chemical leak drills, gas leak drills and emergency evacuation drills) were held. Holding these drills will enable rapid and correct emergency responses in the event of a real emergency.

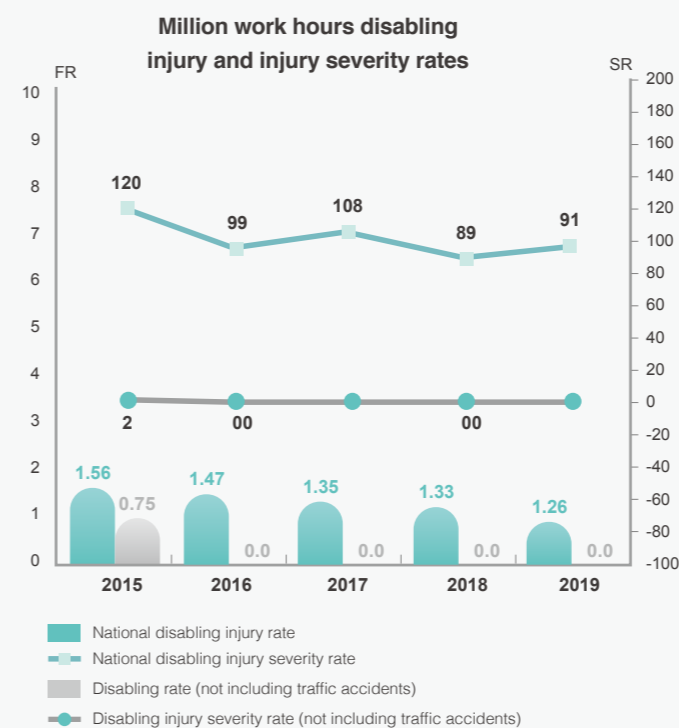


Occupational Accident Indicators

Nuvoton has established comprehensive notification, handling, investigation, improvement tracking measures, and promotional systems to ensure the safety of our fellow colleagues, visitors, and contractors, and to prevent the occurrence of repeat incidents. There was no disabling injury incidents in 2019. The types of light injury accidents include physical contact (falls or collisions) and contact with harmful objects. Accident investigation and cause analysis have been carried out for each incident. The responsible units are requested to formulate improvement measures to improve the unsafe environment and establish colleagues' awareness of hazards and the ability to respond to unsafe conditions immediately, so that all employees can work in a safe and secure environment and grow with the company. Following the indicators published by the Ministry of Labor, Nuvoton's statistical analysis of occupational hazards includes all factories in Taiwan, and uses the Disabling

Frequency Rate (FR) and Disabling Severity Rate (SR) for its main statistical basis. In 2019, there were no fatal occupational accidents, work-related injuries, or occupational diseases among employees and contractors (injury statistics do not include incidents resulting from traffic accidents from and to work): Disabling Frequency Rate (FR) and the Disabling Severity Rate (SR) were both zero. For injury statistics that include incidents resulting from traffic accidents from and to work, Disabling Frequency Rate (FR) was 2.52 (male: 3.83; female: 0.82), while Disabling Severity Rate (SR) was 24 (male: 25; female: 24). In response, Nuvoton has held traffic safety awareness lectures, inviting experienced traffic officers as speakers to help increase traffic safety awareness during employee commutes as well as promote safe driving practices and emergency response and handling methods during traffic accidents, using the traffic accidents as study cases for safety awareness.

Traffic Safety Awareness Lectures



Employee Accidents (Non-traffic related)	2015		2016		2017		2018		2019	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Number of Disabling Injuries	1	1	0	0	0	0	0	0	0	0
Total Number of Lost Days Due to Injury	3	3	0	0	0	0	0	0	0	0
Disabling Injury Frequency Rate (FR)	0.71	0.81	0	0	0	0	0	0	0	0
Disabling Injury Severity Rate (SR)	2	2	0	0	0	0	0	0	0	0
Occupational Disease Rate (ODR)	0	0	0	0	0	0	0	0	0	0

Note 1: Disabling Injury Frequency Rate (FR) = (number of disabling injuries × 106) ÷ total working hours (truncated to two decimal places, trailing decimals are discarded)  
 Note 2: Disabling Injury Severity Rate (SR) = (Number of days lost to injury × 106) ÷ total working hours (truncated to an integer, decimals are discarded)  
 Note 3: Occupational Disease Rate (ODR) = (Number of occupational disease incidences × 106) ÷ total working hours (rounded up to next integer)  
 Note 4: Days lost due to disabling injury: Refers to the total number of days lost after occurrence of injury for a single case; days disabled refers to the number of days that the injured person is unable to return to work, the total number of days last does not include the day of the injury or the day of return to work. However, all days including weekends, holidays, or work stoppages between the day of injury and day of return to work due to the accident are counted.

