

Integrated Report 2023

Fiscal Year Ended 31 March 2023

Nippon Sheet Glass Company, Limited



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Editorial Policy

NSG Group started to publish "Integrated Report" since 2018. "Integrated Report 2023" is aimed at describing to our stakeholders how our stated mission of "Changing our surroundings, improving our world" would enable sustainable growth through the strengths of our unique technology and products that address social challenges. Also, for editing the Integrated Report 2023, particular emphasis on the viewpoint of how we address and contribute to climate change and Human Capital Management.

Detailed financial and non-financial data can be found in the Annual Consolidated Financial Statements and on our website.

Information Disclosure Structure



Scope of Report

Period Covered: April 1 2022 to March 31 2023
 *Some content may include activities after April 1 2023
 Organizations Covered: Nippon Sheet Glass Company, Limited and its consolidated subsidiaries
 Financial Standards: Financial statements and financial data included in this data after 2011/03 were prepared in accordance with International Financial Reporting Standards.

Forward-looking Statements

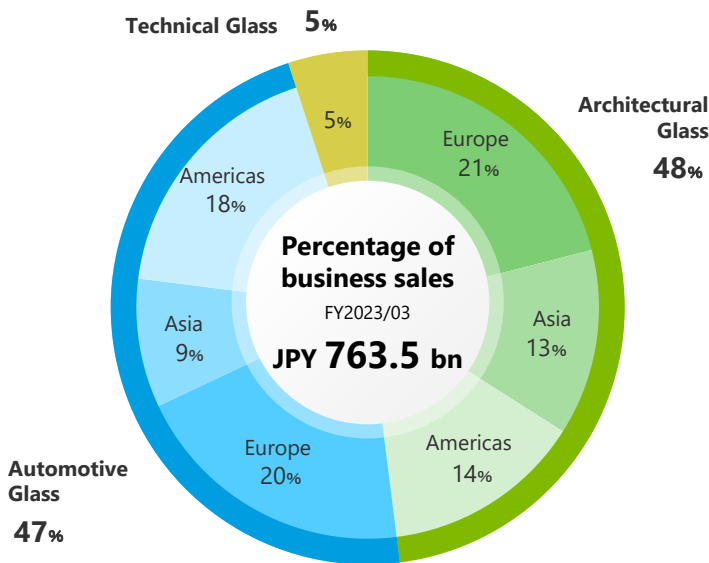
The projections contained in this document are based on information currently available to us and certain assumptions that we consider to be reasonable. Hence the actual results may differ. The major factors that may affect the results are the economic and competitive environment in major markets, product supply and demand shifts, currency exchange and interest rate fluctuations, changes in supply of raw materials and fuel and changes and laws and regulations, but not limited.

NSG Group overview

Three Global Businesses : Architectural, Automotive, and Technical Glass.

The NSG Group is one of the world's largest manufacturer of glass and have principal operations around the world and sales in over 100 countries.

The NSG Group is striving to realize a sustainable society by offering new values and services with glass swiftly and appropriately to meet the growing needs of our customers and society.



Architectural

Leading supplier for architectural glazing and thin film solar panels

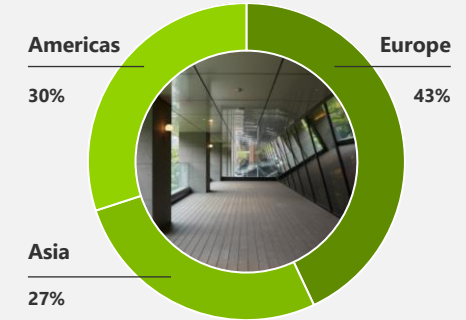
Products

1. Building glass & glazing
2. Glass for solar panels

Features

- 27 float lines operated globally
- Top market share in online coating

Sales percentage by region



Automotive

Key supplier globally in new vehicle (OE) and automotive aftermarket (AGR)

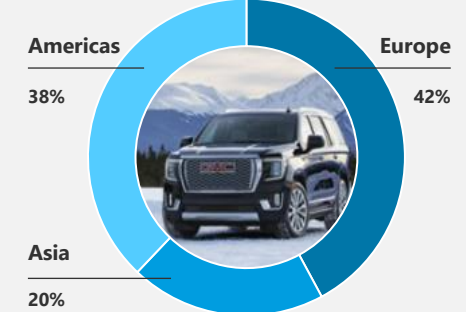
Products

1. Glazing for new vehicles
2. Glazing for replacement markets

Features

- Key operations in 14 countries
- Supplying glass to world's leading vehicle manufactures
- The largest global service provider for aftermarket

Sales percentage by region



Courtesy of General Motors

Technical Glass

Unique 'Number One' and 'Only One' niche products

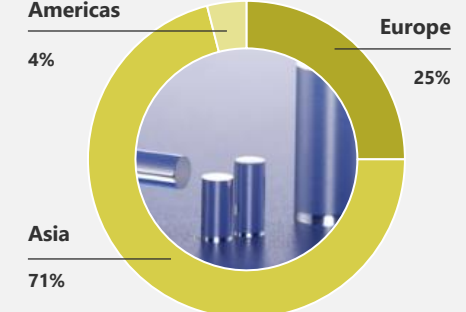
Products

1. Thin glass for display etc.
2. Lenses for printers, telecommunication devices and medical endoscopes
3. Glass cord for car engine timing belt, etc.
4. Glass flakes

Features

- Key operations in Asia and Europe
- Leader in printer lens

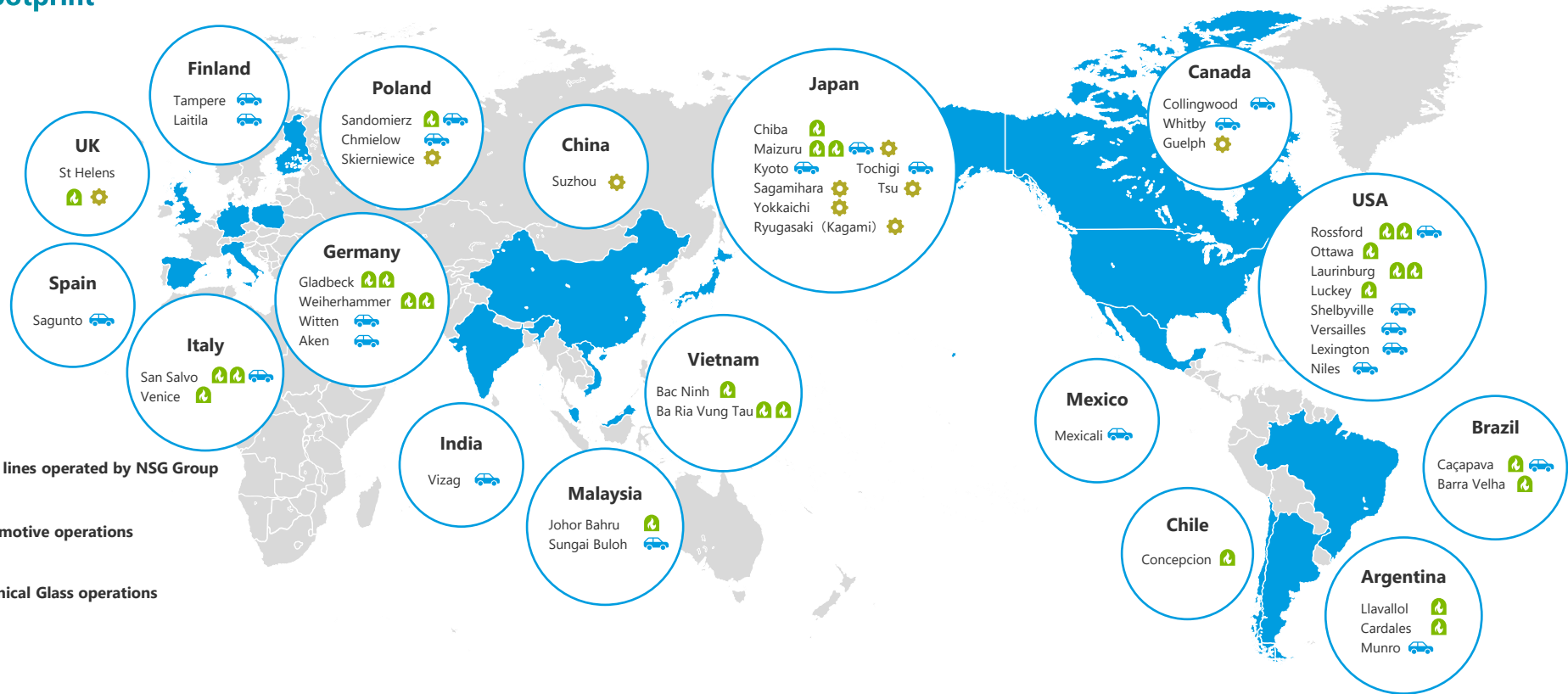
Sales percentage by region



NSG Group overview

Global footprint

(2023 July)



- Float lines operated by NSG Group**
27
- Automotive operations**
23
- Technical Glass operations**
9

NSG Group in numbers

<p>Sales</p> <p>JPY763.5 bn</p> <p>(FY2023/3)</p>	<p>Operating Profit</p> <p>JPY34.8 bn</p> <p>(FY2023/3)</p>	<p>Net Asset</p> <p>JPY951.4 bn</p> <p>(FY2023/3)</p>	<p>Employees</p> <p>25,000</p> <p>(2023 March)</p>	<p>Float lines</p> <p>27</p> <p>(2023 March)</p>	<p>Foundation</p> <p>1918</p>	<p>Sales in over</p> <p>100 countries</p>
<p>Female managers ratioActual results</p> <p>12.7% → 14.4%</p> <p>(June 2021) (December 2022)</p>	<p>Research grants</p> <p>1,444 PJs</p> <p>(Cum above JPY 1.8bn : 2023 March Cumulative)</p>	<p>Online-coating glass share</p> <p>No.1</p> <p>(8 float lines)</p>	<p>Lenses for multi function share</p> <p>No.1</p>			

NSG Group's Structure of Strategy



CEO Message

"FY2024/3 is not only the last year of RP24, but also the year when we develop the new mid-term management plan to start from FY2025/3. It is a challenging year to create our future."



President and Chief Executive Officer

Munehiro Hosonuma

After appointment as CEO in April 2023

You have been appointed to CEO from April 2023.

What brought you to join the NSG Group in 2018 which is five years before that?

It is because NSG Group is a Japanese manufacturer, and I perceived a strong aspiration for change. I myself had worked for foreign companies, and would like to contribute to a Japanese company, especially to a manufacturer which I love, if possible. The offer for the position as a right-hand person and an executive officer to me who was still in the middle of forties surprised me that there was a Japanese company which seriously tried to change something. After some meetings with the management at that time, I understood a seriousness for change and decided to join. Some wonder why I chose NSG Group whose results were unfavourable then, but its results were not so important to me. What was important was strong aspiration such as "to improve the company" or "to change the company", so I never had second thought about it.

What did you think when the appointment of CEO was offered?

I thought that the time has come at last. Some trainings and assessments were carried out under the succession plan for CEO already which works well in NSG Group, so I was prepared with a thought that it may be offered some day. I started working at the Group in 2018, was appointed to the head of Architectural business unusually only after three years after that, and after one year and three months from then, I became a director, representative executive officer, vice president and COO. So I wasn't surprised with the offer for the appointment to CEO, and never wondered with holding my answer once nor discussed with my family, as often described in articles about interviews for new CEOs. I was actually already prepared in my mind and thought the time to be CEO has come at last.

What do you think is expected from the Board of Directors?

I think it is expected first to improve profits, especially operating profit, to increase cash inflows with its improvements, and enhance the financial stability through them. I have attended the Board of Directors since I was COO, so I am fully conscious of the expectations from the company and believe that I can reflect them to my management smoothly.

CEO Message

What kind of CEO do you want to be? Do you have an ideal image?

How do you want to show your uniqueness for it?

Your age was focused especially when you were appointed to CEO.

I would like to be a cheerful and positive CEO. It is important that all stakeholders including employees think that "we can manage it" anyway. My beliefs and motivations are "to be forward-looking" and "to gain trust, be given honest opinion and respond to them continuously". I actually experienced in the former job that only a change of atmosphere of an organization could lead to its completely different results. I believe that to work with positive mind will enhance an engagement to the company, and lead to better ideas or innovations.

I don't aim at expressing my uniqueness itself, although I did it as a result since I joined the Group and have been appointed to CEO with my career which is different from the others around me. Regarding my age, I don't think I am young. Younger CEOs are commonly appointed in global companies which are the competitors or customers to the Group. What I think important for CEO are not uniqueness nor youth but beliefs and steady management.

What do you grasp strong and weak points of the Group? And what type of the company do you want it to be considering these points?

There are two strong points in the Group. The first point is human resources. The Group has many honest, sincere and hard-working people and a culture of respectful acceptance of others. I have been accepted from my start and felt it comfortable to work. The other one is the DNA with which the Group has developed new technologies and new products. The Group invented or developed the technologies which were historically the first in the world such as the float process^{*1} which is necessary for float glass production, on-line coating^{*2} technology, APBL^{*3}, SELFOC® Lens Array in Technical glass business. Recently, the Group succeeded in the trials for float glass production powered by hydrogen or biofuel for the first time in the world. Although the Group once had some difficulties in technology development when its results weren't favourable, I would like to arouse the DNA again to create new technologies and new products with a challenge spirit. What I would like to improve are very few now, but one is the viewpoint of the structure if the old Nippon Sheet Glass or Pilkington. Origin is irrelevant when we work for the Group. That is why I have issued the message of "For the Group" and "One

team" frequently in the Group when I was COO before the appointment to CEO. These messages include the meaning of cooperation for the same goal with breaking down departmental and regional barriers. I would like the Group to create new technologies and new products continuously as we are manufacturer. The Group has the culture and the human resources, and DNA for it. It is never so fun and wonderful as everyone cooperates, produces new products, and contributes to the customers and the society. It is CEO's duty to proceed the initiatives to realize such value creations.

Which areas do you find potentiality or want to grow in each business?

In Architectural glass business, I find large potentiality in solar energy glass which uses the on-line coating of the Group and would like to grow it. Solar batteries in the next generation such as Perovskite and BIPV^{*4} where our technologies can be applied will be the most important area in the future development, while competition for their development is increasing globally. More refurbishment movements have been seen in many countries in the sustainability, especially the decarbonization trend, so robust demand for general Architectural glass is expected.

In Automotive glass business, the number of vehicles with ADAS (Advanced Driving Assistance System) or HUD (Head Up Display) system has been increasing, so demand for glass products has been increasing with high precision that support these accordingly. The Group has APBL process for windshields and have been expanding the value-added products with this technology. Demand for lighter weight or infra reflective for electrical vehicles has been also increasing, so I would like to enrich these product line up.

Technical glass business is smaller than Architectural glass or Automotive glass businesses, but it comprises highly profitable products. It has many ones which is niche but with high technology and I am so excited when new products are launched to the markets one after another. For example, the Group is aiming at the replacement of carbon fiber with MAGNAVI™, high performance fiber with high modulus and specific strength, and looking forward to the future expansion of low dielectric flake glass whose dielectric constant and loss tangent are significantly reduced compared to conventional products.

*1 Float process : production method of large glass developed by Pilkington. Molten glass is poured continuously from a furnace onto a shallow bath of molten tin.

*2 On-line coating : coating method of thin, uniform metallic oxide film deposited over glass while being hot and formed inside the float bath

*3 APBL : Advanced Press Bending for Laminated Glass

*4 BIPV : Building Integrated Photovoltaics

CEO Message

What do you think is expected from each stakeholder?

(1) When I attended the ordinary general shareholders' meeting for the first time as CEO in last June, I realized that the expectations for resumption of dividend have been increasing as the Group's results have been improving. However, more accumulations of profit and cash are necessary for it, so some more time is still needed. Especially for individual shareholders, the share price isn't still in the enough level, although it has been increasing recently, since many of them have the shares for a long time. So, the Group would like to meet the expectation with the share price increase reflecting the results improvement first from medium to long term viewpoint. I have also had some communications with analysts and investors in the disclosure meetings and individual IR meetings of Q2 and full-year results. Especially in FY2023/3, significantly improved operating profit despite the business environment with headwind such as energy and material prices hike and vehicle production constraints due to lack of components like semi-conductors were appreciated very much, while expectations for the business growth, financial improvement, repayment of loans, redemption of the class A shares, and resumption of dividend have been increasing.

(2) What are expected from the employees are not only financial improvement. I am aware of the expectation to make the Group to be bright and forward-looking since the Group experienced some large redundancies in the past. To meet this expectation, I have been trying to have frank communications by visiting each site and have some townhall meetings after the appointment to CEO.

(3) For the customers, it is the most important to supply "Safe and high-quality products and services" as defined in the materiality of the Group. Especially in the last fiscal year, the Group was very conscious of the firm supply chain since the Group's production and sales plan were heavily affected by the restriction of vehicle production at the car manufacturers or the procurement risk of natural gas got higher temporarily after the Russian invasion to Ukraine, for example. The Group will fully meet the expectations from the customers for the development and supply of high-performance and value-added products in the three areas of contribution such as "Safety and Comfort", "Eco society", and "ICT (Information and Communication Technology)" under the Group's Medium Term Vision as "A global glass supplier contributing to the world with high value-added glass products and services". Moreover, contribution to the customers in the sustainability area is also important. The Group will promote the appropriate management of the supply chain, legal compliance, and the

contribution to reduction of CO₂ emissions (Scope 3) at the customers with reduction of CO₂ emissions in the whole supply chain of the Group.

(4) On the other hand, the suppliers expect the Group to play a role of the leader in its supply chain. The Group established the Sustainable Supply Chain Charter by developing the existing Supplier Code of Conduct to promote building firmer sustainable supply chain.

(5) As explained above, "Eco society" is defined as one of the three areas of contribution under the Group's Medium Term Vision. That is why the Group considers society widely as a stakeholder. Sustainability, especially decarbonization is one of the most important issues to be addressed. The Group aim at achieving carbon neutrality by 2050, and in the process, 30% reduction of CO₂ emission by 2030 which is committed to SBT (Science Based Target). The Group has prepared the roadmaps by site and for research and development to address them as the common target across the whole Group.



CEO Message

Toward the final year of RP24

In such situations above, FY2024/3 is the final year of RP24. Why did you mention "Corporate Culture Reform" (four "F"s (Flat organization, Frank Communication, Fast decision making, and Fun at workplace) in both of internal and external message especially from the three reforms? Is it related to human capital management?



This is because I recognize that the progress of "Corporate Culture Reform" is behind the other reforms. In the root of my thought is that one must change one's behavior and set a good example when one wants to another to change. In 2022, the Group established the "Leadership behavior Charter" which consists of ten behaviors to be shown by the senior leaders. It is important that it isn't an abstract theory to change culture but embodied as the concrete behaviors with expression of "I will ...". And it is also important that this charter does not request the employees to do but declares that the management including me will behave in accordance with it to show good examples.

The four "F" is the key words where the goals which I am aiming are condensed understandably. Recently I have been realizing that the goals have been known in the organization as more employees use the words of the four "F" in communications like e-mails. I think that my motto of the four "F" is a base and a minimum requirement of the initiatives for "Human Capital Management". That is why it is so simple. It is necessary to develop and carry out the initiatives for "Human Capital Management". The focused area of the initiatives of human resources in FY2023/3 were set as "Talent Management", "Employee Engagement", and "Create Corporate Culture" with consideration of the results of the employee survey conducted in January 2022, and they have been developed in six pillars which were developed in FY2024/3 as the issues in line with the management theme. Concretely speaking, they are "Strengthen the senior management layer as One Team", "Conduct open, transparent and interactive organizational management", "Provide development opportunities including re-skilling", "Promote Diversity, Equity & Inclusion (DEI) as a "source of new ideas"", "Foster a sense of community that strengthens the bonds to the Group", and "Keep improving our evaluation/compensation scheme for better retention, development, and recruitment". As the new CHRO has been appointed, the Group will discuss further and decide the concrete indications and action.

CEO Message



What do you think the Group need to do for “Cost structure reform” and “Business structure reform”?

In “Cost structure reform”, the Group needs to address DX (Digital Transformation) more intensively. The Group has fully carried out redundancies and Kaizen activities at workplaces, but I think that their effects are limited. From now on, it is very important to make the organization lean and agile with standardization of the data and the processes. It is an issue to be addressed steadily not in the short term but in the medium term. DX has already been introduced in many examples such as temperature management in the float bathes by AI (Artificial Intelligence) and yield rate improvement by utilizing big data in manufacturing, and will be introduced to indirect field hereafter. A steering committee which is specialized for DX has started under the new CSO (Chief Strategy Officer).

In “Business structure reform”, the Group will grow up the area which are mentioned above with expectations in Architectural, Automotive, and Technical glass businesses. On the other hand, the Group will promote the efficiency of the organization by consolidation or closure of the sites in Architectural and Automotive glass businesses in Europe, consolidation of the sales sites in Architectural glass business in Japan. Conversion of a float furnace for solar energy glass is one of the examples of the business structure reform. It will be able to turn the float furnace which has been losing its competitiveness to the one for value-added manufacturing site.

Next question is about the two key initiatives of “Restoration of financial stability” and “Transformation into more profitable business portfolio”. What is necessary to achieve the targets of operating profit margin (8%) and net profit (JPY 30 billion cumulatively for three years)?

When we look at the operating profit margin in FY2023/3 for example, they are approximately 10% in Architectural, 1% in Automotive, and 20% in Technical glass businesses, so the Group needs to improve Automotive glass business more while continuing cost saving efforts by “Cost structure reform” and business growth by “Business structure reform” at the same time. Profitability improvement of Automotive glass business in Europe is especially essential, where capacity optimization, prices pass-through reflecting the hiked energy and material costs, and expansion of the value-added products including windscreens with ADAS and HUD

system are keys. By these means, the Group will get closer to the targets of operating profit margin (8%) and net profit (JPY 30 billion cumulatively for three years) and repay loans which lead to reduction of the financial cost.

It is difficult to speak concretely about “Transformation into more profitable business portfolio”, but the Group aims at building a base for sustainable growth by considering every possibility Reduce space or withdraw from strategically non-core businesses, and business profitability improvement and management costs reduction.

CEO Message

Regarding the next medium term management plan

The next medium term management plan will start from FY2025/3. What kind of future image do you have in your mind for the Group?

I can't explain in detail since we are developing it, but I can say it is sure that "the Group will go forward with believing values of glass". I think it is the basis and would like to put emphasis on that all the employees believe the power of glass as a material, although I understand that another strategy to have a portfolio other than glass may be effective.

The plan will include not only sustainable financial growth such as improvement of profit and cash flows, redemption of the class A shares, resumption of dividend, but also non-financial initiatives, based on the expectation from the stakeholders which are mentioned above. The Group has a lot of things to do for the contribution to sustainable society such as environmental protection, supply chain, employee engagement. On top of these, the Group is conscious of ROE and PBR from the viewpoint of capital cost and share price.

The four key words for our future strategy will have a letter "D", which are Decarbonization,

Digital, Business Development, and Diversity. Decarbonization and Digital are crucial not only for our business growth but also for our operations. We should face the reality that we are reaching the plateau in VA (Value-added) activity as product mix and profit improvement with existing products, especially in many mature markets. To capture the market trend of Decarbonization and Digital, we should develop new technologies, new products, and new businesses. As I said that I would like the Group to develop new technologies and new products continuously, I would like to commit it by myself and send a message to the employees at the same time by declaring internally and externally development as one of the important management themes. Diversity is a strong source of new ideas, which are crucial to develop new things. It is one of the core parts of our strategy. That's the reason why I have included Diversity as one of the four "D"s.



You have defined this FY2024/3 not only as the final year of RP24 but also the year to develop our future since the Group is developing the new medium term management plan.

What do you want to do for the future?

Even though the new plan will be for "medium term", we should look at "long term" and identify necessary actions in a "back casting" way. We already do this for the 2030 Scienced Based Targets associated with the carbon reduction roadmap across SBUs and regions. We should roll out similar way of thinking, combining a long term goal and required actions for now, across the Group. It is so critical to create the steady axis for the future in this year.

October, 2023

President and Chief Executive Officer

Munehiro Hosonuma

NSG Group's Business and Strength

Architectural glass business

Leading supplier for architectural glazing and thin film solar panels

Market Conditions

Continuous favourable supply-demand situation is expected while impact of energy price volatility and potential recession concern are predicted mainly in Europe and the USA. Commodity glass will continue to be affected by market conditions, however high value-added glass will expand against the backdrop of tougher environment regulations and increasing awareness of health. Also at the same time, demand for solar energy glass will remain solid with increasing shift to renewable energy. Adding to that, demand for value-added glass for industrial application will grow.

architectural glass



solar energy glass



value-added glass for industrial applications

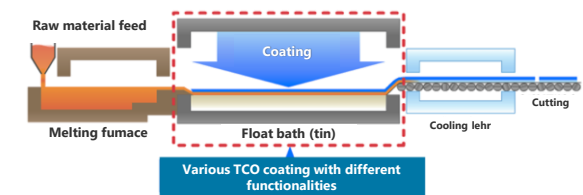


Business Direction

The Group aims to accelerate the shift from commodity glass to value-added products and secure returns on the strategic investments decided and executed. For the areas of strength, we are going to focus on adding value to our products such as unique online coating and sol-gel coating technologies and continue to develop new markets through finding and collaboration with third parties. To secure returns on the strategic investments, backed by the increasing shift to renewable energy, we started a new float in Vietnam and established a new plant for solar panel glass production in Ohio, USA in 2020, both facilities are contributing to both sales and the environment. Also in Malaysia, the construction of installing a new online coating facility to produce glass for solar energy is in progress. It is planned to start operation in the second half of FY2024/3 and is expected to contribute to the spread of renewable energy as well as sales expansion. Adding to that, in South America where the market position is solid, the second float furnace in Argentina started production in 2022 and has already contributed to sales increase. Other than developing new products and improving business performance, the company also emphasizes non-financial areas. The company will also accelerate actions on decarbonisation following the world's first successful experiments in hydrogen and biofuel-based Architectural glass production in 2022, to provide a more concrete path towards achieving carbon neutrality in the future at an early stage.

NSG Strength~ Online coating (CVD) technology

Over the years coatings have been a key for improved energy efficiency of buildings through more effective thermal management than that of traditional glass while maintaining high visibility and transparency. Whether Low Emissivity coatings to reduce heat loss from buildings in cold climates or Solar control coatings which reduce need for air conditioning – these films play a key role in enhancing comfort inside, as well as the overall energy efficiency of the building. One of our unique technologies for coating glass surfaces is online CVD (chemical vapour deposition). This is a technology that incorporates online coating into the float glass manufacturing process and uses a chemical reaction that utilizes the thermal energy of the glass to deposit a strong film on the glass surface and the Group have total 8 floats (4 in the US, 1 in UK, 1 in Germany and 2 in Vietnam) with on-line CVD coater around the world. It is energy-saving and mass-producible as it is produced during the glass manufacturing process, and the film is also highly durable and can be subjected to secondary processing. These technologies are used to produce a range of products such as glass with transparent conductive coatings (NSG TEC™), antibacterial glass (SaniTise™, VirusClean™) and highly reflective glass (MirroView™). NSG TEC™ are supplied to thin-film solar cell manufacturers, contributing to the expansion of renewable energy.



NSG Group's Business and Strength

Topics

San Marco, Italy

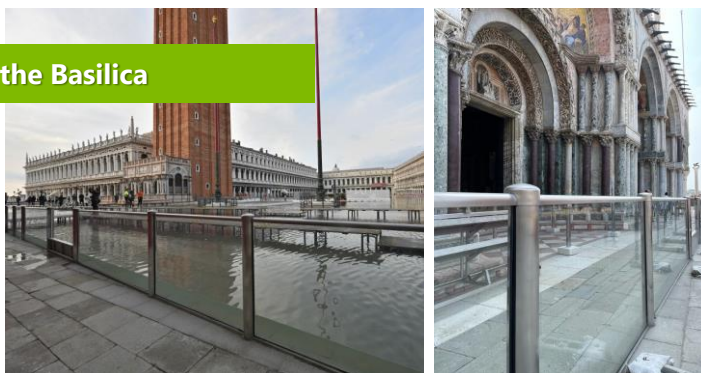
Our Glass protects the Basilica

Contributing area

Safety & Comfort

Eco society

ICT



An extraordinary engineering system comprising extra clear glass and steel is now in operation to protect Italy's Basilica of San Marco in Venice from high tides.

To keep the cathedral safe from damage, an architectural solution, using Pilkington Optiwhite™ extra-clear glass, has been installed to provide enhanced protection to one that already exists – the MOSE, a system of mobile barriers designed to reduce the entry of the tides from the harbour inlets. Currently, it is of just partial use since it is activated only when the rise of tide exceeds 110 cm. A grander overall, long-term solution is under construction – that of providing a more efficient seal from rising groundwater and sewage as well as raising the entire St. Mark's Pier Insula (built area) to facilitate better rainwater run-off.

In the meantime, the steel and Pilkington Glass watertight barrier, will not only help protect the structure from erosion, but thanks to the choice of material, also provides unobstructed views over the square and Cathedral.

Solina, Poland

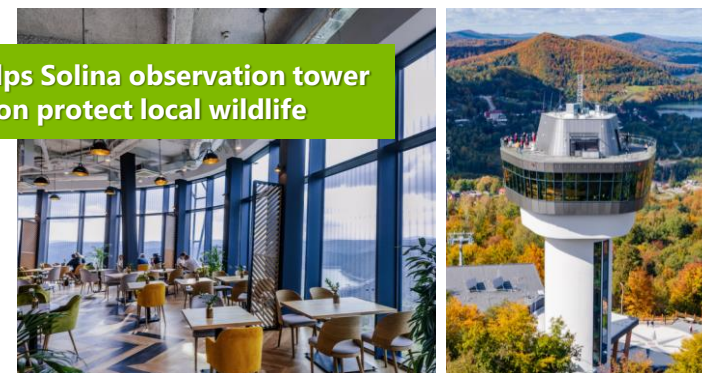
Bird-safe glass helps Solina observation tower and gondola station protect local wildlife

Contributing area

Safety & Comfort

Eco society

ICT



Pilkington AviSafe™ is an innovative glass designed to protect birds. The glazing is used in gondolas and observatories located in the buffer zone of a national park on Solina, Poland.

Birds do not identify reflected images of natural surroundings on the glass surface and actual landscape which may lead to collisions with windows. The Solina gondola station and observation tower are surrounded by forests making bird collisions due to reflections of the trees a particular risk. Ultimately Pilkington AviSafe™ disrupts these reflections on the glass with its unique patterned UV-enhanced coating, helping birds to see a clear barrier.

The coating is designed on the principle that birds see in a different light range than people, making Pilkington AviSafe™ glass more visible to birds while remaining aesthetically appealing on the exterior surface. From the inside, however, it's barely visible to the human eye.



Vitalino, Alderlan

Architectural Glass Business Global VA Director

Pilkington Optiwhite™ extra-clear glass was the perfect choice for this prestigious project that not only demanded the highest quality of protection, but also superior elegance. Its low-iron content allows to see the true colour of the marble to be appreciated through the thickness of the glass barrier, which is laminated with a rigid interlayer. This product is often used for high windows and display cases for these superior features.



Chłopek, Ryszard

Architectural Glass Business Value Added Products Sales Manager

When the time I received the first enquiries about the project in Solina, I immediately knew Pilkington AviSafe™ was the product to suggest. Making buildings truly sustainable goes beyond emissions and energy efficiency. Architects and specifiers increasingly need to consider how their projects impact local wildlife too. Pilkington AviSafe™ has clear value amidst nature reserves, forests and mountains in Solina. But many of the world's major cities are located on bird migratory paths, where tall, glazed buildings can increase the chance of collisions.

NSG Group's Business and Strength

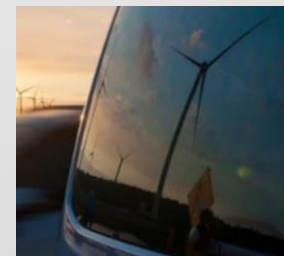
Automotive Glass business

Key supplier globally in new vehicle (OE) and automotive aftermarket (AGR)

Market Conditions

while consumer vehicle demand remains strong, shortages of components including semiconductors affect constraints vehicle build at car manufacturer. Also, the business is affected by rising raw materials and energy costs. Vehicle production volumes in the Group's main markets are not expected to recover to the pre-pandemic levels during RP24. Rapid development of CASE* will cause significant changes to the auto industry supply chain which leads to increase demands for windshields with HUD, glass antenna for 5G and solar control coating on glass for EV, so the resource allocation will have to be more selective and focused. CASE will also increase its importance in the AGR business. * CASE: Connected, Autonomous, Shared Electric

for new vehicles (OE)



for replacement markets (AGR)



Business Direction

The Group focuses on three pillars of "cost saving", "price improvement" and "expansion of value-added products" in OE business. The Group promotes drastic cost structural reform including consolidation of manufacturing and logistics sites, optimizing of capacity utilization with improved productivity and flexible manufacturing and minimization of logistics cost through re-examination, price pass-through in response to input cost rises, and expands sales of value-added products by leveraging the Group's proprietary technologies in response to the development of CASE. The Group strengthens the sales and distribution network in the AGR business.

NSG Strength

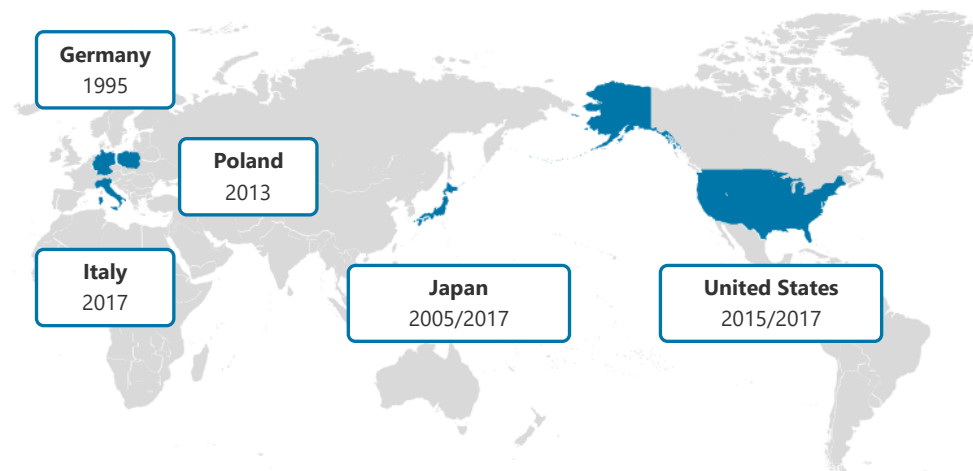
Since 1995, the Group began installing APBL*1 equipment and were among the first to establish a global production system. Laminated glazing is used for windshields to prevent from shattering for the safety of the drivers and passengers. There is a growing need for high-precision windshields for ADAS*2 and HUD*3, and APBL manufactures them to function ADAS and accurately project HUD images.

*1 APBL: Advanced Press Bending for Laminated Glass

*2 ADAS : Advanced Driver Assistance System

*3 HUD: Head Up Display

Installation of APBL



Windshields with ADAS and HUD

High-precision windshields processing technology is required to ensure that ADAS functions accurately, preventing accidents and projecting speed and navigation.



NSG Group's Business and Strength

Topics

Mercedes luxury model

Heated Coated and Augmented Reality Head up Display Windscreen

Contributing area

Safety & Comfort

Eco society

ICT



NSG Group's glazings are selected for the new Mercedes-Benz S-class which is the flagship vehicle for the company and its luxury electric car, EQS.

The windscreens are made of laminated glass and are shaped using our unique "Advanced Press Bending for Laminated Glass" technology. The precision of the shaping technology perfectly compliments the Augmented Reality Head Up Display and this provides a world leading driver assistance system. Also, a high performance solar reflecting coating is applied to the windshield windscreen which reflects the sun's heat and is heated without the need for the traditional wire heating filaments. The coating provides occupant comfort and vehicle energy efficiency in all seasons.

NSG's continuous investment in advanced glass technologies have positioned the group to respond to expanding customer needs generated by the electrification of their model line-up and the rapidly advancing technology for driving assistance systems.



Christine Pilon

Automotive Glass Business Global Product Manager Windscreens

This product provides additional benefits in terms of sustainability by reducing the amount of CO₂ output for internal combustion vehicles and increasing the range for electric vehicles as it requires less usage of air conditioning/heating in summer and winter respectively. The Mercedes EQS was also the first vehicle launched on the market to have an AR-HUD integrated in the windscreen, also a first for NSG. Complex development was required for NSG for this product in conjunction with the heating functionality.

Volkswagen

Low emissivity glass

Contributing area

Safety & Comfort

Eco society

ICT



The laminated roof glazing on the Volkswagen Caddy has a low emissivity coating applied to the glass surface. The coating is formed on the glass by NSG's proprietary online Chemical Vapour Deposition float glass coating technology, and offers substantial improvement to thermal insulation when compared to standard glass.

This type of special coating has historically been used in buildings to minimize heat loss from a room, as it effectively acts as a mirror to heat. When used in an automotive roof application, and in combination with a dark tinted glazing, it prevents significant heat from being transferred into the vehicle interior in hot conditions. In winter conditions, the coating helps to maintain a comfortable temperature by minimizing heat loss from the vehicle. The combination of benefits for both hot and cold climates aid the energy efficiency of the vehicle by reducing the need to provide power for cooling and heating. Furthermore, utilising a low emissivity coating on a roof glazing can allow the interior blind system to be removed, which means less weight, fewer components and further efficiencies.



Xavier Arnaud

Automotive Glass Business Global Product Manager Roof glazings

We all know that CO₂ emissions must be reduced around the world. Our low-emissivity glazing products exhibit break-through solar performances compared to standard solutions. They are ideal for the new vehicle generations that look for improved overall energy efficiency. Volkswagen recognized their benefits for its new Caddy. Other automotive manufacturers are also convinced. Don't be surprised if you see it implemented on your next car!

NSG Group's Business and Strength

Technical glass business

Unique 'Number One' and 'Only One' niche products

Market Conditions

Although the demand is anticipated to decrease for a short term due to digital market slowdown, From a medium and long-term perspective, the advancement of a highly information-oriented society will increase demand dramatically for products related to storage and high-speed and large-capacity communication. At the same time, the need for compact, high-precision optical components is expected to increase due to the penetration and expansion of image-sensing technology to FA equipment, logistics robots and drones.

Business Direction

We will develop highly unique products that meet changing market needs, particularly in ICT. Furthermore, we will develop our technological base with an eye on changing market needs, acquire a new customer base through the development of new applications and the introduction of new products, and accelerate the actual commercialisation of new products, while also looking to accelerate the creation of new businesses through bold alliances. The Group is continuing to pursue a niche-top strategy to promote business growth.

NSG Strength

Glass properties including "transmit light", "light and strong", and "non-conductive" are leading to innovative designs by engineers. Some products maintain a high market share such as lenses for printers and glass cords. NSG will continue to build its future with its clients as the pioneer of high-performance glass materials.

thin glass



optoelectronics products



specialty glass fiber products



Glass cord



Glass Cord is a glass fiber product with NSG's proprietary technology to reinforce rubber and resin products. As well as improving the elasticity, durability, and dimensional stability of belts, these strong, and bendable stretch-resistant cords also help to achieve drive systems that are kinder to the environment and save energy.

High modulus, high strength glass fiber MAGNAVITM



High modulus, high strength glass fiber MAGNAVITM is the ideal solution for reinforcement of composites to reduce weight and increase strength. MAGNAVITM was created with the environment in mind during its product development, including the selection of environmentally friendly raw materials and low CO2 emissions during production.

