



# About This Report

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## About This Report

In response to global climate change issues, in 2022, Taiwan Semiconductor Co., Ltd. (TSC or the Company) formed an ESG Committee to conduct our sustainability strategy blueprint. This led to the establishment of the ESG Office and various task forces to implement ESG projects and improve our ESG efforts from all perspectives. In addition, this report is the first sustainability report issued by TSC to disclose the status of its sustainable development. It also serves as the first annual report to release non-financial information publicly.

This report is written by TSC based on the principles of integrity and transparency, to communicate the Company's sustainable development strategies and performance in environmental, society, and governance matters to stakeholders, reflecting TSC's concern and commitment to sustainability issues. This report has been reviewed and approved by the ESG Committee before its release.

## Principles of Report Compilation

This report referred to the GRI Standards released in 2021, the Task Force on Climate-related Financial Disclosures (TCFD), and the Semiconductors Sustainability Accounting Standard 2018 by Sustainability Accounting Standards Board (SASB). It is prepared in accordance with the procedures for compiling and submitting sustainability reports by listed companies.

## Report Boundary

This report discloses the specific achievements of Taiwan Semiconductor Co., Ltd. sustainable practices for the year 2022. As this is the first time Taiwan Semiconductor Co., Ltd. has compiled a sustainability report, the scope of this report is limited to the operations in Taiwan (Taiwan headquarters, I-lan Site and Li-Je Site) within the consolidated financial report boundary. In the future, overseas operations and subsidiaries will gradually be included in the disclosure scope. To present the trend of changes over the years, some data will be traced back to information before 2022. Any inconsistencies of the report period or adjustments to the information disclosure scope will be noted and explained in the report.

This report was issued in September 2023, with an information disclosure period from January 1, 2022, to December 31, 2022. It is expected to be published annually, with the next edition scheduled for June 2024.

## Restatements of Information

This report is the first sustainability report compiled by Taiwan Semiconductor Co., Ltd., so there is no need for restatements of information.

## Third-party Guarantee and Assurance

This report was collected, compiled, and written by the ESG team of TSC, and confirmed by each functional Supervisor to ensure that the report covers all material topics. The Company has commissioned KPMG in Taiwan to conduct a limited assurance in accordance with TWSAE 3000 of the Taiwan ARDF on Financial Reporting Standards for Non-Historical Financial Information Audit or Review (established referring to ISAE 3000 Revised). The Certified Public Accountant/CPA's independent assurance statement is attached to [Appendix Independent Limited Assurance Report](#) of this report.

## Contact Information

Should you have any questions or suggestions about the content of this report, please feel free to contact us.

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## Message from the Chairman

The COVID-19 pandemic has accelerated digital transformation in recent years, while extreme weather events, geopolitical turmoil, and the new establishment of Global Semiconductor Climate Consortium, have caused semiconductor industry to focus more on sustainable development issues. As a member of the global semiconductor supply chain, Taiwan Semiconductor Co., Ltd. is committed to adhering to international standards, engaging with stakeholders, and integrating sustainable development strategies into our core business. We have prioritized carbon reduction, green operations, environmental safety, talent development, and community engagement to achieve sustainable development and stay up-to-date with international trends. To align with the United Nations Sustainable Development Goals (SDGs) and increase transparency of environmental, social, and governance (ESG) information, we published our first ESG report in 2023. Our goal is to use our positive influence as a company and collaborate with our industry chain to move towards sustainability and create a better future for the world.

### Sustainable Governance on the Basis of Integrity

In 2022, we formed an ESG Committee to conduct our sustainability strategy blueprint. This led to the establishment of the ESG Office and various task forces to implement ESG projects and improve our ESG efforts in all perspectives. In terms of governance, we are committed to ethical practice and have strengthened our risk control, information security, and sustainable supply chain management. We have also integrated ESG targets into our brand and daily operations.

In terms of environment, we are actively responding to the global vision for carbon reduction and Taiwan's goal of Net Zero by 2050. We have implemented various carbon reduction measures, and identified the Company's climate risks and opportunities, in alignment with the Task Force on Climate-related Financial Disclosures (TCFD) framework. These all demonstrates our determination to take climate action. Moving forward, we will continue to comply with domestic and international laws, such as carbon taxes and fees. We will launch corresponding carbon reduction and renewable energy projects and evaluate the feasibility of joining the Science Based Targets Initiative (SBTi) to take responsibility for carbon reduction as an enterprise.