Employee(non-traffic related incidents)	2015		2016		2017		2018		2019	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
No. of disabling injuries	4	1	2	1	5	0	7	3	6	1
Total Number of Lost Days Due to Injury	20	2	17	1	26	0	77	57	40	29
Disabling Injury Frequency Rate (FR)	2.83	0.81	1.37	0.84	3.27	0	4.45	2.45	3.83	0.82
Disabling Injury Severity Rate (SR)	14	1	11	0	17	0	49	46	25	24

See below table for 2019 Company absenteeism rate

Year	2019			
	Hours Absent		Absenteeism Rate	
	Male	Female	Male	Female
Work-Related Sick or Injury Leave	491	168	0.03%	0.01%
Sick Leave or Physiological Leave	4,862	9,857	0.32%	0.86%
Personal Leave	3,611	2,610	0.24%	0.23%
Subtotal	8,964	12,635	0.60%	1.11%

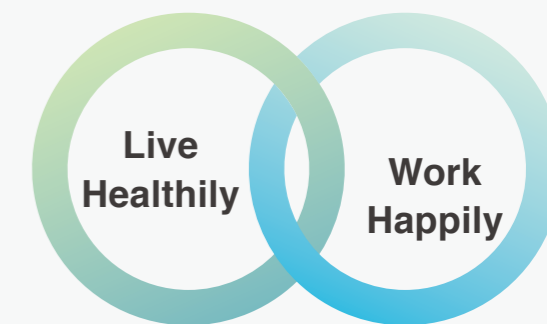
Note 1: Absenteeism Rate is calculated as (Hours of absence for each leave category / total normal working hours) \* 100%  
 Note 2: "Normal total working hours" is based on the proportion of each employee's employment of each gender in 2019, and the total hours of the year are estimated from the number of shifts

### Health Management Program

Healthy employees are the most precious asset of a company, and high-quality companies are the most precious resource for employees. Successful international companies employ employee health management and health promotion as important business strategies, aiming to create healthy, positive and optimistic employment power, thereby enhancing company quality and competitiveness.



Healthy and happy employees can bring high creativity, high efficiency, high production and high profits to the company. Good health is a prerequisite for a good employee. The success of a company depends on employees with good performance. A successful company is the foundation of the country's economic prosperity and sustainable development. Nuvoton's health management and promotion plan is to keep working towards the LOHAS goal of "Work Happily, Live Healthily". We are committed to taking good care of our employees' health and well-being.



### Health Management Plan

The potential impact caused by employee occupational injury or illness, or a decline in productivity due to poor personal health, should not be underestimated. Nuvoton's health management takes "human health" as the central concept, striving long-term for "whole-person, full-process, and all-round" health services to promote employee health management and benefit the physical and mental health of employees. With warm and friendly services, Nuvoton combines elements of industrial safety and environmental protection, focusing on a safe and hygienic working environment to implementing the company's "healthy workplace, friendly enterprise" policy.

#### \* 7-11 Professional and Instant Health Services Around The Clock

The nurses in the health center provide 24-hour health services and emergency rescue. Our intentions and care shown to our employees are close to the heart, providing them with a sense of trust. The comfortable, warm, and private space provides high-quality services so that employees can feel calm and relaxed in body, mind and spirit.

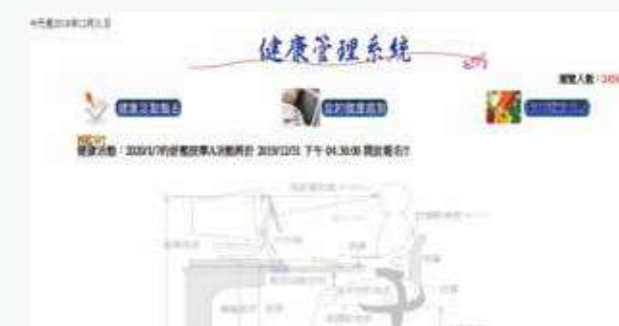
#### \* Emergency and First Aid Response: With our established

system of various incident notification and response procedures, we have installed sufficient emergency response equipment and medical kits, and regulate emergency rescue personnel to complete on-the-job education and training on a regular basis, combined with e-learning special learning methods so as to reduce personnel injuries in emergency situations. At present, the factory is equipped with three AEDs (automatic external defibrillators), three AED (Automated External Defibrillator) units, and two sets of supplementary oxygen units, and other such emergency equipment. In addition, CPR and AED training is actively promoted throughout the company, increasing employee emergency response knowledge and capabilities.

#### \* Convenient Health Management System

"My Health Manager" platform built by the health center is placed on the homepage of the company website.

Employees can log in using their individual account and password to check personal health examination reports and trends over the years, appointments for health outpatient clinics, as well as register for various health promotion activities and seminars. The safe and convenient management system is simple and easy for employees to use. At the end of 2019, the website had reached over 24,563 views.



#### \* Health Check Program

Every Nuvoton employee is provided with an annual health check. The health center plans customized inspection items based on health management needs and different groups every year, introducing the Three Levels and Five Stages of Disease Prevention model to achieve early diagnosis and early treatment. Our arrangements and plans over the years have deeply embedded the concept of health in the hearts of employees. Employees actively participate in health checks or health promotion activities, and the inspection rate of regulatory health check items over the years has reached 100%. We have been cooperating with the health check team of the medical center for more than 15 years. Long-term cooperation has cultivated tacit understanding and improved service quality. The chief physician of the health check center has gained a high level of trust and satisfaction from employees. Nuvoton special health examination have three categories: ionizing radiation exposure, arsenic exposure, and particle exposure checks. Over employees received the above checks in 2019, and due to proper work safety monitoring and regulations and work operations procedures, no employees checked were classified with abnormality grades of higher than II.

