



旺宏電子股份有限公司

**2014 Macronix International Co., Ltd.  
Corporate Social Responsibility Report**

**June 2015**

# Editorial Principles

Welcome to the Macronix International Co., Ltd. (hereinafter “Macronix) Corporate Social Responsibility (CSR) Report. The purpose of the CSR report is to provide the general public and all Macronix stakeholders a better understanding of our concerns and actions in 2014 with regard to sustainability and social responsibility. The report also shows our other commitments to various CSR matters and our performance in these areas.

## Reporting Period

The report discloses Macronix's management guidelines, the core topics on CSR, our corporate commitment, and the results of our various CSR initiatives during the period from January 1, 2014 to December 31, 2014. The report is issued annually. (The next publication is scheduled for June 2016). There were no significant changes during the reporting period regarding the organization's size, structure, ownership, or its supply chain.

## Aspect Boundaries and Scope of the Report:

Macronix's corporate organization is composed of the company's headquarters (including the employee dormitory and activity center), Fab 1, Fab 2, Fab 5, Testing Plant, and our Taipei office (please refer to Chapter 2.2 for all global business locations).

The scope of the report includes the headquarters (address: No.16, Li-Hsin Road, Science Park, Hsin-chu, Taiwan, R.O.C.), Fab 1 (address: No.3, Creation Road III, Science Park, Hsin-chu, Taiwan, R.O.C.), Fab 2 (address: No.16, Li-Hsin Road, Science Park, Hsin-chu, Taiwan, R.O.C.), Fab 5 (address: No.19, Li-Hsin Road, Science Park, Hsin-chu, Taiwan, R.O.C.), and Testing Plant (address: No.8, Creation Road IV, Science Park, Hsin-chu, Taiwan, R.O.C.).

## Reporting and Third Party Verification

The report was written based on version 4.0 of the Global Reporting Initiative (GRI G4.0) and AA 1000 standards, and was verified by a third party verification unit commissioned by the management representative. Bureau Veritas Certification (Taiwan) Co., Ltd. was entrusted with the evaluation of the report. The report was verified to comply with the requirements of the GRI G4.0 and AA1000AS: 2008 standards. The financial information and ESH performance in this report were presented in common

international indicators.

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# 1. Messages from Macronix Executives

## Message from the Chairman and CEO



In 2014, because Macronix has continuously expanded its product lines and applications, its advanced 12-inch fab plant has gradually reached optimal productivity, generating more revenue for Macronix than it did last year and increasing Macronix's gross operating product by 41% compared with the previous year. This reveals the company's positive growth in business operations. Particularly, in response to the development of new applications for Internet of Things and wearable devices, as well as the upcoming of the big data era, Macronix will continue to advance its existing technologies and products for improving people's lifestyle.

As the global leading provider of non-volatile memory and integrated device, Macronix provides Mask ROM/ XtraROM® (Read-Only Memory), NOR Flash memory and NAND Flash memory solutions in a variety of specifications and capacities. Macronix is not only the largest global manufacturer and supplier of ROM, but its shipment of NOR Flash memory continues to increase. Throughout 2014, over 1.9 billion NOR Flash memory units have been shipped, increasing Macronix's global market share in NOR Flash to the second largest in the world. The superior quality and increased customer demand for our newly launched SLC NAND Flash and NAND-based MCP (Multi-Chip Package) products, these products are widely used across the global market.

According to IDC statistics, Taiwan's wearable device market is growing rapidly, with a capacity that is anticipated to increase to NT\$112 million by 2018 and an annual compound growth rate of 78.4%. In response to such a massive business opportunity, Macronix has already developed corresponding strategies for expanding the market and expediting the development of relevant product solutions. For example, our new series of wide-voltage and ultra-low power NOR Flash products are designed with a Vcc wide voltage (1.7V-3.6V), which reduces power consumption by more than 60% compared with traditional NOR Flash. Macronix also actively researches and develops various types of advanced memory products, playing a critical role in the ecological system of Internet of Things (IoT).

Macronix has long devoted its effort in the innovation, research and development (R&D) of non-volatile memory technologies and products, attaching a high level of importance to protecting its intellectual property (IP) rights. The company has filed patent applications in various countries to secure its own key technologies and abundant R&D innovations. In 2014, the

company acquired 436 patents, a growth of 14% compared with the previous year, and ranked 14th place in the top 100 patent applications in Taiwan. Currently, the company has accumulated over 5,800 patents, further strengthening its IP and technology strength and solidifying its leading status in the global non-volatile memory industry.

As a part of the global market, Macronix upholds the concept of sustainable management by complying with the Electronic Industry Citizenship Coalition (EICC) Code of Conduct and actively promoting energy and water conservation, as well as waste reduction. Moreover, it has investigated in renewing and maintaining various types of pollution prevention equipment, with the goal of establishing efficient, green fab plants. In addition, our products have received green product certificates from internationally recognized customers. We have also invited our partners to sign the Supplier Social Responsibility and Business Ethics Agreement, in an effort to jointly promote CSR practices and contribute to protecting the environment.

Macronix has always been very committed to corporate social responsibility, particularly in training technical talent and promoting education in the sciences, with the company adopting these platforms into our corporate culture. Macronix established the Macronix Education Foundation in 2001 and has sponsored the Macronix Golden Silicon Awards and Macronix Science Awards for 14 years. These competitions have attracted the participation of nearly 20,000 teachers and students over the years and led to the awarding of more than NT\$90 million in scholarships. This devotion has inspired students in Taiwan to explore the sciences and develop their potential for innovation. The commitment of the Macronix Education Foundation has also been extended internationally in recent years. Donations were made to the International Organization of Chinese Physicists and Astronomers (OCPA) to establish the Outstanding Young Researcher Award (Macronix Prize), with the aim of promoting high-tech research development by outstanding Chinese talent.

Dedicated to promoting CSR, Macronix was the first semiconductor firm in the Hsinchu Science and Industrial Park to receive the SA 8000 Corporate Responsibility Management Systems certificate. Our CSR reports are compiled according to Global Reporting Initiative (GRI), Sustainability Reporting Guidelines Version 3.1 and Accountability 1000 Assurance Standard (AA1000) and have obtained A+ rating in the third-party verification, rendering it a CSR report that has passed double international verification standards.

Macronix strictly adheres to a high standard of corporate governance practice, endeavors to protect shareholders' and stakeholders' rights, reinforces managerial disciplines and duties of our board of directors, references other countries' advanced system, and adopts numerous forward-looking practices in accordance with Taiwan's laws and regulations. To understand our stakeholders' expectations and needs, Macronix interacts with relevant stakeholders during our daily business activities and sets up communication channels on the company's website, where people could ask questions and express their opinions. Personnel are designated to process and

deliver the communicated issues to various accountable units that will respond to these issues. This year, the Taiwan Stock Exchange placed Macronix in the top 5 companies that received outstanding performance in the first corporate governance evaluation. This validates Macronix's efforts in implementing corporate governance, emphasizing the importance of shareholder equity, maintaining operational transparency, and its excellent performance in risk management and information disclosure.

To pursue corporate sustainability, we actively fulfill our CSR through tangible action. Following prolonged periods of business expansion into the market, our three major product lines (IoT/wearable devices, wireless communication, and automobile/industrial products) will be the primary driver of the company's future operational growth. We will continue to focus on our primary business activities, and research and develop value-added, green products to mitigate environmental impact. Macronix will uphold its business philosophy of honesty, ensure an honest disclosure, co-exist and prosper together with our stakeholders, and devote to enriching human lives, thereby becoming the benchmark of a sustainable company.

**Macronix Chairman & CEO**

The image shows a handwritten signature in black ink. The characters are stylized and appear to be '吳敏求' (Wu Minqiu), which is the name of the Macronix Chairman & CEO.

## Message from the President



As a leading provider of non-volatile memory, Macronix adheres to our corporate values: innovation, quality, efficiency, and team work to strive to deliver high-quality, innovative and performance driven products to our customers with world-class R&D and manufacturing capability. In addition to innovating products and ensuring the continual growth of its main businesses, Macronix anticipates becoming the benchmark company in green technology.

Regarding environmental protection, safety, and health systems, we will incorporate all of our working environments into system management, actively promote energy and water conservation, as well as waste reduction, and invest in renewing and maintaining various types of pollution prevention equipment. Our efforts have honored us with multiple government awards for corporate environmental protection and energy conservation, in addition to obtaining Green Partner certification.

In 2014, Macronix has invested over NT\$170 million in environmental protection. Our major significant outcomes included establishing the energy baseline for energy-consuming process equipment and a whole system for our 12-inch Fab(Fab 5) to increase energy efficiency. In 2013, our Fab 5 was ranked first place in the energy conservation and carbon reduction project by Hsinchu Science Park. In 2014, Macronix was recognized with “Excellence in Energy Conservation” and “Excellence for Promoting Energy Education” awards from the Ministry of Economic Affairs for our significant achievement in environmental protection and energy conservation efforts.

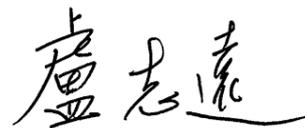
Besides mitigating environmental impact by regulating our daily business operations, we also proceeded from the source, incorporating environment design concepts into our product designs. Macronix's green products are free from halogen and lead and conform to EU's RoHS directives and the requirements for substances of very high concern (SVHC). Furthermore, we prohibit the use of conflict minerals, integrate the primary members of a product supply chain to construct a comprehensive green electronic product supply chain management system, and implement risk assessment of suppliers (RAS) to ensure that the entire supply chain could jointly implement green practices. Macronix follows international trends in environmental protection, and procures equipment with Eco Labels (implemented by the Environmental Protection Administration) or Energy Star labels (promoted by the Ministry of Economic Affairs), which

enabled us to be honored as a manufacturer of excellence that promotes green consumption and implements green procurement by the Environmental Protection Administration.

We uphold the belief that employees are fundamental to the Company and are the most precious asset. Therefore, we attach extreme importance to employee education and issues such as health, safety, and sanitation. We continuously build Macronix into a healthy, happy company where a wide variety of software and hardware facilities such as diverse learning maps and learning environment are established for cultivating our employees. To care for the physical and mental health of our employees, we promote a Sports Year Plan that encourages employees to cultivate the habit of exercises regularly while balancing their work and life, thereby cooperating with the company in creating a perfect vision. In 2013, Macronix received the Workplace Health Excellence Award from the Ministry of Health and Welfare, and in 2014, Macronix won the first "Work-Life Balance Award" presented by the Ministry of Labor in recognition of the Company's performance in care and support for employee families and the health and safety of its employees.

CSR has become a crucial sustainable development topic. The Macronix CSR Report demonstrates our persistence and determination in advancing toward a long-term corporate sustainable management. Macronix will incorporate the concept of CSR into its management system, internalize this concept into its corporate culture and value system, continue to strive to maximize benefits for its employees, customers, partners, and shareholders, and aim to produce a mutually beneficial outcome for the company, environment, and society.

**Macronix President**

A handwritten signature in Chinese characters, reading '盧志遠' (Lu Zhiyuan), written in black ink.

## 2. About Macronix

Macronix International Co., Ltd. ("Macronix" hereinafter), a global leader in non-volatile memory (NVM), was founded in 1989 at the Hsinchu Science Park in Taiwan. Since its inception, Macronix has adhered to high standards of corporate governance, while actively maintaining investor relations and advocating CSR. Macronix has been awarded Corporate Governance System Evaluation Certification for companies traded publicly and over the counter, and was the first semiconductor manufacturer at the Hsinchu Science Park to receive the SA8000 Corporate Responsibility Management Systems certificate.

As a leading provider of non-volatile memory with our own brand name and professional technology, we strive to maintain our competitive edge while continuing to increase production capacity. Macronix has been able to successfully build up long-term and mutually beneficial strategic partnership with world-class firms attributable to the high-quality of our products and services that we have been committed to delivering.

Focused on research and development (R&D) of products and proprietary technologies, Macronix invests over 10% of its revenues in R&D each year. Macronix has accumulated 5,716 patents worldwide as of the end of 2014. According to statistics by the Patent Board of the U.S. in 2011, Macronix's technology strength ranked No. 1 among Taiwan-based semiconductor firms and No. 18 worldwide, enabling Macronix to receive the Contribution Award at the 2011 R.O.C. National Invention and Creation Awards.

Macronix spun off its logic products unit and established subsidiaries so that the company's operations could better focus on delivering optimized performance. Since then, the subsidiaries and Macronix have cooperated in the R&D of mobile platform solutions, showing that the firm and its subsidiaries have the capability to operate independently and collaborate on a large scale when required.

Looking ahead, Macronix will continue to invest in R&D, staying ahead of the competition, while continuing with product innovation and enhancing its technology, quality, and services in order to increase its competitiveness and profitability. We will do our utmost to deliver sustainable growth for Macronix while also enhancing Taiwan's competitiveness worldwide.



旺宏電子股份有限公司  
MACRONIX INTERNATIONAL CO., LTD.

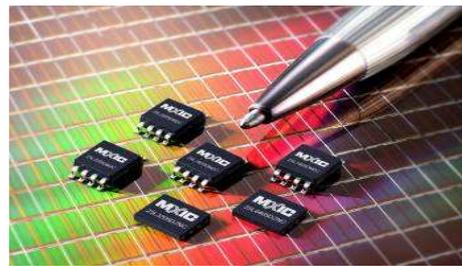
## 旺宏的使命及宣言 MISSION STATEMENT

在當今或未來，旺宏電子矢志成為半導體產業的領導供應廠商，以精湛的技術、最高的品質與可靠的服務，提供創新的客戶／應用導向解決方案與非揮發性記憶體產品。

Macronix is and will continue to be a leading provider of innovative customer/application driven system solutions and non-volatile memory requiring state-of-the-art technology, the highest quality and trustworthy service.

董事長兼執行長  
Chairman & CEO

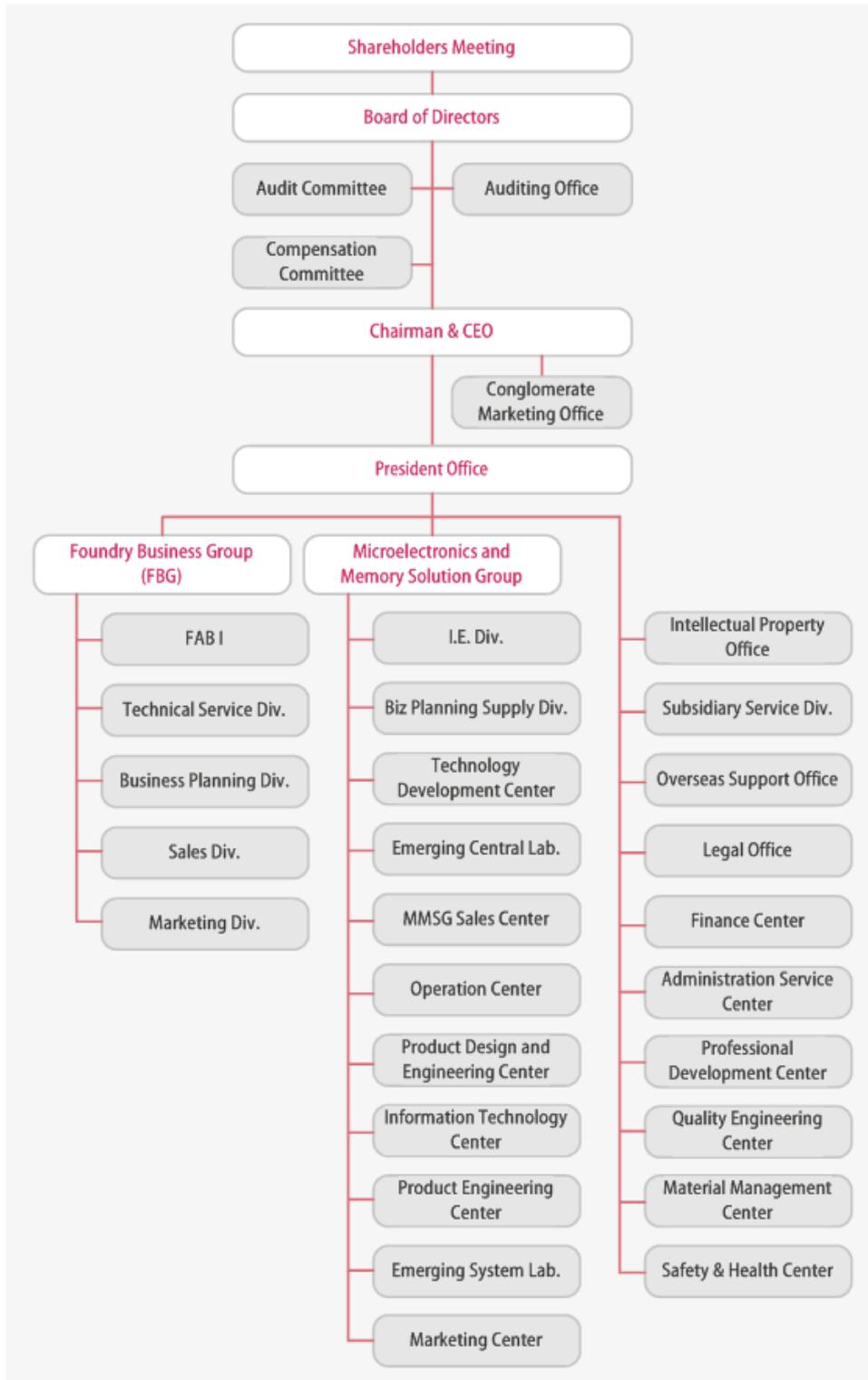
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### A glance at Macronix

Highlight		
<ul style="list-style-type: none"> <li>• One and only TW-based non-volatile memory provider with own brand and global competitiveness</li> <li>• Devoted to long term investments in R&amp;D and proprietary technologies</li> <li>• First R&amp;D center approved by the Ministry of Economic Affairs</li> <li>• Owns complete intellectual property portfolio and has capability to provide integrated total solutions</li> </ul>		
Established	December 1989	
Publicly listed	March 1995	
2014 revenues	NT\$22.41 billion	
No. of employees (persons)	General employees	4,553
	Management (manager and above)	677
Fab capacity	FAB 1(6'') ~35K	
	FAB 2(8'') ~48K	
	FAB 5(12'')~20K	
ROM market share	No. 1 worldwide	
NOR Flash market share	No. 3 worldwide (No. 2 worldwide for Serial NOR Flash)	

## Organization Chart



\*Note: Please refer to the Company's annual report for affiliated corporate organizations

## Macronix CSR Milestones

Time	Achievement
2000	<ul style="list-style-type: none"> <li>• Held the first Macronix Golden Silicon Awards — Semiconductor Design and Application Competition</li> </ul>
2001	<ul style="list-style-type: none"> <li>• Established the Macronix Education Foundation</li> </ul>
2002	<ul style="list-style-type: none"> <li>• Macronix Education Foundation held the first "MXIC Science Awards"</li> </ul>
2004	<ul style="list-style-type: none"> <li>• Received the "2004 Distinguished Enterprise of Energy Conservation Award" from the Bureau of Energy, Ministry of Economic Affairs</li> <li>• First firm in Hsinchu Science and Industrial Park to complete comprehensive inspection and verification on greenhouse gas</li> <li>• Established Macronix Science Awards Association</li> </ul>
2005	<ul style="list-style-type: none"> <li>• Received ISO 14001:2004 Environmental Management System Certification from British Standards Institute</li> <li>• Macronix's Fab 2 won the Republic of China Corporate Environmental Protection Award for four consecutive years.</li> </ul>
2006	<ul style="list-style-type: none"> <li>• Received green product certification from international brands including SONY, CANON, and LG for compliance with RoHS requirements</li> </ul>
2007	<ul style="list-style-type: none"> <li>• Received the IECQ QC 080000 Hazardous Substance Process Management System Certification</li> <li>• Received the "Outstanding Award of Greenhouse Gases Emissions Reduction" from Bureau of Industrial Development, Ministry of Economic Affairs</li> <li>• Awarded ISO 14064-1 "Certificate of Greenhouse Gases Emission Verification" by the British Standards Institute</li> <li>• Credited with "CG6002 Corporate Governance Certification" by Taiwan Corporate Governance Association</li> </ul>
2008	<ul style="list-style-type: none"> <li>• First semiconductor manufacture in the Hsinchu Science Park to receive SA8000 Corporate Responsibility Management Systems Certification</li> <li>• Donated NT\$300 million to National Tsing Hua University to build MXIC Building (Learning Resource Center)</li> <li>• Donated CNY 5 million to help victims of Sichuan earthquake</li> <li>• Helped push upstream and downstream supply chain partners to implement Electronic Industry Citizenship Coalition Code of Conduct</li> <li>• Certified with new OHSAS 18001: 2007 certification from SGS</li> <li>• Certified with Taiwan Occupational Safety and Health Management System (TOSHMS) Certification</li> <li>• Recognized of "2007 Green Procurement Outstanding Award" by Environmental Protection Administration</li> </ul>
2009	<ul style="list-style-type: none"> <li>• Awarded of National Industrial Safety &amp; Health Awards</li> <li>• First semiconductor firm to receive Authorized Economic Operator from the Directorate General of Customs</li> <li>• Donated NT\$100 million to aid victims of Typhoon Morakot in Taiwan</li> <li>• Received the fifth annual Global Views Monthly Magazine CSR Award for its outstanding performance in Corporate Social Responsibility</li> </ul>
2010	<ul style="list-style-type: none"> <li>• Received the sixth annual Global Views Monthly Magazine CSR Award top honor (Five Star rating)</li> <li>• Received the 2010 Commonwealth Magazine Corporate Citizenship Award</li> <li>• Donated an additional NT\$100 million for the MXIC Building at National Tsing Hua University</li> <li>• Received the Employment Creation Contribution Award from the Executive</li> </ul>

Time	Achievement
	Yuan
2011	<ul style="list-style-type: none"> <li>• Donated NT\$30 million to Japan Earthquake Relief Efforts</li> <li>• Received the Employment Creation Contribution Award from the Executive Yuan</li> <li>• Honored as one of the Top 100 Taiwan Brands by Ministry of Economic Affairs, ROC</li> <li>• Once again received CommonWealth Magazine Corporate Citizenship Award</li> <li>• Honored with 2011 National Invention and Creation Award, Contribution Award</li> <li>• Received CG6006 Corporate Governance Evaluation Certification</li> <li>• Received Employee Assistance Plan Outstanding Business Award from the Council of Labor Affairs, Executive Yuan</li> </ul>
2012	<ul style="list-style-type: none"> <li>• Received the eighth annual Global Views Monthly Magazine CSR Award</li> <li>• Once again received CommonWealth Magazine Corporate Citizenship Award</li> </ul>
2013	<ul style="list-style-type: none"> <li>• Official opening of the new Learning Resource Center at National Tsing Hua University – the Macronix Building</li> <li>• Macronix Education Foundation was awarded by the Ministry of Education of Outstanding Educational Foundation</li> </ul>
2014	<ul style="list-style-type: none"> <li>• Received the first "Work-Life Balance Award" presented by the Ministry of Labor in recognition of the company's performance in care and support for employee families and the health and safety of its employees</li> <li>• Macronix's Fab 5 plant received the 2014 Award of Excellence in Energy Conservation from the Ministry of Economic Affairs, ROC</li> </ul>

## 2.1 Products and Services

Macronix, a leading integrated device manufacturer in the Non-Volatile Memory (NVM) market, provides a full range of NOR Flash, NAND Flash, and ROM products. With its world-class R&D and manufacturing capability, Macronix continues to deliver high-quality, innovative and performance driven products to its customers in the consumer, communication, computing, automotive, networking and other segment markets.

Macronix is capable of providing a comprehensive lineup of densities for Serial Flash products, from 512Kbit to 1Gbit. We also have miniature NOR Flash products that can adequately fulfill the demand for lightweight and miniature portable electronic products. We also provide KGD (Known Good Die) products to meet the needs of SIP (System In Package) solutions.

In Read-Only Memory, we have begun mass-production of 45 nm XtraROM<sup>®</sup> products.



## Macronix Products

Product Type	Key products
Non-Volatile Memory IC	Read-Only Memory (Mask ROM; XtraROM <sup>®</sup> )
	NOR Flash Memory (NOR Flash)
	NAND Flash Memory (NAND Flash)
Wafer Foundry Service	Sub-micron logic process/ Pressurized CMOS and BCD process
	Embedded ROM/ Flash/ MTP/ OTP process

## Applications

Product Type	Key products	Applications and Functions
Non-Volatile Memory IC	Mask ROM/ XtraROM <sup>®</sup>	Video game cartridges, electronic dictionaries, printers, personal entertainment devices, electronic toys, etc.
	NOR Flash Memory	Mobile phones, set-top boxes, personal computers, digital cameras, MP3 players, CD-ROM drives, printers, hard drives, network devices, tablet PCs, wireless communication devices (Bluetooth, WLAN), arcade games.
	NAND Flash Memory	Mobile phones, set-top boxes, TVs, digital cameras, MP3 players, printers, hard drives, network devices, tablet PCs, wireless communication devices (Bluetooth, WLAN), arcade games.
Wafer Foundry Service	Sub-micron logic process/ Pressurized CMOS and BCD process	Pressurized CMOS manufacturing power management and LED / LCD driver IC services.
	Embedded ROM/ Flash/ MTP/ OTP Processing	Provide integrated embedded ROM/Flash/MTP/OTP to strategic clients.

## Key Markets

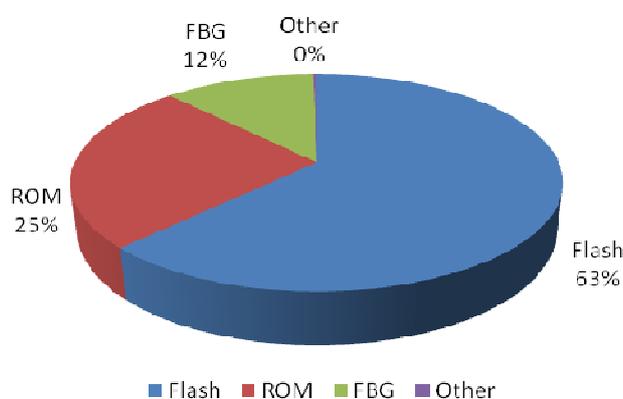
Macronix is export-oriented, with Japan as our largest market. Japan is a prolific manufacturer of gaming systems and consumer electronics worldwide; therefore it has strong and consistent demand for high quality IC components.

## Product Sales and Market Share

Unit: NT\$ 1,000

Product	2014	
	Sales turnover	Sales ratio
Serial NOR Flash Memory	13,994,850	62.44%
Read-only Memory (ROM)	5,697,690	25.42%
Wafer Foundry Services (FBG)	2,649,409	11.82%
Others	72,264	0.32%
Total	22,414,213	100.00%

## 2014 Sales Breakdown by Products



MaskROM/XtraROM<sup>®</sup>, one of Macronix' main products, has long been the global market share leader. According to 2014 OTP ROM global market share statistics, we are ranked number one in the global ROM market share.

Read-only Memory (with over 50% market share)	<b>1. Macronix</b>
	2. OKI Semiconductor
	3. Others

Macronix' Serial NOR Flash has been a popular choice with our clients, and has accelerated our global market share in NOR Flash products to third place worldwide, with our Serial NOR Flash being ranked second in the world.