### Innovative Product Research and Development

Thanks to the collective efforts of all our employees, the Company's revenue in 2022 exceeded NT\$560 million, which is a 20% increase from the previous year. This outstanding operating performance has laid a solid foundation for the Company's sustainable development. In terms of products, we assist automobile clients in developing new energy vehicles and improving their car performance with our high-quality automotive products. This

contribution helps conserve energy and reduce carbon emissions. Additionally, we plan to use fully recyclable and decomposable eco-friendly packaging materials.

In terms of manufacturing, we have optimized our processes by removing lead, treating wastewater, and adjusting our electroplating process. We are paying close attention to the major markets of automotive and industrial automation and control to consolidate our main business and respond to the European Union's End of Life Vehicles Directive (ELV). We are committed to meeting the needs of all our stakeholders.

### Shared Prosperity Through Social Charity

Employees are a valuable asset. Since 2022, our Company has launched several talent development initiatives, including expanding industry-academia collaborations and improving our internal education and training programs. These efforts aim to actively enhance our employees' professional skills and technical know-how. Additionally, we hold employee engagement conferences where our management team personally shares the Company's future outlook. To foster open communication with our employees, we regularly conduct employee opinion surveys and utilize various communication methods to ensure a healthy, safe, and friendly workplace. We also prioritize giving back to society through social charity events and creating value for our community.

Our first ESG report demonstrates to the public our Company's commitment to and efforts toward corporate sustainability. As we navigate the constantly evolving landscape, we remain committed to addressing all aspects of ESG concerns, listening to stakeholder feedback, and promoting positive environmental, social, and economic growth through a comprehensive sustainable governance framework. We will continue to prioritize business performance while working towards these goals. We are excited to collaborate with industry partners across all sectors to build a sustainable future together.

Chairman Wang Shiu-Ting





# Sustainability Performance Highlights



## Environment

In the past three years, the energy-saving plan has achieved savings of **1,418,830 kWh**.

In the past three years, the intensity of greenhouse gas emissions has continued to decrease.

The cooling water recycling project has reduced water consumption by more than **2,520 tons** per year.

Dedicated to promoting circular economy, achieving **100%** recycling and reuse of discarded sludge.

The use of renewable materials in green packaging has **increased by 14.67%** compared to the previous year.



## Society

Average training hours per person for the management level is 61.65 hours, while for non-management level it is 56.39 hours.

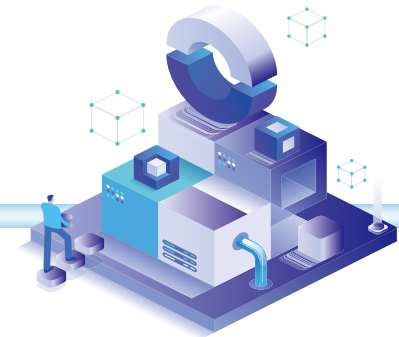
In non-supervisory positions, the median salary of full-time employees in non-supervisory positions **increased by 8.13%** over the previous year.

All employees are provided with health check-ups annually. In 2022, over 80% of employees underwent check-ups.

Implement occupational disease prevention and health management, and maintain **zero occupational disease cases** for three consecutive years.

The proportion of employees who have undergone performance and career development checks reached 100%.

Over the years, social charitable assistance and donations to impoverished students has **exceeded NT\$5 million**.



## Governance

The annual Corporate Governance Evaluation System ranking reached the 21%-35% bracket.

The proportion of Independent Directors reached 57%.

In the past three years, there have been **no data security breaches**.

Equipment automation coverage in TSC's sites in Taiwan has reached **68.8%**.

Introduce a knowledge management system, with **38 patents**.

Local purchases account for **72.7%** of procurement.



# Material Topics GRI 3-1, 3-2, 3-3

## Material Topic Identification

TSC conducts significant theme analysis and identification in accordance with GRI Standards. Through the five steps of identification, evaluation, analysis, inspection, and approval, it examines the potential and actual impacts that operational activities may have on the economy, environment, and society/people, and uses this as a basis for planning and adjusting sustainable management strategies.

