





Arcientec 2018 Corporate Social Responsibility Report 1



#### **Drafting Principles and Guidelines**

This report was prepared in accordance with Global Reporting Initiative's GRI Standards, Corporate Social Responsibility Best Practice Principles for TWSE/GTSM Listed Companies, and the AA1000 AP (2018) standards. It discloses the steps taken by Ardentec to ensure business sustainability in a number of aspects, such as stakeholder response, corporate governance, economics, environmental, employees, and social engagement. This report includes all the material topics which were reviewed and approved to release by President.

Financial figures in this report are expressed in NTD and are CPA-certified. Performances in terms of environment, safety and health are illustrated based on internationally accepted benchmarks and data filed with the competent authorities.

#### Report Period and publishing

This report is the seventh corporate social responsibility report published by Ardentec Corporation which discloses the performance of corporate social responsibility (CSR) from January 1, 2018 to December 31, 2018. Electronic version of this report can be downloaded from the company's website http://www.ardentec.com. Ardentec publishes the Corporate Social Responsibility Report every year. The previous year's report was published in June, 2018, and we expect to publish the next report in June, 2020.

#### Scope of report

This report discloses the economic, environmental, and social aspects of Ardentec's performance, including its headquarters, its Singaporean and Korean subsidiaries, and also GIGA Solution subsidiary.

#### Verification

The verification of this report is entrusted to a third party verification unit, BSI Taiwan Ltd., in line with GRI Standards core disclosure level and type 1 moderate assurance level of AA1000 AS assurance standard. The BSI independent statement is attached to the annex of this report.

#### **CSR Contact**

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# LETTER FROM THE **MANAGEMENT**

# Dear friends interested in the sustainable development of Ardentec

Governments, businesses as well as people around the world and in Taiwan are increasingly paying attention to trends in social responsibility and environmental sustainability. Greater altruism and cooperation is a wonderful development in society!

the creation of social value in each aspect as part of our robust management approach. We strive to do our best for the common good of society and environment. We are very pleased to share our 2018 corporate social responsibility performance with friends of Ardentec through this report once again.

Ardentec headquarters worked with our subsidiaries in each country to promote policies and activities connected to CSR and environmental sustainability. Together, we received the outcomes of related efforts made at each site, the potential for further increases in social

for future efforts. We hope each site can one day expand their achievements to entire regions.

The Validated Audit Program (VAP) of the Responsible Business Alliance (RBA) was introduced at Ardentec in September 2018 and Ardentec has always insisted on a maximum possible score of 200 was achieved in January 2019. In addition to using RBA standards to see how Ardentec measures up internationally, we also put even more effort in to exceeding standards on greenhouse gas (GHG) management and reduction, carbon footprint on a regular basis every year. inventory and more.

> Ardentec is fortunate in having many customers that take CSR seriously along with suppliers that are willing to actively cooperate with our efforts. In every country that Ardentec operates in, we joined forces with local suppliers and our customers around the world to implement the RBA standards and philosophy. From

value, and identified directions this we built a supply chain that supports the promotion of CSR even more and created a value chain for CSR and sustainability that spans multiple countries and entire continents.

> Ardentec headquarters and our international subsidiaries care greatly about the community and the environment as well. Our employees now embrace activities such as engaging with the young and old in the local community, education, environmental education, charity fund-raising, book donations and volunteering

Employees filled with enthusiasm, customers in pursuit of sustainability, and suppliers that support our philosophy are all partners of Ardentec in our bid to realize even more distant goals in CSR and sustainability. We all share a common goal of becoming even better!

Chairman

President

C.Y. Le ULLY

# **ABOUT ARDENTEC**

- 1.1 Company Introduction
- 1.2 Corporate Values
- 1.3 The Organization
- 1.4 Professional Services
- 1.5 Market Size and Performance
- 1.6 Surplus Allocation
- 1.7 Development Strategies and Innovations
- 1.8 Honors and Accolades

# 1.1 Company Introduction

Ardentec Corporation is a specialized semiconductor testing company. The company's service includes testing engineering development and product testing of various semiconductors.

Ardentec's headquarters is in Hsinchu Industrial Park, Hukou Township, Hsinchu County, Taiwan. Taiwan headquarters has a total of 4 Sites, including Kaiyuan, TingShin, Gaosheng and Paoching.

The north-east Asia Korea subsidiary, East Asia Headquarters and GIGA Solution subsidiary in Taiwan, Ardentec Nanjing and Singapore subsidiary are connected as the circular Asia service band, forming a complete

Ardentec

Map

Distribution

business development and testing operation service network of Europe, Asia and America.

The front-end and back-end (such as testing and packaging) in the semiconductor industry require huge equipment investment. The technology and production management of the front end and back-end are very different. Therefore, in the semiconductor industry, the professionalization of the back-end such as testing and packaging becomes a parallel and complementary division of labor with the front-end. With the industry-leading engineering capability, quality system and IT technical service and through the industrial vertical integration,

Ardentec has established a longterm cooperative relationship with big domestic and foreign semiconductor manufactures and become one of top three specialized wafer testing service provider in Taiwan. With a specialty in niche services, Ardentec hopes to secure its foothold in the world's semiconductor industry.

#### Taiwan Headquarters

Kaiyuan Site No.24, Wenhua Rd., Hsin-Chu **Industrial Park** Tingshin Site No.3, Gongye 3rd Rd., Hsin-Chu Industrial Park Gaosheng Site No.9, Renyi Rd., Hsin-Chu Industrial Paoching Site 6F., No.12, Guangfu N. Rd., Hsin-Chu

**Industrial Park** 

Singapore Subsidiary 12 Woodlands Loop, #02-00 Singapore 738283

#### Korea

Taiwan

Korea Subsidiary 61, Cheongbuksandan-ro, Cheongbukmyeon, Pyeongtaek-si, Gyeonggi-do 451-833, Korea

Ardentec Nanjing No. 29, Qiuyun Road, Qiaolin Street, Pukou District, Nanjing City, Jiangsu Prov., 211800 China

Giga Solution 7F., No.6, Keji 5th Rd., East Dist., Hsinchu City 300, Taiwan, R.O.C.



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Zero Defect

on the quality

Achieving Zero Defects Attitude is always first Every Defect generates an unhappy customer

#### 3 About Ardentec

# 1.2 Corporate Values

Ardentec aspires to be a "right" business processes to model company that creates a exercising diligent in governance, adhering to laws and regulations disclosures, and using the the right values through

provide customers with the positive cycle conducive to the best professional services and In addition, Ardentec has development of society, the provide employees with the economy and the industry by best care and benefits. To us, emphasizing business ethics, the most enjoyable aspect of corporate management is to engage employees, customers, as well as international rules and suppliers and business partners standards, making transparent with "passion" and create

the cornerstones of "Ardentec. incorporated topics of environmental protection, employee care, and society feedback into its corporate governance, and thereby ensure sustainable growth for the Company, the employees, the

environment, and society alike.

"rationality." These beliefs are

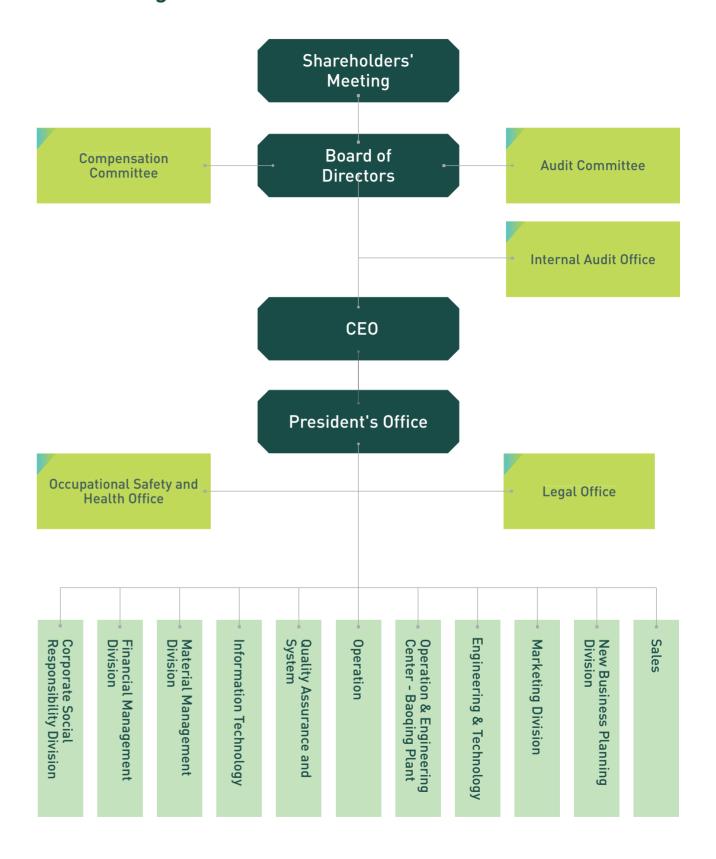
# Corporate Values

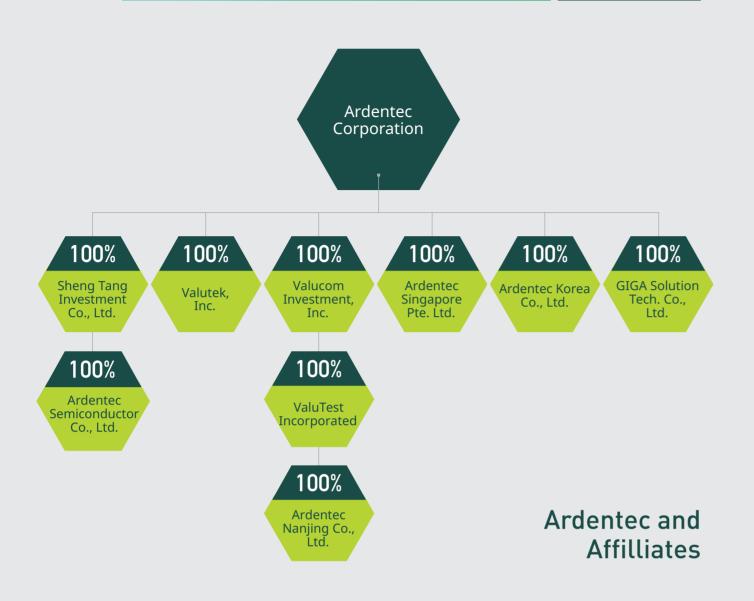
- With the spirit of continuous improvement, Ardentec meets the requirement of high quality clients and the expectation of long-term stakeholders.
- With enthusiastic and innovative attitude, Ardentec provides valuable key service in the global semiconductor industry.
- With balanced humanity and professional demands, we drive the co-growth of employees and company.
- With a commitment to business integrity, we endeavor to care for the sustainable development of society and the environment.



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# 1.3 The organization





## 1.4 Professional Services

With engineering expertise, services, wafer-level chip scale service enthusiasm, and lean on-site management, we are committed to providing customers with complete In Ardentec, we have semiconductor testing solutions. Our scope of service includes preproduction engineering service, mass production engineering service, probe card service, wafer probing service, final testing

packaging (WLCSP) service, and other related engineering support

independently developed highly automated information platforms. Our outstanding engineering team builds custom information service for customers with different needs and provides

customers with engineering services from the design phase to mass production to enable customers to quickly start mass production and maximize added value for customers. By combining highly automatic test production with the rigorous quality system and production error automatic alarm system, we assure the production quality of

customer products.

Ardentec passed various quality management systems certifications, lean engineering capabilities as well as advanced automated information platform ensure that we provide the best quality in the industry, and made us a leader in automotive IC and security control IC.



## 1.5 Market Size and Performance

Despite the global pall of uncertainty from the US-China trade war, the semiconductor industry continued to reach new heights in 2018 with estimated global semiconductor sales of US\$477.9 billion, up 15.9% from 2017. According to market research firms, semiconductor sales are expected to grow by around 2.6% in 2019. The market outlook for 2019 given by international industry bodies are relatively conservative compared to the last three years. The main reasons for these include the impact of the US-China trade war, the slow-down in smart phone sales, and a weakening in memory prices. Demand from Internet-of-Things, artificial intelligence, electric vehicles, smart manufacturing and 5G applications are also providing the market with opportunities

for growth as well. We will be prudent with our investments and maintain robust management practice to continue refining our customer services and enhance our competitiveness. With continuously improving quality, Ardentec has an edge over its competitors and continues to maximize profit for its customers,

shareholders, and employees. An increasing number of integrated device manufacturers (IDMs) in Europe and the United States are outsourcing work to semiconductor manufacturers in Taiwan and seeking local packaging and testing partners. Ardentec has garnered the attention of multiple international clients due to our extensive testing experience and customization services, making it possible for the company to secure a foothold in the

semiconductor testing market. At the same time, Ardentec is staying in touch with market trends and generating business growth by continuing develop customers among IC design houses.

In 2018, our logic/mixed-signal IC as well as security control, automotive and communication chip testing services all grew significantly. The Nanjing subsidiary of Ardentec also obtained customer certification this year to begin mass production, provide customer services, and participate in the business opportunities offered by China's growing semiconductor market. The completion of our regional strategy and alignment with customers' global strategy improved customer relations and benefited all parties involved.

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2018 product sales proportion					
Product	Revenues	Weight %			
Wafer Test	7,073,901	83.78%			
Final Test	1,345,351	15.93%			
Others (equipment rental)	24,552	0.29%			
Total	8,443,804	100.0%			

2017 and 2018 Testing Service Sales Region					
Year	2017	2018			
Taiwan	1,461,895	1,546,359			
USA	3,316,014	3,438,561			
Singapore	767,241	650,689			
Mainland China	237,659	182,150			
Others ※	2,077,206	2,626,045			
Total	7,860,015	8,443,804			

Unit: NT\$1,000 primarily consists of European customers

Unit: NT\$1,000

2017 and 2018 Financial Performance(Consolidated)						
Year	2017	2018				
Operating revenues	7,860,015	8,443,804				
Operating costs and expenses	6,241,697	6,605,873				
Operating net profit	1,618,318	1,837,931				
Non-operating revenues and expenses	80,894	143,303				
Pre-tax profit	1,537,424	1,981,234				
Income tax expense	269,853	432,692				
Current period net profit	1,267,571	1,548,542				

Above includes the revenues of Taiwan Headquarter, GIGA Solution, Korea subsidiary, Singapore subsidiary and China Nanjing subsidiary.

Unit: NT\$1,000

# 1.6 Surplus Allocation

According to the Company's Articles of Incorporation, when there is a profit after the annual closing of books, besides paying taxes and covering up losses in previous years, the Company will appropriate 10% of the balance as the legal reserve and the special reserve by the law or based on

actual needs. Then, according to the need for operational activities, the Board of Directors will draw up a proposal to distribute the balance (including reverted special reserve) together with the unappropriated earnings in the previous year and submit the proposal to the annual general

meeting of shareholders (AGM) for resolution before distributing

The 2018 net profit after tax is NT\$1,548,542,000. The Board of Directors approved on February 27, 2019 the distribution of cash dividends at NT\$1.6 per share.



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# 1.7 Development strategies and innovations

research and develop information

The experience accumulated from providing wafer testing services for leading manufacturers at home and abroad has enabled Ardentec to establish core competitiveness in key technologies, such as advanced testing technology, test process analysis systems, and test production automation.

In response to market trends in the industry, Ardentec has successfully developed technologies in recent years, including testing techniques for automotive ICs, security ICs and ICs specifically for the Internet of Things (IoT). These technologies have entered a harvest stage, and turnover will increase year by year.

We have also embarked on the R&D and successfully integrated technologies relating to IC testing, such as information system, logistics management, and automated production, to provide customers with integrated products and services. Aiming to improve production quality and enhance production efficiency, we continuously

systems to achieve the dual goal of product quality improvement and testing cost reduction. We also continuously optimize and develop the test process analysis system and test machine realtime monitoring system to meet the comprehensive demands and quality requirements of different customers. RFID system was introduced by Ardentec for batch management and automated production on the production lines. We are making progress in this area and the technology will be extensively used on the production line within two years. Top cope with the industry trend, we continuously expand our testing capacity for 12-inch wafers to become the largest testing team for 12-inch wafers in the industry. Apart from providing long-term mass production testing service for numbers of professional IC manufacturers at home and abroad, we launch cooperation with upstream IC design houses to advance the development of product testing programs for customers at the

product design phase to facilitate customers to quickly start mass production.

One-stop, high-end, and automated testing services have become a market trend. In addition to participating in the professional division of labor and launching strategic alliances with the industry chain at home and abroad for global market deployment, we have also established the Patent Review Committee to develop patents for cutting-edge testing, advanced IT technologies, and automation technologies. The committee also continuously optimizes and innovates research energy and services to achieve the goal of "leading brand of testing and qualification service and technology development" with complete and custom services.

9 About Ardentec

# 1.8 Honors and Accolades

# Membership Site Members Global Semiconductor Alliance (GSA) Taiwan Semiconductor Industry Association Chinese Institute of Engineers, Hsinchu County Chapter Monte Jade Taiwan Hsinchu Industrial Society Taiwan Headquarters Hsinchu Industrial Park Association Hsinchu Industrial Park Security Alliance Hsinchu County Nurses Association Automobile Electronic SIG Exchange Seminar Chinese Institute of Industrial Engineers (CIIE) Singapore Business Federation (SBF) Singapore Site Singapore Semiconductor Industry Association (SSIA) Korea Customs Logistics Association Eoyeon Hansan Industrial Complex Manager Association GG Association of Foreign Invested companies Korea Site Korea Fire Safety Association Korea Energy Engineers Association Korea Electric Engineers Association



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## Verification/Certification

Starting			Subsidiarie	S	
year of validity	Headquarters	Singapore	Korea	Nanjing	GIGA Solution
2000	ISO 9002				ISO 9002
2002	QS 9000				ISO 9001
2003	ISO 9001				
2004	ISO 14001				
2004	ISO/TS 16949				
2007	OHSAS 18001	ISO 9001			
2008	ISO 27001				
2009	TOSHMS	ISO 14001			
2009		OHSAS 18001			
	ISO 14064	ISO 27001			
2010	IECQ QC080000				
	Authorized Economic Operator, AEO				
2011		ISO/TS 16949	ISO 9001		ISO 14001
2012	Internal Compliance Program (ICP)	ISO 14064	ISO/TS 16949		
	CNS 15506(Note 1)		ISO 14001		
2013	Common Criteria (Security Site) Tingshin Site	Strategic Trade Scheme (STS) Tier 3 Permit	OHSAS 18001		
	AA1000 AS		0113/13 10001		
	ANSI/ESD S20.20	Approved Contract Manufacturer and Trader (ACMT)	ISO 27001		
2014	Common Criteria (Security Site) Kaiyuan Site	TradeFirst & STP certificate	CP (Compliance Program) AA grade		
	ISO/IEC 17025	Common Criteria (Site Certification)	Automatic Customs Approval		
	Common Criteria (Site Certification) EAL 6 (Note 2)	ISO 22301			
2015	Healthy Workplace Certification Health Promotion Mark				
2016	ISO22301				
2017					ANSI/ESD S20.20
	ISO 45001		IATF 16949	ISO 9001	IATF 16949
2018	ISO 26262			IATF 16949	
	IATF 16949			ISO/IEC 27001	

Note1: Not renew from 2015

Note2: ncludes Gaosheng Site data center and Paoching Site data center

Chairman Chih-Yuan Lu was elected as a research fellow of Academia Sinica in 2018.



Above-Received "3rd place for excellent place" in the the Company or Site Protection category of the 2018 Civil Defense Corps Training by Hsinchu County government.

Below-Chairman Chih-Yuan Lu presented with 2018 Contribution to Material Technology

Award by Materials Research Society - Taiwan.



Left-Singapore subsidiary listed as one of the 100 fastest growing small enterprises in Southeast Asia by the SME magazine. (SME100 Award)

Right-Ardentec presented with Sustainable Management Practice Award by the British Standards Institution (BSI). 2018 Awards

# SUSTAINABLE BUSINESS FRAMEWORK

- 2.1 CSR Policy
- 2.2 The CSR Organization
- 2.3 Corporate Socail Responsibility

  Performance
- 2.4 Analysis of Stakeholders and Issues of Concern
- 2.5 Topic Materility Matrix
- 2.6 Material Topics Value Chain and
  Managemant strategy
- 2.7 Communication with Stakeholders



# 2.1 CSR Policy

Upholding the concept of enhancing the competitiveness of enterprises while taking into account the social sustainable development, Ardentec expects to drive the culture and establish a society that values ethics and maintains social welfare and environmental sustainability. The Board of Directors reviews the CSR policy and evaluates the implementation performance of

the economic, environmental and social topics annually.

The Board of Directors has established Ardentec's CSR policy which are as follows:

- ◆ Business ethics and corporate
- ◆ Compliance with laws and international standards
- ◆ Fully disclose corporate governance and CSR Information
- ◆ Development of a sustainable environment

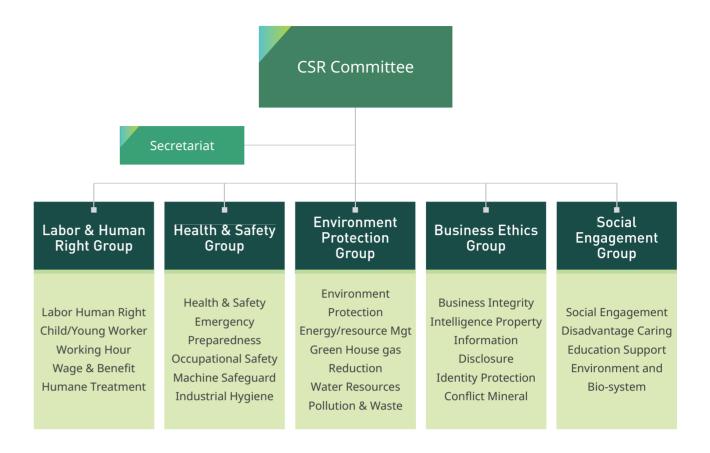
In the process of implementing CSR, Ardentec stands behind the mission, vision, and charter of the RBA Responsible Business Alliance. In addition, Ardentec undertakes that the operating activities fully comply with the Responsible Business Alliance Code of Conduct (RBA CoC).

# 2.2 CSR organization

CSR Committees have been set up at Ardentec and all of its subsidiaries. The President serves as the chair of the CSR Committee at corporate headquarters while members of the committee are made up of senior executives from different functions and the General Manager of each subsidiary. At each subsidiary, the General Manager and executives serve as members of the CSR Committee. All committee adhere to the categories defined by the RBA. Each committee sets up four tasks groups focusing on "Labor and Human Rights", "Health and Safety", "Environmental Protection" and "Business Ethics." Headquarters also has a "Social Engagement" group to actively

engage, support and give back to society. Ardentec headquarters lead all subsidiaries in promoting the development and introduction of CSR. Every effort is made to realize the Ardentec Corporate's sustainability goals in each phase and for the long-term. The president briefs the Board of Directors on the corporate's performance each year.

