

Discussion with External Directors on Corporate Governance

— Enhancing NSG Group's corporate value —



Günter Zorn

External Director
Chairman of the Board

Toshikuni Yamazaki

External Director
Chairman of the Audit Committee

Two of NSG Group's External Directors — Günter Zorn (Chairman of the Board) and Toshikuni Yamazaki (Chairman of the Audit Committee) — discuss how the Group's Corporate Governance seeks to enhance corporate value.

Corporate Governance and Board of Directors

Q1

Mr. Zorn, you have been a director for five years and Mr. Yamazaki for four years. As Independent External Directors, firstly, how do you think corporate governance should function and secondly, how do you evaluate the current corporate governance and Board of Directors of NSG Group?

Mr. Zorn (Chairman of the Board): When establishing a robust governance system, not only is the role of the Board very important, but crucially, it also creates a system whereby the External Directors can check whether the process is secure. Board meetings should be held in a venue where each Director can express their opinions frankly and engage in an open discussion.

Mr. Yamazaki (Chairman of the Audit Committee): Corporate governance is a necessary mechanism for the Board to function properly. As stipulated in Japan's Corporate Governance Code, the Board owes a fiduciary duty to the Company's shareholders and I believe that it must oversee management so that the Company can achieve sustainable growth and enhance corporate value over the medium to long term and also improve profitability and capital efficiency. In addition to this, the Board must ensure that governance is functioning and being implemented systematically.

Mr. Zorn: Following the acquisition of Pilkington in 2006, our aim was to adopt a sophisticated governance structure inline with a global company, shifting to a committee-based governance structure in 2008. This system may not be suitable for all companies, but it works well for us, which is why I place great value on it. The Board oversees management and the Executive Officers are in charge of business execution. The three committees (the Compensation Committee, the Audit Committee, and the Nomination Committee), of which the majority of members are External Directors, each play their respective roles.

At NSG Group, an Independent External Director assumes the position of Chairman of the Board of Directors, which is my role at present. Some people may think that a person from within the Company, who is more familiar with the business should be the Chairman, but for us, because management supervision and business execution are clearly separated, I think it is right that an Independent External Director serves as Chair.

Mr. Yamazaki: Executive officers run the Company, the Board oversees it, and the Audit Committee works closely with Internal Audit and auditing firms to conduct audits. In this way the Company's governance structure can be rated very highly. However, one of our challenges from now on is to facilitate improved corporate value over the medium to long term.

Q2

One new External Director has just been appointed. Please tell us what you think about the composition of the Board of Directors.

Mr. Zorn: Director candidates are selected by the Nomination Committee. The Nomination Committee is chaired by an Independent External Director, and the only member of that committee hailing from inside the Company is the CEO. For the selection of External Directors, they have been and will be selected only from among those candidates whose qualifications and experts are diverse enough in terms of internationality, gender diversity, global management and academic achievements. As an External Director, Dr. Jörg Raupach Sumiya, brings diversity and a wealth of experience and knowledge as an academic and a business person. As a professor at the Faculty of Business Administration at one of the major universities in Japan, he will strengthen the Company's governance. At the same time, we recognize that gender diversity within the Board is a continuous challenge for us.

Mr. Yamazaki: If the Board alone tried to find External Directors, we would be limited in what we could do, so we decided to make active use of outside consultants to introduce candidates to us. That is why it is hard to imagine somebody who is on friendly terms with the CEO becoming an External Director. Currently, we have External Directors with different backgrounds, which in my view ensures that the composition of the Board is very balanced. The addition of Dr. Raupach Sumiya will further strengthen governance from a different perspective and we expect it will contribute to the Company's sustainable growth.

Appointment/Dismissal and Compensation System of Senior Management

q3

How is the CEO appointed?



Mr. Zorn: We prefer to appoint the CEO from within the Company, but if necessary, we will also consider external candidates. Candidates are selected by the Nomination Committee which is chaired by an External Director. The criteria for selecting CEOs have been established over the years, and because the right image of the CEO changes depending on the business environment, e.g. consolidation versus growth phase, it is not an absolute standard and should be adjusted as necessary. In addition, the opinions of experienced external consultants are also helpful. The CEO is appointed in a highly objective and transparent process, without being influenced by personal preferences.

Mr. Yamazaki: The term of the Directors and Executive Officers of the Company is one year. In other words, each year at appointment time, the suitability of the CEO is put into question and in that respect the role the Nomination Committee plays is a major one, making it a highly transparent system.

q4

In terms of the compensation scheme for the senior management, please tell us how you ensure fairness.

Mr. Zorn: There are objective standards determined by the Compensation Committee for the basic payment and performance-related compensations of our Executive Officers. The Compensation Committee uses these criteria to make its evaluations. It is chaired by an Independent External Director, and the only member of the committee who is an Internal Director is the CEO. The CEO himself cannot take part in discussions about his own compensation. Performance-related compensation is determined on the basis of short-term results such as yearly performance, and achieving long-term goals such as improved profitability and progress on growth strategies. In addition, the long-term incentive plans, or LTIPs, which are based on long-term results, the Executive Officers are required to invest 50 percent of LTIP proceeds to purchase the Company's shares. The purpose of this is to further align the interests of Executive Officers and shareholders. We have also introduced Malus and Clawback



systems to reduce or cancel this incentive if any inappropriateness is detected at a later stage, even after compensation has been paid. There are various ways of thinking about the level of compensation and incentives, but I think that it should serve as a means to improve motivation. Since we operate globally, it is especially important that senior management's compensation be at a competitive level for each of the different regions. That is why we have set the medium level as the standard, referring to the standard compensation level in each country.

Mr. Yamazaki: Senior management will never be allowed to determine its own compensation. It is a highly transparent compensation system. However, we do not have enough information in our Company about the right levels of competitive compensation to secure necessary personnel, which is why we also use information from external consultants to help us. On the other hand, incentives should be continuously reviewed. As the business environment is always changing, we also need to consider changes in order to be effective in advancing our current strategies.

Highly Effective Audit System and Group Governance

Q5

Please tell us about the features of the Company's auditing system and the activities you conduct.

Mr. Yamazaki: The main feature of our Audit Committee is that everyone who sits on the committee is a part-time Independent External Director. There are no full-time members. But the full-time staff members of the Audit Committee Office, which serves as the secretariat, properly relay required information to the Audit Committee. It is a supporting framework so it functions very well. Ultimately, the role of the Audit Committee is to make an audit report confirming, at the AGM (Annual General Meeting of Shareholders), that the Board of Directors is fulfilling its fiduciary responsibilities. For that purpose, four members of the Audit Committee attend the required meetings, read through the necessary paperwork, hear from the relevant people, and if required, make site visits, either in Japan or overseas, to carry out their checks. However, the basic premise for the activities of the Audit Committee to carry meaning is a strong governance system. The Audit Committee takes steps to approve the Internal Audit's audit plan, while the external accounting firms also examine its content. The accounting auditors also appropriately perform audits on management's internal controls (J-SOX) regarding financial reporting. Because of this, we think the conditions within the Company are suitable for auditing activities to be carried out safely.

Mr. Zorn: It is very important that the Chairman of the Audit Committee has financial expertise. Also, because no Internal Directors sit on the Audit Committee, there is the added advantage that they are able to talk openly and directly with people when visiting a site to conduct an audit. The accounting auditors can also have more honest discussions when only talking with External Directors. These advantages are achieved only because the Audit Committee consists solely of Independent External Directors.

q6

The Company has many subsidiaries and affiliated companies, including overseas subsidiaries, but what is your view on the Group governance?

Mr. Yamazaki: Internal Audit, the Audit Committee, and accounting auditors all have their own respective functions. As such, I believe that the global Group governance framework is robust in terms of internal control of subsidiaries, including those overseas. But no matter how strong the governance system is, not all minor wrongdoings can be prevented. Our in this context it should be whistleblowing system allows hidden issues to be properly followed up. We also liaise as much as possible with local accounting auditors in regions where our Group companies are based. Better governance can be realized with checking by both the Audit Committee and local accounting auditors.

Mr. Zorn: The Audit Committee holds monthly meetings and conducts interviews with Executive Officers and other key personnel. The Committee checks to see whether there are any discrepancies in the information they receive from the management team and what is actually happening on the ground. That being said, it does not aim to carry out audits on trivial issues — it lets local management handle them. The committee's focus is on more important things, such as material issues, serious problems, or potentially significant matters.

Challenges for the Group and Future Direction

q7

In light of the Group's current situation, what issues do you recognize to be most important at present?

Mr. Zorn: There are two important issues to recognize. The first, naturally, is to develop a growth strategy. The Company's aim is to generate corporate value over the medium to long term to satisfy the expectations of its shareholders, employees, society, and all other stakeholders. To that end, it is necessary to make effective use of the Company's resources to encourage the creation of new business opportunities. With our efforts over the past several years, the Group has achieved a certain level of financial stability, and we are finally at the stage where we can make investments to secure growth opportunities.

The second is risk management. As well as economic risks, we are exposed to environmental risks (such as resource and energy problems and climate change) and geopolitical risks (such as trade wars). The Company's risk management has been strengthened and is in a good position, but we must always consider what we can and should do going forward.

Mr. Yamazaki: The purpose of the Company is to achieve sustainable growth and, based on this, enhancement of corporate value. Until now, financial stability had been a priority. The Company struggled to find and invest in new growth opportunities, which meant the whole Company was in a contracted state. But with the resumption of dividends on common shares, like Mr. Zorn, I now think it is a good time to actively pursue growth investments. An important role of the Board is to ensure that no undue risks are taken, but if anything, I think it may be necessary for the Board to think of ways to assess the risk-taking of the executive side a little more positively.

Finally, what are your thoughts on the future direction of the Group?

Mr. Zorn: The Company's management base is very robust. Products, technology, manufacturing, R&D, and governance are all at a high level for a global company. Now the focus is on increasing our sales ratio of Value-Added products and I believe we need to further accelerate such initiatives. Within the Company, a manufacturing culture where the customer comes first has taken root, but I think it is necessary to foster a culture that will further develop the market even more aggressively.

We command a strong market position in providing Value-Added products in the fields of architectural, automotive and technical glass, but this is not enough if we consider future growth. I believe we need to actively branch out into new fields, beyond the traditional business fields. Setting the Company in this direction is probably the most important role for the Board up ahead, a good example is the recent establishment of the Company's Business Innovation Center (BIC).

Mr. Yamazaki: We are now at a turning point, from defensive to proactive. But in order to grow aggressively, the mindset of not only the senior management, but also of the employees is important. From now on, we need to think about things positively, that is, we have to become a Company where employees are more proactive in coming up with ideas, where they look for better ways of doing things. Creating such an atmosphere and making the Group even more vibrant than before will be a major management task up ahead. To what extent this will be included in the next medium-term management plan is something I would like the Board to work on through discussions with Executives.



Board of Directors



① Chairman of the Board

Günter Zorn

NC Member	AC Member	CC Member
External	Independent	

[Reasons for recommendation]

Mr. Günter Zorn's career and experience include serving in management of major international companies and as Representative Director and President of their Japanese entities. In addition, he is a Representative Director and President of his own consulting firm. He has vast international experience as well as a broad understanding of business management.

② External Director

Masatoshi Matsuzaki

NC Chairman	AC Member	CC Member
External	Independent	

[Reasons for recommendation]

Mr. Masatoshi Matsuzaki's career and experience include serving as both Representative Executive Officer and subsequently Chairman of the Board of a major international manufacturing company, which, similar to NSG Group, has adopted a governance system of "Company with Three Committees". He has a vast experience, and a broad understanding of both sides of executive and supervisory functions of companies that have this type of Committee system.

NC: Nomination Committee AC: Audit Committee CC: Compensation Committee

③ External Director

Toshikuni Yamazaki

NC Member	AC Chairman	CC Member
External	Independent	

[Reasons for recommendation]

Mr. Toshikuni Yamazaki's career and experience include serving as Representative Director, Executive Vice President (in charge of finance, investor relations and accounting) and full-time corporate auditor of a major international manufacturing company, and a member of the Investment Advisory Committee of the Government Pension Investment Fund, Japan (GPIF). He has vast experience as well as a broad understanding of business management and finance and accounting.

④ External Director

Yasuyuki Kimoto

NC Member	AC Member	CC Chairman
External	Independent	

[Reasons for recommendation]

Mr. Yasuyuki Kimoto's career and experience include serving as Chairman of the Board of a major international manufacturing company. The majority of that Board consisted of Independent External Directors. As well as leading the Board, he liaised with several non-Japanese Independent External Directors of the UK subsidiary of a major Japanese financial institution. He has vast international experience, and a broad understanding of business management.



⑤ External Director
Yuji Takei

External

[Reasons for recommendation]

Mr. Yuji Takei initially joined the Long-Term Credit Bank of Japan Ltd. (now, Shinsei Bank Limited) and then, moved to an international consulting firm. He subsequently worked as a partner in an investment fund among other interests. He has experience of engaging in corporate management as an External Director in several companies and has vast experience and a broad understanding of business management.

⑥ External Director
Jörg Raupach Sumiya

CC Member

External

Independent

[Reasons for recommendation]

Dr. Jörg Raupach Sumiya has international experience in the fields of both business and academia, and is currently a professor at the college of business administration, Ritsumeikan University, one of Japan's most famous private universities. He has vast experience both in the academic world and business management.