TSC referenced the domestic and international sustainability-related evaluations and industry indicators, such as Dow Jones Sustainability Indices (DJSI), Carbon Disclosure Project (CDP), Sustainability Accounting Standards Board (SASB), Corporate Sustainability Assessment (CSA), United Nations Sustainable Development Goals (SDGs), industry regulations and norms, issues of concern to benchmark companies in the upstream and downstream, expectations of stakeholders, and opinions of expert consultants in the identification process, identifying 21 actual and potential impacts. In the evaluation stage, the ESG Committee of TSC assesses the significance of the impacts based on their impact and potential level. At the same time, surveys are sent to important stakeholders to understand their level of concern for sustainability issues. After analyzing and ranking the impact assessment results, taking into account stakeholder feedback and industry concerns, six major themes are identified.

The six material topics for 2022 are: customer relationship management, human resource management, climate change mitigation and strategy, employee safety and health, product liability, and environmental pollution prevention.

Customer Relationship Management

Human Resource Management

Climate Change Mitigation And Strategy

Employee Safety and Health

Product Liability

Environmental Pollution Prevention

### 1 Identification

#### ◆ Eight main stakeholders :

The main communication targets of TSC are suppliers, customers, employees, investors, government, media, general public, and academic institutions.

#### ◆ Twenty-one positive/negative impacts :

We have summarized 21 actual and potential impacts by referencing information such as the Semiconductor Industry Dow Jones Sustainability Index (DJSI), Carbon Disclosure Project (CDP), Sustainability Accounting Standards Board (SASB), Corporate Sustainability Assessment (CSA), United Nations Sustainable Development Goals (SDGs), industry regulations and norms, issues of concern to benchmark companies in the upstream and downstream, expectations of stakeholders, and opinions of expert consultants.

### 2 Evaluation

#### ◆ Degree of Impact and Significance :

Based on the positive/negative impact and significance on the environment, society, and economy in 2022, the issue is assessed on a four-level scale from 0 (zero impact) to 3 (serious impact).

#### ◆ Possibility of occurrence :

Assess the possibility of future occurrence based on the impact, using a four-level scale from 0 (impossibility) to 3 (high possibility).

#### ◆ Calculation of Impact Significance :

The significance of the impact = impact x possibility.

### 3 Analysis

#### ◆ Prioritization :

Identify and prioritize sustainability issues into positive/negative impacts, using a threshold value of 33%. Any issue exceeding the threshold will be classified as a material topic.

#### ◆ Select six sustainable issues of concern as the material topic for 2022, and create a TSC material topic matrix.

### 5 Approval

#### ◆ After review by the ESG Office, it is submitted to the ESG Committee for approval.

### 4 Inspection

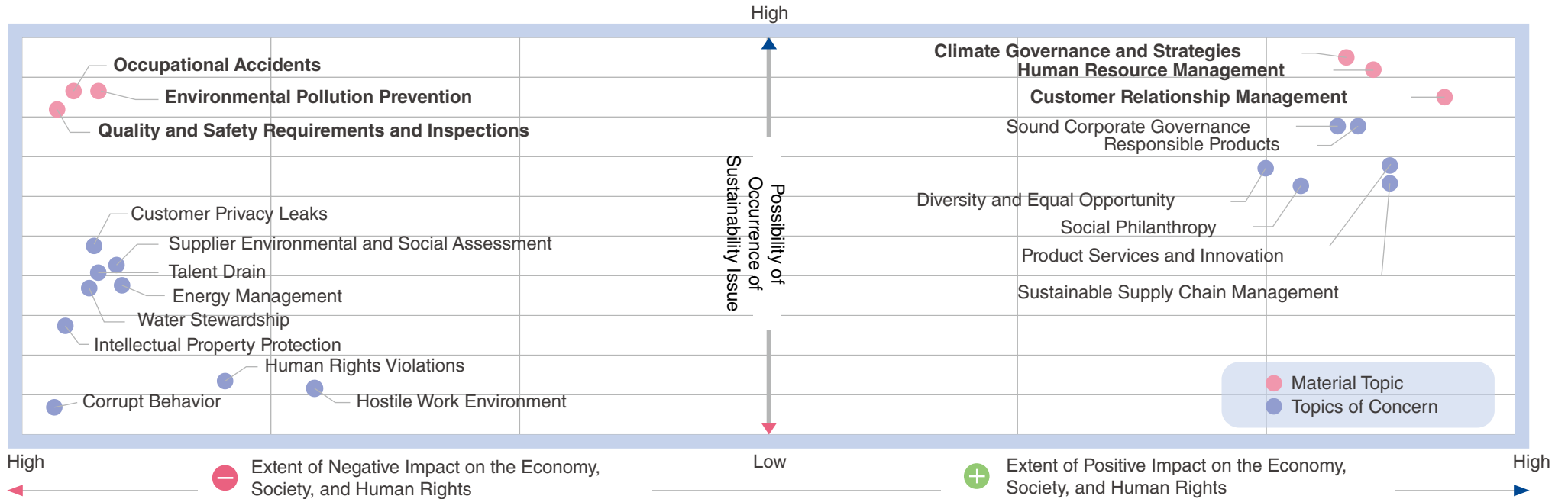
#### ◆ Stakeholder feedback :

