About the Report

This is the fifth annual Corporate Social Responsibility (CSR) Report of Chroma ATE Inc (Chroma). Chroma has been devoted to promoting CSR for a long time. In this report, we will disclose in detail our business performance in economic, social, environmental and other aspects. We intend to demonstrate the results we have achieved in the active fulfillment of CSR to our customers, enterprises, society, government and other stakeholders.

Furthermore, every stakeholder should feel free to offer comments or advice, as feedback is a driving force behind our continued progress in sustainable business operations.

- Report quality and external verification -

★ The information and data of this report are prepared and filed by our employees from various departments. This report was reviewed by the department supervisors before being submitted to the CSR committee for future reference. We have also made use of external reference agencies who have provided suggestions for improvement.

★ The contents of this report meet the requirements of the Global Reporting Initiative (GRI) Standards in accordance with Core Option. The report had been verified by a third-party certification body, the British Standards Institution (BSI), and had passed the AA 1000 AS Type I moderate-level assurance.
About the Report

- Scope of information disclosure and the period disclosed in the report -

★ This report and the information disclosed hereinafter cover a period from January 1 to December 31, 2018. The contents of this report consist of the specific operations and relevant performance data of Chroma with respect to corporate governance, economy, product services, environment and society. For the completeness and comparability of the disclosed operational performance information, some of the information is retrospective.

★ Chroma intends to publish the Corporate Social Responsibility Report for the previous year at the end of June each year. The previous report was published in July 2018.

★ In this report, the scope of disclosure only covers Chroma Headquarters in Taiwan. Overseas subsidiaries or branch offices are not included. There were no major changes in the scale of the company, structure, ownership or supply chain during the report period.

★ Data boundaries: Related entities that have significant impact on Chroma business operations and the management policies will also be disclosed. The impact scope on stakeholders (employees, customers, investors/shareholders, suppliers/contractors, communities and NGOs, government authorities) is also included in the external boundaries of the organization.

- Writing reference -

<table>
<thead>
<tr>
<th>Published unit</th>
<th>Followed regulations</th>
</tr>
</thead>
<tbody>
<tr>
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<td>GRI Standards: Core Option</td>
</tr>
<tr>
<td>Taiwan Stock Exchange</td>
<td>Corporate Social Responsibility Best Practice Principles for TWSE/GTSM Listed Companies</td>
</tr>
<tr>
<td>Taiwan Stock Exchange</td>
<td>Taiwan Stock Exchange Corporation Rules Governing the Preparation and Filing of Corporate Social Responsibility Reports by TWSE Listed Companies</td>
</tr>
<tr>
<td>United Nations</td>
<td>Sustainable Development Goals (SDGs)</td>
</tr>
</tbody>
</table>

- Chroma contact person -

If you have any suggestions regarding the “Chroma 2018 CSR Report,” you are welcome to contact us:

This report will also be published on our official company website to make access easy.

<table>
<thead>
<tr>
<th>Address</th>
<th>66, Huaya 1st Rd., Guishan Dist., Taoyuan City 33383, Taiwan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Official website</td>
<td><a href="http://www.chroma.com.tw">http://www.chroma.com.tw</a></td>
</tr>
<tr>
<td>Contact person</td>
<td>Paul Ying</td>
</tr>
<tr>
<td>Telephone</td>
<td>+886-3-327-9999</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:CSR@chroma.com.tw">CSR@chroma.com.tw</a></td>
</tr>
</tbody>
</table>
From the Chairman

Sustainable management and the pursuit of excellence

We understand, that for sustainable operation of the Company, we have to focus on the development of corporate social responsibility in addition to the pursuit of revenue growth. Our vision of business strategy is to strengthen corporate social responsibility as a vision for continuous dedication and company development. Therefore, Chroma has published its fourth corporate social responsibility report this year to reinforce communications with stakeholders. In this report, we will disclose in detail our sustainable business performance and results from the economic, environmental and social aspects. Chroma has invested a great amount of manpower and resources in the R&D and integration of core technologies over the years with the aim of developing more top-class products and to achieve excellent business performance. To maintain Chroma competitiveness and the advantages of its products, we have put tremendous efforts into developing innovative technologies. We have also provided our customers with more top-quality and comprehensive testing solutions to create higher value. The Company has ranked 11th amongst the top 50 Taiwan high performers in a major survey conducted by CommonWealth Magazine in 2018. CommonWealth Magazine also pointed out that Chroma is a company with long-term stability and short-term explosive growth potential.

Energy saving and environmentally friendly

Chroma has been advocating environmental protection and energy conservation for a long time. The company is fully aware of climate change and the need for energy conservation and carbon reduction to curb the environmental impact from greenhouse gases and global warming. In addition to continuous and innovative research and develop of the manufacturing processes for advanced equipment and high quality measuring instruments, we continue to measure greenhouse gas emissions using a method of traceable management. We are dedicated to lessening the impact of products on the environment by minimizing the use of energy and resources as well as reducing the amount of waste produced in manufacturing processes. We continue to promote more environmental protection projects to create a green enterprise that is environmentally friendly.

Happy working environment

The Company truly believes that employees are the core element for corporate and social development. Outstanding talent is a foundation that will allow the Company to achieve the strategic goal of sustainable development. It is also the driving force behind our continuous progress in business operations. At the same
From the Chairman

Chroma has been continuously committed to social welfare and care for underprivileged groups and young children. We have long supported the BoYo Social Welfare Foundation, Paper Windmill Cultural Foundation and Qiu Zaixing Culture and Education Foundation. We are dedicated to giving a helping hand to those in need and cultivating their education and growth. To reinforce talent cultivation in the industry, the Company and the National Taiwan University of Science and Technology have established the Chroma NTUST R&D Center to nurture professionals and enhance the potential of research and development through industry-university cooperation. We believe in the concept of "giving back to society at the same time as we benefit from society." In the future, we will continue to put more effort into specific action to give back to society and promote sustainable development.

Care for society

Looking into the future, Chroma will continue with their efforts in innovation, research and development, and also develop international business sites to achieve a global business operation model. In the future, we plan to provide better services to our international customers and connect more quickly with the industry worldwide. We hope to expand our move steadily toward We look forward with industrial and social together with our em generate more profit society and to create future.

time, we also actively cultivate professional talent through career planning and development of core techniques, to create a win-win situation for our employees and the Company. We also implement the spirit of happy enterprise, as we not only offer a high salary and welfare system but have also provide various pressure-release activities and facilities for our employees. In addition, we also have the safest, healthiest and most friendly working environment to take care of every aspect of the lives of our employees.

We look forward with insight to future industrial and social trends, and work together with our employees to generate more profit society and to create future.

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8.1 Industry-academic collaboration to cultivate talents for the industry 93
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Appendix: GRI Standards Disclosure Comparison List
Sustainable Performance

- Corporate Governance and Economic Performance -
  ★ 2018 Annual Group Revenue

Grow 14%

★ 8% of the revenue was invested in innovation and R&D, with up to 85 domestic and foreign patents in 2018

★ 2018 Stable Profit

EPS 6.22

★ Two products won the Taiwan Excellence Award

- Social Performance -
  ★ Employee training hours reach

20,886 hours

- Environmental Performance -
  ★ Waste recycling rate at least 50%
In the 27th Taiwan Excellence Award ceremony, two of the products produced by Chroma were selected as products with “Innovative Value” and Chroma won the Taiwan Excellence Award.

The Chroma 2238 video signal graphics generator provides testing support for the Ultra HD 8K resolutions (7680x4320/8192x4320) and it fully supports the 8K@30/60Hz resolution specifications. The modular interface can load 4 signal modules simultaneously and output 4 different resolutions and testing diagrams. The user can select the most suitable combination based on testing and application.

The Chroma 17040 energy recovery battery module testing system is a high-precision, highly efficient and safe charge and discharge device specially developed for the testing of high-power secondary battery sets. It also has a battery discharge energy recovery function, which provides a clean and stable power supply. Efficiency is 90% or more and fully achieves the function of energy saving and low heat emission.

This award is recognition of the “Chroma” brand name by the judges. Chroma is rooted in Taiwan but develops business worldwide. Our business sites are located in Europe, the United States, Japan, Korea, China and Southeast Asia. Chroma innovative technology provides customers with higher added-value products and services to fulfill the needs of customers, and Chroma is committed to becoming a world-class enterprise to generate a higher trading momentum for Taiwan.
1.1 Introduction
1.2 Basic Information
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1.4 Organizational Structure of the Company
1.5 Operations of the Board of Directors
1.6 Establishment of the Remuneration Committee
1.7 Implementation of integrity management and anti-corruption measures
## 1.1 Introduction

Chroma was established 35 years ago and is a world-leading supplier of precision electronic test and measurement instrumentation, automated test systems, intelligent manufacturing systems, and comprehensive test and automation turnkey solutions marketed globally under the brand name "Chroma." In the past, our R&D strategies have focused on technological innovation, market orientation and project management, and have developed testing instruments and systems that have become part of a leading brand "Chroma" in the fields of power supply and video. In recent years, we have devoted effort to semiconductor/IC testing solutions, LCD module testing solutions, physical image display and the R&D of PXI testing instruments and systems. "The active development of world-class products and becoming a world-class enterprise" is our vision for company growth. In the future, we intend to expand the scope of our business to include more fields, such as electric vehicles, the smart factory, and clean technology (including electric vehicles and solar power). In addition, in response to the global need for energy saving, carbon reduction and environmental protection, we plan to apply our key technologies to green, energy and other kinds of clean industry. We aim to develop a variety of innovative and technologically leading products to move towards a vision of becoming a professional manufacturer of world-renowned brands. Chroma devotes a great deal of investment and resources to research and development to sustain its leading key technologies and highly integrated capabilities in the industry, and to retain competitive advantage as well as achieve the company goal of sustainable business operations.

### Our Commitments:

Our brand value is anchored to the close connection between our operations and CSR. We focus particularly on customers in the fields of electric vehicles, LED lighting, solar power, fuel cells, and other energy-efficient products, and customers continue to choose our products for their testing solutions. We also provide customers and end consumers with products that are more environmentally friendly, and we intend to design many new and creative products in the future. Based on our six principles, we expect to achieve better business performance to the ultimate benefit people in the future.

Brand Values and Our Commitments

- Working on better solutions
- Customer satisfaction with quality first
- Caring, sharing, being responsible, teamwork and striving for excellence
- Having initiative, being accountable and innovative for superior technology, quality and service
1.2 Basic Information

Date of establishment | 1984.11.8
Paid-in capital       | NT$4.168 billion
Stock code            | 2360
Chairman              | Mr. Leo Huang
President             | Mr. Leo Huang
Number of employees   | Taiwan: 1,715 people
Business sites        | Headquarters: Taoyuan, Taiwan
                      | Branches: Hsinchu and Kaohsiung
2018 consolidated revenue | NT$16.9 billion

Scope of business

Our business mainly focuses on the design, assembly, manufacture, sales, maintenance, calibration and distribution of products in fields that include: software/hardware for computers and peripheral equipment, automated testing systems, precision testing and measuring instruments, signal generators, power supplies, manufacturing information systems, integrated measurement and automation solutions, and communications power supplies.

Ratio of revenue by products in 2018:

<table>
<thead>
<tr>
<th>Product type</th>
<th>Amount (in 1000s of NT dollars)</th>
<th>Revenue share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test &amp; Measurement instruments and equipment</td>
<td>9,724,331</td>
<td>57.43 %</td>
</tr>
<tr>
<td>Special materials</td>
<td>2,005,001</td>
<td>11.84 %</td>
</tr>
<tr>
<td>Automated transportation equipment</td>
<td>4,862,323</td>
<td>28.72 %</td>
</tr>
<tr>
<td>Others</td>
<td>339,473</td>
<td>2.01 %</td>
</tr>
<tr>
<td>Total</td>
<td>16,931,128</td>
<td>100 %</td>
</tr>
</tbody>
</table>
1.3 Global Presence of the Chroma Group

Chroma Group operates on 3 continents and has presence in the Americas, Europe and Asia. Chroma distributors provide convenient and fast services to customers near their locations in major cities around the world.
1.4 Organizational Structure of the Company

Meeting of shareholders

Board of Directors

Remuneration Committee
Audit Committee
Chairman
President
Technical Manager

Auditor’s Office

President’s Office

Market Planning Division
Legal Affairs Division
Center for Environmental Protection, Safety and Health - Overseas Affairs

Operation Management Center
Finance and Administration Center
Advanced Technology Research Center
Corporate Manufacturing
Manufacturing Execution System BU
Integrated System Solution BU
Test and Measurement BU
Semiconductor Test Equipment BU
### Introduction of organizational duties and responsibilities

<table>
<thead>
<tr>
<th>Departments</th>
<th>Department managers’ duties and responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>President’s Office</strong></td>
<td>Market Planning Division, Legal Affairs Division and Center for Environmental Protection, Safety and Health. Overall management, company administration, and business affairs: setting targets; communication and coordination; planning of products; planning of new business development; patent management; contract review; environmental protection, and safety and health management.</td>
</tr>
<tr>
<td><strong>Auditor’s Office</strong></td>
<td>Establishment, revision and review of the internal audit and control systems. Approval, review and audit of the internal control system.</td>
</tr>
<tr>
<td><strong>Semiconductor Testing Equipment BU</strong></td>
<td>Planning, R&amp;D, and marketing of semiconductor testing equipment.</td>
</tr>
<tr>
<td><strong>Test and Measurement BU</strong></td>
<td>R&amp;D and marketing of measurement instrument products. Calibration of instruments and operation of calibration laboratories.</td>
</tr>
<tr>
<td><strong>Manufacturing Execution System BU</strong></td>
<td>R&amp;D and marketing of manufacturing information management systems.</td>
</tr>
<tr>
<td><strong>Corporate Manufacturing</strong></td>
<td>Procurement and production of raw materials for production. Design and maintenance of product quality systems.</td>
</tr>
<tr>
<td><strong>Advanced Technology Research Center</strong></td>
<td>The planning and development of new technologies to help BUs understand the development of future new industries.</td>
</tr>
<tr>
<td><strong>Finance and Administration Center</strong></td>
<td>Finance Division, Accounting Division, Human Resources Division, General Affairs Division and Factory Affairs Division. Finance Division: Planning and use of funds; planning and assessment of investments; stock affairs. Accounting Division: Establishment and implementation of accounting systems; taxation and account management. Human Resources Division: Overall planning of human resources; organizational development; education and training. General Affairs Division: Procurement of general supplies; management of equipment and fixed assets. Factory Affairs Division: the maintenance and safety of factories.</td>
</tr>
<tr>
<td><strong>Operations Management Center</strong></td>
<td>Establishment and management of operations management systems. IT Division (including the IT System Development Section, IT System Management Section and Data Management Section): Design, safety control, regulation and management of IT equipment and application systems.</td>
</tr>
</tbody>
</table>
1.5 Operations of the Board of Directors

We firmly believe that while seeking business growth and creating business values, we can also build a good structure for corporate governance and establish an effective system for internal control to improve the quality of business management and increase our competitiveness. The directors of Chroma perform their functions objectively and independently, guided by the long-term interests of Chroma and all shareholders. We continue to adhere to the principles of corporate governance. Members of the Board of Directors are elected by all shareholders through a voting process in accordance with the Articles of Incorporation and legal requirements. Functional committees have been established under the Board of Directors. We seek to strengthen the functions of the Board of Directors, safeguard the rights and interests of shareholders and stakeholders, and increase information transparency. We are actively implementing our corporate governance policies and fulfilling our social commitments. Over the past few years, the company has stipulated and announced several internal regulations such as the “Principles on CSR Best Practices,” “Ethical Code of Conduct,” “Ethical Management Best Practices,” and “Rules on Ethical Management Best Practices,” which continue to reinforce our corporate governance.

In 2018, the Board of Directors consisted of seven members. Three were independent directors who represented 43% of the voting seats. The members were all men around 50 years of age or older. All had rich and professional knowledge of the electronics industry and management experience. This enhanced the independence and diversity of the Board to a significant degree and enabled it to fully perform its strategic and advisory functions. The Board of Directors meets at least once every quarter. The Board held six meetings in 2018, with an average attendance rate of 93%. Mr. Leo Huang was re-elected Chairman of the Board of Directors. He has a great deal of professional skill and is responsible for making decisions on the management of Chroma, enhancing operational performance, and ensuring normal function of the Board.
<table>
<thead>
<tr>
<th>Position title</th>
<th>Name</th>
<th>Education</th>
<th>Main background and experience</th>
</tr>
</thead>
</table>
| Chairman       | Leo, Huang    | BS, Department of Electronics Engineering, National Chiao Tung University | President of the company  
Director, I-SHENG ELECTRIC WIRE & CABLE CO LTD.  
Director, Leadtek Research Inc.  
Individual director, member of the audit committee and remuneration committee, Ichia Technologies Inc.  
Representative of corporate directors, Tian Zheng International Precision Machinery Co Ltd.  
Director, TwoWay Communications Inc.  
Chairman, DynaScan Technology Corp. |
| Directors      | I-shih, Tseng | PhD in Mechanical Engineering, Pennsylvania State University  
Project Manager, Institute for Information Industry | General Manager of Business Unit in the company  
Technical Manager, DynaScan Technology Corp.  
Individual director and member of the remuneration committee, Dynapack Corp. |
| Directors      | Tsun-I, Wang  | PhD in Optoelectronic Engineering, National Chiao Tung University  
Vice President, Tailyn Technologies, Inc.  
Vice President, Hua Wei Photoelectric Co. | Technical Manager, DynaScan Technology Corp.  
Individual director and member of the remuneration committee, Dynapack Corp. |
| Directors      | Chung-ju, Chang | PhD in Electrical Engineering, National Taiwan University  
R&D Director, National Chiao Tung University  
Dean of Telecommunications Engineering Department, National Chiao Tung University  
Professor Emeritus, Electrical Engineering Department, National Chiao Tung University | Director, Dingxun Telecom Development Culture and Education Foundation  
Director, National Information Infrastructure Enterprise Promotion Association |
| Independent Director | Tsung-Ming, Chung | MBA, National Chengchi University  
Passed the Accountant Examination in Connecticut State, USA  
Certified Public Accountant (CPA), Deloitte Taiwan  
Lecturer in Accounting Department, National Chengchi University  
Lecturer, Department of Accounting, National Taiwan University | Chairman, Dynapack Corp.  
Representative of corporate directors, Far Eastern International Bank Co Ltd.  
Director, Unity Opto Technology Co Ltd.  
Individual director, Fubon Hyundai Life Insurance Co Ltd. (Korea)  
Member of the remuneration committee  
Member of the operational risk management committee  
Member of the remuneration committee |
| Independent Director | Quincy Lin                | PhD in Business Administration, University of Kentucky, USA  
Senior Vice President, Taiwan Semiconductor Manufacturing Co Ltd.  
Chairman, Neo Solar Power Energy Corp. | Chairman, Rafael Micro  
Chairman, V5 Technologies  
Director, co-founder and strategic consultant, United Renewable Energy Co Ltd.  
Independent director, member of the audit committee member and remuneration committee, Powertech Technology Inc. |
| Independent Director | George Chen | PhD in Atmospheric Sciences, State University of New York, USA  
Chair Professor, National Taiwan University  
Distinguished Chair Professor, National Taiwan University  
Dean of the National Taiwan University  
Head of the Department of Atmospheric Sciences, National Taiwan University  
Chairman of the Chinese Geoscience Union | Distinguished Chair Professor, National Taiwan University  
Individual director, member of the audit committee and remuneration committee, Ichia Technologies Inc. |
According to our regulations and the “Regulations Governing Appointment of Independent Directors and Compliance Matters for Public Companies”, the election of directors shall take into account the overall setup of the Board. At Chroma, the factors to be considered in the composition of the Board of Directors include: the ability to exercise operational judgment and management, accounting and financial analysis experience, the ability to manage crises, industrial knowledge, knowledge of the global market, leadership and decision-making ability, etc. In addition, the Board of Directors has arranged that directors receive continuing external education in accordance with the “Directions for the Implementation of Continuing Education for Directors and Supervisors of TWSE Listed and TPEx Listed Companies.”

In 2018 the director training topics included the following:

<table>
<thead>
<tr>
<th>Position title</th>
<th>Name</th>
<th>Date of the training course</th>
<th>Host</th>
<th>Name of course</th>
<th>Duration of the training course in hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chairman</td>
<td>Leo, Huang</td>
<td>2018/07/03</td>
<td>Taiwan Institute of Directors</td>
<td>The 2018 annual meeting of the Taiwan Institute of Directors</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2018/07/24</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Independent</td>
<td>Tsung-Ming,</td>
<td>2018/07/24</td>
<td>Taiwan Academy of Banking and Finance</td>
<td>Board of directors’ operational practices and corporate governance workshop</td>
<td>3</td>
</tr>
<tr>
<td>Director</td>
<td>Chung</td>
<td>2018/12/24</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Directors</td>
<td>Tsun-I, Wang</td>
<td>2018/08/21</td>
<td>Accounting Research and Development Foundation</td>
<td>The &quot;e-commerce&quot; profit model and consideration of the need for internal audit and control in this era of financial technology.</td>
<td>6</td>
</tr>
</tbody>
</table>
An audit committee has been established for the implementation of internal audit and risk management

The Company has established an audit committee in accordance with Article 14-4 of the Securities and Exchange Act. It consists of three independent directors, and one of them is specialized in accounting and finance. The committee convened six meetings during the reporting period, and the member attendance rate was 89%. In compliance with the "Regulations Governing the Exercise of Powers by Audit Committees of Public Companies," the independent directors have been given the right to conduct internal audits to reinforce the quality of major company decisions. The audit committee is responsible for monitoring the presentation of company financial statements, the appointment and dismissal of accountants, the evaluation of independence and performance, the implementation efficiency of internal company control, and compliance with all relevant laws and regulations, as well as the control and management of existing or potential risks to the company.

