



TAIWAN GLASS IND. CORP.

2018

CORPORATE SOCIAL RESPONSIBILITY REPORT



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//About This Report//

Since its founding in 1964, Taiwan Glass Industry has been committed to the development of the industry, through the constant pursuit of innovation and the development of new products, fulfills corporate social responsibility as a good global citizen. Since the first Corporate Social Responsibility Report was published in 2013, TGI has issued 6 Corporate Social Responsibility Reports, demonstrating to the public and all stakeholders TGI's continued commitment to civic responsibility and the pursuit of sustainable social development as well as sharing the fruits of this sustainable development. The 6 themes of this report include "Sustainable Glass Leadership", "Ethical Operation", "Quality Management", "Environmental Protection", "Friendly Workplace" and "Community Care", which manifest TGI's efforts and results in sustainable development indicators such as the economy, environment, employee care, human rights and product responsibility in 2018, illustrated with relevant statistics.

For the public and stakeholders to learn more about TGI CSR initiatives, TGI created a designated section on the company website. In this corporate responsibility section, not only can this report be downloaded, but there are also regularly updated sustainable development objectives, strategies and results. TGI has put in place an online stakeholder feedback form to facilitate communication between TGI and stakeholders.

In this report "TGI, the Company or we" all refer to Taiwan Glass Industrial Co., Ltd. For other key terms, letter abbreviations, or technical terms, used in this report will be noted in the same pages. The content of the report was arranged through a systematic analysis model to identify the priorities and decide interested parties' for being the reference base of information disclosure.

Report Coverage and Calculation Basis

This report covers TGI's results in corporate social responsibility from January 1, 2018, to December 31, 2018. Some content also relates to projects in 2018 and beyond, as well as future policies, objectives, and plans, which all form part of the report.

The scope of the 2018 annual report covered TGI's Taipei headquarters and manufacturing facilities in Taiwan (Taoyuan Factory, Hsinchu Factory, Taichung Factory, Lukang Factory, Lukang Flat Glass Factory, and Changpin Factory). If the index relates to other regions, these are separately described in the report. The 2018 data is presented in international generic indicators. Any estimated numbers will be noted so in related chapters. All financial figures have been audited and confirmed by Ernest & Young and are all in NT dollars. This report's coverage is similar to that of the same report in 2017.



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Report Writing Principles and Programme

The content and structure of TGI's 2018 Corporate Social Responsibility Report are in line with international standards by following Global Reporting Initiative's Standards (GRI Standards) Sustainability Reporting Guidelines which was formally published by Global Sustainability Standards Board (GSSB) on October 19, 2016. It uses substantive analysis to identify the sustainability issues that stakeholders are concerned about, decide priorities and analyze sustainability issues, related strategies, objectives, and measures, and related initiatives:

Initiatives and Guidelines Referred

- Global Reporting Initiative's Standard Sustainability Reporting Guidelines
- United Nation Sustainable Development Goals (SDGs)
- Earth Charter and OECD Guidelines for Multinational Enterprises
- Accountability's AA1000 Series of Standards (2008 version)
- International Standard on Assurance Engagements 3000 (ISAE3000)
- United Nations Global Compact
- ISO 26000 Social Responsibility Guidance Standards
- TWSE Corporation Rules Governing the Preparation and Filing of CSR Reports by TWSE Listed Companies

Report Editing

This report was edited by the TGI CSR group which was also responsible for the overall planning, communication, integration, information compilation, and editorial revisions. The CSR group was composed of executive team members as well as those from the company and relevant sectors in the factories.

Information and Data Quality Management

Every materials and data in this report was collected by every department and submitted to the CSR group. A draft of the report was submitted to the CSR group and individual team members proofread and revised their particular areas of data and content. After finalization, an impartial third party verified the final content. It was then sent to the Chairman for final review prior to publication.

Report Assurance

The Ernst & Young accounting firm, an independent and credible accounting firm, was commissioned to conduct limited assurance in accordance with the provisions of the Joint Standards Publication on verification of non-historical financial information or review on TGI's 2018 CSR Report, which was compiled according to the Global Reporting Initiatives Standards (GRI Standards) Sustainability Reporting Guidelines. Once the assurance was done, we have communicated with the governance units over the result. For the scope and detailed conclusions of the independent assurance, please see the independent assurance report in the appendix of this report.

Issuing Period and Cycle

- TGI regularly publishes the CSR Report each year
- Current version: Published in June 2019
- Previous version: Published in June 2018

Contact

We hope that through this report the general public and relevant stakeholders can learn more about TGI's efforts in the promotion of sustainable development. If you have any questions and suggestions on TGI's '2018 Corporate Social Responsibility Report, please contact us as follows:

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- Email: CSR@taiwanglass.com
- Website: <http://www.taiwanglass.com>

//Message from the Chairman//



Chairman
Lin, Por Fong

In the first half of 2018, the domestic and international demands raised the economy of Taiwan. In the second half of 2018, the rising Fed rate brought the rebound of the USD, and high export base period as well as US-China trade conflict slowed the economy. In addition, Brexit is postponed, and GDP of Mainland China in 2018 hit a record low with 6.6%. With the possibility of an economy downturn in 2019, the International Monetary Fund (IMF) has lowered the global GDP growth prediction to 3.3%. Institutes in Taiwan have also forecasted that the domestic economy growth in this year will be lower than in last year. From this spring, the US-China trade conflict has eased. In addition, the Fed's announcement of stabilizing interest rate, and the homecoming of Taiwanese enterprises could have positive effect for the economy in 2019.

The rise of global economy brought TGI's growth in first and second quarter of 2018. However, excess market capacity and rising raw material prices led to lower operating gross profit. Although the corporate business achievement of whole year is not better than it was in 2017, we still maintained a certain profit performance. TGI's consolidated net income before tax achieved NTD1.55 billion. We make a brief report by product lines as follows.

In flat glass, under the situation of inactive real estate in Taiwan, the quantity of domestic demands only stayed level. Besides continuing to produce high added value products and enhancing after-service by combining clients' demands, we appealed to the Government for pushing adaptation of Low-E energy saving glass to reduce power consumption of air conditioner, responding to the stage of energy transition and adjustment of power supply of Taiwan.

In ultra-thin glass, it continues to be sold to the markets of Europe and America, India and Vietnam. We cooperate with customers to develop new products and ensure the products will comply with quality standard of the industry can be supplied, and increase product sales volume.

The sales volume of flat glass in Mainland China markets was increased. The market faces strict environmental regulations and emission reduction measures, and continues to consolidate supply-wise. However, the overproduction still exists. Since this April, the VAT rate of China enterprises has been adjusted from 16% to 13%, meanwhile, the general industrial oil and gas price and five social insurance and one housing fund are decreased to effectively reduce the production cost of enterprises. All TGI's subsidiaries in Mainland China comply with the environmental standard, carry out the control of risk and industrial safety. TGI fully uses its flexible capacity and inventory to optimize its industrial structure by forbidding adding new capacity strictly, and supervise the backward production capacity.

In fiberglass, the Electronic Fiberglass Fabric suffered a mild correction last year. TGI is self-sufficient on raw material and production, that it, we still have the advantage of competition on cost. Taichia Bengbu Glass Fiber Co., Ltd. in Anhui of China started production this March. It is predicted to reach full capacity in second quarter of this year with yearly capacity of 35 thousand tons. Nowadays, emerging technology applications, IoT, and automotive electronics industry are still under rapid growth. TGI continues to strive for orders to enter the high-end customer supply chain.

For FRP, TG Taoyuan Factory has signed an agreement for technology cooperation, manufacturing and supply with Owens Corning, and obtained the most advanced fiberglass formulation and technology in the world. The equipment is promoted in second quarter of this year to help cut production costs efficiently. Comparing with the traditional steel material, it has more flexibility to be designed, processed and recycled. These advantages meet energy saving and environmental trends.

In container, tableware and kitchenware glass, two tableware production lines of TS-6 in Hsinchu Factory were replaced by IS M/C equipment to produce container glass. Through transferring effect of US-China

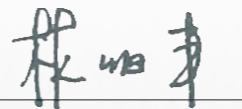
//Key Achievements of the Year//

trade competition, we actively achieved higher priced orders from America. It is expected to start production in July of this year with yearly capacity 8,000 tons.

In our private brand, TGI cooperated with Fukasawa Naoto, who is a Japanese artist of industrial design, to plan and design our private brand "TG". First batch of products is in minimalist and elegant style, injecting new ideas into Taiwan's life aesthetics.

This year is TGI's 55th anniversary since establishment. Special thanks to our stockholders, dealers, suppliers, and employee for their long-term support and contribution to TG. We will continue to optimize corporate governance, pay attention to professional managers, innovative technology, and talent cultivation, enhance risk management of industrial safety, invest in environmental equipment, fulfill corporate social responsibilities, and create maximum profits for stockholders and employee.

Chairman
Lin, Por Fong



 Silver Award

TGI has been awarded silver price for the past four years in the "Traditional Manufacturing" category incorporate sustainability report award.

 10 Material Topics

10 Material Topics were identified in 2018 and effective management policies were formulated accordingly.

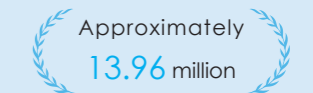
 36,000,000 M²

TGI manufactured a total of 36,000,000 M² of Low-E products in 2018.

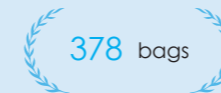
 50 %

In 2018, the export of TGI container glass accounted for 50%, doubled compared to 2017.



 Approximately 13.96 million

TGI donated a total of NT\$13,963,313 in 2018.

 378 bags

In 2018, all factories of TGI donated a total of 378 bags of blood in response to the "Give blood, save lives" principle.

 100 %

100% of TGI products have passed relevant standards and certifications.

 -30 %

Low-E products can reduce 30% of air conditioner usage and energy consumption.

82 %

Customer satisfaction exceeded 82% across all TGI departments.

410 million

Environmental protection expense was NT\$410 million in 2018 for TGI.

170,000 tons

Recycled 170,000 tons of scrap glass in 2018.

-10 %

Reduced NOx and Sox emission by 10% in 2018 compared to 2017.



8.2 %

Lowest employee turnover rate of 8.2% in recent years, which indicate the stability of employee retention.

-23 %

Compared to 2017, disabling Injury Frequency Rate (FR) decreased by 23% in 2018.

99.9 %

The percentage of local-hires was 99.9%, TGI created job opportunities and cared for local communities.

94.44 %

94.44% of employees that applied for parental leaves in 2017 retained in 2018

CH.1

Sustainable Glass Leadership

1.1 Sustainable Management

1.2 Stakeholder Communication and Participation

1.3 Material Topics

Achievements of Sustainable Operation in 2018



//1.1 Sustainable Management//

TGI has been committed to the development of the glass industry, with sustainable development as our core value, and constructs the corporate social responsibility principle that covers economy, environment and the society. We protect the rights and interests of stakeholders and the social environment, practice corporate social responsibility to balance economic and sustainable development goals.



The Board of Directors, exercising care as good administrators, supervises and assists the management to fulfill their social responsibilities. The results are reviewed and action plans are formulated immediately to eliminate any deficiencies to make sure that the corporate social responsibility policies are implemented. When it comes to TGI's corporate social responsibilities, the Board of Directors is responsible for the following :

- a) Propose the CSR mission and vision; formulate CSR policies, systems or relevant management guidelines.
- b) Include CSR in the company's business activities and development and formulate concrete CSR action plans.
- c) Ensure that the company is disclosing accurate CSR information on a timely basis.

TGI's CSR Principles which supervises and implements the concept of sustainable management is divided into four major parts:

Conducting our business with integrity

Integrity management is the core value of TGI and its commitments and responsibilities to shareholders, employees, and all stakeholders. The Board of Directors and managers are all strictly abode by the code of honest business, avoidance of conflict of interest, anti-corruption, and conduct comprehensive risk management.

Strengthening sustainable environment

TGI is in compliance with environmental protection laws and regulations, continuously improving its work environment, reducing environmental pollution, and committing to energy conservation and carbon reduction. To achieve the goal of sustainable environmental management, TGI pays attention to renewable energy issues, innovates green products, and promotes the reuse of resources

Building an inclusive workplace

TGI pays attention to the industrial relation which includes employer-employee relation, employee benefits and welfare, and comfortable and safe workplace environment. Also, TGI cares for employee rights, physical and mental health, respects human rights and gender equality, promotes the cultivation and development of talents, and establishes diversified communication channels between employees and the company and TGI Association. TGI aims to build a win-win culture for both the employees and the company.

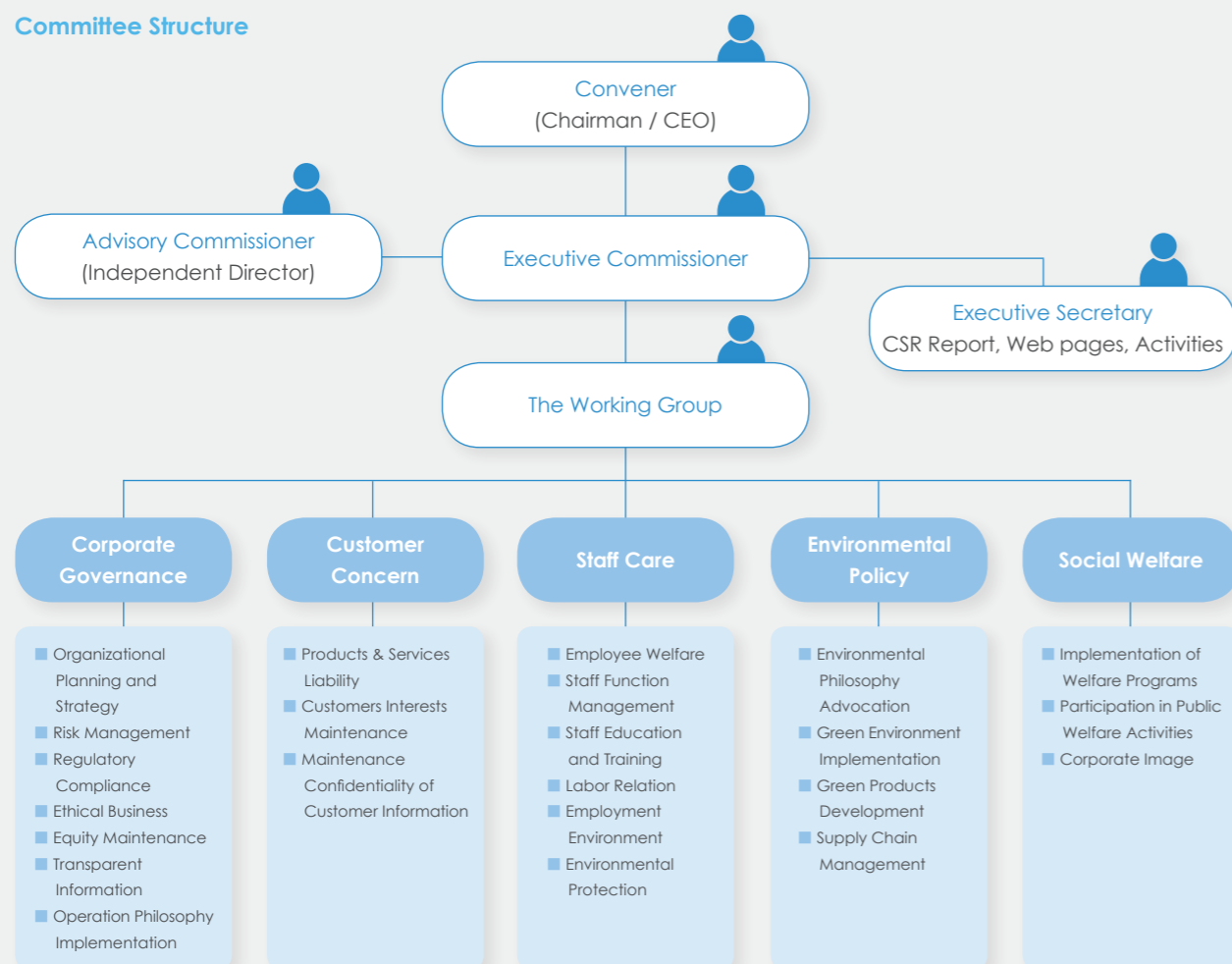
Caring for social charity

TGI upholds the commitment to civic responsibility, cares and contributes to the society, and takes participation in social charity activities. TGI enhances community development and interactive friendship and provides scholarships for employees and dealers' children.

Corporate Social Responsibility Committee

TGI, to fulfill the implementation of CSR policies, has established "Corporate Social Responsibility Committee" (CSR Committee), with our chairman and president as coordinators, independent directors as advisers and several executive committee members.

Committee Structure



TGI CSR Committee convenes every 6 months (flexible) but should convene at least once a year. The Committee convened two sessions in 2018. The agendas include the schedule for the 2018 TGI CSR report, the corporate social responsibility (CSR) performance and equipment renewal of each factory, and implementation of "Clean Production Assessment System Conformity Determination" and "CSR training".



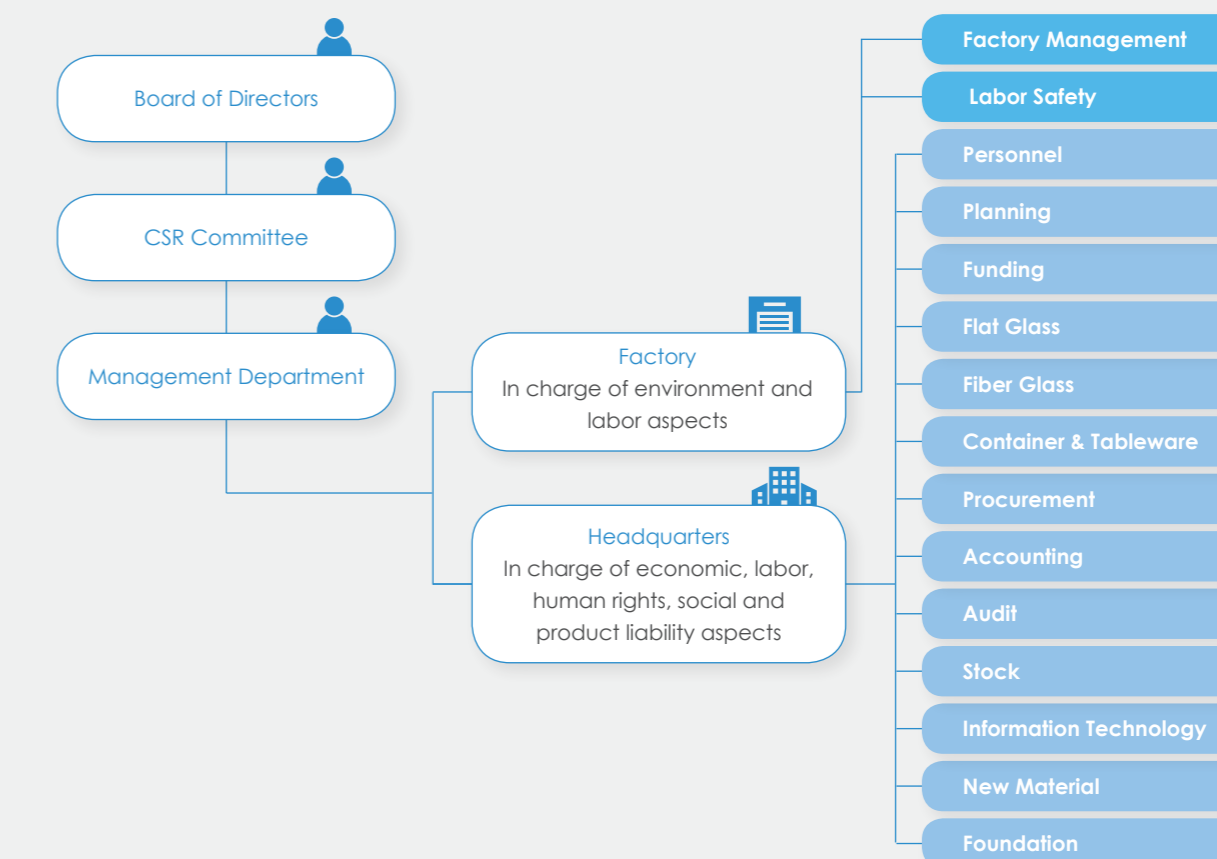
Committee Members

TGI CSR Committee Members			
Title	Name	Gender	Concurrent position at TGI
Convener	Lin Por Fong	Male	Chairman
Convener	Lin Por Shih	Male	CEO
Advisory Commissioner	Huang Chin Yuang	Male	Independent director
Executive Commissioner	Su Yu Ted	Male	COO of Fiberglass Business Department
Executive Commissioner	Hong You Qin	Male	Vice President of Management Department
Executive Commissioner	Li Jing Tian	Male	Manager of Management Department
Executive Commissioner	Pan Ya Lun	Female	Manager of Secretary Department

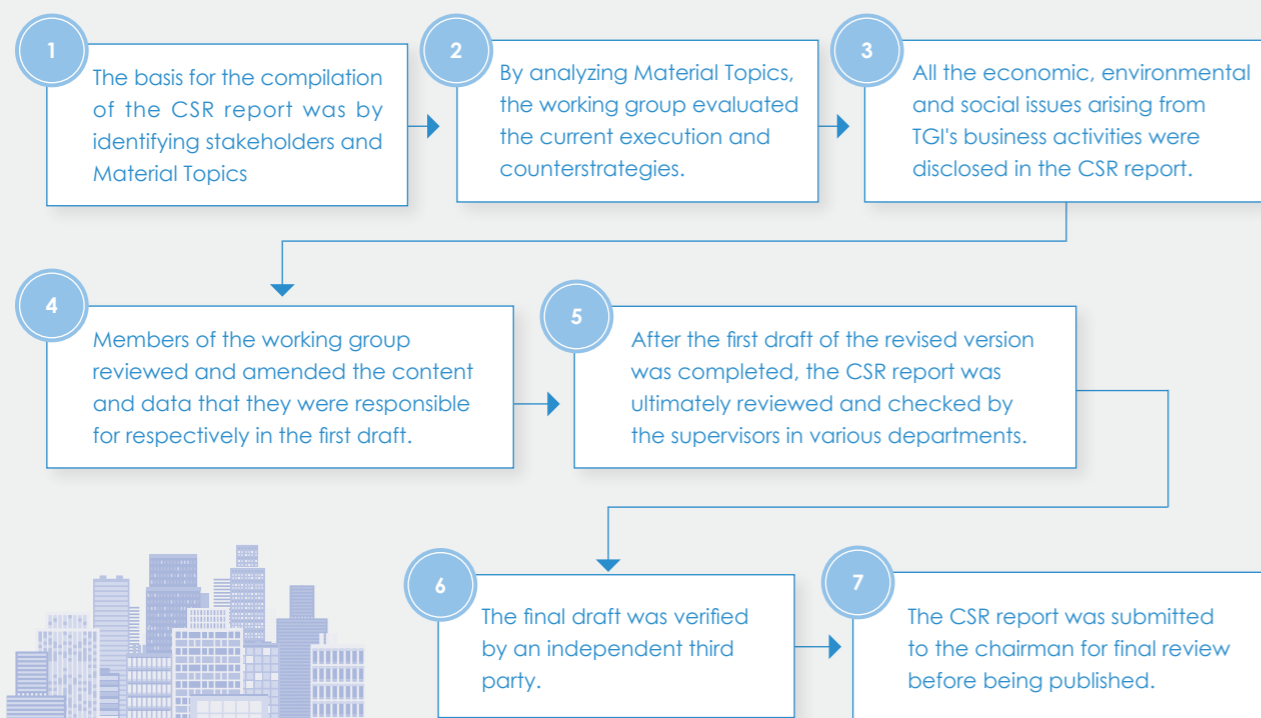
Responsibilities of CSR Working Group

We build up a "CSR working group" responsible for the overall planning, communication, data integration and the implementation of economic, social, environmental performance. The management department is responsible for the implementation of the integration, and the members include representatives from relevant departments of the company and the factory.

The Structure Diagram of CSR Working Group



In addition to preparing the report, the groups also actively participate in CSR related courses offered by Center for Corporate Sustainability (CCS) courses, Industrial Resources Integration and Development Association, etc. Through these courses they exchange information about sustainable development measures and recent trends with many different industries, enhancing practice knowledge of editing to raise awareness of risk management. The execute steps of the working group as follow:



CSR Achievements

For 4 consecutive years, TGI has won the TCSA Taiwan Corporate Sustainability Silver Award in the "Traditional Manufacturing" category. To promote corporate social responsibility, this award is hosted by Taiwan Institute for Sustainable Energy (TAISE) and experts, scholars and professionals from various fields are invited to serve as volunteers for evaluation. Through an objective, fair, just and rigorous evaluation process, company's sustainability report award is selected based on the integrity, credibility, and communication of the report, the company's sustainability report award is selected. TGI looks forward to working with every field to promote the spirit of sustainable corporate development. CSR and SDGs will be incorporated into management guidelines and performance goals to create Circular Economy, towards sustainable development.



TCSA Taiwan Corporate Sustainability Silver Award in the "Traditional Manufacturing" category

Alliance for Sustainable Development Goals, A · SDGs

To build a platform for information and resource exchange for sustainable development in Taiwan, the Taiwan Sustainable Energy Research Foundation and the Taiwan Enterprise Sustainability Research Center jointly launched Alliance for Sustainable Development Goals (A · SDGs) with multi-disciplinary stakeholders such as enterprises, government agencies, academic institutions, and non-governmental organizations. A · SDGs was formally established in August 2018 with 11 government agencies, 12 universities and colleges, 44 companies, 5 research institutes, and 11 NGOs in hope that through the global common language of SDGs, Taiwan can strive for sustainable development and cultivate core competitiveness.

As a member of the alliance, TGI is committed to integrating SDGs into our business and development strategies, complying with the policies of the Sustainable Development Goals Alliance, and jointly achieving the goal of sustainable development. As an important member of the global supply chain, to achieve the "sustainable development goals", TGI not only need focus on economic development and profit, we must use the power of business to work with all stakeholders to create a good society and a new sustainable environment.



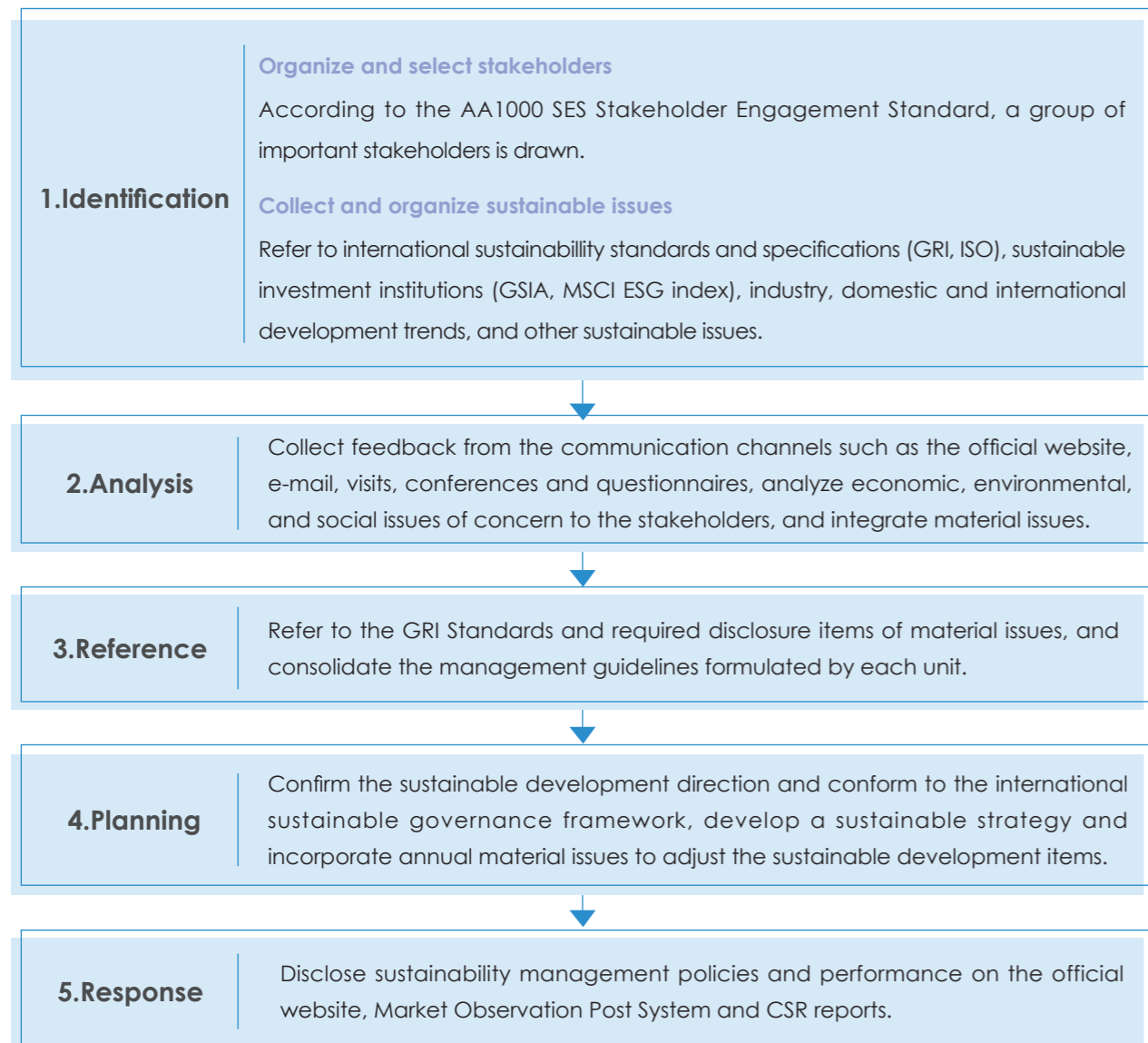
Please refer to the CSR.SDGs for details of the Sustainable Development Goals Alliance (A · SDGs).

//1.2 Stakeholder Communication and Participation//

Stakeholder Engagement

Through multiple two-way communication channels, TGI analyzes stakeholder groups and their individual concerns, develops management policies based on selected material issues, effectively allocates and manages resources, plans sustainable development strategies, and regularly reviews implementation effectiveness, to ensure response and meet the needs and expectations of stakeholders.

In order to practice the commitment to stakeholders and respect and safeguard their rights, TGI analyzes and screens sustainable issues on a wide range of topics, conducts stakeholder and material issues analysis in accordance with the GRI Standard issued by the Global Reporting Initiative's Standards. The stakeholders' engagement process is as follows:



Stakeholder Communication Channel

We instantly respond to the interests of all stakeholders by gaining a deeper understanding of the material issues. TGI set up various communication and appeal channels to implement the principle of honesty, immediate processing, and positive response. The Board of Directors authorizes the CSR Committee to periodically review the progress and effectiveness of various corporate social responsibility related businesses, and propose strategic planning and measures in response to performance appraisal to achieve effective two-way communication with stakeholders.

In addition to the external communication box provided on the official website, the corresponding department and the responsible unit provide corresponding mailboxes for relevant personnel to provide information, ask questions, make appeals, etc. TGI also established a corporate social responsibility promotion team to publish corporate social responsibility reports on a regular basis, frequently update the content of the company's website and corporate social responsibility zone to expose information in a transparent and effective mechanism.

TGI cares about the voices of our stakeholders and immediately reviews and improves stakeholders' concerns to meet the expectations of all parties and maintain a harmonious relationship. The material issues, stakeholders' communication channels and frequency are as follows:



TGI keeps effective communication channels with every stakeholder. The main contents are roughly divided into:

- product information
- business opportunities
- investor services
- job opportunities
- corporate social responsibility



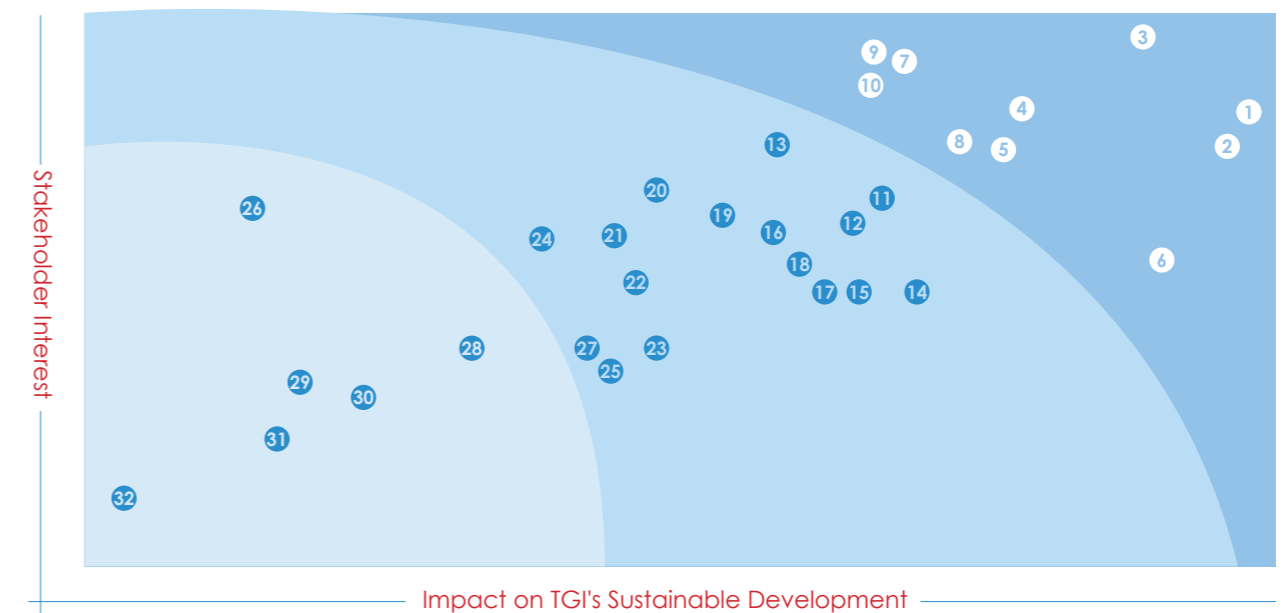
Stakeholders	Key concerns	Methods of communication	Corresponding section	Communication frequency
Shareholders/ investors/ financial institutions	<ul style="list-style-type: none"> ■ Regulation Compliance ■ Employment 	Reports business revenue information	2.2 Corporate Sustainable Governance 5.1 Employee and Benefits	Every month
		Annual financial statement and individual financial statements		Once a year
		Convene general shareholder meeting		Once a year
		Select a spokesperson or a deputy spokesperson		Aperiodic
		Financial reports, statements, stock affairs, audits and major announcements in the "Information Disclosure" section on the TGI website		Every Year/aperiodic
		Institutional investors conference		Aperiodic
Employees	<ul style="list-style-type: none"> ■ Occupational Health and Safety ■ Employment ■ Economic Performance ■ Training and Education ■ Market Presence 	Internal information system, ex. internal network, announcement	2.1 About TGI 5.1 Employee and Benefits 5.3 Safe Workplace	Aperiodic
		Occupational Safety and Health Committee		Once every 3 months
		Management and Labor Council		Once every 3 months
		Advocate complaint phone number, fax, and email for reporting sexual harassment incidents during training. All reports are handled by dedicated staff		Aperiodic
		Face to face communication between the management and the union representative		Once a year

Stakeholders	Key concerns	Methods of communication	Corresponding section	Communication frequency
Corporate clients	<ul style="list-style-type: none"> ■ Corporate Governance ■ Product Quality ■ Sustainable Development Strategy ■ Innovation and R&D ■ Customer Service 	Questionnaire	2.1 About TGI 2.2 Corporate Sustainable Governance 3.2 Product Quality Management 3.3 Research and Innovation 3.4 Customer Service	Once every 6 months/ Once a year
		Customer service email		Aperiodic
		Customer satisfaction survey		Once every 6 months/ Once a year
		Participate in product exhibitions to gain a direct insight into the clients and market trends. For example, every two year the Flat Glass Business regularly attends Taiwan and Germany Building Materials Exhibition; every year the Fiberglass Business participated in China Composites Expo, France JEC Exhibition; Container & Tableware Glass Business took part in the Hong Kong Housewares exhibition and infant supplies exhibition in Shanghai		Once every 2 years/ Once a year
		Customer visits, on-site surveys, audits, questionnaires or irregular meetings		Aperiodic
Dealers	<ul style="list-style-type: none"> ■ Corporate Governance ■ Product Quality ■ Innovation and R&D ■ Risk Management ■ Customer Service 	Act as a good communication platform between the clients and TGI. Understand the clients'need and assist them with issues via personal visits, phone calls and emails	2.2 Corporate Sustainable Governance 2.3 Risk Management 3.2 Product Quality Management 3.3 Research and Innovation 3.4 Customer Service	Aperiodic
		Give project presentations, determine wind load deflections, glass strength design, plan types of glass and review of the standards		Aperiodic
		Assist with orders, samples, complaints, QC, equipment maintenance, technical service and so on		Aperiodic
		Customer satisfaction survey		Once a year
		Attend Taiwan and Germany Building Materials Exhibition		Once a year/ once every 2 years
		Attend China Composites Expo and France JEC Exhibition		Once a year

//1.3 Material Topics//

The material topics identification process

Based on the aforementioned analysis, we define the 2018 material issues matrix and list issues of high stakeholder interest and impact on TGI as material issues. These issues serve as reference for information disclosure to ensure effective stakeholder communication with various stakeholders.



















