

CEO MESSAGE



Shigeki Mori

Representative Executive Officer,
President and CEO, NSG Group

With “Our Vision”, the new management principle of NSG Group, we will aim at the realization of a sustainable society through a variety of Value-Added (VA) products to reduce the impact of climate change and improve safety and comfort.

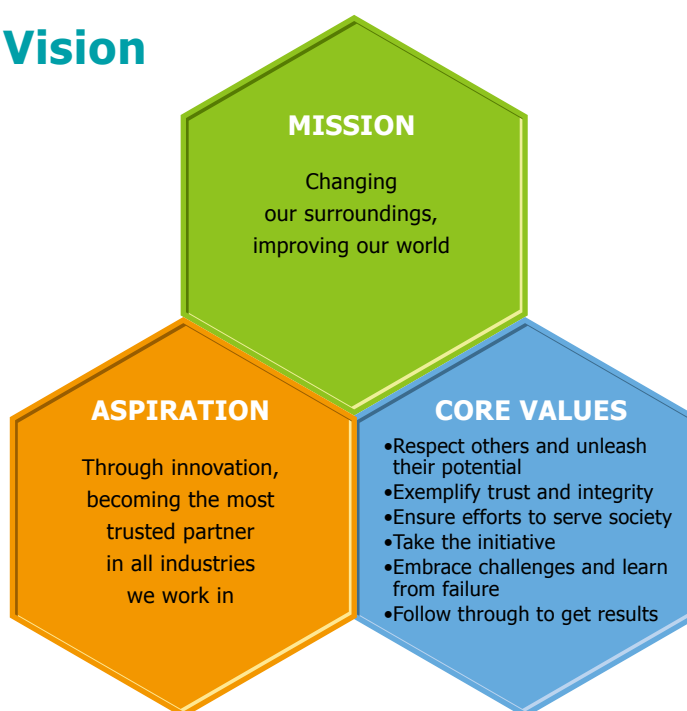
About: “Our Vision”

Announced at the 100th anniversary of NSG Group in November 2018, “Our Vision” comprises: Mission, “Changing our surroundings, improving our world”; Aspiration, “Through innovation, becoming the most trusted partner in all industries we work in” and Core Values, “Respect others and unleash their potential; Exemplify trust and integrity;

Ensure efforts to serve society; Take the initiative; Embrace challenges and learn from failure and Follow through to get results”.

With “Our Vision”, we are striving to improve our surroundings by creating new value with glass to meet the growing needs of our customers and society.

Our Vision



Medium-Term Plan (MTP) Phase 2

Based on the Group's Long-Term Strategic Vision to transform NSG Group into a VA Glass Company, we are currently executing the Medium-Term Plan (MTP) Phase 2 over a period of FY2018 through FY2020. The objectives of MTP Phase 2 are to achieve financial sustainability and start the transformation into a VA Glass Company. The two financial targets are net financial debt / EBITDA of 3X and operating return on sales (ROS) of greater than 8 percent. We also envision a return on equity (ROE) of greater than 10 percent and a shareholders' equity ratio of around 20 percent when the financial targets are achieved.

*Note: Calculated based on trading profit.

The actions under MTP Phase 2 consist of growth measures and financial measures. The growth measures include the following four actions.

1. Drive VA No.1 Strategy to aim for a leading market position in "high growth potential areas where the Group has core strengths".
 2. Establish growth drivers by focusing resources selectively.
 3. Promote business culture innovation for building a lean business structure.
 4. Enhance global management to optimize the Group's operations and advance global management effectiveness.
- The financial measures have been implemented to enhance equity and reduce net debt.

The financial measures include the enhancement of capital and reduction of net debt.

FY2019 Earnings and Progress of MTP Phase 2

Although the Group's performance in FY2019 was affected by higher energy costs, weaker South American currencies and weakening of the automotive market in Europe, in the second half, both revenue and profits increased year on year in an overall robust market environment, particularly in Europe, with a higher VA sales ratio. Revenues improved to ¥612.8 billion (up 2.3 percent from FY2018) and trading

profit to ¥38.8 billion (up 3.4 percent from FY2018). The profit attributable to owners of the parent company was ¥13.3 billion (up 115.6 percent from FY2018). Trading profit grew for the sixth straight year, while the profit attributable to the owners of the parent company remained in the black and there has been an overall profit increase for the last three years.