MICROGLAS® METASHINE®



METASHINE® is inorganic glittering pigment coated by metal or metal oxide on flake-shaped glass substrate to generate beautiful luster. It is made from raw materials that are friendly to both humans and environment. High-quality glitter can be obtained from sparkle of reflection and interference delivered only by flake-shaped glass.

NSG Group's Business and Strength

Topics

Cover glass for automotive displays

glanova®, chemically strengthened glass

Contributing area

Safety & Comfort

Eco society

ICT



With the evolution of cars, the applications of displays in the vehicle have been expanding and the need for touch panels has been increasing accordingly. The glass is expanding adoption for instrument panels and other applications in automotive for its superiority in terms of appearance and texture. Glanova® was firstly developed as a cover glass for phones or tablets, but now adopted as a display in the vehicle as well. The product meets the requirements for automotive interiors since it is easy to chemically strengthen, has excellent transparency and easy thermoforming with low softening point. In 2023, for the first time in NSG Group, some items of glanova® have received Recycled Content Certification from the SCS Global Services*(SCS), third-party environmental sustainability certification and auditing organization. With this certification, it is now recognized by an independent organization that more than 38% of materials in "glanova®" are made from pre-consumer recycled glass.

* SCS Global Services: A leading third-party certification and auditing company in the fields of sustainability and environment. Since 1990, the SCS Recycled Content Certification program, under which NSG was certified recently, has supported manufacturers in making commitment to natural resource conservation, setting sustainability goals, and having their recycled products meet customer standards.



Daichi Arai

Creative Technology Function Fine Glass division

For producing glanova®, glass cullet* are used as a part of raw materials and remelting 1 ton of cullet can reduce CO² emissions by about 400 Kg to 600 Kg compared to melting raw materials from scratch. By acquiring this recycling certification, we expect to differentiate our products as more and more clients are willing to purchase Sustainability and products. Recently, the adoption of glanova® has expanded to applications in new areas such as for VR headsets and I am looking forward to its future.

*Using cullet, which is once made into glass and pulverized can reduce energy consumption and carbon emission compared to using raw materials.

Automated Optical Inspection (AOI)

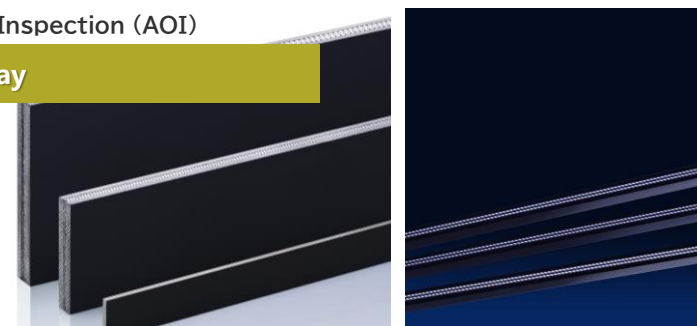
SELFOC® Lens Array

Contributing area

Safety & Comfort

Eco society

ICT



Demand for Automated Optical Inspection (AOI) is expanding with a growing need for inspection with enhanced AI and Deep learning technology, making up for labor shortage, labor saving and increasing quality demand. These days, the need for AOI is expanding to areas such as checking semiconductors, electric components, food and cosmetic applications to detect foreign objects, dirt and other defects. SELFOC® Lens Array has a unique shape of "flat" lenses consisting of an array of refractive index distribution type lenses and is used in the reading section of the machines. It is expanding its opportunities as a new inspection device that can replace the camera methods because of the following features: the simple and compact structure makes it possible to add inspection functions to processes where space is limited, and the image uniformity in the width direction without peripheral distortion, unlike the conventional method. In response to the rapid expansion of demand for SLA for industrial inspection machines, NSG Group is developing a long depth of focus lens for machine vision.



Akihiro Masuda

Creative Technology Function Information Devices division

Originally, the SELFOC® Lens Array (SLA) was developed mainly for multifunction printers which need compactness, and it was the opposite of the requirements of AOI. However, we are developing products in a different direction while taking advantage of their compactness and ability of uniform linear image transmission, which meet customer needs by doubling the working distance and depth of focus so that they can be used in environments where maintenance is required, objects flap, and foreign matter splashes. Demand for AOI is expected to grow in the future due to the increase in demand for inspection equipment, which linked to the increase in EV batteries and the shortage of labor, we aim to expand SLA's contribution in this area. Currently, we have received many inquiries from customers, including those for battery film inspection, for which demand is increasing with the spread of EVs, due to the popularity of this compact and wider lens array compared to camera-type lenses. We will continue to meet customers' needs for AOI by supplying SLA and developing new products.

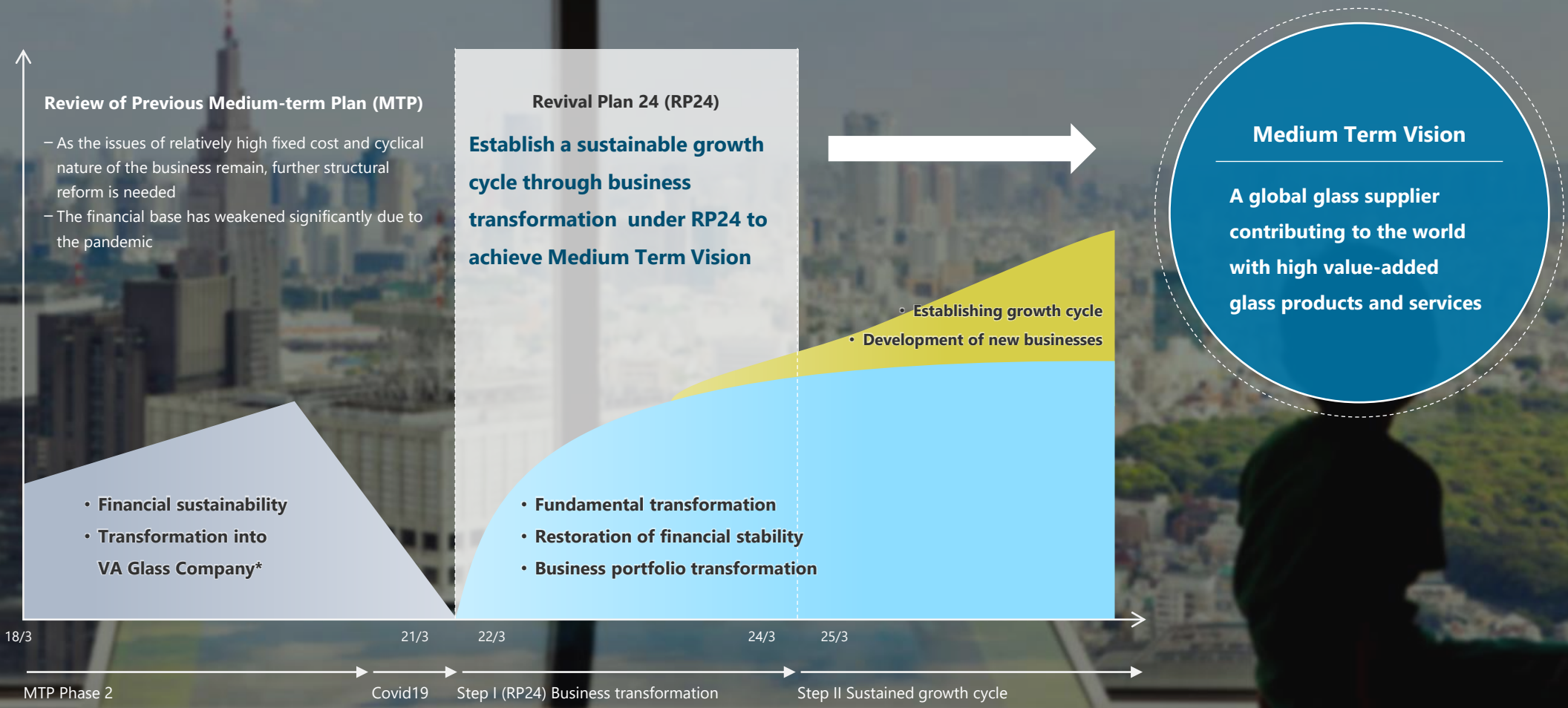
Financial Highlight

		FY2019/3	FY2020/3	FY2021/3	FY2022/3	FY2023/3	
Consolidated Income Statement (million yen)	Revenue	612,789	556,178	499,224	600,568	763,521	
	Operating Profit before Exceptional Items	36,855	21,177	13,067	19,980	34,812	
	Profit before Taxation	22,730	-13,549	-17,171	11,859	-21,933	
	Profit Attributable to Owners of the Parent	13,287	-18,925	-16,930	4,134	-33,761	
	Operating Profit Ratio to Revenue	6.0%	3.8%	2.6%	3.3%	4.6%	
	Profit Attributable to Owners of the Parent Ratio to Revenue	2.2%	-3.4%	-3.4%	0.7%	-4.4%	
	ROE	10.7%	-25.7%	-26.9%	2.8%	-34.8%	
	ROA	5.1%	3.0%	1.8%	2.4%	4.2%	
By Business Segment (million yen)	Revenue	Architectural	247,348	233,687	215,501	281,816	365,947
		Automotive	314,645	280,977	245,184	276,246	354,693
		Technical Glass	49,106	40,143	36,818	39,770	38,754
		Others	1,690	1,371	1,721	2,736	4,127
	Operating Profit	Architectural	25,811	17,331	15,670	28,130	33,557
		Automotive	15,118	6,100	1,802	-7,908	4,052
		Technical Glass	8,062	7,116	6,707	9,907	8,733
		Others	-12,136	-9,370	-11,112	-10,149	-11,530
	Profit Ratio to Revenue	Architectural	10.4%	7.4%	7.3%	10.0%	9.2%
		Automotive	4.8%	2.2%	0.7%	-2.9%	1.1%
Technical Glass		16.4%	17.7%	18.2%	24.9%	22.5%	
Balance Sheet (million yen)	Total Assets	761,869	765,197	824,963	939,281	951,387	
	Interest-bearing Debt	371,508	435,007	471,710	467,885	495,120	
	Net Debt	317,700	390,169	411,771	365,173	407,923	
	Shareholders' Equity	123,760	73,612	62,937	145,291	97,040	
	Shareholders' Equity Ratio	16.2%	9.6%	7.6%	15.5%	10.2%	
Cash Flows (million yen)	Cash Flows from Operating Activities	29,030	30,444	21,053	45,061	48,506	
	Cash Flows from Investing Activities	-28,143	-56,888	-25,589	-22,787	-34,649	
	Free Cash Flow	887	-26,444	-4,536	22,274	13,857	
	EBITDA	64,732	55,023	46,837	56,651	75,006	
	Net Debt/EBITDA	4.9	7.1	8.8	6.5	5.4	
	Capital Expenditure	-32,150	-66,971	-43,347	-28,629	-40,917	
	Depreciation & Amortization	27,910	34,842	35,768	36,675	40,212	
Cash Flows (million yen)	Earnings per Share	115.2	-236.0	-208.3	24.1	-393.1	
	Book Value per Share	978.5	470.9	349.6	1,256.0	723.8	
	Cash Flow per Share	9.8	-291.7	-49.9	244.8	152.0	

Medium Term Plan "Revival Plan 24 (RP24)" Overview

Roadmap to Achieve Medium Term Vision

Launch of new three-year management plan, Revival Plan 24 (RP24)



* VA: Value-Added

Medium Term Plan "Revival Plan 24 (RP24)" Overview

Revival Plan 24 (RP24) – Outline

Committed to the three reforms and two key initiatives to build business strength

RP24 Policy

- The Group will accomplish drastic and fundamental initiatives, revising the business strategy reflecting the changes in the business environment
- RP24 is the period for business transformation and the Group will focus on drastic reform of profit structure, restoration of financial stability and transformation of business portfolio

RP24 Initiatives

Under RP24, the Group commits to the following
Three Reforms and Two Key Initiatives

Three Reforms

1. Cost structure reform: cost reduction and productivity improvement
2. Business structure reform: expansion of value-added business; development of new growth businesses; emphasis on investment and asset efficiency
3. Corporate culture reform: never failing to take up challenges and following through to deliver results

Two Key Initiatives

1. Restoration of financial stability
2. Transformation into more profitable business portfolio

Sustainability

- Work on improvement of existing technology and development of new technology aiming for carbon neutrality in 2050

Financial Targets

Aiming to recover the equity ratio to at least 10% at the earliest opportunity with stable net profit and free cash flow. Over the medium to long term, the Group will opportunistically consider ways to further improve its financial foundations

(JPY)	21/3	24/3 Target
Operating Profit Margin ^{*1}	2.6%	8%
Net profit ^{*2}	(16.9) bn	> 30 bn cumulatively for 3 years
Equity ratio	7.6%	> 10%
Free cash flow	(4.5) bn	> 10 bn

*1: Operating profit before exceptional item

*2: Profit attributable to owners of the parent



Profitable business to generate stable free cash flow

Constant net profit generation to restore equity ratio of more than 10 percent

Medium Term Plan "Revival Plan 24 (RP24)" Overview

Transformation Initiatives under Revival Plan 24

Initiatives underway for business to grow sustainably according to RP24. Achieved in shareholder's equity ratio and free cash flows among the financial targets

Three Reforms

01 Cost structure reform

- Most of direct Headcount reductions in line with the consolidation/closure of sites/production lines mainly in Automotive business in Europe and Americas implemented in FY2022 and will continue after FY2023
- Non headcount : Direct costs savings via Kaikaku and Kakushin activities

02 Business structure reform

- Trial becoming the world's first flat glass manufacturer to fire furnace using hydrogen or 100% biofuel
- Construction started to install online coating capacity for solar energy glass to an existing float furnace in Malaysia (Aiming to start production from Q3 of FY2024/3)
- 2nd float furnace in Argentina started production
- Started a new verification test for transparent solar panels for use as windows at a railway station in Tokyo



Transparent solar panels for use as windows

03 Corporate culture reform

- Encourage open communication: creating "Leadership behavior Charter" in response to employee opinion survey to promote cultural reform from leaders
- Diversity, Equity & Inclusion (DEI): developing Inclusion & Diversity into DEI to enhance individual employees' paths and engagement

Two Key Initiatives

01 Restoration of financial stability

Progress towards the financial targets is below.

- OP margin was below the target, however 4.6% by 1.3pt improvement from FY2022/3
- Net loss due to JPY 48.8 bn impairment loss on goodwill and intangible assets were recorded in Q2
- Achieved in equity ratio and free cash flow for two consecutive years

(JPY)	Target	2022/3 Actual	2023/3 Actual	Achievement
Operating profit margin*1	8%	3.3%	4.6%	-
Net Profit*2	> 30.0 bn cumulatively for 3 years	4.1 bn	△ 33.8 bn	-
Equity ratio	> 10%	15.5%	10.2%	○
Free cash flow	> 10.0 bn	22.3 bn	13.9 bn	○

*1: Operating profit before exceptional item *2: Profit attributable to owners of the parent

02 Transformation into more profitable business portfolio

- Disposal of Battery Separator business (September 2021)
- Integration of the Group's Automotive Glass business in China with a major Chinese automotive glass manufacturer (September 2022)
- Disposal of Joint Venture in Russia (June 2023)

CFO Message



Senior Executive Officer
Chief Financial Officer

Akihito Okochi

“Changes in the business environments are opportunities for the NSG Group. The Group aims for further reforms and profit improvements by utilizing our excellent human resources and advanced technologies as much as possible.”

Could you review FY2023/3 from the viewpoint of finance as CFO?

First of all, FY2023/3 results could show that the Group is in a recovering trend. The Group exceeded the operating profit forecast for the full year of JPY 30.0 bn with improving revenues and operating profits while in the business environments with headwinds such as input cost hikes and restricted vehicle build at our customers, although net loss was recorded due to the recognition of impairment loss of goodwill and intangible assets related to the Automotive glass business in Europe originally arising on the acquisition of Pilkington in the second quarter.

Revenues and operating profit improved as a result of various measures including cost reduction efforts under RP24 in the environments of the past few years severely affected mainly by the COVID-19 pandemic. I newly joined the Group but understand through the communications with the internal people including production sites that they implemented

these various measures in each business and across the whole Group with tough experiences. The fact that the Group could achieve operating profit improvement in this year when the business environments change rapidly proves that the measures the Group have been implementing are in the right direction.

The fruits of these past measures can be seen in the results of each business.

In Architectural glass business, the energy surcharge system in North America and Europe fully functioned and could pass through hiked energy prices mainly natural gas to sales prices. Also in Japan, sales prices were revised upward for two consecutive years which contributed to the profits.

Automotive glass business turned black for the first time since FY2021/3 led by the progress of sales price improvement negotiations mainly aiming for mitigating the impact of the energy prices hike.

In Technical Glass business, operating profit decreased reflecting IT market slowdown, however, its operating profit margin remained high partly as a consequence of measures implemented during the COVID-19 pandemic.

Now the Group entered a period with more uncertainty represented by higher geopolitical risks, input costs rise, and freight and labor cost hikes. On the other hand, such dynamic changes in the business environments can be opportunities for the Group.

For example, in the past, negotiations of selling prices improvement with our customers in the Automotive business could even never be imagined before, but the fact that price improvement negotiations progressed in FY2023/3 shows that business practices have been changing, so I regard such changes in the business environments positively opportunities.

CFO Message

FY2023/3 was the second year, which is a half way point of the medium-term management plan RP24. What do you think of the results? The Group achieved financial targets of RP24 for equity ratio and for free cash flow in two consecutive years.

The Group could achieve the target for equity ratio (above 10%) and free cash flow (above JPY 10.0 bn) as a result of the accumulation what we should do. For example, the Engineering team in Automotive business manages its investment and profitability for all the products including so small ones thorough the system. I believe accumulation of such detailed managements and cost saving efforts based on "Kaikaku and Kaizen" activities resulted in the achievement of the targets. It is a result of the serious work by all employees.

On the other hand, the Group couldn't achieve the targets for operating profit margin (8%) nor net profit (above JPY 30.0 bn cumulatively for 3 years).

Operating profit margin has been improving but the Group will focus on achieving 8% which is the target of RP24 first. It will be necessary to develop the plan looking ahead of 8% in the next medium term management plan. The Group will continue to focus on profitability improvement for the present.

Regarding net profit, the Group recorded net loss of JPY 33.8 bn in FY2023/3 due to the recognition of impairment loss of goodwill and intangible assets related to the Automotive glass business in Europe originally arising on the acquisition of Pilkington of JPY 48.8 bn in the second quarter. The impairment loss was the one-off which has reduced the financial risks since the acquisition of Pilkington, and the Group could have recorded net profit of above JPY 10.0 bn without it. However, net profit is especially essential from the viewpoint of return to the investors that it is necessary to enhance profitability more to generate profits continuously both on consolidated and non-consolidated basis. For that purpose, the Group will plan what to do concretely and put it into action.

FY2024/3 is the final year of RP24. What do you aim for and focus on?

RP24 has been committed externally, so it is a very important mission to achieve it. For the achievement, the Group will implement financial initiatives enough.

What the Group focus on first are improvement of profitability and ability to generate cash. They are in the improving trend, so I would like to maintain this momentum, accelerate the initiatives to enhance them more. Naturally the Group may be in the business environment with the headwinds, but we will be flexible to do these. In this situation, the competitive environment will be an issue. I recognize that it has been calm down in Japan where over-supply is eased, but intense in Europe and North America where it is better to anticipate tighter profitability. It is uncontrollable, but the Group will watch the business environments and implement the initiatives to adjust the capacities, promote the prices pass-through, reduce costs and expand the value-added products. When we look at the operating profit margin in FY2023/3 for example, they are approximately 10% in Architectural, 1% in Automotive, and 20% in Technical glass businesses, so the Group need to implement various initiatives intensively in Automotive glass business, especially in Europe.



CFO Message

Many questions have been given from the analysts and investors about the use of cash, since the results have been improving and the Group achieved the target of RP24 for shareholder's equity ratio and free cash flow for two consecutive years. What do you think about the balance between investments for growth, investments for carbon neutrality by 2050, repayment of loans, redemption of the class A shares, and resumption of dividend?

It is necessary to consider it from various viewpoints. First, I would like to allot the cash actively to investments for research and development or/and growth, since the Group has many wonderful technologies which have been contributing to not only sustainability but also the Group's profit such as solar energy glass and many of investments for the Group are also sustainable. On the other hand, from the viewpoint of larger trend, sustainable investments such as sustainable finances or green bonds are not basically profitable, so it cannot make profits improve significantly. So, it is important to connect with governments including subsidies from them to secure profitability of the investments. The Group has already utilized subsidies in Europe from the UK government in the trials for float glass production powered by hydrogen or biofuel which were succeeded for the first time in the world. The Group has been taking actions to use the cash efficiently not only in such investments for research and

What do you think is important for increasing the Group's corporate value?

From the financial viewpoint, it is necessary to reduce the finance cost by proceeding with repayment of loans since huge amounts of loans and large finance costs accompanying with them are one of the financial issues of the Group. It is important to maximize free cash flow for that. It is essential to increase the Group's corporate value by reducing loans while maximizing free cash flow steadily and sustainably. Needless to say, actions for non-financial aspects including ESG is also required as a listed company. It is a prioritized management issue to minimize the burden on the environment since a glass manufacturer is a energy intense industry. Regarding human capital, it is important not to invest formally with only words in textbooks but to invest really with substance. Investment in human capital has been limited financially, or reduced adversely for a long time financially, so feelings of exhaustion have prevailed across the Group globally. The Group must invest enough since the employees' satisfaction supports its growth. In my opinion, that bringing out employees' potential is the best to contribute to the enhancement of an organization. I experienced a good cycle in a former job where maximizing of bringing out of each employee's potential led to the best performances and individual abilities and an organization got better by far. It is vital to secure

development. Communications with the US government strategically together with a customer to utilize subsidies efficiently have been being made in North America where the capacity increase for solar energy glass which is expected to actually contribute to the Group's profits is considered. I would like to allocate the cash to growth investments as much as possible with enhancing cash efficiency by taking external funds based on the relations with the customers and governments in addition to the existing cash such as funded by the shareholders' equity and loans. Naturally, I will take balances between investments where the Group should invest strategically and not. I would like to proceed with repayment of loans, redemption of the class A shares, and resumption of dividends while taking balances between each stakeholder.

psychological safety and show the strategic direction where the Group will go for the employees in order to bring out individual abilities. Psychological safety doesn't simply mean salary or job security. What is important is that the employees can work in the environment free from anxieties with connection between people and feel that their jobs are value-adding and meaningful. For example, as I am CFO, I will follow up all the employees in my subordinate carefully with one-on-one meeting and have already started it by reserving the time. What I can do by myself is limited, so I think it is necessary to invest time to proceed with it, although it is assumed to take a long time for it to prevail across the whole Group. Regarding the Group's direction, the next medium term management plan is being developed now, so CEO and CSO (Chief Strategy Officer) will show it. I will show the financial numbers to be targeted and their reason. From my perspective, my role is to secure psychological safety for the employees and to show the Group's financial direction clearly. Enhanced disclosure of non-financial information in the security report is required recently, so the Group will disclose both financial and non-financial information in the same way as this integrated report.

CFO Message



TSE (Tokyo Stock Exchange) has requested the listed companies whose PBR is below 1.0 or ROE is below 8% for the management which is conscious of share price and capital cost.

There are many factors which affect share price, but what increases it most is to maximize EPS (Earning Per Share) with profit. In addition to this as a start point, it is important to disclose fully the financial and non-financial actions as explained in the part of increasing the Group's corporate value so that the stakeholders who have something to do with the Group resonate that the Group is likely to get better. For that, it is necessary to show the Group's future and the story in the next medium term management plan.

ROE is behind only in Japanese market from the global viewpoint, and it is a natural mission as a listed company to generate returns to the investors. As explained above, the Group will pursue profitability improvement.

You joined the Group in May 2023 and has been appointed to CFO from June. What do you think are good points or points to be improved of the Group? In addition to those, please tell the point which you think important in the CFO's mission and job.

The good points of the Group are two, which are excellent human resources and advanced technologies. I understand that the power of manufacturer is originated from its production sites and technologies after I have worked for manufacturer for a long time, and I feel that the Group possessing these strengths. Regarding excellent employees, there are many employees who are very serious and work on everything seriously. This is the Group's very important intangible assets which cannot be obtained nor built in a short time. The Group will show the direction where the management would like to go and allocate the resources with balances, while utilizing such excellent employees and assets. Regarding advanced technologies, the Group has many amazing new technologies such as solar energy glass and online coating, although glass industry is matured. The Group has also value-added windshield with ADAS and HUD function which are produced with APBL in Automotive glass business, and some niche but top products where the technologies are utilized in Technical glass business.

On the other hand, I think that the point to be improved is to have stronger financial discipline. The Group's profit will increase when each employee has a strong discipline. It is important that each employee can seriously pursue profit as much as possible by selling a product and take necessary actions within the limit with understanding what to do when profit is not made. The Group is responsible for achieving the target numbers to be committed. I will lead and

show good examples.

CFO's mission is to be both a business partner and a supporter. I may sometimes have to say severely inside the Group since I am responsible for precise explanations about the Group's situation to the capital market, the banks, the customers, the employees and so on, and play the check-and-balance function. But I am basically a supporter who stands by the businesses. What I put importance on is to understand fully the fact which is a background of numbers and communicate both internally and externally with stakeholders. I naturally think that it is important to make a comment or ask a question after I understand backgrounds of numbers multifacetedly, not to make a comment or ask a question simply after seeing only numbers. So, it is also important to build trust with the related people.

The Group is entering a new phase with its profits including operating profit in improving trend. I would like to contribute to the Group's further reform, profit improvement and financial enhancement by utilizing what I have experienced so far, especially the experience of establishing and implementing strategies for profit improvement.

Special Feature Interview: Human Capital Management



Executive Officer
Chief Human Resources Officer
Denise Haylor

In the last year or two, ESG issues have been shifting from E to S, and in particular 'Human Capital Management' has been attracting more attention. What is 'Human Capital Management' in the NSG Group?

Since our company was founded, we have always placed great importance on Sumitomo's philosophy that 'Business is people'. It is people that support the company's business activities. When our people are motivated by their work and in our business in an engaged and rewarding way, the Group can contribute to both our customers and society. The cycle of realizing such an environment, whereby the company grows, and its employees enjoy the fruits of this growth and are more motivated to engage in the business is the essence of 'Human Capital Management', and we are working to create such an environment. The CHRO plays a key part in developing and enabling such a virtuous cycle.

How has the handover been going since you took over as the new CHRO in June? What is your impression of the NSG Group's Human Capital Management initiative?

The handover has been seamless, and I have received full support from CEO and everyone I have met in the Group. I feel confident and am personally committed to continue to drive the philosophy of 'business is people' to further enhance the experience of our customers and the lives of our employees and the broader communities in which we operate.

The previous CHRO retired at the end of March this year and I have not had the opportunity to speak to him directly, but CEO has been acting in his place in the interim, and I have been working closely with CEO since my appointment. I have received a great deal of support for which I am very grateful.

As a global company we are, by definition, diverse. In talking with our employees, I'm hearing a sense of pride and an inquisitiveness to understand more about our company and customers. For me this is a strong sign of the 'business is people' philosophy mentioned earlier.

We have a great opportunity in our diversity, equity and inclusion work which will be a focus of mine as I believe it will help deepen the ties within the Group. Another key initiative will be digitization and, especially, how we might implement a human capital management solution for the Group. The benefits of accurate people data in a few clicks are manifold both for our leaders and our people.

And, of course, recruitment and retention will remain a high priority for me and my team.

Special Feature Interview: Human Capital Management

Has the 'Corporate Culture Reform' in RP24 as part of human capital management been achieved?

In the RP24, the implementation of 'Corporate Culture Reform' is described as "reforming the organization into one that constantly challenges change and achieves results, with an emphasis on 'customer focus', 'rapid decision-making and action' and 'overcoming difficult challenges'". During the past year, we have faced several challenges, including the spread of the Covid-19, the situation in Russia and Ukraine, and the significant rise in the cost of raw materials and fuel. Needless to say, the effects of these developments have been manifold. Each employee of the Group, in each region and division, worked hard to cope with the challenges and to ensure business continuity, while at the same time achieving business results. We believe that these results are the result of our concerted efforts to "overcome difficult challenges". It is notable and admirable that our employees achieved this during challenging personal times especially with Covid-19. A personal thank you to every employee of the Group. The 'Corporate Culture Reform' is steadily yielding results, and our efforts need to continue. Change will continue to speed up and we need to continue to be nimble to be successful.

The period covered by RP24 was indeed a time when 'difficult challenges' came one after another. What initiatives contributed to overcoming them?

For example, the recent rise in the cost of raw materials and fuel has had a significant impact on the costs of our business operations. I think the most important thing was that we were able to share information transparently about the situation and how we were going to respond to it, at all levels and all locations within the Group.

Covid-19 challenged us to think differently about how we communicate, and we embraced technology to ensure we stayed connected with our people. The use of technology and the learnings from Covid-19 will serve us well in the future.

We were able to face the challenges because our employees have a sense of belonging to the Group. This has been built up over time and is based on trust and mutual respect. We do not take this for granted and will continue to foster an environment where 'business is people' and everyone can bring their true self to work. This is what makes the Group special and is a source of advantage for us.

In the previous Integrated Report, the NSG Group set out the 'four pillars' of our HR strategy, which have now been revised to 'six pillars'. What is your view on HR strategy and have you reviewed the pillars?

In an ever-changing world we need to continue to review and renew our people practices. As part of this I reviewed the pillars and while the initiatives remain relevant for the Group, I felt we needed a strategic framework. Such a framework helps us with alignment to our business strategy, keeps us focused on the most important activities and helps us explain our strategy with all stakeholders. I also felt it was important to have a vision for HR – perhaps better said as our HR promise to our people.

Now we have the framework we can closely align the 6 pillars to a long-term vision for HR. In socializing the framework, I have received great support.

'Improving the capability of the HR department', which was included in the previous 'four pillars', is not included in this year's 'six pillars'.

It is not included in the 'six pillars' because the spirit of continuous improvement needs to be 'what we do' as an HR team.

The global nature of our business is a great strength however it can pose specific challenges for our HR team. We need to be mindful of legal and custom and practice differences in every country in which we operate. Our HR model supports us as we have a regional and country approach, so we can react quickly to local requirements and to escalate through our communications channels.

There are, of course, regional, and global requirements e.g., GDPR which we must comply with. We work closely and cross functionally to ensure we comply with all legal requirements.

The advantages of being global - sharing and deploying best practice in each country and region, and growing through experience in other regions - are, of course, also true for the HR function. As an example, our regional HR Directors and I meet regularly monthly to share what is going on within their regions and best practices that have been developed and might be valuable to other regions. The power of this network and way of working was especially valuable during Covid-19.

Special Feature Interview: Human Capital Management

What areas do you need to continue working on in the future?

As we think about our current and future business needs for talent, we need to have a laser focus on recruiting and retaining the best people.

The 'war for talent' is very real and continues to intensify. We need to do more to attract, develop and retain our people. Specifically, we need to have a value proposition which reflects who we are and what we do as a Group, a multi-channel approach to accessing the talent market and a seamless on boarding for our people. Everyone has talent and we want people to bring their talents to our Group.

Our strong culture and 'business is people' approach helps us and, as part of our value proposition, our people will be our strongest recruiters and advocates.

Our global footprint is very attractive to many potential employees, and it is essential our brand is well known in the talent market. We have had successes in several countries, and we will continue to scale these successes across the Group.

An engaged workforce is essential and part of our role in HR is to create an environment which underpins the principles of engagement by supporting our employees and line leaders to be the best they can for the benefit of their careers and the Group.

What is the situation regarding recruitment and turnover of early career talent?

Our turnover rate among early career talent has been on the increase in recent years. When we speak to people who leave us, many of them say that when they think about their future career, they decided to change jobs because they were looking for opportunities not available in our company. We can, at least partially, solve this via a strong employer brand, ease of access to opportunities and dialog with our people to understand their needs.

A very promising development has been several people returning to us after experiencing other companies. Our strong sense of belonging and affiliation is proving to be very attractive. That said we need to focus on retention and ensure that everyone has an opportunity to develop regardless of role. We have several local initiatives focused on development and we will continue to share across countries and sites as best practice.

We have much to offer people at all career stages. Our role is to make accessing the opportunities easy both internally and externally.

Diversity is also an important theme in terms of human resources. What is your awareness of the issues related to diversity?

I believe diversity, equity and inclusion is an imperative and a source of competitive advantage.

We believe that diversity should be viewed and understood from various perspectives. Embracing diversity creates value and research shows that having a diverse workforce can lead to a 'source of new ideas'.

Regarding gender, in June this year, we further evolved and developed our existing basic statement for promoting Inclusion & Diversity (I&D) and formulated a new Diversity, Equity & Inclusion (DEI) policy. It is important to provide equal opportunities (Equality), but it is also essential to provide the best opportunities (Equity) for every individual according to their needs and circumstances. We believe that this will lead to increased value and the creation of a sustainable company.

We would like to build on our foundational steps and make diversity, equity, and inclusion a way of working in the Group. We want to set stretch long-term goals, enable leaders to take the lead in achieving them, and have the entire company proactively involved in them, so that actions in every part of the business are aligned with the overall direction of the company. Such initiatives and outcomes will be more proactively communicated internally and externally than in the past.

This will not be confined to one area of diversity but will be embracing of all. We will co-create our plan and will have concrete actions combined with stretch goals. A key aspiration for HR and, indeed, our business is diversity equity and inclusion as reflected in our new mid-term plan.

One of our major strengths is the diversity of nationalities and cultures we have achieved through our global operations. We believe that we can build on this strength to develop activities with depth and breadth.



Special Feature Interview: Human Capital Management

Since FY23, the Company has conducted an all-employee attitude survey throughout the entire Group; how is this positioned within human capital management?

The survey provides us with timely and actionable insights into how our people are feeling and what is important to them. By swiftly accessing the feedback, sharing best practice, and enabling our line leaders we can take timely and meaningful action.

The survey is more than a tool – it is an insight, and we believe by deeply listening to our employees using the survey (and other methods) we can build a sustainable and enriching place to work.

Compared with other companies, where is the NSG Group's human capital management advanced and where do you think it needs improvement?

while our origins are Japanese through acquisition and organic growth, we have built a global company and have, along the way, taken the best practices from European and US companies to inform our approach to people. While many Japanese companies have acquired other companies overseas to expand their global operations, we acquired and integrated companies in the same industry, but on a larger scale. In many cases, Japanese-style management has been introduced to the acquired company, but we have been able to compare and verify the systems and initiatives of each company and have proceeded by horizontally deploying best practice. This is no exception in the case of our approach to our people practices – 'business is people'. In terms of human capital management, we have a longer history of initiatives in Europe, and some of the systems and approaches there have been deployed throughout the Group. This is one reason why our human capital management is ahead of other companies. For example, we have a group-wide system in which our managers are remunerated based on their duties, and an increasing number of companies in Japan are now moving to such an approach. In terms of diversity, our strength lies in the diversity of our human resources, which is a result of the fact that we have a global presence.

In simple terms – we take an integrated approach to our people. We respect and recognize differences in terms of local culture and endeavor to build a cohesive sustainable company for all our stakeholders. We know and recognize our challenges and will prioritize the areas of

diversity, equity and inclusion, recruitment and retention coupled with the underpinning digital tools to help make our Group a great place to build a career.

How do you plan to take measures to address the current situation you have described so far?

We have developed our people strategy; we have our key initiatives and have identified 4 key aspirations (with clear actions and measures) for our mid-term plan all aligned with our business strategy. We are well placed to overcome any challenges and the key will be focused execution. As already mentioned, one of the major challenges at present is how to recruit and retain talent. We need to flawlessly execute on our initiatives in this area and continuously improve our approach. Diversity, equity, and inclusion is a key enabler both in making our Group a great place to work and more broadly for society in general. Focusing on the employees' journey will help us improve our offering and help us build an engaged and engaging place to work. Through creativity, innovation coupled with focus and continuous improvement we can overcome the challenges and build a sustainable company for the benefit of all stakeholders.



Materiality

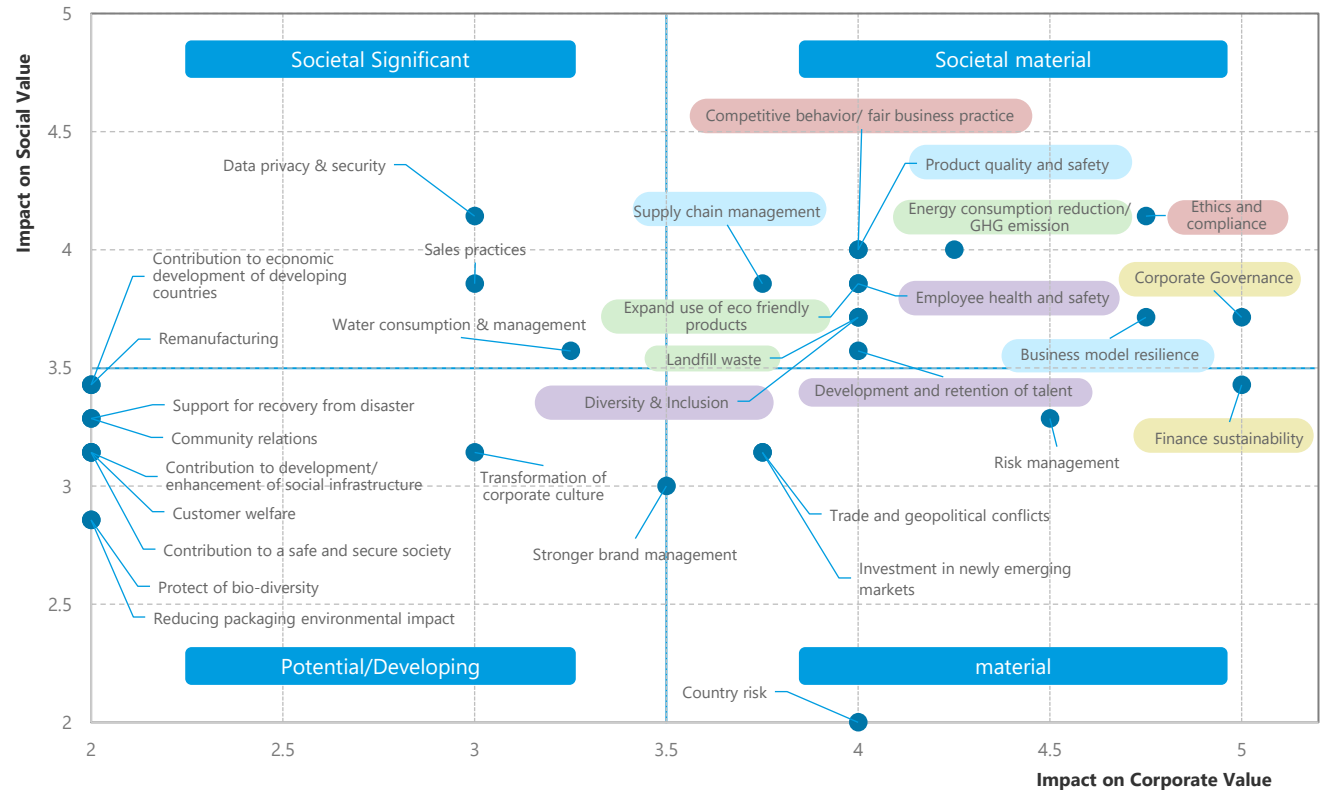


Executive Officers
Sustainability Director
Shiro Kobayashi

Environment	Contribute to the realization of a decarbonized society with GHG emissions reduction by eco-friendly manufacturing process and sales expansion of eco-friendly products
Society Shift and Innovation	Identify significant challenges to society and providing technology/product/service to their solution in a timely fashion
Safe and High-Quality Products and Services	Enhance both the products and service quality through improvement of quality and supply chain control
Ethics and Compliance	Carry off significant trust from stakeholders by constant address on Ethics and Compliance
Human Capital	Ensure sustainable growth of the Group and contribute employees' welfare through a variety of initiatives to enhance developing Change Leaders at global level, safety, health, and Inclusion and Diversity

The following five items have been identified as **Material** to attain sustainable growth of the Group and contribute to a sustainable society in the medium-to long-term. The Group selected these five items according to their significance as assessed on the matrix measuring the axes of impacts on both society and the Group. Each item is categorized by referring to the classification in the criteria such as GRI, SASB or IIRC, the impact on each stakeholder is scored, and the item with the highest score on the two axes is reclassified as the "priority area" and selected. Of these, "Corporate governance" and "Securing financial base" have extremely strong impact on the Group and are also the foundation of it, so they are set as the issues that the Group will focus on separated from the selection of materiality.