The CSR committee is responsible for the implementation of the sustainable management goals, monitoring the development of domestic and international CSR systems and changes in the corporate environment, developing measures for the implementation of CSR and sustainability goals, continuing to strengthen the CSR management system established by Ardentec and ensuring continuous enhancements to the effectiveness of CSR implementation.



## 2.3 Corporate Social Responsibility Performance

Ardentec headquarters adopted the RBA management standard to set a direction for upstream customers and downstream suppliers. These directives serve as the ultimate standard 2019. for fulfilling each standard

item. Ardentec's first VAP was conducted by RBA in September 2018. A Silver rating was achieved with a score of 79.9 following by a maximum score of 200 in January

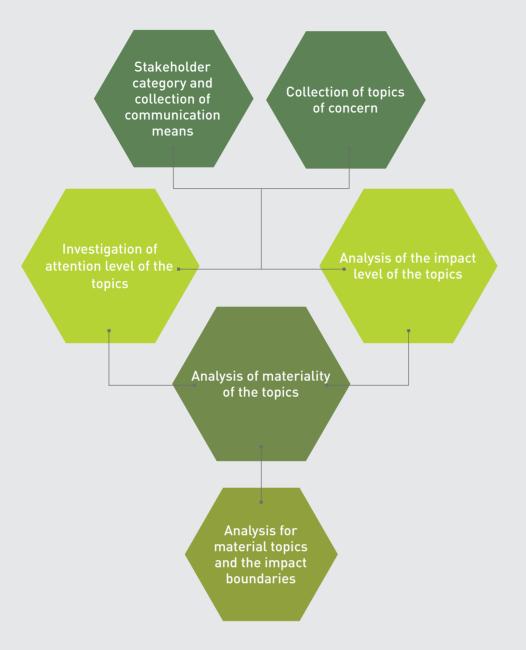


# 2.4 Analysis of Stakeholders and Issues of Concern

Every year, Ardentec adopts the following processes to identify stakeholders and issues collection, monitor level of issue concern and impact, and identify material issues. Ardentec has

established diverse, transparent, and responsive communication channels with stakeholders in the hope of understanding their issues of concern and expectations for Ardentec.

The responses of stakeholders are important references for the Company's CSR direction, planning, and sustainable development.



#### Collection of topics of concern

concern.

#### **Identification of** stakeholders

topics of concern from related identifies the stakeholders in employees, customers, suppliers domestic and foreign industries, the business activities and the and contractors, government and confirming the collected communication methods and information with each functional channels with these stakeholders cooperation institutions, creditors department before summarizing based on the identified topics. and communities. it into a complete list of topics of Based on the identification results, we conclude eight

Every year, Ardentec collects The head of each function major types of stakeholders: regulatory agencies, investors,



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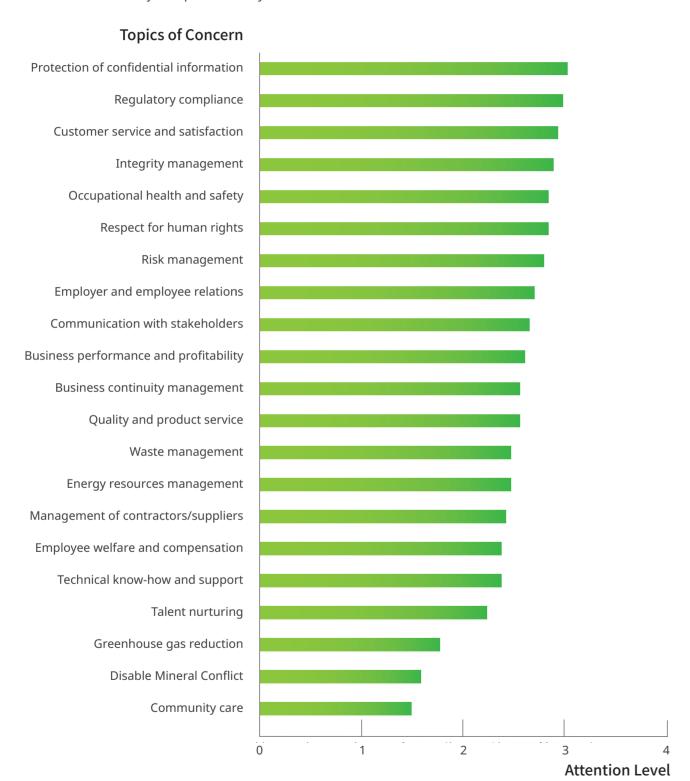
Stakeholder.								
Stakeholders Topics of Concern	Employees	Customers	Suppliers and contractors	Government and regulatory agencies	Investors	Cooperation institutions	Creditors	Commun
Customer service and satisfaction		$\checkmark$	$\checkmark$		$\checkmark$	$\checkmark$	$\checkmark$	
Protection of confidential information	$\checkmark$	$\checkmark$	$\checkmark$	<b>√</b>	$\checkmark$	$\checkmark$	$\checkmark$	
Regulatory compliance	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	<b>√</b>	
Respect for human rights	$\checkmark$			✓		$\checkmark$		
Occupational health and safety	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$				
Employee welfare and compensation	$\checkmark$			$\checkmark$		$\checkmark$		
Risk management		$\checkmark$			$\checkmark$		<b>√</b>	
Business continuity management	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	<b>√</b>	
Employer and employee relations	$\checkmark$			$\checkmark$		$\checkmark$		
Business performance and profitability	$\checkmark$		<b>√</b>	$\checkmark$	$\checkmark$			
Business integrity	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	
Waste management		$\checkmark$						
Energy resources management								
Quality and product service	$\checkmark$	$\checkmark$	<b>√</b>		✓	$\checkmark$	✓	
Communication with stakeholders				$\checkmark$	$\checkmark$		$\checkmark$	
Technical know- how and support		$\checkmark$	$\checkmark$		<b>√</b>		$\checkmark$	
Management of contractors/ suppliers		$\checkmark$	$\checkmark$		$\checkmark$		<b>√</b>	
Talent nurturing						$\checkmark$		
Greenhouse gas reduction								
Mineral Conflict- Free								
Community care								

The cooperation institutions include accounting firms, audit unit, cooperative schools, etc.

Investors and community did nor reply to concern topic survey

#### Analysis of attention level of the topics

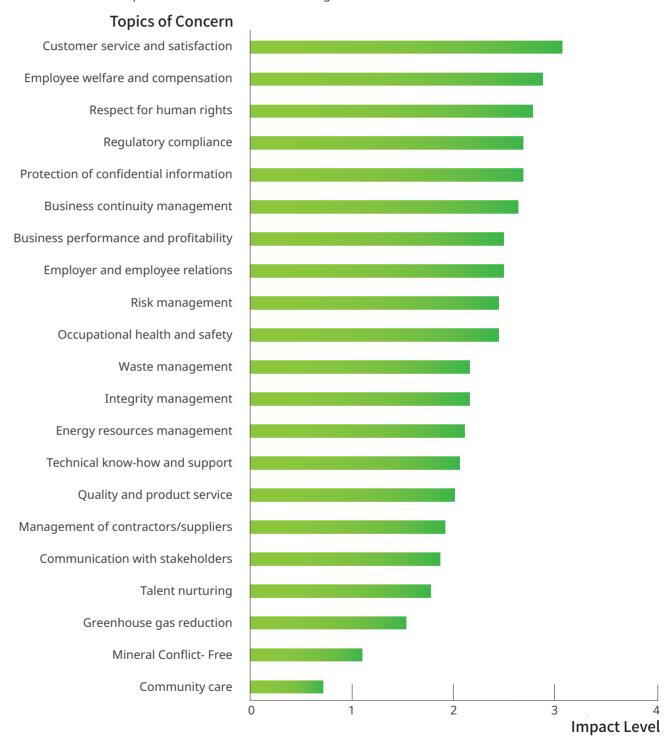
After identifying stakeholders and surveying communication methods and channels, the attention level relating to stakeholders within and outside of the organization is investigated by guestionnaire survey. This is to provide the management with an overview of the stakeholders and the materiality of Topics raised by them. The materiality of topics raised by stakeholders is as follows:



Attention level: 0-Not relevant/Unknown 1-Not Attention, 2-Attention, 3-Heavy, 4-Extreme

#### Analysis of impact level of topics

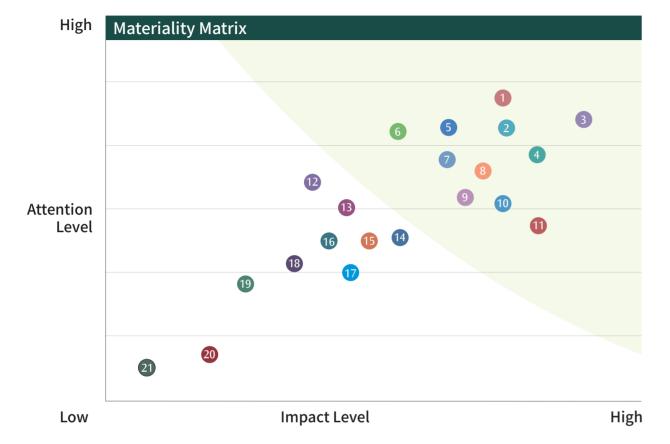
After their collection and organization, the issues of concern will be analyzed by each function supervisor with respect to the impact of each issue on the Company's business activities. After the assessment of impact of issues from each function being collected and organized, the Corporate Social Responsibility Committee will examine the impact of each issue on the Company as a whole. After the two-way microscopic-to-macroscopic inspection and the analysis of the relevance to the overall operation, the impact of these issues on operation will be collected and organized.



Impact level: 0-Not relevant/Unknown 1-Not Attention, 2-Attention, 3-Heavy, 4-Extreme

# 2.5 Topics Materiality Matrix

After combining the results of topic materiality assessment, questionnaire survey, and the internal assessment of the reasonability of topic, the materiality of topic raised by stakeholders are concluded and prioritized as distributed below.



#### Material topic

- Protection of confidential information
- 2 Regulatory compliance
- 3 Customer service and satisfaction
- 4 Respect for human rights
- **5** Occupational health and safety
- 6 Integrity management

- 7 Risk management
- 8 Employer and employee relations
- 9 Business performance and profitability
- 10 Business continuity management
- 11 Employee welfare and compensation

#### Other topic

- 12 Communication with stakeholders
- Quality and product service
- 14 Waste management
- 15 Energy resources management
- 16 Management of contractors/suppliers
- 17 Technical know-how and support
- 18 Talent nurturing
- 19 Greenhouse gas reduction
- 20 Mineral Conflict- Free
- 21 Community care



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# 2.6 Material Topics Value Chain and Management **Strategy**

Material issues are analyzed and assessed on their level of attention and impact. Their relevance is then determined through actual operations. An analysis of the considerations and borders on material issues is tabled below.

			Corresponding	Value Chain of the Identification of Boundaries			
Material Topics	GRI Standards (201	6)	chapter of Management			- osidiarie	es
			approach	Headquarters	Singapore	Korea	Nanjing (1)
Customer service and satisfactionw	Material topics identif stakeholders'feedb		6.4	√	√	<b>√</b>	$\checkmark$
Protection of confidential information	Customer Privacy	418-1	3.6 6.2	$\checkmark$	$\checkmark$	<b>√</b>	$\checkmark$
Regulatory compliance	Socioeconomic Compliance	419-1	3.6	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Respect for human rights	Non discrimination Child Labor	406-1 408-1	5.3	$\checkmark$	✓	$\checkmark$	$\checkmark$
Occupational health and safety	Occupational Health and Safety	403-1 403-4	5.5	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Employee welfare and compensation	Economic Performance Employment Relations	201-1 201-3 401-2	5.3	✓	$\checkmark$	<b>√</b>	$\checkmark$
Risk management	General Disclosures Indirect Economic Impacts Customer Privacy	102-30 203-2 418-1	3.6	√	√	✓	<b>√</b>
Business continuity management	General Disclosures  Indirect Economic Impacts	102-11 102-30 102-31 203-2	3.6	✓	√	$\checkmark$	√
Employer and employee relations	Employment Relations  LaborManagement  Relations	401-2 402-1	5.3	√	✓	<b>√</b>	✓
Busniess performance and profitability	General Disclosures Economic Performance	102-15 201-1	1.5 1.6	$\checkmark$	$\checkmark$	$\checkmark$	<b>√</b>
Integrity management	General Disclosures  Against corruption	102-11 102-14 102-16 102-17 102-27 102-28 102-31 205-2 205-3	3.1 3.4 3.5	✓	√	V	✓

Material Topics	GRI Standards (2016	6)	Corresponding chapter of Management approach	GIGA Solution	Customers	Suppliers and contracto	Creditors
Customer service and satisfactionw	Material topics identifi stakeholders'feedba	ed by ack	6.4	$\checkmark$	✓		
Protection of confidential information	Customer Privacy	418-1	3.6 6.2	<b>√</b>	✓	<b>√</b>	
Regulatory compliance	Socioeconomic Compliance	419-1	3.6	$\checkmark$			
Respect for human rights	Non discrimination Child Labor	406-1 408-1	5.3	✓		✓	
Occupational health and safety	Occupational Health and Safety	403-1 403-4	5.5	$\checkmark$		$\checkmark$	
Employee welfare and compensation	Economic Performance Employment Relations	201-1 201-3 401-2	5.3	✓		✓	
Risk management	General Disclosures Indirect Economic Impacts Customer Privacy	102-30 203-2 418-1	3.6	$\checkmark$	✓		<b>√</b>
Business continuity management	General Disclosures  Indirect Economic Impacts	102-11 102-30 102-31 203-2	3.6	$\checkmark$	<b>√</b>		<b>√</b>
Employer and employee relations	Employment Relations  LaborManagement  Relations	401-2 402-1	5.3	✓		√	
Busniess performance and profitability	General Disclosures Economic Performance	102-15 201-1	1.5 1.6	$\checkmark$		$\checkmark$	<b>√</b>
Integrity management	General Disclosures  Against corruption	102-11 102-14 102-16 102-17 102-27 102-28 102-31 205-2 205-3	3.1 3.4 3.5	√	√	√	

<sup>(1)</sup> Explanation of new addition to impact boundary of topics: Ardentec Nanjing subsidiary commenced production on May 1, 2018. • Chapters relating to topical impact.



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## Description of Modifications in Significant Issues

Issue	Modifications	Description
Business continuity	Materiality elevated to top 10	Business continuity ensures that business processes and system impacts during natural or man-made disasters can be minimized. Stakeholders such as investors and customers are therefore taking a greater interest in business continuity.
Business performance and profitability		As the company to grow, shareholder/investor's positive interest in business and profitability should increase as well.
Business Integrity		Due to the positive correlation between ethics and governance around the world, greater emphasis is to be placed on stakeholder loyalty to the business owner.
Waste Management	Materiality dropped out of top 10	Testing found that production waste had a tiny impact on the environment.  Beneficiaries include waste reduction and recycling. Materiality is therefore relatively low.
Energy Resource Management		Testing is a low-energy consumption and low-resource industry. These have a criminal effect on the impact of the economy. Energy-saving targets are set every year. All kinds of recycling as a resource activities are conducted each year. Cooperate with these projects to save on water and optimize resource management performance. Materiality is therefore relatively low.

# Management of Significant Issues

	Significant Issue	Policies	Management measures/ projects	Goals	Evaluation mechanism
	Customer service and satisfaction	With industry-leading technology in wafer testing, Ardentec offers customers comprehensive services, making it the best partner for customers	Establishing individual customer projects in order to build a smooth service system and communication channel	More than 76% customer satisfaction	Annual implementation of customer satisfaction survey
	Protection of confidential information	All employees to duly comply with the security regulations and requirements and implement the information security items to ensure the security of customers' and the Company's information and facilities.	Setting up an Information Security Committee to promote information security related management Promote Common Criteria verification to ensure the effectiveness of the information security management system	Zero information security incidents	Regular audit and management review
	Regulatory compliance	Overall business activities must comply with relevant laws and regulations	Adopting the relevant laws from the Regulatory Identification Procedures to serve as the reason for checking the surgery as required by law.	Legal compliance: 100%	Quarterly implementation of legal compliance audit

Significant Issue	Policies	Management measures/ projects	Goals	Evaluation mechanism
Human Rights Protection	Headquarters and all subsidiaries comply completed with local labor laws and international human rights conditions.	Adhere to the national labor laws on RBA principles and RBA Responsible Labor Initiative (RLA) as the basis for labor protection and self-inspection. Each site is provided with signed and anonymous reporting channels and whistle-blower protection. Appeals can be made for incorrect information.	100% compliance on human rights	Audits based on labor laws and international princes are conducted on a quarterly basis. Management reviews and notification of any complaints relating to human rights must be conducted every six months. A full-scale audit of each subsidiary is conducted by headquarters every year.
Occupational health and safety	Complying with regulations and international standards, as well as eliminate and reduce occupational safety and health risks to establish a safe and healthy working environment, promote labor participation and consultation, and make continuous improvements to safety and health performance.	1.Established a Occupational Safety and Health Management Committee to coordinate, make recommendations and review OHS-related initiatives and compliance.  2.Verify and continue to promote the ISO 45001 occupational safety and health management system while continuing to ensure compliance with international laws.  3.Promotion of healthy workplace projects	1.Eliminate serious occupational injuries (including both employees and engineers). 2.Total injury index < 0.04	Management review meetings are conducted by the Occupational Safety and Health Management Committee on a quarterly basis.
Employee welfare and compensation	1.Workers' Compensation Comply with Labor Laws  2.Employee remuneration is highly competitive in the industry  3.Employees are rewarded through profit-sharing when the company is profitable for the year.	1.Annual review of changes in the remuneration regulations to ensure that employees' wages, overtime pay, and other benefits are better than those provided in the regulations  2.Regularly review average salaries in the job market and industry, check the company's business performance, carry out project evaluations and make salary adjustments.  3.The Articles of Incorporation explicitly set out how employee compensation should be shared if the Company turned a profit for the year.	100% compliance in employee compensation Employee compensation maintained in the top 25 percentile of the industry	1.Compliance audits are conducted every quarter  2.Industry compensation surveys and salary adjustments are conducted every year  3.Employee profitsharing proposal is submitted to the Board of Directors for approval after annual settlement.



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Significant Issue	Policies	Management measures/ projects	Goals	Evaluation mechanism
Risk management	Formulate risk assessment and operating procedures for each type of business-related risk to protect the interests of the Company and stakeholders through sound risk and crisis management.	1.Internal control systems were set up and implemented in accordance with the Regulations Governing Establishment of Internal Control Systems by Public Companies issued by the Financial Supervisory Commission.  2.Various management committees were set up for routine risk management in accordance with the risk management system and operating guidelines.  3.Management audits conducted for internal controls to help carry out routine risk management at the relevant committees	Zero incidents of major risk	Each risk management committee meets regularly to review actual performance and conduct internal audits that ensure that risk management procedures are being effectively enforced
Business continuity	The business continuity management system was used by Ardentec to identify potential threats to business operations and establish an emergency response capability for protecting stakeholders, business reputation and brand image. Continuous improvements to the business continuity management system are also being made in accordance with applicable laws and regulations.	A Business Continuity Management Committee was set up, and certification obtained for the ISO 22301 business continuity management system (BCMS) international standard.	Zero disruptions to business continuity due to major disasters	Conducted annually  1.Risk Assessment (RA)  2.Business Impact Analysis (BIA)  3.Internal system audit  4.Management review meeting
Employer- employee relations	1.Employee Partnership Policy and maintenance of harmonious employer- employee relations  2.Ardentec headquarters and subsidiaries all comply with local local labor laws and international standards on employer-employee relations	1.Employer-employee meetings are held at each site each quarter to engage in communication  2.Employees are provided with open channels for making signed and anonymous complaints to promote employer-employee relations	No labor- management disputes	CSR Committee conducts its performance reviews on a half-yearly basis.

Significant Issue	Policies	Management measures/ projects	Goals	Evaluation mechanism
Business performance and profitability	Embrace the Ardentec philosophy of on sustainability by being prudent with investments, maintaining robust management practices, continuing to refine our customer services and enhance our competitiveness. Maximize profits for customers, shareholders and employees through continuous improvements in quality.	1.Focus on our core business by improving testing technologies and the automation of production systems.  2.Expand carefully into strategic markets and actively expand our business from integrated device manufacturers while continuing to build up our customer base among professional IC design houses.  3.Monitor the latest market trends and satisfy customer needs a in a timely manner in pursuit of profit growth.  4.Closely track changes in the overall international economic environment and review the impact on existing customers every month so that the necessary response can be taken to reduce potential business impacts.	Carry out the Company's annual business plan and achieve revenue growth by meeting the monthly, quarterly and annual business targets.	Host production and sales meetings every week to review actual operating conditions; Conduct 3-month business forecasts, check monthly revenues and hold review meetings every month to ensure that business targets can be accomplished.
Business Integrity	Employees are prohibited from offering, committing, requesting or accepting any illegitimate benefits, or being involved in any conduct that would be construed as dishonest, illegal or in breach of trust, whether directly or indirectly, while carrying out their duties.	1.To enforce our business philosophy and policy on business ethics, the Ethical Corporate Management Best Practice Principles explicitly prohibits all unethical behavior. Disciplinary measures and an appeals process has also been defined for violating the rules on ethical management.  2.All employees undergo anti-corruption training every year  3."Conflict of interest reporting" is required for all managers above the level of department head and for all personnel engaged in external business contacts.	Zero incidents of unethical behavior	A management review meeting is conducted by the CSR Committee every 6 months to review whistle- blower reports of unethical behavior



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# 2.7 Communication with Stakeholders

Through various channels and by transparent and two-way interaction, Ardentec communicates with stakeholders and jointly examines and provide feedback on specific achievements of Ardentec in its implementation of corporate social responsibility. Stakeholders may communicate with the Company at any time through the Contact Us section on the official website, and the Company can immediately respond.

