TAIWAN GLASS IND. CORP.

2020

CORPORATE SOCIAL RESPONSIBILITY REPORT

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About This Report

Since its foundation in 1964, Taiwan Glass Ind. Corp. (TGI) has committed to the development of the glass industry. It constantly pursued innovation and the development of new products, fulfilling corporate social responsibility as a good global citizen. TGI has issued 8 Corporate Social Responsibility Reports, with the first Corporate Social Responsibility Report published in 2013, which demonstrates 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, including “Sustainability Communication”, “Ethical Governance”, “Quality & Service”, “nGreen Operation” “Friendly Workplace” and “Community Care”, show TGI's efforts and results in sustainable development indicators such as the economy, environment, employee care, human rights and product responsibility in 2020, which will be further illustrated with relevant statistics.

TGI created a designated section on the company website for the public and stakeholders to learn more about TGI's CSR initiatives. In this 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 Ind. Corp.For other key terms, letter abbreviations, or technical terms, used in this report will be noted on the same pages.

Report Coverage and Calculation Basis

This report covers TGI's results in corporate social responsibility from January 1, 2020, to December 31, 2020. Some content also relates to projects in 2020 and beyond, as well as future policies, objectives, and plans, which all form part of the report.

The scope of the 2020 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). The 2020 data is presented in international generic indicators. If the index relates to other regions, these are separately described in the report. 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 2019.

Report Writing Principles and Programme

The content and structure of TGI's 2020 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:

- 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

All materials and data in this report were collected by every department and a draft of the report was submitted to the CSR group. The individual team members will proofread and revised their particular areas of data and content afterward. 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 2020 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 July 2021
- Previous version: Published in June 2020

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 ‘2020 Corporate Social Responsibility Report, please contact us as follows:

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Message from the Chairman

Chairman Lin, Por Fong

In the first half of 2020, the world was affected by the rapid-spread COVID-19 pandemic and lockdown measures. However, the global economy has slightly improved since each government has successively launched large-scale monetary policies and relief packages. With the effective containment of the virus, economic recovery in both Taiwan and Mainland China has been boosted. It is expected that the global economy will gradually recover after the vaccination in 2021. The IMF raised the global economic growth forecast from the preliminary estimate of 5.5% to 6% – the largest increase in 40 years, of which Taiwan's growth was 4.7%, and 8.4% to Mainland China. Some central banks have even started raising interest rates in response to the advent of inflation. On the whole, there are still countless contingencies that exist in face of coronavirus. We look forward to importing effective vaccines to curb the COVID-19 pandemic.

In 2020, Taiwan Glass faced sluggish market demand due to the pandemic in the first half-year. However, in the second half, industry demand increased, and the group's annual profit before tax was 2.99 billion. The following are the business status of each product:

In terms of flat glass, on account of the small scale of the Taiwanese market and low-price competition of imported glass, the price remained low and experienced a slump. Nonetheless, Taiwan Glass continues to strengthen its production and sales system, increased added value of products, and promote Low-E glass, which is in line with current environmental protection and energy conservation. In addition, it provides various products based on domestic construction projects, and the tendency of diversified decoration market and changeable consumption habits, hoping to expand demand and boost the sales growth.

In the first half of the year, the sheet glass industry in Mainland China had impacted by the COVID-19 pandemic. When the real estate agency postponed the date to resume their business, orders for glass significantly extended. Most of the factories stopped their operation and repaired their equipment because they all faced pressure from limited inventory and funds. When most of the industries recovered in the second half of the year, the demand rapidly rebounded. However, the actual production capacity kept declining due to the new production capacity was restricted by the government, and the backward production capacity gradually withdrew from the market as they were under the force of environmental protection policy. At the same time, the need for Photovoltaic

transparent glass rose so suddenly that the demand exceeded the supply. Thus, companies turned to produce Photovoltaic transparent glass to gain more profits which caused the decrease of float glass production and rise in its price. In general, after all, the economy is recovering this year.

For new material glass, in response to the increased demand for screen protectors in the Chinese and Indian markets, 0.33mm and 0.44mm screen protectors will be produced this year, improving quality and increase the aluminum content to achieve the goal of no surplus of every product.

As for the fiber business, Taiwan Glass's fiberglass products continue to reduce costs and accelerate development to increase product value. For FRP, the new kiln, in cooperation with Owens Corning of the United States, has improved capacity and increased efficiency, along with the most advanced fiberglass formulation and production technology. As a result, we are steadily supplying customers with more comprehensive high performance and environmentally friendly products.

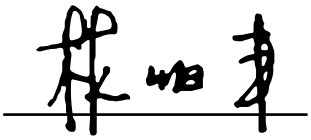
Electronic-grade fiberglass fabric responds to the market's demands in the future. The ultra-thin fiberglass fabric #1010 has been developed and supplied successfully to meet customer demand specifications. Meanwhile, conforming to the direction of 5G deployment, long-distance business opportunity, and new electric product stocking needs, Taiwan Glass has developed low-dielectric (Low DK) fiberglass fabric certified and continuously adopted by international terminal manufacturers.

As for kitchenware containers, both production and sales have increased, especially container products that domestic and foreign customers favor. The unit price, thus, is gradually rising and forming long-term stable orders. Additionally, TG, Taiwan Glass's private brand, grand opening on the Taiwan Glass Building 1F in December 2020, positively affects product sales and promotion. Moreover, the design of TG products and packaging won the Red Dot Design Award in 2021.

Looking ahead to the business development strategy, Taiwan Glass, a leading corporation in the domestic glass industry, will continue to deepen the application of energy-saving glass products. We conduct technical development on fiberglass fabric that is forward-looking and high value-added, continuously re-examine and optimize costs and outcomes to strengthen firm competitiveness. Furthermore, to promote the reuse of resources, we constantly implement process optimization and energy saving, applying the “Certificate of Cleaner Production Assessment” of the Industrial Bureau. Additionally, we are committed to comprehensive intelligent and lean production, testing producing efficiency and energy-and-material consumption regularly, strengthening the response of labor safety, environmental safety, and human resources management, as well as risk awareness control. Based on the glass industry as a foundation of TGI's operations, we pursue sustainable development and be recognized as Excellent Factory in the Cleaner Production Assessment by the Bureau of Industry.

Confronting the crunch of the current energy transition, we expect the government to formulate practical energy-saving and energy-creation policies actively. We earnestly hope the government provides long-term stable and abundant energy, also builds investment-friendly circumstances to strengthen corporate investment confidence.

Chairman of TAIWANGLASS



Key Achievements of the Year

FTSE4 Good	TGI was again selected to FTSE4 Good in Taiwan Index Plus, which shows our performance of practicing ESG
GREEN FACTORY	TGI Taoyuan Factory successively obtained the Certificate of Cleaner Production Evaluation System Qualification Certificate from the Industrial Plant Green Factory.
Silver Award	TGI has been awarded Silver Award for the past six years among “Traditional Manufacturing” companies in Corporate Sustainability Report Award.
100%	100 % of flat glass products passed EU CE, US ANSI, Taiwan CNS and other relevant standards.
100%	Fiberglass products were 100% compliant with RoHS and REACH specifications.
100%	100% of glass food container products met Taiwan food container and packaging hygiene standards, and all factories met FSSC 22000 certification for environmental protection and food safety.
47.92%	The average recovery and reuse rate of food-holding glass products reached 47.92% and obtained the resource renewable green product certification of the Bureau of Industry
-12.5%	Lightweight bottle technology reduces 12.5% of product weight and is 100% recyclable.
88%	In 2020 the average satisfaction of all departments in customer surveys is 88%.
10.6%	10.6% of employee turnover rate in 2020, remaining low turnover rate in recent years, which indicates the stability of employee retention.
100%	100% of employees that applied for parental leaves in 2019 retained in 2020
29.05 years	144 employers retire in 2020 in an average of 29.05 serving years. The chairman/president issue the retirement memorial medal, showing appretiation to their long-term dedication
16.8 hours	In 2020, the average hours of education and training for general personnel of TGI are 16.8 hours, 19.1 hours for grassroots supervisors, 7.9 hours for intermediate supervisors, and 1.8 hours for senior supervisors.
155%	The average salary of TGI personnel is 155% higher than the local minimum salary.
90.47%	In 2020, TGI adopted the <New Staff Counselor System> and the in-service rate is 90.47% by December 31st, 2020
2.53 million	TGI donated NT$2.53 million in 2020
147 bags	In 2020, all factories of TGI donated a total of 147 bags of blood in response to the “Give blood, save lives” principle

CH1 Sustainability Communication

1.1 TGI Sustainable Management
1.2 Stakeholder Communication
1.3 Identification of Material Issues

Achievements of Sustainable Operation in 2020

FTSE4 Good	Taiwan Glass was again selected as a constituent of the Taiwan Index Company's Perpetual Index, demonstrating our performance in practicing ESG.
Silver Award	TGI has been awarded a silver price for the past six years among “Traditional Manufacturing” companies in the CSR Report Award.
8 categories	TGI identified eight categories of stakeholders, including shareholders/investors/financial institutions, employees, business customers, suppliers, contractors, sub-contractors, dealers and government/authorities.
8 Material Issues	In 2020, we identified a total of 8 material issues and an effective management policy was assigned to each of these perspectives.

1.1 TGI Sustainable Management

TGI has set sustainable development as our core value and constructs the corporate social responsibility principle that covers the economy, environment and society. While managing the sustainable leading position in the industry, we protect the rights and interests of stakeholders and the social environment, lighten environmental impact to meet the long-term purpose and value of the business.

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:

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 all strictly abide by the code of honest business, avoidance of conflict of interest, anti-corruption, and conduct comprehensive risk management.

Strengthening sustainable environment

TGI complies with environmental protection laws and regulations, continuously improving its work environment, reducing environmental pollution, 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 focus on the industrial relation which includes employer-employee relation, employee benefits and welfare, and a 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.

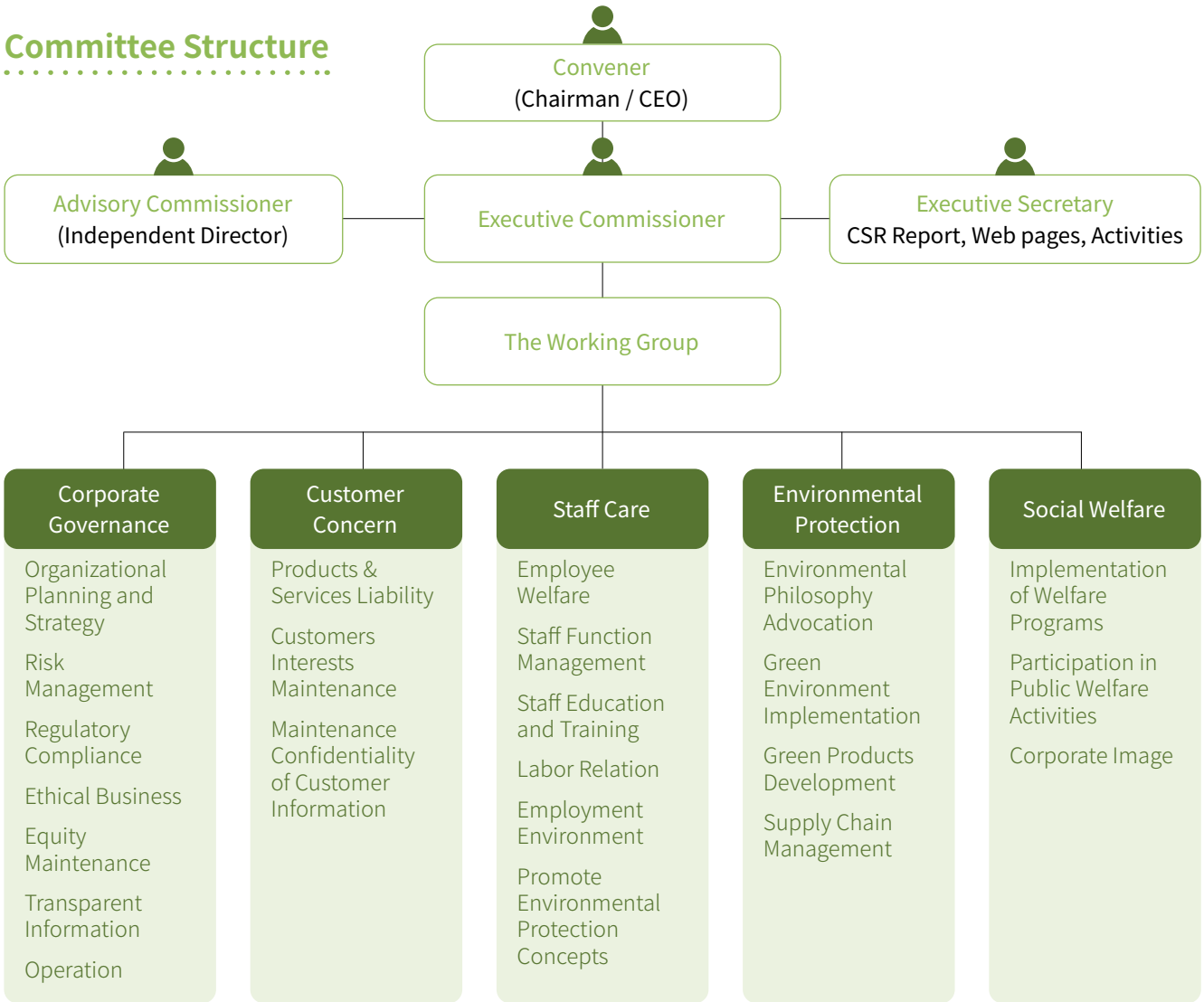
Corporate Social Responsibility Committee

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

TGI CSR Committee is held every six months. It can be adjusted flexibly if necessary, but it should be held at least once a year. In 2020, two meetings have been held. The agenda includes motion discussion on the progress of applying Green Factory Certification, the CSR performance of the subsidiaries in this year, and the project of applying for Green Building Certification.

Go to TG website.

Committee Structure



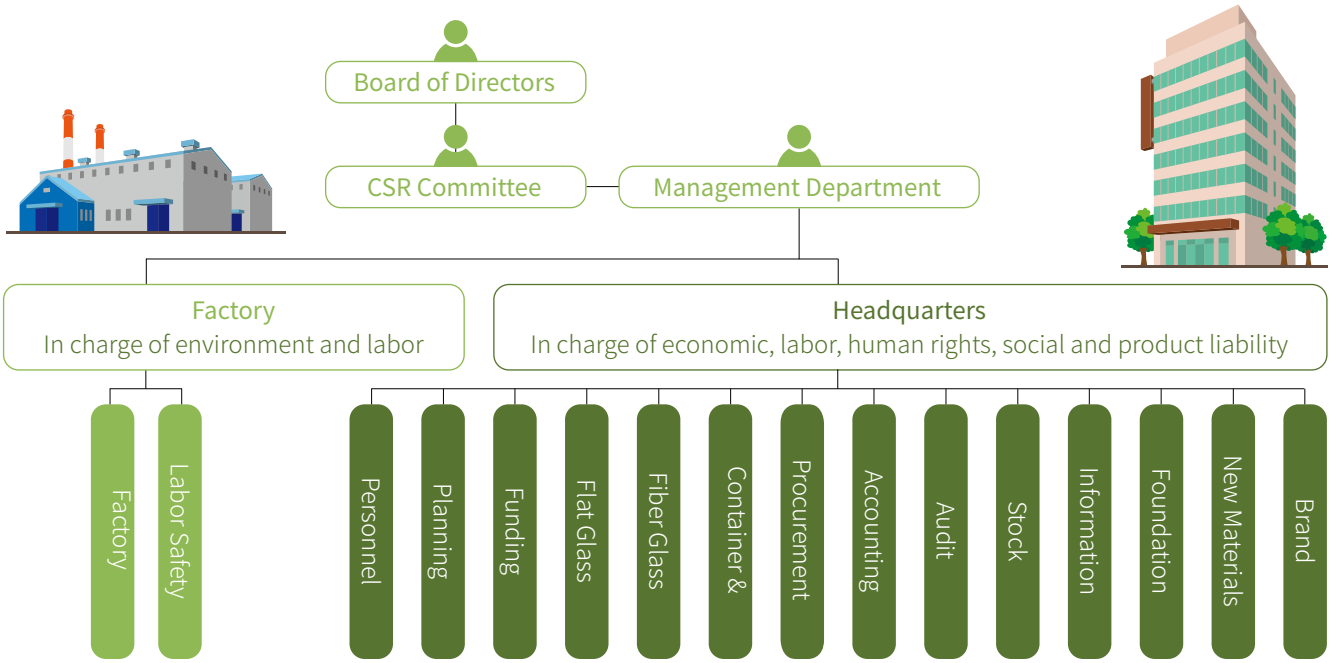
Committee Members

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 Tsing Yuan	Male	Independent director
Executive Commissioner	Su Yu Te	Male	COO of Fiberglass Business Department
Executive Commissioner	Hong You Qin	Male	Vice President 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 the 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 follows:

01 The basis for the compilation of the CSR report was by identifying stakeholders and Material Topics

02 By analyzing Material Topics,the working group evaluated the current execution and counterstrategies.

03 All the economic, environmental and social issues arising from TGI's business activities were disclosed in the CSR report.

04 Members of the working group reviewed and amended the content and data that they were responsible for respectively in the first draft.

05 After the first draft of the revised version was completed, the CSR report was ultimately reviewed and checked by the supervisors in various departments.

06 The final draft was verified by an independent third party.

07 The CSR report was submitted to the chairman for final review before being published.

2020 CSR Initiatives and Achievements

TGI has been awarded “Silver Award” in TCSA (Taiwan Corporate Sustainability Award) among the traditional manufacturing enterprises for 6 consecutive years. 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.

Alliance for Sustainable Development Goals, A · SDGs

TGI is dedicated to integrating SDGs into its business and development strategies, complying with the regulation of Sustainable Development Goals Alliance, utilizing the business powerto influence the industry. Therefore, TGI joined Alliance for Sustainable Development Goals (A · SDGs), an organization founded in August 2018 by the Taiwan Sustainable Energy Research Foundation and the Taiwan Enterprise Sustainability Research Center with multi-disciplinary stakeholders such as enterprises, government agencies, academic institutions, and non-governmental organizations.

The alliance has seen “globalization”, “integration”, “partner relationship”, “business engagement” and “education” as its development strategies. Through SGDs, a universal language of the world, TGI hopes that Taiwan can strive for sustainable development and cultivate core competitiveness, making a commitment to building a good society and a new sustainable environment with all stakeholders.

Green factory promotion and Certificate of Cleaner Production Assessment

TGI values the development of the environment. As a part of the manufacturing industry, we emphasize saving energy and resources and reducing waste output. Since 2018, we have successively applied for the “Certificate of Cleaner Production Assessment” of the Industrial Bureau at Lukang Factory and Taoyuan Factory. The improvement assessments of green buildings are implemented simultaneously. In 2020, Taoyuan Factory took the lead applying for the green building assessment to improve the old plant and successfully obtained the EEWH in May 2021 to fully comply with both the “internal” and “external” of the green plant and practice TGI's vision of sustainable energy-saving and green operation. It is prominent to show our sustainable leadership in the glass manufacturing industry.

FTSE4Good TIP Taiwan ESG Index

Partnered with FTSE Russell, Taiwan Index Plus (TIP) Corporation created the FTSE4Good TIP Taiwan ESG Index, an investment index covers environment (E), society (S), governance (G) and financial index. In 2019 and 2020, Taiwan Glass was selected as a constituent of FTSE4Good TIP Taiwan ESG Index and awarded an exclusive logo in recognition of the ESG dedication of the selected constituents. Taiwan Glass will keep communicating with stakeholders to fulfill corporate social responsibility, promote environmental sustainability, contribute to Taiwan's economy, and lead the better development of the industry.

臺灣永續指數成分股證明
CERTIFICATE OF MEMBERSHIP
台灣玻璃工業股份有限公司
Taiwan Glass Ind. Corp.
FTSE4Good
TIP Taiwan ESG Index
TIP

1.2 Stakeholder Communication

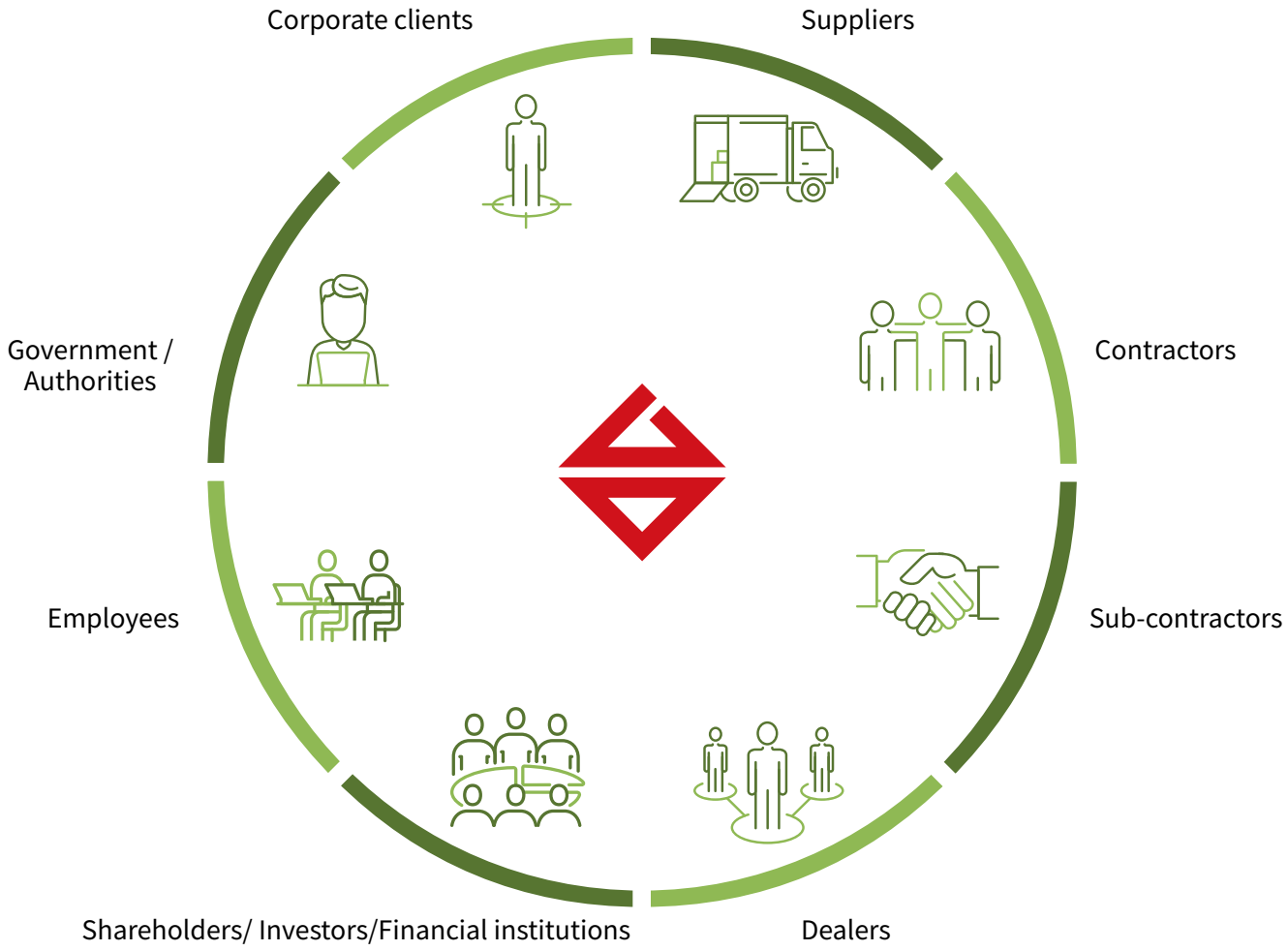
Stakeholder Engagement & Prioritization of Sustainability Issues

Through multiple 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 effectiveness in implementations, to ensure response and meet the needs and expectations of stakeholders.

TGI analyzes and screens sustainability 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:

Identification	**Organize and select stakeholders** According to the AA1000 SES Stakeholder Engagement Standard, a group of important stakeholders is drawn. **Collect and organize sustainability issues**
Analysis	Collect feedback from communication channels such as the official website, e-mail, visits, conferences as well as seminars to conduct the annual CSR questionnaires to analyze economic, environmental, social issues along with other sustainability issues for stakeholders in order to identify 2020 material issues.
Reference	Refer to the required disclosure items of material issues in the GRI Standards,and consolidate the management guidelines formulated by each department.
Planning	Confirm the sustainable development direction and conform to the international sustainable governance framework, develop a sustainable strategy and incorporate annual material issues to adjust the sustainable development items.
Response	Disclose sustainability management policies and performance on the official website, Market Observation Post System and CSR reports.

TGI Stakeholders



Stakeholder Communication Channel

TGI has set up various channels for communications and appeals to implement the principle of honesty, immediate processing, and direct 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.