Through the 2022 TSC Stakeholder and Material Topic Questionnaire, surveys and interviews were conducted on closely related and influential subjects.



## Material Topic Matrix

In response to the GRI concept, TSC considers factors such as industry, geographic location, and organization to define the positive and negative impacts of various sustainability issues. Through the concept of risk management, TSC identifies the actual and potential significance of these impacts. The X-axis of the material topic matrix is set to represent the organization's impact on the economy, environment, and society/people for each issue, with the magnitude of the impact differentiated by numerical values. The Y-axis of the matrix represents stakeholders' assessment of the likelihood of the issue occurring. A total of six material topics for 2022 have been assessed, as shown in the figure below.



Negative **-** ( 4 governance ; 3 environment ; 4 society ; 1 products )

Governance	Environment	Society	Product
Corrupt Behavior	<b>Environmental Pollution Prevention</b>	Human Rights Violations	<b>Quality and Safety Requirements and Inspections</b>
Customer Privacy Leaks	Energy Management	<b>Occupational Accidents</b>	
Supplier Environmental and Social Assessment	Water Stewardship	Brain Drain	
Intellectual Property Protection		Hostile Work Environment	

Positive **+** ( 2 governance ; 1 environment ; 3 society ; 3 products )

Governance	Environment	Society	Product
Sound Corporate Governance	<b>Climate Governance and Strategies</b>	<b>Human Resource Management</b>	<b>Customer Relationship Management</b>
Sustainable Supply Chain Management		Social Philanthropy	Responsible Products
		Diversity and Equal Opportunity	Product Services and Innovation

Note: The bold text in the table indicates material topics.



## Material Topic Management

Positive: Negative:

Number	Aspect	Material Topics in 2022	Explanation of Positive/Negative Impact	Value Chain Impact			Management Policy (Corresponding Chapter)
				Upstream	TSC	Downstream	
1	Product	Customer Relationship Management	Customer Relationship Management Through regular customer meetings organized by the Company's customer service team, we can understand the actual needs of customers and make immediate improvements to operational plans. This will optimize and enhance the customer experience, as well as increase customer retention rate and loyalty, thereby improving economic performance.				<a href="#">2.2 Customer Relationship Management</a>
2	Society	Human Resource Management	Human Resource Management Establish an attractive, diverse, and equitable remuneration and benefits system to increase employees' sense of identity and cohesion towards the Company. Develop diverse recruitment channels to recruit excellent talents to enhance operational efficiency. Meanwhile, enhance employee professional capabilities through a comprehensive talent development and cultivation system, provide appropriate positions for different employee characteristics, and thereby improve employee job satisfaction and operational performance.				<a href="#">4.1.1 Diversity and Inclusion</a>
3	Environment	Mitigation and Strategies for Climate Change	Climate Governance and Strategies Strengthening strategic deployment and the management of climate issues in enterprises (such as increasing the proportion of renewable energy sources) helps to reduce environmental impacts like carbon emissions and waste, mitigate future financial costs such as carbon taxes/fees, and enhance the management measures of climate-related risks through investment. It also helps to lead the development of low-carbon industries and enhance the climate resilience of TSC.				<a href="#">1.3.3 Climate Risk Management</a>
4	Society	Employee Safety and Health	Occupational Accidents The Company's operational safety regulations are not perfect, resulting in employees encountering occupational accidents and diseases, or chemical hazards, causing disability and harm to employees. As a result, the Company may face compensation and litigation issues.				<a href="#">4.2.3 Workplace Safety Management</a>
5	Governance	Responsible Products	Quality and Safety Requirements and Inspections If there are any product safety/quality incidents, there may be related legal proceedings and violations, resulting in litigation costs, compensation, and other economic losses, while also compromising customer health and safety.				<a href="#">2.1.1 Products and Services</a>
6	Environment	Environmental Pollution Prevention	Environmental Pollution Prevention Waste, water, and air pollution from plants can have a serious negative impact on the environment. If companies do not have waste and wastewater management or fail to implement air pollution prevention and control regulations and greenhouse gas reduction measures, this may lead to their being required by relevant government agencies to clean up and take responsibility for environmental improvement, which will also affect their reputation and increase operating costs.				<a href="#">5.2 Waste Management</a>