Communicatio	n Channels with the Stakeho	olders and	the Frequ	ency	
Stakeholder category	Communication methods and channels	monthly	Quarterly	Annually	Irregularly scheduled
	Labor-management meetings		<b>√</b>		
	Safety window meetings		<b>√</b>		
	Occupational safety and health committee meetings		<b>√</b>		
Employees	Intranet e-platform				$\checkmark$
	Suggestion (on-line or box)/ telephone/Email				<b>√</b>
	Announcements				$\checkmark$
	Department meetings				<b>√</b>
	Meeting/audit				<b>√</b>
Customers	Customer satisfaction management or survey			<b>✓</b>	
customers	Customer visit				<b>√</b>
	Company website				<b>√</b>
	Contractor training	$\checkmark$			
	Supplier CSR and Business Ethics Guidelines			<b>√</b>	
Suppliers and contractors	Protocol meeting				<b>√</b>
	Supplier/contractor audit			<b>√</b>	
	Meetings or communications				<b>✓</b>

	entec	Corporate :	Responsibil





50 40

- 3.1 Governance Principles
- 3.2 Board of Directors
- 3.3 Executive

Compensation Policy

- 3.4 Ethical Guidelines
- 3.5 Internal Controls
- 3.6 Risk Management
- 3.7 Major Investment



# 3.1 Governance Principles

employees to value corporate governance, embrace enthusiasm, and care about environmental and social sustainability to run an everlasting enterprise. Therefore, we have established the "Corporate Governance to strengthen the implementation Best Practice Principles, "Ethical Corporate Management Best Practice Principles, and "Corporate Social Responsibility Best Practice Principles"as the code of conduct of Ardentec • .

Ardentec has incorporated topics of environmental protection,

At Ardentec, we request all employee care, and society feedback into its corporate governance. In 2016, the Board of Directors conducted further reviews and enhancements to the corporate value, CSR policy and functioning of the CSR Committee of CSR.

> We also establish our governance framework in accordance with relevant laws and regulations and standards at home and abroad, such as the Company Act and Securities and Exchange Act of the Republic of China, ISO

standards, and the EICC Code of Conduct. Stakeholders can enquire important codes and regulations relating to corporate governance on the CSR site of our corporate website. These codes and regulations include: Ardentec Articles of Incorporation, Rules for Election of Directors and Supervisors, Rules of Procedure for Meetings of Shareholders, Procedure for Acquisition or Disposal of Assets, Procedure for Engaging in Derivatives Transaction, Procedure for Loaning of Funds to Others,

and Procedure for Making Endorsement/Guarantee for Others.

in every aspect of governance. We also took part in the 4th

of Publicly Listed/Trade Companies conducted by the Ardentec strives to do our best Taiwan Stock Exchange and Taiwan Exchange. The results published in May 2018 ranked

Corporate Governance Evaluation Ardentec among the top 5% of public companies in Taiwan represented recognition of our governance performance by a third-party assessment.

- Corporate Governance Best Practice Principles: http://web.ardentec.com/zh.php?m=127
- Ethical Corporate Management Best Practice Principles: http://web.ardentec.com/zh.php?m=128
- Corporate Social Responsibility Best Practice Principles: http://web.ardentec.com/zh.php?m=126

# 3.2 Board of Directors

The Board of Directors of Ardentec has 13 seats and 6 of the directors are corporate entities, which accounts for half of total directors, 4 seats are for independent directors which accounts for 1/3 of the board of director. 1 is female which accounts for 7.7%. All members are in the age over 50, all have rich professional background and technical experiences.

Upholding the principles of corporate governance, all board members, managerial personnel, and administrators do not hold shares of the companies of suppliers and other stakeholders, and no board member represents any financial holding company.

The Board of Directors of the Company exercises the powers of the Board of Directors in accordance with the Company Act, Regulations Governing Procedure for Board of Directors Meetings of Public Companies,

Articles of Association of the Company and Regulations Governing Procedure for Board of Directors Meetings. When the Board of Directors encounters an agenda involving the avoidance matter specified in the Regulations Governing Procedure for Board of Directors Meetings or Director's interests related to the Company's interests, the director must recuse himself/herself from discussion or voting, and may not act as another director's proxy to exercise voting rights.

In 2018, a total of five board meetings were convened to supervise the Company's management in economic, social, and environmental aspects, and assist the Company in strengthening internal controls and enhancing corporate governance.

The Rules Governing the **Evaluation of Board Performance** was also approved by the Board

of Directors in 2018 for evaluating the overall performance of the Board. Self-assessments were also conducted by each committee member and individual directors to strengthen Board function and operations.

According to the regulations of Directions for the Implementation of Continuing Education for Directors and Supervisors of TWSE Listed and GTSM Listed Companies, each year the members of the Board have been arranged to attend training sessions to improve their function.

The attendance and operation of the abovementioned Board of Directors and the content and hours of the Board Members' training sessions have been announced on the Taiwan Stock Exchange Market Observation Post System.

#### List of Ardentec Directors

Chairman Chih-Yuan Lu

Now: Chairman and CEO of Ardentec Director and President of Macronix International Co., Ltd. President of Vanguard International Semiconductor Corporation Deputy General Director of ERSO, ITRI Ph.D. in Physics, Columbia University, U.S.A.

Vice Chairman Chi-Ming Chang

Now: Vice Chairman and President of Ardentec Division Director of Vanguard International Semiconductor Corporation Deputy Division Director of ERSO, ITRI Ph.D. in Industrial Engineering, Texas Tech University, U.S.A.

Director Liang-Po Chen

Now: Director and President of GIGA Solution Tech. Co., Ltd. Deputy director of National Nano Device Laboratories Ph.D. in Electronic Engineering from National Cheng Kung University

Corporate Director Representative of Macronix International Yen-Hie Chao

Now: Vice President of Macronix International Co., Ltd. Department of Material Science and Engineering, National Tsing Hua

Corporate Director Representative of Kingwell Investment : Mickey

Ken

Now: Vice President of Product and Quality Assurance Center, Etron Technology, Inc.

Master of Electronics Engineering, National Chiao Tung University

**Corporate Director** Representative of Hong Ming Consulting : Ding-Hua

Now: Chairman of Hong Ming Consulting Co., Ltd. Professor and Department Head of Engineering, National Chiao Tung University

President of Han Ding Co., Ltd.

Ph.D. in Electrical engineering from University of Missouri

Corporate Director Representative of Chiu Chiang Investment : Jing Amy Chao

Now: Director and Chief Financial Officer of Te-Mao-Hsing Investment Vice President of General Administration, China Times Master in Economics, California State University, U.S.A.

Corporate Director Representative of Sheng Tang Investment : James Song

Now: Vice President of Etron Technology, Inc. Ltd. Executive Vice President of Semiconductor Manufacturing International. Ph.D. in EE, Texas Tech University, U.S.A.Institute of Technology, U.S.A.

Corporate Director Representative of VALUTEK INC Dahchieh Otto Cheng

Now: President of China General Plastics Corporation President of Taita Chemical Company, Ltd. Ph.D. in Chemistry, Michigan State University, U.S.A.

Independent Director Ta-Hsiung Chen

Now: Special consultant, Shanghai Baosteel Senior Consultant, Lianhua gas company General manager of Asia, Praxair, Inc. General manager, Praxair Chemax Semiconductor Materials Co. Ltd Ph.D. in Chemical Engineering, University of Houston

Independent Director Wei-Shan

Now: Professor of Chung Yuan Christian University Vice President of Chung Yuan Christian University Ph.D. in Financial Management, University of Oklahoma, U.S.A.

Independent Director Chen-I Chia

Now: President of Retail Banking Business Group, Bank SinoPac President of Retail Banking Business Group, Chien Hua Bank MBA, University of Wisconsin, U.S.A.

Independent Director Lai-Juh Chen

Now: Chairman of Ten Life Corporation EMBA of Thunderbird School of Global Management Ph.D. in Chemical Engineering from National Tsing Hua University

# 3.3 Executive Compensation Policy

A Compensation Committee are comparable to industry was composed of 4 independent Directors of Ardentec's Board of Directors. Its function includes establishing the policies and system related to the performance and salary remuneration of the Directors, Supervisors and Managers and regularly reviewing the salary remuneration of the Directors, Supervisors and Managers to achieve the goal of reasonable remuneration and retaining talents. A total of 4 meetings have been held in 2018, and proposals were formulated in accordance with the resolutions of the meetings and were submitted to the Board of Directors for review. Ardentec adopts a gender and age-neutral approach when remunerating its management officers. Employees' compensations are set to reflect individual and team performance as well as the future risks of the company, at levels that

peers. Compensations are also formulated in such a way that attracts, inspires and retains top

Compensation for directors and supervisors comprise travel allowances and remunerations. Travel allowance is paid based on their attendance at board meetings, while remuneration is determined based on current year earnings at proportions laid out in the Articles of Incorporation, and distributed once resolved during the meeting of shareholders. Managers are remunerated at levels comparable to competitors given their roles, while taking into consideration their responsibilities and contributions to the company's targets. Compensation for employees are determined based on current year earnings at percentages specified in the Articles of Incorporation, and are distributed once resolved by the meeting of shareholders.

Remunerations to directors, supervisors, and managers2 are subject to the Compensation Committee's review and Board of Directors' resolution, and are fully disclosed in the company's annual reports. When discussing remuneration proposals, related members of Board of Directors would disassociate themselves from discussions and voting that pose conflicts against their own

Based on the company's Articles of Incorporations, we respectively appropriate 12% and 3% of the profit of the current year as compensations for employees and remunerations to directors. However, when there are accumulated losses, they should have been covered. In 2017, the remuneration for directors and supervisors is NT\$53,722,842 and the compensation for employees is NT\$214,891,367.

Note1: Managers refer to those who are Senior Director or above and the Chief Finance Officer

Note2: Profit of the current year refers to the profit balance after deducting the compensations for employees and remunerations to directors and supervisors from the income before tax.

## 3.4 Ethical Guidelines

Ardentec's belief in being"A Testing Partner You Can Trust" is manifested in its technical service as well as its business activities and employees' conduct.

Ardentec has been insisting on the integrity management since it was founded. Ardentec promotes and advocates the moral behavior of integrity management to all employees. Any forms of corruption, extortion and misappropriation of public funds are strictly prohibited. We refuse to provide or accept any improper benefits, abide by fair trade, and do not participate in illegal market competition such as false advertisement. Ardentec also continues to sign customer CSR and business ethnic commitment to show Ardentec's recognition and support of the business

ethnical standards.

In 2018, all business personnel and managers graded department head and above had completed their "Conflict of Interest Reports." No corruption has occurred in 2018.

All employees are required to accept moral standards and anti-corruption training. As of December 31, 2018, all employees of Ardentec have completed the anti-corruption training.

#### Handling violations of ethical quidelines

A business ethics grievance hotline ((03) 597-6688 ext. 1211) and a grievance email (grievance@ardentec.com) have been established and also announced on the corporate website. Employee or external party may file a signed or

unsigned grievance or report on matters of violation to our code of business ethics. relevant laws and regulations, or organizational integrity,. After receiving a grievance or report, the HR Division will initiate an investigation and report to the management. If the grievance or report is confirmed, for employees violating such codes will be punished according to the "Employee Reward and Punishment Regulations", for suppliers violating such codes, we will cease all transactions with this supplier. If this also violates the law, the case will be referred to relevant authorities. Retaliation is strictly prohibited to whistleblower.

# 3.5 Internal Controls Controls

To ensure the efficiency of business operations, reliability of financial reports and compliance with applicable laws and regulations, Ardentec has designed, implemented and maintained its internal control systems in accordance with "Regulations Governing Establishment of Internal Control Systems by Public Companies"

promulgated by the Financial Supervisory Commission(FSC). Competent and appropriate auditors are allocated in the audit office under the Board of Directors. The audit office drafts an annual audit plan in accordance with regulations which should be approved by the board of director in order to carry out the audit for each item

and propose suggestions for improvement. All audit reports are subject to the Chairman's acknowledgment as well as independent directors' and supervisors' review, before they are reported during board meetings. By conducting audits, the Internal Audit Office is able to assist the board and the management with their internal 35 Corporate Governance

control and risk management. Ardentec and its subsidiaries judge the design and operating

Establishment of Internal Control Systems by Public Companies.

effectiveness of its internal Management Best Practice control system based on Principles" formulated by the criteria provided in the Ardentec prohibits unethical Regulations Governing the behavior. It also defines the

disciplinary and appeals process for any violations. All employees The "Ethical Corporate receive training on code of ethics and anti-corruption every year.

# 3.6 Risk management

Sound risk management, proper crisis management and constant attention to stakeholders' interests are the keys to ensuring business sustainability. The various risk management results are regularly reviewed by the general manager or management representatives, and the improvement plans are formulated to ensure the continuous improvement of the effectiveness of risk management.

# ISO22301 Certification







#### Risk Category

#### Risk Management Strategies

For business continuity and emphasis on the rights and interests of stakeholders, and in order to ensure that the overall operation is free of any risks that may cause interruption, ISO 22301 Business Continuity Management System (BCMS) International Standard verification was approved in 2016, covering the Kaiyuan factory, Dingxing factory, Baoging factory and Gaosheng factory.

The Business Continuity Policy and Business Continuity Management Handbook have been established. All employees must duly comply with business continuity related operation procedures and protect the Company in the event of operation disruption so as to safeguard key operational processes from the effects of major disasters, sabotage, or equipment failure.

The Supply Chain Risk Assessment Guidelines are established to prevent supply chain disruption and reduce the risk of operational resources disruption.

Ardentec has established the Business Continuity Management Committee, complies with the business continuity operation, and performs regular business impact analysis (BIA), risk assessments (RA), disaster drills, and surveys of stakeholder issues of concern. Every year, the Committee conducts internal audits and management review meeting on the Company's business continuity management system, during which the system is monitored, measured, analyzed, and evaluated to ensure the effectiveness of the Business Continuity Management System. All employees must perform annual business continuity management training.

To continuously strengthen the management ability of business continuity risks, all supervisors implement daily management tasks, observing internal and external changes. When latent risks are likely to pose an impact on the Company, they must comply with the response measures and plans of the business continuity management system to reduce the probability of business disruption.



Focusing our efforts solely on the semiconductor testing business, and not engaging in any high-leverage or high-risk investments. Ardentec and its subsidiaries all implement a stringent approach towards financial and financial market management; we also control our operations and profit risks at all times, and further coordinate in devising strategies to accommodate changes in the industry economy and ultimately deliver stable semiconductor testing business performance and earnings.

The company has a set of Environmental Measurement/ Hazard Identification and Risk Assessment Procedure in place to identify the existence characteristics and risk level of causes that may possibly result in staff injuries, illnesses, loss of property,



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damages to the work environment, or the combination of any of the aforesaid latent risks, for the reference of continuous improvement decision for safety and health policy, goals and management plan.

Establishing Emergency Response Plans according to the Emergency Response Control Procedure, which provide response measures for typhoons, earthquakes, and other natural disasters. Each factory area has its own emergency response team in place and holds regular emergency response drills and fire evacuation drills to develop employees' responsiveness to emergencies and raise their safety awareness which ultimately reduces the risk of accidents during disasters.

Ardentec headquarters as well as its subsidiaries in Singapore, Korea and Nanjing have completed ISO 45001 or OHSAS 18001 audits to effectively manage safetyrelated risks through an international management system.

Legal and Intellectual Property Right , Risks

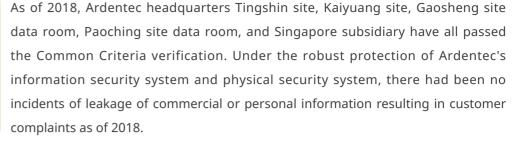
The Company has established PIP Management Specification to ensure the protection and proper use of intellectual property rights in the technology industry. Monitoring changes in local and foreign policies, social and economic laws and regulations that affect the operational situation, or patents that are relevant to the Company's operations at all times. As of 2017, there were no violations of laws and regulations.

The Corporate Social Responsibility Committee identifies the compliance of various business-related laws and regulations on a quarterly basis according to the Law and Regulation Identification Procedure. Necessary adjustments are made to the internal systems and business activities in response to changes in laws and regulations to ensure the legality and lawfulness of the Company's operations.

Information is the lifeblood of the technology industry and customers. In order to achieve strict protection of information security, documents related to information security, including the Information Security Manual, have been developed. All employees must follow the information security regulations and requirements and implement the protection of information security matters to ensure the safety of customers and Company's information and facilities. All employees must attend information security education every year.

All system development and maintenance, data access, backup mechanism, virus and network intrusion have rigorous protection measures. The computer room is equipped with an automatic fire extinguishing system, uninterruptable power system, and video surveillance measures.

The Information Security Committee has developed multiple information security protection mechanisms and conducts regular risk assessments. The Committee convenes a management review meeting every six months and continues to make improvements. The Company passed ISO 27001 standard verification in 2008.





There are human rights protection guidelines and specific types of fixed-term employment contract labor intermediary and management regulations to ensure that workers are under proper human rights protections. The Company also has a variety of reporting and complaint channels announced within the Company and on the official website. Any human rights related issues can be anonymously or onymously reported to ensure smooth channels for all human rights concerns to be promptly eliminated. Protective operation of the Human Resources Department to check the recruitment process of all labor recruited abroad; each year, the Human Resources Department audits domestic and foreign agencies to confirm that employees do not have any human rights risks in the recruitment process. As of 2018, there have been no violations of labor or human rights.



Establishing a business ethics risk management procedure to identify potential risks in business ethics. Business activities identified as high risk are subject to appropriate control mechanisms to reduce risk.

Each department conducts annual business ethical risk identification and assessment. According to the results of the 2018 annual assessment, the possibility of risk occurrence is extremely low, and the existing control measures can properly control risks, so there have been no violations of business ethics.

# 3.7 Major Investments

To extend the leading position of was 45,000,000 USD; Factory so it had no significant impact Taiwan's semiconductor supply chain, deepen cooperation with the end of 2017, pilot production international semiconductor vendors and expand the global market, the Company established Ardentec Nanjing Co., Ltd. as a wholly-owned subsidiary in Nanjing, Jiangsu Province, China. Total investment amount financing of financial institutions,

construction was completed at was started in 2018 and mass production commenced in May

The main sources of funds for the above two investments were the Company's own funds and

on the financial aspects of the Company; the above two investments will be the cornerstone of the Company's continuous growth in the future and are expected to keep creating greater benefits for shareholders





4.5 Greenhouse Gas Management

4.6 Water Resource Management

4.7 Waste Management

# 4.1 Environmental protection

Ardentec is committed to energy saving, carbon reduction, maintenance of ecological environment, implementation of"environmental sustainable development"policies and practice the concept of environmental sustainable development.

Regarding the purchase of each site or lease assessment, selection and business activity planning, our first consideration is to be away from the habitat and conservation areas with rich biodiversity. In addition, another

# Environmental sustainable development policy Devoted to environmental protection through legal and

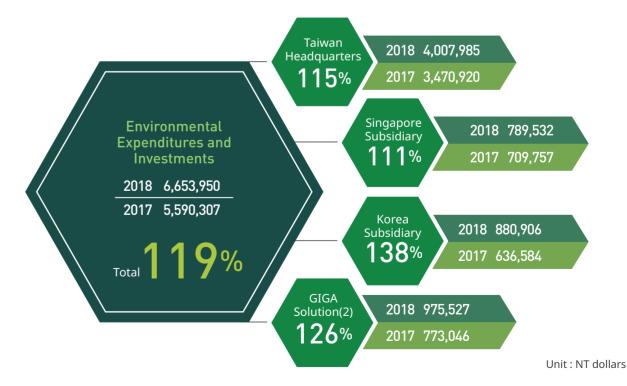
international standard compliance. Promote energy saving and emissions reduction and sustainable use of resources. Continuously improve environmental performance and develop a sustainable environment.

important selection factor is to be as close as possible to the clients to achieve low-carbon and energy saving transportation. the walking distance of the site We do our best to minimize to reduce the carbon emission the transportation mileage and energy consumption of daily

operation in order to reduce the impact on the environment. All dormitories are located within generated by vehicles.

# 4.2 Environmental protection expenses

Major expenses in environmental protection include professional waste removal, pollution prevention and environmental monitoring. Raw materials are not needed by the testing industry so materials consist of packaging.



2017 adjustment: Management system verification/validation expenses related to environmental protection not counted

Headquarters and Singapore subsidiary: Increase in 2018 production compared to 2017

Korean subsidiary: Production at the Korean subsidiary was expanded by 28% in 2018 so there was a corresponding increase in gloves and plastic film used during production that are classified as general domestic waste for disposal.

GIGA Solution: Fees for disposal of general industrial waste and sewage treatment are adjusted by the landlord each year and split on a proportional basis among tenants. The company therefore has no control over the cost.

The Nanjing subsidiary commenced mass production on May 1, 2018, and production capacity is being progressively expanded. Since production output has not yet stabilized it is not yet ready for energy-saving targets to be set. Data from 2018 is incomplete and there is no data for 2017 so this was not included.

# 4.3 Green Management System

warming, energy crisis and climate change, the requirement protection regulations will become stricter. The primary task of improving the impact of climate change is to reduce greenhouse gas emissions.

The main energy used by semiconductor testing is electricity. The gradual increase in energy and environmental protection costs caused by climate change is an inevitable trend.

#### Environmental Management System

Ardentec follows the government's relevant

With the exacerbation of global environmental protection regulations in its establishment of an integrated management of relevant environmental system, introducing environmental protection personnel, formulating, promoting, and maintaining environmental management systems and action plans. Ardentec reviews the overall operational processes to perform greenhouse gas inventory and reduction, water resources inventory management and waste reduction/recycling and other improvement measures, to reduce and manage greenhouse gas emission from the source. In addition, Ardentec is committed to energy-saving projects, minimizing environmental

consumption, optimizing cost management, and reducing the impact of global warming to enhance our competitiveness and achieve environmental sustainability goals.

The Ardentec headquarters, Singapore subsidiary, Korea subsidiary, and GIGA Solution Tech. Co., Ltd. have all been verified by the ISO14001 **Environmental Management** 

In 2018, there were no incidents of major leakage or pollution related fines, lawsuits or environmental damage costs incurred by Ardentec headquarters, its Singapore subsidiary, Korea subsidiary, or GIGA Solution subsidiary.



Headquarters

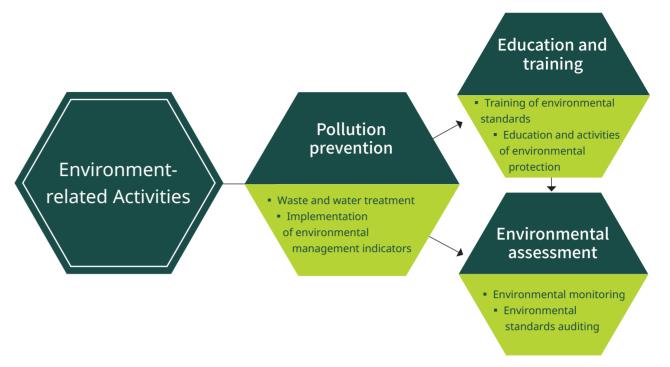
Singapore Subsidiary





Nanjing Subsidiary

Giga Solution Subsidiary



#### Environmental Management Goals and **Effectiveness**

Semiconductor testing is positively correlated to the consumption of energy and water resources, waste generation and the amount of test equipment used. Ardentec establishes specific energy-saving and wastesaving projects and goals and includes them in long-term improvement strategies. In that way it can achieve reduction and encourage external suppliers and contractors to achieve the goal of greenhouse gas reduction in the industry chain. In order to continuously improve the performance of environmental management, we calculate the annual energy consumption per unit by the number of turnedon test machines and set our environmental management goal

#### Management Effectiveness of Energy

		energy used KWH	Power saving KWH	Power saving rate
Taiwan Hea	adquarters	121,873,461	2,416,030	1.94%
	Singapore	9,842,036	115,341	1.16%
Subsidiary	Korea	6,768,540	368,050	5.16%
	GIGA Solution	21,666,702	235,060	1.07%
Total		160,150,739	3,134,481	1.92%

Power saving rate = Power saving / (energy used+ Power saving) The Naniing subsidiary commenced mass production on May 1, 2018, and production capacity is being progressively expanded. Since production output has not yet stabilized it is not yet ready for energy-saving targets to be set.