Note: Please refer to the 2018 annual company report for details.

1.6 Establishment of the Remuneration Committee

A Remuneration Committee was established in accordance with the "Securities and Exchange Act". The committee, which convenes two meetings per year, consists of three independent directors, each with a 3-year term. It is currently in the 3rd term. The average member attendance rate for the Remuneration Committee was 83% in 2018. The Remuneration Committee conducts assessment on the remuneration policies and systems and business performance of the directors and managers. The Committee makes proposals about the rate appropriation for the distribution of dividends in an objective and professional manner. The Committee also makes suggestions about the remuneration of managers and the company remuneration policies, and offers advice based on the environment of industrial competition and the short, medium, and long-term business goals. In addition, we regularly take part in salary surveys carried out in the industry, or by consulting firms, to determine if our salary and welfare measures continue to meet the market standards and to design a welfare system with incentives. Please refer to our annual electronic reports for the details of proposals made in meetings of shareholders about the distribution of employees and directors remuneration.
1.7 Implementation of integrity management and anti-corruption measures

To sustain business operations, the company needs to evaluate the importance of corporate ethics and the implementation of social responsibility, to maintain the trust and respect of the consumer, partners and the public. Ethical business transactions have long been an important company business concept. We will continue all our business activities with integrity, and absolutely free of any kind of corruption or fraud.

To align employees and suppliers with our business standards and actively continue an ethical management policy, we have established "Ethical Management Best Practices," "Rules on Ethical Management Best Practices," "Ethical Code of Conduct," "Regulation of Employee Rewards and Discipline" and "Vendor Management Regulations." This will help our employees, managers and members of the board of directors to be more aware of the ethical standards to which their duties must comply and also help them to continue to hold themselves to the highest of standards.

Should there be any suspicious behavior or violation of ethical code, by internal or external company personnel, or Chroma representative, a report can be made using the case reporting system. This includes reporting by Email (audit@chroma.com). This system has been set up to encourage internal or external company personnel to contact the dedicated unit using the proper channels. The identity of any person making such a report will be kept confidential.

In addition to insisting that our employees maintain ethical and professional conduct, we have established rules that prevent possible conflict of interest between our suppliers and related parties. We stipulate several procedures for the prevention of unethical conduct in the "Rules on Ethical Management Best Practices." Furthermore, our vendors are required to sign the "Integrity Commitment Form for Suppliers" document which clearly prohibits inappropriate or dishonest conduct in commercial transactions. Any dishonest conduct will result in a cancellation or termination of the contract.

In addition, various procedures are in place, detailed in the "Rules on Ethical Management Best Practices", that prevent unethical conduct. Furthermore, our vendors are required to sign the "Integrity Commitment Form for Suppliers," which clearly prohibits any inappropriate or dishonest conduct in the course of commercial transactions.

The managerial officers of the company strictly abide by the principles of integrity. All departmental supervisors are responsible for the promotion of anti-corruption measures in their sections. This ensures that all our employees have the same ideas about ethical conduct. These promotions have been effective and there was no illegal conduct reported in 2018. All our employees abide by these ethical regulations, and this is clear demonstration of the successful implementation of the corporate integrity management philosophy.
Social Responsibility Organization

2.1 A dedicated CSR unit
2.1 A dedicated CSR unit

Chroma has established the “CSR Committee” (with a four year term) and the President is the current Chairman. Led by the Chairman, all relevant divisions of Chroma shall be responsible for the implementation of strategies and sustainable corporate development. The Center for Environmental Protection, Safety and Health has been designated as the primary point of contact.

We are determined to continue as a socially responsible enterprise and will promote CSR ideas and actions throughout the Chroma Group. This will help us to achieve corporate sustainable development. To do this we need continuously correct and improve our business operations. We have also released the “Principles on CSR Best Practices” to demonstrate our clear commitment to social responsibility.

To maintain corporate sustainable development and continue the overall development of social responsibility, both locally and internationally, we offer regular opportunities for our employees to engage in both internal and external educational activities. These include both training courses and seminars and we aim to keep advancing the sustainable thinking that guides the “CSR Committee”. We are focusing on the planning and promotion of CSR-related matters in our group, including governance policies, corporate commitments, environmental protection and social engagement.

The “Principles for CSR Best Practices” were established in 2016 and all employees and interested parties were informed. Chroma encourages an emphatic business management approach towards the fulfillment of CSR to keep in line with the international trend towards balancing care for the environment with society and corporate governance. Everyone in Chroma is encouraged to assume responsibility as a corporate citizen to increase our contribution to the national economy. The objective being to improve the quality of the lives of employees, communities and society, and also to maintain our competitive advantages. To fulfill the purpose of CSR and respect social ethics and the rights of other stakeholders, we need to pay attention to relationships between the environment, society and corporate governance in the pursuit of sustainable management and profit. Such concerns should become a part of Chroma management and operations.

The CSR Committee held four meetings in 2018. Issues discussed during the meetings included energy management, social welfare, employee care, corporate sustainable management, management of the social responsibility of suppliers, various CSR plans and devoted resources, and the planning of implementation reports. The meetings were held to realize management commitment, promote a balance between the economy, environment and society, and achieve sustainable development.

Regular discussions and meetings are held to strengthen communication among the divisions. Internal and external resources are mobilized for project planning and management. We also keep making improvements to meet the goal of corporate sustainable development and demonstrate that the company is truly dedicated to fulfilling our social responsibility.
Communication with Stakeholders

3.1 Identification of Stakeholders
3.2 Channels and Frequency of Communication and Engagement with Stakeholders
3.3 Material Aspects for Consideration and Boundary Identification
3.4 Material Topics
3.5 Matrix of Material Topics
3.6 Material Topics and Description of Value Chain Boundaries
3.7 The annual achievements corresponding to the UN Sustainable Development Goals (SDGs)
3.1 Identification of Stakeholders

Understanding the needs and expectations of stakeholders is a key to the core implementation of corporate social responsibility, and also the key to report analysis and disclosure. To fulfill company social responsibilities, we heed the needs and expectations of the people through various communication channels and proactively respond in a sincere manner. We identify various sustainability topics of concern by means of material topics in the GRI Standards, as a basis for the disclosures in our yearly Corporate Social Responsibility Report.

To identify stakeholders related to Chroma, meetings of stakeholders are held. In accordance with the AA1000 stakeholders engagement standard, these meetings discuss the influence, level of attention, responsibility, level of dependence and diverse perspectives. Discussions based on employee feedback were held at the CSR Committee meetings in 2018 to recognize the main stakeholders.

The main Chroma stakeholders identified by the CSR Committee are:

- Employees
- Customers
- Suppliers/Contractors
- Investors (Shareholders)
- Government agencies
- Communities and non-profit organizations

The annual report contains no significant changes for the main company stakeholders, compared with the 2017 report.

The company believes that building a close relationship and communications between Chroma and society is an important part of CSR fulfillment. We have adopted an open approach and value the opinions of all parties. We are able to receive valuable suggestions and advice by close communications with our stakeholders and this helps us to understand their actual needs and expectations. The CSR reports help with the identification of potential risks as well as management opportunities. We continue to improve our operations to meet the requirements for corporate sustainable management.
### 3.2 Channels and Frequency of Communication and Engagement with Stakeholders

We conducted a matrix analysis on the levels of concern shown by different types of stakeholders and the degree of immediate or potential impact on our company using internal communication, coordination, and the assessment of effective management integration. The aim was to determine how much concern stakeholders have shown for a particular topic and how much impact that has had on our business operations.

<table>
<thead>
<tr>
<th>Stakeholders</th>
<th>Target audience</th>
<th>Communication channel and frequency</th>
<th>Main background and experience</th>
</tr>
</thead>
</table>
| Employees           | All employees                            | Labor-management meeting (quarterly)  
Performance evaluation (yearly)  
Occupational Safety and Health Committee (quarterly)  
Education and training (irregular)  
Employee Welfare Committee (quarterly)  
E-mail, e-bulletin, announcement (irregular) | Corporate Governance and sustainable development  
Operational performance  
Operational risk  
Talent cultivation, education and training  
Labor-management relations and employee welfare  
Workplace occupational safety |
| Customers           | Customer liaison                         | Survey of customer satisfaction (regular)  
Customer service hotline, e-mail, official website (irregular) | Customer relationship management  
Innovative R&D  
Customer satisfaction and complaint channel  
Green and energy-efficient product design  
Customer privacy management |
| Suppliers/Contractors | Supplier  
Labor contractor | Supplier evaluation (yearly)  
Interview of contractors (irregular)  
Contract (irregular)  
Education and training of suppliers/contractors (irregular) | Supplier Management  
Green and energy-efficient product design  
Occupational Safety  
Operational performance  
Compliance  
Environmental laws and regulations |
| Investors (Shareholders) | Shareholder/Director | Board of Directors/regular  
Annual and financial reports/regular  
Official website update/irregular  
Shareholders’ Meeting/annual | Corporate Governance and sustainable development  
Operational risk  
Innovative R&D  
Compliance |
| Government agencies | Government organization | Inspections and seminars on fire and labor safety/regular  
Hotline, e-mail and meetings/irregular  
Official letters/irregular  
Visits/irregular | Corporate Governance and sustainable development  
Operational performance  
Compliance  
Environmental strategy and management  
Greenhouse gas control |
| Communities and non-profit organizations | Residents in the neighborhood areas of the Linkou, Hsinchu and Kaohsiung plants | Community activities and care/irregular  
Holding events/irregular  
Voluntary service/irregular | Community engagement  
Public service  
Environmental strategy and management |
3.3 Material Aspects of Consideration and Boundary Identification

Discussions were held by the CSR Committee on topics of sustainable development of relevance to Chroma. The topics included GRI, ISO26000 and other regulations. Indicators developed by sustainable investment institutions were also used as reference, these included the Dow Jones Sustainability Index (DJSI), Carbon Disclosure Project (CDP), MSCI, and UN Sustainable Development Goals (SDGs). A total of 15 key topics were selected for discussion.

Regarding 11 of the material topics, we looked for corresponding ones in the new version of GRI Guidelines, collected information on sustainability, and presented related management policies and sustainability plans.

To determine the level of concern shown by each type of stakeholder, each Chroma division conducted a survey between December 2018 and January 2019, that included questionnaires that were sent to all our major stakeholders, employees, customers, suppliers, communities and investors. A total of 756 valid questionnaires were returned. The questionnaires were in written and electronic form.

Next, the managers of the divisions did a sustainability impact assessment. Based on the four principles for defining report content in the GRI Sustainability Reporting Guidelines, they then evaluated the effect of each topic on our operations.

- **Stakeholder Inclusiveness**: Clarification of the stakeholders and description of how to respond to their reasonable expectations and interests.
- **Materiality**: Whether the selected topics would have significant impact on the economy, environment and society.
- **Sustainability Context**: How the cooperation can make effective improvement and reduce damage with respect to the local or global trends of economic, environmental and social development.
- **Completeness**: Full appreciation of the stakeholders’ ideas and thoughts and understanding of their needs and expectations.

The matrix of the material topics was decided in the previous two steps. The CSR Committee resolved to confirm the material topics, which were then adopted as goals for the development and planning of sustainable operation.
3.4 Material Topics

No significant changes in material topics were found in 2018, compared to 2017. However, the importance of customer relationship management and green energy-saving product design were enhanced.

<table>
<thead>
<tr>
<th>Item no.</th>
<th>Category</th>
<th>Material topic</th>
<th>Comparison with 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Economic</td>
<td>Operational performance</td>
<td>No change</td>
</tr>
<tr>
<td>02</td>
<td>Environmental/Social</td>
<td>Innovative R&amp;D</td>
<td>No change</td>
</tr>
<tr>
<td>03</td>
<td>Corporate Governance</td>
<td>Corporate Governance and sustainable development</td>
<td>No change</td>
</tr>
<tr>
<td>04</td>
<td>Corporate Governance</td>
<td>Operational risk</td>
<td>No change</td>
</tr>
<tr>
<td>05</td>
<td>Economic</td>
<td>Customer relationship management</td>
<td>Up</td>
</tr>
<tr>
<td>06</td>
<td>Social</td>
<td>Labor-management relations and employee welfare</td>
<td>No change</td>
</tr>
<tr>
<td>07</td>
<td>Social</td>
<td>Talent cultivation, education and training</td>
<td>No change</td>
</tr>
<tr>
<td>08</td>
<td>Environmental</td>
<td>Green and energy-efficient product design</td>
<td>Up</td>
</tr>
<tr>
<td>09</td>
<td>Environmental</td>
<td>Environmental management, energy saving and carbon reduction</td>
<td>No change</td>
</tr>
<tr>
<td>10</td>
<td>Economic/Environmental/Social</td>
<td>Supplier Management</td>
<td>No change</td>
</tr>
<tr>
<td>11</td>
<td>Social</td>
<td>Occupational safety management</td>
<td>No change</td>
</tr>
</tbody>
</table>

3.5 Matrix of Material Topics
## 3.6 Boundaries of Material Topics

<table>
<thead>
<tr>
<th>Material topic</th>
<th>Applicable GRI material topic</th>
<th>Importance to operations</th>
<th>(Corresponding chapter)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operational performance</strong></td>
<td>Economic Performance/ (GRI-206)</td>
<td>● The core values of our business are “precision”, “reliability” and “uniqueness”. We run our business of measurement and automated testing on this basis, safeguarding electronics. We continue to seek technological innovation to increase profit and ensure steady operations. We believe that stable performance over the long term can only be achieved by effective overall operations.</td>
<td>1. About Chroma 4. Corporate Governance</td>
</tr>
<tr>
<td><strong>Innovative R&amp;D</strong></td>
<td>Economic Performance/ (GRI-206)</td>
<td>● We focus on emerging green industries such as solar power and electric vehicles. We invest greatly in R&amp;D and provide our customers with comprehensive and diverse solutions as a leading manufacturer in these relevant sectors. ● We encourage our employees to engage in innovative R&amp;D. We have established a comprehensive system for patent application to protect intellectual property rights.</td>
<td>6. Innovative R&amp;D and Green Design</td>
</tr>
<tr>
<td><strong>Corporate Governance and sustainable development</strong></td>
<td>No applicable GRI material topic</td>
<td>● We actively seek to enhance the effectiveness and improve the mechanism of corporate governance. ● We seek to increase the stability and transparency of our business operations, safeguard the rights and interests of shareholders, and strengthen the functions of the Board of Directors and committees. Our aim is to enhance the level of company information transparency and carry out corporate sustainability through effective operations.</td>
<td>4. Corporate Governance</td>
</tr>
<tr>
<td><strong>Operational risk</strong></td>
<td>No applicable GRI material topic</td>
<td>● All divisions in Chroma conduct effective and accurate analyses of operational risks to ensure that both stability and growth are sustainable. We seek to decrease operational losses caused by the risks and increase efficiency and effectiveness. ● We remain informed and in compliance with the requirements of all applicable laws and regulations. ● We stress the importance of applications for technology patents. ● We protect customer privacy and intellectual property rights.</td>
<td>4. Corporate Governance</td>
</tr>
<tr>
<td><strong>Labor-management relations and employee welfare</strong></td>
<td>● Labor-Management Relations/(GRI-402) ● Labor-Management Relations/(GRI-401) ● Employee diversity and equal opportunities/(GRI-405)</td>
<td>● Professional talent is considered a valuable and vital asset and we provide a good working environment, competitive compensation and an excellent welfare system for our employees. ● We care about our employees and listen to their demands. We maintain a satisfactory work environment and pay attention to health, safety and welfare. ● We offer comprehensive employee benefits that make Chroma a happy working environment.</td>
<td>7. Employee Care</td>
</tr>
</tbody>
</table>
## Material topic

| Customer relationship management | Marketing and Labeling (GRI-417) | • Based on customer attributes and industrial development, we provide new products for new and green industries and customize our services to meet the diverse needs of our customers.  
• We are committed to the provision of innovative services. We conduct regular customer satisfaction surveys to ensure the provision of comprehensive service solutions.  
• We protect customer rights and data security in the most stringent way to maintain customer trust. | 4. Corporate Governance | ▲/★ |

| Talent cultivation, education and training | Training and Education (GRI-404) | • The cultivation of professional talent, and the improvement of talent quality, has resulted in an increase in employee professionalism. We encourage our employees to acquire professional skills and qualifications to enhance their capabilities, as well as that of the company, to maintain market competitiveness.  
• We have dedicated a great deal of effort to cultivating talent, as well as to understanding the demands of our employees. We have well-designed plans for talent development to improve employee skills, to develop a closer relationship with them, and to establish a Chroma identity. This helps to motivate employees, increases the efficiency of production and innovative R&D, and achieves better business performance. | 7. Employee Care | ▲/★ |

| Green and energy-efficient product design | Energy (GRI-302) | • We follow the trends and dynamics of the markets and industries and continue to devote effort to technological innovation and R&D. We seek to reduce the consumption of energy and resources and limit the environmental impact through the enhancement of efficiency, the use of eco-friendly materials and lower costs.  
• We actively seek to increase the energy and resource efficiency of our internal processes to reduce the consumption of resources in production. | 6. Innovative R&D | ▲/★ |

| Labor management relations and employee welfare | Energy/Emission/Waste (GRI-302/305) | • We have taken all the key aspects of environmental protection and its legal requirements into account, and implement the regulations accordingly. We also maintain an inventory and verification of greenhouse gas (GHG) emissions. | 5. Environmental Protection | ▲/★ |

| Supplier Management | Procurement practices/Supplier environmental assessment/Supplier social assessment (GRI-204/308/414) | • We implemented a mechanism for supplier management, evaluation and improvement, to allow us to grow together with our suppliers.  
• We provide guidance as well as training sessions for our suppliers and contractors. This raises their awareness of our systems and regulations and their implementation. | 4. Corporate Governance | ▲/★ |

| Occupational safety management | Occupational Safety (GRI-463) | • We have implemented an occupational safety management system in our factories as well as an overall system of functional committees. We seek to raise employee awareness of occupational safety and encourage them to participate in courses on occupational safety and health management, ultimately leading to the acquisition of professional certification, reduction of employee accidents, and creation of a safe work environment. | 7. Employee Care | ▲/★ |

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▲ The QCDS audit is the management approach we have adopted for our procurement units to assess their quality (Q), cost (C), delivery (D) and service (S).
3.7 The annual achievement corresponding to the UN Sustainable Development Goals (SDGs)

Our actions for the SDGs

In response to the 2030 SDGs adopted by the UN, we have assessed the risks and opportunities the actions in our value chains may bring in accordance with the “SDGs Compass”. We have included the current and future impact, both positive and negative, in a prediction of the outlook for our operational goals.

We have identified sustainable development indicators for Chroma based on the 17 SDGs. We have also used the indicators to set the vision and concrete strategies and objectives for sustainable development following the spirit of the SDGs. By incorporating the SDGs into our operations we have established several objectives and regular follow-ups of SDG performance are being done by the CSR Committee. We hope to see substantial improvement in the global sustainability issues.
<table>
<thead>
<tr>
<th>SDGs indicator</th>
<th>Material topics of concern to Chroma</th>
<th>Company action in 2018 and corresponding chapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 Good Health and Well-being</td>
<td>Social care and public welfare</td>
<td>We continue to care for underprivileged groups to facilitate a healthy society.</td>
</tr>
<tr>
<td>4 Quality Education</td>
<td>Talent cultivation</td>
<td>We continue to work with institutions, colleges and universities to cultivate professional skills for the next generation.</td>
</tr>
<tr>
<td>5 Gender Equality</td>
<td>Labor-management relations and employee welfare</td>
<td>The company fully implements gender equality.</td>
</tr>
<tr>
<td>7 Affordable and Clean Energy</td>
<td>Environmental management and climate change</td>
<td>We have reduced the consumption of various energy and resources by optimizing energy management. We cooperate with green energy business operators in the development of a green energy industry.</td>
</tr>
<tr>
<td>8 Decent Work and Economic Growth</td>
<td>Corporate Governance and sustainable development</td>
<td>We have created a good working environment and a competitive compensation and welfare system, as well as adequate employment opportunities.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SDG indicator</th>
<th>Material topics of concern to Chroma</th>
<th>Company action in 2018 and corresponding chapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>11 Sustainable Cities and Communities</td>
<td></td>
<td>• Understanding the needs of the customer and the government and policies. Active R&amp;D of innovative and sustainable green products, as well as a forward look towards a turning point that will lead to the creation of a sustainable environment.</td>
</tr>
<tr>
<td>13 Climate Action</td>
<td>Energy saving, carbon reduction and environmental protection</td>
<td>The optimization of manufacturing processes and the gradual introduction of energy-saving equipment. The establishment of various energy-saving regulations for the plants and offices. Raising the employee awareness of energy conservation and carbon reduction. We hope to reduce the amount of greenhouse gas emission.</td>
</tr>
<tr>
<td>16 Peace, Justice and Strong Institutions</td>
<td>Social care and public welfare</td>
<td>The practical implementation of sustainable development and care for underprivileged groups of society.</td>
</tr>
<tr>
<td>17 Partnerships for the Goals</td>
<td>Social care and public welfare</td>
<td>Reinforce sustainable development relationships with business partners.</td>
</tr>
</tbody>
</table>
Corporate Governance

4.1 Financial Performance
4.2 Long-term and Short-term Business Development Plans
4.3 Internal Risk Control and Management System
4.4 Listening to Customer Feedback
4.5 Participation in Industry Groups and Associations
4.6 Legal Compliance and Intellectual Property Rights
4.7 Supply Chain Management
Corresponding “material topic”

- Operational Performance
- Corporate governance and sustainable development

Meaning for Chroma

- Business operations are based on maintaining stable growth of profits to meet the expectations of investors and stakeholders. We can achieve stable business performance in the long term only through pursuit of overall operational benefits and market development.
- We are able to enhance the stability and transparency of business operations with a well-established mechanism for corporate governance.