Revised NSG Sustainable Value Matrix




















Materiality

The Group will set targets for each item and take specific actions accordingly.

	Aspiration	Background and Focal Points
Environment	Contribute to the realization of a decarbonized society with GHG emissions reduction by eco-friendly manufacturing process and sales expansion of eco-friendly products	<p>The glass manufacturing is a fossil fuel-consuming industry. Therefore, it is the most critical challenge for us to address such initiatives as reduction of GHG emission, saving energy and waste management in order to improve environment so that we can attain sustainability for society and the Group. At the same time, we also believe it is mandatory for us to contribute to preserving the environment through provision of products and services. Aiming Carbon Neutral with eco-friendly manufacturing process and products & zero waste to landfill.</p> <ul style="list-style-type: none"> – Energy consumption & GHG emissions reduction (realize eco-friendly manufacturing process) – Sales expansion of eco-friendly products – Reduction of waste to landfill
Society Shift and Innovation	Identify significant challenges to society and providing technology/product/service to their solution in a timely fashion	<p>Always keep an eye on the rapidly changing movements of society, accurately grasp the flow, and then aim to be the company contributing to the stakeholders with identifying significant challenges to society and providing technology/product/service to their solution in a timely fashion, which are the source of innovation.</p> <ul style="list-style-type: none"> – Innovate new products/service and revenue increase – Strengthen business development and R&D function
Safe and High-Quality Products and Services	Enhance both the products and service quality through improvement of quality and supply chain control	<p>As a manufacturer, it is the minimum mission for our stakeholders to continue to provide safe and high-quality products in a stable manner. In addition, the value of not only products but also services will be much required. The Group aims to increase value for the stakeholders and ensure sustainable growth by consistently supplying customers with safe and high-quality products and services.</p> <ul style="list-style-type: none"> – Enhance quality assurance – Enhance supplier management – Enhance service culture
Ethics and Compliance	Carry off significant trust from stakeholders by constant address on Ethics and Compliance	<p>As a member of society, it is an essential mission to respect and comply with the rules of society. The Group is aiming to be the company which carry off significant trust from stakeholders through constantly addressing on E&C activities to avoid corporate value deterioration.</p> <ul style="list-style-type: none"> – Identify/address and info. sharing for E&C risks – Fair business practice – anti-bribery/corruption, Conflicts of interest and competition compliance – E&C governance and oversight
Human Capital	Ensure sustainable growth of the Group and contribute employees' welfare through a variety of initiatives to enhance developing Change Leaders at global level, safety, health, and Inclusion and Diversity.	<p>Under one of the core value, "Respect others and unleash their potential", the Group addresses a variety of initiatives to enhance safety, health, I&D while engaging in development/creation of talents who would ensure sustainable growth of the Group. At the same time, we aim to be the company contributing employees' welfare. Ultimate goal for the safety is to keep zero injury.</p> <ul style="list-style-type: none"> – Inclusion and Diversity – Health and Safety – Human development

Materiality

FY2024/3 targets and FY2023/3 progress

	FY2024/3 target	FY2023/3 progress	SDG s
Environment	<ul style="list-style-type: none"> 8 percent reduction in CO₂ intensity across glass manufacturing operations compared to CY2018 	KPI of 0.73 kg CO ₂ (e) / tonne glass (e) was measured during CY2022. This represents a 1.4% YoY improvement in the KPI since CY2021 (0.74 kg) and a 2.7% improvement vs baseline of CY2018 (0.75 kg). This improvement was achieved via a combination of the continued efficiency improvements associated with the implementation of the NSG Group energy & carbon efficiency management program and increased activity in the procurement of renewable forms of energy.	 
	<ul style="list-style-type: none"> 20 percent reduction of waste to landfill compared to FY2020/3 	Waste to landfill increased by 2.0 kt to 21.6 kt in FY2023/3 versus FY2022/3 but reduced by 2.3% versus the baseline FY2020/3 which is 22.1 kt.	
Human Capital	<ul style="list-style-type: none"> Reduction of Significant Injury Rate (20 percent vs. FY2020/3) 	Significant Injury Rate was 0.32, a 3% increase compared to FY2022/3. We continue to focus on reducing all anxiety behaviors by strengthening leadership and communication around the Gemba Walk.	
	<ul style="list-style-type: none"> Employee Engagement, "Our Vision" penetration ratio (80 percent) 	In an employee attitude survey conducted in January 2022, 84% responded positively to the question on whether their immediate supervisor's decisions are in line with the core values of our Vision, confirming that the penetration of Our Vision among employees is improving.	
	<ul style="list-style-type: none"> Female managers in NSG Group <ul style="list-style-type: none"> 12.7% as of 2021 June 30th FY2024/3 target : female manager increase at least 1% in each SBU and Function compared to 2021 June 30th 	Female managers in NSG Group was 14.4% as of 2022 December 31th , by 1.7 points improvement. The progress will be monitored half yearly and best practice will be shared.	
Responsible sourcing	<ul style="list-style-type: none"> To achieve and maintain a 95 percent acceptance of the NSG Supplier Code of Conduct by our key suppliers. 	94% of Key suppliers have now agreed to the Supplier Code of Conduct or can demonstrate their own equivalent code. This is an improvement of 4 points compared to FY2021/3. We will continue our efforts to improve the acceptance rate of the Supplier Code of Conduct with regard to key themes such as human rights and the environment.	  
	<ul style="list-style-type: none"> To assess and monitor the sustainability performance of 65 percent of our suppliers by external spend. 	EcoVadis sustainability assessments completed for 60% of external supplier spend. This result is improved by 8% to that of FY2022/3. We will continue our efforts to improve assessment coverage.	  
	<ul style="list-style-type: none"> To achieve and maintain an average 50 sustainability score for all assessed suppliers. 	Average scoring of all suppliers Ecovadis assessments also increased by 2 pts to 61. In particular, the number of suppliers with low scores has decreased, leading to an improvement in scores.	  
Ethics & Compliance	<ul style="list-style-type: none"> Hotline utilization (Actual vs. benchmark data) 	NSG Group received 175 reports for FY2023/3 with increase by 51 from FY2022/3. The benchmark for similar-sized enterprises in number of employees is 197 according to an external consulting firm. Group E&C continues to analyze variance between the number of the actually received reports vs. the benchmark data.	
	<ul style="list-style-type: none"> Increase of concern reports from Manager's Report Form targeting 30 percent of the total report 	The ratio of reports from Manager's Report Form (MRF) was 34 percent of the total reports in FY2023/3 with increase by 6 points from FY2022/3. Group E&C continues to promote MRF via various communication channels such as internal bulletins and newsletters.	
	<ul style="list-style-type: none"> Education completion ratio (95 percent completion by managers by 5 days before the deadline of the education campaign) 	98.4 percent of Key Roles completed relevant trainings during the annual education campaign in FY2023/3. 78 percent of managers completed by 5 days before the deadline. Group E&C will continuously make its best effort to raise the training completion rates.	
	<ul style="list-style-type: none"> Top level communications (Minimum four annually (CEO/C-Suite)) 	Top level communications regarding ethics and compliance were made four times during the fiscal year such as an internal bulletin by the name of CEO, COO message video during the 2022 Ethics and Compliance Week.	

Climate Change, TCFD

NSG Group's initiatives to decarbonize and reduce environmental impact

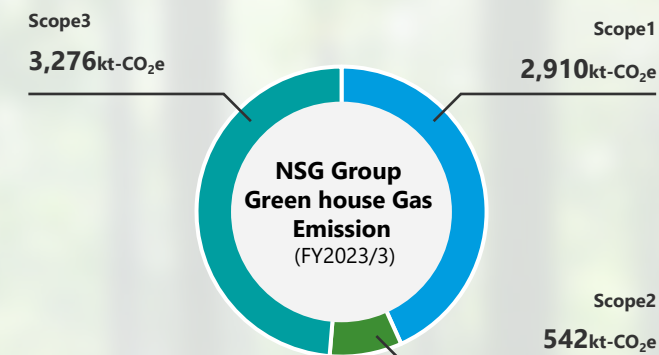
As an energy-intensive and carbon-intensive manufacturing company, tackling climate change is essential for the Group. Contributing to a decarbonized society through our products and services will help us fulfil our mission to 'build a better world through the creation of comfortable living spaces'. We are actively working towards social issues such as climate change, contributing to a sustainable society and increasing our corporate value. The Group continues to endorse the TCFD, with actions including increasing the intensity and scope (to include all three emission scopes) of SBTi verified decarbonization targets in May 2022 (original verification in 2019). It has also committed to achieving carbon neutrality by 2050. The implementation of the roadmap to achieve this will lead to a reduction in CO₂ emissions and, in turn, to the continued development of Sustainability and products and the expansion of opportunities related to our business.

Initiatives to reduce Scope 1 (own emissions)

We are considering a range of technical options to reduce Scope 1 emissions, including:

- Use of alternative fuels:** we are actively engaged in technological development initiatives, such as the world's first successful production of float glass using hydrogen energy in September 2021, as well as the successful production of glass using 100% biofuels in February 2022
- Electric melting of glass:** efforts are being made to increase the amount of renewable electricity used as a substitute to fossil fuel in the glass production process in 2025, a project increasing to the highest level ever achieved within the Group for electric melting will be implemented with the support of the German Government.
- Substitution of glassmaking raw materials:** during the glass melting process, large amounts of carbon dioxide are emitted due to decomposition of CO₂ containing raw materials in the furnace. In order to reduce the carbon dioxide emissions from these raw materials, attempts are being made to replace the carbonates in the material with various oxides: in 2022, glass production using 'Dolime' (CaOMgO) was successfully achieved in a float furnace in Chile; studies will continue in 2023.
- Carbon capture:** the process for capturing CO₂ emissions from glass melting furnaces is not compatible with typical CO₂ capture processes, so we are working with a process development partner that is likely to be compatible with our needs. We are planning to receive UK Government support for this project in 2023.

Procuring fuels on a larger scale at competitive prices is particularly important for hydrogen and biofuels. Long-term contracts with suppliers, as well as securing production sites and stable supplies of fuels in the vicinity of the sites, are some of the initiatives being promoted by the purchasing team to support reductions in Scope 1.



Initiatives to reduce Scope 2 (own emissions)

The company has set a target of 50% renewable electricity by end of 2024. To support this target, the Group continues to invest in on-site power generation including installing on-site solar power at the Lathom Research Institute in the UK and the Rossford plant in Ohio, USA. Many other solar projects are underway across the Group. We are also actively introducing power source certification and Power Purchase Agreements (PPA agreements) on a global basis.

Initiatives to reduce Scope 3

In 2022, the company launched a Sustainable Supply Chain Committee to examine sustainable supply chains with regard to all factors, including environmental and social aspects. In the course of its activities, it is also working on reducing Scope 3 emissions. We are working with actual suppliers to obtain emissions data and share best practice alongside various other initiatives.

Climate Change, TCFD

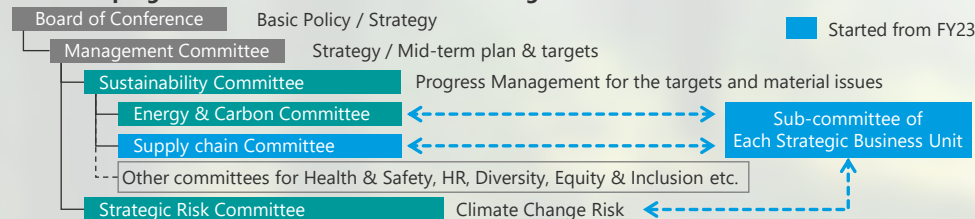
Information disclosure in line with TCFD

Since 2017, the NSG Group has been developing its climate-related disclosures in line with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), utilizing the CDP framework; in 2021, it expressed its support for the TCFD recommendations, and also undertook a detailed climate-related risk and opportunity-focused scenario analysis and undertook activities to complement the existing climate change roadmap. Below is an introduction to the NSG Group's climate change initiatives in line with the four recommended disclosure sections of the TCFD recommendations: governance, risk management, strategy and indicators and targets.

governance

Climate-related risks and opportunities are overseen by the Board of Directors, and the Group CEO and Board of Directors set the basic policies and targets for the Group's sustainability activities, including climate change. Climate change-related issues are discussed by the Executive Committee, the Sustainability Committee and the Strategic Risk Committee with the aim of achieving all sustainability targets and linking them to all relevant business. This includes strategies and actions based on risk and opportunity analyzes to achieve both corporate growth and a positive social contribution; the Board members, who are experts in the field of ESG, provide input and guidance. Activities and progress in each area, such as the status of energy and CO₂ emissions reductions in each business unit, are managed by a sub-committee of the Sustainability Committee. In FY2022, discussions focused on continuing progress and prioritizing activities in the Decarbonization Action Plan, which is necessary to achieve the new targets approved by the SBTi in May. In addition, the development of a new sustainability strategy to accompany the next medium-term management plan was initiated.

NSG Group's governance structure on climate change.



strategy

Risks, opportunities and responses related to climate change in the short, medium and long term.

The Group has carried out an analysis of the risks and opportunities associated with climate change in the short (1-2 years), medium (2-4 years) and long term (>5 years, usually up to 15 years) according to the following three main scenarios to identify physical and transition risks in the timescale to 2100.

Low-carbon world scenario (<2°C)	A scenario in which aggressive mitigation measures are taken to curb carbon emissions over the next 30 years, with the aim of transitioning to a low-carbon economy.
RCP 4.5 Medium stabilization scenario (2-3°C temperature rise)	Interim scenario, assuming that current policies, pledges and targets are achieved.
RCP 8.5 High reference scenario (>4°C)	A scenario in which global temperatures continue to rise substantially, with catastrophic consequences, as a result of continued emissions growth with little or no measures to avoid physical risks.

Risks and opportunities identified include the impact of

Current regulation	opportunities to supply high-performance products in relation to the European Energy Directive
New regulations	Risks of increased production costs through new emissions trading schemes (ETS), new European Emissions Trading Scheme (ETS) leading to opportunities for sharing high-performance energy-saving building products.
Technical Development	EV market and the growth of the energy-efficient buildings market.
Legal compliance	Risks and costs of meeting future compliance, opportunities for more stringent product demand, NSG's competitive product development, etc.
Market aspects	e.g. customer specifications for building / vehicle efficiency with associated opportunities for product development
Reputation	customer specifications for building / vehicle efficiency with associated opportunities for product development
Acute Physical risk	e.g. flood, typhoon risk impact to operations & value chain (supply continuity) opportunity for specific product development e.g. storm glazing.
Chronic Physical risk	e.g. sea level rise primarily risk impact to current and future operations and value chain.

Climate Change, TCFD

The identified risks and opportunities have been quantified, categorized and prioritized accordingly in accordance with the Group's standard risk management framework. This includes impacts on policy and legal aspects, technical aspects, market aspects and reputational aspects. Last year, the analysis was further reviewed from the perspective of additional legislation, such as the European CSRD, and stakeholders, such as biodiversity, circularity and community impacts. Based on this new analysis, the NSG Group's next new medium-term plan will be developed.

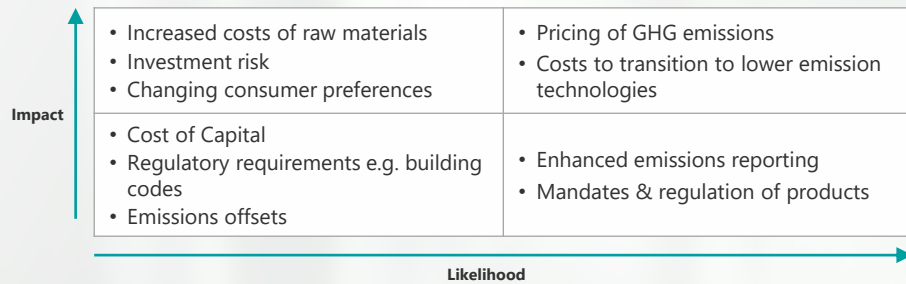
The risks and opportunities identified were further reinforced and included in the Group's business strategy, Revival Plan 24 (RP24), resulting in, for example, the Sustainable Supply Chain ' project, investment in research and technology development to reduce greenhouse gas emissions, and the development of new products that support the decarbonization of society. These activities are in line with the Group's mission to 'build a better world through the creation of comfortable living spaces'.

Based on the multiple global warming scenarios described above, a quantitative and qualitative analysis of resilience to climate change and prioritization of actions to be implemented in the future was also carried out. As a result, the Group's decarbonization targets over the medium to long term were developed based on the analysis that the risk with the highest impact and potential for the Group is an increase in the costs associated with the price of GHG emissions. The reduction targets developed by the Group were certified by the SBTi in 2019 and were updated in 2022 to more ambitious targets in line with a warming scenario well below the Paris Agreement's 2°C.

Compliance with this target will improve the Group's resilience to both physical and transition risks related to climate change.

Scope of assessment of annual impact and transition risk potential

- residuals in the long-term perspective (2035) under the 2050 net-zero scenario Risk :



Examples of identified risks with high impact and urgency

Impact of Climate Change on NSG Group		Financial Impact	Urgency
Transition Risk (Low Carbon World Scenario)	Pricing of GHG emissions	Very high (>JPY 40 oku/yr)	Very likely to occur, high urgency for mitigation
	Costs to transition to lower emissions technology	Very high (>JPY 40 oku/yr)	
	Increased cost of raw materials	Very high (>JPY 40 oku/yr)	Likely to occur, medium urgency for mitigation
	Investment risk – unlisted from TSE prime market	Very high (>JPY 40 oku/yr)	
Physical Risk (RCP 8.5, 4°C Scenario)	Drought Stress	Medium (JPY 10 - 20 oku/yr)	Likely to occur, medium urgency for mitigation
	Chronic Heat	Low (1.2 – 10 JPY oku/yr)	

risk management

Climate-related risks are identified and monitored by the Strategic Risk Committee and assessed against quantitative criteria for four vectors: financial impact, business impact, compliance impact and external assessment impact. The Strategic Risk Committee assesses the controls and mitigations in place to address the risks and directs the implementation of additional measures where necessary. The risk owner is responsible for monitoring and reporting on progress against defined action plans to manage risks within the Group's tolerances. Individual controls and measures are progress managed within each business unit (SBU) and Group function and reported to the Executive Committee and Sustainability Committee. Specific risks and opportunities reported to the Strategic Risk Committee are reported regularly (at least once every six months) to the Executive Committee to ensure integration of risk management and business strategy.

Climate Change, TCFD

Metrics and targets

The Group monitors all greenhouse gas (GHG) emissions affecting the entire Group (Scope 1 and 2), supply chain (Scope 3) and customers (Scope 3). The Group's SBTi's CO₂ emissions for the reference year (total for the year from January to December) are as follows:

Scope 1	Scope 2 (location-based)	Scope 3
3,103 thousand tonnes	1,050 thousand tonnes	2,513 thousand tonnes

The CO₂ emissions for the three scopes for the latest year (total for the year January-December 2022) were as follows.

Scope 1	Scope 2 (location-based)	Scope 3
2,910 thousand tonnes	719 thousand tonnes	3,276 thousand tonnes

In addition, the trend in CO₂ emissions from 2018 to 2022 is as follows:

Carbon dioxide (thousand tonnes)	Scope 1	Scope 2		Scope 3
		location-based	market-based	
2018	3,103	1,050	891	2,513
2019	2,970	885	790	2,819
2020	2,817	728	530	2,952
2021	3,031	731	648	3,556
2022	2,910	719	542	3,276

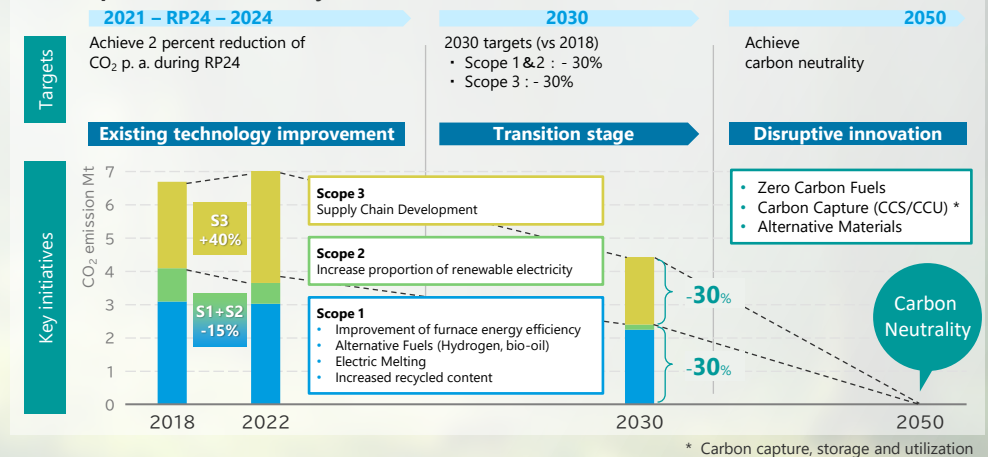
*CO₂ emissions are the total for the year from January to December of each year.

We are also working towards our target of reducing greenhouse gas emissions per unit of production in the glass manufacturing process by 8% by FY2024/3 compared to FY2018/3. Progress in FY2023/3 was 1.4% better than in FY2022/3 and 2.7% better than in FY2018/3. The company is on track to achieve this goal.

The Group obtained SBTi certification in 2019 for its target to reduce its Scope 1 and Scope 2 CO₂ emissions by 21% by 2030, but in 2021 the Group revised this target, raising it to a more ambitious target and setting a Scope 3 target. This revised target is to reduce Scope 1 and Scope 2 and Scope 3 CO₂ emissions by 30% by 2030 compared to 2018. A 1.5°C scenario is the preferred target setting, but this requires a significant reduction (halving) of our Scope 1

emissions, which account for nearly half of our CO₂ emissions. As our Scope 1 emissions are generated by the combustion of fossil fuels in the glass melting process, we need to switch to fuels from renewable energy sources in order to reduce our Scope 1 emissions. The technology development required for fuel conversion is progressing and does not require significant capital investment, but we do not expect to be able to supply the amount of green fuels we need until 2030 or later. The target is therefore set for a scenario well below 2°C, rather than the 1.5°C scenario. This target was approved by the SBTi in May 2022. In FY2023/3, the NSG Group entered into a Sustainability Linked Loan Agreement with a link to three Climate Change Impact Indicators (KPIs). The KPIs were selected as indicators that are key to the NSG strategy to support decarbonisation, including the reduction of CO₂ emissions (Scope 1 and Scope 2) mentioned above. We are also committed to achieving carbon neutrality by 2050. This is in line with the Group's mission "Building a better world by creating comfortable living spaces", as well as meeting the demands of our customers and investors and the expectations of our employees. The roadmap set out below is embedded as an action plan at company-wide level and at local level, e.g. at production sites. The implementation of this roadmap will lead to a reduction in CO₂ emissions and, in turn, to the continuous development of Sustainability and products and the expansion of opportunities related to our business.

Roadmap to Carbon Neutrality for 2050



Sustainability and products

The NSG Group has identified the Environment as one of our materialities, which is an important issue for both medium and long-term sustainable corporate growth, as well as contributing to the realization of a sustainable society. Through the timely provision of our unique and valuable products and services, we aim to contribute to solving important social issues such as climate change and biodiversity.

Architectural Glass



Through their superior performance, our glass helps to play a crucial role in supporting these environmental and societal issues by improving the energy efficiency of buildings and helping to reduce CO₂ emissions and we feel this is an important business opportunity for us. To facilitate this activity, we have now launched a new sustainability communications platform, *makechange*[™], which helps us to communicate our passion and commitment for positive change to support the business in sharing our sustainability messages.

Here are some examples of our environmentally friendly products that we offer.

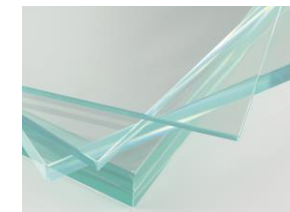
Supporting clean energy generation

As a consequence of global warming in recent years, demand for solar panels as a clean energy source is growing worldwide. Thin-film solar panels using cadmium telluride are expected to see market expansion not only in North America but also in emerging countries such as Southeast Asia in the future, due to their superior performance stability, especially in high temperature environments. High quality glass with transparent conductive coating (TCO) and high transmittance made with our superior online coating technology is highly compatible with the aforementioned thin-film solar panels and supports the creation of clean energy worldwide through products such as those shown. To support the growing solar cell market, we have invested in additional TCO-coated glass production capacity in Malaysia. The investment supports the expansion strategy of First Solar, a global manufacturer of thin-film solar cells with whom we have a long-standing established partnership. In addition to its existing facilities in Vietnam and Malaysia, the company is building a new manufacturing plant in India, which is expected to be operational in late 2023.



**NSG
TEC[™]**

Highly optimized, durable transparent conductive coating glass



OPTIWHITE

Low iron content and high light transparency

Visible light transmission rate 90.5% (Monolithic glass:19mm)

Sustainability and products

Stakeholder Interview

First Solar



A sustainable energy future with the NSG Group

First Solar is the world's leading manufacturer and distributor of thin-film solar panels. The company's solar panels, which use cadmium telluride (CdTe) as opposed to the more common crystalline silicon, feature the most eco-efficient solar panels available today with the lowest carbon, water footprints and fastest energy payback time (EPT)*. NSG Group have interviewed Michael Koralewski, Chief Supply Chain Officer of First Solar, one of the largest customers of TCO coating provided by the NSG Group, about their journey towards a renewable energy society and their expectations of the NSG Group.

*Energy payback time: the operating period required before the same amount of energy is saved by power generation as is input during the lifecycle.

What is First Solar's roadmap to a renewable energy society?

First Solar's vision is to lead the world's sustainable energy future. Even as we embark on a journey of rapid growth, we remain true to our core principles, especially our commitment to Responsible Solar. Not all solar power is created equal, and we stand apart from most of the industry in understanding our responsibility towards the planet, the community, and our customers. We are driven by a desire to make better solar that does not pay lip service to sustainability but embodies it. Solar that considers the social and environmental impacts and works hard to make people's lives healthier. Solar with no tolerance for the use of forced labor, either in its manufacturing or its supply chain. This is solar that meaningfully supports the fight against climate change, and we are proud to embrace our role in producing it to power our societies' renewable journey.

What are the expectations of NSG Group in the company's roadmap for sustainability?

NSG and First Solar share a long-standing global partnership spanning multiple markets, including the United States, Malaysia, Vietnam and now India. As a supply partner for over 20 years, we value NSG's ability to be agile and support our growth plans. This has been especially crucial as we invest in rapid growth, underpinned by a strategy of locating new manufacturing capacity close to demand while also diversifying and localizing our supply chains. For instance, NSG's ability to supply US-made glass has helped support our manufacturing expansion in the United States.

First Solar's Solar Panel Manufacturing



Sustainability and products

Biodiversity conservation

Against the background of recent climate change, the conservation and promotion of biodiversity has become an even more important global theme. Among other things, bird collisions on glass are now a worldwide problem and bird protection is a key social issue in many countries, including Germany. In Germany, bird-friendly construction is requested more and more or is even required in tenders for public spaces. We developed and designed an innovative glass solution; Pilkington **AviSafe™**, which greatly reduces the number of bird collisions with glass. The glass is fully transparent, with a unique patterned coating which reflects ultraviolet spectrum to ensure both safety for birds and an unobscured view for the human eye. Pilkington **AviSafe™** has also been successfully tested by external third parties. Using our technology, we aim to create a society where humans and animals can coexist.

Pilkington **AviSafe™**

Glass designed to protect birds



Providing environmentally friendly and aesthetically pleasing energy

Building-integrated photovoltaics (BIPV for short) refers to an enhanced building component that is integrated into building facades to perform as a renewable energy generating material. Pilkington **Sunplus™** BIPV Window and PV spandrel solutions enable buildings to generate electricity and aesthetically pleasing alternative to traditional energy sources. From May to July in 2023, the Company, together with ENEOS Holdings, Inc., East Japan Railway Company and YKK AP Inc. conducted a demonstration test in the Takawawa Gateway Station using transparent photovoltaic window panels developed by Ubiquitous Energy Inc. of the USA, in which ENEOS has invested and in which the Company is co-developing. The Group will continue to provide products that create an 'environmentally friendly environment'.

Pilkington **Sunplus™** BIPV

Building-integrated photovoltaic glass



Provision of new low-carbon glass products.

We have recently launched a new architectural glass product, Pilkington **Mirai™**, which offers 50% less CO₂e* (vs our standard glass product). The development of Pilkington **Mirai™** was made possible through a series of technical world firsts and a holistic approach to sustainability. Even though glass is an endlessly recyclable material, as a leading glass manufacturer, we have a significant opportunity and responsibility to *makechange™* in our industry and support the built environment by developing low carbon products such as Pilkington **Mirai™** as part of the wider solution. We will continue to focus on developing and promoting sustainable architectural glass products.

*EPD pending



Michael Scheer

President of Flachglas Markenkreis GmbH*,
Chairman of the Cooperative Board

"Pilkington **AviSafe™** can meet all aesthetic and functional requirements such as thermal insulation, solar radiation control, bird protection and sound insulation in a single sheet of double glazing, contributing to the prevention of global warming and potentially saving millions of birds' lives."

*One of the largest associations of glass processors and double glazing companies in Europe

Sustainability and products

Automotive Glass

In recent years, the automotive industry has seen an increase in the importance of eco-cars, which are designed to reduce greenhouse gas emissions through electrification. In parallel, automotive glazed areas continue to increase in size, driven by the design, safety and styling benefits of fluid shapes, enhanced external visibility, lighter interiors and a greater desire for occupant interaction with the environment.

NSG Group's superior press bending glass shaping technology and solar control products are fully capable of meeting the major changes in vehicle design brought about by this shift to an electrified powertrain, and are aiding the world's drive towards clean mobility.

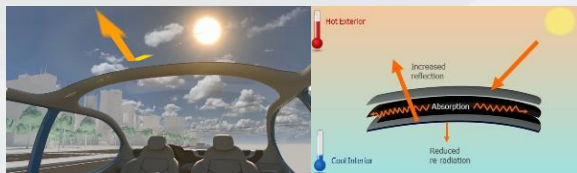
Low-emissivity online coated glass

Battery-electric vehicles, for which demand has been increasing in recent years, often use large-area roof glazings to secure head space inside the vehicle and to enjoy panoramic vision, as the heavy battery is placed under the floor of the vehicle body. The perceived Achilles heel of using large glazed areas is the accompanying heat loading associated with a material that both transmits the sun's heat, but also radiates heat that it has absorbed. The solution for a roof glazing is to utilize a low-emissivity coating as this has been proven to provide both high heat shielding and thermal insulation. These properties are ideal to both enhance passenger comfort and improve the energy efficiency of the climate control inside the vehicle. The low-emissivity coating is formed on the glass by NSG's proprietary online Chemical Vapor Deposition float glass coating technology.

Over the years, NSG has developed the APBL (Advanced Press Bending Lamination) glass shaping process (which is suitable for high-precision windscreens and large-area roof glazings) and utilizes this process in combination with our low-emissivity coating. This capability allows NSG to provide large area low-emissivity roof glazings, with superior dimensional shape control for fitment to the vehicle, and high quality reflective optical properties.

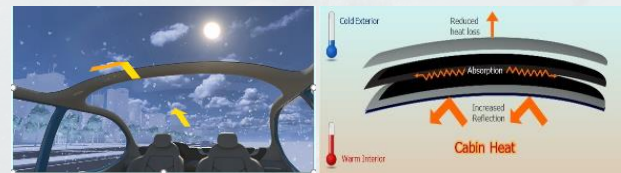
Summer →

Inhibits the release of heat absorbed by the glass into the vehicle.



Winter →

Reflects heat inside the vehicle and suppresses dissipation of heat outside the vehicle.



Technical Glass

The NSG Group's glass products help to make products more energy efficient and sustainable across different market segments, thanks to the excellent glass properties of lightness, strength, flame resistance, insulation and chemical resistance.

New high-performance glass products that contribute to reducing society's environmental impact

MAGNAVI™ was created as a result of environmentally friendly product development, using raw materials with a low environmental impact and reducing energy use and CO₂ emissions during production. Its superior strength and modulus are expected to contribute to the saving of resources and energy and the reduction of waste materials and CO₂ emissions through the reduction of weight of transport equipment components and application to rehabilitation pipes.



Energy

Energy Usage

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

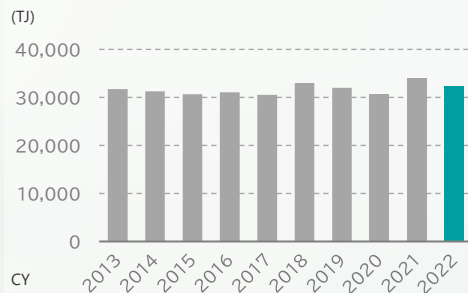
Please refer to the "[NSG Group Energy Policy](#)".

Our energy usage and carbon emission

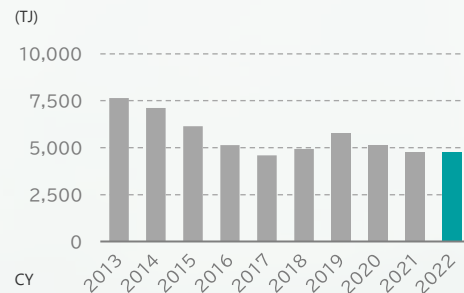
For both environmental and financial reasons, we continue to use natural gas as the fuel of choice for glass melting. Furnaces continue to be converted from heavy fuel oil to gas.

Small quantities of diesel and LPG are used for space heating and back up generators. See the graphs for consumption and carbon emission in details.

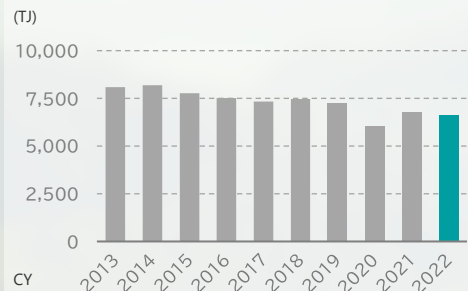
Natural Gas



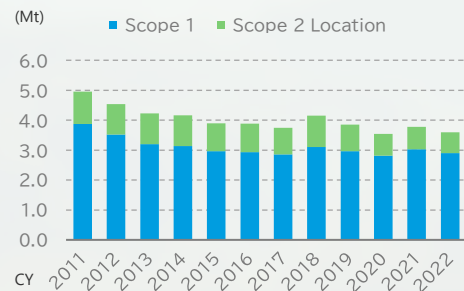
Heavy Fuel Oil



Electricity



Carbon Emission



Initiatives to reduce energy usage & carbon (CO₂e) emission

Energy & Carbon Management

All initiatives are monitored by the Heads of SBUs and Group functions at six-monthly Energy & Carbon management Committee meetings.

Energy & carbon management SBU committees

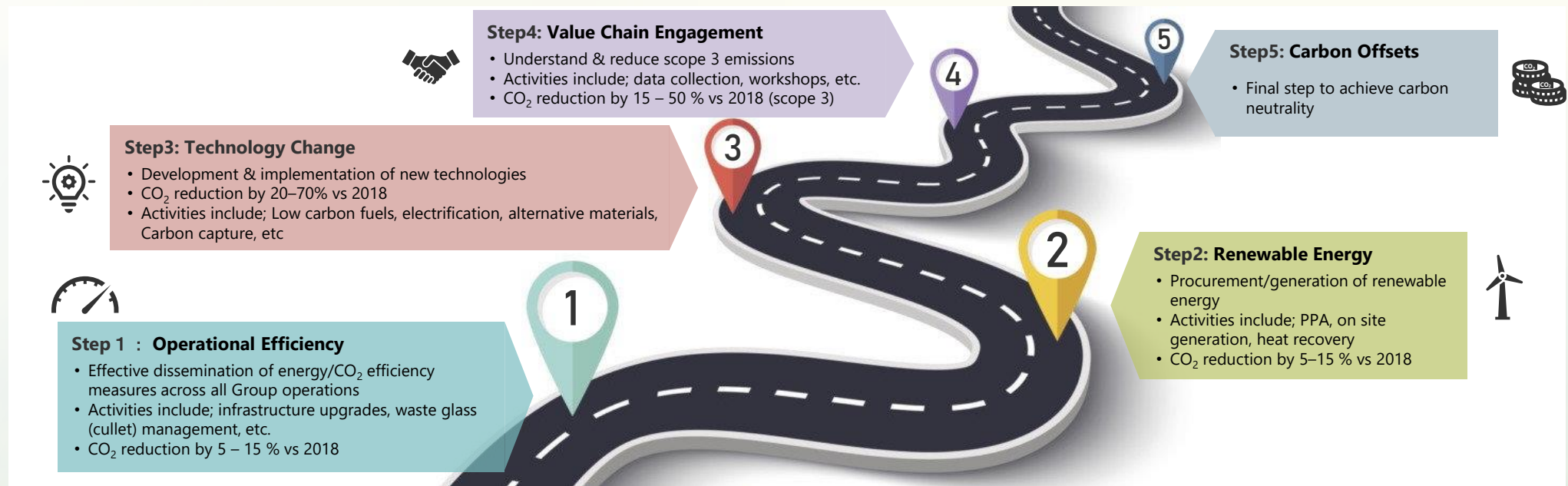
The energy pilot plant program was replaced during FY2022/3 with the introduction of management committees at SBU level. The role of these committees is facilitate focused engagement across the SBU with involvement of the SBU executive team and other key central functions. This gives the opportunity to provide focused identification and dissemination of activities relevant to the SBU as well as general Group level initiatives. Alongside energy efficiency activities, the committee also coordinates progress of decarbonization roadmaps at an SBU level which are derived from regional and local plant level proposals. This 'bottom-up' approach is one of the key aspects for decarbonization target achievement with ownership of the roadmap at a local production site level.

This management approach has facilitated the development of the NSG Group decarbonization roadmap. This roadmap focuses on the implementation of five key activities to support the achievement of the mid term (2030) Science Based Target achievement and long term (2050) carbon neutrality. The five stages run in parallel incorporating existing activities as well as development and implementation of technologies and processes of the future. The program is detailed in the figure below, with the stages including;

Energy

Progress of this roadmap will be coordinated by the Energy & carbon management core multifunctional team, with management committee progress reviews on a six monthly basis. The first iteration of the roadmap focused on a 'top down' approach to identify at a Group level the opportunities and program actions necessary to implement those opportunities to

achieve targets. This roadmap was further developed with the introduction of the 'bottom up' activities, leading to the development of the first iteration of the NSG Group action plan for decarbonization. Now into the third iteration of development, specific examples of these actions are included in the following sections;



Operational energy & carbon 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. As part of the NSG Group Transformation program, energy and carbon efficiency / cost reduction activities are classified according to the financial saving, cost and/or level of technology innovation into one of three categories;

Kaizen	Continuous improvement projects. These projects continue to be referred as operational cost saving activities (OCS)
Kaikaku	'Big change' projects, achieving significant improvements in efficiency / cost reduction
Kakushin	'Innovation' projects, which require some level of innovation as well as significant improvement in efficiency / cost reduction.