#### Management of Hazardous Substances

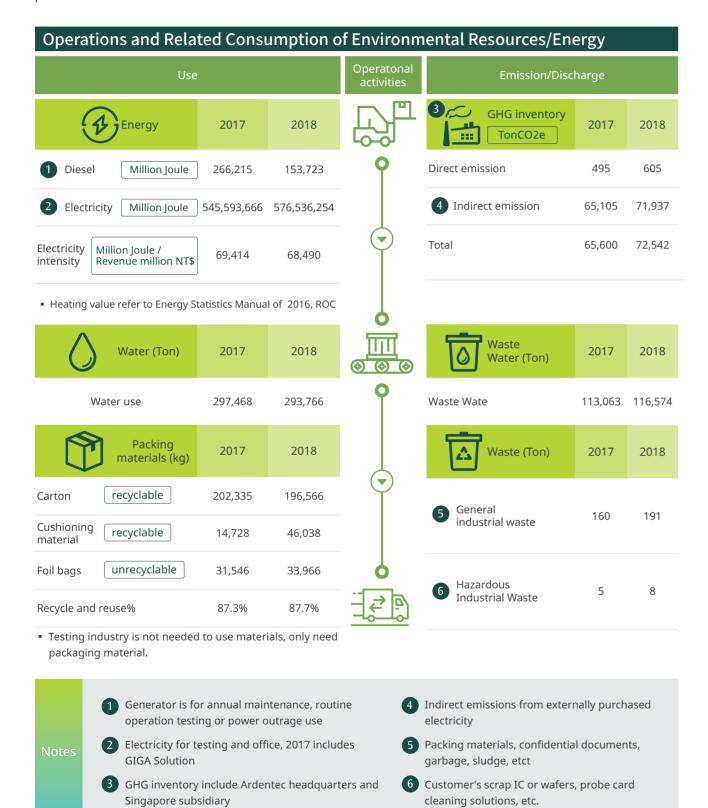
Ardentec has formulated a Non-Hazardous Substance Policy, regularly implementing internal audits to manage and review the Company's Non-Hazardous Substance Goal every six months. The four factories at the Taiwan headquarters have all incorporated the IECQ QC 080000 hazardous substance process management system and passed the verification. All of their

operational activities conform to international regulations such as the EU's Restriction of Hazardous Substances Directive (RoHS) and the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) regulations. Ardentec's services adhere to international laws and regulations and comply with customers' requirements for green products and management of hazardous substances.

43 Environmental Protection

# 4.4 Disclosure of environmental information

The main environmental resource consumed during Ardentec's business operation is the electricity for the testing machines that run 24 hours a day. This is followed by the water, electricity, oil, and refrigerant consumed, and the small amount of waste produced, during site operations, cooling, transportation and personnel activities.





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# 4.5 Greenhouse gas management

GHGs are categorized into three categories of emission, as shown in the table below.

Em	ssion Scope	Inventory item	Coverage	Source
			Emission of GHG while generating electricity, heat, steam, or during combustion of fossil fuel.	Diesel (gasoline) used in emergency generators
		Production process emissions, emergency	GHG emitted from transportations that the Company has control over.	Diesel (gasoline) used in trucks and company vehicles
I	Direct	and move emissions sources, including CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O, HFC <sub>s</sub> and PFC <sub>s</sub>	Fugitive emissions	Methane gas from the septic system, refrigerant used in the air-conditioning system, carbon dioxide used in fire extinguishers, and SF6 used by electric switches
			GHG emissions from biological, physical or chemical processes.	Chemical reactions
II	Indirect	From externally purchased electricity, including CO <sub>2</sub> ,CH <sub>4</sub> ,N <sub>2</sub> O	Emission of GHG from purchased supply of electricity, heat, steam, or outsourced combustion of fossil fuel.	Purchased electricity
III	Other indirect	Other emission not belonging to self-owned or self-controllable	Emission from other organizaton owned or controllable, such as emission from vendors	Vehicles used by contractors or for employees' commuting and travel, fuels used in outsourced employee cafeteria, outsourced wastewater treatment,outsourced waste disposal, etc.

The types of GHG have been classified given Ardentec's business characteristics; it does not represent that Ardentec is an emitter of all GHG types.

#### **GHG** inventory

Electricity and cargo transportation is the main type of energy used by Ardentec. An annual inventory of greenhouse gas (GHG) emissions is conducted by Headquarters, the Singapore and Korea subsidiaries as well as GIGA Solution for the period running from January 1 through December 31.

According to the inventory result, emissions of CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O were mostly indirect emissions from electricity for testing machines that run 24 hours a day. HFC<sub>s</sub> from air-conditioning refrigerants were the second largest group of GHGs emitted, followed by minor amount of PFCs (CF<sub>4</sub>) emitted when testing equipment is used.

2018 GHG Emissions								
		Scope I	Scope II	Total				
Taiwan I	Headquarters	596	67,518	68,114				
	Singapore	8	4,419	4,427				
Subsidiary	Korea	154	3,091	3,245				
	GIGA Solution	309	11,462	11,771				
	Total	1,067	86,490	87,557				
				Unit : Ton CO2e				

- 1. Scope I and Scope II emission include CO<sub>2</sub> \ CH<sub>4</sub> \ N<sub>2</sub>O \ HFC<sub>5</sub> \ PFCS<sub>5</sub> categories.
- 2. There is no SF<sub>6</sub> and NF<sub>3</sub> emission during the business operation. A small amount of R123, R22, HCFC-141b and HCFC-124 controlled by the Montreal Protocol was emitted in 2018.
- 3. Discharge Coefficient Refer to:
- HQ and Giga Solution: Bureau of Energy announced 2017 power Discharge coefficient of 0.554 KqCO<sub>2e</sub>/Kwt, GWP value adopted the coefficient of IPCC announced 4th evaluation report in 2017.
- Singapore subsidiary: Singapore Ministry of the Environment and Water Resources announced power Discharge coefficient of 0.4244 KgCO<sub>2e</sub>/Kwt
- Korea subsidiary: Korea Ministry of the Environment announced power Discharge coefficient of 0.4567 KgCO₂√Kwt
- 4. The statistic of greenhouse gas adapted by operation control.
- 5. Based on the ISO 14064-1 inventory standard; third-party inventory conducted by Headquarters and Singapore subsidiary; Internal inventory conducted at GIGA Solution and Korea subsidiary.

The results of GHG inventory provides insight into the influence and impact of the Company's business activities on the environment, and serve as a reference base for developing continual carbon reduction action plans and goals.







Headquater

**ASGP** 

#### Reduction of Greenhouse Gases (GHGs)

Although wafer testing is not a high electricity-consuming business in the semiconductor industry, we persistently search for every opportunity to save energy in our business activities, given that every little bit helps. We aggressive promote energy saving and electricity saving at every site. The CSR Committee assigns the Facility Department which manages all powered equipment and provides resources including water, electricity, and compression air to form a

cross-site energy saving team by integrating with the quality control circle (QCC) concept. With strategic and integrated management, we aim to optimize and minimize the energy consumption of infrastructures.

#### 2018 Energy **Conservation Projects**

Ardentec is striving to response to climate change by conserving energy. In 2018, the execution of 23 energy conservation projects reduced power consumption by 3,134,481 kWh and GHG emissions by 1,686 tons  $CO_2e$ .

	Energy conservation projects	Project description	Electricity savings (kWh) <sub>(1)</sub>	Electricity savings (MJ) <sub>(2)</sub>	CO <sub>2</sub> emissions reduction (Ton)	Electricit savings (NT\$)
		Replacement of clean room AC circulation fans with DC circulation fans	1,128,606	4,062,938	625	2,607,08
	Facility Update	Replacement of conventional lighting in public areas with LED lighting	542,447	1,952,789	301	1,253,05
		Replacement of old UPS with high-efficiency UPS	2,610	9,396	1	6,029
	Operational	Compressor operation optimization	319,028	1,148,488	177	736,955
	optimization	Vacuumizer operation optimization	32,616	117,416	18	75,343
		Energy-saving lighting in public areas and offices	31,121	112,034	17	71,888
		Energy-saving blowers in the clean room	134,226	483,209	74	310,063
		Adjustment to extraction fan operation	5,500	19,800	3	12,705
	Energy	Control of flow through secondary chilled water pump	155,100	558,354	86	358,281
	Conservation Settings	Replacement of ventilation fan thermostat to save energy	7,058	25,409	4	16,304
		Timer control of cafeteria F/C for energy conservation	3,889	14,001	2	8,984
		Addition of inverters to general ventilation blowers to save energy	24,240	87,262	13	55,993
		Optimization of oven ventilation to save energy	29,589	106,519	16	68,351
		Upgrade to 102 air purifier units used in chillers	52,969	190,686	23	162,830
Singapore subsidiary	Facility Update	Replacement of traditional lighting in the plant and offices with LED lighting	48,831	175,770	21	150,116
		Upgrading the water treatment system to save energy	13,541	48,747	6	41,626
		MAU upgrade to save energy	205,383	739,371	94	609,988
		Energy conservation for air dryer	49,549	178,374	23	147,161
Korean subsidiary	Operational optimization	Lowering the power-rating of AHU operations	58,963	212,264	27	175,120
		Improving the efficiency of the cooling tower	32,417	116,700	15	96,279
		Improving chiller efficiency	21,738	78,256	10	64,562
GIGA Solution	Facility Update	Replacement of traditional lighting with LED lighting	93,440	336,380	52	238,272
Tech. Co., Ltd.	Operational optimization	Increasing the PCW supply temperature	141,620	509,826	78	361,13°
	-	Гotal	3,134,481	11,283,989	1,686	7,628,11

- (1) The energy savings of various energy conservation projects are estimates
- (2) Referencing the 2016 Energy Statistics Handbook of Republic of China for heating value data

#### **Calculation basis**

		Handayaytaya	Subsidiary			
		Headquarters	GIGA Solution Singapo		Korea	
Conversion rat Announce				Ministry of the Environment and Water Resources  South Korean Minis Environment		
Power unit	kWh			kWh		
CO <sub>2</sub> emission	kgCO₂e	1kw•ho	ur x 0.554	1kw • hour x 0.4244	1kw • hou x 0.4567	
Price/k\	Wh	NT\$2.31	NT\$2.55	SGD 0.13748	KRW 108	

#### Simplification of lighting and air-conditioning

Partitioning and time interval control and management of air conditioning and lighting, for example: concentrating the night and holiday on-duty personnels' work areas to reduce the lighting and air conditioning energy consumption area; encouraging employees to turn off the area lighting and air conditioning when leaving the office in accordance with the control chart to conserve energy. Corridors with natural lighting have been equipped with light sensors so that lighting will be turned off automatically when there is sufficient light in the area; corridors people seldom visit have built-in infrared sensors. Only when people pass through the area will the lighting turn on. This minimizes unnecessary energy consumption.

#### Saving energy on Management Information System

Energy-saving measures are taken for all information management devices. When computers are not in use, screens are shut down, dimmed and set to go into sleep mode under preconfigured circumstances to reduce energy consumption and CO<sub>2</sub> emission.

#### Mitigating global warming"Meat-free Monday"

2018 is the 11th year of Meat-free Monday. Through a meat-free day a week, all employees have reduced the carbon footprint of food from their plates. With a reduction of 10% livestock products from the daily diet, we not only reduce the livestock's harm to the global warming but also give our employee a chance

to practice the healthy, lowcarbon and green lifestyle.

#### Forest protection : Use of unbleached recycled paper

In an attempt to preserve our forest, Ardentec has adopted the practice of using only "unbleached, reprocessed toilet paper and paper towel". By reusing our resources, we can reserve our forest as habitat for a great number of species, and in the meantime reduce the impact of garbage processing on the environment. Furthermore, without the bleaching process, there would be lesser pollution to the air and water. In 2018, we consumed a total of 80,000 recycled toilet rolls and 28,000 packs of paper towels, reducing GHG emissions at a total of 9.2 ton of CO<sub>2</sub>e.

# 4.6 Water Resource Management

Water Resources Consumption in 2017 and 2018

Korea

Subsidiary

26%

#### Use of water resources

The bulk of Ardentec's water usage was for air conditioner cooling in its 24-hour testing fabs. Other water usages include general and fire safety purposes. In 2018, Ardentece used 330,248 metric tons of water. in total.

#### Water conservation results

Even though it uses a relatively small amount of water, Ardentec

is committed to "reduce, recycle and reuse" water resources while continuously introducing new water-saving facilities and management practices. The air conditioning condensation water and the RO discharge from the manufacturing process have been reused as cooling water for the air conditioning, which maximizes the recycling and reuse rate of water resources, thereby reducing the depletion of water resources. The cost saved from water conservation will be transferred to environmental education related to water resources, to promote positive feedback loops in the green management system.

In 2018, a total of 19,758 metric tons of water were recycled from the Headquarters and Singapore subsidiary, and the amount recycled accounted for 6% of the water consumed.

Unit: metric tons



- The Korea subsidiary expanded its production by 28% in 2018 so there was an increase in the amount of water needed for production environment control.
- The water costs of GIGA Solution are adjusted annually by the landlord based on the number of tenants and is not controlled
- The Nanjing subsidiary commenced mass production from May 1, 2018, data from 2018 is incomplete and there is no data for 2017 so this was not included.

#### Water sources

Water sources are all approved by the government for business purposes, to there is no risk of impact on the environment or species.

Haadayartara	Sub	sidiary		
Headquarters	Singapore	Korea	Nanjing	GIGA Solution
Tou cian stream and Shimen Reservoir	Source of industrial water is reclaimed water treated by government-approved procedures; source of domestic water is rainwater and desalinated sea water	Jinwi River and Lake Paldang	yangtze river	Baoshan No. 2 Reservoir

# 4.7 Waste Management

#### Management principles

operating subsidiaries have closely controlled waste or that there is no environmental pollution, outflow to habitats, or impact to ecology or diversity of any species.

Ardentec's operation waste can be divided into general industrial waste and hazardous industrial waste. The waste has been centralized, stored, and managed to effectively control the output transported to be treated abroad.

Ardentec headquarters and all of waste sources. The waste has In 2018, Ardentec removed been classified as appropriate, and the waste that cannot be sewage treatment, ensuring recycled is entrusted to be 8 metric tons of hazardous treated by professional, qualified waste organizations according to the best treatment technology corresponding to the waste characteristics. The Company conducts non-periodical follow up to ensure that the waste is properly disposed of, and the hazardous industrial waste is not

a total of 200 metric tons of general industrial waste; About industrial waste from Ardentec headquarters and GIGA Solution; The Singapore subsidiary and the Korea subsidiary do not produce hazardous industrial waste. Headquarters set a waste recycling target of over 40% for 2018 and 46% was achieved in

#### **Waste Items and Treatment**

			2017					
Category	Туре		Sı	ubsidiary		Cause of waste	Treatment	
3 7	71	Headquarters	Singapore	Korea	GIGA Solution			
	Mixture of waste plastic	36	0	1	0	Packing materials		
General industrial waste	Mixture of waste paper	0	0	1	0	Shredded confidential documents	Incineration	
	Daily living waste	83	3	5	4	General garbage		
	Wood waste	27	0	0	0	pallet		
	Sludge	27	0	0	0	wastewater <sub>(1)</sub>	Physics treatment	
	Waste electronic components, offal products, defective product	1	0	0	1	Scrapped IC/ wafer <sub>(2)</sub>	Chemical treatment	
Hazardous industrial waste	Acid-base waste	3	0	0	0	Alkaline solution from probe card rinsing	Chemical treatment	
	Organic waste	0	0	0	0	Waste liquor of Laboratory	Incineration	

			2	018					
Category	Туре	Handauartara		Subsi	diary		Cause of waste	Treatment	
		Headquarters	Singapore	Korea	GIGA Solution	Nanjing			
	Mixture of waste plastic	37	1	1	0	2	Packing materials		
General	Mixture of waste paper	0	0	1	0	2	Shredded confidential documents	Incineration	
industrial waste	Daily living waste	79	2	10 (3)	4	5	General garbage		
	Woodwaste	23	0	0	0	0	pallet		
	Sludge	33	0	0	0	0	wastewater <sub>(1)</sub>	Physics treatment	
Hazardous	Waste electronic components, offal products, defective product	1	0	0	1	0	Scrapped IC/ wafer <sub>(2)</sub>	Chemical treatment	
industrial waste	Acid-base waste	5	0	0	0	0	Alkaline solution from probe card rinsing	Chemical treatment	
	Organic waste	1	0	0	0	0	Waste liquor of Laboratory	Incineration	

- (1) Sludge produced by the treatment of wastewater from the WLCSP process.
- (2) Requested by customer to scrap their product; not generated scrapped IC/wafer from Ardentec/GIGA Solution service
- (3) The Korea subsidiary expanded its production by 28% in 2018 so there was a corresponding increase in gloves and plastic film used during production that are classified as general domestic waste for disposal.
- (4) The Nanjing subsidiary commenced mass production from May 1, 2018, Data from 2018 is incomplete and there is no data for 2017 so this was not included.

#### **Waste Reduction Initiatives** Reuse and Reduction of Packaging Materials

upstream and downstream vendors to reduce waste by enhancing the recycling and reuse rates of their various packaging materials. Except for specific products of the For example, the special wafer customers that are not suitable pods are professionally cleaned

Ardentec rigorously encourages for packaging material reuse, Ardentec cooperates with customers to re-use packaging materials of shipments to Ardentec for Ardentec's future shipments back to the customers.

and re-used for shipments, and the cardboard boxes are reused; from July to December of 2018, a total of 17.03 metric tons of aluminum foil bags shipped by the customers were recycled by professional vendors to make reused plastic material resources.





Wafer cassettes





Including two or more reuses

#### **Resources Recycled and Reused**

			2017				
Waste	Item	Method of reuse		Subsidiary			
Resource	Item	Method of redse	Headquarters	Singapore	Korea	GIGA Solution	
Paper	Cartons and documents	Paper raw materials	39,995	161	600	59,260	
Cassette	Scrapped wafer cassettes	Plastic raw materials	5,734	74	0	0	
Plastic	Plastic bags, bubble wraps, and other plastic	Reused by the recycling agent	13,152	123	255	2,320	
Iron	Engineering waste, scrapped equipment	Recycling agent to extract other metals	16,463 (2)	118	405	1,631	
Others	Scrapped PC, monitors, lamps, batteries	Reused by the recycling agen	1,002	304	13	0	

Waste Resource	Item	Method of reuse	2018				
			Headquarters	Subsidiary			
				Singapore	Korea	GIGA Solution	Nanjing
Paper	Cartons and documents	Paper raw materials	48,430	152	1,167	46,755	1,620
Cassette	Scrapped wafer cassettes	Plastic raw materials	4,990	72	0	0	0
Plastic	Plastic bags, bubble wraps, and other plastic	Reused by the recycling agent	24,241 (1)	121	247	2,099	0
Iron	Engineering waste, scrapped equipment	Recycling agent to extract other metals	2,179	78	171	573	0
Others	Scrapped PC, monitors, lamps, batteries	Reused by the recycling agen	879	104	57	0	0

Unit : kg

- (1) In 2018,IC cassettes were recycled that were previously disposed of as general waste.
- (2) The replacement of factory UPS in 2017 led to a higher proportion of mixed metal waste.
- (3) The Nanjing subsidiary commenced mass production on from May 1, 2018, data from 2018 is incomplete.

#### Refuse to use of disposable dining utensils

Most of the disposable dining utensils are made from fossil materials that produce high amounts of carbon when incinerated. 75% of disposable chopsticks contain bleach, sulfur dioxide, hydrogen peroxide and a number of chemical substances that are harmful to our health. As Ardentec believes in the idea that "health comes to those who are friendly to the environment". It had saved nearly 336,000 meal's worth of disposable dining utensils in headquarters in 2018, and reduce the amount of carbon they emit and the level of pollution they could have done to the environment.

#### Waste or Polluted Water Discharge

The polluted water is mainly

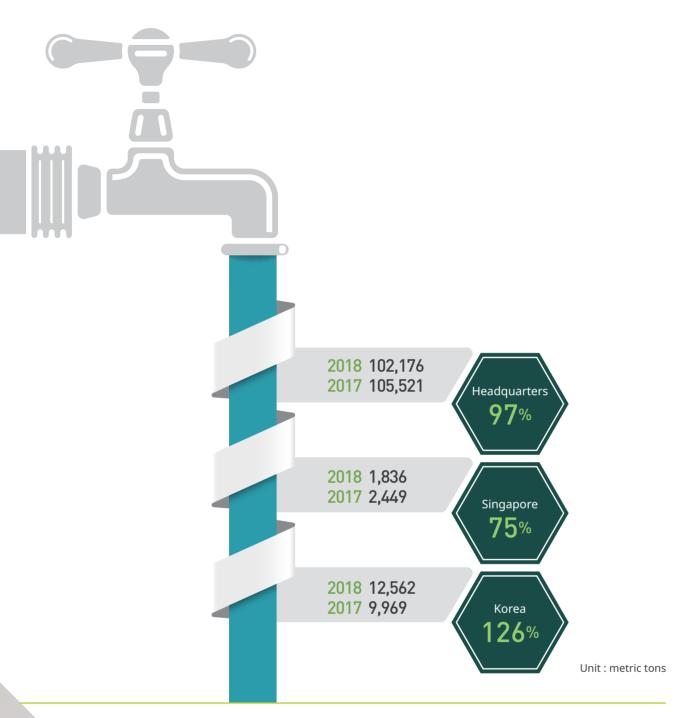
of the cooling water tank operated for the plant's airconditioning and general headquarters has monitoring facilities in place to manage and control the polluted water to be in compliance with the discharge standards of waste (sewage) water in the sewers of Hsinchu Industrial Park before discharging, ensuring that wastewater reaches the PH, COD and SS discharge standards of waste (sewage) water in the sewers of Hsinchu Industrial Park. This ensures that subsequent treatment of water quality reaches the standards for discharge into streams. As a result, the water discharge of Ardentec headquarters does not influence or impact the biodiversity or habitat in regions

areas of high biodiversity outside of protected areas.