**2014 NOR Flash Market Share**

Serial NOR Flash (29.8% market share)	1. Winbond
	<b>2. Macronix</b>
	3. Gigadevice
	4. Micron
	5. Spansion (Cypress)
NOR Flash (18.8% market share)	1. Spansion (Cypress)
	2. Micron
	<b>3. Macronix</b>
	4. Winbond
	5. Gigadevice

Source: iHS, March 2015

## 2.2 Global Business Locations



## 2.3 A Glance at Financial Performance

Macronix's 2014 total annual operating revenue was NT\$22.414 billion, an increase of 0.9% compared with 2013, while the net loss after tax was NT\$6.483 billion, and loss-per share was NT\$1.84. The average gross profit margin was 12%, end-of-period cash equivalent was NT\$7.636 billion, and debt-to-equity ratio was 49%. The annual capacity utilization rate was approximately 91.4%.

### Economic performance in 2011-2014

Unit: NT\$1,000

	2011	2012	2013	2014
<b>Operating income</b>	27,843,673	23,888,847	22,204,420	22,414,213
<b>Operating costs and expenses</b>	24,059,978	28,484,910	28,560,749	28,737,045
<b>Net operating profit</b>	3,783,695	(4,596,063)	(6,356,329)	(6,322,832)
<b>Non-operating income and profit</b>	303,197	353,680	338,073	134,819
<b>Non-operating expenses and losses</b>	577,926	1,273,039	334,896	281,388
<b>Pre-tax profit</b>	3,508,966	(5,515,422)	(6,353,152)	(6,469,401)
<b>Income tax expenses</b>	591,967	(77,011)	5,087	13,523
<b>Current period net profit</b>	2,916,999	(5,438,411)	(6,358,239)	(6,482,924)

Note: 2013 and 2014 numbers include consolidated revenues from subsidiaries

### R&D investment

Unit: NT\$ million

	2011	2012	2013	2014
<b>Fixed R&amp;D investment</b>	3,850	4,547	5,453	6,306
<b>Total revenue</b>	27,843	23,888	22,204	22,414
<b>Percentage</b>	13.83%	19.03%	24.56%	28.13%

**Government subsidies and items in 2014**

Unit: NT\$

<b>Category</b>	<b>Basis</b>	<b>Amount</b>
<b>R&amp;D</b>	Macronix applied for deduction for investment in R&D in 2014 (Statute for Industrial Innovation)	Actual tax deduction applied in 2014 was NT\$0.
<b>Shareholders investment deduction</b>	Macronix is applicable for shareholders investment deduction in 2012 (Statute for Upgrading Industry)	Actual tax deduction applied in 2014 was NT\$0.

## 2.4 Honors and Recognitions

- Received the first "Work-Life Balance Award" presented by the Ministry of Labor in recognition of the company's performance in care and support for employee families and the health and safety of its employees (2014)
- Macronix President, Chih-Yuan Lu, received the Presidential Science Award (2013)
- Macronix Education Foundation received the top honor from the Ministry of Education's award for excellent education foundations, the High Distinction Award (2013)
- Received the 13th National Standardization Award, advanced contribution award (2012)
- Received Employee Assistance Plan Outstanding Business Award from the Council of Labor Affairs, Executive Yuan (2011)
- Received National Invention and Creation Award, Contribution Award, from Intellectual Property Office, Ministry of Economic Affairs (2011)
- Honored as one of the Top 100 Taiwan Brands by Ministry of Economic Affairs, ROC (2011)
- Received Employment Creation Contribution Award from Executive Yuan two consecutive years (2010 & 2011)
- Received the 2010 Commonwealth Magazine Corporate Citizenship Award (2010, 2011 & 2012)
- Received Global Views Monthly Magazine CSR Award, Exemplary Award and Top Award (2009, 2010 & 2012)
- Received Third Annual National Labor Safety Award (2009)
- First semiconductor manufacture in the Hsinchu Science Park to receive SA8000 Corporate Responsibility Management Systems Certification (2008)
- Received CG6002 Corporate Governance Evaluation Certification from the Corporate Governance Association (CGA) in Taiwan (2007)
- Received the IECQ QC 080000 Hazardous Substance Process Management System Certification (2007)

## 2.5 External participation

Name	Title	Action/Contribution
Taiwan Electrical and Electronic Manufacturers' Association	Member	1. Macronix offers suggestions, promotes collective interests of fellow members, functions as a bridge between the industry and the government, and promotes industry development.
Allied Association for Science Park	1. Director 2. Convener of safety and health committee 3. Convener of public relations committee	1. Macronix contributes to the discussion, decision, and execution of the association's operations. 2. Macronix leads the discussion, decision, and execution of work related to occupational safety and health and risk management in the science park. 3. Macronix promotes public relations for the science park and functions as a communication platform with the media.
Chinese National Association of Industry and Commerce, Taiwan	Member	1. Macronix offers suggestions, promotes collective interests of fellow members, functions as a bridge between the industry and the government, and promotes industry and commerce development.
Friends of Police Association, Hsinchu	Director	1. Macronix cooperate with police to enhance and promote crime control and prevention.
Taiwan After-care Association, Hsinchu	Standing director	1. Macronix helps ex-prisoners in rehabilitation return to the workplace and start new lives.
Ministry of Labor, TOSHMS North consortium	President of North consortium	1. Macronix shares its experience from winning the National Labor Safety Award. 2. Macronix promotes cross-industry education and awareness of labor safety issues and inspires creativity for promoting worker safety.

## 2.6 Major Indirect Influence on Economy and the Degree of Influence

### 2.6.1 Creating Employment Opportunities

Due to the need to expand capacity, Macronix purchased a 12-inch wafer fab in 2010 and continued to hire additional employees in cooperation with the government's various employment promotion programs, creating numerous job opportunities over the years. We received the Employment Creation Contribution Award from the Executive Yuan in 2010 and 2011, and Macronix stock was included in the Taiwan Employment Index 99. Macronix has made significant contributions to creating job opportunities in Taiwan.



▲ Chairman, Miin Wu, (on right) receiving the Employment Creation Contribution Award (2011) from Executive Yuan Premier, Wu, Don-Yih

### 2.6.2 Raising the Global Status of Taiwan Semiconductor Providers

Macronix allocates more than 10% of revenues to research and development each year. Macronix's high quality products are utilized by customers worldwide, giving rise to Macronix's leading position as the world's largest ROM provider and ranking among the top-three global NOR Flash manufacturers. The Patent Board of the United States conducted a survey on 240 leading semiconductor manufactures worldwide in 2011. Macronix came ranked No. 18 globally and No. 1 in Taiwan in terms of technology strength and No. 11 globally in terms of science strength. Macronix has filed 8,232 patent applications worldwide and acquired 5,716 patents by the end of 2014.



### 2.6.3 One of the Most Representative High-tech Companies in Taiwan

Macronix is the first world-class advanced memory provider in Taiwan to launch our own brand and develop proprietary technology, and also one of the few Taiwan-based integrated circuit device manufacturers capable of IC design, fabrication, assembly, testing, and marketing. Macronix's innovative operations have enabled the Taiwan's high-tech industries to grow out of their OEM business model. The inception of Macronix also allowed Taiwan engineers to turn from contract manufacturing to the whole new field of independent R&D, so that local engineers could receive solid training to fully develop their capability in independent product R&D.

The visionary leadership of Macronix chairman, Miin Wu, has attracted attention from the media around the globe. Chairman Wu received the Premier Award on Contemporary Business Leader from Taiwan Business Weekly, was elected as a "Top 5 Executive" by Electronic Business Asia and one of "the 25 Industry executives who made a difference" by Electronic Buyers' News, U.S. Wu was on the cover of Forbes, was granted the Outstanding Contribution Award from the Electronics Devices and Materials Association, and was chosen as one of the "Stars of Asia" by Business Week. He was also honored with the Outstanding Alumni Award by National Cheng Kung University, a Fellow and Outstanding Performance Award in the Field of Management of Technology by the Chinese Society for Management of Technology, and the "Professor Shen Wenzhen Memorial Award" for his outstanding contribution to the integrated circuits and system design fields, in addition to an "Honorary Doctorate" from National Tsing Hua University.

Macronix president, Dr. Chih-Yuan Lu, received the 2012 IEEE Frederik Philips Award, which is considered as the Oscar (Academy Award) for technical research engineers. The recognition represented the international community's affirmation that Dr. Lu's achievements have resulted from his long-term devotion to technical innovation and visionary leadership in R&D management. The award also recognized his noteworthy

contributions to the overall semiconductor industry. Dr. Lu was also the first person in the Greater China region to be honored with the prestigious award. In addition, Dr. Lu received the National Science and Technology Medal from Taiwan's Executive Yuan, the Outstanding Research Award from Pan Wen Yuan Foundation, the Special Distinguished Award from the Physical Society of the Republic of China, the Distinguished Alumni Award from National Taiwan University, and an Honorary Doctorate from National Chiao Tung University. He was also elected IEEE Fellow, American Physical Society Fellow, Chinese Society for Management of Technology Fellow, and ITRI Laureate, and was honored with the Presidential Science Award in 2013 and was selected for the Engineering Sciences Awards by The World Academy of Sciences (TWAS) in 2014 in recognition for his outstanding contributions to semiconductor physics and component technology.

#### **2.6.4 Five Macronix Papers Chosen in 2013 VLSI, the Most in Taiwan**

Macronix has maintained an outstanding performance in VLSI research. Macronix had about five papers presented on average each year at the IEEE International Electron Devices Meeting (IEDM). Macronix also had five papers selected by the Symposium on VLSI Technology in 2013, the most among Taiwan-based firms. In particular, one thesis, which focused on the research of conducting bridge resistive memory (CBRAM), was selected as the highlight paper by the symposium.

### **3. Corporate Social Responsibility**

The key electronic components produced by Macronix have enriched human lives. As a member of the global market, we insist on sustainable management, and we are committed to our responsibilities as a corporate citizen of the world. We strive to create a better future by leveraging our advanced technological capabilities to assist our clients in creating excellent products.

To realize sustainable corporate management, Macronix continues to elevate shareholder rights and is committed to our duties as a global corporate citizen as we care for our environment, and conservatively use the natural resources. We have proactively pursue all aspects of the Electronic Industry Citizenship Coalition<sup>®</sup> Code of Conduct (EICC<sup>®</sup> CoC) and contribute to society through scientific education and promotion.

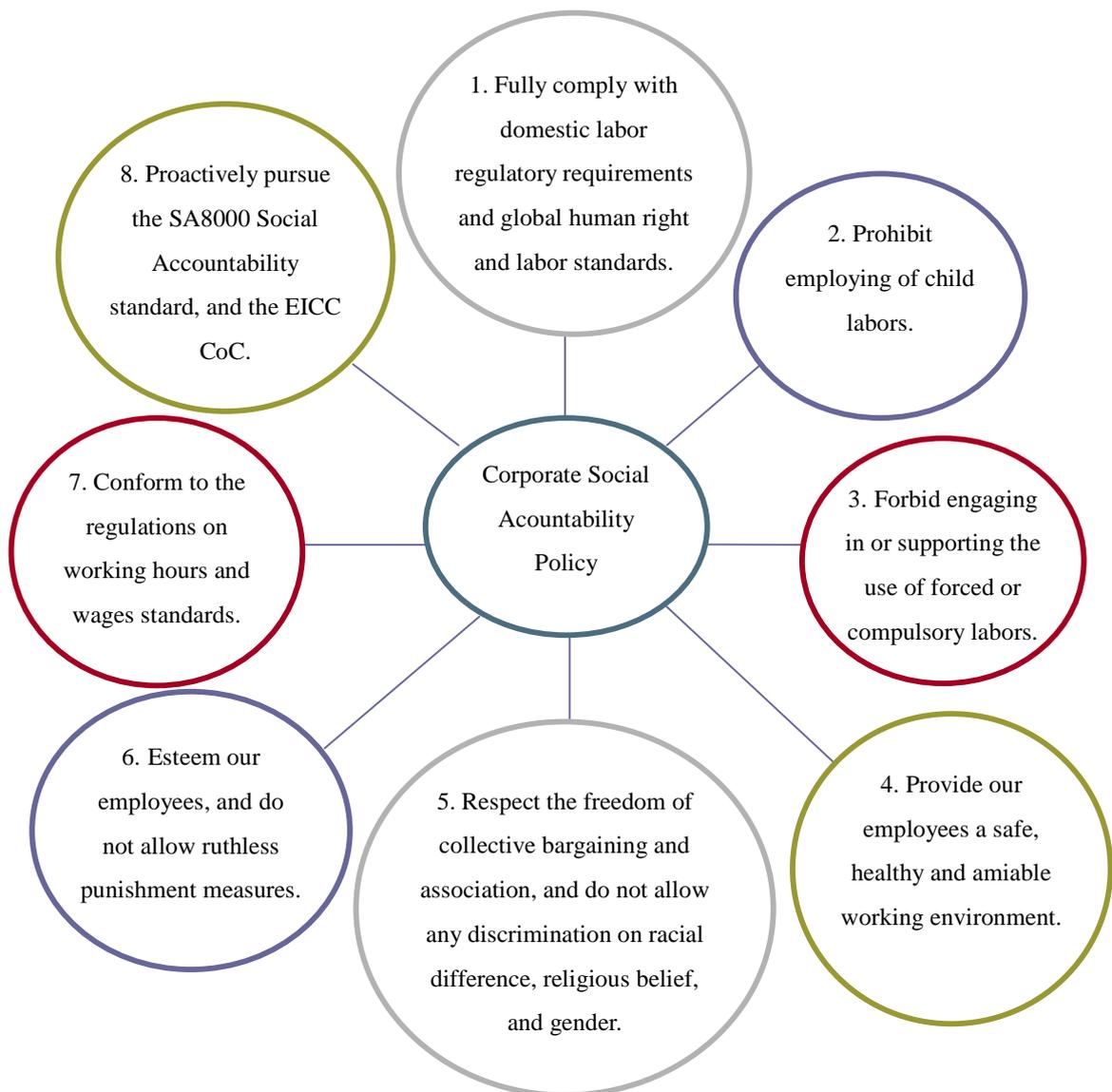
We show our commitment to corporate social responsibility through the following efforts:

- Improving environmental safety and risk management, well beyond legal standards.
- Structuring an outstanding human resource management system and labor policies with careful planning and execution.
- Meticulously committing to sustainable supply chain management, that is fully compliant with international standards, laws, and customer requirements, while prohibiting the use of conflict minerals.
- Promoting science education to cultivate innovation in the younger generation in order to expand our contribution to society.

### 3.1 Corporate Social Accountability Policy

Macronix's first issue of Corporate Social Accountability (CSA) Policy was approved in 2008 by the President of the company and announced on the company's electronic bulletin board. In particular, the CSA Policy requires Macronix to protect the labor rights, respect human rights, provide a safe, healthy, and amiable working environment, conservatively use the natural resources, promote science education, encourage innovative research and development, protect shareholders' rights, actively contribute to society, and persist in sustainable management.

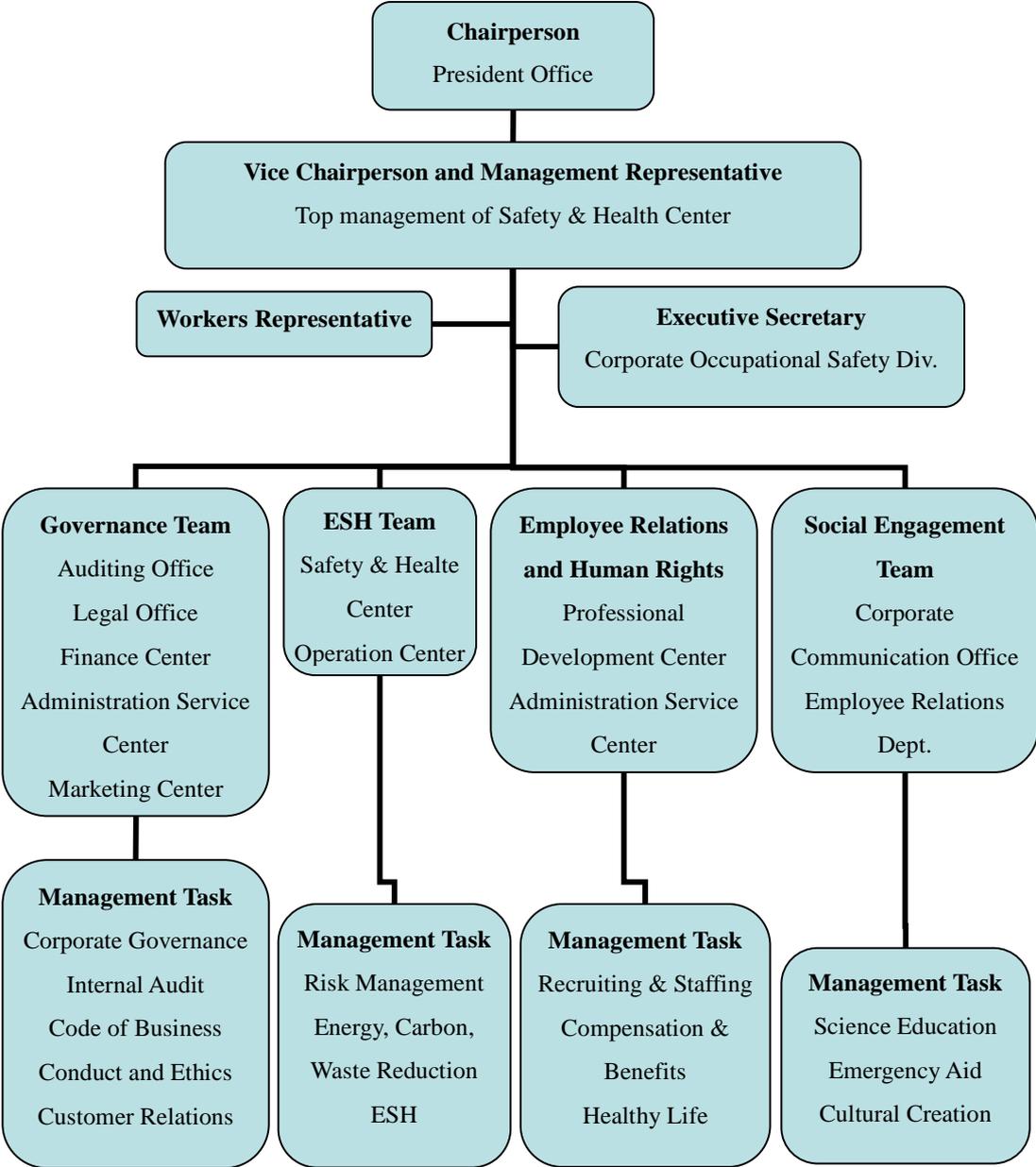
The CSR Policy implemented by Macronix comprises the following:



## **3.2 Corporate Social Accountability Organization**

Macronix's President currently serves as a member of the Board of Directors. The Company's Social Performance Team (SPT) comprises the President as the chairperson, the highest executive of the Safety & Health Center as the management representative, and the representatives of the Company's cross-department center or business group as the committee members. They play a role in encouraging the performance team to continuously increase its commitment to CSR-related tasks, ensure Macronix to comply with company and customers' relevant regulations, integrate cross-department resources for promoting and maintaining the effective operation of CSR, and provide employees with operational recommendations and consultation services to maintain and continuously improve the Company's operating systems. Macronix's CSR Report Execution Task Force is also based on the Social Performance Team, gathering relevant departments since 2012 and encouraging them to voluntarily compile Macronix's first CSR Report, and this practice is still implemented today.

**CSR Report Execution Task Force Structure**



### **3.3 Stakeholder Responsibility Management and Issue**

#### **Response**

Macronix recognizes that it is necessary to engage in long term conversations with stakeholders to increase our understanding of the community and thus make proper decisions and reduce conflicts with society.

Macronix continues to build a robust CSR value chain system and work with our employees and corporate partners to understand and respond to stakeholders expectations toward Macronix's fulfillment of social responsibilities, while also serving as a learning tool for the company to learn more about trends, risks and development opportunities.

The engagement of stakeholders will help us to realize our promises into actions that will bring about a positive contribution to society and the environment. Although this is a long term challenge, Macronix is committed to continue making efforts in integrating our supply chain and cooperating with governance policies and guidelines to accomplish the CSR goals.

We also share with the community about our position, progress, and challenges that arise from key issues including the development of green products that are harmless to people and the environment, issues related to climate change, and the handling of our supply chain responsibilities, as we demonstrate how our company and brand compositions are promoted to the citizens of the world.

The Macronix CSR report is comprised of information and statistics that consider the perspectives and needs of many stakeholders, including:

### Response to Macronix's Stakeholders

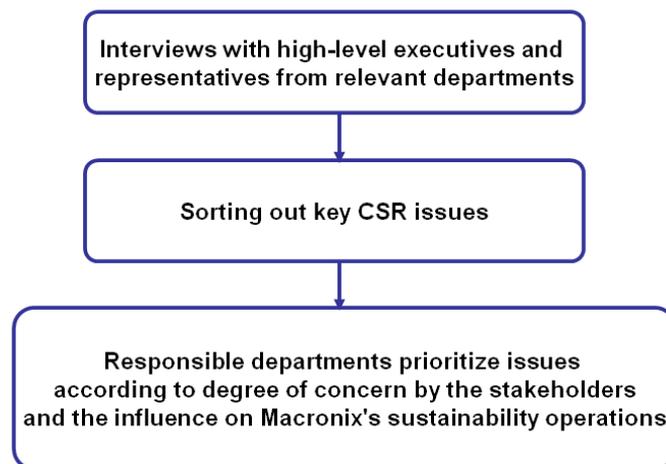
Category	Target	Issues of concern	Communication method and frequency
Shareholders/ investors	General shareholders  Corporate shareholders	<ol style="list-style-type: none"> <li>1. Corporate Sustainable Development</li> <li>2. Corporate Governance</li> <li>3. Economic performance</li> <li>4. Risk Management</li> <li>5. Product Market Share</li> <li>6. Information Disclosure and Transparency</li> <li>7. Innovative R&amp;D</li> </ol>	<ol style="list-style-type: none"> <li>1. Online investor conference held quarterly</li> <li>2. Shareholders' meeting convened every June Periodically participating in roadshows and investment forums</li> </ol>
Customers	Current customers  Potential customers	<ol style="list-style-type: none"> <li>1. Customer services</li> <li>2. Product price and quality</li> <li>3. Hazardous substance management</li> <li>4. Customer privacy</li> <li>5. Ethical Corporate Management</li> <li>6. Supply chain management</li> </ol>	<ol style="list-style-type: none"> <li>1. Periodically replying to customer audits</li> <li>2. Conducting customer satisfaction surveys online or by questionnaire</li> </ol>
Employee	Management Level  General employees  Contract workers	<ol style="list-style-type: none"> <li>1. Compensation/benefits</li> <li>2. Learning and growth</li> <li>3. Safety and healthy working environment</li> <li>4. Balance between work and life</li> <li>5. Communication and interaction</li> </ol>	<ol style="list-style-type: none"> <li>1. Various open-discussion meetings held periodically</li> <li>2. "Suggestion box" available to answer employees' questions</li> <li>3. Issuing internal magazine "Macronix Garden" and setting up both hard copy and electronic bulletin boards to communicate information</li> <li>4. Setting up Employee Relationship Management Portal to maintain good labor relations</li> </ol>
Suppliers	Equipment/raw material suppliers  Construction contractors  Cleaning/mainten	<ol style="list-style-type: none"> <li>1. Supplier management</li> <li>2. Price competitiveness</li> <li>3. Occupational safety and health management</li> <li>4. Supplier training and education</li> </ol>	<ol style="list-style-type: none"> <li>1. Annual supplier meeting held to convey major corporate policies and messages</li> <li>2. Annual supplier audit conducted to ensure supplier quality</li> </ol>

	<p>ance service providers</p> <p>Waste disposal service providers</p>		<p>3. Periodic training courses provided to suppliers</p>
Local communities	<p>Community citizens</p> <p>Local non-government organizations</p> <p>Local associations</p>	<p>1. Community engagement (public welfare/feedback)</p> <p>2. Pollution prevention and treatment</p> <p>3. Corporate operation image</p>	<p>1. Dedicated contact windows to communicate with local citizens</p> <p>2. Participating in discussion on matters of concern to local residents by invitation</p> <p>3. Donating prizes for major holiday events</p> <p>4. Surroundings of employee dormitory cleaned periodically to maintain a good environment</p>
Media	<p>Print media</p> <p>Traditional electronic media</p> <p>Digital media</p> <p>Newspaper/business magazines</p>	<p>1. Business Performance</p> <p>2. Company image</p> <p>3. Product and service information</p> <p>4. Communication and interaction</p>	<p>1. Periodically holding press conferences to make public announcements and enhance effects of interactions with the media</p>
Government	<p>Ministry of Economic Affairs</p> <p>Ministry of Finance Securities and Exchange Commission</p> <p>Ministry of Labor</p> <p>Science Park Bureau. Ministry of Science and Technology</p> <p>EPA/ Environmental Protection Bureau</p>	<p>1. Regulatory compliance/reply to official documents</p> <p>2. Participation in development of public policy(e.g. greenhouse gas, climate change, and water resources)</p>	<p>1. Complying with requirements by governments of all levels and abiding by laws and regulations</p> <p>2. Maintaining good interactions with local governmental institutions</p> <p>3. Providing constructive advices to governmental institutions as reference for policy implementation and legislative establishment</p>

### 3.4 Key CSR issues

To fully understand and gather the issues that are of concern to both internal and external stakeholders, Macronix appointed our Safety and Health Center, Administration Service Center, and Professional Development Center to be in charge of all work related to CSR. These units conducted interviews with representatives from relevant internal units and high-level executives from the management team to determine the key issues pertaining to Macronix's sustainable development and the subjects that require open communications with the various stakeholders. Various key CSR issues were compiled based on the feedback from these units.

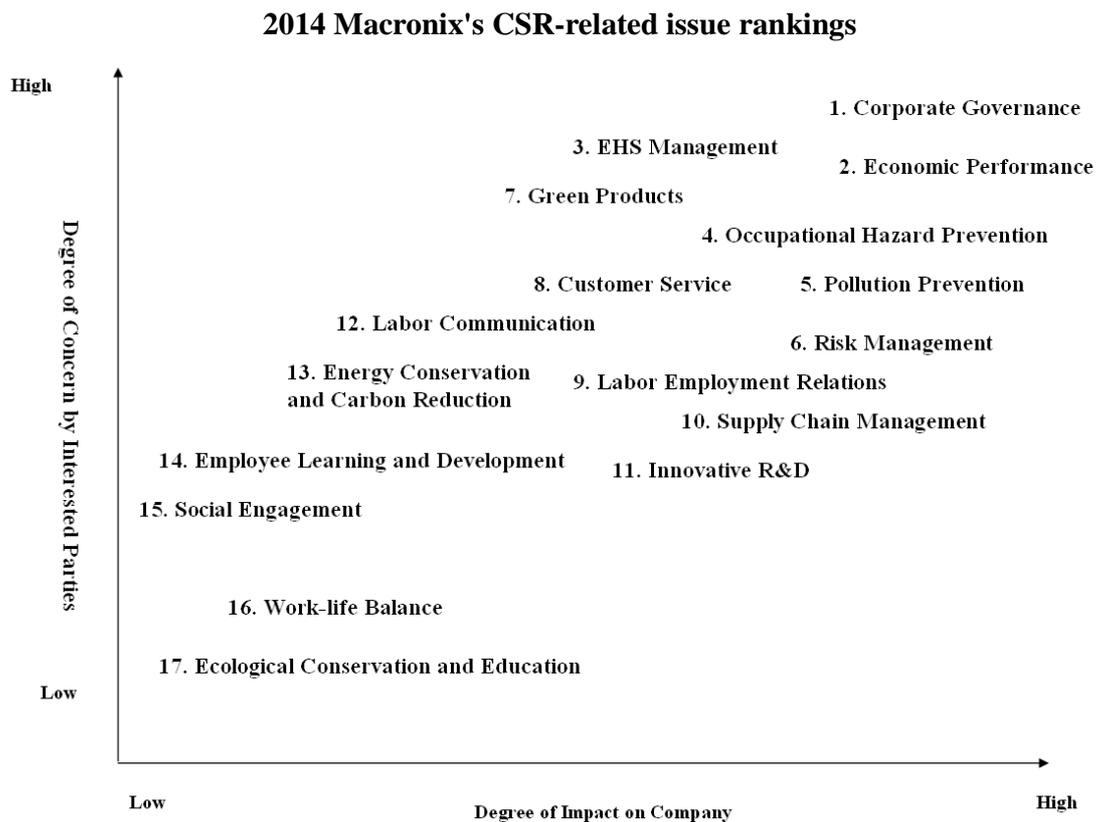
#### Decision making flow of key CSR issues



According to the key issues provided by the various departments, Macronix ultimately considers the risk and chances of its sustainable development, issues that are a concern to stakeholders, and business opportunities for future sustainable development. Subsequently, the management representatives and supervisors of the Corporate Occupational Safety Division prioritized the issues based on the degree of concern by the stakeholders and the influence these issues have on Macronix's sustainable operations, thus identifying 17 material issues.