Concrete plans for 2018

- We plan to enhance the stability of business operations, by continuous improvement of corporate governance and evaluations of the system.

Goals for 2018

- We hope to rank within the top 20% of publicly traded companies for good corporate governance.

Resources invested

- Our website lists the contact persons for investor relations
- We continue to publish the CSR reports every year

Evaluation mechanism

- We publish financial information and news about our company periodically in accordance with the applicable legislation.

Concrete performance in 2018

- In 2018, our ranking in the corporate governance evaluation of publicly traded companies was within the top 21%-35%.
- Our earnings per share (EPS) reached NT$6.22.

2019 or medium-term to long-term goals

- As one of the top 20% publicly traded companies in the ranking of corporate governance we continue to enhance this particular attribute.
- We understand local and international trends in corporate governance and take part in related evaluation and certification to meet international standards and remain focused on sustainable development.
4.1 Financial Performance

The global economy grew steadily in the first half of 2018. However, there was a gradual slow-down in the second half of the year due to uncertainties such as the China-US trade war. Most manufacturers have been affected and have suspended planned expansion of production capacity, frozen capital expenditures, and even plan production outside China. Our company measurement instrument business has been affected and our annual revenue has declined quarter by quarter.

In 2018, the operating revenue was NT$7,547 million, the Group's revenue was NT$16,931 million, the net profit after tax was NT$2,547 million and earnings per share were NT$6.22.

Looking back at the previous year, the Group's overall measurement instrument business decreased slightly by 1%. However, sales of power electronic testing equipment still grew steadily by 4%, as the global market still shows strong demand for high-power electronic testing equipment for electric vehicles and lithium batteries. However, the low market demand for semiconductor/Photonics related testing equipment has resulted in a 23% decrease in annual operating revenue. In addition, MAS Automation (part of the Group) had outstanding business operations performance last year and its annual revenue increased by 92%. This also resulted in an increase in annual revenue of 14%. This set an historic high record for the Group's annual revenue.

Looking forward to 2019, although the protectionism of the US has boosted the US market, the trade war between the United States and China has also created uncertainties for future global economic growth. In response to the trade downturn and rapid changes in the economic environment, the company has decided to take the following measures:

1. A clear understanding of the growth demands in the North American market and reinforcement of the marketing and sales business.
2. Pay close attention to the new demand of manufacturing ‘outside China’ for the Southeast Asian market.
3. Actively develop the related testing and measurement products for AI, 3D Imaging Sensing and 5G communication.

We expect to overcome difficulties and generate more operating revenue and profit for our shareholders.
### Key Financial Indicators
(Group Consolidated Financial Report)

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consolidated revenue</td>
<td>11,624</td>
<td>14,901</td>
<td>16,931</td>
</tr>
<tr>
<td>Net profit after tax</td>
<td>1,720</td>
<td>2,558</td>
<td>2,546</td>
</tr>
<tr>
<td>EPS (NT dollar)</td>
<td>4.53</td>
<td>6.41</td>
<td>6.22</td>
</tr>
<tr>
<td>Capital (millions of NT dollars)</td>
<td>3,899</td>
<td>4,119</td>
<td>4,168</td>
</tr>
<tr>
<td>Total assets (millions of NT dollars)</td>
<td>18,633</td>
<td>22,018</td>
<td>23,202</td>
</tr>
<tr>
<td>Total equity (millions of NT dollars)</td>
<td>10,788</td>
<td>13,463</td>
<td>14,690</td>
</tr>
<tr>
<td>Return on assets (%)</td>
<td>10.12</td>
<td>12.68</td>
<td>11.37</td>
</tr>
<tr>
<td>Return on equity (%)</td>
<td>17.18</td>
<td>21.46</td>
<td>18.42</td>
</tr>
</tbody>
</table>

**Note:** Our consolidated financial report includes information from our affiliates. Please refer to the 2018 annual report for details.
### 4.2 Short-term and Long-term Business Development Plans

<table>
<thead>
<tr>
<th>Short-term development plan</th>
<th>Goal</th>
<th>Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Focus on tier-1 customers worldwide and increase market share for all products.</strong></td>
<td>We market our products to tier-1 customers worldwide. Being certified for use by tier-1 customers is strong evidence of the quality of our products. It helps raise our profile, makes product sales easier and increases their market share.</td>
<td></td>
</tr>
<tr>
<td><strong>Accelerate the pace of innovation, develop instruments and systems with AI will, and fulfill the demands of smart manufacturing</strong></td>
<td>Major industrialized countries are encountering the issue of an aging society and high wages, the development of AI and smart factories can greatly reduce manpower need which significantly increases the possibility that some manufacturers will move to the US. Therefore, we have invested in big data analysis. The focus will be on machine and deep learning. We will apply AI technologies to make Chroma measurement and testing equipment more intelligent and also to give early warning about the health of equipment. We will also combine AI technologies with our intelligent manufacturing systems to help our customers with big data analysis and predictions to improve their processes. We seek to accelerate the development of measurement, testing and turnkey solutions that are “precise”, “reliable” and “unique” to meet future market demand.</td>
<td></td>
</tr>
<tr>
<td><strong>Precise business operations management, and effectively enhance quality and efficiency</strong></td>
<td>We build a complete information management system, create databases of product R&amp;D technologies as well as information about technical talent, and update the business management system. The goal is to accelerate product R&amp;D and provision of data for management analysis to serve as a basis for making decisions on business management and to improve product quality.</td>
<td></td>
</tr>
<tr>
<td><strong>Implement Program 5300, enhance our market analysis for products, and formulate strategies for the development of product lines to increase our operation scale</strong></td>
<td>We will strengthen our market analysis for products, study market trends more thoroughly, and formulate strategies for the development of product lines. We will develop marketing strategies and implement Program 5300 to increase the scale of our operations.</td>
<td></td>
</tr>
</tbody>
</table>
"The active development of world-class products to become a world-class enterprise" is our vision for long-term growth of the company. All world-class products must have three specific characteristics, “precision”, “reliability”, and “uniqueness,” to give customers valuable test solutions for various electronic technology industries. We believe that a world-class enterprise itself also requires three elements, “innovative technology,” “own brand,” and “globalization.” Chroma devotes a great deal of effort and resources to research and development to sustain its leading key technologies and highly integrated capabilities in the optical, mechanical, electronic, temperature control and software fields. This is vital to retaining a competitive advantage and maintain sustainable business operations.

<table>
<thead>
<tr>
<th>Goal</th>
<th>Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expand sales channels in all areas, and provide customers with services of the best quality.</td>
<td>The international division of labor has led to the expansion of manufacturing bases in the IT industry. To provide our customers with services of the best quality, we and our subsidiaries have been building marketing networks through overseas subsidiaries and by increasing the number of our overseas agents and distributors. Taiwanese companies have been investing in Southeast Asia over the past few years. The company has also established sales sites in the area through a subsidiary in Singapore. Various activities are supported by the parent company and we expect to generate more revenue in the region. We are actively promoting products of our own brands. Through marketing networks, we are looking for strategic alliances with internationally well-known brands for agency agreements and the distribution of specialized equipment. The aim being to enhance the efficiency of overall resources.</td>
</tr>
<tr>
<td>Human resources plan</td>
<td>Chroma and its subsidiaries have been engaged in the development of niche products for a long time. They are technology-intensive and require the cultivation of professional talent and strong employee education and training. We have established knowledge management platforms and learning databases that help employees dive into the available technological expertise. The aim is to enhance the quality of human resources and reduce the time needed for learning.</td>
</tr>
<tr>
<td>Product development plan</td>
<td>Chroma and its subsidiaries have been investing in electronic product testing for years, and have kept our product development strategies well in line with development in the industries. In addition to developing testing equipment for semiconductors and flat panel displays, we also focus on customized modular instruments, system integration and diversified automation. Rising labor costs and an aging population have made the smart network, industrial automation and medical care very important. Therefore, our long-term plan for product development envisages investment in testing equipment for smart network products, as well as smart industrial and medical care equipment. We will engage in upstream and downstream integration and seek acquisitions to create opportunities for the establishment of relevant product lines.</td>
</tr>
</tbody>
</table>
4.3 Internal Risk Control and Management System

Chroma is committed to steady and solid business strategies and the idea of sustainable management. We regularly review overall risk and stipulate comprehensive measures in response to any potential risks the company may encounter in the future. Potential risks include those to business operations, finance, the environment and information security. Our risk management mechanism allows us to anticipate and control potential risks that might have an effect on operations and profits, in order to reduce negative impact and losses and significantly lower the operational risk, damage and the impact on the company. If a risk is encountered, we can react quickly and develop strategies and emergency measures to protect the safety, rights and interests of our stakeholders.

<table>
<thead>
<tr>
<th>Aspect of risks</th>
<th>Main risk areas</th>
<th>Our response</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Financial risks</strong></td>
<td>Exchange rate</td>
<td>1. Exchange rate: We use a natural hedging process that includes the write-off of additional accounts receivable in foreign currencies due to trading in US dollars, accounts payable in foreign currencies due to purchase, and short-term bank loans in foreign currency. We also pay close attention to changes in exchange rates. We adjust foreign currency positions and implement strategies for foreign currency hedging at suitable times.</td>
</tr>
<tr>
<td><strong>Interest rate</strong></td>
<td>2. Interest rate: In response to possible risks arising from changes in interest rates, we take into account the loose conditions of market funds and negotiate favorable interest rates for loans with banks to actively reduce operational costs.</td>
<td></td>
</tr>
<tr>
<td><strong>Credit risk</strong></td>
<td>3. Credit risk: We review and control the credit lines of our customers in accordance with our internal standards for credit rating. Please refer to the risk description and evaluation in the annual Company financial report.</td>
<td></td>
</tr>
<tr>
<td><strong>Business risks</strong></td>
<td>Horizontal competition</td>
<td>We have always focused on the development of measurement instruments. We have maintained good relationships with our customers and continued to follow industrial dynamics. Our professional R&amp;D teams provide our customers with the best solutions.</td>
</tr>
<tr>
<td><strong>Industrial development</strong></td>
<td>1. A comprehensive information technology management system: This is based on the needs of businesses, and systems have been developed that include an EIP (enterprise information system), eHR (human resources information system), eServices (service platform information system) and eFinance (financial information system).</td>
<td></td>
</tr>
<tr>
<td><strong>Information security</strong></td>
<td>2. A good information technology environment: A host and desktop virtualization system enables us to save energy and power. Backup power and host backups are provided by all the server rooms. We regularly restore and test important systems and data to lower the risk of data loss. We have also carefully designed plans for emergency response as well as employee training in data protection.</td>
<td></td>
</tr>
<tr>
<td><strong>Sound IT systems</strong></td>
<td>3. Internet security and protection: We have raised the level of Internet security protection and Internet access management. We have mechanisms for endpoint anti-virus protection and USB locking. We apply filters to remove viruses and fraudulent emails. Confidential documents and R&amp;D assets are protected by encryption. We respect intellectual property rights and regularly publish on and inspect the use of software.</td>
<td></td>
</tr>
<tr>
<td><strong>Good IT environment</strong></td>
<td>4. The information security reports that are regularly presented to the management reduce security risks: Monthly reports are prepared on the status of information security to review and improve information security.</td>
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</tr>
</tbody>
</table>
### Occupational safety risks

**Occupational accidents**

1. We plan to establish a system for occupational safety management and implement ISO45001. The system is designed to identify workplace hazards and risks in all factories and rate them based on frequency and severity. We have established relevant regulations to strengthen occupational safety control.
2. We have implemented management procedures for all in-plant work carried out by contractors. Rigorous training is conducted specifically designed to prevent occupational accidents and avoid forced interruptions in business operations caused by accidents.
3. We periodically review the legality of all the different laws and regulations because they are becoming stricter by the day.

### Environmental risks

**Climate change**

1. We are devoting much attention to the development of green and innovative energy-saving products. We are developing green manufacturing processes and technology, and are implementing green energy management in our factories.
2. We are committed to energy saving and the reduction of GHG emissions. Our main focus is on making employees aware of the need for energy saving to reduce emissions and also lower costs. The problem of global warming is becoming more serious by the day. In an effort to reduce carbon emissions, we have introduced ISO 14064-1 GHG inventory and examined the primary sources of energy consumption in an effort to control and reduce the consumption of resources. The goal being to prevent operational risks in the global market and the vast consumption of energy that has accompanied climate change.

**Energy crisis**

1. We are committed to energy saving and the reduction of GHG emissions. Our main focus is on making employees aware of the need for energy saving to reduce emissions and also lower costs. The problem of global warming is becoming more serious by the day. In an effort to reduce carbon emissions, we have introduced ISO 14064-1 GHG inventory and examined the primary sources of energy consumption in an effort to control and reduce the consumption of resources. The goal being to prevent operational risks in the global market and the vast consumption of energy that has accompanied climate change.

### Compliance risks

**Contracts**

1. The Legal Affairs Division has strengthened contract review procedures and enlisted the assistance of other divisions with questions related to product liability and legal obligations.
2. We provide assistance to our business units in matters involving patent application, trademarks and other intellectual property rights, to ensure the proper protection of our patents.
3. We seek to raise the legal knowledge of our employees to make them more aware of legal compliance and to avoid risk.

**Product liability**

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2. We provide assistance to our business units in matters involving patent application, trademarks and other intellectual property rights, to ensure the proper protection of our patents.
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**Intellectual property**

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3. We seek to raise the legal knowledge of our employees to make them more aware of legal compliance and to avoid risk.

### Supplier concentration risks

**Defective raw materials**

1. Review of qualified contractors: Our cooperation with suppliers is based on strategic thinking that includes “balanced competition in procurement”. For the purpose of risk diversification, the selection of qualified contractors is based on factors that include technological productivity, quality, price and delivery.
2. The evaluation of qualified contractors: Performance assessments are done every six months on all contractors.
3. The establishment of a good relationship with suppliers: We regard suppliers as partners. Cooperation and mutual trust allows us to find common ground and achieve a positive outcome for both sides. Necessary preparation for a procurement process includes assessment of “advantages” and “risks”, setting high goals that must continue under “low-risk procurement” conditions with core suppliers and maintaining a good relationship.

**Suspension of operations due to a shortage of material**

1. Conduct inventories and audits on a regular basis. Schedule and implement employee career development plans, to maintain stability and competitiveness in our employees.
2. Recruitment of top talent: Expansion of our business has increased the demand for professionals in all areas. Sole reliance on our recruitment platform has become inadequate. We have developed the following strategies as a response:
   - **A. Active establishment of channels for campus recruitment**
   - **B. Visits to the businesses**
   - **C. Negotiation of industry-academic collaboration to attract top talent to Chroma as early as possible.**
3. Changes in laws and regulations: strict implementation of the labor laws and regulations is vital because they are gradually becoming stricter. The company is raising awareness of the amendment of laws and regulations and is promoting early application for extra working hours to prevent unnecessary overtime.

### Recruitment risks

**Changes in laws and regulations**

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### Disaster risks

**Fire, flood, earthquake, water and power outage**

The following risk prevention and management measures must be carried out proactively:

1. Risk assessment - We analyze potential disasters in advance and designate vital control points based on the probabilities of an event and possible consequences, as well as effective means of protection against damage.
2. Risk response - In the event of disasters, we immediately activate crisis management and emergency response to prevent or limit damage and ensure the safety of workers and the factories.

Ensure that the safety standard for our factory employees meets the highest standard in the technology industry.
4.4 Listening to Customer Feedback

- **Corresponding “material topic”**: Customer relationship management

- **Meaning for Chroma**: To meet the demands of customers, we offer not only products but also comprehensive services to improve customer satisfaction.

- **Concrete plans for 2018**: Strengthen the stability of our operations. Keep improving the corporate governance system and take part in its relevant evaluation.

- **Goals for 2018**: Keep the overall score of satisfaction within the “Satisfactory” range of 4 to 5 (on a 5-point scale). Improve customer satisfaction and get a score higher than that attained in 2017. A rate of customer complaints of 0%.


- **Evaluation mechanism**: Evaluation was based on the number of customer complaints.

- **Concrete performance in 2018**: The score of customer satisfaction in 2018 was 4.31 within the range of “Satisfactory”, an increase of 0.1 from the previous year. The rate of handling of customer opinions and feedback was 100%. The rate of customer complaints was 0%. No special cases.

- **2019 or medium-term to long-term goals**: Improve customer satisfaction. Improve product and service quality according to customer feedback.
We have long continued to adhere to the belief that a world-class enterprise requires the three elements of “innovative technology”, “own brand”, and “globalization”, and that world-class products must also have “precision,” “reliability” and “uniqueness,” to achieve sustainable development. We understand that earning recognition and long-term support from our customers is the only right way for the company to maintain sustainable growth.

The company is a leading manufacturer of measuring and testing equipment. We provide customers with advanced, innovative and high-quality services to meet their demands. We are customer oriented and think proactively. We assist our customers to establish professional and customized equipment and provide them with a quality service. This approach has had a positive and beneficial effect on the growth cycle that exists between us and our customers.

Improve customer satisfaction

We have always pursued the ultimate goal of meeting customer satisfaction. We use a satisfaction survey form to determine the levels of customer satisfaction with all aspects of our performance. The survey form can be used as the basis for plans to enhance performance and to maintain our overall competitiveness and management efficiency. The survey was conducted by our marketing and planning department. The questionnaire was in four languages: traditional Chinese, simplified Chinese, English and Japanese. Customers with Chroma transactions of at least NT$300,000 in 2018 were eligible for selection as samples. The survey focused on customer satisfaction from four aspects: the product, marketing activity, salesperson and after-sales service. A total of 1500 questionnaires were sent out.

Results of customer satisfaction survey

The overall results of the survey in 2018 showed that customer satisfaction was at a “Satisfactory” level, with an average score of 4.31. The scores on all the subjects showed an increase in comparison with those of the three previous years, and were the highest attained for several years. The highest scores achieved were in product quality and sales personnel. In the future, the company plans to create more e-service platforms to fulfill the immediate requirements of our customers. The salespersons in charge will be tasked with carrying out regular follow-ups and adjustments, as a response to customer suggestions for improvement. The excellent performance of Chroma over the years has established a good interaction and cooperation model with our customers. Feedback from our customers has become a driving force for improvement in products and services. Our ultimate goal is to exceed customer expectations.

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<tbody>
<tr>
<td>Product Quality</td>
<td>4.28</td>
<td>4.19</td>
<td>4.23</td>
<td>4.26</td>
<td>4.36</td>
<td>+0.10</td>
</tr>
<tr>
<td>Marketing activities</td>
<td>3.83</td>
<td>3.85</td>
<td>3.94</td>
<td>3.95</td>
<td>4.02</td>
<td>+0.07</td>
</tr>
<tr>
<td>Sales personnel</td>
<td>4.33</td>
<td>4.25</td>
<td>4.30</td>
<td>4.36</td>
<td>4.49</td>
<td>+0.13</td>
</tr>
<tr>
<td>After-sales service</td>
<td>4.28</td>
<td>4.20</td>
<td>4.27</td>
<td>4.26</td>
<td>4.37</td>
<td>+0.11</td>
</tr>
<tr>
<td>Overall satisfaction level</td>
<td>4.18</td>
<td>4.12</td>
<td>4.19</td>
<td>4.21</td>
<td>4.31</td>
<td>+0.10</td>
</tr>
</tbody>
</table>

- ▲ Satisfaction score level is based on a 5-point scale
- ◆ Red indicates an increased satisfaction level
- ◆ Green indicates a decreased satisfaction level

Very satisfied: 5, Satisfied: 4, Average: 3, Not satisfied: 2, Very dissatisfied: 1
Protect customer property

We are absolutely committed to the principles of secrecy and confidentiality of information during business transactions with our customers. The code of conduct for employees stipulates that all the confidential information of the company shall remain secret. This ensures the safety of customer property such as hardware software, and data. Moreover, our confidential mechanism through the “ethical standards” rules in the factoriesserves to avoid the risk of information leaks.