Drive VA No.1 Strategy

- Win leading position in those areas with “high growth potential” and “core strength”
- How:
 - Focus resources on VA shift in the areas where NSG Group technology and brand have the biggest advantage
 - Enhance customer relationships, build strategic alliances

Establish Growth Drivers

- Launch multiple, promising growth drivers
- Target areas:
 - Architectural Glass (energy saving/generation, health, design)
 - Automotive Glass (ADAS, connected, UV/IR shield, light weight)
 - Technical Glass (new products/applications with proprietary technology)

VA Glass Company

Business Culture Innovation

- Build leaner business structure
- How:
 - Optimize all work processes
 - Enhance manufacturing excellence in each region
 - Optimize global R&D with customer viewpoints
 - Strengthen customer-oriented marketing

Enhance Global Management

- Advance global management to achieve the Group’s optimization
- How:
 - Drive talent development, promote diversity
 - Enhance faster decision-making with flexible organization management
 - Continue to reduce cost across the Group

Free cash flow decreased from the previous fiscal year to ¥0.9 billion, partly due to an increase in working capital.

In FY2019, the second year of MTP Phase 2, the actions for achieving targets were accelerated with the policy of “Shift to VA + Growth”. The sales ratio of VA products increased to 46 percent, contributing to the improvement in operating profit. With a view to further growth, we are expanding the production capacity of glass for solar panels in Vietnam and North America and building a new float glass line in Argentina, to supply emerging markets in South America. To accelerate the initiatives for developing new businesses and generating new customer value, we launched our Business Innovation Center (BIC) in July 2018. BIC is focused on the development of new businesses in the promising fields of life science and Industry 4.0.

In light of the improved progress in transitioning to a financial structure capable of generating stable profits and cash flow, the year-end dividend (DPS ¥20 for ordinary shares) was distributed in FY2018 — the first dividend payment since FY2012. With the policy to secure dividend

payments based on sustainable business results, a year-end dividend for FY2019 (DPS ¥20 for ordinary shares) was also paid.

In FY2019, Class A shares worth ¥5.0 billion were redeemed in December 2018. We will continue to redeem Class A shares while maintaining financial stability by balancing generated profits and cash flow with the demand for funds for investment projects. Accordingly, the additional ¥5.0 billion of Class A shares were redeemed in June 2019.

We will maintain the basic policy on dividends even after all Class A shares have been redeemed in the future and endeavor to continuously pay dividends in targeting a consolidated dividend payout ratio of 30 percent.

Good progress was made on implementing the growth initiatives of MTP Phase 2. In the area of “VA No. 1 Strategy”, we have further improved our advantageous position in online coating products for architectural glass, while orders for VA automotive glass continued to increase. In establishing growth drivers, we are accelerating the commercialization of new businesses by managing promising

development themes as “Star Projects”. In the area of business culture innovation, productivity was improved in the manufacturing of automotive glass by enhancing manufacturing excellence, and “customer-first” thinking was expanded beyond our sales divisions with the reinforcement of marketing. To enhance global management, shared service centers were set up in four global locations to consolidate administrative functions. Based on our statement on Inclusion and Diversity, we continue to promote greater diversity and participation in our workforce.

Progress towards our FY2020 targets during MTP Phase 2 is as follows.

FY2019 ROS
of 6.3 percent (versus target of at least 8 percent)
FY2019 net debt/EBITDA ratio
of 4.9 (versus target of 3.0)

*Note: FY2019 ROE was 10.3 percent and shareholders’ equity ratio 16.2 percent

FY2020 Outlook and Issues to be Addressed

Through FY2019, we achieved a trading profit growth for the sixth straight year and kept the profit attributable to owners of the parent company in the black for the third consecutive year with a greater sales ratio of VA products, ongoing improvements in capacity utilization and cost reductions. However, we do not expect to achieve the financial targets (ROS and net debt/EBITDA ratio) we set for FY2020, the final year of MTP Phase 2, mainly because of increasing energy and other input costs, delays in launching new products, delays in VA shift in some markets, and frontloaded investments for future growth.