GIGA Solution subsidiary is domestic water. The Ardentec located in the Hsinchu Science Park, and the polluted water is discharged according to the system of the Science Park Bureau. Regarding overseas businesses, wastewater is discharged through wastewater treatment plants after reaching the wastewater (sewage) treatment standard of the industrial park. Industrial wastewater at the Singapore subsidiary is discharged to the government's NEWater Plant, and domestic wastewater is discharged to the sea after being treated; Korea subsidiary discharges its wastewater to Hwanggujicheon River.

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### 2017 and 2018 Sewage Discharge



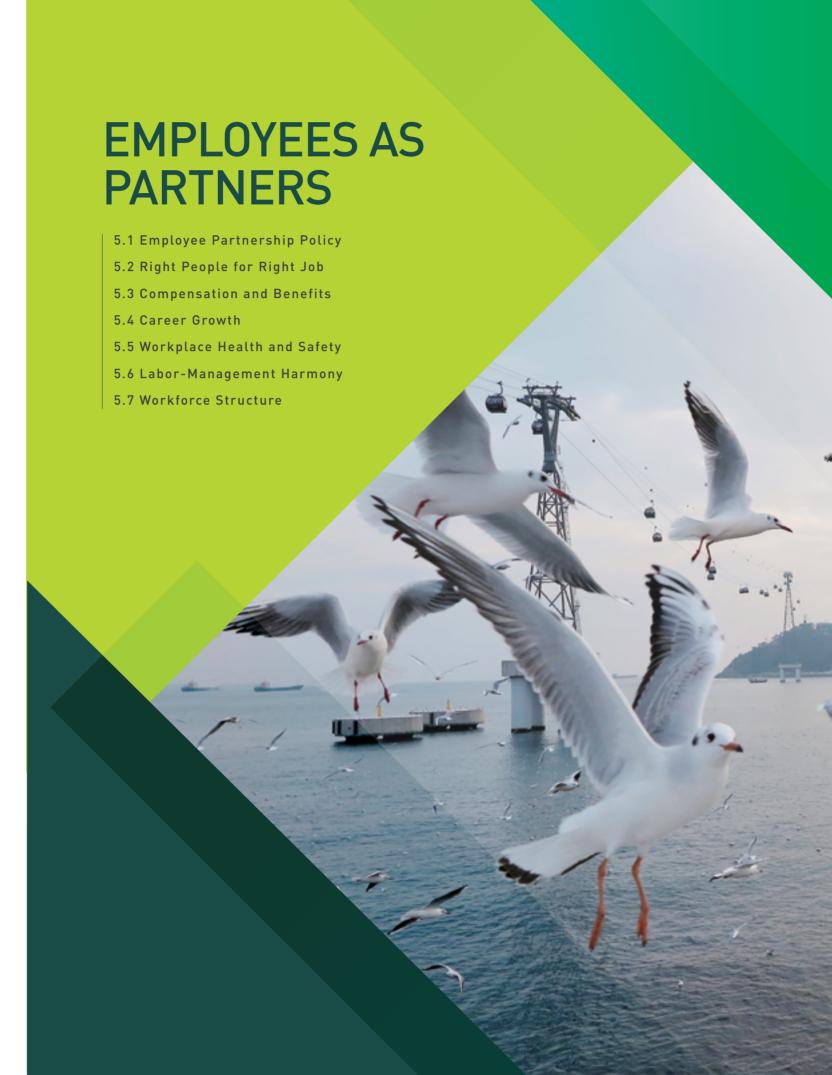
Water consumption by the Korean subsidiary in 2017 has now been corrected as 9,969 tons.

1.Singapore subsidiary made improvements to the proportion of effluent generated by the level of conductivity in reclaimed water in 2018, greatly reducing the amount of effluent compared to 2017.

2.Korea subsidiary expanded production by 28% in 2018 so there was a corresponding increase in the amount of effluent generated from temperature control of the production environment.

3.The amount of effluent produced by GIGA Solution is adjusted annually by the landlord and split among the building tenants so is not controlled by the company.

4.The Nanjing subsidiary commenced mass production from May 1, 2018, data from 2018 is incomplete and there is no data for 2017 so this was not included.



# 5.1 Employee Partnership Policy

By viewing employees as partners of the Company, Ardentec has developed an employee partnership policy that is centered on 4 core values: "Right People for the Right Job," "Reasonable Compensation and Benefits," "Career Development," and "Workplace Health and Safety." Through empathy and trust, we strive to grow with our partners. We hope that employees not only enjoy their work, but also the time they have with their families. Moreover, we long to



see Ardentec employees become the core of the Company's competitiveness in the global semiconductors industry, working alongside the Company for a brighter future.

# 5.2 Right People for Right Job

Ardentec evaluates the to the production workforce professional skills of job applicants with discreet standards and a systemic assessment process. Moreover, we look for hard-working professionals who have similar beliefs and are willing to grow with Ardentec.

Ardentec is committed to creating more opportunities to take care of more families. We comply with local employment regulations in every place we do business. We recruit employees under of the principles of equal opportunity and recruiting the right people for the right job. We give priority to hiring local talent. When it no longer responds sufficiently

requirements, Ardentec then files an application with the Ministry of Labor to hire foreign workers in manners compliant with laws, so that it can add to the workforce required for operational growth, grow its business, and create more jobs for the local population. Ardentec rigorously chooses recruitment agencies with excellent human rights protection records to cooperate in admitting foreign labor. Complying with the RBA CoC, for any foreign workers who have been admitted by Ardentec since 2016, all the expenses, plane tickets, and health check

fees required by the laws incurred during the interview process or the hiring and employment process after assuming the post must all be borne by Ardentec. The workers just need to carry their luggage and enjoy their jobs at Ardentec.

When hiring foreign workers, the Company does not discriminate against potential candidates based on race, skin color, age, gender, ethnicity or nationality, disability, pregnancy, religion, political affiliation, or marital status. During each overseas recruitment, Ardentec's human rights policy and nondiscrimination policy will be

announced to all candidates, and they will be given a small complaint channel card to provide the candidates with a channel

to lodge complaints about any violation of the Ardentec policies. New employees numbered 560 in 2018. There were no violations

of human rights or incidents of discrimination in the employment

#### **Hiring Process**



## Non-Retaliation channels for grievance or reporting Thank you for joining Andentec's interview If you have been treated or charged unfairly while applying ordentec jobs with the agent in Philippines, please email to We will have the designated person at your service. Don't worry about retaliation for using this channel to raise your points.

Small complaint channel card to provide the candidates with a channel to lodge complaints about any violation of the Ardentec policies.

# 5.3 Compensation and Benefits

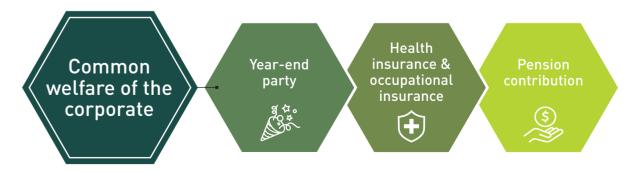
Ardentec employees' salaries are set at a highly competitive level within the given industry. Review of salary is in no way connected to employees' gender, and while doing so the Company ensures full compliance with labor regulations local to its places of business. Market salary level, industry pay level and the Company's operating performance are regularly assessed. Performance evaluation and salary adjustment are carried out in the first quarter of each year based on the contribution, performance and responsibilities

of previous year. Gender, race, religion or marriage status does not make a difference.

The new "Corporate Governance Roadmap (2018 - 2020) issued by the Financial Supervisory Commission included measures for improving the quality of disclosure on corporate governance information and increased emphasis on social responsibility. Statistics on 1,360 full-time employees in non-management positions were compiled by Ardentec Headquarters in accordance with the Salary Information for

Full-time Employees in Nonmanagement Positions reporting process. Average salary was found to be NT\$882,464.

The Articles of Incorporation states that employees are entitled to share the Company's earnings when the Company is profitable on governmental accountingbase. This system is consistent with Ardentec's view that employees are its closest business partners. The 2018 surplus of Taiwan Headquarters allocable to the employee is NT\$276,864,394.



#### Welfare of each site

#### Headquarters

- √ Comfortable dormitory
- ✓ Medical consultation by stationed physicians
- √ Wedding/funeral subsidies and festive gifts
- ✓ Profit sharing
- √ Group medical insurance, life insurance, and travel insurance
- √ Regular health exam
- √ Long-term service trophy and bonus
- √ Free night meal
- √ Lunch and dinner subsidies
- √ Production/ operation bonus
- √ Annual employee travel
- √ Multi-functional health center

#### Korea Subsidiary

- √ Comfortable dormitory
- √ Medical consultation by stationed physicians
- √ Wedding/funeral subsidies and festive gifts
- √ Regular health exam
- √ Free night meal
- √ Commute shuttle service
- √ Free 3 meals a day

#### **Nanjing Subsidiary**

- √ Comfortable dormitory
- ✓ Free night meal
- √ Lunch and dinner subsidies
- √ Commute shuttle service
- √ Housing Central Provident Fund

#### Singapore Subsidiary

- Medical consultation by stationed physicians
- √ Wedding/funeral subsidies and festive gifts
- √ Profit sharing
- √ Group medical insurance, life insurance, and travel insurance
- √ Long-term service trophy and bonus
- √ Commute shuttle service
- √ Production/ operation bonus
- √ Annual employee travel
- √ Zero MO birthday leave
- √ Welcome luncheon and weekly tea party
- √ Vacuum bottle
- √ Fitness class
- √ "Team spirit building" activity
- √ Annual Family Day
- / Dental allowances
- √ Vision allowances

#### **GIGA Solution Subsidiary**

- √ Comfortable dormitory
- Medical consultation by stationed physicians
- √ Wedding/funeral subsidies and festive gifts
- ✓ Group medical insurance, life insurance, and travel insurance
- ✓ Profit sharing
- √ Regular health exam
- √ Long-term service trophy and bonus
- √ Lunch and dinner subsidies
- √ Vision allowances

#### Pension compensation

The Headquarters and GIGA every month in accordance Solution subsidiary transfers the pension contribution Company hires actuaries to to the employees' personal bank accounts every month in accordance with the new order to ensure that monies retirement policy. Pension contribution following the old retirement contribution is also deposited to the specific accounts

with the law. Every year, the calculate the rate of employees' pension contributions, in provided to the defined benefit account held with Bank of Taiwan and amounts budgeted for pension contributions do

suffice to guarantee employees' lifestyles after retirement. A Pension Supervisory Committee comprising of employee and management representatives would review the pension account every quarter and discuss issues regarding employees' retirement. The Singapore subsidiary complies with local regulations by contributing to the governmentmanaged Central Provident Fund (CPF), whereas the Korea Site follows the "Pension Protection Act" and makes contributions to a "Defined Contribution" (DC: Defined Contribution Retirement

#### Gender Equality

Ardentec respects what employees have planned for their careers. It adopts an equal gender perspective and accepts applications for child care leave of absence. In 2018, there were 31 females and 4 males applied for child care leave of absence in 2018, a total of 34 females applied for maternity leave and a total of 42 males applied for paternity leave.

#### Community welfare

The welfare committee organizes employee trips on an annual basis so that employees and their families can explore the beauty of Taiwan and enhance their interaction and affection with

Pension) plan that the employer China. and the employees have agreed upon. Retirement benefits -The Nanjing subsidiary makes contributions to to pension insurance in accordance with the pension insurance regulations of

their family and friends.

The Company's health center is equipped with treadmills, static bicycles, ping pong tables, and pool tables, offering a broad range of training courses that differ every quarter, including aerobics, pilates, yoga, and belly dancing. The different choices of exercise activities are aimed at helping employees strengthen their physical fitness and relax their body and mind!

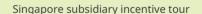
Clubs in Ardentec: soft pitch, mountain climbing, badminton, yoga, snooker, cycling, basketball, table tennis, belly dancing, photography, volunteering, water activities, and triathlon. Clubs occasionally organize events that can be fun and games or

The Headquarters and its subsidiaries made pension contributions totaling 3.5% of employees' salaries in 2018.

physically challenging.

GIGA Solution clubs include the AKGS Softball Club, GS Cafe, GS Tabletop Gaming Club, GS Billiard Club and 17 RUN Jogging Club. Social or physically challenging events are organized by the clubs at various times to enrich the lives of employees in their spare

The Singapore subsidiary has for 3 consecutive years invited the children of its employees to work at Ardentec for a day to show them what their parents do at work. It also encourages family members to identify with Ardentec.







Singapore subsidiary 「1 day staff of Ardentec」



Singapore subsidiary 「Family Day」

Soft pitch Basketbal Snooker Badminton Ardentec has  $\langle$  a number of clubs  $\rangle$ Water Sports Table tennis Photography including



The cycling club explores the beauty of Hsinchu's bike routes



GIGA Solution 2018K No limit Road running



Swimming across Sun Moon Lake event





GIGA Solution Softball club



Street basketball competition of Ardentec Headquarters Basketball Club



Ardentec Headquarters Badminton Club won 2nd place at the 2018 Manufacturers' Cup



Singapore subsidiary Fitness course

# 5.4 Career growth

Talent training is the key to sustainable business for any company. In Ardentec, nurturing Company's growth has become focuses. We have developed a multitude of training solutions that are centered on the Company's goals and employees'

career development. Through and employee discuss the the use of systematic learning roadmaps, we have built an talent in the direction of the environment where employees may learn and grow on the job. one of the critical management The performance evaluation in in order to assist the employee's the first quarter of each year involves training requirement and personal development plan (PDP) review. The supervisor

personal work and annual growth requirement required by the future target and create a customized training program career development and lifelong learning.

Ardentec offers five different types of training:

#### The Training System

Compulsory

training

New Employee Orientation

Company profiles, management regulations, company policies, employee rights, human rights and ethics and workrelated laws and regulations

Growth management

Helps employees Trains employees on develop the right skills and knowledge knowledge, attitude, that are needed for teamwork, and certain roles management skills

On-the-job training

Training that is mandatory and relevant to the employee's line of work; e.g. training of machine operations for technical staff

Compliance training

Helps employees

become aware of the

laws, policies, national and international standards that are relevant to their business activities, which eventually contributes toward business and environmental sustainability

Technical skill development is one of the major focuses in the Company's training. Employees who have been trained on Ardentec's testing procedures and system operations are given the responsibility to pass on their knowledge and bring new comers to the expected standard of professionalism.

Apart from the five main types of training, the Company has also organized seminars featuring a variety of issues to broaden the scope of employees' learning and to enrich their lives.

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Training at external or overseas institutions

Working at overseas subsidiary/parent companies for practical multinational experience

Quarterly managers' forums where managers may develop leadership skills by discussing trends of the industry, regulatory developments, upcoming international standards, business planning, and share practical experiences

Ardentec places special emphasis on the human rights and ethic training. As of 2018, accumulated total of 10,847 hours of "Human Rights and Ethics" and "CSR and RBACode Introduction" was provided, and it achieved 100% completion training rate.

Training of human rights policies and consideration has been provided to all security responsible for security control, to ensure that they comply with Ardentec's respect for human rights when performing their duties.

3

In 2018, Ardentec's headquarters and subsidiaries organized 85,127 hours of training in total. On average, every male employee had 36 hours of training. Every female employee had 38 hours of training. 100% of employees received training.





# 5.5 Workplace Health and Safety

#### Safety and health policy

Legal and regulatory compliance, Safe and health work environment, Continuously improving safety and health performance.

# Occupational safety and health management system

sites follow the regulations on occupational safety and health and the regulations of domestic and foreign management systems to promote various safety and health measures. The Ardentec headquarters and its Singapore and Korea subsidiaries have all passed OHSAS 18001 Occupational Safety and Health Management System verification. Health and safety risk

assessments are performed for each project to identify possible risks, with audits to timely control risks and achieve continuous improvement goals.

#### Occupational Safety and Health Management Committee

The labor representative of the OSH Management Committee is at a percentage higher than the statutory requirements. Labor representatives of the labor-management meeting are directly selected by employees and the percentage of labor representatives is higher than that required by the statutory requirements at Ardentec and each operating countries.and illuminance are complying with the regulatory requirements.



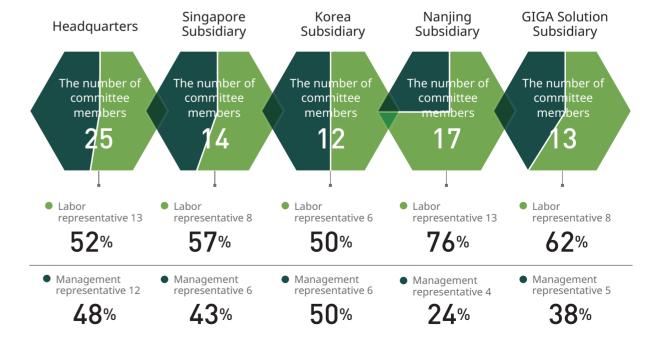
Headquarters

Singapore Subsidiary



Korea Subsidiary

Nanjing Subsidiary



65 Employees as Partners

#### Safe Workplace

Safety inspection must be carried out on a monthly basis; the head of each department shall perform work area inspection; occupational safety guards thoroughly inspect the Company, and deficiencies found must be pursued and improved upon to ensure the safety of the workplace. Factory safety inspection is conducted by Directors of the Fabs quarterly, and by the Vice Presidents every six months.

Working environment measurement is conducted on a biannual basis to ensure the intensity of CO2 in air, the exposure intensity of chemical, and illuminance are complying with the regulatory requirements.

#### Healthy Workplace Program

The four sites in Taiwan headquarters have received the Health Promotion Badge for Accredited Healthy Workplaces from the Health Promotion Administration of the Ministry of Health and Welfare since 2015. The badges are valid for 3 years. The programs of healthy workplace program include:

#### Safety and Health Education

Regularly perform employee safety and health training sessions. We also require employees to complete relevant safety and health training according to the nature of their job before they can commence with their work; employees using chemicals must complete general hazard education and training and perform their work only after fully understanding the chemical characteristics and hazards, the use of protective equipment, exposure prevention measures, and emergency response measures.

#### • Health Management and Risk Identification

Employee health checkups are conducted every two years to collect information such as employee age, work, and life schedule, and working conditions. The correlation between health risks and work are analyzed to identify high-risk employees for proactive health management. Resident physicians provide consultations for employees identified as being in the high-risk group while regular follow-ups and support are provided by nursing personnel to reduce the risk of serious illness among employees.

For employees with anomalies in the results of their health checks, individual health instruction and education by the resident physician is organized. Assistance with seeking medical treatment is provided if necessary.

Resident physicians and nursing personnel regularly visit each site to help treat/prevent general/ occupational diseases/injuries, offer health advice and provide first-aid.

#### Emergency Treatment

Set up enough full-time professional nurses. Employees who fall ill or are injured are given immediate treatment, assessment of the need for care or medical care, pre-medical care and contact and arrangement of medical institutions.

Excessive first-aid personnel are set up in each class of each factory, and the first-aid personnel uniforms are specially marked. When emergency needs arise, emergency resources can be immediately sought.

Automated External Defibrillators (AED) are provided in all factories. Every year, training sessions are conducted to maintain employee familiarity with operation of AED and emergency care in case of emergencies.

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#### Pandemic disease control

Ardentec has established epidemic prevention mechanisms and supplies to prevent the spread of contagious diseases and viral infections. The Company also regularly provides the latest international information on epidemics and health education.

#### Care for female and maternal employees

The company arranges regular female three-in-one cancer screenings, offers exclusive parking spaces for pregnant employees, and provides uniforms of a specific color for pregnant employees to serve as a reminder for others.

#### Health Promotion

Combined with lectures from mental health counselors, fitness centers, and clinics, multiple healthpromoting activities have been organized, including stress management and weight loss management.

#### Health and safety information disclosure

Every year we produce statistics on the disabling injury frequency rate and disabling injury severity rate defined by the Ministry of Labor and the lost day rate and absence rate defined by GRI; review employee occupational accident management and health management; and use relevant data as the reference for continual improvement.

In 2018 there were 18 cases of occupational injury with 14 due to commuting; 4 cases were occupational injuries in the workplace such as falling down the stair, accidental bumping of the head during equipment maintenance, fingers being caught under objects, and back injury while moving goods. All injuries were classified as minor. There have never been any fatal incidents of occupational injury at Ardentec.

Occupational Injury Statistics											
	Headquarters -			Subsidiary							
Items	пеацц	uarters	Sing	apore	Ko	rea	Nar	njing	GIGA S	Solution	Total
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	
No. of occupational injuries	9	6	0	0	0	0	2	0	0	1	18
Disabling injuries	1	1	0	0	0	0	2	0	0	0	4
Work days lost	3	2	0	0	0	0	7	0	0	0	12
Frequency of disabling injuries	0.68	0.66	0.00	0.00	0.00	0.00	21.66	0.00	0.00	0.00	0.88
Severity of disabling injuries	2.05	1.32	0.00	0.00	0.00	0.00	72.65	0.00	0.00	0.00	2.56

The frequency of disabling injuries and severity of disabling injuries defined by the Ministry of Labor is calculated as follows: Frequency rate of disabling injuries = number of disabling injuries / total work hours elapsed x 1,000,000 Severity rate of disabling injuries = total work days lost / total work hours elapsed x 1,000,000

- Given the condition of Ardentec's workplace and employees' work nature, there are no concerns of occupational illness
- Occupational injuries include commutation traffic accidents. The occupational injuries have never occurred in Singapore Site and Site Korea Site

#### **Absence Information**

Headquarter Item		uarters	Singapore		Korea		Nanjing		GIGA Solution		Total
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	
No. of absent days	459	1,201	377	402	34	26	54	23	461	713	3,750
Absence rate (%)	0.28	0.72	2.08	2.56	0.32	0.26	0.5	0.47	0.78	1.39	0.74

The number of days absent includes medical leaves, menstrual leaves, occupational injury leaves, and disease control leaves Absence rate (AR) = (total days absent during the reporting period / total working days in the reporting period) x 100%

## 5.6 Labor-Management Harmony

#### Employee communication

Ardentec employees have not established a union, in accordance with the Collective Agreement Act. However, to create a harmonious relationship among employees and employers, we followed the Regulations for Implementing Employee-Management Meetings to establish the Labor Management Meeting Committee as an alternative to the Collective Agreement Act. In addition, the Company has a number of labor management communication committees in place that thoroughly discuss and communicate about issues on a variety of issues, including labor safety window meetings, the Occupational Safety and Health Committee, and the Staff Welfare Committee. These committees comprise representatives from both the management and the employees; all employees' opinions and rights are protected by these functional committees. In an environment of open communications, Ardentec has been able to develop trust between the management and the employees; there has never been any employment-related dispute that has negatively affected employee relations or

resulted in losses.