A new information technology solutions platform

Chroma launched a new digital information service in 2018, to enhance customer service and instantly and efficiently provide product information to our customers. The robust platform functions allow our customers to instantly obtain information on various measurements and automated turnkey solutions via APP. At present, the platform service is available in three languages and it includes a global service map with functions such as GPS navigation and contact through phone, e-mail and website. This enables customers to search for the nearest local service site at any time and from anywhere. This platform creates a good communications bridge for instant customer contact. The online electronic catalog is also eco-friendly, in that it saves the printing of at least 760,000 copies a year.

Customers are able to obtain preliminary information and can also connect to the online price quotation system via the APP as to easily obtain business assistance and further information.

The company information platform covers 14 measurement solutions and more than 500 product models. The main application fields include electric vehicles, green batteries, LEDs, solar power, semiconductors, photonics, flat panel displays, video and color, power electronics, passive components, electrical safety, thermoelectric temperature control, automated optical inspection and intelligent manufacturing systems for smart factories.
4.5 Participation in Industry Groups and

In addition to continuously promoting internal sustainable events, Chroma has been taking part in activities with other industrial groups and associations. This close interaction allows Chroma to exchange ideas with peer companies in a mutually beneficial manner. Experience and comment feedback from practical operations can easily be shared. We hope to make a contribution to the electronic testing and related industries.

List of industry groups and associations Chroma joined in 2018:

<table>
<thead>
<tr>
<th>Name of Industry Groups and Associations</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taiwan Battery Association</td>
<td>Our chairman serves as a director</td>
</tr>
<tr>
<td>Automatic Optical Inspection Equipment Association (AOIEA)</td>
<td>Our chairman serves as a member of the executive committee and vice president</td>
</tr>
<tr>
<td>Semiconductor Equipment and Materials International (SEMI)</td>
<td>Member</td>
</tr>
<tr>
<td>Taiwan Electrical and Electronic Manufacturers’ Association (TEEMA)</td>
<td>Member</td>
</tr>
<tr>
<td>Taiwan Autotronics Collaborative Alliance</td>
<td>Member</td>
</tr>
<tr>
<td>Taiwan Electronic Equipment Industry Association (TEEIA)</td>
<td>Member</td>
</tr>
<tr>
<td>Photonics Industry &amp; Technology Development Association (PIDA)</td>
<td>Member</td>
</tr>
<tr>
<td>Taiwan Society for Precision Engineering (TSPE)</td>
<td>Member</td>
</tr>
<tr>
<td>Taiwan Thermal Management Association</td>
<td>Member</td>
</tr>
<tr>
<td>Taoyuan Importers and Exporters Chamber of Commerce</td>
<td>Member</td>
</tr>
</tbody>
</table>
4.6 Legal Compliance and Intellectual Property Rights

All company departments are required to comply with the relevant domestic and international laws and regulations. The company has created a dedicated department for legal affairs, under the direct management of the president, that is responsible for providing legal assistance and consultation to the departments. Furthermore, we arrange internal training courses and programs to help our employees gain a clear understanding of current laws and regulations. The operation and process specifications will be updated in a timely manner and the new information will be added to the daily work operations without delay. This ensures that the company is fully compliant with all relevant laws and regulations.

All legal documents signed or established need to be reviewed and confirmed by the dedicated legal affairs division to minimize possible risks, and to ensure a positive outcome for our customers and us.

We continue to ensure that all our operations are in conformity with local and international regulations so that we can keep running smoothly.

During the period covered by this report, we have remained in full compliance with the Trade Secrets Act, and established the “Rules for the Management of Confidential Documents” for internal control. The “Rules for Information Security and Protection and Management of Personal Information” were established to regulate the collection, processing and use of personal information in our operations in full compliance with the Personal Information Protection Act. Any personal information we obtain, including that of job applicants, employees and visitors, is subject to the provisions of the Personal Information Protection Act. We have established guidelines to ensure absolute protection of personal information and compliance with all legal requirements.
4.7 Supply Chain Management

- **Corresponding “material topic”**

- **Meaning for Chroma**
  - Suppliers are our important partners. To promote CSR and sustainable development, we have created management procedures for quality, the environment, occupational safety, society and other matters in accordance with various international standards. By doing so, we enable our partners to meet the expectations of customers and society regarding social responsibility. We can also achieve stable quality in the supply chain and make a contribution to society together with our partners.

- **Concrete plans for 2018**
  - Comprehensive implement the QCDS mechanism for supply chain management in aspects like quality and environment to meet industrial standards.

- **Goals for 2018**
  - At least 95% of our suppliers have signed the form of commitment to the investigation of hazardous substances and conflict minerals.
  - Complete the audits of at least 400 suppliers on quality and environment.
  - The local procurement rate is at least 90%

- **Resources invested**
  - The relevant R&D and the procurement and quality control staff review and manage our suppliers.
  - A total of 12 employees from the procurement division were deployed.

- **Evaluation mechanism**
  - Evaluation of suppliers is conducted twice a year.

- **Concrete performance in 2018**
  - 95% of our suppliers signed the form of commitment to the investigation of hazardous substances and conflict minerals.
  - The local procurement rate was 93%.
  - In the first and second half of 2018, the performance of respectively 488 and 437 suppliers was evaluated.

- **2019 or medium-term to long-term goals**
  - Keep strengthening supply chain management and cooperation, promote local procurement to meet green standards, implement the system for social responsibility in the supply chain, and push for sustainable development in the industry.
The suppliers are close Chroma partners and the company expects to retain sustainable growth for both through close collaboration. The company is also promoting the purchase of local materials to support the domestic economy and provide employment opportunities in Taiwan.

Chroma develops excellent testing and measurement instruments. To produce them we purchase components from upstream manufacturers and assemble and produce our instruments in-house for delivery to customers everywhere. The nature of the industry dictates that the company purchase a large variety of customizable products. Currently, there are tens of thousands of different types of material in our supplier database.

The company’s procurement strategy is to purchase interchangeable products from two or more suppliers to ensure supply and competitive prices. This diversification of procurement lowers risks and reduces cost. In addition, our procurement and quality assurance units regularly conduct supplier evaluation to ensure stability and quality in the supply chain. This also helps to determine the suppliers’ production capabilities.

Currently, supplier chain evaluation is made using a comprehensive supply chain management approach based on Q (Quality), C (Cost), D (Delivery) and S (Service). The objective being to fulfill commitments to our trading partners and work closely with them through the QCDS approach. We seek effective management of information flow, logistics and cash flow, and aim to establish a sustainable and stable supply chain system with synergy generated by the vertical integration of the upstream and downstream. We plan to implement “social responsibility” in the standards for supply chain evaluation. Chroma will work with suppliers to maximize the sustainable value of our services and business and to minimize costs.
Supplier evaluation committee and signing of the commitment form

A “supplier evaluation committee” has been formed by the procurement division in coordination with R&D, quality control and other related divisions.

The evaluation of new suppliers includes an assessment of technical capabilities and development, of the supply capacity of subcontractors, an audit of the procurement system and a field review. Newly qualified suppliers are asked to sign forms of commitment regarding hazardous substances and the prohibition of the use of conflict minerals. During the supply period, the suppliers are subject to relevant international laws and our regulations for suppliers. Furthermore, to ensure that suppliers fulfill their social responsibilities, we plan to introduce a form of commitment to social responsibility as well as to standards such as RBA. The electronics industry focuses more on the importance of social responsibility and management systems and standards nowadays. We also insist our suppliers remain in compliance with labor rights and ethical standards, and help them to do so.

Management of hazardous substances and conflict minerals

More than 500 local and foreign Chroma suppliers have signed the form of commitment with respect to hazardous substances and the form of declaration regarding the prohibition of conflict minerals, which is more than 95% of our suppliers. We will continue to follow up on the status of signing by new suppliers and suppliers with which we have conducted business.

In the future, we will send out questionnaires on the environment and social responsibility to collect information from the suppliers about their environmental and social responsibility. We are going to keep strengthening the standards for the evaluation of suppliers in these aspects.

Supplier evaluation

The first evaluation of a new supplier of raw material will be conducted on site. The procurement division makes arrangements for this to be done by the evaluation committee (R&D/quality control/procurement). Suppliers that score 60 or more in the evaluation of quality and technical capability are rated as class C or higher and are eligible for listing as qualified suppliers. The evaluation committee must fill out the “supplier evaluation form” and submit it to the quality control division, which will then complete the “supplier interview form” and give approval. Transactions may only proceed after this has all been done. In the first and second half of 2018, 488 and 437 supplier evaluations respectively were carried out.
Our main suppliers are listed under specific categories including components, electronics, institutions and trading companies. In 2018, there were 489 qualified suppliers. Among these, 450 (93%) were local contractors for procurement in Taiwan. The remaining 39 (7%) were international. We will continue to promote local procurement, enhance the efficiency of procurement, and maintain full cooperation with local suppliers.

We will keep improving, developing and offering state-of-the-art products and technologies, and a comprehensive process management system. We intend to play our part in protecting the environment and strive toward sustainable development of society.

**Implementation of local supply chain management and procurement**

In 2015, we began to introduce the hazardous substance management system. We continue to reduce the use of hazardous substances in our products in compliance with customer demand. The comprehensive application of the system in 2018 ensured our electronic products remain in compliance with EU standards on global chemical control (e.g., RoHS, REACH, EU). We have also asked all our suppliers to sign the form of commitment with respect to hazardous substances to make our products greener.

By the end of 2018, over 95% of our suppliers had signed the commitment form.

**Management of Hazardous Substances for Suppliers**

In 2015, we began to introduce the hazardous substance management system. We continue to reduce the use of hazardous substances in our products in compliance with customer demand. The comprehensive application of the system in 2018 ensured our electronic products remain in compliance with EU standards on global chemical control (e.g., RoHS, REACH, EU). We have also asked all our suppliers to sign the form of commitment with respect to hazardous substances to make our products greener.

By the end of 2018, over 95% of our suppliers had signed the commitment form.
Environmental Protection

5.1 Responses to Climate Change and Management of Energy and Resources
5.2 Waste Management
5.3 Management of Toxic Chemicals
5.4 Measures to Improve Energy Saving in the Factories
- Environmental management, energy saving and carbon reduction

- We continue to take the key aspects of the environment, and legal requirements of environmental protection, into account and implement the regulations accordingly.

- Every year, we improve the environmental systems and culture of the factories and carry out ISO 14064 GHG emission inventory.

- Implement management systems and certification in regard to environmental management.

- Promote a plan for the enhancement of resource productivity in the factories.

- Conduct regular external verification every year in accordance with ISO 14064, and update policies on environmental protection, safety and health.

- Continue to improve the resource recycling rate.

- At least 2.5% decrease in the GHG emission per capita.

- A waste recycling rate of 50% or more.

- Continue to improve the equipment in the factories.

- Monthly summary of water recycling data.

- Monthly summary of waste cleanup data.

- Continue the external ISO14064-1 verification.

- The GHG emission per capita increased by 6.47%.

- The waste recycling rate was 54%.

- We will implement an environmental management system with full consideration of environmental impact. In addition to compliance with the legal requirements, we will introduce life cycle thinking for environmental control. The processes of the factories will be in line with our regulations and measures for preventing pollution and actively reducing the impact on the environment.

- Obtained ISO14001 certification for environmental management system.
Policies and Commitments

The environment, energy conservation and carbon reduction are topics of serious concern to stakeholders. Chroma has been advocating environmental protection and energy conservation for a long time and makes sustained effort to lessen the impact of greenhouse gases and global warming. In addition to innovative research and development in the manufacturing processes of our advanced equipment and measuring instruments, we also pay serious attention to lessening the impact of our products on the environment. We reduce energy use and waste generated in production to a minimum.

We have implemented the concept of green product design at every stage of the R&D of new products. This starts with customer demand and includes the e-management programs. The R&D division has been tasked with making the products more energy-efficient and ensuring compliance with hazardous chemical regulations. We use renewable and recyclable materials as much as possible. Improvements and evaluations are carried out on a continuous basis to ensure that our mass production meet the requirements and standards in terms of quality assurance and environmental protection. We conduct sampling inspections to ensure the products remain in compliance with the requirements. Our aim is to ultimately implement sustainable product management.

The company has also been promoting various energy-saving projects in the factories. These include the production lines, offices, public areas, IT center, etc. The company expects to achieve a substantial reduction in energy consumption by optimized energy management. We expect to achieve the goals of sustainable coexistence with the environment by using highly efficient environmental improvement technology and equipment.

Currently, the company and subsidiaries of the Group have been taking part in green and environmental protective activities. We have taken an aggressive approach to develop operations and products that are more eco-friendly. In this way, we seek to satisfy the green requirements of our customers as well as the regulations on management of energy and resources, climate change, RoHS and toxic chemicals in the countries where we sell our products. We use this as a guide for improvement and sustainable management to eventually become a totally green company.

Chroma will keep improving energy saving, carbon reduction and environmental management in all our factories. We are actively focusing on green design and production, and the reduction of GHG emissions. We are determined to establish proper green management and lessen the impact of our products on the planet and are steering our suppliers in the same direction.
The use of energy and resources not only consumes the total mineral resources of the planet, but also produces a tremendous volume of greenhouse gases such as carbon dioxide, the primary component. Global warming has increased the occurrence and intensity of extreme weather and in addition to sometimes irreversible damage to the planet, this can seriously affect our manufacturing environment. In the face of global climate changes and ecosystem transformation, we need to take immediate action in the management of energy and resources, as well as greenhouse gas emissions.

Chroma established a GHG inventory system four years ago, and created an inventory process for the detection of all possible sources of GHG emissions in our organization. Each year, we check the GHG inventory for the previous year in our factories under Category 1 and Category 2. A third-party certification organization carries out the inspection in accordance with ISO14064-1. We fully understand the greenhouse gas emissions condition of the company and formulate the short-, mid-, and long-term reduction plans according to the individual amount of emissions to company implement our planned actions on environmental protection.

Using the data from the 2018 ISO 14064-1-based GHG inventory, we calculated the GHG emissions from the use of energy in our Linkou Headquarters and branches in Hsinchu and Kaohsiung. The sources covered by the inventory included externally purchased electricity, equipment for processes, boilers, water towers and water chillers. The total emissions were 11,096.987 tons CO2e with an average of 6.471 tons CO2e per employee. The overall emission density was a 6.47% increase from 2017, due to the difference in product category and manufacturing processes. The main source of emissions was externally purchased electricity under Category 2, which accounted for 97.40% of the total emissions. In the future, we will continue the inventory of our GHG emissions and take relevant measures for emission reduction.

### 5.1 Responses to Climate Change and Management of Energy and Resources

#### 2018: Results of ISO 14064-1-based Inventory of 7 Major GHGs

<table>
<thead>
<tr>
<th>Year</th>
<th>Category 1</th>
<th>Year 2015</th>
<th>Year 2016</th>
<th>Year 2017</th>
<th>Year 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>306.412</td>
<td>488.624</td>
<td>496.184</td>
<td>612.469</td>
</tr>
<tr>
<td></td>
<td>Category 2</td>
<td>10,185.093</td>
<td>9,081.949</td>
<td>9,988.148</td>
<td>10,484.518</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>10,491.505</td>
<td>9,570.574</td>
<td>10,484.333</td>
<td>11,096.987</td>
</tr>
</tbody>
</table>

* Unit: ton CO2e/year

* Note: The emissions of 2015 were used as the base for the GHG inventory. The 2018 inventory conformed to the level of reasonable assurance under the verification agreement. Based on the GWP values in the Fifth Assessment Report of the IPCC in 2013, the sources of emissions were enumerated using the operational control method.
Scope of GHG Inventory

Category 1
From the factories of Chroma
Direct sources of emissions
GHGs used in processes
PFCs, HFCs, N2O, CH4, CO2, etc.
GHGs produced from the use of fuels
Natural gas, petrol, diesel, etc.
Septic tanks, fire equipment and other sources of fugitive emission

Category 2
Externally purchased electricity

Purchase of electricity

Category 3
Other indirect sources of emissions
Purchase of electricity
Overseas travels
Transportation of products and raw materials
Production by suppliers of raw materials
Waste recycling and treatment
Purchased fuels and energy and other sources of emissions not under Category 2

Environmental Information

<table>
<thead>
<tr>
<th>Import</th>
<th>Item</th>
<th>Total amount</th>
<th>joule</th>
<th>Factories covered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Externally purchased electricity</td>
<td>21,941.2 thousand kWh</td>
<td>78,988,320 MJ</td>
<td>Headquarters, Hsinchu Factory, Kaohsiung Factory</td>
<td></td>
</tr>
<tr>
<td>Externally purchased natural gas</td>
<td>55,019 m3</td>
<td>2,071.80 MJ</td>
<td>Headquarters</td>
<td></td>
</tr>
<tr>
<td>Tap water</td>
<td>61,032 kWh</td>
<td>-</td>
<td>Headquarters</td>
<td></td>
</tr>
<tr>
<td>Externally purchased petrol</td>
<td>97,4402 kiloliter</td>
<td>3,424.59 MJ</td>
<td>Headquarters, Hsinchu Factory, Kaohsiung Factory</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Export</th>
<th>Item</th>
<th>Total amount</th>
<th>Factories covered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste</td>
<td>275.52 tons</td>
<td>Headquarters</td>
<td></td>
</tr>
<tr>
<td>Sewage</td>
<td>48598 M²</td>
<td>Headquarters</td>
<td></td>
</tr>
<tr>
<td>Emission</td>
<td>11096.987 tons CO2e</td>
<td>Headquarters</td>
<td></td>
</tr>
<tr>
<td>Externally purchased diesel</td>
<td>0.1088 kiloliter</td>
<td>Hsinchu</td>
<td></td>
</tr>
</tbody>
</table>
5.2 Waste Management

Waste clean up

Waste disposal has become a serious environmental issue. Waste is a threat to the environment and it also results in huge waste disposal costs for both the enterprises and government units. Statistics show that Chroma generated that a total of 275.52 tons of waste in 2018. The waste generated in the factories can be divided into general business waste and hazardous waste. These are properly sorted and stored individually. Cleanup plans are regularly submitted to the environmental protection agencies in the areas where Chroma operations are carried out.

Professional and legally recognized cleanup, disposal and recycling companies are commissioned and strictly monitored, for the disposal of the waste produced by the company to ensure proper and safe waste treatment.

Furthermore, only 1.86% of the waste generated by Chroma is hazardous. Due to the nature of the industry, 98.14% of the company waste is general business waste. The company will actively reduce the amount of waste generated by optimization of production processes and use of recycled materials.

We have promoted comprehensive sorting, management and collection at the source to optimize resource recycling. Useful resources are sold or delivered to certified treatment companies for recycling to make effective use of them and increase the benefits of recycling. We also promote other prudent waste management measures that include:

Moreover, the company will actively reduce the waste generated by the optimization of production processes, a reduction of the amount of raw material used, and the use of recycled materials. We continue to raise the awareness of our employees to the benefits of resource sorting and recycling and the positive impact such practices have on them as well as the company. We hope to strengthen the idea of resource recycling amongst our employees and encourage spontaneous maintenance and implementation of the idea in a continued effort to reduce our impact on the environment.
5.3 Management of Toxic Chemicals

The places where toxic chemical substances are used in the company are in accordance with the regulations of the Toxic and Concerned Chemical Substances Control Act. We have obtained the related documents issued by the competent authority and hold toxic chemical training courses every year. In 2019, we will promote the self-management of toxic chemical substances, establish hazard prevention and simulate a response rehearsal plan to ensure proper operation and reduce the risk of hazards.

The operations are conducted according to the related government regulations. We have devoted much effort to the prevention of pollution and harm to human health from leakage. We have also promoted reduction management measures and computer controlled operations:

- Reduction management and assessment, search for alternatives to reduce amount of storage and usage
- Closed storage and usage to avoid contact and exposure of personnel
- Control of the process flow and declarations of operational amount by computer, to avoid human error in manual operations
- Stipulation of Management Regulations for Toxic Chemicals
- Regular audit for regulatory compliance
- Training for appointed personnel

Non-compliance with environmental protection laws and regulations

The company did not commit any major violations in 2018, but received a ticket for an environmental violation due to an inconsistency in the amount of toxic chemicals declared on the operational records revealed in an on-site residue inspection by the Environmental Protection Bureau. The fine was NT$60,000 and a time limit was set for improvement. This was carried out and completed by December 5, 2018.