# Communication with Stakeholders

TSC values and listens to the voices of various stakeholders. Through discussions and reviews within the units and departments under the ESG Committee, we gather information on internal and external groups or individuals that have an impact on or are affected by the Company's operations. We also reference the five principles of the AA1000 Stakeholder Engagement Standard (SES) to identify eight main stakeholders: suppliers, customers, employees, investors, government, media, the general public, and academic institutions. Through regular and irregular communication with stakeholders, we aim to understand the actual and potential impacts of our operations on stakeholders. This understanding serves as the basis for our future planning of relevant preventive and mitigation actions.

## Communication with Stakeholders

Stakeholders	Description	Issues of Concern	Communication Frequency and Channels	Communication Achievements in 2022
<p>Suppliers</p>	Provide TSC products, services, or enterprises and their branch companies that have commercial relationships with TSC	<ul style="list-style-type: none"> <li>Responsible Products</li> <li>Intellectual Property Protection</li> <li>Sustainable Supply Chain Management</li> <li>Environmental Pollution Prevention</li> <li>Occupational Accidents</li> </ul>	<ul style="list-style-type: none"> <li>Quarterly: Internal meeting on supplier delivery management capabilities and scheduling flexibility.</li> <li>Annually: Written or physical audits, signing relevant agreements on intellectual property protection with suppliers, RBA self-assessment questionnaire.</li> <li>Time to time: Communication meetings on intellectual property protection issues for IC design companies, information product promotion activities, informing contractors of hazards before factory construction, and signing occupational safety and health commitment letters.</li> </ul>	<ul style="list-style-type: none"> <li>Hold at least two information product promotion events.</li> <li>Hold meetings with IC design companies to discuss intellectual property protection from time to time.</li> <li>The factory held a pre-construction hazard notification education training session with the participation of more than 500 contractors.</li> <li>RBA self-assessment questionnaire response rate exceeded 90%.</li> </ul>
<p>Customers</p>	The customer is the source of revenue for TSC. Understand the customer's needs, grasp industry trends, and provide professional services.	<ul style="list-style-type: none"> <li>Customer Privacy Leaks</li> <li>Intellectual Property Protection</li> <li>Supplier Environmental and Social Assessment</li> <li>Customer Relationship Management</li> <li>Quality and Safety Requirements and Inspections</li> <li>Responsible Products</li> <li>Climate Governance and Strategies</li> <li>Sound Corporate Governance</li> </ul>	<ul style="list-style-type: none"> <li>Annually: Customer Satisfaction Survey</li> <li>Time to time: Conduct meetings with customers regarding quality and specification testing. Respond to questionnaires on specific data platforms (such as Ecovadis, CDP, SupplyOn, etc.) according to customer requirements. Conduct RBA assessments and CSR/ESG evaluations/audits according to customer requirements. Communicate with automotive industry customers about ESG-related progress and plans. Coordinate and communicate with customers with their score card and results.</li> </ul>	<ul style="list-style-type: none"> <li>Conducting annual customer satisfaction survey, with a response rate of 83%.</li> <li>Complete three customer evaluation audits.</li> <li>During Electronica in Munich, at least 15 business meetings were held with customers to discuss future opportunities.</li> <li>Conduct at least 10 meetings regarding existing and emerging market automotive-related products. The content should cover the latest product developments and achievements, as well as listening to customer needs and evaluating trends in the automotive market.</li> </ul>
<p>Investors</p>	Pay attention the investment value of TSC, focusing on the Company's growth strategy, profitability, shareholder return on investment, and sustainability performance.	<ul style="list-style-type: none"> <li>Sound Corporate Governance</li> <li>Corrupt Behavior</li> <li>Product Services and Innovation</li> </ul>	<ul style="list-style-type: none"> <li>Quarterly: Quarterly financial statements</li> <li>Annually: Annual shareholders' meeting, annual financial statements.</li> <li>Time to time: Investor conferences, company website updates on operational performance, major announcements on Market Observation Post System.</li> </ul>	<ul style="list-style-type: none"> <li>Quarterly financial statements held four times</li> <li>Annual shareholders' meeting held once</li> <li>Five investor conferences have been held</li> </ul>