**\* Drafting and Implementation of Health Management SOP**

The health center checks for abnormalities in employees based on the statistics, analysis, and hierarchical management of the health check data; Employees those with serious abnormalities are arranged to have medical examinations and treatment, while those with slight abnormalities are given physician counseling and health lectures through the company health clinic.

Nuvoton Physical Examination Health Management Tiers	Definition	Management Method
Tier 1	All results of physical examination evaluated as being within normal ranges by a physician.	Health promotion
Tier 2	Some abnormal findings seen in physical examination results but determined to have no effect on the health of examined individual by a physician.	Health education and promotion
Tier 3	Abnormal physical exam findings requiring additional consultation and education of related health risks.	Health education and consultation
Tier 4	Serious abnormalities found, further tests or medical attention required.	Medical consultation or further medical attention provided.
Tier 5	Critically abnormal findings requiring immediate notification and medical attention found.	Undergo medical treatment

**\* Health Clinic :**

Nuvoton arranges for physicians specializing in occupational disorders or family medicine to hold on site clinics every month to provide employees with medical consultation, care and support. Biannual on-site physician visitations allows for the discovery of potential health hazards so that immediate suggestions for preventing occupational disorders can be provided to help maintain a safe working environment that promotes employee health.

**\* Workplace Protection Plan Promotion :**

Nuvoton Technology has created different protection plans tailored to each different employee groups for the continuous promotion of the health of our employees to achieve a safe and healthy workplace environment.

**» Employee Assistance Program (EAPC)**

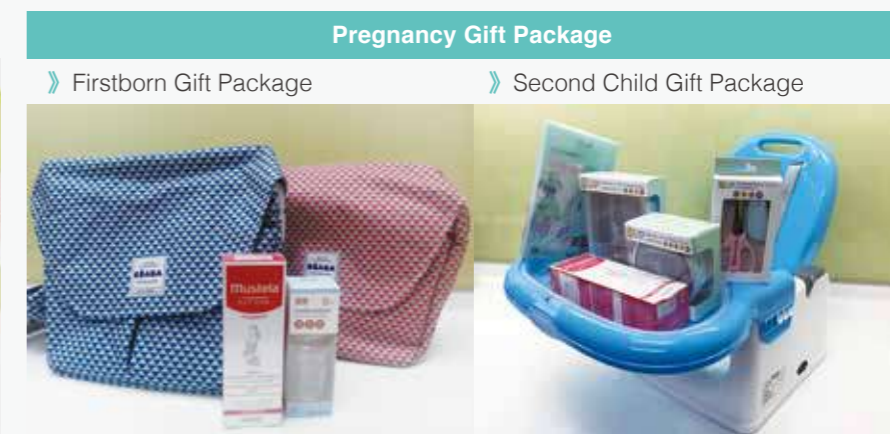
To establish a positive attitude and culture where employees are able to effectively solve any work and life issues, we have employed the help of third party professional mental health institutions to help establish a system for meeting the psychological health needs of our employees. Every employee is given a minimum of three hours of free professional psychological consultation services per year. In addition, we advocate seeking help immediately when encountering difficulties by maintaining complete confidentiality and protecting the privacy of any employees that choose to seek help.

**» Maternity Protection**

We provide pregnancy and postpartum physician consultations, physical and mental assessments, job suitability and work environment risk assessments and personalized health management plans for all female employees from the beginning of their pregnancy up to a year after birth. Nuvoton actively encourages its employees to have children, and provides fully-equipped nursing rooms, special parking spaces for pregnant women, baby supplies and childcare support etc. to provide our employees that are just beginning to start families with additional support. 11 employees collected our new mom gift packages in 2019.