重大性排序					
1.	Product Quality	9.	Regulation Compliance	17.	Green House Gases
2.	Sustainable Development Strategy	10.	Employment	18.	Training and Education
3.	Corporate Governance	11.	Effluents and Waste	19.	Anti-corruption
4.	Innovation and R&D	12.	Air Pollution	20.	Market Presence
5.	Risk Management	13.	Economic Performance	21.	Stakeholder Communication
6.	Resource Conservation	14.	Water Management	22.	Biodiversity
7.	Occupational Health and Safety	15.	Information Security	23.	Raw Material
8.	Customer Service	16.	Supply Chain Management	24.	Labor Right
				25.	Green Packaging
				26.	Procurement Practices
				27.	Diversity and Equal Opportunity
				28.	Indirect Economic Impacts
				29.	Freedom of Association and Collective Bargaining
				30.	Anti-competitive Behavior
				31.	Local Communities
				32.	Public Policy

Stakeholders	Key concerns	Methods of communication	Corresponding section	Communication frequency
Suppliers	<ul style="list-style-type: none"> Product Quality Sustainable Development Strategy Corporate Governance Innovation and R&D Risk Management 	Designated units communicate with suppliers and contractors via phone, fax or email to help them deal with issues after receiving messages	2.1 About TGI 2.2 Corporate Sustainable Governance 2.3 Risk Management	Aperiodic
		Supplier audit	3.2 Product Quality Management 3.3 Research and Innovation	Quarterly evaluation
Contractors	<ul style="list-style-type: none"> Corporate Governance Sustainable Development Strategy Economic Performance Employment 	Questionnaire survey	2.1 About TGI 2.2 Corporate Sustainable Governance 5.1 Employee and Benefits	Once a year
		Interview/ phone calls and communications		Aperiodic
		Contractors are required to fill out Letters of Safety Commitment and Notions About Working Environment Hazards. All contractors are required to understand and countersign the letters		Every time a contractor enters a factory for construction work
		Contractors' job safety and health training		Aperiodic
Sub-contractors	<ul style="list-style-type: none"> Product Quality Sustainable Development Strategy Corporate Governance Risk Management Occupational Health and Safety 	Questionnaire	2.1 About TGI 2.2 Corporate Sustainable Governance 2.3 Risk Management 3.2 Product Quality Management 5.3 Safe Workplace	Once a year
		Sub-contractor evaluation		Aperiodic (Taichung Factory-once every quarter)
		Sub-contractor complaint number, fax, online platform or email. Communicate with related parties to help them deal with issues after receiving complaints		Aperiodic
Government / Authorities	<ul style="list-style-type: none"> Regulation Compliance Occupational Health and Safety Effluents and Waste 	Maintain a good interaction with the competent authorities and attend public hearings held by the competent authorities	2.2 Corporate Sustainable Governance 4.3 Green Production 5.3 Safe Workplace	Aperiodic
		Mailroom staff will sort through the letters and distribute them to responsible units		Aperiodic
		Each factory has a dedicated department to handle documents and discussions with the local competent authorities		Aperiodic
		Invite government/ competent authorities to visit TGI factories and energy-saving product launch press conferences		Aperiodic

Prioritization of Material Topics, Chapter Disclosure of Management Policy and Scopes Analysis

- represents materiality. The management policy and performance indicators will be disclosed in this report.
- ▲ represents materiality. TGI will continue to strengthen the management and disclose the related information in this report through the CSR evaluation and analysis of subsidiaries and suppliers

Prioritization	Material Issues	Corresponding UN SDGs	Responding Chapter	Internal	External				
				TGI	Suppliers	Contractors	Corporate clients	Dealers	Sub-contractors
1	Product Quality		Ch3 Quality Management	●	▲	—	▲	▲	▲
2	Sustainable Development Strategy	 	Ch2 Ethical Operation	●	▲	▲	▲	—	▲
3	Corporate Governance		Ch2 Ethical Operation	●	▲	▲	—	—	▲
4	Innovation and R&D		Ch3 Quality Management	●	▲	—	▲	▲	▲
5	Risk Management		Ch2 Ethical Operation	●	▲	—	▲	▲	—
6	Resource Conservation	   	Ch4 Environmental Protection	●	—	—	—	—	—
7	Occupational Health and Safety	 	Ch5 Friendly Workplace	●	▲	▲	—	▲	▲
8	Customer Service		Ch3 Quality Management	●	—	—	—	—	—
9	Regulation Compliance		Ch2 Ethical Operation	●	—	—	—	—	—
10	Employment	 	Ch5 Friendly Workplace	●	—	—	—	—	▲

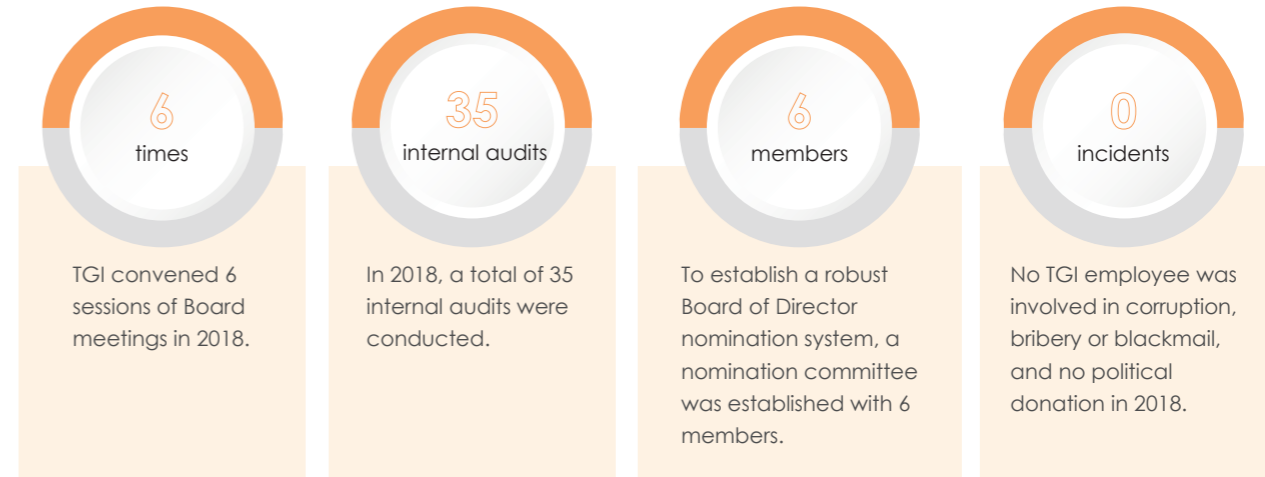


CH.2

Ethical Operation

- 2.1 Introduction
- 2.2 Corporate Sustainable Governance
- 2.3 Risk Management

Achievements of Corporate Governance and Operation in 2018



//2.1 Introduction//

TAIWAN GLASS IND. CORP.	
Market	Oversea Chinese/foreign investment/publicly traded, TWSE listed company
Stock Code	1802, Taiwan Glass Industrial
Industry	<ul style="list-style-type: none"> Manufacturing and sale of flat glass Manufacturing and sale of fiberglass fabric and reinforced fiberglass Manufacturing and sale of glassware
Founded on	August 25, 1964
Date of listing	July 15, 1973
Capital	NT\$29,080,608 thousand
Turnover	NT\$12,561,584 thousand
Number of employees	Employees in Taiwan: 4,737
Headquarters	11F., Taiwan Glass Building, No.261, Sec. 3, Nanjing E. Rd., Songshan Dist., Taipei City 105, Taiwan (R.O.C.)

History and TGI Business Philosophy



Please visit TGI's official website for the history and TGI business philosophy.



Our Philosophy

TGI has upheld its belief in building high performance, laying a steady operation strategy, a global macro perspective, and a solid and sound financial basis.

Our Goal

TGI will provide outstanding quality, reasonable prices and impeccable services to satisfy customers, reward shareholders, take care of employees and contribute to society.

Our Quality Policy

TGI will continue to implement advanced technologies and company-wide quality management to provide our clients with satisfying products.

Founded in 1964, for the last 50 years, TGI has been following the company founder Lin Yu-Chia's business principles of honest hard work and focus on our core business of glass. As the leader in the glass industry in China, Hong Kong, and Taiwan, TGI has put Taiwan in an important position in the global glass industry. In the future, TGI will continue to implement advanced technologies and company-wide quality management to provide our clients with satisfying products. We will continue to develop advanced technologies, improve our supply, production, distribution, and service to achieve sustainability, contribute to society and succeed in the international market competition.



//Sustainable Development Strategy Management Policy//	
Importance	The founder of TGI adhered to the philosophy of building an autonomous high-quality glass industry in Taiwan. Under the joint efforts of partners in the construction industry, the company strives to create a solid foundation of professional manufacturing for the glass industry. Since TGI's establishment, we have been committed to providing great quality, reasonable prices, perfect services, customer satisfaction, to reward shareholders, care for employees, and contribute to society.
Policy and Commitment	To ensure TGI's competitiveness in the ever-changing economy, we strive to cultivate talents, develop high-quality products, enhance the business management, strengthen the layout and marketing services, and implement the economic, environmental, labor and product responsibility aspects of corporate social responsibilities, so that enterprises and society can progress and prosper together, and achieve the goal of robust financial and business development and sustainable operation.

//Sustainable Development Strategy Management Policy//	
Action Method	TGI established the Corporate Social Responsibility Committee which focuses on ESG planning. We continue to introduce new technologies and expand production operations, optimize product and operation scale to enhance TGI sustainable development.
Goals and Targets	<ul style="list-style-type: none"> ■ Reduce operating costs. ■ Optimize and improve the production line structure. ■ Strengthen distribution channels and services.
Objective Evaluation	<p>Flat Glass</p> <p>Update automation technology equipment, increase the sales of high-grade building materials such as Low-E energy-saving glass and Super Clear Glass, and increase the added value of products. Make full use of the layout to flexibly allocate production capacity and inventory to achieve the goal of reducing operating costs and strengthening distribution channels.</p> <p>Fiberglass</p> <p>The technology and quality of fiberglass products have always been the core competitiveness of the company, among which the production capacity of electronic grade fiberglass fabric accounts for 16% of the global market. TGI has successfully developed products with leading global technology, in line with applications of emerging industries such as advanced mobile devices, automotive electronics, and Internet of Things, continue to seize market trends and supply the high-end product. We also cooperate with Owens Corning, the global leader in the production of fiberglass, to renew the technology license and sign the technology licensing and manufacturing supply agreement. With the agreement signed, TGI obtained the world's most advanced fiberglass formulation and production technology. TGI optimizes the structure of production lines and increases the annual production capacity of 60,000 tons to 80,000 tons, providing customers with higher performance and more environmentally friendly products, improving the quality of composite products of domestic manufacturers and increasing the overall competitiveness of the market.</p> <p>Container Glass</p> <p>The domestic and international demand for container glass products remains stable. The one-piece bottle made of α33 borosilicate heat-resistant glass has a global market share of 40%, can withstand an instantaneous temperature difference of 150°C, and has excellent quality and safety. TGI has entered the global leading brand supply chain. We continue to strengthen the traditional sales channels of the food and beverage container products, and selected products are sold on the B2C e-commerce platform, which is closer to the consumer market. In order to establish product characteristics and market segmentation, TGI invited the Japanese industrial design master Naoto Fukasawa to design the brand identification and products, and the product has been launched.</p>

TGI Group Production Base Layout

01 TAIWAN GLASS IND. CORP.

FLAT GLASS

02 TAICHUNG FACTORY

03 CHANGPIN FACTORY

03-1 TG TECO VACUUM INSULATED GLASS CORP.

04 TG QINGDAO GLASS CO., LTD.

05 TG CHANGJIANG GLASS CO., LTD.

06 TG KUNSHAN GLASS CO., LTD.

07 TG CHENGDU GLASS CO., LTD.

08 TG HUANAN GLASS CO., LTD.

09 TG DONGHAI GLASS CO., LTD.

10 TG TIANJIN GLASS CO., LTD.

11 TG XIANYANG GLASS CO., LTD.

12 TG TAICANG ARCHITECTURAL GLASS CO., LTD.

13 TG ANHUI GLASS CO., LTD.

14 TG WUHAN ARCHITECTURAL GLASS CO., LTD.

15 QINGDAO ROLLED GLASS CO., LTD.

16 LUKANG FLAT GLASS FACTORY

FIBERGLASS REINFORCED · FIBERGLASS FABRIC

16 LUKANG FACTORY

17 TAOYUAN FACTORY

18 TAICHIA GLASS FIBER CO., LTD.

19 TAICHIA CHENGDU GLASS FIBER CO., LTD.

20 TAICHIA BENGBU GLASS FIBER CO., LTD.

ULTRA-THIN GLASS

21 TAICHUNG ULTRA-THIN GLASS FACTORY

PHOTOELECTRIC GLASS

22 TG FUJIAN PHOTOVOLTAIC GLASS CO., LTD.

23 TG YUEDA SOLAR MIRROR CO., LTD.

GLASS CONTAINER TABLEWARE & KITCHENWARE

24 HSINCHU FACTORY

AUTOMOTIVE GLASS

25 TAIWAN AUTOGLASS IND. CORP.

26 TG YUEDA AUTOGLASS CO., LTD.

SILICA SAND

27 TG HANZHONG SILICA SAND CO., LTD.

28 TG FENGYANG SILICA SAND CO., LTD.

29 YINAN SILICA SAND CO., LTD.

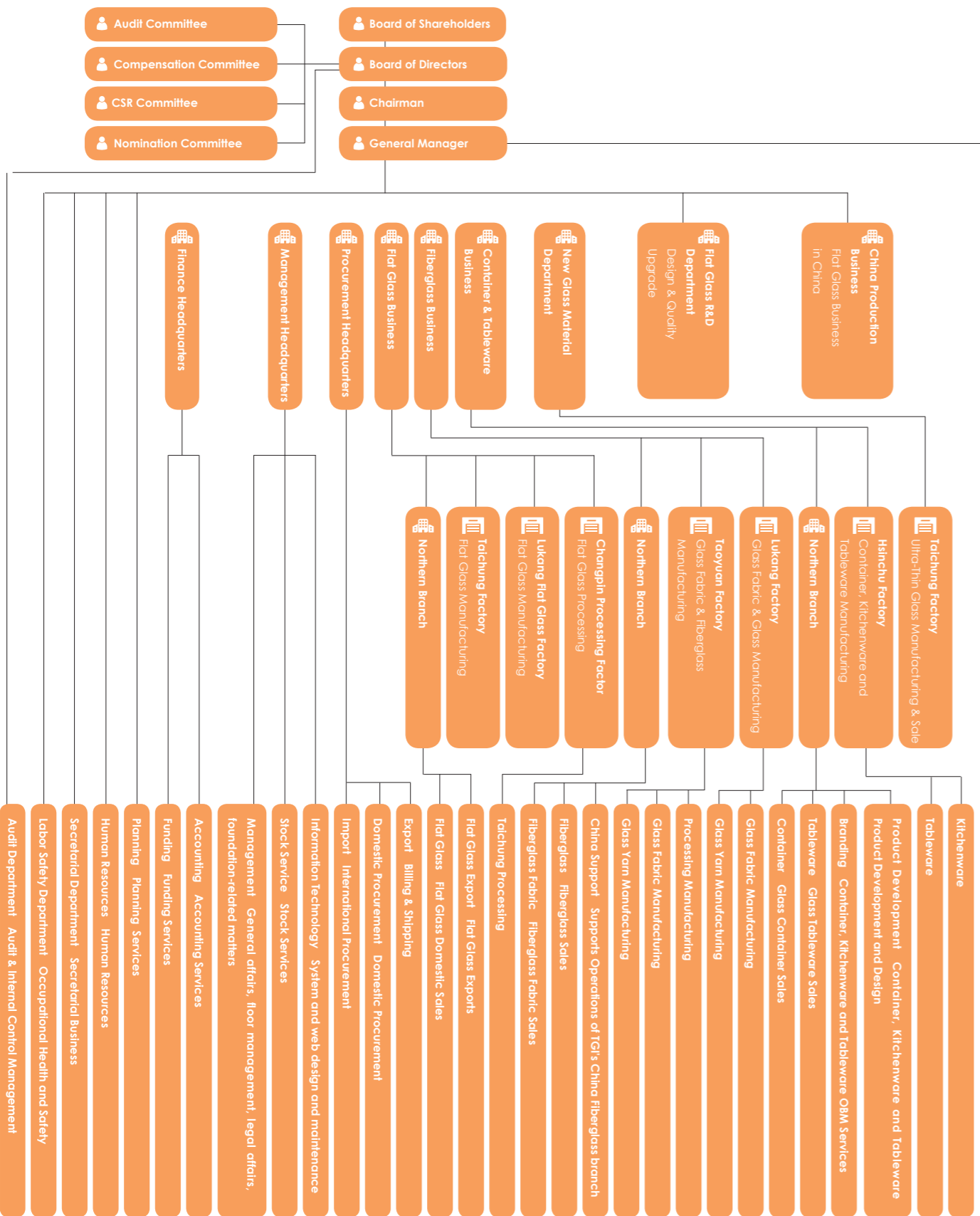
30 TG ZHANGZHOU SILICA SAND CO., LTD.

SODA ASH

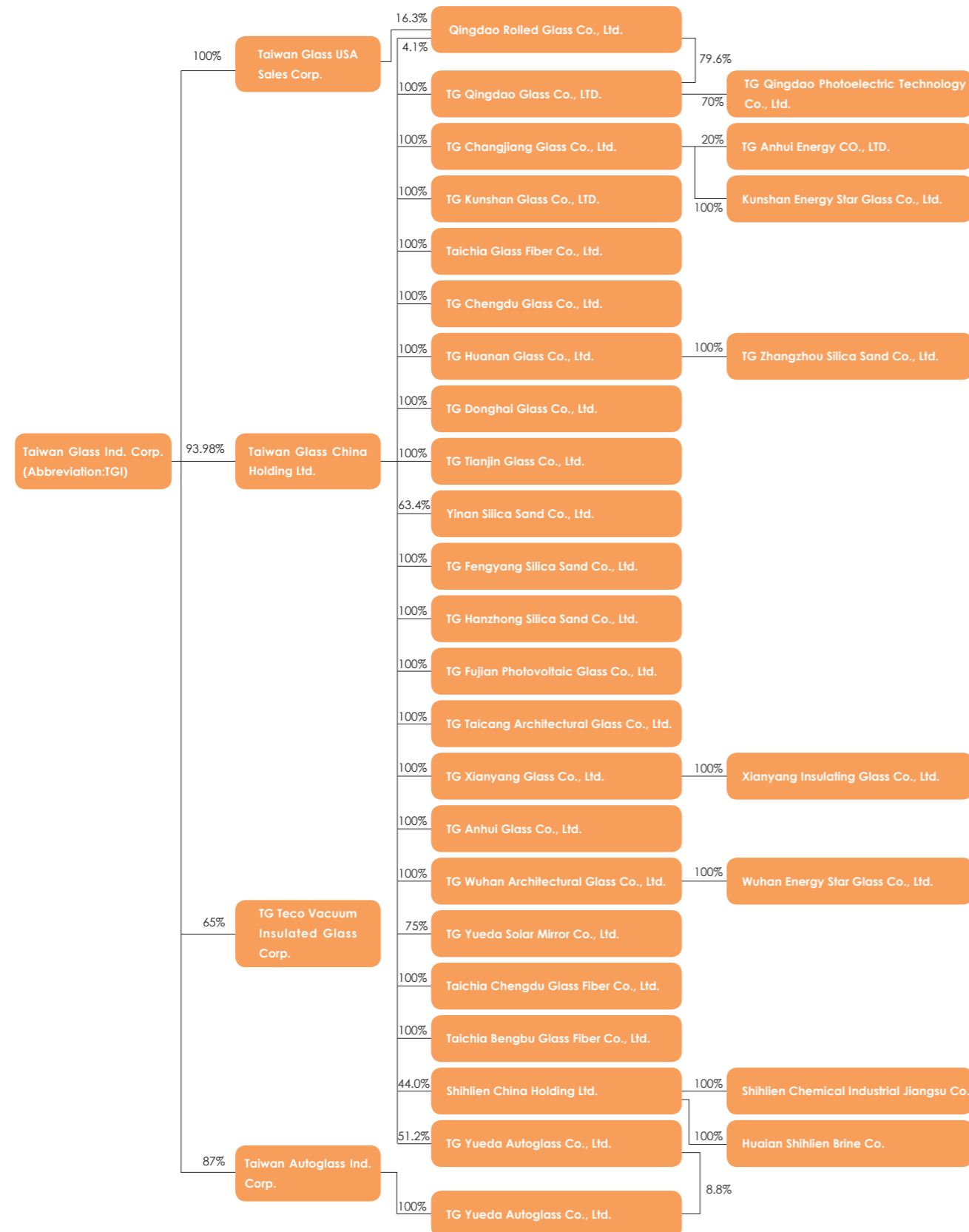
31 SHIHLIEN CHEMICAL INDUSTRIAL JIANGSU CO., LTD.

32 HUAIAN SHIHYUAN BRINE CO., LTD.

Management Team and Key Function of Departments



TGI Affiliates



Main Business and Products

Division	Product Category
Flat Glass Division	<ul style="list-style-type: none"> Clear Float Glass Tinted Float Glass Rolled Glass Low-E Glass Low-E Vacuum Glass Reflective Glass Tempered Glass Ceramic Silkscreen/Spandrel Glass Heat Strengthened Glass Laminated Glass/Sound Control Laminated Glass Bent Glass/Bent Tempered Glass Mirror Glass
New Material Business	<ul style="list-style-type: none"> Ultra-Thin Glass
Solar Business	<ul style="list-style-type: none"> Super Clear Glass Low Iron Photovoltaic Cover Glass
Automotive Glass Business	<ul style="list-style-type: none"> Auto Glass
Fiber Glass Business	<ul style="list-style-type: none"> Fiberglass Yarn Glass Yarn Fiberglass Fabric
Container, Tableware & Kitchenware	<ul style="list-style-type: none"> Glass Container Tableware Kitchenware Tableware/Kitchenware Glass Processing
Salt Chemical	<ul style="list-style-type: none"> Soda Ash Ammonium Chloride

Green Products

TGI Group draws on world-class technology and equipment suppliers and accumulates own R&D experience to make efforts in technology improvement and new product research and development. In addition to obtaining a number of quality and environmental certificates, in response to global green energy issues, TGI reduces pollution from the production process to mitigate environmental impact and devotes to develop environmental and energy-saving related products.



Participating Organizations

TGI is actively involved in national organizations and commercial enterprises, cross-strait exchanges, regional economic and trade, industry associations and other sustainable and environment-related organizations, hoping to interact with other companies in the industrial and help one another grow by participating in various activities.



Organization	Title
Industrial and Commercial Enterprise Groups	
Chinese National Association of Industry and Commerce	Chairman
Chinese National Federation of Industries	Director
Taiwan Chamber of Commerce & Industry	Director
The Third Wednesday Club	Vice Chairman
Cross-strait Exchange Organizations	
Straits Exchange Foundation	Director
Straits Economics & Cultural Interchange Association	Managing Director
Cross-Strait CEO Summit	Director
Regional Economic and Trade Organization	
Chinese Association for Reinforced Plastic	Chairperson of the board of supervisors
Chinese International Economic Cooperation Association	Member
Taiwan-African Business Association	Member
Industry-Related Associations	
Taiwan Glass Industry Association	Chairperson of the Board of Supervisors
Taiwan Green Building Material Council	Member

Organization	Title
Chung-Hwa Railway Industry Development Association	Member
Taiwan Fire Safety & Material Association	Member
Taiwan Composites Association	Managing Director
Taiwan Weaving Industry Association	Member
Guanyin Industrial Park for Industrial Technology Advancement	Member
Hsinchu City Industrial Association	Member
Taichung Harbor Related Industrial Park	Member
Lukang Changhua Coastal Industrial Park	Member
Taiwan Printed Circuit Association	Member
Environmentally Sustainable Development Related Organizations	
Center for Corporate Sustainability	Advisory Director
Taiwan Green Building Council	Member

Financial Information

Items/Year	2016	2017	2018
Operating revenue	12,952,715	13,173,276	12,561,584
Operating costs	10,367,981	10,777,756	10,779,115
Gross profit	2,584,734	2,395,520	1,782,469
Operating expenses	1,999,422	2,019,522	2,025,001
Operating income(profit and loss)	585,312	375,998	(242,532)
Non-operating income and expenses	(2,168,231)	1,797,118	1,354,431
Profit before tax	(1,582,919)	2,173,116	1,111,899
Net income from continuing operations (Net income or loss after tax)	(1,641,685)	2,123,773	1,066,286
Other comprehensive income (loss)	(3,297,667)	(135,333)	(1,225,535)
Total comprehensive income (loss)	(4,939,352)	1,988,440	(159,249)
EPS (NT\$) (Adjusted retroactively)	(0.62)	0.73	0.37
Salary and Wages	2,829,337	3,070,707	3,244,259
Financial contribution to the Government (Taxes, donations, fees)	62,822	58,810	49,232

Note: ■ All figures have been audited and certified by a CPA.
■ The company has adopted the International Financial Reporting Standards since 2013.

Government Research Subsidies

According to the regulations for promoting industrial upgrading, the five-year exemption from profit-making business income tax (2014~2018): TGI application factories are Changbin Factory, Hsinchu TS-7 Kiln, and Taoyuan TT-1 Kiln.

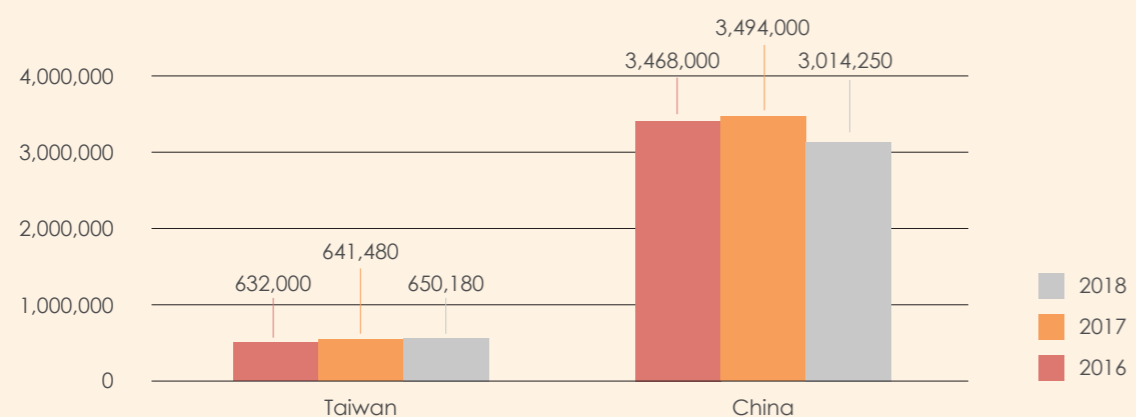


Production and Sales

Taiwan Glass Group 2018 Annual Capacity for Each Product

Product	Taiwan		China		Total	
	Kilns	Tons	Kilns	Tons	Kilns	Tons
Float glass	2	340,000	11	2,860,250	13	3,200,250
Ultra-thin glass	1	33,580	-	-	1	33,580
Photovoltaic cover glass	-	-	-	-	-	-
Solar mirror	-	-	-	-	-	-
Rolled glass	-	-	1	33,000	1	33,000
Fiberglass fabric	2	25,000	6	121,000	8	146,000
FRP reinforced fiberglass	2	75,000	-	-	2	75,000
Glass container	6	173,600	-	-	6	173,600
Glass tableware/kitchenware	1	3,000	-	-	1	3,000
Total	14	650,180	18	3,014,250	32	3,664,430

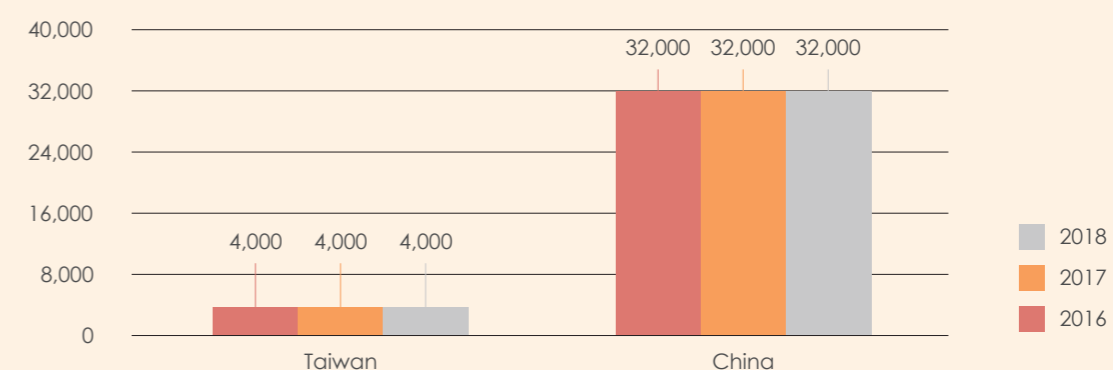
Annual Production Capacity of Taiwan Glass Group (ton)



TGI Group's Total Production Capacity of Low-E

Product	Taiwan		China		Total	
	Production line	1,000 M ²	Production line	1,000 M ²	Production line	1,000 M ²
Low-E glass	1	4,000	8	32,000	9	36,000

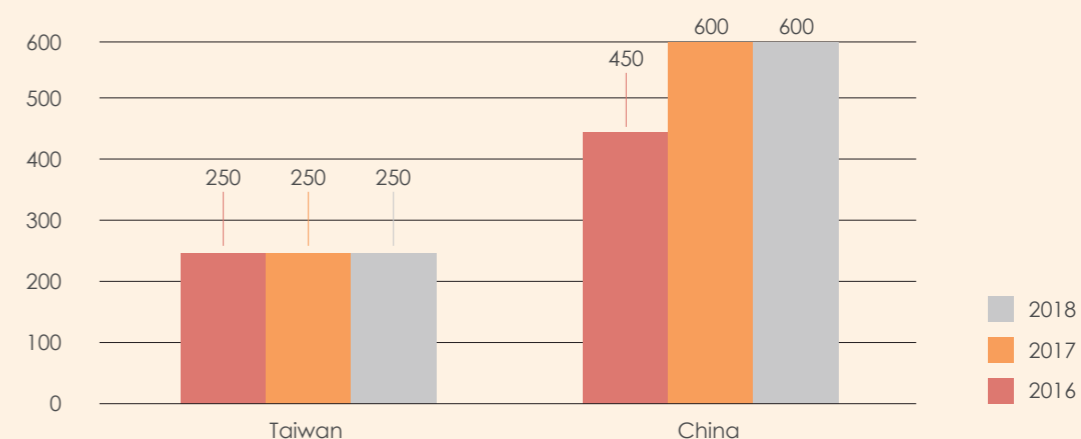
TGI Group's Total Production Capacity of Low-E (1,000 M²)



TGI Group's Total Production Capacity of Automotive Glass

Product	Taiwan		China		Total	
	Production line	Thousand cars	Production line	Thousand cars	Production line	Thousand cars
Automotive glass	1	250	4	600	5	850

TGI Group's Total Production Capacity of Automotive Glass (Thousand cars)



Sales Information

Sale Information of Main Products in 2018						
Serial number	Product category	Ratio of domestic sales	Ratio of export sales	Sales share	Sale areas	Clients
1	Flat glass	90% (including cooperative export)	10%	66%	Asia, Central & South America, Australia, Europe, Africa, and North America.	Construction automotive, furniture, decoration, optoelectronics, sanitary, lighting, gift, electronics industries
2	Fiberglass Fabric and Fiberglass	41%	59%	26%	Europe, USA, China, Japan, South Korea, Middle-East, Southeast Asia, New Zealand, and Australia.	Electronics, electrical appliance, communication equipment, fishing boat, yacht, vehicle, pipeline, barrel, building materials, umbrella, golf equipment, equipment, wind power blade industries
3	Glass container	52%	48%	7%	USA, New Zealand, Australia, China, and Germany.	Wine, food, pharmaceutical, dairy, home appliance, retail industries
4	Glass tableware	50%	50%	0%	India, South Korea, Germany, and Australia.	
	Glass kitchenware	10%	90%	1%	China	
5	New material-Ultra-thin glass	5%	95%	0%	China	Photoelectric, electronic industries

Market Share in 2018					
Serial number	Product category	Market share	Serial number	Product category	Market share
1	Flat glass	About 80% of the domestic market	4	Glass container	About 35% of the domestic market
2	Fiberglass Fabric	About 35% of the domestic market	5	Glass tableware/ kitchenware	About 20% of the domestic market
3	Fiberglass	About 55% of the domestic market	6	New material-Ultra-thin glass	About 10% of the China market

//2.2 Corporate Sustainable Governance//



//Corporate Governance Management Policy//	
Importance	TGI upholds the philosophy of sustainable development, pays attention to shareholders' rights and interests and takes care of employees. We also give back to society, effectively manage and implement the Board of Directors and improve the foundation of corporate governance. Our corporate governance focused on operational development, continuously enhancing our competitiveness, and providing transparent information for all stakeholders to understand and reference so as to enhance the company's operational value.
Policy and Commitment	"Honest Business" is always TGI's core principle and the most fundamental commitment and responsibility that we promise to give all stakeholders. Transparent management creates stable profits and sustainable operations.
Action Method	<p>Avoidance of Conflict of Interest</p> <p>TGI's rules of procedures for meetings of the Board of Directors include clauses for the avoidance of conflict of interest. Furthermore, the Company has professional and unbiased independent directors to fully protect company interests.</p> <p>Anti-corruption</p> <p>TGI has "Honest Business Principles" and "Employees' Honest Principles" which require employees not to accept bribery.</p> <p>Complaints mechanism</p> <p>TGI established internal and external communication and appeal channels for stakeholders to file complaints or provide suggestions.</p>
Goals and Targets	Achieve risk management, regulation compliance, and honest business, protect shareholders' rights and implement the business philosophy through methods such as avoidance of conflict of interest, anti-corruption, and complaints mechanism.
Objective Evaluation	<ul style="list-style-type: none"> When the Audit Committee reviewed the 2019 audit plan in 2018, the attendees were excused from the meeting, and the plan was passed by independent directors. In 2018, no employee was involved in corruption, bribery or extortion. As for the stakeholder opinions, all cases were dispatched and replied by the people in charge based on the questions and the contents of the appeals have been properly coordinated. The fifth corporate governance evaluation score reached 80.97, ranked 21% to 35% among the listed companies.