TGI cares about the voices of our stakeholders and immediately reviews and handles 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:

The main contents of TGI and every stakeholder:

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

Stakeholders	Significance for TGI	Key concerns	Methods of communication	Corresponding section	Communication frequency
Shareholders/ investors/ financial institutions	Shareholders, investors and financial institutions are the foundation of TGI's operations, and TGI's steady growth is its best response	· Economic Performance · Anti-corruption · Corporate Governance	· Reports business revenue information	2.2 Integrity TGI 5.1 Talent Structure 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, annual report, stock affairs, audits and major announcements in the "Information Disclosure" section on the TGI website		Every Year/ aperiodic
			· Institutional investors conference		Aperiodic
Employees	Talent is the driving force of TGI's operations. Caring for, and nurturing employees is the responsibility of TGI.	· Compensation and Benefits · Talent recruitment and retention · Labor Right	· Internal information system, ex. internal network, announcement	2.1 About TGI 5.1 Talent Structure and Benefits 5.2 Employee Care & Development 5.3 Safe Workplace and Health Promotion	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
Corporate clients	To meet the needs of customers/ consumers for products is the goal of TGI's business and innovation	· Product and Customer Service Quality · Innovation and R&D · Innovation and R&D	· Questionnaire	2.1 About TGI 2.2 Integrity TGI 3.1 TGI Product 3.2 Product Quality 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 direct insight into the clients and market trends. For example, every two years 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

Stakeholders	Significance for TGI	Key concerns	Methods of communication	Corresponding section	Communication frequency
Dealers	TGI maintains good relations with distributors to ensure the quality of products and services	· Product and Customer Service Quality · Innovation and R&D · Innovation and R&D	· 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 Integrity TGI 2.3 Risk Management 3.2 Product Quality 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 France JEC Exhibition and China Composites Expo		Once a year
Suppliers	The stability and delivery of suppliers affect TGI's products and shipments, so we maintain a good interaction with it and we attach great importance to it	· Effluents and Waste · Product and Customer Service Quality · Raw Material 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 Integrity TGI 2.3 Risk Management 3.2 Product Quality 3.3 Research and Innovation	Aperiodic
			· Supplier audit		Quarterly evaluation
Contractors	TGI communicates closely with contractors to ensure that both parties attach importance to engineering and industrial safety	· Occupational Health and Safety · Economic Performance · Effluents and Waste	· Questionnaire survey	2.1 About TGI 2.2 Integrity TGI 5.1 Talent Structure 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

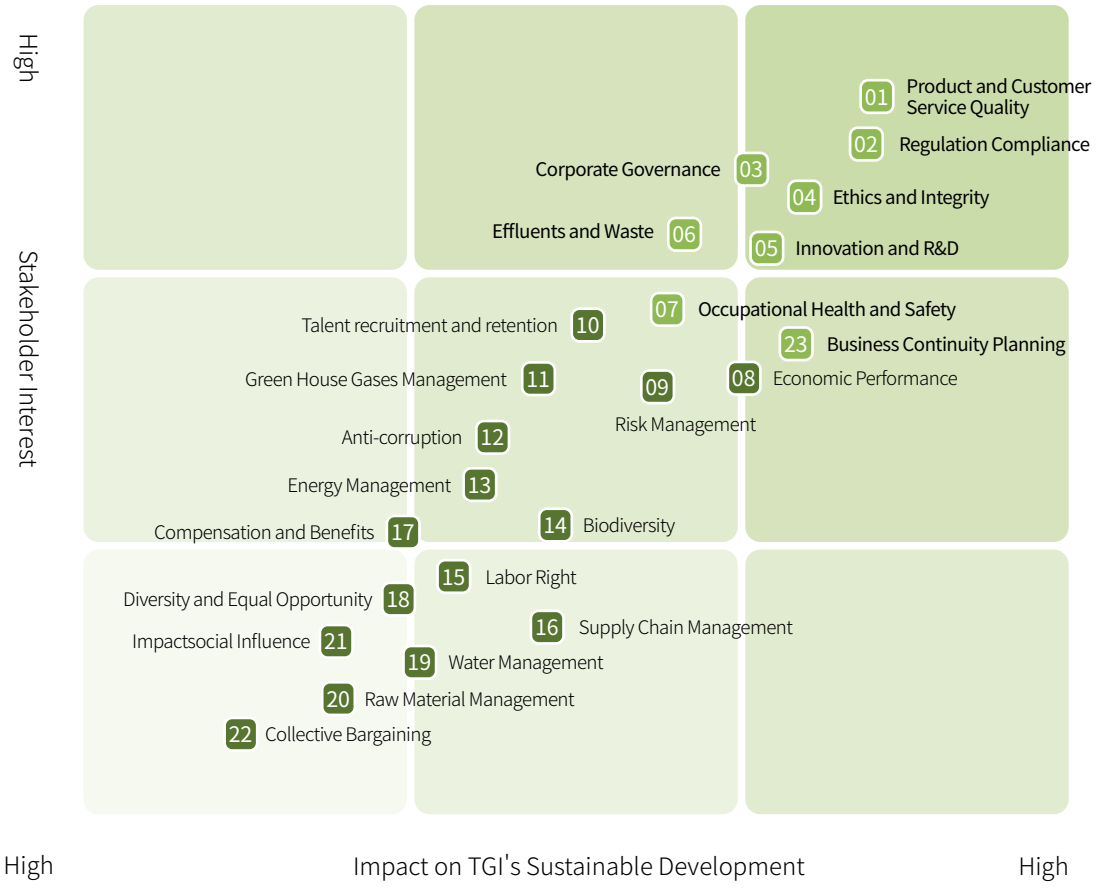
Stakeholders	Significance for TGI	Key concerns	Methods of communication	Corresponding section	Communication frequency
Sub-contractors	The sub-contractors are a partner of TGI. Ensuring that its quality is consistent with ours is the requirement of TGI for our products.	· Occupational Health and Safety · Effluents and Waste · Talent recruitment and retention	· Questionnaire	2.1 About TGI 2.2 Integrity TGI 2.3 Risk Management 3.2 Product Quality 5.3 Safe Workplace and Health Promotion	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	As a large enterprise, it is the duty of TGI to maintain good relations with the competent authority, and cooperate with and abide by the laws and regulations of the competent authority	· Biodiversity · Effluents and Waste · Regulation Compliance	· Maintain a good interaction with the competent authorities and attend public hearings held by the competent authorities	2.2 Integrity TGI 4.3 Green Production Management 5.3 Safe Workplace and Health Promotion	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

1.3 Identification of Material Issues

TGI 2020 CSR report will focus on “Business Continuity Planning” and issued eight main items due to impact by the COVID-19. The report in conjunction with the 2019 CSR Report, the global sustainability trends, industry standards, and feedback from supervisors.

Prioritization of Material Issues

01 Product and Customer Service Quality	09 Risk Management	17 Compensation and Benefits
02 Regulation Compliance	10 Talent recruitment and retention	18 Diversity and Equal Opportunity
03 Corporate Governance	11 Green House Gases Management	19 Water Management
04 Ethics and Integrity	12 Anti-corruption	20 Raw Material Management
05 Innovation and R&D	13 Energy Management	21 Indirect Economic Impactsocial Influence
06 Effluents and Waste	14 Biodiversity	22 Collective Bargaining
07 Occupational Health and Safety	15 Labor Right	23 Business Continuity Planning
08 Economic Performance	16 Supply Chain Management	



Material Issues and their impacts on stakeholders

Prioritization	Material Issues	Corresponding UN SDGs	Responding GRI specific topic	Internal	External				
				TGI	Suppliers	Contractors	Corporate clients	Dealers	Sub-contractors
1	Product and Customer Service Quality	12	GRI 416 GRI 417	●	▲		▲	▲	▲
2	Regulation Compliance	12	GRI 307 GRI 419	●	▲	▲	▲		▲
3	Corporate Governance	8	-	●	▲	▲			▲
4	Ethics and Integrity	12	GRI 205 GRI 206	●	▲		▲	▲	▲
5	Innovationand R&D	9	-	●	▲		▲	▲	
6	Effluents and Waste	6, 13	GRI 306	●					
7	Occupational Health and Safety	3, 8	GRI 403	●	▲	▲		▲	▲
8	Business Continuity Planning	3, 13		●	▲		▲	▲	

Material Issues & Management Policy

Topic	Significance for TGI	Policies and Commitments	Target	2020 implementation results	Corresponding chapter
Product and Customer Service Quality	TGI has a high-quality brand image, is committed to providing customers with excellent and reliable product quality, and protecting consumer rights and interests are the primary task. Therefore, all products have obtained relevant certificates or passed various quality, manufacturing safety and food safety certifications at home and abroad.	To achieve prosperous economic growth, environmental sustainability and social co-prosperity, reduce the probability of risk and reduce the impact of its impact, we actively introduce management systems such as product quality, product safety, environmental safety and health, transportation safety systems as continuous improvement products Quality and risk countermeasures.	1 Continuing implementation of quality management of each product line and complying with CNS standards, and ANSI standards. 2 Promote electronic grade sheet glass to pass various product certifications.	1 Continue to pass the ISO 9001 quality management system. 2 Passed the ISO 45001 occupational safety and health management system and obtained the resource regeneration green product certification of the Bureau of Industry.	3.2 Product Quality 3.4 Customer Service

Topic	Significance for TGI	Policies and Commitments	Target	2020 implementation results	Corresponding chapter
Regulation Compliance	As a multinational company, TGI's operations are throughout the Asia-Pacific region. Therefore, TGI must comply with the laws and regulations of many countries, confirm the most important regulatory compliance issues for TGI, and establish corresponding compliance systems to avoid company risk. In addition, it is more important to be able to protect the most basic labor rights of employees.	TGI has a legal affair and audit department to ensure that each department comply with environmental regulations, labor safety regulations, Labor Standards Act, product regulations and related regulations, and provides employees with relevant education and training to ensure that everyone understands the relevant agreements. We are also committed to complying with the government's environmental protection policies.	1 There will be no major violations (the fine exceeds NT$1 million). 2 Annual labor-management meeting and training for new employees are held regularly.	1 No violations occurred. 2 Labor-management meeting and training for new employees are held as scheduled, effectively proclaiming the concept and awareness of the prevention and control of laws and regulations. 3 Two cybersecurity seminars are held in 2019, and employees of all factories can recognize the importance of cybersecurity and personal information protection.	2.1 About TGI 2.2 Integrity TGI
Corporate Governance	TGI adheres to the concept of sustainable management, pays attention to shareholders' rights and interests, takes care of employees, and gives back to society. It effectively manages and executes the board of directors and improves the foundation of corporate governance. Corporate governance focuses on operational development, continuously improves the competitiveness of TGI transparent information for stakeholders to understand and reference, and self-improving the company's operating value.	Integrity management is the most basic commitment and responsibility that TGI gives all stakeholders. Transparent management creates stable profits and sustainable operation.	Through methods such as interest avoidance, anti-corruption, and complaint mechanisms, we hope to achieve risk management, compliance with laws and regulations, and integrity management to protect shareholders' rights and implement business philosophy. In addition, a complete performance assessment system to the Board of Directors has been established to enhance its effectiveness of operation, thereby intensifying corporate competitiveness and building investor confidence. **Short-term Goals** 1 Advocate the concept of interest avoidance 2 Educate new and incumbent personnel in anti-corruption 3 Continue to improve complaint mechanisms 4 Complete the annual board of directors' self-assessment based on the law **Long-term Goals** 1 No incident of interest avoidance occurs. 2 No circumstance of corruption violation. 3 Ensure the complaint mechanism is transparent and unblocked. 4 Incorporate functional committees into the scope of self-assessment, and evaluate the corporate's board of directors and functional committees by an external professional organization.	1 When the audit committee in 2019 considers the audit plan for 2020, the attendees abstain from the meeting and are approved by the independent directors. 2 No corruption, bribery or extortion occurred in 2020. 3 All the appeal cases of the interested parties have been dealt with in the first time, and the appeal contents have been properly coordinated. 4 The score of the 7th Corporate Governance Evaluation is 71.86 points, ranking 36%~50% among listed companies. 5 The Board of Directors passed the "Regulation of Board Self-assessment or Peer-assessment" and issue a self-assessment questionnaire for performance evaluation of directors at the end of the year. The evaluation results are expected to be reported to the Board of Directors in March 2021.	2.1 About TGI 2.2 Integrity TGI

Topic	Significance for TGI	Policies and Commitments	Target	2020 implementation results	Corresponding chapter
Ethics and Integrity	Based on a clean, transparent and responsible business philosophy, TGI has formulated relevant policies based on integrity and established a good corporate governance and risk control mechanism to strengthen the integrity of corporate culture and create a sustainable business environment.	In the rules of the procedure of the board of directors, TGI sets out the clauses for avoiding the interests of the directors. For matters of the board of directors, who have an interest in the directors themselves or their legal representatives and cause harm to the interests of the company, they may present their opinions and answers in person. Join the discussion and voting, and must avoid during the discussion and voting, and shall not act on behalf of other directors to exercise their voting rights. TGI has a "Ethical Corporate Management Best Practice Principles", "Handling Measures for Reporting Cases of Illegal and Unethical or Dishonest Conduct" and a "Guidelines for Integrity for Employees in Performing Duties."	We strictly abide by the code of good faith management and abide by relevant laws and regulations to maintain a clean corporate image.	TGI has planned a complete education and training for new employees, and signed the "Employee's Guidelines for Conduct for Performing Duties". It regularly organizes education, training and promotion for relevant personnels, and employees can fully understand the importance of maintaining the company's integrity. In 2020, there was no corruption, bribery or extortion among the employees of TGI. TGI's external donations or sponsorships are handled in accordance with relevant laws and the company's internal regulations to prevent giving or taking bribery and illegal political donations.	2.2 Integrity TGI
Innovationand R&D	TGI's technological process continues to breakthrough innovation, maintains industry-leading standards in the fields of environmental protection, energy-saving, photoelectricity, thinning and diversification, and actively develops high-quality environmentally friendly glass products related to green building materials. In order to ensure food safety for consumers, we are committed to obtaining various food safety certifications; various electronic product processes are towards lighter development, expanding the application of glass fiber composite materials, coupled with mature applications of technology and Internet of Things, Netcom equipment, mobile devices, and emerging unmanned driving The automobile and other industries will drive the growth of the demand for industrial fiberglass and electronic-grade fiberglass cloth.	We are committed to the improvement of technology and the research and development of new products, reducing pollution in the production process and mitigating the impact on the environment, and are more oriented toward the development of environmental protection and energy-saving related products as the main axis. In addition to establishing an internal innovation sharing mechanism and continuously strengthening the innovation vitality of the organization, it also assists customers and industries in cross-disciplinary innovation, including product innovation in cooperation with customers and green innovation in cooperation with suppliers.	1 Promote ultra-thin cloth, obtain ISO 50001 certification, cooperate with the Industrial Research Institute and United University, improve the recycling rate of broken glass, communicate with customers and technicians, absorb new ideas and integrate into their own know-how. 2 Improve the production capacity and quality of ultra-thin glass. 3 Cooperate with the advent of the 5G era, research and develop Low DK fiberglass cloth for printed circuit boards (PCB) for Netcom equipment.	1 The ultra-thin fiberglass fabric #1017 has started selling after being certified by customers in 2020. 2 In 2020, the average annual recycling rate of broken container glass reached 54.92%, and the recycling rate is increasing steadily.	3.1 TGI Product 3.3 Research and Innovation

Topic	Significance for TGI	Policies and Commitments	Target	2020 implementation results	Corresponding chapter
Effluents and Waste	Facing the continuous decline of the global energy resource supply, the demand side has grown year by year; TGI actively promotes the reduction of wastewater discharge and waste generation through the improvement of process efficiency, promotes green process energy conservation, and achieves sustainable operation and environmentally friendly enterprises aims.	We continue to promote environmental improvement programs and are committed to improving the efficiency of energy resources used in glass production. Through specific energy-saving measures, we can reduce operating costs and reduce environmental impact.	1 Continue to promote various measures and projects every year to improve process efficiency and reduce wastewater and waste. 2 Review the recycled water system and water saving measures every year to continuously reduce the discharged water and enhance the use of recycled water.	1 Lukang Factory and Taoyuan Factory passed the assessment and certification of the Cleaner Production System of the Industrial Bureau. (Taoyuan Factory obtained the certificate in 2020) 2 The Taoyuan Factory recovers the wastewater discharged from the backwashing of the resin softening tank, and can recover 41,975 cubic meters of water annually. 3 The Changbin Factory divides water according to medicine washing and backwashing, and can recover 14,442 cubic meters of water every year.	4.3 Green Production Management
Occupational Health and Safety	Set up a special management unit by laws and regulations to plan and 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.	The objective of the occupational disaster management of TGI is based on the goal of zero disaster, and it is used as an indicator to improve various safety activities in the factory area.	1 TGI takes zero occupational injury as the goal of occupational disaster management, and reduces the Disabling Injury Frequency Rate (FR) and Disabling Injury Severity Rate (SR) by 20% each. 2 Hsinchu Factory, Taichung Factory, and Changbin Factory: Aiming at zero injuries per 100 days, a cumulative number of days without work injuries is set up to encourage employees to prepare daily. 3 Lukang Factory: work injury frequency ≦ 0.2hrs/person*year. 4 Lukang Flat Glass Factory: work injury frequency ≦ 0.04 hrs/person*year.	1 The reduction of FR by 9% and SR by 30% at the Changbin Factory reached the set target. 2 The whole group will have 1,876 general health check-ups and 2,898 special health check-ups in 2020, for a total of 4,414 person-times. 3 Luknag Flat Glass Factory conducted a gas leakage drill and continued to improve itself under the continuous non-work-related injuries.	5.3 Safe Workplace and Health Promotion

Topic	Significance for TGI	Policies and Commitments	Target	2020 implementation results	Corresponding chapter
Business Continuity Planning	To prevent risk during operation or sudden disruption of function, TGI has established a comprehensive risk management operation. Risk management involves lowering the occurrence rate and reducing the impacts of recognized risks. In addition, risk management aims to achieve a sustainable process by strengthening risk management, lowering business risk exposure, and improving crisis management.	In the face of physical disaster risk, each subsidiary of TGI has an emergency response procedure with plans for uninterrupted operations prepared to ensure that the company's overall operating conditions are not in danger. In the future, we will continue to focus on the trend of climate change and plan to improve the level of risk management countermeasures.	1 Regularly examine the updates of laws and regulations, estimate its impacts on the costs of Taiwan Glass, and analyze the possible expenditure and cost reduction. 2 There is a minimum inventory for each raw material manufacturer (2-3 months for foreign products of on-hand inventory, and 2-4 weeks for domestic products). The long-term contracts raise for essential raw materials. Manufacturers make regular and quantitative deliveries according to the demands of each firm to avoid stock out. 3 There is property insurance every year, with the coverage and standard rise annually. 4 Backing up the data daily and setting up various user permissions in the system to prevent data from leaking out and being used by inappropriate people. 5 Each factory owns its “emergency procedure” written by each occupational Safety Section through considering different situations.	1 In 2020, TGI Hsinchu Factory conducted a fire drill for 125 people. 2 Lukang Factory conducted a drill for sulfur dioxide leakage to have on-site personnel be familiar with the response process and rescue methods in 2020. 3 Taoyuan Factory implemented semiannual emergency response training in May and November 2020. There were 61 participants in May and 58 participants in November. 4 TGI Lukang Factory and Lukang Flat Glass Factory mobilized 45 participants in a joint fire drill.	2.3 Risk Management

CH2 Steady operation, Integrity governance

2.1 About TGI
2.2 Integrity TGI
2.3 Risk Management

Achievements of Corporate Governance in 2020

7 times	TGI convened 7 sessions of Board meetings in 2020.
	Formulate “Standard Operating Procedures for Handling Directors' Requests” to enhance board transparency
0 incidents	No TGI employee was involved in corruption, bribery or blackmail, and no political donation in 2020.

TG Business philosophy, goals and quality policy

Our Philosophy

TGI has upheld its belief in building high performance, laying a steady operation stralegy, 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 philosophy of honest hard work and focus on our core business of glass. 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.

In addition, TGI has worked closely with Japanese companies for many years. Chairman Lin, Por Fong has communicated with the public associations of related industries in Japan for a long time to promote the improvement of the economic and trade relations between Taiwan and Japan. Therefore, in 2019 Chairman Lin received “The Order of the Rising Sun” given by the Emperor of Japan, which laid a solid foundation for the international visibility and friendliness of Taiwan's industry and business community

Chairman Lin, Por Fong was awarded the “The Order of the Rising Sun “ by the Ministry of Foreign Affairs of Japan

2.1 About TGI

TGI Profile

TAIWAN GLASS IND. CORP.	
Market	Oversea Chinese/foreign investment/publicly traded, TWSE listed company
Stock Code	1802, Taiwan Glass Ind. Corp.
Industry	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$11,758,874 thousand
Number of employees	Employees in Taiwan: 4,447
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

*Note：Please visit TGI'sofficial website for the history and TGI business philosophy.

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.

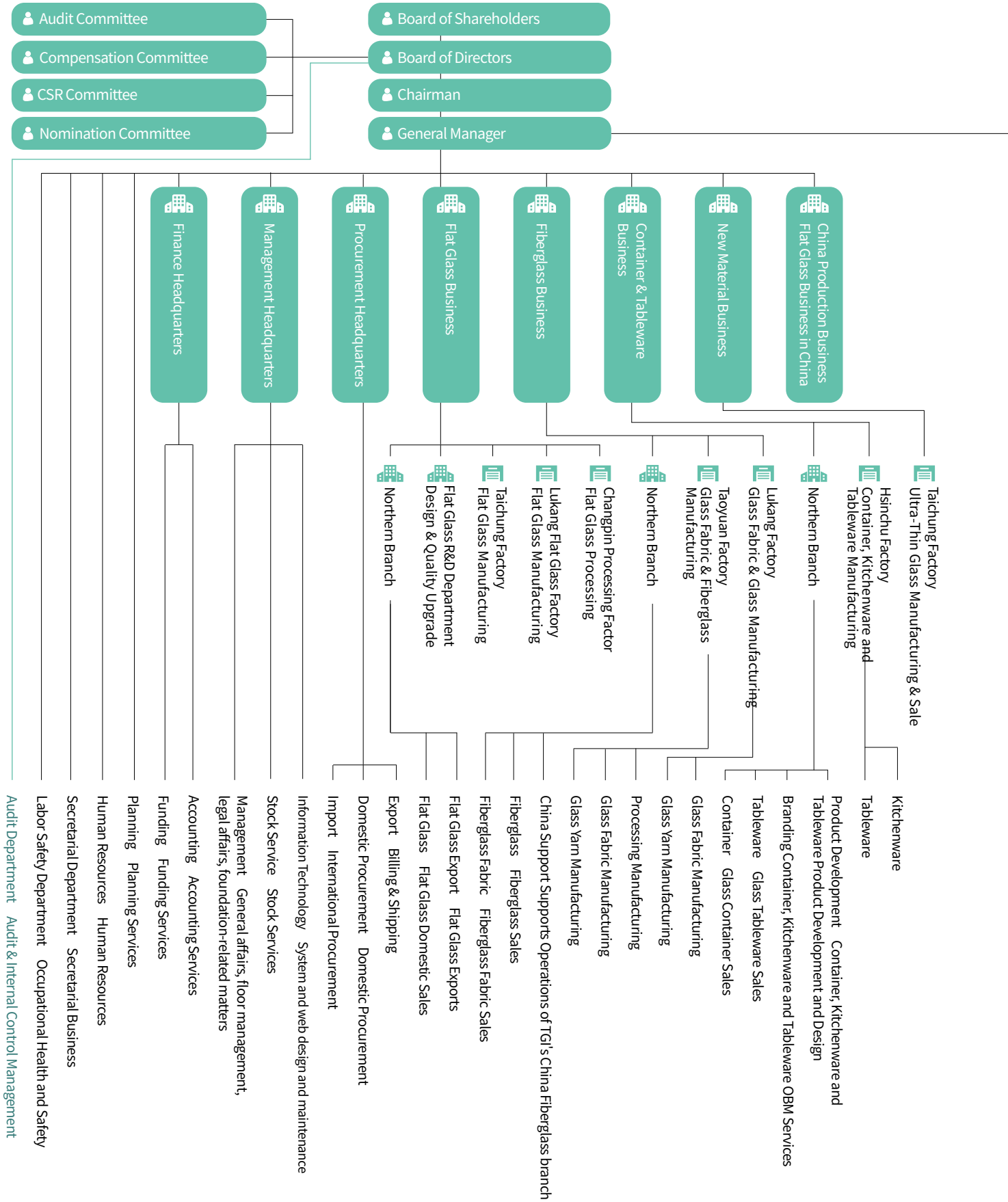
28 TG FENGYANG SILICA SAND CO., LTD.

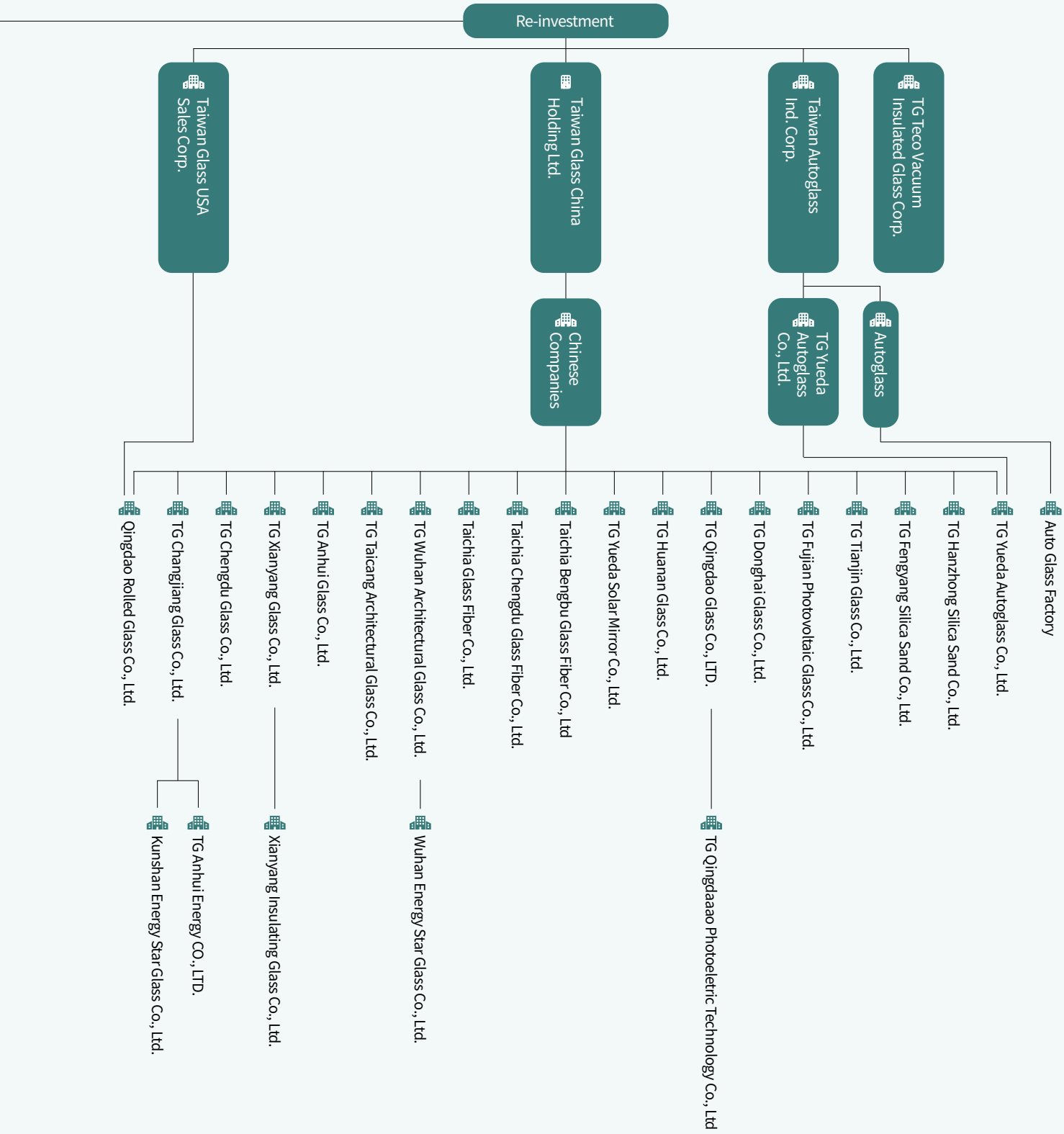
SODA ASH

29 SHIHLIEN CHEMICAL INDUSTRIAL JIANGSU CO., LTD.

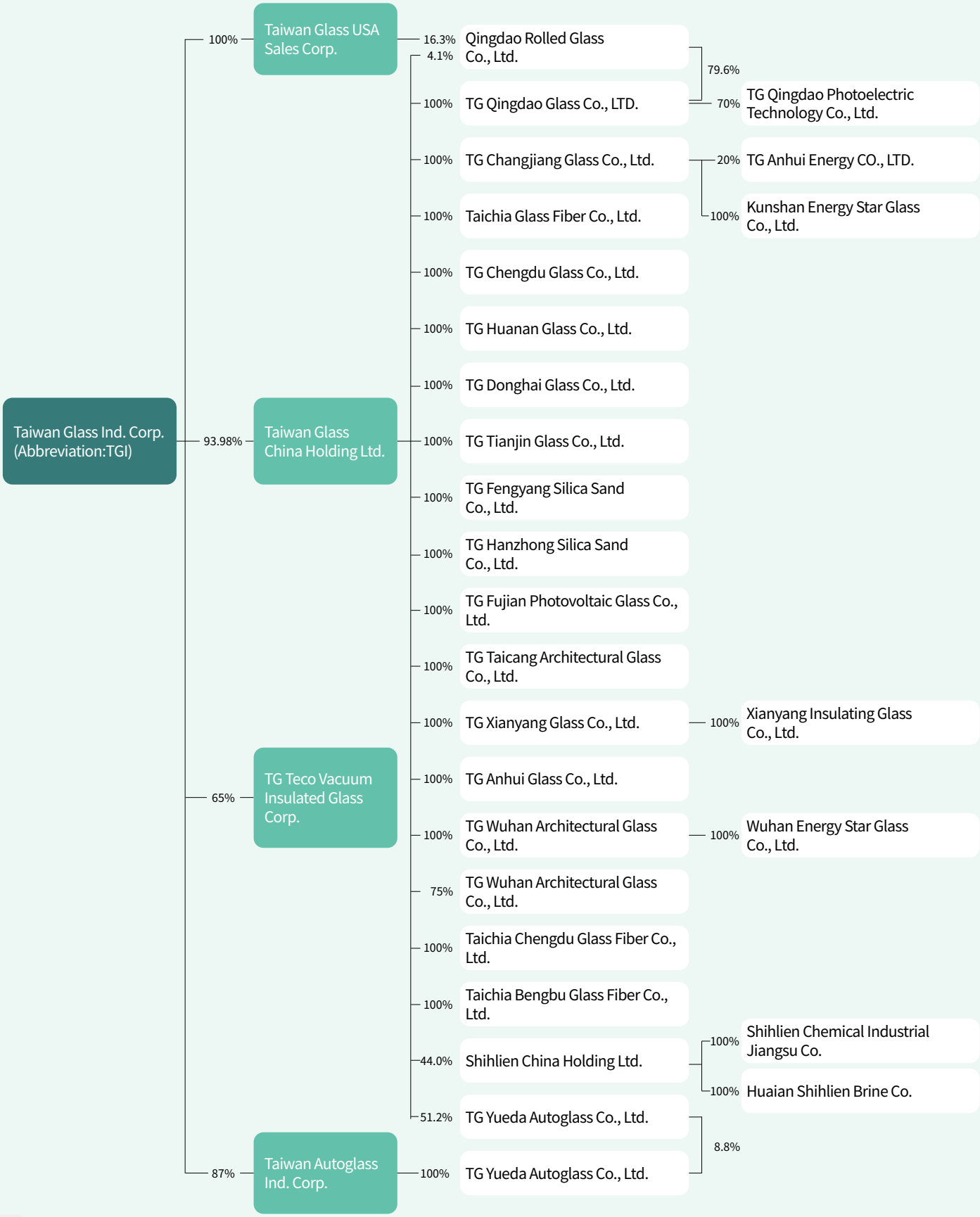
30 HUAIAN SHIHYUAN BRINE CO., LTD.