⑦ Representative Executive Officer,
President and CEO
Shigeki Mori

⑧ Representative Executive Officer,
Executive Vice President and COO
Clemens Miller

⑨ Representative Executive Officer,
Executive Vice President and CFO
Kenichi Morooka

Executive Officers (Excluding Representative Executive Officers)

[Senior Executive Officers]

Tony Fradgley, Koichi Hiyoshi, Satoshi Ishino,
Hiroshi Nishikawa, Jochen Settelmayer, Phil Wilkinson.

[Executive Officers]

Hiroshi Kishimoto, Yutaka Nakashima, Tim Bolas,
Mike Greenall, Shiro Kobayashi, John Mercer,
Iain Smith, Milena Stanisci.

Corporate Governance Overview

NSG Group believes that achieving and maintaining an advanced level of corporate governance is a key management agenda. We adopt the Company with the Three-Committee structure to promote separation of the executive and the supervisory functions; enhance management transparency, improve the level of corporate governance and thereby becoming a company trusted by our shareholders. We have created and adopted "NSG Group Corporate Governance Guidelines", supporting and endorsing the spirit and principles of the Corporate Governance Code provided by Tokyo Stock Exchanges. These Guidelines are intended to define and embed the basic principles and framework of our corporate governance in the organization. To further secure such purpose, the Group has also adopted a self-disciplinary approach for the Guidelines which, among others, requires it to give a reasonable account to our shareholders if the Group should proceed with any actions deviating from these Guidelines. For more detail, please visit our corporate website for the NSG Group Corporate Governance Guidelines.

<http://www.nsg.com/en/about-nsg/governance/approach>

Fundamental Principles

(1) Structure

- a) The Group's ultimate parent company, Nippon Sheet Glass Company Limited (the "Company", "NSG" or "We") adopts the committee-based governance structure under the Companies Act of Japan (the "Companies Act") and the Company hence establishes the Board of Directors (the "Board"), Nomination Committee, Audit Committee, Compensation Committee (individually referred to as "Committee") and Executive Officers.
- b) It is the intention of the Board that the Executive Officers should be authorized to determine the businesses and affairs of the Company within the scope as permitted by law, thereby facilitating separation of execution from oversight, enhancing transparency of management process and further strengthening oversight function over executive management.
- c) The Company will establish and maintain an effective internal control system operating on a Group-wide basis including the system in relation to financial reporting (J-SOX).

(2) Stakeholders Communication

- a) The Group aims to be judged by being best in class by our many stakeholder groups in a variety of settings across the whole Group (including shareholders, customers, suppliers and local communities) from their own perspectives and will also develop, maintain and enhance good relationships with any such groups.
- b) In relation to the matter of disclosure of corporate information, whether or not it is to be made according to legal requirements, the Group always aims to act in a timely and appropriate manner both in terms of the substance and form, with a view to maintaining and invariably enhancing transparency of management of the Group.

(3) Code of Conduct

The Group sets its Code of Conduct to be followed by all entities and employees. Reviewed regularly for its content and implementation, the Code of Conduct reflects the Group's values and ethical standards.

Our actions to date aiming for an advanced level of corporate governance

2008	<ul style="list-style-type: none"> Changed the company's fundamental governance structure from the traditional Statutory-Auditor system to the current three-Committee structure Four Independent External Directors were elected accordingly
2010	<ul style="list-style-type: none"> Created and adopted our original and stringent criteria for the independency of External Director, taking into account not only the standard of Tokyo Stock Exchanges but also those similar rules in other major jurisdictions
2012	<ul style="list-style-type: none"> All three (Nomination, Audit and Compensation) Committees were chaired by Independent External Directors
2013	<ul style="list-style-type: none"> Board of Directors became chaired by an Independent External Director
2014	<ul style="list-style-type: none"> Made the independency criteria for External Directors more specific and publicly disclosed it Incorporated the share purchase element into Long Term Incentive Plan Set shareholding targets for Executive Officers
2015	<ul style="list-style-type: none"> Established NSG Group Corporate Governance Guidelines
2016	<ul style="list-style-type: none"> Started annual board effectiveness evaluation process
2018	<ul style="list-style-type: none"> Revised the "NSG Group Corporate Governance Guidelines"
2019	<ul style="list-style-type: none"> Of the nine members of the Board of Directors, the majority are the five Independent External Directors

Our Approach to TSE Corporate Governance Code

NSG Group complies with all but one principle of the Corporate Governance Code (revised in June 2018) provided by Tokyo Stock Exchange.

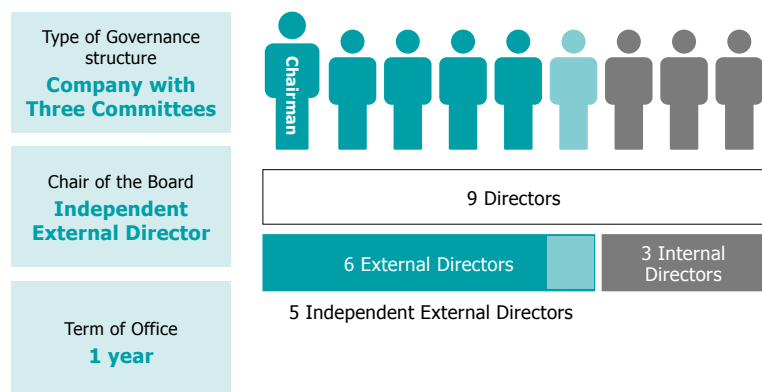
Reasons for Non-compliance with the Principles of the Corporate Governance Code [Principle 4.11 Preconditions for Board and Kansai-aku Board Effectiveness]

We have been working on global projects focused on Inclusion & Diversity since 2017 and continue promoting diversity at our corporate body, including the Board of Directors. As we have not found female candidates that we believe are suitable, currently there are no female directors on the Board, although we continue to focus on promoting diversity including addressing this particular issue.

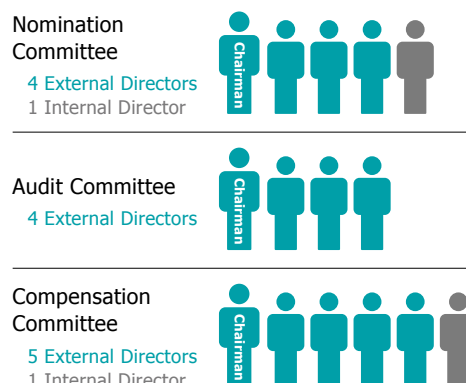
For details, please visit our corporate website and refer to our Corporate Governance Report.

<http://www.nsg.com/en/about-nsg/governance/approach>

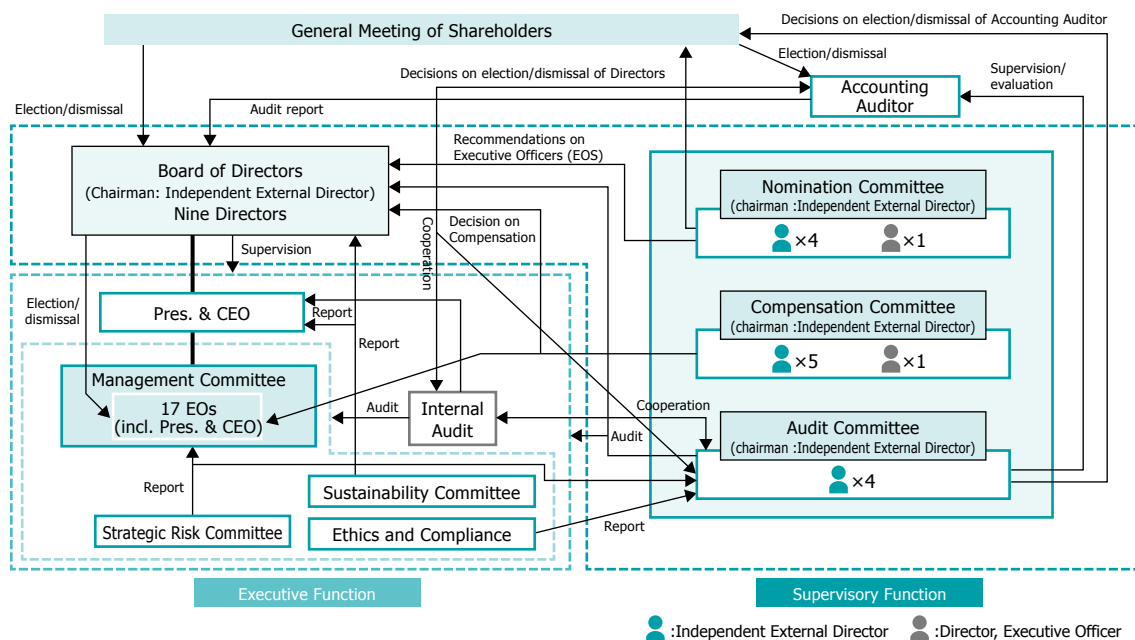
■ Outlines of our Management Structure (as of July 1, 2019)



■ Composition of the Three Committees



■ Management System



■ Composition of the Board and Committees

Name	Position	Attribute	Current Responsibilities at NSG Group				Record of attendance at Board meetings and each Committee as of March 31, 2019.			
							Board	NC	AC	CC
Günter Zorn	Chairman of the Board	External Independent	Chairman of the Board	NC Member	AC Member	CC Member	100% (11/11)	100% (5/5)	100% (11/11)	100% (5/5)
Shigeki Mori	Representative Executive Officer, President and CEO			NC Member		CC Member	100% (11/11)	100% (5/5)		100% (5/5)
Clemens Miller	Representative Executive Officer, Executive Vice President and COO						100% (11/11)			
Kenichi Morooka	Representative Executive Officer, Executive Vice President and CFO						100% (11/11)			
Toshikuni Yamazaki	Chairman of the AC	External Independent		NC Member	AC Chairman	CC Member	100% (11/11)	100% (5/5)	100% (11/11)	100% (5/5)
Yasuyuki Kimoto	Chairman of the CC	External Independent		NC Member	AC Member	CC Chairman	100% (11/11)	100% (5/5)	100% (11/11)	100% (5/5)
Masatoshi Matsuzaki	Chairman of the NC	External Independent		NC Chairman	AC Member	CC Member	100% (11/11)	100% (5/5)	91% (10/11)	100% (5/5)
Yuji Takei	—	External					100%(11/11)			
Jörg Raupach Sumiya	—	External Independent				CC Member	Appointed June 2019			Appointed June 2019

NC: Nomination Committee AC: Audit Committee CC: Compensation Committee

Supervisory Function

Diverse and highly independent in its structure, the Board of Directors is responsible for making decisions on the Group's material matters and supervising the execution of business.

Board of Directors	Role	The Board of Directors is responsible for making decisions on the Group's material matters, such as basic policies for business management, internal control system and duty allocation among Executive Officers, and supervision over business execution by executives.
Nomination Committee	Role	The Nomination Committee is responsible for making decisions on the General Meeting of Shareholders agenda items regarding the appointment and removal of Directors. It also oversees the succession plans for key executives, including President and CEO, and provides advice and recommendations for the Executive Officer candidates.
Audit Committee	Role	The Audit Committee is responsible for auditing the execution of duties by Directors and Executive Officers, preparing audit reports, and deciding details of proposals concerning appointment, removal or not reappointing the Accounting Auditor.
	Audit methodology and cooperation with others	<ul style="list-style-type: none"> Audit by Audit Committee is such that it interviews executives, attends material executive meetings such as Management Committee, and inspects business operations and financial status of the company and major subsidiaries, being assisted by Audit Committee Office, in accordance with its audit policy and plans, as well as periodically monitoring and reviewing status of development and operation of the Group's internal control system. Audit Committee meets with Accounting Auditor and the internal audit function on a regular and as needed basis to receive reports on items such as progress of audits, exchange views and gather information.
Compensation Committee	Role	The Compensation Committee is responsible for making decisions on a compensation policy for Directors and Executive officers as well as individual elements of compensation for Directors and Executive Officers.

Board Effectiveness Evaluation

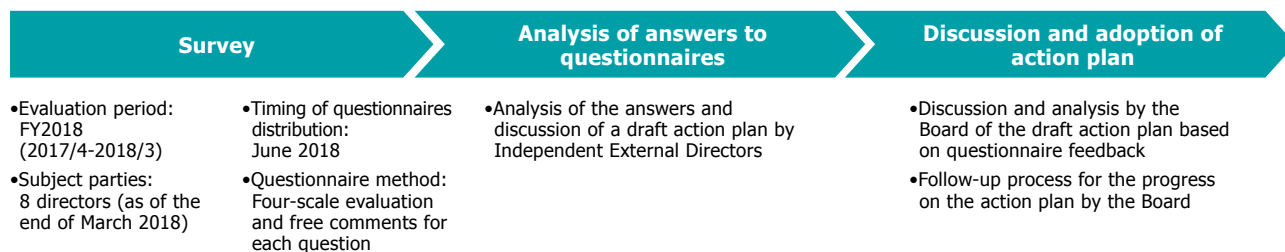
NSG Group started an annual evaluation process for the Board effectiveness in FY2016, in order to further and constantly improve performance and effectiveness of the Board of Directors and Nomination, Audit and Compensation Committees.

■ For FY2018

Evaluation process

The effectiveness review of the Board and the Committees was conducted following feedback and views taken from each Director, addressing composition, status of management, agenda-setting and the direction of the role of the organization. It is led and supervised by the Independent Directors (led by the Chairman of the Board) to ensure its adequacy and independence.