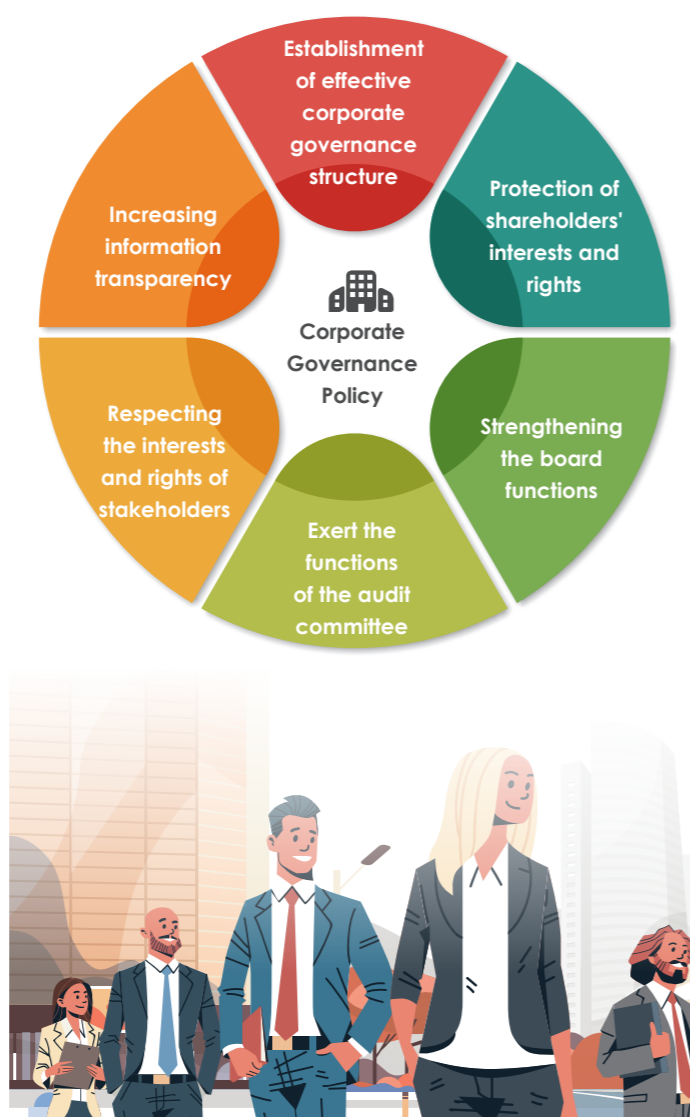


//Regulation Compliance Management Policy//	
Importance	As a multinational company, our operation expands across the Asia-Pacific region. Therefore, the company must comply with the laws and regulations of many countries, confirm the most important regulatory compliance issues for the company, and establish a corresponding compliance system to avoid business risks and also protect the employees' basic labor rights.

//Regulation Compliance Management Policy//	
Policy and Commitment	TGI has Legal Department and Audit Department to ensure that all units'operations comply with environmental, labor safety, product and any related regulations and Labor Standards Act. We offer education and training to help and ensure that each employee understands related rules and regulations., while also committed to complying with the government's environmental protection policy.
Action Method	<ul style="list-style-type: none"> Conduct internal employee training of government laws and regulations, strengthen labor actability, and identify, respond to and follow the regulations. Establish steps for governmental regulations to ensure compliance with statutory requirements.
Goals and Targets	<ul style="list-style-type: none"> No material regulatory violation (where the fine exceeds NT\$1 million). Periodically hosting annual Management and Labor Council and orientation training for new employees.
Objective Evaluation	<ul style="list-style-type: none"> There was no major violation of the law in 2018. The annual Management and Labor Council and orientation training for new employees were all held as scheduled.

Board of Directors

TGI adheres to transparent operations, focusing on shareholders' equity, and believes that a robust and efficient Board of Directors is an excellent foundation for corporate governance. We believe that good corporate governance builds a solid foundation for the operation and development of the market to provide high-quality products and services while enhancing the long-term value of the company. Our corporate governance policies are in accordance with the "publicly traded corporate governance code of practice" and relevant laws and regulation. Under these principles, the TGI Board of Directors has authorized to establish the Audit Committee, Remuneration Committee, CSR Committee, and Nomination Committee to assist the Board of Directors in fulfilling its supervisory duties. Articles of Association of the committees are approved by the Board of Directors, the Chairman of each Committee reports its activities and decisions to the Board of Directors on a regular basis.



Board Members

TGI 2018 Board of Directors included 15 directors. Each director, supervisor and legal person/ representative has rich academic or business operation experience. Among them, 3 were independent directors. TGI's sustainability relies on these directors' rich knowledge, insight and sense of business. Each director has a 3-year term, elected by the shareholders' meeting from among candidates with capability. Directors may be eligible for re-election. Chairman of the Board of Directors shall be elected from among the directors. The Chairman will lead the Board of Directors on behalf of the company, and the Chairman does not serve as the company's CEO concurrently. The board meeting is held at least once each quarter and TGI held 6 board meetings in 2018. There are two types of shareholder meetings: regular and special. Regular shareholder meetings are held at least once a year, convened by the Board of Directors based on the law within six months after the end of each fiscal year. Special shareholder meetings are held based on the law when necessary.

TGI Board members					
Title	Name	Gender	Job Title/Experience	Concurrent Position at TGI	2018 board of directors Actual attendance
Chairman	Lin, Por Fong	Male	TGI General Manager	None	6
Director	Lin, Por Shih	Male	TGI Managing Director	TGI General Manager	4
Director	Lin, Por Chain	Male	TGI Managing Director	None	5
Director	Yun San Corporation Chang, Po Shin (Dismissal on 2018.06.11)	Male	Chairman, Chang Hwa Bank	None	1
Director	Lim, Han Ton	Male	Chairman, Bo Chi Investment	None	5
Director	Lim Ken Seng Kah Kih Corp. Hsu, Li Lin	Female	Sunrise Department Store General Manager	None	5
Director	Peng, Cheng Hao	Male	CEO of Meifu Group	None	3
Director	Tai Feng Investment Lin, Chia Hung	Male	GM, China Prod.	COO, China Prod.	4
Director	Tai Feng Investment Su, Yu Te	Male	GM, Fiber	COO, Fiber	6
Director	Tai Feng Investment Lin, Chia Yu	Male	VGM, Fiber	GM, Fiber	5
Director	Tai Chien Investment Lin, Charles Ming	Male	VGM, Finance	GM, Finance	6

TGI Board members					
Director	Ho Ho Investment Chen, Cheng Chang	Male	Plant Director, Lukang Factory	Project VGM, Lukang Factory	2
Director	Ho Ho Investment Tsai, Tseng Ming (2017-10-26 appointment)	Male	VGM of Purchasing Department	VGM of Purchasing Department	6
Independent director	Lin, Fong Cheng	Male	Minister of the Interior	None	5
Independent director	Chen, Ching Chih	Male	Chairman, Wan Hai Lines	None	6
Independent director	Hwang, Tsing Yuan	Male	Director, TWSE	None	6

Note: 12 directors over the age of 50; 3 directors between 30 and 50.

Duties of the Board of Directors

The Board of Directors is the center of the company's major decisions. The Board of Directors is responsible for appointing and supervising the company's management as well as the company's overall performance. The Board of Directors' second responsibility is guiding the management team. TGI's Board of Directors listens to the management team's reports periodically, which cover economic and environmental protection issues. The Board of Directors frequently communicate with the management team, and the team needs to propose company strategies to the Board of Directors. The Board of Directors evaluates the feasibility of these strategies, keeps track of implementation progress and urges the management team to make adjustments when needed.

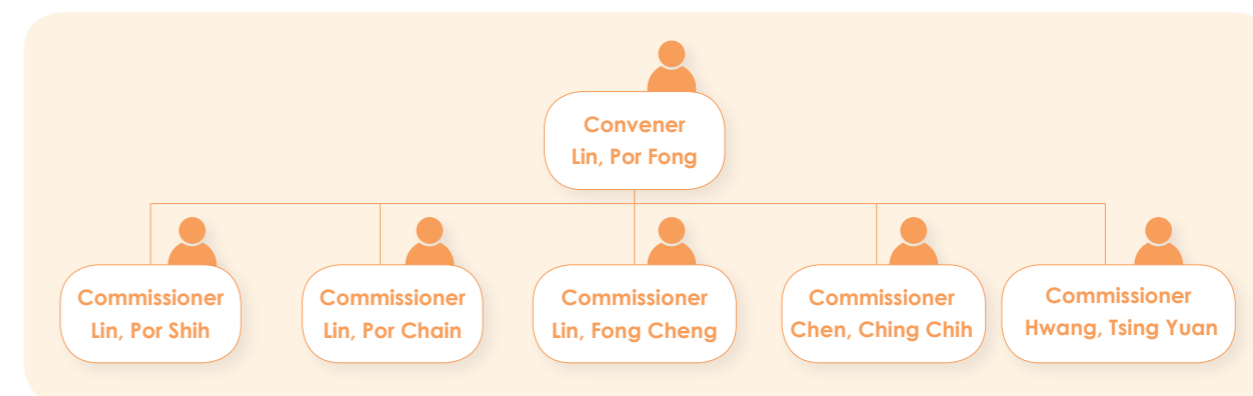


Nomination Committee

To establish a robust nomination system, TGI, following Item 3 of Article 27 of Corporate Governance Best Practice Principles for TWSE/TPEx Listed Companies, established the Nomination Committee in 2016. The committee is authorized by the Board of Directors to seek, review and nominate director candidates as well as build and develop the structure of the board to ensure a healthy Board of Directors.

In accordance with the company law and the company's articles of incorporation, TGI has established a method for the selection of directors, adopts a nomination system for candidates and a registered voting method. The names of the electors can be replaced by the shareholders' numbers, and the shareholders are elected from the list of director candidates. In order to achieve a sustainable and balanced development and an increasingly diversified Board of Directors, we set up a nomination committee to consider various aspects of diversity of board members when setting up a board composition, including but not limited to gender, age, cultural and educational background, ethnicity, professional experience, skills, and knowledge and service terms.

For more information on the policy and responsibilities of our Nomination Committee, Audit Committee and Numeration Committee, please visit the TGI website



Audit Committee

For the establishment of good corporate governance, TGI established the Audit Committee under "Regulations Governing the Exercise of Powers by Audit Committees of Public Companies", with effect from August 2015, all members of the audit committee are independent directors, and at least one of whom must have accounting or financial expertise.

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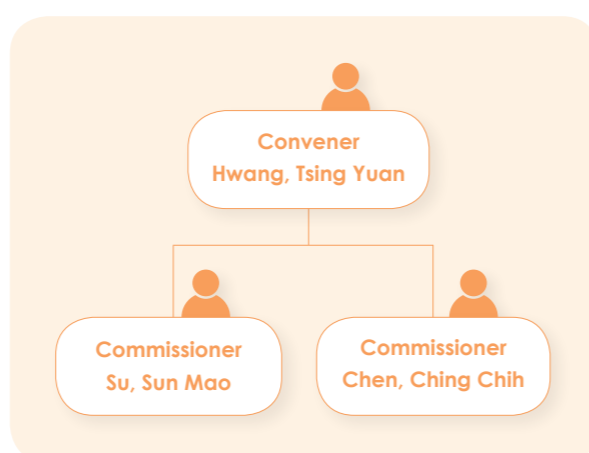
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    Convener[Convener  
Lin, Fong Cheng] --- C1[Commissioner  
Chen, Ching Chih]
    Convener --- C2[Commissioner  
Hwang, Tsing Yuan]
  
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Remuneration Committee

To establish a healthy remuneration system for the directors and managers in TGI, the Remuneration Committee was established following the "Regulations Governing the Appointment and Exercise of Powers by the Remuneration Committee of a Company Whose Stock is Listed on the Stock Exchange or Traded Over the Counter". This committee serves to professionally and objectively evaluate the remuneration policy and system of directors and managers and make suggestions to the Board of Directors as needed. The committee regularly reviews its organizational procedure, annual/long-term performance objectives for the directors and managers and their remuneration policy, system, standards and structures and the performances. The committee will propose the remuneration for each director and manager as a reference in policymaking. In 2018, two Remuneration Committee meetings were held to discuss "Compensation of the Directors and Managerial Officers of TGI in 2017", "TGI 4th Remuneration Committee Convener Case", and "Amendment of Governing Compensation of the Directors and Managerial Officers".

Title	Convener	Independent Director	Commissioner	Commissioner
Name	Hwang, Tsing Yuan	Chen, Ching Chih (2018-06-13 appointment)	Su, Sun Mao	Zhang, Ke Cheng (Dismissal on 2018-06-12)

The aforementioned salary and remuneration include cash compensation, share options, dividends, retirement benefits or termination payments, various allowances and other measures that have substantial incentives; its scope should be consistent with the guidelines for recordable items in the annual report of public offering companies. The remuneration of directors, supervisors, and managers is the same. TGI has not yet consulted the interested parties on the salary policy in 2018 and will consider the participation of interested parties as future reference



Internal Audit Department

The Internal Audit Department (IAD) of TG is an independent unit under the Board of Directors. IAD has a suitable number of eligible auditors who, in addition to regular presentations during the board meetings, report to the chairman, supervisors and independent directors on a regular basis or when necessary. In 2018, a total of 35 internal audits were conducted and no major anomalies were found. This company has its own Internal Audit Implementation Rules, based on which the IDA reviews and assesses the company's internal control system, business performance, and efficiency. The IDA then offers timely suggestions for improvement to ensure that the internal control system is implemented continuously and effectively. The scope of audit covers all operations of the company and our subsidiaries. The IAD mainly conducts audits based on the audit plan approved by the Board of Directors. The audit plan is based on recognized risks. The IAD also conducts an audit on a case-by-case base when necessary. The self-inspection results, the internal control flaws and any matters that need improvement discovered by the IAD will be as a reference in the evaluation of the internal control system's effectiveness and the foundation of Management's Reports on Internal Control.

Avoidance of Conflict of Interest

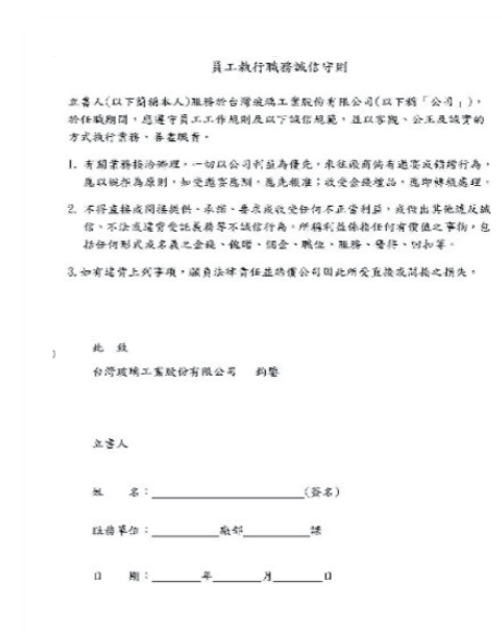
TGI's rules of procedures for meetings of its Board of Directors include clauses for the avoidance of conflict of interest. If any director or a juristic person represented by a director is an interested party with respect to any agenda item, the director may express his/her opinions and answer questions at the meeting but may not participate and shall be excused during discussion or voting on that agenda item, and may not act as another director's proxy to exercise voting rights. Furthermore, this company has professional and unbiased independent directors, who offer objective suggestions based on their expertise and experience as the company formulates strategies. The Board of Directors will fully consider the independent directors' opinions when discussing any agendas. Any reasons or opinions for agreement or objection will be recorded while staying in line with the principle of avoidance of conflict of interest to fully protect the company's interests.

Anti-corruption

TGI has "Honest Business Principles" and "Employees' Honest Principles" and provides training to new recruits to ensure that each employee understands these principles.

- Meal invitations or gifts offered by manufacturers should be declined.
- Invitation to meal and other entertainment should be reported; accepting gifts or money should be reported and delivered to the official handling on the same day.
- The employee shall not exploit their relationship with manufacturers for private business dealings.

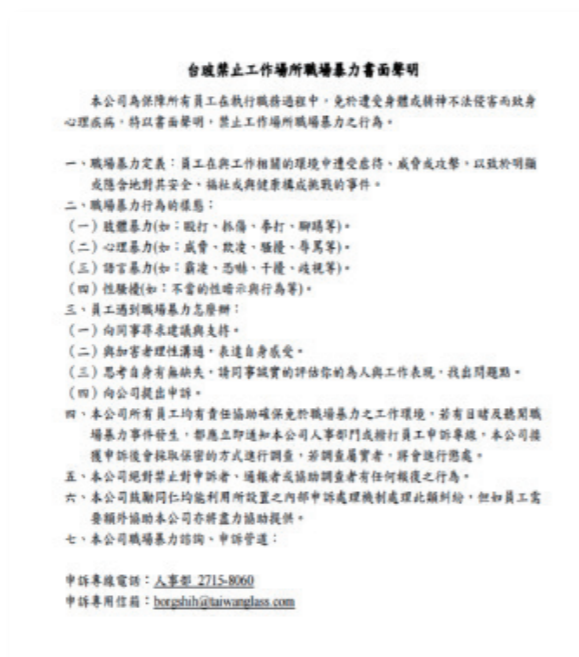
In 2018, no employee was involved in corruption, bribery or extortion. Any donations or sponsorships from TGI to other parties will be processed according to relevant laws and regulations as well as the company's internal rules to prevent bribery or illegal political donations. TGI did not make any political donations in 2018.



Employee's Honest Principles

Complaints mechanism

To pursue growth and implement honest business, TGI established accounting and internal control systems to ensure that all operations in the company stay in line with relevant laws and regulations. Following "Ethical Corporate Management Best Practice Principle" item 20, the Board of Directors passed "Process for Reporting Illegal and Unethical or Dishonest Cases" in 2018, and disclose designated unit, reporting channels, handling process and policy. TGI set up employee appealing email and telephone on the internal website, and external email address on the company's website that the public can use to file complaints or provide suggestions. TGI has both internal and external complaints consultation procedures as follows:



Workplace Violence Policy Statement

Please visit the TGI website for the handling process of illegal and unethical cases and TGI Ethical Code of Conduct

//2.3 Risk Management//



//Risk Management Management Policy//	
Importance	In order to avoid additional losses, TGI strives to reduce operational risks and establish sound risk management based on various possible risks.
Policy and Commitment	Based on various issues, TGI assigns relevant departments to regularly inspect and manage, and proposes improvement measures to monitor the recurrence rate of identified risks, and strengthens preventive measures to reduce impact.
Action Method	<ul style="list-style-type: none"> Arrange related education and training to ensure that all employees have full knowledge of possible risks. Arrange related emergency drills to improve the response, ex fire, wastewater facilities incidents, air pollution incidents, oil and chemical leak, explosion, etc. Maintain a robust financial structure as favorable bargaining power when negotiating with financial institutions, and keep close contact with banks to obtain a more favorable loan interest rate and reduce interest rate risk. In response to the continuous production demand of the production line and avoiding interruption, the following policies are made respectively for raw materials, fuels, and energy supplies: <ol style="list-style-type: none"> raw materials : set safety stock. fuel : design backup fuel system. energy : The main equipment in the factory is equipped with an uninterruptible power system.
Goals and Targets	Conduct preliminary risk assessment and plan prevention strategies for important types of environmental and security emergencies.
Objective Evaluation	<ul style="list-style-type: none"> Evaluate risk assessments for critical emergencies and plan strategies for crisis prevention. Quality, environment, and safety were all complied with the management system to implement risk assessment. Regularly implemented fire drills and other risk management courses, such as general education of hazardous chemicals, fire self-defense training, etc. Regularly conducted drills on fire and other various contingency entities, such as molten glass leakage emergency response drills, wastewater overflow emergency response drills, and heavy/diesel tanker loading and unloading leakage response drills.

To prevent risk during operation or sudden disruption of operation, TGI has all departments conduct periodically reviews comprehensive risk evaluations, implement various risk management measures for a sound and comprehensive risk management operation. Risk management involves lowering the occurrence rate and reducing the impacts of recognized risks. The goal of risk management is to achieve sustainable operation, by strengthening risk management, lowering business risk exposure and improving crisis management



//Countermeasures for Risk Management//		
Category	Risk	Impacts and countermeasures/ Response
Financial risk	■ Funding risk	Prepare bank financing quotas and negotiate with banks for more favorable financing rates to reduce funding costs and maintain the normal operation of the company's funds.
	■ Liquidity management risk	Increase interest income on liquidity and ensure the profit and integrity of liquidity.
	■ Interest rate risk	Maintain robust financial structure as favorable bargaining power when negotiating with financial institutions, and keep close contact with banks to obtain a more favorable loan interest rate.
	■ Exchange rate change risk	The exchange rate risk arising from the purchase or sale of non-functional currency pricing is mutually exclusive, so the exchange rate risk is not significant.
	■ Inflation	No significant impact on our Company.
	■ High risk and highly leveraged investment ■ Loans to others ■ Endorsements and Guarantees	In 2018 we had no high risk and highly leveraged investment, and no loans to others. Only the loans and endorsements to our subsidiaries in China were implemented for construction and business turnover.

//Countermeasures for Risk Management//		
Category	Risk	Impacts and countermeasures/ Response
Operational risk	■ Regulatory risk	Through the update of monthly inspection on laws and regulations to ensure TGI is in compliance with all the relevant laws and regulations. Legal internal control system was established as internal control requirements became strict, management methods such as contract review were incorporated into the system. After the contract was electronicized, a legal review was passed. For example, GHG emissions reporting and management law, the three regulations of water-saving, labor disputes, and factory safety accidents.
	■ Cost risk	We estimate the impact of regulations on the cost of TGI and analyze the potential savings in expenditures and costs. For example, the water surcharge, the supply and safety of products and raw materials, and the impact of internationalization on the supply and competition of raw materials. The production department had replaced the original pumped motor water supply to the factory water pressure supply to improve water saving.
	■ Client complaint risk	There is product insurance every year, and premiums and content are increased year by year.
	■ Off-The-Shelf risk	The US FDA is rigorous which increases the risk of product removal, we had increased the number of insurance projects in order to reduce the impact of the risk.
	■ Natural disaster risk	Observe the impact of climate risk and focus on current events to understand what is likely to happen and follow the handling process listed in the ISO 14001 (8-ES-B10) emergency response. For example, news reports of drought or floods.
	■ Information security risk	TGI backed up numerous data and confidential documents on a daily basis. Various permissions are set in the system to ensure that information is used by appropriate personnel and is not exposed.
	■ Human resources risk	Attracting and retaining talents with competitive salary levels. In the past 7 years, we have adjusted salary for 5 years and introduced HR system in response to the risk of system crash and data loss.
	■ Production risk	In response to the continuous production demand of the production line, the following policies are made respectively for raw materials, fuels, and energy supplies: ① raw materials : set safety stock ② fuel : design backup fuel system ③ energy : The main equipment in the factory is equipped with an uninterruptible power system

//Countermeasures for Risk Management//

Category	Risk	Impacts and countermeasures/ Response
	<ul style="list-style-type: none"> Raw material risk 	<p>Glass production is very sensitive to a slight change in formula. The materials going into the kiln must be monitored carefully because the incorrect formula will lead to major losses.</p> <p>Risk</p> <ul style="list-style-type: none"> Material misplaced in the wrong silo <p>Risk occurred</p> <ul style="list-style-type: none"> Wrong formulate resulted in unqualified glass <p>Countermeasures</p> <ul style="list-style-type: none"> Fully implement material storage control Enhance staff training Store raw materials in an isolated and consistent location Label names and inspection results on the packaging
Operational risk	<ul style="list-style-type: none"> Environmental security and health risk 	<p>To prepare for any environmental or security emergency, the Engineering Safety Section should formulate an emergency response plan and conduct an investigation when incidents occur. The Factory Affairs Section should plan training sessions and have all departments collaborate with the section. Each factory has its own emergency response drill for incidents such as fires, accidents in the wastewater treatment facilities, air pollution, oil or chemical leaks and explosions. The Engineering Safety Section can revise the plan based on the circumstances in the factories.</p> <p>Level 1</p> <ul style="list-style-type: none"> Incidents occur Initiate the contingency plan Determine if the incident can be contained effectively and immediately <p>Level 2</p> <ul style="list-style-type: none"> Operator or security guards will conduct the emergency broadcast and contact the authorities Establish an emergency response team which will be in charge of initiating the contingency plan Determine if the incident can be contained effectively and immediately <p>Level 3</p> <ul style="list-style-type: none"> Request for external support Implement task and management on disaster relief End the contingency plan as the disaster has been contained Review

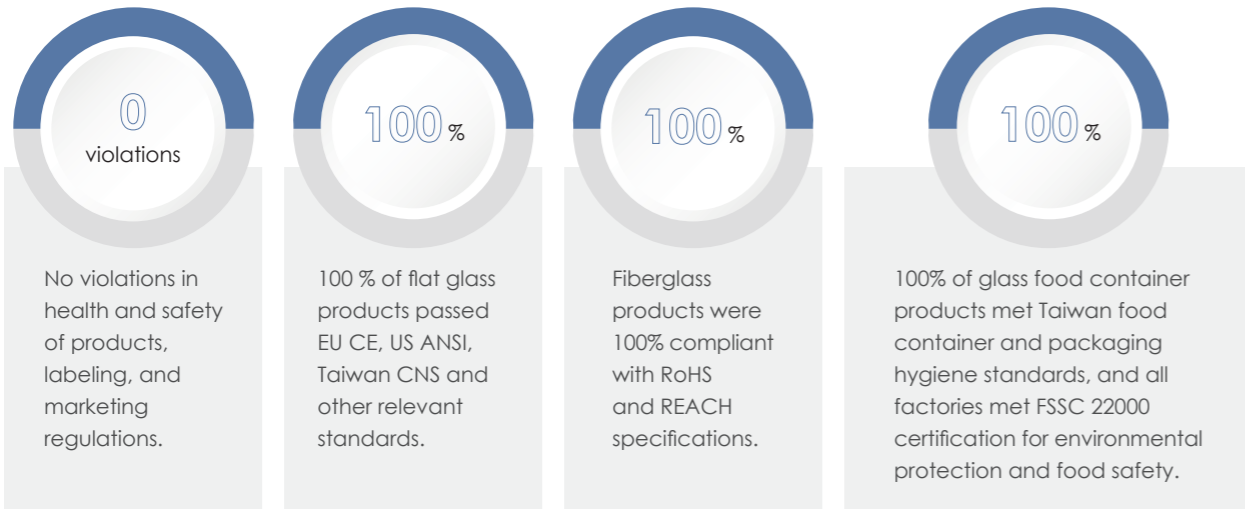


CH.3

Quality Management

- 3.1 Product Introduction
- 3.2 Product Quality Management
- 3.3 Research and Innovation
- 3.4 Customer Service
- 3.5 Sustainable Supply Chain

Achievements of Product Performance and Accountability in 2018



//3.1 Product Introduction//

TGI's main products include flat glass, fiberglass, and glassware. There was no any violation of regulations related to product health & safety, labeling and marketing and no product's sale was prohibited in 2018.

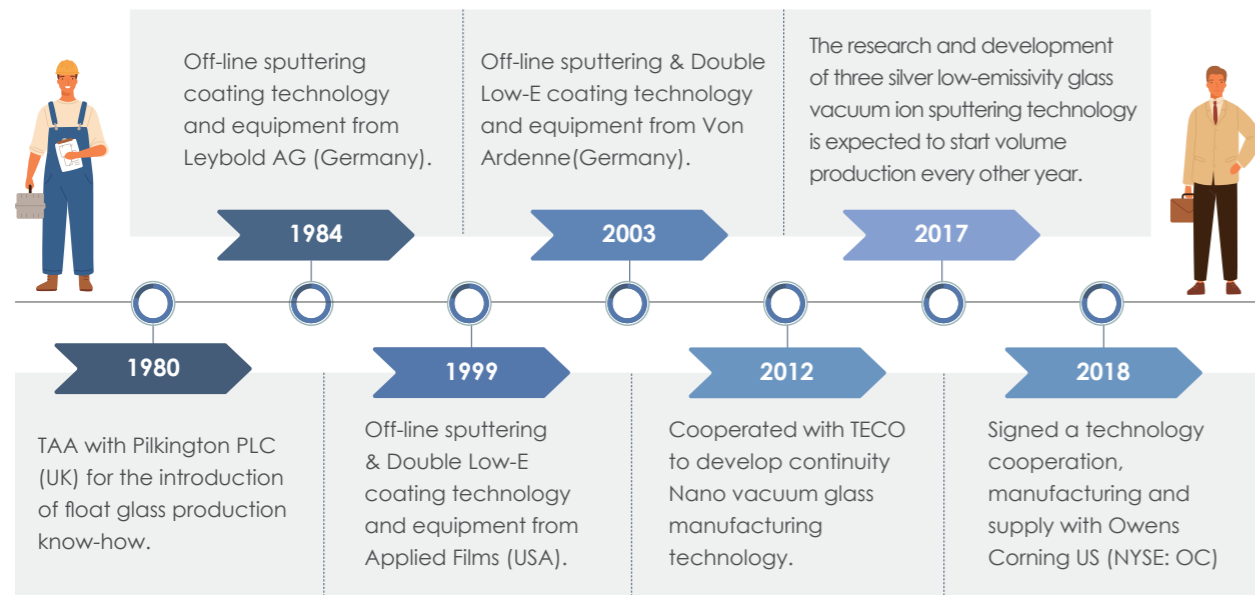
Flat glass is one of the core products of TGI. With production plants based in Taiwan and China, TGI's major markets reach Taiwan, China, Japan, Korea, North America, Middle East, Australia, Europe, South Africa and so forth. TGI was not involved in any anti-competitive behavior, anti-trust and monopoly practices or legal proceedings in 2018.

Flat Glass

TGI's flat glass has 100% passed the EU CE, US ANSI, Taiwan CNS and other relevant standards. In the production of the flat silver mirror, TGI uses an advanced lead-free copper process to avoid heavy metal pollution. TGI also actively promotes the hot-dip process to strengthen glass. Even if it is broken, it will become small pieces to reduce harm. Laminated Glass has the PVB interlayer withstands penetration from an impact. Even if the glass cracks, splinters will adhere to the interlayer and not scatter. In comparison with other kinds of glass, laminated glass has the much higher strength to resist shock, burglary, burst, and bullets. Cladding, coating, vacuum and other energy-saving glass have more excellent thermal insulation so it can reduce the heat exchange of indoor and outdoor to save air conditioning usage which indirectly reduces greenhouse gas emissions.



Technical Cooperation



Flat Glass Related Certification



Green Product - Flat Glass

The new generation of energy-saving Low-E glass products can effectively block the radiation from sunlight while allowing most sunlight to enter, which solves the problem of lighting and heat insulation. This product also significantly reduces energy consumption from air conditioners. TGI's Low-E glass products are in compliance with CNS12681 standard and certified with ISO 9001 standard and IGCC. Currently, the product has been vastly used in buildings.

TGI actively promotes the green building concept. The Low-E Glass can reduce 30% energy consumption of air-conditioning, and Low-E vacuum energy-saving glass insulation performance is 4-6 times of ordinary glass chip. The energy-saving products can better conserve energy than other industrial products. Therefore energy-saving buildings will become a key to the energy conservation energy of the country.

//TGI's Information//

What is Low-E Glass?