Management Team and Key Function of Departments

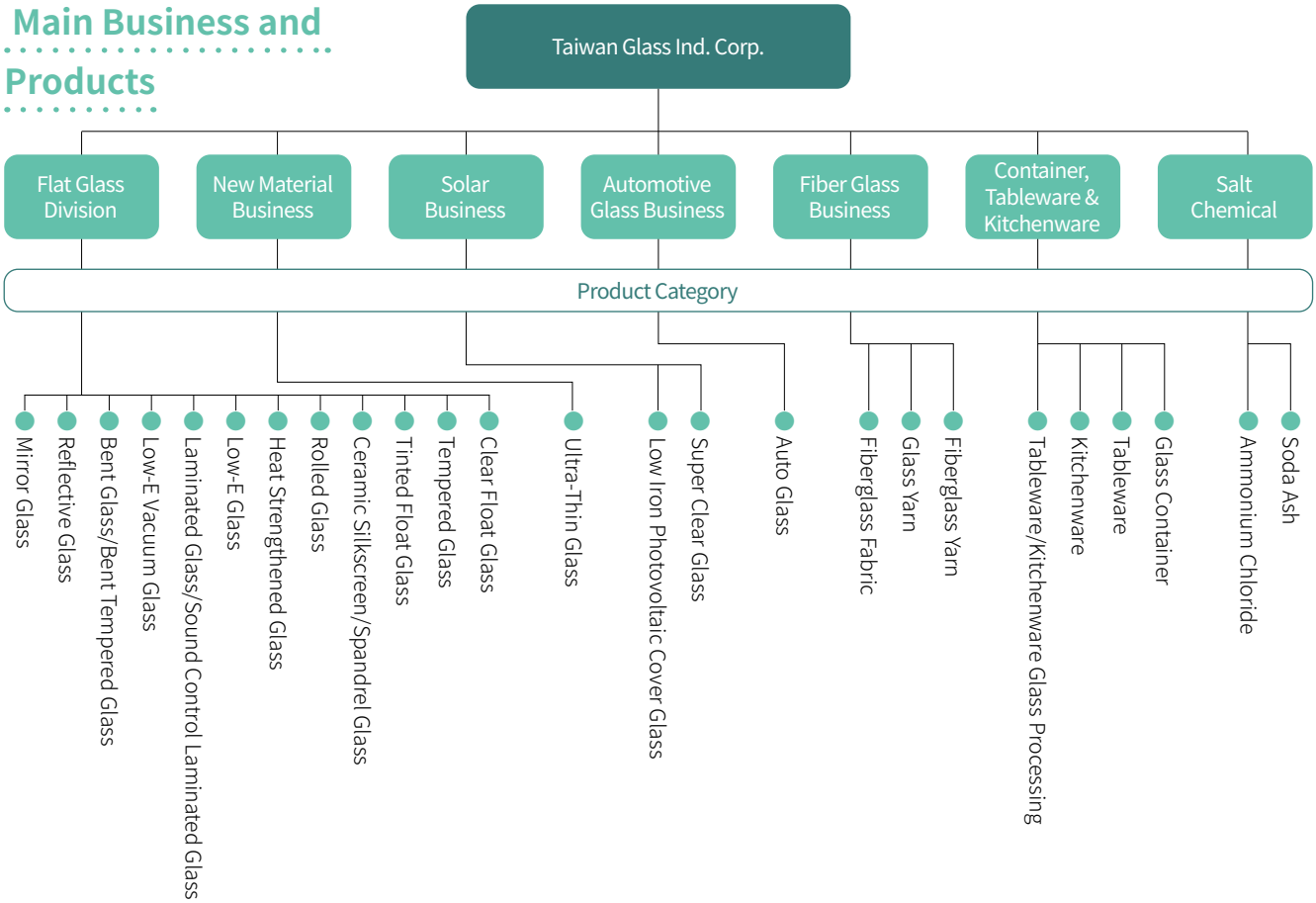



Re-investment
TG Teco Vacuum Insulated Glass Corp.
Taiwan Autoglass Ind. Corp.
Taiwan Glass China Holding Ltd.
Taiwan Glass USA Sales Corp.
Autoglass
TG Yueda Autoglass Co., Ltd.
Chinese Companies
Auto Glass Factory
TG Yueda Autoglass Co., Ltd.
TG Hanzhong Silica Sand Co., Ltd.
TG Fengyang Silica Sand Co., Ltd.
TG Tianjin Glass Co., Ltd.
TG Fujian Photovoltaic Glass Co., Ltd.
TG Dongbai Glass Co., Ltd.
TG Qingdao Glass Co., LTD.
TG Huanan Glass Co., Ltd.
TG Yueda Solar Mirror Co., Ltd.
Taichia Bengbu Glass Fiber Co., Ltd
Taichia Chengdu Glass Fiber Co., Ltd.
Taichia Glass Fiber Co., Ltd.
TG Wuhan Architectural Glass Co., Ltd.
TG Taicang Architectural Glass Co., Ltd.
TG Anhui Glass Co., Ltd.
TG Xianyang Glass Co., Ltd.
TG Chengdu Glass Co., Ltd.
TG Changjiang Glass Co., Ltd.
Qingdao Rolled Glass Co., Ltd.
TG Qingdaaao Photoeletric Technology Co., Ltd
Wuhan Energy Star Glass Co., Ltd.
Xianyang Insulating Glass Co., Ltd.
TG Anhui Energy CO., LTD.
Kunshan Energy Star Glass Co., Ltd.

TGI Affiliates



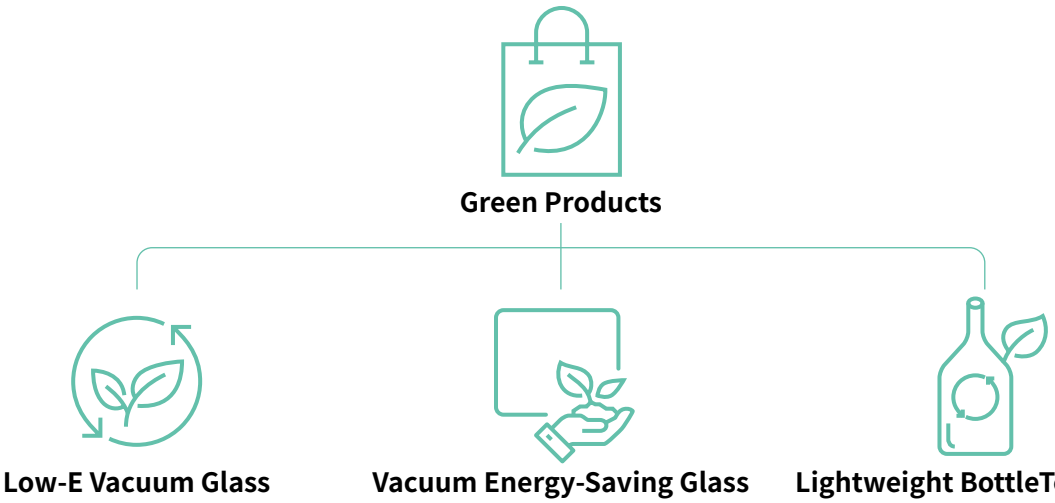
Main Business and Products



Green Products

TGI Group draws on world-class technology and equipment suppliers and accumulates its 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, exhibitions, seminars, multilateral communication meetings.

Organization	Title
1.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
2.Cross-strait Exchange Organizations	
Straits Exchange Foundation	Director
Straits Economics & Cultural Interchange Association	Managing Director
Cross-Strait CEO Summit	Director
3.Regional Economic and Trade Organization	
Chinese East Asia Economic Association	Director
Chinese International Economic Cooperation Association	Member
Taiwan-African Business Association	Member
4.Industry-Related Associations	
Taiwan Glass Industry Association	Chairperson of the Board of Supervisors
Taiwan Green Building Material Council	Member
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
5.Environmentally Sustainable Development Related Organizations	
Center for Corporate Sustainability	Advisory Director
Taiwan Green Building Council	Member

Financial Information

Financial Information (Thousands NTD.)			
Items/Year	2018	2019	2020
Operating revenue	12,561,584	11,702,108	11,758,874
Operating costs	10,779,115	10,708,502	10,314,282
Gross profit	1,782,469	993,606	1,444,592
Operating expenses	2,025,001	1,915,823	1,936,837
Operating income (profit and loss)	(242,532)	(922,217)	(494,591)
Non-operating income and expenses	1,354,431	(545,790)	3,023,426
Profit before tax	1,111,899	(1,468,007)	2,528,835
Net income from continuing operations (Net income or loss after tax)	1,066,286	(1,448,450)	2,468,521
Other comprehensive income (loss)	(1,225,535)	(1,762,559)	1,174,962
Total comprehensive income (loss)	(159,249)	(3,211,009)	3,643,483
EPS (NT$) (Adjusted retroactively)	0.37	(0.50)	0.85
Salary and Wages	3,244,259	3,124,606	3,044,111
Financial contribution to the Government (Taxes, donations, fees)	49,232	109,010	42,753

Note 1：All figures have been audited and certified by a CPA.
2：The company has adopted the International Financial Reporting Standards since 2013.

Income Tax Information				
		2019	2020	Average
Profit Before Tax		-1,468	2,529	530.5
Income Tax Expense	**Current Income Tax**	11	2	6.5
	Deferred Income Tax	-31	58	13.5
Effective Tax Rate		20%	20%	20%
Pay Income Tax		68	2	35

Taiwan Glass Group 2020 Annual Capacity for Each Product

Product	Taiwan		China		Total	
	Kilns	Tons	Kilns	Tons	Kilns	Tons
Float Glass	2	340,000	11	2,651,250	13	2,991,250
Fiberglass	1	29,280	-	-	1	29,280
FRP Fiberglass Reinforced	-	-	1	237,250	1	237,250
Glass container	1	20,000	5	95,000	6	115,000
Glass tableware	1	80,000	-	-	1	80,000
Glass kitchenware	6	166,000	-	-	6	166,000
Auto glass	1	3,000	-	-	1	3,000
Total	12	638,280	17	2,983,500	29	3,621,780

2020 Sales Information

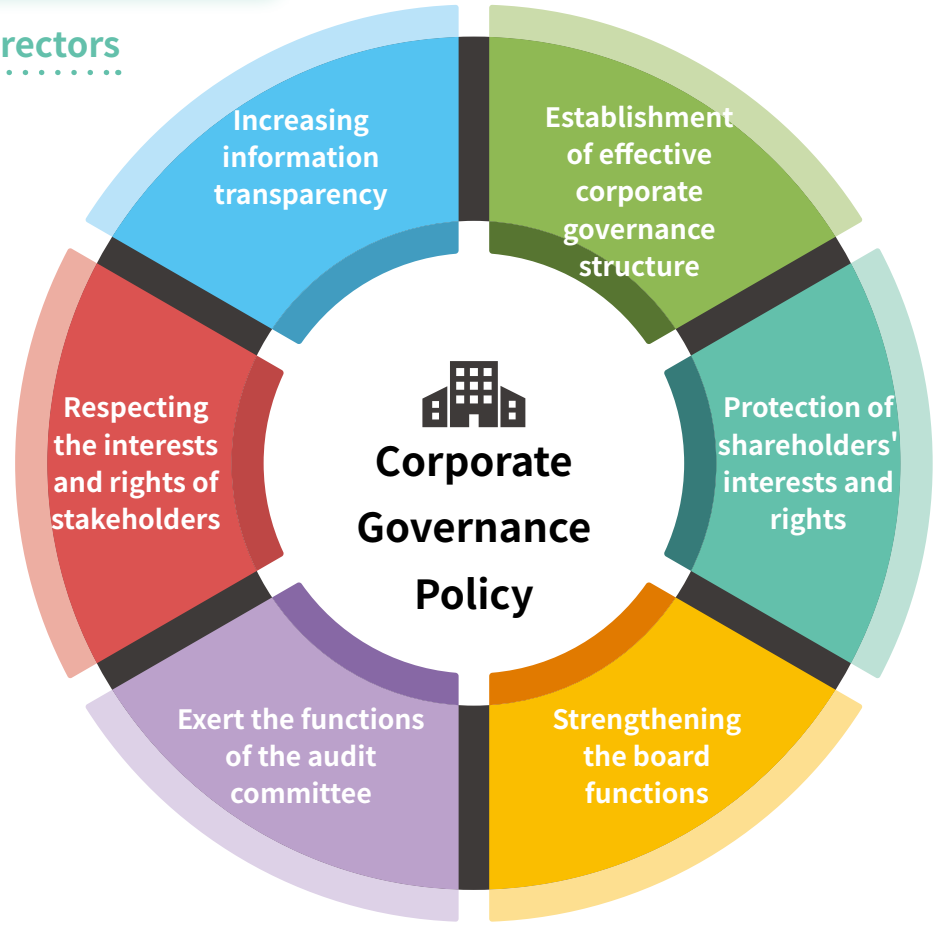
Serial number	Product category	Ratio of domestic sales	Ratio of export sales	Ratio of total sales	Sale areas	Clients
1	**Flat glass**	90%	10%	25.38	Asia, Central & South America, Australia, Europe, Africa, and North America.	construction, automotive, furniture, decoration, optoelectronics, sanitary, lighting, gift, electronics industries
2	**Fiberglass Fabric and Fiberglass**	41%	59%	37.28	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%	28.22	USA, New Zealand, Australia, China, and Germany.	Wine, food, pharmaceutical, dairy, home appliance, retail industries
4	**Glass tableware**	50%	48%	0.21	India, South Korea, Germany, and Australia.	
	Glass kitchenware	10%	90%	1.96	China	
5	**New material-Ultra-thin glass**	5%	95%	5.79	China	Photoelectric, electronic industries

Market Share in 2020

Serial number	**1**	**2**	**3**	**4**	**5**	**6**
Product category	Flat glass	Fiberglass Fabric	Fiberglass	Glass container	Glass tableware/ kitchenware	New material-Ultra-thin glass
Domestic Market share	60%	35%	55%	35%	10%	10% of the China market

2.2 Integrity TGI

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 under the “Corporate Governance Best Practice Principles for TWSE/TPEx Listed Companies “ and relevant laws and regulations. We divide into six main strategies:

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 regulary.

From 2019, TGI established a new position of Corporate Governance Manager. The duties include hosting and recording meetings of stakeholders and directors, also assist with office taking and advanced studies of directors, data provides, and law consulting. A total of training hours for corporate governance managers in 2020 has reached 12 hours.

During the COVID-19 period, directors keep participating in meetings via emails and phone calls. The attendance rate of Board meetings averaged 96.19% in 2020.

Board Members

TGI 2020 Board of Directors included 15 directors. Each director, supervisor and legal person/representative has a 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 7 board meetings in 2020. Compared with last year there were two additional meetings, the board of directors respectively discussed syndicated loans and fixed assets for activating assets and funds of the company. 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	2020 board of directors Actual attendance
Chairman	Lin, Por Fong	Male	TGI General Manager	None	7
Director	Lin, Por Shih	Male	TGI Managing Director	TGI General Manager	7
Director	Lin, Por Chun	Male	TGI Managing Director	None	7
Director	Lim, Han Ton	Male	Chairman, Bo Chi Investment	None	7
Director	Lim Ken Seng Kah Kih Corp. Hsu, Li Lin	Female	Sunrise Department Store General Manager	None	6
Director	Peng, Cheng Hao	Male	CEO of Meifu Group	None	7
Director	Tai Feng Investment Lin, Chia Hung	Male	GM, China Prod.	COO, China Prod.	7
Director	Tai Feng Investment Su, Yu Te	Male	GM, Fiber	COO, Fiber	7
Director	Tai Feng Investment Lin, Chia Yu	Male	VGM, Fiber	GM, Fiber	6
Director	Tai Chien Investment Lin, Charles Ming	Male	VGM, Finance	GM, Finance	7
Director	Ho Ho Investment Chen, Cheng Chang	Male	Plant Director, Lukang Factory	Project VGM, Lukang Factory	5
Director	Ho Ho Investment Tsai, Tseng Ming	Male	VGM of Purchasing Department	VGM of Purchasing Department	7
Independent director	Lin, Fong Cheng	Male	Minister of the Interior	None	7
Independent director	Chen, Ching Chih	Male	Chairman, Wan Hai Lines	None	7
Independent director	Huang, Tsing Yuan	Male	Director, TWSE	None	7

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 every quarter, which covers economic situations, environmental protection, and factory management issues. The Board of Directors frequently communicates with the senior management, and the management 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.

In 2019, the Board of Directors has approved “ Standard Operating Procedures for Handling Directors' Requests ” in order to enhance the efficiency of the Board of Directors and set a good coporate governance procedure.

To enhance the efficiency of the Board of Directors and set an excellent corporate governance procedure. In 2020, the Board of Directors had approved the “ Regulation of Board Self-assessment or Peer-assessment ” accompanying five aspects of measurement for the board performance evaluation, aiming to implement corporate governance and enhance the functions of the board of directors. We issued self-assessment questionnaires for the performance evaluation of directors at the end of the year. The performance appraisal results would be merged with the review mechanism of directors' remuneration and establish performance targets to enhance the efficiency of the board's operations.

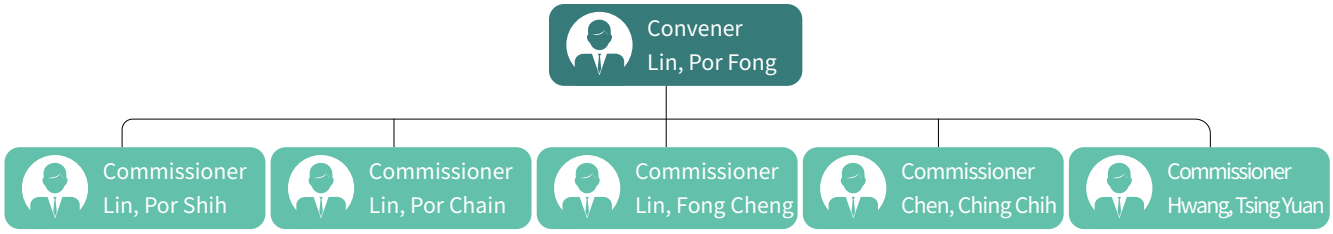
自評結果請參閱

台玻 2020 年報 P.XX

Nomination Committee

To establish a robust nomination system, TGI has established the Nomination Committee in compliance with Corporate Governance Best Practice Principles for TWSE/TPEx Listed Companies since 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. 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.

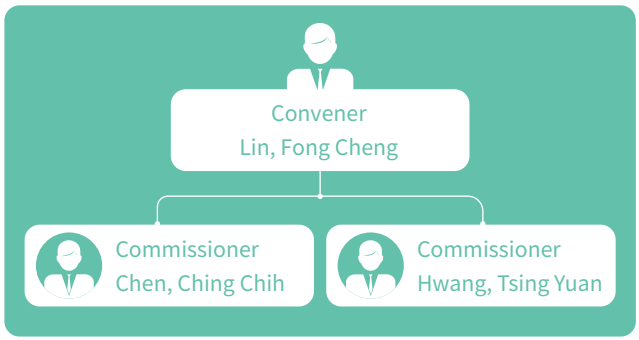


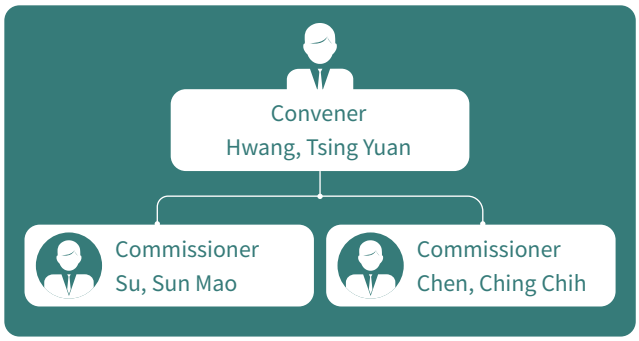
Audit Committee

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.

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 2020, two Remuneration Committee meetings were held to discuss "Compensation of the Directors and Managerial Officers of TGI in 2019"and revise Article of Association of the remuneration committee





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 2020 and will consider the participation of interested parties as future reference.

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

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 regularly or when necessary. In 2020, 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 IAD reviews and assesses the company's internal control system, business performance, and efficiency. The IAD 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 concerning 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.

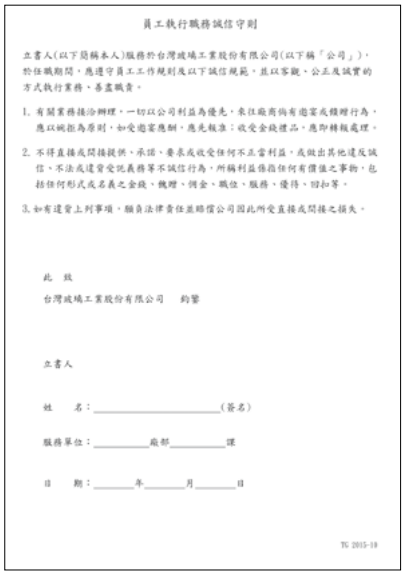
Anti-corruption

TGI has "Honest Business Principles", "Process for Reporting Illegal and Unethical or Dishonest Cases" and "Employees' Honest Principles" and provides training to new recruits to ensure that each employee understands these principles.

1. Meal invitations or gifts offered by manufacturers should be declined.
2. 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.
3. The employee shall not exploit their relationship with manufacturers for private business dealings.

To 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 2019, 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.

In 2020, 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 2020.



員工執行職務誠信守則

立書人(以下簡稱本人)服務於台灣玻璃工業股份有限公司(以下稱「公司」)，於任職期間，應遵守員工工作規則及以下誠信規範，並以客觀、公正及誠實的方式執行業務，善盡職責。

1. 有關業務接洽辦理，一切以公司利益為優先，來往廠商倘有邀宴或贈禮行為，應以婉拒為原則，如受邀宴應酬，應先報准；收受金錢禮品，應即轉報處理。
2. 不得直接或間接提供、承諾、要求或收受任何不正當利益，或做出其他違反誠信、不法或違背受託義務等不誠信行為，所稱利益係指任何有價值之事物，包括任何形式或名義之金錢、機會、佣金、職位、服務、優待、回扣等。
3. 如有違背上列事項，願負法律責任並賠償公司因此所受直接或間接之損失。

此 致

台灣玻璃工業股份有限公司 鈞鑒

立書人

姓 名：_____(簽名)

服務單位：_____廠部_____課

日 期：_____年_____月_____日

TG 2015-10

Employee's Honest Principles

台玻禁止工作場所職場暴力書面聲明

本公司為保障所有員工在執行職務過程中，免於遭受身體或精神不法侵害而致身心傷害，特以書面聲明，禁止工作場所職場暴力之行為。

一、職場暴力定義：員工在與工作相關的環境中遭受恐嚇、威脅或攻擊，以致於明顯或隱含地對其安全、福祉或與健康構成挑戰的事件。
二、職場暴力行為的型態：
(一) 肢體暴力(如：毆打、推搡、拳打、腳踢等)。
(二) 心理暴力(如：威脅、欺凌、騷擾、辱罵等)。
(三) 語言暴力(如：霸凌、恐嚇、干擾、威脅等)。
(四) 性騷擾(如：不當的性暗示與行為等)。
三、員工遇到職場暴力怎麼辦：
(一) 向同事尋求建議與支持。
(二) 與加害者理性溝通，表達自身感受。
(三) 思考自身有無缺失，請同事誠實的評估你的為人與工作表現，找出問題點。
(四) 向公司提出申訴。
四、本公司所有員工均有責任協助確保免於職場暴力之工作環境，若有目睹或聽聞職場暴力事件發生，都應立即通知本公司人事部門或執行員工申訴專線，本公司接獲申訴後會採取保密的方式進行調查，並調查屬實者，將會進行懲處。
五、本公司絕對禁止對申訴者、證人者或協助調查者有任何報復之行為。
六、本公司規劃同仁均能利用所設置之內部申訴處理機制處理此類問題，但如員工需要額外協助本公司亦將盡力協助提供。
七、本公司職場暴力諮詢、申訴管道：

申訴專線電話：人事部 2715-8060
申訴專用信箱：hrgshih@taiwanglass.com

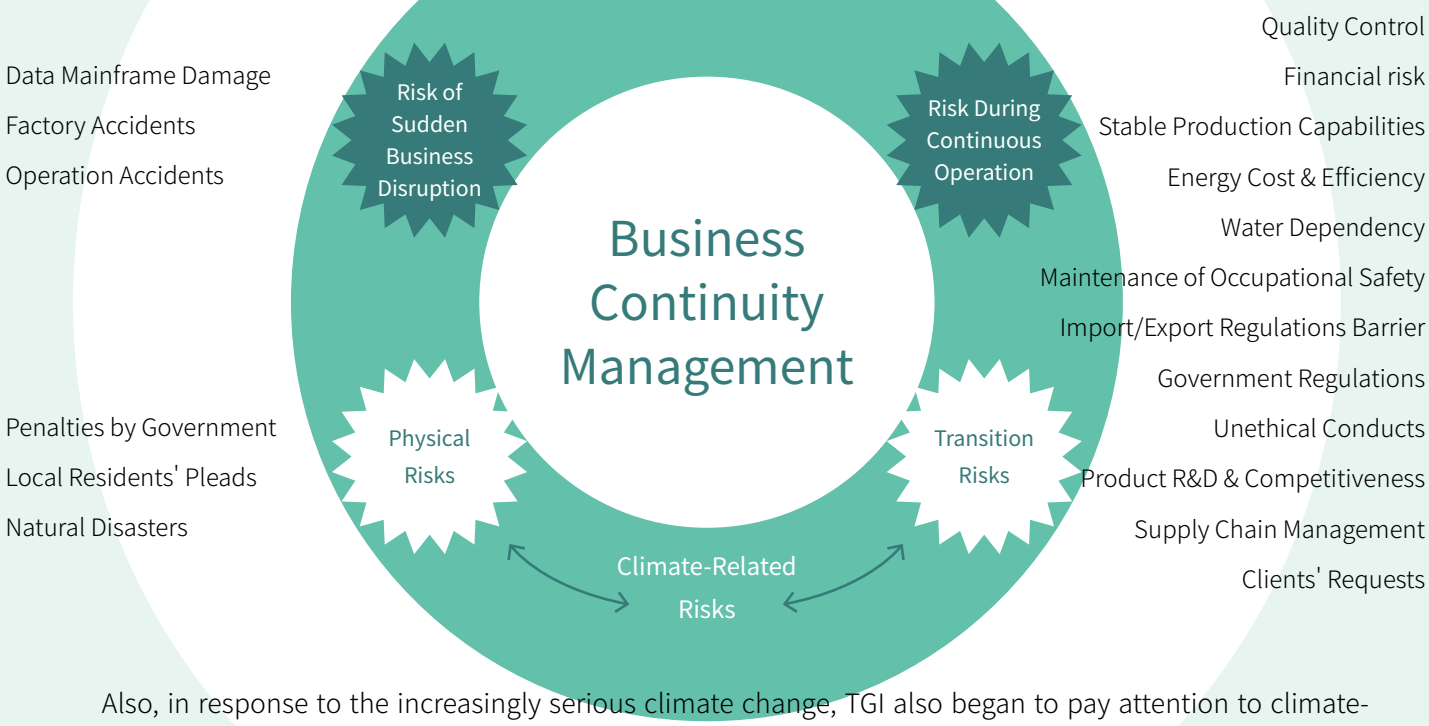
Workplace Violence Policy Statement

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

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.