A review of the incident revealed that it had been caused by human error in document management. To avoid recurrence, training was enhanced and self-inspections have now been introduced to strengthen the source management and eliminate further violation of environmental protection issues.
Linkou factory waste statistics

<table>
<thead>
<tr>
<th></th>
<th>Year 2016</th>
<th>Year 2017</th>
<th>Year 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total amount of waste at Linkou Factory A=B+C (tons/year)</td>
<td>287.28</td>
<td>252.55</td>
<td>275.52</td>
</tr>
<tr>
<td>General business waste B (tons/year)</td>
<td>282.06</td>
<td>248.59</td>
<td>270.40</td>
</tr>
<tr>
<td>Hazardous business waste C (tons/year)</td>
<td>5.22</td>
<td>3.96</td>
<td>5.12</td>
</tr>
</tbody>
</table>

Waste recycling and disposal statistics for the Linkou factory

<table>
<thead>
<tr>
<th></th>
<th>Year 2016</th>
<th>Year 2017</th>
<th>Year 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disposal by incineration or burial (tons/year)</td>
<td>143.58</td>
<td>105.17</td>
<td>126.97</td>
</tr>
<tr>
<td>Recycled and reused (tons/year)</td>
<td>143.70</td>
<td>147.38</td>
<td>148.55</td>
</tr>
<tr>
<td>Recycling rate % (amount of recycled waste ÷ total amount of waste)</td>
<td>50.02 %</td>
<td>58.36 %</td>
<td>54.00 %</td>
</tr>
</tbody>
</table>

Description of the amount of various waste disposals in 2018

<table>
<thead>
<tr>
<th>Total amount (tons/year)</th>
<th>Disposal amount (tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazardous business waste</td>
<td>5.123 Reuse 0.5975</td>
</tr>
<tr>
<td>Recycling</td>
<td>2.925</td>
</tr>
<tr>
<td>Incineration</td>
<td>1.600</td>
</tr>
<tr>
<td>Non-hazardous business waste</td>
<td>270.402 Reuse 41.071</td>
</tr>
<tr>
<td>Incineration</td>
<td>125.371</td>
</tr>
<tr>
<td>Recycling</td>
<td>103.960</td>
</tr>
</tbody>
</table>

Management and regulation of contractors for cleanup

Selection of qualified cleanup companies announced by the Environmental Protection Administration
Examination of permits for cleanup/treatment
Signing contracts
Education and training sessions on safety and health at the factories
Submission of triplicate applications for cleanup and transportation
Inspection of cleanup operations by contractors
Examination of valid certificates of weighbridge areas
Impromptu, on-site inspection of weighing records during cleanup
Proper treatment of waste
5.4 Measures to Improve Energy Saving in the Factories

Effect on air conditioning systems in the factories

The company buildings need a lot of air-conditioning. The water chillers consume the most energy and account for 60% of the AC system energy consumption. Enhancement of the water chiller efficiency not only saves energy but reduces electricity costs while reducing the carbon dioxide emissions as well. In 2018, the company replaced the air-cooled water chillers on the fourth floor of the Headquarters building. Water pumps and sprinkler pipes have been installed in the AC system tanks in the head office. The ice-cold water from the bottom of the tanks is pumped to the sprinkler pipes and sprayed evenly on the top of the ice layer. This circulation effectively solves the problem of ice melting in summer, reduces the amount of power consumed by AC during peak hours, and eases the pressure on the Taipower energy supply. Replacement of the water chillers raised the energy-saving efficiency on a single floor of the head office building by 18%, and the estimated total energy saved was as much as 35,040 kWh, with a cost saving of NT$105,121.

The replacement of the time controllers in the factory cleanrooms

Factory cleanrooms are essential for certain production processes. The cleanliness of these environments needs to be maintained for long periods. However, work in the cleanrooms is not continuous over the 24 hour day. After consultation with the units concerned, automatic time controllers were installed in 2018, which have greatly reduced cleanroom energy consumption. Some of the servers can even be shutdown. This has not disturbed the proper operations and production requirements continue to be served while cleanliness has been maintained. Statistics show that energy saving efficiency reached 96,969 kWh in 2018, with a saving of NT$290,907 in electricity costs.

Temperature settings of the air conditioners in offices

As a response to the Bureau of Energy regulations on energy saving, the factory affair units are watching the ice storage systems. Central monitoring ensures that the temperature of the water from the melted ice can be PID-controlled and the office temperature is kept within the range of 25 to 26°C. This saves energy and reduces carbon emission. and the temperature difference between the office and the outside is not likely to cause discomfit in people moving in and out.

Plan for our new premises as a gold-class green building

To increase production capacity, construction of the new A7 building was started in 2017. The lighting will be fully LED-based, and the design of the building will allow efficient collection of rainwater. This is used in a sprinkler irrigation system and also for sanitation purposes. The lower floors have ice storage air conditioners, and the upper floors VRV high-performance air conditioners. Arrays of solar panels will be installed on the roof. The curtain walls use double-layers of Low-E energy-efficient glass to reduce the burden on the air conditioners. In addition, hanging gardens will be set up in the factories. We expect to receive a gold-class label for green building. This highly intelligent green factory clearly demonstrates our commitment to becoming a sustainable, green enterprise.
Innovative R&D and Green Design

6.1 Our Industrial Strategy and being a Leader in Green Energy
6.2 Renegerative Energy Battery Module Testing System
6.3 Leading Development in the Electric motorcycle Industry by Collaborating with Research Institutions
6.4 Enhancing the Quality and Safety of Battery Management Systems for Electric Vehicles
■ Innovative R&D

- We focus on emerging green industries such as solar power and electric vehicles. We invest greatly in R&D and provide our customers with comprehensive and diverse solutions to become the leading manufacturer in the relevant sectors.
- We encourage employees to engage in innovative R&D. We have established a comprehensive system for patent application to protect intellectual property rights.
- Develop our R&D plans based on industrial and customer demand, including promotion of Industry 4.0-based automated equipment, development of integrated turnkey solutions, and the design of intelligent manufacturing solutions for Industry 4.0.
- We are developing devices associated with IoT and IoV and testing equipment for electric vehicles, batteries, wireless communications, as well as for VR and AR.
- Chroma and its subsidiaries actively engage in the R&D of “clean technology”, with the aim of developing automated testing equipment.

■ We will continue to focus on testing solutions in the fields of power electronics, electric vehicles, battery testing, automation and LED lighting & drivers. We hope to maintain our efforts in reducing GHG emissions for the sake of our planet.

■ More than 80 overseas patents

- Every year, the Test and Measurement BU makes a substantial investment in manpower and resources for the R&D and integration of our core technologies. The BU focuses on the R&D of green products including testing solutions for power electronics, electric vehicles, battery testing, automation and LED lighting & drivers.
- In 2018, the R&D outlay was NT$1,254,553 billion.

■ Carbon emissions can be calculated using the number of sales channels. The evaluation of effects is based on carbon emission.
- Statistics of input and output are conducted annually, and we continue to apply for foreign patents.

■ 8% of the revenue was invested in innovation and R&D, with up to 85 domestic and foreign patents being granted in 2018.
- Two products won the Taiwan Excellence Award.
- Recently, the IT industry has focused on 3D applications, intelligent communication and IoT. The trend has been towards the combination of wireless communication with all types of equipment, which symbolizes the coming of age of electric vehicles, driverless cars and smart cities. In the manufacturing sector, we see the appearance of Industry 4.0. In the financial sector, there is Finance 3.0. This shows businesses in every industry are hoping to make profits by harnessing the new technologies. Our R&D plans are based on development in the industries. We seek to promote Industry 4.0-based automated equipment, develop integrated turnkey solutions, and design intelligent manufacturing solutions for Industry 4.0. We are developing devices associated with IoT and IoV and testing equipment for electric vehicles, batteries, wireless communications, as well as for VR and AR.
- We will continue to focus on testing solutions in the fields of power electronics, electric vehicles, battery testing, automation and LED lighting & drivers. We hope to maintain our efforts in reducing GHG emissions for the sake of our planet.
6.1 Our Industrial Strategy and being a Leader in Green Energy

Chroma is renowned for its power electronics testing solutions, in which we have the largest market share in the world. Chroma has a unique vision and was at the forefront to seize the opportunities presented by green energy. We are now the leading supplier of our own brands of automatic test equipment (ATE). Our focus is on nine groups of products: video and color, power electronics, passive components/electrical safety, semiconductor/IC, solar power, LEDs, batteries, electric vehicles, and optical component testing solutions. We also plan to develop power electronic testing solutions. So far, we have more than 800 patents and over 100 special core technologies, this is the highest number in the domestic measurement industry. In 2018, Chroma ranked 69th in applications for invention patents in Taiwan, and 82nd with respect to the number of announced patents, so within the top 100 of domestic companies on both respects.

Our future operational strategies will be based on securing our place in the green energy industry and we are constantly adjusting direction and the steps being taken in this direction. At the same time, we are drawing up performance evaluation strategies to enhance our core competencies. As a result, we have become firmly rooted in both solar power and the electric vehicle fields. A wide range of new green energy products continue to enter the market and need more accurate product-testing services. Because the market is now focused on the excellent opportunities that have come with the green energy industry, we have also extended our key testing technologies to clean energy. We have developed a range of technologically advanced products that lead the industry, including the Total Power testing solutions using light-emitting diodes (LED)s, as well as systems for the automatic grading of the efficiency of solar cells, and for regenerative battery formation. These products have enabled Chroma and its subsidiaries to maintain their lead in the testing solutions market and achieve great business performance. These products are also a crucial driving force behind our growth and progress.
6.2 Renegerative Energy Battery Module Testing System

The Chroma 17040 high precision battery module testing system is an efficient and very safe charge and discharge device especially developed for the testing of high-power secondary battery sets. It also has a regenerative function that routes the discharge power back into the grid, providing clean and stable power. Efficiency is 90% or higher to save energy and lessen heat dissipation. The electric grid remains stable even during dynamic charging and discharging and it does not affect other equipment with harmonic pollution. The energy produced during discharge of the battery set is recycled to the electric grid, which solves issues of traditional equipment with waste of discharge energy and space heat treatment. The requirements of environmental protection are fully met.

The 17040 also has a dual-mode feature. This allows switching to battery simulator mode giving real battery characteristics for motor driver or charger testing.

The 17040 system allows parallel connection and a dynamic driving profile simulation function. The parallel connection function allows higher charge/discharge current and power, this increases the efficiency and flexibility of the equipment to achieve high utilization. The simulation function of the dynamic operating condition allows loading of the battery waveform of a given driving profile, and the current/power mode meets the NEDC and FUDS standards. The dual direction structure ensures that the instantaneous current is not interrupted during the charge/discharge transition moment, so that the driving conditions can be precisely simulated. This meets various international test standards such as ISO, IEC, UL and GB/T.

The 17040 system includes Battery Pro software which has a flexible editing feature. Independent tests can be conducted for each channel to meet the various test requirements for all secondary battery sets.

Various safety and protection mechanisms that reinforce battery test risk management are included. The testing process will automatically detect abnormality such as over-voltage, over-current, over-temperature and any external parameters. Should an abnormality be detected in a channel, the protection mechanism will be triggered to stop charge or discharge. The 17040 is highly stable and safe and supports a power failure recovery feature to ensure that test data will not be interrupted or lost.

- Power range 60kW ~ 300kW
- Maximum voltage/current output 1000V / 750A
- Voltage/current measurement accuracy <0.05% FS.
- Auto switching between multiple ranges to enhance the measurement precision during dynamic testing
- The high voltage section 700-1000V can provide full power or full current output Fulfils the development trend of the high-power battery system
- High current slew rate (-90% to +90%) 2 msec. 2msec – this is better than the regular 10-50msec and provides more rigorous charge/discharge tests for the battery
- MOSFET and SiC materials for increased lifespan and switching frequency
6.3 Leading Development in the Electric motorcycle Industry by Collaborating with Research Institutions

The government plan that in 2035 all new motorcycles will be electrical has stimulated the development of fast-charging systems for batteries, and electric motorcycles have become a global trend. Chroma leads collaboration between industry and research institutions, and is working with the Industrial Technology Research Institute (ITRI), Ship And Ocean Industries R&D Center (SOIC) and eTreego Co Ltd. The results of research into "an electric motorcycle charging station and charging compatibility test systems" were officially announced at the Taipei International Electronics Show on October 9, 2018.

The Chroma electric motorcycle charging station and charging compatibility test system is based on the "industrial standards of the fixed type inductive charging system for electric motorcycles" developed by the ITRI. It can simulate charging station conditions, or an electric motorcycle with normal or abnormal charging modes as well as the testing parameters, on electrical characteristics and communication. This will assist manufacturers with product testing in the R&D stage and before product delivery, and also allow the management and monitoring of production. ITRI has created a technical blueprint for testing regulations as verification of the technology and foundation of product testing. Supported by the Department of Industrial Technology (Ministry of Economic Affairs), Chroma, SOIC and ITRI have all collaborated in the development of the charging interface simulator used in this testing system. And eTreego’s charging module and the design and development of capable charging stations, as well as the collaboration between the industry and research institutions has made a serious contribution to the development of domestic electric motorcycles. This has also improved charging safety and enhanced the popularity of electric motorcycles.

The charging infrastructure is the key to the popularity of electric (motor) vehicles. There is much support for the potentially huge domestic market as a result of favorable policies and regulations. Chroma has been devoting much effort to the green energy industry and the measurement and testing of key components of electric vehicles. This includes the testing solutions for the carried charger, AC and DC charging station, battery power, battery management system and motor stator, which have now been adopted by domestic and overseas vehicle manufacturers and well-known inspection laboratories. In addition, we have established the first electric motorcycle charging station and a charging compatibility testing platform that meets the domestic testing regulations, and have created another business opportunity.
6.4 Enhancing the Quality and Safety of Battery Management Systems for Electric Vehicles

There has been a global realization of the urgent need for zero carbon emission in electric vehicles. The battery is the key component and the performance and safety of the battery pack is crucial. The core battery management system (BMS) requires specific and detailed verification to ensure safety.

The Chroma 8710 BMS automated testing system (ATE) provides voltage and temperature sensor simulations for a BMS. Furthermore, it offers applications suitable for the Unit Under Test to reduce the problems when performing the tests. The testing functions include:

1. The power conversion circuit converts the starting battery voltage to the power required by the digital circuit. It is necessary to confirm the power status to ensure operational stability of the control circuit and to verify its power status.

2. Measurement accuracy is required when using high voltage to measure the battery pack total voltage. This voltage is also one of the judgment criteria to determine insulation resistance. Insulation resistance is critical to safety and requires verification. Besides supporting the verification process, the best way is to do this by calibration first and re-verification later.

3. The high/low side drive circuit controlling the high voltage relay is also one of the vital items for verification. When an abnormality occurs while the high/low side gate drive circuit is not active to disconnect the charge and discharge circuit, it may result in safety issues and cause the electric vehicle to catch fire. Therefore, it is necessary to check if the high/low side drive circuit is running normally under any conditions.

Chroma has devoted efforts to the research of battery management system testing, and provides the 8710 BMS ATE system to fulfill the requirements of all the above tests. The test procedures are fully automated and provide long duration charge/discharge testing for high capacity battery sets.
The BMS usually includes a current sampling unit (CSU), battery cell sensor circuit (CSC) and battery management unit (BMU). It delivers information to the BMU via CANbus signals and issues appropriate operational processing commands. When verifying a BMS, it is imperative to verify the cell status monitored by CSC as well as the active/passive balancing circuit and current consumption. For the CSU, the validation of current sampling accuracy is essential as it may affect the battery SOC, SOH and over-current protection function. As to the most complicated BMU that controls the entire system, it verifies the data returned from CSU and CSC.

The Chroma customized integrated testing system provides high quality function verification for the battery pack and the BMS.
Employee Care

7.1 Composition of Employees
7.2 Employee Remuneration
7.3 Environment and Regulations for Infant Care
7.4 Employee Turnover
7.5 Employee Welfare
7.6 Employee Development and Human Resources Management
7.7 Employee Communication and Care
7.8 Overall Employee Health Management
7.9 Safe Working Environment
Corresponding “material topic”

<table>
<thead>
<tr>
<th>Employee-employer relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee development and training</td>
</tr>
<tr>
<td>Remuneration and welfare</td>
</tr>
</tbody>
</table>

Meaning for Chroma

- We are committed to building an harmonious employee/employer relationship to enhance our overall operational performance.
- Our strategies are focused primarily on innovation and speed. We understand that employee innovation and speed can only be enhanced by good education and development.
- Employees are our greatest asset, and the remuneration and welfare we offer are more favorable than those required by law and the average market level.

Concrete plans for 2018

- We have established well-functioning channels for communication (including e-mail, physical mail and a hotline) and we arrange interviews with employees who are leaving their jobs.
- We ensure sound training of new staff with respect to positions directly related to products: For the positions of PM, Sales and R&D, new employees will attend training courses on the production lines and quality control within one month of their arrival.
- A proportion of the distributable profits of the previous year is allocated to employees.

Goals for 2018

- More effective management of employee relations.
- Adjust the contents of courses and organize training sessions in all factories.
- Appropriate 5%-20% of the distributable profits of the previous year for allocation to employees.

Resources invested

- Two employees from the Finance Division and five from the Human Resources Division.

Evaluation mechanism

- Number of cases of employee complaints.
- Number and completion rate of training sessions.
- Complete distribution of employee rewards.

Concrete performance in 2018

- In 2018, we received 0 cases of employee complaint(s).
- There were 20,886 employee training hours.
- In 2018, NT$0.24 billion of the profits were appropriated for the remuneration of employees.

2019 or medium-term to long-term goals

- Active encouragement of harmonious employee relations.
- Expand the scope of implementation and evaluate the demands of the technical support units.
- Issue 5%-20% of the distributable profits of the previous year to employees.
Employee diversity and equal opportunities.

Professional talent is our most valuable company asset. Our employees are our partners. Clear communication in both directions ensures a friendly and enduring relationship in an harmonious working environment that is human-oriented. The company fully respects the dignity of every employee, remains open-minded, and is willing to hear all concerns, differences of opinion, and suggestions. We do our best to provide our employees with good benefits to maintain business ethics and fulfill our social responsibility, making announcement of our efforts.

Chroma regards a working environment that is free from discrimination and that has a high cultural level, as an important principle. Chroma recruitment, reward, promotion, or training is done irrespective of race, religion, faction, sexual orientation, ethnicity, skin color, disability, pregnancy, political affiliation, association membership or marriage. We provide a comprehensive career development platform that is healthy both physically and mentally, and offers excellent benefits. Our employees can be happy in their work and reach their full potential of capabilities, make the best contribution to our customers and other issues in society.

In 2018, the total number of company employees was 1,715. Chroma is a technology-intensive company that focuses on R&D and there are more male than female employees. All the senior managers are Taiwan nationals. There are 491 people in R&D, accounting for 28.63%. This ensures that our innovation capacity and R&D operations are highly competitive.

7.1 Composition of Employees

Chroma employee composition in 2018

All our employees work on a full-time basis. We do not employ part-time workers.

<table>
<thead>
<tr>
<th>Male position</th>
<th>Female position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group subtotal and percentage</td>
<td>Group subtotal and percentage</td>
</tr>
<tr>
<td>549 32.01%</td>
<td>491 28.63%</td>
</tr>
<tr>
<td>398 23.21%</td>
<td>117 6.82%</td>
</tr>
<tr>
<td>339 85.18%</td>
<td>91 16.58%</td>
</tr>
<tr>
<td>104 88.89%</td>
<td>91 16.58%</td>
</tr>
<tr>
<td>28 17.5%</td>
<td>49 9.98%</td>
</tr>
<tr>
<td>160 9.33%</td>
<td>13 11.11%</td>
</tr>
<tr>
<td>458 83.42%</td>
<td>491 28.63%</td>
</tr>
<tr>
<td>132 82.50%</td>
<td>13 11.11%</td>
</tr>
<tr>
<td>442 90.02%</td>
<td>49 9.98%</td>
</tr>
<tr>
<td>104 88.89%</td>
<td>13 11.11%</td>
</tr>
<tr>
<td>28 17.5%</td>
<td>49 9.98%</td>
</tr>
<tr>
<td>About Chroma</td>
<td>Social Responsibility Organization</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>Male age structure</td>
<td>Education of male employees</td>
</tr>
<tr>
<td>Under 30</td>
<td>114</td>
</tr>
<tr>
<td>31-50</td>
<td>487</td>
</tr>
<tr>
<td>Over 51</td>
<td>770</td>
</tr>
<tr>
<td>Under 30</td>
<td>74.51%</td>
</tr>
<tr>
<td>31-50</td>
<td>81.03%</td>
</tr>
<tr>
<td>Over 51</td>
<td>80.12%</td>
</tr>
<tr>
<td>Education of male employees</td>
<td>Education of female employees</td>
</tr>
<tr>
<td>Doctor</td>
<td>488</td>
</tr>
<tr>
<td>Master</td>
<td>25</td>
</tr>
<tr>
<td>Bachelor</td>
<td>25</td>
</tr>
<tr>
<td>High school or lower</td>
<td>833</td>
</tr>
<tr>
<td>23.23%</td>
<td>31.14%</td>
</tr>
<tr>
<td>1.46%</td>
<td>1.46%</td>
</tr>
<tr>
<td>35.14%</td>
<td>31.14%</td>
</tr>
</tbody>
</table>
### Type of employment, men

- Regular employment: 1371 (80.08%)
- Temporary employment: 3 (0.17%)

### Type of employment, women

- Regular employment: 341 (19.92%)
- Temporary employment: 2 (100%)

### Male/ female physically or mentally disabled

- Male: 2 (22.22%)
- Female: 7 (77.78%)

### Nationality of male employees

- Republic of China (Taiwan): 1187 (79.50%)
- Philippines: 158 (97.53%)
- Vietnam: 25 (42.37%)
- Malaysia: 3 (100%)

### Nationality of female employees

- Republic of China (Taiwan): 34 (57.63%)
- Philippines: 306 (20.50%)
- Vietnam: 1187 (79.50%)
- Malaysia: 3 (100%)

### Male/ female physically or mentally disabled

- Male/ female physically or mentally disabled: 1 (0.06%)
- Male/ female physically or mentally disabled: 59 (3.44%)

### Group subtotal and percentage

- Total male employees: 1403 (87.06%)
- Total female employees: 1493 (87.06%)

**Group subtotal and percentage**

- Male employees: 1187 (79.50%)
- Female employees: 306 (20.50%)

**Nationality of employees**

- Republic of China (Taiwan): 1187 (79.50%)
- Philippines: 306 (20.50%)
- Vietnam: 1187 (79.50%)
- Malaysia: 3 (100%)

**Male/ female physically or mentally disabled**

- Male physically or mentally disabled: 1 (0.06%)
- Female physically or mentally disabled: 59 (3.44%)

**Regular employment**

- Regular employment: 1371 (80.08%)
- Temporary employment: 3 (0.17%)

**Temporary employment**

- Regular employment: 341 (19.92%)
- Temporary employment: 2 (100%)

**Male/ female physically or mentally disabled**

- Male: 2 (22.22%)
- Female: 7 (77.78%)

**Nationality of employees**

- Republic of China (Taiwan): 1187 (79.50%)
- Philippines: 306 (20.50%)
- Vietnam: 1187 (79.50%)
- Malaysia: 3 (100%)

**Male/ female physically or mentally disabled**

- Male physically or mentally disabled: 1 (0.06%)
- Female physically or mentally disabled: 59 (3.44%)
7.2 Employee Remuneration

Employees are the foundation for company development. Employees are our most important partners. We strive to offer competitive remuneration and benefits and career development plans to attract and retain employees with excellent skills. We have also established a fair and objective performance and incentive mechanism to ensure equal legal rights for all employees.