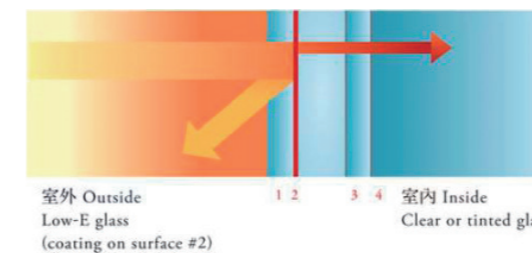
Low-E (Low-Emissivity) glass is the best building material to reduce heat from sunlight as it can deflect most ultraviolet and infrared radiation, preventing the indoor temperature from rising, conserving energy and reducing carbon emission.

Thermal radiation from the sun mainly contains ultraviolet, visible light and infrared radiation. Emissivity (ϵ value, the lower the value, the higher the effectiveness for heat insulation) is glass' ability to emit heat radiation from the sun.

Low-E glass utilizes its coating to block the heat radiation from the sun. According to China's Guobiao standards, only coated glass with emissivity (ϵ value) lower than 0.25 can be labeled as Low-E glass.

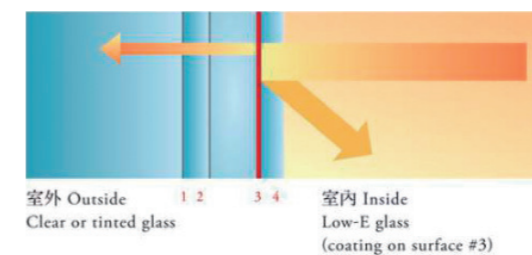
Note:

Emissivity value: The value measures an object's ability to emit heat radiation after absorbing it. The higher the value, the higher the ability to absorb and emit heat; the lower the value, the lower the ability to absorb and emit heat, which means better heat insulation.



(Sub)Tropical Zone

Assembly Sequence Suitable for (Sub) Tropical Zone Coating on surface #2 : The heat is reradiated back outdoors, reducing the heat gain potential into the building interior.



(Frigid) Temperate Zone

Assembly Sequence Suitable for (Frigid) Temperate Zone Coating on surface #3 : Low-E insulating glass will reflect IR heat from inside the room to help reduce the energy loss.

Fiberglass

Our Fiberglass Department actively promotes the application of fiberglass in daily life products. Compared to metal supporters, fiberglass has better resistance to corrosion and elements. Fiberglass is low-cost, more durable and has a great strength/weight ratio. Different types of fiberglass, based on their structures and features, are extensively used in thermal insulation, heat insulation, fireproof material, and reinforcement.

TGI's fiberglass products all meet RoHS and REACH requirements. For food contact products, a total of 4 meet US FDA standards; 8 meet EU 10/2011 regulation and have Germany's BfR approval; 2 meet France's requirements for drinking water (CAS). The quality of our products meets CNS national standards. We print the CNS logos on labels according to different customer requirements. The packaging labels of fiberglass fabric and fiberglass yarn are marked with RoHS compliance logos.



Glass Container, Tableware, and Kitchenware

Glass containers, with excellent transparency, showcase the real color of anything inside the container. They also have the advantages of easy sealing and flavor preservation. Furthermore, glass containers can be heated up gradually without deforming. TGI's glass containers come in various shapes. A suitable container can further highlight your product's texture.

The manufacturing facility of the container, tableware, and kitchenware has received FSSC 22000 certification; moreover, it has obtained ISO 50001 in 2017. All products meet Taiwan's Sanitation Standard for Food Utensils, Containers and Packages. TGI can also provide products that meet RoHS and REACH standards based on clients' requests. For our heat-resistant products, all of our baby feeding bottles meet EU's latest EN 14350 standard. All of our coffee pots come with heat-resistant labeling. In addition, since

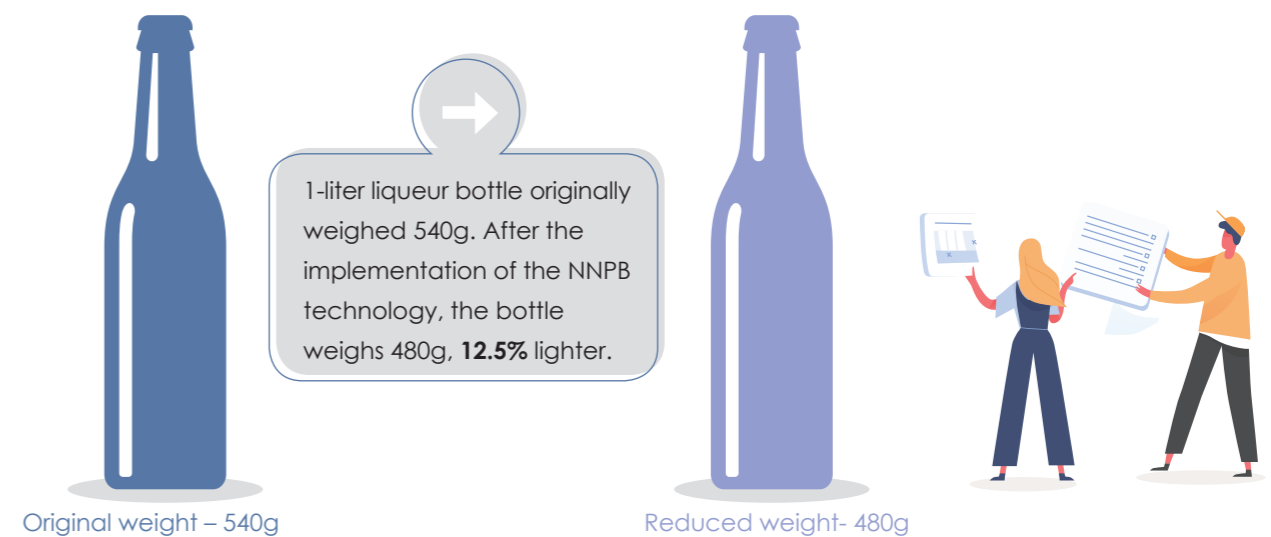
2017, the container part has also started TPCB heavy metal inspection (mercury, lead, cadmium, and hexavalent chromium) on a quarterly basis in response to US customer requirements. The inspection results are in line with the standards.

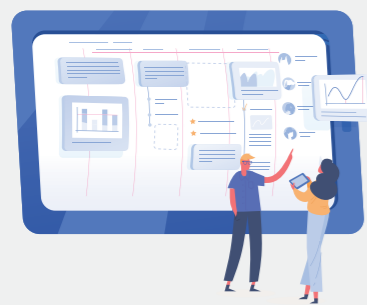
TGI has established a waste glass recycling factory where waste glass is cleaned and recycled. This company periodically sends samples from this factory to SGS to test for lead content. Due to an increase in export-share, TGI has a USD 5,000,000 global product liability insurance covering all the products.



Green Products - Glassware

TGI began acquiring German NNPB glass-blowing technology in 1983 in order to meet the needs of the market and enhance environmental protection. This technology produces attractive, lightweight bottles of uniform thickness. More recently, TGI has participated in technological cooperation with Germany's Heye-Glass Group, producing more than 200 million bottles per year. Lightweight bottles are the product of future trends in the glass container market. Besides helping customers cut production costs, lightweight bottles are environmentally friendly, as their production consumes fewer resources and energy.





Advantages of Lightweight Bottle

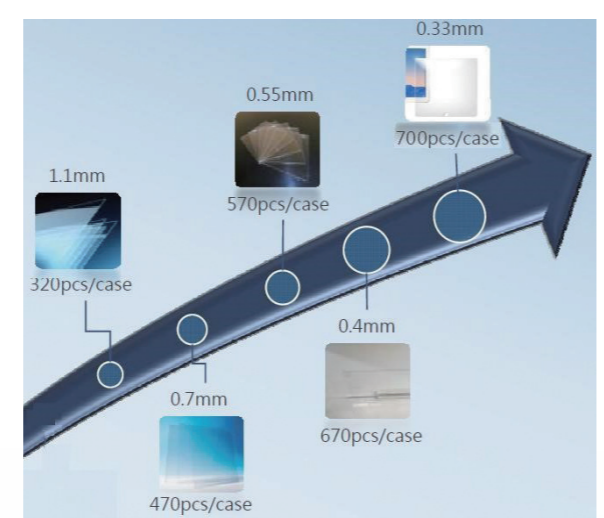
- Conserves raw materials use. It has the same strength despite a thinner bottle wall
- Reduces energy consumption
- Reduces clients' production costs
- Glass containers are 100% recyclable and will not destroy the earth's ecological environment

Asia's top quality heat-resistant baby feeding bottle

Starting on June 1, 2011, China banned the baby bottles containing bisphenol A, which is also regulated in countries worldwide. TGI container factory started the production of heat-resistant borosilicate bottles from April of 2013. These bottles have the CTE of 33, which is certified by AGR (American Glass Research) with leading quality in Asia.

Ultra-Thin Glass

The TF5 furnace in Taichung Factory is a newly established production line for Ultra-thin touch glass. Introducing the installations of Computerized Automated Production Management System, cleanroom and mechanical arms for collecting glass panes, this line started production in November 2014 with mass production for 0.33~1.1mm glass. The 0.55~0.11 glass could be used for ITO touch panels and the 0.33~0.4mm glass could be used as screen protector for 3C products. All of the products undergo strict inspections before shipment. The high-quality product is able to provide for major electronic manufacturers at home and abroad to produce consumer electronic goods.



Properties		TGI	Japanese Product	Chinese Product
Mechanical Properties	Density (g/cm ³)	~ 2.50	~ 2.50	~ 2.50
	Young's modulus (GPa)	72 ~ 74	70 ~ 75	68 ~ 72
	Depth of Layer (um)	8 ~ 12	8 ~ 12	8 ~ 11
	Compressive Stress (MPa)	> 500	> 400	> 400
Thermal Properties	Coefficient of Linear Thermal Expansion (x10 ⁻⁷ /°C)@50~350°C	~ 85	85 ~ 90	75 ~ 80
	Annealing Point	~ 554	~ 554	~ 532
	Strain Point	~ 530	~ 510	~ 496
Optical Properties	Visibele Light Transmittance	> 91 %	> 91 %	> 91 %
	Photoelasticity	25.36	26.5	27.5

Our Private Brand

TGI's technique to produce glass container and tableware has been able to compete with international recognized brands. Therefore, we established our private brand, TG. TGI targeted the new audiences who pay attention to lifestyle and cooperated with Fukasawa Naoto, who is a Japanese artist of industrial design, to plan and design with the observation of Taiwanese culture. The varieties of products reach to 200. First batch of products includes water containers, coffee pots and drinking vessel and is injecting new ideas into Taiwan's life aesthetics. TGI hope the new brand could open to the world market from Taiwan.

//3.2 Product Quality Management//



//Product Quality Management Policy//	
Importance	TGI aims to provide good quality and reliable products to clients and to protect the interests of customers as the first priority. All products are equipped with related certification, governmental or global recognition for quality, safety in manufacturing and food safety.
Policy and Commitment	Besides economic growth improvement, the environmental and social sustainability as well as risks reduction are also TGI's policy and commitment. Therefore, TGI actively introduces product quality, product safety, environment & health, and transportation security systems in order to keep upgrading product quality and related risks countermeasures.
Action Method	Obtain system certification of each product line in order to improve product quality.
Goals and Targets	<ul style="list-style-type: none"> Keep obtaining and maintaining the quality management systems, CNS and ANSI of each product line Keep obtaining each product certification of electronic class fiberglass
Objective Evaluation	<ul style="list-style-type: none"> New Material Business meet ISO 9001:2015 quality management system certification. Flat glass products with higher production yield rate to 95% above.

To achieve economic growth and prosperity, social prosperity and sustainable living environment, reduce the incidence of risk and its impact, TGI actively introduced systems of product quality, product safety, ESH, transportation security and risk management. Certifications for TGI's factories are listed below:

Certification/ Factory	Headquarter	Taoyuan Factory	Hsinchu Factory	Taichung Factory	Lukang Factory	Lukang Flat Glass Factory	Changpin Factory
AEO	●	●	●	●	●	●	●
ISO 9001		●	●	●	●	●	●
ISO 14001		●	●	●	●	●	●
ISO 14064-1		●	●	●	●	●	
ISO 50001		●	●	●		●	
ISO / IATF 16949		●					
FSSC 22000			●				

Note: 「●」 refers to the factory has the related certificate

Quality Systems

Good quality management system gives a good product quality, meets customer needs, and improves economic efficiency. TGI's factories meet ISO 9001 quality management system certification. Flat glass products obtained CNS Certificate from Bureau of Standards, Metrology and Inspection, Green Building Material Certificate from Ministry of the Interior, Certificate of Australia CSI Safe Glass Certificate Authority and the Certificate of United States IGCC Multilayer Glass Certification Association. Fiberglass products have obtained Norway's DNV certification and Germany's GL certification. The Taoyuan Factory obtained the ISO/TS 16949 certification for quality management systems in 2016. The Changpin Factory submits their processed glass products for examination to maintain the certification by SGCC (tempered glass and laminated glass) and IGCC (insulating glass).



Environment, Health, and Safety System

TGI knows the importance of environmental protection and sustainability of the earth. In environmental management, all TGI's factories are certified with ISO 14001 for environmental management and ISO 14064-1 for greenhouse gases (except Changpin Factory). In 2015, Taichung Factory established a committee of promoting greenhouse gas management to implement measures and report on these. It obtained third-party verification SGS compliance with ISO 14064-1: 2006 Greenhouse Gas review statement to achieve the target of waste reduction and protecting the global ecological environment effectively through ISO management procedure.



Product Health and Safety System

In recent years, tainted food incidents are quite common. To meet our clients' food safety requirements and to improve our international competitive advantages, since 2010, the Hsinchu Factory has actively imported ISO 22000 food safety management system for process hazard control. On March 7, 2011, it was SGS verified, and issued the "FSSC 22000 food safety management system certificate". The Taoyuan Factory also met Lloyd's Register product safety certification for shipbuilding and the TZW safety certificate for food container manufacturing.



Product Transport Safety System

In 2014, TGI was among the top 500 blue-chip manufacturers for import and export and was awarded Bureau of Foreign Trade's certification. TGI, as a partner, also helped Customs implement comprehensive supply chain security measures to obtain substantial and convenient customs clearances. On 19 April 2012, Taiwan glass obtained an AEO certification (for excellent enterprises with compliances) from the Keelung Customs Department. On April 19, 2015, the certificate was extended for another 3 years. Honored by Ministry of Finance for its outstanding contribution on May 10, 2016, TGI, with AEO supply chain safe measures, ensured a safe quality of TGI products throughout the entire supply chain. By improving the safety, TGI was able to reduce intellectual property loss and satisfy the safety requirements of both customs and clients.



Energy Management System

Global warming and climate change have become an important sustainable development issue. Greenhouse gas emission reduction has become important in each country. To fulfill the corporate social responsibility, TGI seeks to reduce greenhouse gas emissions, improve energy efficiency, and implement energy source management. In 2014 it began to introduce the ISO 50001: 2011 Energy Management System. In 2014, the Taichung Factory was certified and received the certificate from Bureau Veritas Certification Taiwan. The Hsinchu Factory and the Taoyuan Factory are also certified by Bureau Veritas Certification Taiwan in 2017.



//3.3 Research and Innovation//



Innovation Management Policy	
Importance	<p>TGI's technological process continues to break through innovations and maintains industry-leading standards in the fields of environmental protection, energy conservation, optoelectronics, lightweight, diversification, and actively develops green building materials related to high-quality and environmentally-friendly glass products. In order to protect the food safety of consumers, TGI strives to obtain various food safety certifications.</p> <p>Various electronic product manufacturing processes are being developed toward lighter weight, expanding the application of glass fiber composite materials. Besides, coupled with the maturity of technology IoT applications, Netcom equipment, mobile devices, and emerging driverless cars, it will drive industrial glass fiber and electronic grade fiberglass fabric demand growth.</p>
Policy and Commitment	<p>We are committed to the improvement of technology and the research and development of new products, reducing the pollution of the production process, reducing the impact on the environment, and focusing on the development of environmental protection and energy-saving related products.</p> <p>In addition to establishing an internal innovation sharing mechanism and continuously strengthening the innovation dynamics of the organization, TGI also assists clients and industries in cross-domain innovation, including product innovation in cooperation with customers, and green innovation in cooperation with suppliers.</p>
Action Method	<ul style="list-style-type: none"> ■ Develop thin, high-precision, high-strength fiberglass fabric ■ Save energy and improve resource reuse rate ■ Cooperate with academia to maintain research and development ability ■ Alliance with industry to provide products that meet market demand ■ Ultra-thin glass manufacturing technology and production process improvement
Goals and Targets	<ul style="list-style-type: none"> ■ Promote ultra-thin fiberglass fabric #1027 and innovate the latest #1017 to meet the requirement of state-of-the-art mobile device ■ Improve the manufacturing technology and production process quality of ultra-thin glass
Objective Evaluation	<ul style="list-style-type: none"> ■ Ultra-thin fiberglass fabric #1027 won stable orders and the sample of #1017 was sent to the customers to be testified ■ The year production of 0.33mm ultra-thin glass achieved to 48,500 m²/year from 36,000 m²/year; the production rate of 0.55mm ultra-thin glass rose by about 56%

In order to strengthen innovative R&D capabilities, each product line, in addition to developing its own research and development technologies and equipment, also combines external R&D capabilities and resources, such as the cooperation with foreign R&D companies to develop high-aluminum glass to enhance its physical and chemical properties, as well as inviting foreign technicians to the factory to teach and introduce new production technologies. In addition, TGI cooperated with China University of Science and Technology, Southern Taiwan University of Science and Technology, and Plastics Industry Development Center to research the application program of thermoplastic fiber composite materials. In 2018, TGI continued to upgrade its core technology and R&D capabilities. The key results are as follows:

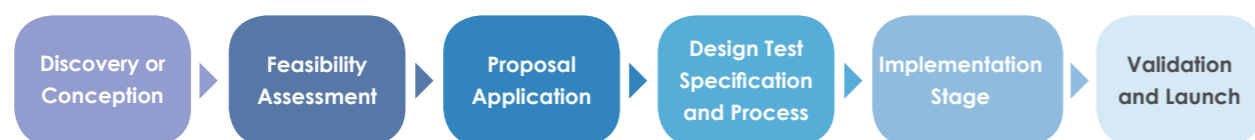
- 1 Super clear float glass for solar batteries was successfully pilot produced in the second half of 2008, and continued producing in 2009-2012. The thickness of the product is between 3mm~19mm and the quality all meet the optoelectronics, buildings and export needs because of technology ripening and stable.
- 2 The main Changpin Processing plant has been built and Low-E with high performance and vacuum glass and varieties of processing equipments continuously entered mass production. This makes the processed glass more refined and competitive advantage in diversification.
- 3 TGI Group and Mainland China continuously searching for TCO glass, Ultra-Thin Glass and Vacuum Glass techniques, equipment and plant building plans to meet the changes and needs in global markets.
- 4 The manufacturing technology of Vacuum Glass was ripening and could combined Low-E Glass into Low-E Vacuum Glass.
- 5 The quality of heat-resistant baby feeding bottle and laboratory bottle is steadily growing.
- 6 Ultra-Thin Glass has been into operation formally and the thickness of 1.8mm~0.33mm was made to used as electronic products and glass screen protectors.
- 7 Our brand TG utensil has launched in December 2018 to increase the added value of products and officially entered into B2C market.

TGI signed an agreement for technology cooperation, manufacturing and supply with Owens Corning US, the global leading manufacturer of fiberglass, in 2018. TGI obtains the most advanced fiberglass formulation and technology in the world and strengthening the partnership between both parties in the area of composite material through this agreement. Besides, TGI provides customers high-performance and more environmental products by TGI's owned high-quality fiberglass manufacturing factories as well as lowering the cost effectively and boosting the competitiveness of domestic composite material products and market. The technology and quality of fiberglass products are always core competency of TGI. TGI

keeps putting efforts in R&D to produce low-cost, high-strength, and high-efficiency fiberglass products to satisfy the demands of clients and create a development niche.

In order to motivate employees to actively provide opinions on production technology, quality, environmental protection, safety, or business administration, TGI provides a bonus for proposal improvement suggestion. For major research and development program, TGI will award project members bonuses as encouragement based on the research contribution and achievements. These improve the employee identification and solidarity, reduce costs, upgrade the working environment, and enhance productivity and quality standards. Special contributions to the production technology or business management are rewarded by giving credit.

Product Development Process



//3.4 Customer Service//

//Customer Service Management Policy//	
Importance	For more than 50 years of operation, TGI has attached great importance to the opinions of its customers. Therefore, it is a prerequisite for gaining customers' recognition and trust, which is also an objective that we have been working hard every year.
Policy and Commitment	<p>Glass Containers We continue maintaining high customer satisfaction in order to obtain a sustainable competitive advantage. The product quality is the core factor makes TGI different from other competitors.</p> <p>New Glass Materials The first priority is to provide product for customers with satisfactory quality. TGI continue improving production conditions after bringing into production and purchasing additional inspection equipment to ensure the quality of the product we provide meets customer satisfaction.</p> <p>Flat glass Customer satisfaction and customer trust are the most important aspects of sustainable development. TGI improved its education and training, upgraded equipment maintenance, and enhanced professional services and production quality to strengthen its competitiveness.</p> <p>Fiberglass An assessment of the degree of satisfaction with the customer relationship during the transaction was conducted to facilitate the improvement plan and to enhance the customer's satisfaction.</p>
Action Method	In order to keep close to the needs of customers and improve them, TGI regularly implements a "Customer Satisfaction Survey" every six months or year. The content covers 7 topics which are "complaints response speed", "message feedback - correctness", "message feedback - promptness", "business attitude", "ability to fill rush orders", "professional competence" and "quality consistency". Based on customer response the indicators are reviewed and analyzed for follow-up meetings about improvement measures and implementation issues raised in customer feedback.
Goals and Targets	Each of the factory's product lines passed 7 issues including "complaints response speed", "message feedback - correctness", "message feedback - promptness", "business attitude", "ability to fill rush orders", "professional competence" and "quality consistency". With a focus on active management, we expect to continuously improve customer service satisfaction, with overall satisfaction exceeding 80%.
Objective Evaluation	Average customer satisfaction in 2018: 82%

Customer Satisfaction

In 2018, customer satisfaction averaged more than 82% across various TGI departments (New Material Business Division is added to the survey scope in 2018). Each department will make improvements for the service failures and strengthen communication with customers, and expect to improve customer satisfaction in 2019.



Protecting Confidential Customer Information

To practice personal data security management, TGI follows the relevant provisions of "personal data security maintenance management approach" and the "personal data protection act". We provide new staff education and training in personal profile protection to strengthen the awareness. Every six months staff from each department will be assigned to the education and training of personal profile protection. This is to reduce possible legal risks for the company and employees, protect the interests of customers and enhance colleagues' handling capability of information security.



Information Security Seminar

In addition, we are also committed to protecting customers' confidential information. To prevent data leakage, our information equipment has strict permissions control, and all employees are required to protect customers' confidential and proprietary information carefully and prevent inappropriate loss of customer data. TGI provides information safety training for its staff regularly and urges the staff to lock their computers with passwords, in compliance with Item 3 of Article 11 of Regulations Governing the Certification and Management of the Authorized Economic Operators. In 2018, TGI did not receive any complaint regarding client privacy violation or loss of client data.

To establish face-to-face communications with our clients, each department also regularly visit customers, or participates in exhibitions: Flat Glass Business regularly attends Taiwan and Germany Building Materials Exhibition; Fiberglass Business participated in China Composites Expo, France JEC exhibition, Container & Tableware Glass Business took part in the Hong Kong Housewares exhibition and infant supplies exhibition in Shanghai; New Glass Material Business joined C-TOUCH & DISPLAY in Shenzhen.

C-TOUCH & DISPLAY mainly exhibited transformational products, including double-sided coating and shadowing ITO Glass, doubled-sided reflectiveness AR Glass, and translucent semi-reflective glass, etc. TGI is focusing on the development of ITO Glass and striving to stabilize ITO market at present.

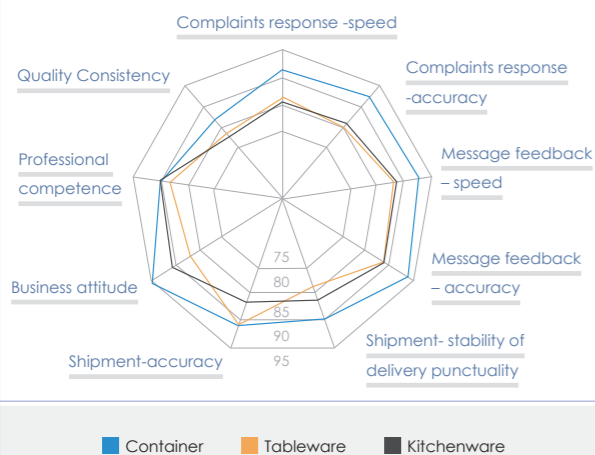


Fiber Glass – JEC Exhibition

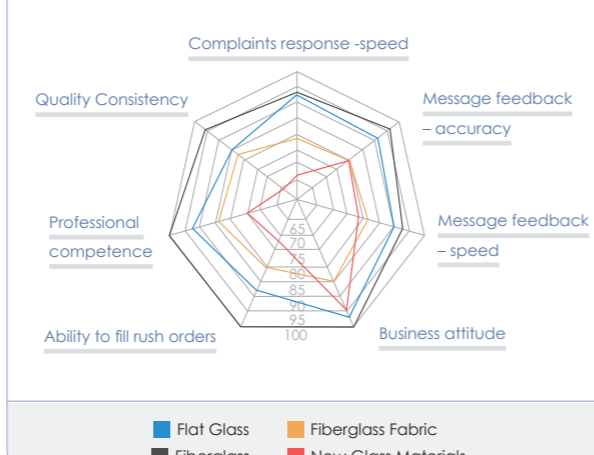
Fiber Glass – China Composites Expo

Container & tableware – Children Baby Maternity Industry Expo

Analysis of 2018 Customer Satisfaction



Analysis of 2018 Customer Satisfaction

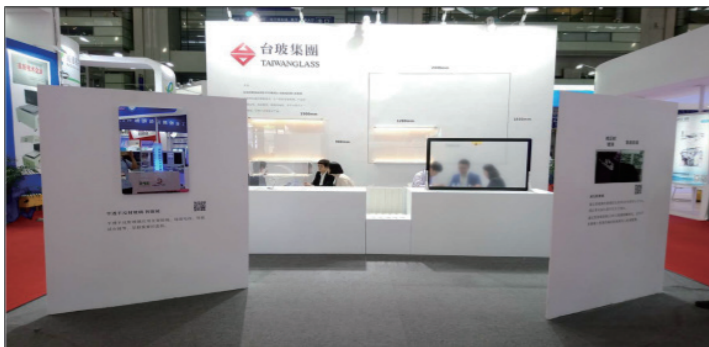


Customer Response Process

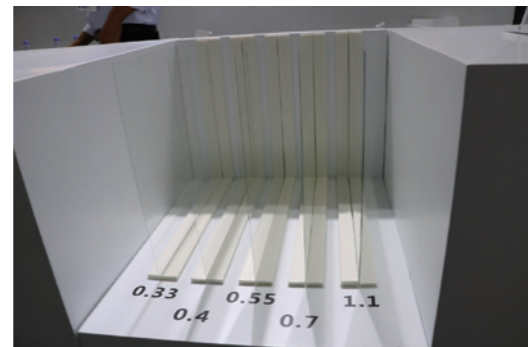




Flat Glass – Building Materials Exhibition



New Glass Material - C-TOUCH & DISPLAY



//3.5 Sustainable Supply Chain//

Purchasing Policy & Supply Chain Social Responsibility Management

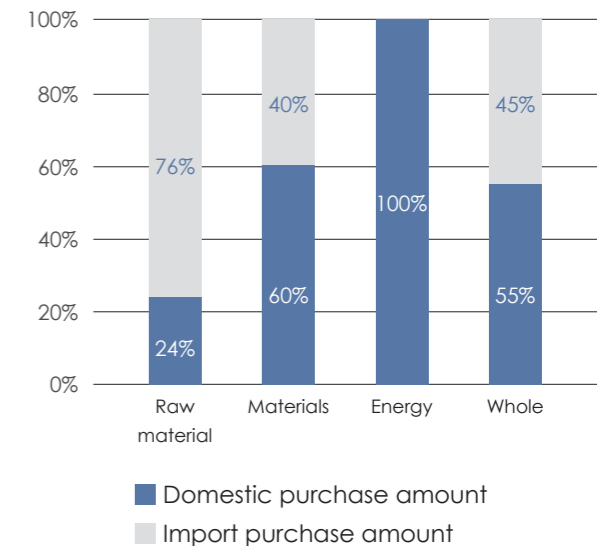
Since 2018, an open procurement tender information has been published on the official website of TGI. Besides, TGI implements a fair, just and transparent procurement policy to supply our factories with materials with acceptable quality, reasonable prices, and such materials are also low polluting, do not contribute to public hazards and compromise the supply chain's safety. Every quarter TGI evaluates the prices, delivery punctuality, and quality of suppliers that might affect our product quality for the reference of future procurements.

As TGI is the supplier of glass processing products companies, it is also part of its supply chain. Therefore, TGI evaluates and manages suppliers' environmental management, labor affairs, human rights assessment, social impact, and product liability impacts. The supplier is required to issue a statement prohibiting the employment of child labor, promising not to employ child labor and complying with its relevant regulations.

The supplier is one of the most important partners for the sustainable management of TGI. TGI is committed to enhancing the overall level of the supply chain in line with international standards. We hope to cooperate with suppliers to create a win-win situation and to enhance the sustainable development of society together.

In 2018, TGI worked with a total of 1,941 suppliers in Taiwan and 255 suppliers from overseas. TGI mainly works with local suppliers in Taiwan. Currently, the limestone and dolomite used in the factories come from Hualien. Other major materials (silica sand, sodium carbonate, and kaolinite) are imported since Taiwan does not have mines for such minerals. With the exception of premium diesel (from Formosa Petro), TGI purchases fuel oil, natural gas and LPG from CPC Corporation. Electricity is 100% supplied by Taiwan Power Company. This can create job opportunities, boost regional economic

Raw Materials Procurement Ratio(%)



developments, conserve energy consumption in transportations and enhance the suppliers' quality, green awareness and skills.

Suppliers / Sub-contractors Qualified Job Evaluation and Audit

Each quarter, Taiwan Glass uses 1-PO-B05-08 (supplier evaluation form) to evaluate the prices, punctualities, and qualities of suppliers that might affect our product quality. The result serves as a reference for future procurements.

For supplier evaluations, our procurement units evaluate the suppliers' prices; material units evaluate the suppliers' punctuality and the quality assurance units evaluate the suppliers' product quality. The evaluation results are recorded for reference for future procurements.

Our procurement staff uses the evaluation results above to calculate and produce run charts every quarter. They analyze and compare the data every 6 months and conduct in-depth analysis once a problematic trend is discovered in order to solve the problems or confirm the feasibility or effectiveness of our procurement system. TGI evaluates its suppliers each quarter to make sure that our suppliers meet our requirements and maintain a long-term and quality cooperation with quality suppliers. In 2018, there is no C-class manufacturer, which meets TGI's requirements. Manufacturers are required to provide high-quality material only and do so punctually.



In 2018, the overall performance of suppliers was good, with about 97% of A-level and 3% of B-level.

We categorize our suppliers as A, B and C classes.

A	Continue cooperation	≥ 90 points
B	Acceptable	70 - 89 points
C	Teerminate	≤ 69points

2018 TGI Suppliers Assessment									
Number of Suppliers Evaluated Every Quarter					Supplier Assessment				
	1Q	2Q	3Q	4Q		1Q	2Q	3Q	4Q
Level A	160	161	148	152	Level A	96%	99%	96%	96.8%
Level B	6	2	6	5	Level B	4%	1%	4%	3.2%
Level C	0	0	0	0	Level C	0%	0%	0%	0.0%
Total	166	163	154	157					

Evaluation Details

Evaluation Schedule

- Annual evaluations are conducted at the end of every December and are completed by the 20th of the following month.
- Quarterly evaluations are conducted every March, June, September and December and completed before the 15th of the following months.

Quality assurance units (and the units that actually use the materials) are responsible for evaluating quality items; units that submit purchase requisitions or the material units are responsible for evaluating the delivery; procurement units are responsible for evaluating prices and calculating the total numbers in the surveys.

Supply Chain CSR Management

In addition to the management of existing suppliers, TGI also extends the concept of sustainable development to the supply chain. We introduced the "Supply Chain CSR Management Evaluation" in 2015, assessing the environmental impact, labor conditions, human rights, social impact and product liabilities of part of the new suppliers and current suppliers. The evaluation aims to encourage our suppliers to improve their methods and fulfill their corporate social responsibility voluntarily.

CSR Evaluation Analysis

TGI evaluated the suppliers' corporate social responsibility, analyzed the overall scores from all aspects, and implemented questionnaires in the form of information disclosure as a basis for the evaluation of our suppliers' CSR results. Questionnaires were collected from 16 suppliers. The results indicated 69% of the suppliers as excellent, qualified suppliers were about 31% and 0% of the suppliers needed to improve.

From the results, the control of the environment and human rights-oriented should be stressed further. In the future, TGI will review the score and analysis methods and continue tracking the progress of improvement. The analysis results are as follows:

Aspect ratios of suppliers (%)				Aspect scores for information disclosure of suppliers	
Aspect	Score (%)	Opportunity for Improvement (%)	Total Score (%)		
Environment (EN)	78.47	21.53	100	Environment (EN)	
Labour (LA)	87.20	12.80	100	Labour (LA)	
Human Rights (HR)	90.10	9.90	100	Human Rights (HR)	
Social aspect (SO)	95.83	4.17	100	Social aspect (SO)	
Product (PR)	92.08	7.92	100	Product (PR)	

Score analysis for the 16 suppliers Analysis				Analysis of supplier evaluation result	
Classification	Score	Number of suppliers	Percentage		
Gold (good)	105 ~ 85	11	68.75%	<p>Bronze 0%</p> <p>Silver 31.25%</p> <p>Gold 68.75%</p> <ul style="list-style-type: none"> Gold (good) 105 - 85 Silver (qualified) 84 - 60 Bronze (to be improved) ≤ 60 	
Silver (qualified)	84 ~ 60	5	31.25%		
Bronze (to be improved)	< 60	0	0%		
total		16	100		

TGI is also the supplier of glass processing products of international brands. The code of conducts of supply chain from customers are included in key management issue. For example, Flat Glass produced by Taichung Factory was sold to Taiwan Mirror Glass Enterprise LTD, the dealer taking orders of IKEA, in 2016. TGI issued a statement of prohibition for child labor in response to the request of human right from IKEA and we were committed to not employing child labor and complying with relevant regulations.