The targets of MTP Phase 2 to achieve financial sustainability and start the transformation into a VA glass company still remain valid. In FY2020 we will continue to do

what is required to transform our business structure under the policy of “Shift to VA + Growth”.

I believe the Group must address the following two issues: (1) Transform the business structure into one that can flexibly respond to market changes and steadily generate profits, even in the midst of economic uncertainties and instabilities; and (2) Establish a robust earnings platform to realize sustained growth. To this end, we are steadily executing the four key measures of MTP Phase 2 (Drive VA No. 1 strategy, Establish growth drivers, Business culture innovation, and Enhance global management) and pushing ahead with the transformation from a commodity/mass-volume business model to one that is centered on high value (transformation into a VA glass company).





We will also carry out strategies to deliver sustained growth. The potential applications of glass are almost infinite — in addition to the traditional functionalities of light, heat, sound transmission and control, glass can now be used to relay information through displays, sensors and optical communications.

In the architectural market, we are expected to increase our growth in the construction of Zero-Energy Buildings (ZEBs). The amount of energy used by a ZEB is roughly equal to the amount it generates. We hope to expand sales of our energy-saving glass and glass substrates for solar panels used in ZEBs. We also see new business opportunities in the growing uptake of IoT (Internet of Things) and AI-based “smart” windows. In the automotive sector, CASE (Connected, Autonomous, Shared, Electric) is taking the

industry by storm and we are looking to expand sales of our sophisticated VA glass products to meet the respective needs of these four disciplines. In the area of Technical Glass, sales of separators used for ISS batteries, hybrid cords for engine timing belts, and Metashine™ products are growing. And through our newly established Business Innovation Center, we have plans to make forays into the domains of life science, IoT/cloud services, energy conversion, and Industry 4.0.

Also, the Strategic Risk Committee was established last year and its new Chief Risk Officer will complement the existing bottom-up approach to risk management and deepen our discussions about how to address risks on a corporate level.

Initiatives for realizing a society with Sustainable Growth

Under the Group’s new management principles “Our Vision”, we have embraced the Mission of “Changing our surroundings, improving our world”. We are actively implementing initiatives aimed at realizing sustainable growth for society. As a signatory to the United Nations Global Compact, we support all of its principles and actively contribute to its Sustainable Development Goals.

In 2016, we identified the material issues and incorporated them into our sustainability goals. Our decisions were based on

the considerable impacts that our Group activities have on the economy, the environment and society, as well as the opinions we receive from stakeholders over the course of the year. Of the items of materiality, reducing greenhouse gas (GHG) emissions (CO₂) is the environment-related initiative of greatest concern to stakeholders and of most importance to our business operations.

By supplying VA products — one of our growth strategies — we can contribute to both energy conservation and

generation, and at the same time, play a part in the reduction of GHG emissions. Meanwhile, we are actively working to reduce CO₂ emitted by our glass manufacturing processes. In July 2018, the Group became a signatory to the Science-Based Targets initiative (SBTi), which we expect will further accelerate the pace of our strategies for reducing GHG emissions.

We will also continue to train and develop our people. Based on the recognition that “the key to our business is the power created by our diverse human resources”, the Group’s management is committed to promoting Inclusion and Diversity. We also strive to fulfill our social mission and responsibility as a good corporate citizen by ensuring that our employees understand the NSG Group Code of Ethics and implementing our Supplier Code of Conduct compliance assurance program.

I believe the key to leveraging our Group’s strengths hinges on every employee having an equal understanding of our policies and issues, which is why every year I visit our offices around the world to engage in two-way

communication with employees. I also regularly post messages on our intranet site to convey my own thoughts to all Group employees and keep them updated on things happening within the Group.

We continue to work hard towards contributing to the realization of a sustainable society by pursuing effective governance with transparency and objectivity ensured under the oversight of the Board of Directors. In light of the amendments made to Japan’s Corporate Governance Code in July 2018, the Group is taking steps to establish more effective corporate governance with the aim of enhancing corporate value.