In addition to keeping a transparent and open communications channel, Macronix will also call attention to CSR issues that are crucial and of major concern to stakeholders. Based on the urgency and importance of the issues, related discussions will take place at

relevant internal committee meetings. We will also implement corresponding action plans and disclose the results on the company website and in CSR reports so that stakeholders and investors concerned about the company's environmental, social, and operational performance are aware of Macronix's CSR achievements through transparent and free communication.



The key issues identified in this CSR Report can be divided into three dimensions, namely economic sustainability, environmental sustainability, and social sustainability. The validity of the management guidelines was assessed according to the aspects and management guidelines, including policy and goal aspects, corresponding to each material issue as defined by the members of the CSR Report Execution Task Force, as well as the Company's internal and external evaluation mechanisms and feedback from stakeholders. The scope of the aspects disclosed in this CSR Report includes only Macronix and excludes its subsidiaries. The boundary of various indicators is composed of indicators selected on the basis of consideration for Macronix as well as its suppliers/contractors, customers, and citizens of society.

### Category of material issues

Economic Sustainability	Environmental Sustainability	Social Sustainability
Corporate Governance Economic Performance Risk Management Customer Services Supply Chain Management Innovative R&D	EHS Management Occupational Hazard Prevention Pollution Prevention Ecological Conservation and Education Green Products Energy Conservation and Carbon Reduction	Labor Employment Relations Labor Communication Employee Learning and Development Work-life Balance Social Engagement

### Scope and boundary of issues

Category	Boundary Material Issues	Internal Materiality	Corresponding aspects and disclosed indicators
<b>Economic</b>	Corporate Governance	<b>V</b>	General indicator(G4-41, G4-56, G4-57, G4-58)
	Economic Performance	<b>V</b>	Economic performance(G4-EC1, G4-EC3, G4-EC4) Market Image(G4-EC5) Indirect economic impact(G4-EC7, G4-EC8)
	Risk Management	<b>V</b>	General indicator(G4-14)
	Customer Services	<b>V</b>	Product and service labeling(G4-PR5)
	Supply Chain Management	<b>V</b>	General indicator(G4-12) Procurement practice(G4-EC9)
	Innovative R&D	<b>V</b>	No corresponding aspects, voluntarily disclosed issues(CH4.4)
<b>Environment</b>	EHS Management	<b>V</b>	Occupational health and safety(G4-LA5, G4-LA6) Overall Status(G4-EN31)
	Occupational Hazard Prevention	<b>V</b>	Occupational health and safety(G4-LA5, G4-LA6)
	Pollution Prevention	<b>V</b>	Water(G4-EN8, G4-EN10) Emissions(G4-EN21) Wastewater and wastes(G4-EN22, G4-EN23)
	Ecological	<b>V</b>	No corresponding aspects, voluntarily

	Conservation and Education		disclosed issues(CH5.4)
	Green Products	<b>V</b>	Products and services(G4-EN27)
	Energy Conservation and Carbon Reduction	<b>V</b>	Energy(G4-EN3, G4-EN6, G4-EN7) Emissions(G4-EN15, G4-EN16, G4-EN17, G4-EN18)
<b>Social</b>	Labor Employment Relations	<b>V</b>	Labor employment relations(G4-LA1, G4-LA2, G4-LA3) Non-discrimination(G4-HR3) Child labor(G4-HR5) Forced or compulsory labor(G4-HR6) Indigenous rights(G4-HR8)
	Labor Communication	<b>V</b>	No corresponding aspects, voluntarily disclosed issues(CH6.2)
	Employee Learning and Development	<b>V</b>	Training and education (G4-LA9, G4-LA10, G4-LA11)Employee diversity and equality(G4-LA12)
	Work-life Balance	<b>V</b>	No corresponding aspects, voluntarily disclosed issues(CH6.4)
	Social Engagement	<b>V</b>	No corresponding aspects, voluntarily disclosed issues(CH7)

**Note: V represents a material issue that is disclosed in this CSR Report. Each aspect discloses at least one indicator, but each indicator is not limited to full or partial disclosure. Disclosure information is determined according to the Company's actual feasible data or information.**

## **4. Corporate Governance**

Macronix govern corporate utilized a high standard and commit to keep a good relationship with investors. We also comply with the principles of corporate governance and establish our Code of Business Conduct and Ethics which is followed by all employees in Macronix.

### **Macronix's Philosophy**

#### **Be Grounded**

### **Macronix's Corporate Values**

#### **Innovation, Quality, Efficiency, Service, Team Work**

### **4.1 Corporate Governance**

Six elements of Macronix corporate governance:

1. Risk management and protection of shareholder interests
2. Respect for stakeholder interests and social responsibility
3. Discipline and open communication from executives
4. Effective supervision by Audit Committee
5. Enhancement of Board of Directors' functions
6. Increased information transparency

Macronix, after being the world's first publicly-listed Taiwan high-tech company on the NASDAQ in 1996, took the initiative to adopt advanced management systems from abroad and boldly instituted pioneering business practices, including establishing two independent director seats in 2003, a step ahead of the requirements by Taiwan government regulations; forming audit and compensation committees; taking the lead in changing the director election system to be done entirely by candidate nomination in 2006. In particular, Macronix prohibits employment of a director's (third-degree) relatives at Macronix in order for the board to remain independent in its supervision and that its operations will not be influenced.

### 4.1.1 Board of directors

The Macronix board of directors serves as the top governing unit of the company. The chairman is also the CEO, and the board is comprised of 15 industry professionals and specialized scholars with practical and theoretical backgrounds in business, law, finance, accounting, electrical engineering, physics, and material engineering. There are three independent director seats served by specialists in management, electrical engineering, and accounting/statistics, who oversee execution of Macronix’s operation plans based on their professionalism and objectivity to ensure the board’s quality in decision making. We have a total of 15 directors, 14 male (93%) and 1 female (7%). All directors are over 50 years of age.

Furthermore, Macronix started to internally handle matters related to company stock in 1997 with a dedicated unit to manage shareholder affairs, address shareholder concerns, and promote a strong relationship with institutional investors. Therefore, we arrange visits to global institutional investors every year and hold an investor conference every quarter to maintain transparent communications with institutional investors worldwide.

#### Macronix corporate governance highlights

<b>The Board of Directors</b>	<ul style="list-style-type: none"> <li>➤ Voluntarily established independent director seats and functional committees in compliance with Taiwanese government regulations</li> <li>➤ First company in Taiwan to adopt a full candidate nomination system for director appointment and election (2006)</li> <li>➤ Lead Taiwan's industry in taking out director liability insurance(since 1999)</li> <li>➤ Prohibits employment of relatives of directors (third-degree) at Macronix</li> </ul>
<b>Manager</b>	<ul style="list-style-type: none"> <li>➤ Compensation committee evaluates and approves compensation for high-level executives (since 2006)</li> <li>➤ Prohibits employment of relatives of high-level executives (fourth-degree)</li> <li>➤ Set up operation goals and implementation of PDP performance evaluation</li> </ul>
<b>Internal controls</b>	<ul style="list-style-type: none"> <li>➤ Systematize internal controls and self-check operation procedures</li> <li>➤ Implement redundant check systems for audit operations</li> <li>➤ Audit results reported periodically to Audit Committee and board of directors</li> </ul>

## 4.1.2 Compensation Committee

The compensation committee was inaugurated on August 8, 2005 and officially established on August 23, 2011 according to regulations. The Macronix compensation committee is composed of three independent directors and one director, Mr. Su Yan-Kuin, serves as the chair. Five meetings were held in 2014. For details on compensation committee meetings, please refer to the Macronix annual report at <http://www.macronix.com>.

## 4.1.3 Audit Committee

Macronix employs finance and accounting specialists to serve as Audit Committee members. Seven meetings were convened in 2014. The three Audit Committee members are entrusted with auditing annual and semi-annual financial statements, appointments, termination, as well as compensation approval of certified public accountants and reviewing matters where directors may have a conflict of interest. The committee also performs the statutory functions and powers of corporate controllers.

### Audit Committee members

Name	Education	Past Experience
<b>Kao, Chiang</b>	Ph.D., Forest Management, Oregon State University	Professor, Department of Computer Science, Southwest Texas State University Chair Professor, National Cheng Kung University
<b>Su, Yan-Kuin</b>	Ph.D., Electrical Engineering, National Cheng Kung University	President, Kun Shan University Honorary Chair Professor, Department of Electrical Engineering, National Cheng Kung University
<b>John C. F. Chen</b>	B.A., Accounting Statistics, National Cheng Kung University	Certified Public Accountant Chairman and CEO, Qianqiu Investment Ltd. Chairman, Diwan Capital Ltd.

## 4.1.4 Internal Audit

In order to strengthen internal audit mechanisms, Macronix established a dedicated internal audit unit, which is maintained as an independent department with five full-time auditors directly reporting to the board. The auditors are responsible for reporting audit operations to the Audit Committee and will also attend board meetings for reporting.

Internal audit operations are mainly executed according to the audit plan approved by the board and the unit will periodically review the self-check operations as part of the internal control systems conducted by various divisions. The internal audit unit will also review the quality of the internal control operations and report the compiled self-check results to the board.

Macronix's audit director, Hong-Chi Wang was elected as the 23rd Outstanding Internal Auditor in 2014 by the Institute of Internal Auditors for his excellent professionalism, practical planning, and execution of internal mechanisms and auditing tasks, as well as for his active implementation of corporate governance. Such honor indicates the recognition of Macronix's excellent internal auditing performance.

#### 4.1.5 Executive discipline and avoidance of conflict of interest

The general manager, senior managers, financial managers at Macronix shall report any conflict of interest or any concern for potential conflict of interest to the Macronix Audit Committee.

Macronix employees, other than the general manager, senior managers, and financial managers shall disclose any occurring or potential conflict of interest to their supervisor or senior manager in writing. Macronix directors and corporate controllers shall immediately notify the chairman of the Audit Committee of any conflict of interest.

#### 4.1.6 Corporate conduct and ethics code

In accordance with NASDAQ regulations and upon approval by the board, the corporate conduct and ethics code was issued for directors, controllers, management of all levels, and all employees. The purpose of the code is to prevent any misconduct and encourage the following behavior:

1. Honest and ethical conduct (including ethically handling actual or obvious conflicts of interest in personal and professional matters).
2. All Macronix public announcements, reports or documents submitted to securities authorities will be complete, fair, accurate, and timely.
3. All conduct will be compliant with government laws, guidelines, and regulations.
4. Timely reports of any violations of the code by persons subject to the terms of the code.
5. All conduct shall comply with the code.

To ensure that all Macronix employees are fully aware of the conduct and ethics code, one hundred percent of all new employees receive training and are tested during their orientation to the company. In addition, compliance of employee conduct with the code is included as part of the annual performance evaluations, both personal and departmental, so that Macronix employees are reminded on a daily basis of the importance of carrying out the principles of the conduct and ethics code.

#### 4.1.7 Communications channel with stakeholders

We hold various meetings with employees to encourage communications and an open dialogue with management. We have also set up a "Speak Your Heart" suggestion box and a report hotline, which the Audit Committee has appointed a special team to oversee. Macronix also provides a list of contact windows on the company website for any related party to leave messages or comments regarding various Macronix operations.

#### 4.1.8 Information disclosure

The company's Chinese website has an investor relations section that discloses financial and corporate governance information and the English website publishes related company information as well. A special dedicated unit is responsible for the gathering and publicizing of Macronix information and all Macronix public announcements are made by a company spokesperson or agents. Also, we provide Macronix CSR information to the general public, shareholders, and customers in a timely fashion through mediums including the company website, press releases, and issuance of CSR reports. In addition, slides and records of Macronix's investor conferences can be found on the company website under "Investor Relations/Financial Information/Quarterly Report."

## 4.2 Risk Management

<b>Risk Management Policy</b>
<ul style="list-style-type: none"><li>● Regulatory compliance: We abide by Taiwan regulations and international standards and act in accordance with social ethics and integrity principles.</li><li>● Asset protection: We are aware of the importance of risk management and will effectively prevent any crisis to protect corporate assets.</li><li>● Loss prevention: We foresee the possibility of crises and keep the risks under control by using means to avoid or transfer risks to prevent or minimize losses.</li><li>● Sustainable development: We have built up comprehensive capabilities to handle crises and practice through training drills. In addition to pursuing financial success, we attend to our social and environmental responsibilities to ensure Macronix's sustainable development.</li></ul>

### 4.2.1 Risk Management Organization

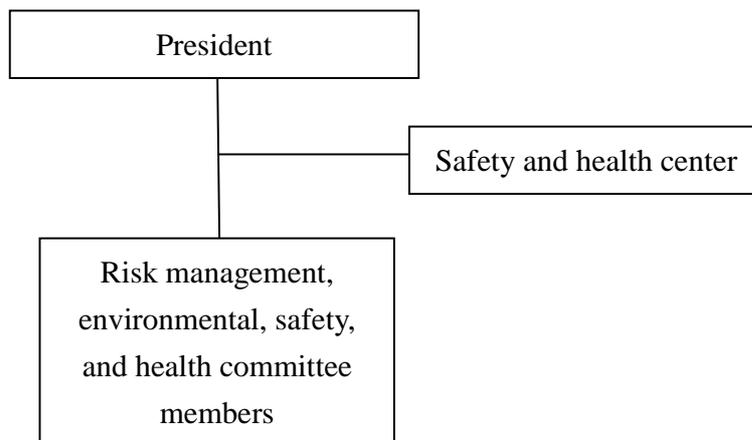
In fulfillment of our corporate mission and devotion to social responsibility for long-term sustainability, Macronix established a corporate risk management organization to collectively manage potential risks in various operations that possibly affect or endanger corporate profitability. The company will provide sufficient risk management information to Macronix's stakeholders, shareholders, and other parties of interest.

Macronix has set up a safety and health center in charge of organizing risk management, environmental, safety, and health events; providing technical information relating to risk management; tracking results and improvements; and submitting the annual report on risk management, environmental, safety, and health work to the president for review. We completed the establishment of the Business Continuity Management Program (BCP) and engage in crisis management drills every year. We conduct mock drills every year so that we are fully prepared to deal with major emergencies such as natural disasters, fires, droughts, power outages and supply interruption, through a complete management system. Moreover, we request our supply chain to establish response plans and procedures for potential operating risks so that they can ensure continual business operation and mitigate the possible impact resulting from negative events. In addition, we invest in formulating risk improvement plans every year to minimize the possible impact resulting from disruptions to our operations. The

outstanding performance of our risk management system enabled us to promote the self-audit of our company and receive international certification. We take pride in abiding by the related laws and regulations to implement risk management mechanisms. We are not involved in any unfair competition practices and anti-trust litigations, and have not been fined for any major violations.

To perfect our existing mechanisms, we have integrated the principles of the Plan-Do-Check-Act (PDCA) and launched the Business Continuity Management System (BCMS) in 2014 to further solidify the integrity of our business continuity capabilities. This system allows us to implement business continuity management and thus protect the interests of employees, shareholders, and customers in the event of crises in the global supply chain or natural disasters and ensuring Macronix's sustainable development.

**Risk management, environmental, safety, and health committee**



## 4.2.2 Risk control of subsidiaries

Operation procedures are established to effectively manage investment decision making and risks.

### Policy

- Supervision procedures for subsidiaries
- Control procedures for long-term investments
- Control procedures for reinvestments
- Control procedures for financial operations between subsidiaries

### Relevant operating procedures

- Operation procedures for procurement and disposal of assets
- Credit control procedures
- Supplier management procedures
- Control procedures for short-term investment operations

### Execution

- Subsidiaries are required to establish internal control procedures
- Investment review committee examines major investment plans
- Subsidiary financial executive meeting is convened every month
- Quarterly investment report is submitted to high-ranking executives every month
- Correspondent banks are evaluated quarterly
- Correspondence with subsidiaries is in accordance with terms of contracts
- Systems of management
  - ✓ Subsidiaries supervision system
  - ✓ Customer credit control system
  - ✓ Supplier order management system

### **4.3 CSR value chain management**

Macronix continues to build a robust CSR value system and work with our employees and partners to understand and respond to stakeholders' expectations toward Macronix's fulfillment of social responsibilities, while also serving as a learning tool for the company to learn more about trends, risks and development opportunities.

Macronix, as a leading global semiconductor provider, works with a variety of supply chain partners in the industry. We cooperate with more than 100 suppliers and production partners (producers, agents, and contractors of raw material, indirect materials, parts, mechanical equipment, and plant facilities) to provide professional services to major markets worldwide. Our supply chain partners include both local and global companies so that we can build a complete and stable supply chain control system. We purchased 30% of the raw materials from Taiwan-based suppliers in 2014. We hope to help our suppliers establish and raise their awareness and capabilities in social and environmental responsibility (SER) by enhancing SER controls and training for our supply chain partners and conducting audits on our partners.

We hold true to the principles of creating value together with our partners and adhering to high standards of business ethics to protect employee and partner rights and dignity. We set up strict and vigorous health and safety standards to minimize any negative influences on the environment, safety, health, and our partners. To fulfill these promises, we work closely with employees, suppliers and their employees and require our supplier partners to sign the Supplier Corporate Social Responsibility and Business Ethics Consent. We have also conducted the Risk Assessment of Suppliers (RAS) periodically, which involves on-site inspections and document reviews. RAS is conducted on outsourced and testing plants once a year and on raw material suppliers once every two years to ensure all CSR values are put into practice throughout the entire organization. In addition, Macronix communicates with its suppliers and partners through meetings and communication channels to acquire their opinions so that our supplier partners can become an integral part of the Macronix corporate value chain system.

### **4.3.1 Sharing values with customers**

Macronix is committed to being an integrated solutions provider. This is a long-term promise we have made to our corporate partners and it is also our ultimate business goal. Production of low-cost and standardized memory and logic chips in large quantities is no longer the mainstream in the era of information appliances. The market focus is shifting to information-oriented devices, and therefore whoever is capable of delivering custom-made total solutions for numerous electronic product applications will be able to ride the next wave of technology and come out on top.

After more than a decade of cultivation, Macronix has successfully built strategic partnership with world-class manufacturers in the U.S., Japan, Europe, and Asia. Our favorable long term relationship with these powerful partners has enabled us to develop top quality new products in Flash memory, ROM, and logic devices. In addition to our efforts to try to expand our worldwide market share, we also endeavor to become the world's top Mask ROM provider.

During the first-stage implementation of our corporate concept, Macronix was an integrated service provider that offered complete services from R&D design, manufacture and production, to assembly and testing. Progressing into our second decade of operation, Macronix has accomplished our first-stage goal.

Currently, Macronix is advancing to its second-stage goal, devoting its effort in finding innovative solutions partners for its customers. We actively participate in the development projects of our system customers, providing not only innovative R&D concepts and advanced processing technologies, but also affording creative ideas to help our customers develop marketable products. In future, Macronix will continuously accumulate its intellectual properties, provide better products and services, and cooperate with its customers around the world to face challenges pertaining to advanced technologies.

### **4.3.2 Creating customer satisfaction**

In our long term cooperation with business partners, we have always strived for

customer satisfaction with our services, which is also a decisive indicator of how well we are performing. We listen to what customers have to say and keep on improving our service quality from customers' perspectives. We have operation offices in the U.S., Europe, Japan, Singapore, Hong Kong, and Taiwan to quickly provide resources and services to our customers. Macronix has also instituted an integrated mechanism system to boost customer satisfaction.

Devotion to service is one of the principles that Macronix operates. Maintaining favorable customer relationship is a Macronix core value. Taking customer satisfaction surveys seriously, the Macronix headquarters directly oversees the execution of periodic customer surveys so that high-level executives are directly aware of customer opinions and feedback. We have set up an integrated mechanism system so that we are better able to cater to customer needs and learn of their satisfaction level. We instituted satisfaction evaluation mechanisms for sales service, order shipments, product quality, and customer inquiry response times, while also conducting surveys through questionnaires and telephone interviews. The survey results serve as an important basis for Macronix to review our service quality and improve our operation flow, which will then enable us to optimize our service and thereby enhance our relationships with our customers. The latest customer satisfaction survey was completed in 2014, and all customers gave positive ratings for the entire company. The next survey is planned for 2016.

Furthermore, customers can directly communicate with Macronix sales representatives regarding any of their needs or inquiries. Customers can also contact Macronix via our corporate website. Macronix's Customer Request System (CRS) will maintain records and allocate resources for each customer request. This system also monitors the procedures and progress concerning the handling of the case. When a case has fallen behind schedule during any step in the process, higher level managers will be notified. CRS is an efficient tool for Macronix to accurately respond to customer inquiries in a timely manner.

In addition, if a customer finds a problem with any material, Macronix's customer service department will appoint designated employee(s) to manage the case. The quality and reliability engineering team will conduct failure analysis and provide a complete failure analysis (FA) to report the problem.

As Macronix holds numerous NOR Flash patents and proprietary XtraROM<sup>®</sup>

technology, we offer ODM services similar to other memory providers as well as providing first-line customers support for their own product brands. As such, how to effectively manage relationships with the four types of partners including customers, outsource manufacturers, material suppliers, and contractors is an issue Macronix is constantly working on.

Macronix uses "new thinking," "new partnerships," and "new cooperation modes" to resolve the aforesaid issue. We promote the integration of procedures and systems by re-creating corporate internal flows and building computerized system architecture. We also set up a connection to the information systems of our suppliers/contractors/partners to computerize logistic details and cash flow information to boost management efficiency and optimize information systems for the entire supply chain. It is also important that we connect to customers' information systems, without which we would not be able to increase the accuracy of demand forecasts and order control, and thus would not be able to raise the service level for our key customers.

In recent years, Macronix emphasizes the importance of information security in protecting its intellectual property and customer confidentiality. Based on the idea of our general manager to "Prevent information security incidents from happening even before they occur," we established an information security committee led by a company vice president and comprised of top supervisors from different divisions and business units to oversee matters related to information security. In addition, Macronix also holds education and training sessions and promotional campaigns to raise awareness for information security. For example, Macronix offers training programs for new recruits, holds information security challenges, issues monthly information security e-newsletters, and establishes information security websites. With the goal of encouraging everyone to be responsible for information security, Macronix has internalized our practices into an action plan aimed at protecting the company's intellectual property and confidential information.



**Information security and personal information website-MIP confidential information protection**



**Interactive competition web page**



**Information security promotion activity**



**Information security e-newsletters**

### 4.3.3 Supply chain partnership

Macronix uses CSR as a criteria for evaluating and selecting suppliers. We have deeply rooted CSR programs in our supply chain and have invited our supply chain partners to sign the "Supplier Corporate Social Responsibility and Business Ethics Consent" to jointly promote our CSR work and grow together with our partners.

Macronix was one of the first firms in the Hsinchu Science and Industrial Park to complete greenhouse gas verification and among the first semiconductor providers to receive AEO certification from the Customs Administration, Ministry of Finance. We also actively pushed upstream and downstream supply chain partners to comply with the EICC® Code of Conduct, and instituted "Supplier Green Product and SER Audit" mechanisms. By conducting annual audits on our supply chain partners, we expanded our

CSR to the supply chain system level. At Macronix, we protect the planet through action.

We also extended the requirements of SA8000 standards (e.g. no child labor, the granting of freedom of assembly and association, and no forced labor) to our supplier selection policy (including security guards) and incorporate these principles in our employee training courses and promotional materials. There were 39 suppliers that passed our audits in 2014. We provided assistance to the suppliers that failed the audits so that 100% of our suppliers eventually were compliant with our requirements.

## **4.4 Innovation**

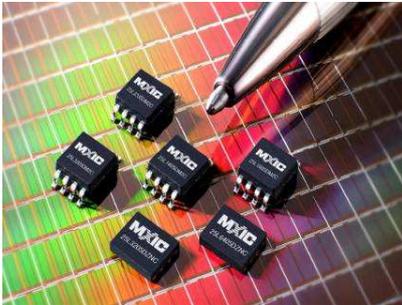
Macronix embodies corporate social responsibility and employs it as a driving force for sustainable growth for both the company and the environment. Macronix and its partners are committed to fully utilizing our combined talent, technologies, and resources to develop wide-ranging complete solutions and environmentally-friendly green products.

The most important Macronix value is innovation. In recent years we have invested more than 10% of our annual revenues in R&D focusing on next-generation non-volatile memory technologies and products to keep our competitive edge in the market. Since 2001, Macronix research papers (average of 5 to 8 papers) have regularly been presented in international semiconductor academic conferences (e.g., IEDM and VLSI), exemplifying the international recognition of Macronix's research achievements on advanced memory.

As a worldwide leader in ROM and non-volatile memory, Macronix perceives not only challenges arising from the needs of a growing global population but also unprecedented opportunities. Therefore, Macronix will continue to innovate so that the technologies we develop can contribute to the optimization of green products for cutting-edge performance, sustainability, and the efficient use of natural resources.

Macronix clearly understands the challenges and complexity of issues related to sustainable global development and the company has taken the initial step through our own operations. We also realize the need to work with our partners, including enhancing the skills and competence of employees and suppliers; developing strong connections with society and the community, and participating in the formulation of viable solutions for issues faced by all related parties in order to make a difference and fulfill our corporate responsibilities for sustainability.

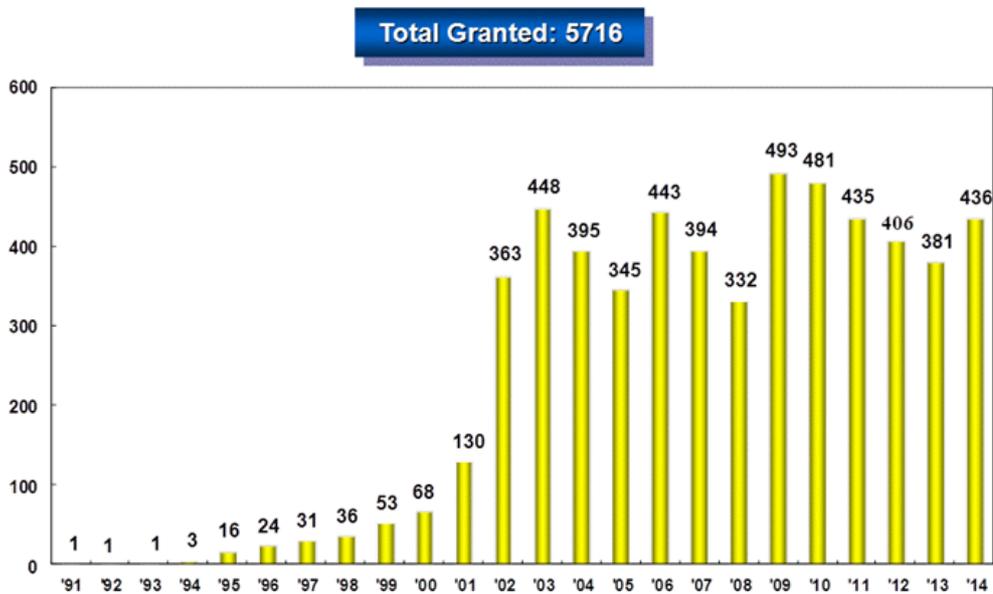
### 4.4.1 Innovative R&D



Talent, innovation, collaboration, and involvement are the core values of a knowledge-based economy and also represent the values Macronix has employed since our inception. Macronix positions itself as an integrated solution provider (ISP), meaning we are not only a chipmaker but also a provider of complete, integrated and total solutions that meet customer needs.