In addition to basic benefits, our employees receive salaries and working conditions that are higher than the minimum legal requirement and above the industrial average. We adjust the pay each year in accordance with the results of a salary survey in the market to maintain company competitiveness. We appreciate the hard work and contributions of our employees and are committed to the provision of top-quality working and leisure environments where they can enjoy their work as well as leisure.

We adhere strictly to the principle of gender equality, and we do not treat employees differently because of their sex. Our employees are paid in accordance with the “Table of Pay Grades”. Overall remuneration is based upon the position, job grade, and the education/experience and seniority of an employee. However, as the majority of our employees are men whose average level of education/experience and seniority is higher than that of their female colleagues, their average positions and job grades are also higher than those of female employees doing the same type of job. As a result, there are pay differences between male and female employees.

<table>
<thead>
<tr>
<th>Main category</th>
<th>Type of job</th>
<th>Linkou</th>
<th>Hsinchu</th>
<th>Kaohsiung</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salary (basic pay)</td>
<td>Number of male/female employees &amp; female-to-male basic pay ratio in each factory</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Number of people</td>
<td>Ratio (Male: Female)</td>
<td>Number of people</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Male</td>
<td>Female</td>
<td></td>
</tr>
<tr>
<td>Manager position</td>
<td>261</td>
<td>53</td>
<td>1: 1.25</td>
<td>34</td>
</tr>
<tr>
<td>R&amp;D position</td>
<td>363</td>
<td>36</td>
<td>1: 1.04</td>
<td>27</td>
</tr>
<tr>
<td>Marketing position</td>
<td>47</td>
<td>11</td>
<td>1: 1.19</td>
<td>2</td>
</tr>
<tr>
<td>Technical position</td>
<td>395</td>
<td>83</td>
<td>1: 1.06</td>
<td>23</td>
</tr>
<tr>
<td>Administrative staff</td>
<td>24</td>
<td>108</td>
<td>1: 1.29</td>
<td>1</td>
</tr>
</tbody>
</table>
7.3 Environment and Regulations for Infant Care

We encourage our female employees to breastfeed. There are lactation rooms in our building that have refrigerators for the storage of breast milk and stringent access control. This exclusive space for new mothers is comfortable, private and safe. Unpaid parental leave may be granted to any employee who has been working for six months or more, for the care of a child or children under the age of three (3). This arrangement is made in accordance with the “Act of Gender Equality in Employment” and “Regulations for Implementing Unpaid Parental Leave for Raising Children”. The period of leave may not be more than two (2) years. After the end of an unpaid parental leave period, arrangements will be made for the employee to return to their previous unit and position. We help our employees strike an appropriate balance between physical/mental health, work and family. We make our work environment as warm and as harmonious as possible within the extent permitted by the laws and regulations.

7.4 Employee Turnover

New employee statistics

<table>
<thead>
<tr>
<th>Subcategory</th>
<th>Male</th>
<th>Hsinchu</th>
<th>Kaohsiung</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 30</td>
<td>123</td>
<td>4</td>
<td>23</td>
<td>173</td>
</tr>
<tr>
<td>31-50</td>
<td>64</td>
<td>3</td>
<td>8</td>
<td>86</td>
</tr>
<tr>
<td>Over 51</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Subtotal</td>
<td>187</td>
<td>7</td>
<td>32</td>
<td>261</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Male</th>
<th>Hsinchu</th>
<th>Kaohsiung</th>
</tr>
</thead>
<tbody>
<tr>
<td>New employees Turnover rate</td>
<td>66.28 %</td>
<td></td>
</tr>
</tbody>
</table>

| Under 30 | 122 | 4 | 6 | 49 | 1 | 4 | 186 |
| 31-50 | 95 | 4 | 16 | 11 | 1 | 4 | 131 |
| Over 51 | 2 | 0 | 1 | 1 | 0 | 0 | 4 |
| Subtotal | 219 | 8 | 23 | 61 | 2 | 8 | 321 |

Statistics of employees turnover

- Reinstatement rate = (Number of employees actually reinstated after unpaid parental leave in 2018/Number of employees to be reinstated after unpaid parental leave in 2018) x100%
- Retention rate = (Number of employees reinstated in 2017 who are still working after 12 months/Number of employees actually reinstated in 2017) x100%
The concept of “our employees are regarded as family members,” ensures our employees receive proper care and treatment. In Chroma this is a matter of the utmost concern. The company welfare system helps with a lot of the mundane aspects of daily life: food, clothing, housing, transportation, education and entertainment. This allows employees to focus more fully on their work without needing to pay too much attention to other matters. We put a lot of effort into fully understanding the needs of our employees by using the several established communications channels as to continually improve the welfare system.

We have also established various recreational, medical and health facilities and services in the factories. These conveniences can be accessed any time and again they allow workers to concentrate on their work with their mind and body at ease. This comprehensive effort in employee care allows them to maintain a good balance between hard work and a healthy and happy family life.

We provide our employees with labor and health insurance and maternity allowance or unpaid parental leave, in accordance with the laws and regulations. An appropriate percentage of salary or wages is taken as a contribution to the pension funds (under new system) or reserve funds (under old system) for retirement. Moreover, all our employees are covered by comprehensive group insurance, and Chroma leave benefits are more favorable than those provided for in the Labor Standards Act. The benefits include one-day birthday leave and five days of paid sick leave each year. We want to make sure our employees can work and live safely and also find time to relax and rest.

### 7.5 Employee Welfare

<table>
<thead>
<tr>
<th>Reason for leaving</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Involuntary termination</td>
<td>6</td>
</tr>
<tr>
<td>Foreign worker / Fixed-term employment</td>
<td>161</td>
</tr>
<tr>
<td>Mandatory retirement / Early retirement</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>170</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Statistics of new employment and turnover rates</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Year</strong></td>
</tr>
<tr>
<td>----------</td>
</tr>
<tr>
<td>Year 2016</td>
</tr>
<tr>
<td>Year 2017</td>
</tr>
<tr>
<td>Year 2018</td>
</tr>
</tbody>
</table>

* New employment rate  New employees (not including foreign workers, fixed-term employees, or reinstated employees) / [(initial number of employees + final number of employees) / 2]
* Turnover rate Employees turnover (not including foreign workers, fixed-term employees, or those on unpaid leave) / [(initial number of employees + final number of employees) / 2]
There are staff canteens in the wholesome and healthy.

Employees can be sure the food is improvements needed are made so our

is conducted on site quarterly and any

of Kitchens of Catering Service Providers”

regular basis. An “Audit on the Sanitation prepared in the staff canteens on a

in the dishes served to provide a variety

guaranteed, changes are frequently made

an environment where healthy food is

for only NT$15 each meal. To maintain

Employees are offered a variety of food

headquarters and the Kaohsiung branch

W

allowance.

hospitalization allowance and emergency

allowance, a funeral subsidy,

harmonious corporate atmosphere
care and to create a warm and

program, to promote communication and

offer a diverse employee subsidy

Family support subsidies

We offer a diverse employee subsidy program, to promote communication and care and to create a warm and harmonious corporate atmosphere such as wedding cash gift, maternity allowance, a funeral subsidy, hospitalization allowance and emergency allowance.

Staff travel subsidies

We provide travel subsidies, based on seniority, for employees who are planning to travel individually within Taiwan or overseas. We provide gift vouchers for those who have no travel plans.

Staff canteens with healthy meals

There are staff canteens in the headquarters and the Kaohsiung branch where subsidies cover most of the costs. Employees are offered a variety of food for only NT$15 each meal. To maintain an environment where healthy food is guaranteed, changes are frequently made in the dishes served to provide a variety and SGS takes samples of the meals prepared in the staff canteens on a regular basis. An “Audit on the Sanitation of Kitchens of Catering Service Providers” is conducted on site quarterly and any improvements needed are made so our employees can be sure the food is wholesome and healthy.

LOHAS workout center

The right attitude towards work and a strong and healthy body both lead to good performance. Our operational performance is important, but the health of our employees is of much higher value to us. We firmly believe that only employees with healthy bodies and minds can enhance our performance. We promote a healthy workplace lifestyle based on exercise, and we have built a top-class indoor gym in the factory. The facilities include a staff leisure center, weight rooms, a multi-purpose swimming pool with spa and saunas, a fitness room, a dance classrooms and recreational areas. Courses on different types of exercises are organized regularly, including boxing dance classes, yoga classes and sports competitions. Every employee is a most important partner, and we exercise and strengthen our bodies together to develop a culture of exercise and create a healthy workplace in Chroma.

Favorable leave benefits

In addition to those required by the laws, some of our leave benefits are more favorable than legal requirements. These include one-day birthday leave and five (5) days of sick leave on full pay. Thus helps our employees achieve a good balance between their work and home-life.

Comprehensive insurance plans

All our employees are fully covered by labor insurance, National Health Insurance and group insurance in accordance with the Law. The costs of group insurance is fully borne by Chroma. To protect the health of our employees, the coverage includes payments for term life insurance, accident insurance, major burns/scalds, limited medical insurance for accidents, hospital insurance, cancer insurance, occupational accident insurance and accelerated critical illness insurance.

Commuting and parking benefits

In response to the need to save energy and reduce carbon emission, as well as to shorten the commuting time, we provide shuttle services on five lines in Taipei and Taoyuan. Employees no longer have to waste time commuting and can travel safely between work and home. This helps with a reduction of carbon emission from cars and makes a serious contribution to energy saving and planet protection. We offer free parking for motorcycles and indoor/outdoor parking at low prices. Special parking spaces are reserved for pregnant women and the disabled.

Safe and comfortable employee dormitories

We have built comfortable dormitories for foreign and non-local employees. The dorms have 64 rooms, with certain floors reserved for women to ensure safe accommodation.

Bonuses and benefits

Chroma not only offers a high salary but also a year-end bonus, a profit-sharing bonus, gift vouchers for the three traditional holidays and for Labor Day and a birthday cash gift based on the operational performance of the current year.

Diverse club culture

We support the formation of different kinds of recreational clubs by our employees. We have established the “Chroma Regulations for Subsidization of Clubs,” to promote sports and facilitate the balanced development of mind and body. Applica ions for the formation of clubs can be made by any employees. There are currently 12 clubs: basketball, badminton, dance, hiking, table tennis, flower arrangement, board games, softball, film, volunteer, cycling club and the health promotion club. At least 20% of our employees are members of a sports club. If more people take part in club activities, more of them will have strong and healthy bodies. They will also perform better in their work and identify more with Chroma.

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Chroma not only offers a high salary but also a year-end bonus, a profit-sharing bonus, gift vouchers for the three traditional holidays and for Labor Day and a birthday cash gift based on the operational performance of the current year.

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Employees are the foundation of company development and the most important component for the achievement of sustainable growth and competitiveness. We place great importance on training and the balanced educational development of our employees. We continue to enhance employee quality and professionalism by adhering to the idea of “learning and growing together”. We offer a variety of channels for employee training and enlist the services of excellent trainers and teachers to ensure sufficient training resources.

All divisions of the company propose training plans according to their professional need. The managers and the human resources division arrange on-the-job training courses and internal training delivered by senior employees or experts. These include courses on core competencies, management, sales, marketing, and customer service etc, for employees with different expertise and at different stages of their jobs.

Each division can also arrange training courses in marketing/sales/labor safety/fire safety/technical expertise, at professional institutions depending on the job requirements of the divisions and the demand for external professional knowledge.

The various divisions will submit proposals for annual training based on organizational goals and employee development needs. The human resources division is responsible for coordination and planning. We also make arrangements for employees to attend external seminars and lectures to learn the latest trends and dynamics. This benefits our growth in that we will have enough employees with professional skills to meet development needs and achieve sustainable management.
Comprehensive training courses for new employees

New employees attend general courses that include an introduction to the company, the concept of business operations, ethical standards, labor and human rights laws, rules and regulations, the quality and documentation systems, environmental safety, and labor safety and health laws, and the social responsibility management system, as well as professional courses in the divisions. In addition, new employees in PM, Sales and R&D positions directly related to products, will take a three-day "training course for new staff members" in a manufacturing unit one month after their arrival.

This trainee system allows new employees to understand our production lines and processes. It also provides a basic introduction to the R&D process, production, quality certification, and so on. At the same time, new employees will become familiar with the work environment and company. This procedure also shortens the time it takes them to adapt and they can begin their professional jobs without undue delay.

e-Education and Training Platform (i Learning)

We enhance the professional knowledge, skills, and expertise of our employees to improve their work quality and overall competitiveness. The learning styles and methods often change and become more advanced and we endeavour to provide a variety of learning methods for our employees. We have developed an i-Learning education platform, in cooperation with the human resources and IT divisions. Currently, the functions include online registration, reading information sharing, a training record database, and evaluation and access management. We will continue to develop unique and user-friendly functional modules. This will help to improve the professional knowledge of our employees and be effective for the sharing of knowledge and technology enhancement.
Statistics of annual education and training in 2018

Annual training: Overview of education and training in 2018

<table>
<thead>
<tr>
<th>Subcategory</th>
<th>Male</th>
<th>Female</th>
<th>Total (hours)</th>
<th>Average (hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male (hours)</td>
<td>Female (hours)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Managerial</td>
<td>5,778</td>
<td>643</td>
<td>596</td>
<td>120.5</td>
</tr>
<tr>
<td>position</td>
<td></td>
<td></td>
<td>17.93</td>
<td></td>
</tr>
<tr>
<td>Non-managerial position</td>
<td>1,0575</td>
<td>1,604.5</td>
<td>1,260.5</td>
<td>308.5</td>
</tr>
<tr>
<td>Total hours</td>
<td>1,6353</td>
<td>2,247.5</td>
<td>1,856.5</td>
<td>429</td>
</tr>
<tr>
<td>Combined</td>
<td>11.93</td>
<td>6.53</td>
<td>1.35</td>
<td>1.25</td>
</tr>
<tr>
<td>count</td>
<td>(16353+1371)</td>
<td>(2247.5+344)</td>
<td>(1856+1371)</td>
<td>(429+344)</td>
</tr>
</tbody>
</table>

Training categories: (Only lists the annual training programs that are available for the entire company; internal/external training programs of divisions are not included)

<table>
<thead>
<tr>
<th>Subcategory</th>
<th>Name of course</th>
<th>Description</th>
<th>Number of sessions/ number of participants (total)/ hours (single session)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management</td>
<td>Training for new managers</td>
<td>1. Introduction to HR laws and regulations</td>
<td>1/39/4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Recruitment process and introduction to interview skills</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Introduction to key performance interview points</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hands-on management and highly efficient execution</td>
<td>Understanding the duties and roles of a manager and establishing a correct management attitude. Provision and use of management tools and the concepts for management of routine daily work.</td>
<td>2/49/7</td>
</tr>
<tr>
<td></td>
<td>Employee selection and skills needed for job interviews</td>
<td>Strengthening the knowledge and skills required by supervisors for the selection and recruitment of professional talent. Enhance the success rate of professional talent selection. Make interviews more effective by preparation before, during and after the session.</td>
<td>5/150/7</td>
</tr>
</tbody>
</table>

* Average hours  Total training hours in the type of position/Number of employees in that type of position at the end of December
<table>
<thead>
<tr>
<th>Subcategory</th>
<th>Name of course</th>
<th>Description</th>
<th>Number of sessions/ number of participants (total)/ hours (single session)</th>
</tr>
</thead>
</table>
| Management   | Instructions for manpower planning and budgeting                                 | 1. Key points for manpower budgeting  
2. Description of manpower budget and costs  
3. Introduction to the manpower budget operating system                                                                                             | 1/9/0.5                                                                  |
| Electronic components (finished products/semi-finished products/raw materials) | Approval Sheet and application notes                                               | The R&D personnel should be familiar with the basic material concept of the related internal electronic components, including finished products, semi-finished products and raw material. The Approval Sheet should include component specifications, and all necessary new material documentation should be attached, with a description of modifications and any other relevant remarks. | 1/22/1.5                                                                |
| Wire approval notes                                                                                   | The R&D personnel should be familiar with the classification of wire coding, the method for filing the wire material description and wire characteristics, the wire application, and any related remarks. | 1/30/1.5                                                                |
| Magnetic components (transformers and inductors) Approval notes                                       | The R&D personnel should be familiar with the operational rules for magnetic components, including chokes, low- and high-frequency transformers, mechanical casings for transformer etc, and any other relevant information. In addition, internal forms should be fully explained with reference examples and other pertinent information. | 1/28/1.5                                                                |
| The application of materials (mechanical components)                                                  |                                                                       | 1. The necessary documentation and notices for new materials  
2. Sharing of common mistakes  
3. Announcements, specifications and the description of regulations related to materials                                                                 | 1/32/1.5                                                                |
| R&D          | Presentation skills for R&D personnel                                           | Learn to grasp the needs of the counterparty as a response to different purpose and subject. View the matter from the standpoint of the counterparty. Enhance the ability of brief presentation for R&D personnel, so that it will be easier for them to make logical and effective internal/external presentation.  | 2/59/7                                                                  |
| The application of materials (mechanical components)                                                  | Introduction to patents, the interpretation of patent documents, the interpretation of the scope of patent application, and discussions of relevant cases:  
1) Is the instruction book clear and complete? Can it be used for purpose?  
2) Does the claim clearly describe the required technical characteristics?  
3) Is a clarification of the technical characteristics recorded in the claim?  
4) How to review the functional terms  
A brief introduction to the key points of patent infringement judgment, such as the interpretation of the claim, interpretational principle of technical characteristics, reading of the literal meaning, the equality theory (including the principle of full specification, the history of estoppel, the prior art of defense, and the principle of contribution). | 1/120/4                                                                |
| Sales        | Sales, marketing and communications skills                                      | Learn the fundamental of business sales and understand the information required for sales at every stage. Have clear responses ready when facing the customer at different stages of a sale to facilitate the transaction. | 1/28/7                                                                  |
| Reminders of business transaction risk and the sharing of frequently seen questions                  | The course is based on notices and possible risks at each stage for both the sales and procurement personnel. This includes phase of contract preparation, product delivery, acceptance, payment, and warranty etc. | 1/29/1.5                                                                |
To protect labor and human rights and ensure that our employees know what rights they have, we organized training courses on labor and human rights in 2018. The rate of participation in the latter course was 100%. The following are the statistics:

<table>
<thead>
<tr>
<th>Subcategory</th>
<th>Name of course</th>
<th>Description</th>
<th>Number of sessions/ number of participants (total)/ hours (single session)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology</td>
<td>Improvement and simplification of work, and proposal skills.</td>
<td>Train participants to improve work performance by using simpler techniques. Integrate a cost-benefit analysis, so that the improvement and simplification will be specific and more feasible. Use creative thinking to generate a result that is different from the previous output to enhance work quality and efficiency.</td>
<td>2/71/7</td>
</tr>
<tr>
<td>Technology</td>
<td>Advanced communications skills for handling customers’ problems</td>
<td>Learn the fundamental skills of interacting with customers, to help managers and senior employees handle customer complaints! Cultivate technical service personnel using logical and effective communication tools. This will help them understand customer needs and expectations right from the start, and allow solutions to be reached by consensus.</td>
<td>2/68/7</td>
</tr>
<tr>
<td>Common</td>
<td>Training on safety and health</td>
<td>When company employees visit customer sites to make an installation, carry out service, maintenance, or calibration, the customer may require that our employees be certified. This means they will have completed a 6-hour (or longer) training course in accordance with the labor safety and health regulations. We arrange these training course internally to reduce the cost.</td>
<td>2/80/6</td>
</tr>
<tr>
<td>Common</td>
<td>Introduction to the operations of annual performance evaluation</td>
<td>1. The concept of goal setting. 2. The operations of e-performance.</td>
<td>1/100/0.5</td>
</tr>
<tr>
<td>Common</td>
<td>Description of the implementation of annual budgeting</td>
<td>Learn the fundamental skills of interacting with customers, to help managers and senior employees handle customer complaints! Cultivate technical service personnel through logical and effective communications. This will help them understand customer needs and expectations right from the start, and allow solutions to be reached by consensus.</td>
<td>1/15/1.5</td>
</tr>
</tbody>
</table>

**Statistics of labor and human rights training**

To protect labor and human rights and ensure that our employees know what rights they have, we organized training courses on labor and human rights in 2018. The rate of participation in the latter course was 100%. The following are the statistics:
Chroma has introduced a Management by Object System arranged by human resources. This system sets individual employee work goals and integrates a vision of the company and division to enhance individual management and professional capability. This improves team performance and synergy, reinforces organizational operations and develops momentum.