In order to provide a more open means of communication, Ardentec has implemented a set of Employee Communication and Protection Guidelines that offers a diverse range of communication channels, from labormanagement meetings to online and physical opinion/grievance boxes. These encourage employees to raise suggestions or problems concerning their work and the environment to the decision making bodies.

In addition to the communication channels provided by the Company, Ardentec respects the freedom of employees to associate, and employees may join or organize clubs to enrich their lives according to their personal preferences.

#### Labor-management meetings

A total of 6 management representatives have been assigned, comprising the Vice President of Operation and directors. A total of 6 labor representatives have been selected from among employees below the rank of Site Director. If no foreign worker is elected as an employee representative, a foreign worker communication meeting will be held beforehand, and proposals made during the session will be submitted to the quarterly labor-management meeting for discussion.

Labor-management meetings are held on a quarterly basis, and on an interim basis when deemed necessary. Employees are able to raise suggestions regarding employment relations, employment terms and welfare, and speak freely during the meetings. During the labor management meetings, labor representatives can communicate with management and participate in labor-related decisionmaking. Employees are able to express their opinions while being protected under the labor

meeting agreements. All issues discussed are recorded on file to enable follow-up tracking and subsequent improvements.

Any changes to the Company's operations that require an adjustment to employees' jobs are notified to affected employees at least 30 days in advance. Meanwhile, all necessary assistance is given to employees to effect the new arrangement. For any employees out-stationed at overseas subsidiaries, Ardentec would provide the necessary subsidies and make arrangements to have employees' family members accompany them overseas.

#### Employee complaints

Employees may file complaints personally to their line managers or to human resource should they encounter any problems at work, including but not limited to physical or verbal violence, coercive conducts, sexual harassment or assault. Handlers of employee complaints are required to discuss and explore solutions in the shortest time possible. Employees may file complaints anonymously by sending e-mails using their personal e-mail addresses to grievance@ardentec.com, and by describing clearly the circumstances, details and

evidence involved. Where a complaint involves other employees, the investigator would be required to protect the basic rights of all those involved during investigation. All complaints, whether identified or anonymous, will be investigated with corrective measures implemented where appropriate. Line managers and the Human Resource Department have the responsibility to resolve employees' complaints, while in the meantime giving employees the rightful protections they deserve, including the right to confidentiality.

#### Suggestion box

Suggestion boxes have been made available online and at the cafeteria, which employees may use to express opinions on an identified or anonymous basis. Queries raised through the suggestion box are answered or looked into by the relevant functional units. Where improvements need to be made, the underlying issues will be followed upon until completion, while in the meantime good communication with the proposer is maintained. Anonymous opinions that do not involve any particular person are announced publicly once resolved. In 2018, we received 89 mails from the 69 Employees as Partners

#### Work-life balance

We admire employees who enjoy their work or are selfmotivated in learning, and we also care for employees' worklife balance. We ensure strict compliance with local regulations regarding employees' work hours. The Taiwan headquarters, for example, adheres to the terms of the Labor Standards Act by providing "at least one day's rest for any seven-day period" and "at least 30 minutes of break time for every four

consecutive work hours," while limiting work hours to "no more than 12 hours a day" and "no more than 46 overtime hours in a month." If there is a need to arrange overtime working, we would demand line managers to make overtime arrangements only with employees who are willing to participate. In order boxes of each site have been to ensure that employees' work hours are managed according to the above rules, the Company has implemented an electronic overtime application system that caters for all overtime scenarios. Overtime arrangements that do not comply with such rules will be automatically rejected by the system without exceptions. Ardentec has strict rules to ensure that it does not exceed its authorities when managing employees' work hours and rights. There were no incidents of forced labor or violation of employees' rights in 2018.

#### Respect for career plans

Employees who wish for a change

of role or to take on different career plans may do so by raising a transfer request, subject to department head's approval. Employees who wish to resign may do so freely by serving a required period of notice. Managers and human resource staff would stay in contact with employees who have left Ardentec, and invite them back to work at a proper time.

#### Respect for freedom

The Company fully respects the employee's rights to set up associations or participate in any legitimate organizations or union, and encourage the employees to exercise their civil rights. The Company also has full respect for the political orientation of individual employees and has communicated this belief with the suppliers for a mutual understanding. Neither the Company nor its suppliers was involved in any violation of freedom in the reporting year.



## Suggestion box

Physical suggestion boxes are placed at cafeterias of each site; result of investigation will be replied or announced to all employees by HR & Service Division

## 5.7 Workforce Structure

As of December 31, 2018, Ardentec had 2,307 employees worldwide with a gender distribution of 1.1:1 (male:female). Details of which are as follows:

#### Job Role/Gender Distribution

	Headquarters -		Subsidiary									
Job role			Singapore		Korea		Nanjing		GIGA Solution			
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female		
Manager (•)	111	26	17	6	12	1	12	0	48	18		
Engineering	465	144	44	17	19	5	25	14	206	20		
Administrative	47	61	5	8	2	3	2	8	7	35		
Technical	134	478	11	37	10	32	16	9	20	172		

section head or higher management HQ: includes 1 part-time consultants (male) and 12 interns (male 5, felmale 71)

#### **Academic Distribution**

Education	Headquarters -		Subsidiary									
background			Singapore		Korea		Nanjing		GIGA Solution			
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female		
High school and below	82	191	4	6	13	27	8	6	28	55		
College/university	537	455	31	14	29	12	40	23	189	178		
Postgraduate and above	138	63	42	48	1	2	7	2	64	12		

#### **Nationality Distribution**

	Headquarters –		Subsidiary									
Nationality			Singapore		Korea		Nar	njing	GIGA Solution			
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female		
Domestic	695	477	29	9	41	38	38	26	280	157		
Foreign	62	232	48	59	2	3	17	5	1	88		

#### Age Distribution

	Headquarters -		Subsidiary								
Age	Heauq	luarters	Singa	apore	Ko	rea	Nar	njing	GIGA S	Solution	%
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	
<30	183	192	15	24	7	29	36	23	68	53	27%
30~50	534	478	55	44	34	12	15	8	201	188	68%
>50	40	39	7	0	2	0	4	0	12	4	5%

## **6.1 Customer Service**

Ardentec focuses on the development of wafer and final testing technologies as well as production. A comprehensive developed to provide customers with high-quality and timely testing services. The information system also protects confidential

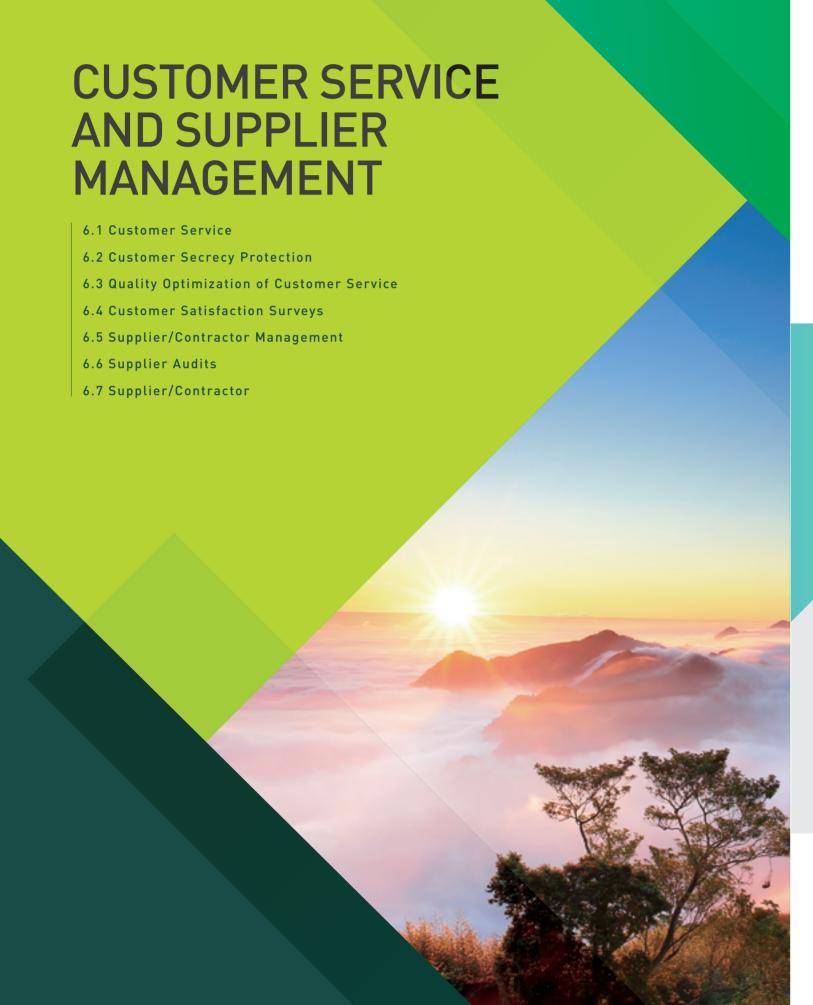
succeed in the global market. The strategy benefits both Ardentec and our customers.

developed by Ardentec with transparent, real-time information on production and testing. The system can also be customized to satisfy the customer data to help them product testing requirements

of each customer. Weekly project meetings strengthen the function and service efficiency improvements to rapid mass 
The TPAS information system of trans-department customer project teams. Integrated service information system has been can provide customers systems and communication channels are provided for sales, production management, quality assurance, test development, product engineering, product manufacture and other areas.

## Customer Service Flow





## **6.2 Customer Secrecy Protection**

At Ardentec, we value customer Site IDC, and Singapore Site secrecy protection and sign the non-disclosure agreement (NDA) with every customer. Our service teams uphold the NDA principle throughout the service for customer to ensure the secrecy of customer products. To raise the level of information security, we passed third-party ISO27001 certification. In addition, the Kaoyuan Site, Tingshin Site, Gaosheng Site IDC, and Paoching

have passed Common Criteria certification for site to build the most robust and solid protection wall for customer secrecy.

To closely control technical documents and customer data, the Document Control Center (DCC) is a dedicated department for managing customer documents and assigning access privileges according to the level of classification to ensure

no document can be accessed download without corresponding privilege to eliminate improper use of customer confidential information. We also include customer complaints about privacy infringement or information leakage in the management review. In 2018, no violation of customer secrecy incidents were found.

## 6.3 Quality Optimization of Customer Service

Weekly project meetings are conducted with the customer by Ardentec. Quarter Business Reviews (QBRs) are also conducted with key customers on business, engineering technology and quality optimization to collect customer opinions and requirements. Internal meetings are regularly held to review and propose improvement plans. Progress is then reported at the next business, engineering technology and quality

optimization meeting. To improve customer satisfaction, Ardentec executives and sales managers regularly visit customers to stay abreast of market changes and customer requirements.

Ardentec is continuing to upgrade the functionality and efficiency of our proprietary TPAS system to provide customized virtual factory information. Data links can be set up based on individual customer requirements to provide the latest information

on production process and utilization of production capacity. This virtual factory model allows the customer to keep track of production progress and delivery time at all times. Information provided by the production automation system covers anything before mass production to WIP/EDAS testing; production progress and test results are generated real-time to facilitate communication with customers.

Notes: WIP - Work In Process EDAS - Engineering Data Analysis System

## 6.4 Customer Satisfaction Survey

conducted by Ardentec every

The Customer Satisfaction Survey year looks at sales services, engineering support, on-

time delivery rate, hazardous substance free controls, quality management and system services. The survey results provide a critical reference for future improvements to customer satisfaction. Having better knowledge of customer requirements allows Ardentec to make continuous improvements and upgrades to testing quality, engineering technology and service efficiency that translate into a win-win partnership.

Ardentec believes that customer satisfaction with delivered quality and services is the only way to improve customer satisfaction, strengthen relations with existing customers, and attract new customers. Only then can the profitability of the company be maintained. Results gathered from customer satisfaction surveys are consolidated then reviewed by the Vice President of Sales personally. Employees of relevant departments would be instructed to conduct reviews and make improvements to address customers' suggestions, and therefore contribute towards total satisfaction.

Ardentec achieved a 97% customer satisfaction in 2018, which was higher than the 85% target the Company had imposed upon itself.

• Satisfaction rate (the percentage of customers' requirements met) = Ardentec's performance/customer's requirements.

## 6.5 Supplier/Contractor Management

#### Suppliers' Human Rights

Ardentec invests mainly in equipment and software. The main suppliers of Ardentec are from the US and Japan. Both are developed countries with complete and well protected human rights laws and regulations. Therefore, the Company does not need to include human rights laws and regulations as a term when screening for suppliers. Except for the procurement of equipment, Ardentec's other procurements required for business operations are made locally. Ardentec did not incorporate new significant suppliers in 2018.

#### Supplier/Contractor Management

Due to the fact that suppliers the Taiwan headquarters and and contractors are key business partners of Ardentec, the Company has implemented a business model that ensures sustainable growth of the common business. Except that the semiconductor testing equipment must rely on the manufacturing country or if clients designate their suppliers, Ardentec maximizes the use of local suppliers so that the best efficiency of various resource services can be achieved while supporting the local job and economic stability. Except in countries that do not produce testing equipment and in situations where the customer has demanded specific suppliers,

its subsidiaries would and have purchased 100% of its supplies from local sources.

In addition, we scrutinize every supplier and contractor to make sure that they have been legally registered and that their activities comply with local regulations and human rights principles.

In addition to making CSR commitments to customers, Ardentec also requires its major suppliers and contractors to do the same, by complying with Ardentec's "Supplier CSR and Business Ethics Guidelines." Doing so would ensure CSR compliance throughout the entire supply chain.

75 Customer Service and Supplier Management



### Supplier CSR and Business Ethics Guidelines

#### To the suppliers of Ardentec:

We appreciate your long-time support to Ardentec's businesses. Ardentec has long-dedicated in maintaining business reputation in a world of rising awareness towards corporate social responsibilities (CSR). As workers' rights, health and safety, and the company's working environment, management and ethics become an increasing part of our image, you - being one of our key suppliers - play a critical role in Ardentec's pursuit for CSR.

To give you an idea of what Ardentec and its key suppliers must do to meet customers' expectations, we have created a set of "Supplier CSR and Business Ethics Guidelines" and would like you - a key supplier of Ardentec - to comply accordingly.

Should you encounter any situation that contradicts the "Supplier CSR and Business Ethics Guidelines" while dealing with Ardentec, please report such incidents to Ardentec's HR & Service Division. We will maintain confidentiality for all suppliers and employees who report inappropriate conducts. Contact method is as follows:

Tel: +886-3-597-6688	Extension 1206	; Project Senior Director	Rhiannon	Chen
E-mail: rhiannon.cher	@ardentec.com	; grievance@ardentec.co	om	

Ardentec	
Resource Division	



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### Supplier CSR and Business Ethics Guidelines

- 1. All Ardentec's suppliers must operate and employ based on standards that are equivalent to or more stringent than those set forth by the Responsible Business Alliance (RBA) and those of the Labor Standards Act of the Republic of China. This includes but is not limited to: Refraining from the use of slave, child or illegal labor or forcing employees to work under inhumane conditions and in the meantime ensuring that employees' work hours and remuneration do comply with laws. Respecting employees' freedom of association and apply no restraints on their communication. Avoiding discrimination of employees based on race, skin color, age, gender, sexual orientation, ethnicity, disability, pregnancy, religion, political affiliation, union membership or marital status.
- 2. Providing employees with a safe and healthy work environment that complies with the relevant health and safety regulations.
- 3. Complying with environmental protection laws.
- f 4. Avoiding gifts to Ardentec employees or their relatives in the form of gifts, tours, discounts, loans, commissions, kick-backs, complimentary services or remunerations of any kind.
- **5.** Conducting business in the utmost good faith, and refrain from making fictitious quotations or forging transaction data.
- 6. Refraining from the use of bribery, corruption, extortion, monopoly, conspired price-fixing or any inappropriate methods to compete, negotiate or deliver business deals.
- 7. Refraining from making non-business purchases with business entities established by Ardentec employees or their relatives.
- 8. Refraining from hiring Ardentec employees or their relatives as consultants within the supplier.
- 9. Not asking Ardentec employees to lobby within Ardentec.

## 6.6 Supplier Audits

Apart from demanding all aspects. compliance with Supplier CSR and In 2018, the Company Business Ethics Guidelines, the Company also conducts annual major suppliers on a number field audits on major suppliers of aspects such as human (Note) according to the Supplier Management Policy, to determine whether they have fulfilled CSR in All audited suppliers were found

completed its field audit for all rights, employment condition, environment, health, and safety.

to have complied with the Labor Standards Act; no use of child labor or forced labor was found, and they all respected employees' freedom of association to the Company's expectation.

• Note: Refers to suppliers from which the Company makes 10 purchases or more in a quarter.

## 6.7 Suppliers/Contractors' Workplace Safety

Contractor Safety and Health Environmental Protection ◆ Informing suppliers and Regulation to confirm that contractors of the expectations the service content meets the requirements of safety, health social responsibility and business and environmental protection. ethics for suppliers Before operating, the employee In 2018, the headquarters, must accept "orientation training for contractors", including:

commencing work to ensure sessions of Contractor Pre-

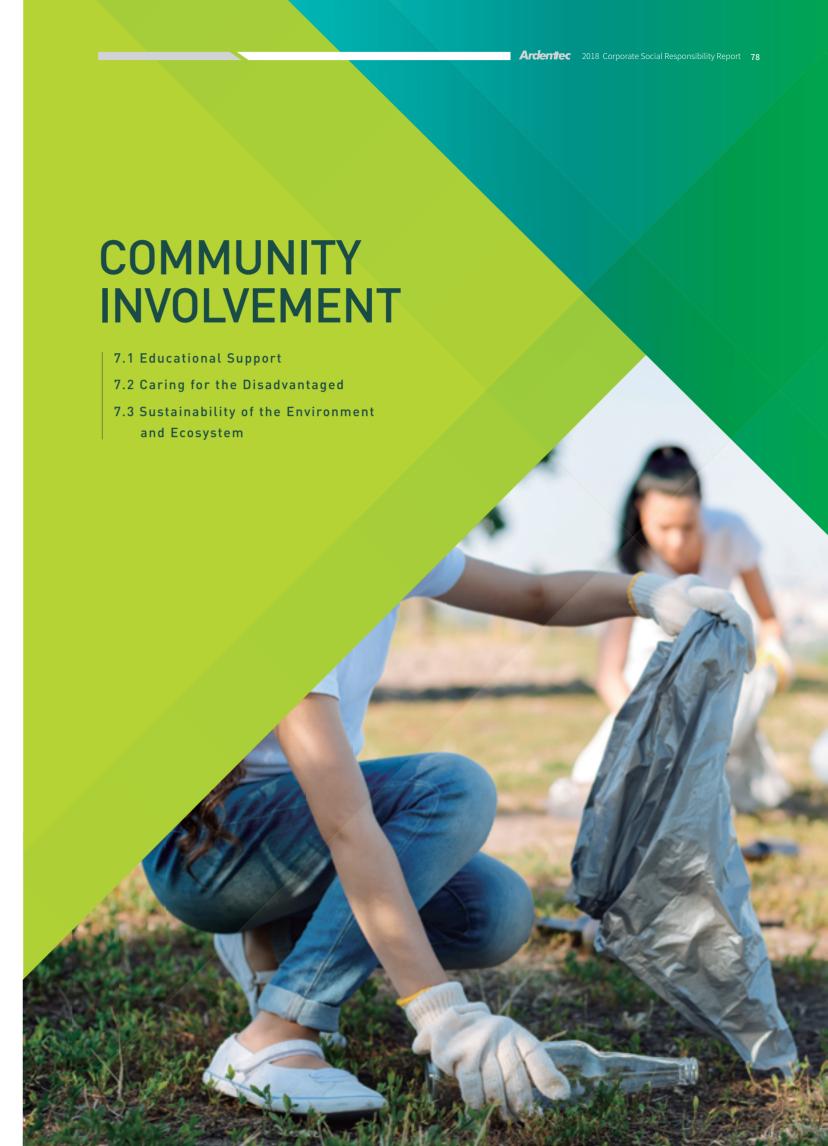
health of contractors

and requirements in corporate

Singapore Subsidiary, Korea Subsidiary and GIGA Solution

The contractors must sign the the protection of the safety and Service Education and Training, attended by 2,560 participants, representing 229 suppliers.

Before entering the site, the employer of the contractor must hold an engineering meeting with contractors to explicitly inform them of the working environment where the contracted job will take place, the risk factors, ◆ Notification of hazards before have held a total of 259 and relevant risk prevention



Ardentec's Taiwan headquarters joins together with the subsidiaries in showing our care for our communities, both at home and around the world, with real actions. We gradually expand the scope of our care and the communities involved. In addition to the feelings we hold toward the industrial parks where we are located, our neighborhoods, non-profit organizations, and local government agencies, we also owe them a responsibility. As a result, we take the initiative to take part in activities that will help us to grow with the local communities and make better cities to live in.

## 7.1 Educational support

#### Good second-hand book sharing; educational travel in remote areas

In 2018, we launched the 5th year of sharing good books with children in distant neighborhoods. We collected and donated 853 second-hand books to the Hengshan and Jianshih former centers.

#### Supporting traditional arts: Lion Dance Troupe of Zhongzheng Junior High School

At Zhongzheng Junior High School, Hsinchu Industrial Park, there is a group of children tirelessly dedicated to learning traditions of Chinese culture—the lion dance and drumming. Since 2015, Ardentec has continued to donate funds to support the passing on of diminishing traditional arts!

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#### Have a bright future — blessings to the graduates

We offered 35 Ardentec Award to encourage the graduates from Zhongzheng Junior High School, Sh Huaxing, and Chunghsing Elementary Schools in Hsinchu Industrial Park to study hard and have a bright future!





Bestowing the Ardentec Award at the graduation ceremonies of Huaxing, Chunghsing Elementary School

#### Providing a Better Learning Environment for Mountain Elementary Schools

Ardentec began donating books, dictionaries, recorder band equipment and costumes to Jianshi Elementary School in 2015. In 2018, Ardentec also

helped the school with upgrading the protective padding around school buildings to create a safer environment for children's activities. We strive to provide a better learning environment for children at elementary schools on the mountain.

#### After-school tutorials for students

Immigrants or low-income families with foreign spouses living near Hsinchu Industrial Park are generally unable to afford their children's education due to language barriers, cultural difference, or the need to support the family. Sitting next to Ardentec in Hsinchu is a village called Fengshan Village headed by Chief Wu who organizes free after-school tutorials and free meals for children of economically-disadvantaged families; he tutors them after school, protects them, and cares

for them, reducing the learning gap in children of Taiwan. Ardentec stands by Chief Wu's good thoughts. Since 2013, we have continued to donate children's books, school supplies, and food for after-school tutorials.