■ Overview of evaluation and analysis process



Summary results of evaluation, and Action plan

The effectiveness score regarding the Board and Committee meetings has improved since FY2017. The evaluation process concluded that their procedure was "appropriate and adequate", and therefore the effectiveness of the Board of Directors and Committees had been well maintained.

Based on specific recommendations that were made throughout the process, the Board developed an action plan including the following points:

- Increase discussion on the critical business strategies of the Group (e.g. growth and financial strategy, talent development/human resources)

- Continue efforts to enhance risk management process and reporting
- Improve diversity of the Board members
- Enhance succession plans for the CEO and other senior executives

■ For FY2019

Evaluation process

The Board effectiveness evaluation is underway (as of the date of this report), taking into consideration the appraisal of the FY2018 results, recommendations and feedback, and the action plans developed through the last evaluation process.

Executive Function

A diverse group of 17 Executive Officers (as of July 1, 2019) carrying out the Group's business activities

Executive Officer	Role	The Business execution of NSG Group
	Composition	Three Representative Executive Officers (Chief Executive Officer (CEO), Chief Operation Officer (COO) and Chief Financial Officer (CFO), respectively), 6 Senior Executive Officers and 8 Executive Officers
Management Committee	Role	The Management Committee leads the Group's business operation and oversees the implementation status of businesses in order to realize the policies and targets set out by the Board of Directors efficiently and appropriately.
	Composition	The Management Committee mainly consists of the Executive Officers.
	Number of times met in FY2019	11
Sustainability Committee	Role	The Sustainability Committee builds the sustainability strategies, presides over all of the Group's sustainability-related activities, and ensures effective communication with various stakeholders.
	Composition	The Group Sustainability Committee is chaired by the CEO or a person who is nominated by CEO and composed of the CEO, COO, CFO, Group Sustainability Director, the Heads of each Strategic Business Unit, Chief Development Officer (CDO), Chief Human Resources Officer (CHRO), Chief Legal Officer (CLO), Chief Corporate Planning Officer (CCPO), Chief Communication Officer (CCO) and the Heads of relevant Group Functions.
	Number of times met in FY2019	2
Strategic Risk Committee	Role	The Strategic Risk Committee periodically reviews policies, strategies and frameworks concerning risk management throughout the Group, and appropriately takes into account the results of such review in forming the organization strategy and goals, in order to enhance the Group's business management.
	Composition	The Strategic Risk Committee is chaired by the Chief Risk Officer (CRO) and composed of CEO, COO, CFO, CRO, the Heads of each Group Function, and the Heads of each Strategic Business Unit.
	Number of times met in FY2019	3

Appointment and Dismissal of CEO, CEO's Succession Plan

The Nomination Committee, chaired by an Independent External Director and comprising five (5) Directors including the Chairperson, four (4) of whom are Independent External Directors, clarifies, pursuant to the Policy and Procedure on Appointment and Dismissal of the CEO and Executive Management, and the qualifications of the Chief Executive Officer's succession plan.

■ Appointment and Dismissal of CEO

The Nomination Committee clarifies, pursuant to the Policy and Procedure on Appointment and Dismissal of Executive Management, the necessary qualifications for CEO and its procedure for appointment on the basis of which the Nomination Committee makes recommendation on CEO candidates for the Board of Directors and then Board of Directors decides such appointment with such

recommendations. In case the incumbent CEO is appointed as a member of recommendations Committee, he/she will not be involved in any decision or discussion as to the recommendations regarding the appointment of the CEO, except where he/she expresses his/her opinion in response to a specific request from a member of the Nomination Committee.

In case any early dismissal of the CEO is contemplated (including the case where unexpected failure to renew the term is contemplated for the purpose of this subject-matter) the Nomination Committee, which consists of four Independent External Directors and a CEO, deliberates and then tenders a recommendation on their findings to the Board of Directors, that then makes its ultimate decision on the matter based on the committee's recommendation. In case the incumbent CEO is appointed as a member of The Nomination Committee, he/she will not be involved in any decision or discussion as to such recommendation relating to his/her dismissal, except only where he or she expresses his/her opinion in response to a specific request from the

Nomination Committee.

■ Appointment and Dismissal of the senior management and the nomination of Director candidates

The Company will decide the candidate for director at the Nomination Committee and submit the details to the ordinary general meeting of shareholders as a proposal. In addition, the Board of Directors will, on the basis of recommendations rendered by the Nomination Committee in advance, appoint or dismiss senior executive managers including Executive Officers.

■ Succession plan for CEO and senior management

As part of the CEO's succession plan, the nomination committee clarifies the candidates' expected qualifications and character. Management Leadership development training and promotion planning are also in place. In addition, succession plans for other executives are being developed, reviewed and maintained.

Compensation System for Executive Officers and Director

The Compensation Committee, chaired by an Independent External Director and composed of six Directors including the Chairperson, five of whom are Independent External Directors, has formulated and been operating the executive

remuneration system that determines the amounts, based on "Principles of Compensation for Directors, and Executive Officers".

■ Compensation System for Executive Officers

Objectives	<ul style="list-style-type: none"> To ensure that packages of employment terms and conditions are market competitive and designed in such a way as to attract, retain and motivate Executive Officers of the highest world-class caliber in an international business To ensure that each individual's basic salary and incentives are aligned with the performance of the Group and interests of the shareholders as well as reflecting the commitment and achievements of the individuals concerned 		
Decision-making Body	Compensation Committee		
Composition and Details	Basic salary		<ul style="list-style-type: none"> Set at market competitive levels
		Management Incentive Plan (Annual bonus)	<ul style="list-style-type: none"> Aligned to NSG Group's Medium-Term Plan Performance measures (FY2019, FY2020): <ul style="list-style-type: none"> Group Management Operating Profit Group Free Cash Flow Global SBU* Management Operating Profit Global SBU* Cash from Operations * SBU means each "Strategic Business Unit" of NSG Group Payment: In cash Potential payment levels: Ranging between 0% and 125% against each individual's basic salary depending upon the management grade
	Performance-related compensations	Long-Term Incentive Plan	<ul style="list-style-type: none"> Long-term incentive scheme over a three business-year period Performance measure (FY2017, FY2018): Aggregate Earnings per Share Performance measure (FY2019): Aggregate Earnings per Share and Return on Sales Payments are factored up or down according to the share price movement during each three-year plan period. Payment (nature of share-based payment): In cash, and the plan rules require the participants to invest 50% of cash LTIP proceeds (if any) to purchase ordinary NSG Group shares. Further, shareholding targets are set for each Executive Officer and are expressed as a percentage of basic salary—ranging between 50% and 100% against basic salary dependent upon the management grade. Potential payment levels: Ranging between 0% and 150% against each individual's basic salary depending upon the management grade Malus (ability for the value of the award to be reduced after it has been granted but before it has vested) and Clawback clauses (ability for the Group to require the participant to repay the value they receive after the award has vested)

Note 1: Executive Officers with regard to the above table include the ones concurrently serving as Directors.

Note 2: Apart from the above-mentioned compensation, Stock Compensation-type Stock Options are issued annually to certain Executive Officers, which were introduced as a retirement saving plan in accordance with the abolishment of director's retirement allowance scheme in 2007 under Japanese employment terms.

Performance measures for the FY2019 and FY2020 annual incentive plan for Executive Officers are mainly based on the following:

Element	Weight (%)		
	CEO, COO and CFO	Executive Officers other than CEO, COO and CFO, who are mainly responsible for specific Global SBUs	Executive Officers other than CEO, COO and CFO, who are mainly responsible for specific Group functions
Group Management Operating Profit	50%	25%	25%
Group Free Cash Flow	50%	25%	25%
Global SBU Management Operating Profit	–	In relation to the results of specific SBUs they are responsible for, constituting 25% in total	In relation to the results for each of the Group's SBUs constituting 25% in total
Global SBU Cash Flow from Operations	–	In relation to the results of specific SBUs they are responsible for, constituting 25% in total	In relation to the results for each of the Group's SBUs constituting 25% in total

*Note: SBU means each "Strategic Business Unit" of the Group

A case of compensation composition ratio for Executive Officer (CEO)

Basic salary 27%	Management Incentive Plan (Annual bonus) 33%	Long Term Incentive Plan (LTIP) 40%	In principle, half of net LTIP proceeds is used to purchase NSG Group shares
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Note 1: This estimation is created based on a hypothesis that performance-related compensation (annual bonus and LTIP) are fully paid for CEO.
(For calculation, this estimate excludes "other" compensations than any of above compensations).

Note 2: LTIP requires the participants to invest 50% of net LTIP net proceeds (if any) to purchase NSG Group ordinary shares.(unless impracticable in specific cases)

Note 3: Compensation composition ratio is determined according to the management grade.

Amount of Compensation for Directors and Executive Officers for FY2019

(Million Yen)

Category	Headcount	Basic Salary	Performance-linked compensation		Other Benefits
			Annual Bonus	Long-Term Incentive Pay	
External Directors	5	69			–
Executive Officers	12	429	95	190	135

Notes

1: Five of the Executive Officers include compensation for the Executive Officers paid by the Company's subsidiary.

2: Amounts shown relate to the periods for which the office of Director and Executive Officer was held.

3: The data for Executive Officers includes those who assumed office during the Group's Financial Year from April 1st 2018 to March 31st 2019.

4: The amount shown as Performance-linked compensation in the table are the payments associated with the Annual Bonus for the year from April 2018 to March 2019 and with the Long-Term Incentive Plan covering the three financial years from April 2016 to March 2019. The amount will be paid to the Executives in the financial year commencing April 2019.

5: Other Benefits for Executive Officers include an amount of 79 Million Yen for Stock Options awarded to six Executive Officers, which are the Stock Compensation-type Stock Options introduced as a retirement saving plan in accordance with the abolition of the Director's retirement allowance scheme in 2007 under Japanese employment terms.

6: Other Benefits include pension fund contributions, healthcare provision and accommodation costs and so forth.

Compensation System for Independent External Directors

Objectives	<ul style="list-style-type: none"> To enable Independent External Directors to fulfill their supervisory role adequately and effectively To retain individuals with the capacity and experience required for that role
Composition and Details	<ul style="list-style-type: none"> Appropriate compensation level set based on comparisons with other companies using benchmark provided by external professionals Compensations for their performance on their duties No performance-related compensations such as Management Incentive Plan and Long Term Incentive Plan
Decision-making Body	Compensation Committee

Note: According to resolutions of the Compensation Committee, a Non-Independent External Director also receives the level of compensation adequate for his/her duties and is not eligible for the performance-related compensations such as Management Incentive Plan and Long Term Incentive Plan.

Please refer to our securities report (Yukashoken Hokokusyo or Yu-Ho) for the Policy for Directors and Executive Officers' Compensation and the past compensation actually paid.

RISK MANAGEMENT



Basic policy

Consistent with the “Our Vision” management principles, NSG Group aims to enhance corporate value by way of sustained growth in line with MTP Phase 2. That said, the business environment enveloping the Group is becoming increasingly complex and showing signs of a dynamic transformation. We see risks in the uncertainties that stem from internal and external factors and affect the Group’s ability to achieve its business targets. We therefore position risk management, which is tasked with identifying, assessing, and properly managing major risks, as an important part of our management foundation in order to minimize the negative effects and maximize positive results. And by

systematically and methodically implementing appropriate risk management across the entire Group, we can not only achieve our business targets, but also reliably execute business strategies.

NSG Group’s risk management is carried out in accordance with our Basic Policy on Internal Control Systems, which was resolved by the Board of Directors pursuant to the provisions of the Companies Act. Specific measures for addressing risks that arise in connection with our corporate activities are prescribed in our NSG Group Risk Management Policy and are consistent with ISO 31000 (principles and guidelines on risk management).

Framework

NSG Group employs a two-tiered risk management framework comprising the Strategic Risk Committee (SRC) and the Enterprise Risk Management (ERM) Team, both of which are under the supervision of the Management Committee.

The SRC’s members are mostly executive officers, while the CEO serves as Chairman. One of the executive officers is appointed Chief Risk Officer (CRO).

The SRC determines the companywide risk management framework, based on which it classifies high-level risks thought to have a serious impact on the Group and risks that ought to be managed by SBUs or Group functions. It then monitors how those risks are being addressed and requests that measures be taken if required. For high-level risks, the SRC appoints “risk owners” to manage the collection of risk information and the progress of countermeasures.

The CRO presides over all SRC meetings and as representative of the committee, periodically reports to and receives feedback from the Management Committee and the Audit Committee mainly regarding the effectiveness of the Group’s basic internal control system and risk management structure. In FY2019, the SRC convened three meetings and reported once each to the Management Committee and the Audit Committee.