As a result of our initiatives, NSG Group acquired the highest “Gold” rating for the first time in 2018 from France-based CSR rating agency EcoVadis. The Group was ranked in the top 7 percent in the glass industry thanks to favorable assessments in the categories of environment, labor practices & human rights, fair business practices, and sustainable procurement.



Final remarks

In November 2018, NSG Group celebrated its 100th anniversary. A century of continuous operation was made possible by the support of all our stakeholders and the fruits of our ongoing efforts as a socially responsible company to realize a sustainable society.

Currently, we are developing the business strategy after MTP Phase 2. With the management principles “Our Vision”, we are re-evaluating the material issues based on societal expectations for the realization of a sustainable society. Reflecting the reassessment, we will develop post-MTP Phase 2 strategies and action plans with a focus on the newly-defined material issues concerning the environment, safety and quality of products/services, compliance/ethics, and human capital. Financial sustainability and corporate governance remain critical for NSG Group and will underpin the abovementioned strategies and action plan going forward.

I believe that NSG Group must deliver innovative solutions in anticipation of societal changes if we are to play a role in

the realization of a sustainable society. After the completion of MTP Phase 2, shifting the Group’s business portfolio will present an important challenge as we manage various social challenges and new trends, including: environmental problems; an ageing society in developed countries; the emergence of developing countries; technological innovation; and the borderless nature of information.

We will announce the next Medium-Term Plan to all stakeholders in due course following discussion and approval by the Board of Directors.

I firmly believe that the continued development of our activities will not only contribute to a sustainable society but also drive the growth of NSG Group. I look forward to the continued support and understanding of all our stakeholders.



Kenichi Morooka

Representative Executive Officer
Executive Vice President and CFO

Stabilizing our financial base and stepping up strategic investments aimed at future growth

FY2019 Review and Outlook for FY2020

The automotive glass markets of Europe and North America slowed in the second half of the fiscal year ending March 31, 2019, but remained stable in other regions. Other business markets were also stable, and we managed to boost sales volume and increase sales prices in some regions. As a result, revenue was up 2 percent year on year to ¥612.8 billion, or up 6 percent if stripping out the impact of forex. Trading profit before exceptional items and amortization relating to the acquisition of Pilkington plc grew 3 percent year on year to ¥38.8 billion, the sixth straight year of profit growth. In addition, profit attributable to owners of the parent improved by a healthy ¥7.1 billion to reach ¥13.3 billion and ROE came to 10.3 percent thanks to financial cost-cutting benefits, solid earnings at Cebrace (Brazil), and the dropout of one-off tax expenses booked in FY2018.

Despite the considerable improvement in net profit and higher asset values, owing to the application of hyperinflationary accounting in Argentina, total equity decreased ¥11.2 billion to ¥132.5 billion. Accordingly, the shareholders' equity ratio dipped slightly year on year to 16.2 percent.

Net debt rose ¥11.2 billion to ¥317.7 billion, mainly reflecting an increase in working capital. The Group also held unused credit lines of ¥74.6 billion at the end of

FY2019. Free cash flow held steady at +¥900 million, mainly as a result of operating profit falling short of our initial plan and the increase in working capital. Even though we forecast tough market conditions in FY2020, we are targeting revenue of ¥620 billion (+1.2 percent YoY) on the back of higher sales of Value-Added (VA) products. We forecast a 5 percent decline in trading profit to ¥37 billion because we expect to be unable to pass-on the impact of higher fuel, raw material, and distribution costs.