**» Human Factors Injury Prevention Program**

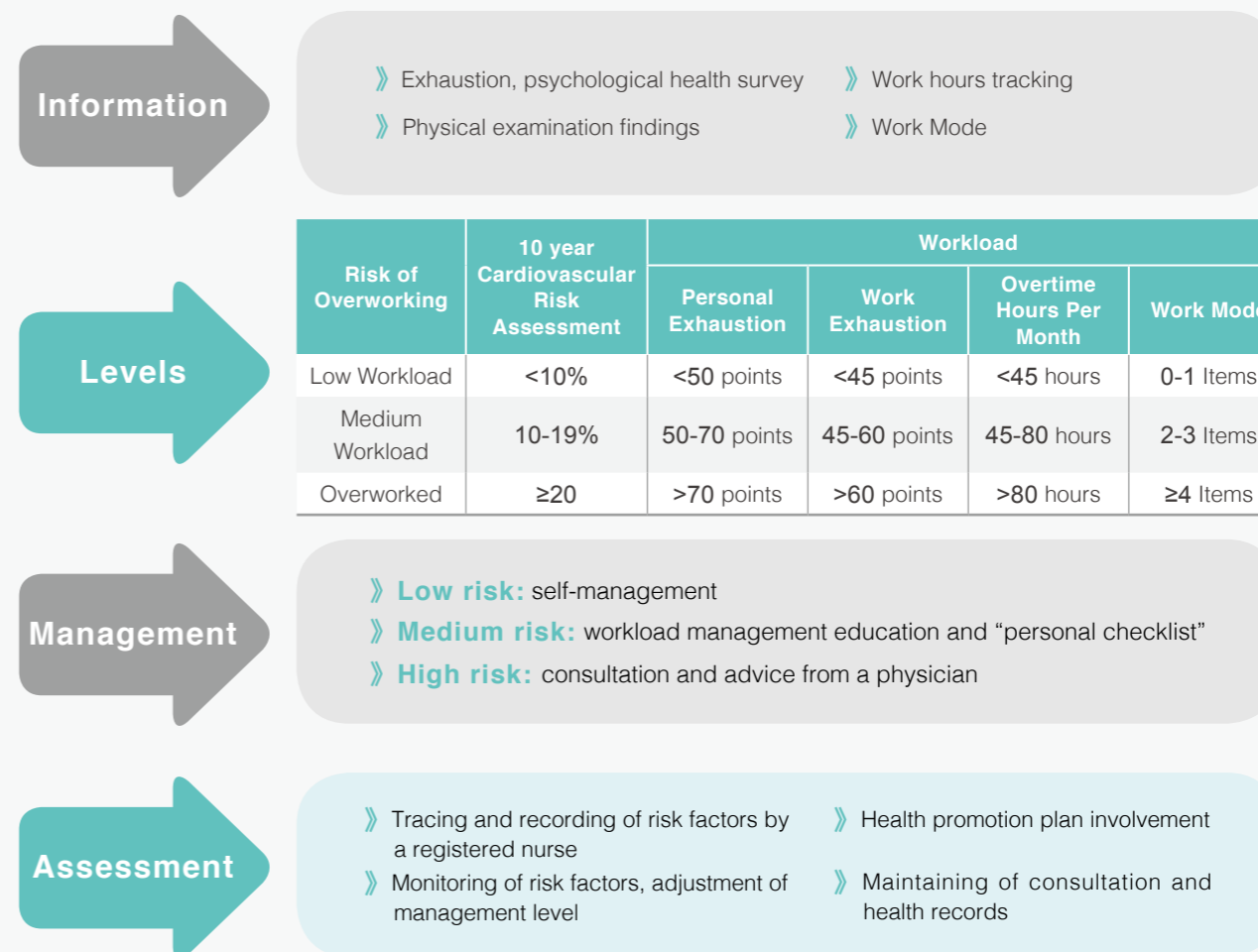
Nuvoton's longstanding Human Factors Injury Prevention Program continues helping our employees avoid musculoskeletal injuries caused by repetitive work or incorrect posture. Each year during the Company's annual employee health check period, online surveys are conducted to help better understand musculoskeletal discomforts currently being experienced by employees. For serious cases, outpatient consultations or on site work assessments are carried out by occupational physicians and proper sitting advising is given on a one on one basis. Activities such as our three times a day office-wide stretching exercise sessions, professional massages from visually impaired masseuses, stretching classes, and physical therapists consultation events continue to be well-received and participated in by employees.



**» Work Overload Management**

In order to prevent work overloading leading to related diseases, the online annual health check questionnaire allows employees to fill in their work and personal pressure factors. After each annual health check and test results analysis, employees that are at high risk of cardiovascular disease are assessed for duration and work environment related risk when working night shifts, day shifts, and rotating shifts. Consultations with a physician are also arranged for these employees for individual consultation and health education. Extra attention is also paid to these workers to ensure that they do not work overtime.

**Nuvoton Abnormal Workload Management**



**Health Promotion Plan**

The individual health of our employees benefits not only themselves, but also the Company. Healthy employees are the driving force behind the sustainable growth of the Company. Nuvoton provides its employees with high quality working environments, benefits, and employee health promotion services, while caring for the health and comfort of our employees. To promote employee health, we advocate for regular exercise, healthy diets, and participation in health related lectures. In addition, health related activities and events such as walking for health, vaccinations, bone density checks, cervical and ultrasound screening, massage sessions etc. are held on a constant basis to promote the mental and bodily health of employees; helping to maintain a positive work attitude and culture, reducing employee absences and improving work quality and efficiency and energy.



Several of the 10 leading causes of death in the Nation are related to obesity, including cancer and cardiovascular disease. In addition, obesity may result in degenerative arthritis, metabolic syndrome, diabetes, hypertension, hypercholesterolemia, etc. To reduce risk amongst Nuvoton employees and promote employee health, annual weight loss and walk for health events are held. As new elements are added each year to encourage employees to participate in these events, employee health has evolved into a group effort and company wide tradition.

In addition, to achieve the goal of "cancer prevention" through early diagnosis and early treatment, Nuvoton continues to provide screening reimbursement for designated items for employees categorized as high-risk according to data published by the National Health Promotion Administration in 2018. In following with the Company's 2018 eight part cancer prevention program, ultrasound screening for thyroid cancer was further included to the list of cancer screenings provided to further improve chances of early discovery and early treatment.

- Liver cancer
- Prostate cancer
- Colorectal cancer
- Cervical cancer
- Breast cancer



- NEW!**
- Thyroid cancer
  - Nasopharynx cancer
  - Oral cancer
  - Liver cancer

**\* Walking Event**

Nuvoton's 2019 "Take a Walk" health event was held in conjunction with the Company's "Leisure Walking" club. The Marathons World application was used to help record exercise methods, times, and frequencies of participants. Participants were also able to see their exercise mileage rankings, encouraging friendly competition and discussion. In addition, participants were also able to share comments of encouragement. The three month event saw an average of 62 participants per month. A total of 13,165 km was walked, a total of almost 11 (10.97) laps of Taiwan's coastline (the length of Taiwan's coastline is around 1,200 km).