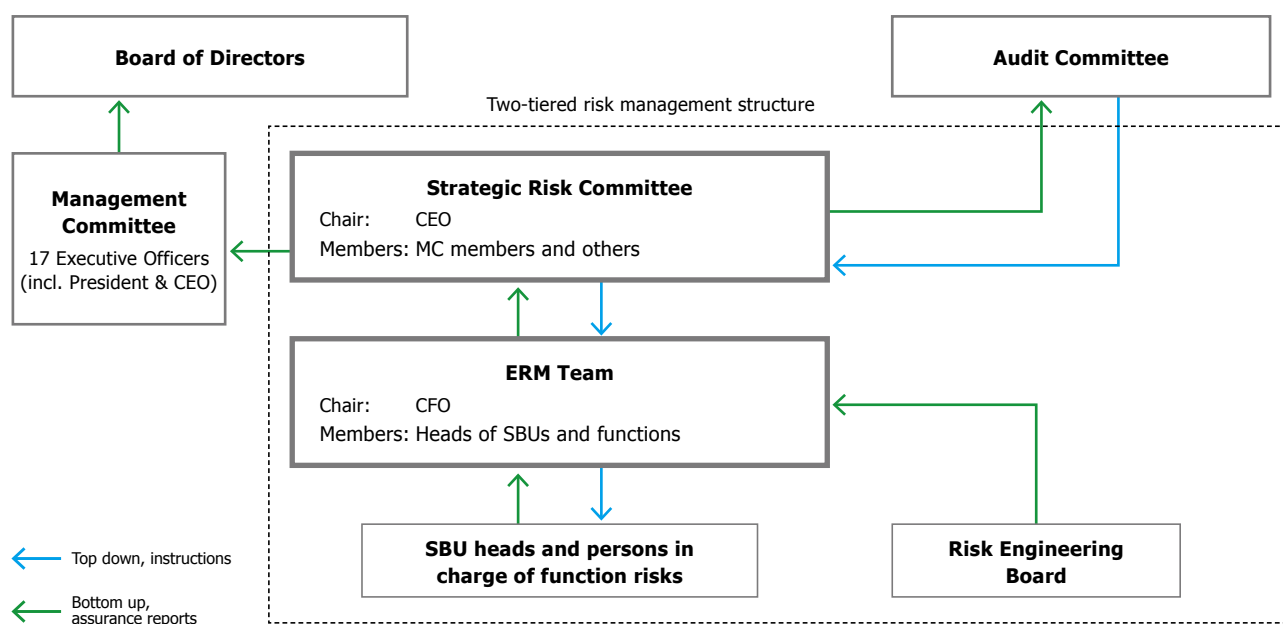
The ERM Team is chaired by the CFO and its members comprise SBU general managers and heads of functions such as accounting, finance, and human resources. Every year this team identifies, assesses, and prioritizes risks pertaining to business execution and endeavors to improve the effectiveness of risk management by formulating necessary measures to mitigate risks. The ERM Team periodically, or

whenever requested, reports on its activities to the SRC.

The Internal Audit Department's role is to provide assurance from an independent standpoint regarding companywide efficiency of risk management.

As for the sharing of risks, we established the NSG Group Insurance Policy. We identify risks such as losses caused by natural disasters. Every year under the supervision of the SRC, we implement, or review, the Group's comprehensive insurance coverage under our global insurance program.

Risk management structure



Major risks for NSG Group

The SRC identified, assessed, and listed in order of priority the following risks from among the major risks it monitored in FY2019. Risk owners for each type of risk are appointed from among the executive officers to take responsibility for appropriately dealing with risks.

Risk
1 Business continuity risk
2 Non-performance of shipping contract by supplier
3 Cyber risk
4 Loss of competitiveness to key customers

Risk
5 Economic risk
6 Financial risk
7 Labor shortage
8 Compliance risk
9 Ascertaining and responding to technological innovation
10 Business strategy risk
11 Product quality risk
12 Risk pertaining to new or amended laws and regulations
13 Intellectual property risk
14 Organizational culture capable of swiftly responding to changes

Business continuity risk

In preparation for the occurrence of a serious accident or large-scale disaster and as part of its business continuity management, NSG Group has organized teams and formulated plans at each business site so serious accidents can be managed in accordance with NSG Group Business

Continuity Policy and Serious Accident Management Guidelines. Since 2013, we have prioritized our main business sites in drafting and rehearsing comprehensive business continuity plans.

ETHICS AND COMPLIANCE

Code of ethics and education

The NSG Group Code of Ethics broadly covers the ethical behavior expected of our employees in the work place, including compliance with all laws and all major Group policies, procedures and guidelines. The Code is available in all 19 Group languages.

The Group decided to expand new employee education to cover not only the Code of Ethics, but also conflict of interest, fraud, social media and Ethics and Compliance

reporting. Key Roles for competition law compliance and anti-bribery and anti-corruption (ABAC) are also required to complete the relevant online education. The education modules will be assigned to the Group employees accordingly through the NSG Group Ethics and Compliance Education Center. This new education structure began in April 2019. We will continuously monitor its effectiveness as well as the completion rate of the modules.

Ethics network

A Global Ethics Network is aimed at enhancing the ethical culture and monitor compliance risks throughout the Group. The Ethics Network consists of senior managers who have been appointed Regional Ethics Ambassadors and Ethics Champions. Both roles will play a vital part in the

communication and promotion of the Code of Ethics by leading and championing ethics and compliance in their local region or function which in turn will help embed ethics into the business.

Group Ethics & Compliance and communication

Group Ethics and Compliance has a direct reporting line to the Audit Committee. Its responsibilities include the development, implementation and maintenance of an integrated internal ethics and compliance management and control system, as well as the creation and review of relevant Group policies and procedures.

In FY2019, the Group E&C function adopted a regional structure by appointing E&C regional managers in Europe, North America, South America and Asia to embed E&C culture into the whole organization as well as cover risks in each region. In this regard, Group E&C started regional visits to reach out to local business/function people, liaising with the relevant Ethics Ambassadors and Champions.

Group E&C periodically issues Group Ethics and Compliance Briefings to employees. The Group's communications team translates the briefing into multiple languages and distributes to all NSG Group locations that is also made available on the Group's Intranet. In addition, each regional E&C manager issues a regional E&C newsletter to the relevant local employees.

Group E&C has begun sharing with the heads of Strategic Business Units and HR the case details reported via the E&C Hotline system to help improve the workplace environment as well as business performance. Group E&C regularly reports to the Audit Committee.

Conflict of interest disclosure

Under our Code of Ethics, all employees are responsible for acting in the best interests of the Group. Employees are required to complete an educational module and at the end they are asked to disclose any outside interests, activity or investments, which actually or potentially, could cause conflict against that of the Group, or otherwise certify they

do not have any such conflict of interest. Group E&C reviews all reported disclosures and discusses certain matters with the relevant business or function head if necessary. Feedback is provided to all reporters and in some cases, possible plans to mitigate exposure are also provided.

Compliance system

To ensure transparency of employees' actions related to our core compliance programs, NSG Group requires the reporting of certain high risk areas such as competition law compliance and ABAC. Group E&C centrally manages an online reporting system where employees are required to document or obtain prior permission from Group E&C whenever they contact our competitors, join a trade association, make charitable contributions, give or receive a certain amount of gifts and

entertainment, do businesses with third parties, and interact with public officials. The specific requests and notifications are reviewed and approved by the relevant E&C regional managers.

NSG Group is monitoring around 500 third parties such as agents, consultants and joint venture partners that meet certain risk criteria of ABAC. This process includes due diligence, assessment and reputational screening.

Reporting of concerns — Ethics & Compliance Hotline

NSG Group is committed to maintaining an environment in which employees can report, without fear of retaliation, any conduct they know of or suspect to be in violation of law, Group regulations or guidelines.

For this purpose, the Ethics and Compliance Hotline system has been established to provide an easy and simple way to report concerns, while employees are encouraged to speak to HR or line management first.

- | | |
|---------|--|
| Hotline | <ul style="list-style-type: none"> • Can be used by third parties • Reports can be made anonymously (except as prohibited legally) • Available 24 hours a day, 365 days a year in multiple languages • Toll-free number • Anybody can raise questions • Operated by a third party (to guarantee confidentiality) |
|---------|--|

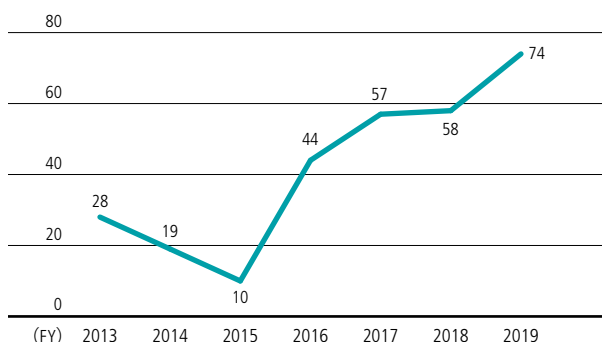
Managers who received the report from their colleagues must file the designated reporting form (Manager's Report Form) if he/she believes that it has a potentially adverse or negative legal, financial or reputational impact on NSG Group.



Any form of retaliation against an individual who has reported a concern or incident in good faith shall not be tolerated.

NSG Group constantly measures the effectiveness of the system by using the metrics against the industry benchmark region by region.

Number of reported concerns





Shiro Kobayashi

Executive Officer
Head of Group Sustainability

Mitigating risks associated with climate change are an opportunity for NSG group to make a positive contribution to our environment

Glass is playing an important role in society's efforts to reduce greenhouse gas emissions and to mitigate the effects of climate change. We aim to be the global leader in innovative high-performance glass and glazing solutions, contributing to energy conservation and generation, while working safely and ethically. Glass markets are extremely competitive around the world and it is imperative that we can meet the ever-increasing demands of customers.

Our sustainability agenda is integral to decreasing our costs and increasing our market opportunities. Over the past year, we have continued our efficiency programs in areas such as energy reduction, greenhouse gas emissions and waste recycling, which can have a significant and swift impact on the business performance of the Group.

Mitigating risks associated with climate change are an opportunity for NSG Group to make a positive contribution to our environment. With our planned commitment to Science-Based Targets we will aggressively reduce absolute CO₂ emissions generated in our glass manufacturing processes. In combination with increasing the development of environmentally beneficial products, this will become the basis for the NSG Group climate change strategy.

We train and develop our people while respecting their human rights, improving Inclusion & Diversity and keeping them safe from workplace injuries or occupational illness. We encourage our contractors and supply chain to take similar steps through the ongoing evaluation of our key suppliers' sustainability practices. We continue to keep good relationships with local communities.

Materiality

For the purposes of this Report, we consider material information to be of greatest interest to, and which has the potential to affect the perception of, those stakeholders who wish to make informed decisions and judgments about the Company's commitment to environmental, social and economic progress.

The NSG Group Sustainability Committee agreed on material issues based on the Group's key impacts and stakeholder feedback throughout the year. These material issues have influenced our Sustainability Targets.

Financial issues are of the highest importance to

stakeholders. Financial health remains a critical issue to NSG Group and cost reductions are vital to our strategy and everyday activities.

People are NSG Group's most important asset. Inclusion & Diversity is a key issue for our global organization, being widely recognized as enhancing both corporate value and the working lives of employees. We provide leadership and development programs for our employees to develop their capability. Feedback from an employee engagement survey has led to improved learning and development plans and a healthy and motivated workforce. The minimization of safety

risks is important to all stakeholders and our management program is aimed at protecting the workforce. Our reputation is integral to the success of NSG Group. We are committed to demonstrating good corporate governance and ethical business practice to satisfy increasing shareholder and customer requirements.

We will execute the MTP Phase 2 in line with the Long-Term Strategic Vision within our Corporate Governance Guidelines. Group policies on compliance and reporting of concerns have been updated to align with these guidelines. Our Code of Ethics reflects our dedication to doing business the right way whilst minimizing regulatory and reputational risk.

Operational energy use and associated CO₂ emissions have a significant environmental impact combined with cost, security and regulatory risks. Operational efficiency has always been a key business concern but is now of particular interest to government, investors and customers. Requirements from regulators and customers are providing opportunities for sustainable and innovative product design in a shift to Value-Added products.

Supply chain risks and impacts, especially those related to the sustainability of raw materials and the environmental and human rights performance of suppliers, are important for NSG Group and our customers. We assess key suppliers' sustainability practices to satisfy these concerns.

Our Management Approach

We work with local communities and governments to ensure compliance and forward thinking. We do this directly and through our membership of trade associations, standards bodies and other organizations. We also work to influence legislation, particularly in energy conservation and emission regulation.

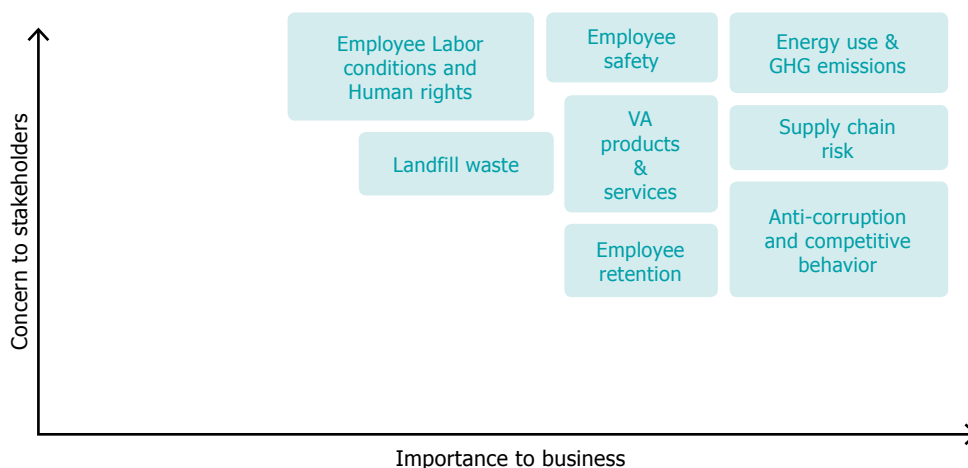
We have communicated our Supplier Code of Conduct to our suppliers and have conducted evaluations to verify the declarations we have received. Our products require raw materials that must be extracted from the earth. We take our responsibility to protect the natural habitats of the affected regions seriously.