Energy

To support the cost saving activities across sites, a deep analysis of all energy projects within the Transformation and OCS database is regularly completed. Multiple projects were identified for rapid dissemination in FY2023/3 to deliver energy consumption, CO₂e reduction & cost savings. Each manufacturing site within the Group had at least one active OCS energy project in FY2023/3. Led by Manufacturing Excellence and assisted by other Group functions, NSG Group sites identified more than 200 energy and carbon optimization opportunities, resulting in annual energy efficiency improvements in excess of 50GWh and CO₂e savings in excess of 30kt.

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 continued to be progressed during FY2023/3. This includes analytics of process data including energy metering with the goal of optimization of energy consumption & CO₂e emission. The analytics also supports the identification and development of new projects, such as identifying energy waste & management of tariffs. This project links directly to the broader aspects of digitization of NSG operations and activities which is a Group level initiative. Several other digitization projects for improved energy efficiency are under development across the organization, with pilot applications implemented in the UK, North America and South America.

A focus on the energy & carbon efficiency of operating furnaces when they are repaired was launched in FY2020/3 and continued to be implemented in FY2023/3. This included the restart of the first furnace repair where this minimum 5% improvement target has been introduced and the performance exceeded this target. The program continues as a key activity within the Specific targets for efficiency improvements in addition to the benefit of furnace repair have been established. This program has now been implemented at several furnace repairs, including 3 repairs in FY2023/3 resulting in significant improvements in efficiency expected across the full life (at least 15 years) of the furnace operation.

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.

During FY2021/3, the original R&D decarbonization project (Project Carbon 2050) was separated into a series of individual project activities to support the delivery of the Group strategic mid term targets (RP24) and longer term Science Based Target goals. In FY2023/3, these individual projects continued with the implementation of several specific project actions to 'test' the application of various technologies in supporting delivery of the targets with viable solutions. A key project that continued within FY2023/3 was the application of Hydrogen as a low carbon alternative fuel in the float glass manufacturing processes. In August 2021, NSG Group achieved a global first with tests of the use of hydrogen at its Greengate Works in St. Helens, U.K.

The initiative is part of a project managed by HyNet, a consortium of industries in the North West of England, aimed at reducing carbon emissions from industry, homes and transport. The work is supported by £5.2m of funding from the UK government under the Industrial Fuel Switching Scheme. NSG Group are investigating whether hydrogen can be used to wholly or partly replace the natural gas and oil that are the standard fuels for the glass making industries. If all of the natural gas can be replaced with hydrogen this would reduce emissions of scope 1 CO₂e by around 80%.The float glass produced from this successful trial has an overall carbon footprint of 40% lower than standard float glass produced.

The development of Hydrogen and other alternative, low/zero carbon fuels continued during 2021 and into 2022, with another global first achieved by the Group with the production of float glass utilising a bio derived fuel oil.



Greengate site, St. Helens, UK



Flame appearance inside the furnace using a fuel blend of 80% natural gas and 20% Hydrogen.



Flame appearance inside the furnace using a fuel blend of 100% Hydrogen.

Energy

Management systems

We have maintained ISO 50001 certification across all operations in Germany, Italy, Finland and the Automotive engineering function. In addition, the certification has been extended to included operations in South America (Chile) with plans of further implementation in FY2024/3 across Brazil & Argentina. 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. This is a key component of the strategy within FY2023/3 to link digitization and decarbonization activities.

Energy Savings Opportunity Scheme (ESOS)

All UK manufacturing sites are continuing to participate in the UK government Energy Savings Opportunity Scheme (ESOS). Currently entering phase 3, 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

In 2020 the Group published (via CDP response) a target to increase the proportion of certified renewable electricity (as purchased and/or via on-site generation) to 50% vs 2018 baseline consumption proportion.

Progress towards this target was significant during FY2023/3, with 32% of the NSG Group operations electricity consumption being supplied from renewable generation.

During FY2023/3, several specific project initiatives were launched. Building on the signing of a power purchase agreement (PPA) with EDP Renewables (EDPR), the world's fourth largest renewable energy producer, for the renewable electricity generated by a wind farm located in Poland. The PPA program was extended to include activities across several regions involving



multiple sites. The purchase of certified renewable generation certificates (REC's) in countries across Europe, the America's and Asia regions continues. The purchased of REC's is a key part of the decarbonization transition activities with the expectation that over a period of the next years, the proportion of REC's purchased will decrease and be substituted with increasing quantities of electricity purchased via PPA's

In addition, continued investigation and investment (via internal capex or utilising third party funding approaches) in on-site generation has been made.

Alongside the existing on-site generation facilities at the NSG technical center in the UK (Lathom) which became operational in 2020, the Northwood technical center in Ohio (2021) and the Rossford fabrication operations facility, Ohio (2022), the Group has opened in FY2023/3 onsite generation capability in Aken (Germany) and continues to expand existing operations such as the photovoltaic panels on the roof and former car parking areas of our German Weiherhammer plant. Further on site generation projects are under evaluation in North America, Malaysia, Japan and several other locations.

We continue to evaluate and utilize alternative low carbon / renewable fuel sources across the Group operations. As well as the Hydrogen and bio derived fuel trials in the UK, investigations are ongoing to identify viable sources of such fuels in other global locations. The use of such decarbonization technologies has been an integral part of the development of NSG low carbon glass solutions.



The thin film solar panels in Rossford plant

Energy

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; utilization of battery storage systems to support reduction in consumption peaks in electricity demand, addressing compressor inefficiency and installation of high efficiency motors and to make better use of waste heat generated in our glass-making processes.



Employee energy efficiency awareness

An energy management training program, designed to help the Group deliver cost savings and reduced CO₂e emissions, has continued to be rolled out globally. Launched in 2016, the program has been implemented across European, South American, Japan and South East Asia operations.

The initial program involved local site energy champions in a 'back to school' initiative that increased levels of energy awareness and supports the on-going generation of energy and carbon management project activities. The key aspect of the training is to help the delegates understand the approach to energy and carbon management, how they can identify and implement activities at their sites and encourage others to do so.

Following the successful implementation of remote training solutions developed in FY2022/3, several discrete training sessions were held to both educate new energy champions as well as providing 'refresher' training to previous attendees. This activity was supplemented with the development of various energy management auditing tools to support implementation of

best practices. A specific focus during FY2023/3 has been a return to basics program to ensure continued adoption and development of the existing best practice management activities in place across the Group. To date, the training has directly involved more than 75 champions, with identification and implementation of over 300 projects. Energy savings have exceeded ¥ 130 million, and reduced CO₂e emissions by more than 4,000 tonnes.

The initiative comprises three levels of training, with level 1 involving 50 hours in all aspects of energy management. The course is organized with the support of local functional teams and was led by David Cast, Climate Change Director, NSG Group. It is 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 are encouraged, where appropriate to their role, to continue energy management training with external organizations leading to level 2 and level 3 qualifications. Several delegates across the NSG Group have achieved the level 3 qualification.

Project examples that have been implemented so far include:

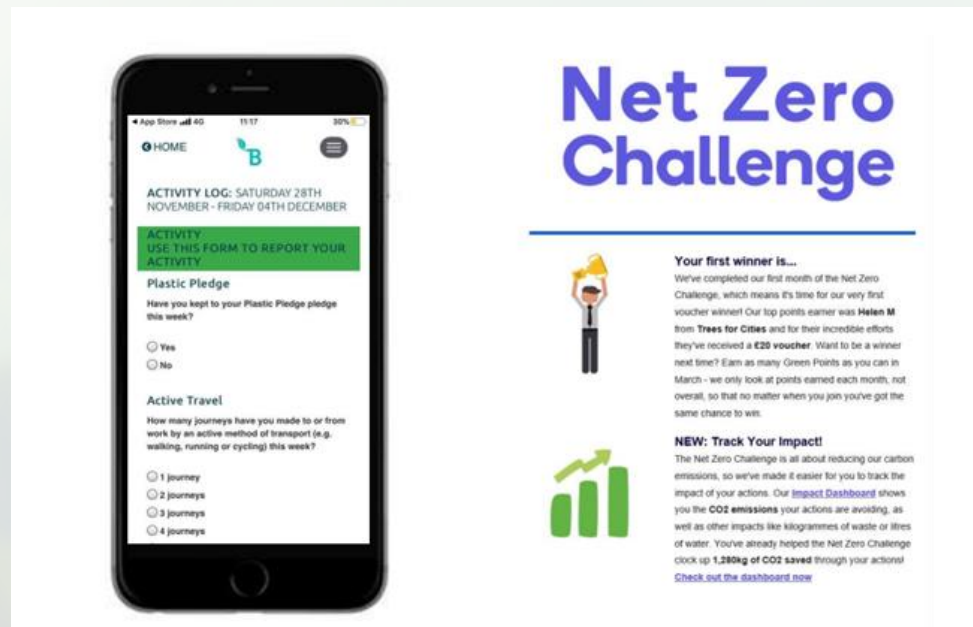
LED lighting replacement and controls	Staff awareness campaigns including 'shut-off' activity and inappropriate energy use
Replacement of motors & drives with variable speed devices	
Optimizing combustion set up in furnaces and boilers	'Back to basics' program for energy management which includes utilization of energy 'mini audits' in daily routines (part of 5S activities)
Reducing compressed air leakages and optimizing compressed air generation efficiency	

It is planned to implement the training in FY2024/3 as a combination of face to face and remote activities. This will extend the reach even further of the training activity to develop the necessary skills across the organization in support of the decarbonization and energy efficiency goals.

Energy

Employee Engagement Program – collaboration with JUMP

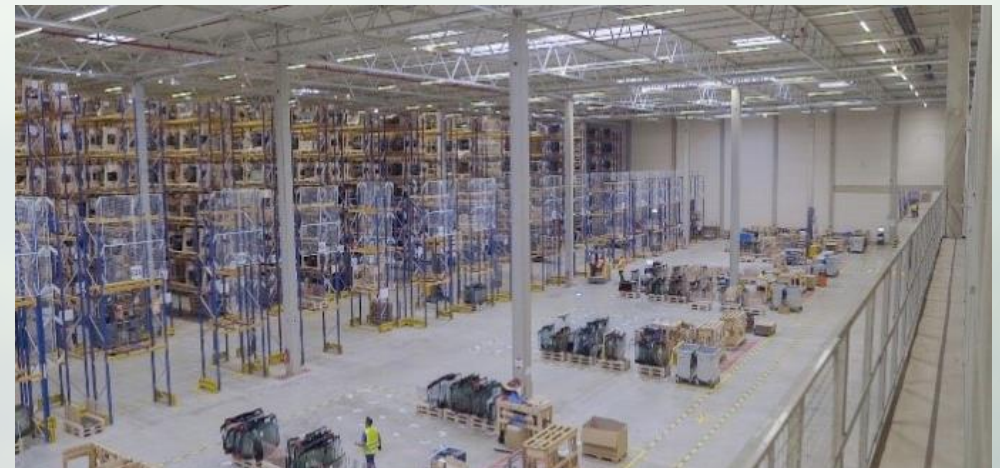
In 2021 we launched an energy & carbon awareness program for employees based at the NSG European technical center. This program utilizes a 3rd party software platform (JUMP) called the net zero challenge (Nzc). The Nzc offers simple ways in which people can be more sustainable, no matter where they are on their sustainability journey. It links activities in the workplace and at home, proving practical ideas and suggestions. Progress is measured against targets with participation encouraged by reward and recognition programs. In 2022 the program was extended across all UK operations. Through implementation of these simple measures, UK employees have delivered in excess of 7 tonnes of CO₂e reduction. While this is a very small fraction of the total UK emissions of NSG Group operations, the increase in awareness as a result of participating in the program is very significant and supporting the energy & carbon objectives of the Group



Heat Recovery In Poland Operations

A four step program was initiated at the Automotive OE operation in Chmielow, Poland to recover and utilize waste heat generated at various stages in the manufacturing process. Stage 1 and 2 involved the capture and recirculation of heat generated from air compressors on the site. Stage 3 focused on capture and utilization of waste heat generated from the air handling units providing conditioned air to the clean rooms for pre-lamination stage of the process. Step 4 started in FY2022/3 and continuing during FY2023/3 includes the installation of heat recovery units on the glass bending furnaces and utilizing this heat for generation of hot water for plant space heating. Total energy savings delivered by the project will be in excess of 2.5 GWh/yr and in excess of 1800 tonnes of CO₂ avoided for generation of thermal energy.

Over the past decade, the NSG Group has worked on improving its energy efficiency through energy management projects such as lighting upgrades, utilization of waste heat and innovative manufacturing equipment. This has created a platform in which the focus can shift from the reduction of energy consumption, to the integration of renewable energy projects to further improve the sustainability of its energy supply. Following a successful lighting installation project at our Gelsenkirchen site, we have seen significant advantages with the new LED lighting system as well as the savings it has generated for the business.



Energy

Solar Panel

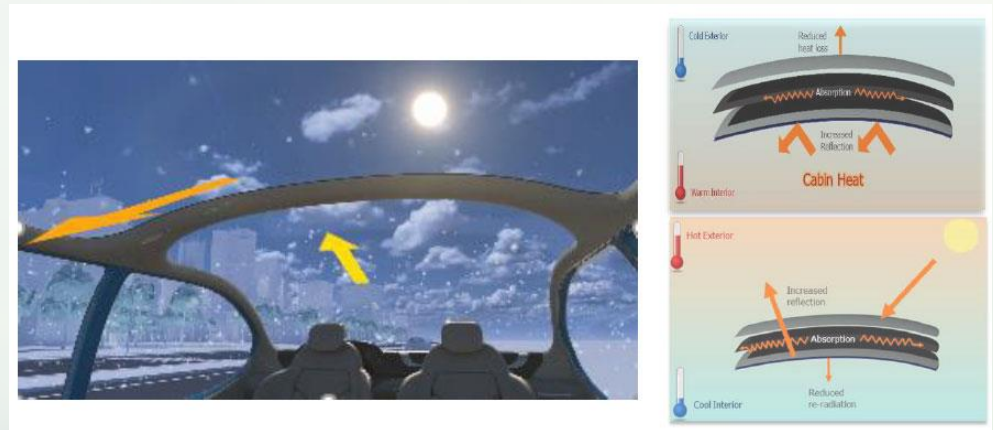
It is increasingly recognized that a move from fossil fuel is essential as supplies are finite and global warming is a reality. Solar energy panels offer alternative solutions for a range of energy requirements, from small scale domestic applications to large scale solar power stations, from cloudy northern rooftops to hot sunny deserts. Glass is an integral and important element of these solar panels. Our wide range of high-quality products are used in the three leading solar technologies aimed at converting solar energy into electricity: thin film photovoltaics, crystalline silicon photovoltaics and concentrated solar power applications. In addition to the generation of electricity, our glass products are also used in solar applications that generate hot water.



Solar Control - Rooflight of Low Emissivity online coated glass

NSG has launched its first high performance solar control rooflight that provides occupant benefits in both summer and winter conditions. A low emissivity coating laminated with a special solar absorbing interlayer has allowed the customer to remove the internal blind system on the vehicle - providing an energy saving coupled to weight and cost saving benefits.

The NSG Group will promote the introduction of alternative energy sources such as hydrogen in the manufacturing process, and will actively promote efforts to decarbonize by providing products for the renewable energy market and developing products that save energy.



Water

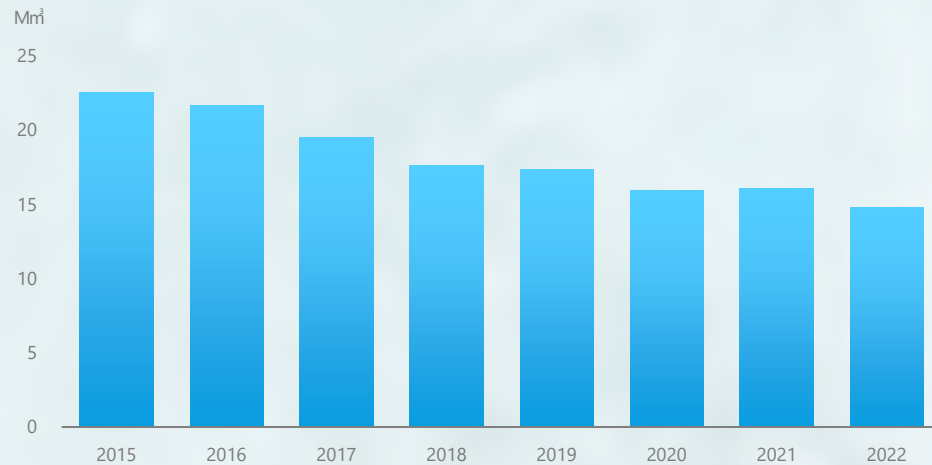
Water utilization and Water management

In glassmaking, 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 re-circulated. We seek to minimize our water consumption by working with suppliers to recycle water and to install advanced water treatment facilities. Processes are managed by Manufacturing Excellence's standardization procedures (e.g. turn off washer sprays when not needed, use optimal sized nozzles, install water catchers, implement controls to prevent overflows and maintain to prevent leaks, etc.). This not only reduces the withdrawal of water itself

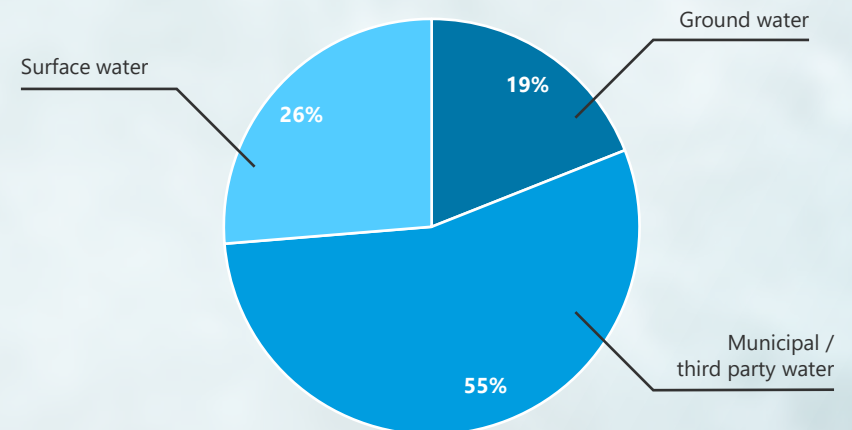
but also the chemicals used in the treatment of the water. Across the Group, water consumption can vary considerably according to process and product demands as well as water quality. Approximately 2.6m³ are required to manufacture one ton of float glass and approximately 0.12 cubic meters are required to process each square meter of automotive product.

We withdrew a total of 14.8 million cubic meters of water in 2022. This is 1.3 million cubic meters (8%) less than in 2021.

NSG Group total water withdrawal 2015-2022



NSG Group Water withdrawal by source 2022

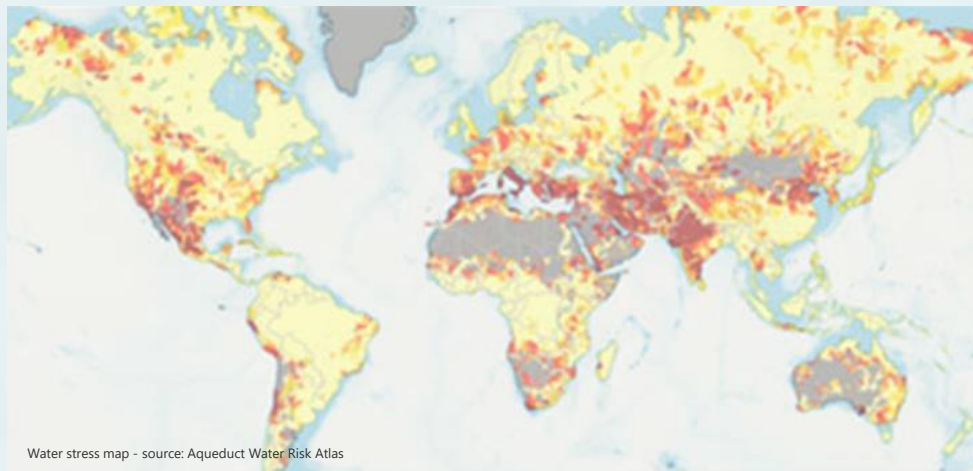


Water

Water risks

We do not have any current stakeholder concerns regarding water scarcity or wastewater quality. On the other extreme of water risks, flood planning and prevention strategies have been applied where indicated. Water risks do not register as significant in the NSG Group risk assessment process; however, we will continue to risk assess all facilities. The NSG Group Sustainability Committee reviews risk and performance and discusses related activities on water management. The NSG Group has implemented an extra Water Policy in 2020 to ensure a clear statement of NSG Group's approach to water stewardship and in order to address water quality challenges and the risks of water scarcity in support of the Group Sustainability and Environmental Policies.

In 2019 the NSG Group implemented a new and more sophisticated Environmental Reporting and Analysis database. All sites are reporting their specific information and water data into this central database for further aggregation, analysis and monitoring on corporate and site level. Our 2022 data reporting and reviews highlights that 9 NSG sites are located in water stressed areas in accordance with the global Aqueduct Water Risk Atlas. The water withdrawal at those sites represents 14% of the total in 2022. Those sites are subject to prioritized water management reviews and improvement activities.



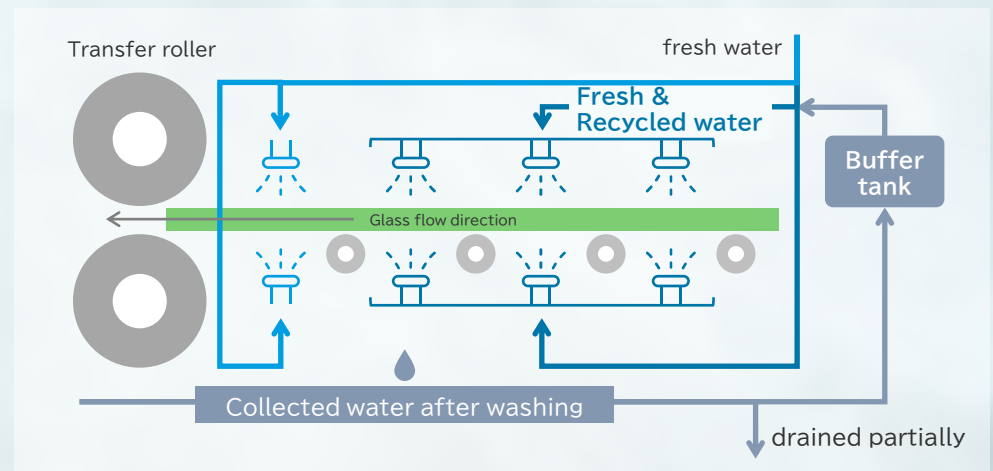
Water saving Projects

Amongst other good water saving projects, the water project at the San Salvo plant in Italy is extremely successful. The San Salvo plant is located in a potentially water stressed area at the east coast in southern Italy. Most of the utilized water for equipment cooling, glass washing and steam generation comes from a nearby river - with potential water scarcity in hot summer periods.

The recent improvement project had 3 steps: better water utilization, reuse optimization and the use of rainwater. All 3 steps lead to an overall reduction of water extraction from the river by 69% in 2022 versus the project baseline of 2019. The saved water from the river is now used by the local water supplier to produce drinking water for the local Community.

This project did win the Environmental Award of the NSG Group EHS Award in 2022.

Another significant water saving project got implemented at a Float plant at Hanoi in Vietnam. This includes a system to collect rainwater plus water recycling at a glass washing machine – resulting in a ~17% reduction of the water demand at this plant.



“Society Shift and Innovation” from an R&D viewpoint



Executive Officer
Chief Technology Officer

Mike Greenall

This is the last year of RP24.

When the Group announced “Our Vision”, five items were identified as Materiality, to attain sustainable growth of the Group and contribute to a sustainable society in the medium to long-term. The Group selected these five items according to their significance as assessed on a matrix measuring the impact on both society and the Group.

Environment

Society Shift and Innovation

Safe and High-Quality Products and Services

Ethics and Compliance

Human Capital

“Society Shift and Innovation” is one of those five items.

Our aspiration is to satisfy our stakeholders as we identify and interpret significant challenges to society. We will innovate in a timely manner to provide technology/product/service to the solution of those challenges. Revenue will increase as a result. To facilitate this, we will strengthen business development and the R&D function.

The focus of R&D’s approach to this important aspect of Materiality is guided by business strategy and the three areas of contribution set out in NSG Group’s Medium-Term Vision

1) Safety & Comfort:

To create people-friendly surroundings and a living space that is pleasant, safe, and healthy

2) Eco Society:

To create an eco-friendly world by various contributions such as a shift to renewable energy and lowering the usage of air-conditioning and heating

3) Information and Telecommunication:

To contribute to the development of information and telecommunication technology to make people’s lives more convenient and to support the advancement of the society

Within these focus areas we are concentrating our resources and investment on those core technologies where the group excels and where we can dominate the competition. Funding and allocation of resources is managed in a well-balanced and cost-effective way with priorities set in collaboration with each SBU.

R&D Policy

NSG has a long and successful record of developing and exploiting core technologies including areas of distinct competitive advantage such as float glass, coatings, glass fibers and flakes and automotive glazing fabrication.

NSG is working in partnership with others to develop basic science and to enable us to investigate emerging technologies relevant to our core competencies. The breadth of involvement ranges from long term partnerships with leading Universities in Japan and the UK, to facilitating start-up companies by offering access to NSG facilities.

The business plays an active role in the prioritization and planning of the project portfolio at a regional and global SBU level. In addition, executive reviews allow members of the management committee to monitor and guide R&D contributions to the Group.

“Society Shift and Innovation” from an R&D viewpoint

R&D Activities by Three Areas of Contribution

(1) Safety & Comfort

NSGs products contribute to user comfort and safety in many ways.

In buildings, both residential and commercial, glass plays a vital role in occupant comfort by helping to control temperature and light. The R&D function continues to develop new markets to allow the group to meet the different needs of climate zones around the world.

In 2023 we developed and launched HeatComfort™

HeatComfort™ is a range of glass products using the NSG Group technology of electrically conductive coatings to redefine the concept of comfort. In a market demanding a combination of greener solutions with avant-garde functions, the public's attention has been drawn to HeatComfort™ with its quality and sophisticated smart solutions. Using the Group's special NSG TEC™ coating, the HeatComfort™ line provides the perfect non-fossil heating element solution to warm a home cleanly and effectively with radiant heat.

All elements of the HeatComfort™ range can be intelligently controlled by sensors, handheld controllers, or smartphone apps.



Glass Panel heaters and towel rails with customisable decoration.

NSG Group has launched Pilkington Suncool™ Q

Its latest offering in a range that provides the most advanced solutions in new high performance solar control. With effective sun protection becoming more and more important, the right glazing not only protects against solar radiation in summer but can also help to reduce heating costs in winter.

The solutions offered by Pilkington Suncool™ Q provide architects with a host of aesthetic and practical possibilities. A superior solar control glass range with high colour-stability, low reflection, low angle dependence, excellent neutrality and superb selectivity, the range includes Pilkington Suncool™ Q 50, Pilkington Suncool™ Q 60 and Pilkington Suncool™ Q 70 – all offering various levels of light transmission and solar heat gain.

Crucially, the three different products can be used seamlessly in the same project. In this way, a façade with a uniform colour can meet a variety of different technical challenges. A building that is oriented in different directions can be equipped with various types of solar control glass products displaying a uniform appearance. For architects and planners, these properties result in very special design options.

Builders and architects can choose from a wide range of products to find individual solutions for modern buildings. In this way, structural requirements can be addressed flexibly



and the comfort for occupants can be maximised.

In the Automotive business unit, NSG continues to lead the market with the manufacture of precision formed windscreens that are combined with the latest generation of collision warning systems and augmented Reality Head up display projection systems. These systems provide drivers with timely warnings about road hazards. As the systems have increased in complexity the demands on the optical quality of the windscreen have also increased dramatically. NSG has been able to use our deep understanding of optics and glass forming processes to ensure that our glazing meets car makers demanding specifications.

“Society Shift and Innovation” from an R&D viewpoint

R&D Activities by Three Areas of Contribution

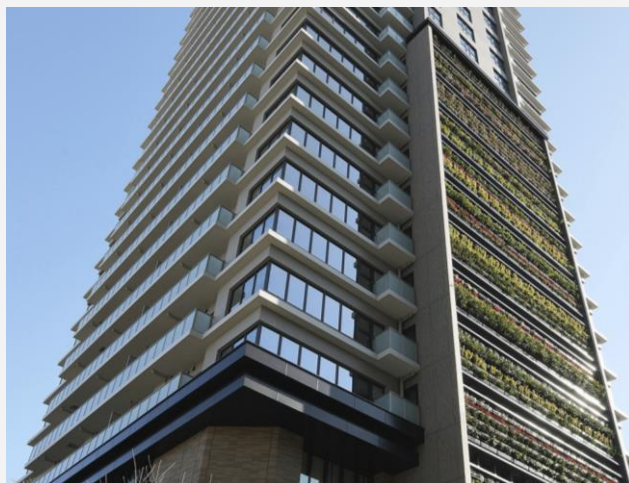
(2) Eco Society

NSG's products have a very beneficial impact on the environment. This is particularly true of our coated glass that is extensively used in thin film Photovoltaic devices. Continuous improvement to the NSG product gives direct improvements to PV cell efficiency.

Within the PV field a third generation of Photovoltaic technology is emerging. Perovskites are making a name as a potential route to low-cost high efficiency modules, similarly quantum dot could offer a low-cost manufacturing process. Plasmonic, and dye sensitized technology is being developed for low power IOT applications. Several customers are using NSG thin film coatings as the base layer for their devices and some of these are scaling up their operations ready for commercial launch. We are working closely with them to tune our coating to their needs.

Vacuum insulating glazing Pilkington Spacia™

We see an enormous opportunity to retrofit existing buildings with superior glazing materials that will improve thermal efficiency. Pilkington Spacia™ is a vacuum insulating glazing that is 75% of the thickness of a standard insulated glazing unit. It can be installed in thin frames and is particularly attractive for historic building renovations.



A building in Osaka, Japan where Super Spacia® is used

The Pilkington Botanical™ range for horticulture applications

Providing food to the world's growing population, while dealing with crop yields that are increasingly affected by climate change, and disruption to logistics chains is a challenge for mankind. NSG has continued to develop the Pilkington Botanical™ range of glass products for Horticultural applications, by striving to understand the needs of our customers and adapting our products to those needs.



Pilkington HortiClean™

Self-cleaning glass is the ideal sustainable solution for greenhouses where lower light transmittance may be acceptable in return for easier and safer maintenance and water saving. The durable coating of this product has photocatalytic and hydrophilic properties that remain unchanged throughout the lifetime of the glass. It reduces the need for manual window cleaning, saves water, eliminates the use of potentially harmful detergents, and increases the safety of people who could be endangered during maintenance at height.

Pilkington HortiGrow™ 98

A product for applications where it is important to maximize light transmission. By using an anti-reflective coating on both sides of the extra clear low-iron glass, the light transmittance can be increased up to 98%. This product offers exceptional durability over the lifetime of the glass.

“Society Shift and Innovation” from an R&D viewpoint

R&D Activities by Three Areas of Contribution

(2) Eco Society

Sustainability in Automotive Glass business

In the automotive sector Electric vehicles produce no exhaust emissions so they are able to offer our world a cleaner means of transportation.

Traditionally, the internal combustion engine is used to manage heating and cooling of the cabin area, but for an electric vehicle this is supplied using the energy stored in the batteries which significantly limits the vehicles range.

NSG continues to develop energy saving solar control and low emissivity coatings that allow reduced air conditioning and heating load on the battery.

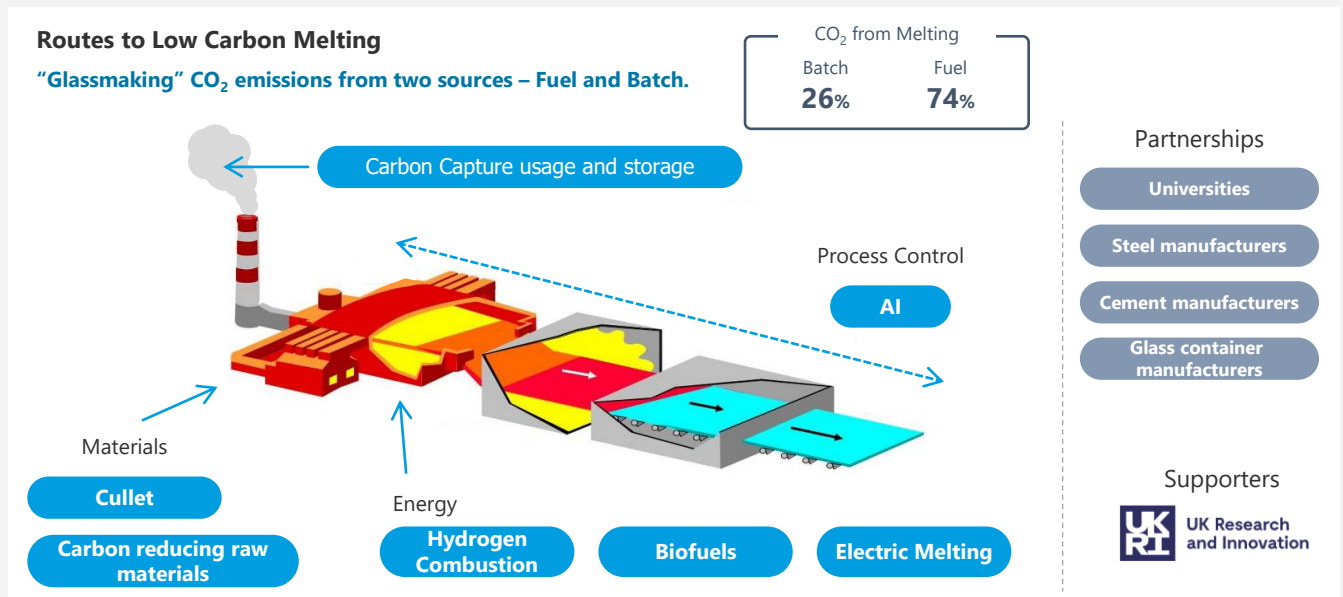
Technical Glass business – MAGNAVI™

Technical Glass business is also active to produce products relevant to Eco Society.

MAGNAVI™ is a new glass fiber product which has high modulus and specific strength while maintaining glass fiber properties such as heat resistance and radio wave transmission. It is expected to contribute to reduction of wastes and CO₂ emissions by application to lightweight of various components including aircrafts and vehicles or rehabilitated pipes.

Decarbonization in glass production processes

An important focus of R&D within our businesses is to research and develop technologies to reduce the energy consumption and carbon emissions associated with glassmaking. We are particularly conscious that we need solutions that achieve real reductions when considering scope 1, 2 and 3 emissions. A significant part of the overall R&D program is dedicated to this theme. We are funding research at leading universities. We are also leveraging the input of technology partners. The challenge to reduce carbon emissions is shared with other traditional industries such as steel, cement and glass container manufacturers. NSG is engaged in a number of cross sector projects, where consortia of industry and academia have come together to tackle common issues. Some of these projects have caught the attention of national and regional government and they have supported us strongly with advice and financial contributions. Over the last three years we have demonstrated the use of alternative fuels, alternative raw materials and continue to develop electrification and carbon capture. As a result of these advances NSG has been able to announce the launch of Pilkington Mirai™, a glass with a 50% reduction of carbon footprint compared with traditional float glass. The origin of the name is from a Japanese word which means “future”.



“Society Shift and Innovation” from an R&D viewpoint

R&D Activities by Three Areas of Contribution

(3) Information and Telecommunication

The R&D function is taking a lead within NSG to master new digital tools such as AI and Machine learning. We are using it to develop new materials and new insightful controls for our manufacturing processes. We are making extensive use of partnerships with world leading universities and national centers of excellence in this exciting field while at the same time training our scientists to use these tools effectively.

In automotive, NSG continues to supply customers with design and validation of on glass antennae. This field is digitalizing rapidly. We have been continuously working to improve our simulation capabilities to shorten development time and reduce the amount of in vehicle tests.

Technical Glass business has successfully developed ultra-thin type of SELFOC® Micro Lens with a diameter of 125 μm (0.125 mm), which is as fine as optical fibers to meet expansion of the all-photonics market where information is transmitted as light from networks to terminals. We expect that optical devices can be designed smaller, simpler and cheaper with its same diameter as optical fibers.

Invisible connectivity thanks to high-tech glass

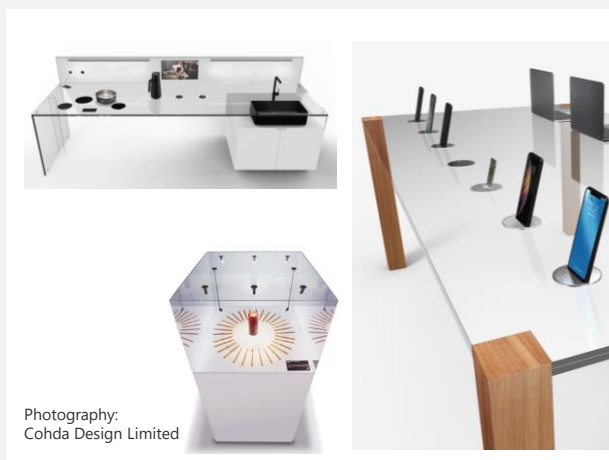
The NSG Group has collaborated with Cohda Design Limited (UK) to create new glass applications that deliver power to devices without the need for wires. The NSG Group supplies its NSG TEC™ electrically conductive glass to customers of Cohda, which combines the product with its patented Power-Tap® (P-Tap®) wireless power technology. P-Tap® technology allows electricity or data to be transferred wirelessly through a transparent conductive coating to power any device. This allows glass to act as a wire, transferring power out through contact alone. Electricity typically flows into the glass via a connection at the perimeter of the glass surface. This creates the positive and negative charge, which flows invisibly through individual layers within the conductive glass' lamination and into any connected device placed on apertures, or contact points, on its surface. The collaboration has a vast array of applications for designers, architects and engineers to locate powered

devices within transparent structures. Early applications have included retail, where in-store display stands can wirelessly charge electronic devices such as mobile phones and cameras; and in automotive, to power head-up display screens that are embedded in a vehicle's windscreen. For example, in art galleries or museums embedded LED lights can illuminate a glass display cabinet without aesthetically disruptive wires. In kitchens of the future, P-Tap technology can be installed in a clear glass counter, with power concentrated at various spots. This can provide induction heating for pans, power kitchen appliances such as kettles and toasters, and even charge your phone wirelessly, all on the same surface of glass. NSG TEC™ electrically conductive glass is ideal for use with P-Tap technology. The glass has high light transmission, durability of the glass coating and potential for thermal treatment, so it enables P-Tap technology to be used to meet a wide range of design challenges across different settings.

Intellectual Property Policy

The Group recognizes the importance of Intellectual Property (IP) in pursuing its business objectives and maintaining a competitive edge in its technical areas of expertise. The Intellectual Property team works closely with R&D and the SBUs to align our patent strategy with our business and R&D strategies. They actively manage the Group's IP portfolio paying particular attention to patents which are closely connected with our core and strategic businesses. Intellectual Property Rights for product developments and process technology developments are secured, maintained, and vigorously enforced.