**\* Weight loss event**

A new approach was taken for Nuvoton's 2019 "Cut Weight,

Gain Health" event. Participants formed groups of three and came up with their own group names. A total of 37 groups and 111 employees participated. Groups entertained us by coming up with names such as: Most Liked Waistlines, Fatty Special Attack Force, Light as Feathers, Weight Loss 2019, Revenge of the Housewives, Breathing Makes You Fat Right?, Round, Meaty, White Flower Oil, Thick Slices of Toast, Fried Chicken Daily, Pandarians, Fat Oppas, Empty Wallets and Heavy Hearts, demonstrating the amount of creativity and determination put into the event as well as generating discussion for the event. During the three month event, a total of 407.6 kg was lost, an average of 3.7 kg. The personal best performance was a loss of 24.1 kg.

**Exercise App, Exercise Mileage Rankings**

Rank	Name	Mileage
1	King Chen	388.8 km
2	Yi-Hsin	351.0 km
3	陳國輝	228.5 km
4	陳國輝	220.0 km
5	陳國輝	218.3 km
6	陳國輝	188.3 km
7	陳國輝	185.2 km
8	陳國輝	178.2 km
9	陳國輝	77.8 km
10	陳國輝	76.8 km
11	陳國輝	77.7 km
12	陳國輝	69.2 km
13	陳國輝	64.7 km
14	陳國輝	54.1 km
15	陳國輝	54.3 km
16	陳國輝	54.1 km
17	陳國輝	53.7 km
18	陳國輝	52.4 km
19	陳國輝	51.7 km
20	陳國輝	42.9 km
21	陳國輝	40.3 km
22	陳國輝	39.7 km
23	陳國輝	39.3 km
24	陳國輝	38.7 km
25	陳國輝	33.3 km
26	陳國輝	31.5 km
27	陳國輝	31.2 km
28	陳國輝	30.0 km
29	陳國輝	22.7 km
30	陳國輝	19.4 km
31	陳國輝	16.0 km
32	陳國輝	14.2 km



**New Year, New You, 2019's "Find a Group" Lose Weight Gain Rewards Event**

**2019 揪團減重比賽**

揪的就是你

時間: 8/21 - 11/21 三個月  
對象: 不限  
方式:  
- 揪團 三人成羣 (Who?) -> 揪團名  
- 揪團其中一人BMI > 25; 不限男女, 可跨部門  
- 報名收銀碼送 \$500 元 (票) 比賽期間與員工家屬送全額獎券  
(本活動發給獎券, 換得公益)  
- 參加 2 次減重課程  
- 揪團登錄數目/Week  
- 揪團揪團揪團名

獎勵期間: (報名截止 20 日, 揪團報名截止, 揪團中心 10 日半滿即開獎內含)

揪團獎勵:  
揪團第一名: 10000 元 (揪團成員不得有異議)  
揪團第二名: 10000 元 (揪團成員不得有異議)  
揪團第三名: 5000 元 (揪團成員不得有異議)

PK 獎品:  
活動期間, 個人減重 10kg 以上, 揪團 10 日內, 揪團 10 日內, 揪團 10 日內  
活動期間, 個人減重 20kg 以上, 揪團 10 日內, 揪團 10 日內, 揪團 10 日內  
揪團 10 日內, 揪團 10 日內, 揪團 10 日內

**Healthy Weight Loss Talk**

拒絕甜蜜的負擔, 健康減重講座

MyT = My metabolic type®  
My=我的; metabolic type=代謝型態

**MYT 我的代謝型態**

請你, 我是健康, 我的代謝型態  
請你, 我是健康, 我的代謝型態  
請你, 我是健康, 我的代謝型態  
請你, 我是健康, 我的代謝型態  
請你, 我是健康, 我的代謝型態

點我報名

日期/時間	主題	講師	講者介紹
8/27(二) 11:30-13:00	面對方法: 減重不靠意志力	林麗卿醫師 林麗卿醫師, 內科醫師, 內科醫師, 內科醫師	林麗卿醫師, 內科醫師, 內科醫師, 內科醫師
9/16(二) 11:30-13:00	拒絕, 拒絕, 拒絕 拒絕, 拒絕, 拒絕	林麗卿醫師 林麗卿醫師, 內科醫師, 內科醫師, 內科醫師	林麗卿醫師, 內科醫師, 內科醫師, 內科醫師





# 8

## Philanthropy

› Public Welfare Events

## Philanthropy

Nuvoton upholds the corporate social responsibility principles and spirit by continuing to care for rural children and students from economically disadvantaged families. In 2015, the Company established its own Love Society to initiate public welfare activities such as end of year donations, second-hand charity sales, year end supplies donation drives, and environmental education etc. As a collective, we seek to help protect the environment and socially disadvantaged groups. Our efforts have helped organizations such as Genesis Social Welfare Foundation, Syn-lu Social Welfare Foundation, Shi-guang Special Education and Care Home, Hsinchu Family Support Center, Yawen Listening and Speech Foundation, Municipal Yuandongguomin Junior High School, National Taiwan University Hospital Hsin-Chu Branch, Economically Disadvantaged Patients at Mackay Memorial Hospital etc., as well as employees suffering from serious illness or injuries. During each event, employees participated enthusiastically and every one managed to contribute in their own way. Although funds were limited, the effort made by every one was heartwarming.