NSG Group's Code of Ethics ensures that these activities are conducted in a safe, professional, legal and ethical manner, demonstrating corporate social responsibility and promoting sustainability.

Wherever possible, the Code defines a fair and common sense approach to doing business, with some elements dictated by strict legal requirements.

Our Group policies and procedures detail the procedures everyone in the Group must follow to achieve sound governance, tight controls, risk management and adherence to legal, ethical and sustainable principles.

Outcome of materiality assessment



TARGETS

Target	FY2020 targets	Progress in FY2019
Safety	<ul style="list-style-type: none"> Reduce Significant Injury Rate by 10 percent per year with no fatalities 	<ul style="list-style-type: none"> FY2019 was 3 percent worse than FY2018, but the average of three years was 2 percent improvement. There were no fatalities.
Waste	<ul style="list-style-type: none"> Reduce waste to landfill by 12kt (40 percent reduction vs. FY2014) 	<ul style="list-style-type: none"> 11.3kt reduction in FY2019 (37 percent reduction vs. FY2014)
Energy and CO₂ reduction	<ul style="list-style-type: none"> One percent year on year reduction in CO₂ intensity across glass manufacturing operations 	<ul style="list-style-type: none"> NSG Group has achieved this one percent reduction target each year to FY2019.
Sustainable Value-Added products	<ul style="list-style-type: none"> Increase proportion of Value-Added products in total sales to 50 percent or more in FY2020 Demonstrate the added environmental or social benefit of products 	<ul style="list-style-type: none"> There has been a steady increase in the VA ratio and it was 46 percent in FY2019.
Responsible sourcing and transportation	<ul style="list-style-type: none"> 10 percent year on year increase in Supplier Code of Conduct acceptance by our key suppliers Extend sustainability assessments for key suppliers and continue to monitor suppliers that use materials with a potentially high environmental impact 	<ul style="list-style-type: none"> 75 percent of Key suppliers have now agreed to SCoC or can demonstrate their own equivalent code. The Supplier Code of Conduct was last revised in 2017 to incorporate legislation, including modern slavery and human trafficking. We continued to improve our supplier sustainability evaluation. NSG Group continues to make good progress and has improved monitoring of suppliers with a potentially high environmental impact.

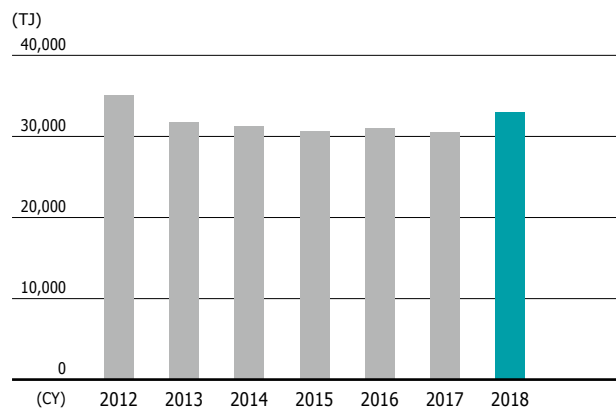
Target	FY2020 targets	Progress in FY2019
Employees	<ul style="list-style-type: none"> • Improve the engagement score by 5 points by the end of FY2020 • Train all managers in the new Appraisal Model and Talent System by the end of FY2019 • Increase the skills of our newly appointed or prospective plant managers by 50 percent of the target population attending the Plant Leadership Program by the end of FY2020 • Increase Inclusion & Diversity awareness by training all managers with designated modules by the end of FY2020 	<ul style="list-style-type: none"> • FY2019 engagement score was lower than previous year. This is mainly due to the expansion of the survey area in Asia. We are considering their feedback and working on further improvement. • Performance management training using SABA was completed by the end of March. SABA is the software supplier we have partnered with to introduce the global cloud-based talent management system. • Among the newly assigned plant managers and their candidates, 45 percent has completed SABA training. Additional workshops are scheduled for FY2020. • Selected managers completed training to 100 percent by FY2019. Awareness training continues to be issued to additional managers. All Strategy Business Units and Group Functions take specific actions in FY2020.
Ethics and Compliance	<ul style="list-style-type: none"> • Reissue Governance and Culture Leadership Assessment • Standardized New Employee Compliance Training Package • Ethics and Compliance Interview in the new appraisal system, SABA • Begin review of Code of Ethics 	<ul style="list-style-type: none"> • Adopted regional E&C structure • Preparing test out option for efficiency and effectiveness of annual online training campaign (Ongoing) • Conducted due diligence on third parties and sanction screen all business partners (Ongoing) • Conducted an annual Conflict of Interest assessment. Moving this to SharePoint site in line with other internal reporting systems regarding CC and ABAC, for consistency and usability (Ongoing).

ENERGY USAGE

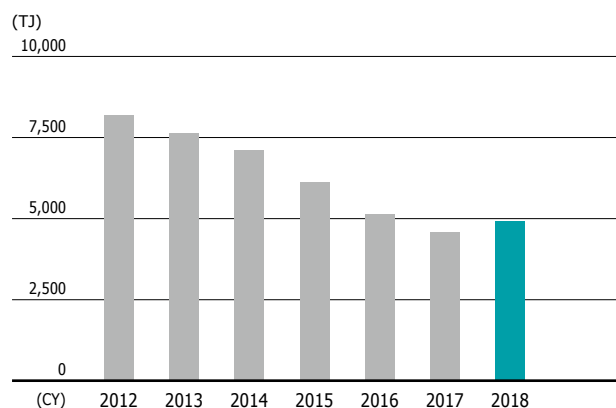
We work continuously to minimize energy input into all our processes, so that the usage of glass contributes net benefit to sustainability.

NSG Group Energy Usage

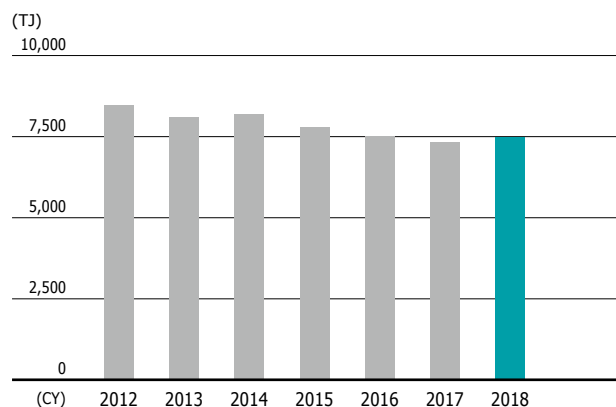
■ Natural Gas



■ Heavy Fuel Oil



■ Electricity



Our energy usage

For both environmental and financial reasons, we continue to use natural gas as the fuel of choice for glass melting. Furnaces continue to be converted from heavy fuel oil to gas. Small quantities of diesel and LPG are used for space heating and back up generators. See the graphs for consumption details.

Initiatives to reduce energy usage

Energy Committee

All initiatives are monitored by the Heads of SBUs and Group functions at six-monthly Energy Committee meetings, chaired by the Chief Operating Officer.

Energy Core Team

A senior management team representing key functions including; manufacturing, engineering, procurement and R&D coordinate all energy project activities to ensure maximum engagement in the Group energy management program.

Energy management pilot plants

The concept of the energy pilot plants is to make a step change reduction in energy consumption by using energy more efficiently and effectively. This initiative continues to expand across the Group with more than 25 sites engaged in the program. These sites represent in excess of 85 percent of NSG Group's energy spend.

Cross-functional pilot site teams are led locally by the plant manager, with proactive support from other Group functions, and extensive use is made of third-party suppliers. Over 500 projects have been implemented or continue to be evaluated.

Operational energy-efficiency projects

The Operational Cost Saving program aims to reduce all operational costs in the areas of prime and overhead costs. One of the largest prime costs for the Group is energy.

To support the cost saving activities across sites, a deep analysis of all energy projects within the OCS database is regularly completed. Multiple projects were identified for rapid dissemination in FY2019 to deliver energy consumption and cost savings. Each manufacturing site within the Group had at least one active OCS energy project in FY2019.

Led by Manufacturing Excellence and assisted by other Group functions, NSG Group sites identified more than 200 energy-optimization opportunities, resulting in annual CO₂ savings in excess of 20kt.

Major projects include furnace fuel combustion optimization, reducing electrical requirements of motors optimizing compressed air systems, energy sub metering,

energy efficient lighting, fuel switching, cogeneration processes, waste heat and energy recovery.

An initiative to engage in Industry 4.0 or Internet of Things (IoT) for energy management was launched. This includes analytics of process data including energy metering with the goal of optimization of energy consumption. The analytics also support the identification and development of new projects, such as identifying energy waste & management of tariffs.

A directory of potential novel technologies available across the glass industry continues to be developed, including recommendations for appropriate application at Group sites.

R&D activity

Reducing CO₂ emissions and maintaining the security of energy supply for our furnaces will remain fundamental to our continued business. Implementation of incremental technology changes will be required in the short term to minimize capital expenditure.

Project Carbon 2050 was launched in 2018 to support development and implementation of a decarbonization roadmap that identifies the technologies, barriers and financial investments required to achieve significant carbon emission reductions in float manufacturing by 2050.

Management systems

We have maintained ISO 50001 certification across all operations in Germany, Italy, Finland and the Automotive engineering function. Investment in sub-metering hardware and software installations allows a high level of transparency in energy consumption and enables a sophisticated energy-planning process with improvement activities, target setting and frequent reviews to be established.

Energy Savings Opportunity Scheme (ESOS)

All UK manufacturing sites are continuing to participate in the UK government Energy Savings Opportunity Scheme (ESOS). Currently in phase 2, the scheme is linked to the UK government commitment to the EU Energy Directive article 8. Sites are assessed by certified external auditors with the aim of identifying viable energy saving project activities. The assessment includes verification of energy consumption data and site energy audits which result in a set of published recommendations signed off by a UK senior management representative. A number of initiatives identified within the scheme have been implemented and disseminated across other regions. Similar schemes exist in several EU and other countries either at a mandatory or voluntary level with many sites participating.

Renewable on-site energy generation and alternative fuels

We have installed an on-site photovoltaic generation facility

at our technical center in Lathom, UK. This facility will provide 30 percent of the site's annual electricity demand.

Our Rossford technical center in North America produces about 7 percent of its own electricity with on-site photovoltaic generation. We also have photovoltaic panels on the roof and former car parking areas of our German Weiherhammer plant.

We continue to evaluate and utilize alternative low carbon / renewable fuel sources across the Group operations. This includes use of waste derived biofuel oil which cuts CO₂ emissions on a furnace by 8kt / year.

Partnership with suppliers

We continue to partner with key suppliers to develop projects to reduce energy consumption in our manufacturing sites.

Close collaboration with leaders in specific technologies is enabling us to implement optimum solutions to specific energy management challenges. Collaborative projects undertaken include, addressing compressor inefficiency, to make better use of waste heat generated in our glass-making processes and to reduce peaks in electricity demand.

Innovation in cullet recycling

Our Watson Street plant continues to invest in plastic boxes to travel on float liners with customer glass deliveries. The collected downstream processed cullet is diverted from landfill and, when re-melted, reduces energy consumption and raw material decomposition, saving 3,000 tonnes CO₂ emissions per year.

Our VASA automotive glass plant in Argentina has invested in technology to allow the re-use of laminated glass back into the furnace. The process involved allows a previously unsuitable source of material to now be reused resulting in significant energy efficiency gains and CO₂ savings.



Laminated glass cullet



Employee energy efficiency awareness

An energy management training program, designed to help the Group deliver cost savings and reduced CO₂ emissions, has been rolled out through Japan & SE Asia.

The program is the next stage of the initiative launched in 2016, and already delivered across European and South American operations.

Japan, Vietnam and Malaysia site energy champions were involved in a 'back to school' initiative that will increase levels of energy awareness and support the on-going generation of energy management project activities.

The key aspect of the training was to help the delegates understand the approach to energy management, how they can identify and implement activities at their sites and encourage others to do so.

To date, the training has directly involved more than 60 delegates, with identification and implementation of over 150 projects.

Energy savings have exceeded ¥64.5 million, and reduced CO₂ emissions by more than 1,500 tonnes.

The initiative comprises three levels of training, with level 1 involving 50 hours in all aspects of energy management. The course was organized with the support of local functional teams and was led by David Cast, Climate Change Director, NSG Group.

It was designed to support site energy management activities and give formal qualifications to the delegates with the cost of the course being recovered by the delegates identifying and delivering energy cost-saving projects.

Following successful completion of level 1, delegates were encouraged, where appropriate to their role, to continue energy management training with external organizations leading to level 2 and level 3 qualifications.

Project examples that have been implemented so far include:

- LED lighting replacement and controls
- Staff awareness campaigns including 'shut-off' activity and inappropriate energy use
- Replacement of motors & drives with variable speed devices
- Optimizing combustion set up in furnaces and boilers
- Introducing energy 'mini audits' in daily routines (part of 5S activities)



European Team (2016)



South American Teams (2017)



Japan & SE Asia Training (2018)

Lathom Solar Project

NSG Group and Lightsource BP have installed and connected a 2.3MW solar installation at the European Technical Centre in Lathom, Lancashire, UK. The site is anticipated to provide 30 percent of the facility's annual electricity demand.

This project was developed and funded entirely by Lightsource BP, with no capital investment required from NSG Group and no disruption to their daily operations during construction. NSG Group buys the clean, renewable electricity via a Power Purchase Agreement (PPA) with Lightsource BP, which provides a fixed, index-linked rate designed to hedge against future price fluctuations and deliver operational savings over the 25-year contract period.