Also, in response to the increasingly serious climate change, TGI also began to pay attention to climate-related risks; at present, the assessment of the risks associated with climate change at each factory includes: regulatory risk, raw material/energy cost risk, natural disaster risk, and environmental safety risk. The main effects can be attributed to two major categories:

Transformation risks

Changing market conditions and stricter regulations caused by climate change.

Physical risks

Natural disasters caused by climate change have injured or trapped factory staff or damaged equipment in the factories, which has forced operations to be interrupted.

In response to the transformation risks of climate change, TGI has long paid attention to changes in laws and regulations and responded to relevant regulations in advance; at the same time, it has paid attention to changes in market raw materials and customers' low-carbon transformation demand trends for future sustainable growth. In the face of physical disaster risk, each factory of TGI has an emergency response process, and there are usually plans for uninterrupted operations to ensure that the company's overall operating conditions are not in danger. In the future, we will continue to focus on the trend of climate change and plan to improve the level of risk management countermeasures.

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 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.
	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 2020 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.
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. The 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 electronicist, 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.
	Procurement risk	Set up an Internal Audit system to strengthen inner risk prevention and management Open the procurement tender information on the website Legal review the purchasing list and contrast, and verify related laws by legal affair department Investigate suppliers' brand, credit, size, achievement, and compatibility. If necessary, meet with the supplier accompanied by quality assurance units and the units that use the materials on-site to check whether its product quality, productivity, technology, and after-sales service meet TGI's requirements. Each factory has a minimum inventory of commodities (2-3 months for foreign products, 2-4 weeks for domestic products). Long-term contracts are signed for important commodities. Cooperative companies must supply their products regularly based on each factory's requirement.
	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. Actively communicate with customers, understand their needs and market dynamics, and check the quality requirements of each product.
	Off-The-Shelf risk	FDA's strict standards increase the risk of product removal, we had increased the number of insurance projects in order to reduce the impact of the risk.
	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. Information security seminars are held every six months to equip employees with basic concepts of information security, to avoid being attacked by malware on the Internet, and to reduce the occurrence of information security incidents and the damage caused by security incidents.
	HR risk	Provide a starting salary higher than the legal minimum wage, and periodically adjust it based on industry standards. Recruit suitable talents actively through multiple channels. Let the new employees fit in the workplace quicker and increase the retention rate through introducing the “Coach for New Colleague Program”. Professional and skillful staff would guide and educate newbies in this co-worker interaction system. Establish a comprehensive training system to develop employees' competency based on organization strategies and demand investigation surveys to adapt to outer environmental changes.

Category	Risk	Impacts and countermeasures/ Response	
Operational risk	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: raw materials：set safety stock fuel：design backup fuel systemenergy：The main equipment in the factory is equipped with an uninterruptible power system	
	Raw material risk	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.	Risk ▶ Material misplaced in the wrong silo Risk occurred ▶ Wrong formulate resulted in unqualified glass Countermeasures ▶ 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
	Environmental security and health risk	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.	Level 1 Incidents occur ▼ Initiate the contingency plan ▼ Determine if the incident can be contained effectively and immediately N → Y ▼ Level 2 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 N → Y ▼ Level 3 Request for external support ▼ Implement task and management on disaster relief ▼ End the contingency plan as the disaster has been contained ▼ Review
	Risks related to climate change		
	Physical risk	Observe the impact of climate change and weather disasters, pay attention to current events and understand what may happen, and follow the treatment methods prescribed by ISO 14001 (8-ES-B10) emergency response. In the event of a short-term disaster, all our factories follow the emergency response plan and environmental incident investigation to ensure that the damage to equipment is minimized and the safety of personnel is improved. Secondly, the damage of raw materials and inventory is evaluated, and the goal is to resume supply as soon as possible. With regard to long-term climate change, we will respond to potential climate risks by paying attention to relevant adjustment measures promulgated by the state, training by local authorities, and cooperating with industrial zone implementation measures.	
	Transformation risk	TGI is committed to product innovation and research and development of low-carbon products, and continuously improves the energy efficiency of the factories; for example, the promotion of clean production system evaluation certification and green building evaluation certification of Lukang Factory and Taoyuan Factory are all for early transformation. Low-carbon economy and society are prepared to respond to future changes in regulations and policies.	

CH3 Excellent Service Quality & Innovative Products

3.1 TGI Products
3.2 Product Quality
3.3 Research and Innovation
3.4 Customer Service
3.5 Sustainable Supply Chain

Achievements of Product Performance and Accountability in 2020

0 violations	No violations in the health and safety of products, labeling, and marketing regulations.
100%	100 % of flat glass products passed EU CE, US ANSI, Taiwan CNS and other relevant standards.
100%	Fiberglass products were 100% compliant with RoHS and REACH standards.
100%	100% of glass container products met Taiwan food container and packaging hygiene standards, and all factories met FSSC 22000 standard for environmental protection and food safety.
54.92%	The average recovery and reuse rate of glass containers reached 54.92% and obtained the resource renewable green product certification of the Bureau of Industry
-30%	Low-E products can reduce 30% of air conditioner usage and energy consumption.
-12.5%	Lightweight bottle technology reduces 12.5% of product weight and is 100% recyclable.
0 complaints	TGI did not receive any complaint regarding client privacy violation or loss of client data in 2020.
14 certifications	As for fiberglass as food contact material, 4 products passed FDA regulations. 8 passed EU 10/2011 and Germany's BfR certification for drinking water and 2 products met France's CAS requirements for drinking water.
88%	In 2020, the average satisfaction of all departments in customer surveys is 88%, 6% higher compared to last year.

3.1 TGI Products

TGI's main products include flat glass, fiberglass, and glassware. We are also actively dedicated to the invention and production of new products in recent years. 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. There was no violation of regulations related to product health & safety, labeling and marketing, and no product's sale was prohibited in 2020. TGI was not involved in any anti-competitive behavior, anti-trust and monopoly practices, or legal proceedings in 2020.

TG Our Private Brand-TG

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. TG targeted the new audiences who pay attention to lifestyle. Besides, in order to create the brand image and build the products style, we invited Fukasawa Naoto, who is a Japanese artist of industrial design, to plan and design with the observation of Taiwanese culture. He merged the feelings such as “kindness”, “mild” and “nature” into the design, which breathed new life into the glass products.

It has sold products including water containers, coffee pots, and drinking vessels since 2019 and is also injecting new ideas into Taiwan's life aesthetics. TGI hopes the new brand could extend into global markets with its base in Taiwan. TG will cooperate with more cross-disciplinary designers and artists in Taiwan to create more classic glass containers that can represent our culture in the future.

TG products include water cup series, coffee series, wine ware, teaware, tableware, home decorations, etc. The materials include glass, ceramic, stainless steel, and Taiwan acacia wood, etc. TGI plans to develop 200 items in the future. At present, there are three directly managed counters in Taiwan, including the flagship store of Taiwan Glass, Xue Xue Taste Lab, and Xinyi Eslite, and a total of about 40 domestic and overseas physical and online channels, including Wallpaper Store, a global online design e-commerce company, stores of Kaohsiung Museum of Fine Arts and National Taiwan Museum of Fine Arts, Tsutaya Bookstore, Marais, The Xiaoqi, Funfuntown, Everyday ware & co., 30Select, or PEKOE, 61 note, LE CLUB, Pinkoi, MOMO, Udesign, etc. TG brand has been recognized with awards, including the 29th Taiwan Excellence Award in 2020 for “Heat-Resistant Water Pitcher” and the 2020 Taiwan Craft Brand Certification for “Glass Storage Jar with Taiwan Acacia Lid”

TG

TG had recognized by awards are including the 29th Taiwan Excellence Award for “Heat-Resistant Water Pitcher” and Taiwan Craft Brand Certification for “Glass Storage Jar with Taiwan Acacia Lid” in 2020.

Taiwan Craft Brand Certification

Product Photo

Certification Photo

Taiwna Design Award

Product Photo

Certification Photo

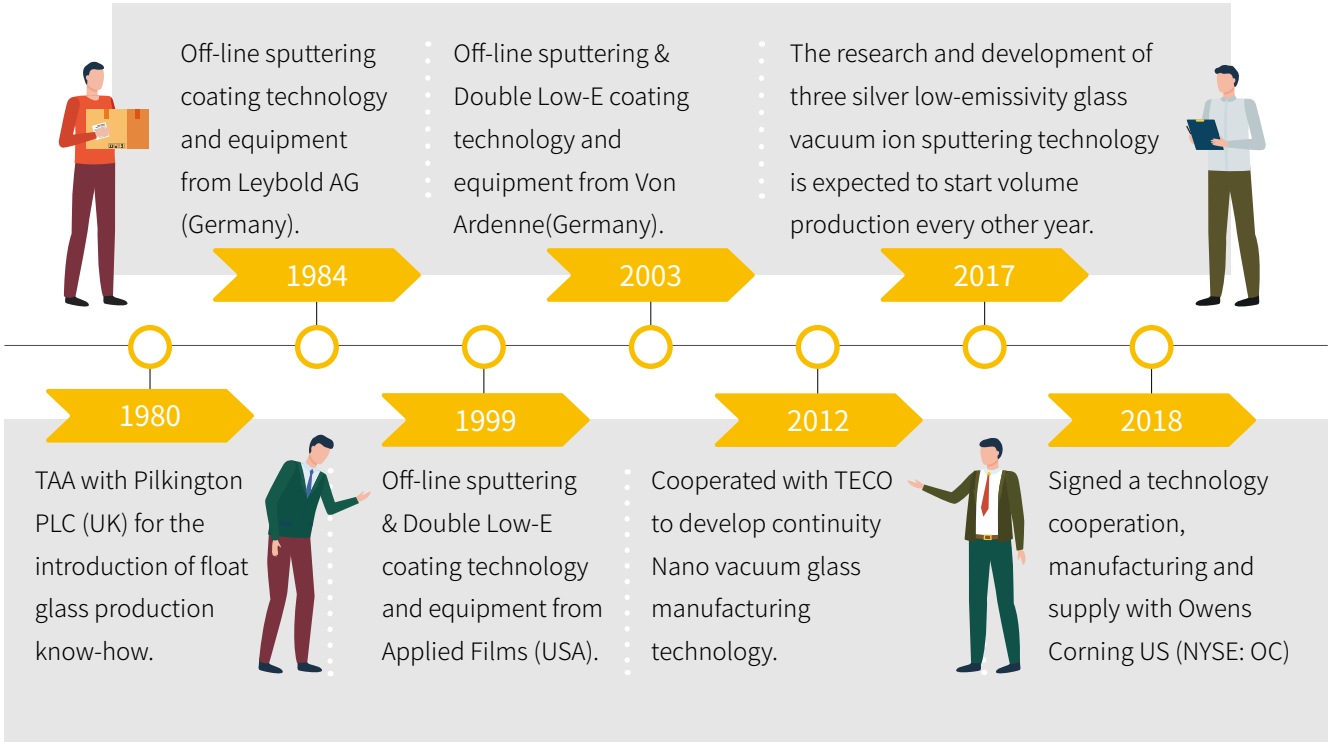
The flagship store was opened on the first floor of the Taiwan Glass Building on Nanjing East Road on December 15, 2020. The interior space was designed by Naoto Fukasawa and Taiwan's architect Hao Chen-Sui. It is also the first business space designed by Naoto Fukusawa, including a new series of glass products, logo, package, and interior design. The shop windows display the TG products photographed by Tamotsu Fujii, a famous Japanese commercial photographer.

TGI has invited IL MERCATO restaurant team to collaborate in a cross-industry alliance, offering various light snacks and beverages for consumers to try TG tableware. An experience combining glass aesthetics and delicious food was provided to TG consumers.

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 the 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 a 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

歐盟 CE	美國 ANSI	台灣 CNS	ISO 9001	ISO 14001 / SGS	PASMARK	IGCC

Please Scan for more about flat glass ›

or visit TG website

Green Product – Low-E 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 comply with CNS12681 standard and certified with ISO 9001 standard and IGCC. Currently, the product has been vastly used in buildings.

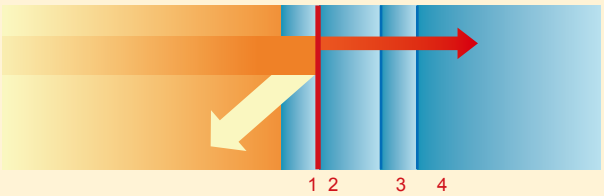
TGI adopts the most advanced coating technology to develop silver-free Low-E (JN88). Compared with ordinary Low-E coating, JN88 film structure no longer contains the characteristic material of general Low-E coating-metallic silver. Instead, the hard semiconductor nanomaterial film is used, which still maintains a very low surface emissivity. While having excellent thermal insulation performance, the film layer has high hardness, abrasion resistance, and oxidation resistance, which can be exposed to the air. There is no problem of oxidation and film deterioration. The birth of JN88 has increased the multiple applications of offline Low-E glass.

The use of JN88 on the interior surface can not only ensure the stability of product performance, but also significantly reduce the thermal conductivity of laminated glass and single glass, effectively reduce energy consumption, and improve the energy-saving effect and value of buildings. After adopting double Low-E cladding, the U value of the single-chamber cladding glass is close to that of the double-chamber cladding glass, which directly reduces the curtain wall glass cost, and also reduces the curtain wall's overall load on the building, lowering has significant benefits.

Green Product – Low-E Flat Glass

TGI's Information

(Sub)Tropical Zone

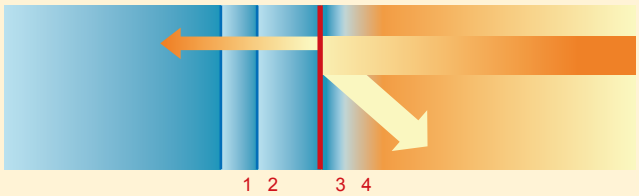


Outside 室外
Low-E glass(coating on surface #2)

Inside 室內
Clear or tinted glass

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



Outside 室外
Clear or tinted glass

Inside 室內
Low-E glass(coating on surface #3)

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.

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) is glass' ability to emit heat radiation from the sun.

*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.

Please scan QRcode for more details

Fiberglass

Compared with metal support materials, fiberglass has excellent corrosion resistance and weather resistance, and at the same time has the advantages of low cost, high strength/weight ratio, and longer service life. According to the different weaving structure and characteristics of the glass fiber cloth, its products are very diverse and diversified, and it is also widely used for heat preservation, heat insulation, fire prevention, and material 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.

With the advent of the 5G era in 2020, global information transmission has entered an era of high frequency and high speed. Printed circuit boards (PCB) for Netcom equipment must use Low DK materials to effectively meet the 5G high-frequency and high-speed performance requirements. Following the United States and Japan, TGI became the third manufacturer to successfully develop Low DK fiberglass cloth for high-end PCBs and has been certified by domestic and foreign terminal manufacturers to be used in 5G equipment. Due to the impact of the outbreak of the COVID-19 pandemic in 2020, the development of 5G was delayed. However, with the continuous construction of 5G in countries, more and more manufacturers invest in electric vehicles, and the demands of glass cloth will enter a rapid development. Taiwanglass will keep meeting the demands of customers, increase production of Low DK and ultra-thin cloth, and develop thinner, high-value products.

Scan for more detail ›

or visit TG website

Direct Roving | Conventional Roving | Woven Roving | Chopped Strand Mat | Chopped Strand

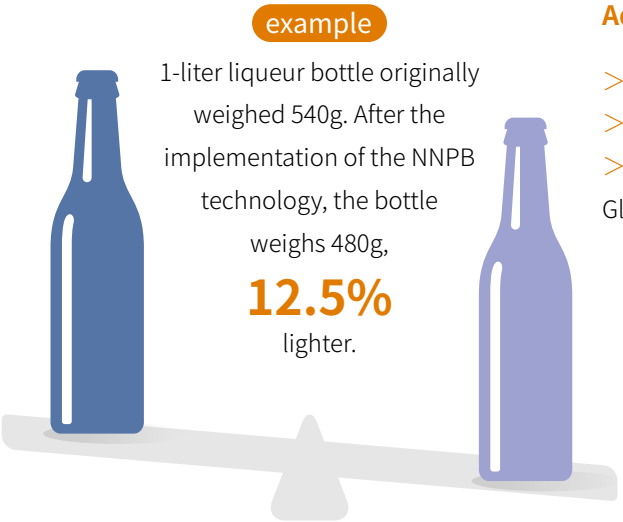
Glass Container, Tableware, and Kitchenware

Glass containers, with excellent transparency, showcase the real color of anything inside containers. Advantages such as easy sealing, long-time storage and suitableness for microwave heating make these containers a necessity for modern people. The manufacturing facility of the container, tableware, and kitchenware has received ISO9001 and FSSC 22000 certification. 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. Coffee pots come with heat-resistant labeling upon clients' requests.

In 2020, we will make every effort to develop the high-price special-shaped bottles, and heat-resistant containers will continue to deepen the bottle market and expand new customers. TGI also established a recycling glass processing center to clean and reuse the recycled glass, and regularly send samples of SGS to verify the lead content. In addition, we scrapped the waste glass in the factory and also recycled it through metal detector inspection. Regarding the output and recycling part of customers' waste glass after sales, they will cooperate with Spring Pool Glass to recycle and sell the waste glass to the middle and downstream glass factories, clean and inspect with a metal detector to remove most of the stainless steel, aluminum, copper, tin, etc. Metal contaminants improve production quality. In 2019, the average recycling rate reached 56.4% and obtained the Renewable Green Product Certification from the Bereau of Industry.

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. They are the future trend of glassware.



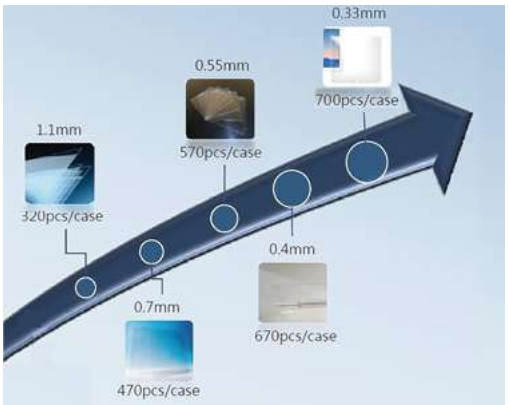
Advantages of Lightweight Bottle:

- Conserves raw materials use
- Reduces energy consumption
- Reduces clients' production costs

Glass containers are 100% recyclable

Please scan QRcode for more details:

Ultra-Thin Glass



The TGI 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. In 2020, to produce thinner and stronger devices, the goal is set up to 4%. Taiwan Glass' own AR Coating technology can reduce the reflectivity of the glass to 0.5%~1%, making the visual image clearer and reducing the glare and double shadow phenomena. These products have been used for special medical equipment and display purposes (at art galleries, or department store display windows, etc.). In addition, the 0.55~1.1mm glass product can be applied to the ITO touch panel. The 0.55mm glass products on the other hand sell well in 2020, which mostly go to China and India markets. As for the 0.33~0.4mm glass product, it can be used as a 3C product screen protector. All these products are strictly checked plenty of times to reach high-quality international standards. Then they can be supplied to domestic and foreign electronic manufacturers to produce high-quality products for customers. In 2021, the demand for the 0.33mm glass increases continuously. It is estimated that 0.33mm glass will be produced throughout the year. In the future, despite continue to raise the market share of Mainland China and India, Taiwan Glass will also develop markets in other countries, such as Vietnam, Bangladesh, Malaysia, and Africa.

3.2 Product Quality

To achieve economic prosperity and growth, sustainable living environment and social prosperity, 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	■	■	■	■	■	■	■
The expiration date of certification		No expiration dates/ perpetual term	2012/04/19 No expiration dates/ perpetual term	No expiration dates/ perpetual term	2012/04/19 No expiration dates/ perpetual term	2012/04/19 No expiration dates/ perpetual term	2024/4/19
ISO 9001		■	■	■	■	■	■
The expiration date of certification		2023/07/23	2023/3/22	2022/11/9	2022/4/15	2023/12/8	2024/6/5
ISO 14001		■	■	■	■	■	■
The expiration date of certification		2023/10/14	2023/9/14	2023/9/14	2023/3/18	2022/6/18	2022/5/23
ISO 14064-1		■	■	■	■	■	
The expiration date of certification		Regularly annual examine	Regularly annual examine	Regularly annual examine	Regularly annual examine	Regularly annual examine	
ISO 50001		■	■	■		■	
The expiration date of certification		2023/12/30	2023/11/27	2023/11/20		2021/12/8	
ISO/IATF16949		■					
The expiration date of certification		2024/05/15					
FSSC 22000			■				
The expiration date of certification			2021/12/23				
ISO 45001			■				
The expiration date of certification			2022/8/31				

Note: ■ refers to the factory has the corresponding certificate

◀ In 2020, Lukang Flat Glass Factory and Hsinchu Factory has renewed the ISO9001 certification

▶ In 2020, Lukang factory has renewed the ISO14001 certification

TG's policy of promoting excellent products and services

Three lines of defense for product safety

Quality System

- All factories have passed ISO 9001 quality management system certification

Flat Glass

- BSMI Orthographic mark
- MOI Green Building Material Mark
- Australian CSi safety glass certification
- American IGCC double-layer glass certification
- Taoyuan Factory ISO16949 Automotive Industry Quality Management System
- Changbin Plant passed the US SGCC strengthened glass, laminated glass and IGCC double-layer glass certification

Fiber glass

- Norway DNV, Germany GL certification

Product Health and Safety System

- Hsinchu Factory continues to pass FSSC 22000 food safety management system certification
- Taoyuan Factory obtained Lloyd's Register Shipbuilding Safety Certification
- Taoyuan Factory obtained TZW Food Container Manufacturing Safety Certification

Product Transportation Security System

- As a good import and export manufacturer, it has obtained the certification issued by the International Trade Bureau since 2014, and has obtained practical convenience for customs clearance.
- AEO Safety Certified Quality Enterprise
- The supply chain safety accredited by the Ministry of Finance

Double way of corporate sustainability

Environment, safety, health system

- All factories have passed ISO 14001 environmental management system certification
- All factories (except Changbin Plant) have passed ISO14064-1 organization greenhouse gas emission inventory certification
- Hsinchu factory passed ISO45001 occupational safety and health management system certification
- Actively import the latest version of the ISO system and continue to pass certification
- Hire a British industrial safety consultant to improve workplace safety

Energy Management System

- Taichung, Taoyuan, Hsinchu and Lukang Flat Glass factories have all passed the ISO50001 energy management system certification, and continue to improve every year.

※For more actions of Taiwan Glass's environmental protection and workplace safety, please see Chapters 4 and 5.

3.3 Research and Innovation

In order to strengthen innovation and R&D capabilities, in addition to developing its research and development technologies and equipment, TGI 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, while also inviting foreign technicians to our factories to teach and introduce new production technologies to us. TGI also cooperated with China University of Science and Technology, Southen Taiwan University of Science and Technology, and Plastics Industry Development Center to research the application program of thermoplastic fiber composite materials.

TGI become a member of Advance Glass Techniques & Manufacturing Associate in National United University, which symbolize the opportunities for attending the academic conference and discussing techniques with other organization. Meanwhile, we offered the glass sample to their Glass Center Exhibition. The key results are as follows:

1. The main Changpin Processing plant has been built and Low-E with high performance and vacuum glass and varieties of processing equipment started mass production. This makes the processed glass a more refined and competitive advantage in diversification.
2. TGI Group and Mainland China continuously search for TCO glass, Ultra-Thin Glass and Vacuum Glass techniques, equipment and plant building plans to meet the changes and needs in global markets.
3. The manufacturing technology of Vacuum Glass is mature and Vacuum Glass can be futher applied to Low-E Vacuum Glass, by combining Vacuum Glass with Low-E Glass.

4 Silver-free Low-E Glass was successfully made by coating technology. The coating uses a hard semiconductor nano coating to maintain a very low surface emissivity. While having excellent thermal insulation performance, it retains high hardness, wear-resistance and anti-oxidation.

5 We successfully breakthrough and develop low-DK (low-dielectric) fiberglass for high-end PCBs, to effectively meet the 5G high-speed performance requirements, and will be able to consolidate our position in the market and create value.

6 The quality of heat-resistant baby feeding bottles and laboratory bottles is steadily growing.

7 Ultra-Thin Glass has started produciton and the thickness of 1.8mm~0.33mm was made to use as cover plates for electronic products and glass screen protectors.

8 More than 200 of the TG life utensils have almost obtained product patents and are sold in physical stores and on ecommerce platforms.