The Group continuously monitors Third Party IP in its business field. Where appropriate, the Group will oppose the grant of such IP and will vigorously defend itself against unfounded allegations of IP infringement. Going forward, we try to improve patent quality, and obtain intellectual property rights that will better serve the interest of businesses.



Photography:
Cohda Design Limited

Safe and High-Quality Products and Services



Head of Manufacturing Excellence and
Global Head of Automotive Manufacturing
Stephan Rosebrock

Our Aspiration

Our NSG Vision is through innovation to become the most trusted partner in all industries that we work in. Our commitment to the delivery of Safe and High-Quality Products throughout their entire life cycle is of material importance to the achievement of this goal and this is reflected in our Group level quality policy. Our supporting programs focus on three key areas:

- Consistent Customer Satisfaction
- Right First Time Product and Service Introduction
- Operational Excellence



World Quality Day 2022

For the first time in 2022 there was a whole Group celebration of World Quality Day together with employees, customers and other stakeholders.

Consistent Customer Satisfaction

As a foundation for achieving consistent customer satisfaction and as the 1st Line of defense against our product quality risk NSG Group operates with management systems certified according to ISO9001: 2015 and IATF 16949 in all Strategic Business Units. NSG management systems are reviewed through a range of external and internal audits.

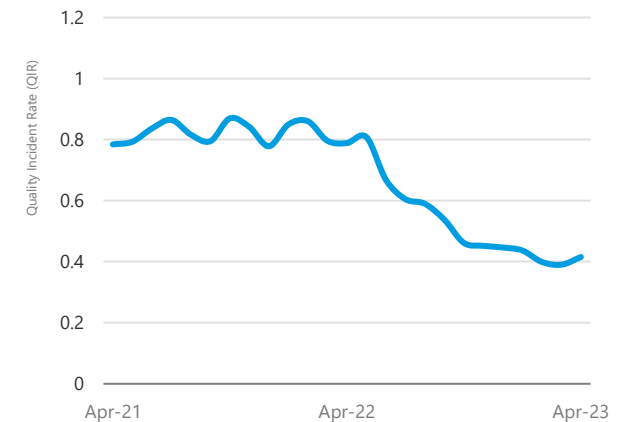
Our Manufacturing Excellence team provides a 2nd Line of defense with additional monitoring and creation of Group wide standards in key areas of risk. NSG Group Internal Audit team is the 3rd Line of defense focusing on risk-based audits of Group quality standards.

A quality incident rate (QIR) for the Group has been monitored since FY2022/3, incidents are classified by severity in a way that is aligned with the approach taken for safety incidents. A positive trend with a reducing rate of incidents has been seen reflecting the strong focus on the Pass Only Good Glass initiative and Lessons Learned

dissemination. During the past year there were no “S-Level” (most severe category) quality incidents within both the Automotive and Technical Glass SBUs.

*1 A measure of the occurrence of quality incidents affecting external customers with financial impact > 0.01 Oku as a ratio of sales

Fig.1 NSG QIR Trend



Safe and High-Quality Products and Services

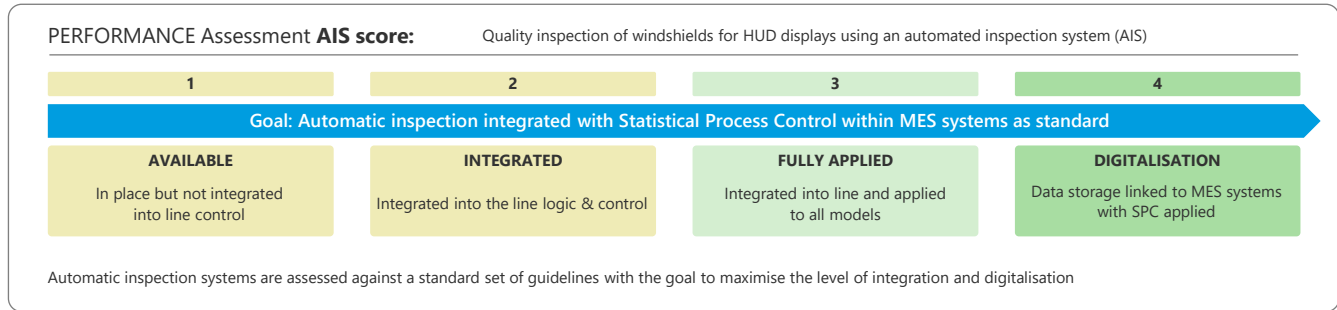
Pass Only Good Glass

The NSG key initiative to drive quality improvement is “Pass Only Good Glass” (POGG). The goal of the Pass Only Good Glass program is to improve quality and yield performance by stopping and preventing defects at source. This protects our customers and also allows us to focus on internal cost reduction. The Pass Only Good Glass program utilizes a toolbox of quality improvement methods within a structured approach working across the whole production environment. Prevention of defects using statistical process control and the implementation of automatic inspection systems (AIS) for monitoring of key quality characteristics are two focus areas for POGG, aiming to avoid the variability that is introduced by exclusively human control of product quality. In order to achieve the most positive impact of automatic inspection it is important that the systems used are fully integrated into the line operation with data utilized for both quality assurance and statistical process control. To support this goal guidelines have been introduced to validate AIS, this will provide a standard for roll-out of existing equipment and for the introduction of new inspection systems.

The development of additional inspection techniques to support continuous improvement for complex value added products is also a focus area, for example the detection of float glass defects that are outside the capability of standard on-line scanning systems.



Fig. 2 Microscopic defects on the float glass surface as small as 50 microns cannot be detected online but can limit the performance of some more complex products. New inspection systems are under development to support continuous improvement in this area.



Operational Excellence

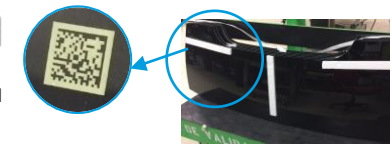
Our global Manufacturing Excellence focus drives improvement in our operations and the products and services we supply, guided by identification of the risks within our internal and external environment. ME360 is the NSG standard program to improve operations towards excellence. Sites complete a regular self-assessment against the ME360 criteria and develop a Manufacturing Excellence Improvement Plan (MEIP) based on their needs. NSG is pursuing digitalisation as a key part of our manufacturing improvement activities, through sharing best practice examples around the Group and collaborating with a range of organizations to find innovative solutions to existing challenges. To support further improvement a new ME360 section has been introduced to outline a site level Digital Transformation roadmap. NSG operates inhouse Manufacturing Execution Systems (including “Cortex” and “Sequoia”), integrating short term field data collection and real-time visualization with long term data storage and analysis. This links process and product information to a piece-by-piece traceability system, using digitalization to support quality control and process improvement.



Example: Traceability system in Automotive North America



Unique Glass QR code linked to piece-by-piece traceability



Suppliers

Overview of the Supplier Code of Conduct.

The Supplier Code of Conduct sets out the behaviors, procedures and processes that suppliers must follow and outlines the minimum standards we expect from our suppliers. Its contents have been communicated to all existing and new suppliers and we have obtained agreement to the Code from most of our key contracted suppliers.

The Code of Conduct includes key areas such as Anti-Forced and Child labor, Dealing with Conflict Minerals and Anti-Bribery and Corruption, and all NSG suppliers are responsible for following the principles of the Code.



Supplier engagement in 2022.

The NSG Group has been implementing energy efficiency programs through mutual global cooperation across the Group for more than a decade.

In 2021, we launched a new project focused on Scope 3 emissions and engaged with key suppliers to better understand supply chain CO₂ and to identify and share best practice with partners. This has resulted in improved accuracy of data collection and an increase in Scope 3 emissions reported in 2021 and 2020, with details of Scope 3 emissions by category in 2022 as shown in the chart below. To reduce emissions in the supply chain, the NSG Group has

undertaken a number of initiatives. For example, for raw materials, which account for around 17% of the Group's total CO₂ emissions, we have worked with key raw material suppliers to identify low-carbon raw materials, which have been successfully tested on a large scale on our South American float lines resulting in reduced CO₂ emissions as well as reduced energy consumption. We are also continuing to reduce carbon emissions in our supply chain by encouraging key raw material suppliers to shift to alternative fuels and promoting modal shifts in transport.

Contracts with suppliers

The NSG Group aims to establish clear and mutually beneficial business relationships with its suppliers of materials and services. We believe that this is best achieved by entering into appropriate contracts with all suppliers. All supplier contracts must be properly managed and approved within the NSG Group.

The NSG Group and its affiliates define their business relationships with suppliers according to the contractual terms and conditions set out in the Standard Terms and Conditions of Business (NSG Group Conditions of Purchase : PCP2) issued in 2008.

Category	CY2022 (tonnes)
1. Purchased Goods & Services	1,655,954
2. Capital goods	5,000
3. Fuel & Energy related materials	534,186
4. Upstream transportation & Distribution	60,750
5. Waste generated in Operations	32,743
6. Business Travel	5,065
7. Employee Commuting	2,000
8. Upstream leased assets	0
9. Downstream transportation & distribution	174,842
10. Processing of sold products	600,000
11. Use of sold products	0
12. End of life treatment of sold products	35,425
13. Downstream leased assets	0
14. Franchises	0
15. Investments	170,000
Other	0
Total all 15 categories	3,275,965

Suppliers

Sustainable supply chain

Supplier development.

The NSG Group monitors its suppliers' ESG rating indicators (KPIs) through EcoVadis* (an external organization that assesses supply chain ESG performance) to continuously improve the sustainability of its supply chain. The EcoVadis rating coverage of our key suppliers (based on weighted average purchase value) has steadily increased over the past three years, as shown in Figure 1 : 60% in FY2023/3, compared to the final target of 65% in 2024.

In FY2023/3, we also focused on suppliers with low EcoVadis scores and worked towards improving their scores. As shown in Figure 2, the overall average score increased from 59 to 61 and the number of low-scoring suppliers decreased. These results indicate that our strategy has been successful. Figure 3 shows the scores by category for the key EcoVadis themes: environment (ENV), labor and human rights (LHR), ethics (ETH) and sustainable sourcing (SUS). The number of suppliers with low scores has decreased compared to last year, showing an improvement in supplier scoring.

Fig1 3 Year Performance against Recovery Plan 24 Valid Scorecard Spend %

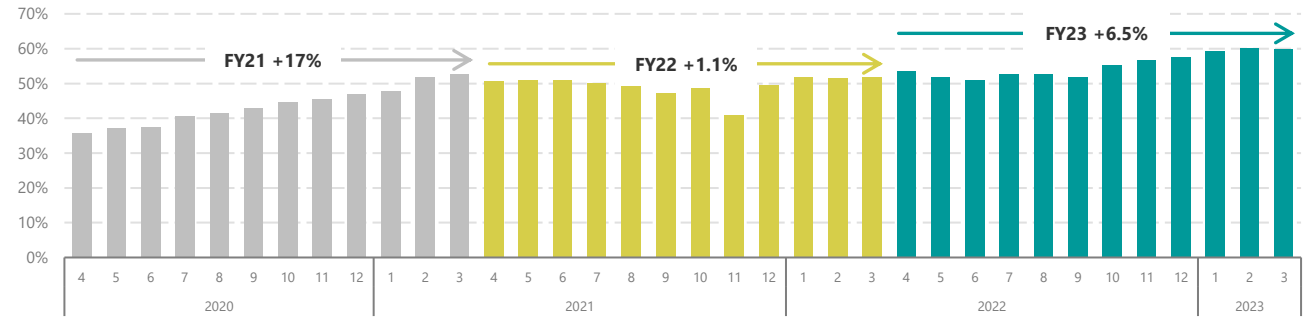


Fig2 FY23 - EcoVadis Score Distribution

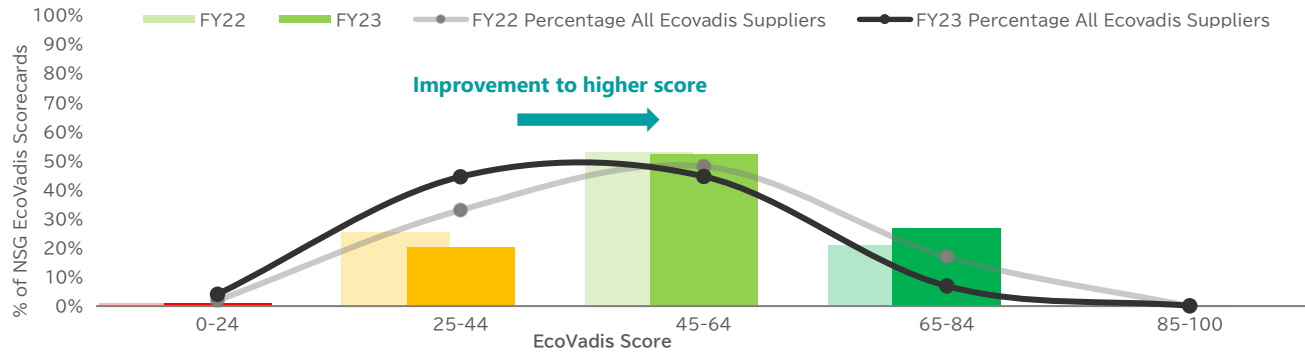
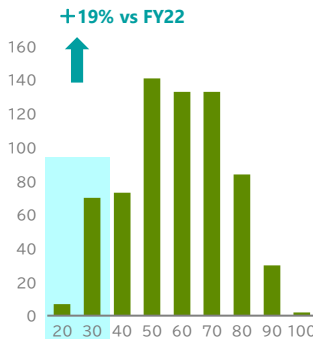
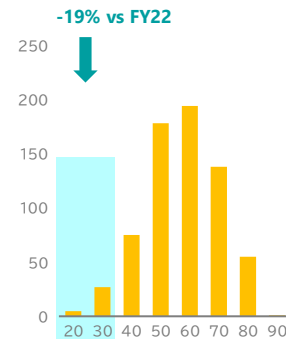


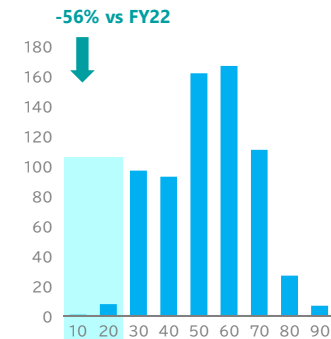
Fig3 ENV Score Distribution



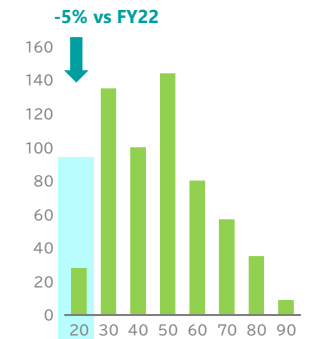
LHR Score Distribution



ETH Score Distribution

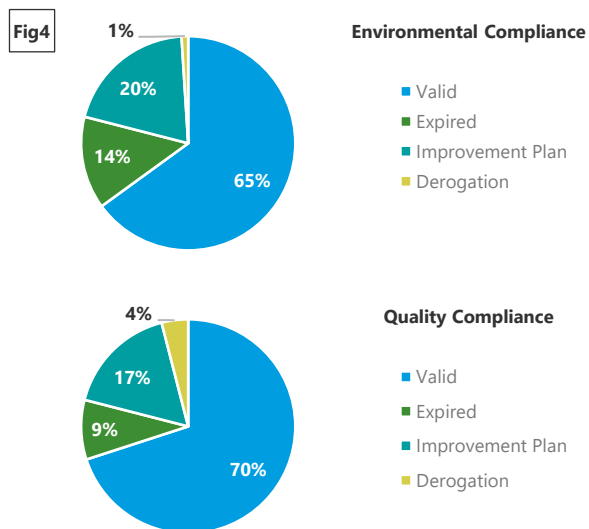


SUS Score Distribution



Suppliers

Special attention is paid to suppliers with a potentially significant impact on the environment (HEI: High Environment Impact). Suppliers in the HEI categories such as wood packaging, chemicals, etc. are required to sign and comply with a Supplier Code of Conduct, obtain ISO 14001 or equivalent national environmental certification and/or EcoVadis assessment. Also for wood, paper and corrugated packaging materials we strive to minimize the negative environmental impact of these suppliers by requiring them to obtain Chain of Custody (CoC) certification from the Forest Stewardship Council (FSC) or PEFC forest certification programs for their raw material suppliers, for example. Supplier compliance status in terms of environmental aspects, such as ISO 14001, forest certification and EcoVadis scores, and in terms of quality, such as IATF 16949 and ISO 9001, is shown in Figure 4.



ESG targets and training

NSG's Procurement Team, from Executive Directors through all levels, have S.M.A.R.T objectives (Specific, Measurable, Achievable, Realistic, Timely) related to the sustainability activities described above. They are also required to attend various training courses on ESG items such as NSG Code of Ethics, Anti-Bribery and Anti-Corruption (ABAC), Competition Compliance and, more recently, Fraud and IS Security. In addition, with the support of our long-term partner EcoVadis, we are conducting formal ESG awareness training sessions, including practical assistance on platform functions. In FY2023/3 the first training specific to Procurement processes was delivered to all non-Procurement Managers within NSG's global operations. Providing awareness and guidelines in support of direct working with suppliers will help deliver benefits in many areas not least competitiveness and compliance. Figure 5 illustrates the functional areas completing the training module in FY2023/3.

Fig5 Procurement training for non-procurement managers



Strategic approach to sustainable supply chains

In 2022 NSG established a new Procurement mission fully aligned with the Group's mission "Changing our Surroundings, Improving our World". The Procurement mission "Leveraging our Supply Chains, Improving our World" recognizes the vital contribution that our supply partners can make to the planet and society and also to NSG's own goals in the area of Sustainability. This section of our Integrated Report will set out NSG's ambitions in this area and provide some examples of the initiatives we are working on in partnership with our suppliers.

- We will;
- Align the supply chain sustainability strategy with the NSG Group's sustainability objectives
 - Ensure that NSG is recognized as a leader in sustainability in the supply chain
 - Assist in attracting and retaining NSG personnel
 - Follow international standard, ISO 20400: Principles of sustainable procurement.

As a first step we have published in September 2023 a Sustainable Supply Chain Charter outlining our long term aspirations and commitments as part of establishing and developing a fully sustainable Supply Chain. The Supply Chain Charter will also list the corresponding commitments expected of our suppliers and the KPIs we will use to measure their progress.

The Supply Chain Charter identified the following eight key sustainability impact themes as having the greatest impact on the supply chain.

1. Reducing Greenhouse Gas Emissions
2. Protecting the Environment
3. Protecting labor and Human Rights
4. Reducing Wastes
5. Conserving Water
6. Improving Transparency
7. Supporting Diversity, Equity, and Inclusion
8. Supporting Communities

Suppliers

For each theme, we have set four key elements: commitment / expectations of suppliers / joint aspirations, which is what we and our suppliers aim to achieve together / KPIs to measure progress. We also conduct risk heatmap analysis to establish priority themes by procurement category and region. For more information, see Risk Management - Sustainable supply chains.

In parallel we are accelerating our efforts to reduce our Scope 3 carbon emissions in line with the publicly announced 30% target as shown in Figure 6. The maturity of Procurement ESG objectives is illustrated in Figure 6. This activity has a strong cross functional governance in place, reporting directly into the Group's overall Sustainability Committee, chaired by the CEO.

External evaluation in FY2023/3



We are very pleased to announce that as in FY2022/3 we were again recognized that our efforts in working with our suppliers to improve in areas of ESG have been endorsed by an external assessment. We have been recognized by CDP in their most recent evaluation for CY22 as a Leader in Supplier Engagement. This places us among the top 500 companies worldwide (out of a total of more than 13,000+ companies assessed), including 105 from Japan. CDP is a non-profit organization that manages a global disclosure system for investors, companies, cities, states and regions to manage their environmental impact on climate

change, water security and deforestation. We use EcoVadis to cover and assess not only our procurement base, but also the requirements of our customers and investors. On the subject of 'sustainable sourcing', we have managed to raise our score from 60 to 70 out of 100 points. This places us in the top 3% of the glass industry.

Sustainable Procurement score distribution

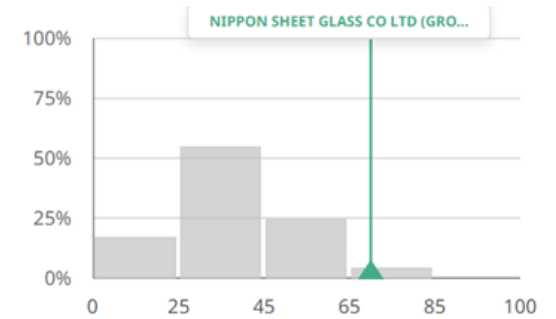


Fig6

Group Procurement - ESG Objective Maturity

	FY20	FY21	FY22	FY23	FY24	FY30
Initiatives to focus on in the relevant year	Simple KPIs	Maturing KPIs	Identifying Risk	Mitigating Risk	Sustainable Supply Chain	Delivery of Goals
EcoVadis	Target Spend Coverage by weighted average based on purchase price Average Score Average EcoVadis rating score of major suppliers	<ul style="list-style-type: none"> Procurement Team formal objectives. 	<ul style="list-style-type: none"> FY21 plus: 	<ul style="list-style-type: none"> FY22 plus: 	<ul style="list-style-type: none"> FY23 plus: 	<ul style="list-style-type: none"> FY24 plus:
other	Key Supplier Targets					
	50% spend 50% score	55% spend 55% score	60% spend 60% score	65% spend 60% score	60% score	60% score
		<ul style="list-style-type: none"> Education & raining of Global Procurement Team 	<ul style="list-style-type: none"> Improvement through supplier collaboration 	<ul style="list-style-type: none"> Low score action plans. 	<ul style="list-style-type: none"> Additional to EcoVadis Deliver Sustainable SC strategy based on ISO methodology. Publish Supply Chain Charter. Finalize Long Term sustainability Targets. Deliver 50% NSG Renewable Electricity Finalize Roadmap for Scope 3 CO₂ target Implement Intelligent Risk Mapping 	<ul style="list-style-type: none"> FY24 plus: Deliver 30% Scope 3 CO₂ reduction vs 2018 baseline Target 85% Renewable Electricity Aspire to 100% Renewable Electricity Deliver all objectives resulting from FY24 strategy. Integrated Supplier Risk Management system Supplier diversity programme fully embedded.

NSG Group has also taken the step in FY2023/3 to join the League of Champions within the Sustainable Procurement Pledge (SPP) organization. This network of individuals and companies is driving the agenda on Sustainable Procurement and Supply Chains. NSG is proud to join this group to help drive the program for Sustainable Procurement forward with even greater speed.



Let's drive change. Together.



"Sustainable Procurement Pledge - Let's drive change. Together" (Spp.earth)

Ethics and Compliance

Transparency In All That We Do

Working ethically and safely is essential for NSG Group to be sustainable.

NSG Group has in place the Group Ethics and Compliance (E&C) function and implements ethics and compliance programs in accordance with "Fundamental Policies of the Company on creation of effective internal control system of the Group" established by the Board of Directors.

The Group E&C function supports the Group in achieving its goals by assessing and analyzing ethics and compliance risks and establishing ethics and compliance programs that align with the Group's strategic goals to ensure the success of our business. In line with these objectives, more specific key performance indicators (KPIs) have been developed to help measure the effectiveness of the ethics and compliance program on page 32.

Code of Ethics and Education

The [NSG Group Code of Ethics](#) broadly covers the ethical behavior expected of our employees in the workplace, including compliance with all laws and all major Group policies, procedures and guidelines. The Code is available in all 19 Group languages.

The Group's new employee education is to cover not only the Code of Ethics, but also conflict of interest, fraud and IS security. Even for other existing Group employees, the IS security education is mandatory. Key Roles for competition law compliance (CC) and anti-bribery and anti-corruption (ABAC) are also required to complete the relevant online education. In FY2024/3, NSG Group enhanced its education interface and changed the name from the "NSG Ethics & Compliance Education Center" to "NSG Learn". This change reflects the growth of our education platform which now houses more various modules. The education modules will be assigned to the Group employees accordingly through the NSG Learn. We will continuously monitor its effectiveness as well as the completion rate of the educations.

FY2023/3

1,419

New starters completed the training packages at their onboarding

FY2023/3

4,472

Key Roles completed the CC and/or ABAC trainings accordingly

Ethics Network

A Global Ethics Network is aimed to enhance 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.

47

Ethics Ambassadors across SBUs and Functions all over the world

Ethics and Compliance

Group E&C Function and Communication

Group E&C has a direct reporting line to NSG Group 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.

Group E&C function has regional structure with 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 puts importance on local communications to reach out to local business/function people, liaising with the relevant Ethics Ambassadors and Champions.

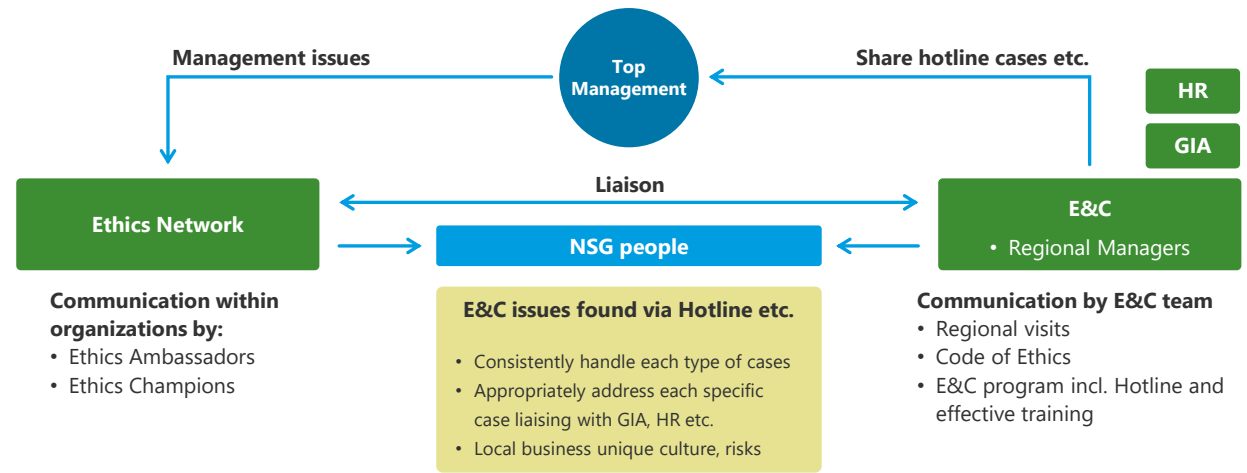
The Group has set Ethics and Compliance Week every year since FY2022/3, which reconfirms our commitment to ethics and compliance, raising awareness of its significance for the Group business. Various events are held throughout the Group organizations such as message videos from the executive officers and senior managers including C-suite, daily communications, regional activities and relevant online educations during the Week. The theme of the last year's E&C Week was "Make Respect Visible" to focus on the importance of respecting each other to accomplish each assigned task effectively and efficiently as a team so that we could achieve the business targets. The theme for this year is "Integrity Builds Trust." NSG Group's Core Values state "Exemplify Trust and Integrity." We cannot build trust among the team without integrity. In this regard, integrity can be essential for ethical and sustainable business and be the foundation of our business activities. Some feedback which we have received last year showed concerns about "respect" which also had to do with integrity. It is felt

difficult, however, to define what integrity specifically means in the context of daily business activities. We will discuss through the Week what "integrity" means for us, how it helps us build "trust" and what we should do in our workplace.

In FY2023/3, additionally, each E&C regional manager visited major production sites in their regions to reach out to the shop-floor workers there trying to make more direct and better communication with them about ethics and compliance.

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, which is also made available on the Group's Intranet. In addition, each regional E&C manager issues regional E&C newsletter to the relevant local employees.

Group E&C shares 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 and even business performance while taking care of its confidentiality.



The global structure towards effective solution to Group E&C issues

Ethics and Compliance

Conflict of Interest Disclosure

Under our Code of Ethics, all employees are responsible for acting in the best interest of the Group. Employees are required to disclose any interest, activity or investment which actually or potentially could cause conflict against that of the Group. Group E&C reviews all reported disclosures and discusses certain matters with the relevant business or function managers if necessary. Feedback is provided to all reporters and in some cases, possible plans to mitigate exposure are also provided.

Activities for Competition Law Compliance and Anti-Bribery/Anti-Corruption

Regarding certain high-risk areas in the Group business such as competition law compliance (CC) and anti-bribery and anti-corruption (ABAC), NSG Group establishes and controls relevant policies, procedures and manuals. These internal rules stipulate a wide range of matters accordingly such as specific types of prohibited actions, the necessity and importance of compliance, and the impact of any violations to ensure that the Group conducts business in compliance with relevant laws of all countries where we operate.

There were no violations of competition law and anti-bribery and anti-corruption law in FY2023/3.

As mentioned in "Code of Ethics and Education" above, employees who meet the Group's criteria for CC and/or ABAC risks are appointed Key Roles accordingly and required to complete the relevant online educations at onboarding and annually, which includes explanations of the applicable laws and regulations and internal policies and requirements under the ethics and compliance programs as

well.

Further, to ensure transparency of employees' actions, NSG Group policies provide reporting requirements about CC 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, (CC risk controls), make charitable contributions, give or receive certain amount of gifts and entertainment, do businesses with third parties, and interact with public officials (ABAC risk controls). E&C regional managers confirm or approve the specific requests and notifications considering their regional or countries' risks.

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 and 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 Code of Ethics policies/procedures or guidelines.

For this purpose, [the Ethics and Compliance Hotline system](#) provides an easy and simple way to report concerns, while employees are encouraged to speak to line management, HR or other relevant functions first.

This Hotline system is also available for any stakeholders outside the Group.

Managers who received the report from their colleagues must file the designated reporting form (Manager's Report

Form) or report it directly to Group E&C if they believe that it has a potential adverse or negative legal, financial or reputational impact on NSG Group.

Since inception in FY2013 there had been 813 reported concerns managed via the Ethics and Compliance Hotline system as of the end of March 2023. FY2023 experienced 175 allegations reported via the Ethics and Compliance Hotline and Manager's Report Form. NSG Group constantly measures the effectiveness of the system by using the metrics against the benchmark region by region.

Hotline

Open to third parties

Anonymous report is acceptable unless prohibited by law.

7/24/365/Multiple languages

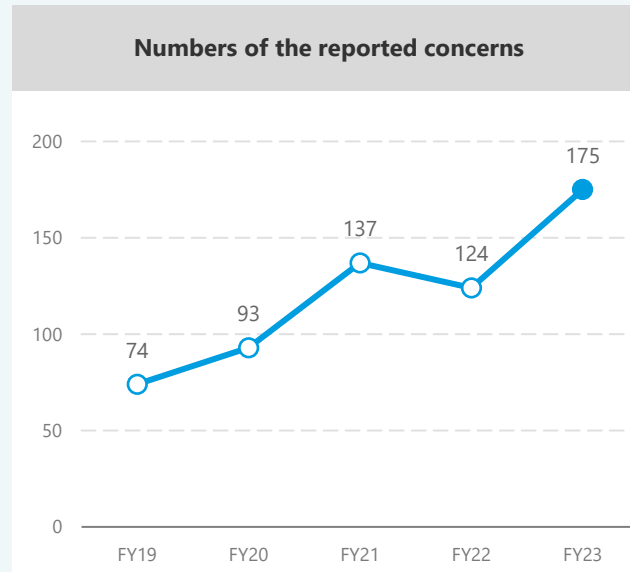
Toll free

Anyone can ask questions.

Operated by a qualified third party with a data privacy module

Ethics and Compliance

Categories of the reported concerns	
Accounting and Financial Reporting	1%
Misuse, Misappropriation of Corp. Assets	2%
Environmental, Health & Safety	12%
HR, Diversity and Workplace Respect	66%
Business Integrity	19%



You can see the general trend of increasing numbers for the last few years. We understand that the recent actions have contributed to such increase of the reported cases: such as creation of or revisions to the relevant policies and our constant and continuous communications regarding the Reporting of Concerns System including Hotline through various channels like the aforementioned newsletters and online educations. The Group Policies on Ethics and Compliance and Reporting of Concerns which were revised in FY2021 more clearly define the managers' reporting requirement and the process of the case investigation and its follow-up. We established the Group Anti-Retaliation and Reporter Protection Policy which more explicitly provides that the Group never tolerate any form of retaliation against those who report concerns in good faith.

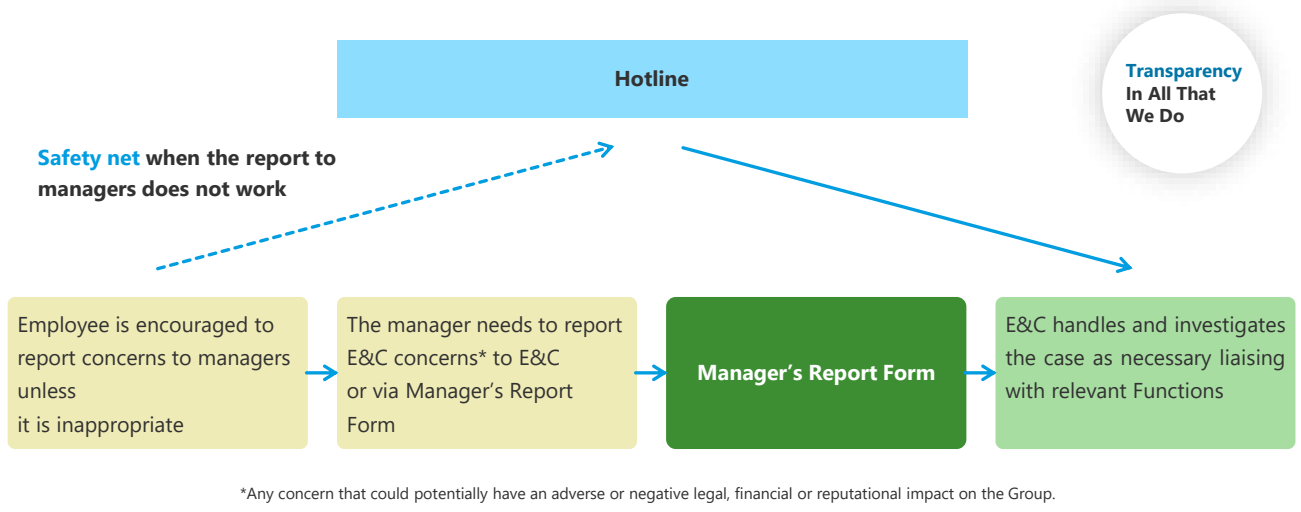
This global Hotline would be also deemed as "Internal Whistleblowing System" for NSG and its consolidated subsidiaries in Japan in the context of the revised Whistleblower Protection Act of Japan coming into effect on June 1, 2022.

We will continuously strive to embed "Transparency In All That We Do" committing to more open corporate culture.

Reports to Management Committee and Audit Committee

Group E&C reports to not only Management Committee but also Audit Committee which consists of Independent External Directors, periodically or on as-needed basis, on status, progress and issues of the above-mentioned ethics and compliance programs.

To embed transparent and fair corporate culture into NSG Group how does it work?



Human Resources



1. Alignment of People Strategy with Management Strategy

NSG Group is addressing "Human Capital" as one of material issues (materiality) defined based on Our Vision, the new management principles set forth in 2018 to attain sustainable growth of the Group and contribute to a sustainable society in the medium to long term. People are the "capital" indispensable for the company to maintain business activities. NSG Group considers having corporate culture, personnel system, and workplace environment in place so that employees can find opportunities to "grow" and "find joy in working" is the goal of "Human Capital Investment" and has instituted the office of Group CHRO to enhance the effectiveness and efficiency of such investment to keep driving its growth under the "Human Capital Management". NSG Group has identified six pillars of the People Strategy in alignment with Our Vision, 'Strengthen the senior management layer as One Team', 'Conduct open, transparent and interactive organizational management', 'Provide development opportunities including re-skilling', 'Promote Diversity, Equity & Inclusion (DEI) as a "source of new ideas"', 'Foster a sense of community that strengthens the bonds to the Group' and 'Keep improving our evaluation / compensation scheme for better retention, development, and recruitment'.

Human Rights, Well-being

Among the six Core Values set forth as the basis on which we work and conduct ourselves, "Respecting others and unleashing their potential" is the value we are committed to first. NSG Group has always valued Sumitomo's philosophy of "People are our most important asset" since its establishment in 1918.

Also, the second Core Values set forth "Exemplify trust and integrity". "NSG Group's Code of Ethics" which embodies it defines safety, respecting human rights, taking personal ownership for actions and communicating with openness and involvement as behaviors expected of all employees. NSG Group's Code of Ethics acknowledges internationally proclaimed human rights explicitly. Our Equal Opportunities and Diversity policy prohibits discrimination based on race, color, creed, religion, beliefs, age, gender, sexual orientation, national origin, disability, union membership, political affiliation, or any other status protected by law.

We have also focused on Safety and Health as a top priority for NSG Group employees. Personal information about health must be handled with particular attention to privacy, which necessitates different ways of handling the matter not only culturally but legally between countries and regions. Thus, HR related actions concerning health are limited to Japan so far. We will provide further details in a separate section.

Respect for these human rights and wellbeing is the premise of the HR strategy, on which the six pillars have been formulated.

Human Resources

Human Rights, Well-being

1. Strengthen the senior management layer as One Team

The first pillar of the HR Strategy is "Strengthen the senior management layer as One Team". In the Medium Term Management Plan "Revival Plan 24" announced publicly in May 2021, NSG Group explained to realize Corporate Culture Reform as one of "Three Reforms". But in our Employee Survey "Your Voice" conducted in January 2022, its result showed that one third of respondents are not satisfied with the current company culture and the way leaders behave.

The Group senior management team got together in the UK for a leadership workshop in October 2022. They spent time discussing how they can support the Company's culture reform. Based on the idea that to change the culture we should change our own behavior not just say we will change it, and that any changes in the Group should start from the top, the senior leadership team agreed the Leadership Behavior Charter which declares that 'the senior team will change their own behavior'.

The Leadership Behavior Charter comprises the following ten declarations of action.

The Leadership behavior Charter

- I will challenge the status quo to make a better future for our people
- I will be approachable and communicate openly and honestly
- I will communicate our Vision and direction clearly
- I will listen carefully when someone wants to discuss an idea
- I will empower and support people to reach their full potential
- I will show my appreciation and give praise to all colleagues
- I will act quickly to address the needs of business
- I will make decisions quickly, openly communicating the criteria for decision making
- I will promote a diverse team and value an inclusive workplace
- I will commit to an open, safe, ethical and sustainable way of doing business

I support the team. I value One Team.

In the process of discussion, various opinions were expressed from various viewpoints and the discussion was heated, but, in the end, the Senior management team agreed with the Charter. And we believe that this process is also linked to the 'One Team approach'. We plan to hear from employees in the next "Your Voice" in 2023 to see if the Senior management is taking the initiative in adopting behaviors to deliver culture change.

It is important that succession plans for Senior management members are developed and realistic. The plan is discussed annually by the Nomination Committee chaired by External Director with regard to options and activities likely to be taken to improve the quality of the plan, including promotion of candidates' readiness, development of potential, clarification of concerns and gaps.

2. Conduct open, transparent and interactive organizational management

NSG Group defines 'corporate culture' as the culmination of the tendencies of each employee's thinking and behaviors, and believes that a robust corporate culture can be fostered by encouraging changes in thinking and behaviors through 'dialog' between management and the fields, superiors and subordinates as well as among colleagues.