Macronix has always focused on the innovation and enhancement of production and product design. XtraROM<sup>®</sup> is progressing to a 32/22 nm process, and our Flash memory to a 55nm process, further reducing our costs. Moreover, our 3DVG (Vertical Gate) NAND Flash will be Macronix's weapon to penetrate the higher density memory product market.

### 4.4.2 Intellectual property portfolio



Statistics of allowed patents over the years

In accordance with our innovative values, Macronix has taken a pro-active approach to increasing and deploying our intellectual property. In 2014, Macronix obtained 436

patents. As of December 31, 2014, Macronix had obtained 5,716 patents worldwide. We effectively manage our R&D projects, taking into consideration the investment return as well as customer requirements, so that corporate resources are efficiently and effectively used and our R&D achievements can be commercialized in a timely manner, thus further enhancing our competitive edge and economic growth.

## **5 Environmental Sustainability**

Macronix has always insisted our principle of sustainable operations and cared environmental sustainability. We have taken active steps toward water and energy conservation, waste reduction, production process improvement, pollution control, green office design, resource recycling and reuse, ecosystem conservation and education, while also undertaking initiatives to follow the regulations and international standards.

Macronix sees environmentalism as the foundation of our corporate culture and we seek to protect the planet through action. We go to great lengths each year to minimize the impact of our operations to the environment and enhance our corporate competitiveness by reducing energy consumption and carbon emissions, purchasing "Green Mark" products, increasing resource efficiency, and designing green products.

We initiated and passed ISO 14001 Environmental Management System Certification in 1997. We ensure our environmental management system complying with the Plan-Do-Check-Act (PDCA) operations of the ISO system to maintain a healthy and safe environment and continue improving. All of Macronix facilities have passed the Environmental Management System Certification. Our achievements include:

- Macronix is the first semiconductor provider in Taiwan to receive SA 8000 (Social Accountability Standard Management System) Certification.
- In 2009, Macronix was among the first group of semiconductor providers to complete the establishment of an AEO safe supply chain.
- Macronix is the first firm in the Hsinchu Science and Industrial Park to pass ISO 14064-1 greenhouse gas emission verification recognized by TAF and will continue with our efforts in energy and carbon reduction.

### **5.1 Environmental protection, safety, and health management**

Macronix is fully aware of the influence of employee safety and health on our corporate competitiveness so Chairman Wu has always played the role as a company's advocate ever since Macronix's inception in 1989. He urges employees to take environment, safety, and health management seriously and actively introduced various strict international certification standards at the planning stage of Macronix's environment, safety, and health management systems so that we could build a complete platform. We

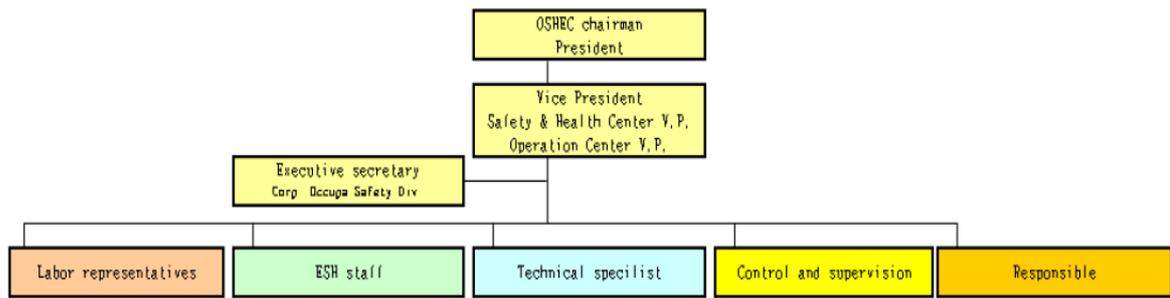
have strict and complete environment monitoring procedures to continue monitoring the air quality work environment and ensure employee health and safety. We periodically evaluate and review our management measures according to government regulations and customer's requirements. We have installed a variety of environmental protection and pollution treatment equipment (e.g. for water, air, waste, toxic substance, and noise) and closely monitor environmental quality.

In terms of management systems, Macronix introduced and passed ISO 14001 Environmental Management System Certification in 1997. Thanks to all employees' efforts, Macronix received OHSAS18001 Occupational Health and Safety Management Systems Certification in 2002. We have implemented high-quality environment, safety, and health management as part of the corporate culture and values that drive our sustainable growth, which enabled us to win the 2009 third annual National Occupational Health and Safety Award, a top honor recognizing labor safety achievements in Taiwan.

### Macronix environment, safety, and health policies

1. **Rights and obligations:** We promise and ensure that all Macronix employees work in a comfortable, safe, and healthy environment. We guarantee employees and their representatives will receive adequate consultation about, and have opportunities to participate in, safety and health management activities. All Macronix employees fulfill their duties and obligations in a safe and healthy environment.
2. **Regulatory compliance:** We abide by environmental, safety, and health regulations and implement environmental, safety, and health campaigns.
3. **Danger prevention:** We conduct danger assessment, risk evaluation, and environmental impact analysis to determine potential risks and facilitate pollution controls and disaster prevention.
4. **Education and training:** We provide high-quality and comprehensive education and training so that our employees are able to properly carry out environmental, safety, and health procedures.
5. **Sustainable development:** We adhere to the international trend of developing green products and carrying out the strict management of environmental-related controlled substances. Based on international occupational safety and health management measures and environmental control systems, we continue making improvements and effectively use all resources to safeguard the environment, as well as ensure the safety, and health of our employees while also sustaining growth for the company that is in line with the expectations of all Macronix employees, customers, shareholders, and stakeholders.

Macronix has also established the Occupational Safety Health and Environment Committee (OSHEC) led by the Macronix President to oversee the promotion and execution of environmental protection, safety, and health work. Macronix OSHEC is composed of three operational representatives, four management representatives, nine technical engineering representatives, 10 environmental, safety, and health representatives, 17 labor representatives, and wherein labor representatives account for 40%.



Macronix OSHEC organization chart

Although Macronix employees did not establish a union, Macronix OSHEC convenes meeting at least once every quarter mainly to discuss all Macronix environmental, safety, and health management operations, organization, and supervision issues, and also to track the progress of every projects. Respective manufacturing facilities hold local monthly or quarterly meetings to review the execution of initiatives.

We offer employees adequate personal protective equipment (PPE) and complete safety and health education and training. We have also established the emergency response team (ERT). The business continuity program (BCP) has also been instituted to ensure employee and corporate safety. We conduct periodic checks and repairs on fire safety equipment and public safety for buildings. Escape and evacuation drills are also practiced regularly to improve employees' ability to react to emergencies. The work environment is also routinely reviewed for comfort. As a result of systematic supervision and management, we have been able to bring about numerous achievements over the years:

- Worked with the Council of Labor Affairs' Safety Partners Program from 2008 to 2009 and organized the joint audit program on chemical suppliers in the Science Park.
- Built the safety and health cost accounting system to effectively control resources devoted to environment, safety, and health management each year. The company invested approximately NT\$590 million in 2014 in environmental pollution prevention and safety and health management.
- Developed the Safety and Health e-Management System in 2007.
- Instituted Supervisor On-site Observation, wherein supervisors are required to be at the operation sites personally and interact with employees to dig out and improve operation risks.
- Conduct annual BCP trainings and drills since 2011.

## **5.2 Prevention and handling of occupational hazards and diseases**

In addition to establishing standard operation procedures, the following measures have been taken to prevent any occupational hazard and diseases from impacting employees and corporate operations:

- Professional audits and 24-hour monitoring are provided.
- All accidents are investigated, and followed up with related safety improvements in order to prevent any reoccurrence or further incidence.
- Training for new and current employees and PPE management are provided.
- Occupational safety meetings are conducted at each levels.
- Programs to monitor operational environment and continue improving occupational safety that exceed regulatory requirements have been implemented.
- A health service center is available for conducting professional health examinations and health management, while healthy activities such as, seminars, psychological counseling, and an employee fitness and activity center are provided.
- An employee assistance program (EAP) has been implemented and specialist doctors on occupational diseases have been invited on-site to guide and instruct employees concerning work safety and health.
- Regular doctor visits are scheduled at our facilities to provide medical advice to employees, help conduct evaluation on health risks, and assist with health management at different levels.
- A dedicated unit in charge of protecting against epidemics collects the latest information about epidemics and diseases and then integrates any related epidemic control measures to safeguard employee health.
- Complete employee assistance programs are provided as well as psychological counseling.
- Pregnant employees are cared for by implementing the "Three no's", no night shifts, no heavy lifting, and no radiation work, to offer a friendly workplace.

Macronix has established a system for managing employee occupational injuries. Macronix had no cases of occupational disease in 2014 and the frequency and severity of disabling injuries were far below industry and national averages thanks to company controls and effective measures and mechanisms that include top manager's participation, and efforts by all employees. In addition, Macronix has received the highest honor in the third National Occupational Health and Safety Award, demonstrating its excellent performance in safety and health management and employee health promotion. The

employee absence rate in 2014 was only 608.9 (absence rate = total number of days absent x 200,000 ÷ total work hours), and the number of occupational mortality was zero.

The key reason behind Macronix winning of the National Occupational Health and Safety Award is our thorough labor safety responsibility system, wherein executives at all levels actively participate in the management of safety and health, and encourage employees to actively offer suggestions for improving workplace safety. Employees who proposed good suggestions were recognized and awarded. We also expanded work safety management to personal health care. In the future, Macronix will continue to promote employee safety and health and build a work environment with a high-safety level.

### **2011-2014 occupational injuries of male and female workers and resulting loss of work hours**

<b>Year</b>	<b>Gender</b>	<b>Occupational Injury (cases)</b>	<b>Lost working days (days)</b>	<b>Total work hours</b>	<b>Injury rate (IR)</b>	<b>Lost day rate (LDR)</b>
<b>2011</b>	<b>Male</b>	0	0	3,989,760	0.00	0.00
	<b>Female</b>	2	19	3,465,600	0.12	1.10
	<b>Total</b>	2	19	7,455,360	0.05	0.51
<b>2012</b>	<b>Male</b>	2	28.2	5,038,080	0.08	1.12
	<b>Female</b>	0	0	4,296,960	0.00	0.00
	<b>Total</b>	2	28.2	9,335,040	0.04	0.60
<b>2013</b>	<b>Male</b>	2	18	5,040,000	0.08	0.71
	<b>Female</b>	2	6	4,239,360	0.09	0.28
	<b>Total</b>	4	24	9,279,360	0.06	0.52
<b>2014</b>	<b>Male</b>	0	0	4,915,200	0.00	0.00
	<b>Female</b>	3	47	4,133,760	0.15	2.27
	<b>Total</b>	3	47	9,048,960	0.07	1.04

Note:

1. IR = no. of disabling injuries×200,000÷total work hours (excludes first aid)
2. LDR = total lost work days×200,000÷total work hours
3. Injury category: work-related injury (excludes accidental incidents)
4. LDR is calculated based on calendar days starting from the day after the incident occurred
5. Statistics include full-time and part-time employees.
6. Statistics on the occupational injury of independent contractors are unavailable.

## **5.3 Pollution prevention**

### **5.3.1 Water resource management**

As the fabrication of semiconductors require a large amount of ultrapure water, Macronix takes the idea of water resource conservation very seriously and has aggressively implemented measures for reducing water usage and waste water recycling during our fabrication process. We also installed the first rain water recycling system in the Science Park. In addition to discharging treated waste water into the existing sewage system of the Science Park, we also implemented the following measures:

- Regularly track and manage the usage data of water resources Conduct risk evaluation and control
- Conduct risk assessment and management
- Determine if our fabrication facility is located in a water resource depleted area
- Help promote water resource utilization programs
- Entrust certified organizations to sample and analyze quality of discharged water twice a year (inspection items listed below)
- Real time monitor pH/fluoride levels of effluent and pH level of rain water, with all results being compliant with regulations.
- Environmental inspectors routinely examine the conditions of wastewater treatment and report the results in a timely manner
- Various management levels hold daily, weekly, monthly, or quarterly meetings to track and review water resource management

With effective control measures, Macronix not only met all regulatory standards (refer to the table below for the quality of discharged water from Macronix's plants in 2014), but our last three-year water recycling rate has reached 79% on average. We have received the "Outstanding Water Conserving Unit Award" from the Ministry of Economic Affairs twice.

### Quality of discharged water in 2014

Discharged water quality								
Site	pH		BOD (mg/L)		COD (mg/L)		SS (mg/L)	
	1H	2H	1H	2H	1H	2H	1H	2H
<b>Fab 1</b>	6.7	6.2	Cannot be analyzed	Cannot be analyzed	54.3	47.5	22.7	6.9
<b>Fab 2</b>	6.2	6.1	Cannot be analyzed	9.2	92.2	70.4	140	107
<b>Fab 5</b>	6.7	6.7	Cannot be analyzed	4.8	172	139	61.6	53.6

Data source: Macronix's annual report on the wastewater discharge from Macronix's plants

### Water usage

Macronix's total running water usage in 2014 amounted to 2,872,485 tons (water meter information) and the total water discharge was 2,277,010 tons. Through our fabrication waste water recycling technology, Fab 1, Fab 2, and Fab 5 were able to respectively recycle 361,679 tons, 1,447,225 tons, and 1,525,695 tons of each fab waste water in 2014. The recycle rates were 79.48%, 86.83%, and 72.2% (recycling calculation based on the water recycling rate of the Science Park's water balance chart and excludes calculation for rainwater recycling).

### Water Conservation Measures

Current measures adopted include recycling and reutilization of process and air-conditioning condensation water.



Rain water recycling system



Separate local scrubber waste water recycling



Faucet water flow adjustment



Green parking lot

### Water saving project

1. Raised our fab waste water recycling rate and reduced the overall use of water
2. Rain water and air conditioning condensation water recycled and reused
3. Ultrapure water (UPW) recycled and reused

### 5.3.2 Air pollution prevention

The central gas emission treatment system at Macronix fabrication facilities are comprised of three main systems respectively for regular gas emission, acid/alkaline gas emission, and volatile organic compounds (VOCs). The effluent gas is treated in professionally designed facilities and emissions are produced in accordance with statutory regulations. We entrust certified organizations to test acid gas emissions every year. Macronix facilities are installed with continuous monitoring device for measuring VOCs, and the emission removal rate is as high as 90% and the emissions are less than 0.6 kg/hour each fab.

#### 2014 plant gas emission test data

Site	VOCs	NO <sub>x</sub>	SO <sub>x</sub>
Fab 1	34188.23	No test	No test
Fab 2	4053.7	74.09	1800.1
Fab 5	2980.59	1858.03	55.64

(Unit: kg/year)



Air pollution treatment equipment

### 5.3.3 Waste and hazardous substance

#### management

Macronix has completed the adoption of alternative materials and improvement in fabrication processes regarding hazardous substances used in electronics that are of concern to the international community and specified in the EU RoHS (Restriction of Hazardous Substances). We received IECQ QC 080000 Hazardous Substances Process Management System Certification in November 2007, which confirmed that our products are compliant with RoHS and customer requirements. Because of our thorough hazardous substance control system, we have been awarded green product certifications from many internationally known customers.



#### Waste amount and disposal method

Waste generated at Macronix includes general industrial waste and hazardous industrial waste. The waste is disposed of by contractors through recycling, reuse, incineration, or landfill. Before waste disposal, we first confirm how the commissioned contractors process the waste and require them to undergo relevant review procedures before commissioning them to treat the waste. The amount of general industrial waste recycled in 2014 was 275.949 tons, reuse was 1,094.269 tons, incineration was 243.917 tons, and landfill was 182.071 tons. The amount of hazardous industrial waste recycled in 2014 was 882.144 tons, reuse was 2,801.729 tons, incineration was 2.195, and landfill was 0 tons. Total waste generated at Macronix in 2014 was 5,482.274 tons, of which 92% was recycled and reused. We hope to further increase the recycle and reuse rate in the

future and effectively reduce the impact on the environment.

**2011-2014 waste amount**

<b>Year</b>		<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
<b>Category</b>	<b>Contractor disposal</b>	<b>Disposed amount (metric tons)</b>			
<b>General industrial waste</b>	<b>Recycle</b>	857.085	586.553	269.188	275.949
	<b>Reuse</b>	312.674	600.081	1,388.985	1,094.269
	<b>Incineration</b>	488.247	360.020	362.141	243.917
	<b>Landfill</b>	17.480	20.090	70.900	182.071
<b>Hazardous industrial waste</b>	<b>Recycle</b>	576.852	945.452	0.361	882.144
	<b>Reuse</b>	1693.238	1,938.210	2,941.488	2,801.729
	<b>Incineration</b>	1.809	1.250	2.740	2.195
	<b>Landfill</b>	0.001	0	0	0

Note: 2011 data included only Fab 1, Fab 2, and Test Facility 3; 2012-2014 data included Fab 1, Fab 2, Fab 5 and Test facilities. 2011 and 2012 output waste data were re-verified, calculated, and revised in 2015 for adjusting the 2013-issued report data.

## 5.4 Ecological conservation and education

Macronix attempted to implement ecosystem conservation actions by actively adopting six hectares of land from the Science Park Administration Bureau and turned it into the Macronix Park with hundreds of trees and plants including banyan trees, camphor trees, bamboo, and Taiwan golden-rain trees in addition to rare water plants, such as waterweed, water lily, floating moss, yellow water lily, creeping burhead, and oriental cattail, which all combine to present a different landscape each season.

Macronix Park is open to the public for their enjoyment during regular hours and is also an ideal place for schools and environmental groups to hold ecological education events. Macronix Park has won the "Outstanding Landscape Award" from the Hsinchu Science Park Administration four years in a row since 2004.

In addition, all Macronix facilities are located in the science and industrial park areas that have been environmentally assessed and evaluated; thus, all environmental protection work complies with local government regulations and corporate internal environmental policies and specifications. Therefore, the environmental impact of Macronix operations can be controlled within the scope of legal regulations and organizational policies.



## 5.5 Green products

In response to the rising trend of green consumerism and strict international environmental laws, Macronix endeavors to reduce its impact on the environment, starting from its daily operations while also incorporating the concept of environmental design into its product designs. In addition to our



efforts to minimize pollution resulting from our production process, we adopt green product designs and ensure our products are lead-free, halogen-free, and avoid items listed in the European Union Substance of Very High Concern (SVHC). Our green efforts include:

- Products in compliance with EU RoHS and SVHC free

Macronix has acquired the IECQ QC 080000 Hazardous Substance Process Management System Certification every year since 2007. Our products comply with Directive 2011/65/EU on the restriction of the use of certain hazardous substances and are free of SVHC released by ECHA.

- 100% lead-free

Starting from 2001, Macronix has produced reliable lead-free products for customers. In 2007, all our products are lead-free.

- 100% halogen-free

In 2007 Macronix started to make halogen-free products in compliance within international standards (IEC 61249-2-21, JPCA-ES01 2003, IPC 4101). Since the second quarter of 2008, all Macronix's products are halogen-free.

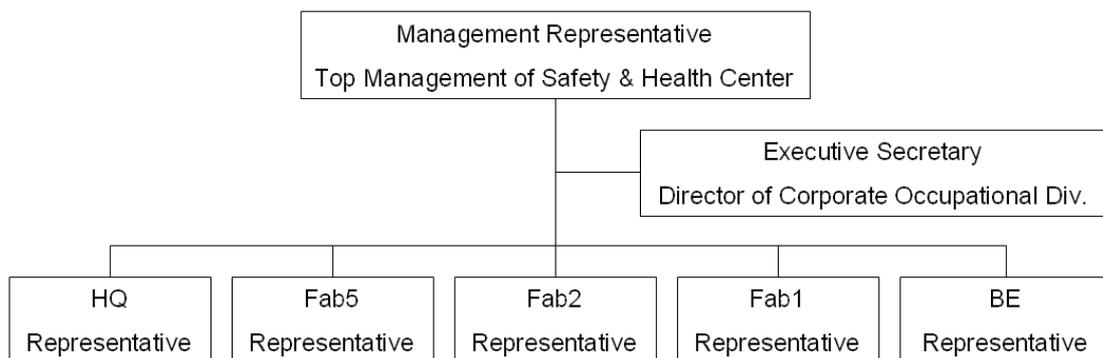
Macronix has developed a system that combines a quality control system and a risk assessment of suppliers (RAS) system, as part of our green product control system for supply chain management to ensure that upstream and downstream suppliers comply with RoHS directives as well as customer requirements. Thanks to Macronix's comprehensive hazardous substance control system, we have been awarded green product certifications from numerous internationally prestigious customers.

## 5.6 Greenhouse gas control and reduction

In response to the trend of greenhouse gas control and reduction in the supply chain due to global warming, Macronix began planning for greenhouse gas checks, control, and reduction in 2000 and introduced ISO14064-1 greenhouse gas verification in 2007.

<b>Macronix strategies for greenhouse gas control</b>	
1.	Minimize energy loss and reduce greenhouse gas emission
2.	Raise energy efficiency of equipment
3.	Alternative production process plans
4.	End-of-pipe treatment
5.	Promotion and education
6.	Recycling waste and limiting greenhouse gas emission

We established the units to manage greenhouse gas management according to ISO 14064-1 verification standards as illustrated below. Through the complete management system, we performed thorough checks on the energy use conditions in our facilities and offices and thereby established records monitoring internal procedure checks with regard to control of greenhouse gas. Therefore, we are able to use the information as a basis for selecting alternative production technologies with reduced energy consumption and greenhouse gas emissions in order to achieve our goal in this respect. We received the Best Award for Carbon Reduction Companies in 2010 from the Science Park Administration in recognition of our achievement in greenhouse gas control.



**Macronix greenhouse gas management organization chart**

Macronix added the scope of Fab 5 in the greenhouse gas check in 2012. However, due to the base year set-up, Fab 5 emissions were not included in the total emission count

and therefore separately listed. Macronix's total emissions in 2014, excluding Fab 5, were 269,305.581 metric tons CO<sub>2</sub>-e. Fab 5 emissions in 2014 were 172,888.293 metric tons CO<sub>2</sub>-e. In addition, excluding Fab 5, Macronix's scope 1 emission accounted for 43.01% of the total and scope 2 accounted for 56.99%. Fab 5's scope 1 emissions accounted for 37.80% of the total and scope 2 emission accounted for 62.20 %.

**Macronix greenhouse gas emissions (excl. Fab 5)**

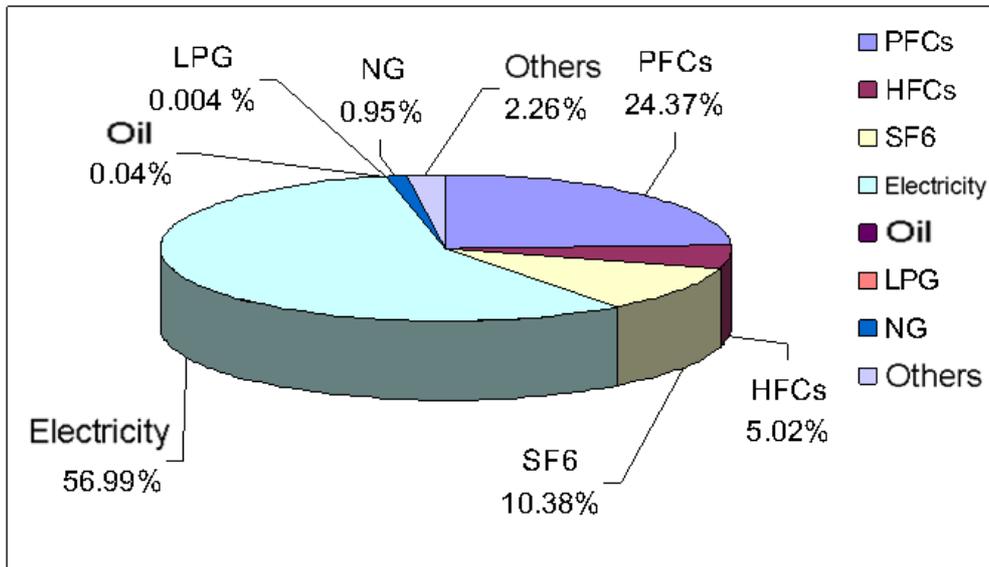
	<b>Unit</b>	<b>2011</b>		<b>2012</b>		<b>2013</b>		<b>2014</b>	
<b>Scope 1 Direct</b>	Metric tons CO <sub>2</sub> -e/year	121,000	39.91%	120,000	42.15%	119,000	43.34%	116,000	43.01%
<b>Scope 2 Indirect</b>	Metric tons CO <sub>2</sub> -e/year	183,000	60.09%	164,000	57.85%	156,000	56.66%	153,000	56.99%
<b>Total</b>	Metric tons CO <sub>2</sub> -e/year	304,000	100%	284,000	100%	276,000	100%	269,000	100%

**Fab 5 greenhouse gas emissions**

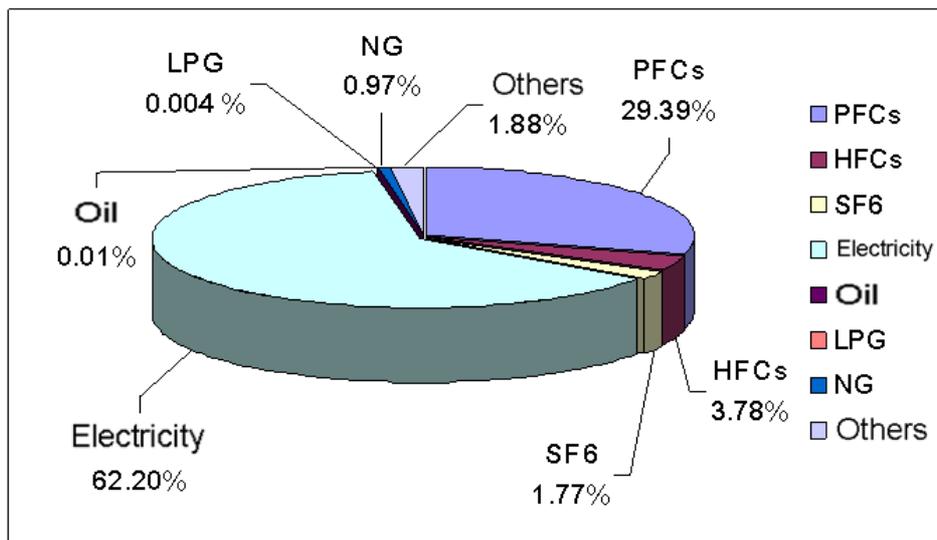
	<b>Unit</b>	<b>2012*</b>		<b>2013</b>		<b>2014</b>	
<b>Scope 1 Direct</b>	Metric tons CO <sub>2</sub> -e/year	68,000	40.70%	80,000	42.86%	65,000	37.80%
<b>Scope 2 Indirect</b>	Metric tons CO <sub>2</sub> -e/year	100,000	59.30%	107,000	57.14%	108,000	62.20%
<b>Total</b>	Metric tons CO <sub>2</sub> -e/year	168,000	100%	187,000	100%	173,000	100%

Note: Scope 3 emissions, other indirect greenhouse gas emissions such as employee business travel and material transportation, account for a small portion or cannot be quantified; therefore they were not included in the check.