■ Outlook for FY2020

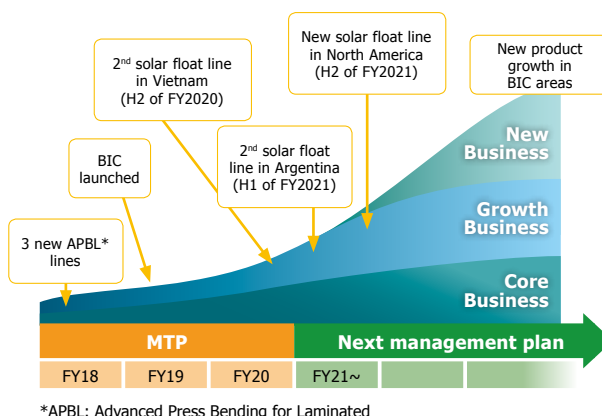
(billions of yen)

	March 31 2018 (actual)	March 31 2019 (actual)	March 31 2020 (forecast)
Revenue	598.9	612.8	620.0
Trading profit	37.7	38.8	37.0
Profit attributable to owners of the parent	6.2	13.3	11.0
Shareholders' equity ratio	17.1%	16.2%	—
ROE	4.7%	10.3%	—

Strategic investments

In FY2019, we started to prepare for the growth phase that will follow Phase 2 of our Medium-Term Plan (MTP). We took the decision to increase production capacity for solar panel glass in Vietnam and North America and also expand capacity at our float glass plant in Argentina, an emerging South American market. These strategic investments are essential for realizing future growth and we plan to spend a further ¥60 billion in FY2020. Furthermore, we launched our Business Innovation Center with the aim of developing and nurturing new businesses in line with our policy of accelerating the commercialization of growth fields such as life sciences and Industry 4.0.

Strategic Investments Decided for Growth



Capital policy

The Group issued Class A shares to the tune of ¥40 billion on March 31, 2017 which drastically lowered net borrowings, improved borrowing terms in FY2017, and nearly achieved its goal of reducing financial expenses to ¥13.0 billion from ¥19.1 billion one year earlier than planned in FY2019. Moreover, in aiming to lighten the burden of paying preferred dividends on Class A shares, we acquired and cancelled 5,000 shares worth ¥5 billion in December 2018 and again in June 2019 (for a total ¥10 billion). We aim to redeem all of the remaining Class A shares (worth ¥30 billion) as soon as possible while giving due consideration to profit attributable to owners of the parent, dividends on common stock, and the Group's financial stability. We believe this will help improve per-share profit attributable to owners of the parent.

Following the resumption of FY-end common share dividends in FY2018, we paid an interim dividend of ¥10 per share in FY2019 to commemorate NSG Group's 100th anniversary and a year-end dividend of ¥20 in light of stable earnings. Accordingly, the annual DPS for common stock in FY2019 was ¥30 for a consolidated dividend payout ratio of 26 percent. In FY2020, we plan to leave the year-end dividend unchanged at ¥20. Going forward, the Group's basic policy on profit distribution is to pay steady dividends based on sustainable business earnings. We will maintain our basic policy on dividends even after all Class A shares have been redeemed in the future and endeavor to continuously pay dividends in targeting a consolidated dividend payout ratio of 30 percent.

Medium and long-term financial strategy

FY2020 is the final year of MTP Phase 2. Regrettably, we do not expect to achieve the financial targets of ROS of at least 8 percent and a net debt-to-EBITDA ratio of 3.0. We have fallen short of our ROS target mainly because of delays in launching new products and the slow transition to VA products in some businesses. On top of this, higher-than-expected raw material costs and a failure to achieve lower costs by way of streamlining, also had an impact. The main reasons for missing the net debt-to-EBITDA ratio target include insufficient cash flow generation from profit improvement and a one-time increase in net borrowings for strategic investments executed in FY2019.

The financial targets called for in our MTP are still appropriate for the direction in which the Group is headed and our policy going forward will be to address the key challenge of achieving financial sustainability. From a medium and

long-term perspective, however, improvement in our financial position is not possible without growth. Even though net borrowings temporarily increase when we make strategic investments, we have no plans to ease up on implementing our initiatives in aiming to realize future financial improvements. We will continue to stick to our plan while striking the right balance between stabilizing our financial base and executing strategic investments necessary for growth.

In addition to securing returns from strategic investment projects, we will work towards achieving a lasting cycle of financial improvement by enhancing our ability to generate cash by further lowering our cost base with a higher sales weighting for VA products and more efficient manufacturing. We hope to build momentum for renewed growth from as early as FY2021 when our strategic investments begin to contribute to earnings.