This project is especially significant for both Lightsource BP and NSG Group as the installation showcases one of the glass manufacturer's own products. The solar modules selected were sourced from First Solar, one of NSG Group's largest global customers. Research and development for the glass contained within the solar modules was conducted at the European Technical Centre itself, where operations will now be powered by their own hard work.

As well as reducing electricity costs, the solar installation is a crucial part of NSG Group's drive to improve our sustainability credentials, and this project will help us meet carbon reduction targets by saving an estimated 848 tonnes in emissions each year – the equivalent of taking 180 family cars off the road.



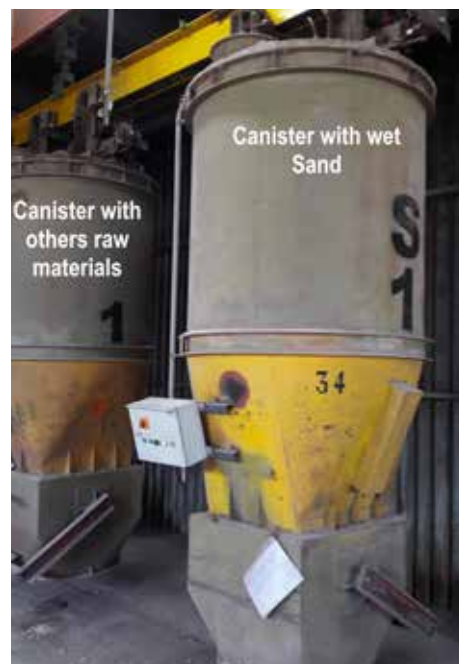
Lathom

Wet Sand Project in San Salvo

A project was delivered at the San Salvo site, Italy to eliminate the sand drying process on the unique canister batch plant to improve both employee health & safety and reduce site energy consumption.

By modifying the process to allow the use of wet sand, the amount of sand dust has been significantly reduced and the consumption of natural gas for drying the sand has been eliminated. Benefits of the project include a reduction of 900kSm³ Natural Gas consumption and 1900t CO₂ saved annually.

The project was an excellent collaboration between local site teams and the R&D function.



New Canister

AIR EMISSIONS

The main emissions from a flat glass furnace come from the combustion of fuel and the decomposition of the carbonate and sulphate raw materials. The raw materials are melted at a very high temperature so the process is extremely energy-intensive.

Emissions to air

The most significant pollutants from a glass furnace are: nitrogen oxides formed from the nitrogen and oxygen in the air at high temperature; sulfur oxides from the refining agent (and from oil fuel if that is used); and particulate matter derived from compounds volatilized from the molten glass. Carbon dioxide comes from both the decomposition of carbonates and from combusted fuels.

We are tackling pollutant air emissions with a range of primary and secondary abatement techniques. Primary methods, such as special burners or carefully-chosen raw materials, including more cullet (recycled glass), reduce pollutant formation and can also improve the thermal performance of the furnaces.

Secondary abatement removes the pollutants from the furnace waste gases before they are emitted through the chimney.

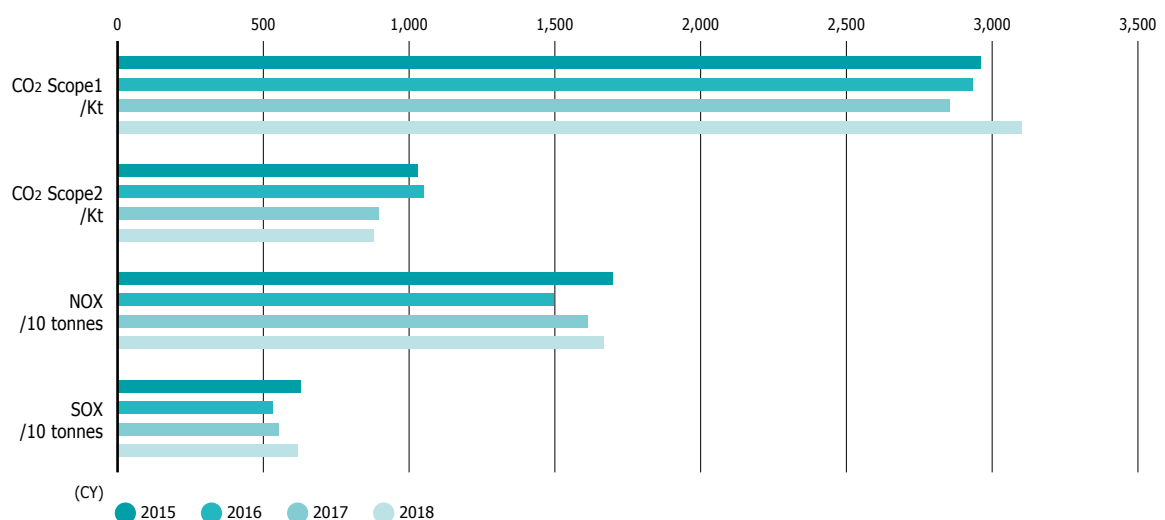
Until recently, the furnace emission pollution control plants in operation around NSG Group have all been based on standard technology. This removes the pollutants from the waste gases in three stages: alkali is injected into a scrubber to remove acid gases, the resultant reaction products and particulate emissions are then collected in an electrostatic precipitator, and finally nitrogen oxide is removed using ammonia injected into a selective catalytic reduction unit. However, the latest pollution control plant built by NSG Group uses a novel technique called a catalytic ceramic filter, or CCF.

Novel pollution control plant installed at Ottawa

The abatement plant just installed on NSG Group's OT1 furnace in Ottawa, USA, is a CCF unit purchased from McGill AirClean. The system is based on thousands of ceramic filters, or "candles", in a single unit. Alkali, in this case lime, is added to the waste gas and the resultant reaction products and primary particles are collected by the filter. The novelty of the process is that the fibers of the filters are coated with a metal catalyst so when the gases pass through the structure nitrogen oxides are also removed. It is expected that CCF technology will become the standard for new furnace pollution control plant throughout NSG group.



Air Emissions



Monitoring and reducing carbon emissions

In 2018, NSG Group was responsible for the emission of 4.0 million tonnes of CO₂e. This is a six percent increase on the previous year due to the recommissioning of furnaces balanced against increased renewable electricity and many proactive operational cost saving initiatives described in the energy use section.

Our Scope 1 emissions were 3.1 million tonnes. These direct emissions occur from our furnaces and from fuel used in bending and toughening furnaces. In 2018, our measured Scope 2 indirect emissions were 0.9 million tonnes of CO₂ and our estimated Scope 3 emissions were 2.3 million tonnes CO₂e. In the operation of our float plants, heavy oil to natural gas conversion has helped to reduce carbon emissions by around 50 percent over the past 40 years and a combination of design and operational innovations has made further progress. We aim to reduce CO₂ emissions per tonne of equivalent product by one percent per year until 2020. This target has been achieved year on year for the last five years.

	Tonnes CO ₂ e / tonne equivalent product	Percentage improvement
FY2019	0.73	2.1
FY2018	0.75	1.4
FY2017	0.76	1.5
FY2016	0.77	1.5
FY2015	0.78	1.2

Recycled glass to improve efficiency and reduce emissions

Glass for recycling is a valuable resource.

Wherever quality allows, we recycle any glass off-cuts or cullet within our own glass melting lines. Glass from our downstream operations and from our customers represents a potentially useful resource to us. We gain a double benefit from the use of such cullet: its use to make glass reduces the requirement for raw materials and avoids disposing of what would otherwise be a waste material and closes the recycling loop.

Ten percent cullet use saves three percent furnace energy and leads to reductions in CO₂ emissions. One of our sites has manufactured glass using only cullet.

Cullet return projects are ongoing to try to minimize the need for virgin raw materials.

Landfill is the least favored disposal option.

If glass is produced that cannot be remelted on-site, it is sent, where practicable, for external recycling.

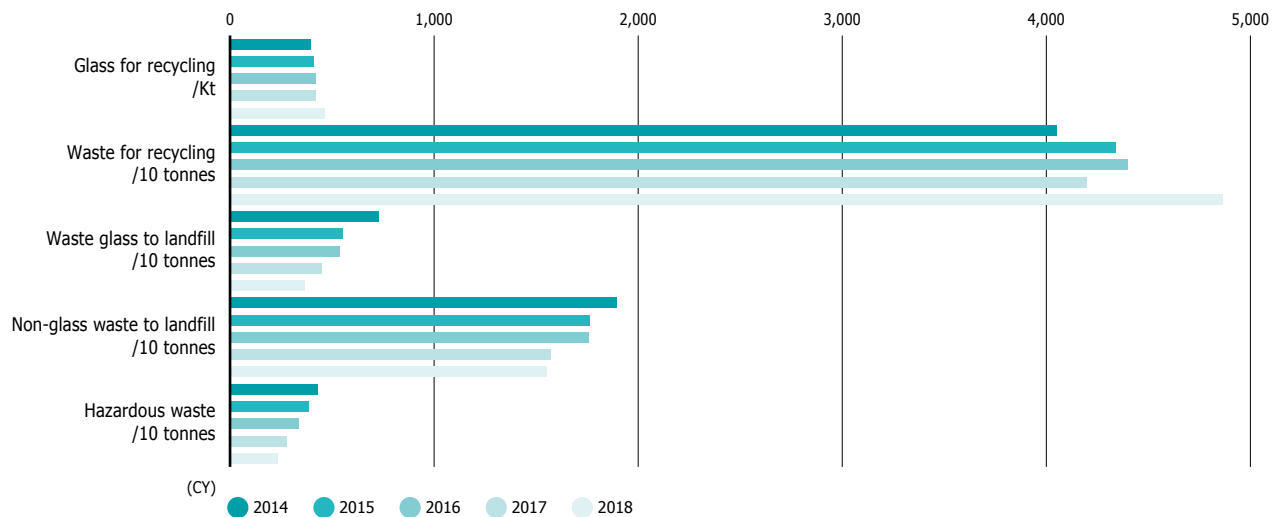
Reduction of CO₂ emission at NGFE

The drive belt reinforcement cords manufactured by NSG Glass Fiber Europe (NGFE) in St Helens are made from glass fibers with two layers of special organic materials applied in coating ovens. The fumes from these primary and secondary coating processes are emitted through pollution abatement processes that are now undergoing refurbishment. The original primary coating treatment process sent the emissions through a recuperative incinerator and the energy was recovered to heat the ovens. It was realized that the concentration of the pollutants in the unabated emissions from the primary coaters was actually lower than the regulated limit and incineration was not only unnecessary but generating carbon dioxide and adding to climate change. However, improvement was not simply a case of emitting the unabated fumes through the existing chimney because there was the possibility of an odour problem affecting the local area. Using meteorological and topographical data for St Helens, R&D experts at NSG Group's Technology Centre at nearby Lathom were able to predict the required height of the new chimney to ensure ground level concentrations were never above the odour threshold. With support from Group Engineering, NGFE has now installed a new primary coater fume abatement process that directly heats the ovens, while lowering operational costs by reducing fuel, and at the same time reducing the emission of carbon dioxide by more than three thousand tonnes per year. This is a great example of the efforts of R&D, Group Engineering and site management combining to deliver a sustainable improvement to NSG Group businesses.



RESOURCES AND RECYCLING

NSG Group promotes the efficient use, reuse, recovery and recycling of glass and other materials involved in glass manufacture, processing, packaging, and delivery.



Waste sent to Landfill

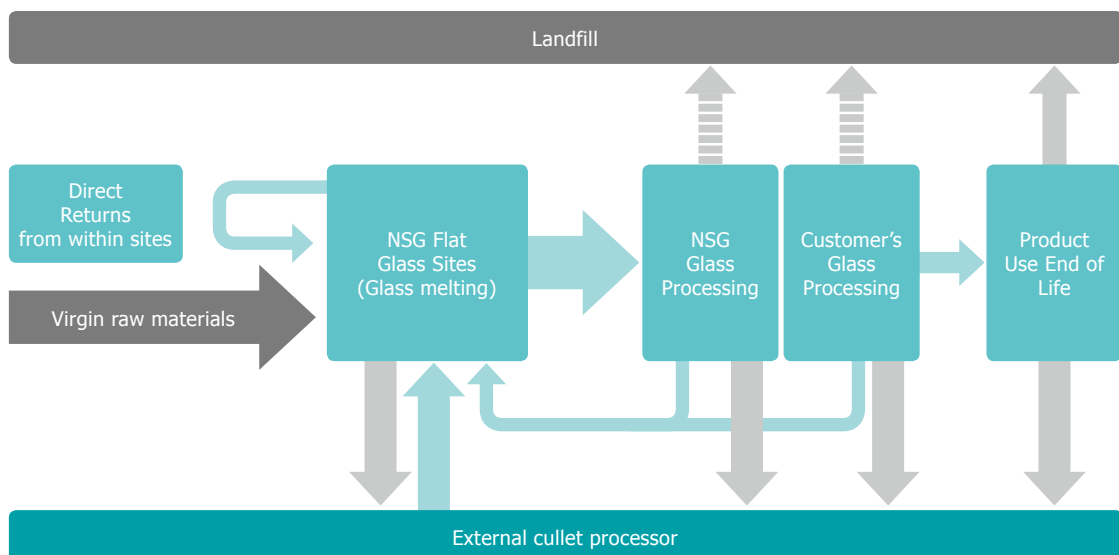
NSG Group reduced the waste sent to landfill by 50 percent up to 2013 versus the selected baseline year 2007. NSG Group set a new Sustainability target to reduce this environmental impact by an additional 40 percent (12 kt) on FY2014 by the end of FY2020. The result of FY2019 (37% reduction) is already close to that target and showing a 5% improvement versus FY2018, however with an inconsistent improvement performance of the individual sites. Additional actions are being taken at sites which are not yet showing the expected reduction of waste to landfill.