Guideline for suppliers protecting labors under 18 and supporting their employment (IWAY)



TGI complies with IWAY

Environmental Sub-contractor Qualifications and Evaluations

Every year TGI uses I-PO-B05-12 (environmental subcontractor evaluation form) to evaluate these subcontractors. During the evaluation cycles, if a subcontractor commits a severe violation of any environmental, labor safety and health regulations, it will be reported to the chairman or president and the said contractor will be disqualified as a TGI contractor. Based on TGI's requirements, subcontractors should have necessary licenses/certifications or receive training in order to have smooth cooperation with TGI.

During the initial contract signing, the factory affairs representatives from all factories will head to the environmental subcontractors' facilities to understand how they operate and their working environments. The representatives will verify their licenses and ensure that the waste collecting and disposal process is intact and sign the 3-way contract afterward.



Environmental sub-contractor evaluation form



CH.4 Environmental Protection

- 4.1 Sustainable Environment Strategy
- 4.2 Sustainable Resource Management
- 4.3 Green Production & Innovation



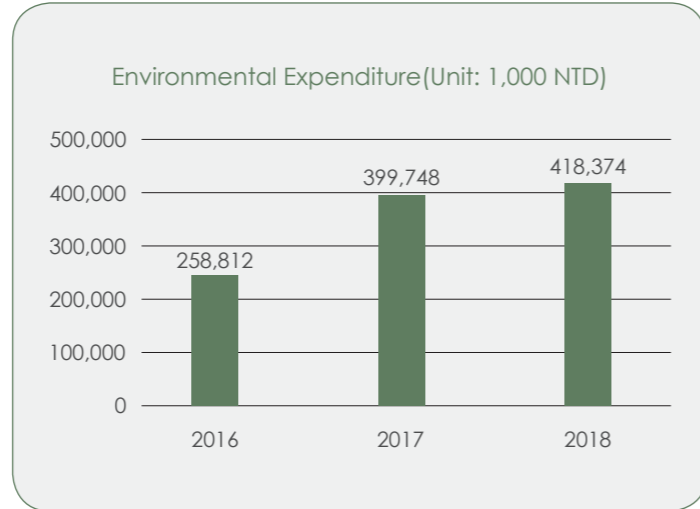
TGI is aware of the importance of environmental protection and the sustainable development. We encourage the implementation of energy and water saving strategy across TGI factories every year. Also, in order to reach the environmental symbiotic and the sustainability principle, we manage the sustainable resource through good management modes.

Achievements of Green Production in 2018



//4.1 Sustainable Environment Strategy//

In 2018, TGI invested more than 410 million NTD in environmental protection expenditures, which is more growth than the past 30%, showing the company's concern for environmental protection. We continue to invest in equipment at various plants or head offices to improve energy or reduce pollution. We also invest in environmentally relevant management systems and conduct environmental education and training for relevant personnel to achieve compliance with environmental regulations, environmental pollution and sustainable environmental management.



Climate Change Policy

TGI tries to understand the environmental ethics and has a sense of responsibility for climate change. It adopts policies of positive development and actively participates in carbon reduction programs as a response to climate change. TGI's Factories (Taoyuan, Hsinchu, Taichung, Lukang, Lukang flat glass, and Changpin Factories) are located in industrial zones and conform to the environmental impact assessment for industrial areas instead of being located in any ecological conservation zones or protected habitats. In terms of biodiversity, the company's activities, products, and services have no significant impact on conservation areas or other areas important to biodiversity. Since the factories opened there have never been any petitions about their effect on the ecology.



Energy-saving products

We continue to develop and manufacture Low-E glass and vacuum insulated glass. And the use of materials in the process of product packaging, shipping and recycling can be minimized, such as the use of product labels and pallets.





Recycle crushed glass

The use of crushed glass theory for the heat of fusion only requires about 50% of raw materials, which can effectively save energy and reduce the GHG emissions.



Energy conservation and carbon reduction

TGI constantly takes inventory of greenhouse gas emissions at all factories to understand the actual situation and take measures to reduce emission accordingly. By continuing reducing our energy consumption in manufacturing, we are able to lower our energy consumption intensity. Taoyuan, Hsinchu and Taichung Factory continue to verify the energy management system and set carbon reduction targets every year to improve energy efficiency. Other factories have also proposed several advanced measures to ensure TGI's sustainable development goals.



Response to water shortage

All factories have implemented water conservation projects.



Green procurement

Taiwan Glass conducts priority procurement of energy-saving products.



The 2018 Environmental Input and Output Diagram of TAIWAN GLASS



Compliance with Environmental Regulations

TGI believes in honesty and hard work and always complies with governmental regulations. Under the "environmental protection and occupational safety first" principle, TGI pursues the objective of "zero pollution and occupational hazards" by complying with the government's environmental protection policies while ensuring occupational safety to fully fulfill the company's corporate social responsibilities. In 2018, the number of violations of various factories and districts dropped significantly compared with 2017, and they all improved immediately. There are no major leakage and environmental impact appeal cases. The environmental compliance status of each factory area is as follows:

Factory	Violations	Fine (NTD)	Improvements
Taoyuan	Taoyuan City Environmental Protection Bureau inspected the factory on June 7th, 2018. It was found that the pressure drop of the bag dust collector (A005) was 130mmH ₂ O, which was inconsistent with the operation permit.	100,000	<ul style="list-style-type: none"> Change the filter bag material and adjust the pressure and action time of the filter bag Pluse Air. Taoyuan City Environmental Protection Bureau completed the review at August 8th, 2018.
Hsinchu	The Hsinchu City Environmental Protection Bureau conducted an audit on September 26th, 2018 to the general garbage storage area in the factory, and found that the garbage classification was not confirmed and was fined according to law.	1,200	<ul style="list-style-type: none"> Strengthen the classification of garbage for each unit, and irregularly check the classification of garbage produced by each unit.



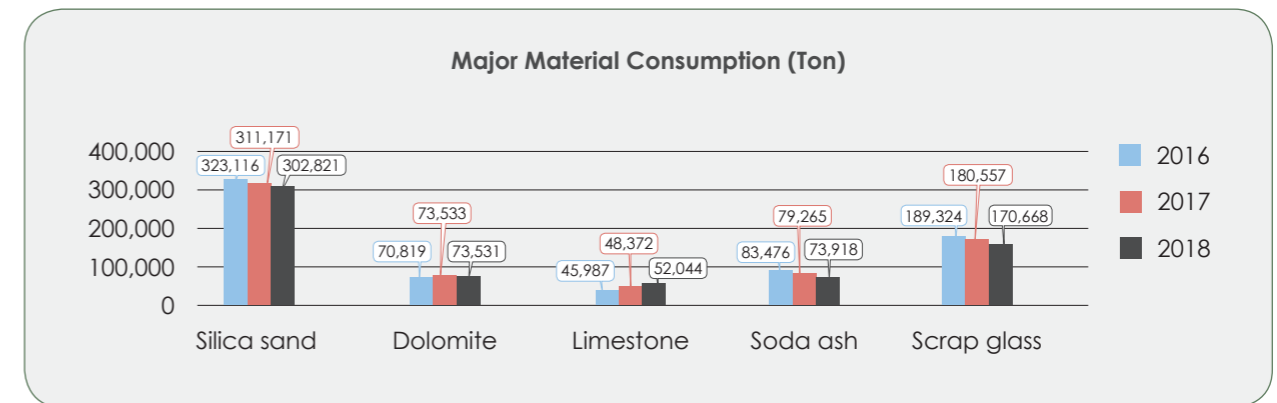
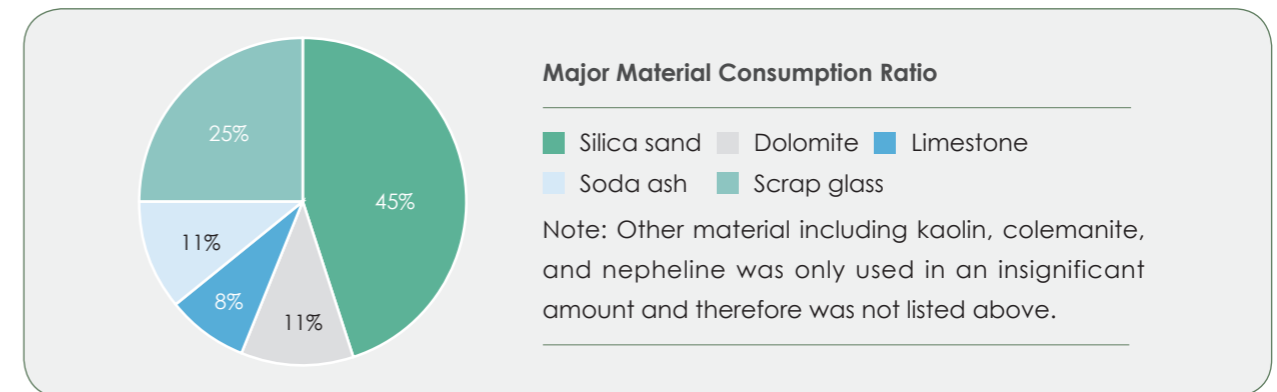
//4.2 Sustainable Resource Management//



//Sustainable Resource Management Policy//	
Importance	Global resources production is declining. On the demand side, it has grown year by year. By increasing the efficiency of the energy resources using, TGI has actively reduced the percentage of energy costs, reduced greenhouse gas emissions, and promoted energy-saving green production to achieve sustainable and environmental friendly goals.
Policy and Commitment	We continue to promote energy-saving and carbon reduction actions and strive to improve the efficiency of energy using in glass production. Through energy-saving measures, TGI reduced the impact of operating costs on the environment.
Action Method	<ul style="list-style-type: none"> ■ The Taoyuan Factory promoted energy-saving and carbon reduction projects such as the addition of sludge dewatering machine, D1 exhaust fan control energy saving and other improvement programs. ■ The Hsinchu Factory completed the 70% rainwater and sewage diversion device; increase the water storage tank (add 2 pools) to recycle the production water. ■ The Taichung Factory strictly demand waste sorting, recycled waste glass raw materials, and increased recycle-materials input. ■ The Lukang Factory : <ol style="list-style-type: none"> ① Pallet recycling ② Continue to increase the efficiency of recycled water, and start sludge recovery in 2018 ③ Promote "Green factory clean production certification" ④ Adding waste gas system improvement equipment, costing about 0.6 billion NTD ⑤ A course in Industry 4.0 has begun in October 2018 ■ The Lukang flat glass Factory cost about 100 million NTD to upgrade the exhaust system, for reusing or recycling dust collection ash. ■ The Changpin Factory improved energy conservation for cutting and cutting machines, reviewing the recycling water system and water saving measures every year.
Goals and Targets	<ul style="list-style-type: none"> ■ The Taoyuan Factory reduced CO₂ emissions by 957 tons. ■ As a legal person and natural person of a contract capacity of more than 800 kilowatts, the Taichung Factory has, according to the Article 9 of Energy Administration Act, established the objectives of conserving 1% of electricity. ■ The Lukang flat glass Factory : Air pollutants NO_x 300ppm ->180ppm ; SO_x 100ppm ->60ppm; Particle 50->25 mg/m³; The cullet recovery ratio target is more than 10%.
Objective Evaluation	<ul style="list-style-type: none"> ■ The Taoyuan Factory reduced 987 tons of CO₂ emissions, achieving success rate of 103%. ■ The Taichung Factory has increased the use of kiln furnaces, making it difficult to meet the goal of saving electricity. However, Taichung Factory has proposed improvement plans in all aspects, saving 371,059 kWh of electricity and reducing CO₂ emissions by 205.6 tons. ■ The Lukang flat glass Factory: The proportion of recycled cullet used is about 15% on average, reaching the target.

Raw Material Management

TGI's main products include flat glass, fiberglass, and glassware. The major materials used in production include silica sand, limestone, dolomite, soda ash and recycled scrap glass (cullet). In 2018, TGI used approximately 302,800 tons of silica sand, more than any other material. The consumption of these materials is listed below:



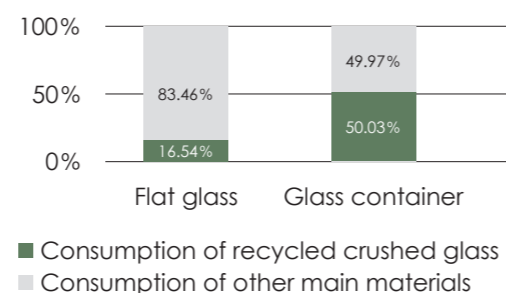
Recycle of Scrap Glass

A glass is highly recyclable. Thanks to this feature, in the future government and the society certainly will support the use of glass as packing material due to environmental concerns. TGI's flat glass factories use recycled scrap glass in production.

TGI's container factory recycles its blemished and scraped products, which reduces the consumption of ore and the environmental impact. Recycle yards recycle scraped glass products and ship them to the Hsinchu Factory. These recycled products will be selected, washed, smashed and screened before being used as raw materials for production. Recycling reduces waste and consumption of ore, which benefits the environment. A scraped glass is not considered as waste in the glass industry. Instead, it is the material needed for production. Glass containers are the type of product most consumers are familiar with and the most demanded product in the glass industry. Therefore adding scraped glass into the molten glass is both beneficial environmentally and economically. In addition to recycling scrap glass, TGI also recycles all the reusable packaging material in the production process; Not only does this reduces cost, it also reduces our environmental impact and fulfills our corporate social responsibilities.

Year/Product	Flat glass	Glass container
2016	19.10%	50.47%
2017	18.54%	49.28%
2018	16.54%	50.03%

Scraped Glass Consumption Ratio in 2018

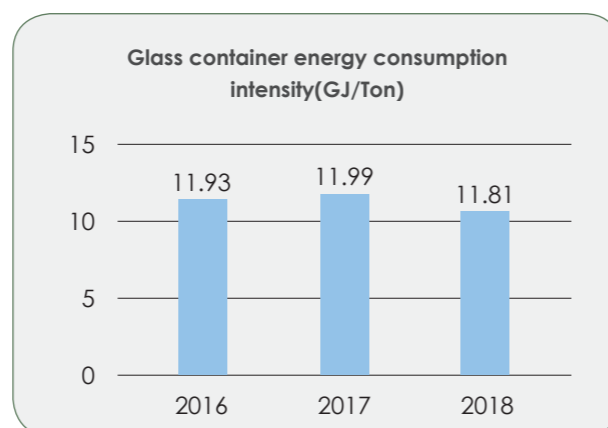
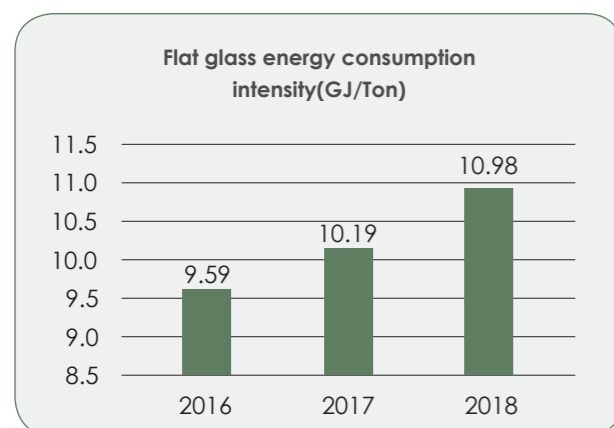


Energy Management

Each TGI's factory improves its energy efficiency in the production of glass, through a furnace heat storage exchange chamber and the best available control technology, with energy-saving kiln oxyfuel specific measures to reduce the operating costs in terms of environmental impact. Various types of energy consumptions are as follows:

Various energy consumptions (by year)						
Year/ Energy		Heavy crude oil (KL)	Diesel(Liter)	Natural gas (M ³)	Liquefied petroleum gas (KG)	Electricity (kWh)
2016	Total	107,245	725,273	31,556,070	53,539	503,850,691
	Calorific value (GJ)	4,309,710	25,520	1,056,750	2,704	1,813,842
2017	Total	105,765	924,907	36,602,945	58,943	539,830,818
	Calorific value (GJ)	4,250,229	32,522	1,225,759	2,977	1,943,369
2018	Total	104,191	746,901	42,313,241	50,997	566,014,106
	Calorific value (GJ)	4,186,968	26,263	1,416,986	2,575	2,037,628

Greenhouse Gas Management



Greenhouse Gas Assessment Policy

Every member of TGI is contributing to energy conservation, carbon reduction, and greenhouse gas emission reduction. We also promote the awareness of green production and trace the carbon emission amounts regularly.

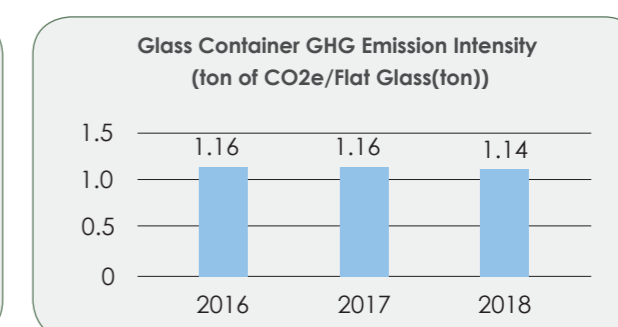
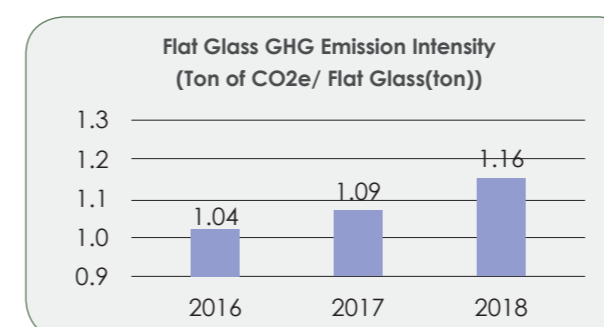
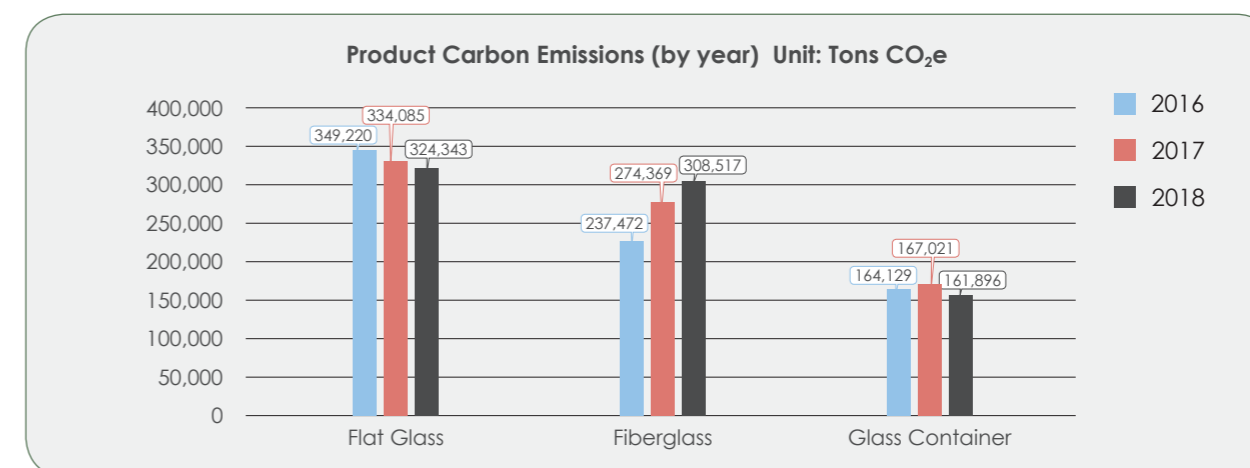
TGI's greenhouse gas emissions can be divided into two categories: direct and indirect. The direct category includes the energy (such as heavy crude oil, diesel, and natural gas) used during production. The indirect category mainly consists of the electricity purchased from external sources. TGI's direct carbon emission was approximately 500 thousand tons of CO₂e in 2018, 1.11% higher than 2017.

Product Carbon Emissions (by year)

Unit: Ton CO₂e

Product/ Year	2016		2017		2018	
	Direct emission	Indirect emission	Direct emission	Indirect emission	Direct emission	Indirect emission
Flat Glass	270,231	78,989	258,466	75,619	250,686	73,657
Fiberglass	103,279	134,193	116,730	157,639	132,188	176,329
Glass Container	111,278	52,851	114,708	52,313	112,460	49,436
Subtotal	484,788	266,033	489,904	285,571	495,334	299,422
Total	750,821		775,475		794,756	


(Please note that this report does not include the scope 3 or fugitive emission sources and only lists major emission sources.)



Energy Conservation and Carbon Reduction Commitment from TGI Factories


TGI continued to promote energy conservation and take action on carbon reduction. Since 2014, Taoyuan, Taichung and Hsinchu Factory have been certified the ISO 50001 (energy management system), and continue to obtain certificates. By establishing energy management principles and methods, it will allow TGI to optimize its energy efficiency while staying in line with the company's strategies and objectives. On top of this, the Plan Do-Check-Action mechanism can continue improving the way TGI uses energy.

Energy Conservation and Carbon Reduction Commitment from TGI Factories




Taoyuan Factory

To achieve reduction of indirect energy consumption through the (ISO 14001, ISO 50001) environmental management system management program. Every year it implements energy-saving measures, mainly including lighting energy consumption reduction, production process improvement, and equipment depreciation or compressor performance adjustment. Execute energy management in the factory. Also, we regularly entrust SGS to verify ISO 14064 every year, to voluntarily comply with the government's greenhouse gas reduction policy. In 2018, the furnace had a cold-repair work to provide melting heat in Oxyfuel combustion mode for improving energy efficiency.



Hsinchu Factory

TGI continued to join in "MOEA's Voluntary GHG Reduction Program". We promote energy conservation and carbon reduction, encourage all employees to participate in energy conservation activities, and pool employee awareness of energy conservation. Each year, we report the implementation plan for energy-saving measures and accelerates the updating of efficient energy-saving equipment to the "Bureau of Energy, Ministry of Economic Affairs". We also commission SGS to verify the ISO 14064 greenhouse gas audit statement on an annual basis. We continued to pass the ISO 50001 certification; through the check of the energy management system, it comprehensively inspects energy use, regularly monitors the effectiveness of energy-consuming equipment and continuously improves energy performance.




Taichung Factory

As a legal person and natural person of a contract capacity of more than 800 kilowatts, the factory has, according to the Article 9 of Energy Administration Act, established the objectives of conserving 1% of electricity. In 2018, through the use of F.P.B power adjustment and factory LED bulb replacement, the Taichung Factory conserved electricity by 287,000 kWh and reduced carbon dioxide emissions by 205.6 tons. In addition, the electricity demand was also reviewed, and the contract capacity was reduced by 200 KW, the annual electricity bill is expected to save about 438,000 NTD.



Lukang Factory and Lukang Flat Glass Factory

Lukang Factory and Lukang Flat Glass Factory continued to join in the Industrial Development Bureau's Greenhouse Gas Emission Voluntary Reduction Program. Each year, through the environmental management system, being verified the ISO 14064, and starting the "clean production assessment and certification operation of the Green Factory Program of the Industrial Bureau in 2018, the factory proposes its energy conservation plan to become friendly to the environment, fulfill its corporate social responsibilities and achieve sustainable development.



Changpin Factory

We are aware of the importance and urgency of the global climate change anomaly. Therefore, it is actively improving equipment and adjusting production models, and developing green energy industry to create a sustainable low-carbon society. In 2018, we adjusted the running time of various equipment, reviewed and compared energy consumption, and defined the best use mode, saving about 336,000 kWh a year.

TGI reduced its carbon emission by a total of 5518.7 tons in 2018. The energy conservation and carbon reduction measures and results for all TGI's factories are listed below:

tem Factory	Energy conservation measures	Energy conserved	Amount conserved	CO ² reduced (ton)
Taoyuan Factory	Add sludge dewatering machine	sludge (tons)	2,025	1,526.9
	D1 exhaust fan control energy saving	Electricity (kWh)	37,745	20.91
Hsinchu Factory	Replaced TS-10 IS Mold Cooling Fan 150HP with IE3 inverter motors and inverter controls	Electricity (kWh)	130,284	72.2
	TS-7 Manufacturing Man Blower Updated	Electricity (kWh)	145,109	80.4
	Replaced TS-7 EP ID FAN 125HP with IE3 motor frequency converter	Electricity (kWh)	165,550	91.7
	TS-7 EP Insulator Protection System changed to temperature control and adjusts the air intake position	Electricity (kWh)	124,392	68.9
	TS-7 IS Mold Cooling Fan 215HP replaced with IE3 inverter motors and inverter controls	Electricity (kWh)	919,537	509.4
	TS-9 Miscellaneous reciprocating compressor updated and changed the high efficiency variable frequency spiral compressor	Electricity (kWh)	266,676	147.7
	TS-7 Kiln Heavy Oil Burner Updated	Heavy Oil (KL)	525.6	1,640.0
	TS-6 #2 F/H combustion system improvement	LNG (M ³)	277,400	522.0

tem Factory	Energy conservation measures	Energy conserved	Amount conserved	CO ² reduced (ton)
Taichung Factory	Tungsten light bulb replaced with LED bulb	Electricity (kWh)	474.4	262.8
	With the production conditions, the power of FP2 of F.P.B was reduced from 200kw to 160kw.	Electricity (kWh)	286,272	158.6
Lukang Factory	Reduce <T/W>HVACMD-3&MD-4 return air volume	Electricity (kWh)	263,382	139.1
	TW MD-1.2 RETURN FAN air volume reduction and energy saving improvement	Electricity (kWh)	190,728	100.7
Changpin Factory	Air conditioning equipment for glue production line is closed when not in production	Electricity (kWh)	150,336	79.4
	Plated line EDI process water system is only enabled for production needs time	Electricity (kWh)	99,060	52.3
	Multilayer butyl melter closed on holidays	Electricity (kWh)	30,210	16.0
	Edging and drilling machine reduces daily usage time	Electricity (kWh)	56,311	29.7
Total of CO2 reduction across all factories (tons) :				5,518.7

Water Resources Reduction Management

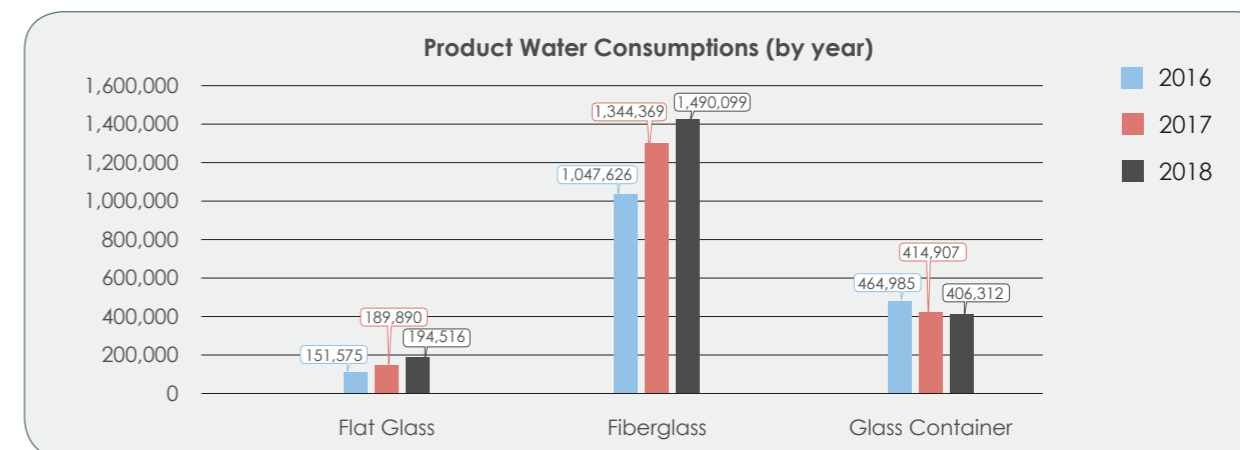


Water Resources Management Policy

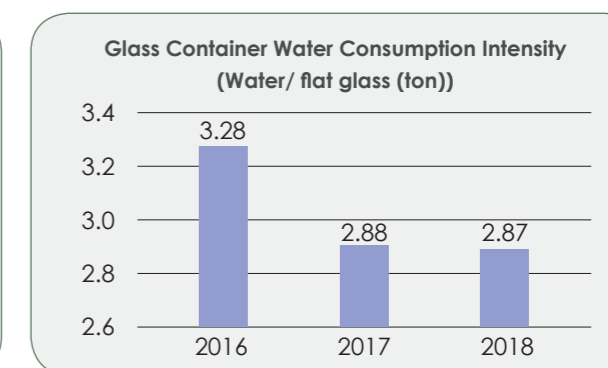
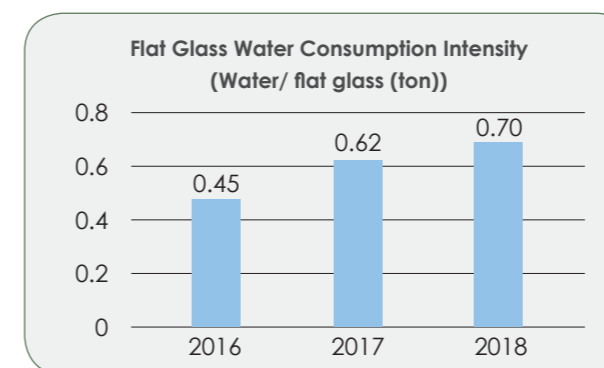
TGI improves water efficiency and conducts priority procurement of water-conserving equipment. We promote awareness of green production and reuse the water resources.

In the process of manufacturing glass, such as glass edging, anvil holes, drilling, etc., a large amount of water source must be used. We continue to improve water-saving technologies in various factories, evaluate feasible methods and apply them to reduce water consumption and achieve the spirit of sustainable water resources. The water used in each factory can be divided into business water, domestic water and recycled water (partially used in the exhaust system), and recycled water is used instead of tap water to reduce the amount of tap water. The water withdrawal from each factory in Taiwan has no significant impact on the local water source. The water intake is as shown in the right table.

Factory	Water Source
Taoyuan	Taiwan Water Corporation 2nd Branch
Hsinchu	Dongxing waterworks
Taichung	Water Management Area 4, 1st Branch
Lukang/ Lukang Flat Glass	Taiwan Water Corporation 11th Branch
Changpin	



In 2018, the water consumption of each plant in TGI was about 2.09 million tons. Since last year, some processes have been improved, and recycled water has been used as dilution water. As a result, the amount of water used has increased. In 2018, the water recovery system has gradually improved and the water consumption has gradually decreased. According to the product comparison, the water consumption of flat glass increased by 2.4% in 2018, and the glass fiber increased by 10.8%, which was significantly slower than that in 2017; the water consumption of glass containers decreased by about 2.07%.



Factory Water Reuse

With the frequent changes of climate and extreme weather, the proper use of water resources and the reuse of water are all issues that enterprises and manufacturing industries must face. Over the years, TGI has promoted water conservation measures in various factories, improved equipment efficiency, reduced water consumption per unit of product, and promoted changes in water use behavior to employees, saving water and spare no effort. For example, the rainwater and sewage diversion device completed



Rainwater and sewage diversion system in Hsinchu Factory

//4.3 Green Production & Innovation//

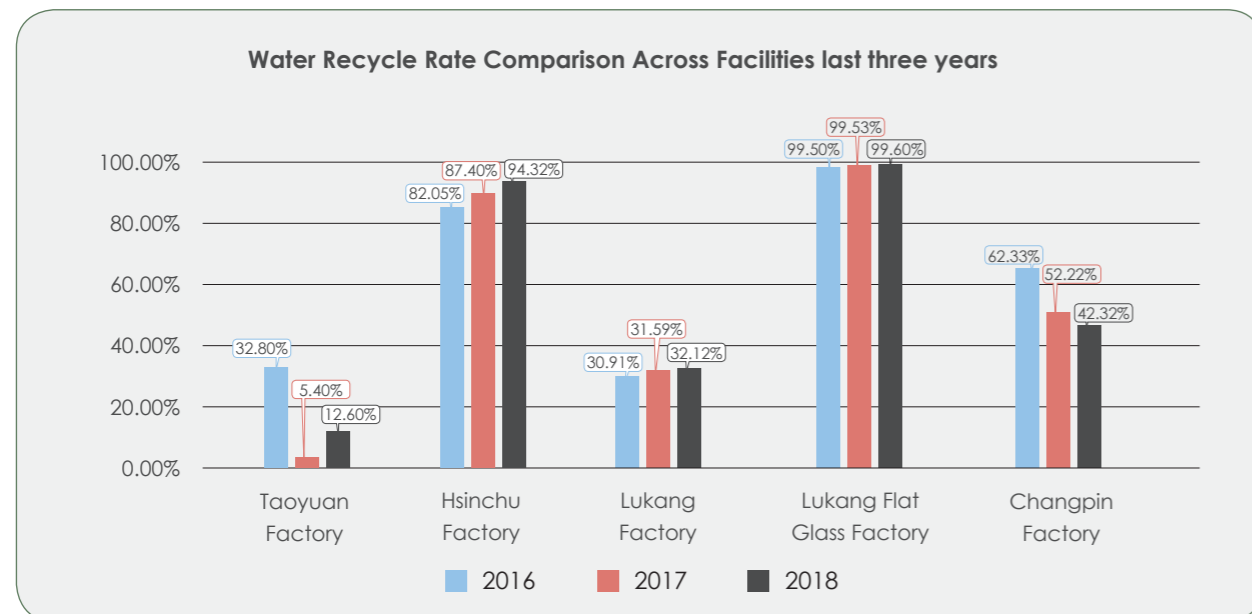
by the Hsinchu factory in 2018 can increase the water storage tank and recycle the production water. The Changpin Factory adds a concentrated water recycling bin to the plant to recover the concentrated water discharged from the plated pure water equipment, and then supplies it to the washing machine and other equipment to increase the usage rate of the tap water and effectively reduce the water production in the factory. 2018 The annual wastewater treatment capacity is 52,726 tons, which is a reduction of 16,442 tons of wastewater treatment.