#### Industry-academia linkage

Since 2012, Ardentec has been Science and Technology with providing undergraduates the chance to experience working in an industry so that they can apply knowledge in practice and make seamless transitions into their careers. In the 2018 academic year, Ardentec provided 25 students from Feng Chia University, Yuan Ze University, Fu Jen Catholic University, National Quemoy University, and Minghsin University of

internship opportunities. Since 2012, a total of 141 students from 9 universities have been offered internships and academia cooperation in Ardentec. In addition, one student has received support Germany. We invited our interns to join Ardentec straight after graduation to accumulate their professional values in depth and

breadth. To provide students with an introduction to the actual semiconductor production line and working conditions, 101 students and teachers from the Department of Information Management at Minghsin University and the Applied in a cross-school internship in Technology Class from Yimin Junior High School were given a tour of the production line in

## 7.2 Caring for the Disadvantaged

#### Build a Career Stage for the Disadvantaged Minority

Ardentec has actively hired people with physical disabilities who make a living on their own. Depending on the categories of their disability, these people are given a stage on which they can apply their skills, learn to rely on themselves, and build their confidence. For many years, Ardentec has hired more people with disabilities than the amount required by the People with Disabilities Rights Protection Act. In 2018, the employment of people with disabilities was 121% of that required by law.

#### Saving Children from Hunger - Charity Meals for the Summer Break

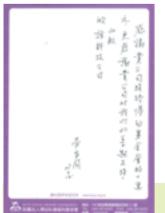
In 2018, 77 employees at GIGA Solution answered the call from the "Saving Children from Hunger - Charity Meals for the Summer Break Fund-Raiser" by donating NT\$134,300. Their generosity was recognized with a certificate of appreciation from World Peace Association.





#### **Diverse and Friendly Society**

Ardentec began making financial and material donations to professional social welfare institutions in 2012 so that disabled or disadvantaged people can receive better care or support. More than NT\$4 million has been donated to 14 charitable institutions as of 2018. Ardentec's longstanding support for local charities such as Boyo Social Welfare Foundation, Genesis Social Welfare Foundation, St. Joseph Social Welfare Foundation, Catholic Hua-Kuang Social Welfare Foundation and Maria Social Welfare Foundation help to foster a more friendly society.









The founder of the Boyo Social Welfare Foundation, Richard Chia-Tung Lee, wrote a note to thank Ardentec for its support.

#### **Anti-Cancer Charity** Projec

The generous donations made by employees at the Singapore subsidiary towards the projects and services of the Singapore Cancer Charity help to fight cancer and save lives!



#### **Charity Run**

1919 Go for Love - Raising funds for "troubled families

Ardentec's cycling club has been recruiting club members for the annual "1919 Go for Love" cycling event to raise donations for "troubled families" since 2012. This year marked the 7th time that Ardentec has taken part.

In 2018, employees Singapore subsidiary took part in the charity run organized by The Strait Times in Singapore for the second time to raise funds for disadvantaged groups.



Employees from Headquarters taking part in the "1919 Love Goes Around" cycling event to raise donations for "families in distress

Singapore employees in The Strait Times charity run.



#### Warm companionship; Having fun together

Every month, members of the Ardentec volunteer club go to the St. Joseph Home to accompany the elderly in singing, exercising, dancing, and join activities to adapt to the community, etc. They provide haircuts for the elderly and interact with them to create a lively atmosphere for the aged elders.





#### Saving lives with blood donation

Every year, employees of Ardentec headquarters and the Singapore subsidiary passionately donate blood to save lives and maintain the health of strangers.







## 7.3 Sustainability of the Environment and Ecosystem

Guarding the Ocean and Loving the Earth beach cleanups at home and abroad Loving the Earth beach cleanup campaig

#### **International Coastal Cleanup**

Ardentec hosted its 6th "Protect garbage occupying the coastline the Oceans and Love the Earth" employees and their families from education initiative. The General Day.

for sorting and counting. Data coastal cleanup event in 2018. on collected garbage was sent the beauty of the sea and sustain Around 400 people including through the organizers to The Ocean Conservancy, the US-based Headquarters and GIGA Solution organizer of the International took part in this environmental Coastal Cleanup (ICC), to be compiled into an annual; report Manager of Singapore subsidiary on global maritime waste and to do everything they can to led employees and their families make a contribution to global in volunteering for the local environmental protection. A International Coastal Cleanup total of 462 kg of garbage was nurtures so much life. removed in 2018.

The coastal clean-up removed Their passion for the environment

sees Ardentec employees and their families work hard to restore marine life!

Through actual participation, everyone could learn how to improve their daily habits as well as sort and recycle waste in order protect our magnificent oceans and the natural ecology that







#### Ardentec's Paddy - Respect Ecology

Ardentec Headquarters employees participated in the Changhua Ecology Wetland Rehabilitation Project by working together to manage Ardentec's Paddy. Only the most natural farming methods that eschew the use of pesticides, herbicides and chemical fertilizers are employed so that a naturally diverse and balanced ecosystem can be formed by the plants and animals living on the land.



## Community Service - Helping to Keep the Environment Clean

Employees from the Korea subsidiary clean up nearby streets every quarter as a service to the local community and environment.



# **ANNEXES** Annex 1 Independent Assurance Opinion Statement Annex 2 GRI Standards Reference Tabl Annex 3 ISO26000 Reference Table Annex 4 Corporate Social Responsibility Best Practice Principles for TWSE/GTSM Listed Companies Reference Tabl Annex 5 The UN Global Compact Reference Table Annex 6 Corporate Social Responsibility Best Practice Principles for TWSE/GTSM Listed Companies Reference Table

#### Annex 1 Independent Assurance Opinion Statement

#### INDEPENDENT ASSURANCE OPINION STATEMENT

Ardentec Corporation 2018 Corporate Social Responsibility Report

The British Standards Institution is independent to Ardentec Corporation (hereafter referred to as Ardentec in this statement) and has no financial interest in the operation of Ardentec other than for the assessment and assurance

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

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

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

#### Scope

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

- 1. The assurance scope is consistent with the description of Ardentec Corporation 2018 Corporate Social Responsibility Report.
- 2. The evaluation of the nature and extent of the Ardentec's adherence to all AA1000 AccountAbility Principles (2018) in this report as conducted in accordance with type 1 of AA1000AS (2008) with 2018 Addendum assurance engagement and therefore, the information/data disclosed in the report is not verified through the verification process.

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

#### Opinion Statement

We conclude that the Ardentec Corporation 2018 Corporate Social Responsibility Report provides a fair view of the Ardentec CSR programmes and performances during 2018. The CSR report subject to assurance is free from material misstatement based upon testing within the limitations of the scope of the assurance, the information and data provided by the Ardentec and the sample taken. We believe that the 2018 economic, social and environmental performance indicators are fairly represented. The CSR performance indicators disclosed in the report demonstrate Ardentec's efforts recognized by its stakeholders.

Our work was carried out by a team of CSR report assurors in accordance with the AA1000 Assurance Standard (2008) with 2018 Addendum. We planned and performed this part of our work to obtain the necessary information and explanations we considered to provide sufficient evidence that Ardentec's description of their approach to AA1000 Assurance Standard with 2018 Addendum and their self-declaration in accordance with GRI Standards: Core option were fairly stated.

#### Methodology

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

- a top level review of issues raised by external parties that could be relevant to Ardentec's policies to provide a check on the appropriateness of statements made in the report.
- discussion with managers and staffs on Ardentec's approach to stakeholder engagement. However, we had no direct contact with external stakeholders.
- 16 interviews with staffs involved in sustainability management, report preparation and provision of report information were carried out.
- review of key organizational developments.
- review of the findings of internal audits.
- review of supporting evidence for claims made in the reports.
- an assessment of the company's reporting and management processes concerning this reporting against the principles of Inclusivity, materiality, responsiveness and impact as described in the AA1000 AccountAbility Principles (2018).

A detailed review against Inclusivity, Materiality, Responsiveness and impact of AA1000 AP (2018) and GRI Standards is set out below:



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#### Inclusivity

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

#### Materiality

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

#### Responsiveness

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

#### Impact

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

#### GRI Sustainability Reporting Standards (GRI Standards)

Ardentec provided us with their self-declaration of 'in accordance' with GRI Standards: Core option (For each material topic covered by a topic-specific GRI Standard, comply with at least one topic-specific disclosure). Based on our review, we confirm that social responsibility and sustainable development disclosures with reference to the GRI Standards' disclosures are reported, partially reported or omitted. In our professional opinion the self-declaration covers the Ardentec's social responsibility and sustainability issues.

#### Assurance level

The moderate level assurance provided is in accordance with AA1000 Assurance Standard (2008) with 2018 Addendum in our review, as defined by the scope and methodology described in this statement

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

#### Competency and Independence

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

For and on behalf of BSI:

Peter Pu

Managing Director BSI Taiwan 2019-05-15





Taiwan Hendquarters: 5th Floor, No. 39, Ji-Hu Rd., Nei-Hu Dist., Taipei 114, Taiwan, R.O.C.

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## Annex 2 GRI Standards Reference Table

\* Core Item

※ Topic Materiality

Verify result is as Annex 1 Independent Assurance Opinion Statement

	GRI Standards Item	Corresponding chapter	Page	Remarks
	GRI 102	: General Disclosures 2016		
	O	rganizational Profile		
*102-1	Name of the organization	CSR Report cover		
*102-2	Activities, brands, products, and services	1.1 Company Introduction 1.4 Professional Service	7 9	
*102-3	Location of headquarters	About the Report 1.1 Company Introduction	2 7	
*102-4	Location of operations	About the Report	2	
*102-5	Ownership and legal form	1.1 Company	7	
*102-6	Markets served	1.5 Market Size and Performance	9-11	
*102-7	Scale of the organization	1.3 The Organization 5.7 Workforce Structure	7-9 67-68	
*102-8	Information on employees and other workers	5.7 Workforce Structure	67-68	
*102-9	Supply chain	6.5 Supplier/Contractor Management	71-74	
*102-10	Significant changes to the organization and its supply	3.7 Major Investment	36	
*※102-11	Precautionary Principle or approach	3.5 Internal Controls 3.6 Risk Management	33-34 34-36	
*102-12	External initiatives	1.8 Honors and Accolades	12-15	
*102-13	Membership of associations	1.8 Honors and Accolades	12-15	
		Strategy		
**102-14	Statement from senior decision-maker	Letter from Chairman and President 3.1 Governance Principles	7 30	
<b>%102-15</b>	Key impacts, risks, and opportunities	1.5 Market Size and Performance	9-11	
		Ethics and Integrity		
*※102-16	Values, principles, standards, and norms of behavior	3.4 Ethical Guidelines	33	
<b>%102-17</b>	Mechanisms for advice and concerns about ethics	3.4 Ethical Guidelines 5.6 Labor-Management Harmony	33 65-67	
		Governance		
*102-18	Governance structure	1.3 The Organization 2.1 CSR Policy 2.2 The CSR Organization 3.2 Board of Directors	7-9 17 17-18 30-32	
102-19	Delegating authority	2.2 The CSR Organization	17-18	
102-20	Executive-level responsibility for economic, environmental, and social topics	2.2 The CSR Organization	17-18	
102-21	Consulting stakeholders on economic, environmental, and social topics	2.4Stakeholders and analysis of Topics of Concern	18-21	
102-22	Composition of the highest governance body and its committees	3.2 Board of Directors	30-32	



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	GRI Standards Item	Corresponding chapter	Page	Remarks
102-23	Chair of the highest governance body	3.2 Board of Directors	30-32	
102-24	Nominating and selecting the highest governance body	3.2 Board of Directors	30-32	
102-25	Conflicts of interest	<ul><li>3.2 Board of Directors</li><li>3.3 Executive Compensation Policy</li></ul>	30-32	
102-26	Role of highest governance body in setting purpose, values, and strategy	1.2 Corporate Values	7	
<b>%102-27</b>	Collective knowledge of highest governance body	3.1 Governance Principles	30	
<b>%102-28</b>	Evaluating the highest governance body's performance	<ul><li>3.1 Governance Principles</li><li>3.2 Board of Directors</li></ul>	30 30-32	
102-29	Identifying and managing economic, environmental, and social impacts	6.4 Customer Satisfaction Surveys	71	
<b>%102-30</b>	Effectiveness of risk management processes	3.6 Risk Management	34-36	
<b>%102-31</b>	Review of economic, environmental, and social topics	3.1 Governance Principles 3.6 Risk Management	30 34-36	
102-32	Highest governance body's role in sustainability reporting	About the Report	2	
102-36	Process for determining remuneration	3.3 Executive Compensation Policy	32	
	Commi	unicate with stakeholders		
102-37	Stakeholders' involvement in remuneration	<ul><li>2.6 Material Topics Value Chain and Management strategy</li><li>2.7 Communication with stakeholders</li></ul>	22-26 27-28	
*102-40	List of stakeholder groups	2.4 Stakeholders and analysis of Topics of Concern	18-21	
*102-41	Collective bargaining agreements	5.6 Labor-Management Harmony	65-67	
*102-42	Identifying and selecting stakeholders	2.4 Stakeholders and analysis of Topics of Concern	18-21	
*102-43	Approach to stakeholder engagement	2.4 Stakeholders and analysis of Topics of Concern	18-21	
*102-44	Key topics and concerns raised	2.5 Key Topics and the Identification of Boundaries	21-22	
		Report overview		
*102-45	Entities included in the consolidated financial statements	1.5 Market Size and Performance	9-11	
*102-46	Defining report content and topic Boundaries	About the Report	2	
*102-47	List of material topics	2.5 Topic Materility Matrix	21-22	
*102-48	Restatements of information	GRI Standards Reference Table GRI Standards Reference Table		
*102-49	Changes in reporting	2.6 Material Topics Value Chain and Management strategy	24-27	GRI Standards Reference Table
*102-50	Reporting period	About the Report	2	
*102-51	Date of most recent report	About the Report	2	
*102-52	Reporting cycle	About the Report	2	
*102-53	Contact point for questions regarding the report	About the Report	2	
*102-54	Claims of reporting in accordance with the GRI Standards	About the Report	2	

	GRI Standards Item	Corresponding chapter	Page Remarks
*102-55	GRI content index	Annex 2	85-90
*102-56	External assurance	About the Report Annex 1	2 84
	GRI 103 : Disclosur	e of Management Approach 201	6
*103-1	Explanation of the material topic and its Boundary	2.5Topic Materility Matrix 2.6 Material Topics Value Chain and Management strategy	21 22-26
*103-2	The management approach and its components	2.6 Material Topics Value Chain and Management strategy	24-27
*103-3	Evaluation of the management approach	2.6 Material Topics Value Chain and Management strategy	24-27
	Disclos	sure of Specific Topic	
	GRI 103 : Ec	onomic Performance 2016	
*※201-1	Direct economic value generated and distributed	<ul><li>1.5 Market Size and Performance</li><li>1.6 Surplus Allocation</li><li>3.3 Executive Compensation Policy</li><li>5.3 Compensation and Benefits</li></ul>	9-11 11 32 55-60
**201-3	Defined benefit plan obligations and other retirement plans	5.3 Compensation and Benefits	55-60
	GRI 202 :	Market Presence 2016	
202-2	Proportion of senior management hired from the local community	5.2 Right People for Right Job	54-55
	GRI 203 : Indi	rect Economic Impacts 2016	
<b>%203-2</b>	Significant indirect economic impacts	3.6 Risk Management	34-36
	GRI 204 : Pr	ocurement Practices 2016	
204-1	Proportion of spending on local suppliers	6.5 Supplier/Contractor Management	71-74
	GRI 205	: Anti corruption 2016	
205-1	Operations assessed for risks related to corruption	3.4 Ethical Guidelines	33
<b>%205-2</b>	Communication and training about anti- corruption policies and procedures	3.4 Ethical Guidelines	33
<b>%205-3</b>	Confirmed incidents of corruption and actions taken	3.4 Ethical Guidelines	33
	GRI 30	1 : Materials 2016	
301-1	Materials used by weight or volume	4.4 Disclosure of Environmental Information	40-42
301-2	Recycled input materials used	4.4 Disclosure of Environmental Information	40-42
	GRI 3	02 : Energy 2016	
302-1	Energy consumption within the organization	4.4 Disclosure of Environmental Information	40-42
302-3	Energy intensity	4.4 Disclosure of Environmental Information	38-40
302-4	Reduction of energy consumption	4.3 Green Management System 4.5 Greenhouse Gas Management	42-47
302-5	Reductions in energy requirements of products and services	4.3 Green Management System 4.5 Greenhouse Gas Management	38-40 42-47



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	GRI Standards Item	Corresponding chapter	Page	Remarks
	GRI 3	303 : Water 2016		
303-1	Water withdrawal by source	4.6 Water Resource Management	47-48	
303-2	Water sources significantly affected by withdrawal of water	4.6 Water Resource Management	47-48	
303-3	Water recycled and reused	4.6 Water Resource Management	47-48	
	GRI 304	: Biodiversity 2016		
304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	4.1 Environmental Policy	38	
304-2	Significant impacts of activities, products, and services on biodiversity	4.7 Waste Management	48-52	
	GRI 305	5 : Emissions 2016		
305-1	Direct (Scope 1) GHG emissions	4.5 Greenhouse Gas Management	42-47	The direct GHG emissions in Taiwan headquarters and Singapore Site has been verified by BSI
305-2	Energy indirect (Scope 2) GHG emissions	4.5 Greenhouse Gas Management	42-47	The direct GHG emissions in Taiwan headquarters and Singapore Site has been verified by BSI
305-4	GHG emissions intensity	4.3 Green Management System	38-40	
305-5	Reduction of GHG emissions	4.5 Greenhouse Gas Management	42-47	
	GRI 306 : E	ffluents and Waste 2016		
306-1	Water discharge by quality and destination	4.7 Waste Management	48-52	
306-2	Waste by type and disposal method	4.7 Waste Management	48-52	
306-5	Water bodies affected by water discharges and/or runoff	4.7 Waste Management	48-52	
	GRI 307 : Envi	ronmental Compliance 2016		
307-1	Non-compliance with environmental laws and regulations	4.3 Green Management System	38-40	There were no violations in the year of report
	GRI 401	: Employment 2016		
<b>%401-2</b>	Benefits provided to full-time employees that are not provided to temporary or part-time employees	5.3 Compensation and Benefits	55-60	
	GRI 402 : Labor	Management Relations 2016		
<b>%402-1</b>	Minimum notice periods regarding operational changes	5.6 Labor-Management Harmony	65-67	

	GRI Standards Item	Corresponding chapter	Page	Remarks
	GRI 403 : Occupat	tional Health and Safety 2	016	
<b>%403-1</b>	Workers representation in formal joint management–worker health and safety committees	5.5 Workplace Health and Safety	62-65	
403-2	Types of injury and rates of injury,occupational diseases, lost days, and absenteeism, and number of work-related fatalities	5.5 Workplace Health and Safety	62-65	
<b>*</b> 403-4	Health and safety topics covered in formal agreements with trade unions	5.5 Workplace Health and Safety	62-65	There is no union in the Company, but there is an occupational safety and health management committee dedicated to th function
	GRI 404 : Trai	ning and Education 2016		
404-1	Average hours of training per year per employee	5.4 Career Development	60-62	
404-2	Programs for upgrading employee skills and transition assistance programs	5.4 Career Development	60-62	
404-3	Percentage of employees receiving regular performance and career development reviews	5.3 Compensation and Benefits 5.4 Career Development	55-60 60-62	
	GRI 405 : Diversity	and Equal Opportunity 2	016	
405-1	Diversity of governance bodies and employees	3.2 Board of Directors 5.7 Workforce Structure	30-32 67-68	
	GRI 406 : N	on discrimination 2016		
<b>%</b> 406-1	Incidents of discrimination and corrective actions taken	GRI Standards Reference Table		There were no discriminations in 2018
	GRI 407 : Freedom of Asso	ciation and Collective Barg	aining	2016
407-1	Operations and suppliers in which the right to freeom of association and collective bargaining may be at risk	5.6 Labor-Management Harmony 6.6 Supplier Audits	51-52 58	
	GRI 408	: Child Labor 2016		
<b>%408-1</b>	Operations and suppliers at significant risk for incidents of child labor	5.2 Right People for Right Job 6.6 Supplier Audits	41 58	
	GRI 410 : S	Security Practices 2016		
410-1	Security personnel trained in human rights policies or procedures	5.4 Career Development	47-48	
	GRI 412 : Huma	an Rights Assessment 201	6	
412-2	Employee training on human rights policies or procedures	5.4 Career Development	47-48	
	GRI 414 : Suppl	ier Social Assessment 201	6	
414-1	New suppliers that were screened using social criteria	6.5 Supplier/Contractor Management	71-74	
	GRI 418 : C	Eustomer Privacy 2016		
<b>**418-1</b>	Substantiated complaints concerning breaches of customer privacy and losses of customer data	3.6 Risk Management 6.2 Customer Secrecy Protection	34-36 70	Complaints of violation of customer privacy or data leakage in 2018
		economic Compliance 201	6	
<b> *419-1</b>	Non-compliance with laws and regulations in the social and economic area	2.6 Material Topics Value Chain and Managemant strategy	22-27	
		3,		



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#### Annex 3 ISO 26000 Reference Table

ISO	26000 indicators	Corresponding chapter	Note
Organizational governance	Decision-making processes and structures that help fulfill social responsibilities and enable applications of core CSR principles	Sustainable Business Framework     Corporate Governance     Sustainable Business Framework     Response Framework     Sustainable Business Framework	
	Checks for regulatory compliance and avoidance of human rights risks	5. Employees as Partners 6.5 Supplier/Contractor Management	Employees are provided with a multiple means through which to communicate and file complaints
	Human rights risk situations	5. Employees as Partners 5.6 Labor-Management Harmony	
	Avoidance of complicit	5.6 Labor-Management Harmony	Employees are provided with a multiple means through which to communicate and file complaints
	Resolving grievances	5.6 Labor-Management Harmony	
Human rights	Discrimination and vulnerable groups	7.2 Caring for the Disadvantaged	
	Civil and political rights	5.6 Labor-Management Harmony	Ardentec cares for all aspects of national development but remains politically neutral; We encourage employees to exercise civil rights, but fully respect the political orientation of individual employees
	Economic, social and cultural rights	5. Employees as Partners	
	Fundamental principles and rights at work	5.2 Right People for Right Job 5.3 Compensation and Benefits	
	Employment and employment relations	5.2 Right People for Right Job	
	Conditions of work and social protection	5.2 Right People for Right Job 5.3 Compensation and Benefits 5.5 Workplace Health and Safety 5.6 Labor-Management Harmony	
Labor practices	Social dialogue	2.7 Communication with stakeholders	
	Health and safety at work	5.5 Workplace Health and Safety	
	Human development and training in the workplace	5.4 Career Development 5.5 Workplace Health and Safety	
	Prevention of pollution	4.3 Green Management System 4.7 Waste Management	
	Sustainable resource use	4.7 Waste Management	
P e a	Climate change mitigation and adaptation	4.1 Environmental Policy 4.3 Green Management System	
	Protection of the environment, biodiversity and restoration of natural habitats	4.1 Environmental Policy 7.3 Sustainability of the Environment and Ecosystem	