BUSINESS OVERVIEW

**“Changing our surroundings, improving our world”
— NSG Group’s mission is the foundation of our efforts to achieve the objectives of MTP (Medium-Term Plan) Phase 2 with the expanded offering of VA products and services.**



Clemens Miller
Representative Executive Officer
Executive Vice President and COO

Domain

Architectural

A leader in architectural glazing and glass for solar energy products



The Boston Logan Airport installation, Electrochromic windows by View, Inc. with NSG Group TEC™ glass

Automotive

Leading supplier of glass to original equipment (OE) and automotive glass replacement (AGR) market



Photo by Jaguar Land Rover

Technical Glass

Leading player in thin glass for displays, lenses and light guides for printers, glass cord for timing belts and separators for batteries



Other

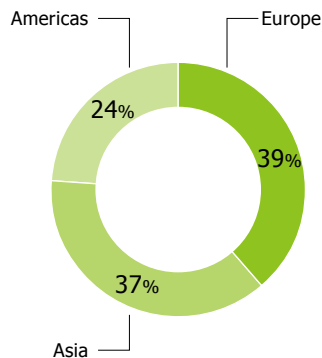
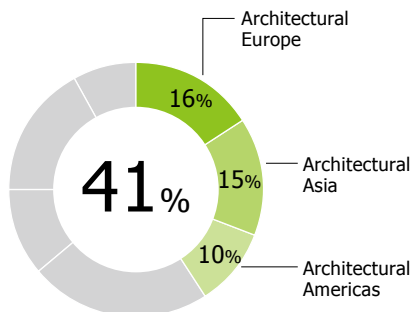
Small-scale businesses not included in the above segments

Main Products

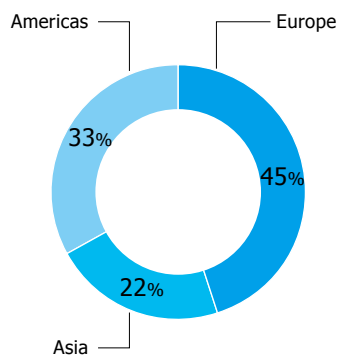
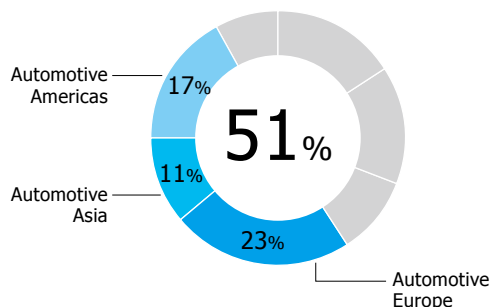
External Revenue
(Contribution to Group revenue)

Revenues by Region and by Sector (FY2019)

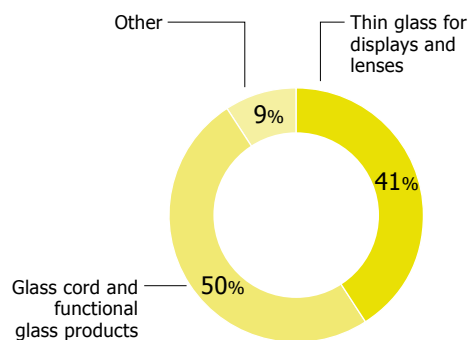
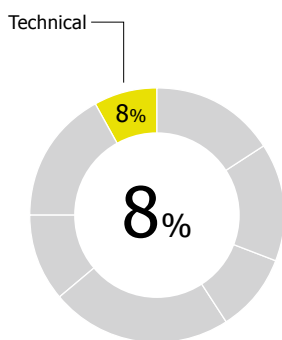
- Glass for solar panels
- Thermal insulation glass
- Vacuum glass
- Solar control glass
- High light transmission glass
- Fire protection glazing



- High surface accuracy windshield
- Anti-fog coating glass
- Lightweight glazing
- Solar control glass
- Thermal insulation glass
- Glass antenna



- Battery separator
- High intensity glass cord for timing belts
- Copier/printer lenses
- Glass flake
- Ultra fine flat glass
- Crystal tableware



Less than
1%

ARCHITECTURAL



The Boston Logan Airport installation, Electrochromic windows by View, Inc. with NSG Group TEC™ glass



Through its leading glass technology, Architectural Glass SBU provides a range of glass products for various applications, such as glass for solar power, that improves the energy efficiency of buildings throughout the world.