9 Ultra-thin fiberglass fabric #1017 obtained client certification in 2020 and has hit the store shelves.

To motivate employees to actively provide opinions on production technology, quality, environmental protection, safety, or business administration, TGI provides a bonus for proposal improvement suggestions. For major research and development program, TGI will award project members bonuses as encouragement based on the research contribution and achievements. These improve 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

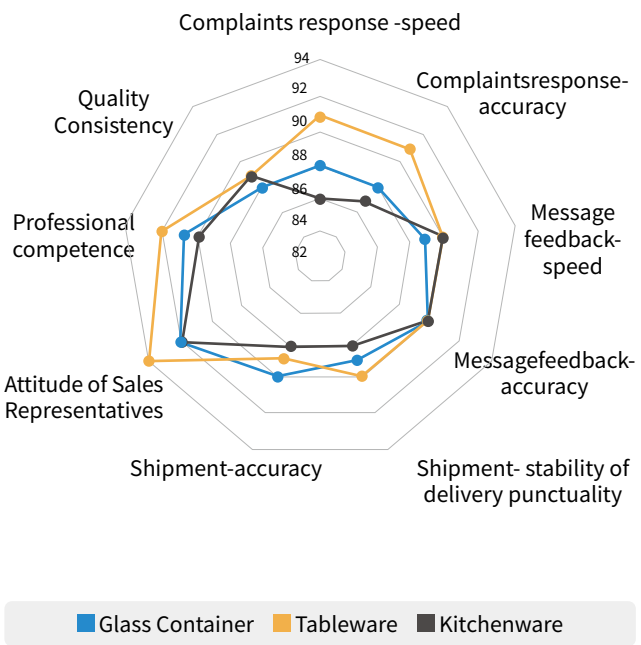
For more than 50 years of operation, TGI has attached great importance to the opinions of its customers. For each service, we are committed to enhancing the trust and satisfaction of our customers, hoping to create a professional image. We are convinced that trust and satisfaction are based on good products and quality. Therefore, TGI commits to and proposes related policies for new materials, flatglass, containers and fiberglass business, including establishing customer interaction channels, improving production conditions, strengthening education and training, measuring customer satisfaction, etc. to maintain market competitiveness and customers' support.

TGI regularly implements a "Customer Satisfaction Survey" every year. The content covers 7 topics, which are "complaints response speed", "message feedback - correctness", "message feedback - promptness", "attitude of sales representatives", "ability to meet rush order needs", "professional competence" and "quality consistency". Based on customer responses, the indicators are reviewed and analyzed for follow-up meetings about improvement measures and implementation issues raised in customer feedbacks.

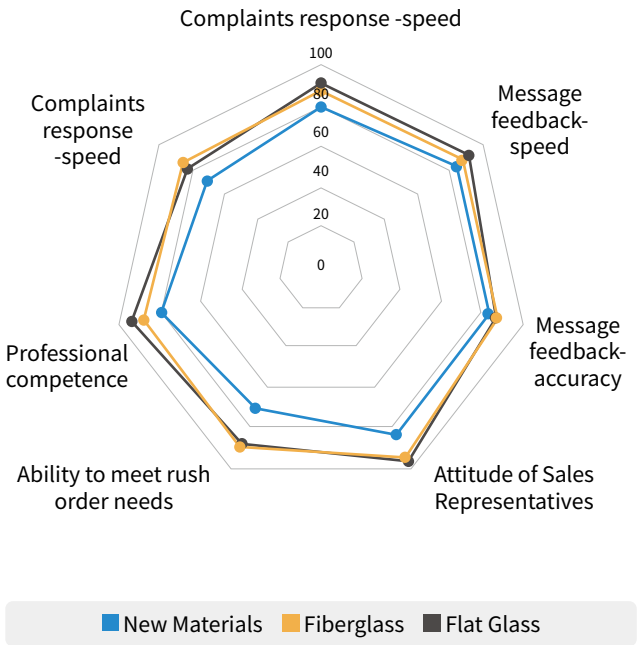
Customer Satisfaction Survey

In 2020, customer satisfaction averaged more than 88% across various TGI departments (New Material Business Division is added to the survey scope in 2020). Each department will make improvements for the service failures and strengthen communication with customers, and expect to improve customer satisfaction in 2021.

Analysis of 2020 Customer Satisfaction



Analysis of 2020 Customer Satisfaction



Customer Response Process

Protecting Confidential Customer Information

To practice personal data security management, TGI enacts "Personal Data Protection and Management Approach" in compliance with "Personal Data Protection Act". We provide new staff education and training in personal data protection to strengthen awareness. Every six months, staff from each department will be assigned to education and training of personal data 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.

We turn to use the online learning platform called "Online school for Small and Medium Enterprise" this year, hoping that while increasing learning efficiency, transportation cost and carbon footprint of lectors can also decrease to contribute to the environment.

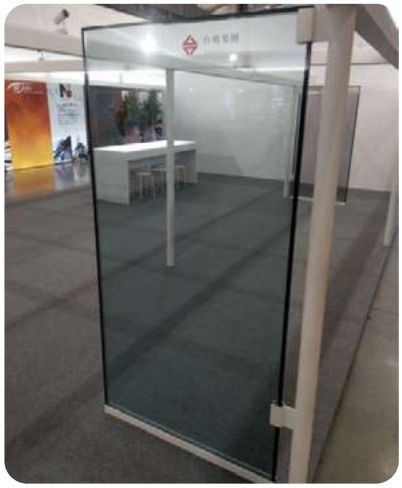
In addition, we are also committed to protecting customers' confidential information. To prevent data leakage, our information equipment has strict access control, and all employees are required to protect customers' confidential and proprietary information carefully and prevent illegal collection of clients' proprietary information. TGI provides information security 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 2020, TGI did not receive any complaints regarding client privacy violations or loss of client data.

Information Security Seminar

Customer Relation Management and External Exhibition

To establish face-to-face communications with our clients, each department also regularly visit customers, or participates in exhibitions. However, due to the COVID-19, the exhibitions are all canceled, only flat glass keep attend 2020 Nangang Constructional Material Exhibition.

In 2020, we developed an app for dealers of the Flat Glass division to order online. We reduce the typing errors on the order sheet, improve efficiency, and raise the delivery speed. It turns out to provide dealers with higher quality service by replacing the traditional way such as phone calls, fax, or email with this app.



<Flat Glass>2020 Nangang Constructional Material Exhibition.

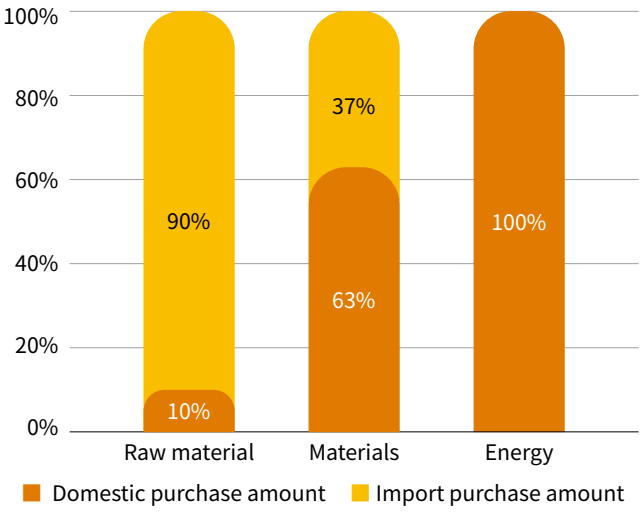
3.5 Sustainable Supply Chain

Purchasing Policy & Supply Chain Social Responsibility Management

Procurement tender information had published on the TGI official website since 2020. In line with a fair, just, and transparent procurement policy, TGI provides materials with authorized quality, reasonable price, supply chain security, low pollution, and away from public hazards to the suppliers' factories. 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.



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 2020, TGI worked with a total of 1,917 suppliers in Taiwan and 253 suppliers from overseas. TGI mainly works with local suppliers in Taiwan. Currently, the limestone and a portion of 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. Except 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 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 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.

he performance of suppliers in 2020 is excellent, 98% of them are in A class, and 2% of them in B class

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

Class A	Class B	Class C
Continue cooperation	Acceptable	Teerminate
≧ 90 points	70-89 points	<69 points

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 2020, there is no C-class supplier, which meets TGI's requirements. Manufacturers are required to provide high-quality material only and do so punctually.

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 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. Quarterly evaluations will be reported to the Chairman or President of the Company.

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

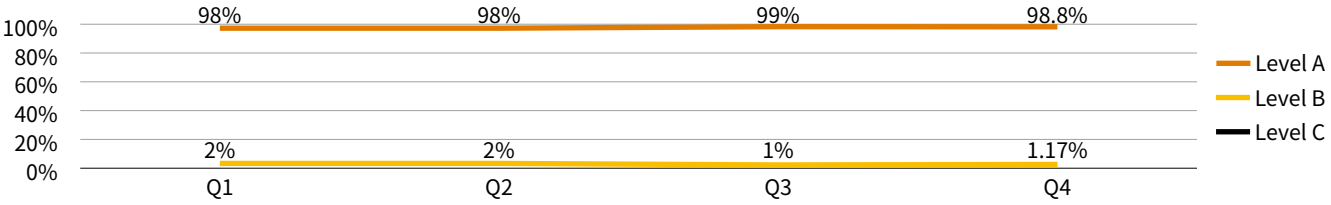
TGI evaluated the suppliers' corporate social responsibility, analyzed the overall scores from all aspects, and implemented questionnaires in the form of information disclosure as a basis for the evaluation of our suppliers' CSR results. Questionnaires were collected from 16 suppliers. The results indicated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

CSR Evaluation Analysis

2020 TGI Suppliers Assessment

	Number of Suppliers Evaluated Every Quarter					Number of Suppliers Evaluated Every Quarter			
	1Q	2Q	3Q	4Q		1Q	2Q	3Q	4Q
Level A	165	159	155	168	**Level A**	98%	98%	99%	98.8%
Level B	3	3	1	2	**Level B**	2%	2%	1%	1.2%
Level C	0	0	0	0	**Level C**	0%	0%	0%	0.0%
Total	168	162	156	170					

indicated 69% of the suppliers as excellent, qualified suppliers were about 31% and 0% of the suppliers needed to improve.

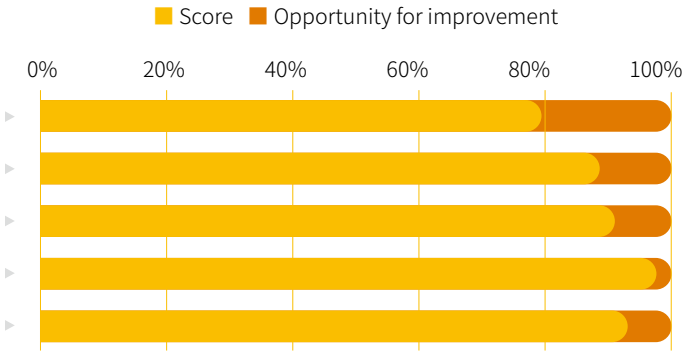


From the results, the control of the environment and human rights-oriented should be stressed further. In the future, TGI will review the score and analysis methods and continue tracking the progress of improvement. The analysis results are as follows:

Aspect ratios of suppliers (%)

Aspect	Score	Opportunity for improvement	Total Score
Environment (EN)	78.47	21.53	100
Labour (LA)	87.2	12.8	100
Human Rights (HR)	90.1	9.9	100
Social aspect (SO)	95.83	4.17	100
Product (PR)	92.08	7.92	100

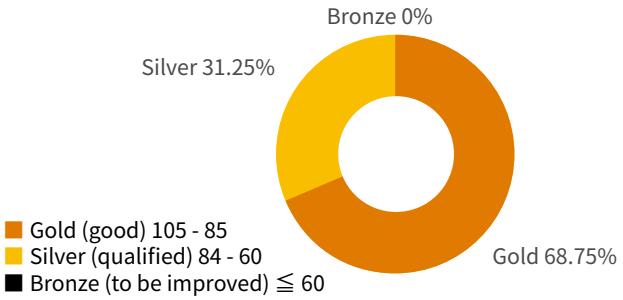
Aspect scores for information disclosure of suppliers (%)



Score analysis for the 16 suppliers Analysis

Classification	Score	Number of suppliers	Percentage
Gold (good)	105~85	11	68.75%
Silver (qualified)	84~60	5	31.25%
Bronze (to be improved)	<60	0	0.00%
total		16	100%

Analysis of supplier evaluation result



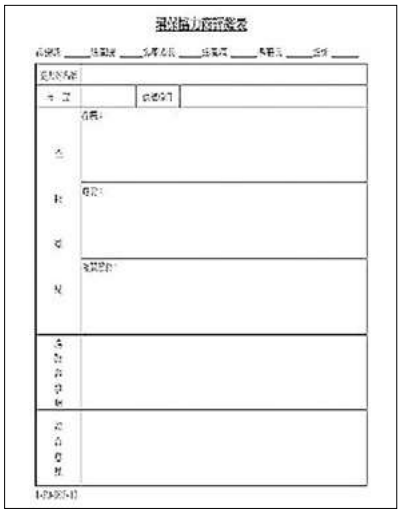
TGI is also the supplier of glass processing products of international brands. The code of conducts of the supply chain from customers is included in key management issue. For example, Flat Glass produced by Taichung Factory was sold to Taiwan Mirror Glass Enterprise LTD, the dealer taking orders of IKEA, in2016. TGI issued a statement of prohibition for child labor in response to the request of human rights from IKEA and we were committed to not employing child labor and complying with relevant regulations.

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

TGI complies with IWAY

Environmental Sub-contractor Qualifications and Evaluations

Every year TGI 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.



Environmental subcontractor evaluation form

CH4 Sustainable Operation

4.1 Sustainable Environment Strategy
4.2 Sustainable Resource Management
4.3 Green Production & Management.

TGI is aware of the importance of environmental protection and the sustainable development. We encourage the implementation of energy and water saving strategies 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.

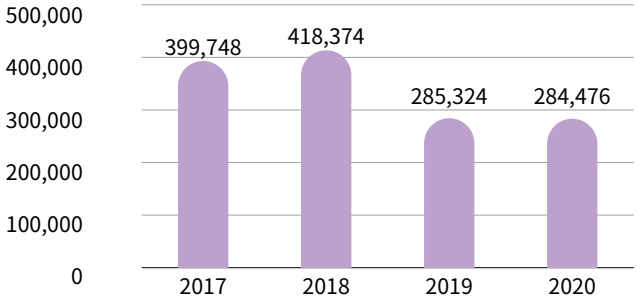
Achievements of Green Production in 2020

280 million	In 2020 invested a total of 280 million in the plan to promote environmental policy.
168,000 tons	Recycled 168,000 tons of scrap glass in 2020.
-8.6%	Greenhouse gas emission of Taoyuan Factory decreased by 8.6% in 2020.
-7.28%	In 2020, the average SOx of TGI decreased by 7.28% compared with 2019.
-930 thousand kWh	With the elevation of equipment and procedure's energy efficiency, including Windmill Engine, lighten device, TGI reduce 930 thousand kWh of electricity consumption
162 million tons	In 2020, there are 162 million tons of the cycle water and total recycle water.
-43.28%	In 2020, the water consumption from the Lukang Factory decreased by 43.28%
-16.27%	In 2020, the wastewater discharge from the Lukang Factory decreased by 16.27%

4.1 Sustainable Environment Strategy

In 2020, TGI spent more than 280 million NTD on environmental protection expenditures. We continue to invest in equipment, regardless of deficit or profitability of the year, 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.

Environmental Expenditure (Unit: 1,000 NTD)



Climate Change Policy

Faced with the impact and challenges of climate change, Taiwan Glass believes that enterprises should bear the responsibility of mitigating environmental impacts. We uphold the ethics and awareness of environmental protection, actively invest in protective measures, and invite supply chain to join our initiatives. TGI's Factories (Taoyuan, Hsinchu, Taichung, Lukang, Lukang flat glass, and Changpin Factories) operates with sustainable development of the environment in mind, and the top priority of our production and products is not to cause major impact on the local ecological environment.

Climate Action	
Response to water shortage	All factories have implemented water conservation projects.
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 emissions 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 serval advanced measures to ensure TGI's sustainable development goals.
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.
Green procurement	Taiwan Glass conducts priority procurement of energy-saving products.

Environmental Input and Output

Raw Materials (Tons)

Silica Sand
253,044

Dolomite
58,844

Limestone
28,664

Sodium Carbonate
62,057

Cullet
168,227
including those purchased from external sources

Kaolinite
29,249

Calcium borate
3,505

Energy Consumption:

Heavy Crude Oil	Diesel	Natural Gas	LPG	Electricity	Water Consumption
75,560 KI	1,193,605 L	47,721,881 M^3	38,325 Kg	524,221,915 KWh	2,084,225 tons

Production capacity

Greenhouse Gas Emissions

- Scope 1: 391,851 tons CO_2e
- Scope 2: 280,502 tons CO_2e

Air Pollutants Emissions

- NOx: 817,046 Kg
- SOx: 324,950 Kg
- VOCs: 69,148 Kg
- Particulate pollutants: 61,894 Kg

Processing Waste

Unwound Yarn	Sludge	Garbage	Wastepaper	Scrap Iron	Waste wood	Reclaimed water
10,695 tons	1,584 tons	509 tons	598 tons	181 tons	296 tons	1,238,733 tons

Solution

Unwound Yarn	Sludge	Garbage	Wastepaper	Scrap Iron	Waste wood	Reclaimed water
Recycle	Heat treatment or Curing	Incineration	Recycle or Incineration	Recycle	Recycle	Reclaimed water 162,310,707 tons

Compliance with Environmental Regulations

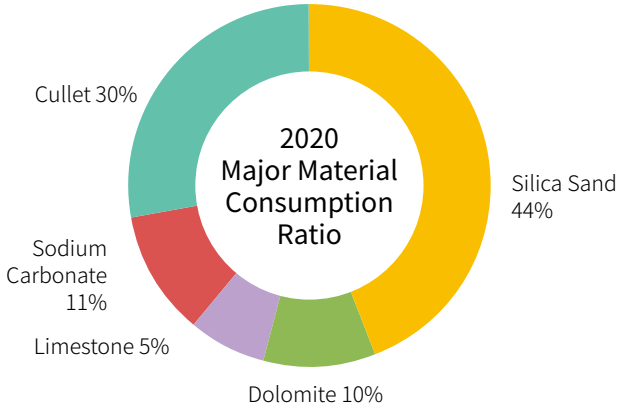
TGI believes in honesty and hard work and always complies with governmental regulations. Under the " environmental protection and occupational safety first " principle, TGI pursues the objective of " zero pollution and occupational hazards " by complying with the government's environmental protection policies while ensuring occupational safety to fully fulfill the company's corporate social responsibilities. In 2020, the violation of environmental law are as follow, there is no significant violation in 2020, which is lower compare with 2019.

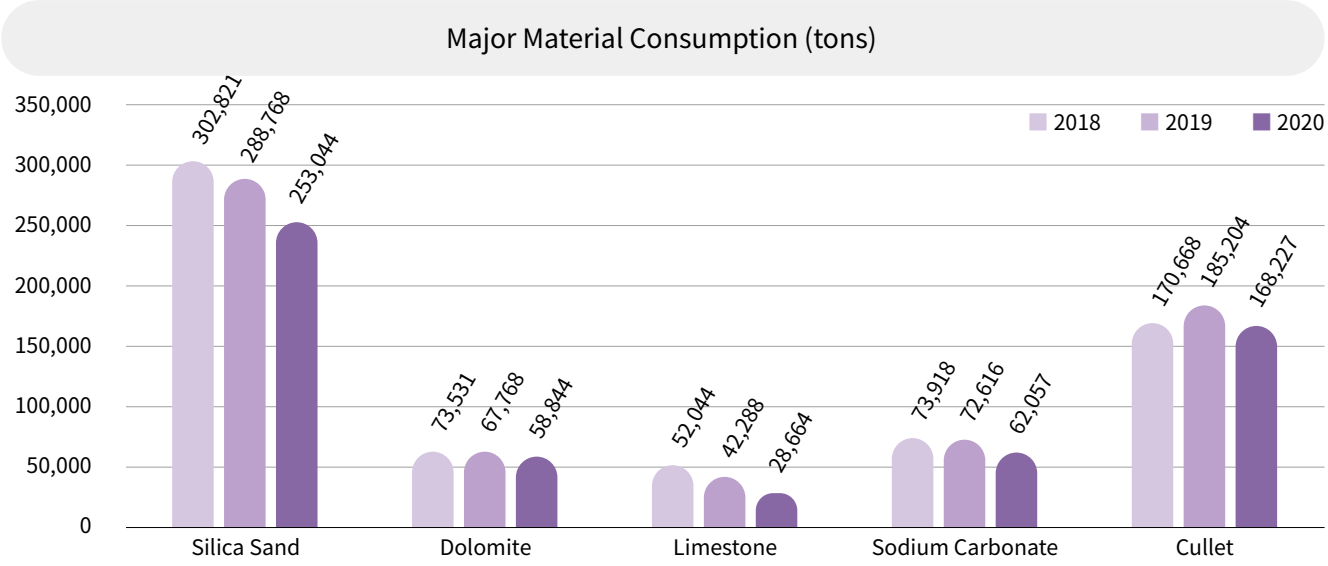
Factory	Violations	Fine (NTD)	Improvements
Taoyuan	Fine for violating Water Pollution Control Act to leak out polluted water	**36,000 元**	1. The wastewater leaks out when it is on a high level, for burst on the pipeline. 2. The pavement above the burst is excavated, which is fixed by cement. 3. The factory passed the reinspection of the Environmental Protection Bureau on January 9, 2020.

4.2 Sustainable Resource Management

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 2020, TGI used approximately 253,000 tons of silica sand, more than any other material. The consumption of these materials is listed below:





※Note: Other material including kaolin, colemanite, and nepheline was only used in an insignificant amount and therefore was not listed above.

Recycle of Waste Glass

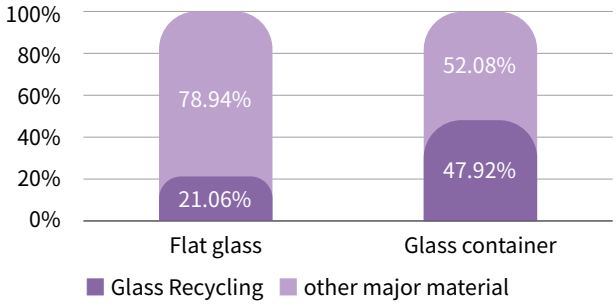
As glass is the material that can reduce environmental pollution, using glass is supported by the public; furthermore, both international organizations and governments from each country recognize the highly recyclable feature of glass.

TGI's container factory recycles its blemished and scraped products, which reduces the consumption of ore and the environmental impact. Recycle yards recycle scrapped 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, but it also reduces our environmental impact and fulfills our corporate social responsibilities.

Waste Glass Consumption Ratio Unit：%

Year/Product	Flat glass	Glass container
2018	16.54%	50.03%
2019	19.40%	51.35%
2020	21.06%	47.92%

Ratio of Scrap Glass Recycling



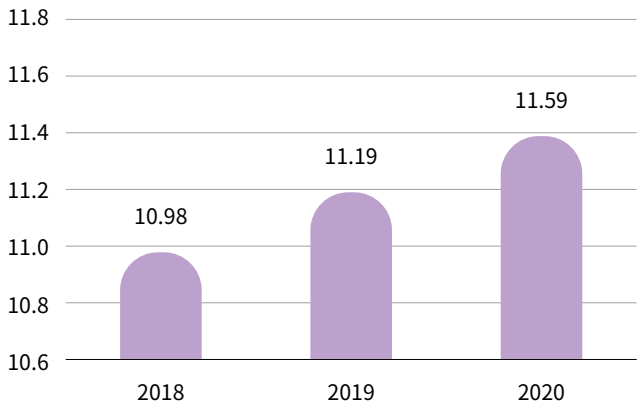
Energy Management

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:

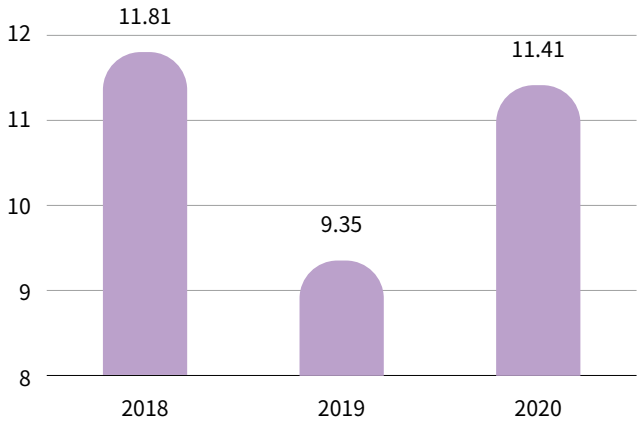
Various energy consumptions (by year)

Year/ Energy		Heavy crude oil (KL)	Diesel (Liter)	Natural gas (M^3)	Liquefied petroleum gas (KG)	Electricity (kWh)
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
2019	**Total**	97,558	762,650	43,270,529	9,000	523,599,725
	Calorific value (GJ)	3,920,409	26,817	1,449,043	454	1,884,938
2020	**Total**	75,560	1,193,605	47,721,881	38,325	524,221,915
	Calorific value (GJ)	3,036,416	42,015	1,598,638	1,939	1,887,199

Flat glass energy consumption intensity (GJ/ton)



Glass container energy consumption intensity(GJ/ton)



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 electricity purchased from external sources. TGI's direct carbon emission was approximately 439 thousand tons of CO2e in 2020, a 14% decrease compared with 2019 and a 8.6% decrease compared with 2019.

Carbon Emissions (by product/by year)

Product/ Year	2018		2019		2020	
	Direct emission	Indirect emission	Direct emission	Indirect emission	Direct emission	Indirect emission
Flat Glass	250,798.30	77,137.46	250,678.80	72,312.40	191,997.49	63,907.18
Fiberglass	132,192.75	184,662.39	102,522.94	155,484.41	80,493.62	163,772.57
Glass Container	112,451.73	51,771.96	115,745.71	51,281.85	119,359.67	52,822.01
Subtotal	495,442.78	313,571.81	468,947.46	279,078.65	391,850.78	280,501.76
Total	809,014.60		748,026.11		672,352.54	

Remark 1 To make TGI's environmental data easier for readers to understand, this year's report adjusts the presentation of greenhouse gases, converts the plants' main emission by coefficient released by the Evironmental Protection Administration and the Bureau of Energy, and revises the data of the past two years.

Remark 2 Except for the head office and the Changbin plant, plants of Taiwan Glass annually commissions a third-party organization to track the previous year's greenhouse gas inventory. Results are uploaded to the National Greenhouse Gas Platform of the Environmental Protection Administration and Market Observation Post System, in compliance with relevant laws.

TGI continued to promote energy conservation and take action on carbon reduction. Since 2014, Taoyuan, Taichung, Lukang 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

1. Taoyuan Factory had replaced the boiler and changed the fuel from oil to natural gas since March 2020. It had consumed 1236.88 thousand cubic meters of natural gas from May to December, compared to 1260.13 KL heavy oil per year in the past. This measure makes Taoyuan Factory reduce 1594 tonnes of carbon emissions and raises the efficiency of the boiler to 94%.
2. Taoyuan Factory hugely decreases electric consumption by replacing 4-foot fluorescent tubes with the same length LED tubes in producing area, which is estimated to save 222,720 kWh every year.
3. In March 2020, Taoyuan Factory obtained the “Certificate of Cleaner Production Assessment” of the Industrial Bureau.