Recycling of Glass

The glass manufacturing process itself produces very little waste material. All trimmed glass from the manufacturing processes of raw float glass plates is recycled back into the melting process. Cullet and rejected parts from further glass processing for Automotive or Architectural Glazing parts is recycled at the NSG Group glass melting process or given to external glass recycling partners.

Little glass cullet from Glass processing (3.4 kt in 2018) is sent to landfill – which is included in our related Sustainability improvement target and activities.

Cullet flow



Grinding sludge

The waste stream from grinding of automotive glass edges and glass drilling cannot be prevented, but we have been actively seeking recycling partners to divert this waste from landfill and provide a raw material for concrete products and other aggregate manufacturers.

Float rejected raw material

In 2018, we continued to seek recycling opportunities for glass dust and rejected batch – occasional off-specification raw material that often cannot be blended and dust collected by the pollution abatement equipment. Automated process monitoring and control systems are being implemented to proactively reduce the number of reject batches at our Rossford plant; while our Ottawa plant installed a new equipment to reduce batch spillage.

General waste

Focus and support have been given to the highest volume producers to further improve general waste segregation, and procurement has been actively involved in finding local recycling partners.

Automotive glazing components

In Automotive, all supplied glazing parts and their materials are registered in the global IMDS (International Material Data System) to ensure we have complete visibility of components confirm material compliance and to identify opportunities for recycling.

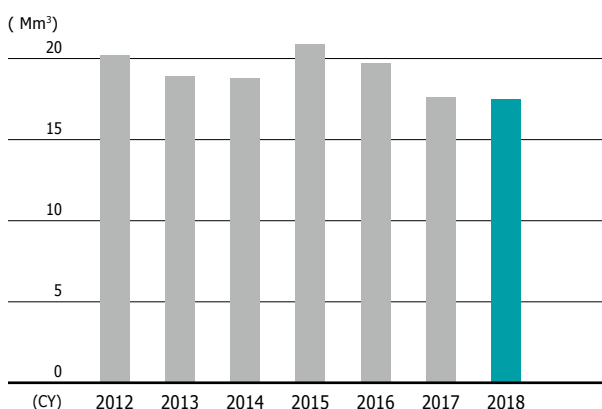
This data is shared with our Automotive customers to support their own material compliance and recycling efforts.

Water management

In glass-making, water is used for cooling, and most of our plants operate with closed loop systems and so only require top up. Water is also used for washing glass in plants but there the need is for very high purity, so water is treated and then reused. We seek to minimize our water consumption by working with suppliers to recycle water and to install advanced water treatment facilities. This not only reduces the consumption of water itself but also the chemicals used in the treatment of the water. Across the Group, water consumption can vary considerably according to process and product demands as well as water quality. Approximately 2m³ are required to manufacture one tonne of float glass and approximately 0.09 cubic meters are required to process each square meter of automotive product. We drew a total of 17.5 million cubic meters of water in 2018. Our Group risk assessment shows that our largest water consuming sites are located in countries that do not have water supply issues.

NSG Group water usage

■ Total water use



Handover of the award trophy to the team at Versailles

Amongst other good water saving projects, the water project at the Automotive downstream site Versailles, Kentucky won the internal Environmental Award 2018. The project recovers and re-uses water from numerous glass washing machines, resulting in significant savings of >200,000 m³ water per year.



Timber

In Europe, much of our glass is transported on steel stillages - in cycles with the customers - without packaging and utilizing specialist 'Floatliner' vehicles for the large raw glass plates. We use a significant quantity of wooden packaging in our operations and work with our suppliers to design reusable units. Due diligence is carried out to ensure it comes from legal and sustainable sources.

SUPPLIERS

We purchase materials, goods and services from more than 20,000 suppliers worldwide. In support of Group Environmental Social Governance (ESG) goals, we are focused on ensuring our supply base is sustainable. Through our policies and procedures, as well as using reports by partners such as Ecovadis, we are working to mitigate risk in our supply base. The following key areas are included within our drive for sustainability.

Our Supplier Code of Conduct

As part of our Sustainable Procurement Program, we operate a Supplier Code of Conduct. It outlines behaviors, processes and procedures — in short, the standards we expect from our suppliers. Our manufacturing processes use materials, products and services procured from a wide range of regional and global suppliers. Our suppliers are therefore crucial to the achievement of our sustainability objectives. To manufacture and supply superior quality glass products to our customers, we aim to build strong relationships with suppliers that are based on a framework of trust, cooperation and sustainability.

The wide range of issues addressed in the Code reflect the many and diverse activities in which our suppliers are involved. Wherever possible, the Code defines a fair and common sense approach to doing business, while incorporating all relevant legal requirements.

The content of the Code also takes into account our values and principles, particularly the emphasis on safety, taking personal ownership for our actions and communicating with openness and involvement. It is the responsibility of all our suppliers to follow the principles of this Code to ensure compliance with our requirements.

Insisting that our suppliers agree to adhere to our Code has influenced who we develop longer-term relationships with as part of our category strategies and who we do not. It has also prioritized which suppliers we need to develop and help to ensure full compliance.

The Code is updated periodically to accommodate changes in legislation. The most recent updates include money laundering, modern slavery, human trafficking and Conflict Minerals.

Modern Slavery and Trafficking - Due Diligence Processes for Suppliers

Our Supplier Code of Conduct specifically covers this area. It is communicated to all current and new suppliers and we have already obtained agreement to its provisions from the majority of our key contracted suppliers. We operate a supplier sustainability program, which has detailed questions on compliance with labor laws.

Our supplier audits include coverage of this area.

We have a hotline available to all NSG Group employees and third parties that can be used to report suspected violations of human rights. Reporters may be anonymous in most countries and all reporters are protected from retaliation in any form.

Conflict Minerals

NSG Group supports the goals and objectives of the Dodd-Frank Wall Street Reform and Consumer Protection Act's Section 1502, which aims to prevent the use of conflict minerals that directly or indirectly finance or benefit armed groups in The Democratic Republic of the Congo (DRC) or an adjoining country as defined in the Act.

Identifying suppliers who provide materials that could potentially include these minerals is now a very important part of our procedures and due diligence continues to be completed via an online questionnaire. During FY2019 we once again updated data from these suppliers.

Anti-Bribery Anti-Corruption (ABAC)

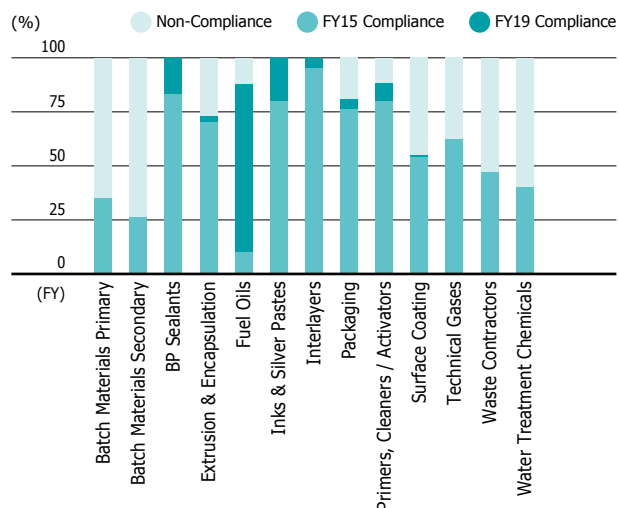
NSG Group and its subsidiaries do business with a range of persons and entities in the private sector including, but not limited to, agents, consultants, distributors, service providers, freight forwarders and customs clearance agents (collectively, "Third-Parties"). NSG Group sometimes engages Third-Parties to represent its interests or to interact on its behalf with Public Officials such as customs brokers, lawyers, lobbyists, standards committees, or other intermediary activities. Acting on behalf of NSG Group is not limited to those situations where the third party represents the Group as an attorney-in-fact. It also applies to those situations where they represent the Group's interests whether or not they are interacting with public officials or other entities in the private sector.

We continually review our suppliers in order to identify those considered to be a high ABAC risk. The NSG Group Ethics and Compliance function carries out due diligence that includes a questionnaire and screening process. The Third-Party may be screened against various lists including sanctions lists, watch lists, PEP (politically exposed persons' lists) and checked for exposure in adverse media.

Communication and co-operation

In line with our Sustainability Policy, we communicate and work constructively with our suppliers and governments, regulatory agencies, the scientific community and other relevant stakeholders to develop and encourage business and community practices that make progress towards the common aim of sustainable development.

Ranking supplier risk on the environment HEI Compliance FY2015-FY2019



In recent years we have implemented a program of identifying suppliers that have a potentially high impact on the environment (categorized as HEI). Our aim is to ensure that our suppliers minimize their potentially negative impacts and work positively on environmental initiatives. The scope covers 13 of our material categories, which we now categorize as being of 'High Environmental Impact', including wooden packaging, batch materials, waste-management contractors and chemicals. We expect that all suppliers in these categories have a recognized environmental certification such as ISO14001 or equivalent. In the case of wooden packaging, paper and cardboard, we look for a recognized chain of custody (e.g. FSC or PEFC) in regard to the raw material supply.

Energy Efficiency and CO₂ reduction

For more than seven years, NSG Group has been implementing a globally co-ordinated and supported energy-efficiency program across its operations. The program combines central resources from Research and Development, Procurement and Manufacturing Excellence function together with local teams in a cross-functional effort focused on reducing our energy consumption and costs across the entire Group.

Each major site in the Group has undergone a structured process involving several days at the site working on all aspects of its consumption of natural gas, oil, electricity, diesel, water and other utilities. No stone is left unturned in the search for opportunities to reduce consumption and cost. The initial workshops to identify the areas of opportunity are only the beginning. The projects identified at the workshop are scoped in detail and evaluated and prioritized for implementation. Some ideas are quick to put in place and require little or no investment. Other projects require much longer to implement, and in some cases they require many thousands or even millions of dollars to realize.

Working with suppliers to save energy

We continue to work with key suppliers to develop projects to reduce energy and water consumption in our manufacturing sites, utilizing their expertise in various technologies to develop solutions to specific energy management challenges.

Renewable electricity

We are working to ensure that the electricity we consume comes from more sustainable sources. Since 2017, we have been implementing renewable energy guarantee of origin (REGO) contracts across the majority of our European electricity consumption reducing our CO₂ emissions by almost 200,000 tonnes. In 2020, we will be seeking to extend this concept across Europe and into other regions.

In April 2019, we also turned on a major on-site solar installation at the Lathom site in the UK. The solar installation, which has been implemented in partnership with Lightsource-BP, has a maximum capacity of 2.3MW in electrical output to supply 30 percent of the site's overall electricity demand. The installation has utilized First Solar's series 4 modules which contain the glass produced by NSG Group. A number of other on-site and near-site solar installations are currently under evaluation across the Group's operations.

EMPLOYEES

Our management philosophy values the health and safety of our employees above all other considerations and we aim to ensure that we provide a working environment that allows our people to reach their full potential and meet our customers' expectations.

Safety, Quality, Customer Focus, Sustainability and Ethical Leadership underpin everything we do, with the principles of trust, mutual respect and open communication being central to our Employment Policies.

■ Focus on NSG Group

	Group
Permanent Male FTEs	22,482
Permanent Female FTEs (15%)	4,089
Total Permanent FTEs	26,571
Temporary Male FTEs	2,186
Temporary Female FTEs (23%)	643
Total Temporary FTEs	2,829
Total Male FTEs	24,668
Total Female FTEs	4,732
Total FTEs	29,400
Full-time Male employees	24,485
Full-time Female employees (16%)	4,606
Part-time Male employees	123
Part-time Female employees (2%)	115
Total	29,329
Male Managers	2,258
Female Managers (12%)	330
Total Managers	2,588

Data collected end December 2018

Ethics and Inclusion & Diversity

Our Code of Ethics reflects our Integrity, as articulated in our Core Values, and forms part of the newly-introduced "Our Vision". It defines what is expected of all our employees. It particularly emphasises safety, respecting human rights, taking personal ownership for actions and communicating with openness and involvement.

The overriding basis of the Code is that we will carry out our business activities in a safe, professional, legal and ethical manner, and in a way that demonstrates corporate social responsibility and sustainability.

The Code acknowledges internationally proclaimed human rights and these are also reflected in our overall employment policies and standards, providing our employees with reassurance on how they will be treated. Our Equal Opportunity and Diversity policy aims to prohibit discrimination based on race, color, creed, religion and beliefs, age, gender, sexual orientation, national origin, disability, union membership, political affiliation, or any other status protected by law.

Global Inclusion and Diversity (I&D) is a key issue for many companies, being widely recognized as enhancing both corporate value and the working lives of employees. NSG Group is firmly committed to further improve its own I&D,

embracing the internally and externally declared Statement of Intent and one of our Core Values, "Respect Others and Unleash their Potential".

At our Group Conference in November 2018, our senior executive leaders had their first I&D-focused session. They discussed and agreed on I&D commitments by SBUs and Functions. Each SBU and Function has now set their own actions following these initial commitments. NSG Group will be reviewing the progress of these actions quarterly throughout the coming year to ensure that we are making continuous progress on I&D with support from our Global I&D Steering Group.