The following table shows each TGI factory's amount of water recycled and recycling rate in 2018:

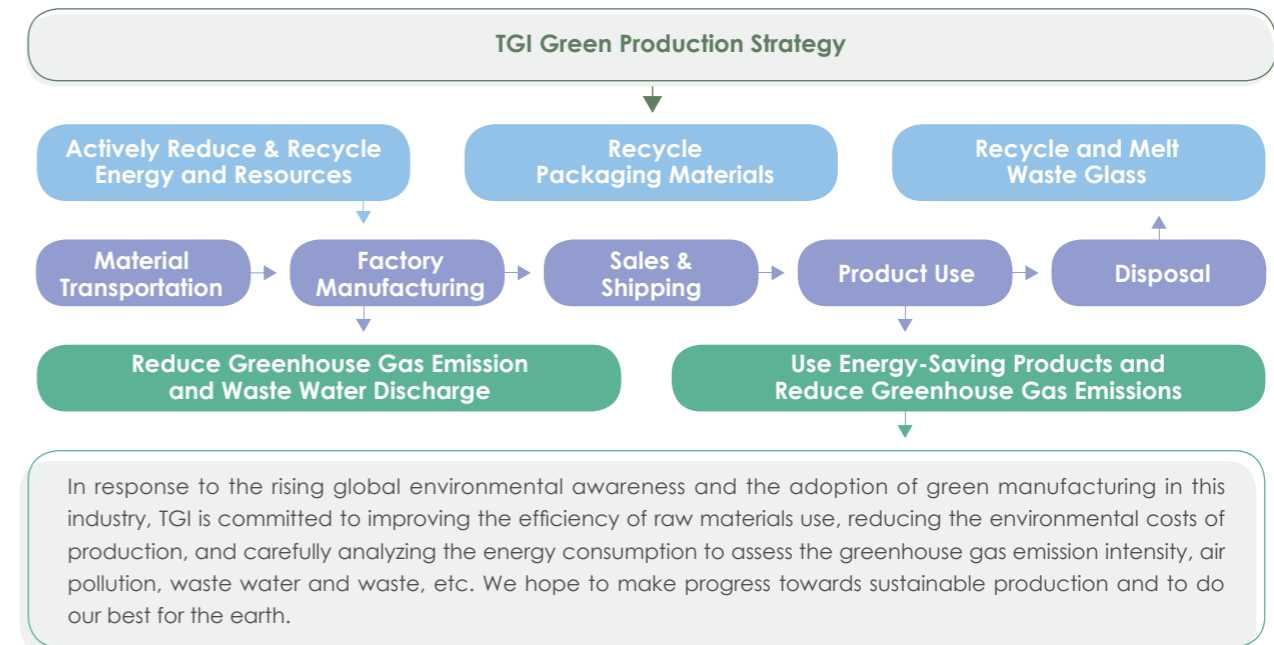
TGI 2018 Factory Recovery and Recycling of Water Resources					
Project / Factory	Taoyuan	Hsinchu	Lukang	Lukang Flat Glass	Changpin
Recycled Amount (M ³)	95,517	439,895	350,867	12,289,295	22,316
Recycle Rate (%)	12.60%	94.32%	32.12%	99.60%	42.32%

Notes :

1. Processing capacity: the amount of wastewater flowing to the recycling system.
2. Recycled Amount: the amount of water used after processed in the recycling system.
3. Recycle Rate: (Recycled amount ÷ processing capacity) × 100%.
4. The Taichung Factory does not have a flow meter and therefore unable to provide related numbers.



Green Production Strategy



Air Pollution Control

For air pollution prevention, TGI starts with reducing the pollutants in the exhaust. Our priority is to comply with EPA' emissions standards and reduce pollutants emitted every year. TGI follows the ISO 14001 management system and complies with air pollution prevention guidelines. We have departments in charge of periodically checking and maintaining our equipment. Should there be any control or emissions anomalies, these departments will respond by carrying out contingency plans. They will determine the cause of the anomalies and have them under control immediately to reduce the burden our manufacturing imposes on the environment.

In 2018, the emissions of NOx and SOx from various factories, decreased by 11% and 14% respectively compared with 2017; and VOCs and particulate matter were higher than that of 2017. The increase of particulate matter was because of the regulations have been amended by Environmental Protection Agency. Since 2018, the particulate matter air pollution fee has been levied, and in addition to the process, the amount of emissions from transportation, storage, and stacking activities has been included. Therefore, the emissions of particulate matter in factory plant have increased. We will also work to reduce the emission of such air pollutants.

TGI's factories will also work to reduce the generation of air pollutants and emissions. We reduce the use of heavy oil and diesel in the process, increase natural gas to reduce the emission of air pollutants. Many factories adopt rechargeable electric indoor stackers, in addition to reducing air pollution and fossil energy use, this implementation also ensure the health of employees in the factory.

In 2018, Lukang Flat Glass Factory spent more than 100 million to build new waste gas prevention equipment. Compared with 2017, it is estimated that the plant's NOx, SOx and VOCs will be reduced by 6%, 4% and 10% respectively. The new exhaust gas treatment equipment is highly efficient, and the resulting dust collection ash exceed the amount that can be put into the kiln for recycling, which will be processed by exterior manufacturers. In order to cope with the increase of particle cost in the new air pollution fee, TGI installed new dust-proof nets and other facilities, and it is estimated that the discharge of particulate matter can be greatly reduced in the future.

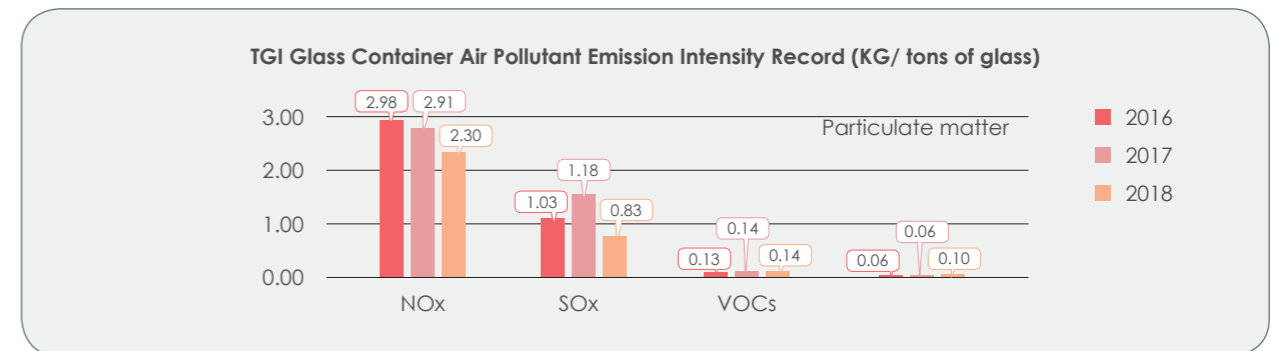
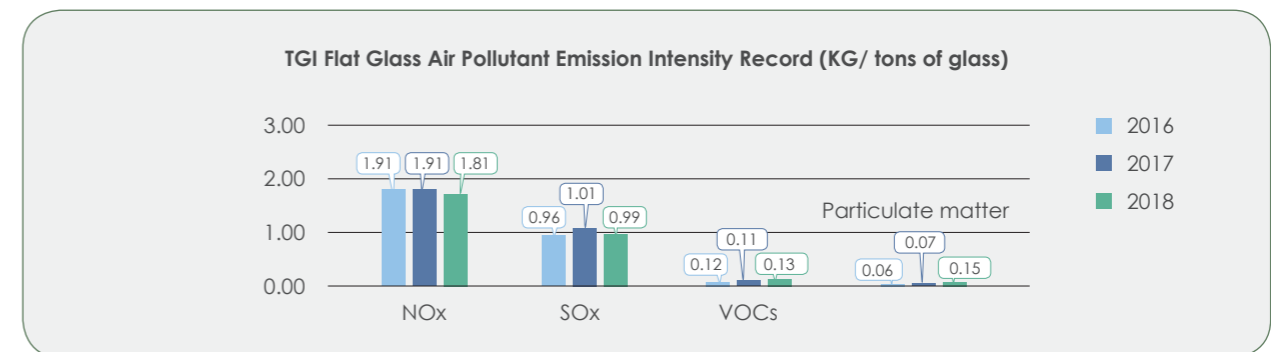
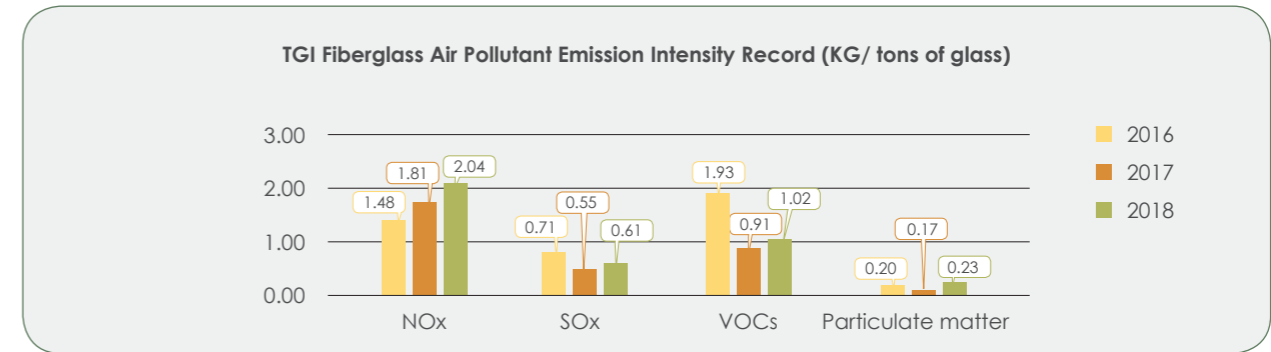


The new Exhaust gas prevention equipment in Lukang Flat Galss Factory

Units: kg

Total Air Pollutants Emissions for Each TGI Factory				
Air pollution evaluation item	Year	2016	2017	2018
NOx		1,162,249	1,122,783	997,334
SOx		515,915	514,037	442,759
VOCs		185,586	114,237	137,963
Particulate matter		41,712	41,466	73,321

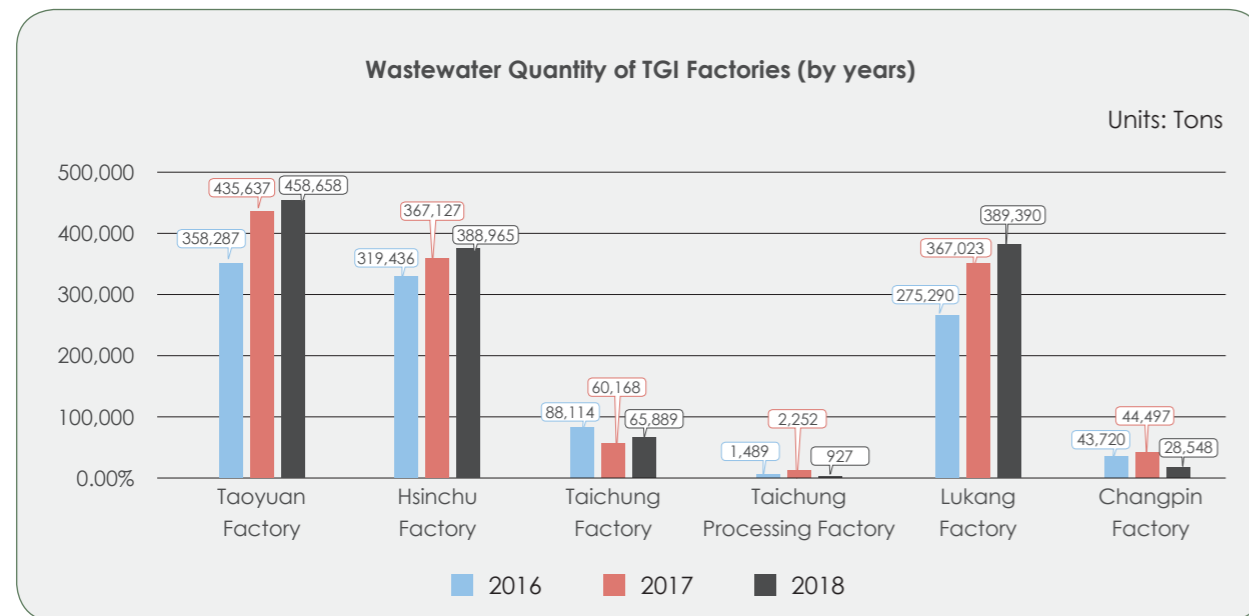
The emission intensity of air pollutants of each product is shown in the figure. In the future, we will also control all types of air pollutants more rigorously. We hope to reduce pollutant emissions while increasing production capacity, and make a contribution to the global environment and people's health.



Note: In order to compare the air pollutant emissions of different products more accurately, we change the individual emission intensity according to the product as the basis for calculation and comparison in 2018.

Water Pollution Management

TGI has continuously reduced the production waste going into wastewater during the years. All factories have wastewater treatment equipment to reduce the pollutants in the wastewater so that the wastewater can meet the local discharge quality standards. Graywater, after being treated by the treatment system, is in compliance with the legal standard to be discharged to the surface water body. Due to production process improvement, the recycled water was used for dilution causing TGI factories discharged a total of 1,332,377 tons of wastewater in 2018, 4.3% more than 2017; However, the increase in 2018 has been significantly lower than that in 2017, indicating that the improvement in the process has indeed achieved results.



Wastewater Discharge Destination and Legal Standards

Factory	Discharge Destination	Legal Standards
Taoyuan Factory	Guanyin Industrial Park Service Center	Guanyin Industrial Park Service Center Wastewater Discharge Limits Summary Table
Hsinchu Factory	Sanxinggoan Creek	Water Pollution Control Act
Taichung Factory (including the processing plant)	Guanlian Industrial Park sewage system	Taichung Harbor Special District Water Recycle Center Wastewater Discharge Standards
Lukang Factory (including Lukang Flat Glass Factory)	Changhua Coastal Park Service Center Wastewater Treatment Plant	Changhua Coastal Park Service Center Wastewater Treatment Standard
Changpin Factory	Changhua Coastal Park Service Center Wastewater Treatment Plant	Changhua Coastal Park Service Center Wastewater Treatment Standard

2018 Detected Discharged Water Value

Water pollution inspection item/factory	Taoyuan Factory	Hsinchu Factory	Taichung Factory	Taichung Processing Factory	Lukang Factory	Changpin Factory
COD (mg/L)	Detected Values	76	35.3	17	6.1	76.2
	Discharge Standards	560	<100	800	800	<640
SS (mg/L)	Detected Values	28	3.9	1.7	4	6.9
	Discharge Standards	480	<50	600	600	<400

Waste Management and Recycle

TGI first aims to reduce waste by improving the production yield rate. The waste from this factory mainly consists of waste glass fiber, sludge, garbage, waste pallets and unrolled glass filaments. The waste processing companies use physical treatment, thermal treatment, incineration, and recycling when dealing with waste.

Domestic waste and mixtures such as waste plastic, waste rubber, and waste glass, are non-recyclables waste. Certified cleaning companies are commissioned to collect and transport these waste to the incinerators and landfills of Environmental Protection Bureau of Local Government. Sludge from wastewater treatment is recycled by qualified cleaning companies. Recyclable waste including waste paper, scrap iron, and waste plastic, are recycled by certified recycling companies. TGI each factory will continue to ask all departments to sort and recycle the waste and reduce the total waste.

Taichung Factory commissions qualified cleaning companies to classify, collect and recycle its waste. Waste paper, waste metal, waste PVB films and empty waste oil containers are sold with marked price by the factory affairs section. In order to reduce wastes, Changpin Factory checks waste sorting from all departments. Departments that do not meet the standards will receive a warning and be asked to improve the waste sorting immediately.

Part of the process waste increases with capacity, such as waste glass fiber, mixtures, and so on. TGS each factory is actively investing in equipment or actions to improve waste reducing. In recent years, it has reduced a large amount of sludge, which is nearly half the weight compared with 2016, indicating the determination of TGI to save the earth.



TGI Waste Disposal Capacity (By Years)

Unit: Tons

Item	Year	Treatment	2016	2017	2018
Domestic Waste		Incineration	604.00	596.73	477.81
Waste Plastic		Reuse or Incineration	126.00	121.31	124.71
Waste Rubber Mixture		Reuse or Incineration	1.00	1.00	1.10
Waste Paper		Reuse or Incineration	690.00	660.58	625.20
Waste Fiber		Incineration	18.00	17.01	1.20
Waste Glass		Buried or physical treatment	1,893.00	2,298.62	3,134.69
Waste Fiberglass		Reuse	1,880.00	2,752.00	2,985.43
Waste Glass Mixture		Buried or physical treatment	360.00	397.30	573.20
Waste Wood		Reuse	143.00	199.09	189.00
Waste Fire Bricks		Reuse	0.00	0.00	0.00
Waste lubricants		Reuse	5.25	18.00	22.69
Human Waste		Biological treatment	87.00	85.89	43.75
Civil Engineering Waste		Reuse	0.00	0.00	0.00
Scrap Iron		Reuse	646.00	408.00	410.00

Item	Year	Treatment	2016	2017	2018
Waste Aluminum Caps		Reuse	420.00	464.00	514.00
Waste bricks		Reuse	51.00	65.55	182.06
Sludge (Inorganic/organic)		Heat or solidification Treatment	4,206.00	2,767.61	2,301.75
Waste insulation materials		Buried after physical treatment	4.00	4.37	0.00
Waste Silk		Reuse	2,229.00	6,864.00	1,861.39
waste Pallet		Reuse	60.00	103.00	128.11
Unwound Yarns		Reuse	9,783.00	13,517.00	17,822.33
Other corrosive mixtures		Incineration	4.00	1.81	5.27
Selenium and selenium compounded		Buried after solidification treatment	13.00	26.90	40.01
Waste Oil Mixture		Reuse	0	0	0

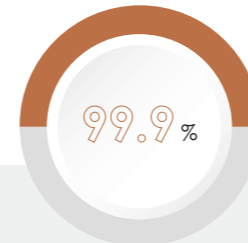


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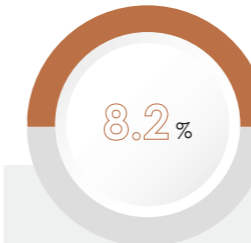
Friendly Workplace

- 5.1 Employee and Benefits
- 5.2 Employee Care and Cultivation
- 5.3 Safe Workplace

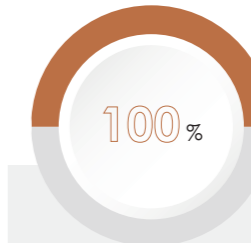
Achievements of Friendly Workplace in 2018



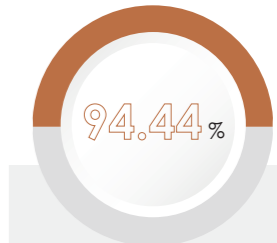
99.9% of top managers are Taiwanese, creating many job opportunities for the local community and taking care of the locals



In 2018, the turnover rate was 8.2%, which is the lowest in recent years, indicating the stability of employee retention



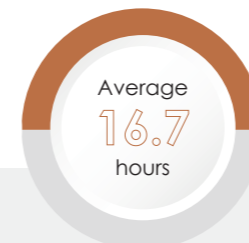
100% in compliance with the percentage of employees with disabilities stipulated in "People with Disabilities Rights Protection Act"



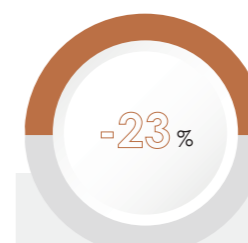
A total of 94.44% of employees returned after paternity/maternity leave without pay



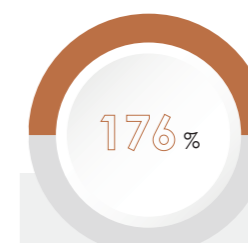
In 2018, 41 employees retired with an average of 27.6 years of service with the company, and were presented with medals from the chairman/president as a token of appreciation for their service over the years



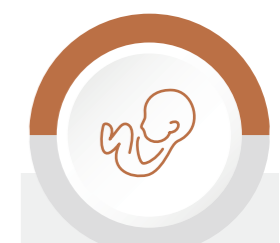
In 2018, full-time employees received an average of 16.7 hours of training; staff received an average of 15.2 hours; junior-level manager received an average of 19.8 hours; mid-level manager received an average of 17.2 hours; while senior manager received an average of 10.8 hours



The Disabling Frequency Rate (FR) in 2018 is 23% lower than that in 2017



The average salary is better than the statutory salary of 176%



The nursing room in TGI Taipei obtained the Taipei City's excellent nursing room certification

//5.1 Employee and Benefits//



//Employee Relationship Management Policy//	
Importance	To maintain the competitive advantage of Taiwan Glass, we have excellent employees who partner with us to advance and grow. "Colleagues are the most important assets of Taiwan Glass," is our never-changing philosophy, and also the goal of continuous efforts.
Policy and Commitment	<ul style="list-style-type: none"> ■ Transparent promotion and salary increase channels ■ Positive salary adjustment plan ■ Dual-track talent training development ■ Healthy staff turnover rate
Action Method	<ul style="list-style-type: none"> ■ Regularly assess the overall performance of staff for promotion and salary increase every quarter. ■ Regularly set an annual salary adjustment plan for the external economic environment and internal profitability. ■ Establish a Management Associate training program. Aggressive and potential outstanding colleagues can enter the reserve training system and obtain experiences, accumulate self-strength, and enhance self-career ability. ■ TGI believes that a healthy turnover rate can maintain excellent human resources. Therefore, we actively recruit new and outstanding employees, and at the same time, performance assessment is conducted every quarter to maintain the replacement mechanism.
Goals and Targets	<ul style="list-style-type: none"> ■ The annual turnover rate is maintained within 15%. ■ With the permission of the company's operations, the employee's entire salary adjustment assessment plan will be conducted every 2 years.
Objective Evaluation	<ul style="list-style-type: none"> ■ The turnover rate in 2018 was 8.2%, which was not only in line with the expected target, but also lower than that in last year.

TGI treats employees as the company's most valuable assets, therefore, we want to build the best working environment that helps our employees grow. We also believe in taking good care of our employees and have established various communication channels within the company. Multiple employee relation projects help build a workplace that allows our staff to enjoy working and enjoy living. Labor rights are also the company's top priority. In addition to compliance with various labor-related regulations, we implement humanized management. TGI has a comprehensive system in talent development and employee benefits, providing our staff with a fair and reasonable salary based on their position and personal experience. When determining an employee's salary, TGI reviews employee's education level, experience, expertise, skills, number of years of service in the industry and the average salary in the industry. We provide a starting salary that is higher than the legal minimum wage in the areas where TGI operates. Our compensations and benefits are also better than our competitors. Gender, race, religion, political affiliation, marital status or union/social association membership will not affect an employee's basic salary. All management systems and rules were formulated with compliance with Labor Standards Act and other regulations. Various levels of managers assist employees inside and outside the company, the overall labor relations are harmonious.

Human Resources Structure

By the end of 2018, TGI has a total of 4,737 employees, among which 1,392 managers were Taiwanese and only 1 was of foreign nationality. 99.9% of supervisors at TGI are local Taiwanese. This shows that TGI has created many job opportunities for local people. All the employees are hired workers, no dispatched employees, making a stable and healthy workforce. Our employees are located in various locations in northern, central and southern Taiwan. They are all either fixed-term or non-fixed-term contracted workers. The employee structure is listed below:



Employee Gender Structure

Year		2016		2017		2018	
Item	Category	Male	Female	Male	Female	Male	Female
Nationality	Taiwanese Employees	3,242	536	3,279	545	3,254	555
	Foreign Employees	536	50	734	126	785	143
	Sub-total	3,778	586	4,013	671	4,039	698
Total		4,364		4,684		4,737	

Employee Seniority Structure

Item	Category	Male		Female		Total	
		Number	Percentage (%)	Number	Percentage (%)	Number	Percentage (%)
Seniority	Under 5 years	1,659	35.02%	326	6.88%	1,985	41.90%
	6~15 years	1,326	27.99%	161	3.40%	1,487	31.39%
	16~25 years	753	15.90%	182	3.84%	935	19.74%
	25 years or above	301	6.35%	29	0.61%	330	6.97%
	Sub-total	4,039	85.26%	698	14.74%	4,737	100.00%

Salaried/Contract Employees

Item	Category	Male		Female		Total	
		Number	Percentage (%)	Number	Percentage (%)	Number	Percentage (%)
Type	Salaried Employees	3,193	83.83%	544	14.28%	3,737	98.11%
	Contract Employees	61	1.60%	11	0.29%	72	1.89%
	Total	3,254	85.43%	555	14.57%	3,809	100.00%

Note : Foreignemployees were not included.

Employee Age Structure

Item	Category	Male		Female		Total	
		Number	Percentage (%)	Number	Percentage (%)	Number	Percentage (%)
Age	Under 30	1,003	21.17%	235	4.96%	1,238	26.13%
	31~40	1,717	36.25%	273	5.76%	1,990	42.01%
	41~50	895	18.89%	158	3.34%	1,053	22.23%
	51 or older	424	8.95%	32	0.68%	456	9.63%
	Sub-total	4,039	85.26%	698	14.74%	4,737	100.00%

Employee Education Level Structure

Item	Category	Male		Female		Total	
		Number	Percentage (%)	Number	Percentage (%)	Number	Percentage (%)
Education	Master or higher	163	4.28%	11	0.29%	174	4.57%
	College	2,006	52.66%	361	9.48%	2,367	62.14%
	High school or below	1,085	28.49%	183	4.80%	1,268	33.29%
	Total	3,254	85.43%	555	14.57%	3,809	100.00%

Note : Foreignemployees were not included.

Management Structure

Nature of work	gender	total	Ratio	Total percentage
General staff	Male	2,840	59.95%	71.94%
	Female	568	11.99%	
Junior-level Manager	Male	1,100	23.22%	25.69%
	Female	117	2.47%	
Mid-level Managers	Male	83	1.75%	2.03%
	Female	13	0.27%	
Senior Managers	Male	16	0.34%	0.34%
	Female	0	0.00%	
Total		4,737	100%	

Recruitment and communication

TGI complies with the laws and regulations of Labor Standards Act to safeguard our employees' human rights and privacy and prohibit discrimination. Our recruitment process is fair, just and honest. All recruitment, employee selection, and employment comply with the government's rules and regulations. No employee is discriminated against (including compensation discrimination) based on his/her race, social status, language, thought, religion, political party, place of origin, birthplace, gender, sexual orientation, age, marital status, appearance, facial features, disability, or past membership in any labor union. TGI offers compensation better than other companies in the same industry. An employee's compensation is determined based on the education level, job responsibilities, position rank, experience and professional background. Candidates's outfit, demeanor, mental situation, reaction and logic during the interview will also be factored in.

In order to fulfill corporate social responsibility and safeguard the basic human rights of all colleagues, customers and stakeholders, TGI adheres to the 《UN Universal Declaration of Human Rights》, the 《UN Guiding Principles on Business and Human Rights》, the 《UN Global Compact》 and the 《UN International Labor Organization》. The principles enshrined in international human rights conventions respect internationally recognized fundamental human rights, including freedom of association, care for vulnerable groups, banned child labor, eliminate all forms of forced labor, eliminate employment and employment discrimination, and abide by the labor of the local regulations.

The company's human rights policy applies to all levels of units, with particular emphasis on the following human rights issues, and continuously promote and promote the quality of human rights:

- Multi-inclusive and equal opportunities
- Privacy protection
- Reasonable working hours
- Health and safety workplace
- Freedom of association
- Labor negotiation

Staff Turnover Rate and Resignation Rate

In 2018, 313 employees resigned from TGI with a turnover rate of 8.2%. In the last three years, we have had an annual turnover rate below 15%. The company pursues the most optimal rather than the lowest resignation rate. TGI hired 302 new employees with a recruitment rate of 7.9%. This practice will also boost local employment opportunities.

New recruits in 2018

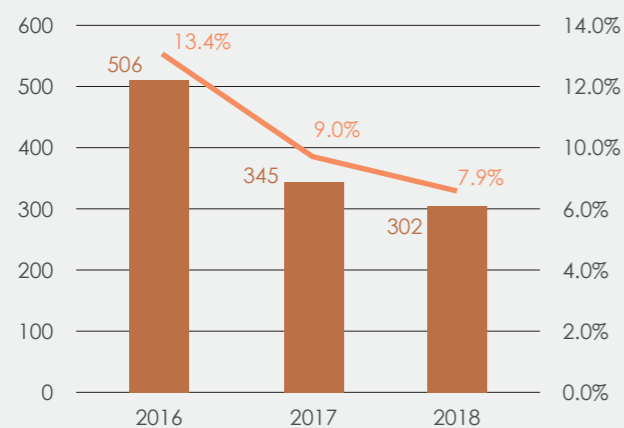
Area	New recruits	Gender		Age							
		Male	Female	Male				Female			
				Under 30	31~40	41~50	51 or older	Under 30	31~40	41~50	51 or older
North	209	176	33	91	68	14	3	17	12	3	1
Central	93	74	19	43	22	3	6	12	7	0	0
Total	302	250	52	134	90	17	9	29	19	3	1

Resignation in 2018

Area	Resignation	Gender		Age							
		Male	Female	Male				Female			
				Under 30	31~40	41~50	51 or older	Under 30	31~40	41~50	51 or older
North	181	150	31	55	68	17	10	9	13	6	3
Central	132	117	15	46	48	5	18	9	6	0	0
Total	313	267	46	101	116	22	28	18	19	6	3

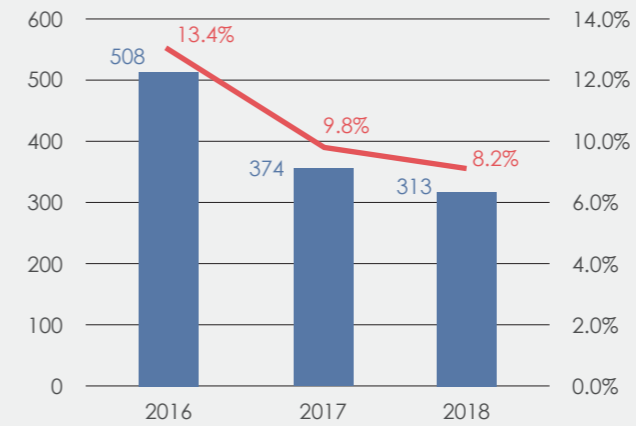
Note : 1. Does not include employees on leave without pay or transferred from other TGI factories.
2. North: The Headquarter, Taoyuan and Hsinchu Factory. Central: Taichung, Lukang, Lukang Flat Glass and Changpin Factory.

TGI Recruit rate(by year)



Recruit rate (%)= New recruits of the category/Total number of Taiwanese employees of the category by the end of the year (3,824)

TGI Resignation rate (by year)



Resignation rate (%)= Number of employees of the category that left TGI/Total number of Taiwanese employees of the category by the end of the year (3,824)

Because of the declining birthrate and the declining labor force in Taiwan, TGI had maintained the talent recruitment advantage by launching the courses of "Employer Brands and Talents" and "Selecting Talents and Interview Techniques" in 2018. The professional lecturers from the industry shared the current manpower market trends and corporate response methods, for contributing to the company's image in the job market and enhancing the employee welfare system; thereby strengthening recruitment and selection, and attracting more outstanding talents to join.



Employer Brands and Talents Recruitment Course



Selecting Talents and Interview Techniques Course

A Diverse and Friendly Working Environment

TGI friendly workplace column - Birthday Leave Welfare

Taiwan Glass has always been aiming at creating a workplace environment that is "efficient work and happy life" for its colleagues. To show our gratitude towards colleagues who work together with the company, each employee will get a birthday-leave starting from 2019. For TGI, "Healthy and Happy employees come with the sustainable development of TGI" is not just a slogan, but the goal of our continuous efforts to improve, and believe we will do better.



TGI friendly workplace column – Christmas Thank-you Event

The Taipei Head office held a thank-you event during the Christmas period. Through the card, colleagues expressed their gratitude for a whole year to colleagues. In addition to the exchange of friendship, they also spread the positive energy in the workplace and built a strong bond among employees.

Employee Benefits

Fair Performance Management System

We assess our employees based on their education level, experience, expertise, seniority, and performances. Gender, race, religion, political affiliation, marital status and membership in unions/social association will not affect our employee assessments. With the exception of foreign blue-collar workers and local workers still on probation, all TGI employees receive regular performance assessment mainly based on their job performances. Their work efficiency and sense of responsibility are the core evaluation criteria.

Each employee receives a different bonus based on the company's overall performance and his/her performance and contribution to the company. We pay great attention to employee compensation and benefits.

The male-to-female ratio of a basic salary of TGI in 2018 was 1:0.9, and the overall difference was less than 0.1. The analysis of this minor difference reflected the differences in job content and qualifications. TGI upholds equal pay for equal work and does not differ by gender. In addition, the personnel unit continuously tracked and analyzed the salaries of the general staff, which was better than the statutory salary of 176%. The average annual salary of non-executive full-time employees is 590 thousand NTD.



Union

To maintain an open communication channel between the company and the employees, TGI established labor union, which holds meetings with directors, supervisors, and members regularly. TGI's related personnel also attend such meetings to respond to all the suggestions for improvement proposed during the meetings. We held a collective bargaining agreement with the union in September 2018; Issues such as employee health and safety are also discussed during the meetings. The labor union holds a meeting every 3 months and member representative meetings every year. Representatives are selected with a majority vote. The union holds meetings regularly to discuss employee related affairs such as employee dining in the factories, group casualty insurance, travel and year-end banquet. There are also online suggestion box, bulletin board and phone number, which the employees can express their opinions. This allows the company to respond and deal with issues in a timely manner. Some factories do not have unions, a total of 1,412 employees are union members.



Representative Meeting



Employees' Suggestion Box and Bulletin Boards

2018 Union Participation		
Factory	Hsinchu	Taichung
Male	846	447
Female	86	33
Total	932	480
Ratio	97%	80%

Note:

- The number of employees in Hsinchu Factory does not include that of foreign workers, and all the employees are union members in Hsinchu Factory.
- The Lukang Factory union could not provide related information.
- No union was established in Taoyuan Factory, Lukang Flat Glass Factory, and Changpin Factory.