### 2019 Love Society Public Welfare Events:

#### \* End of Year Donation Drive

Donations were made to the Hsinchu City Renai Children's Home. The Children's Home is located in a neighborhood near Nuvoton and provides care for single parent family children or orphans. After receiving news that children at the Home were in urgent need of school registration fee assistance, early treatment fees, and more, we sent out a public notice to all employees to call on them for help. In a short time, 360,000 TWD was raised. The principal, teachers, and children were all extremely grateful. In addition to donating to the Children's Home, we also provided a portion of the funds to the continuous support of aboriginal or new immigrant children at Municipal Yuandongguomin Junior High School. It is our belief that even faced with economic hardship, everyone should still have the opportunity for education. Education is the nourishment for their future growth and can be a stepping stone to improve their lives. We hope that the compassion of Nuvoton employees can help these children as they march bravely towards their dreams.

#### \* Year End Supplies Donation Drive

Each year, our Love Society encourages employees to donate extra clothing or other useful items that they no longer use to the Shi-guang Special Education and Care Home. Not only does this help protect the environment through reuse and repurposing, employees are also very passionate about taking part. Several employees also helped purchase daily necessities such as body wash, laundry detergent, toilet paper etc. to donate. Every donation drive so far has ended with an entire truckload of supplies

to be sent over to the Care Home in hopes of being able to warm the hearts of those in need during the cold winter.

#### \* Mid-Autumn Youth and Elderly Support Project

In 2018, we cooperated with Ms. Shen Xin-ling to purchase grapefruit from old local farmers in Yunlin and donated them to the single elderly in Hsinchu City. In 2019, we continued to support old farmers, donating a total of 138,000 TWD to purchase grapefruit for elementary school teachers and students in rural Hsinchu. Taking the burden of having to worry about selling their grapefruit off of old farmers, and letting children enjoy grapefruit with their families during the Mid-Autumn Festival.

#### \* Clean Beaches for the Planet

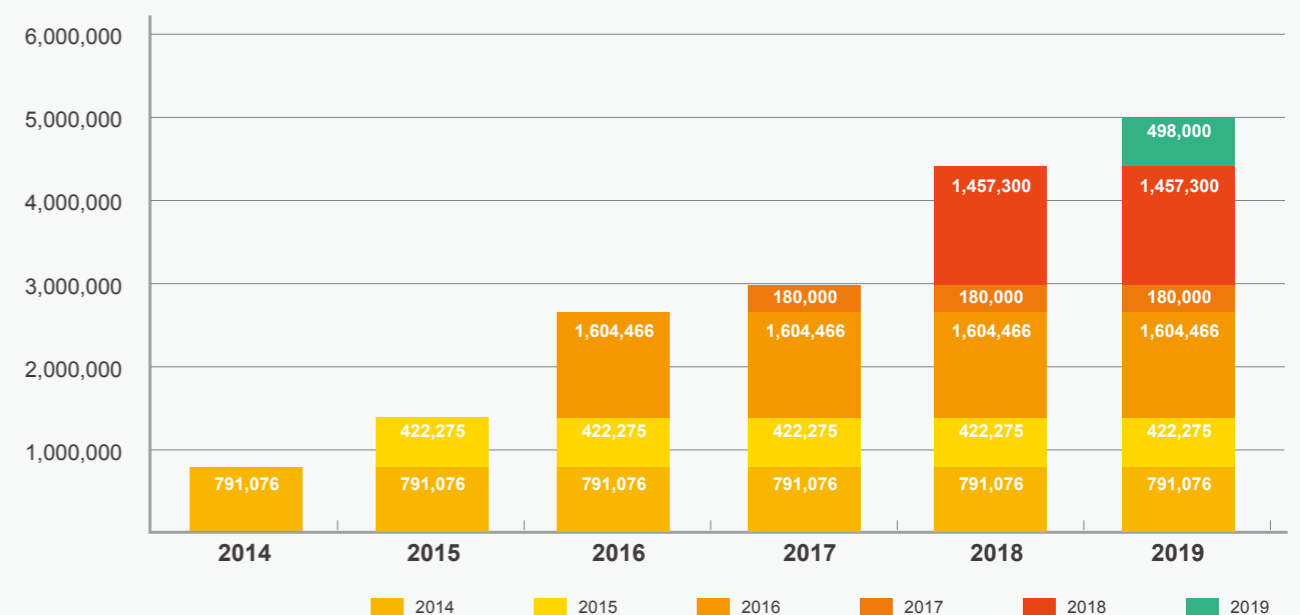
There is only one Earth, and it is ours to protect. Environmental protection awareness must be promoted from top down, beginning with environmental protection education, everyone has a place in the protection of the environment. Nuvoton called on employees and their families to help protect the earth, and participate in the spring season beach cleaning event held by the Environmental Protection Bureau of Hsinchu City. This year, Nuvoton employees participated in adopt a beach initiatives by helping to clean Kanhai Park and Yugang Park. An unthinkable amount of trash can be found on beaches. In addition to plastic bottles, plastic pellets and fragments, and discarded fishing nets, even large appliances such as refrigerators were found during our beach cleanup event. As exhausted as participating employees were after using sieves and shovels to help uncover trash hidden underneath, seeing the beaches cleaned of trash made it all worth it.