Stakeholders	Description	Issues of Concern	Communication Frequency and Channels	Communication Achievements in 2022
<p>Employees</p>	All TSC employees	<ul style="list-style-type: none"> <li>Product Services and Innovation</li> <li>Brain Drain</li> <li>Human Resource Management</li> <li>Sound Corporate Governance</li> <li>Diversity and Equal Opportunity</li> <li>Occupational Accidents</li> </ul>	<ul style="list-style-type: none"> <li>Weekly: Product Development Meetings</li> <li>Quarterly: Independent study courses, production scheduling planning, quality issue communication, cross-functional meetings, senior executive meetings, all-hands meetings, occupational health and safety meetings, labor-management meetings, etc.</li> <li>Semiannually: SMART performance goal setting principles workshop</li> <li>Every year: Employee annual on-the-job safety and health training, KPI setting</li> <li>The Li-Jie and I-lan Site conduct two fire escape drills and one chemical spill drill annually.</li> <li>Time to time: SMART Train the Trainer workshop, job content and occupational competency development meetings, new employee safety and health training, employee interviews.</li> </ul>	<ul style="list-style-type: none"> <li>Over 500 people participated in training courses such as SMART workshop and SMART Train The Trainer workshop.</li> <li>Over 50 safety and health training sessions have been held, with approximately 300 participants.</li> </ul>
<p>Government</p>	The operation of TSC directly or indirectly involves, or is regulated by, the competent authorities	<ul style="list-style-type: none"> <li>Environmental Pollution Prevention</li> <li>Climate Governance and Strategies</li> <li>Occupational Accidents</li> <li>Energy Management</li> <li>Sound Corporate Governance</li> <li>Responsible Products</li> </ul>	<ul style="list-style-type: none"> <li>Time to time: Updates on legal compliance matters on the Company website, legal publicity briefings, industrial safety counseling, inspections by the Occupational Safety and Health Administration of the Ministry of Labor, wastewater treatment planning and testing, waste-related audits, energy consumption inspection reports, interaction with government by official documents.</li> </ul>	<ul style="list-style-type: none"> <li>Conducting over 25 government evaluations or audits</li> </ul>
<p>Media</p>	The media plays the role of a bridge between TSC and stakeholders, helping stakeholders openly obtain accurate company information and solidify the Company's image.	<ul style="list-style-type: none"> <li>Sustainable Supply Chain Management</li> <li>Sound Corporate Governance</li> <li>Corrupt Behavior</li> </ul>	<ul style="list-style-type: none"> <li>Time to time: Investor conferences, face-to-face interviews, phone interviews, company official website, press releases.</li> </ul>	<ul style="list-style-type: none"> <li>Held five investor conferences.</li> </ul>
<p>General Public</p>	TSC's operations can generate positive and negative ESG impacts on the general public.	<ul style="list-style-type: none"> <li>Social Philanthropy</li> <li>Supplier Environmental and Social Assessment</li> </ul>	<ul style="list-style-type: none"> <li>Quarterly: Donate invoices to Genesis Social Welfare Foundation</li> <li>Time to time: Disaster relief donations, lunch and miscellaneous fees assistance for impoverished students, blood donation charity events</li> </ul>	<ul style="list-style-type: none"> <li>Invoice Collection Campaign</li> <li>Blood drives were held at the Li-Je Site and I-lan Site, and a total of 118 bags of blood were donated</li> </ul>
<p>Academic Institutions</p>	Research institutions collaborate with TSC to develop advanced technologies and applications, assisting industry-academia cooperation in innovative research and development to enhance market competitiveness.	<ul style="list-style-type: none"> <li>Human Resource Management</li> <li>Sound Corporate Governance</li> </ul>	<ul style="list-style-type: none"> <li>Time to time: Recruitment orientation, Industry-Academia Cooperation Meeting</li> <li>Annually: Governance and Training of Board of Directors</li> </ul>	<ul style="list-style-type: none"> <li>Collaboration and exchange activities were held with colleges and universities, with over 150 participants.</li> <li>Held three recruitment orientations, conduct face to face recruitment and recruit interns.</li> </ul>