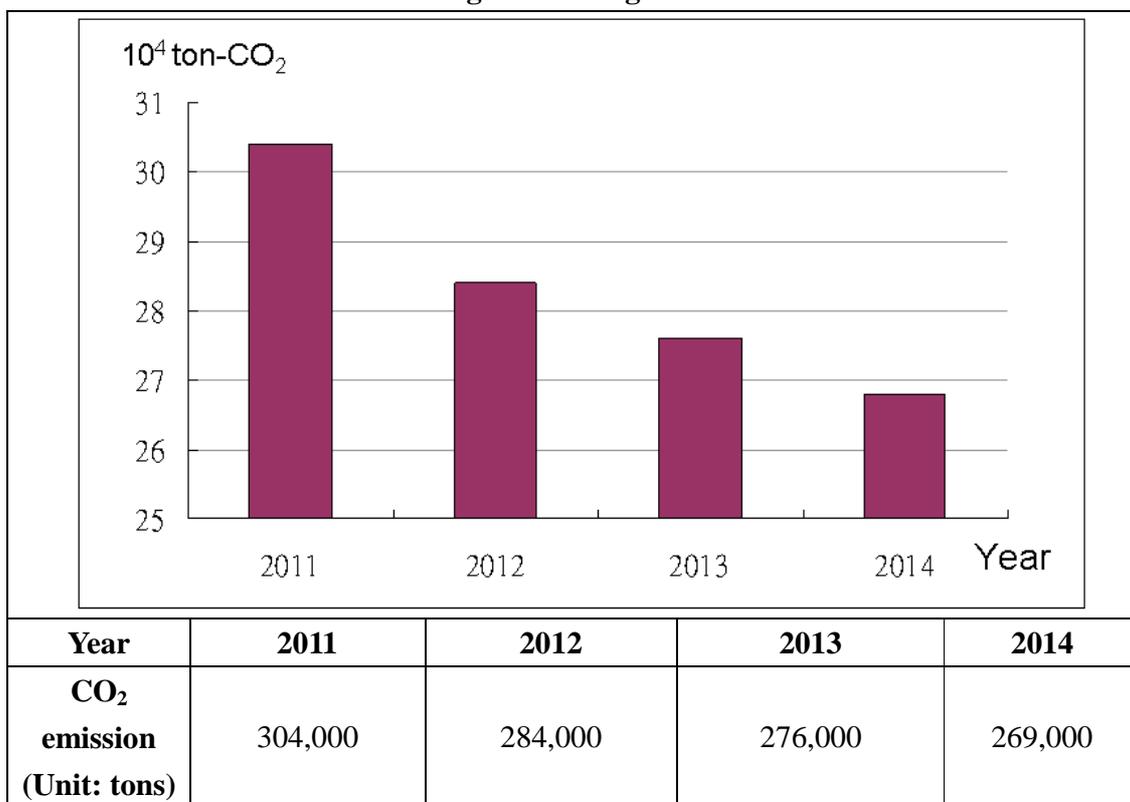
**Ratios of greenhouse gas emissions by source of emission, 2014**



**Fab 5 ratios of greenhouse gas emissions by source of emission, 2014**



### Trend of greenhouse gas emissions



Note: Figures exclude Feb 5 data

### Carbon emission intensity

	Calculation unit	2011	2012	2013	2014
<b>Carbon emission intensity</b>	CO <sub>2</sub> -e (ton)/revenue (million)	10.9	11.8	12.4	12.0
<b>Carbon emissions</b>	CO <sub>2</sub> -e (ton)	304,000	284,000	276,000	269,000
<b>Annual total revenue</b>	million	27,843	23,888	22,204	22,414

Note: Figures exclude Feb 5 data

**Environmental data**

	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
<b>Electricity</b>	$1.0 \times 10^6$	$1.0 \times 10^6$	$1.1 \times 10^6$	$1.1 \times 10^6$
<b>Liquefied petroleum gas used in kitchen and dormitory</b>	$4.9 \times 10^2$	$4.0 \times 10^2$	$4.0 \times 10^2$	$4.0 \times 10^2$
<b>Liquefied natural gas (NG)</b>	$4.7 \times 10^4$	$4.9 \times 10^4$	$5.1 \times 10^4$	$4.3 \times 10^4$
<b>Petrol</b>	$6.1 \times 10^2$	$4.2 \times 10^2$	$3.7 \times 10^2$	$4.5 \times 10^2$
<b>Diesel</b>	$1.5 \times 10^3$	$3.5 \times 10^3$	$3.0 \times 10^3$	$1.3 \times 10^3$

Note: The scope of data excludes Fab 5 data, data were re-verified and converted to GJ (1 billion joules)

**Fab 5 Environmental data**

	<b>2012</b>	<b>2013</b>	<b>2014</b>
<b>Electricity</b>	$6.7 \times 10^5$	$7.4 \times 10^5$	$7.5 \times 10^5$
<b>Liquefied petroleum gas used in kitchen and dormitory</b>	0.0	0.0	0.0
<b>Liquefied natural gas (NG)</b>	$2.7 \times 10^4$	$2.9 \times 10^4$	$3.1 \times 10^4$
<b>Petrol</b>	0.0	0.0	0.0
<b>Diesel</b>	$1.6 \times 10^2$	$2.1 \times 10^2$	$2.2 \times 10^2$

Note: The scope of data includes Fab 5 data, data were re-verified and converted to GJ (1 billion joules)

### 5.6.1 Energy conservation activities

We officially formed the Macronix "Energy Conservation Service Group" in 2008 to carry out our various energy conservation activities. A record of the accomplishments Macronix has achieved over the years in this area includes:

1. Implemented energy management initiatives for all levels of our operations.
2. Energy-savings service group helped implement energy conservation techniques and experience sharing.
3. Introduced external energy audits and invited experts to provide guidance.
  - Completed on-site energy audits by the ITRI energy conservation service group, including audits on our air conditioning systems, power systems, air compression and energy management systems.
  - Promoted energy conservation guidance program for firms in the Science Park.
  - Five experts including specialists from the ITRI Green Energy and Environment Research Laboratories, professors from National Taipei University of Technology, and energy conservation and carbon reduction consultants from the Industrial Development Bureau conducted on-site evaluations of our cleanroom air conditioning system, chiller system, and air compressor system and offered advice on VOC to RTO energy-savings technology.
  - Executed SEMI S23 pilot project in 2013 and completed establishing the Fab 5 plant air-conditioning system energy baseline.
  - Continued the 2013 pilot project in 2014 and established energy baseline for the entire system and a portion of energy-consuming processing equipment used in Fab 5 to improve main energy-consuming equipment and enhance the company's competitiveness in energy utilization.
4. Hold periodic internal energy control meetings to implement projects and track progress.
5. Routinely maintain records of various energy supplies and check energy equipment at our facilities.
6. Perform unscheduled audits on MODULE energy consumption and energy equipment checks.
7. Promote education on energy-conservation and carbon reduction through diversified policies and methods.



## Major energy-saving projects in 2014

Macronix implemented several energy-saving projects over the past few years, including projects focusing on the chiller system, power system, and illumination equipment, achieving significant results.

Energy saving measures	Electricity Saved	Costs Saved	Joules Saved	Energy saving Baseline comparison	Energy saving Calculation method
Fab 2 weather risk energy conservation application	448,000 degree	1.12 million	$1.6 \times 10^{12}$	Comparison with 2012 and 2013 baseline	Comparison with actual statistical value
Replaced MUA system with low-voltage HEPA in Fab 2 plant	660,000 degree	1.66 million	$2.3 \times 10^{12}$	Comparison with 2013 baseline	Estimation according to energy saved
Energy conservation of vacuum cycling water pump in Fab 5 (2014)	390,000 degree	\$1.04 million	$1.4 \times 10^{12}$	Comparison with power usage before improving systems	Estimation according to energy saved
Fab 5 UPW system switch (2014)	4.2 million degree	11 million	$1.5 \times 10^{13}$	Comparison with power usage before improving systems	Estimation according to energy saved

## Future energy-saving plans

1. Macronix will continue investing in energy-saving measures by replacing old and inefficient equipment with new highly energy-efficient models.
2. Macronix will improve energy conservation practices according to energy baseline inventory results.
3. The entire Macronix corporation will only purchase green products.
4. We will extend our experiences in energy savings to our subsidiaries.

## **5.6.2 Product Carbon Footprint**

In order to lower greenhouse gas emissions contributed by our organization and products while reducing the impact to the environment, we conducted greenhouse gas verification for the organization and also initiated verification on greenhouse carbon gas emissions for individual products, while calculating the carbon footprint of Macronix products. We aim to use these findings as the basis for evaluating how we can improve our production methods and company operations by adopting more energy-efficient processes and equipment in order to make more sustainable products.

Accordingly, in 2011 Macronix completed training of 47 qualified internal carbon footprint verifiers, completed a carbon footprint and life cycle database and initiated the certification process for PAS 2050:2011.

Macronix takes a two-pronged approach to reduce the carbon footprint of our products. First, we use highly energy-efficient equipment to lower power consumption and consistently replace out-of-date and energy-inefficient processes with innovative technology. We provide low-carbon solutions through management and technical methods.

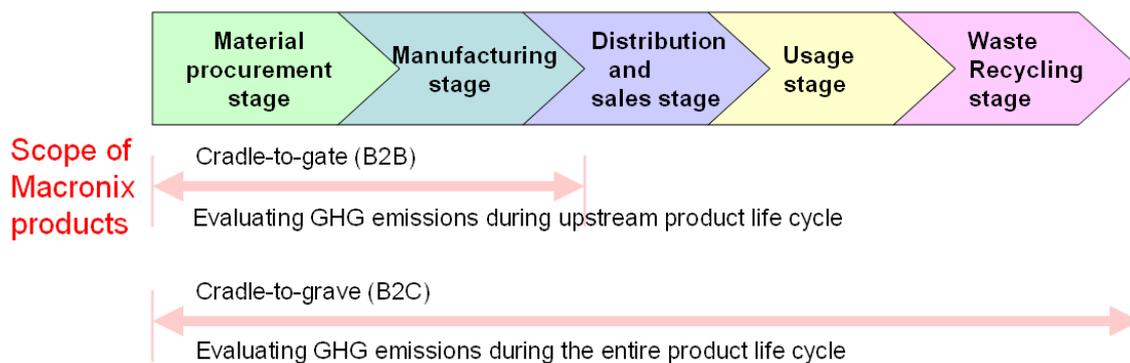
### **Macronix product carbon footprint development milestones**

- 2013 Worked with customers to conduct carbon footprint checks and verification
- 2012 Completed carbon footprint certification (PAS 2050:2011) for the first NOR Flash (8SOP 209mil) product family
- 2011 Undertook the establishment of Fab 2 and commenced production of the BE:NOR Flash (8SOP 209mil) product family and initiated the related carbon footprint certification (PAS 2050:2011)
- 2009 Conducted carbon footprint verification for 48 TSOP and Driver-A700 products under the Hsinchu Science Park Bureau's carbon footprint reduction program
- 2008 Completed greenhouse gas verification and was the first in the nation to be awarded ISO 14064-1 certificate by TAF
- 2007 Completed greenhouse gas verification and was awarded ISO 14064-1 certificate by BSI

## Future Outlook

Looking forward, Macronix will continue to pay attention to issues related to climate change and the influence of greenhouse gas emissions. We will aim for the following goals:

- Promote carbon neutrality
- Strengthen green product designs and green process management
- Continue driving green supply chain management
- Actively participate in customer product-related carbon footprint projects



## 5.7 Introduction to environment, safety, and health costs accounting management system

To keep up with international trend, to fulfill our environmental and social responsibilities, and also to raise the effectiveness of our investments in the environment, worker safety, and health management, Macronix has implemented an environment, safety, and health costs accounting (ECA) management system upon resolution by the ESHC and under the commitment and support of high-level executives in the fourth quarter of 2004. The risk management division formed a cross-department unit to be in charge of planning and building the system in February, 2005 and hosted several training and education sessions to promote the system, which was officially began operations on December 1, 2005.

The Macronix ECA management system not only considers environmental costs that other companies generally take into account but also includes safety and health expenses. The system evaluates overall investment costs and results in environment, safety, and health management and converts activities of environmental protection (e.g. pollution prevention), worker safety (e.g. operation site safety), and health (e.g. health promotion)

into financial or accounting information, which is then used to classify the costs into six categories: corporate operations, supplier and customer up/down stream relations, management activities, R&D, social events, and loss compensation. We thereby use management means or approaches to solve or improve environmental problems as part of our strategy for sustainable operations. Our 2014 costs in environmental pollution prevention were NT\$363,426,251 and expenses in environmental management activities were NT\$63,909,595.

**2011-2014 safety and health expenses**

	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
<b>Costs in safety and health disaster prevention</b>	27,063,279	70,447,140	67,270,145	55,613,780
<b>Costs in safety and health management activities</b>	62,679,128	102,597,232	110,037,556	108,267,646
<b>Major safety and health fines</b>	0	0	0	0

Unit: NT\$

**2011-2014 environment expenses**

	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
<b>Costs in environmental pollution prevention</b>	256,733,030	373,014,600	334,846,947	363,426,251
<b>Costs in environmental management activities</b>	39,853,753	64,685,027	65,996,981	63,909,595
<b>Major environmental fines</b>	0	0	0	0

Unit: NT\$

## 5.8 Honors in environment, safety, and health achievements

Major awards Macronix received in 2014 in recognition of environment, safety, and health achievements:

- "Outstanding Energy Saving Company Award" from Bureau of Energy, Ministry of Economic Affairs
- "Outstanding Green Beautification and Environment Protection in the Science Park Award" from the Hsinchu Science and Industrial Park for Macronix's headquarter, Fab 1, and test facility.
- "Outstanding Park Greenland Cultivation Company" from the Hsinchu Science and Industrial Park, Ministry of Science and Technology



## **6 Warmth, Happiness, Growth**

Warmth, happiness, and growth are the vision of Macronix human resource management.

An enterprise is like a big family, and at Macronix we provide our staff with the care and attention that any other family would. With empathy, we respect, understand, and care for the work and life of our staff and extend this caring to their families. This makes employees treat each other in a mutual trust and cooperation way. Following the philosophy of humane management style, we provide staff with high flexibility and autonomy at work and continuously encourage staff to actively make valuable innovative solutions to our nonvolatile memory solutions. Hence the firm has been able to present top technical papers at the International Electron Devices Meeting (IEDM), VLSI Symposia, and International Solid-State Circuits Conference (ISSCC), receiving worldwide attention on its forward-looking R&D outcomes. Macronix believes that respecting individual diversity, and adopting open-door policy to create an atmosphere of open and transparent communication. We routinely hold management communication meetings, conduct staff satisfaction surveys, set up staff suggestion boxes and publish the Macronix quarterly magazine in order to provide a platform to encourage our staff communicate, express their ideas, and share their voices. Macronix adheres to the Macronix CSR Policies, devoting its utmost effort in construction a superior human resource management system and labor system with its perfect planning and execution abilities, to comply fully with local labor laws and regulations and the SA8000 specifications.

A happy staffs are usually those employees with highest efficiency. Macronix provides competitive compensation packages, humanistic management system, top recreation and leisure infrastructure, and colorful extracurricular activities to motivate staff enjoy working. These measures also help staff nurture active and positive work values, broadend the horizons, enable passion sparked and express the strengths. The firm hopes staff can find happiness, values, self-confidence, satisfaction and pride in the work they do.

Talents are the foundation and the most valuable assets to the corporation. Hence the firm establishes a comprehensive training system and provide well-structured and constant training plans. This system accommodates different learning paths, competencies, and

career ladder structure to provide staffs with individual development plan. To achieve the goal of continued growth for the firm and staff, Macronix has various types of training programs that are in line with corporate strategies and organizational development. The programs adopt innovative and diverse teaching methods with the aim of enhancing staff knowledge, skills, and capabilities that will then transform into strengthening the firm's competitiveness.

We believe that a comfortable working and learning environment will bring out staff additional growth potential and renewed energy, which is the driver of success. Hence, Macronix works hard to build a work environment that allows staff to be healthy physically, psychologically, and spiritually. The firm practices the value of caring for its staff through its management system to improve the internal environment and increase harmony between the staff and the management team in order to build a warm, happy, and growing family.

## 6.1 Employment status

In 2014 the total number of staff in Macronix was 4,553, including 2,458 males and 2,095 females. In particular, foreign staff accounted for a total of 417 with 93 males and 324 females. The percentage of staff under the age of 30 was 27% while the percentage of staff in the age group of 30 to 50 was 69%. The percentage of staff above the age of 50 was 4%. We respect the work right of disabled people. Following the law, the firm employed 30 staff with disabilities in 2014.

### Employment Status by Work Type

Quantitative indicator	2011	2012	2013	2014
General staff	3126	3906	3893	3876
Management (Managers and above levels)	757	880	919	677
Total	3883	4786	4812	4553

### Management by Gender

Quantitative indicator	2011	2012	2013	2014
Male (%)	80	84	84	85
Female (%)	20	16	16	15

### Employment Status by Gender

Quantitative indicator	2011	2012	2013	2014
Male (full-time)	2078	2596	2627	2458
Female (full-time)	1805	2190	2185	2095
Total	3883	4786	4812	4553

### Employment Status by Age

Quantitative indicator	2011	2012	2013	2014
< 30 (%)	33	35	35	27
30~50 (%)	65	63	63	69
> 50 (%)	2	2	2	4

### Employment Status by Nationality

Quantitative indicator	2011	2012	2013	2014
Taiwanese male	2018	2512	2536	2365
Taiwanese female	1628	1932	1898	1771
Foreign contracted male	60	84	91	93
Foreign contracted female	177	258	287	324
Total	3883	4786	4812	4553

### Employees' Employment Status by Gender

Quantitative indicator	2011	2012	2013	2014
Directly employed (male)	224	307	316	288
Directly employed (female)	1285	1622	1611	1545
Indirectly employed (male)	1854	2289	2311	2170
Indirectly employed (female)	520	568	574	550
Total	3883	4786	4812	4553

### 2011-2014 New employees

Gender	Age group	2011		2012		2013		2014	
		N	Percentage*	N	Percentage*	N	Percentage*	N	Percentage*
Male	Under 30	409	42%	262	45%	265	40%	160	30%
	30~50 years	163	17%	87	15%	93	15%	88	16%
	Over 50	0	0%	1	0%	2	0%	2	0%
Subtotal		572	59%	350	60%	360	55%	250	46%
Female	Under 30	314	33%	197	34%	250	38%	215	39%
	30~50 years	77	8%	36	6%	49	7%	82	15%
	Over 50	1	0%	0	0%	1	0%	0	0%
Subtotal		392	41%	233	40%	300	45%	297	54%
Total		964	100%	583	100%	660	100%	547	100%

\*Percentage = number of new employees/total number of new employees x 100

### Employees with disabilities

Quantitative indicator	2011	2012	2013	2014
Employees with disabilities	31	30	32	30

### Contract Employees

Category	2011	2012	2013	2014
Work-study students	4	1	0	0
Long-term contract	9	4	1	8
Short-term contract	5	19	19	18
Total	18	24	20	26

Note: Contracts with employment period longer than three months are considered long-term contracts.

### Employee Turnover Rate

In 2014, there were 772 leaving employees with 414 males and 358 females. In particular, among the total leaving of new employees, 3% were male and 5% were female. Among all leaving in 2014, 55% were in the age group of below 30 while 44% were in

the age group of 30-50. Staff in the age group above 50 accounted for 1% of all leaving.

### 2011-2014 resigned employees

Gender	Age group	2011		2012		2013		2014	
		N	Percentage*	N	Percentage*	N	Percentage*	N	Percentage*
Male	Under 30	92	23%	148	27%	192	32%	192	25%
	30~50 years	119	29%	140	25%	100	17%	219	28%
	Over 50	3	1%	3	1%	4	1%	3	1%
Subtotal		214	53%	291	53%	296	50%	414	54%
Female	Under 30	121	30%	181	33%	174	29%	232	30%
	30~50 years	69	16%	77	14%	129	21%	124	16%
	Over 50	3	1%	2	0%	2	0%	2	0%
Subtotal		193	47%	260	47%	305	50%	358	46%
Total		407	100%	551	100%	601	100%	772	100%

\*Percentage = number of resigned employees/total number of resigned employees x 100

### Turn-over rate of New employees by Gender

Quantitative indicator		2011	2012	2013	2014
New employees*	Male (%)**	10	7	5	3
	Female (%)**	14	8	7	5

\*New employees refer to those working for less than 90 days

\*\*Percentage = number of newly resigned employees/total number of resigned employees x 100

## 6.2 Respect the staff

We respect individual diversity and adopt open-door policy to create an atmosphere of open and transparent communication. Labor management conferences are held quarterly by covering topics such as health and safety, benefits, training, and remuneration. The firm also provides platforms to encourage our staff to communicate, express, and share opinions, including:

- Holding various meetings based on open communications, including new employees orientation, department staff meetings, staff (job grade 8 and above) conferences, and labor management conferences, in order to provide clear two-way communication channels to ensure everyone's voice is heard.
- Establishing the "No Topic is Off Limits" suggestion box for staff to ask questions, provide suggestions, and file complaints, so that the firm can resolve any raised issues. Macronix also provides a special phone line for reporting issues.
- Publishing the Macronix quarterly magazine and setting up physical bulletin boards, as well as publishing electronic versions of the content, to effectively communicate important messages and legal & corporate policies.
- Develop Sexual Harassment Prevention Policies to address the prevention, reporting, and punishment of sexual harassment within the company, while developing & maintaining gender equality and upholding self-respect.
- Setting up "Our Family" Employee Relations Website, a forum for promoting direct message from management team, while also being a social media platform that promotes the sharing of employee needs and requirements, status update of company and staff, topical discussions on life and culture, and EAP (Employee Assistance Program) where employees can obtain assistance. Our Family website is deemed to be the bridge between the company and employees that allows Macronix to better understand the needs and issues that employees are facing in real life in order to guide and encourage staff and maintain a strong company-staff relationship.
- Conducting the surveys to new employees actively helps new comers to adapt to our culture and work environment effectively. This allows new employees to quickly be a part of the company. Macronix provides equal employment opportunities and is against discrimination and child labor - the core value of our happy enterprise philosophy. We aim to provide fair promotion, equal employment, and forbid discrimination and harassments in the workplace. This principle of equal opportunity is the root of Macronix's corporate value.



At Macronix, employment, work assignment, and promotion are based on individual abilities and job description, and are not affected by age, birthplace, race, skin color, gender, sexual preference, language, religion, disability, political ideology, nationality, social status, financial status, family background or other status. We have especially made adjustments to support employment for people with disabilities and prevent prejudice, discrimination, and harassment. Since Macronix was founded in 1989, the firm has maintained good relationships between the company and employees and has never experienced a loss of business due to labor disputes. Based on this relationship, Macronix has received recognition from government and industry authorities. In 2014, Macronix did not receive any complaints or incidents where the rights of local staff or aboriginals were infringed.

### **Macronix Corporate Social Responsibility Policies**

Macronix strives to secure employees' well beings, to respect human right, to provide a safe, healthy and amiable working environment, to conservatively use the natural resources, to promote science education, and to encourage innovative research and development. Our goals are to benefit our investors, to contribute to the society, and to abide by the concept of sustainable business development.

1. Fully comply with domestic labor regulatory requirements and global human right and labor standards.
2. Prohibit employing of child labors..
3. Forbid engaging in or supporting the use of forced or compulsory labors.

4. Provide our employees a safe, healthy and amiable working environment.
5. Respect the freedom of collective bargaining and association, and do not allow any discrimination on racial difference, religious belief, and gender.
6. Esteem our employees, and do not allow ruthless punishment measures.
7. Conform to the regulations on working hours and wages standards.
8. Proactively pursue the SA8000 Social Accountability standard, and the Electronic Industry Code of Conduct.

### **6.2.1 Employee rights guaranteed**

Macronix protects all employee work rights and follows the five principles regulated by labor law regarding employee job assignment and working locations: 1. Based on the needs of business operations; 2. Prohibit the breach of labor contracts; 3. Prohibit the changes of wage and other working conditions unfavorably against labor; 4. The employee should be qualified in physical capabilities and skills for the re-assigned job, by comparing with the previous positions; 5. If an employee is transferred to a remote location, the employer should provide necessary assistance to help the labor relocate.

The firm sets up its retirement policies according to related regulations in the Labor Standard Act. The firm has established Pension Supervisory Commission to supervise and manage pensions and pension related issues. The firm contributes to the pension according to regulations.

### **6.2.2 Competitive salary and benefit package**

Macronix views employees as important assets and holds the principle that profits should be shared with employees. Based on company performance, the firm provides relatively competitive salary among peer companies. Basic wage is higher than the labor law standard and is equal regardless of gender.

We offer compelling compensation package to top talents. To attract, motivate, and retain the best talents, Macronix provides attractive and highly competitive compensation package according to the importance and difficulties of the job.

Bonuses are distributed according to individual performance result. For example, the company provides a bonus every quarter based on company and employee individual performance. Macronix also distributes annual bonuses based on company profits and employee individual performance. Macronix not only complies with local labor

regulations, but actively participates in local salary association to ensure that we provide the competitive salary and benefits package that is equal for all political ideologies, gender, and marital statuses.

### **Welfare System**

<b>Names of benefits</b>	<b>Description</b>
Rewards and bonuses	Issues bonuses and vouchers for Chinese Moon Festival, Dragon Boat Festival, and Chinese New Year, as well as incentives and employee bonuses according to the company and employee performance.
Leave	Various types of leaves are granted according to laws and regulations, including maternity leave, parental leave, family care leave, paternity leave, menstrual leave, while annual leave are granted on the first year of starting work.
Insurance and welfare subsidies	Labor insurance, National Health insurance, group insurance (life/accident/cancer/medical treatment), and overseas business travel accident insurance, as well as subsidies for child birth, marriage and funeral, emergency, injuries, hospitalization, and extracurricular cultural activities.
Welfare facilities	Employee dormitory, parking lot, restaurants, leisure activity center, green park, convenience stores, cafe, breastfeeding room, and health care room.
Retirement system	Our employee retirement fund policies fully comply with the Labor Standards Act and the Labor Pension Act. We have also established a Labor Retirement Reserve Supervision Committee to oversee the accrual and distribution of pensions.
Staff Welfare Committee	We established the Staff Welfare Committee in accordance with laws and regulations, and systematically promoted various employee welfare measures.
Employee counseling and services	Provides free psychological consultation and guidance services, health examination once a year, and post-health examination consultation services.