#### \* Environmental Education and Protection Events

Since 2016, Nuvoton has been a member of the Hsinchu Science Park Administration Environmental Education Partnership Program, actively assisting and participating in the promotion of environmental education activities. In 2019, we cooperated with the Hsinchu City Environmental Protection Bureau to host "Recycling" and "Shopping Bag Donation" events. Employees were invited to engage in green living practices, to do their part in protecting the environment, using simple interactive games to teach the public how to recycle domestic daily waste produced. Caring for the earth begins with the "donation of shopping bags".

#### » By spreading love and care, we at Nuvoton hope to help make the world a better place.

In 2019, Nuvoton employees donated 498,000 TWD on their own initiative, donations made over the past 6 years are shown in figure below:



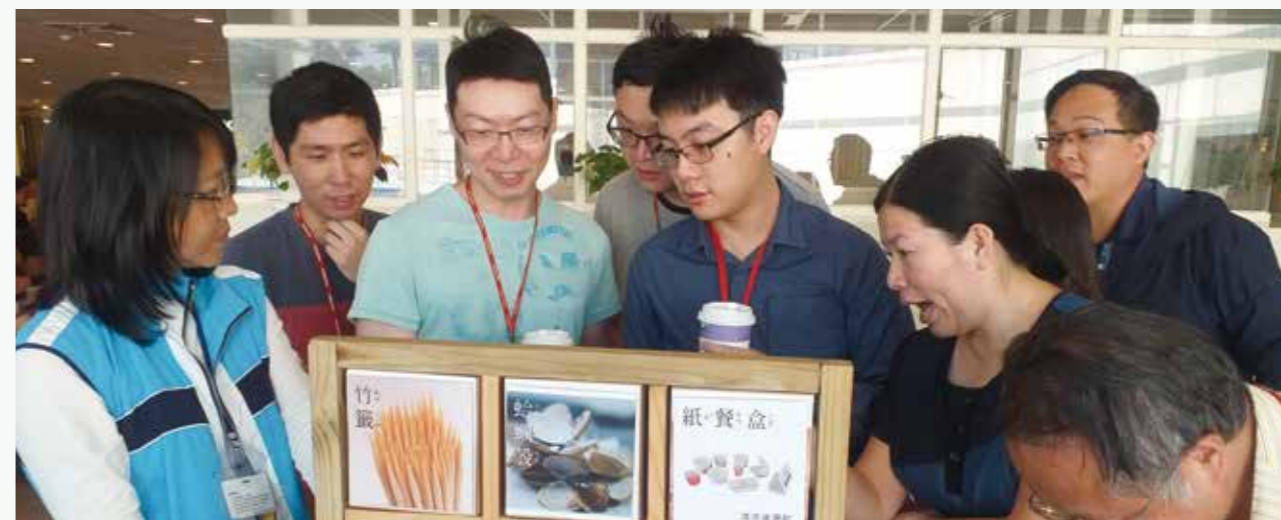
Donation to Renai Citizen's Home



Supplies Donated to Shi-guang Special Education and Care Home



\* Partnership with Bureau of Environmental Protection Hsinchu for "Recycling" and "Donate a Shopping Bag" events



2019 Beach Cleaning Event



2019 Beach Cleaning Event



2019 Beach Cleaning Event



2019 Beach Cleaning Certificate of Thanks



\* Hsinchu Science Park Administration Environmental Education Partnership



Supporting Old Local Farmers in Mid-Autumn 2019



2019 Mid-autumn Purchasing and Donation of Grapefruit from Old Farmers to Rural Students



GRI Standards (2016 version) Index Table

General Standard Disclosures GRI 102 : 2016

Scope	Index	Section	Details	Page No.
Organization Profile	102-1	3.1 Company introduction		09
	102-2	3.3 Innovative Technology and Products		10
	102-3	3.1 Company introduction		09
	102-4	3.1 Company introduction		09
	102-5	3.1 Company introduction		09
	102-6	3.1 Company introduction 3.3 Innovative Technology and Products		09 10
	102-7	3.1 Company introduction 3.2 Company Mission 3.3 Innovative Technology and Products 3.5 Financial Performance		09 10 11 12
	102-8	7.1 Human Resources Structure		44
	102-9	5.5 Sustainable Supply Chain Management		27
	102-10		Operations at the Zhubei Building started in November, 2019	
	102-11	4.6 Risk Management		19
	102-12	4.5 Legal Compliance	Unable to participate in external initiatives	18
	102-13	3.6 Association(Guild) Membership		13
	102-14	1. Words from the Chairman		02
102-16	4.4 Code of Conduct and Regulatory Compliance		16	
102-18	4.1 Corporate Governance 4.2 Board of Directors		14 17	
Identified Material Aspects and	102-40	2.2 Communication and Participation of the Stakeholders		06
	102-41		The company has no group agreements	
	102-42	2.2 Communication and Participation of the Stakeholders		06
	102-43	2.3 Communications and Participation of the Stakeholders		06
	102-44	2.3 Communications and Participation of the Stakeholders		06
Stakeholder Engagement	102-45	2. Description		05
	102-46	2. Description		05
	102-47	2.2 Communications and Participation of the Stakeholders		06
	102-48	6.4.1 Greenhouse Gas Inventory		43
102-49		No major changes to report		
Report Profile	102-50	2.1 Description		05
	102-51	2.1 Description		05
	102-52	2.1 Description		05
	102-53	2.1 Description		05
	102-54	2.1 Description		05
Content Index	102-55	2.1 Description		05
Assurance/ Confidence	102-56	2.1 Description		05
		9.2 3rd Party Statement of Verification		