Performance evaluation is designed to cultivate professional talent and improve employee performance. Employees who perform well are given training and development opportunities. Managers will work with employees whose performance is below expectation and help them to improve by case counseling and communication. Improvement plans are formulated, with assistance from the managers, that will enhance our overall productivity and competitiveness.

The focus of objective-oriented performance

- Two aspects (results aspect and behavioral aspect)
- Three stages (initial setting, mid-term review and final evaluation)
- Two objectives (employee development and human resources policies). These are designed to facilitate superior-subordinate communication and organizational feedback.

However, it is not easy to measure the targets of direct labor and first-line administrative staff. Therefore, the original job performance evaluation, based on specific items, has been retained and is implemented in parallel with the performance evaluation system.
The results of the performance management evaluation system are incorporated into the promotion management and the reward/remuneration systems to ensure the evaluation of employee performance is added to human resources records. With the exception of business unit managers, or those at higher level, local employees whose three-month probationary period has ended are required to undergo performance evaluation. In 2018, 1,447 employees underwent performance evaluation, accounting for 84.37% of our employees. Of them, 90.32% underwent objective-oriented performance evaluation, and 9.68% underwent job performance evaluation.

### Percentage of employees undergoing objective-oriented performance evaluation, by gender and type of position

<table>
<thead>
<tr>
<th>Subcategory</th>
<th>Male</th>
<th>Female</th>
<th>Male</th>
<th>Female</th>
<th>Subtotal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of employees</td>
<td>Percentage</td>
<td>Number of employees</td>
<td>Percentage</td>
<td>Number of employees</td>
<td>Percentage</td>
</tr>
<tr>
<td>Managerial position</td>
<td>1 1.59%</td>
<td>1 1.3%</td>
<td>326 30.1%</td>
<td>58 25.89%</td>
<td>386</td>
</tr>
<tr>
<td>R&amp;D</td>
<td>25 39.68%</td>
<td>2 2.6%</td>
<td>395 36.48%</td>
<td>46 20.54%</td>
<td>468</td>
</tr>
<tr>
<td>Marketing</td>
<td>7 11.11%</td>
<td>3 3.9%</td>
<td>96 8.86%</td>
<td>9 4.02%</td>
<td>115</td>
</tr>
<tr>
<td>Technical</td>
<td>26 41.27%</td>
<td>19 24.67%</td>
<td>244 22.53%</td>
<td>31 13.84%</td>
<td>320</td>
</tr>
<tr>
<td>Administrative staff</td>
<td>4 6.35%</td>
<td>52 67.53%</td>
<td>22 2.03%</td>
<td>80 35.71%</td>
<td>158</td>
</tr>
<tr>
<td>Total</td>
<td>63 100%</td>
<td>77 100%</td>
<td>1083 100%</td>
<td>224 100%</td>
<td>1447</td>
</tr>
</tbody>
</table>

*Remarks: In company internal classification, a manager simply has managerial responsibility. Non-managerial positions include R&D, marketing, technical and administrative personnel.*

### Percentage of employees who received promotion, by gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Number of employees promoted in 2018</th>
<th>Number of employees at year end in 2018</th>
<th>Promotion rate in 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>150</td>
<td>1188</td>
<td>12.62 %</td>
</tr>
<tr>
<td>Female</td>
<td>28</td>
<td>306</td>
<td>9.15 %</td>
</tr>
<tr>
<td>Total</td>
<td>178</td>
<td>1494</td>
<td>11.91 %</td>
</tr>
</tbody>
</table>

*Remarks: The above statistics do not include foreign workers.*

1. Performance evaluation: For administrative staff, clerks, assistants and assistant secretaries in grade 1-4.
2. For operators and technicians in grade 1-3, such as marketing, R&D and technical.
7.7 Employee Communication and Care

The rights of our employees are a matter of great importance and all of them receive proper care and attention. Many diverse channels are provided for two-way communication to increase the efficiency of internal exchange, and enact a good relationship between the company and its employees. All our employees are encouraged to make suggestions, and we do our best to satisfy reasonable demands. We show concern and make sincere effort to settle complaints and find the source of a problem to lower the rate of recurrence. We encourage our employees to identify with Chroma and participate fully in company culture. There is an e-mail suggestion box and a hotline for employee communication. We have even setup physical suggestion boxes in the canteens. Our employees can access real-time information through the bulletin board on the Enterprise Information Portal as well as announcements and tickers on the human resources system e-HR. In 2018, 734 company-wide announcements were made. These provide timely solutions and responses to employee problems so they do not have to worry about not getting help.

There are many forums in the Notes system where employees can discuss such matters as cafeteria meals and welfare. In 2018, there were 264 posts in the forums. 264 posts in the forums.

Programs for upgrading employee skills and transition assistance programs.

The type and scope of programs for the enhancement of employee competency and assistance:
To provide systematic training to employees in all positions and to strengthen their knowledge and management skills, we offer courses related to the competencies needed for a particular job. Employees can gain new knowledge at work and increase their individual competitiveness.

- We provide care and assistance to our employees so they can develop cohesion and balance. This helps them become more focused on their jobs while still remaining able to enjoy life.
- We hold quarterly labor-management meetings, in accordance with the Labor Standards Act. We have established work rules stipulating both employee and employer rights and obligations. At these meetings, employee representatives can make suggestions and express opinions on specific topics, and then work with the company for resolution. The meetings also serve as venues for discussion and mediation of labor-management relations to achieve more harmonious labor-management. In 2018, there were 10 participants at the meetings with equal numbers of employee and management representatives present.
- In the event of major changes in operations that will affect the work rights of our employees, or if labor conditions have to be changed, we will remain 100% in compliance with Article 16 of the Labor Standards Act. The company will inform the employees, well in advance of any changes in labor contracts, and well within the minimum period of notice, prior to such change. In a case of business termination, transfer, deficit, sales reduction or where an employee turns out to be incompetent or unable to perform their job, the employee will be notified of termination of their labor contract 10 to 30 days in advance, depending on their service period completed, in compliance with the law. The company will disclose any dismissal plans, and inform the competent manager and the labor representative at a labor-management meeting, so that all employees will be fully and immediately informed.
In 2018, no employee complaint were filed through our internal complaint channel, and there were no cases of human rights complaint received, processed or solved via external formal mechanisms.

Cases of employee complaints:

We are working hard to implement various measures for the protection of our employees against sexual harassment in the workplace. We have strengthened our efforts to raise awareness during training sessions for new employees. We also put up posters to raise the awareness for self-protection in the workplace. The posters contain information about the channels that can be used for complaints and examples of sexual harassment. We are making every effort to create a friendly and safe environment for our employees.

Compliance

Statistics of announcements in 2018

<table>
<thead>
<tr>
<th>2018 announcements and tickers</th>
<th>No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office of the President</td>
<td>113</td>
</tr>
<tr>
<td>Operations Management Center</td>
<td>178</td>
</tr>
<tr>
<td>Employee Welfare Committee</td>
<td>25</td>
</tr>
<tr>
<td>Clubs</td>
<td>301</td>
</tr>
<tr>
<td>Administration Center (not including the Human Resources Division)</td>
<td>94</td>
</tr>
<tr>
<td>Human Resources Division</td>
<td>23</td>
</tr>
<tr>
<td>Total</td>
<td>734</td>
</tr>
</tbody>
</table>

Statistics of forums in 2018

<table>
<thead>
<tr>
<th>Category</th>
<th>No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forums for employee welfare</td>
<td>200</td>
</tr>
<tr>
<td>Forums for employee meals</td>
<td>64</td>
</tr>
</tbody>
</table>

Employee care and awareness

We show concern for our employees and do our best to satisfy the reasonable demands of complainants and find the source of a problem to lower the recurrence rate. In 2018, there were no cases of human rights complaint accepted, processed or solved via internal formal mechanisms.

Pecuniary Punishment in the Labor Category

The Department of Labor, Taoyuan City, dispatched personnel to conduct labor inspection on February 26, 2018 and found, through random inspection, a violation of Paragraph 2, Article 32: “The extension of working hours shall not exceed 46 hours a month.” And the performance bonus was not included in the payment for extended working hours which was a violation of Paragraph 1, Article 24: “An employer shall pay worker overtime wages using the following basis…” An official letter was received from the Taoyuan City Government on March 26, 2018, imposing a fine of NT$ 200,000 on the company. Another official letter was received from the Taoyuan City Government on May 7, 2018, stating that the Company had wages not paid in full directly to the worker, which was a violation of the second Paragraph of Article 22 of the Labor Standards Act: “Wages shall be paid in full directly to the worker, unless otherwise prescribed by applicable statutes or administrative regulations or agreed to by both the employer and the worker.” The fine was NT$60,000. In response to the abovementioned violations, the company made an adjustment and has included the performance bonus in the payments for extended working hours. Strict control of extended working hours is carried out in accordance with the law.
7.8 Overall Employee Health Management

Warmhearted Medical Service

It is our responsibility to provide a safe and healthy workplace, and we show this responsibility and care by providing high-class medical services for our employees. A medical service has been set up in the factory to provide an abundant and warm-hearted medical resource for the employees. Various professional services ensure that employees can work without worry in an environment where comprehensive medical attention is immediately available. In addition to basic attention such as dressing minor injuries, preliminary diagnoses and simple health care services, the medical rooms provide a comfortable environment for simple relaxation. An employee can talk to a nurse and receive the latest health information. Medical periodicals are available, as well as information boards and a dressing-change service. Blood pressure, blood sugar and body fat can be measured. There are consulting rooms and even an area for taking a break. We have a long-term relationship with the Family Medicine Department of the Chang Gung Memorial Hospital. It provides medical service to the company on a regular basis. This includes comprehensive health management for our employees and health care in every respect. These services include health consultation for the employees, their family members and relatives, a diagnostic service, an injury and illness prevention service, assessment and suggestion of fitness for work and return to work, consultation and assistance for health promotion activities, assistance and follow-up of health management measures, referrals, assessment and inspections of plants, and the identification of operational and workplace hazards.

All existing and new employees receive annual medical examination. We work with on-site doctors in the factories, medical specialists, and professional nurses to discuss any changes needed as well as the addition of new tests or procedures. The hepatitis B/antibody test has been added and it is carried out every 18 months. This is better than stipulated in government regulations. Personnel who work in specific production lines, such as those where ionizing radiation is present, or lead, methylene bisphenyl isocyanate, or any other toxic material is used, have special health inspection checks. These examinations are done in accordance with the occupational health and safety regulations, to ensure that the employees in our factories all remain in good health. In addition to normal health care of the employees in the company, the medical service provides a "health care pack" for employees to take with them on business trips. There are gauze masks, Band-Aids, a temperature measurement card and a booklet with useful health information for the traveler. The pack is both helpful and protective. The company “Relaxed body and mind - Make Yourself Free and Easy” stress-relief camp covers a wide range of activities for employees. These activities range from the development of the body, mind and spirit to special methods for the relief of work stress. Employees who take part can improve their work efficiency and control their state of health and learn to enjoy a really healthy and happy life.
iHealth Website for Your Health

We have created a culture of health, and in addition to placing more importance on employee health, we encourage the adoption of personal health management. The cloud-based iHealth Management System website was built in 2016 to create a working environment that favors physical and mental health. The health status of the employees, including their physical examination and nursing care records, is followed up and analyzed using cloud-based systematic management to establish health promotion measures and to conduct risk assessment. The website provides the latest medical information, important announcements, personal health statistics, self-healthcare registration, and allows doctor’s appointments to be made. The platform is easy to use and medical information can easily be found. It is possible to get a comprehensive knowledge of health for the protection of their physical and mental health in all respects.

Work-Life Balance! Exercise for a new healthy life in the workplace.

"Employee health is the fortune of Chroma." We believe that only healthy employees can generate excellent company productivity. A luxurious indoor exercise and recreational center with comprehensive hardware facilities and regular sports courses has been created. In 2017, the company was approved as a Taiwan iSports Enterprise by the Sports Administration of the Ministry of Education.

Chroma has established this sports center, which includes a gymnasium, a rhythmic gymnastics classroom, and a swimming pool and spa, as part of ongoing effort to promote a healthy workplace lifestyle and encourage exercise and health-related recreation. The company has also held health and weight-loss promotion events for 12 consecutive years. These events have had a high employee participation rate and have achieved very effective results.

To encourage enterprises and enhance a trend towards exercise in the public, the Sports Administration held an "Adopting an enjoyable exercise habit program" with the slogan "iSport" in 2018. It is hoped that enterprises will fulfill their responsibility for the care of employee health by encouraging them to adopt an exercise habit. The company is carrying out new testing methods of employee physical fitness in cooperation with the Sports Administration. The new physical fitness testing method and digital equipment are used to conduct various tests and analyses. The goal being the achievement of an easy method that takes less time to get more precise employee health data.
Corporate physical education course – Exercise seminar X Technology physical fitness

To balance the mounting pressure of work and personal life, Chroma has cooperated with “Global Views Monthly” to arrange corporate exercise courses and scientific physical fitness activities. Experts give lectures and hold seminars on the topics of enjoyable exercise, health benefits and injury protection. A regular exercise habit can strengthen the psychological approach to work. People who have an exercise habit are more likely to also have a more positive attitude towards adversity! The absentee rate, due to work stress, in employees who exercise is less. All our employees have come to appreciate the value of physical fitness and many share the fun of exercise with groups of other colleagues!

Survey of HRV (Heart Rate Variability) and the PTG (fluctuations in the arteries)

Many modern studies show that some diseases are due to both physical and mental disorders. The symptoms of these disorders include insomnia, anxiety, irritability, inattention, upset stomach and headaches. “Pressure” and “depression” are a root cause for both physical and mental disorders. Autonomic nervous disorders can be due to long-term stress and can result in cardiovascular and cerebrovascular diseases that may include the risk of sudden death.

In 2018, the company infirmary conducted a HRV survey in Linkou, Hsinchu and the Kaohsiung plants. This involved an evaluation of cardiovascular and cerebrovascular obstruction and hardening for an assessment of employees at high risk of a stroke and those needing intervention to alleviate this risk as soon as possible. Variations in heart rate are a clear indicator of the physiological condition. Employees with physical and mental disorders can use the scientific data as a reference that will help them with prevention and treatment.

The provision of a good psychological consultation service for our employees

To enhance the level of importance of employee mental health for supervisors, the Center for Environmental Protection, Safety and Health has assisted in the integration of internal and external resources, and planned an individual employee assistance program based on the needs of the company through the Lifeline Association in Taoyuan City. We have arranged a “consultation service” for employees in need. The monthly half-day psychological counseling service involves professionals who help employees handle problems that affect their work performance and personal life. Consultation topics include communication between employees and supervisors, dealing with emotional problems, and conflict resolution.

In 2018, there were 60 on-site consultations, 55 were individual consultations, 4 were about management and one was an individual meeting.

The relevant issues are summarized as follows:
Various Lectures to Improve the Awareness of Health

The medical facility organizes lectures on medical and health care on a regular basis and there were 16 lectures with 701 participants held in 2018. The lectures were designed with different themes on physical and mental health, such as medication safety, diet control, self-stress-adaptation, the prevention of allergies, health-related physical fitness, workplace communication techniques, the relief of physical and mental stress, and so on.

Event/Seminar | Event date | Lecturer | Factory area | Number of participants |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Health Promotion Event I - 60 days of handsome and beauty cultivation classes</td>
<td>2018/05/28</td>
<td>-</td>
<td>Linkou Plant</td>
<td>50</td>
</tr>
<tr>
<td>2018 Introduction to the in-service health examination report</td>
<td>2018/06/05</td>
<td>Dr. Lin Dengfu</td>
<td>Linkou Plant</td>
<td>20</td>
</tr>
<tr>
<td>Technology physical fitness testing</td>
<td>2018/06/13</td>
<td>-</td>
<td>Linkou Plant</td>
<td>106</td>
</tr>
<tr>
<td>Health care in the workplace such as self-relaxation exercises and muscle exercises</td>
<td>2018/06/13</td>
<td>Dr Hu Jacheng</td>
<td>Linkou Plant</td>
<td>49</td>
</tr>
<tr>
<td>Nutrition - Things to know about the upgrade of systemic endocrine</td>
<td>2018/07/04</td>
<td>Dr Lin Anmin</td>
<td>Linkou Plant</td>
<td>60</td>
</tr>
<tr>
<td>Exercise - exercise methods to improve health</td>
<td>2018/07/18</td>
<td>Dr Lin Anmin</td>
<td>Linkou Plant</td>
<td>47</td>
</tr>
<tr>
<td>2018 Annual health promotion achievement presentation and award ceremony</td>
<td>2018/08/21</td>
<td>-</td>
<td>Linkou Plant</td>
<td>36</td>
</tr>
<tr>
<td>Parent-child seminar - How to teach gentle but consistent</td>
<td>2018/09/13</td>
<td>Teacher Big tree</td>
<td>Linkou Plant</td>
<td>27</td>
</tr>
<tr>
<td>Annual Health Promotion Event II - Chroma i-Sport &quot;Adopting an enjoyable exercise habit program&quot;</td>
<td>2018/10/01</td>
<td>-</td>
<td>Linkou Plant</td>
<td>52</td>
</tr>
<tr>
<td>Kaohsiung Plant - 2018 Health promotion event</td>
<td>2018/07/01</td>
<td>-</td>
<td>Kaohsiung Plant</td>
<td>25</td>
</tr>
<tr>
<td>Kaohsiung Plant - 2018 Health promotion achievement presentation and award ceremony</td>
<td>2018/10/17</td>
<td>-</td>
<td>Kaohsiung Plant</td>
<td>17</td>
</tr>
<tr>
<td>HRV+PTG testing event</td>
<td>2018/08/14</td>
<td>-</td>
<td>Kaohsiung Plant</td>
<td>50</td>
</tr>
<tr>
<td>Redesign of lifestyle, strong body building with vitality - plus elastic belt lessons</td>
<td>2018/07/11</td>
<td>Wang Lixuan</td>
<td>Kaohsiung Plant</td>
<td>42</td>
</tr>
<tr>
<td>Disease of the sitting lifestyle - lower body cross syndrome - get to know your body</td>
<td>2018/08/30</td>
<td>Wang Lixuan</td>
<td>Kaohsiung Plant</td>
<td>44</td>
</tr>
<tr>
<td>2018 Introduction to the in-service health examination report</td>
<td>2018/05/17</td>
<td>Wang Jianyuan</td>
<td>Kaohsiung Plant</td>
<td>20</td>
</tr>
<tr>
<td>Technology physical fitness testing</td>
<td>2018/11/20</td>
<td>-</td>
<td>Kaohsiung Plant</td>
<td>56</td>
</tr>
<tr>
<td><strong>Total number of employees</strong></td>
<td><strong>701</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The Weight Reduction Competition and the Exercise Habit

Cultivation of a habit of regular exercise is the first step needed to safeguard your health. The average weight of people in Taiwan is increasing by the year and the culprits are dining out and too little exercise. We organize regular “Relaxed body and mind - Make Yourself Free and Easy” weight reduction competitions to encourage employees to take part in physical training to guard their health and avoid unnecessary illness. In 2018, 54 employees participated in the event. They lost an average of 3.3 kilograms to reach a total of 164 kilograms lost.

Safety Workplace Certification

Training to improve employee first-aid skills for use in emergency circumstances creates a safer working environment. Chroma received “Safe Workplace Certification” in 2016 and encouraged employees to take part in the Cardiopulmonary Resuscitation (or CPR) and AED training project. Several hundreds have finished the CPR + AED training and 4 sets of AED equipment have been placed in the headquarters in Taoyuan and the Hsinchu and Kaohsiung branches. All the AED devices are in places where they are immediately available for use and are clearly marked to ensure they can easily be located in an emergency.
7.9 Safe Working Environment

Corresponding “material topic”
- Occupational health and safety management.

Meaning for Chroma
- We are dedicated to the sustainable development of the company and creation of a safe and comfortable working environment to improve the coherence of the employees. We take steps to prevent accidents and adverse effects on the health of the employees by regular safety inspections of occupational safety risks. Inspections are also done before any new equipment is put into service.

Concrete plans for 2018
- An occupational safety and health committee was established.
- All the employees participate in environment, safety and health management courses.
- An environment, safety and health management system was established for all the employees.

Goals for 2018
- Zero cases of occupational illness or death.

Resources invested
- We have established an occupational accident reporting mechanism and an online training system for employee education. Responsible personnel conduct review and management.

Evaluation mechanism
- Monthly statistics of occupational injury cases are prepared.