	Anti-corruption	3.4 Ethical Guidelines 5.4 Career Growth	
	Responsible political involvement	5.4 Career Growth	Ardentec cares for all aspects of national development but remains politically neutral; We encourage employees to exercise civil rights, but fully respect the political orientation of individual employees
Fair operating practices	Fair competition	3.4 Ethical Guidelines	The Company serves corporate customers and is not involved in the mass market. Ardentec complies with regulations that govern intellectual property rights and fair trading. It maintains sound and legal
	Promoting social responsibility in the value chain	6.1 Customer Service 6.4 Customer Satisfaction Surveys 6.5 Supplier/Contractor Management	
	Respect for property rights	3.6 Risk Management	The Company complies with regulations that govern intellectual property rights. It maintains sound and legal business interactions with customers as well as upstream and downstream partners.
	Fair marketing, factual and unbiased information and fair contractual practices	3.4 Ethical Guidelines	The Company complies with regulations that govern fair trade. It maintains sound and legal business interactions with customers as well as upstream and downstream partners.
	Protecting consumers' health and safety		The Company's business activities were primarily semiconductor testing with no tangible products produced. The testing procedures pose no health or safety concerns to the customers.
Consumer	Sustainable consumption		The Company maintains long-term business relationships with its corporate customers
Topics	Consumer service, support, and complaint and dispute resolution	6.1 Customer Service 6.4 Customer Satisfaction Surveys	The primary operation does not contain any tangible products. Therefore, there is no concern about customer services, support, complaints and disputes.
	Consumer data protection and privacy	6.2 Customer Secrecy Protection	The primary operation does not contain any tangible products. Therefore, it does not involve customer data and privacy.
	Access to essential services	6.1 Customer Service	
	Education and awareness		The Company's services are not targeted at individual consumers
	Community involvement	7. Community involvement	
	Education and culture	7. Community involvement 7.1 Educational Support	
	Employment creation and skills development	1.7 Development strategies and innovations 5.2 Right People for the Right Job	
Social investment	Technology development and access	1.7 Development Strategies and Innovations	
	Wealth and income creation	1.5 Market Size and Performance 5.3 Compensation and Benefits	
	Health	5.5 Workplace Health and Safety	
	Social investment	7. Community involvement	



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## Annex 4 UN Sustainable Development Goals Reference Table

	Sustainable Development Goals	Goal Item	Corresponding chapter
3	Ensure healthy lives and promote well-being for all at all ages	3.8 3.9	5.5 Workplace Health and Safety
4	Ensure inclusive and equitable quality education and promote lifelong learnming opportunities for all	4.4 4.5 4.7	5.4 Career Growth 7.1 Educational Support
5	Achieve gender equality and empower all women and girls	5.1 5.2 5.b	5.2 Right People for Right Job 5.3 Compensation and Benefits 5.4 Career Growth
6	Ensure availability and sustainable management of water and sanitation for all	6.3 6.4	4.6 Water Resource Management 4.7 Waste Management
7	Ensure access to affordable, reliable, sustainable and modern energy for all	7.2 7.3	4.3 Green Management System 4.5 Greenhouse Gas Management
8	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	8.2 8.7 8.8	1.7 Development Strategies and Innovations 5.2 Right People for Right Job 5.4 Career Growth
12	Ensure sustainable consumption and production patterns	12.5	4.3 Green Management System 4.5 Greenhouse Gas Management 4.7 Waste Management
13	Take urgent action to combat climate change and its impacts	13.3	4.5 Greenhouse Gas Management 5.4 Career Growth
16	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	16.5	Sustainable Governance

## Annex 5 The UN Global Compact Reference Table

	sification and principles he UN Global Compact	Corresponding Chapter	Note
Human rights	Businesses should support and respect the protection of internationally proclaimed human rights  Business should make sure that they are not complicit in human rights abuses	5. Employees as Partners 6.5Supplier/contractor management	The Taiwan headquarters, Singapore, Korea, and GIGA Solution subsidiaries are located in countries with sound human rights review. All business operations are located in the industrial zones supervised by the governments. All human rights related matters meet the regulations.
	Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining	5.6 Labor-Management Harmony	
Lahau	Elimination of all forms of forced and compulsory labor  5.2 Right People for Right Job 6.5Supplier/Contractor Management		
Labor	Effective abolition of child labor	5.2 Right People for the Right Job 6.5Supplier/Contractor Management	
	Elimination of discrimination in respect of employment and occupation	5.2 Right People for Right Job 5.3 Compensation and Benefits	
	Business should support a precautionary approach to environmental challenges	4.3 Green Management System 4.5 Greenhouse Gas Management 4.6 Water Resource Management 4.7 Waste Management 7.3 Sustainability of the Environment and Ecosystem	
Environment	Undertake initiatives to promote greater environmental responsibility	4.3 Green Management System 4.5 Greenhouse Gas Management 4.6 Water Resource Management 4.7 Waste Management 7.3 Sustainability of the Environment and Ecosystem	
	ncourage the development and diffusion of environmentally friendly technologies	7.3 Sustainability of the Environment and Ecosystem	Ardentec primarily offers testing services and technologies, and does not produce tangible products.
Anti- corruption	Businesses should work against corruption in all its forms, including extortion and bribery	3.1 Governance Principles 3.4 Ethical Guidelines 3.5 Internal Controls 6.5Supplier/Contractor Management	



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# Annex 6 Corporate Social Responsibility Best Practice Principles for TWSE/GTSM Listed Companies Reference Table

	Chapters	Corresponding chapter
Article 1	In order to assist companies listed on the Taiwan Stock Exchange Corporation ("TWSE") and GreTai Securities Market ("GTSM") (collectively referred to as "TWSE/GTSM listed companies") to fulfill their corporate social responsibility initiatives and to promote economic, environmental, and social advancement for purposes of sustainable development, the TWSE and GTSM hereby jointly adopt the Principles to be followed by TWSE/GTSM listed companies. TWSE/GTSM listed companies are advised to promulgate their own corporate social responsibility principles in accordance with the Principles to manage their economic, environmental and social risks and impact	About the Report Letter from Chairman and President 2.2 The CSR Organization 3.1Governance Principles
Article2	The Principles applies to TWSE/GTSM listed companies, including the entire operations of each such company and its business group. The Principles encourages TWSE/GTSM listed companies to actively fulfill their corporate social responsibility in the course of their business operations so as to follow international development trends and to contribute to the economic development of the country, to improve the quality of life of employees, the community and society by acting as responsible corporate citizens, and to enhance competitive edges built on corporate social responsibility.	Letter from Chairman and President 2.Sustainable Business Framework 3.Corporate Governance
Article3	In fulfilling corporate social responsibility initiatives, TWSE/GTSM listed companies shall, in its corporate management guidelines and business operations, give due consideration to the rights and interests of stakeholders and, while pursuing sustainable operations and profits, also give due consideration to the environment, society and corporate governance.	2.Sustainable Business Framework 4.Environmental Protection 7. Community Engagement
Article 4	To implement corporate social responsibility initiatives, TWSE/GTSM listed companies are advised to follow the principles below:  1.Exercise corporate governance.  2.Foster a sustainable environment.  3.Preserve public welfare.  4.Enhance disclosure of corporate social responsibility information.	About the Report Letter from Chairman and President 3.1 Governance Principles
Article 5	TWSE/GTSM listed companies shall take into consideration the correlation between the development of domestic and international corporate social responsibility principles and corporate core business operations, and the effect of the operation of individual companies and of their respective business groups as a whole on stakeholders, in establishing their policies, systems or relevant management guidelines, and concrete promotion plans for corporate social responsibility programs, which shall be approved by the board of directors and then reported to the shareholders meeting.  When a shareholder proposes a motion involving corporate social responsibility, the company's board of directors is advised to review and consider including it in the shareholders meeting agenda.	2.1 CSR Policy
Article 6	TWSE/GTSM listed companies are advised to follow the Corporate Governance Best Practice Principles for TWSE/GTSM Listed Companies, the Ethical Corporate Management Best Practice Principles for TWSE/GTSM Listed Companies, and the Code of Ethical Conduct for TWSE/GTSM Listed Companies to establish effective corporate governance frameworks and relevant ethical standards so as to enhance corporate governance.	3.1 Governance Principles 3.4 Ethical Guidelines

Article 7	The directors of a TWSE/GTSM listed company shall exercise the due care of good administrators to urge the company to perform its corporate social responsibility initiatives, examine the results of the implementation thereof from time to time and continually make adjustments so as to ensure the thorough implementation of its corporate social responsibility policies.  The board of directors of a TWSE/GTSM listed company is advised to give full consideration to the interests of stakeholders, including the following matters, in the company's performance of its corporate social responsibility initiatives:  1.Identifying the company's corporate social responsibility mission or vision, and declaring its corporate social responsibility policy, systems or relevant management guidelines;  2.Making corporate social responsibility the guiding principle of the company's operations and development, and ratifying concrete promotional plans for	Letter from Chairman and President 2. Sustainable Business Framework 2.1 CSR Policies	Article 13	TWSE/GTSM listed management sys systems shall incl 1.Collecting suffic company's busing 2.Establishing me whether the deve still relevant on a 3.Adopting enforcexamining the res
	corporate social responsibility initiatives; and 3.Enhancing the timeliness and accuracy of the disclosure of corporate social responsibility information.  The board of directors shall appoint executive-level positions with responsibility for economic, environmental, and social issues resulting from the business operations of a TWSE/GTSM listed company, and to report the status of the handling to the board of directors. The handling procedures and the responsible person for each relevant issue shall be concrete and clear.	3.1 Governance Principles	Article 14	TWSE/GTSM listed assign dedicated environment man hold environmen employees on a p
Article 8	TWSE/GTSM listed companies are advised to, on a regular basis, organize education and training on the implementation of corporate social responsibility initiatives, including promotion of the matters prescribed in paragraph 2 of the preceding article.	3.4 Ethical Guidelines		TWSE/GTSM listed of business opera concept of sustail procurement, pro following principl
Article 9	For the purpose of managing corporate social responsibility initiatives, TWSE/GTSM listed companies are advised to establish an exclusively (or concurrently) dedicated unit to be in charge of proposing and enforcing the corporate social responsibility policies, systems, or relevant management guidelines, and concrete promotional plans and to report on the same to the board of directors on a periodic basis.  TWSE/GTSM listed companies are advised to adopt reasonable remuneration policies, to ensure that remuneration arrangements support the strategic aims	2.2 The CSR Organization	Article 15	human beings fro 1.Reduce resourc 2.Reduce emissio properly. 3.Improve recycla 4.Maximize the su 5.Enhance the du 6.Improve efficien
	of the organization, and align with the interests of stakeholders. It is advised that the employee performance evaluation system be combined with corporate social responsibility policies, and that a clear and effective incentive and discipline system be established.		Article 16	To improve water sustainably use w TWSE/GTSM listed protection treatm
Article 10	TWSE/GTSM listed companies shall, based on respect for the rights and interests of stakeholders, identify stakeholders of the company, and establish a designated section for stakeholders on the company website; understand the reasonable expectations and demands of stakeholders through proper	2.4 Stakeholders and Analysis to Topics of Concern 2.7 Communication with		use their best effi environment by a measures.
	communication with them, and adequately respond to the important corporate social responsibility Topics which they are concerned about.	stakeholders		TWSE/GTSM listed
Article 11	TWSE/GTSM listed companies shall follow relevant environmental laws, regulations and international standards to properly protect the environment and shall endeavor to promote a sustainable environment when engaging in business operations and internal management.	4.1 Environmental Policy	Article 17	generally used in inventory and to following: 1.Direct greenhor or controlled by t 2.Indirect greenh of externally pure TWSE/GTSM lister
Article 12	TWSE/GTSM listed companies are advised to endeavor to utilize all resources more efficiently and use renewable materials which have a low impact on the environment to improve sustainability of natural resources.	4.3 Green Management System		change on their of conservation and operations and the include obtaining business operation



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Article 13	TWSE/GTSM listed companies are advised to establish proper environment management systems based on the characteristics of their industries. Such systems shall include the following tasks:  1.Collecting sufficient and up-to-date information to evaluate the impact of the company's business operations on the natural environment.  2.Establishing measurable goals for environmental sustainability, and examining whether the development of such goals should be maintained and whether it is still relevant on a regular basis.  3.Adopting enforcement measures such as concrete plans or action plans, and examining the results of their operation on a regular basis.	4.3 Green Management System
Article 14	TWSE/GTSM listed companies are advised to establish a dedicated unit or assign dedicated personnel for drafting, promoting, and maintaining relevant environment management systems and concrete action plans, and should hold environment education courses for their managerial officers and other employees on a periodic basis.	4.3 Green Management System
Article 15	TWSE/GTSM listed companies are advised to take into account the effect of business operations on ecological efficiency, promote and advocate the concept of sustainable consumption, and conduct research and development, procurement, production, operations, and services in accordance with the following principles to reduce the impact on the natural environment and human beings from their business operations:  1. Reduce resource and energy consumption of their products and services.  2. Reduce emission of pollutants, toxins and waste, and dispose of waste properly.  3. Improve recyclability and reusability of raw materials or products.  4. Maximize the sustainability of renewable resources.  5. Enhance the durability of products.  6. Improve efficiency of products and services.	4.5 Greenhouse Gas Management 4.6 Water Resource Management 4.7 Waste Management
Article 16	To improve water use efficiency, TWSE/GTSM listed companies shall properly and sustainably use water resources and establish relevant management measures. TWSE/GTSM listed companies shall construct and improve environmental protection treatment facilities to avoid polluting water, air and land, and use their best efforts to reduce adverse impact on human health and the environment by adopting the best practical pollution prevention and control measures.	4.6 Water Resource Management 4.7 Waste Management
Article 17	TWSE/GTSM listed companies are advised to adopt standards or guidelines generally used in Taiwan and abroad to enforce corporate greenhouse gas inventory and to make disclosures thereof, the scope of which shall include the following:  1.Direct greenhouse gas emissions: emissions from operations that are owned or controlled by the company.  2.Indirect greenhouse gas emissions: emissions resulting from the generation of externally purchased or acquired electricity, heating, or steam.  TWSE/GTSM listed companies are advised to monitor the impact of climate change on their operations and should establish company strategies for energy conservation and carbon and greenhouse gas reduction based upon their operations and the result of a greenhouse gas inventory. Such strategies should include obtaining carbon credits to promote and minimize the impact of their business operations on climate change.	4.3 Green Management System 4.5 Greenhouse Gas Management

Article 18	TWSE/GTSM listed companies shall comply with relevant laws and regulations, and the International Bill of Human Rights, with respect to rights such as gender equality, the right to work, and prohibition of discrimination.  A TWSE/GTSM listed company, to fulfill its responsibility to protect human rights, shall adopt relevant management policies and processes, including:  1.Presenting a corporate policy or statement on human rights.  2.Evaluating the impact of the company's business operations and internal management on human rights, and adopting corresponding handing processes.  3.Reviewing on a regular basis the effectiveness of the corporate policy or statement on human rights.  4.In the event of any infringement of human rights, the company shall disclose the processes for handling of the matter with respect to the stakeholders involved.  TWSE/GTSM listed companies shall comply with the internationally recognized human rights of labor, including the freedom of association, the right of collective bargaining, caring for vulnerable groups, prohibiting the use of child labor, eliminating all forms of forced labor, eliminating recruitment and employment discrimination, and shall ensure that their human resource policies do not contain differential treatments based on gender, race, socioeconomic status, age, or marital and family status, so as to achieve equality and fairness in employment, hiring conditions, remuneration, benefits, training, evaluation, and promotion opportunities.  TWSE/GTSM listed companies shall provide an effective and appropriate grievance mechanism with respect to matters adversely impacting the rights and interests of the labor force, in order to ensure equality and transparency of the grievance process. Channels through which a grievance may be raised shall be clear, convenient, and unobstructed. A company shall respond to any employee's grievance in an appropriate manner.	5.1 Employee Partnership Policy
Article 19	TWSE/GTSM listed companies shall provide information for their employees so that the employees have knowledge of the labor laws and the rights they enjoy in the countries where the companies have business operations.	5.2 Right People for Right Job
Article 20	TWSE/GTSM listed companies are advised to provide safe and healthful work environments for their employees, including necessary health and first-aid facilities and shall endeavor to curb dangers to employees' safety and health and to prevent occupational accidents.  TWSE/GTSM listed companies are advised to organize training on safety and health for their employees on a regular basis.	5.5 Workplace Health and Safety
Article 21	TWSE/GTSM listed companies are advised to create an environment conducive to the development of their employees' careers and establish effective training programs to foster career skills.  TWSE/GTSM listed companies shall appropriately reflect the corporate business performance or achievements in the employee remuneration policy, to ensure the recruitment, retention, and motivation of human resources, and achieve the objective of sustainable operations.	5.4 Career Growth
Article 22	TWSE/GTSM listed companies shall establish a platform to facilitate regular two-way communication between the management and the employees for the employees to obtain relevant information on and express their opinions on the company's operations, management and decisions.  TWSE/GTSM listed companies shall respect the employee representatives' rights to bargain for the working conditions, and shall provide the employees with necessary information and hardware equipment, in order to improve the negotiation and cooperation among employers, employees and employee representatives.  TWSE/GTSM listed companies shall, by reasonable means, inform employees of operation changes that might have material impacts.	5.6 Labor-Management Harmony



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Article 22-1	A TWSE/GTSM listed company is advised to treat customers or consumers of its products or services in a fair and reasonable manner, including according to the following principles: fairness and good faith in contracting, duty of care and fiduciary duty, truthfulness in advertising and soliciting, fitness of products or services, notification and disclosure, commensuration between compensation and performance, protection of the right to complain, professionalism of salespersons etc. Said company shall also develop the relevant strategies and specific measures for implementation.	Major business is semiconductor testing service for business customer, no physical product to consumers, thus no need of labelling for product nor advertisement for counsumers.
Article 23	TWSE/GTSM listed companies shall take responsibility for their products and services, and take marketing ethics seriously. In the process of research and development, procurement, production, operations, and services, the company shall ensure the transparency and safety of their products and services. They further shall establish and disclose policies on consumer rights and interests, and enforce them in the course of business operations, in order to prevent the products or services from adversely impacting the rights, interests, health, or safety of consumers.	6.1 Customer Service
Article 24	TWSE/GTSM listed companies shall ensure the quality of their products and services by following the laws and regulations of the government and relevant standards of their industries.  TWSE/GTSM listed companies shall follow relevant laws, regulations and international guidelines when marketing or labeling their products and services and shall not deceive, mislead, commit fraud or engage in any other acts which would betray consumers' trust or damage consumers' rights or interests.	Major business is semiconductor testing service for business customer, no physical product to consumers, thus no need of labelling for product nor advertisement for counsumers.
Article 25	TWSE/GTSM listed companies are advised to evaluate and manage all types of risks that could cause interruptions in operations, so as to reduce the impact on consumers and society.  TWSE/GTSM listed companies are advised to provide a clear and effective procedure for accepting consumer complaints to fairly and timely handle consumer complaints, shall comply with laws and regulations related to the Personal Information Protection Act for respecting consumers' rights of privacy and shall protect personal data provided by consumers.	Major business is semiconductor testing service for business customer, no physical product to consumers, thus no need of labelling for product nor advertisement for counsumers.
Article 26	TWSE/GTSM listed companies are advised to assess the impact their procurement has on society as well as the environment of the community that they are procuring from, and shall cooperate with their suppliers to jointly implement the corporate social responsibility initiative. Prior to engaging in commercial dealings, TWSE/GTSM listed companies are advised to assess whether there is any record of a supplier's impact on the environment and society, and avoid conducting transactions with those against corporate social responsibility policy. When TWSE/GTSM listed companies enter into a contract with any of their major suppliers, the content should include terms stipulating mutual compliance with corporate social responsibility policy, and that the contract may be terminated or rescinded any time if the supplier has violated such policy and has caused significant negative impact on the environment and society of the community of the supply source.	6.5 Supplier/Contractor Management

Article 27	TWSE/GTSM listed companies shall evaluate the impact of their business operations on the community, and adequately employ personnel from the location of the business operations, to enhance community acceptance. TWSE/GTSM listed companies are advised to, through equity investment, commercial activities, endowments, volunteering service or other charitable professional services etc., dedicate resources to organizations that commercially resolve social or environmental Topics, participate in events held by citizen organizations, charities and local government agencies relating to community development and community education to promote community development.	5.2 Right People for Right Job 7. Community Involvement
Article 28	TWSE/GTSM listed companies shall disclose information according to relevant laws, regulations and the Corporate Governance Best Practice Principles for TWSE/GTSM listed Companies and shall fully disclose relevant and reliable information relating to their corporate social responsibility initiatives to improve information transparency.  Relevant information relating to corporate social responsibility which TWSE/GTSM listed companies shall disclose includes:  1.The policy, systems or relevant management guidelines, and concrete promotion plans for corporate social responsibility initiatives, as resolved by the board of directors.  2.The risks and the impact on the corporate operations and financial condition arising from exercising corporate governance, fostering a sustainable environment and preserving social public welfare.  3.Goals and measures for realizing the corporate social responsibility initiatives established by the companies, and performance in implementation.  4.Major stakeholders and their concerns.  5.Disclosure of information on major suppliers' management and performance with respect to major environmental and social Topics.  6.Other information relating to corporate social responsibility initiatives.	5. Employees as Partners 7. Community Involvement
Article 29	TWSE/GTSM listed companies shall adopt internationally widely recognized standards or guidelines when producing corporate social responsibility reports, to disclose the status of their implementation of the corporate social responsibility policy. It also is advisable to obtain a third-party assurance or verification for reports to enhance the reliability of the information in the reports. The reports are advised to include:  1.The policy, system, or relevant management guidelines and concrete promotion plans for implementing corporate social responsibility initiatives.  2.Major stakeholders and their concerns.  3.Results and a review of the exercising of corporate governance, fostering of a sustainable environment, preservation of public welfare and promotion of economic development.  4.Future improvements and goals.	About the Report 2.Sustainable Business Framework
Article 30	TWSE/GTSM listed companies shall at all times monitor the development of domestic and foreign corporate social responsibility standards and the change of business environment so as to examine and improve their established corporate social responsibility framework and to obtain better results from the implementation of the corporate social responsibility policy.	2.2 The CSR Organization



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