Benefit Committee

To provide adequate support to employees and ensure their living conditions, TGI provides or sponsors the promotion of relevant welfare programs in addition to providing basic protection according to the law and organizes the staff Benefit Committees to take charge (planning and implementing) of the benefit measures of all colleagues. The current welfare measures are as follows:

Employee Benefit and Welfare Measures	
Benefit Measures	<ul style="list-style-type: none"> ■ Company annual trip, gift-money for birthday, wedding, funeral, Autumn festival, Dragon Boat Festival and Chinese New Year and club activity subsidies.
Company Measures	<ul style="list-style-type: none"> ■ Factories have dormitories and cafeterias, providing affordable, safe and convenient room and boarding for our employees. ■ The headquarter and each factory have nursing rooms, and regularly perform environmental cleaning, monitor the temperature of the refrigerator, which allows mothers use the rooms with peace of mind to achieve a friendly maternal workplace environment.
Meal allowances	<ul style="list-style-type: none"> ■ Encourage employees to participate in company meal plans with 50% subsidy.
Excellent Insurance	<ul style="list-style-type: none"> ■ TGI provides our employees the best care and protection. In addition to labor insurance and health insurance regulated by the law, TGI has planned group insurance policy for employees' family to join at their own expenses to provide better protection and coverage.
Staff Health Management	<ul style="list-style-type: none"> ■ Regularly execute employee health inspections, covering general health checks, special health checks, and other items. ■ Follow up for employees with abnormal health check results. ■ Regular doctor/nurse stationed in site for health management.
Birthday Leave	<ul style="list-style-type: none"> ■ Have one-day birthday leave during the birthday month.

Employee Benefit and Welfare Measures	
Comprehensive Employee Care	<ul style="list-style-type: none"> ■ Shall any family member of our employees requires personal care by our employee due to mishaps, our employee can apply and take a 2-year leave without salary approved by the company. ■ Employee's family members can pay at their own expense to enjoy the same company group casualty insurance as TGI employees. ■ Employee family care consultation service (employee care program).
Retirement & Pension	<ul style="list-style-type: none"> ■ TGI has its own employee retirement program. We also provide comprehensive pension to families of our employees who suffer from injuries or even loss of life due to work.
Further Education and Training	<ul style="list-style-type: none"> ■ To encourage colleagues to continue learning, improve workplace competitiveness, and then develop career development, Taiwan Glass continued to promote the "Employee Charging Development Project", and successively hired professional lecturers to open free foreign language courses for employees. ■ To help our employees learn new techniques and business skills, TGI selects and sends our hard-working employees to other countries to observe and study, on an internship or receive training. The company also holds lectures, on-job training and collaborated with professional training institutions to help our staff grown and enhance their professional skills.
Scholarship for Employee's Children	<ul style="list-style-type: none"> ■ TGI awards scholarships to all employees' children every year, to encourage their academic excellence and stimulate their motivation to study.

The number of foreign employees across factories in Taiwan is quite large. Usually, various kinds of dinners and activities will be held according to holidays. The Taoyuan Factory held exclusive tours for foreign employees in 2018, the laborers who had left their home countries could enjoy the leisure time. These activities promote cultural exchanges, and increase recognition of TGI.



We encourage employees to form clubs, do exercise or relax after work. Such activities allow employees to cultivate friendships, enhance their mutual understanding, which helps forming the Company's centripetal force. Each factory has rich varieties of sports clubs, who participate in community-based or local governments tournaments.

2018 Social Group Activities in TGI



Hsinchu Factory union members participate in the labor sport games



Hsinchu Factory (top), Taichung Factory (bottom) badminton club members practice regularly, cultivate understanding and friendship.



Basketball club activities (Taichung factory basketball club)

Parental Leave

23 TGI employees took a parental leave during 2017-2018, Female employees accounted for 52.17% of the applicants, and male employees accounted for 47.83% of the applicants. 14 employees were reinstated in 2018, and the rate of reinstatement was 60.87%. TGI has always adheres to "work-life balance", applying for parental leave is not treated differently because of gender. In 2018, an average 58.33% of female workers and 63.64% of male workers were reinstated after a parental leave.

Reinstatement after Parental Leave (2018)	Male		Female		Total	
	Number	Percentage	Number	Percentage	Number	Percentage
A. Number of Workers Scheduled for Reinstatement (=B+C)	11	47.83%	12	52.17%	23	100.00%
B. Number of Reinstated Workers	7	30.43%	7	30.43%	14	60.87%
C. Number of Workers that Resigned after Parental Leave	4	17.39%	5	21.74%	9	39.13%
Reinstatement Rate (B/A) %	63.64%		58.33%		60.87%	

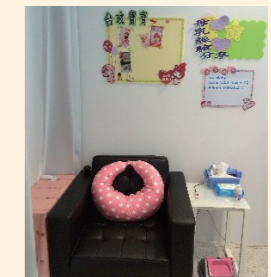
Between 2017 and 2018, 18 employees were reinstated after a parental leave in 2017. Among which 17 employees were reinstated for one year in 2018. The average retention rate was 94.44%, while the retention rate for female workers is 100.00% and 87.50% for male workers.

Reinstatement after Parental Leave (2017-2018)	Male		Female		Total	
	Number	Percentage	Number	Number	Percentage	Number
E. Number of Reinstated Workers after a Parental Leave in 2017	8	44.44%	10	55.56%	18	100.00%
F. Number of Reinstated Workers after a Parental Leave in 2017 with 2018 Marking One Year after their Reinstatement	7	38.89%	10	55.55%	17	94.44%
Retention Rate (F/E %)	87.50%		100.00%		94.44%	

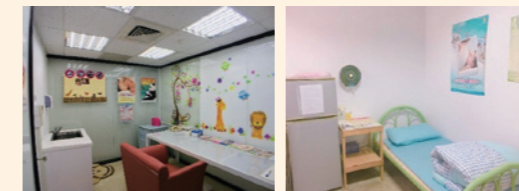
Mother-Friendly Workplace



The certification of Headquarter and The Hsinchu Factory



There are desk and TV in the nursing room of Taichung Factory



(Left) Headquarter (Right) Hsinchu Factory



There is a message board in the nursing room of the Changpin Factory, allowing female employees exchange experiences.

Mother-Friendly Workplace

For pregnant women and women within one year after giving birth, we conduct risk assessment of their work environment, categorize and manage their health conditions. Doctor visits are arranged to provide appropriate assessment and advice. We follow up regularly with mother employees and provide them with health education information based on their stages of pregnancy. Their workload/duties can be adjusted accordingly to ensure workplace safety. Pregnant employees at TGI have their dedicated parking spaces. Our facilities are also equipped with breastfeeding rooms where mother employees can pump during working hours, allowing them to take care of their family and job at the same time.

//5.2 Employee Care and Cultivation//

We attach great importance to the career planning and personal development of our employees, aiming to develop professional talents and expect to convey the mission, vision and core values of Taiwan Glass. Taiwan Glass has established a comprehensive training policy to provide new and incumbent personnel diversified training experience ranging from common courses to professional courses, and even to management knowledge. Every year TGI arranges courses according to organizational strategies and unit needs. Through systematic education and training, for example, standardization of workflow of staff employees, optimization of supervisory competence, and promotion of workplace safety and health education, and awareness to human rights, workplace safety and regulatory compliance; in addition, in order to respond to rapidly changing market demands, digital and information explosion generations, we cultivate optoelectronics, energy conservation, touch-responsive glass, to enhance the company's competitiveness and continuity of sustainable operation.

Education and Training System for TGI Employees

New employee orientation and education

- Common courses (including corporate culture, history, system regulations, etc.)
- Professional courses (including professional document reading, factory internship, etc.)

On-the-job education and training

- Annual education and training plan: All units and departments report the needs for the courses at the end of the year to determine the planning and schedules of the courses for the following year.
- Application for external training: Depending on the needs of each department, employees will be selected to participate in the external training to strengthen professional knowledge.

Diverse skill training

- Information security course, Fire safety course, First aid course, Language courses, Makeup course, and course that required by regulation or proposed by factories.

To encourage continuous learner, and enhance competitiveness, TGI promotes "Off-work Learning Plan", and offered Basic Japanese, Business English courses in 2018. Those who pass the course are awarded a certificate by the teacher. The company provides annual award certificates and bonuses to encourage employees.



Commercial English course in 2018



Make-up course in Taichung Factory

The breastfeeding rooms have warm and welcoming decoration. The soft colors can create relaxing and comfortable atmosphere. TGI has formulated and put in place a guideline on breastfeeding rooms. The rooms come with locking doors, comfortable couches and breastfeeding pillows, breast milk refrigerator, pure water baby wipes, bottle sterilizer, spare breast milk bags and glass bottles. All items are free of charge and all the breastfeeding rooms are cleaned every day and the temperatures of the refrigerators are also monitored. TGI also provides breastfeeding related information, activities, and consultations. As a mother experiences physical changes during the pregnancy, TGI provides necessary support and arranges other experienced colleagues to help these new mothers. All in all, we strive to provide the friendliest workplace for mothers. In 2018, the nursing room of headquarter in Taipei was approved by the Taipei City Health Bureau's excellent nursing room certification program. The Hsinchu Factory also obtained the "Friendly Nursing Room" certification, which allows TGI's female colleagues enjoy intimate hardware facilities and a friendly workplace environment.

Retirement system

Based on Labor Standards Act and Labor Pension Act, TGI has formulated a retirement policy. Employees who joined TGI before June 30, 2005 (inclusive) are entitled to the old retirement pension, which pension is paid to the old retirement reserve account of the Central Trust Bureau on a monthly basis of 6%. The new pension is paid by the employer 6% to the employee's individual pension account. In addition, employees can choose to pay a pension ranging from 0% to 6% according to their own wishes. The coverage of the TGI employee retirement system is 100%. In addition to

appropriating pension to the respective accounts regularly, TGI has a professional accounting consultant that precisely calculates the pension to ensure that the company appropriates enough pensions every month so that our employees can receive a pension after retirement. According to Labor Standards Act, a worker may apply for voluntary retirement when he/she attains the age of fifty-five and has worked for fifteen years, has worked for 25 years or above, or attains the age of sixty and has worked for ten years. In TGI, our work rules state that any employee who attains the age of 49 and has worked for 15 years or has worked for 19 years may apply for early retirement with the company's approval. This rule is more favorable to employees than Labor Standards Act.

In 2018, 41 employees retired, with an average of 27.61 years of service. Senior supervisors were presented with medals from the chairman/president as a token of appreciation for their service over the years.

Minimum Notice Period of Labor Contract Termination

Where TGI terminates a labor contract pursuant to Article 11 or the provisions of Article 13, the provisions set forth below shall govern the minimum period of advance notice :

- Where a worker has worked continuously for more than 3 months but less than 1 year, the notice shall be given 10 days in advance.
- Where a worker has worked continuously for more than 1 year but less than 3 years, the notice shall be given 20 days in advance.
- Where a worker has worked continuously for more than 3 years, the notice shall be given 30 days in advance.

The average of staff education & training of TGI in 2018 Staff: 15.2 hours

- Supervisors: 19.8 hours
- Managers: 17.2 hours
- Executives: 10.8 hours

TGI set up dedicated manpower and training unit to plan all categories of courses, establish annual training plan. Through the professional curriculum planning, training and exercise programs, TGI aimed to develop the glass-related technical and management talents. If other competency (such as education level, skills or license, experience, etc.) are required for the

work, the Factory Affairs Section will select and evaluate the competent personnel. For example, the operation of overhead cranes and forklifts requires a professional license from a government registered external training institution.

To encourage young people to understand the industry, and have the opportunity to join TGI as a member in the future, the Taichung Factory have participated in the government's "Youth Flagship Program" and employed young people who were aged 15-29. The program was subsidized with 10 thousand NTD for the first 3 months. The Taichung Factory also joins the Ministry of Labor's industrial talent promotion plan. Within three years, an external lecturer can be hired to attend the class, and the plan will subsidize the relevant cost. Hsinchu Factory also implements "Charging Take-off and Industrial Talent Investment" projects through trade unions and government agencies. From general staff to senior executives, are all welcome to participate in this training, learning briefing techniques, interviewer skills, workplace etiquette, and business correspondence, etc.



Youth flagship program of Taichung City Government



Charging Take-off and Industrial Talent Investment - Recruitment interview and subordinate communication coordination: class 3



2018 TGI Staff Education & Training Statistics							
Employee	Factory	Male		Female		Total	
		Number	Hours	Number	Hours	Number	Hours
Staff	Headquarter	102	247	70	187	172	434
	Taoyuan	316	7,988	84	2,498	400	10,486
	Hsinchu	649	8,375	82	978	731	9,353
	Taichung	355	3,825.5	33	323	388	4,148.5
	Lukang	606	9,624	188	2,778	794	12,402
	Lukang Flat Glass	123	3,112.5	9	111	132	3,223.5
	Changpin	215	2,860.5	32	482.5	247	3,343
	Total	2,366	36,032.5	498	7,357.5	2,864	43,390
	Average Hours	15.2		14.8		15.2	
Junior-level Manager	Headquarter	115	329	150	409	265	738
	Taoyuan	143	3,431.5	14	433	157	3,864.5
	Hsinchu	294	6,301	13	434	307	6,735
	Taichung	235	5,097.5	7	125	242	5,222.5
	Lukang	193	4,609	14	256	207	4,865
	Lukang Flat Glass	66	2,092.5	1	16	67	2,108.5
	Changpin	116	3,364	1	63	117	3,427
	Total	1,162	25,224.5	200	1,736	1,362	26,960.5
	Average Hours	21.7		8.7		19.8	
Mid-level Managers	Headquarter	23	113	11	53	34	166
	Taoyuan	1	4	0	0	1	4
	Hsinchu	17	378	1	21	18	399
	Taichung	12	402	1	6	13	408
	Lukang	5	97	0	0	5	97
	Lukang Flat Glass	3	123.5	0	0	3	123.5
	Changpin	4	146	0	0	4	146
	Total	65	1,263.5	13	80	78	1,343.5
	Average Hours	19.4		6.2		17.2	
Senior-level Managers Executives	Headquarter	3	19	0	0	3	19
	Branch Factories	1	24	0	0	1	24
	Total	4	43	0	0	4	43
	Average Hours	10.8		0		10.8	

//5.3 Safe Workplace//



//Occupational Safety and Health Management Policy//	
Importance	Complying to law, a special management unit was set up to supervise related operations in the factory to prevent accidents or occupational disasters so that employees can improve work efficiency and product quality in a safe operating environment.
Policy and Commitment	The objectives of the TGI occupational disaster management are based on the zero-disaster target and serve as an indicator to increase safety activities in the plant area.
Action Method	<ul style="list-style-type: none"> When accidents occurred, the management of occupational accidents is carried out according to TGI's occupational safety and health management methods to implement notification, investigation and improvement of hazards forecasting procedures. The statistics of the occupational disasters and clarification of the cause of accidents are implemented every six months, and are listed as the focus of prevention and are informed to all units. Potential risk weights are also adjusted to effectively prevent the recurrence of the same type of accident. If there are major accidents in other companies, all units will be informed immediately of the relevant safety requirements. Case presentation such as workplace safety, traffic safety in commuting, etc. We hired British consultant Warwick Mayall to carry out work safety counseling. Through continuous records, we identified and adjusted the causes and patterns of various types of work-related injuries. We internalize our attitude toward safety and express our determination of "Works and Safety is the responsibility of all employees".
Goals and Targets	<ul style="list-style-type: none"> The objectives of TGI's accident management system are based on zero disasters and serve as indicators for increasing safety activities in the factory area. The rate of Disabling Frequency Rate (FR) and Disabling Severity Rate (SR) are expected to reduce by 20% separately. Hsinchu and Taichung Factory establish a goal of zero disasters for 100 days. Zero disaster date are displayed on board to motivate employees to maintain The Lukang Factory set work injury frequency goal with less than 0.2 hours per person a year The Lukang Flat Factory set work injury frequency goal with less than 0.04 hours per person a year
Objective Evaluation	<ul style="list-style-type: none"> In 2018, FR: 6.38 is 23% lower than that in 2017, which reached the goal. SR: 158 is higher than 2017, mainly due to the increase of car accidents while commuting and minor injuries at work. Taichung Factory reduced 45% in FR, 86% in SR; Hsinchu Factory reduced 9% in FR; Changpin Factory reduced 9% in FR, 30% in SR. We expect to strengthen employee safety awareness through external consultant guidance and internal training, therefore more factories will achieve their goals in 2019. The Lukang Factory: Work injury frequency in 2018 is 0.2 hours per person a year, which achieved the goal; We'll continue to reduce workplace injury. The Lukang Flat Factory: Work injury frequency in 2018 is 0.94 hours per person a year, which did not achieve the goal; We'll strive to prevent the same type of accident in the future.

Occupational safety and health committee



2017 Changpin Factory Occupational Safety & Health Committee Session

TGI takes workplace environment safety and health very seriously. The company has safety and health guidelines in place and always notifies the relevant authority when needed. Our Occupational Safety and Health Committee's mission is to formulate safety and health-promoting strategies, establish company-wide safety, environmental and health-promoting objectives and to implement and revise relevant plans when necessary. The headquarters and all factories of TGI all have a Safety and Health Committee, which provides an open channel for communication. 1/3 of the committee members are employee representatives, as required by law. The committees hold quarterly meetings to discuss safety and health-related issues. The meetings serve as a formal platform allowing horizontal communications between all departments and vertical communications between the management and the employees. The headquarters and the factories all have dedicated Occupational Safety Management Units which conduct occupational safety inspection every month to detect a problem and take precautionary measures as early as possible. The Occupational Safety Unit in all facilities are committed to promoting environmental safety & health as well as risk control. They also report to the highest-ranked factory supervisor, relevant authorities and Employee Representatives during Safety and Health Committee sessions every quarter. The "5S" plan provides education and training to new and current employees to enhance their working safety awareness and ability to handle situations at work and prevent accidents

to ensure staff safety and health and a safe and healthy working environment.

Main Issues Discussed During the Occupational Safety and Health Committee Sessions:

1. To make recommendations on occupational safety and health policies.
2. Coordinate and propose occupational safety and health management plan.
3. Review the safety, health education and training implementation plans.
4. Review the operational environmental monitoring plan, monitoring results, and measures.
5. Review the health management, occupational disease prevention and health-promoting measures.
6. Review various safety and health proposals.
7. Review the automatic inspections and safety & health audits of all business units.
8. Review the disaster prevention measures of machinery, equipment or raw materials and materials.
9. Review the occupational injury investigation reports.
10. Assess on-site safety and health management results.
11. Review the operational safety and health management matters in contracted work.
12. Other matters related to occupational safety and health management.

Committee Member/Employee Representative Ratio in 2018							
Item/Factory	Headquarters	Taoyuan	Hsinchu	Taichung	Lukang	Changpin	total
Committee Members	15	12	15	29	15	58	132
Employee	7	7	6	10	5	19	47
Representatives	46.67%	58.33%	40.00%	34.48%	33.33%	32.76%	35.61%

Note: Based on the law, Lugang flat glass factory does not need to establish a labor safety and health committee, but it still continues to promote employee education and training programs every year to strengthen the occupational safety and health awareness.

In 2018, TGI continued to cooperate with the hired British consultant Warwick Mayall to go to various factories for occupational safety consultation and counseling. Through continuous records and observations, distinguish the type and probability of injury and analyze the causes. As well as learning from minor injury cases (eg, on-site treatment injuries and thrilling incidents), internalizing the safety concept into a work attitude, requiring employees to assist each other and being responsible for their own work safety, and establishing a safe working environment; And the goal of zero accidents will be achieved.

Occupational Safety Management

The objective of the disaster management is to reduce the disability frequency (FR) and the severity of the disability injury (SR) by 20%, as the starting point of the zerodisaster target and as an indicator to enhance the safety activities of the factories. The accident management system of TGI requires the unit/supervisor of the injured person to complete and file "Employee Injury Report" and "Employ to/from Work Injury Report" within 3 days of the accident. The reports must be signed by the unit safety manager, department supervisor, Labor Safety Section and Safety & Health supervisor (in this order) before being submitted to the highest supervisor. The original of the reports will be archived by the Labor Safety Section and the duplicates will be archived by the Human Resource Department and Injury/Accident Unit. This practice ensures that all accidents are reported and investigated and improvement measures are taken accordingly. TGI also compiles the occupational injury/accident numbers every six months to understand the causes and make them the first thing to prevent in the facilities. The company notifies all units of the results and preventive measures to prevent the same types of injuries or lower the severity of such injuries. If major accidents take place in other businesses, TGI will notify all units and ask them to promote safety further in all operations with the risk of identical accidents. The 2016-2018 safety indicators are as follows:

Item/Year	Gender	2016	2017	2018
Disabling Frequency Rate (FR). Total Disabling Incidents (more than 8 hours of rest) x 1,000,000/ Total Manhours	Male	6.92	8.43	6.85
	Female	8.01	7.17	3.62
	Total	7.07	8.26	6.38
Occupational Disease Rate (ODR). Total Occupational Diseases x 1,000,000/ Total Manhours	Male	0	0	0
	Female	0	0	0
	Total	0	0	0
Disabling Severity Rate (SR) Days Charged x 1,000,000/Total Manhours	Male	86	119	165
	Female	32	244	118
	Total	79	136	158
Absence Rate (AR) Total number of days lost / Total days Worked	Male	0.01	0.01	0.01
	Female	0.02	0.02	0.02
	Total	0.01	0.01	0.01

Note: Total days of absentee include the number of days of leave, sick leave, and work-related injury leave.
 (1) Sick leave (including unpaid sick leave, half-pay sick leave, menstruation leave): 44,890 hours
 (2) Leave (including family care leave): 38,087 hours
 (3) Work-related injuries: 15,108.5 hours Total working hours: 9,405,680 hours

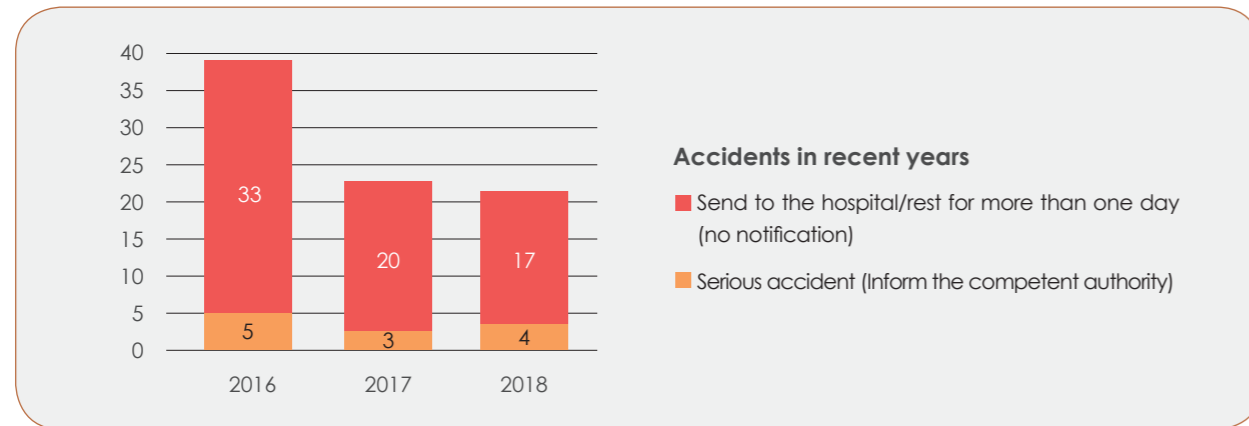
Workplace safety principles

- "Employee" is the key to the success of a safety and health management program.
- All injuries and occupational diseases can be prevented.
- Every employee has a responsibility to prevent possible injuries and illnesses.
- Emphasis on safety is one of the conditions of employment, and each employee must bear the responsibility for workplace safety.
- Workplace safety training is the foundation for establishing a safe workplace.
- A continuous workplace safety audit is necessary.
- All security deficiencies must be corrected immediately.
- Investigating possible accidents is just as important as investigating accidents that have occurred.
- Safety after work and safety at work are equally important.
- Preventing workplace injuries can bring effective benefits.



By the end of 2018, Mr. Warwick Mayall had visited the Taoyuan, Hsinchu, Taichung, Lukang and Lukang Flat Glass Factory, and put forward many suggestions for improvement. For example, in the Hsinchu Factory, according to the characteristics of each unit, a different theme training program was proposed, and the concept of safety prevention was strengthened according to the characteristics of different areas and the risks of operating equipment. In the Taichung Factory, Warwick Mayall reviewed the weekly work at the weekly factory meeting. The unit in which the incident occurred reported to the supervisors of all units present and proposed improvement measures. If there is no accident in the factory, other major industrial safety incidents will be collected and reviewed. The Changpin Factory was specially designed to assess and manage personnel and machinery risks, improve equipment and protect against high-risk projects, and prevent potential hazards as much as possible.

The major injury cases from 2016 to 2018 are as follows:



Road safety education training for foreign employees of Lukang Factory



Changpin Factory occupational safety education training



Changpin Factory CPR Training



Taichung Factory fire drill rescuing

In addition to occupational safety and health related training, there are also related training, drills, and orientation courses for emergency events in the factory, such as CPR emergency ambulance course, or fire safety drills and emergency response.

In April 2018, the Hsinchu Factory, the Fire Department of the Ministry of the Interior and the Fire Department of Hsinchu City simulated a large-scale fire alarm. This drill simulated a serious fire alarm in the storage pool. Two employees were trapped and the fire-fighting unit entered the fire field for search and rescue. The drill mobilized seven fire-fighting units, the police station, the Taiwan Power Company, the CPC and other institutions to perform it for 76 people. After the drill, the Fire Department and relevant scholars put forward suggestions for the drill operation and shared the concept of disaster relief with the employees of TGI.



Hsinchu factory level 3 fire drill rescuing

Labor safety inspections and regulations follow

TGI has no use of child labor in 2018 and complaints about major labor-related issues; there are no forced or compulsory labor risks in any operation activities within the company, and relevant labor conditions are handled in accordance with relevant laws and regulations. In 2018, some factories accept government or the Ministry of Labor. The labor inspection of the Occupational Safety and Health Center of the Occupational Safety and Health Administration is as follows. There are no violations of the regulations.

The Headquarter	2018/10/29 Checked, no violation of facts
Taoyuan Factory	2018/07/26 Checked, no violation of facts
Hsinchu Factory	2018/03/14 It was found that the attendance records were not recorded to the minutes; No penalized
Changpin Factory	2018/11/28 Checked, no violation of facts

The Taichung and Lukang factory were not subject to labor inspections and illegal records in 2018.

The heavy oil transportation pipeline set up in the boiler room of Taoyuan Factory has the risk of explosion and fire due to static electricity. The device for removing static electricity such as the jumper of the pipeline is not provided, and the penalty is 60,000 NTD. In August, the relevant units have put a total of 57 sets of flanges in the boiler house heavy oil pipelines and set up jumpers to complete the improvement.

In June 2018, Hsinchu Factory TS-3 did not check the strength calculation book when using the reeling machine for lifting operation in the kiln warehouse, and did not control the access of personnel during the hanging period which led to injury; the second floor of the warehouse did not set up fences. The aforementioned two incidents were fined 120,000 NTD and due to the lack of a shield or emergency brake device in some of the process sections, another fine of 60,000 NTD was imposed. The Hsinchu Factory has immediately reviewed the non-conformities and completed improvements in July and August 2018. Personnel at Lukang Flat Glass Factory did not wear protective clothing and other appropriate equipment during the replacement of water pipe of glass feeders, and was fined 60,000 NTD in June 2018. The relevant unit had completed the improvement, revised the standard operating procedures, installed pressure relief valves at the water pipe joints, purchased new high-temperature protective gear, and delivered trainings for on-site personnel on protective equipment.

Employee Health Promotion

2018 employee health promotion performance

- Conduct a quarterly physical and mental health questionnaire survey for each shift employee on the site. The results of statistical analysis are used as a reference for further medical treatment or adjustment of work positions.
- Those who are at risk for physical health (such as shifts, excessive work hours, overweight, abnormal blood pressure, diabetes, etc.) are regularly consulted by physicians to provide suggestions for improvement in life, diet and habits.
- The factories continue to promote health promotion courses, such as healthy diet, physical fitness, psychological stress management and scald protection lectures. They also keep encouraging colleagues to participate in and form sports associations to promote physical and mental health of employees.

TGI and each factory set up a health center and equipped with professional factory protection and authorized service specialists to promote health management programs including health care, special protection, health promotion, etc. We expect to balance practical needs and risk management and continue to do efforts be in occupational injuries with disease prevention actions and measures to promote the physical and mental health of employees.

New employees must complete a physical examination before starting working at TGI. The company uses the examination report to assign new employees to a suitable position, place them in the correct category for management, provide health education and keep track of the employee's health. Our formal employees receive a health checkup every two year. For those in hazardous condition, they receive sanitation and health education four times a year and a special physical examination. The results are submitted to the company's nurse practitioners stationed at each factory who analyze and preserve the reports to understand the employees' health. Nurse practitioners will provide health education to those at high health risk and arrange them for repeat doctor visits to keep track of their health condition and help them receive treatment if necessary. The nurse practitioners will follow up with employees' health conditions and evaluate whether or not they are fit for their current positions. When needed, they will help employees get reassigned to other positions. Health-promoting activities are planned based on the



The on-site health consultation service of the headquarter



The vocational musculoskeletal disease prevention course of the headquarter



The man-caused risk analysis and prevention course of Hsinchu Factory

staff's health conditions.

To enhance our employees' work safety and sanitation knowledge, TGI provides occupational safety and health training, emergency response and fire drills and off-site professional training for new employees. In addition, this company holds environmental safety and health training sessions for employees monthly.

Depending on the season and current epidemics, we provide related health information in the company's regular announcements and the company's electronic bulletin board to help our employees prevent themselves from getting the disease. For our high-risk employees, we recommend that they receive a vaccine. The company also provides information for family care for our employees.

Our health center is equipped with a full body composition monitor, which can measure body weight, body fat, body age, BMR, visceral fat and the subcutaneous fat and skeletal muscle of the entire body, arms, torso, and feet. This equipment helps our employees manage their health and weight loss progress. Based on the relevant provisions of the Regulations of the Labor Health

Protection", TGI regularly arranges employees to receive physical examinations to provide a healthy and hygienic working environment for employees. The company has commissioned professional physicians to manage the employees' health on the basis of the physical examination results. 578 employees received general physical examinations and 2,321 received special physical examinations, a total of 2,899 in 2018.

The kiln at the Taichung Factory produces extreme heat and therefore the factory has in place the "Prevention Plan for Ailments Induced by Exceptional Workload" and takes necessary prevention and improvement measures accordingly to make sure all the employee's work hours, breaks and days off work are in compliance with the labor regulations, which can contribute to physical, mental health and balanced family life for our employees. The Lukang Flat Glass Factory produces extreme heat, noise, dust and ionizing radiation, therefore the temperature and noise level are measured every 6 months in compliance with the law, and the measurement has never exceeded the legal limits. To protect the health of our employees, the factory arranges special examinations specifically for dust and ionizing radiation.

2018 Physical Examination Statistics

Physical Examination Statistics								General Physical Examination	Total
High Temperature	Dust	Noise	n-Hexane	Lead	Chromic acid and chromates	Ionizing radiation	Total		
466	428	1,247	6	59	3	112	2,321	578	2,899

In 2018, the "Occupational Safety" department, based on the work hour sheets from Human and other scales, selected a group of employees with potential risks from employees with excessively long hours, excessive shifts and other factors contributing to cardiovascular diseases such as overweight, smoking, unusual blood pressure and diabetes. The department evaluated this group of employees and arranged doctor appointments. Some employees were referred to other treatment and some were provided with health education. The department adjusted/limited the job responsibilities of these employees if needed and continued to follow up to protect the employees' physical and mental health as well as the company's rights.

In order to encourage employees to develop exercise habits, the Changpin Factory held 24 activities of "Independent Sports Development (High Intensity Intermittent Exercise)", and 151 employees participated in the event. And the Changpin Factory also cooperated with the Lugang Health Center of Changhua County

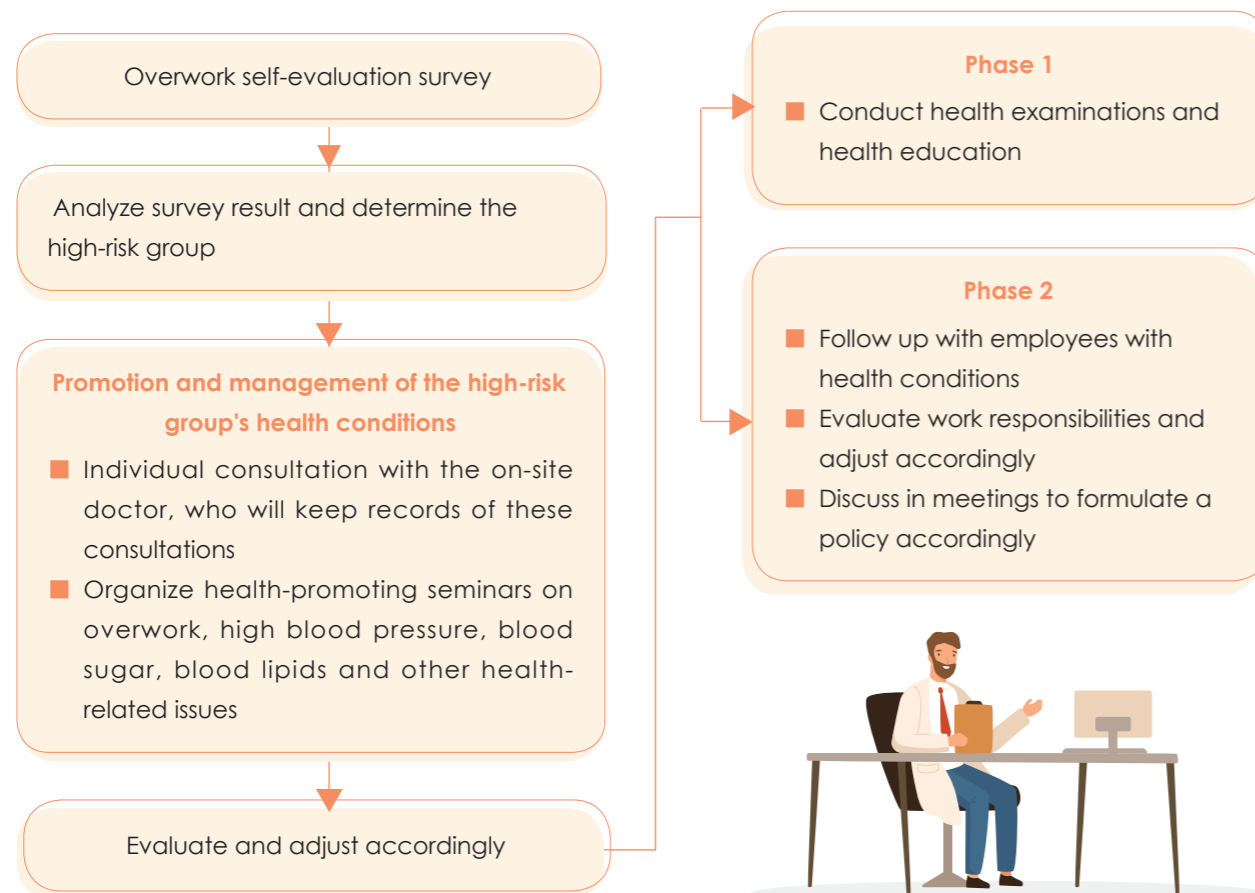
to handle employee health promotion lectures. With the theme of "Healthy New Cooking", it is divided into four sub-themes. The main purpose is to promote balanced nutrition, reduce sugary foods, try to eat natural fresh and less seasoned foods, and promote healthy and sustainable personal eating habits to employees.