Jochen Settelmayer

Senior Executive Officer
Head of Architectural Glass SBU

Business Results

Architectural Glass revenue was up 4 percent from the previous year to ¥247.3 billion. Due to increased input costs and the impact of weak South American currencies, profit was down ¥0.5 billion to ¥25.8 billion.

In Europe, robust demand, higher volume and favorable pricing lifted revenues. Profit increase was small, however, due to increased energy costs and the effect of a float repair in Germany.

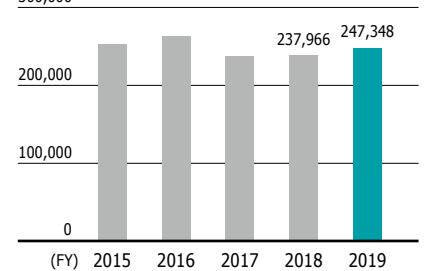
In Asia, while affected by increased input costs, the performance in Japan improved due to higher volume, product mix and pricing, despite a sluggish market. In South East Asia, increased demand for solar glass contributed to profit, although it was offset by higher input costs.

In North America, revenues improved with robust market demand and the restarted operation at the Ottawa Plant in the US. South American markets remained strong, resulting in higher revenues and profits. Due to the weak currency and hyperinflationary accounting adjustments, however, revenues and profits from South America declined after conversion to Japanese yen.

The trading profit for Architectural Glass overall was down slightly from the previous year. Despite higher input costs and weak Argentinian Peso, the business still achieved a double-digit ROS in FY19, reflecting underlying strength of the business, favorable market conditions and cost-reduction efforts.

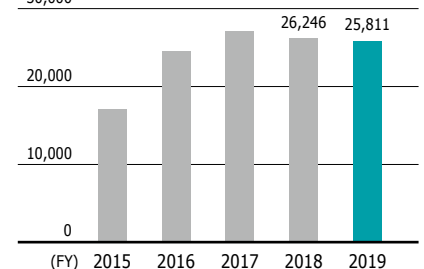
Revenue

(Millions of Yen)



Trading profit

(Millions of Yen)



Business Environment

By region

Construction markets in all regions developed positively. Customer demands were strong in North America and Europe, though Japan remained rather weak. The business performance in South America and South East Asia was positive.

By application

Architectural Glass technology provides a platform for solar energy in various applications, to generate or save energy in buildings and to enhance technical equipment.

Glass for solar panels

Solar panels offer alternative solutions for a range of energy requirements, from small scale domestic applications to large

scale solar power stations. Glass is an integral and important element of these solar panels and a wide range of NSG Group products is used in the leading solar technologies.

Energy Saving Glass for Buildings

NSG Group works closely with governments and authorities on framing building standards. Energy issues are crucial to the building glass industry, as glass products can make an important contribution to combating climate change.

Technical Equipment

NSG Group continues to develop new market opportunities outside traditional glass applications. The focus on "technical equipment", such as digital signage, white goods and touchscreens, provides consumers with added-value.

Strategy

Being a regional business

The Architectural Glass business is regional by nature. It is about providing the regional markets with leading glass products – exterior or interior – for the entire building world. Because of the regional orientation of the business and multiple manufacturing processes, the competitive advantages vary from one region to another.

Focusing on customers and adding value

Over the years, the Architectural business has shifted to a customer-first approach to provide more Value-Added (VA) products. In Q4 FY19, for the first time ever, Architectural

Glass achieved a VA share of 50 percent worldwide. With its advanced products, NSG Group strives to help customers become more competitive.

Supporting leading edge technologies

Internet of things (IoT) enables an intensive data exchange and real-time communication. The above-mentioned "technical equipment" provides an expanded platform for information and user-friendly surfaces. Many devices and technical applications use on-line coated, electrically conductive or low-reflective glass for leading technology and service to end users.