Hsinchu factory

In 2020, Hsinchu Factory won the “Outstanding Water Saving Improvement Award” from Water Resources Agency. To comply with NOx emission standard reduced from 300ppm to 180ppm, Hsinchu Factory installs SCR DeNOx equipment at TS-3, TS-6, TS-7, and TS-8 in 2020. The equipment is estimated to cost NT 92 million.

Taichung Factory

1. As a legal person and natural person with contracted electricity consumption of more than 800 kilowatts, according to the “Energy Management Law”, the target annual power saving is 1%. It also conducts annual on-site audits of waste manufacturers to ensure that their sludge and other waste emissions comply with Taiwan Glass's specifications.
2. Taichung Factory will complete the transformation of EP NaOH Spray & Circulation Pump into an inverter control system in June 2021, which can effectively save electricity.

Lukang Factory

1. SGS is appointed periodically to verify ISO 14064 (Greenhouse Gas Accounting and Verification).
2. This year, Lukang Flat Glass Factory had repaired the kilns by changing their refractory and insulation and covering their inner wall with energy-saving coating, which can improve the effectiveness of heat insulation and reduce the dissipation of fuel.
3. Lukang Flat Glass Factory adds a new CF dust collector in front of the emission pipeline to reduce the emission of particulate matter and increase the stability of air pollution control equipment.
4. Lukang Flat Glass Factory plans to build the natural gas system in kilns in 2021. It can reduce air pollution and greenhouse gas emission by using less heavy oil and most natural gas.
5. Lukang Flat Glass Factory plans to renew ISO 50001:2018 certification to improve energy management.

Changpin Factory

1. Changping Factory applies an automatic recycle water system and sets up automatic tap water charging equipment to save water by reducing manual controls.
2. Introduce an electronic approval system to decrease paper waste.
3. Defective Laminated Glasses are given new lives through recycling in the factory.
4. Modify the wagon of Laminated Glasses to increase the capacity, which enables Laminated kilns to be loaded as fully as possible every time.
5. In 2020, the Zhangbin factory recycled Styrofoam by packing and rearrangement. A total of 4288 pieces had been recycling in 2020.

TGI reduced its carbon emission by a total of 2,101.9 tons in 2020. The energy conservation and carbon reduction measures and results for all TGI's factories are listed below:

item Factory	Energy conservation measures	Energy conserved	Amount conserved	CO_2 reduced (ton)
Taoyuan Factory	**Replacement of natural gas boiler with heavy oil boiler**	Replacement of natural gas boiler with heavy oil(kL)	1,260.127	1,595
	Replacement of 4-foot fluorescent tube with 4-foot LED tube in the twisted yarn section.	Electricity (kWh)	105,912	53.9
	Replacement of 4-foot fluorescent tube with 4-foot LED tube in the composite warehouse section.	Electricity (kWh)	116,808	59.5
Hsinchu Factory	**Replace the old hammer crusher with the new one.**	Electricity (kWh)	4,052	2.0
	Replace the fan motor of TS-2 Forehearth with the new one for burning purposes.	Electricity (kWh)	10,282	5.1
	Replace the fan motor of TS-6 Throat Fan with the new one for cooling purposes.	Electricity (kWh)	9,709	4.8
Taichung Factory	**TF-2 EP NaOH Spray & Circulation Pump had being transformed into the inverter control system.**	Electricity (kWh)	40,646.4	21.7
Lukang Factory	**Replacement of 4-foot fluorescent tube with 4-foot LED tube**	Electricity (kWh)	34,560	18.2
	HVAC Supply Fan is made and added an inverter control system.	Electricity (kWh)	546,300	288.4
Changpin Factory	**Thirty mercury vapor lamps are replaced by electrodeless lamps in the factory.**	Electricity (kWh)	33,880	18.1
	Searching lamps partly take the place of high bay lights	Electricity (kWh)	69,984	38.8
Total of CO2 reduction across all factories (tons)				2,105.41

Water Resources Reduction Management

Water Resources Management Policy

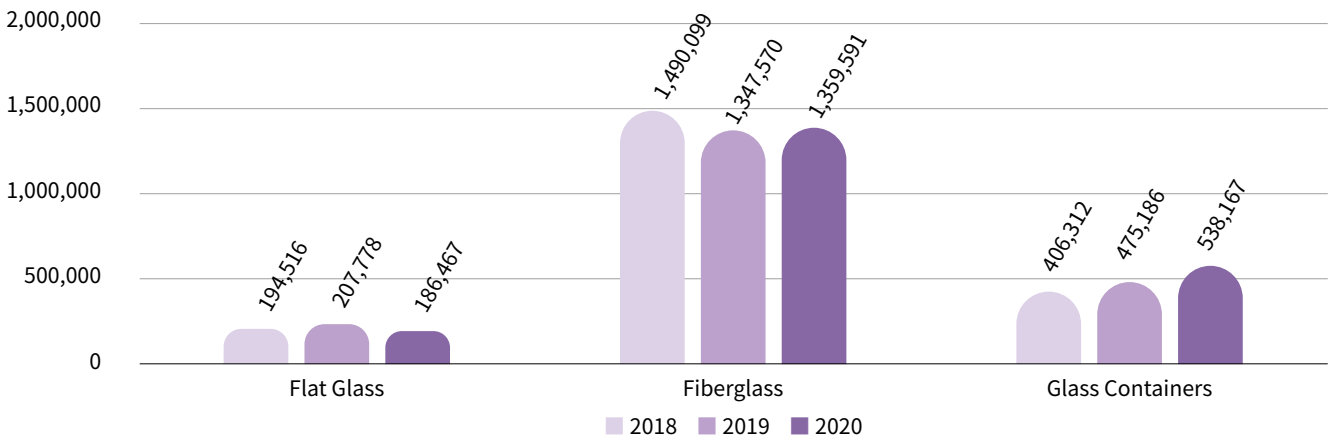
TGI improves water efficiency by purchasing water-conserving equipment. We promote awareness of green production and reuse water resources.

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.

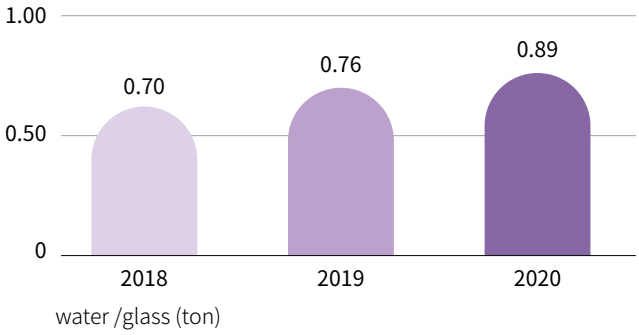
Taoyuan	Hsinchu	Taichung	Lukang/ Lukang Flat Glass	Changpin
Water Source: Taiwan Water Corporation 2nd Branch	Water Source: Dongxing waterworks	Water Source: Water Management Area 4, 1st Branch	Water Source: Taiwan Water Corporation 11th Branch	Water Source: Taiwan Water Corporation 11th Branch

In 2020, the plants of Taiwan Glass will consume about 2.08 million tons of water. Since 2017, part of the process has been improved. Recycled water is used as dilution water. The recycled water system has gradually improved and the increase in water consumption has gradually declined.

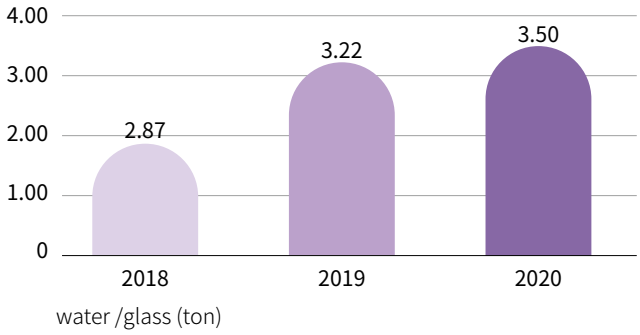
Annual Water Consumption(ton)



Flat Glass Water Consumption Intensity



Glass Container Water Consumption Intensity



Year	2018	2019	2020
Water withdrawal (Million Liter ML)			
Surface Water	0.00	0.00	0.00
Undergriund Water	406.31	428.36	493.78
Seawater	0.00	0.00	0.00
Produced Water	1417.35	1569.82	1674.09
Third-party Water	1843.85	1672.93	1655.07
Total Water withdrawal	3667.52	3671.10	3822.94
Water Displacement(Million Liter ML)			
Surface Water	0.00	0.00	0.00
Undergriund Water	388.97	442.14	387.00
Seawater	0.00	0.00	0.00
Third-party Water	975.51	953.34	881.62
Total Water Displacement	1364.47	1395.48	1268.62
Water consumption (Million Liter ML)			
Total Water Consumption	2303.05	2275.62	2554.32

In 2020, TGI Hsinchu Factory won the “ Implement of Water Conservation Counseling and Improvement Award ” issued by the Water Resources Agency, Ministry of Economic Affairs.

For the three consecutive years since 2017, Hsinchu Factory participated in “ Project of Consulting on Water Saving for Major Water Users and Management Team ” presented by the Water Resources Agency, Ministry of Economic Affairs. With its exceeding performance on water-saving, Hsinchu Factory was awarded 100,000 for the project in October 2020.

Water Reuse

With the frequent changes of climate and extreme weather, water management has become a unignorable material issue in the industry. 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 Changping Factory installed an automatic water replenishment system for tap water, applying a mechanism of recycled water automation to reduce the frequency of manual control to save water. The Taoyuan Factory recycles and reuses the wastewater discharged from the backwashing of the resin softening tank, with 32,668 tons of water recovered in 2020. The Hsinchu Factory added a water recycling tank in the north to increase the water storage capacity and recycle wastewater.

The following table shows each TGI factory's amount of water recycled and recycling rate in 2020.

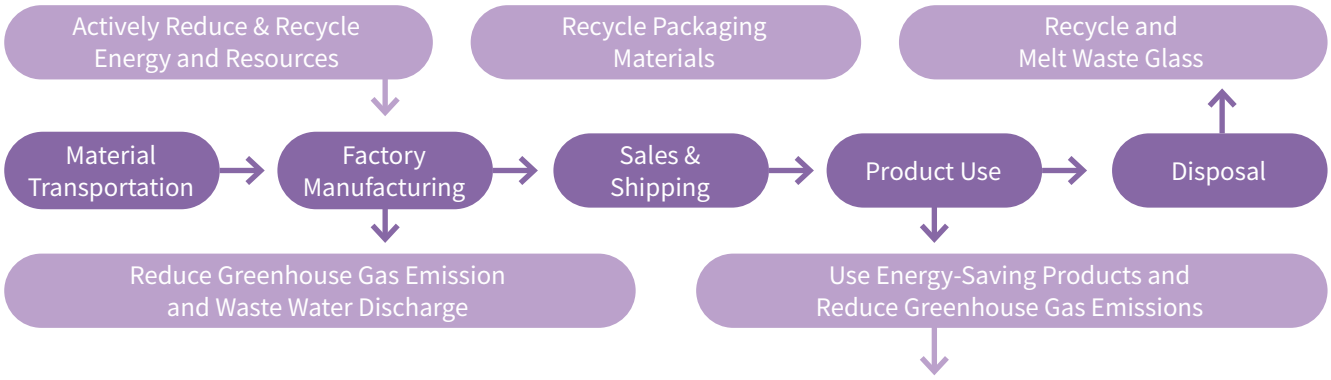
TGI 2020 Recycled Amount & Recycle Rate of Water Resources (By Factory)

Item / Factory	Taoyuan	Hsinchu	Taichung	Lukang	Lukang Flat Glass	Changpin
Total circulating water amount + Total recycled water amount (M3)	44,444,326.6	609,323.0	184.0	97,854,084	6241,518.0	13,161,271
Total water consumption (%)	45,108,394.6	1,147,490.0	177,722.0	98,536,570	6,247,495.0	13,212,306
Recycle rate (Reuse rate)	98.53%	53.10%	0.10%	99.31%	99.90%	99.61%

Notes：1 Circulating water: the amount of water reused in the same system.
Notes：2 Recycled water: the amount of water reused in the other systems.
Notes：3 Total water consumption: the amount of water needed through a productive or operative process.
Notes：4 Recycle rate (Reuse rate): (Total circulating water amount +Total recycled water amount)/ Total water consumption × 100%.
Notes：5 The recycled water that the Taichung Factory supplies to Taiwan Autoglass Ind. Corp. is not included in the calculation of Taichung Factory.

4.3 Green Production&Management.

TGI Green Production Strategy



In response to the rising global environmental awareness and the adoption of green manufacturing in this industry, TGI is committed to improving the efficiency of raw materials use, reducing the environmental costs of production, and carefully analyzing the energy consumption to assess the greenhouse gas emission intensity, air pollution, waste water and waste, etc. We hope to make progress towards sustainable production and to do our best for the earth.

Air Pollution Control

Our priority is to comply with EPA'emissions standards and reduce pollutants emitted every year. We have improved our manufacturing process by replacing heavy oil and diesel with natural gas and managing pollutants with equipment. increase natural gas to reduce the emission of air pollutants. In addition to reducing air pollution and fossil energy use, the implementation also ensures the health of employees in factories. 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.

To comply with NOx emission standard reduced from 300ppm to 180ppm, Hsinchu Factory installs SCR DeNOx equipment at TS-3, TS-6, TS-7, and TS-8 in 2020. The equipment is estimated to cost NT 92 million. In addition, Lukang Flat Glass Factory adds a new CF dust collector in front of the emission pipeline to reduce the emission of particulate matter and increase the stability of air pollution control equipment.

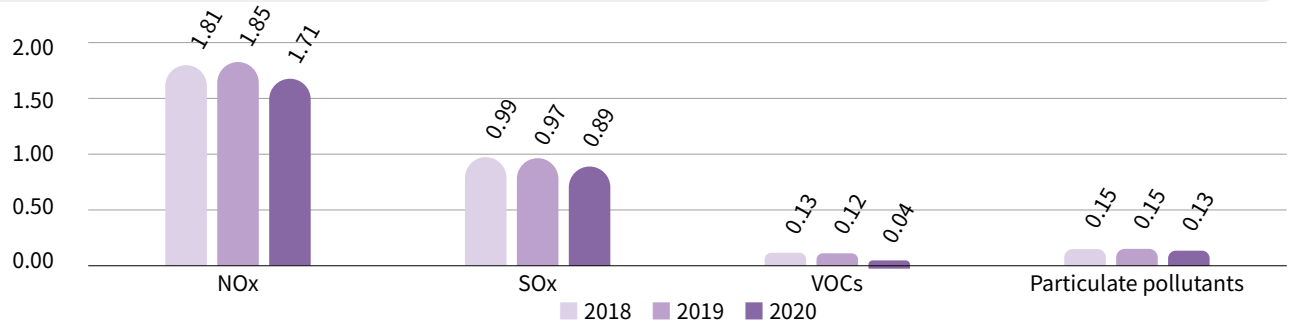
The emission intensity of the air pollutants of each product is shown in the figure. In the future, we will also control all types of air pollutants more rigorously. We hope to reduce pollutant emissions while increasing production capacity, and make a contribution to the global environment and people's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

Total Air Pollutants Emissions for Each TGI Factory Units: kg

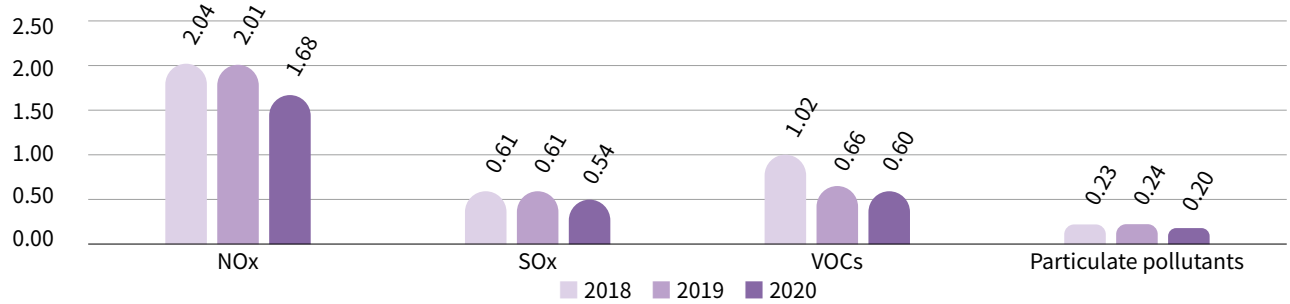
year Air pollution evaluation item	2018	2019	2020
NOx	997,334	950,107	817,046
SOx	442,759	396,592	324,950
VOCs	137,963	87,363	69,148
Particulate matter	73,321	76,115	61,894

The emission intensity of the 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.

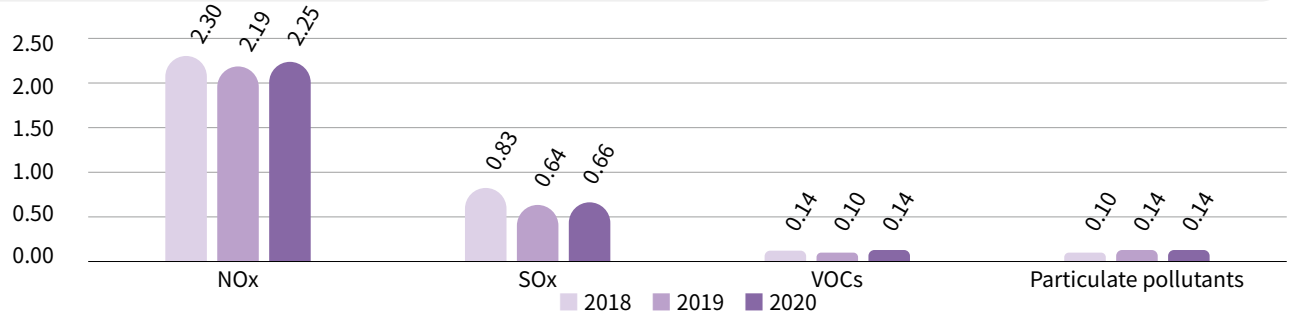
TGI Flat Glass Air Pollutant Emission Intensity Record (KG/ tons of glass)



TGI Fiberglass Air Pollutant Emission Intensity Record (KG/ tons of glass)



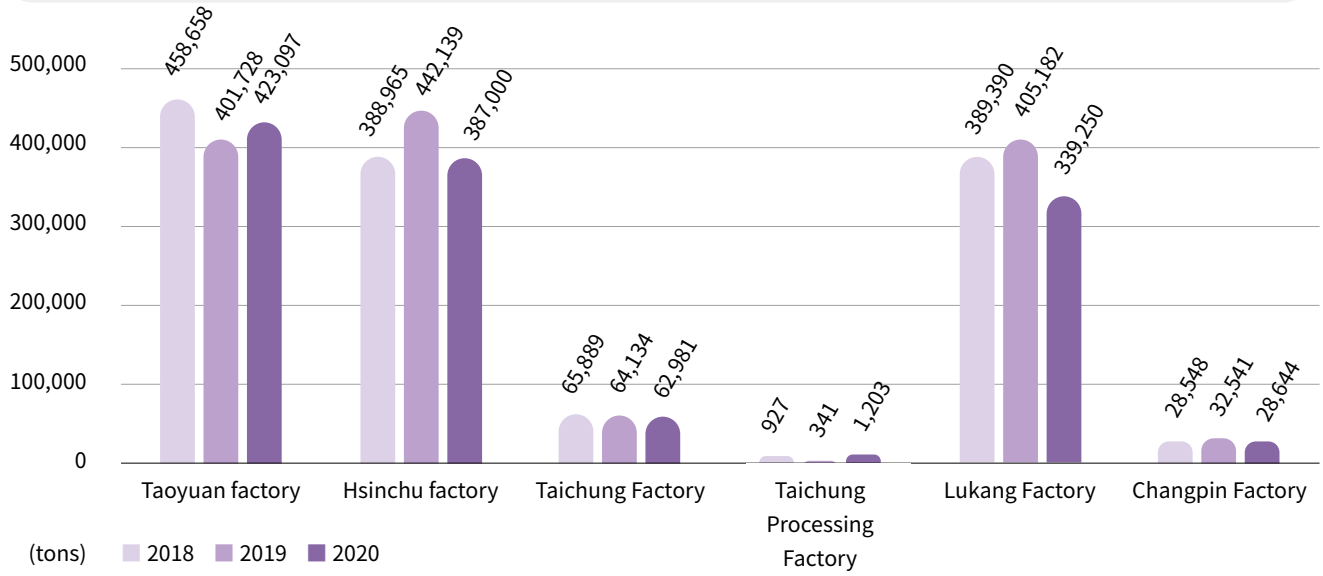
TGI Glass Container Air Pollutant Emission Intensity Record (KG/ tons of glass)



Water Pollution Management

All factories have wastewater treatment equipment to reduce the pollutants in the wastewater so that the wastewater can meet the local discharge quality standards. Domestic sewage, after being treated by the treatment system, is compliant with the legal standard to be discharged to the surface water body. TGI factories discharged a total of 1,242,175tons of wastewater in 2020, reduced 8.39% compared with 2019.

Wastewater Quantity of TGI Factories (by years)



Remark.1 The statistics of Taiwan Glass's wastewater volume are presented by the number of emissions paid by each factory. The emissions of Taichung processing factory include Taiwan Autoglass Ind. Corp., and the emissions of Changpin factory include TG TECO Vacuum Insulated Glass Corporation.

Remark.2 Taichung factory and Taichung processing factory reuse wastewater for cleaning filter cloths and flushing roads, so the payment measurement is lower than the actual discharge.

Wastewater Discharge Destination and Legal Standard

Factory	Discharge Destination	Legal Standard
Taoyuan	Guanyin Industrial Park Service Center	Guanyin Industrial Park Service Center Wastewater Discharge Limit Summary Table
Hsinchu	Sanxinggoan Creet	Water Pollution Control Act
Taichung Factory (Including Taichung Processsing Factory)	Guanlian Industrial Park sewage system	Taichung Harbor Special District Water Recycle Center Wastewater Discharge Standards
Lukang Factory (Including Lukang Flat Glass)	Changhua Coastal Park Service Center WastewaterTreatment Plant	Changhua Coastal Park Service Center WastewaterTreatment Standard
Chanping Factory	Changhua Coastal Park Service Center WastewaterTreatment Plant	Changhua Coastal Park Service Center WastewaterTreatment Standard

2020 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**	163.3	17.3	0.9	10.9	42.7	16.0
	Discharge Standards	560	<100	800	800	640	640
SS (mg/L)	**Detected Values**	45.2	8.5	3.9	7.2	10.8	11.0
	Discharge Standards	480	50	600	600	400	400

Notes.1 Only Hsinchu factory paid half-year billing for wastewater discharge, other industrial areas to which other factories belong calculated and monitored the discharge water value monthly. All the factories entrust third-party institutions to sample and test the declaration in accordance with the provisions of the Environmental Protection Agency.

Notes.2 The monitoring values of Hsinchu factory in this report are presented based on the average value of each quarter's outsourced inspections, and the monitoring values of other factories are presented as the average of monthly monitoring values in the industrial area. Therefore, the inspection value of the processing plant includes TAGC, and TVIG in Changpin factory.

Waste Management and Recycle

Taiwan Glass has set two principles for the disposal of waste, including improving production yield to reduce the amount of waste, and recycling recyclable waste, such as waste fiberglass and unwound yarn.

Non-recyclable wastes such as household waste and wasted plastic mixtures, rubber, glass and other mixtures are commissioned by qualified clearers and handed over to local environmental protection bureaus and incinerators for disposal. Sludge generated by wastewater treatment procedures entrusts qualified processors to recycle. Recyclable wastes such as wasted paper, iron and plastic are also sent to qualified recyclers for disposal. In 2020, the Zhangbin factory recycled Styrofoam by packing and rearrangement. A total of 4288 pieces had been recycling in 2020.

All of the factories should classify garbage and reduce the amount of garbage. The waste removal of the Taichung factory is handled and recycled by qualified processors and classified according to the nature of the waste. In order to achieve the purpose of waste reduction, the Changpin factory conducts an on-site inspection of the waste classification implementation level every week. Those who do not comply with the regulations open missing orders and strictly require improvement.

TGI Waste Disposal Capacity (By Years)

Item	Treatment	2018	2019	2020
Domestic Waste	Incineration	477.81	658.90	509.16
Waste Plastic	Reuse or Incineration	124.71	122.02	103.12
Waste Rubber Mixture	Reuse or Incineration	1.10	1.09	0.60
Waste Paper	Reuse or Incineration	625.20	613.56	597.73
Waste Fiber	Incineration	1.20	0.56	0.18
Waste Glass	Buried or physical treatment	3,134.69	20,240.13	13,116.10
Waste Fiberglass	Reuse	2,985.43	3,072.01	2,083.66
Waste Glass Mixture	Buried or physical treatment	573.20	564.55	373.34
Waste Wood	Reuse	189.00	204.52	295.97
Waste Fire Bricks	Reuse	0.00	0.00	0.00
Waste lubricants	Reuse	22.69	25.78	61.69
Human Waste	Biological treatment	43.75	0.00	0.00
Civil Engineering Waste	Reuse	0.00	0.00	0.00
Scrap Iron	Reuse	410.00	291.00	180.54
Waste Aluminum Caps	Reuse	514.00	468.65	493.71
Waste bricks	Reuse	182.06	1,007.97	0.00
Sludge (Inorganic/organic)	Heat or solidification Treatment	2,301.75	2,372.00	1,531.31
Waste insulation materials	Buried after physical treatment	0.00	0.00	0.00
Waste Silk	Reuse	1,861.39	1,312.00	0.00
waste Pallet	Reuse	128.11	136.00	146.19
Unwound Yarns	Reuse	1,7822.33	14,964.00	10,695.00
Other corrosive mixtures	Incineration	5.27	3.54	3.82
Selenium and selenium compounded	Buried after solidification treatment	40.01	63.07	53.88
Waste Oil Mixture	Reuse	0.00	0.00	0.00
Non-hazardous scrapped furnace dust or its mixtures	Physical treatment	0	0	193.32
Waste refractory Material	Physical treatment	0	0	418.74
Non-hazardous oil sludge	Physical treatment	0	0	40.46
Other mixture waste containing toxic heavy metals containing toxic substances and exceeding the leaching standard limit.	Solidification treatment	0	0	102.9

CH5 Safe Workplace & Trusted Growth

5.1 Talent Structure and Benefits
5.2 Employee Care & Development
5.3 Safe Workplace and Health Promotion

2020 Employee Care and Welfare Achievements

99.9%	The ratio of hiring local senior executives is 99.9%, creating many employment opportunities for the local Taiwanese and caring for the local people.
100%	Proper compliance with government labor laws and regulations, 100% of employees are following the Law on the Protection of Rights and Interests of Persons with Disabilities.
100%	Reinstatement employees who apply for childcare leave without pay will have a 100% retention rate in 2020.
29.05 years	In 2020, there are 144 retired employees with an average length of service of 29.05 years. The chairman/president awards a retirement commemorative medal, thanking the employees for their long-term contributions.
16.8 hrs	In 2020, the average hours of education and training for general personnel of TGI are 16.8 hours.
99.2%	In Off-work Learning Plan, the satisfaction of the supervisory management class survey in 2020 is up to 99.2%.
155%	The average salary of TGI personnel is 155% higher than the local minimum salary.
90.47%	In 2020, TGI adopted the <New Staff Counselor System> and the in-service rate is 90.47%% by December 31st, 2020

5.1 Talent Structure and Benefits

TGI treats employees as the company's most valuable assets, therefore, we put the working environment, career development and health in the first place and keep promoting the various employee welfare projects. Our compensations and benefits are better than the compliance requirement and continuously adjusted based on employee's position and personal experience instead of gender, race, religion, political affiliation, marital status or union/social association membership. In addition to providing a starting salary that is higher than the legal minimum wage in the areas where TGI operates, we also review employee's education level, experience, expertise, skills, number of years of service in the industry and the average salary in the industry.