Plan to Prevent Disease Caused by Unusual Workload

TGI keeps track of and evaluates risks of our employees' health conditions, nature of work (shifts, night shifts, long work hours and unusual workload) and work hours. For employees with potential health risks, TGI arranges for employees to provide them with health education or refers them to seek medical assistance from doctors. The company also helps such workers adjust their workload and shares with them about health-promoting activities. All the measures aim to prevent brain and cardiovascular diseases among our employees and reduce their mental load to be healthy both physically and mentally.

Exceptional Workload Improvement Flow Chart



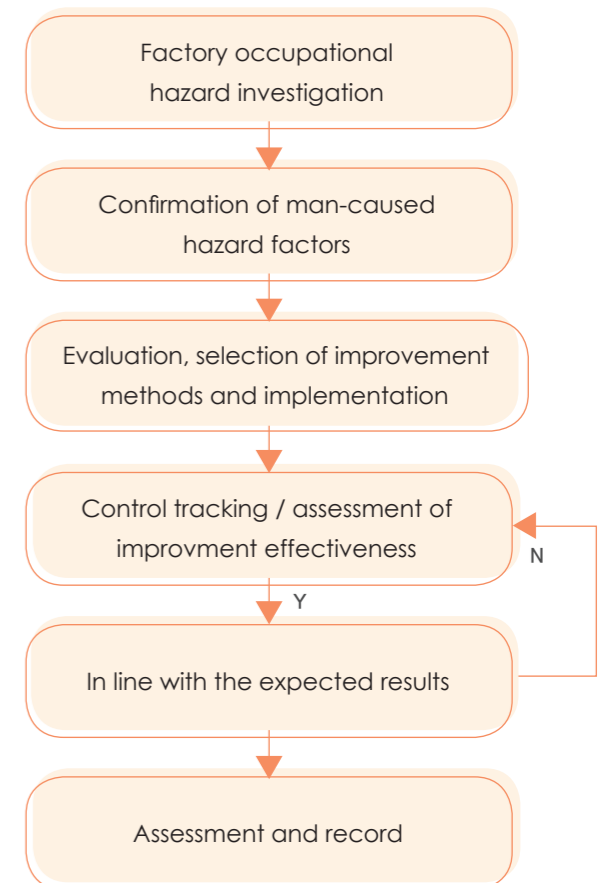
Man-caused hazard prevention implementation instructions

Data collection, analysis, and hierarchical management are implemented according to the work type of colleagues. TGI proposed improvement methods and health promotion to reduce musculoskeletal injuries, improve the work environment, prevent man-caused harm and avoid repeated musculoskeletal injuries to establish a safe and healthy workplace. For example, the procedures of chopped strand are as follow:

The on-site doctor accompanied the chopped strand managers to inspect storage and delivery units and observe how personnel handle glass products.

The height of the table that on-site personnel handles the finished glass product is above the waist and below shoulder, which fit the ergonomic work area. The space for handling the product is spacious to ensure correct posture. Products weighing more than 10 kg will be handled by a group of two or more people according to the exact weigh. The work is repetitive so the prevention of man-caused harm is necessary.

Process of man-caused risk analysis and prevention





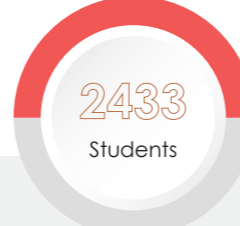



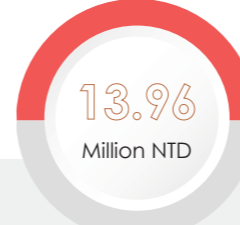
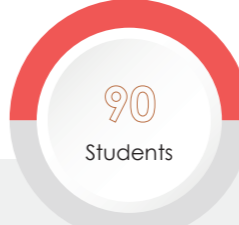


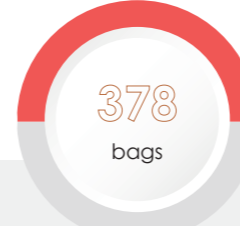



CH.6

Community Care

6.1 Contribute to the Society

6.2 Local Engagement

Achievements of Community Care in 2018

 <p>2433 Students</p> <p>Since established in 2001, the Taiwan Glass Culture and Education Foundation has sponsored 2,433 college students and provided a total of NTD28.45 million scholarships.</p>	 <p>28.45 Million NTD</p>		 <p>Collaborated on the "Chinese Zodiac Exhibition". The fundraising proceeds were all invested in the Taiwanese cultural color education courses across counties and cities.</p>
 <p>13.96 Million NTD</p> <p>Donation in 2018 totaled NTD 13,963,313</p>	 <p>90 Students</p> <p>90 students awarded scholarships with NTD 10,000 each.</p>	 <p>10 Thousand NTD Each</p>	
 <p>378 bags</p> <p>In 2018, Taiwan Glass responded to the concept of "donating a bag of blood and saving one's life", and each factory donated a total of 378 bags.</p>		 <p>Changhua County's appreciation of outstanding corporate of employees with physical and mental disabilities; and appreciation of physical and mental disabilities over-utilized.</p>	 <p>Assist the Changhua County Government in handling the "2018 Special Target Employment Program - Corporate Visits".</p>

//6.1 Contribute to the Society//

To give back to society, TGI founded Taiwan Glass Foundation with the purpose of rewarding young students for their efforts in learning and supporting cultural and educational activities. Since its establishment, in addition to co-organizing cultural and educational activities, it has awarded 2,433 college university students with scholarship of 28.45 million NTD.

Taiwan Glass Foundation was invited by Xuexue Foundation to collaborate on the "Chinese Zodiac Exhibition". With Chinese Zodiac as the theme, domestic and foreign artists were invited to participate. The exhibition was held in Taipei and Kaohsiung and artworks are sold for fundraising. The fundraising proceeds were all invested in the Taiwanese cultural color education courses across counties and cities.

Mr. Lin Yu Chia, the founder, expect students to inspire and learn from each other, actively cultivate a sense of honor and responsibility, and do his/her part for the country, society and individuals. Recipient units are expected to actively and properly make use of fund resources, and provide warmth and support for the needs



Chinese Zodiac Artworks



Kaohsiung Museum of Fine Art "Color of Taiwan·Zodiac" Opening reception



Please visit the website for more information on the Exhibition

Taiwan Glass Foundation Activities

Year	Activity	Location	Descriptions
2018	Scholarship	Taipei City	90 students awarded scholarships of NTD 10,000 each.
	Art Exhibition	Kaohsiung City	Collocated and sponsored the "Chinese Zodiac Exhibition"
2017	Scholarship	Taipei City	80 students awarded scholarships, each issued NTD 10,000.
2016	Scholarship	Taipei City	140 students awarded scholarships, each issued NTD 10,000.
2015	Scholarship	Taipei City	140 students awarded scholarships, each issued NTD 10,000.
2014	Scholarship	Taipei City	129 students awarded scholarships, each issued NTD 10,000.
2013	Scholarship	Taipei City	143 students awarded scholarships, each issued NTD 10,000.
	Culture & Art	Taipei City	131 Beautiful Taiwan (Taiwan from the Air) movie tickets.
2012	Scholarship	Taipei City	196 students awarded scholarships, each issued NTD 10,000.
	Art Exhibition	Taipei City	Co-organized and sponsored "Alvaro Siza: The Beauty of Function"
2011	Scholarship	Taipei City	180 students awarded scholarships, each issued NTD 10,000.
	Art Exhibition	Taipei City	Co-organized and sponsored "Alvaro Siza: The Beauty of Function"
2010	Scholarship	Taipei City	160 students awarded scholarships, each issued NTD 10,000.
	Movie Premiere	Taipei City	Co-organized special screening for "Let the Wind Carry Me" with 200 attendants. The foundation used this opportunity to promote excellent Taiwanese movies and develop more talents in the movie industry.
	Green Building Lecture	Taipei City	"Taipei Beautiful: Green Building Lecture": 300 participants. The foundation worked with the Department of Urban Development, Taipei City Government on this urban renewal plan. In addition to renovating old houses, this project also aims to make buildings more environment-friendly.

Donations in 2018

Prioritization	Organization Title	Total Donation (NTD)
1	Chinese National Association of Industry and Commerce	1,200,000
2	Straits Economics & Cultural Interchange Association	80,000
3	Taiwan Golf & Country Club	10,000
4	Taiwan Glass Industry Association	339,400
5	Taiwan Institute for Sustainable Energy	580,000
6	Chinese National Federation of Industries	230,000

//6.2 Local Engagement//

In addition to the social care and other activities held by the headquarter, TGI constantly strengthens the relationship with local communities. Rooted in the local area, TGI actively contributes to the communities, greening the environment, hire local talents to create employment opportunities and prospering the local economy. In order to enhance the company's corporate image, create the value of a green factory, and establish a comfortable working environment for employees, TGI participated in the green adoption activities in the industrial areas, and hoped to make a contribution by the greening environment. In addition, we also provided TGI products to sponsor schools and associations. No conflicts with community residents occurred in 2018.

Prioritization	Organization Title	Total Donation (NTD)
7	Hsinchu Glass Commercial Association	20,000
8	Keelung Glass Commercial Association	20,000
9	Taipei City Glass Assembly Craft Association	12,000
10	Taipei Glass Commercial Association	65,000
11	Changhua County Glass Assembly Craft Association	12,000
12	Tainan City Glass Union Association	12,000
13	Taichung City Glass Assembly Craft Association	12,000
14	Kaohsiung Glass Commercial Association	30,000
15	Changhua County Glass Commercial Association	20,000
16	Taichung City Glass Commercial Association	30,000
17	Tainan City Glass Commercial Association	20,000
18	Taichung City Chamber Glass Commercial Association	20,000
19	New Taipei City Glass Commercial Association	20,000
20	Chiayi City Glass Commercial Association	20,000
21	Tainan City Glass Assembly Craft Association	12,000
22	Taoyuan City Glass Commercial Association	20,000
23	Hualien County Government	8,000,000
24	National Policy Foundation	300,000
25	Hsinchu City Glass Assembly Craft Association	12,000
26	Chung-Hwa Nuclear Society	100,000
27	Enlightening Earth Association	2,000,000
28	Tsz Ai Education and Training Institute for the Disabilities	20,000
29	Ren Association	10,000
30	The third Wednesday Club	200,000
31	HGD Cultural Foundation	536,913
Total		13,963,313



2018 Hsinchu City River patrol donation activities



Participated in the Hsinchu City River Water Patrol



Water Environment Patrol Team participates in Hsinchu City's "Reduce Plastic, Protect Sea" activities



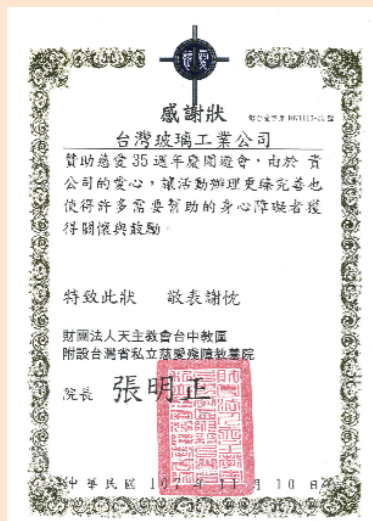
Assist Hsinchu Fire Department in "Simulated Fire Rescue Drill"



Donated the bullet-proof glass on duty counter to the Difang police station of Lukang Branch of Changhua County



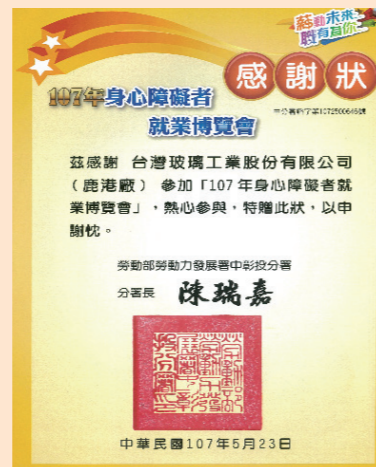
Appearance of Changhua County award ceremony on outstanding employees with disabilities and manufacturer that over-employed employees of disabilities in 2018



Sponsored the 35th Anniversary Celebration of the Disability Education and Training Institute



Visited by Taichung Municipal Shan Shuei Junior High School



Participate in the 2018 Employment Expo for People with Disabilities

Cooperated with the Changhua County Government to assist in the "2018 Special Target Employment Program - Corporate Visits", which was attended by 38 women and middle-aged people in Changhua County. We conducted factory operation guides and provided public Q&A to assist the public to have a better understanding of employment preparation.

Blood Donation

Based on the principle of giving back to society, we hoped that employees can participate in charity in response to the concept of "Give blood, save lives". The Taichung Factory, Lukang Factory, Lukang Flat Glass Factory, and Changpin Factory all held blood donation in 2018. Among them, the Lukang Factory and Lukang Flat Glass Factory partnered with the Taichung Blood Center and held blood donation events every year, and provided prizes sponsored by Lions Club International to encourage employees to donate blood. The two factories aimed to lead as an example to encourage all TGI employees to give blood and save lives. In 2018, TGI's factories donated a total of 378 bags of blood.



- | | | |
|---|---|---|
| 1 | 2 | 4 |
| | 3 | |
- 1. Lukang Factory/Lukang Flat Glass Factory
 - 2. & 3. Changpin Factory
 - 4. The Taichung Factory





Appendix

Appendix I : Global Reporting Initiative (GRI) Standard Index

Appendix II : Sustainable Development Goals (SDGs) Index

Appendix III : ISO26000 Guidance on Social Responsibility

Appendix IV : Independent Assurance Report



//Appendix I: Global Reporting Initiative (GRI) Standard Index//

The following content has been verified by an independent third-party and the result is published in the independent assurance report in Appendix V. “*” indicates Material Topics while “●” indicates external verification.

General standard disclosure

Option	No.	Disclosure	External Verification	Chapter	Page
Core	102-1	Name of the organization	●	2.1 Introduction	27
Core	102-2	Activities, brands, products, and services	●	2.1 Introduction 3.1 Product Introduction	27 55
Core	102-3	Location of headquarters	●	2.1 Introduction	27
Core	102-4	Location of operations	●	2.1 Introduction	27
Core	102-5	Ownership and legal form	●	2.1 Introduction	27
Core	102-6	Markets served	●	2.1 Introduction 3.1 Product Introduction	27 55
Core	102-7	Scale of the organization	●	2.1 Introduction	27
Core	102-8	Information on employees and other workers	●	5.1 Employee and Benefits	98
Core	102-9	Supply chain	●	3.5 Sustainable Supply Chain	73
Core	102-10	Significant changes to the organization and its supply chain	●	2.1 Introduction	27
Core	102-11	Precautionary Principle or approach	●	2.3 Risk Management 3.2 Product Quality Management	49 62
Core	102-12	External initiatives	●	About This Report 3.2 Product Quality Management	03 62
Core	102-13	Membership of associations	●	2.1 Introduction	27
Core	102-14	Statement from senior decision-maker	●	Message from the Chairman	6
Comprehensive	102-15	Key impacts, risks, and opportunities		Message from the Chairman 2.3 Risk Management	6 49
Core	102-16	Values, principles, standards, and norms of behavior	●	1.1 Sustainable Management 2.2 Corporate Sustainable Governance	12 18
Comprehensive	102-17	Mechanisms for advice and concerns about ethics		2.2 Corporate Sustainable Governance	41
Core	102-18	Governance structure	●	2.2 Corporate Sustainable Governance	41
Comprehensive	102-19	Delegating authority		1.1 Sustainable Management	12
Comprehensive	102-20	Executive-level responsibility for economic, environmental, and social topics		1.1 Sustainable Management	12

Option	No.	Disclosure	External Verification	Chapter	Page
Comprehensive	102-21	Consulting stakeholders on economic, environmental, and social topics		1.2 Stakeholder Communication and Participation	18
Comprehensive	102-22	Composition of the highest governance body and its committees		2.2 Corporate Sustainable Governance	41
Comprehensive	102-23	Chair of the highest governance body		2.2 Corporate Sustainable Governance	41
Comprehensive	102-24	Nominating and selecting the highest governance body		2.2 Corporate Sustainable Governance	41
Comprehensive	102-25	Conflicts of interest		2.2 Corporate Sustainable Governance	31
Comprehensive	102-26	Role of highest governance body in setting purpose, values, and strategy		2.2 Corporate Sustainable Governance	31
Comprehensive	102-31	Review of economic, environmental, and social topics		2.2 Corporate Sustainable Governance	31
Comprehensive	102-32	Highest governance body's role in sustainability reporting		1.1 Sustainable Management	12
Comprehensive	102-34	Nature and total number of critical concerns		1.1 Sustainable Management	12
Comprehensive	102-35	Remuneration policies		2.2 Corporate Sustainable Governance	41
Comprehensive	102-36	Process for determining remuneration		2.2 Corporate Sustainable Governance	41
Comprehensive	102-37	Stakeholders' involvement in remuneration		2.2 Corporate Sustainable Governance	41
Core	102-40	List of stakeholder groups	●	1.2 Stakeholder Communication and Participation	18
Core	102-41	Collective bargaining agreements	●	5.1 Employee and Benefits	102
Core	102-42	Identifying and selecting stakeholders	●	1.2 Stakeholder Communication and Participation	18
Core	102-43	Approach to stakeholder engagement	●	1.2 Stakeholder Communication and Participation	18
Core	102-44	Key topics and concerns raised	●	1.2 Stakeholder Communication and Participation	18
Core	102-45	Entities included in the consolidated financial statements	●	2.1 Introduction	27
Core	102-46	Defining report content and topic boundaries	●	1.3 Material Topics	23
Core	102-47	List of material topics	●	1.3 Material Topics	23
Core	102-48	Restatements of information	●	About This Report	3
Core	102-49	Changes in reporting	●	About This Report	3
Core	102-50	Reporting period	●	About This Report	3
Core	102-51	Date of most recent report	●	About This Report	3
Core	102-52	Reporting cycle	●	About This Report	3
Core	102-53	Contact point for questions regarding the report	●	About This Report	3
Core	102-54	Claims of reporting in accordance with the GRI Standards	●	About This Report	3
Core	102-55	GRI content index	●	Appendix I	137
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10 Material Topics

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	201-2	Financial implications and other risks and opportunities due to climate change		4.1 Sustainable Environment Strategy	80
	201-3	Defined benefit plan obligations and other retirement plans		5.1 Employee and Benefits	102
Market Presence	202-1	Ratios of standard entry level wage by gender compared to local minimum wage		5.1 Employee and Benefits	102
	202-2	Proportion of senior management hired from the local community		5.1 Employee and Benefits	102
Indirect Economic Impacts	203-1	Infrastructure investments and services supported		6.1 Contribute to the Society	130
Procurement Practices	204-1	Proportion of spending on local suppliers		3.5 Sustainable Supply Chain	73
Anti-corruption Anti-competitive Behavior	205-3	Operations assessed for risks related to corruption		2.2 Corporate Sustainable Governance	41
	206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	●	3.1 Product Introduction	55
Environmental					
Materials	301-1	Materials used by weight or volume		4.2 Sustainable Resource Management	84
	301-2	Recycled input materials used	●	4.2 Sustainable Resource Management	84
	301-3	Reclaimed products and their packaging materials		4.2 Sustainable Resource Management	84
* Resource Conservation	GRI 103	Management Approach		4.2 Sustainable Resource Management	84
	302-1	Energy consumption within the organization	●	4.2 Sustainable Resource Management	84
	302-3	Energy intensity	●	4.2 Sustainable Resource Management	84
	302-4	Reduction of energy consumption		4.2 Sustainable Resource Management	84
	302-5	Reductions in energy requirements of products and services		4.2 Sustainable Resource Management	84
Water	303-1	Water withdrawal by source		4.2 Sustainable Resource Management	84
	303-2	Water sources significantly affected by withdrawal of water		4.2 Sustainable Resource Management	84
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Biodiversity	304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas		4.1 Sustainable Environment Strategy	84
	304-2	Significant impacts of activities, products, and services on biodiversity		4.1 Sustainable Environment Strategy	84
	304-3	Habitats protected or restored		4.1 Sustainable Environment Strategy	84

Option	No.	Disclosure	External Verification	Chapter	Page
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	305-2	Energy indirect (Scope 2) GHG emissions	●	4.3 Green Production and Innovation	93
	305-4	GHG emissions intensity		4.3 Green Production and Innovation	93
	305-5	Reduction of GHG emissions		4.3 Green Production and Innovation	93
	305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions		4.3 Green Production and Innovation	93
	Effluents and Waste	306-1	Water discharge by quality and destination		4.3 Green Production and Innovation
306-2		Waste by type and disposal method		4.3 Green Production and Innovation	93
306-3		Significant spills		4.1 Sustainable Environment Strategy	80
306-5		Water bodies affected by water discharges and/or runoff		4.3 Green Production and Innovation	93
* Environmental Compliance	GRI 103	Management Approach		2.2 Corporate Sustainable Governance	31
	307-1	Non-compliance with environmental laws and regulations	●	4.1 Sustainable Environment Strategy	80
Supplier Environmental Assessment	308-1	New suppliers that were screened using environmental criteria		3.5 Sustainable Supply Chain	73
	308-2	Negative environmental impacts in the supply chain and actions taken		3.5 Sustainable Supply Chain	73
Social					
*Employment	GRI 103	Management Approach		5.1 Employee and Benefits	102
	401-1	New employee hires and employee turnover	●	5.1 Employee and Benefits	102
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees		5.1 Employee and Benefits	102
	401-3	Parental leave	●	5.1 Employee and Benefits	102
Labor/ Management Relations	402-1	Minimum notice periods regarding operational changes		5.1 Employee and Benefits	102
*Occupational Health and Safety	GRI 103	Management Approach		5.3 Safe Workplace	118
	403-1	Workers representation in formal joint management-worker health and safety committees		5.3 Safe Workplace	118
	403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	●	5.3 Safe Workplace	118
	403-3	Workers with high incidence or high risk of diseases related to their occupation		5.3 Safe Workplace	118
	403-4	Health and safety topics covered in formal agreements with trade unions		5.3 Safe Workplace	118

Option	No.	Disclosure	External Verification	Chapter	Page
Training and Education	404-1	Average hours of training per year per employee		5.2 Employee Care & Development	115
	404-2	Programs for upgrading employee skills and transition assistance programs		5.2 Employee Care & Development	115
	404-3	Percentage of employees receiving regular performance and career development reviews		5.1 Employee and Benefits	102
Diversity and Equal Opportunity	405-1	Diversity of governance bodies and employees		5.1 Employee and Benefits	102
	405-2	Ratio of basic salary and remuneration of women to men		5.1 Employee and Benefits	102
Child Labor	408-1	Operations and suppliers at significant risk for incidents of child labor		5.1 Employee and Benefits	102
Forced or Compulsory Labor	409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor		5.1 Employee and Benefits	102
Rights of Indigenous Peoples	411-1	Incidents of violations involving rights of indigenous peoples		5.1 Employee and Benefits	102
Human Rights Assessment	412-1	Operations that have been subject to human rights reviews or impact assessments		5.1 Employee and Benefits	102
	412-2	Employee training on human rights policies or procedures		5.1 Employee and Benefits	102
Local Communities	413-1	Operations with local community engagement, impact assessments, and development programs		6.1 Contribute to the Society	126
Supplier Social Assessment	414-1	New suppliers that were screened using social criteria		3.5 Sustainable Supply Chain	73
	414-2	Negative social impacts in the supply chain and actions taken		3.5 Sustainable Supply Chain	73
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Customer Health and Safety	416-1	Assessment of the health and safety impacts of product and service categories	●	3.1 Product Introduction	48
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*Socioeconomic Compliance	GRI 103	Management approach		2.2 Corporate Sustainable Governance	31
	419-1	Non-compliance with laws and regulations in the social and economic area	●	2.2 Corporate Sustainable Governance 3.1 Product Introduction 5.1 Employee and Benefits	31 48 102
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Product Quality	Non GRI Standards index			3.2 Product Quality Management	62
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Innovation and R&D	Non GRI Standards index			3.3 Research and Innovation	66
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//Appendix II : United Nation Global Compact Index//

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1	Businesses should support and respect the protection of internationally proclaimed human rights.	3.5 Sustainable Supply Chain	73
2	Make sure that they are not complicit in human rights abuses.	5.1 Employee and Benefits	102
2. Labor			
3	Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining.	5.1 Employee and Benefits	102
4	The elimination of all forms of forced and compulsory labor.	Ch5 Friendly Workplace	101
5	The effective abolition of child labor.	5.1 Employee and Benefits	102
6	The elimination of discrimination in respect of employment and occupation.	5.1 Employee and Benefits	102
3. Environment			
7	Businesses should support a precautionary approach to environmental challenges.	2.3 Risk Management Ch4 Environmental Protection	49 79
8	Undertake initiatives to promote greater environmental responsibility.	Ch4 Environmental Protection	49
9	Encourage the development and diffusion of environmentally friendly technologies.	3.1 Product Introduction 4.2 Sustainable Resource Management 4.3 Green Production and Innovation	55 80 84
4. Anti-Corruption			
10	Businesses should work against corruption in all its forms, including extortion and bribery.	2.2 Corporate Sustainable Governance	41

//Appendix III : ISO26000 Guidance on Social Responsibility//

Number	Article	Relevant Sections	Page(s)
1. Organizational Governance			
1.1	The system by which companies are directed and controlled	2.2 Corporate Sustainable Governance	41
2. Human Rights			
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2.2	Human rights risk situations	3.5 Sustainable Supply Chain 5.1 Employee and Benefits	73 102
2.3	Avoidance of complicity	2.2 Corporate Sustainable Governance	41
2.4	Resolving grievances	1.2 Stakeholder Communication and Participation	18
2.5	Discrimination and vulnerable groups	5.1 Employee and Benefits	102
2.6	Civil and political rights	2.2 Corporate Sustainable Governance	41
2.7	Economic, social and cultural rights	Ch5 Friendly Workplace	101
2.8	Fundamental principles and rights at work	Ch5 Friendly Workplace	101
3. Labor Practices			
3.1	Employment and employment relationships	5.1 Employee and Benefits	102
3.2	Conditions of work and social protection	5.1 Employee and Benefits	102
3.3	Social dialogue	1.2 Stakeholder Communication and Participation	18
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3.5	Human development and training in the workplace	5.2 Employee Care & Development	115
4. The Environment			
4.1	Prevention of pollution	4.3 Green Production and Innovation	93
4.2	Sustainable resource use	4.2 Sustainable Resource Management 4.3 Green Production and Innovation	84 93
4.3	Climate change mitigation and adaptation	4.1 Sustainable Environment Strategy	80
4.4	Protection of the environment, biodiversity and restoration of natural habitats	4.1 Sustainable Environment Strategy	80

//Appendix IV : Independent Assurance Report//

Number	Article	Relevant Sections	Page(s)
5. Fair Operating Practices			
5.1	Anti-corruption	2.2 Corporate Sustainable Governance	41
5.2	Responsible political involvement	2.2 Corporate Sustainable Governance	41
5.3	Fair competition	3.1 Product Introduction	55
5.4	Promoting social responsibility in the value chain	3.5 Sustainable Supply Chain	73
5.5	Respect for property rights	3.1 Product Introduction	55
6. Consumer Issues			
6.1	Fair marketing, factual and unbiased information and fair contractual practices	3.1 Product Introduction	55
6.2	Protecting consumers' health and safety	3.5 Sustainable Supply Chain	73
6.3	Sustainable consumption	3.1 Product Introduction	55
6.4	Consumer service, support, and complaint and dispute resolution	3.2 Product Quality Management	62
6.5	Consumer data protection and privacy	3.2 Product Quality Management	62
6.6	Access to essential services	3.1 Product Introduction	55
6.7	Education and awareness	3.1 Product Introduction	55
7. Community Involvement and Development			
7.1	Community involvement	6.1 Contribute to the Society	130
7.2	Education and culture	6.1 Contribute to the Society	130
7.3	Employment creation and skills development	1.1 Sustainable Management	12
7.4	Technology development and access	Technology development and access 3.3 Research and Innovation	6
7.5	Wealth and income creation	1.1 Sustainable Management	12
7.6	Health	5.2 Employee Care & Development 5.3 Safe Workplace	115 118
7.7	Social investment	6.1 Contribute to the Society	130



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會計師獨立確信報告

台灣玻璃工業股份有限公司 公鑒：

一、 確信範圍

本事務所接受台灣玻璃工業股份有限公司（以下簡稱台玻公司）之委任，對 2018 年度企業社會責任報告書中所選定之永續績效資訊進行有限確信並出具報告。

有關台玻公司所選定之標的資訊及其適用基準，詳附件一。

管理階層責任

台玻公司管理階層應依據適當之基準編製2018年度企業社會責任報告書，包括參考全球永續性標準理事會(Global Sustainability Standards Board, GSSB)發布之GRI準則(GRI Standards)，並應設計、執行及維護與報告編製相關之內部控制，以蒐集並揭露報告書內容。

本事務所責任

本事務所係依照財團法人中華民國會計研究發展基金會所發布之確信準則公報第一號「非屬歷史性財務資訊查核或核閱之確信案件」之要求規劃並執行有限確信工作。

二、 確信工作

有限確信案件中執行程序之性質及時間與適用於合理確信案件不同，其範圍亦較小，所取得之確信程度明顯低於合理確信案件。為取得有限確信，本事務所於決定確信程序之性質及範圍時曾考量台玻公司內部控制之有效性，但目的並非對台玻公司內部控制之有效性表示意見。

為作成有限確信之結論，本事務所已執行下列工作：

- 與台玻公司之管理階層及員工進行訪談，以瞭解台玻公司履行企業社會責任之整體情況，以及報導流程；
- 透過訪談、檢查相關文件，以瞭解台玻公司之主要利害關係人及利害關係人之期望與需求、雙方具體之溝通管道，以及台玻公司如何回應該等期望與需求；

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- 針對報告中所選定之永續績效資訊進行分析性程序；蒐集並評估其他支持證據資料及所取得之管理階層聲明；如必要時，則抽選樣本進行測試；
- 閱讀台玻公司之企業社會責任報告書，確認其與本事務所取得關於企業社會責任整體履行情況之瞭解一致。

三、先天限制

因企業社會責任報告中所包含之非財務資訊受到衡量不確定性之影響，選擇不同的衡量方式，可能導致績效衡量上之重大差異，且由於確信工作係採抽樣方式進行，且任何內部控制均受有先天限制，故未必能查出所有業已存在之重大不實表達，無論是導因於舞弊或錯誤。

四、品質管制與獨立性

本事務所遵循審計準則公報第四十六號會計師事務所之品質管制之規範，建立並維護完備之品質管制制度，包含遵循職業道德規範、專業準則及所適用法令相關之書面政策及程序。本所亦遵循會計師職業道德規範中有關獨立性及其他道德規範之規定，該規範之基本原則為正直、公正客觀、專業能力及盡專業上應有之注意、保密及專業態度。

五、結論

依據本事務所執行之程序及所獲取之證據，未發現台玻公司所選定之永續績效資訊有未依照適用基準編製而須作重大修正之情事。且本事務所未發現台玻公司 2018 年度企業社會責任報告書有未依據 GRI 準則(GRI Standards)之核心選項編製而須作重大修正之情事。

安永聯合會計師事務所

會計師：蕭翠慧



民國一〇八年六月二十八日

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附件一：

編號	頁次	內文標題	標的資訊	適用基準
1		符合性確信	台玻揭露 2018 年度企業社會責任報告書係依據全球永續性標準理事會(Global Sustainability Standards Board, GSSB)發布之 GRI 準則(GRI Standards)之核心選項編製	GRI 準則(GRI Standards)核心選項
2	46	3.1 台玻產品	台玻產品 2018 年無違反產品健康與安全、標示及市場推廣相關法規，亦無發生產品被禁止銷售之事件；亦無涉及反競爭行為、反托拉斯與壟斷措施之法律訴訟	公司適用之商品標示法、食品安全衛生管理法、國際反托拉斯法、消費者保護法
3	68	4.1 永續環境策略-環保法規遵循	2018 年環保違規事件裁罰金額	公司適用之環境法規及公司統計資料
4	70	4.2 永續資源管理-玻璃循環與再利用	2018 年度平板玻璃及玻璃容器回收玻璃使用量佔比	公司統計資料
5	71	4.2 永續資源策略-能源管理	2018 年台玻各項能源使用量	公司統計資料
6	71	4.2 永續資源策略-能源管理	2018 年平板玻璃、玻璃容器能源耗用強度	公司統計資料
7	72	4.2 永續資源管理-溫室氣體管理	2018 年台玻各產品碳排放量-直接碳排放量 (噸 CO ₂ e)	公司統計資料
8	72	4.2 永續資源管理-溫室氣體管理	2018 年台玻各產品碳排放量-間接碳排放量 (噸 CO ₂ e)	公司統計資料
9	87-88	5.1 人才與福利-員工新進率及離職率統計	2018 年員工新進率與離職率統計	公司統計資料
10	93	5.1 人才與福利-育嬰假執行情形	2018 年員工育嬰留停情形	公司統計資料
11	99	5.3 安心職場-職業安全管理	2018 年失能傷害頻率、失能傷害嚴重率、缺席率	公司統計資料
12	102	5.3 安心職場-勞動安全檢查與法令遵循	2018 年職業安全違規罰款金額	公司適用之職業安全法規及公司統計資料

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