### Maternity and paternity leave and returning employees by gender

Quantitative indicator	2011	2012	2013	2014
Male employees eligible for applying for paternity leave: The whole of Macronix, regardless of plant area (including DL and IDL)	338	140	246	266
Female employees eligible for applying for maternity leave: The whole of Macronix, regardless of plant area (including DL and IDL)	185	99	160	144
<b>Total</b>	523	239	406	410
Male employees who have actually applied for paternity leave	1	2	2	5
Female employees who have actually applied for maternity leave	24	31	30	36
<b>Total</b>	25	33	32	41
Male employees returning from paternity leave	0	2	2	4
Female employees returning from maternity leave	21	26	27	26
<b>Total</b>	21	28	29	30
Male employees staying on for 12 months after returning from paternity leave	0	1	0	0
Female employees staying on for 12 months after returning from maternity leave	17	18	16	13
<b>Total</b>	17	19	16	13
% of male employees staying on for 12 months after returning from paternity leave*	0%	50%	0%	0%
% of female employees staying on for 12 months after returning from maternity leave*	80.95%	67.86%	55.17%	81.3%

\* Number of employees (male and female) staying on for 12 months after returning from paternity or maternity leave/total returned employees

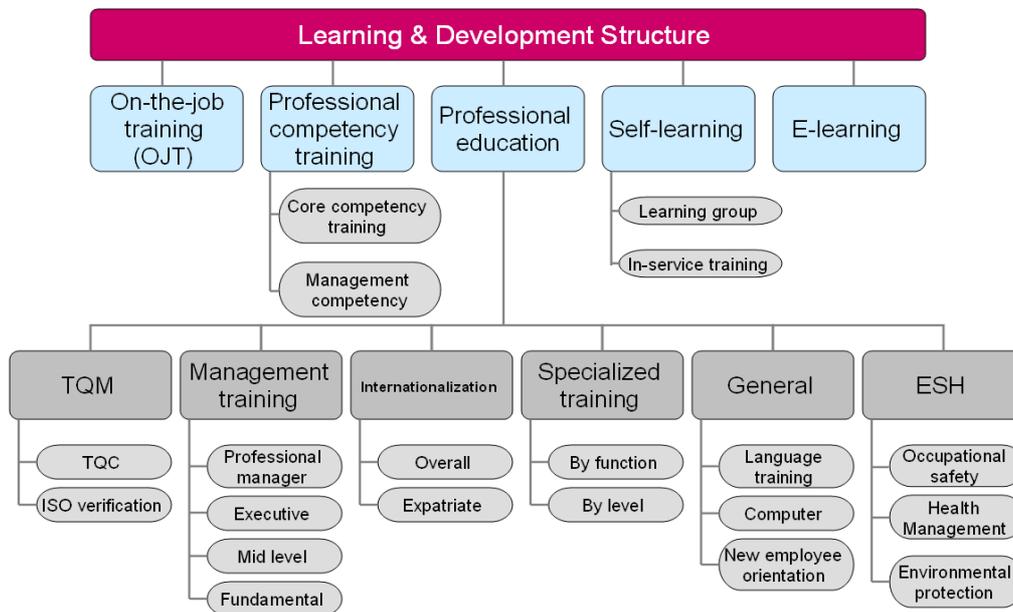
## **6.3 Education and development**

Macronix believes talents are the foundation and the most valuable assets to the corporation. Hence the firm establishes a comprehensive training system and provide well-structured and constant training plans. This system accommodates different learning paths, competencies, and career ladder structure to provide staff with individual development plan.

Macronix holds annual career conferences to assist employees plan for their careers development. We also have an e-academy that consists of various online courses that allow employees to develop their knowledge at their own pace. Our performance development process and individual development plan are closely connected. The performance reviews are held semi-annually to see if the employee is on track for reaching individual performance goals. A face-to-face meeting between employees with supervisors is a must in order to discuss what is needed to achieve employee individual goals and create a individual development plan to broaden and deepen employees professional knowledge and skills. In 2014, the performance appraisal implementation rate was 100%.

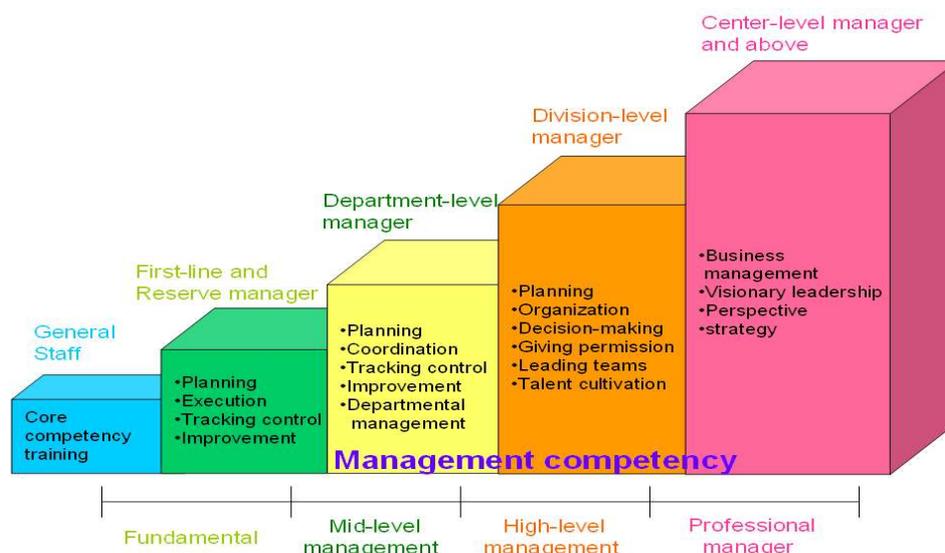
### **6.3.1 Comprehensive training system**

Macronix develops a various of training courses according to corporate strategies, job requirements, and individual development. With clear goals and strategic directions, we provide the detailed learning roadmaps to employees to optimize their personal learning paths. The learning roadmaps are a series of activities helping the employee to achieve their goals and develop an extended skill set. The learning roadmaps also provide a list of learning programs helping to increase their learning efficiency. Transfer assistance project for employees who have retired or have had their employment being terminated is not disclosed in this CSR Report.

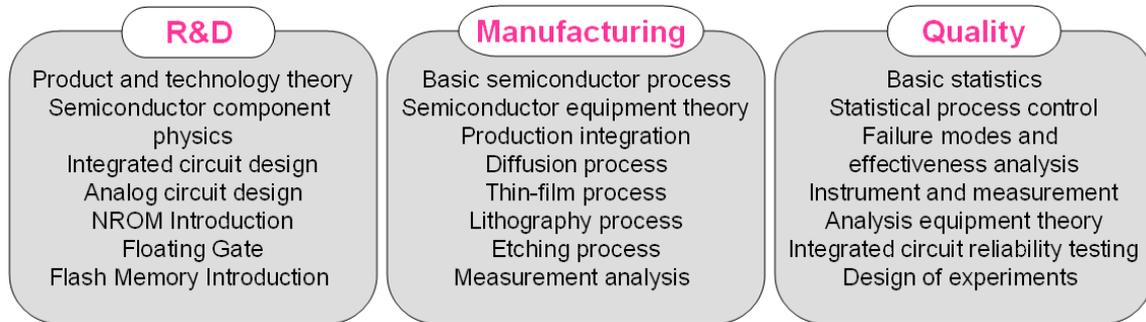


The Macronix learning roadmaps include 4 categories:

1. New employee roadmap: For new employees to be familiar with the corporate culture through experience and learning. This allows new employees to adapt to their new work environment and be immersed in the corporate culture quickly.
2. Core competency roadmaps: Courses that are designed to implement corporate values so that employees could demonstrate behaviors and deliver performance that are expected by the company.
3. Management roadmap (for different levels of management): Provides ladder structures in management training and features various courses for different levels of management to strengthen their skills.



4. Professional roadmaps: Guest speakers from both within and outside the company deliver professional training, with topics including R&D, production, quality, risk management, human resources, administration, sales, and information management to strengthen employees' professional skills.



### 6.3.2 Multiple learning channels

Macronix provides various learning channels to satisfy the different learning needs of a diverse employee. Our measures include:

- In-house training: Macronix invites guest speakers from within the company as well as from outside to deliver lectures on various topics and for various training courses.
- External training: Allows employees to participate in external and work-related training courses and conferences.
- On-the-job training: Allows employees to develop professional knowledge at work, such as job assignment, hands-on practices, and project assignment. This allows employees to acquire knowledge and skills by doing.
- Online training: The established e-academy learning platform allows employees to have easy access to online courses. Students can study at their own pace and based around their own schedule.
- Self-training: Based on the individual development plans, employees develop their cross-field knowledge, computer skills, or a second language, and expand personal horizon through self-study or participate in courses.



### 6.3.3 Macronix Academy

The Macronix Academy is the platform for employees to continuous learning and development. It has a comprehensive learning system providing employees with complete and abundant resources for their career planning. Through the knowledge gathering and sharing, employees obtain an enriched learning resources to achieve their career dreams. Moreover, this helps employees to move to the next advanced stage of their careers and equips with the skill sets needed to successfully overcome various challenges.

Macronix Academy is equipped with facilities and professional equipment required for employees to learn in a positive environment.

- Audio and video room: Contains multimedia computers, books, DVDs, video tapes and audio tapes. The rich learning platform allows students to learn without boundaries.
- Training classrooms: Macronix provides numerous lecture halls and different-size classrooms that can accommodate different types of courses.
- Computer classrooms: Personal computer access for all students to exponentially increase learning efficiency.
- International lecture halls: Can fit 250 people, making it the best location for large-size training courses, conferences, and lectures.
- Library: Features rich and diverse audio and video resources and books for employees to meet their diverse set of learning needs.



### Employee training costs and hours

Quantitative indicator	Unit	2011	2012	2013	2014
Total training cost	NT\$ million	6.69	6.18	14.78	11.8
Total training hours	Hours	128,467	149,157	160,819	123,781
Total employees	persons	3,883	4,786	4,812	4,553
Total revenue	NT\$ million	27,844	23,889	22,204	22,414
Total training costs/total revenues	%	0.03	0.03	0.07	0.05
Total training costs/total employees	NT\$ (NT\$/person)	1,723	1,291	3,071	2,592
Total training hours/total employees	hours/person	33.08	31.17	33.4	27.2

### Average training hours per employee

In 2014, the average total training hours for each male employee was 38.1 hours and 17.5 hours for each female.

Quantitative indicator	Unit	2011	2012	2013	2014
Average training hours per employee per year	hours/person	28.2	31.1	33.4	26.8
General employee	hours/person	26.0	31.7	34.8	26.7
Management	hours/person	30.6	30.0	35.1	28.1

## 6.4 Macronix H2O: Promotes work-life balance

Macronix believes that a staff with physically and psychologically healthy is the essence to make for a successful enterprise. Hence Macronix strives to provide an excellent work environment for staff and promotes various approaches to take care of employee health. In terms of infrastructure, We establish a fitness center and a green park, and provide benefits such as nutrition consultation and health examinations. Our employees benefit from an energetic work environment but also are encouraged to enjoy the vigorous life.

We hope that all employees work in a healthy and happy way. Moreover, Macronix hopes that employees can achieve a healthy work-life balance. Thus, we continuously promote the H2O Corporate Wellness Program for providing employees with comprehensive care. Therefore, Macronix uses H2O as a slogan to advocate and encourage employees to enjoy work-life balance and help create an enlightened future with the company.

**H2O=Health. Happiness. Openness to life.**

### 6.4.1 Health: Recreation and fitness center

To provide an excellent recreation environment for our employees and their families, Macronix has taken a leading position in the industry by establishing the most comprehensive and comfortable employee recreation and fitness center. The center includes video game room, fitness room, racquetball courts, aerobics classrooms, karaoke room, multi-purpose indoor sports courts to provide employees with the most comfortable and healthy place for recreational activities.



## **6.4.2 Health: Health promotion and management**

Macronix views employees as the most important asset of the firm; hence the health of the employees is extremely important. We have a medical room staffed with professionals to promote, plan, and manage the health of employees. Professional nursing staff provide support, consultation and guidance in order for employees to achieve healthier lives. Regarding physical health, we promote weight management class, e-health management system, health lectures, and office-house massage services. To ensure employee health, Macronix provides annual health checks for its employees and new recruits, implements female employee care plans, and periodically offers 4-in-1 female-specific gynecological health checks and ultrasound examinations. In addition, it has established a Business Trip Vaccination Package to ensure the health and safety of Macronix employees, and annually provides free flu vaccination services to its employees and long-term contractors, so that they can receive adequate preventive care and thereby concentrate on facing the challenges presented to them at work.

## **6.4.3 Happiness: Safety, convenience, comfort, and happiness**

Macronix provides complete life management services with optimal comfort and support in the work environment. The company sets up on-site convenience stores and cooperative vendors/stores to satisfy the nutrition, clothing, living, traveling, recreation, and leisure needs of employees. We hope employee enjoy working under such a balanced environment!

## **6.4.5 Happiness: Five-star dormitory**

The Macronix employee dormitory features 16,000 square meters and is situated in the beautiful community. The dormitory can house 1,000 employees. The dormitory has a living room, restaurant, training classrooms, game room, elevators with views, garden, parking lot for cars and motor scooters, and a 24-hour centrally controlled security system to provide a safe and comfortable living environment for employees.

## **6.4.6 Happiness: Full convenience**

Macronix provides employees with various on-site convenience services such as convenience stores, coffee shops, laundry services, and travel agencies; therefore,

employees can complete daily activities while at work.

#### **6.4.7 Happiness: Clean, healthy, and delicious food**

Macronix only cooperates with firms that have achieved HACCP standards to provide food with no MSG and low in sodium and oil. Cooperating firms also have professional nutritionists to ensure the healthiness of the daily cuisine while the managing units routinely publish food safety inspection results. Furthermore, Macronix routinely inspects kitchen safety and food cleanliness, as well as emergency response to ensure that employees can eat healthily. Hence, Macronix has received the honor of being a healthy catering organization and providing for a non-smoking restaurant environment. In addition, Macronix has agreements with various vendors to provide employees with different culinary choices.

#### **6.4.8 Life Satisfaction: Learn, Grow, Be Happy**

Macronix aims to improve the quality of life for its employees. Hence the firm establishes a series of club, extracurricular activities, seminars, and celebrations to make employees and their families with energy and growth. We hope employees can achieve a perfect balance among family, health condition, friends, and spirituality in order to have a satisfying, healthy, happy, and quality life.

#### **6.4.9 Life Satisfaction: Rich and Diverse Clubs**

For employees to achieve a work-life balance, Macronix has more than 30 clubs such as creative balloon design, Chinese calligraphy, sports, hiking, guitar, photography, and religious clubs such as Hung Guang and Da Ai for staff to make friends, and discover and develop hobbies.

#### **6.4.10 Life Satisfaction: Lively and Innovative Celebrations and Activities**

The firm has celebrations for Family Day, Engineer Day, Father's Day, and Mother's Day, employees enjoy the warm and happy atmosphere in these special events.

Other events such as sports competitions, recreation, finance, arts, and music seminars, and movies bring more entertainment to employees' lives.

## 6.5 2014 Health-related awards

Award	Issuer
"Work-Life Balance Award" in recognition of the company's performance in care and support for employee families and the health and safety of its employees	Ministry of Labor
Best Vitality Award for the nationwide workplace healthy exercise competition, Showing Health Together at the Workplace	Health Promotion Administration, Ministry of Health and Welfare

**旺宏電子股份有限公司**

**員工福利**

成立於1980年，是台灣第一家由僑胞回國創辦的電子公司。歷經數十年，提供客戶最廣泛規格及容量的 ROM 記憶體產品，NOR 型快閃記憶體以及 NAND 型快閃記憶體解決方案，以讓客戶的電腦、通訊、醫療、汽車電子等相關領域。

員工人數：男性 2,627 人，女性 2,185 人

**健康、幸福、品味生活**

旺宏電子為建構健康愉快的工作環境，持續推動「H2O 企業健康改善計畫」，提供員工身心的全方位照護，關懷體貼方面，包括落實員工協助方案、24 小時 HR24 專線服務、提供員工協助方案小冊子、每年全次免費心理諮詢等。身體健康是工作方面，推動健身減重班、健康管理、化系統、健康講座及上班族學堂課程。

旺宏電子為守護員工身體健康，除新進人員體檢及年度體檢外，更落實女性員工關懷方案，定期辦理婦科聯合的女性特殊體檢、婦科超音波檢查，針對出差同仁健康安全，提供「出差防疫包」，並每年提供同仁及長期護理免費進行免疫流感疫苗，讓員工擁有完善的預防保健服務，能更知專心投入於面對工作上的挑戰。

此外，旺宏建立了完善休閒活動中心，將最自然的旺宏綠地公園，讓同仁在安全舒適及健康的軟體環境中，充實工作、品味生活。

**健康快活**

- 落實員工協助方案
- 女性員工關懷方案：婦科聯合一次的女性特殊體檢、婦科超音波檢查
- 旺宏綠地公園 休閒活動中心設備完善
- 出差防疫包

**員工幸福宣言**

智慧與健康是旺宏對同仁的承諾。我們將持續行動旺宏成為「健康幸福」的企業。

**員工大發現**

有健康的身心，才能成就一流的工作績效。感謝旺宏對同仁健康的關懷。

年度體檢活動



同仁 Superstar Game 活動後合影



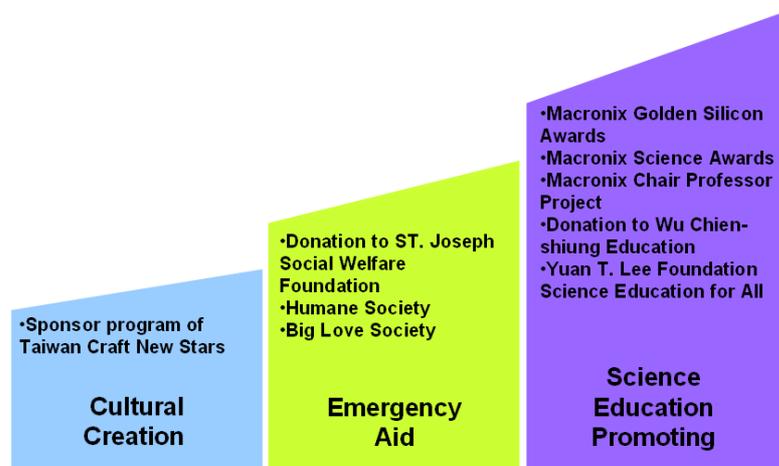
## 7 Social Engagement

Since the inception of Macronix in 1989, we have always insisted on deeply cultivating our own technical strength and have been committed to helping enhance Taiwan industry's R&D capabilities and technology innovations. Macronix manufactures important electronic components that help enrich people's lives. As a member of the global market, we are mindful to maintain sustainable operations and continue to augment shareholder interest and care for the environment. Macronix never forgets to feedback the society that nourishes us. We believe it is only by constantly fostering technical talent that Taiwan can maintain its leading position worldwide and outperform international competitors. Accordingly, Macronix made donations to found the Macronix Education Foundation in 2001, chaired by the Chairman of Macronix, Miin Wu. Macronix funds the Foundation more than NT\$20 million to hold its primary events. Macronix employees also participate in the Foundation's events. It is anticipated that through the strength of the Macronix Education Foundation, resources can be maximized systematically, enabling more people to participate, thereby activating the innovative competency of the younger generations to expand the knowledge and perspectives of our domestic scholars.

The Macronix Education Foundation participated in ratings conducted by the Ministry of Education for the first time and received the top rating in 2013 for successfully organizing science education programs including the Macronix Golden Silicon Awards.

We have devoted longtime efforts to community involvement, particularly in the three main areas of science education, emergency aid, and cultural creation.

In recognition of our achievements, Macronix has won Corporate Citizenship Awards (2010-2012) from CommonWealth Magazine and CSR Awards (2009, 2010, 2012) from Global Views Monthly.



### **Planting the seed of science education**

Macronix recognizes education is fundamental for success and global prosperity, 21st century will be built upon a foundation of a knowledge-based economy. For Taiwan to be able to compete with world-class players, creativity and technical know-how will be the most important resources for Taiwan. To cultivate talents to be able to compete and stand out internationally, Macronix funded the Macronix Education Foundation. Through the foundation, Macronix continues to be devoted to educating and fostering talented people in Taiwan and the Company established the Macronix Golden Silicon Awardss and the Macronix Science Awardss, and also organizes various Future Knowledge Engineering Program for students of different ages.

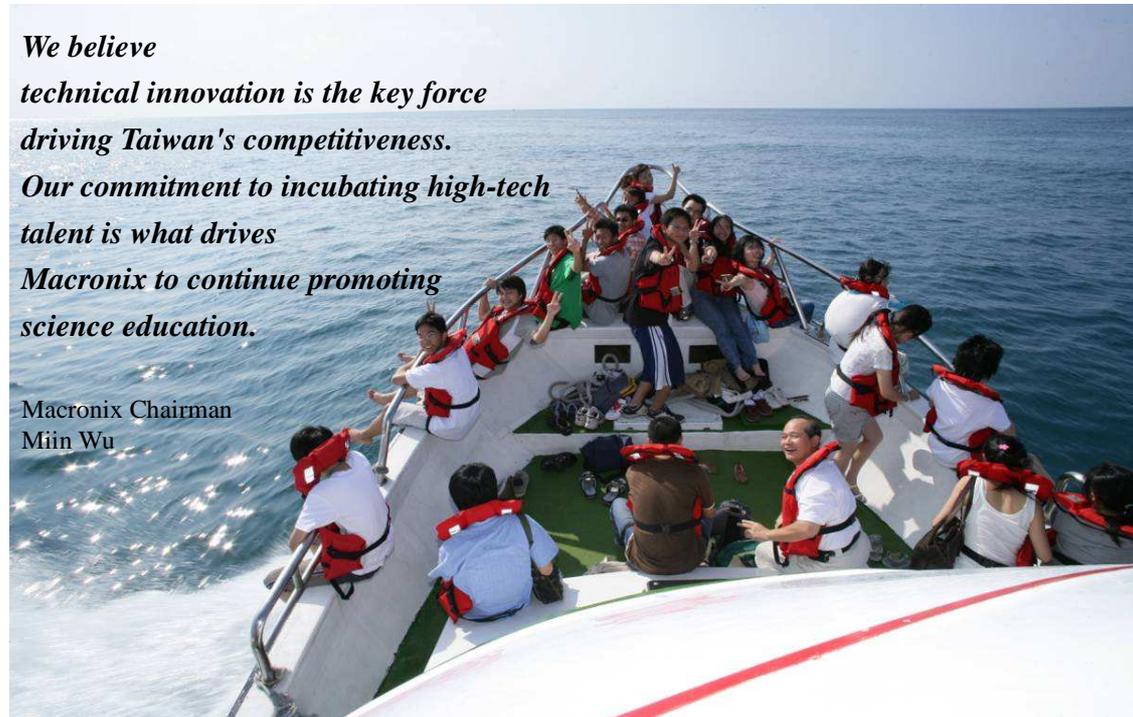
### **Employee public welfare group - Caring for the underprivileged by offering aid**

In addition to caring about education through the Macronix Education Foundation, Macronix also has our own "Humane Society" and "Big Love Society" charity clubs that brings together the goodwill of Macronix employees and provides a platform to feedback society through benevolent actions. The Humane Society was approved by the Hsinchu City Government in 2008 to change into the "Humane Society Service Organization," transitioning from an internal employee club to become a bridge that connects charitable resources inside in the Science Park with outside communities.

### **Nurturing culture with creativity, Incorporating innovative elements**

The Macronix Education Foundation invites cutting-edge artists to join the Taiwan Craft New Stars Sponsor Program every year. We created the first program to turn trophy design into an art form and made the trophies available for the Macronix Golden Silicon Awardss and Macronix Science Awards. With sponsored awards over NT\$1 million each year, we use creativity as a bridge to bring artistic elements into technology, in addition to nurturing local potential artists.

## 7.1 Planting the seed of science education



### 7.1.1 Macronix Education Foundation

The foundation's work focuses on enhancing the value of knowledge economy, incubating science and technology talent, caring for children and adolescent physical and mental development, and elevating social harmony and quality of life. It has endeavored to:

1. Sponsor technological development.
2. Reward outstanding science and technology talents.
3. Cultivate children and adolescents to develop an interest in learning knowledge related to science, humanities, and nature.
4. Plan activities such as nature observation, cultural events, historic site visits, and folk art events.
5. Handle public welfare-related matters that conform to the goals of the foundation.

By focusing on cultivating basic science knowledge and nurturing talented knowledge engineers, the foundation continues to implement the Future-Knowledge Engineering Program because we know that education is a foundation that must be planned and promoted continuously. In addition, the foundation holds various activities for different groups, including the Macronix Golden Silicon Awardss, Macronix Science Awards, Macronix seminars, and support for national science education to foster scientific talent in Taiwan.

### **7.1.2 Macronix Golden Silicon Awardss - IC Design and Application Competition**

#### **The most important competition for electronic and electrical engineering students**

Recognizing the importance of innovative R&D for Taiwan's high-tech industry and the difficulty in fostering technical talent, and to inspire college students' creative spirit and hands-on experience in semiconductor research, the Macronix Education Foundation held the first Macronix Golden Silicon Awardss - IC Design and Application Competition in 2000. Now going into its fifteenth year, the event continues to serve as a bridge between the industry and academia. The Macronix Golden Silicon Awardss is regarded as the most important competition by electronic and electrical engineering students to evaluate their performance before graduation.

#### **Avid support from the industry, academia, and government**

The Macronix Golden Silicon Awardss is classified into two categories, Application Group and Design Group. The award offers a totled scholarship to NT\$400,000 to NT\$3.7 million, the highest amount of monetary award offered for the same competition category in Taiwan. In addition to insisting on the principle of anonymity for the competition, the Macronix Golden Silicon Awardss also involves inviting more than 90 committee members to serve as the judges for the competition, including Yan-Kuin Su (President, Kun Shan University), Cheng-Wen Wu (Vice President, National Tsing Hua University), Zhang-Hua Fong (Director General, Department of Engineering and Technologies, Ministry of Science and Technology), and Jen-Inn Chyi (Vice President, National Applied Research Laboratories). Their performance has been praised by the participating teachers and students, with even the participating professors publicly

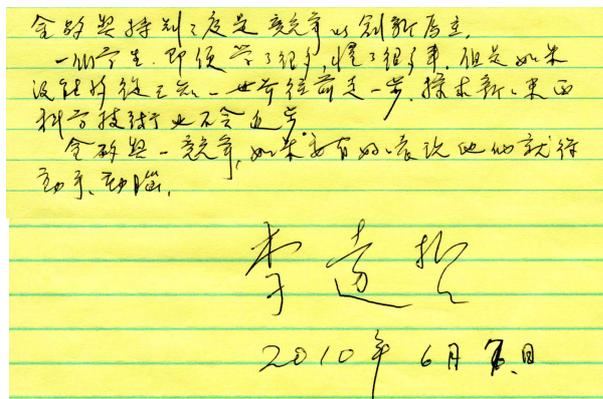
praising their fairness and that the Macronix Golden Silicon Awardss is a competition worth participating in.



Former Minister of Education, Wei-Ling Chiang, presenting the novice award to application group from National Formosa University in 2012.



Dr. Yuan-Tseh Lee, former president of Academia Sinica, having diligently attended the Macronix Golden Silicon Awardss ceremony every year.