Human Resources Structure

By the end of 2020, there were 4,288 employees in total, among which 1,206 managers were Taiwanese. 99.9% of supervisors at TGI are local Taiwanese. This indicates that TGI has created many job opportunities for the locals. All the employees are hired workers, with no dispatched employees, which makes TGI a stable and healthy workforce. Our employees are located in various cities in northern, central and southern Taiwan. They are all either fixed-term or non-fixed-term contracted workers. The detailed employee structure is listed below:

Employee Gender Structure

Year	2018		2019		2020	
Item	Male	Female	Male	Female	Male	Female
Nationality	3,254	555	3,163	559	3,010	550
	785	143	733	127	639	89
	4,039	698	3,896	686	3649	639
Total	4,737		4,582		4,288	

Employee Seniority Structure

Item	Category	Male		Female		Total	
		Number	Percentage (%)	Number	Percentage (%)	Number	Percentage (%)
Seniority	**Under 5 years**	1,271	29.64%	224	5.22%	1,495	34.86%
	6~15 years	1,282	29.90%	179	4.17%	1,461	34.07%
	16~25 years	798	18.61%	186	4.34%	984	22.95%
	25 years or above	298	6.95%	50	1.17%	348	8.12%
	Sub-total	3,649	85.10%	639	14.90%	4,288	100 %

Salaried/Contract Employees

Item	Category	Male		Female		Total	
		Number	Percentage (%)	Number	Percentage (%)	Number	Percentage (%)
Type	**Salaried Employees**	2,943	82.67%	540	15.17%	3,483	97.84%
	Contract Employees	67	1.88%	10	0.28%	77	2.16%
	Total	3,010	84.55%	550	15.45%	3,560	100%

Employee Age Structure

Item	Category	Male		Female		Total	
		Number	Percentage (%)	Number	Percentage (%)	Number	Percentage (%)
Age	**Under 30**	675	15.74%	151	3.52%	826	19.26%
	31~40	1,545	36.03%	247	5.76%	1,792	41.79%
	41~50	1033	24.09%	193	4.50%	1,226	28.59%
	51 or older	396	9.24%	48	1.12%	444	10.36%
	Sub-total	3,649	85.10%	639	14.90%	4,288	100%

Note：Foreignemployees were not included.

Employee Education Level Structure

Item	Category	Male		Female		Total	
		Number	Percentage (%)	Number	Percentage (%)	Number	Percentage (%)
Education	**Master or higher**	146	4.10%	11	0.31%	157	4.41%
	College	1,872	52.58%	363	10.20%	2,235	62.78%
	High school or below	992	27.87%	176	4.94%	1,168	32.81%
	Total	3,010	84.55%	550	15.45%	3,560	100%

Note：Foreign employees were not included.

Management Structure

Nature of work	gender	total	Ratio	Total percentage
General staff	**Male**	2,566	59.84%	71.88%
	Female	516	12.03%	
Junior-level Manager	**Male**	992	23.13%	25.72%
	Female	111	2.59%	
Mid-level Managers	**Male**	73	1.70%	1.98%
	Female	12	0.28%	
Senior Managers	**Male**	18	0.42%	0.42%
	Female	0	0.00%	
Total		4,288		100%

Recruitment and communication

TGI complies with the laws and regulations of the Labor Standards Act to safeguard our employees' human rights and privacy and prohibit discrimination. All recruitment, employee selection, and employment comply with the government's rules and regulations. No employee is discriminated (including compensation discrimination) owing to 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. Our recruitment process is fair, just and honest. TGI offers compensation based on the education level, job responsibilities, position rank, experience and professional background. Candidates' outfit, demeanor, mental situation, reaction and logic during the interview will also be factored in.

In order to safeguard the basic human rights of all colleagues, customers and stakeholders, TGI adheres to the 《UN International Labor Organization》, 《UN Global Compact》, 《UN Guiding Principles on Business and Human Rights》,《UN Universal Declaration of Human Rights》. The principles enshrined in international human rights conventions respect internationally recognized fundamental human rights, including banned child labor, care for vulnerable groups, freedom of association, 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 and particularly emphasises on the following human rights issues, and continuously promote and promote the quality of human rights:

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

Staff Turnover Rate and Resignation Rate

In 2020, 454 employees resigned from TGI with a turnover rate of 12.75%.For the past three years, the annual turnover rate has been below 15%. In 2020, TGI hired 254 new employees with a recruitment rate of 7.13%. TGI promise to build a better working environment and welcome new member join annually.

New recruits in 2020

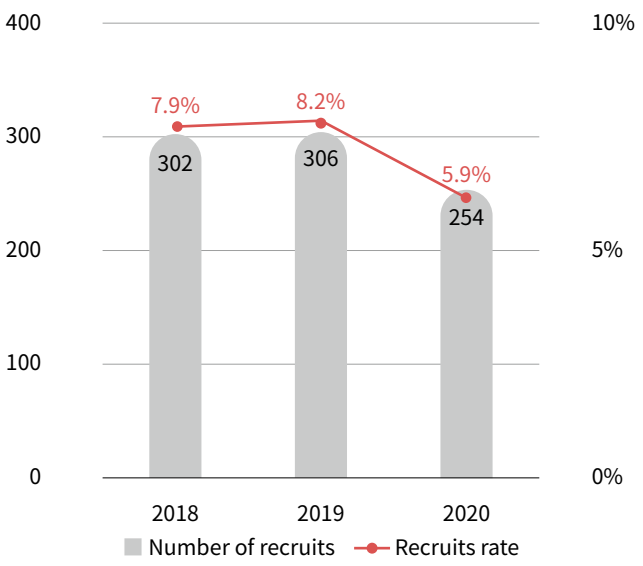
Area	New recruits	Gender		Age							
				Male				Female			
		Male	Female	Under 30	31~40	41~50	51 or older	Under 30	31~40	41~50	51 or older
North	**166**	**129**	**37**	58	36	16	19	22	9	3	3
Central	**88**	**74**	**14**	31	30	8	5	7	5	2	0
Total	**254**	**203**	**51**	89	66	24	24	29	14	5	3

Resignation in 2020

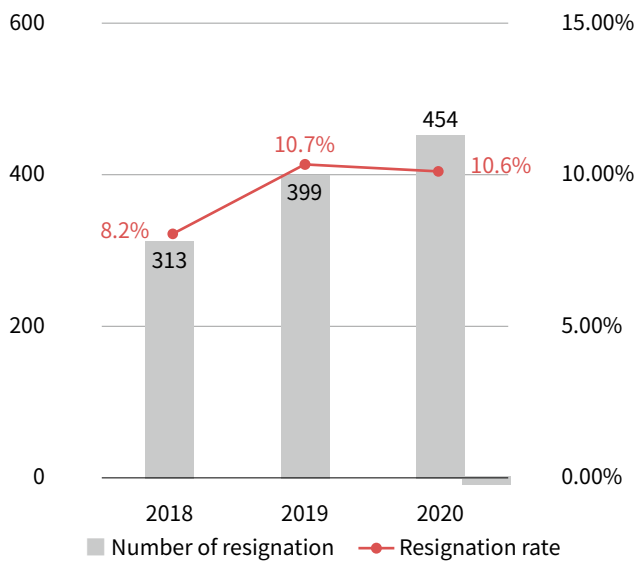
Area	Resignation	Gender		Age							
				Male				Female			
		Male	Female	Under 30	31~40	41~50	51 or older	Under 30	31~40	41~50	51 or older
North	**224**	**185**	**39**	46	46	35	58	12	12	6	9
Central	**230**	**207**	**23**	27	79	21	80	11	7	2	3
Total	**454**	**392**	**62**	73	125	56	138	23	19	8	12

Note:1 Recruit rate (%) = Recruits of the category/Total number of Taiwanese employees of the category by the end of the year
Note:2 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

TGI Recruit rate(by year)



TGI Resignation rate (by year)



Note:1 Recruit rate (%) = Recruits of the category/Total number of Taiwanese employees of the category by the end of the year
Note:2 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

A Diverse and Friendly Working Environment

TGI adheres to the government's statutory regulations on employment quota in disability. Although TGI is a traditional manufacturing industry, it aims to create a stable and friendly employment environment for the disabled employees. At the end of 2020, the average number of disabled employees in TGI is about 108 per month, which is more than 150% higher than the statutory standards. We will be more proactively to create diversified and optional job opportunities and environment ever since. In 2020, Taiwan Glass also employed 27 aboriginal employees, which fully demonstrates the diversity of employment. Also, there were no violations on the rights of indigenous peoples in 2020.

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 - Birthday Leave

The aim of TGI is to build up a “caring the employee for a happily working” environment. To show the gratitude towards colleagues who work together with the company, each employee has one-day birthday leave from 2020. Until the end of 2020, the implementation rate of birthday leave is 80.2%, which shows the recognification of the benefit by TGI employees.

2020 Birthday Leave Welfare Implementation Result

Total number of having the Birthday Leave Welfare (A)	The number of applying for Birthday Leave Welfare (B)	Implementation Rate (B/A) (%)
3,677 人	2,949 人	80.2%

Employee Benefits

Fair Performance Management System

To improve and recognize the performance of the employee, 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. All TGI employees receive regular performance assessments mainly based on their job performances. Their work efficiency and sense of responsibility are the core evaluation criteria.

The male-to-female ratio of a basic salary of TGI in 2020 was 1:0.95, and the overall difference was less than 0.05. 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, race, religion, political party, marriage or union. In addition, the personnel unit continuously tracked and analyzed the salaries of the general staff, which was higher than the statutory salary by 155%. The average annual salary of non-executive full-time employees is 585,000 NTD, and the median of the average annual salary of non-executive full-time employees is 556,000 NTD, which are both better than the average wages of glass industry.

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 is 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, until the end of 2020, the total number of union is 1,263.

2020 Union Participation

Factory	Hsinchu	Taichung
Male	818	337
Female	83	25
Total	901	362
Ratio	94.64%	79.39%

Lukang factory awarded by Changhua Country Government for Signing Collective Bargaining Agreement

Union Member Representative Conference

Note 1 The number of employees in Hsinchu Factory does not include that of foreign workers, and all the employees are union members in Hsinchu Factory.
Note 2 The Lukang Factory union could not provide related information.
Note 3 No union was established in Taoyuan Factory, Lukang Flat Glass Factory, and Changpin Factory.

Employee 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:

We encourage employees to form clubs, do exercise, or relax after work. Such activities allow employees to cultivate friendships, enhance their mutual understanding. In addition, the Changping Factory held a group activity in 2020, inviting colleagues from all departments to join the event, which increases interaction, relaxes the body and mind, and raises team cohesiveness. The headquarters established a “ Sport Competition Club'' in 2020. Through various activities, we encouraged our employees to develop their interest in exercising, also provides numerous sports options.

2020 TGI factory activities

◀ Changping Factory host the tug of war competition to raises associates' cohesiveness.

▶ Changping Factory host the road running event to relax associates' body and mind.

TGI hosts an Amazing shooters event and invites Shooting Sports National Championship as our coach to provide one-to-one training. Throughout the event, we had a deeper understanding of shooting sports and gain a sense of achievement.

▲彰濱廠舉辦路跑比賽，讓同仁放鬆身心靈。

▲「我是神槍手」活動海報。

▲「我是神槍手」活動照片。

Parental Leave

32 TGI employees took a parental leave during 2019-2020, female employees accounted for 53.13% of the applicants, and male employees accounted for 46.88% of the applicants. 20 employees were reinstated in 2020, and the rate of reinstatement was 68.75%. TGI has always adheres to "work-life balance", applying for parental leave is not treated differently because of gender. In 2020, an average 76.47% of female workers and 60.00% of male workers were reinstated after a parental leave.

Reinstatement after Parental Leave (2019)

	Male		Female		Total	
	Number	Percentage	Number	Percentage	Number	Percentage
A. Number of Workers Scheduled for Reinstatement (=B+C)	15	46.88%	17	53.12%	32	100.00%
B. Number of Reinstated Workers	9	28.13%	13	40.63%	22	68.75%
C. Number of Workers that Resigned after Parental Leave	6	18.75%	4	12.50%	10	31.25%
Reinstatement Rate (B/A) %	60.00%		76.47%		68.75%	

Between 2019 and 2020, 16 employees were reinstated after a parental leave in 2019. Among which 16 employees were reinstated for one year in 2020. The retention rate is 100.00%.

Reinstatement after Parental Leave (2019-2020)

	Male		Female		Total	
	Number	Percentage	Number	Number	Percentage	Number
E. Number of Reinstated Workers after a Parental Leave in 2019	6	37.50%	10	62.50%	16	100 %
F. Number of Reinstated Workers after a Parental Leave in 2019 with 2020 Marking One Year after their Reinstatement	6	37.50%	10	62.50%	16	100%
Retention Rate (F/E %)	100.00%		100.00%		100.00%	

Mother-Friendly Workplace

For pregnant women and women within one year after giving birth, we conduct a 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 a working mom 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 working moms can pump during working hours, allowing them to take care of their family and job at the same time.

TGI creates a friendly, welcoming and relaxing breastfeeding room with the soft colors. To make the mother feel comfortable, the room could be locked with the notice of occupying, and TGI provide the comfortable couches, 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.

The certification of Headquarter and The Hsinchu Factory.

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

◀ The message board in the nursing room of the Changpin Factory, allows female employees exchange experiences.

Headquarter

Hsinchu Factory

Chanping Factory

Chanping Factory

Retirement system

According to the 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 system, of 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 the 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. In 2020, 144 employees retired, with an average of 29.05 years of service. Senior supervisors were presented with medals from the chairman/president as a token of appreciation for their service over the years.

Old Retirement System	New Retirement System
● The pension of old retirement system is paid to the old retirement reserve account of the Central Trust Bureau on a monthly basis of 6%.	● The pension of new retirement pension system is paid by the employer 6% to the employee's individual pension account. ● Employees can choose to pay the pension ranging from 0% to 6% according to their own wishes.

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：

1. **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.**
2. **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.**
3. **Where a worker has worked continuously for more than 3 years, the notice shall be given 30 days in advance.**

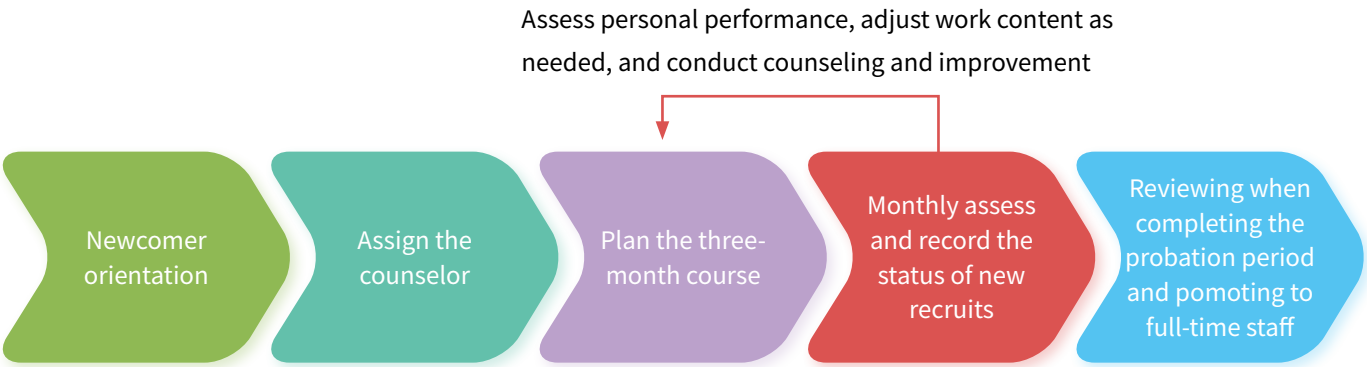
5.2 Employee Care & Development

We attach great importance to the career planning, personal development of our employees, and aim to develop professional talents and expect to convey the mission, vision and core values of TGI. TGI 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 in order to increase the consciousness on human right, occupation safety, compliance, etc. 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; Besides, 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

1 Common Course (including corporate culture, history, regulation, Human resource system, professional document reading). In 2020, we append the ''Insider Trading Policy'' in the compendium.



2 Professional Course (including course, factory internship)

In order to promote employee experience inheritance, tacit knowledge sharing and enhance the sense of honor of senior employees, in 2019, TGI introduced the "New Personnel Counseling System". Through the organization, culture, professional and skilled senior counselors, we provided newcomers the most direct and one-to-one guidance and teaching. With the same employee mutual assistance mechanism, new recruits can quickly integrate into the work environment and increase the retention rate. In 2020, there were 21 counselors in total. Two of the recruits had found that they were not right for the job during the counseling. After the mutual discussion, TGI and the two recruits have decided to terminate the labor contracts. Except for the two exceptions, the other 19 people were promoted to full-time staff at the expiry date of the trial period. Until December 31, 2020, the in-service rate is 90.47% which indicates that the counselor mechanism had shown certain results.

On-the-job education and training

1 **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.

2 **Application for external training:** Depending on the needs of each department, employees will be selected to participate in external training to strengthen professional knowledge.

Diverse skill training

According to the requirements of regulations and the independent proposals of the company's factories, TGI has set up a diversified development training course to enhance employee's varios, considerable knowledge and skills:

1 **Legitimacy requirement:** Information security course, Fire safety course, Personal data protection, Occupational safety and health advocacy, Workplace violence advocacy

2 **Professional skill:** Language courses, First aid course, Artificial Intelligence course, Crane/forklift truck operator training

Heart-related diseases have been increasing in Taiwan recently. Thus, add AEDs (Automated External Defibrillators) and related courses were prepared in the TGI Headquarters in 2020 to boost the perception and ability to handle emergencies for creating a safe working environment.

AED Device

AED Introoduction and Lecture

1 Lecture

2 Demonstration

3 Practice

4 Instruction

TGI set up dedicated manpower and training units to plan all categories of courses, establish an annual training plan. Through the professional curriculum planning, training and exercise programs.

To encourage youngsters to understand the industry and to join TGI in the future, the Taichung Factory has 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 invited to lecture the course. What's more, the program also provides.

In 2020, TGI's general employee education training hours is 16.8 in average.

Hsinchu Factory also implements “Charging Take-off and Industrial Talent Investment” projects through trade unions and government agencies. From general staff to senior executives, all welcomed to participate in this training, learning briefing techniques, interviewer skills, workplace etiquette, and business correspondence, etc. Through the various projects, hopefully, it could bring TGI whole new opportunities and images instead of the traditional manufacturer industry.

Hsinchu Factory-Lesson of Management for Manager

Hsinchu Factory-Lesson of Management for Manager

Lesson of Management for Manager-Certification Issue

2020 TGI Staff Education & Training Statistics

Employee	Factory	Male		Female		Total	
		Number	Hours	Number	Hours	Number	Hours
Staff	**Headquarter**	21	110	35	255.8	56	365.8
	Taoyuan	325	8122.5	82	2079.5	407	10202
	Hsinchu	620	8972.8	79	1000.3	699	9973.1
	Taichung	246	2506.6	26	215.5	272	2722.1
	Lukang	615	8364.1	187	2121.7	802	10485.8
	Lukang Flat Glass	113	2423.4	9	148.6	122	2572
	Changpin	171	6353.8	29	329	200	6682.8
	Total	2111	36853.2	447	6150.4	2558	43003.6
	Average Hours	17.5		13.8		16.8	
Junior-level Manager	**Headquarter**	19	228.3	35	263	54	491.3
	Taoyuan	135	3207.5	13	375	148	3582.5
	Hsinchu	300	5401.2	13	259.3	313	5660.5
	Taichung	205	2293.4	6	43.5	211	2336.9
	Lukang	194	2362.8	13	83	207	2445.8
	Lukang Flat Glass	63	1280.8	1	6	64	1286.8
	Changpin	101	5162.6	1	8.5	102	5171.1
	Total	1017	19936.6	82	1038.3	1099	20975
	Average Hours	19.6		12.7		19.1	

5.3 Safe Workplace and Health Promotion

Occupational safety and health committee

In order to create a safe and secure working environment, Taiwan Glass has set up occupational safety committees in the head office, factories, and implemented a communication mechanism. 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. 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 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 Issued Discussed During the Occupational Safety and Health Committee Sessions:

01. To make recommendations on occupational safety and health policies.

02. Coordinate and propose occupational safety and health management plan.

03. Review the safety, health education and training implementation plans.

04. Review the operational environmental monitoring plan, monitoring results, and measures.

05. Review the health management, occupational disease prevention and health-promoting measures.

06. Review various safety and health proposals.

07. Review the automatic inspections and safety & health audits of all business units.

08. Review the disaster prevention measures of machinery, equipment, or raw materials and materials.

09. Review the occupational injury investigation reports.

10. Assess the 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 2020

Item/ Factory	Headquaters	Taoyuan	Hsinchu	Taichung	Lukang	Changpin	total
Committee Members	14	16	15	24	15	29	113
Employee	6	7	6	9	5	15	48
Representatives (%)	42.86%	43.75%	40.00%	37.5%	33.33%	51.72%	42.48%

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

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 zero-disaster target and as an indicator to enhance the safety activities of the factories. The operational mechanism of occupational accident management is aimed at accidents, traffic accidents and false alarms.

Emergency notification and Management

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 minimize 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 2018-2020 safety indicators are as follows:

Item/Year	Gender	2018	2019	2020
Disabling Frequency Rate (FR). Total Disabling Incidents (more than 8 hours of rest) x 1,000,000/ Total Manhours	**Male**	6.85	7.12	5.82
	Female	3.62	4.48	5.34
	Total	6.38	6.73	5.75
Disabling Severity Rate (SR) Days Charged x 1,000,000/Total Manhours	**Male**	165	159.23	166.55
	Female	118	76.1	179.92
	Total	158	147.13	168.53
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): 43,048 hours
2 Leave (including family care leave): 25,465 hours
3 Work-related injuries: 13,467 hours
4 Total working hours: 8,876,912 hours

TGI has continued to cooperate with the hired Warwick Mayall, a workplace safety consultant from the UK since 2019. TGI hold an annual zero-incident competition. Awards including Outstanding/Excellence/Achievement are given by Chairperson/President to the zero-incident plants evaluated comprehensively with environmental safety indicators.

Safety consultant visiting Lukang Flat Glass Factory

Taiwan Glass Annual Zero Incident Competition Medal

Workplace safety principles:

01. “Employee” is the key to the success of a safety and health management program.

02. All injuries and occupational diseases can be prevented.

03. Every employee has a responsibility to prevent possible injuries and illnesses.

04. Emphasis on safety is one of the conditions of employment, and each employee must bear the responsibility for workplace safety.

05. Workplace safety training is the foundation for establishing a safe workplace.

06. A continuous workplace safety audit is necessary.

07. All security deficiencies must be corrected immediately.0.

08. Investigating possible accidents is just as important as investigating accidents that have occurred.

09. Safety after work and safety at work are equally important.

10. Preventing workplace injuries can bring effective benefits.

The Taichung factory reviewed the last week's occupational safety incident at the factory affairs meeting every Monday. The unit where the incident occurred reported to the supervisors of all units and proposed improvement measures. The work safety department and other departments will also give suggestions if there isn't any incident in the factory. It will collect other major occupational safety incidents from time to time for simulation, analysis and review. The Changpin plant is especially aimed at evaluating and managing risks for people, machines and improving equipment and protective equipment for high-risk projects to prevent potential hazards as much as possible. Lukang Plant regularly organizes traffic safety programs for foreign employees to avoid possible commuting accidents.

In addition to occupational safety and health-related training, there are related training, drills, and advocacy courses for emergency events in the factory. For example, hire professionals to conduct CPR courses and AED courses in the factory, or additionally promote the concept of fire prevention, escape and emergency response to employees.

In May and November 2019, the Taoyuan Factory conducted two emergency response drills with a total of 119 people. Through the Lukang Factory occupational safety training, the personnel at the plant end are explained how to operate the drill and strengthened the emergency handling procedures for fire incidents. Heart-related diseases have been increasing in Taiwan recently. Thus, add AEDs (Automated External Defibrillators) and related courses were prepared in the TGI Headquarters in 2020 to boost the perception and ability to handle emergencies for creating a safe working environment.

Items listed below are the main contents of the fire drill:

1.general knowledge of fire prevention, fire fighting, and self-rescue escape methods

2.CPR and AED training and hydrant performance, instructions, and drills

3.fire extinguisher functions, instructions, and drills

4.fire hydrant functions, instructions, and drills

Fire Fighting Notification and fire escape Guidance Course

Fire Fighting Training Practice

In order to enhance employees' work safety and health knowledge, in addition to conducting occupational safety and health education training, emergency response and fire fighting training, and full-time off-site training for newly recruited employees, TGI conducts monthly environmental safety and health education training for employees in all units. Taoyuan factory conducts occupational safety and health education and training for contractors and supervisors in the factory and conducts course lectures on common lack of work safety and regulations-related requirements.

Emergency Response Practice

Emergency Response Practice

In 2020, Taoyuan Factory held Occupation Safety Training for Contractor and Supervisor

In 2020, Lukang held practice for SO2 leakage, teach them how to react.

Labor Safety Inspections and Regulatory Compliance

TGI has no use of child labor in 2020 and complaints about major labor-related issues; there are no forced or compulsory labor risks in any operational activities within the company, and relevant labor conditions are handled under relevant laws and regulations. In 2020, the labor inspection of the Occupational Safety and Health Center of the Occupational Safety and Health Administration is as follows:

Changpin Factory

There are no violations of the regulations on February 27th, 2020

There are no violations of the regulations on June 27th, 2020

Note: Taipei Headquarters, Taichung, Lukang, Lukang Flat Glass has no inspection and illegal records

Factory	2020 Occupational Safety Violation	Fine	Resolution
Lukang	**Fire Services Act Violations**	60,000	Remove objects obstructing fire-fighting equipment and train for internal staff.
Taipei	**Fire Services Act Violations**	12,000	Install emergency exit warning lights, Maintain fire detection devices and emergency lighting.
Hsinchu	**Occupational Safety and Health Act Violations**	60,000	1 During the training, we requested that when removing the fixed door of the well-elevating conveyor, we should use ancillary tools such as hand-pulled cranes to lift it and not use brute force to carry it. 2 We had completed the installation of hooks for the fixed door of the well-elevating conveyor of the whole factory on September 30, 2020, to use for future maintenance.
Taoyuan	**Act in Gender Equality in Employment**	200,000	1 Disseminate the grievance channel, written statement for prohibition, prevention measures, complaint, and punishment regulation for sexual harassment in the workplace listed on the bulletin board. 2 Besides the original grievance channel, the headquarter add another one to ensure the rights of employees. 3 Strengthen department training, and implement one-hour training every six months to enhance personal safety awareness. 4 Increase the number of sex equality members from 3 to 7.
Lukang Flat Glass	**Occupational Safety and Health Act Violations**	60,000	1 Mandatory requirement of protective equipment. 2 Slit glass for handling broken flats. 3 Group up two or more people to support one another.