Special Metrics Disclosure

Finance GRI 200 : 2016

Scope	Index	Section	Page No.	Omitted
Economic Performance	Management Policies	3.5 Financial Performance	12	
	201-1	3.5 Financial Performance	12	
	201-3	7.3 Salary and Benefits	46	
Market Presence	Management Policies	7. Best Workplace	44	
	201-3	7.3 Salary and Benefits	46	

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## Appendix

- » GRI Standards Index Table
- » Third Party Verification Statement

## Environment GRI 300 : 2016

Scope	Index	Section	Page No.	Omitted
Energy	Management Policies	6.2 Cherishing Resources	27	
	302-1	6.2.1 Energy Conservation	28	
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	302-4	6.2.1 Energy Conservation	28	
Water	Management Policies	6.2 Cherishing Resources	27	
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Emissions	Management Policies	6.4 Greenhouse Gas Emissions Management	39	
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Sewage and Waste	Management Policies	6.3 Pollution Prevention	32	
	306-1	6.3.3 Water Pollution Prevention	34	
	306-2	6.3.4 Waste Management	36	
Environmental Protection and Legal Compliance	Management Policies	4.4 Code of Conduct and Regulatory Compliance	16	
	307-1			environmental laws and/or regulations and fines occurred during the reporting period
Suppliers Environment Assessment	Management Policies	5.5 Sustainable Supply Chain Management	23	
	308-1			No new raw material suppliers added in 2019

## Social GRI 400 : 2016

Scope	Index	Section	Page No.	Omitted
Employer/employee Relations	Management Policies	7. Best Workplace	44	
	401-1	7.2 Talent Acquisition	45	
	401-2	7.3 Salary and Benefits	46	
		7.6 Employee Welfare Committee	55	
401-3	7.3 Salary and Benefits	46		
Employer/employee Relations	Management Policies	7. Best Workplace	44	
	402-1	The notice period for Nuvoton's major operational changes is handled in accordance with local laws and regulations		
Occupational Health & Safety	Management Policies	7.7 Occupational Safety and Hygiene	58	
	403-1	7.7 Occupational Safety and Hygiene	58	
	403-2	7.7.7 Occupational Hazard Metrics	64	
training & Education	Management Policies	7. Best Workplace	44	
	404-1	7.4 Learning and Development	48	
No Discrimination	Management Policies	7. Best Workplace	44	
	406-1	7.2 Talent Acquisition	45	
Forces Labor	Management Policies	7.2 Talent Acquisition	46	
	409-1	7.2 Talent Acquisition	45	was not explicitly disclosed by the suppliers detailed in this report and will be added to supplier self-evaluations in the future.
Customer Health and Safety	Management Policies	6.5 Green Products	41	
	416-1	6.5 Green Products	41	
Client Privacy	Management Policies	5. Client Services and Supplier Management	21	
	418-1	5.3 Client Privacy Protection	22	
Social and Economic Legal Compliance	Management Policies	4.4 Code of Conduct and Regulatory Compliance	16	
	419-1	4.4 Code of Conduct and Regulatory Compliance	16	

## Third Party Statement of Assurance



## ASSURANCE STATEMENT

**SGS TAIWAN LTD.'S REPORT ON SUSTAINABILITY ACTIVITIES IN THE NUVOTON TECHNOLOGY CORPORATION'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 Nuvoton Technology Corporation (hereinafter referred to as Nuvoton) 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 (2020/06/10~2020/07/10). 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 Nuvoton's CSR Report of 2019 and its presentation are the responsibility of the management of Nuvoton. SGS has not been involved in the preparation of any of the material included in Nuvoton's CSR Report of 2019.

Our responsibility is to express an opinion on the report content within the scope of verification with the intention to inform all Nuvoton'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:

- AA1000 Assurance Standard (2008) Type 1 evaluation of the report content and supporting management systems against the AA1000 Accountability Principles (2008) at a moderate level of scrutiny; 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 has not been checked back to source as part of this assurance process.

**STATEMENT OF INDEPENDENCE AND COMPETENCE**

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

TWLPP 5008 Issue 2005

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 Nuvoton's CSR Report of 2019 verified is accurate, reliable and provides a fair and balanced representation of Nuvoton 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 1, Moderate level assurance.

#### **AA1000 ACCOUNTABILITY PRINCIPLES (2008) CONCLUSIONS, FINDINGS AND RECOMMENDATIONS**

##### **Inclusivity**

Nuvoton 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. For future reporting, Nuvoton may proactively consider having more direct two-ways involvement of stakeholders during future engagement.

##### **Materiality**

Nuvoton 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, Nuvoton'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 future reporting, it is recommended to have more descriptions of Nuvoton's involvement with the impacts for each material topic, and how efforts were given to mitigate the impacts. When reporting on goals and targets for each material topic, the expected results are suggested to be set, if applicable, with quantitative objectives. It is proposed to explain the mechanisms for evaluating the effectiveness of the management approach specifically in the future.

Signed:

For and on behalf of SGS Taiwan Ltd.



David Huang  
Senior Director  
Taipei, Taiwan  
24 July, 2020  
WWW.SGS.COM