Concrete performance in 2018
- Zero cases of occupational illness and occupational death in 2018

2019 or medium-term to long-term goals
- Continue to promote “zero cases” of occupational illness or death.
- Disaster prevention and emergency response training and exercise is organized on a regular basis, with participation by all employees as a goal.
We continue to focus on the topic of a safe and healthy working environment that ensures the safety of our employees. Precautions are taken at the same time to prevent loss or damage to property or equipment, and avoid any adverse effects on the environment. In addition to strict control of all the operations, we pay very careful attention to the enhancement of safety awareness and responsibility in our employees and vendors.

The nature of Chroma operations does not include any tasks that include a high level of risk, or which might increase the incidence rate of any specific disease. We have also established an occupational safety management system. This system is used to assess risks in the working environment and identify, eliminate, or reduce the chance of occupational accidents. We use safety performance indicators based on the P(Plan)-D(Do)-C(Check)-A(Action) framework. This quantitative management and monitoring as resulted in substantial improvement in a significant reduction in occupational accidents. All accidents on factory grounds are investigated immediately by the Center for Environmental Protection, Safety and Health. The other factories are informed about the incident and the corrective measures to be used to avoid any recurrence in the future.

Personal protection equipment such as face masks, goggles, and anti-static shoes is provided for different tasks in special work categories. In laboratories where there is any possibility of irradiation, all staff wear monitoring armbands. These are checked every month for dosage to ensure the laboratory is only used when there is no danger to the operators.

Occupational Safety and Health Committee

Meetings of the “Occupational Safety and Health Committee” are held every quarter. The Committee has 16 members and the company nurse is one of them to offer medical insight. Six (40%) of the other members are worker representatives. The committee discusses and reviews the Occupational Safety and Health Plan as well as the training programs, work environment improvement, hazard prevention and management, internal audits, contractor management, and health promotion.

Dissemination and Training for Occupational Safety

“Safety” is our first priority and “zero occupation accidents” is the ultimate goal. Regular safety and health inspections are carried out and all employees are made aware of the need for the prevention of accidents in the factories. Employees periodically put their accident and disaster prevention awareness into practice by conducting on-site situational exercises. These include actions to be taken in the event of fire, evacuation drills, the use of fire extinguishers, escape slings, fire hoses, and CPR instructions. These are important to understand the measures and precautions that need to be taken in the event of some real disaster such as a fire. Employees and contractors sometimes have a need to use protective equipment. We conduct regular training in the use of protective clothing, gloves, masks, etc. Notices are posted near places where there are dangers that have details of all the relevant control measures and precautions that have to be taken.
Dissemination and Training for Occupational Safety

We also provide training for new and existing employees, external contractors, and employees engaged in special operations.

Occupational Safety, Education and Training in 2018

<table>
<thead>
<tr>
<th>Name of course</th>
<th>Number of training sessions</th>
<th>Number of participants</th>
<th>Number of hours</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training for contractors</td>
<td>17</td>
<td>201</td>
<td>201 hours</td>
<td>Contractors working with us on a long-term basis are required to take an annual training to improve their awareness of safety and avoid the occurrence of occupational accidents. A test is conducted at the end of the training to ensure they understand the key points of the course and the need for safety protection when they enter the factory.</td>
</tr>
<tr>
<td>Fire drill for in-service personnel</td>
<td>18</td>
<td>1059</td>
<td>1059 hours</td>
<td>These include evacuation drills and the use of fire extinguishers, fire hoses, and escape slings as well as CPR. The drills are conducted once every six (6) months.</td>
</tr>
<tr>
<td>Training for new employees</td>
<td>19</td>
<td>287</td>
<td>869 hours</td>
<td>We conduct comprehensive training for new domestic and foreign employees using their mother tongue. Hearing instructions given in a language they know well ensures they understand the accurate safety measures in the new factory environment.</td>
</tr>
<tr>
<td>Lithium battery Education and Training</td>
<td>1</td>
<td>80</td>
<td>120 hours</td>
<td>Lithium batteries are relatively dangerous and there are some risks involved in their use and handling. Precautions need to be taken to ensure worker safety and avoid possible accidents. The company conducts thorough training for personnel involved in lithium battery production and handling. These include courses in safety and production standards, as well as emergency treatment and response.</td>
</tr>
<tr>
<td>Training of new employees for wafer probe</td>
<td>12</td>
<td>47</td>
<td>141 hours</td>
<td>Wafer probe operators work in a special environment and are involved in meticulous procedures. Training of these operators is rather specialized and intensive, especially with respect to occupational safety.</td>
</tr>
<tr>
<td>Emergency response training for toxic chemicals</td>
<td>1</td>
<td>30</td>
<td>2 hours</td>
<td>GHS hazardous training is done on an annual basis. Emergency response and practical exercises that involve the wearing of protective clothing and devices are carried out.</td>
</tr>
</tbody>
</table>
# Occupational injury statistics for 2018

<table>
<thead>
<tr>
<th></th>
<th>Work injury</th>
<th>Transportation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>No.</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Work hours lost</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>Day(s) lost</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Absence rate (AR)</td>
<td>0.000%</td>
<td>0.00004%</td>
</tr>
<tr>
<td>Absence rate (AR)</td>
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</tr>
<tr>
<td>Disabling injury frequency rate (FR)</td>
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<tr>
<td>Disabling injury severity rate (SR)</td>
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</tr>
<tr>
<td>Frequency severity indicator (FSI)</td>
<td>0.07</td>
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Remarks:
- Absence rate (AR) = \( \frac{\text{Total absences during the reporting period (incl. sick leave, industrial injury, menstrual leave)} \times 10^{5}}{\text{Total workdays during the reporting period}} \times 100\%
- Disabling injury frequency rate (FR) = \( \frac{\text{Number of disabling injury persons} \times 10^{6}}{\text{Total person-work hours}} \)
- Disabling injury severity rate (SR) = \( \frac{\text{Days lost due to disabling injury} \times 10^{6}}{\text{Total person-work hours}} \)
- Frequency severity indicator (FSI) = \( \frac{\text{FR} \times \text{SR}}{1,000} \)
Social Engagement

8.1 Industry-Academic Collaboration to Cultivate Talents for the Industry
8.2 Social Welfare
8.1 Industry-Academic Collaboration to Cultivate Talents for the Industry

Chroma and NTUST are strengthening their international industry-academic collaboration with a focus on AI and the green energy industry.

Chroma devotes much effort to social engagement in collaboration with the National Taiwan University of Science and Technology (NTUST). We participate in international industry-academic collaboration and in the research and development of cutting-edge technologies such as sustainable energy, artificial intelligence (AI) and intelligent manufacturing. Chroma has a longstanding agreement with the NTUST and after the establishment of the Chroma NTUST R&D Center in 2015, we have continued to make an NT$5 million donation for three consecutive years. This total of NT$15 million had been supplemented by a donation of NT$4.2 million worth of measurement and testing equipment. This industry-academic collaboration combines the research energy of the university with Chroma’s advanced technology in the cultivation of talent for industry!

NTUST works closely with industry and is able to customize solutions to solve industrial issues based on enterprise needs. It also provides research and development energy that cultivates talent for industry. We hope that our yearslong successful experience allows us to expand our industry-academic collaboration to an international level. This will help many domestic manufacturers to develop an international market and will connect our own R&D energy with many other international research institutions and related industries.

NTUST is dedicated to the international industry-academic collaboration and has good technology interaction and communication with technologically advanced countries such as Germany, the US and Japan. The large number of international NTUST alumni, that include graduates from the US, Indonesia, Vietnam and Ethiopia, has become an important resource for the promotion of international industry-academic collaboration.

Chroma is a world-leading supplier of precision electronic test and measurement instrumentation, automated test systems, intelligent manufacturing systems, and comprehensive test and automation turnkey solutions. Chroma makes substantial investment in R&D every year to sustain its leading key technologies. Chroma’s highly integrated capabilities in the optical, mechanical, electronic, temperature control and software fields, help the company retain its competitive advantages and maintain sustainable business operations. The technology and technological manpower of NTUST can quickly provide assistance to Chroma in the development of prospective technology and cutting-edge applications.
8.2 Social Welfare

Chroma is connected with the underprivileged rural areas and works together with small farmers to create a beautiful future.

There are many small farmers in the rural areas of Taiwan who produce high-quality agricultural products. The “Fine food in neighboring areas” platform was established in 2011 to help overcome many of the trading difficulties encountered by small farmers. The platform enables enterprises to purchase directly from the small farmers in rural areas, and this mutually beneficial relationship facilitates the availability of these fine agricultural products. The core values of the “Fine food in neighboring areas” are “clean,” “excellent” and “fair.” The goal is to deliver safe food to people who need it. The small farmers are given a stable and consistent platform from which to sell their produce. This is a driving force that allows them to continue farming, and establishes a good sustainable cycle between farmer and consumer.

Chroma enhanced its collaboration with “Fine food in neighboring areas” starting in June 2018. Supplies for the cafeteria are regularly purchased from the small farmers and the Chroma employees can enjoy fresh organic fruit and vegetables for lunch. Collaboration between Chroma, the farmers and the employees, allows the company to both enhance its competitiveness, and take care of the small local farmers in the countryside. In addition, we provide our employees with better and healthier food that enhances their health and satisfaction. This good platform has created a positive outcome for all three parties concerned.

The company will continue to enhance these collaborations to the advantage of employees, local society and the sustainable development of the company.

Public Welfare Donations in 2018

<table>
<thead>
<tr>
<th>Donor</th>
<th>Amount</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friends of the Police Association in Taoyuan City (Corporation)</td>
<td>$ 500,000</td>
<td>2018/3/28 These donations show our appreciation of the efforts of the local police to maintain stability and security. Their contribution is the foundation of support and maintenance of public safety and order in Taiwan society. Chroma has sponsored the Friends of the Police Association in various regions in the name of the company and Chairman. This is our way of paying our respect, showing appreciation, and recognizing what they do for society.</td>
</tr>
<tr>
<td>Friends of the Police Association in Guishan (Corporation)</td>
<td>$ 500,000</td>
<td></td>
</tr>
<tr>
<td>Friends of the Police Association in Yunlin County (Individual)</td>
<td>$ 200,000</td>
<td>2018/5/7 NT$200,000 Donation (4/24)</td>
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### Donor Engagement

<table>
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<tr>
<th>Donor</th>
<th>Amount</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zhiyuan Foundation in Tainan City (Individual)</td>
<td>$650,000</td>
<td>Helping underprivileged children and providing teaching sessions in rural areas. The Zhiyuan Foundation was established in 2002. It is committed to “comprehensive education” and offers free “supplemental teaching” to help underprivileged children. After-school tutoring sessions are held 2 to 3 hours a day for five days a week. The way of “teaching students based on their capabilities” and strict “quality control” is used to help underprivileged children build up basic capabilities and self-confidence in an improved environment. The foundation enhances social competitiveness in the children and has become their “guardian angel.”</td>
</tr>
<tr>
<td>BoYo Social Welfare Foundation (Individual)</td>
<td>$10,000 × 12/months</td>
<td>The BoYo Social Welfare Foundation was established in 2002. It is committed to “comprehensive education” and offers free “supplemental teaching” to help underprivileged children. After-school tutoring sessions are held 2 to 3 hours a day for five days a week. The way of “teaching students based on their capabilities” and strict “quality control” is used to help underprivileged children build up basic capabilities and self-confidence in an improved environment. The foundation enhances social competitiveness in the children and has become their “guardian angel.”</td>
</tr>
<tr>
<td>Paper Pinwheel Cultural Foundation (Corporation)</td>
<td>$38,400</td>
<td>The local children in Taiwan need to hear local Taiwanese fairy tales. Young children can sense the friendliness and warmth of the Taiwanese when they hear local stories and fairy tales. “The Magic Book of the Paper Pinwheel,” is a story all children need to hear. The artistic performance was held at various locations and put children in touch with drama. They can feel the beauty of the story close-up and get to know their birthplace, Taiwan. The company purchased several dozens of tickets to the shows and distributed them to employees and underprivileged groups. We hoped that watching the show would inspire our children. This classic story will also inspire modern parents whom we hope will encourage their children to walk their own path through life. The events were sponsored by Chairman Leo Huang and are listed below:</td>
</tr>
<tr>
<td>Paper Pinwheel Cultural Foundation (Corporation)</td>
<td>$1,000,000</td>
<td>2018/12/12 Donation to Paper Pinwheel Cultural Foundation</td>
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<tr>
<td>Yunlin County Government: Cho Chia Ting Towel Co Ltd. (Individual)</td>
<td>$100,000</td>
<td>2018/5/22 NT$100,000 Donation (5/22) We sponsored the dragon boat competition event held in the waters of the retention pond in Kouhu Township, Yunlin County for the first time from June 16th to the 18th, 2018. Many local villagers participated in the event and as many as 116 teams took part. There was a grand opening ceremony and Chroma invited several performance groups to the three-day event. We also held other activities such as hiking, a painting competition, and of course, the Dragon Boat Festival celebration itself. The event was a great success and the company also provided some individual sponsorships.</td>
</tr>
<tr>
<td>Donation for the dormitory on the Tainan Campus, National Chiao Tung University</td>
<td>$20,000,000</td>
<td></td>
</tr>
<tr>
<td>Taoyuan Enterprise Chamber (Corporation)</td>
<td>$500,000</td>
<td>2018/10/9 Vice President of the Taoyuan Enterprise Chamber took office and donated NT$500,000</td>
</tr>
<tr>
<td>Donation for the new construction project at the National Chiao Tung University</td>
<td>$3,000,000</td>
<td></td>
</tr>
<tr>
<td>Qiu Zaixing Culture and Education Foundation (Individual)</td>
<td>$4,000,000</td>
<td>2018/12/18</td>
</tr>
<tr>
<td>Taiwan Lifeline Association</td>
<td>$8,800</td>
<td>The Taoyuan City Lifeline Association is dedicated to mental health services and consultations for suicide prevention, career exploration and consultation for youngsters, psychological care for older people, mental health promotion in the community and employee assistance. To connect more social groups with corporate social responsibility and to better understand Lifeline, we put considerable effort into mental health of the general public and sponsorship of the “Care for Life, Lifeline Together” charity carnival on September 29, 2018. We encouraged our employees to join the event and also towards care for the elderly and underprivileged groups, as well as to express their love and care for society. These sponsorships also make substantial contribution to our corporate social responsibility.</td>
</tr>
</tbody>
</table>
Appendix

Chart of affiliated Chroma companies
External verification - Chinese certificate
External certificate - English certificate
GRI Standards Disclosure
Comparison List
Chart of affiliated companies

Chroma ATE Inc.

- Quantel Private Ltd. (Shareholding 60%)
- Neworld Electronics Ltd. (Shareholding 100%)
- Chroma ATE Inc. (USA) (Shareholding 100%)
- Chroma Electronics (Shenzhen) Co Ltd (Shareholding 100%)
- Chroma Electronics (Shanghai) Co Ltd (Shareholding 100%)
- Chroma Germany GmbH (Shareholding 100%)
- Chroma ATE Europe B.V (Shareholding 100%)
- Chroma New Material Corp. (Shareholding 100%)
- Chroma Investment Co Ltd. (Shareholding 100%)
- Chroma Japan Corp. (Shareholding 100%)
- Sensational Holding Ltd. (Shareholding 100%)
- Chroma Systems Solutions Inc. (Shareholding 25%)
- Testar Electronics Corp. (Shareholding 67.2%)
- MAS Automation Corp. (Shareholding 100%)
- CHI Incorporation Ltd. (Shareholding 100%)
- Chen Hwa Technology Inc. (Shareholding 100%)
- San Eagle Development Corp. (Shareholding 100%)
- Sensational Holding Ltd. (Shareholding 100%)
- Adivic Technology Co. (Shareholding 51%)
- EVT Technology Co Ltd. (Shareholding 85.6%)
- Innovative Nanotech Inc. (Shareholding 71.1%)
- Touch Cloud Inc.
- Mo Kuan Technology (Nanjing) Co Ltd. (Shareholding 100%)
- Wei Kuang Automatic Equipment (Nanjing) Co Ltd.
- Wei Kuang Automatic Equipment (Xiamen) Co Ltd.
- Wei Kuang Mechanical Equipment (Shanghai) Co Ltd.
- Wei Kuang Electrical Equipment (Shanghai) Co Ltd.
- Wei Kuang Automation Equipment (Shenzhen) Co Ltd.
- Wei Kuang Automation Equipment (Suzhou) Co Ltd.
- Wei Kuang Automatic Equipment (Nanjing) Co Ltd.
獨立保証意見聲明書

致洪電子股份有限公司 2018 年企業社會責任報告書

根據獨立保証意見聲明書的規定，本公司於 2018 年企業社會責任報告書中作出以下聲明。

1. 我們獨立保証意見聲明書的出具方是洪電子股份有限公司，聲明書的出具方是洪電子股份有限公司。

2. 洪電子股份有限公司的聲明書是按照 A1000 標準進行的，聲明書的出具方是洪電子股份有限公司。

3. 洪電子股份有限公司的聲明書是按照 A1000 標準進行的，聲明書的出具方是洪電子股份有限公司。

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INDEPENDENT ASSURANCE OPINION STATEMENT

CHROMA ATE INC. 2018 Corporate Social Responsibility Report

The British Standards Institution is independent to CHROMA ATE INC. Therefore referred to as CHROMA in this statement and has no financial interest in the operation of CHROMA other than for the assessment and verification of the sustainability statements contained in this report.

This independent assurance opinion statement has been prepared for the stakeholders of CHROMA only for the purpose of assuring its statements relating to its corporate social responsibility (CSR) more particularly described in the Scope below. It was 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 CHROMA. 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 CHROMA only.

Scope

This scope of engagement agreed upon with CHROMA includes the following:

1. The assurance scope is consistent with the description of CHROMA ATE INC. 2018 Corporate Social Responsibility Report.

2. The evaluation of the nature and extent of CHROMA’s adherence to AA1000 Accountability Principles (2008) in this report as conducted in accordance with type 1 of AA1000 Assurance Standard (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 CHROMA 2018 Corporate Social Responsibility Report provides a fair view of the CHROMA CSR programmes and performances during 2018. The CSR report subject to assurance is free from misstatement based upon testing within the limitations of the scope of the assurance, the information and data provided by the CHROMA and the sample taken. We believe that the 2018 economic, social and environmental performance information are fairly represented. The CSR performance information disclosed in the report demonstrate that CHROMA’s efforts are recognized by its stakeholders.

Our work was carried out by a team of CSR report assurance in accordance with the AA1000AS (2008) with 2018 Addendum. We planned and performed this part of our work to obtain the necessary information and assurance we considered to provide sufficient evidence that CHROMA’s description of their approach to AA1000AS (2008) 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 review of issues raised by external parties that could be relevant to CHROMA’s policies to provide a check on the appropriateness of statements made in the report.
- discussion with managers on approach to stakeholder engagement. However, we had no direct contact with external stakeholders.
- 10 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 report.
- an assessment of the organization's reporting and management processes concerning this reporting against the principles of Inclusivity, Materiality, Responsiveness and Impact as described in the AA1000AS (2018).

Conclusions

A detailed review of the Inclusivity, Materiality, Responsiveness and Impact of AA1000AS (2018) and GRI Standards is set out below.

Inclusivity

This report reflects a fact that CHROMA has 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 assessed, 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 CHROMA’s inclusivity issues.

Materiality

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

Responsiveness

CHROMA has implemented the practices to respond to the expectations and perceptions of its stakeholders. An Ethical Policy for CHROMA’s development and continuity provides the opportunity to further enhance CHROMA’s responsiveness to stakeholder concerns. Topics that stakeholders concern about have been responded timely. In our professional opinion the report covers the CHROMA’s responsiveness issues.

Impact

CHROMA has identified and fairly represented impacts that were measured and disclosed in probably balanced and effective way. CHROMA 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 CHROMA’s impact issues.

GRI Sustainability Reporting Standards (GRI Standards)

CHROMA provided us with self-declaration in accordance with GRI Standards: Core option for each material topic covered by a topic-specific GRI Standard, excepting all reporting requirements for at least one topic-specific disclosure. Based on our review, we confirm that social responsibility and sustainable development disclosures with reference to GRI Standards: Core are reported, partially reported or omitted. In our professional opinion the self-declaration covers the CHROMA’s social responsibility and sustainability topics.

Assurance level

The moderate level assurance provided in accordance with AA1000AS (2008) with 2018 Addendum in our review, as defined by the scope and methodology described in this statement.

For and on behalf of BSI

Peter Po
Managing Director BSI Taiwan
2019-03-31

BSI Taiwan is a subsidiary of BSI Standards Limited.
## GRI Standards Disclosure Comparison List

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<td>GRI-102-12</td>
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The Company has not established a labor union and our employees have not signed any collective bargaining agreement.
## GRI Standards Disclosure Comparison List

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### GRI-103 Management Approach (2016)

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<td>GRI-103-3</td>
<td>Evaluation of the management approach</td>
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<td>Direct economic value generated and distributed by the organization</td>
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<td>Ratios of standard entry level wage by gender compared to local minimum wage</td>
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<td>Proportion of senior management hired from the local community</td>
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### GRI-300 Environmental Standards

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<td>Proportion of spending on local suppliers</td>
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### GRI-202 Energy (2016) *

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<td>Energy consumption within the organization</td>
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<td>Reductions in energy requirements of products and services</td>
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<td>Percentage of employees receiving regular performance and career development reviews</td>
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<td>Ratio of basic salary and remuneration of women to men</td>
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