The prerequisite for this is that employees have access to the necessary information and are open about their thoughts, which improves the quality of dialog, leads to improved performance, growth and satisfaction for employees, and improves the NSG Group's output. We have set ourselves the challenge of creating such a highly engaged environment.

Munehiro Hosonuma, CEO since April 2023, shows his philosophy 'Flat', 'Frank' and 'Fast' which means Flat organization, Frank communication Fast decision making. And he also highlights the importance of 'Fun' at our workplace.

'Flat' and 'Frank' are particularly important elements in promoting to 'Conduct open, transparent and interactive organizational management'.

NSG Group launched the "NSG Listening Strategy" since 2022. We have set 'Let's Focus' and 'Let's Talk' sessions in our 'Your Voice' employee survey. The survey results which were circulated to Global SBU/Function Leaders were shared with their managers in all 28 countries during the 'Let's Focus' session, and managers discussed necessary actions with their own team members during the 'Let's Talk' session. We are encouraging employees to change mindset and behaviors through the dialogs in 'Let's Talk' sessions hosted by each department and workplace. In addition, ideas and suggestions for the reform presented by team members have led to improvements in the working environment. The new HR Strategy in FY2024/3 also reflects the voices from the dialog of 'Let's Talk' session.

After the formulation of the Medium Term Vision and the Medium Term Management Plan RP24, we have continued to hold dialog sessions with our employees such as a number of NSG Summits to improve communication with our global leaders and Town Hall meetings for middle managers around the world to understand and share about the direction NSG Group should take.

To realize efficient dialog between superiors and subordinates, we have been helping managers develop competency for coaching and feedback to their subordinates.

We believe that through these activities, we can boost employees' self-esteem and self-efficacy for culture reform and improve our work environment.

Human Resources

Human Rights, Well-being

3. Provide development opportunities including re-skilling

In 2018, we introduced Talent Management as part of our wider Talent Strategy supporting the Group's Vision and Values. We migrated key global talent records and data to a group-wide talent management system, while at the same time providing all managers with comprehensive training on talent development processes. We introduced of our NSG behavioral Competency model with the aim of deepening the Performance Review discussions for employees in 2019. These initiatives have led to an increased transparency of employees' performance reviews and succession plans with the management sharing talent data irrespective of countries, regions or business units.

Our goal toward 2024 is to embed the knowledge and application of Talent Management practices in the workplace and to develop leaders at all management levels, who have the ability to realize the Medium Term Plan 'RP24'. We invest in Human Capital in specific areas of the NSG Competency Model, which align with the RP24 Corporate Culture reform - 'Customer Focus', 'Swift decision making and action' and 'Overcoming difficulties'. At the same time, we will also provide employees with reskilling training in areas such as digitalization, marketing, and new business development necessary for the reform. Through on going training, we have been promoting the transition of our Group programs from face to face learning events to appropriate mix of 'Blended Learning', which includes virtual class rooms, action learning sets and coaching.

In terms of hierarchical talent development, our particular focus will be on accelerating Regional Talent pool, the population below Global Talent. By holding regular Global Talent Meetings, we aim to strengthen the identification and development of talent who will evolve into Global leaders in the future. Especially in Japan, where our headquarters is located, the number of candidates for global management

positions registered in Succession Plans is currently declining. To address this issue, AP (Acceleration Pool) meetings will be launched in Japan in 2022 with a view to accelerating the identification and development of younger talent in their 20s and 30s who will be ready to assume Regional or Global management roles beyond national borders in the next 10-15years. We will also create individual development plans (IDP) for the target group and implement measures such as cross-department transfers, special trainings, and assignments to project teams.

4. Promote Diversity, Equity & Inclusion (DEI) as a "source of new ideas"

Fostering a culture that recognizes and embraces diversity is essential to reforming the NSG Group's corporate culture. In 2023, NSG Group has announced that we formulated the Diversity, Equity & Inclusion (DEI) Policy that develops and evolves Equality into Equity to enhance and accelerate the Group's current State of Intent to promote Inclusion & Diversity. We will discuss and respond to diversity from various perspectives, including not only the promotion of female advancement and employment of persons with disabilities, but also generational diversity and diversity in individual careers.

NSG Group is developing its business globally and sees its great strength as having human resources from diverse countries, regions and cultures. In order to integrate them and make them a "source of new ideas", we will fully support activities in each region, as described below.

5. Foster a sense of community that strengthens the bonds to the Group

The spread of Covid 19 has promoted diverse ways of working, including remote working. This has also triggered a renewed awareness of the importance of communication and interaction with people in traditional ways of working. Now that the restrictions on face-to-face events have been greatly

relaxed, we will revive and enhance those events and promote communication across departments. We believe that through experiences that differ from daily work, a sense of belonging to NSG Group will be heightened, and this will lead to individual employees taking more responsibility and initiative in their own work. It also provides an opportunity to interact not only with employees, but also with their families and communities. Online communication has the great advantage of enabling employees who are far away from each other to connect easily, and we will combine the two effectively to realize a variety of communication. In FY2022, nearly 300 events will be held across the NSG Group.

6. Keep improving our evaluation / compensation scheme for better retention, development, and recruitment

In 2018, NSG Group switched its performance appraisal system from a five-point relative rating scale to a four-point absolute rating scale. As we approach the fifth year since the introduction of the system, we are reviewing its operation with the aim of further promoting employee development and increasing engagement in the reform process, in light of the changes in the current situation and the business environment at the time of its introduction. Specifically, we will review the institutional wording of the employee's evaluation of areas that need improvement so that the employee perceives it positively, and we will also work on a set of measures to improve the communication skills of the employee from his/her supervisor.

We will also discuss career tracks and incentive schemes for professionals who despite their skills and experience indispensable to the Group are currently delayed in their promotion or pay raise because they are not on the management track, with a view to rewarding them in a fair manner for their contributions and increasing their retention.

Human Resources

2. Efforts to Quantify As-is and To-be Gap

In RP24, we explained the following actions to be taken to realize Corporate Culture Reform: “development and appointment of those who can lead reform (Diversity, Equity & Inclusion)”, “recognition of delivering on the reform through incentive schemes”, and “encouragement of open communication b/w management and frontline / region / business units”. We decided to approach these actions in three steps: 1) identify and quantify people/organizational issues to make indicators; 2) develop and implement HR initiatives for the reform and improvement; and 3) monitor changes in the indicators on a regular basis to check the effectiveness and efficiency of human capital investment.

In order to identify and quantify issues, we conducted an employee survey with questions about leadership, engagement/motivation, reward, customers, culture and behaviors, and NSG values in 2022. The “Your Voice” survey targeted all 27,845 employees in 28 countries, including those working at manufacturing sites, by ensuring easy access to the questionnaire not only from company PCs but also from personal smartphones using a two-dimensional code. 66% of

employees (18,292 employees) responded.

When the survey results were benchmarked against the industry median for similar sized global manufacturing companies in the database of HR consulting firm Willis Towers Watson, it was found that we have a lower percentage of employees with a positive perception of the company in the following three areas related to human capital.

The first area is “Engagement/Motivation”. With respect to the current status, 73% of our employees gave positive feedback vs. the benchmark of 84%. Further analysis showed that “employees feel proud to be a member of NSG Group and determined to face current challenges; however, they cannot be optimistic about the company’s future, which is leading to lower engagement”.

The second area is “Reward”. Benchmark of positive responses was relatively low at 59% vs. NSG even lower at 48%, indicating that less than half of our employees have a positive opinion of the current reward. Further analysis showed that “while employees understand that the company is working to improve compensations, they are concerned about having

fewer opportunities for promotion and personal development”. The third area is “Culture and Behavior”. 67% of NSG employees gave positive ratings vs. benchmark of 79%. Further analysis showed that “one third of respondents are not satisfied with the current company culture and the way leaders behave”.

We will collect continuous employee feedback through such surveys to achieve “Corporate Reform” set forth in RP24. In the second “Your Voice” in 2023, we will use the percentages of positive feedback received in the three areas described above in 2022 survey as indicators and monitor the effectiveness and efficiency of human capital investments made in key initiatives explained in the previous section according to the changes in the indicators.



Human Resources

3. Promoting Diversity, Equity & Inclusion (DEI)

Global Diversity, Equity & Inclusion (DEI) is a key issue for many companies, being widely recognized as enhancing both corporate value and the working lives of employees. NSG Group had been 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". In June 2023, NSG Group has announced that we formulated the Diversity, Equity & Inclusion (DEI) Policy that develops and evolves Equality into Equity to enhance and accelerate the Group's current State of Intent to promote Inclusion & Diversity.

Statement of Intent

Having an Inclusive Culture and Environment:

We give everyone an equal opportunity to contribute to their full potential and harness the richness of ideas.

Having a Diverse Workforce:

Any differences in individuals' backgrounds, experiences, preferences and beliefs are recognized, respected and valued for their variety of perspectives.

1. Our effort

NSG Group established a Global DEI Steering Committee with the aim of enhancing Diversity, Equity & Inclusion across the entire group. The Committee comprises 20 members, covering all business units, functions, and regions. It works with individual businesses to identify and implement local, regional, and global initiatives, identifying areas for improvement and measuring progress. One central focus is to move DEI beyond the Human Resources department and establish it within all thinking.

2. Taking action

In line with the annual Group and Regional DEI Action Plans, each country or site is implementing their own actions. One of the annual implementations at site level is to celebrate International Women's Day through various local events.

Another strategic implementation at Group level is the provision of Unconscious Bias Training to all managers across the Group. Unconscious bias occurs as our brains filter information, categorizing people and situations, in order to make quick decisions. Everyone has unconscious bias that is a result of their own cultural environment and accumulated life experiences. Unconscious bias is far more prevalent than conscious prejudice and is often incompatible with our conscious values. All managers across NSG Group undertake online training to learn what unconscious bias is, how to recognize it in themselves and in others, and how to mitigate the potential impacts.

Examples of diversity days which were celebrated and recognized were days such as International Women's Day and International Day of People with Disabilities. Diversity, Equity & Inclusion objectives have also been set for our Senior Leaders and various countries have also set up their own Diversity, Equity & Inclusion country committees.

3. Promotion of Female Career Advancement

NSG Group supports our female career development through Diversity, Equity & Inclusion programs. We were certified as Platinum Kurumin Certification by Japanese Ministry of Health, Labor and Welfare in 2019 as we achieved high standards of the targets for our employees to satisfy both their career and childcare.

Examples of improvements include: greater visibility for females in succession planning discussion, identifying and confirming the positions to which female managers can be positioned, and encouraging more paternity leave. Online workshops have been regularly held for female managers to improve their networking and career planning opportunities, which in turn have helped with career motivation for participants.

We also introduced an exchange program with Sumitomo Group female members. During an online career seminar in 2021, attended by several companies in the Sumitomo Group, participants explored opportunities to discuss their own leadership style and consider future career options. Their experiences were shared within the Company and contributed to our female career advancement.

The group is promoting the appointment of female managers to achieve our Medium Term Plan - RP24 goal "Corporate Culture Reform".

Female managers in NSG Group

12.7% as of 2021 June 30



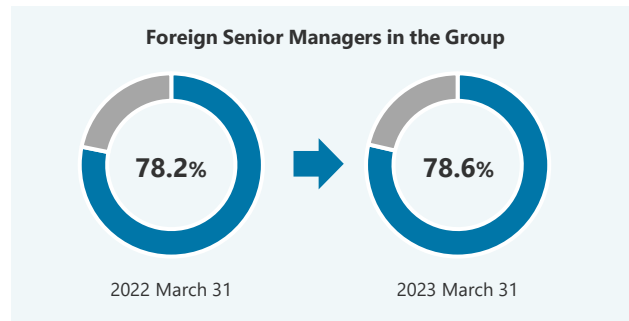
FY2024/3 target:

female manager increase at least 1% in each SBU and Function

Human Resources

4. Promotion of Foreign and Mid-career Employees

We operate as an integrated international Group, with a multinational management team. We believe that our diverse workforce with its range of nationalities, skills, qualifications and experience is a substantial benefit to our business. Our management style is to put the best person in each job, regardless of nationality or region. Our overseas subsidiaries are managed by local Leadership teams.



NSG Group has diverse workforce with its range of skills, qualifications, and experience in the world. We are promoting the mid-career employment in Japan to satisfy the skills and careers required by our businesses and functions.

	FY2022/3	FY2023/3
New Graduates	11	5
Mid-careers	26	49

4. Wellbeing

1. Health Management

The NSG Group think “People are our most important asset”, and health promotion is indispensable for employees to maximize their individual abilities, and it leads to the sustainable improvement of the company’s value. In January 2020, we made a “Health Management Declaration” in Japan. We have been working on health education and seminars to improve health literacy (awareness of health) and promote health of employees and their families, periodic health check-ups, specific health guidance, stress check and work styles reforms including curbing long working hours, promoting paid leave, childcare / long-term care support and flexible working style. We have been recognized as Certified Health and Productivity Management Organization since 2019. The NSG Group is working to improve the environment for realizing diverse working styles in the “new normal” based on the demands of society and the guidelines of the government. We are reviewing the way organizations and individuals should be and aim to shift to a new work style that maximizes productivity and performance under infection control measures.

Health Management Declaration

In order to improve the sustainable value of the Group and contribute to society, we believe that the health of employees and their families is the foundation.

Since its establishment in 1918, Sumitomo’s philosophy of “People are our most important asset” has been valued, and “Respect others and unleash their potential” has been set as the first core value in the current corporate principles “Our Vision”.

Based on the idea, the Group is working on promoting the health of each and every employee and advancing the health management so that employees can maximize their abilities.

2. Stress Check Program

Stress Check Program has been conducted in Japan since 2016. While the Group results are available, we provide feedback to

each organization since employees’ stress levels actually vary by organization and job role, in order to improve employees’ stress at work. This program also measures employees’ satisfaction (engagement) with their jobs and the company, in terms of their wellbeing (physical, mental, and social wellbeing). We will reflect on these results to make the company more attractive and rewarding to work for.

5. Improve HR Department's Capability

It is the HR department that implements HR measures aimed at maximizing the corporate value creation according to the management principles of Core Values, Mission, and Aspiration at the Group level. We believe that we can better ensure the achievement of this goal by improving the capability of HR Department.

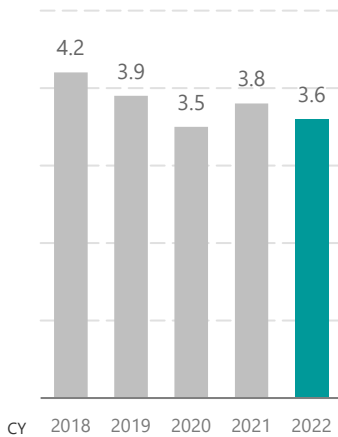
In order to improve the capability of HR Department, we hold online meetings once a month with all HR managers from the Head Office and Regions, which provide us with the opportunity to learn from each other’s best practices and to roll out new, effective measures globally. In addition, every two years, we convene potential future HR executives from around the world to provide them the training to learn about the NSG Group’s human resources management while building up a global human network.

To support the talent management, a talent management system called SABA has been introduced worldwide, where data on managers at all levels is accumulated in the cloud to increase the effectiveness and efficiency in talent development. In order to realize a people strategy that advances “human capital management,” it is essential to collect “non-financial information” related to human capital and make timely management decisions based on such information. Our goal is to establish high level of HR Data Governance such as to ensure alignment between data content and management purposes, consistency of data definition, legality of data provision across countries, and security of data storage, and roll it out globally.

Non-Financial Highlight

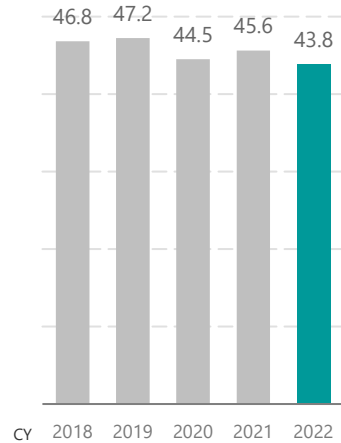
CO₂ emissions *1

(Mt)



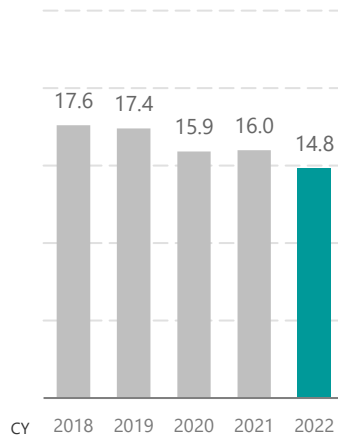
Energy Usage

(PJ)



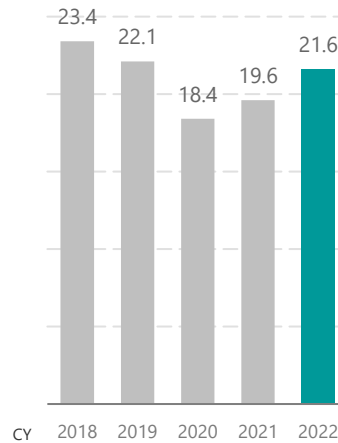
Water Usage

(Mm³)



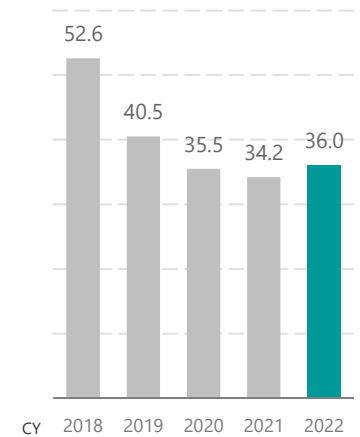
Operational waste to landfill *2

(Kt)

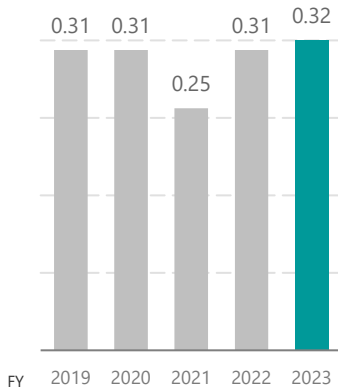


Recycling (not glass)

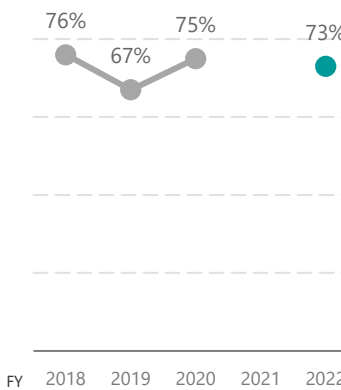
(Kt)



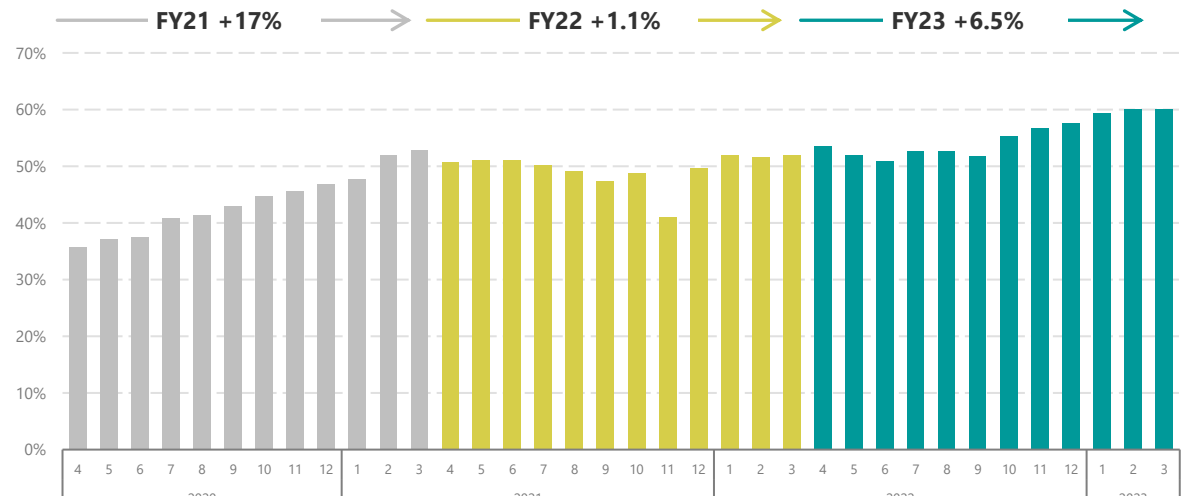
Significant injury rate (SIR)



Employee engagement *3



3 Year Performance of Supplier Spend Assessed by Eco Vadis *4



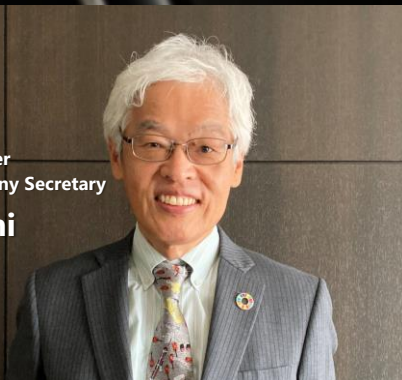
*1 Total CO₂ emissions of Scope 1 and Scope 2 Location *2 Indicates total amount of glass and non-glass landfill waste *3 Employee engagement in FY2021/3 was not conducted due to the spread of COVID 19 infection. The survey for FY2023/3 will be conducted in November 2023. *4 Procurement spend basis

Corporate Governance

Nippon Sheet Glass Group (the "NSG Group" and the "Group") believes that achieving and maintaining an advanced level of corporate governance is a key management agenda. We have created and adopted "NSG Group Corporate Governance Guidelines", supporting and endorsing the spirits and principles of 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 purposes 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.

Senior Executive Officer
CAO, CRO, and Company Secretary

Koichi Hiyoshi



NSG Group Corporate Governance Guidelines Fundamental Principles

The Group considers achievement of an advanced level of corporate governance a key management objective and will implement the following.

(1) Organizational structure

The Group's ultimate parent company, Nippon Sheet Glass Company, Limited will adopt a Company with Three-Committee structure and the Company hence will establish and maintain the Board of Directors (the "Board"), the Nomination Committee, the Audit Committee, the Compensation Committee (individually referred to as the "Committee") and office of Executive Officers. The Board will authorize the Executive Officers to make decisions on the execution of businesses for the Company within the scope as permitted by law, thereby facilitating separation between business execution and oversight, enhancing the transparency of the management processes and strengthening the Board supervisory function over the executive management. The Company will establish and maintain an internal control system operating on a Group-wide basis including in relation to financial reporting (J-SOX).

(2) Stakeholders Communication

The Group aims to be judged by as 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 also will develop, maintain and enhance good relationship with any of such groups. 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 will, in order to materialize those values, create the NSG Group Code of Ethics which all entities and employees etc. of the Group must comply with and will be regularly reviewed in light of the status of implementation/embedding within the Group and the contents

Overview of Corporate Governance Structure (As of 30 June 2023)

Type of Governance structure	Company with Three Committees	
Number of Directors / term of office	7 / 1 year	
Number of Independent External Directors	5	
Chair of the Board	Mr. Hiroshi Ishino (Independent External Director)	
Chair of Three Committees	Nomination	Mr. Hiroshi Ishino (Independent External Director)
	Audit	Mr. Kunihito Minakawa (Independent External Director)
	Compensation	Dr. Jörg Raupach Sumiya (Independent External Director)
Number of Executive Officers (Representative Executive Officers) / term of office	15(1) / 1 year	
Compensation system	Executive Officer (including those who concurrently serve as Directors)	(1) Fixed salary(Basic salary) (2) Performance-linked compensation i Management Incentive Plan (annual bonus) ii Long-term Incentive plan (3) Stock Compensation
	External Director	The level of compensation set at the appropriate level based on comparisons with other companies using benchmark data provided by specialist external advisers(Fixed salary)
Accounting Auditor	Ernst & Young ShinNihon LLC	

Corporate Governance Report

The Group has submitted the Corporate Governance Report to the TSE. Please refer the Group's Corporate Governance Report. For more detail please see NSG website

 **Corporate Governance Report**
(as of August 2023)

 **Approach (nsg.com)**

Corporate Governance

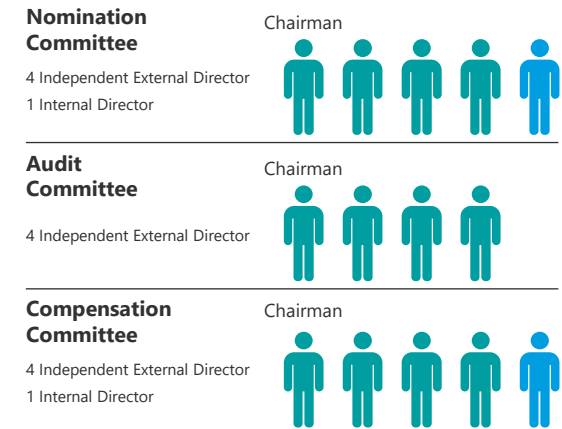
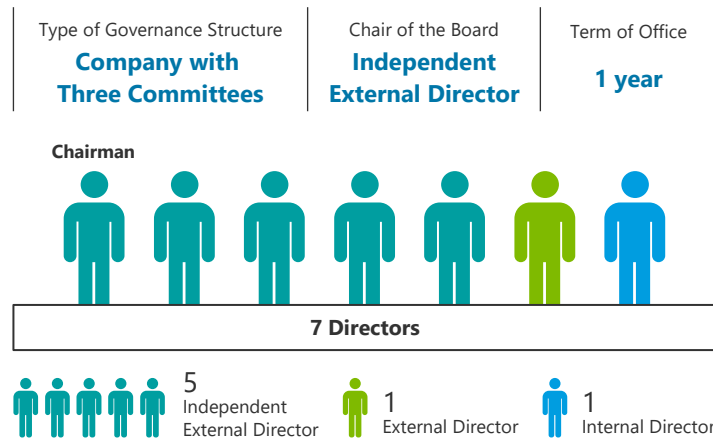
Corporate Governance Structure

NSG Group adopts “Company with Three Committees” governance structure, and has in place, as statutory corporate organizations, Board of Directors and — Nomination Audit and Compensation Committees, and an office of Executive Officer. Currently, the Chairperson of the Board as well as chairpersons of all three Committee are all appointed from among the Independent External Directors. Various steps have been taken to date so that NSG Group has enhanced management transparency by further separation of functions between business execution and its supervision and strengthened role of independent external Directors.

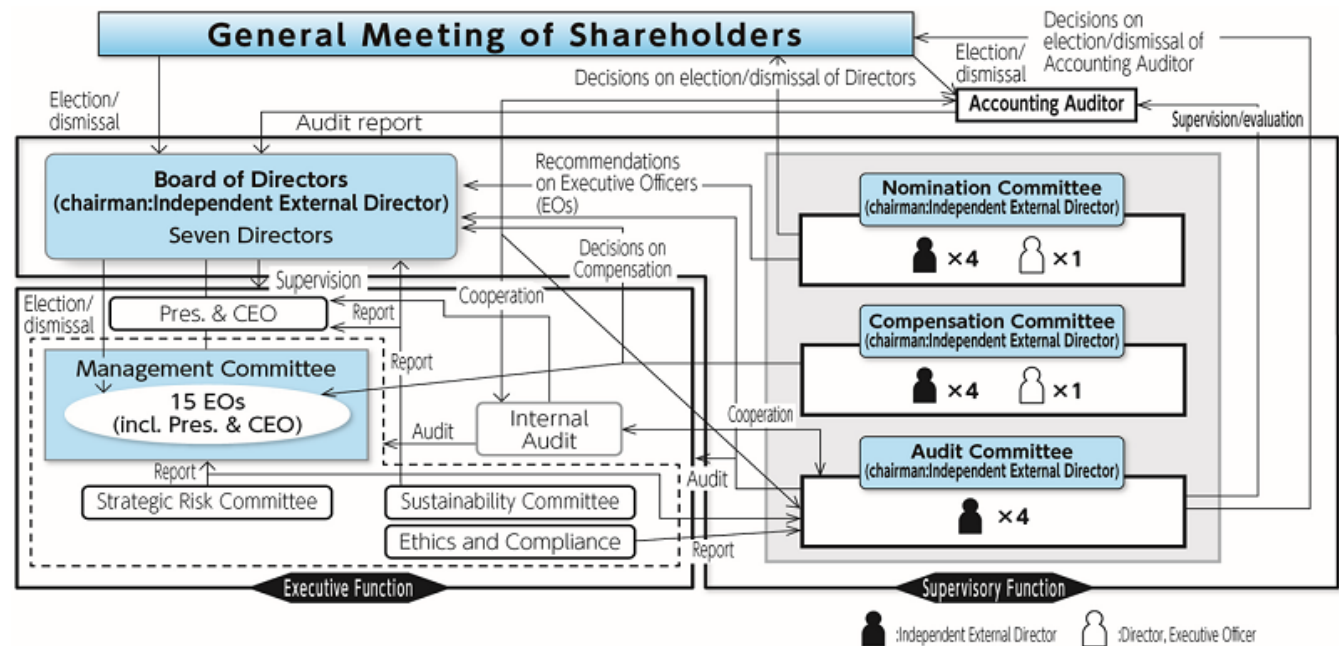
For example, according to the NSG Group Corporate Governance Guidelines, the majority of the members of the Board of Directors are Independent External Directors. Also, the roles of Chairperson of the Board and CEO are clearly distinguished. In the event that Chairperson of the Board is not an Independent External Director, an Independent External Director among them who is entrusted to perform specified tasks such as making of contribution to communication, coordination and cooperation between the Independent External Directors and the Executive Divisions and rendering of support to the Chairperson of the Board in relation to any issues of corporate governance. Independent External Directors meet on an as-needed basis, even without presence of executives, for discussion concerning matters such as corporate governance and businesses. In addition, the Board appoints the Company Secretary, the Company Secretary is responsible for promoting initiatives for efficient functioning of the Board and each Board Committee.

As regards executive function, the Group also has Management Committee, Sustainability Committee, and Strategic Risk Committee. Currently, fifteen (15) Executive Officers are responsible for the business execution. One (1) of them are Representative Executive Officer performing the duties of CEO.

Outlines of our Management Structure (as of 30 June 2023)



Corporate Governance Mechanism (as of 30 June 2023)



Corporate Governance

Board of Directors (As of 30 June 2023)



Hiroshi Ishino

Independent External Director
Chairperson of the Board
Chairperson of Nomination Committee

1975 April Joined Mitsubishi Corporation
2003 March Joined Kansai paint Co., Ltd.
2006 June Director, Deputy General Manager, International Affairs, Kansai paint Co., Ltd.
2008 June Managing Director, Sales, Coatings Business, Kansai paint Co., Ltd.
2010 April Senior Managing Director, Sales, Kansai paint Co., Ltd.
2011 June Director, Senior Managing Executive Officer, Sales, International Affairs and Procurement, Kansai paint Co., Ltd.
2012 June Representative Director, Senior Managing Executive Officer, Sales, International Affairs and Procurement, Kansai paint Co., Ltd.
2013 April Representative Director and President, Kansai paint Co., Ltd.
2019 June Senior Corporate Advisor, Kansai paint Co., Ltd. (Incumbent)
2020 July Director, the Company (Incumbent)



Jörg Raupach Sumiya

Independent External Director
Chairperson of Compensation Committee

1990 June Senior Consultant, Roland Berger Strategy Consultants
1995 October Senior Executive Managing Director, Trumpf Corporation
1999 July Research Fellow, German Institute for Japanese Studies
2001 January General Manager, Administration, NEC Schott Components Corporation (Currently Schott Japan Corporation)
2002 December President, Representative Director, NEC Schott Components Corporation
2011 January Manager, Innovation, Schott Electronic Packaging GmbH
2011 September Professor, FOM University (Germany)
2012 April Professor, College of Business Administration Ritsumeikan University (Incumbent)
2019 June Director, the Company (Incumbent)



Kunihito Minakawa

Independent External Director
Chairperson of Audit Committee

1978 April Joined RICOH CO., LTD.
1997 October SVP and CFO, Ricoh Americas Corporation
2008 January Business Planning Manager and Business Management Manager, Business Management center, Overseas Division, RICOH CO., LTD.
2009 April General Manager, Finance and Accounting, RICOH CO., LTD.
2010 April Corporate Vice President and General Manager, Finance and Accounting, RICOH CO., LTD.
2012 April Corporate Senior Vice President and General Manager, Finance and Accounting, RICOH CO., LTD.
2013 June Corporate Auditor (Full-time), RICOH CO., LTD.
2017 June External Director, Sony Corporation
2018 June External Director, Santen Pharmaceutical Co., Ltd. (Incumbent)
2019 April Financial Services Agency Certified Public Accountants and Auditing Oversight Board Commissioner (Incumbent)
2020 July Director, the Company (Incumbent)



Yoshihiro Kuroi

External Director

1977 April Joined Mitsubishi Corporation
1994 April Managing Director, MCF Financial Services Limited
2004 June Seconded to Mitsubishi Motors Corporation CSR Promotion Office to rescue the Company
2007 January General Manager, Investor Relations, Mitsubishi Corporation
2010 April Senior Vice President, Mitsubishi Corporation
2010 July Executive Officer, Corporate Planning Office, Mitsubishi Motors Corporation
2016 June Senior Vice President, Mitsubishi Motors Corporation
2018 April Senior Managing Executive Officer, Kasai Kogyo Co., Ltd.
2020 May Advisor, Japan Industrial Solutions Co., Ltd. (Incumbent)
2020 July Director, the Company (Incumbent)



Shinji Asatsuma

Independent External Director

1984 April Joined Kansai paint Co., Ltd.
2012 April Executive Officer, General Manager Corporate Planning Office, Kansai paint Co., Ltd.
2015 April Senior Executive Officer, General Manager International Div., Kansai paint Co., Ltd.
2016 June Director, Senior Executive Officer, General Manager Administration Div., Kansai paint Co., Ltd.
2018 April Director, Senior Executive Officer, in charge of Business Management, Corporate Planning, IS, Human Resources Planning, General Manager Administration Div., Kansai paint Co., Ltd.
2019 June External Director, Kyushu Railway Company
2022 June Director, the Company (Incumbent)



Eriko Sakurai

Independent External Director

1987 June Joined Dow Corning Corporation (Currently Dow Silicones Corporation)
2008 May Director, Dow Corning Toray Co., Ltd. (Currently Dow Toray Co., Ltd.)
2009 March Chairman and CEO, Representative Director, Dow Corning Toray Co., Ltd.
2011 May Regional President Japan/Korea, Dow Corning Corporation
2014 June External Director, Sony Corporation (Currently Sony Group Corporation)
2015 June External Director, Sumitomo Mitsui Financial Group, Inc (Incumbent)
2018 June Chairman and CEO, Representative Director, Dow Toray Co., Ltd.
2020 August President, Representative Director, Dow Chemical Japan Limited
2022 March External Director, Kao Corporation (Incumbent)
2022 June External Director, Astellas Pharma Inc. (Incumbent)
2023 June Director, the Company (Incumbent)



Munehiro Hosonuma

Director
Representative Executive Officer
President and Chief Executive Officer (CEO)

1998 April Joined Nikken Sekkei Ltd.
2005 July Joined Boston Consulting Group
2010 October Joined Sumitomo 3M Limited (Currently 3M Japan Limited)
Business Development Senior Manager, Display and Graphics Business Group
2011 May Senior Corporate Officer, Chief Corporate Planning Officer
2013 September General Manager, Cleaning and Workplace Safety Division, Sumitomo 3M Japan Limited
2017 April General Manager, Infection Prevention Division, 3M Japan Limited
2018 August Joined the Company
Senior Corporate Officer, Chief Corporate Planning Officer
2021 January Senior Executive Officer, Head of Architectural Glass SBU
2022 April Representative Executive Officer, Vice President and Chief Operating Officer
2022 June Director (Incumbent)
2023 April Representative Executive Officer, President and CEO (Incumbent)

	Composition of Committees (◎=Chairperson, ○=member)			Number of attendance during FY2023/3 (Number of attendance / Number of held)			
	Nomination Committee	Audit Committee	Compensation Committee	Board of Directors	Nomination Committee	Audit Committee	Compensation Committee
H.Ishino	◎	○	○	100%(12/12)	100%(6/6)	100%(11/11)	100%(6/6)
J.Raupach Sumiya	○	○	◎	92%(11/12)	100%(6/6)	91%(10/11)	100%(6/6)
K.Minakawa	○	◎	○	100%(12/12)	100%(6/6)	100%(11/11)	100%(6/6)
Y.Kuroi	—	—	—	100%(12/12)	—	—	—
S.Asatsuma	○	○	○	100% ^(*1) (9/9)	100% ^(*1) (5/5)	100% ^(*1) (8/8)	100% ^(*1) (5/5)
E.Sakurai	—	—	—	Appointed in June 2023	—	—	—
M.Hosonuma	○	—	○	100% ^(*2) (9/9)	Appointed in April 2023	—	Appointed in April 2023

(* 1) Mr. Shinji Asatsuma was newly appointed as Director at the 156th Ordinary General Meeting of Shareholders held on 29 June 2022 therefore it shows the total number of the Board of Directors and the committee meetings held and attended after his assumption.

(* 2) Mr. Munehiro Hosonuma was newly appointed as Director at the 156th Ordinary General Meeting of Shareholders held on 29 June 2022 therefore it shows the total number of the Board of Directors meetings held and attended after his assumption.

Corporate Governance

Executive Officers (As of 30 June 2023)

Representative Executive Officer



Munehiro Hosonuma
Director
Representative Executive Officer
President and Chief Executive Officer (CEO)

Executive Officer, Chairperson of the Company



Shigeki Mori
Representative Executive Officer,
and
Chairperson of the Company

Senior Executive Officers



Leopoldo Garces Castiella
Head of Architectural Glass



Koichi Hiyoshi
CAO, CRO, and
Company Secretary



Hisashi Okamoto
Head of Creative Technology



Akihito Okochi
Chief Financial Officer



Rob Purcell
Head of Automotive OE



Phil Wilkinson
Head of Automotive AGR

Executive Officers



Mike Greenall
Chief Technology Officer



Denise Haylor
Chief Human Resources Officer



Michael Kiefer
Chief Legal Officer,
Chief Ethics & Compliance Officer



Shiro Kobayashi
Sustainability Director



Kumi Nakamura
Chief Corporate Development Officer



Yohei Nakatsuji
Chief Strategy Officer



Iain Smith
Finance Director

Corporate Governance

Policies and procedures for the appointment of the senior managers and nomination of the director candidates

■ The nomination of director candidates

The Company will decide a candidate for Director at the Nomination Committee, chaired by Independent External Director and composed of five (5) Directors including the Chairperson, four (4) of whom are Independent External Directors and submit the details to the ordinary general meeting of shareholders as a proposal. For such appointment, in particular with Independent External Directors, the Group finds candidates from a wide range of pools with the cooperation of executive search companies and others. The standards for the appointment are as follows. On the appointments of Directors based on the standards, the company aims to have a well-balanced level of expertise as defined in Clause 7 in the Board of Directors as a whole, and diversity in terms of gender, internationality, work experience, and age.

	The standards for the appointment of the director candidates
Personality, Insight, leadership	1. Being a person of good character and high ethical standards. 2. Upholding and promoting compliance with laws and regulations. 3. Being fit to hold office and able to fulfil the duties required 4. Possessing excellent business acumen and the ability to make judgements objectively. 5. Having abundant leadership experience and being team orientated.
No material interest	6. Having no personal interest or business relationship that might affect management decisions in our Group's business areas. ("Criteria of Independency for External Director" is as shown on the right)
Skill/ Expertise	7. Having broad business experience globally or multi-nationally and/or such specialized knowledge in market, technology, accounting, law, talent development, or other specific fields that are necessary or desirable for Directors based on the current situation of the group, strategies, etc.
Commitment	8. Having sufficient time to participate in meetings of the Board and the Committees of which he/she would be a member and being qualified to fulfil the duties as a member of one of any three committees on which he/she would sit: Nomination Committee, Audit Committee or Compensation Committee.