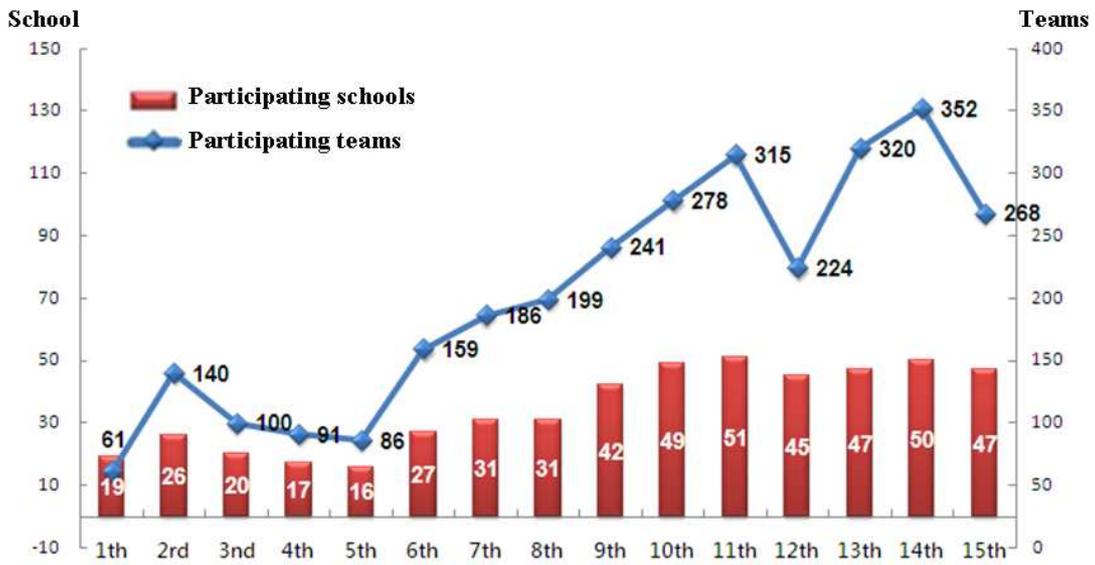
Lee emphasized that the Macronix Golden Silicon Awards is well known for rewarding innovation.

### A glance at the Macronix Golden Silicon Awardss

- Starting in 2000, the Macronix Golden Silicon Awardss is going into its fifteenth year. The 15th Macronix Golden Silicon Awardss had 268 participating teams from 47 schools nationwide and has accumulated a total of 3,028 participating teams comprising over 11,654 teachers and students.
- The Macronix Golden Silicon Awardss offers a fair competition platform and has been actively encouraging students from institutes of technology to join the

competition in recent years. As a result, the number of participating teams from institutes of technology has risen from 15 in the first competition to 104 so far, up seven-fold.

- We also set up the novice award with a prize of NT\$200,000 starting from the third Macronix Golden Silicon Awards to further encourage participation by college students with youthful creativity. This has boosted the number of participating college student teams with 2014 contestants reaching 88 teams, accounting for 32.8% of the total number of teams.



### 7.1.3 Macronix Science Awards



#### **Macronix Science Awards, the Nobel Prize for senior high school students**

The Macronix Education Foundation thinks it is important that science education starts from senior high school. If senior high school students have opportunities to develop their ability to think independently and to innovate, their creativity and potential will soar beyond imagination.

To inspire senior high school students' interests in natural and applied sciences and encourage them to explore science, develop their potential to innovate, think outside the box, and learn outside the classroom, the Macronix Education Foundation held the first Macronix Science Awards in 2002 with Chia-Tung Lee, Emeritus Professor, National Chi Nan University, serving as the convener.

Under Professor Lee's keen support, we were able to invite Chao Han Liu, Distinguished Visiting Scholar, Academia Sinica; Kang-Pei Wang, Emeritus Professor, Tunghai University; Jin-Fu Chang, President, Yuan Ze University; and Hsin-Hsiung Chen, Emeritus Chair Professor, College of Science, National Tsing Hua University to serve on the committee for the Macronix Science Awards. The number of participating students and schools has grown each year, from 189 teams in the first year to a total of 615 teams comprising 12,000 participants by the thirteenth year. The Macronix Science Awards has been acclaimed in Taiwan as the Nobel Prize for senior high school students due to its vast influence.

### Big prizes encourage hands-on experiments

Winners of the Macronix Science Awards get a four-year college scholarship totaling as much as NT\$480,000 and a letter of recommendation co-signed by the five committee members. The purpose is to offer substantial support and to encourage the winning students to remain in field of scientific and continue exploring the area through further education. From the third year on, we added awards to encourage schools and teachers. Each year, the top three schools win Best School and Principal Awards and a specially designed artistic trophy. For those teachers who are committed to long term support, we offer Advisor Contribution Awards. Teachers with 24 accumulated points are awarded NT\$30,000 and a certificate of honor.

<b>List of Best School and Principal Awards</b>	
13 <sup>th</sup> Award	Taipei Municipal Jianguo High School; Kaohsiung Municipal Kaohsiung Girls' Senior High School; Taipei Municipal Lishan High School
12 <sup>th</sup> Award	Taipei Municipal Jianguo High School; National Hsinchu Senior High School; Taipei Municipal Zhongshan Girls High School
11 <sup>th</sup> Award	National Hualien Senior High School; National Hsinchu Senior High School; Kaohsiung Municipal Kaohsiung Girls' Senior High School
10 <sup>th</sup> Award	Taipei Municipal Lishan High School; National Experimental High School at Hsinchu Science Park; National Feng-Shan Senior High School; National Hsinchu Senior High School; National Taichung Girls' Senior High School
9 <sup>th</sup> Award	Tainan First High School; Kaohsiung Municipal Kaohsiung Girls' Senior High School; Taipei Municipal Lishan High School; The Affiliated Senior High School of NTNU
8 <sup>th</sup> Award	Taipei Municipal LiShan High School; Kaohsiung Municipal Kaohsiung Girls' Senior High School; National Chiayi Senior High School
7 <sup>th</sup> Award	National Taichung First Senior High School; National Chia-Yi Girls' Senior High School; National Hsinchu Girls' Senior High school
6 <sup>th</sup> Award	Taipei Municipal LiShan High School; Kaohsiung Municipal Kaohsiung Girls' Senior High School; Tainan First High School; Taipei Municipal Jianguo High School

5 <sup>th</sup> Award	Taipei Municipal LiShan High School; National Feng-Shan Senior High School; The Affiliated Senior High School of National Kaohsiung Normal University; National Chia-Yi Girls' Senior High School
4 <sup>th</sup> Award	National Taitung Girls' Senior High School; Kaohsiung Municipal Kaohsiung Girls' Senior High School; Taipei Municipal Lishan High School
3 <sup>rd</sup> Award	Taipei Municipal Jianguo High School; Kaohsiung Municipal Kaohsiung Girls' Senior High School; National Hsinchu Girls' Senior High school

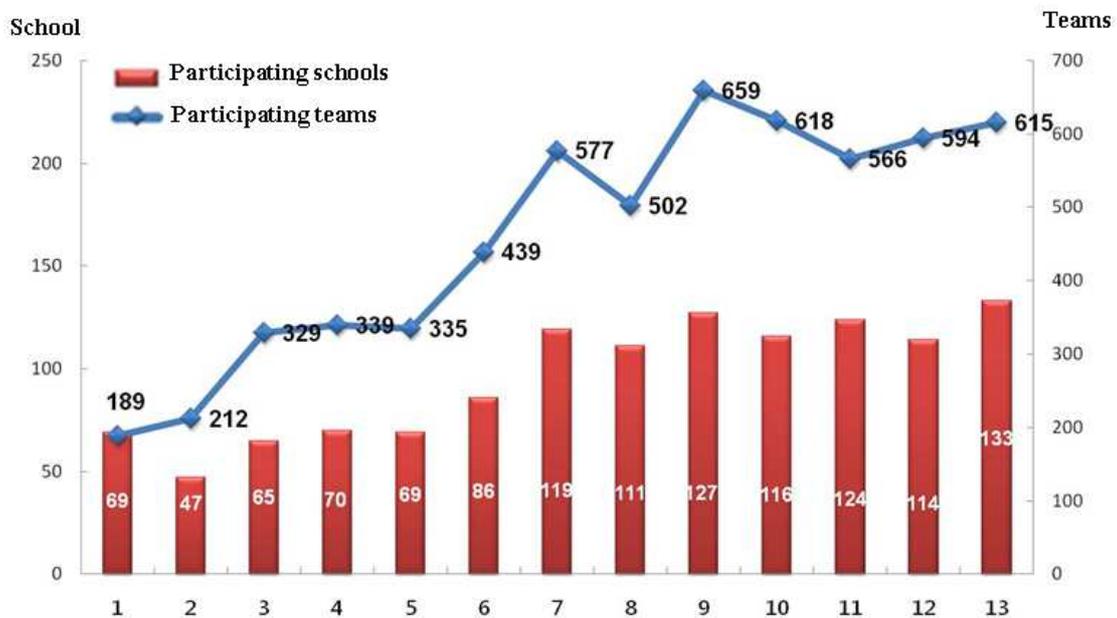
### **Key driving forces, Macronix Science Awards committee members**

Thanks to the five committee members, the Macronix Science Awards is able to continue with support, commitment and recognition from society. Each year the convener calls on leading scientists in the country to form the Macronix Science Awards committee. Using the foundation's values as a touchstone, the committee members selflessly devote time and effort to promoting science education in Taiwan.

<b>Honor roll of Macronix Science Awards committee members</b>	
Yan-Hwa Wu	President, National Chiao Tung University (convener, 12th)
Kwang-Hwa Lii	Vice President, National Central University
Jason Yi-Bing Lin	Deputy Minister, Ministry of Science and Technology
Hung-Duen Yang	President, National Sun Yat-sen University
Ching-Tsai Pan	Chair Professor, Department of Electrical Engineering, National Tsing Hua University
Kang-Pei Wang	Emeritus Professor, Department of Applied Physics, Tunghai University (committee member, 1st-12th)
Hsin-Hsiung Chen	Emeritus Chair Professor, College of Science, National Tsing Hua University (committee member, 1st-12th)
Chao Han Liu	Distinguished Visiting Scholar, Academia Sinica (convener, 8th-11th)
Chia-Tung Lee	Emeritus Professor, National Chi Nan University(convener, 1st-7th)
Jin-Fu Chang	President, Yuan Ze University (committee, 1st-7th)

## A Glance at the Macronix Science Awards

- We have held 13 competitions since 2002, with a total of 133 schools participating in the thirteenth competition and both senior high and vocational senior high schools breaking records of the past years.
- More than 250 senior high schools, over half of the senior high schools in Taiwan, have participated in the competition since its inception. Nearly 40% of the vocational senior high schools in Taiwan have also taken part in the competition. Over the past 13 years, a total of 5,965 teams have participated since its inception, led by almost 1,700 high school teachers, among whom 19 have won the Advisor Contribution Awards.



### 7.1.4 Macronix Science Awards Association



To extend the creative spirit of Macronix Science Awards, the foundation established the Macronix Science Awards Association in September 2004, which is made up of all previous winners and totals 237 members. Through the association, new award winners can associate with their predecessors and expand their scientific horizons, thereby helping each other, grow together and form lifetime bonds.

The association's officers are elected through voting by all members. The positions are voluntary and the term is two years. The foundation has a special team to guide the association officers in the planning and execution of the association's annual meetings. Various seminars are held from time to time inviting Macronix Science Awards committee members and leaders in technical, social, and cultural fields to inspire members to explore life and knowledge in a relaxed, dynamic and enjoyable manner.

Every year, the venue for the association's annual meetings is elected by the members. In 2014, the association's meeting was held in Kaohsiung. With the assistance and guidance of the Wetlands Taiwan, the association members were directed to the Yuanjhong Harbor Wetland on their first day, where they observed fiddler crabs on the mud land. On the second day, the members were led by the Society of Wilderness, adventuring into the primitive Maolin National Scenic Area where they explored the ecology of Taiwan's largest Purple Butterfly Valley, appreciated the Crested serpent eagle circling in the sky, and listened to the frogs croaking by the riverside. By exposing them

to the beautiful and rich ecological environment, the door to the heart of every student calling out to nature is opened.

The most popular event each year would be the "Masterminds Speech Series". Past speakers have been invited to speak on topics of social and natural sciences with students including President Chia-Tung Lee, Mr. Hsun Chiang, President Chung-Laung Liu, Professor Ovid Tzeng, Professor Daisy L. Hung, President Jong-Tsun Huang, Mr. Hsing-Kuo Wu, Professor Wei-Hsin Sun, et al.

In 2014, the foundation was given the honor to invite the former NCKU President Michael Ming-Chiao Lai, internationally esteemed as the father of coronavirus (recipient of the 2013 Presidential Science Prize) to present a speech. Dr. Lai opted to return to Taiwan from the United States when the severe acute respiratory syndrome (SARS) pandemic occurred. He stood at the frontline in preventing the epidemic outbreak, serving as the best model example for the medical community. Regarding humanities domain, Wen-Xing Wang, former Professor of the Department of Foreign languages and literature, National Taiwan University and a novelist (recipient of the National Award for Arts in 2009) was also invited. Regarding literature as the art of writing, Wang has produced works demonstrating both experimental and innovative value, each of which has garnered considerable attention and has exerted a substantial influence on contemporary literature.

The association's activities involve not only intellectual journeys, but also members' self-planned interactive games, an activity most favored among the members. Through this activity, members could devise plans cooperatively, learn to allocate tasks and work with each other amidst the intense competition, and share with others after it, thereby further strengthening the friendship they have with each other.

### **7.1.5 Spreading the seeds of science education**

#### **Macronix Chair Professor Project**

Concerning technology industry development, the passing on of experience is as important as the ability to innovate so not only are we devoted to inspiring creative thinking of young students but we also value the sharing of knowledge. Macronix allocates NT\$1 million every year for the Macronix Chair Professor Project that helps academic institutions in Taiwan offer positions for VLSI and SoC experts such as

Professors Chia-Tung Lee and Yung-Sheng Liu to teach specialized courses. By doing this, Macronix hopes that students have a chance to learn state-of-the-art technology and keep up with the latest industry developments. The company also encourages the participation and collaboration of industry, academia, and research.

### **Sponsoring important science organizations**

The Macronix Education Foundation continues to support major organizations devoted to promoting fundamental science education, including the Wu Chien Shiung Education Foundation, Yuan T. Lee Science Education, and Boyo Social Welfare Foundation, with yearly donations amounting to NT\$2-3 million. The company also occasionally sponsors domestic universities, such as NTU, NTHU, NCTU, NCKU, NTCUST, as well as research institutions including ITRI and National Nano Device Laboratories.

The Macronix Education Foundation has also been donating US\$4000 every year since 2012 to the International Organization of Chinese Physicists and Astronomers (OCPA) for the Outstanding Young Researcher Award (Macronix Prize) to encourage young overseas Chinese researchers in the fields of Physics and Astronomy to jointly promote high-tech developments.

In addition, the Macronix Education Foundation periodically sponsors colleges to organize EE camps or invite students to Macronix to tour the facilities or to receive science trainings. In 2014, there were 550 teachers and students from 12 universities that benefited from these activities.

The foundation has invested considerable effort in the popular science domain, which is why the National Taiwan Science Education Center invited the foundation to attend the 2014 Popular Science Forum: Expansion and Integration of Popular Science, where the foundation's representatives shared their experiences and innovation practices with industrial, academic, and research units involved in the promotion of popular science. The knowledge they shared can serve as a reference for domestic promotion of popular science education and for the development of future promotional plans.

### **Other sponsors**

In addition to enthusiastically promotion science education, Macronix also values reading and character education, making a donation in 2014 to assist in promoting the

Hsinchu City Smart Library Project and establishing library collection and resources for the Hsinchu and Hualien branches. Furthermore, since 2007, the company sponsors the Human Life Ethics Center in promoting basic character education courses regarding respect for life in various junior high schools in Taiwan.

## **7.2 Employee public welfare group - Caring for the underprivileged by offering aid**

Macronix takes active steps in fulfilling our social responsibilities and we have compassion for those in need during the occurrence of major emergencies, such as the major 921 earthquake in Taiwan in 1999, the Sichuan earthquake in China in 2008, and the Typhoon Morakot flooding in Taiwan in 2009. Macronix immediately made donations to help the victims after the major 921 earthquake in Taiwan in 1999, the Sichuan earthquake in China in 2008, the Typhoon Morakot flooding in Taiwan in 2009 and the 311 earthquake in Japan.

By actively establishing charity clubs, raising funds for the clubs and helping with allotting club meeting sites and human resources, we show our enthusiasm and support for social charities to all Macronix employees and deeply endow the DNA of social responsibility in the hearts of our employees.

### **Humane Society**

Macronix set up the internal employee charity club, called the Humane Society, in March 2001 with the purpose of helping those in need and increasing social harmony. Under the work of a group of loving Macronix employees, the Humane Society works together with efforts of other charity organizations such as the Hsinchu Taiwan Fund for Children and Families to help the underprivileged in Hsinchu. The Humane Society was approved by the Hsinchu City Government in 2008 to change its name to the "Humane Society Service Organization".

<b>Humane Society Activities</b>	
<b>Re-usable item donation</b>	In January, March, and August, the Humane Society calls for donations of second-hand items and gives them to the Hsinchu Taiwan Fund for Children and Families, Ai-Heng Training Center

	for Mental Retardation, Catholic Hua-kuang Social Welfare Foundation and St. Francis Organization.
<b>Macronix Family Sponsorship Drive</b>	The Macronix Family Sponsorship Drive has entered its 10th year and currently sponsors 293 children every month, with total donations in 2014 amounting to NT\$1.96 million. The drive sponsors children from eight charity organizations including the Taiwan Fund for Children and Families (aboriginal children), Sacred Heart Home, Miracle Home (teenagers), World Vision, Humane Society Service Organization, Horseback Riding Therapy Center, St. Francis Organization and Eden Social Welfare Foundation.
<b>333 Fishing Pole Project</b>	This project is going into the fourth year based on the successful collaboration with the Eden Social Welfare Foundation in 2010-2011 and the Qi Zhi Vocational Training Center in 2012. Macronix employees order bread (at a price of NT\$250) from the Children Are Us Foundation's bakery so that the mentally challenged can learn to bake and sell pastries. In 2014, 317 employees made orders for a total amount of NT\$440,750.
<b>Christmas - Making Dreams Come True Initiative</b>	For many years, the Humane Society has been organizing employees to donate Christmas gifts for needy children. We have generated great success with these events in 2014 and all children receive the gifts they wished for.

**宏光社愛心麵包開始登記囉**

**喜憨兒 美味愛心盒**

喜憨兒們努力製作的麵包與西點, 各個代表著喜憨兒們的成長故事與無限的希望。邀請您一同品嚐喜憨兒的麵包, 共同創造生命的價值。

每月250元, 品嚐300元美味麵包, 您的支持, 是幫助喜憨兒改變的力量!

認購方式: 每月250元(半年繳1500元), 可品嚐價值300元的麵包與西點。由喜憨兒烘焙屋竹北工作站開立發票開立。

**【美味愛心盒內容】**

- 4月 菠蘿葡萄奶酥2個、核果蔓越莓2個、乳酪布丁蛋糕、香草瑪芬杯2個、手工餅乾
- 5月 養生八寶果、黑糖地瓜、巧克力松露2個、鹹乳酪蛋糕2個、手工餅乾
- 6月 起酥肉鬆麵包2個、蜂蜜大理石2個、巧克力瑪芬杯3個、核桃派2個、手工餅乾
- 7月 葵花核桃、起酥奶酥麵包、布朗尼2個、乳酪布丁蛋糕、手工餅乾
- 8月 雞權核桃、芋頭肉脯、蜂蜜蛋糕2個、巧克力雪紡、手工餅乾
- 9月 白玉抹茶2個、檸檬炸彈3個、霜糖杏仁起酥2個、桂圓蛋糕4個、手工餅乾

**2014 第12屆慈善行動 幸福加倍 愛更多**

「最棒的聖誕禮物, 莫過於可以的話, 我希望能有七億零四億, 因為我的聖誕禮物, 是給我的你, 請你愛我, 因為我愛你。」

「聖誕節的到來, 讓每個人都感到, 新的一年可以完成, 這個美好的起點, 這讓我們不用每次都要向同學解釋了。」

「孩子們對聖誕節的期待, 聖誕節的到來, 讓我們感到幸福了。」

讓我們大家能我們一起為孩子們的聖誕節, 完成他們的小小心願。

聖誕節公益活動、活動資訊、歷年剪影、歷年贈卡、捐款贊助



## Big Love Society

The Macronix Big Love Society was the first social club in the Science Park established for medical charities. Its first phase goal is promote "10,000 Organ Donor Signups with Their National Health Insurance Card" initiative.

Since 2008, the Big Love Society has been participating in major promotional events and also working with volunteers and medical staff of the NTUH Hsinchu branch to engage in street-side campaigns at the Hsinchu Train Station to promote the "Organ Donor Signups with Their National Health Insurance Card" from 10AM to 4PM on the last Saturday of each month. Twelve such activities were held in 2014 with 324 people having signed to donate organs, accumulating to over 3,664 people since the establishment of the Big Love Society.

Big Love Society's Goodwill Events	
<b>Sponsoring Boyo Social Welfare Foundation</b>	<p>Macronix Big Love Society proposed the new concept of a "suspended budget" and donates NT\$100,000 every month to the Boyo Social Welfare Foundation established by Chia-Tung Lee, former president, National Chi Nan University to help underprivileged children.</p> <p>In 2014, 248 people participated, including Macronix's employees making fixed monthly or once-off donations.</p>

<p><b>Passing on Wisdom Book Drive for Schools</b></p>	<p>In the past, books were donated depending on what the donors decided to give. Through the "suspended books allowance" program, which is a new book donation concept organized by the Macronix Big Love Society and Rotary Club of Hsinchu Northwest, NT\$328,600 were given to 29 schools and eight charity organizations in Taiwan in 2014.</p> <p>The 29 schools and eight charity organizations receiving the donations can enter their account number and password on a website and choose books according to their needs from the inventory of 50 publishers. Thirty copies of new books may be selected and will be sent to the donation recipients directly from the publishers so the donated books are actually more diversified and meaningful.</p> <p>The schools benefiting from the book drive included Nei Hu Junior High School, Hsin Ke Junior High School, Dahu Elementary School, Pei-Ying Junior High School, Yu-Hsien Junior High School, Guan Dong Elementary School, Guang-Hua Junior High School, Dong Yuan Elementary School, Hu Lin Junior High School, San Min Junior High School, San Min Elementary School, Zhu Guang Junior High School, Guang Wu Junior High School, Jian Gong Elementary School, Hsinchu Elementary School, Ke-yuan Elementary School, Min Fu Elementary School, Da Chuang Elementary School, Xi-Men Primary School, Lung Shan Elementary School, Jiew Sheh Primary School, and Cheng Te High School.</p> <p>The organizations benefiting from the book drive included Adolescents' Home (Ministry of Health and Welfare), Blue Sky Home(Catholic Organization Hsinchu Diocese), Chuhsin Family (Hsinchu County), Development Center for the Spinal Cord Injured, Hsin Miao Private Development Center for Disadvantaged People, Geng Hsin Lien Yuan, Sunshine Social Welfare Foundation, and Tatzu Children's Home (Fo Guang Shan Monastery).</p>
<p><b>Fundraising to rebuild Lanyang Foundation of</b></p>	<p>Big Love Society held a flea market selling second-hand items, where buyers decided on the purchase prices of things they liked. The purchases are tax deductible. This has built a new charity</p>



help in giving the graduates the gift of being able to keep their fond memories. Principal Wang even invited the photography club's volunteers to personally give the yearbooks to the graduates at the graduation ceremony held on June 19 and also to visit the Tai-an tribe.

**旺宏電子攝影社 幫偏鄉學童圓夢**

竹縣：新竹縣尖石鄉的秀巒國小，因在偏遠山區，少有業者願意前往協助拍攝畢業照。旺宏電子14名攝影社社員為了幫學童圓夢，21日帶著器材前往校園，幫12位小學生及10位幼稚園畢業生拍攝畢業照，並自費製作畢業紀念冊贈送給他們。畢業生們開心穿上原住民傳統服飾入鏡，留下美好回憶。（圖文：魯鋼駿）



**旺宏攝影社 幫忙拍畢業照**

**創校第一本 秀巒國小有畢冊了**

【記者張明輝／尖石報導】遠路趕來秀巒國小，除了傳統藍天白雲秀巒國小位處高海拔，小朋友們還擁有自己專屬的畢業照，幾乎是不可能的夢想。竹科電子公司旺宏電子攝影社特地這趟「輪流」，畢業生由今年起各校開始小學階段拍攝畢業生們拍攝他們的紀念。

「雖然紀念冊已經出爐，我們終於有畢業紀念冊了！」秀巒國小校長王忠志說，以往畢業照都是由單一攝影師拍攝大家而紀念，加上學生數不多，裝不成畢業紀念冊，這是從日輪時代開始以來「第一本」秀巒國小的畢業紀念冊。

活動的策劃人旺宏電子攝影社副社長張明輝說，去年11月初社員上山拍攝，隨著畢業典禮，無意間發現這所小學這個讓人心疼的角落，透過管道聯繫校長，促成這次「讓我們為Memory留存」的活動。

14名成員自行請假響應，擔任攝影志工，還約來化驗師幫小朋友做驗行粉，經過60公里

遠路趕來秀巒國小，除了傳統藍天白雲，還設計了攝影紀錄學生能有自然的反應，小朋友們穿著部落等服飾，讓攝影師捕捉最真實的表情。足足拍了近7個小時，幾千張照片，再經過數個禮拜。

王忠志說，秀巒國小是全台海拔最高的學校，學生來自海拔300公尺到600公尺的部落，以後要再架高，「畢業冊變得更有意義」。

張明輝表示，難得與小朋友的熱情與認真與拍攝大家難忘，照片將做成精緻畢業紀念冊送給他們，他說，「這絕對不是一時一刻」，希望透過這個計畫變成長期的活動，也邀請更多同好一起加入。

秀巒國小畢業生拍攝畢業照時緊張，但最後還是得完成紀錄，讓小朋友們拍美美照片。

圖／旺宏電子提供

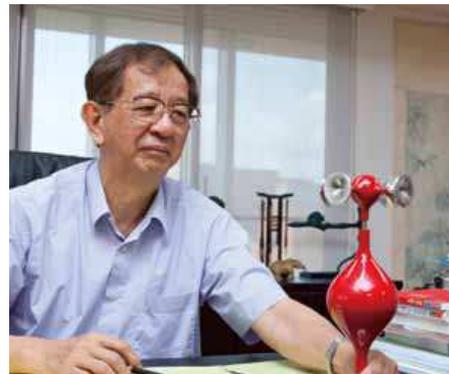


## 7.3 Nurturing culture with creativity, Incorporating innovative elements

### Inviting cutting-edge Taiwan artists to design award trophies

The Macronix Golden Silicon Awards and Macronix Science Awards have been awarded for more than a decade and have become a major battleground for scientific competition in Taiwan. Moreover, ever since the awards were first presented, the Macronix Education Foundation has set an example by inviting different local artists to custom-design the trophies, giving them a chance to show their work. To cultivate local artists, Macronix Education Foundation has set an example by inviting different local artists to custom-design the trophies every year. For 14 years, the Macronix Education Foundation has supported local sculptors with donations of over NT\$1 million every year, with the total reaching NT\$13.9 million over the years with 19 artists benefiting from the pledge.

The trophies not only represent the honor and recognition from winning the awards but also stand for the most fundamental value of the awards, namely innovation, as they are themselves works of art created and refined from scratch. Macronix's pioneering act supports emerging Taiwan sculptors in creating the trophies that the winners of the awards cherish them as collectible art pieces.



The trophies have become Dr. Lee's treasured art pieces.

Looking at the Macronix Golden Silicon Awards as an example, Dr. Yuan-Tseh Lee, the former president of Academia Sinica, has cherished each of the trophies from the first to the fourteenth award. He stated that there are two things he anticipates the most for each year's award ceremony. One is to see the innovations produced by the winning teams, and the other is to appreciate the different trophy designs.

Some trophies of past awards included Lu-Ching Chu's work in stainless steel, "Wuji," for the first award, Ming-Che Huang's colorful metal sculpture, "Ming," for the fifth award, Shing-Lung Li's wood-fire ceramic work painted with aboriginal totem art,

"Standing at the pinnacle," for the seventh award, Yen-hsing Ou Yang's lacquer work, "Turning the odds," for the thirteenth award, and Zong-Long Tsai's "Zero Limit" for the fourteenth award in 2014. Macronix Education Foundation's directors would select the trophy designers through careful consideration each year and then let the artists freely create their own designs. Therefore, the artists were able to apply their specialty and originality and make creations with various materials. The foundation wishes to provide not only an arena for scientific competition but also a platform for artistic appreciation by infusing technology with culture, thereby inspiring sensible technologies with sensational art.