Employee health promotion and management

2020 Employee Health Promotion Performance

1. A quarterly physical and mental health questionnaire survey is conducted for the on-site shift personnel of each factory, and the results of statistical analysis are used as references for follow-up care, further medical treatment or job adjustment.
2. For those with potential health risks (such as shifts, long working hours, overweight, abnormal blood pressure, diabetes, etc.), doctors regularly consult to provide suggestions for improving life, diet and habits.
3. Each factory continues to promote health promotion courses, such ashealthy diet, physical fitness, psychological stress management and burn prevention lectures, etc., and continue to encourage colleagues to participate in and form sports clubs to promote the physical and mental health of employees.

Adhering to the concept of "employees are the most important asset", Each plant of TGI set up health centers, equipped with professional factory nurses and special on-site service specialists to jointly promote health management programs including health care, special protection, and health promotion.

Headquarters on-site health consulting services

Recruits must complete the physical examination before registering, and use the report results as the basis for the allocation of personnel to carry out health classification management, health education, and tracking. Regular employees undergo health checkups every two years; those engaged in special hazard operations will undergo special medical checkups and conduct four health and health education and training sessions each year. The full-time factory nurses will organize, analyze, and save the inspection reports. Health status, giving health education to high-risk groups of health, arranging follow-up and treatment, regular care, and assessing the suitability of the current job, assisting in work adjustment if necessary, integrating health status to plan and promote health promotion activities. According to the season and current epidemic situation, TGI regularly provides health education information through the electronic bulletin board. To assist colleagues in prevention, TGI recommends that colleagues in high-risk groups vaccinate and apply the correct information to personal home care for colleagues to click on.

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.

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 base on the physical examination results. In 2020, there were 2,908 times general health check-ups and 3,504 special health check-ups, 6,412 times in total.

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 comply the labor regulations, which can contribute to physical, mental health and balanced family life for our employees.

In 2020, Taoyuan, Hsinchu, Taichung, Lukang and Lukang Flat Glass Factory arranged the environment examination so to protect the employees from extreme heat, noise, dust and ionizing radiation.

2020 Physical Examination Statistics

Physical Examination Statistics									General Physical Examination	total
High Temperature	Dust	Noise	n-Hexane	Lead	Chromic acid and chromates	Ionizing radiation	Night Shift	total		
451	450	1,605	8	65	3	146	776	3,504	1,142	4,646

Note: 2020 General Physical Examination is practiced in Taoyuan, Taichung

In 2020, Department of Occupational Safety, based on the work hour sheets from Human Resource Department, 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 for overweight, smoking, unusual blood pressure and diabetes.

The department evaluated this group of employees and arranged doctor appointments. Some employees were referred to other treatments 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.

Health check of Hsinchu factory employees

Health check of employees in Taoyuan factory

Create a safe and healthy workplace for staff

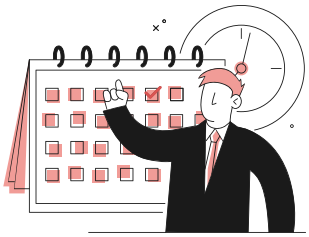
During the pandemic, our staff might be exposed to COVID-19 at work so we provide the latest update of covid information and establish policies and practices in every operation sector.

Implementation	Objective	Excution	Achievement
online attendance system	Reduce the risk of transmission by fingerprint	Open online attendance system access	The total number of online attendance reaches 19000 times till December 2020
Temporary close staff restaurant	Avoid talking while eating and preventing covid-19 transmission	Due to covid, temporary close staff restaurant	Implementation with 100%
Entry requirements	Filter the possible covid cases by measuring body temperature	Having an infrared thermometer to screen people's body temperature and identify any condition will notice the person with their healthcare provider.	Monitoring the staff, vendors, and clients' body temperature by infrared sensors.
Provide sanitizer	Clean frequently touched surfaces and keep good hygiene prevents the spread of Covid	Provide sanitizer and rubbing alcohol for bathroom uses	Put sanitizing in prominent places for staff, vendors or clients
Virtual meeting/ interview	Prevent employees from gathering in groups	Provide meeting rooms, online software, and related facilities	Due to covid, we replaced physical meeting with virtual from preventing employee gather
Elevator buttons protective cover	Reduce the risks for COVID-19 transmission	Require custodial staff regularly cleaning and disinfecting public space	Avoid the virus stay on surface and regularly cleaning and disinfecting
Covid sick leave	Employees who appear to have symptoms will offer them sick leave and notify their supervisor and stay home	Notify their supervisor when staff have any symptoms	The total number of Covid sick leave reach 1396 hours till December 2020.

Caring and Cherish

Expatriate

1. Follow the covid related government policy and reduce the number of travel
2. Recognize staff effort due to covid period, and appreciate their unique contributions to TGI so that the company rewarded by giving credit and bonus.
3. TGI offers coronavirus-related costs (included: salary of the quarantine period, quarantine hotel fee, PCR test fee, etc.)
4. Cause to the covid period, the none redeem flight purchase TGI rewarded by giving bonus.



Domestic

1. Staff could take sick leave of self-quarantine or self-health management
2. Staff could apply for leave to take care of their family member who gets covid or any related symptoms

Recruitment and Selection

Due to covid, alter the physical interview to the virtual platform to reduce risks for virus transmission. If physical touch is necessary, we will make sure people wear face masks, check their body temperature, use hand sanitizer, etc.

Eduction and Training

1. Alter the physical training to the virtual platform like films to control the place with the necessary crowds and reduce the risk of infection.
2. Make sure employees will wear face masks, use hand sanitizer with alcohol, and measure body temperature.
3. TGI will provide the latest update of covid information and establish policies and practices.

Hsinchu Factory using an infrared thermometer to checkmeasure employee's body temperature

Northern District using an infrared thermometer to checkmeasure employee's body temperature

Measuring each employee's body temperature with an infrared thermometer before entering factory

Prevent and reduce transmission Among Employees

Put sanitizing hand rub dispensers in prominent places around the workplace

Provide sanitizer in the restroom for toilet seat

Put the elevator buttons protective plastic cover

Alter the physical interview to the virtual platform

Sports Enterprise

Adhering to the concept of "employees are the most important asset", TGI continuously promotes various sports clubs, courses, lectures, etc., and actively encourages colleagues to exercise after work. Through the call of club activities, many colleagues have been infected by the atmosphere and joined in one after another. Exchanges and discussions not only enhance the emotions between each other in the moment of sweating but also relax the body and mind and promote their health.

2019 年台玻獲頒運動企業獎盃

台玻運動企業獎牌

In order to promote the importance of spontaneous sports, and to take root in sports concepts, TGI participated in the selection of "108 Sports Enterprise Certification of the Ministry of Education". Under the competition of many companies, it stood out and won the certification, indicating that each factory is in sports. The hard work is obvious to all, highlighting the core value of "Employees are the most important asset". In the future, we will continue to promote sports concepts and create a sports atmosphere, so that healthy colleagues will become the driving force behind the advancement of TGI.

Healthy Workplace Certification

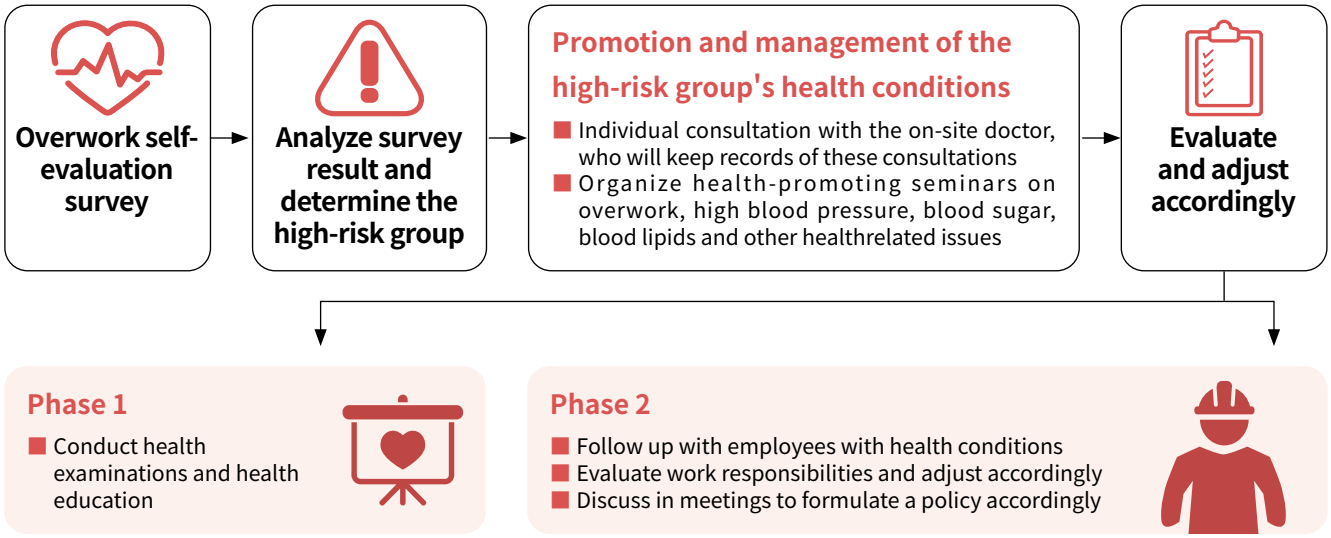
In 2020, TGI won the "Healthy Workplace Certification" issued by the National Health Administration of the Ministry of Health and Welfare. The company is committed to creating a comfortable, healthy and safe workplace environment so that all TGI colleagues "will be happy to work and enjoy life."

TGI Health Workplace Certification

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.

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 the chopped strand are as follow:

Process of man-caused risk analysis and prevention

- 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

The doctor guides the correct handling posture at the site and recommends handling the finished glass products and indeed wearing protective equipment to prevent glass cuts and related musculoskeletal disorders.

Chanping-Relieve Stress Lecture

Chanping-Relieve Stress Lecture

Chanping- Ergonomic Risk Lecture

Chanping- Ergonomic Risk Lecture

CH6 Social and Community Care

6.1 Contributions to the Society

6.2 Local Engagement

Achievements of Community Care in 2020

2,573 Students

29.85 Million NTD

Taiwan Glass Culture and Education Foundation has sponsored 2,573 college students and provided a total of NTD29.85 million scholarships since 2000.

As co-organizer of “Chinese Zodiac Exhibition”, we won the 14th Art and Business Award held by the Ministry of Culture in 2020.

50 Students

10 Thousand NTD Each

50 students awarded scholarships with NTD 10,000 each in 2020.

2.53 Million NTD

Donation in 2020 totaled NTD 2,538,450.

147 bags

In 2020, Taiwan Glass responded to the concept of “donating a bag of blood and saving one's life”, and a total of 147 bags was donated by emplyees of TGI factories.

6.1 Contributions 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 1989, in addition to co-organizing cultural and educational activities, it has awarded 2,573 college/university students with a scholarship of 29.85 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. As a result, Taiwan Glass Foundation won the 14th Art and Business Award for devoting to Art and Culture.

The Art and Business Award is an award awarded by the Ministry of Culture. The purpose is to pay tribute and praise to the enterprises, groups, or individuals that support the culture and art causes. Cultural literacy is an important backing and driving force for a country. The integration of government and non-governmental resources not only stimulates the participation of corporate groups in arts and cultural activities but also enables the growth and promotion of cultural power and becomes an important soft power of the country.

Chinese Zodiac Artworks

Art and Business Award from the Ministry of Culture

Please visit the website for more information on the Exhibition

TGI is committed to transforming social support for us into actions that contribute to the people. This award is an affirmation to us, and it is also the driving force for continuous feedback to society in the future.

Taiwan Glass Foundation Activities

Year	Activity	Location	Descriptions
2020	**Scholarship**	Taipei City	50 students awarded scholarships, each issued NTD 10,000.
2019	**Scholarship**	Taipei City	90 students awarded scholarships, each issued NTD 10,000.
2018	**Scholarship**	Taipei City	90 students awarded scholarships, each issued NTD 10,000.
	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 environmental-friendly.

Donations in 2020

Prioritization	Organization Title	Total Donation (NTD)
1	Chinese National Association of Industry and Commerce	1,212,000
2	Straits Economics & Cultural Interchange Association	48,000
3	Taiwan Golf & Country Club	20,000
4	Taiwan Glass Industry Association	265,450
5	Taiwan Institute for Sustainable Energy	300,000
6	Chinese National Federation of Industries	20,000
7	Hsinchu Glass Commercial Association	20,000
8	Keelung Glass Commercial Association	32,000
9	Taipei City Glass Assembly Craft Association	12,000
10	Taipei Glass Commercial Association	185,000
11	Changhua County Glass Assembly Craft Association	12,000
12	Changhua County Glass Commercial Association	30,000
13	Tainan City Glass Commercial Association	20,000
14	Taichung City Chamber Glass Commercial Association	30,000
15	New Taipei City Glass Commercial Association	20,000
16	Chiayi City Glass Commercial Association	20,000
17	Tainan City Glass Assembly Craft Association	20,000
18	Taoyuan City Glass Commercial Association	20,000
19	The third Wednesday Club	12,000
20	Chung-Hwa Police Friend Association-Lukang Office	20,000
21	Taiwan Chamber of Commerce and Industry	50,000
Total		2,538,450

6.2 Local Engagement

Rooted in the local area, TGI actively contributes to the communities, hiring local talents to create employment opportunities and prosper the local economy. To enhance the 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 contribute to the greening environment. In addition, we also provided TGI products to sponsor schools and associations. We continued to make positive connections with communities.

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”. Lukang Factory and Lukang Flat Glass Factory, partnered with the Taichung Blood Center, hold blood donation events every year. Taichung Plant also joined the event in 2019, with 4 blood donation campaigns being held during 2019 The factories aimed to lead as an example to encourage all TGI employees to give blood and save lives. In 2019, TGI's factories donated a total of 243 bags of blood.

Chanping Factory

Taichung Factory

" Changhua, the place of warm and care "

Changhua County host 2020 The Best Employees with Mental and Physical Disabilities and Best Employers Over Hiring Mental and Physical Disabilities campaign. The Lukang Factory and Lukang Flat Glass Factory are committed to improving the workspace and equipment to provide a quality working environment for the physically challenged. Not only do they have the opportunity to work and support their families, but also can affirm themselves and gain happiness, well-being, and a sense of belonging. It boosts the culture of the company and creates stronger competitiveness for the company

Community Activities and Relationship

Hsinchu City River Water Patrol

In 2020, TGI donated 60,000 NTD of river patrol materials and set up an environmental patrol team. Through internal sponsorship and employee participation, in addition to contributing money, it also contributes more and invests in the maintenance of the community environment in a practical way.

新竹市政府感謝狀

台灣玻璃股份有限公司新竹廠水環境巡守隊熱心積極參與河川水域巡守，對本市河川環境維護認養貢獻良多。

特頒此狀，謹致謝忱。

市長林智堅

Park Environment Maintenance

TGI arranges for employees to take turns once a month to take turns to assist the environmental protection volunteer cleaning day in Puqian Park and to bring the community closer to them also to encourage employees to recognize Taiwan Glass and participate in the community through activities.

TGI Takes responsibility of the cleaning of public toilets next to Mr. Wu's temple from 2018-2021.

Greenfield Investment in Taoyuan city

TGI Taoyuan Factory adopted a 4000 square meters greenfield near to industrial district where to No.124, the fourth street in the Guanyin area. The field took care of by Taoyuan Factory's staff, they will be watering plants 2-3 times a week, and prune dead branches from shrubs and trees. In every quarter, they will fertilize plants, insecticide to kill bugs, and build support stand to maintain the environment.

Annually, the manager of the Taoyuan Ffactory will join the Lantern Festival host by a local temple in the Taoyuan Guanyin area. TGI had donated their particular products such as coffee kettles, double wall glass mugs to the event.

Every Wednesday from 4 pm, some vendors will station on Minzu Road so that the residents have no parking space. To solve, this problem TGI Taoyuan Factory provides 40-50 free parking spots to those vendors and residents.

Cherish the Ocean, Warm the World in Taichung City

China Motor Association initiate and co-organized with TGI to hosts the Sustainable Environment Conference and Beach Cleanup Activity. We hosted three events at Taoyuan Guanyin on 7/29, Tainan Anping on 8/13, Taichung Dajia on 9/24, and these events had 39 vendors and 126 participants together clean up a large amount of marine debris.

The agenda includes

1. **Explain how to cleanup the beach**
2. **Categorizing trashes on the beach**
3. **Reinvigorate ocean ecosystems**
4. **Free plastic workshop**

Invite TGI's 31 foreign workers to participate in the Foreign Worker Agency's event to celebrate Indonesian National Days to comfort their minds.

We co-organized an invitational competition with Taichung Judo Gym to encourage young players to participate in and exchange the spirit of judo. We also donated five boxes of 2,000ml heatproof glass pots.

The Taichung Media Journalists' Association organized the Journalists' Festival and donated ten boxes of 1,800ml rectangular glass baking pans.

感謝狀

台中港柔道館

Appendix

Appendix I:
Global Reporting Initiative (GRI) Standard Index

Appendix II:
United Nation Global Compact Index

Appendix III:
Independent Assurance Report

Appendix I: Global Reporting Initiative (GRI) Standard Index

General standard disclosure

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.

Option	No.	Disclosure	External Verification	Chapter	Page
Core	102-1	Name of the organization	●	2.1 About TGI	022
Core	102-2	Activities, brands, products, and services	●	2.1 About TGI 3.1 TGI Product	022 039
Core	102-3	Location of headquarters	●	2.1 About TGI	022
Core	102-4	Location of operations	●	2.1 About TGI	022
Core	102-5	Ownership and legal form	●	2.1 About TGI	022
Core	102-6	Markets served	●	2.1 About TGI 3.1 TGI Product	022 039
Core	102-7	Scale of the organization	●	2.1 About TGI	022
Core	102-8	Information on employees and other workers	●	5.1 Talent Structure and Benefits	071
Core	102-9	Supply chain	●	3.5 Sustainable Supply Chain	051
Core	102-10	Significant changes to the organization and its supply chain	●	2.1 About TGI	022
Core	102-11	Precautionary Principle or approach	●	2.3 Risk Management 3.2 Product Quality	035 046
Core	102-12	External initiatives	●	About this Report 3.2 Product Quality	002 046
Core	102-13	Membership of associations	●	2.1 About TGI	022
Core	102-14	Statement from senior decision-maker	●	Message from the Chairman	004
Comprehensive	102-15	Key impacts, risks, and opportunities		Message from the Chairman 2.3 Risk Management	004 035

Option	No.	Disclosure	External Verification	Chapter	Page
Core	102-16	Values, principles, standards, and norms of behavior	●	1.1 TGI Sustainable Management 2.2 Integrity TGI	008 030
Core	102-18	Governance structure	●	2.2 Integrity TGI	030
Core	102-40	List of stakeholder groups	●	1.2 Stakeholder Communication	012
Core	102-41	Collective bargaining agreements	●	5.1 Talent Structure and Benefits	071
Core	102-42	Identifying and selecting stakeholders	●	1.2 Stakeholder Communication	012
Core	102-43	Approach to stakeholder engagement	●	1.2 Stakeholder Communication	012
Core	102-44	Key topics and concerns raised	●	1.2 Stakeholder Communication	012
Core	102-45	Entities included in the consolidated financial statements	●	2.1 About TGI	022
Core	102-46	Defining report content and topic Boundaries	●	1.3 Material Topics	016
Core	102-47	List of material topics	●	1.3 Material Topics	016
Core	102-48	Restatements of information	●	About this Report	-
Core	102-49	Changes in reporting	●	About this Report	-
Core	102-50	Reporting period	●	About this Report	002
Core	102-51	Date of most recent report	●	About this Report	002
Core	102-52	Reporting cycle	●	About this Report	002
Core	102-53	Contact point for questions regarding the report	●	About this Report	002
Core	102-54	Claims of reporting in accordance with the GRI Standards	●	About this Report	002
Core	102-55	GRI content index	●	Appendix I	136
Core	102-56	External assurance	●	Appendix Ill	

Material Topics

*Material Topics

Topic	No.	Disclosure	External Verification	Chapter	Page
Economic					
Economic Performance	201-1	Direct economic value generated and distributed		2.2 Integrity TGI	030
	201-2	Financial implications and other risks and opportunities due to climate change		4.1 Sustainable Environment Strategy	056
Market Presence	202-1	Ratios of standard entry level wage by gender compared to local minimum wage		5.1 Talent Structure and Benefits	071
Procurement Practices	204-1	Proportion of spending on local suppliers		3.5 Sustainable Supply Chain	051
Anti-corruption	205-3	Confirmed incidents of corruption and actions taken		2.2 Integrity TGI	030
Anti-competitive Behavior	206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	●	3.1 TGI Product	039
Tax	207-1	Approach to tax		2.1 About TGI	022
Environmental					
Materials	301-1	Materials used by weight or volume		4.2 Sustainable Resource Management	059
	301-2	Recycled input materials used		4.2 Sustainable Resource Management	059
	301-3	Reclaimed products and their packaging materials		4.2 Sustainable Resource Management	059
Energy	302-1	Energy consumption within the organization		4.2 Sustainable Resource Management	059
	302-3	Energy intensity		4.2 Sustainable Resource Management	059
	302-5	Reductions in energy requirements of products and services		4.2 Sustainable Resource Management	059
Water and Effluent	303-1	Water withdrawal by source		4.2 Sustainable Resource Management	059
	303-3	Water recycled and reused		4.2 Sustainable Resource Management	059
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	056

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Topic	No.	Disclosure	External Verification	Chapter	Page
Emissions	305-1	Direct (Scope 1) GHG emissions		4.3 Green Production Management	066
	305-2	Energy indirect (Scope 2) GHG emissions		4.3 Green Production Management	066
	305-4	GHG emissions intensity		4.3 Green Production Management	066
	305-5	Reduction of GHG emissions		4.3 Green Production Management	066
	305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions		4.3 Green Production Management	066
***Effluents and Waste**	306-1	Water discharge by quality and destination	●	4.3 Green Production Management	066
	306-2	Waste by type and disposal method		4.3 Green Production Management	066
	306-3	Significant spills		4.1 Sustainable Environment Strategy	-
*** Environmental Compliance**	GRI 103	Management Approach		1.3 Material Topics	016
	307-1	Non-compliance with environmental laws and regulations	●	4.1 Sustainable Environment Strategy	056
Supplier Environmental Assessment	308-1	New suppliers that were screened using environmental criteria		3.5 Sustainable Supply Chain	051
	308-2	Negative environmental impacts in the supply chain and actions taken		3.5 Sustainable Supply Chain	051
Social					
***Employment**	GRI 103	Management Approach		1.3 Material Topics	016
	401-1	New employee hires and employee turnover	●	5.1 Talent Structure and Benefits	071
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees		5.1 Talent Structure and Benefits	071
	401-3	Parental leave		5.1 Talent Structure and Benefits	071
Labor/ Management Relations	402-1	Minimum notice periods regarding operational changes		5.1 Talent Structure and Benefits	071
***Occupational Health and Safety**	GRI 103	Management Approach		1.3 Material Topics	016
	403-1	Workers representation in formal joint management–worker health and safety committees		5.3 Safe Workplace and Health Promotion	085
	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 and Health Promotion	085

*Material Topics

Topic	No.	Disclosure	External Verification	Chapter	Page
Training and Education	404-1	Average hours of training per year per employee		5.2 Employee Care & Development	081
	404-2	Programs for upgrading employee skills and transition assistance programs		5.2 Employee Care & Development	081
Diversity and Equal Opportunity	405-1	Diversity of governance bodies and employees		5.1 Talent Structure and Benefits	071
Forced or Compulsory Labor	409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor		5.1 Talent Structure and Benefits	-
Supplier Social Assessment	414-1	New suppliers that were screened using social criteria		3.5 Sustainable Supply Chain	051
	414-2	Negative social impacts in the supply chain and actions taken		3.5 Sustainable Supply Chain	051
Customer Health and Safety	416-1	Assessment of the health and safety impacts of product and service categories	●	3.1 TGI Product	039
	416-2	Incidents of non-compliance concerning the health and safety impacts of products and services		3.1 TGI Product	039
Marketing and Labeling	417-1	Requirements for product and service information and labeling		3.1 TGI Product	039
Customer Privacy	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data		3.4 Customer Service	049
***Socioeconomic Compliance**	GRI 103	Management approach		1.3 Material Topics	016
	419-1	Non-compliance with laws and regulations in the social and economic area	●	2.2 Integrity TGI 3.1 TGI Product 5.1 Talent Structure and Benefits	030 039 071
Others					
Corporate Governance		Non GRI Standards index		1.3 Material Topics GRI 102-18	016
Innovation and R&D		Non GRI Standards index		1.3 Material Topics 3.3 Research and Innovation	016 048
Customer Service		Non GRI Standards index		1.3 Material Topics 3.4 Customer Service	016 049
Sustainable Operation		Non GRI Standards index		1.3 Material Topics 2.3 Risk Management	016 035

Appendix II：United Nation Global Compact Index

Number	Article	Relevant Sections	Page(s)
	1. Human Rights		
1	Businesses should support and respect the protection of internationally proclaimed human rights.	3.5 Sustainable Supply Chain 5.1 Employee and Benefits	051 071
2	Make sure that they are not complicit in human rights abuses.	5.1 Employee and Benefits	071
	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	071
4	The elimination of all forms of forced and compulsory labor.	Ch5 Friendly Workplace	070
5	The effective abolition of child labor.	5.1 Employee and Benefits	071
6	The elimination of discrimination in respect of employment and occupation.	5.1 Employee and Benefits	071
	3. Environment		
7	Businesses should support a precautionary approach to environmental challenges.	2.3 Risk Management Ch4 Environmental Protection	035 055
8	Undertake initiatives to promote greater environmental responsibility.	Ch4 Environmental Protection	055
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	039 059 066
	4. Anti-Corruption		
10	Businesses should work against corruption in all its forms, including extortion and bribery.	2.2 Corporate Sustainable Governance	030

Appendix III：Independent Assurance Report

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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 2020 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2020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 2020 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 蕭翠慧

民國一一〇年七月二十八日

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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 2020 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	39	3.1 台玻產品	台玻產品 2020 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	59	4.1 永續經營策略-環保法規遵循	2020 年環保違規事件及裁罰金額	公司適用之環境法規及公司統計資料
4	68	4.3 綠色生產管理-水汙染管理	2020 年水汙染管理	公司統計資料
5	74-75	5.1 人力資源及福利-員工新進率及離職率統計	2020 年員工新進率及離職率統計	公司統計資料
6	86	5.3 職場安全與健康-職業安全管理	2020 年失能傷害頻率、失能傷害嚴重率、缺席率	公司統計資料
7	90	5.3 職場安全與健康-勞動安全檢查與法令遵循	2020 年勞動安全檢查違規事件及裁罰金額	公司適用之職業安全法規及公司統計資料

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