■ Criteria of Independency for External Director at NSG

An External Director is a director who has never been a director, executive officer nor employee of the company nor its subsidiary. To enhance the transparency of business management, the Company has appointed six External Directors out of the seven Directors, five of whom are designated as Independent Directors under the TSE.

In addition to the criteria for independency defined by the TSE, the Company has established its own criteria of independency for External Directors, taking into consideration their relationship with the Group including such with its officers and major shareholders. All of the five External Directors satisfy the criteria of independency, its officers, major shareholders, etc. These all five External Directors meet the relevant criteria of independency. Please refer to the Group's Criteria of independency for External Directors

 [the Group's Criteria of independency for External Directors.](#)

■ The appointment of the senior managers

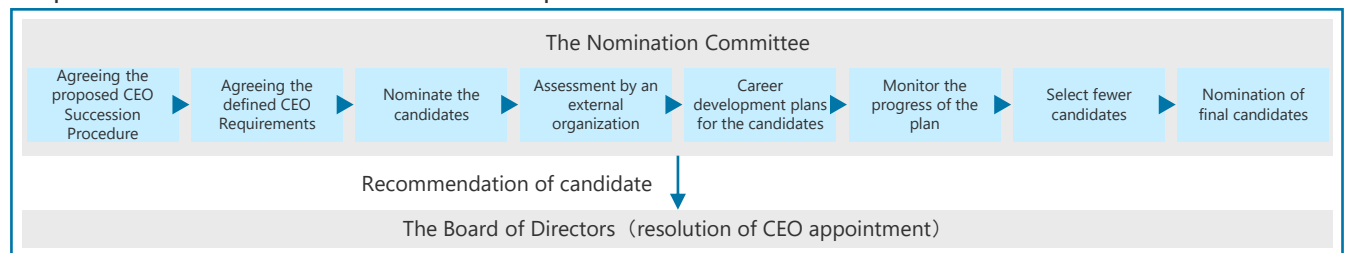
The Board of Directors will, on the basis of recommendation rendered by the Nomination Committee in advance, appoint or dismiss senior executive managers including Executive Officers. Each Executive Officer (EO or Shikkou-Yaku) (collectively referred to as "Executive Management") is appointed by resolution of the Board, as well as being assigned the specific executive or senior positions and responsibilities within the Group such as CEO,COO,CFO,CAO and head of business/function which will usually be associated with either the title of EO accordingly. Prior to the appointment and/or assignment of each candidate, a comprehensive review of the candidate's proven performance to date, potential caliber as a leader, and commitment to the Group's future direction, Values & Principles like "Our Vision" and communications with Stakeholders and Competencies is completed.

The Nomination Committee clarifies the qualifications for a top


managing officer and required personality or character as a part of the Chief Executive Officer's succession plan. Further, the Company formulates and operates training programs and leadership development plans for management development needs. In case the incumbent CEO is also a member of

Nomination Committee, he/she will not be involved in any decision or discussion as to his/ her own succession plan, except only where he/she expresses his/her opinion in response to specific request if any from the Nomination Committee to do so.

The process of the Chief Executive Officer's succession plan



Please refer to the Policies and procedures for the appointment of the senior managers and nomination of the director candidates

 [Policies and procedures in appointment and dismissal of the senior management and the nomination of the Director candidates](#)

Corporate Governance

Director Skills Matrix

In order to develop and enhance the enterprise value of the Group in a sustainable manner on a medium to long term basis, the Board is required to effectively supervise the execution of duties by executive officers, etc., while preparing for a corporate environment which would enable the executive management to take proper degree of risks associated with business. Based on the company situation and the issues to be solved in the execution of the three-year medium-term plan from FY2022/3 to FY2024/3, the areas of experiences and specialized knowledge, which the Nomination Committee considers to be particularly important for the Directors, are defined as follows, and the composition of Directors would be well-balanced as a whole in consideration of diversity.

Global Company Management Experience

The area of experience and/or expertise required from the perspective of supervising the management of the Group which is operating globally based on the management experiences in a global or multinational business environment.

Financial Expertise

The area of experience and/or expertise required from the perspective of supervising the execution of the key initiative, "Restoration of financial stability" in the medium-term management plan

Risk Management

The area of experience and/or expertise required from the perspective of effective and efficient supervision in identifying and evaluating critical risks that the Group should manage.

ESG / Sustainability

The area of experience and/or expertise required from the perspective of effective and efficient supervision for the initiatives to attain sustainable growth of the Group and contribute to a sustainable society in the medium to long-term such as climate change issues and initiatives to ensure a highly independent and transparent Corporate Governance system for that purpose.

Portfolio management / New Business Development

The area of experience and/or expertise required from the perspective of effective and efficient supervision for the initiatives against "Business structure reform" such as new business development and Portfolio transformation to highly profitable business

Operational Excellence / Supply Chain Management

As a manufacturing company, improving on-site operational work performance is essential, and from procurement / manufacturing to logistics, cost structure reform that transcends the boundaries of each function and optimal manufacturing / supply chain are important. Therefore, this area of experience and/or expertise should be required from the perspective of effective and efficient supervision for the initiatives against "Cost structure reform" "Business structure reform" and "Restoration of financial foundation"

Marketing/Commercial

Strategic marketing is needed to develop the business, and this area of experience and/or expertise should be required from the perspective of effective and efficient supervision in implementing the initiatives for "Business structure reform" and customer-oriented "Corporate culture reform".

	Global Company Management Experience	Financial Expertise	Risk Management	ESG / Sustainability	Portfolio management / New Business Development	Operational Excellence / Supply Chain Management	Marketing / Commercial
H.Ishino	●					●	●
J.Raupach Sumiya	●			●	●		
K.Minakawa	●	●	●				
Y.Kuroi	●		●	●			
S.Asatsuma	●	●	●				
E.Sakurai	●			●	●		
M.Hosonuma					●	●	●

Notes: Up to three most highly expected areas of experiences and specialized knowledge are indicated for each Director. The table does not represent all the specialized knowledge and the experiences possessed by each Director.

Corporate Governance

Supervisory Function

The status of activities of the Board of Directors and each committee in FY2023/3 is as follows.

	Board of Directors	Nomination Committee	Audit Committee														
Role	<ul style="list-style-type: none"> The Board is responsible for deciding the basic policies for business management and internal control, segregation of duties among Executive Officers and other important management decisions, and supervising execution of duties by Executive Officers. 	<ul style="list-style-type: none"> The Nomination Committee is in charge of deciding the details of proposals concerning appointment or removal of Directors to be submitted to the General Meeting of Shareholders, and also provide recommendation or advice with regard to candidates for Executive Officers. 	<ul style="list-style-type: none"> 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. 														
Composition as of 30 June 2023	<ul style="list-style-type: none"> The Board of Directors is composed of five(5) Independent External Directors, one(1) External Director, and one(1) Director who also serves as an Executive Officer. The Chairperson of the Board is Mr. Hiroshi Ishino, Independent External Director. 	<ul style="list-style-type: none"> The Nomination Committee is chaired by Mr. Hiroshi Ishino, Independent External Director, and composed of five (5) Directors including the Chairperson, four (4) of whom are Independent External Directors. 	<ul style="list-style-type: none"> The Audit Committee is chaired by Mr. Kunihiro Minakawa, Independent External Director and comprises four (4) Independent External Directors including the Chairperson. 														
Number of times held	<ul style="list-style-type: none"> 12 times 	<ul style="list-style-type: none"> 6 times 	<ul style="list-style-type: none"> 11 times 														
Main items for discussion, consideration and deliberation	<ul style="list-style-type: none"> The Board of Directors received appropriate and timely reports from the executive divisions on the status of their efforts to achieve the goals of the RP24 medium-term management plan that began in FY2022/3, including annual policies and issues of the Group as a whole, the four Strategic Business Units and major Group functional divisions (Human Resources, Purchasing, Transformation, Intellectual Property, Quality Management, Group Entity Management, Internal Control, etc.). In particular, the Board of Directors received a report from the Group Sustainability on the status of the company's promotion plans and initiatives with respect to climate change and CO₂ reduction, among other sustainability issues, including the SBTi certification of CO₂ reduction targets by 2030 and the TCFD roadmap for achieving carbon neutrality by 2050. The Board of Directors also deepened its discussion on important management issues for the Group (financial strategy, business portfolio transformation, etc.), which were addressed in the Board of Directors Action Plan formulated based on the evaluation of the effectiveness of the Board of Directors covering FY2022/3. Based on the recommendation from the Nomination Committee, the Board of Directors discussed and approved the management structure, including the change of President and CEO effective April 2023. The Board of Directors discussed and approved key measures for business restructuring and portfolio transformation, including the construction of a new on-line coating facility for solar glass to be added to an existing float furnace in Malaysia and the integration of the Chinese automotive glass business with a major Chinese automotive glass manufacturer. The Board of Directors discussed and approved the introduction of company indemnity (establishment of a " Group-level Directors and Executive Officers Indemnity Policy") as a response to the revised Companies Act. 	<ul style="list-style-type: none"> The Nomination Committee discussed and approved the recommendation to the Board of Directors for the appointment of a new President, effective April 2023, and for the appointment of Executive Officers to enhance the new management structure. The Nomination Committee deepened its discussion on enhancement of succession plans and training plans for major Senior Executives including Directors and Executive Officers, and further enhancement of disclosure content by reviewing the contents of the Directors' skills matrix, etc.. <p>Discussion schedule</p> <table border="1"> <thead> <tr> <th colspan="2">Main Items for Discussion</th> </tr> </thead> <tbody> <tr> <td>2022 May</td> <td>Key Senior Management Succession Disclosure of Directors' Skills Matrix</td> </tr> <tr> <td>2022 June</td> <td>Senior Management Succession</td> </tr> <tr> <td>2022 September</td> <td>CEO Succession</td> </tr> <tr> <td>2022 November</td> <td>Executive Management Member of the Group - Succession and Development Proposed candidates for Executive Officer / Director – initial discussion</td> </tr> <tr> <td>2023 February</td> <td>Executive Management Structure from April 2023 – discussion</td> </tr> <tr> <td>2023 March</td> <td>Proposal of Directors, EO Recommendation Discussion of Directors' Skills Matrix</td> </tr> </tbody> </table>	Main Items for Discussion		2022 May	Key Senior Management Succession Disclosure of Directors' Skills Matrix	2022 June	Senior Management Succession	2022 September	CEO Succession	2022 November	Executive Management Member of the Group - Succession and Development Proposed candidates for Executive Officer / Director – initial discussion	2023 February	Executive Management Structure from April 2023 – discussion	2023 March	Proposal of Directors, EO Recommendation Discussion of Directors' Skills Matrix	<ul style="list-style-type: none"> The Audit Committee confirmed and reviewed, mainly through interviews, the Executive Officer's understanding and action on important management matters, including issues related to the implementation of the medium-term management plan (RP24), as well as risks and opportunities in the business. For example, with regard to sustainability, the Audit Committee focused on the disclosure of non-financial sustainability information. The Audit Committee confirmed the system and issues for disclosure by interviewing the sustainability department, while closely monitoring the discussions at the Board. The Audit Committee confirmed and verified the status of the design and operation of internal control systems, including ethics and compliance, risk management, and internal control over financial reporting, by hearing reports from the department in charge of internal control and by site visits. In addition, AC requested the Executive Officers, etc. to further strengthen their efforts in governance and Group internal control over subsidiaries, considering our Group's situation, which has too many subsidiaries, joint ventures, and affiliates, and fraud risks. Furthermore, AC has started discussions with the Internal Audit department and the external auditor to review the scope of their audits to improve completeness through further cooperation among the three teams. The Audit Committee confirmed and verified through reports from and discussions with the Finance function and the Accounting Auditor that they had appropriately examined/responded to and conducted necessary audit procedures, respectively, for important issues in the financial statements and accounting audits in each quarterly and annual financial statements. With regard to the accounting issues that were the subjects of Key Audit Matters (KAM), after taking into account the impairment of goodwill and intangible assets related to the European Automotive glass business in the 2nd quarter of the financial year (FY23), the Committee verified the relevance of accounting treatments, including any consideration by the Finance function about the elements such as the impact of the economic environment like rising interest rates and the future prospects of business performances, as well as confirmed and verified the appropriateness of audit procedures and KAM text preparation by the Accounting Auditor.
Main Items for Discussion																	
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Secretariat	<ul style="list-style-type: none"> The Company Secretary Function 	<ul style="list-style-type: none"> The Company Secretary Function 	<ul style="list-style-type: none"> The Audit Committee Office 														
Internal experts		<ul style="list-style-type: none"> The Human Resources Department (internal experts on matters of personnel affairs.) 															

Corporate Governance

Supervisory Function The status of activities of the Board of Directors and each committee in FY2023/3 is as follows.

Compensation Committee	
Role	<ul style="list-style-type: none"> The Compensation Committee is in charge of deciding the compensation policy for Directors and the Executive Officers as well as compensation details of individual Directors and Executive Officers.
Composition as of 30 June 2023	<ul style="list-style-type: none"> The Committee is chaired by Mr. Jörg Raupach Sumiya, Independent External Director and is composed of five(5) Directors including the Chairperson, four (4) of whom are Independent External Directors.
Number of times held	<ul style="list-style-type: none"> 6 times
Main items for discussion, consideration and deliberation	<ul style="list-style-type: none"> The Compensation Committee resolved the individual basic salary, the indicators related to incentive compensation (performance-linked compensation), the method for determining the amount to be paid, and the amount to be paid based on the achievement of the indicators in the previous fiscal year. In addition, for Executive Officers who are appointed pursuant to the terms and conditions of services in Japan, restricted shares are to be granted as retirement benefits, and based on this, the number of restricted shares to be allocated to each of the relevant Executive Officers was determined.
Discussion schedule	
Main Items for Discussion	
2022 May	<ul style="list-style-type: none"> Annual bonus for Executive Officers FY22 Outcome Annual bonus for Executive Officers FY23 Plan Long Term Incentive Plan 2019-2022 Outcome
2022 June	<ul style="list-style-type: none"> Long Term Incentive Plan 2020-2023 Outcome
2022 September	<ul style="list-style-type: none"> 2022-2025 Long Term Incentive Plan
2022 December	<ul style="list-style-type: none"> Pay Proposals for Executive Officers under new Organization Structure
2023 January	<ul style="list-style-type: none"> Pay Proposals for Executive Officers under new Organization Structure Pay Proposals for Executive Officers under new Organization Structure
2023 March	<ul style="list-style-type: none"> Pay Review for Executive Officers based on FY23 Outcome Annual bonus for Executive Officers FY24 Design
Secretariat	<ul style="list-style-type: none"> The Company Secretary Department
Internal experts	<ul style="list-style-type: none"> The Human Resources Department (Internal experts on matters of remuneration)

Executive structure Fifteen executive officers with diverse backgrounds in terms of international experience, gender, age, etc. are responsible for the execution of the NSG Group's business.

Executive Officer		Management Committee
Role	Business execution of NSG Group	Management Committee lead the Company's business operation and oversees the execution of businesses in order to realize the policies and targets set forth by the Board of Directors efficiently and appropriately.
Composition as of 30 June 2023	1 Representative Executive Officer(Chief Executive Officer(CEO)) and 14 Executive Officers	The Management Committee is composed of Executive Officers with Senior Executive Officers and above, other Executive Officers who supervise major businesses and functions as permanent members.
Number of times held in FY2023/3	—	15

Sustainability Committee		Strategic Risk Committee
Role	Sustainability Committee builds the sustainability strategies, presides over all of the Group's sustainability related activities, and ensures effective communication with various Stakeholders.	Strategic Risk Committee periodically reviews policies, strategies and frameworks concerning risk management throughout the Group, and appropriately take into account the results of such review in forming the organization strategy and goals, in order to promote efficiency of the Group's business management and to enhance the medium and long-term corporate value.
Composition as of 30 June 2023	Sustainability Committee is chaired by CEO or a person who is nominated by CEO and composed of CEO, Chairperson of the Company, CFO, Chief Administration Officer (CAO) and Chief Risk Officer (CRO), Chief Legal Officer (CLO) and Chief Ethics&Compliance Officer (CE&CO), Chief Human Resources Officer (CHRO), Group Sustainability Director, the Heads of relevant Group Functions and the Heads of each Strategic Business Unit.	Strategic Risk Committee is chaired by CRO and composed of CEO, Chairperson of the Company, CFO, CAO and CRO, CLO and CE&CO, CHRO, the Heads of relevant Group Functions and the Heads of each Strategic Business Unit.
Number of times held in FY2023/3	2	3

Corporate Governance

Board Effectiveness Evaluation

The Company started an annual evaluation process for the Board effectiveness since FY2016/3, in order to further and constantly improve performance and effectiveness of the Board of Directors and Nomination, Audit and Compensation Committees. The overall summary of the results from the review made in relation to FY2023/3 is as follows.

Overview of evaluation results

In summary, evaluation by the external organization has confirmed that:

- The Board of Directors and committees are generally functioning effectively
- Each director works with a strong sense of commitment to improve the management situation.

Review of the implementation items identified in FY2023/3

Regarding the implementation items identified in FY2023/3, it was evaluated that a certain level of improvement was being achieved through various initiatives by the Board of Directors.

Our Effectiveness Review Process

The annual evaluation for FY2023/3 was conducted by hiring an independent external organization that specializes in corporate governance-related consulting. All Directors were asked to answer the questionnaire and also interviews were held by the external organization. Questions were asked about the composition of the Board of Directors and each committee, the operational status, agenda setting, deliberation status, role fulfillment, communication the Executive team, and material agendas

requiring further in-depth deliberation. The responses and opinions of each Director were evaluated by the external organization. Based on these evaluation results, Independent External Directors discussed and evaluated the effectiveness of the Board of Directors and each committee.

The entire process was led and supervised by the Independent External Directors under the leadership of the Chairman of the Board to ensure sufficient adequacy and independence.

Priority Implementation Items for FY2023/3	Initiatives undertaken
<ul style="list-style-type: none"> • In-depth discussions of the medium- to long-term management strategy and important management issues • Regarding key measures set forth in MTP (RP24), request the Executive Team to further specify implementation items to achieve the plan and monitor the progress to ensure their swift implementation in view of the ongoing changes in the business environment. 	Set up a forum to discuss important management issues in addition to/ separate from the meetings of the Board of Directors and implemented intensive monitoring and discussion. (In FY2023/3, five offline director meetings were held)
<ul style="list-style-type: none"> • Pursue the significance of diversity in the Board, work on realizing an appointment of a female Director, which is an ongoing issue. 	Appointment of a new female director at the Ordinary General Meeting of Shareholders to be held in June 2023
<ul style="list-style-type: none"> • In order to properly deal with medium- to long-term important management issues, promote in-depth discussions on the skills and experiences required for the Board and the current composition of the Board, and select Director candidates 	Discussed the composition of the Board of Directors and the skills, experience, and diversity required of the Board of Directors at the Nomination Committee and the Board of Directors, and revised NSG Group Corporate Governance Guidelines and Director Selection Criteria. (In addition to clarifying the elements of skills, experience, and diversity required of the Board of Directors, the regulations have been revised so that the majority of members of the Board of Directors are composed of Independent External Directors.)

Priority issues in FY2024/3

On the other hand, it was pointed out by the external organization that it would be desirable to work on the following four points in order to further improve the effectiveness of the Board of Directors.

Fostering of common understanding among Directors on how the supervisory function should be
Promotion of mid- to long-Term strategic discussion under new leadership
Further enhancement of board composition and strengthening of Nomination Committee function
Upgrading operation of the Board of Directors

Based on the evaluations and issues presented by the external organization, the Independent External Directors held discussions to further improve the effectiveness of the Board of Directors, and recognized the priority issues of the Board of Directors in FY2024/3 as follows.

- It is necessary to foster a common understanding among Directors regarding the roles that should be played by the Board of Directors and Independent External Directors.
- Diversification of the composition of the Board of Directors has progressed this year, but in order to further enhance and diversify the composition of the Board of Directors, it is necessary to deepen discussions on the skills and experience necessary for the Board of Directors of the Company and advance the sophistication of the process of appointing Directors.
- It is necessary to discuss the modalities and methods of monitoring that can support speedy efforts of the executive team to address management issues facing the NSG Group.
- It is necessary to deepen discussions on the medium- to long-term strategy that the NSG Group is aiming for.
- It is necessary to improve the operation of the Board of Directors in order to activate substantive discussions at the Board of Directors.

Priority Implementation Items in FY2024/3 (what to do next)

Based on the above priority issues, the following priority actions to be taken by the Board of Directors in FY2024/3 were confirmed.

Roles of the Board of Directors and Independent External Directors	In order to further improve supervisory functions, deepen discussions on the roles that the Board of Directors and Independent External Directors should play at a forum for discussion separate from the Board of Directors, and foster a common understanding among Directors.
Board Diversity and Director Selection Process	At Nomination Committee meetings, deepen discussions on the skills and experience necessary for the Board of Directors and the diversity that should be there, and work to improve the process of appointing Directors.
Monitoring as the Board of Directors	Discuss the modalities and methods of monitoring that the Board of Directors should conduct, and after sufficiently coordinating with the executive team, conduct monitoring that can support the speedy efforts of the executive team.
NSG Group's medium- to long-term strategy	Toward sustainable improvement of corporate value, deepen discussions on the medium- to long-term strategies that the Group is aiming for, and formulate a new medium-term management plan based on those discussions.
Sophistication of the operation of the Board of Directors	Efforts to enhance the operation of the Board of Directors in order to activate substantive discussions, including the enhancement of support for External Directors.

Compensation for Director and Executive Officers

1. Compensation Policy for Executive Officers

Compensation System and Compensation Composition Ratio

Compensation packages for the Executive Officers principally consist of basic salary, Management Incentive Plan (annual bonus) and Long-term Incentive plan.

The Group operates a global grading structure across the Group, and management grade is determined based on job evaluation by the Group common scale using the HAY management grade methodology, a globally recognized job evaluation methodology. Management grade determines the maximum quantum levels for participants in both the annual and long-term incentive structures.

a. Compensation System

Objectives

- 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 caliber on a worldwide basis in an international business.
- To ensure that each individuals basic salary and incentives are aligned with the performance of the Group and the interests of shareholders, as well as reflecting the commitment and achievements of the individuals concerned.

Composition and Details

Fixed salary

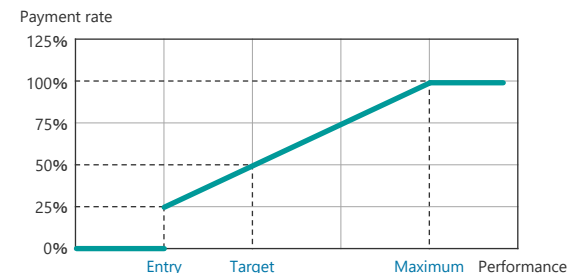
Basic salary

- Salaries are reviewed annually and are broadly aligned with market medians for a global business.
- In determining what are the appropriate market rates, account is taken of turnover, market capitalization and the complexity and breadth of internationalization.
- In reviewing salaries, account is also taken of the scope and responsibilities of the role, the performance of the individual, the progress the Company is making against its targets and plans and of salary increases planned for other managers.

Performance-related compensation

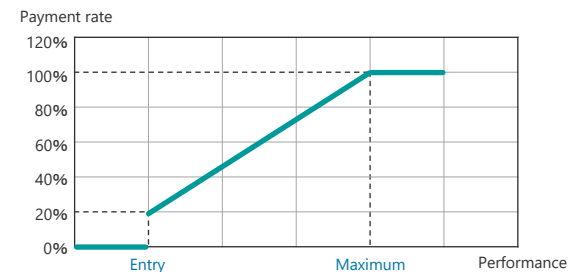
Management Incentive Plan (annual bonus)

- Assessed against the achievement of annual performance indicators which are mainly financial.
- Aligned to NSG Group's Medium-Term Plan
- Payment Maximum levels: Ranging between 40% and 125% against each individual's basic salary dependent upon the management grade
- $\text{Payment Level} = \text{Maximum payment amount} \times \text{Payment rate of Performance measures}$
- A Gate mechanism operates for the plan, which is based on a minimum level of Net Income that must be reached, as an affordability threshold before considering payment based on achievement against the different performance measures.
- For each performance measure, set the minimum performance level ("Entry") for ensuring that the business is meeting the minimum standard of financial performance, "Target" and a maximum value for stipulating the upper limit of annual bonus payments "Max", in line with the annual budget for the financial year.



Long-term incentive plan

- Assessed against the achievement of long-term performance indicators over a three-year period
- Issued annually
- Payment Maximum levels: Ranging between 50% and 150% against each individual's basic salary dependent upon the management grade
- $\text{LTIP Payment} = \text{Maximum payment amount} \times \text{Payment rate of Performance measures} \times \text{Share price movement rate}$
- For each measure, "Entry" is set in such a way to ensure that the business is meeting the minimum required performance level and the "Maximum" point on the scale has appropriate stretch.
- Require the purchase of NSG Shares by using part of the cash award from the plan to lead to further alignment of the Executive Officers with shareholders, allowing Executive Officers to continue to be motivated to help build shareholder value
- Shareholding targets set for Executives
- Plans contain Malus (ability for the value of award to be reduced after it has been granted but before it has vested) and Clawback clauses (ability for the Group to require the participants to repay the value they received after the award has vested). The Group can exercise these provisions if one of a list of trigger events occurs. Trigger events include the Misstatement of results, an error that causes an award to be paid at too high a level, a serious illegal act, or a material breach of the Group Code of Ethics.



Stock Compensation

- Restricted shares are issued annually to some Executive Officers under Japanese employment terms as a retirement saving plan.

Compensation for Director and Executive Officers

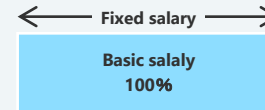
b. Compensation ratio

The ratio of basic salary and incentives is, rather than specifically and equally applied, set according to individuals' management grades.

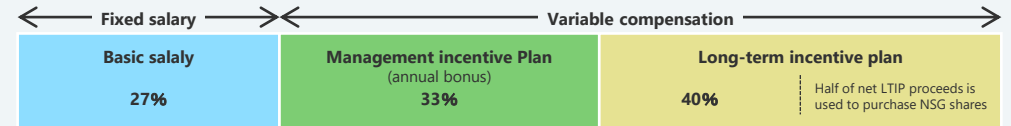
Note: For clarification, the diagram includes only base salary plus annual and Long-term incentive plan compensation, no additional benefits are included. In addition, the impact of the share price movement element of the Long-term incentive plan is not taken into account.

CEO's compensation ratio

In the case that all criteria of performance-linked compensation have not been reached



In the case that performance-linked compensation have been reached all maximum (maximum payment of performance-linked compensation)



Targets of performance measures for performance-linked compensation

【 1 】 FY2024/3 Management Incentive Plan (annual bonus)

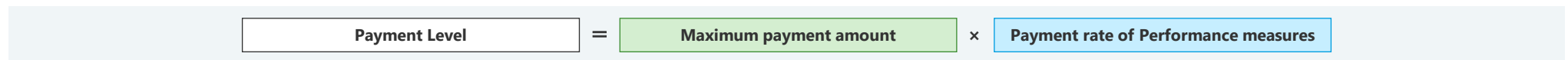
a. Performance measures and weight

Element	CEO and Kaicho	Executive Officers other than CEO and Kaicho, who are mainly responsible for specific Global SBUs	Executive Officers other than CEO and Kaicho, who are mainly responsible for specific group functions	Reasons for selected the measures
Group Management Operating Profit	50%	35%	35%	Ensure alignment with delivery of the target numbers assigned to Group operating profit and cash flow which are the financial performance indicators specifically important to the annual budget
Group Free Cash Flow	50%	35%	35%	
Global SBU Management Operating Profit	—	In relation to the results of specific SBUs they are responsible for, constituting 15% in total	In relation to the results for every of SBU of the Group, constituting 15% in total	For Executive Officers who are mainly responsible for specific SBU or group function, ensure working together to achieve the targets numbers of the entire group as an Executive and also exercising the leadership within each SBU/Function to deliver annual target numbers of each SBU
Global SBU Cash Flow from Operations	—	In relation to the results of specific SBUs they are responsible for, constituting 15% in total	In relation to the results for every SBU of the Group, constituting 15% in total	

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

Note: Group Free Cash Flow used in the above table represents the net debt movement arising as a consequence of the operating and investing activities in the period. It includes transactions that have impacted the Group's net debt even where there has been no cash movement through an NSG Group bank account, and is therefore different to the Free Cash Flow as derived from the sum of operating and investing activities included within the Group's consolidated statement of cash flows. Group Operating Profit shown in the above table is defined as being operating profit stated post-amortization before exceptional items on a consolidated basis plus share of income from the Cebrace JV. The actuals for these KPIs are the subject-matter of review and confirmation by the Compensation Committee.

b. Determination of Management Incentive Plan (annual bonus) Payment Level



Compensation for Director and Executive Officers

【2】 Long-term incentive

a. Performance measures, weight and reasons for selected the measures of plans currently in operation

Performance Measures of Plan commencing in FY2022/3

(Target period : FY2022/3, FY2023/3 and FY2024/3)

Performance Measures	Ratio	Reasons for selected the measures
EPS	50%	Two performance measures ensure clear link with the Medium-Term Plan, incentivizing executives to further strengthen earning power and enhance shareholder value.
ROS	50%	

Performance Measures of Plan commencing in FY2023/3

(Target period : FY2023/3, FY2024/3 and FY2025/3)

Performance Measures	Ratio	Reasons for selected the measures
EPS	75%	Two performance measures ensure clear link with the Medium-Term Plan, incentivizing executives to improve restoration of financial stability and enhance shareholder value. Set the ratio of EPS measure to 75% to further enhance shareholder value
Free Cash Flow	25%	

b. Determination of LTIP Payment Level

$$\text{LTIP Payment} = \text{Maximum payment amount} \times \text{Payment rate of Performance measures} \times \text{Share price movement rate}$$

The share price movement rate is a coefficient that is linked to the price movements of the Company's share price for the three-year period covered by each plan, and is adjusted based on the price movement of the monthly average share price in the month before the start of the plan and the monthly average share price of the last month of the plan.

2. Compensation Policy for Independent External Directors

- Objectives**
 - To ensure that Independent External Directors can adequately and effectively fulfill their supervisory roles
 - To ensure that they have the capability and experience required to fulfill this role
- Compensation level**
 - Set at the appropriate level based on comparisons with other companies using benchmark data provided by specialist external advisers.*

* In the case that a Non-Independent External Director is elected, compensation will be set at an adequate level for his/her duties in a way commensurate with the duties discharged by Independent External Directors including in terms of whether or not they are appointed as member of any of three Committees and so forth.
- Compensation Structure**
 - Only Basic salary
 - Not eligible for Management incentive plans (annual bonuses) and Long-term incentive plans
 - Independent External Directors receive additional reward if they act as Chair at either the Board or any of the Committees.

3. Amount of Compensation for Directors and Executive Officers for FY2023/3

Category	Head count	Amount of Compensation (million yen)							Total
		Basic salary	Performance-linked compensation			Non-monetary compensation			
			Annual Bonus	Long-Term Incentive Pay	Total	Stock Compensation	Others Benefits	Total	
Directors who do not concurrently serve as executive officers (External Directors)	6	68	-	-	-	-	-	-	68
Executive Officers	15	568	177	145	323	46	34	80	970

1. Amount of compensation for Executive Officers includes compensation paid to executive officers by the Company's subsidiaries.
2. Amounts shown relate to the periods for which the office of Director and Executive Officer was held.
3. Directors and Executive Officers include those who retired and those who assumed office during FY2023/3.
4. The amount shown as Performance-linked compensation in the table are the payments associated with the Annual Bonus for FY2023/3 and with the Long-Term Incentive Plan covering the three financial years from April 2020 to March 2023.
5. Stock compensation relates to the cost of allocating a total of 114,000 restricted shares to Executive Officers under Japanese employment terms.
6. Other Benefits include pension fund contributions, healthcare provision and automobile costs and so forth.

dialog with External Directors

~towards further improvement of Corporate Governance~



Independent External Director
Chairperson of Compensation Committee

Jörg Raupach Sumiya

Independent External Director
Chairperson of the Board
Chairperson of Nomination Committee

Hiroshi Ishino

In April, 2023, Mr. Hosonuma was newly appointed as Representative Executive Officer, President and CEO. Could you explain the process of selecting a new President in the Nomination Committee and what the Committee expects from the new President? In addition, could you also explain about the role of newly established Executive Officer Kaicho?

Mr. Ishino When I assumed the role of the Nomination Committee Chairperson in 2021, several candidates had been listed for the Company's President. Since then, we spent a couple of years in the process of selecting a new President including assessment by hiring an external consulting firm, development of a succession plan based on the assessment, and monitoring of a progress of the plan. In this selection process, there were some differences of views between the Nomination Committee and the external firm but we were able to proceed with the process by having in-depth discussion about the competencies and expectations of the new President within the Committee, which I believe was an objective, fair, and excellent process.

Mr. Raupach I agree. The system for appointing a new President worked very well. We spent a couple of years

thoroughly discussing this appointment and the decision was made based on a long-term succession plan instead of a haphazard one. It should be highly evaluated that we were able to appoint a new President by identifying the qualities required of a new President including competencies to overcome challenges the Group is facing while also incorporating the perspectives provided by an external organization.

We believed that a new President should be a person who is customer-oriented, an enabler for innovation, good at developing talents and capable of not only resolving immediate problems but drawing a strategic blueprint for the future and spearheading a full-fledged transformation according to that blueprint. Taking all of these points into account, the Committee held direct dialogs with the candidates including interviews in addition to a systematic

approach, which allowed the Committee to capture their character quite precisely. In all, we believe we were able to appoint the new President based on a very robust process. We believe Mr. Hosonuma's strengths lie in his strategic thinking and interpersonal communication skills. The Committee expects that he will leverage his strengths to build a strong global team, promote reforms, deliver business results while bolstering the financial base, and lead the Group to transform into a growing organization.

Mr. Ishino As Mr. Raupach mentioned, I also believe that Mr. Hosonuma has excellent communication skills, which I consider to be one of his outstanding strengths. As one of three reforms in the Medium Term Plan, NSG takes up "corporate culture reform". In a bid to foster a corporate climate that never fails to take on challenges and follow through to deliver results without being bound by conventional ideas or stereotypes, we expect Mr. Hosonuma will drive transformation forward by influencing the Group greatly through effective communication with various stakeholders not to mention with our own people.

Also, Mr. Mori, former CEO, assumed the role of Executive Officer Chairperson of the Company reporting to President and CEO, who is Representative Executive Officer. Mr. Mori is expected to support a new organization led by Mr. Hosonuma mainly on the management of external relationships critical to the NSG Group. We expect that Mr. Hosonuma will promote the Group's transformation by building a new, global, and robust executive structure while addressing external affairs with the support of Chairperson of the Company Mori.

Mr. Raupach Yes, I agree. Chairperson of the Company Mori has ample experiences to date, and he will be a strong support to President Hosonuma, especially in external activities.

dialog with External Directors

A female Independent External Director was newly appointed in the General Meeting of Shareholders this year, which was a progress in diversifying the Board of Directors in terms of gender. Will you continue to promote diversity in the Board of Directors further? Please share with us what you consider an ideal composition of the Board of Directors.



Mr. Ishino In order for the Board of Directors to be able to supervise the Executive Team from various angles and facilitate enhancement of corporate value over the medium to long term, External Directors are required to have “functionality” based on experience and expertise and be “diverse” in terms of gender, internationality and so forth. This year, the Group modified its Corporate Governance Guidelines regarding the composition of the Board of Directors through discussions at the Nomination Committee and the Board. The amended Guidelines stipulate that “... given specifically the development of and commitment to the businesses conducted globally, the Group aims to ensure that the Board will be composed of such members with a well-balanced mixture of professional skills, knowledge, expertise and experience by reference to the management objectives and strategies of the Group, and at the same time with diverse background in terms of gender, career (including international experience), age, etc.”

I believe that the current composition of the Board of Directors is well-balanced in terms of “functionality” and “diversity” is secured in terms of gender and internationality. Further discussions are needed, however, especially at the Nomination Committee to enhance “functionality” and “diversity” of the Board further in view of the next Medium Term Plan.

Mr. Raupach Considering the Group’s business structure and management challenges, global knowledge and expertise as well as business experiences overseas are indispensable. In this regard, the appointment of Ms. Sakurai as a new Director of NSG this year should bring us closer to an ideal composition of the Board of Directors, given her wealth of experiences in global business and profound insight into sustainability issues. We look forward to her contribution to the enhancement of the effectiveness of the Board to supervise the Executive Team drawing on her extensive overseas business experiences.

Mr. Ishino While we have taken a step forward in gender diversity on the Board of Directors, further progress is needed to ensure supervision of the Executive side from a variety of perspectives. Additionally, diversity of Executive Officers who form the management team is also important. In June 2023, the Group established the “NSG Group Diversity, Equity & Inclusion (DEI) Policy”. Promoting DEI is extremely important to enhance corporate value and materialize a sustainable organization. The Nomination Committee should also step up initiatives to diversify the composition of the Executive Team in terms of gender, nationality, age and so forth.

dialog with External Directors

This is the final year of the current Medium Term Plan, Revival Plan 24 (RP24).
How would you evaluate the progress of RP24 initiatives as the Board of Directors?

Mr. Raupach Discussions on RP24 took place in FY2021/03. Since then, the business landscape has changed dramatically with the pandemic and Russia's invasion of Ukraine. I appreciate the Executive Team's efforts during this time to promote three reforms, namely the cost structure reform, the business structure reform, and the corporate culture reform in order to survive such challenging conditions and meet RP24 targets. To be specific, progress has been made in the cost structure reform including headcount reduction, and strategic investment projects were implemented for a solar glass production line in the USA and a new float furnace in Argentina. The Group's Automotive glass business in China was integrated with a major Chinese automotive manufacturer to accelerate business portfolio change. Sustainability initiatives such as development of Roadmap to achieve carbon neutrality by 2050 also deserve recognition. Discussions between the Executive Team and the Board of Directors have become more active over the past few years, and I feel that we are moving in the right direction as a company.

On the other hand, we are still halfway through our journey toward the restoration of financial stability and the development of new growth businesses under the business structure reform. I expect that the Executive Team will continue their efforts until the very end of the RP24 period to deliver results in these areas. Also, it is important to make sure that remaining issues will be included in the next Medium Term Plan.

Mr. Ishino I agree. A variety of initiatives have been implemented by strategic business units under RP24 in the harsh business environment. Even though it was extremely difficult, headcount reductions were executed as planned mainly in our Automotive glass business locations in Europe and the USA. In addition, soaring raw material and fuel costs were successfully passed on to selling prices in Architectural glass business and Automotive glass business. These achievements are remarkable and should be evaluated highly.

I hope that the Executive Team will leverage such initiatives to drive the corporate culture reform forward. When faced with challenges, it is important to stay positive and think about how we can deal with it instead of searching for reasons why we can't. Such culture or attitude should be promoted across the organization. There are still opportunities for the corporate culture reform. I hope that forward-looking mindset will be established as part of our corporate culture, and employees will tackle issues even the tough ones with a challenging spirit.



dialog with External Directors

The Group will develop the next Medium Term Plan in FY2024/03. What are your thoughts on the directions that the Group should take and how are you going to discuss this new management plan as the Board of Directors, taking into account the request made by the Tokyo Stock Exchange (TSE) in March 2023 that Prime and Standard listed companies should implement “management that is conscious of cost of capital and stock price” and make “improvements in dialog with shareholders and disclosure regarding this”.