Nineteen local Taiwan artists have designed trophies for the Macronix Golden Silicon Awards and Macronix Science Awards in the 14 years they have been awarded. These creations are the spiritual fruit born of the artists and have allowed the nearly 24,000 participants a chance to appreciate the art as they cheer for winning the awards.



### **Working with the National Taiwan Craft Research Institute to jointly promote local artists' works**

Besides inviting artists to design trophies for the two benchmark awards, since 2009 Macronix has cooperated with the National Taiwan Craft Research Institute to purchase creative works from artists certified by the institute as gifts and souvenirs for guests attending the award ceremonies. Macronix even boldly adopted some works not yet in mass production with the aim of promoting local arts in diverse ways and through real action. Through the cooperation process, the institute can also get feedback from Macronix and thereby perfect their craftworks for successful commercialization.



Po-Ching Liao's work "Switch" (not mass produced) from the Taiwan Craft Research Institute were offered as gifts for VIP guests at the ninth Golden Silicon Awards.



Hsinchu local artist An-Fu Huang, recommended by the Taiwan Craft Research Institute, created glass art featuring playing musicians based on the Golden Silicon Awards ceremony theme of an opera house.

## Attachment 1: External Assurance Statement



### INDEPENDENT ASSURANCE STATEMENT

To: The Stakeholders of MACRONIX INTERNATIONAL CO., LTD.

#### Introduction and objectives of work

Bureau Veritas Certification Taiwan has been engaged by MACRONIX INTERNATIONAL CO., LTD. to conduct an independent assurance of its CORPORATE SOCIAL RESPONSIBILITY REPORT FOR 2014. This Assurance Statement applies to the related information included within the scope of work described below.

This information and its presentation in the CORPORATE SOCIAL RESPONSIBILITY REPORT FOR 2014 are the sole responsibility of the management of MACRONIX INTERNATIONAL CO., LTD. Bureau Veritas was not involved in the drafting of the Report. Our sole responsibility was to provide independent assurance on its content.

#### Scope of work

The assurance process was conducted in line with the requirements of the Assurance Standard AA1000AS (2008) Type 1 with Moderate assurance. The scope of work included:

- Data and information included in CORPORATE SOCIAL RESPONSIBILITY REPORT FOR 2014 from 1<sup>st</sup> January, 2014 to 31<sup>st</sup> December, 2014;
- Appropriateness and robustness of underlying reporting systems and processes, used to collect, analyse and review the information reported;
- Evaluation of the Report against the main principles of the AA1000 Assurance Standard (2008)<sup>1</sup>
  - Inclusivity
  - Materiality
  - Responsiveness
- Evaluation of the Report against the principles of Stakeholder Inclusiveness, Sustainability Context, Materiality, Completeness, Balance, Comparability, Accuracy, Timeliness, Clarity, and Reliability, as defined in the GRI Sustainability Reporting Guidelines G4.

#### Methodology

As part of its independent assurance, Bureau Veritas undertook the following activities:

- Interviews with relevant personnel of MACRONIX INTERNATIONAL CO., LTD. - 17 employees interviewed, including remote interview;

<sup>1</sup> Published by AccountAbility: The Institute of Social and Ethical Accountability  
<http://www.accountability.org>





- Review of documentary evidence produced by MACRONIX INTERNATIONAL CO., LTD.;
- Review performance data listed in report with sampling basis;
- Site visit to headquarter and sites in Hsinchu, Taiwan;
- Review of MACRONIX INTERNATIONAL CO., LTD. data and information systems for collection, aggregation, analysis and review.

Our work was conducted against Bureau Veritas' standard procedures and guidelines for external Assurance of Sustainability Reports, based on current best practice in independent assurance.

The work was planned and carried out to provide reasonable, rather than absolute assurance and we believe it provides a reasonable basis for our conclusions.

#### **Our findings**

On the basis of our methodology and the activities described above, it is our opinion that:

- The information and data included in CORPORATE SOCIAL RESPONSIBILITY REPORT FOR 2014 are accurate, reliable and free from material mistake or misstatement;
- The information is presented in a clear, understandable and accessible manner;
- MACRONIX INTERNATIONAL CO., LTD. has established appropriate systems for the collection, aggregation and analysis of relevant information;
- The Report properly reflects the organisation's alignment to and implementation of the AA1000 Assurance Standard (2008) principles of Inclusivity, Materiality and Responsiveness in its operations;
- The progress in managing material issues has been witnessed as part of the assurance.

#### **Alignment with the principles of AA1000AS (2008)**

##### **Inclusivity**

MACRONIX INTERNATIONAL CO., LTD. has processes in place for identifying a range key stakeholders including socially responsible investors, clients, employees, supply chain and local community; and, in this report, covering a range of aspects such as Economic, Social and Environment.

##### **Materiality**

The Report addresses the range of environmental, social and economic issues of concern that MACRONIX INTERNATIONAL CO., LTD. has identified as being of highest material importance.





#### **Responsiveness**

MACRONIX INTERNATIONAL CO., LTD. is responding to those issues it has identified as material and demonstrates this in its policies, objectives, indicators and performance targets.

#### **Key areas for ongoing development**

Based on the work conducted, we recommend MACRONIX INTERNATIONAL CO., LTD. to consider the following:

- The organization should extend the stakeholder engagement process to formally capture stakeholders' concerns and views in a structured manner across the organisation; (MATERIALITY)
- The organization should improve information collection system to ensure the accuracy of performance data, including history data, provided to stakeholders; (COMPLETENESS)
- The business should continue its efforts in actively integrating principles of Corporate Responsibility into its management structures and day-to-day operations, by integrating them into existing management systems and business processes; (COMPLETENESS)
- The organization should ensure that the setting of objectives and performance indicators at a local level is both appropriate to local requirements and consistent with the priorities and objectives set at the group level. (RESPONSIVENESS)
- 

#### **Evaluation against Global Reporting Initiative (GRI) G4 Sustainability Reporting Guidelines**

Bureau Veritas undertook an evaluation of CORPORATE SOCIAL RESPONSIBILITY REPORT FOR 2014 against the G4 Sustainability Reporting Guidelines. This included cross checking the GRI index table against all the reference documents to provide an opinion on the self-declared GRI in accordance 'core' option.

Based on our work, it is our opinion that CORPORATE SOCIAL RESPONSIBILITY REPORT FOR 2014 has been prepared in accordance with the GRI Reporting Framework including appropriate consideration of the Reporting Principles and necessary indicators to meet the requirements of GRI in accordance 'core' option.

#### **Limitations and Exclusions**

Excluded from the scope of our work is any assurance of information relating to:

- activities outside the defined reporting period and scope;
- statements of position, opinion, belief and / or aspiration;
- any information hyperlinked from the web-based Report via <http://www.macronix.com/en-us/CSR/CSRReport/Pages/default.aspx>.





## Attachment 2: GRI G4.0 Content Index for "In Accordance" - Core

### General Standard Disclosure

Representing the core options that must be disclosed

Strategy and Analysis					
G4 Index	Index Definition	Related chapters	Page	External assurance	Supplementary explanation
G4-1	Statement from the most senior decision-maker of the organization	1. Messages from Macronix executives	6, 9	P.121~123	
G4-2	Provide a description of key impacts, risks, and opportunities: 1. Section One should focus on the organization's key impacts on sustainability and effects on stakeholders, including rights as defined by national laws and relevant internationally recognized standards. 2. Section Two should focus on the impact of sustainability trends, risks, and opportunities on the long-term prospects and financial performance of the organization. This should concentrate specifically on information relevant to financial stakeholders or that could become so in the future.	1. Messages from Macronix executives	6, 9	P.121~123	
Organizational Profile					
G4 Index	Index Definition	Related chapters	Page	External assurance	Supplementary explanation

G4-3	Name of organization.	Editorial Principles	1	P.121~123	
G4-4	Primary brands, products and services.	2.1 Products and Services	15	P.121~123	
G4-5	Location of organization's headquarters.	Editorial Principles	1	P.121~123	
G4-6	Report the number of countries where the organization operates, and names of countries where either the organization has significant operations or that are specifically relevant to the sustainability topics covered in the report.	2.2. Global Business Locations	19	P.121~123	
G4-7	Nature of ownership and legal form.	2. About Macronix	11	P.121~123	Please refer to the company's annual report
G4-8	Report the markets served (including geographic breakdown, sectors served, and types of customers and beneficiaries).	2.1 Products and Services	15	P.121~123	
G4-9	Report the scale of the organization.	2. About Macronix	11	P.121~123	
G4-10	Report the total number of employees by employment type, employment contract, region, and gender.	6.1 Employment status	81	P.121~123	
G4-11	The percentage of total employees covered by collective bargaining agreements.	5.1 Environmental protection, safety, and health management	55	P.121~123	Macronix employees did not establish a union, but Macronix OSHEC convenes

					meeting at least once every quarter mainly to discuss environmental, safety, and health issues.
G4-12	Describe the organization's supply chain.	4.3 CSR value chain management	46	P.121~123	
G4-13	Report any significant changes during the reporting period regarding the organization's size, structure, ownership, or its supply chain.	Editorial Principles	1	P.121~123	No major changes
G4-14	Report whether and how the precautionary approach or principle is addressed by the organization.	4.2 Risk Management	43	P.121~123	
G4-15	List externally developed economic, environmental and social charters, principles, or other initiatives to which the organization subscribes or which it endorses.	Each chapter	Each chapter	P.121~123	
G4-16	List memberships of associations (such as industry associations) and national or international advocacy organizations.	2.5 External participation	23	P.121~123	

Identified Material Aspects and Boundaries					
G4	Index Definition	Related chapters	Page	External	Supplementary

Index				assurance	explanation
G4-17	a. List all entities included in the organization's consolidated financial statements or equivalent documents.	2. About Macronix	11	P.121~123	Please refer to the company's annual report
	b. Report whether any entity included in the organization's consolidated financial statements or equivalent.	2. About Macronix	11	P.121~123	
G4-18	a. Explain the process for defining the report content and the Aspect Boundaries.	Editorial principle, 3.3 Responsibility management and issue response,	1, 31, 34	P.121~123	
	b. Explain how the organization has implemented the Reporting Principles for Defining Report Content.	3.4 Key CSR issues	1, 31, 34	P.121~123	
G4-19	List all the material Aspects identified in the process for defining report content.	3.4 Key CSR issues	34	P.121~123	
G4-20	For each material Aspect, report the Aspect Boundary within the organization.	3.4 Key CSR issues	34	P.121~123	
G4-21	For each material Aspect, report the Aspect Boundary outside the organization.		34	P.121~123	
G4-22	Report the effect of any restatements of information provided in previous reports, and the reasons for such statements.	5.3.3 Waste and hazardous substance control, 5.6 Greenhouse gas control and reduction	64, 68	P.121~123	The unit requested following the GRI G4 guideline; therefore data

					re-verification was conducted.
G4-23	Report significant changes from previous reporting periods in the Scope and Aspect Boundaries.	3.4 Key CSR issues	34	P.121~123	The aspect and scope were redefined because the GRI G4 guideline was adopted.

Stakeholder Engagement					
G4 Index	Index Definition	Related chapters	Page	External assurance	Supplementary explanation
G4-24	Provide a list of stakeholder groups engaged by the organization.	3.4 Key CSR issues	34	P.121~123	
G4-25	Report the basis for identification and selection of stakeholders with whom to engage.	3.3 Stakeholder Responsibility Management and Issue Response	31	P.121~123	
G4-26	Report the organization's approach to stakeholder engagement, including frequency of engagement by type and by stakeholder group, and an indication of whether any of the engagement was undertaken specifically as part of the report preparation process.	3.3 Stakeholder Responsibility Management and Issue Response	31	P.121~123	

G4-27	Report key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting. Report the stakeholder groups that raised each of the key topics and concerns.	3.3 Stakeholder Responsibility Management and Issue Response	31	P.121~123	
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Report Profile					
G4 Index	Index Definition	Related chapters	Page	External assurance	Supplementary explanation
G4-28	Reporting period (such as fiscal or calendar year) for information provided.	Editorial Principles	1	P.121~123	
G4-29	Date of most recent previous report (if any).	Editorial Principles	1	P.121~123	
G4-30	Reporting cycle (such as annual, biennial).	Editorial Principles	1	P.121~123	
G4-31	Provide the contact point for questions regarding the report or its contents.	Editorial Principles	1	P.121~123	
G4-32	a. Report the "in accordance option the organization has chosen.	Editorial Principles	1	P.121~123	
	b. Report the GRI Content Index for the chosen option.	Attachment 2:GRI G4.0 Index	125	P.121~123	
	c. Report the reference to the External Assurance Report, if the report has been externally assured. GRI recommends the use of external assurance but it is not a requirement to be "in	Attachment 1: External Assurance Statement	121	P.121~123	

	accordance" with the Guidelines.				
G4-33	a. Report the organization's policy and current practice with regard to seeking external assurance for the report.	Attachment 1: External Assurance Statement	121	P.121~123	
	b. If not included in the assurance report accompanying the sustainability report, report the scope and of any external assurance provided.	N/A	NA	P.121~123	
	c. Report the relationship between the organization and the assurance providers.	Attachment 1: External Assurance Statement	121	P.121~123	
	d. Report whether the highest governance body or senior executives are involved in seeking assurance for the organization's sustainability report.	Editorial Principles	1	P.121~123	

Governance					
G4 Index	Index Definition	Related chapters	Page	External assurance	Supplementary explanation
G4-34	Report the governance structure of the organization, including committees of the highest governance body. Identify any committees responsible for decision-making on economic, environmental and social impacts.	3.2 Corporate Social Responsibility Organization	29	P.121~123	

G4-41	Report processes for the highest governance body to ensure conflicts of interest are avoided and managed. Report whether conflicts of interest are disclosed to stakeholders	4.1.5 Executive discipline and avoidance of conflict of interest	41	P.121~123	
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Ethics and Integrity					
G4 Index	Index Definition	Related chapters	Page	External assurance	Supplementary explanation
G4-56	a. Describe the organization's values, principles, standards and norms of behavior such as codes of conduct and codes of ethics.	Value: 2 About Macronix - Mission Statement Principle: 4 Corporate Governance - Macronix' Philosophy: Be grounded Standards: 3.1 CSR Policies Norms of behavior: 4.1.6 Corporate conduct and ethics code	11, 38, 28, 41	P.121~123	

G4-57	Report the internal and external mechanisms for seeking advice on ethical and lawful behavior, and matters related to organizational integrity, such as helplines or advice lines.	4.1.7 Communications channel with stakeholders	42	P.121~123	
G4-58	Report the internal and external mechanisms for reporting concerns about unethical or unlawful behavior, and matters related to organizational integrity, such as escalation through line management, whistleblowing mechanisms or hotlines.	4.1.7 Communications channel with stakeholders	42	P.121~123	

## Specific Standard disclosures

Indicate the Material Aspect and disclosed index identified for this year

Disclosures on Management Approach					
G4 Index	Index Definition	Related chapters	Page	External assurance	Supplementary explanation
G4-DMA	a. Report why the Aspect is material. Report the impacts that make this Aspect material.	Please refer to the chapters corresponding to each aspect.			
	b. Report how the organization manages the material Aspect or its impacts.				
	c. Report the evaluation of the management approach, including: <ul style="list-style-type: none"> <li>• The mechanisms for evaluating the effectiveness of the management approach</li> <li>• The results of the evaluation of the management approach</li> <li>• Any related adjustments to the management approach</li> </ul>				

Economic Indicator

G4 Index		Index Definition	Related chapters	Page	External assurance	Supplementary explanation
Economic performance	G4-EC1	Direct economic value generated and distributed	2.3 A glance at financial performance 6.2.2 Competitive salary and benefit package 7 Social engagement	20, 87, 99	P.121~123	
	G4-EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change	NA			
	G4-EC3	Coverage of the organization's defined benefit plan obligations	6.2.1 Employee rights guaranteed	87	P.121~123	
	G4-EC4	Financial assistance received from government	2.3 A Glance at Financial Performance	20	P.121~123	
Market Image	G4-EC5	Report the ratio of the entry level wage by gender at significant locations of operation to the minimum wage	6.2.2 Competitive salary and benefit package	87	P.121~123	
	G4-EC6	Percentage of senior management at significant locations of operation that are	NA			

		hired from the local community.				
Indirect economic impact	G4-EC7	Development and impact of infrastructure investments and services supported.	7. Social Engagement	99	P.121~123	
	G4-EC8	Significant indirect economic impacts, including the extent of the impacts	2.6 Major indirect influence on economy and the degree of influence	24	P.121~123	
Procurement practice	E4-EC9	The percentage of the procurement budget used for significant locations of operations spent on suppliers local to that location	4.3 CSR value chain management	46	P.121~123	

Environmental indicator						
G4 Index		Index Definition	Related chapters	Page	External assurance	Supplementary explanation
Raw materials	G4-EN1	Materials used by weight or volume	NA			
	G4-EN2	Percentage of materials used that are recycled input materials	NA			
Energy	G4-EN3	Energy consumption within the organization	5.6 Greenhouse gas control and reduction	68	P.121~123	
	G4-EN4	Energy consumption outside of the organization	NA			

	G4-EN5	Energy Intensity	NA			
	G4-EN6	Reduction of energy consumption	5.6.1 Energy conservation activities	73	P.121~123	
	G4-EN7	Reductions in the energy requirements of products and services	5.6.1 Energy conservation activities	73	P.121~123	
Water	G4-EN8	Total water withdrawal by source	5.3.1 Water resource management	61	P.121~123	
	G4-EN9	Water sources significantly affected by withdrawal of water	NA			
	G4-EN10	Percentage and total volume of water recycled and reused	5.3.1 Water resource management	44	P.121~123	
Biodiversity	G4-EN11	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	NA			None
	G4-EN12	Description of significant impacts of activities, products, and services on	NA			None

biodiversity in protected areas and areas of high biodiversity value outside protected

		areas				
	G4-EN13	Habitat protected or restored	NA			None
	G4-EN14	Total number of IUCN Red List species and national conservation list species with habitats in areas affected by the operations of the organization, by level of extinction risk	NA			None
Emissions	G4-EN15	Direct greenhouse gas (GHG) emissions (Scope 1)	5.6 Greenhouse gas control and reduction	68	P.121~123	
	G4-EN16	Energy indirect greenhouse gas (GHG) emissions (Scope 2)	5.6 Greenhouse gas control and reduction	68	P.121~123	
	G4-EN17	Other indirect greenhouse gas (GHG) emissions (Scope 3)	5.6 Greenhouse gas control and reduction	68	P.121~123	
	G4-EN18	Greenhouse gas (GHG) emissions intensity	5.6 Greenhouse gas control and reduction	68	P.121~123	
	G4-EN19	Reduction of greenhouse gas (GHG) emissions	NA			
	G4-EN20	Emissions of ozone-depleting substances	NA			

		(ODS)				
	G4-EN21	NOx, SOx, and other significant air missions	5.3.2 Air pollution prevention	63	P.121~123	
Wastewater and wastes	G4-EN22	Total water discharge by quality and destination	5.3.1 Water resource management	61	P.121~123	
	G4-EN23	Total weight of waste by type and disposal method	5.3.3 Waste and hazardous substance management	64	P.121~123	
	G4-EN24	Total number and volume of significant spills	NA			None
	G4-EN25	Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally.	NA			None
	G4-EN26	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the organization's discharges of water and runoff	NA			None. The company's wastewater is incorporated into the Science Park's

						underground water channel management
Products and services	G4-EN27	Extent of impact mitigation of environmental impacts of products and services	5.5 Green products	67	P.121~123	
	G4-EN28	Report the percentage of products sold and their packaging materials that are reclaimed by category	NA			No recycled packaging materials
Compliance	G4-EN29	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations	NA			None
Transportation	G4-EN30	Significant environmental impacts of transporting products and other goods and materials for the organization's operations, and transporting members of the workforce	NA			The process by which the company transports products and materials exerts no significant environmental impact

Overall Status	G4-EN31	Report the total environmental protection expenditures and investments by type	5.7 Introduction to environment, safety, and health costs accounting management system (ECA)	77	P.121~123	
Supplier environment assessment	G4-EN32	Percentage of new suppliers that were screened using environmental criteria	4.3.3 Supply chain partnership			
	G4-EN33	Significant actual and potential negative environmental impacts in the supply chain and actions taken	4.3.3 Supply chain partnership			
Environmental Grievance Mechanisms	G4-EN34	Number of grievances about environmental impacts filed, addressed, and resolved through formal grievance mechanisms	5. Environmental sustainability			

Social index: Labor practices and decent work						
G4 Index		Index Definition	Related chapters	Page	External assurance	Supplementary explanation
Labor employment relations	G4-LA1	Report the total number and rate of new employee hires during the reporting period, by age group, gender, and region.	6.1 Employment status	81	P.121~123	
	G4-LA2	Report the benefits which are standard for full-time employees of the organization but	6.2.1 Employee rights guaranteed	87	P.121~123	

		are not provided to temporary or part-time employees, by significant locations of operation.	6.2.2 Competitive salary and benefit package			
	G4-LA3	Return to work and retention rates after parental leave, by gender	6.2.2 Competitive salary and benefit package	87	P.121~123	
Labor Relations	G4-LA4	Minimum notice periods regarding operational changes, including whether these are specified in collective agreements	NA			Handled in accordance with Labor Standards Act
Occupational health and safety	G4-LA5	Percentage of total workforce represented in formal joint management–worker health and safety committees that help monitor and advise on occupational health and safety programs	5.1 Environmental protection, safety, and health management	55	P.121~123	
	G4-LA6	Report types of injury, injury rate (IR), occupational diseases rate (ODR), lost day rate (LDR), absentee rate (AR) and work-related fatalities, for the total workforce, by region and gender	5.2 Prevention and handling of occupational hazards and diseases	59	P.121~123	
	G4-LA7	Workers with high incidence or high risk of diseases related to their occupation	NA			

	G4-LA8	Health and safety topics covered in formal agreements with trade unions	NA			Macronix employees did not establish a union, but Macronix OSHEC convenes meeting at least once every quarter mainly to discuss environmental, safety, and health issues.
Training and education	G4-LA9	Report the average hours of training that the organization's employees have undertaken during the reporting period, by gender and employee category	6.3.3 Macronix Academy	93	P.121~123	
	G4-LA10	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing lifelong careers	6.3 Education and development	90	P.121~123	

	G4-LA1 1	Percentage of employees receiving regular performance and career development reviews, by gender and by employee category	6.3 Education and development	90	P.121~123	
Employment diversity and equal opportunity	G4-LA1 2	Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity	6.1 Employment status	81	P.121~123	
Equal Remuneration for Women and Men	G4-LA1 3	Ratio of basic salary and remuneration of women to men by employee category and by significant locations of operation	NA			
Supplier Assessment for Labor Practices	G4-LA1 4	Percentage of new suppliers that were screened using labor practices criteria	NA			
	G4-LA1 5	Significant actual and potential negative impacts for labor practices in the supply chain and actions taken	NA			
Aspect: Labor practices grievance mechanisms	G4-LA1 6	Number of grievances about labor practices filed, addressed, and resolved through formal grievance mechanisms	NA			

Social index: Human rights						
G4 Index		Index Definition	Related chapters	Page	External assurance	Supplementary explanation
Investments	G4-HR1	Total number and percentage of significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	NA			There are no significant investments that are undergoing human rights screening in 2014
	G4-HR2	Total hours of employee training on human rights policies or procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained	NA			All new employees have underwent SA8000 and EICC CoC training
Non-discrimination	G4-HR3	Total number of incidents of discrimination and corrective actions taken	6.1 Employment status	81	P.121~123	There were no incidents of discrimination in 2014

Freedom of Association and Collective Bargaining	G4-HR4	Operations and suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and measures taken to support these rights	NA			The company respects employees' right to exercise freedom of association and collective bargaining
Child labor	G4-HR5	Operations and suppliers identified as having significant risk for incidents of child labor, and measures taken to contribute to effective abolition of child labor	6.2 Respect the staff	85	P.121~123	
Forced or compulsory labor	G4-HR6	Operations and suppliers identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of all forms of forced or compulsory labor	6.2 Respect the staff	85	P.121~123	
Security Practices	G4-HR7	Percentage of security personnel trained in the organization's human rights policies or procedures that are relevant to operations	NA			
Indigenous	G4-HR8	Total number of incidents of violations	6.2 Respect the	85	P.121~123	There were no

rights		involving rights of indigenous peoples and actions taken	staff			cases of violations involving rights of employees
Assess	G4-HR9	Total number and percentage of operations that have been subject to human rights reviews or impact assessments	NA			Every half year, the company conducts SA8000 internal auditing on all departments to examine employees' human rights reviews within the reporting boundary
Supplier human rights assessment	G4-HR10	Percentage of new suppliers that were screened using human rights criteria	NA			
	G4-HR11	Significant actual and potential negative impacts for human rights in the supply	NA			

		chain and actions taken				
Human Rights Grievance Mechanisms	G4-HR12	Number of grievances about human rights impacts filed, addressed, and resolved through formal grievance mechanisms	NA			

Social index: Society						
G4 Index		Index Definition	Related chapters	Page	External assurance	Supplementary explanation
Local communities	G4-SO1	Percentage of operations with implemented local community engagement, impact assessments, and development programs	NA			The company primarily operates within the Hsinchu Science and Industrial Park, with the Hsinchu Science and Industrial Park as the responsible assessment unit

	G4-SO2	Operations with significant actual or potential negative impacts on local communities	NA			The company primarily operates within the Hsinchu Science and Industrial Park and thus exerts no significant influence on the communities
Anti-corruption	G4-SO3	Total number and percentage of operations assessed for risks related to corruption and the significant risks identified	NA			
	G4-SO4	Communication and training on anti-corruption policies and procedures	NA			
	G4-SO5	Confirmed incidents of corruption and actions taken	NA			None in 2014
Public Policies	G4-SO6	Total value of political contributions by country and recipient/beneficiary	NA			There were no political contributions in 2014

Anti-competitive behavior	G4-SO7	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes	NA			None in 2014
Compliance	G4-SO8	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations	NA			None in 2014
Supplier social impact assessment	G4-SO9	Percentage of new suppliers that were screened using criteria for impacts on society	NA			
	G4-SO10	Significant actual and potential negative impacts on society in the supply chain and actions taken	NA			
Grievance Mechanisms for Impacts on Society	G4-SO11	Number of grievances about impacts on society filed, addressed, and resolved through formal grievance mechanisms	NA			

Social index: Product responsibility						
G4 Index		Index Definition	Related chapters	Page	External assurance	Supplementary explanation
Customer health and safety	G4-PR1	Percentage of significant product and service categories for which health and safety impacts are assessed for improvement	NA			

	G4-PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning the health and safety impacts of products and services during their life cycle, by type of outcomes	NA			None in 2014
Product and service labeling	G4-PR3	Type of product and service information required by the organization's procedures for product and service information and labeling, and percentage of significant product and service categories subject to such information requirements	NA			
	G4-PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes	NA			None in 2014
	G4-PR5	Results of surveys measuring customer satisfaction	4.3.2 Creating customer satisfaction	47	P.121~123	
Marketing Communications	G4-PR6	Sale of banned or disputed products	NA			None in 2014
	G4-PR7	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and	NA			None in 2014

		sponsorship, by type of outcomes				
Customer privacy	G4-PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data	NA			None in 2014
Compliance	G4-PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services	NA			None in 2014