To raise I&D awareness internally, I&D posters were distributed across the organization. An I&D Newsletter is issued regularly, and globally acknowledges International Women's Day every March. Unconscious Bias Training was provided initially to senior leaders in the firm belief that they can help make our corporate culture more diverse and inclusive by demonstrating their own inclusive leadership behaviors to their teams. This training will be rolled out to a wider management population during FY2020. Women's networks have been launched in North America and Japan, and the Group is now developing an Employee Resource Group Guideline to encourage grassroots I&D activities on a wider basis.

NSG Group Talent Management

During 2018, as part of our wider Talent Strategy supporting the Group's Vision and Values, we implemented the new Talent Management system, which involved transferring global employee records and data to our new software, along with providing comprehensive training for all our managers in the new people management and talent development processes.

During the Management Training, we revised our company approach to Performance Management discussions; from 2019 the discussions identify and place emphasis on the Impact and Value individuals are having in their role. These discussions include using our NSG Group Competency Model as a tool which helps Managers link the Impact and Value model to the required behaviors that drive performance. Integrating our Competency Model globally across our core people processes, and providing greater access and visibility for Managers of Talent Management practices, continues to support and drive culture change. During 2019, our goal is to create and share Talent Pools and Succession Plans that Managers have co-ownership of and access to throughout

Talent Management –Strategy



the year, continuing to deliver a more transparent, dynamic approach to Talent Management.

During 2018, we enhanced our Leadership development portfolio and partnered with the University of Lancaster to design and deliver our first Plant Management Leadership Program. Through this global program, we have developed 24 individuals who are either new to the role or have been nominated into succession plans that support the recruitment of people as Plant Managers.

NSG Group Competency Model



“ Leaders are those who are able to engage and motivate our employees (People) and through them achieve short-term performance (Results) and long-term success (Vision) ”

Employee Engagement

We continue to use our Employee Survey to measure sustainable engagement within the Group. In 2018, the survey covered three regions (Europe, Asia, North America), 11 countries and involved 8,557 employees and achieved a response rate of 85 percent (7,254 employees).

The survey was open for completion for three weeks. The survey generated more than 2,658 comments, which were viewed by local Country Managers and Supervisors and action plans were put in place.

We continue to refine our question bank and keep a focus on encouraging Managers to implement their agreed action plans.

Pulse Survey 2018



The 2018 Pulse Employee Survey was accessible to 8,557 employees in 11 countries across 3 regions and available in 10 languages.



The questionnaire consisted of 25 'core' questions and in some areas, tailored 'supplementary' questions



The survey was open to completion for 3 weeks between September 24 - October 12, 2018.



135 online results reports generated



The question 'What one thing would make NSG Group a better place to work' generated more than 2,500 comments

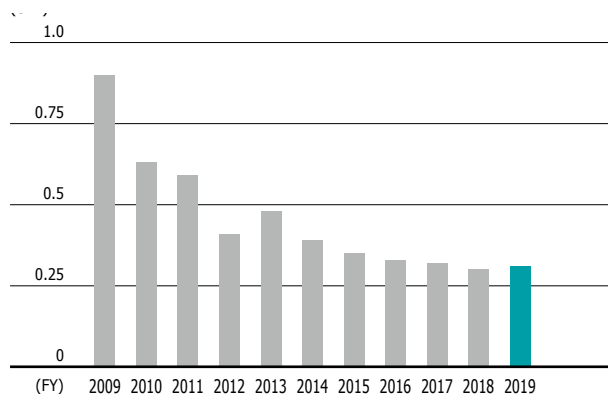


Overall response rate remains high at 85%, with 7,254 people taking part in the survey

HEALTH AND SAFETY

Our safety programs emphasize the importance of our vision and values, that people are our most important asset and the safety of our employees and the communities in which we operate is a core part of our ethical business philosophy.

■ Significant Injury Rate (SIR)



Percentage Significant Injuries	FY2015	FY2016	FY2017	FY2018	FY2019
Glass handling	30	30	38	45	29
Manual work	23	19	21	24	35
Slips/trips/falls	11	22	14	10	16
Engineering	14	0	0	0	0
Machinery	5	16	13	6	6
Blade	7	5	5	2	6
Fall from height	0	3	4	8	2
Others	10	5	5	5	6

Safety organization and strategy

The NSG Group Sustainability Director reports to the Chief Operating Officer.

Monthly safety updates are provided to the COO while more in-depth management reviews are completed every six months with the senior operations team comprising the heads of the four SBUs and the heads of the Group functions. These reviews were held by round table in March 2018, Lathom in September 2018 and round table in March 2019.

All injuries at work are regarded as avoidable. We require full reporting of all incidents, no matter how minor, and appropriate investigation to ensure we learn from all such events.

The Group has a focused site approach that provides additional support and more regular reviews for sites that have more than a defined number of significant injuries.

Safety performance

Safety improvement has been developed to focus on three main areas: leadership, specifically our first line leaders; managing our high risk activities and understanding the behaviors that lead to injuries. NSG Group drives proactive

safety through a measure called NABIS (NSG Anzen Bunka Improvement Strategy) this process has three main areas reflecting our focus points.

Leadership

Asking our leaders at all levels of the business to show visible and demonstrated leadership, through discussion and spending more time in our production areas talking to leaders and teams about improvements using systems such as GEMBA walks.

Ensuring all our leaders assess themselves against our 10 key leadership behaviors, asking them to lead by example and to review their teams against a set of principles, such as never walking past an unsafe act without talking to the individual.

Responsibility and accountability of the leaders are to ensure that people follow the procedures and safety rules for the tasks we ask them to complete. This area also looks at how we consistently review the ability of their colleagues to competently complete the tasks.

Improving the way in which we communicate safety through regular opportunities for two-way briefings and more formal safety meetings with employees and their representatives is an important way of providing clear information on both reactive and proactive safety initiatives. Leadership teams are required to ensure this communication process is effective.

Training our colleagues is a fundamental part of delivering our services to our customers. Ensuring our employees have the tools and ability to deliver our commitments in a safe and ethical manner requires a continual review and update on training needs and competences. Leaders are required through NABIS to ensure that, from a safety point of view, people have the correct knowledge to complete this task.

Asking people to become proactively involved in safety in our plants is part of the leader's responsibility and in NABIS we ask our leadership teams to look for opportunities to involve teams and individuals in safety projects, with the implementation of suggestion schemes and participation in Kaizen processes across many of our larger manufacturing plant being a part of this process.

The second part of NABIS is measuring Safety 4 Ways, which includes:

- Safety Improvement Plans (SIP) – reducing hazards and risks through planned improvements of conditions and behaviors that lead to incidents.
- Incidents of High Potential Severity (IHPS) – reviewing all incidents with a critical eye, asking what could have happened and could the incident have led to a serious injury or fatality; then taking preventative actions.

- Key Safety Behaviors (KSB) – focus on how our employees complete tasks, working to reduce at-risk behaviors through frequent feedback.
- Significant Incident Rate (SIR) – The Significant Injury Rate (SIR) is our primary reactive indicator.
The SIR records injuries requiring medical treatment or the reallocation of duties to allow an individual to continue working, expressed as a rate per 200,000 hours worked. The Significant Injury Rate for the year to March 31 2019 of 0.31 represents an 18 percent improvement in safety performance compared to FY2014 on a like-for-like basis. Finally, NABIS requires our leadership teams to manage our high-risk activities.
We are committed to our high-risk reduction program and the safety tools we have in place. We continue to focus on the following areas:
 - Working where there is a risk of falling
 - Vehicle and pedestrian safety
 - Machinery safety: guarding, frequent access and complete isolation
 - Contractor control, including permits
 - Materials handling: moving glass, load security, grabs, trolleys and pallets
 - Driving

Next steps for NABIS

Our commitment to NABIS for larger sites has been completed with the introduction to all major manufacturing plants around the globe.

The next step for NABIS is for everyone working in NSG Group to be involved in some way in NABIS. To achieve this, the Sustainability Group has developed two new tools for implementation in FY20/21.

NABIS for smaller sites: NABIS continues to utilize the headings of the main NABIS tool. However, in the case for NABIS for smaller sites it takes into account the different operational and management requirement of smaller businesses within the group.

NABIS for Offices: This NABIS is for the functional and operational parts of our organization that do not have a standard manufacturing format and focuses on the risks identified by these functional groups and asks leaders to involve their teams in performance improvement relevant to their activities.

The combination of the three NABIS areas will eventually have all the employees of NSG Group involved in a NABIS activity.

After finding out that “manual work” was involved in 66 percent of the significant injuries, a program to address this issue was started in FY2020.

The Group is currently reviewing opportunities to improve the following areas to address the amount of manual work significant injuries it has by:

- Reviewing root causes and action identification from plant reactive measures such as incident and accident reporting.
- Completing an update of the Group’s PPE specifications for each SBU to further improve current standards, this will include more benchmarking between regional SBUs on suppliers and specifications.
- Leadership teams will need to look at training and the Group will review training techniques and support material specifically related to manual work.
- Development of new tools and applications (apps) to assist first-line leaders in training and observing manual work behaviors.

Moving safety to the next level

The safety strategy remains the same, with a focus on improving the effectiveness of our safety tools and programs. We believe that our employees and leaders will make the difference in moving safety to the next level through the following initiatives:

- Independent audits of our safety tools to drive a more consistent approach, develop our safety skills and improve our shared learning. These audits were across regions and across sites within a region for maximum impact.
- Further improve our level of proactive employee involvement as a means of continuing to change our safety culture.
- Further develop our first-line supervisors to improve our overall level of safety leadership.

NSG Group Annual Safety Day

The NSG Group Annual Safety Day took place on October 11, 2018 and continued to be a successful global event. All sites organized health-related activities and employees were given the opportunity to improve their first aid, firefighting and emergency response skills.

Senior managers attended sites to demonstrate their personal commitment and the opportunity was taken to celebrate safety success.

The focus in 2019 will be on mental health and well-being.

In addition to the conventional safety activities, we are now asking the plants to consider the mental health and wellbeing of the employees.

COMMUNITIES

We aim to be a good neighbor, wherever we operate. We have around 27,000 permanent employees, with principal operations in approximately 30 countries throughout Europe, Japan, North and South America, China and South and South East Asia.

The local communities throughout the world in which NSG Group operates are the foundation of our business and the lives of employees. Without a relationship of mutual benefit with these communities, the Group as a whole could not sustain its operation.

The effects of necessary investments on our communities are generally beneficial, bringing additional employment and economic benefits. For every investment we make, an impact assessment is conducted to ensure we understand and manage the likely effects on the community, the environment and the local economy.

As a responsible and often prominent member of the communities in which we operate, we believe it is important to be involved actively by leveraging our core business and management resources to help to address local issues.

Aims and objectives

We want our operations to function in healthy, thriving communities and to be seen as a good neighbor to those communities.

We know that if we want to operate effectively and to be able to expand or change when the time is right, we need the goodwill that comes from being an active supporter of the community.

In addition to our business investments helping to sustain local operations, we also invest in the communities in which we operate.

We aim to help – through direct cash donations to charities and other projects or through in-kind resources – to improve the health of the community or tackle specific social issues. We operate programs that assess and manage the impacts of our operations on communities, including entering, operating and exiting.

We also involve our staff in providing a lead in developing our relationships with the communities in which we operate. This can take the form of matching contributions raised by staff or allowing staff time to make personal contributions of time and effort in local projects.

Glass run in Poland

During the 1st Glass Run, which took place on September 16, 2018, the attendance was pretty high. The event was attended by 130 participants from Poland and other countries. Participants raced the 25-kilometer route between our two automotive plants: Pilkington Automotive Poland - in Chmielów and in Sandomierz. The entry fee was donated to the local orphanage in Skopanie. The residents of the Children's Home helped during the event as volunteers. The event turned out to be a great success, and the next run is planned for September, 2019.



1,000 Trees for 100th Anniversary of NSG Group

In recognition of the 100th anniversary of NSG Group, an initiative was launched to plant commemorative trees across the Group operations. In the UK, this included working with local schoolchildren to present the activities of NSG Group to reduce CO₂ impact and then plant over 200 trees across the NSG Technical Centre site.



School improvements in Argentina

Every year since 2001, we hold a Community Day when we work with the families of our community. On this occasion, we collaborated with the kindergarten N°909, where around 200 people (adults and children) performed gardening tasks, painting walls, fences and blackboards. We also involved our permanent contractors, who provided electrical installations, masonry work and other jobs. Such activities allow us to strengthen links between our employees' families, work colleagues and members of the communities. Over the years we have collaborated with many schools and the very positive outcomes continually encourage and motivate.



Support for research on inorganic materials in Japan

Nippon Sheet Glass Foundation for Materials Science and Engineering (NSG Group Foundation) was established by Nippon Sheet Glass Co., Ltd. in 1979 to commemorate the 60th anniversary of NSG Group. The NSG Group Foundation offers grants for research on inorganic materials used in various industries including IT and communication, biotechnology, energy, and environmental protection. Since its foundation, it has received 5,238 applications and disbursed a total of ¥1,664 million to 1,287 selected applicants. The NSG Group Foundation also offers grants for research themes on inorganic materials, carried out in overseas universities and institutes. Since 1992, it has received 547 applications and has disbursed a total of 912 thousand dollars to 144 selected applicants.