Mr. Raupach I understand that TSE urged companies to promote “management that is conscious of cost of capital and stock price” in light of the problems faced by Japanese companies as a whole. This is a very difficult request for the Group. We are promoting reforms to build business strength to generate constant and stable free cash flow, but still halfway through the journey toward the restoration of financial stability. Moreover, further increases in interest rates are likely to push up the cost of capital and make the business environment even more challenging.

We should immediately consider concrete strategies for developing new growth businesses while also improving financial stability going forward. We must thoroughly discuss TSE’s request as we create the new Medium Term Plan.

Mr. Ishino In response to TSE’s request, the Board of Directors once again checked the Group’s cost of capital and profitability and confirmed that these items should be discussed as part of the business strategy and the financial strategy of the new Medium Term Plan. The Group’s equity ratio has improved and finally reached the target of more than 10 % set forth in RP24 as a result of various initiatives implemented in the challenging conditions over the last few years. We must continue to generate net profit and free cash flow in order to make progress in the restoration of financial stability.

In addition, business portfolio change should be accelerated by placing greater focus on the cost of capital. In order to facilitate the change, we need bold strategies and initiatives. For example, focusing more on highly profitable businesses/projects while shrinking some other

businesses/assets may be required. These options should be examined more in-depth by the Board Directors and the Executive Team.

Needless to say, it is also crucial to implement management conscious of stock price. In order to boost our share price, we need a strategic story to communicate how we intend to grow and improve our corporate value over the medium to long term. Such a story should be developed during the process of discussing the next Medium Term Plan. We should disclose specific actions to be taken for sustained growth and enhanced corporate value and create opportunities for dialogs with shareholders, investors and other stakeholders.

Mr. Raupach Sustainability is also a matter of great concern for shareholders and investors, and we must continue our initiatives to meet their expectations in this regard. Environmental sustainability initiatives such as CO₂ emission reduction are of course, material management matters to be addressed. At the same time, we must see sustainability issues as opportunities to create added value that differentiates us from competitors and to make this as our competitive advantage. Especially, our Architectural glass business has considerable potential. I believe that there are plenty of business opportunities in the markets where we have strengths - Japan, Europe, and the USA. It is important to develop products and services that can contribute to sustainability, market them effectively and ultimately expand sales.

The Board of Directors is determined to support such efforts by the Executive Team.

Risk Management



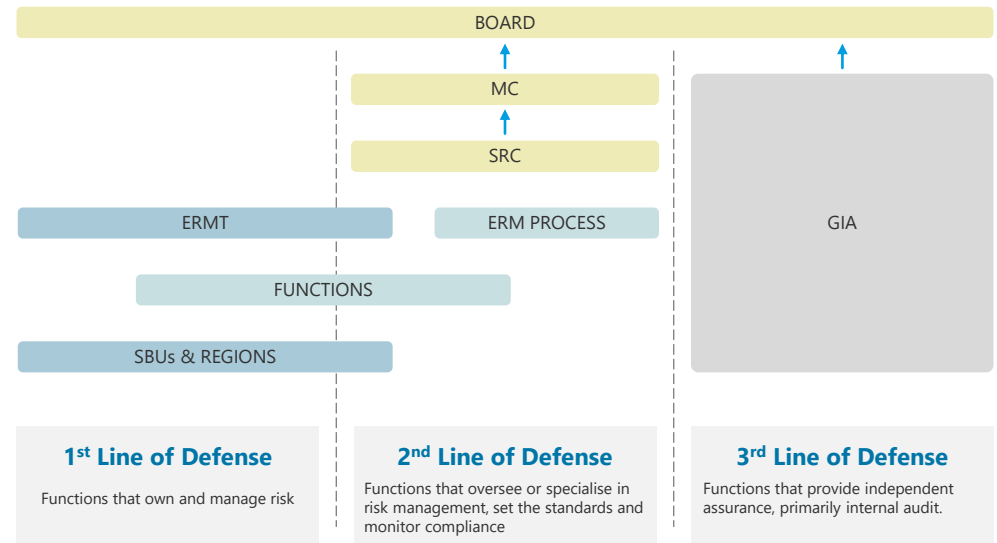
Basic Policy

Consistent with the "Our Vision" management principles, NSG Group aims to enhance corporate value by sustained growth in line with the Medium-term Plan RP24. That said, the business environment enveloping the Group has become increasingly complex and is continuing to dynamically transform. We see risks in the uncertainties that stem from internal and external factors, which threaten to 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. By systematically and methodically implementing appropriate risk management across the entire Group, we can not only achieve our short-term business targets, but also reliably execute business strategies. NSG Group's risk management is carried out in accordance with our Fundamental Policy on Internal Control Systems, which was resolved by the Board of Directors in accordance with the Companies Act and Corporate Governance Code. 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) as well as the COSO Enterprise Risk Management model. We are looking to continuously improve our systems in line with developing standards and the evolving risk landscape.

Framework

NSG's risk management systems are established so that they are fully embedded within the Group's day-to-day operations and operate as "three lines of defense". The first line of defense is established within the business SBU's and Group Functions who operate controls and mitigations to identify, assess and manage risks across all the activities of the Group as part of its the day-to-day operations. The second line of defense is made up of the Group Functions and management forums who not only set the operating and risk management policies and standards for the operations, but also monitor the effective operation of the controls. The third line of defense is provided by the Group Internal Audit Function who make an independent evaluation of the effectiveness of the controls and the risk management processes. At the heart of its enterprise risk management system – mainly the second line of defense – NSG Group employs a two-tiered "hybrid" risk management framework comprising the Strategic Risk Committee (SRC) as a top-down approach and the Enterprise Risk Management Team (ERMT) as a bottom-up approach, both of which are under the supervision of the Management Committee, and report onwards to the Board of Directors.

ERM Organization – Three Lines of Defense



Risk Management

SRC Structure and Purpose – Top-down Risk Review

SRC is chaired by the Chief Risk Officer (CRO) and its members are mostly executive officers including CEO. SRC determines the companywide risk management policy and framework, based upon which it identifies and classifies: (a) high level risks thought to have a serious impact on the Group; and (b) operational risks that ought to be managed by SBUs or Group functions. It then monitors how those risks are being addressed and requests that additional measures be taken if required. For high level risks, SRC appoints “risk owners” to manage the collection of risk information and the progress of countermeasures. 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 regarding the effectiveness of the Group's basic internal control system and risk management structure. On an annual basis the SRC members formally review the current risk universe and the results of the ERMT Bottom-Up Risk Review as explained below, to identify if the risks being monitored by SRC need to be amended. In FY2023, SRC convened three meetings and reported once each to the Management Committee and the Audit Committee.

ERMT Structure and Purpose – Bottom-up Risk Review

ERMT is chaired by CFO and its members comprise heads and relevant senior managers of SBUs and functions such as accounting, finance, human resources and legal. Every year this team identifies, assesses, and prioritizes the key risks pertaining to business execution and endeavors to improve the effectiveness of risk management by formulating necessary measures to mitigate risks. Those risks and mitigation measures are reviewed as necessary according to the circumstances from time to time, among others, material risks are escalated to, and monitored by SRC. ERMT periodically, or whenever requested, reports on its activities to SRC.

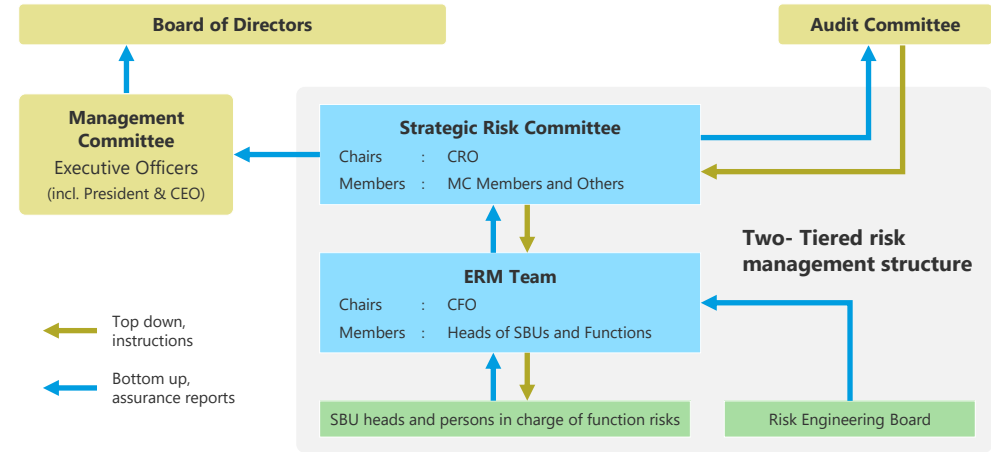
Independent Assurance

The Internal Audit Department's role is to provide assurance from an independent standpoint, regarding the companywide efficiency of risk management, and the effectiveness of specific risk mitigations.

Global Insurance Program

To transfer or share risks, we have established an NSG Group Insurance Program. The program identifies the key insurable risks, including property losses caused by natural disasters, and endeavors to transfer them by placing cost effective insurance. Every year, under the supervision of SRC, we review the Group's comprehensive insurance coverage under the global insurance program.

NSG Group Risk Management Structure



Major Risks for NSG Group

In FY2023 SRC identified, assessed and monitored the following risks. For each risk, an owner has been appointed from among the executive officers or senior managers, to take responsibility for appropriately managing it. For each of the key risks being monitored, SRC has determined that sufficient mitigations are in place, or are being progressed, to manage the risk within the Group's appetite.

Lack of Funding	Lack of Adequate Talent
Economy & Market	Failure to Deliver Key Contracts
Efficiency & Cost base	Loss of Market
Commodities & Supply & Business Interruption & Asset Loss	Political / Fiscal Regime
Failure to Identify / Manage Cyber Incident	Non-Compliance with Laws / Regulations
Product Quality Failures	Change Readiness / Project Execution Failure
Climate Change & ESG	Failure to Adequately Resource Product & Process Development
Technology & Systems	Third party IP Constraints on VA Growth

Risk Management

Risk Focuses

Cyber Security



Chief Information Officer

Cath Hawley

Cyber security threats can come in many forms and be initiated by various individuals or groups, with the intention of economic disruption or funds generation. As the world political situation changes, so does the number of threats. The types of threats are also continually changing, as technology catches up, the threat mechanisms evolve to stay ahead. As a result, we need to continue to focus on this area both in our day-to-day operations and our strategic approach.

The 3 key areas of Cyber Security that we focus on are: People, Technology & Processes. We need to ensure we deliver in all these areas.

Below are some examples of how we try to do this:

People

- Annual mandatory Cyber Security training for all users with an email account. This training is based on a common platform.
- Further, more regular Group-wide communications and education:
- Security News – articles on the Cyber topics are issued to alert people about current threats.
- Security Drops – are bite sized articles issued to keep the topic fresh in people's minds.
- Phishing simulations which take place to make people aware of the red flags to look out for and check their alertness.

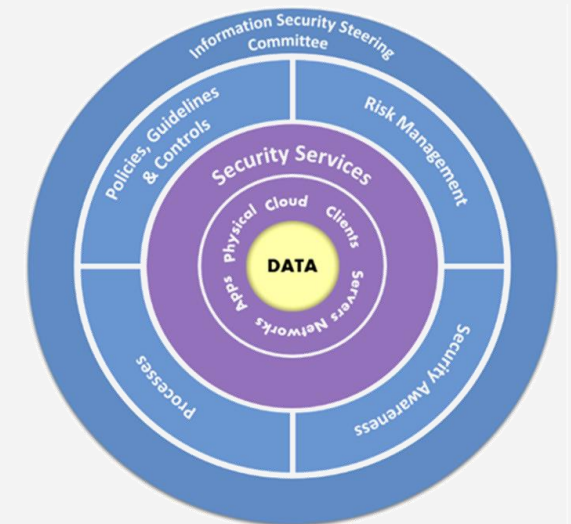
Technology

- A regular patching cycle for devices is in place to ensure technical security is up to date.
- We use 3rd party tools to provide evaluations and additional security.
- Regular reviews and updates of these tools are carried out.
- Status and progress of updates are monitored, and the necessary actions taken.
- A structured program of work is planned for continued developments and improvements.

Processes

- Cyber threats/events are not only an IS responsibility, but other areas are involved, including IS, Legal, GIA, Finance, etc.
- We operate a 3 Lines of Defense model (see page 88) to ensure the necessary policies and procedures are in place, are operated correctly and independently reviewed.
- These relate to both prevention of incidents and response.
- For any concerns or advice, there is a team that can be contacted 24x7. This team has access to the necessary technical and functional experts.

This subject is a very fast-changing one. We need to ensure we keep up to date with the latest threats and react as quickly as possible via updates, employee education, tools implementation and process developments. Our structure is regularly reviewed and updated to reflect required changes, and the technical teams and other supporting functions work together towards this objective.



Risk Management

Risk Focuses

Update on Supply Chain Project



Procurement Manager – Supplier Capability & Development
Jaroslaw Plewniok

Since March 2022, when the Sustainability Steering Committee formed a steering group to specifically focus on development of the Sustainable Supply Chain strategy, several key milestones were achieved:

8 Key Sustainability Impacts identified as having the greatest impact:

- Reducing Greenhouse Gasses Emissions, Protecting the Environment, Protecting Labor and Human Rights, Reducing Waste, Conserving Water, Supporting Diversity, Equity, and Inclusion, Improving Transparency, and Supporting Communities

Sustainable Supply Chain Charter was drafted and approved by the Management Committee,

- as a document outlining NSG commitments towards 8 Key Sustainability Impacts as well as expectations set to suppliers with examples of KPI's and long-term aspirations for collaboration.

Supplier and Customer consultation were conducted,

- to assess the alignment between the Sustainable Supply Chain Charter, customer requirements and aspirations, as well as supplier capacity and capability to meet future expectations.

Risk Heat Map Workshops completed,

- with key stakeholders and Procurement Category and Regional Teams.

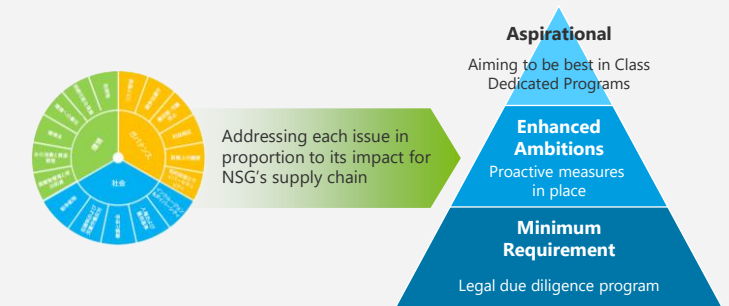
The purpose of creating Risk Heat Maps is to establish sustainable procurement priorities for categories of supply managed both regionally and globally, to guide the procurement team and their business partners in further Supplier Relationship Management through inclusion of appropriate sustainability related:

- requirements in bidding and onboarding process
- criteria in business award
- clauses in contracts
- KPIs in Performance Management (evaluation)

Risk Heat Maps will be used starting from 2nd half of FY24 to determine which suppliers will be asked to sign to the Sustainable Supply Chain Charter (e.g., preferred, strategic, high risk) and invited to participate in evidence-based sustainability assessment. To support our suppliers on the journey towards creating a truly Sustainable Supply Chains, we have entered into partnership with Supply Chain Sustainability School*, to provide a comprehensive set of training materials and resources for internal and external use. School onboarding is planned for Q3 of 2023 followed by a communication campaign and sharing the resources via NSG website.

*Launched in 2012, the Supply Chain Sustainability School is a free learning environment, upskilling those working within, or aspiring to work within, the built environment sector. With over 190 Partners, the School is the key industry-led organization for driving the improvement of sustainability knowledge and skills throughout the whole value chain. Partners include clients, major contractors and key suppliers all with one mission – to deliver more efficient and sustainable projects. They lead and drive the direction of the School, ensuring that a tailored, supply chain support approach can be delivered across industry. School is focused on 17 key topics of Sustainability, as well as addressing topics in Offsite, Procurement, Digital, Lean Construction, Management, People and FIR (Fairness, Inclusion and Respect).

Classification of Sustainability Issues in the Supply Chain



Risk Management

Risk Focuses

Update on Natural Gas Supply Impact on Manufacturing in Europe



Head of Manufacturing Excellence

Stephan Rosebrock

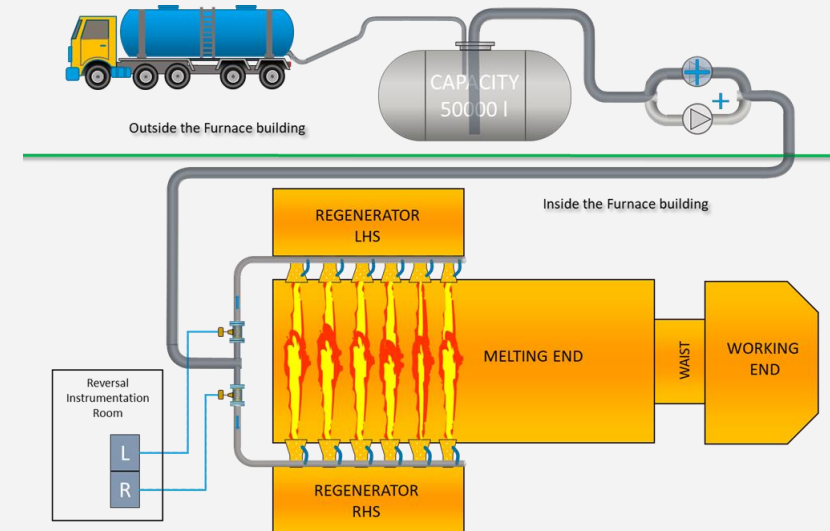
An emergency plan has been developed and executed already in 2022 to ensure that each EU float is prepared to go on hot hold in a controlled manner by firing liquid fuel in case of severe gas shortage; all 9 floats are ready to fire diesel for Hot Hold at any point of time.

8 floats have now the capability to produce by mixing gas and diesel. All floats can also adjust production to manage limited reduction of gas without usage of diesel.

The following actions are put in place for 2023:

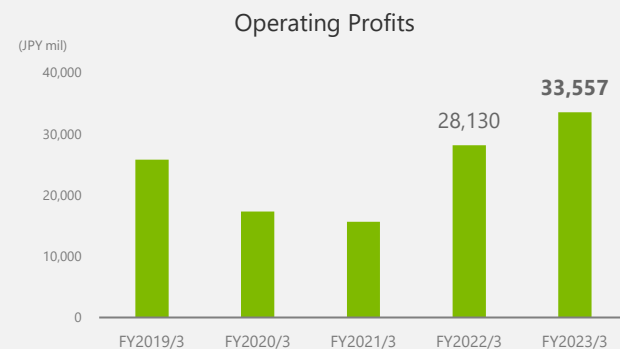
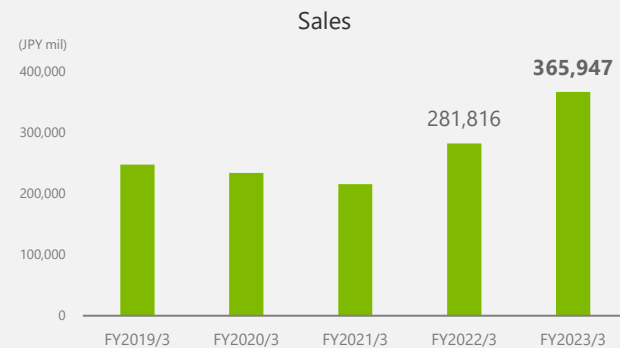
- Regular monitoring of gas shortage risk, consulting external energy and gas providers
- Plant managers will ensure the diesel capability is maintained and regularly tested; training on procedures is regularly refreshed.
- Regional Manufacturing leader ensures high standards is maintained.
- A review meeting with all sites and functions planned in Sept 23 to check readiness to next winter

In our European Automotive operations, the majority of energy consumption is electricity with only a few gas-fueled lines in the countries identified at risk. Level of risk related to raw glass availability significantly reduced due to the open capacity of floats and the capability to produce in mixed mode. A potential reduction of gas of 15% can be managed by all plants identified at risk, without penalizing OE demand.



Business Results of FY2023/3 and Forecast of FY2024/3 for each SBU

Architectural glass business



FY2023/3 results

The Architectural business recorded cumulative revenues of ¥ 365,947 million (FY2022: ¥ 281,816 million) and an operating profit of ¥ 33,557 million (FY2022: ¥ 28,130 million).

Architectural revenues and profits increased from the previous year due to higher selling prices and the translational impact of a weaker Japanese yen.

In Europe, revenues improved significantly as a consequence of increased selling prices and foreign exchange movements. Profits were similar to the previous year, with higher energy-related input costs offsetting the increased selling prices. Volumes also softened during the fourth quarter, as increased levels of inflation and interest rates negatively affected business and consumer confidence.

In Asia, revenues and profits were above the previous year. Market conditions improved with increases in sales volumes and prices, which, together with a positive operational performance, more than offset the effect of increasing input costs.

In the Americas, revenues and profits were ahead of the previous year. Positive customer demand was mitigated by North American logistics constraints, which affected sales volumes in the first half of the year, although this eased during the second half. The Group commenced production at its second float glass line in Argentina during the third quarter of the year.

FY2024/3 assumptions

Demand in the Architectural glass business is expected to be favourable while energy price volatility and potential recession concern mainly in Europe and the USA remain.

In Europe, unstable energy price movement and high input costs are assumed to continue, and their impacts will be mitigated with price pass-throughs. Sales volume is assumed to decline modestly affected by economic slowdown.

In Asia, volume and price in Japan are expected to increase under the favourable demand-supply situation while the competitive situation should be monitored in other Asian countries.

In Americas, solid demand is expected in the regional market with strong economic activity, but there are concerns about an economic recession due to interest rate hikes in North America. In South America, the supply-demand environment is expected to remain tight, and a new float line in Argentina will contribute to profit for a full-year.

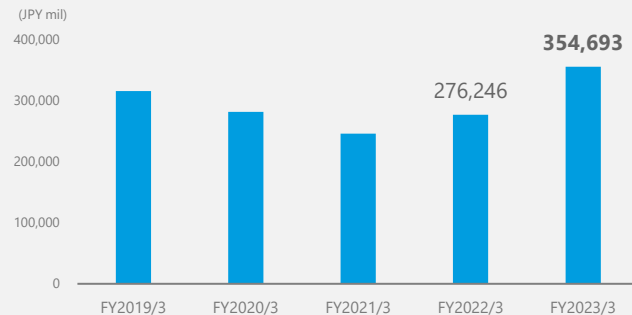
In solar energy glass, demand is expected to remain strong due to the shift to renewable energy. Also, a new capacity installation in the existing float furnace in Malaysia will start its operation in the second half of the year.

Business Results of FY2023/3 and Forecast of FY2024/3 for each SBU

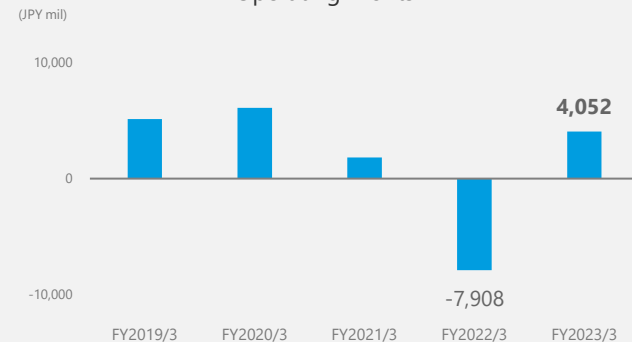
Automotive glass business



Sales



Operating Profits



FY2023/3 results

The Automotive business recorded cumulative revenues of ¥ 354,693 million (FY2022: ¥ 276,246 million) and an operating profit of ¥ 4,052 million (FY2022: loss of ¥ 7,908 million).

Profits in the Automotive business continued to recover allowing the business to record a positive overall profit for the full year. Volumes continued to gradually improve and price increases with customers were agreed to offset the high level of input costs. In Europe, revenues increased, due partly to foreign exchange movements. Volumes were negatively affected by a shortage of semi-conductor components at the Group's customers, although this eased somewhat during the second half of the year. Profitability continued to be affected by high input costs, although this was increasingly offset by rising sales prices, with the Group successfully concluding price negotiations with a number of customers from the second and third quarters. Volumes in glass replacement markets were positive.

In Asia, revenues and profits improved from the previous year, as price increases were negotiated with customers to mitigate the effect of rising input costs.

In the Americas, revenues increased from the previous year, assisted by foreign exchange movements, while profits declined. Demand in North America was generally positive with vehicle manufacturers increasing levels of inventory, although supply chain issues continued to negatively affect demand levels at many of the Group's customers. Demand in South America was relatively strong, with volumes improving in both Brazil and Argentina.

FY2024/3 assumptions

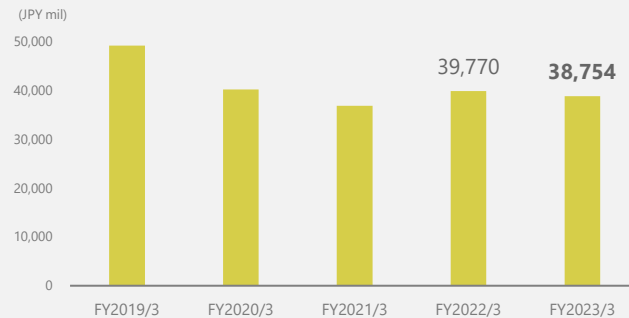
Strong market demand for vehicle is expected to continue and car production constraints due to component shortage is assumed to be resolved gradually. On the other hand, the impact of input costs rise remains and the business will be impacted by other costs rise such as freight and labor. We aim to mitigate these impacts through continuous cost reductions, rational price pass-throughs, and expansion of value-added products based on our unique technologies such as high-precision windshields.

Business Results of FY2023/3 and Forecast of FY2024/3 for each SBU

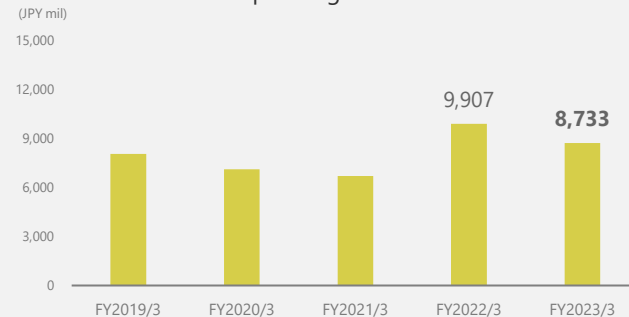
Technical glass business



Sales



Operating Profits



FY2023/3 results

The Technical Glass business recorded cumulative revenues of ¥ 38,754 million (FY2022: ¥ 39,770 million) and an operating profit of ¥ 8,733 million (FY2022: ¥ 9,907 million).

Revenues and profits fell slightly in the Technical Glass business due to the disposal of the Battery Separator division during the previous year. The lost revenue and profits from this disposal was largely offset by positive market conditions experienced by continuing businesses, although Covid lockdowns and a general economic slowdown had a negative effect on results during the second half of the year.

In the fine glass business, sales were impacted by slowing economic conditions. In the information devices business, demand for printer lenses slightly softened due to inflation in North America and Europe. While underlying consumer demand was stable, volumes of glass cord used in engine timing belts continued to be impacted by supply chain issues at the Group's customers. Metashine sales slightly recovered for automotive and cosmetic applications.

FY2024/3 assumptions

In the Technical glass business, less profitability is forecasted due to cost increases and some demand weakness caused by the IT market slowdown.

In the fine glass, continuous cost reduction efforts are expected to contribute to profit while economic and IT market slowdown are concerned.

In the printer lenses business, economic trend should be monitored, as expansion of inflation is concerned in Europe and the USA.

Glass cord demand is expected to be stable however close attention to supply chain issues at customers should be paid.

Evaluation by External Party

CDP Rating

Since 2011, NSG Group has participated in annual CDP* Climate Change and Water reporting.

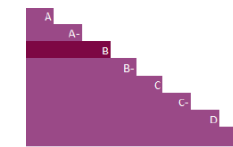
This year, the Group's CDP Climate Change 2022 score was B management rating. It encourages the Group to continue its ongoing efforts to achieve its 2030 Science Based Targets for CO² emission reduction.

NSG Group's CDP Water 2022 score was B management rating .

NSG Group uses CDP's global environmental disclosure system to transparently respond to multiple stakeholder requests in a consistent way. CDP reporting allows investors and customers to understand how emerging risks and opportunities on climate change and water security are managed in the value chain and quantify embodied impacts in products.

In addition, as a result of our collaborative efforts with our suppliers in the area of ESG, we were recognized as a leader in supplier engagement in the 2022 CDP assessment. This ranks us in the top 500 companies worldwide, including 105 Japanese companies, out of a total of more than 13,000 companies evaluated, placing us in the top 3% of the glass industry. CDP reporting has guided NSG Group to develop a data driven strategy, prepare for environmental regulation, set challenging Science Based Targets, introduce internal carbon pricing and align to best practice TCFD recommendations.

Annual feedback scores allow NSG Group to track progress and benchmark its environmental performance against the industry peers.



*CDP is a not-for-profit charity that runs the global disclosure system for investors, companies, cities, states and regions to manage their environmental impacts on climate change, water security and deforestation.

Nippon Sheet Glass Company, Ltd received a B which is in the Management band. This is higher than the Asia regional average of B-, and same as the Other materials sector average of B.

Leadership (A/A-): Implementing current best practices

Management (B/B-): Taking coordinated action on climate issues

Awareness (C/C-): Knowledge of impacts on, and of, climate issues

Disclosure (D/D-): Transparent about climate issues

Rating on Climate Change (Excerpt from the CDP report)

EcoVadis CSR Rating

EcoVadis operates an independent, external platform allowing companies to assess and benchmark their environmental and social performance on a global basis. The process assesses company policies, implemented procedures and published reports with regards to environmental, labor practices & human rights, fair business practices and sustainable procurement issues. The assessment is conducted by CSR experts of EcoVadis on the basis of company answers to a survey which is dynamically adapted to country, sector and size, using scorecards covering 150 industry categories and 21 CSR criteria. The rating is based on supporting documentation, public and stakeholder (NGOs, trade unions, press) information. We used this assessment tool to gain a picture of our CSR performance and to understand areas for improvement. We were rated as Silver regarding our approach to CSR management.



Inclusion in FTSE Blossom Japan Index

As in the previous year, Nippon Sheet Glass Co., Ltd. has been selected as a constituent of the FTSE Blossom Japan Index, an index of Japanese companies that demonstrate outstanding Environmental, Social and Governance (ESG) performance.



**FTSE Blossom
Japan Index**

Evaluation by External Party

Evaluation by financial institutions

In 2018, NSG Group has received the highest rating as “especially progressive environmental initiatives” by Development Bank of Japan, Inc. (DBJ) under its “DBJ Environmentally Rated Loan Program”. Also, NSG Group scored highly in the “commitment line syndication based on an ESG/SDGs evaluation” arranged by Sumitomo Mitsui Banking Corporation in 2021.

Please refer to the news releases.

NSG Received High Scores in the Commitment Line Syndication based on ESG/SDGs Evaluation by SMBC (November 25, 2021)

NSG Receives Highest Mark in Environmentally Rated Loan by Development Bank of Japan (October 1, 2018)

External Evaluation of Health Management (METI Health Management Survey)

Nippon Sheet Glass Co., Ltd. has been certified by the Japan Health Council as a 2023 Excellent Health Management Corporation (Large Corporation Division) in 2023 as a result of its continuous efforts to address employee health issues based on its Declaration of Health Management. This certification will continue for four years from 2020.



Certification as a Company Supporting Childrearing

Nippon Sheet Glass Co., Ltd. was certified by the Tokyo Labor Bureau of the Ministry of Health, labor and Welfare on December 4, 2015 as a “Child Rearing Support Company” under the Act on Advancement of Measures to Support Raising Next-Generation Children, and acquired the “Kurumin” next-generation certification mark. Furthermore, on December 5, 2019, we acquired the “Platinum Kurumin” certification as an excellent company with a high level of commitment among “Kurumin” certified companies. We have been actively supporting childcare and continuing our efforts to become a company where everyone can work more comfortably. Specifically, we have improved the work-life balance by promoting diverse work styles through the creation and distribution of childcare guidebooks, encouraging male employees to take childcare leave, making childcare leave partially paid, introducing telework throughout the company, expanding flextime, interviewing employees about taking planned annual leave, and revising employee nursing care leave regulations. We are also working to improve the work-life balance by promoting a variety of work styles. In addition, efforts to promote the advancement of women include building a women’s network, holding women’s career workshops, unconscious bias training for managers, and reviewing the personnel system to make it more conducive to diverse work styles and careers. We will continue to promote diversity, equity & inclusion, aiming to be a company where each and every employee can play an active role. For more information, please see the press release.

(Release in Japanese)

Obtained “Platinum Kurumin” certification as a childcare support company (as of December 24, 2019)

“Kurumin” Certification for Childcare Support Company (as of December 21, 2015)



History of NSG Group

1918 - 1940s

Foundation and expansion.



Futajima Plant in Fukuoka, Japan

- 1918 America Japan Sheet Glass Co., Ltd. was established
- 1920 New capacity added at Kitakyushu
- 1931 Company name changed to Nippon Sheet Glass Co Ltd
- 1936 Operation started at Yokkaichi

1950s - 1960s

Business expansion and coming of float glass age

- 1950 Company shares listed in Tokyo and other stock exchanges in Japan
- 1952 Operation started at Maizuru
- 1964 Operation started at Chiba
- 1965 Float glass production commenced first in Asia with technology licensed from Pilkington
- 1968 Established Research Center at Itami, Hyogo
SELFOC™ developed



First piece of float glass ever made in Asia



Maizuru Plant in Kyoto, Japan

1970s-1980s

Globalization of Architectural and Automotive Glass businesses.

Build a foundation of Technical Glass with new products and technologies.

- 1970 Manufacturing footprints expanded in Kyoto and Kanagawa
- 1971 Joint venture established in Malaysia
- 1975 Automotive joint venture established in Mexico
- 1978 Thin glass UFF™ (Ultra Fine Flat Glass) production start
- 1979 Launch of the glass fiber business
NSG Foundation established to commemorate the 60th anniversary of the Company
- 1980 Operation started at Sagamihara
- 1986 Automotive joint venture established in the US



The SELFOC is still core technology in NSG

1990s-Today

Further business globalization and contribution to a sustainable society.

- 1990 A 20 per cent stake of Libbey-Owens-Ford Company (Current Pilkington North America, Inc.) acquired
- 1995 Automotive and Technical glass joint ventures established in China and an Architectural joint venture in Vietnam
- 1999 Manufacturing footprints expanded in Tsu
- 2000 Shares of Pilkington acquired
- 2001 Increase in Pilkington shareholding to 20 per cent to become an affiliate of the Company
- 2004 Company headquarters moved to Tokyo
- 2006 Acquisition of Pilkington plc
- 2008 Adopted "Company with Committees (Current Company with a Nomination Committee)" system
- 2011 Adoption of IFRS
Production of solar energy glass started in Vietnam
- 2018 100th Anniversary
- 2020 Float lines for solar energy glass established in the US and expanded in Vietnam
- 2021 Medium Term Vision and Medium Term Management Plan, "Revival Plan 24 (RP24)" launched
- 2022 Disposed an Automotive Business in China to SYP Kangqiao Autoglass Co., Ltd.
Operation started in the second float furnace in Argentina



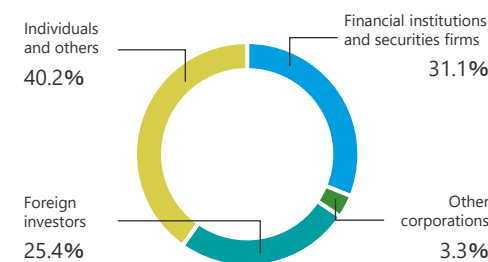
Vietnam Float Glass Co Ltd

Shareholder Information

Corporate Data As of March 31, 2023

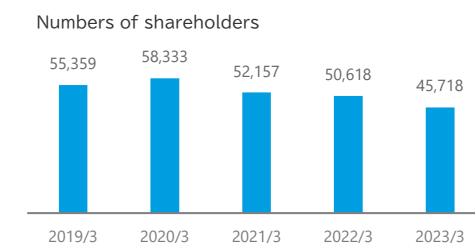
Securities Code	5202
Authorized Shares (Note)	177,500,000
Issued Shares (Note)	91,000,199(Common Shares)
Number of shareholders	50,618(Common Shares)
Trading unit of shares	100(Common Shares)
Stock Listing	Tokyo Stock Exchange, 1st section (Moved to the Prime Market on 4 April 2022)
Fiscal Year End	March 31
Annual Meeting of Shareholders	June
Record Dates	Ordinary General Meeting of Shareholders: 31 March Dividend: 30 September and 31 March If necessary, a public notice is given and a record date is set
Transfer Agent	Sumitomo Mitsui Trust Bank, Limited. Stock Transfer Agency Division 4-1, Marunouchi 1-chome, Chiyoda-ku, Tokyo, Japan
Operating office	Stock Transfer Agency Department, Sumitomo Mitsui Trust Bank, Limited 4-1, Marunouchi 1-chome, Chiyodaku, Tokyo, Japan (Mail Address) Stock Transfer Agency Department, Sumitomo Mitsui Trust Bank, Limited 8-4, Izumi 2-chome, Suginami-ku, Tokyo 168-0063, Japan (Telephone Number) 0120-782-031 (toll free in Japan)
Public Notice	https://www.nsg.com/
Accounting auditor	Ernst & Young ShinNihon LLC
Shareholder benefit program	No

Share ratio in status of shareholders (Common Shares)



	2019 March	2020 March	2021 March	2022 March	2023 March
Financial institutions and securities firms	26.8%	25.0%	27.3%	25.1%	31.1%
Other corporations	3.4%	4.1%	3.7%	3.5%	3.3%
Foreign investors	25.7%	13.7%	21.1%	23.6%	25.4%
Individuals and others	44.2%	57.2%	47.9%	47.7%	40.2%

Numbers of shares and shareholders (Common Shares)



	2019 March	2020 March	2021 March	2022 March	2023 March
Numbers of issued shares excluding own shares (1000units)	90,575	90,621	90,787	90,974	91,136
Numbers of shareholders (people)	55,359	58,333	52,157	50,618	45,718

Major Shareholders (Common Shares)

	Number of shares (1000units)	Percentage of shares
The Master Trust Bank of Japan, Ltd. (Trust Account)	14,788	16.22
Custody Bank of Japan, Ltd. (Trust Account)	4,446	4.87
Nomura Securities Co., Ltd	3,593	3.94
MSIP CLIENT SECURITIES	2,519	2.76
BNYM SA/NV FOR BNY M FOR BNYM GCM CLI ENT ACCTS MILM FE	2,013	2.20
MLI FOR CLIENT GENERAL OMNI NON COLLATERAL NONTREATY-PB	1,861	2.04
Client stock ownership of Nippon Sheet Glass	1,525	1.67
JP JPMSE LUX RE BARCLAYS CAPITAL SEC LTD EQ CO	1,289	1.41
JP MORGAN CHASE BANK 385781	1,227	1.34
SUMITOMO LIFE INSUARANCE COMPANY	914	1.00

Stock indices

Stock indices that include Nippon Sheet Glass Co., Ltd
(As of October 2, 2023)

TOPIX	NIKKEI 500 Stock Average
TOPIX Small	S&P/JPX Carbon Efficient Index]
TOPIX 1000	FTSE Blossom Japan Index

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