Value-Added Products

Pilkington MirroView™

Pilkington MirroView™ is an innovative semi-transparent video and digital display glass for low light applications. It gives digital displays, including television and video screens, a clean, modern, transitional look. It is ideal for concealing video, touch and digital displays screens for commercial and residential applications. It can be used as a traditional mirror with a small video screen concealed beneath. When the screen is turned 'off' the product maintains a mirrored appearance. When the screen is turned 'on', the picture on the video screen shows through. Pilkington MirroView™ is compatible with all touch screen technologies, making it ideal for smart mirrors. It is very durable and can be easily handled, cleaned, transported and processed. Due to its pyrolytic coating, it does not degrade over time, giving the product a virtually unlimited shelf-life and it allows applications even in a humid environment.



AUTOMOTIVE



Photo by Jaguar Land Rover



Our automotive business is one of the world's largest suppliers of automotive glass, serving the original equipment, aftermarket glass replacement, and specialized transport markets

Tony Fradgley

Senior Executive Officer
Head of Automotive AGR SBU and Head of Automotive OE SBU

Business Results

The Automotive business recorded sales of ¥314,645 million.

In the Automotive business, revenues were up one percent from the previous year to ¥314.6 billion and profits also increased to ¥15.1 billion with strong European results experienced during the earlier part of the year.

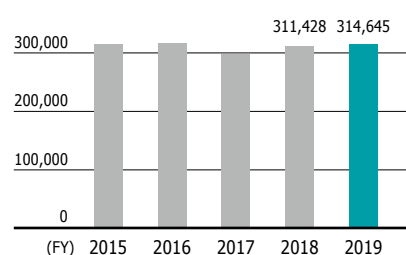
In Europe, results improved in the Group's original equipment (OE) business, although demand softened markedly from the third quarter of the year, affected by both a decline in domestic light-vehicle sales and weakening exports of luxury vehicles. Results also improved in the Automotive Glass Replacement (AGR) business with an increase in volumes and an improving mix of VA products from the previous year.

In Asia, revenues and profits both increased from the previous year. In Japan, light vehicle sales were similar to the previous year. The Group's OE revenues improved despite interruptions to the automotive supply chain caused by natural disasters. Results in the AGR business improved as a consequence of increased volumes.

In the Americas, revenues and profitability were both slightly higher than the previous year. In North America, the Group's OE volumes reflected a progressive weakening during the year of light-vehicle sales in the region. Profitability improved in South America, with a further recovery of volumes from the previous year in Brazil. In Argentina, the Group's automotive results were impacted by the adoption of hyperinflationary accounting.

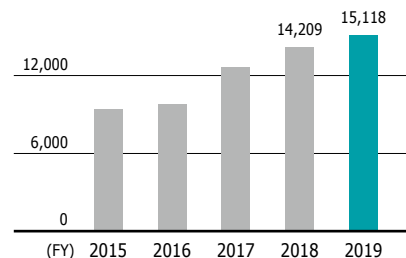
Revenue

(Millions of Yen)
400,000



Trading profit

(Millions of Yen)
18,000



Business Environment

NSG Group supplies all the world's major automotive and specialized transport vehicle manufacturers. Global automotive markets have faced headwinds from slowing economic growth, trade tensions and the impacts of tightening legislation from Worldwide Harmonized Light Vehicle Test Procedure (WLTP/CO₂) rules.

Markets in Europe are likely to remain subdued, reflecting generally weak consumer confidence. Japan is facing pressure on input costs while North American markets are

expected to continue the softening experienced during the latter half of FY2019. South American markets continue to benefit from improving vehicle sales in Brazil.

In the medium term, automotive markets are changing rapidly as technology is changing the way people use vehicles. Our Automotive business continues to explore new opportunities for business growth as advancements in vehicle technology make glass an integral part of protecting vehicle occupants and other road users.

Strategy

These are exciting times for the Automotive industry. Through our VA strategy we are working closely with our customers to lead the change in vehicle and glass technology. The impact of CASE technologies (Connectivity, Automation, Shared Mobility, Electrification) are having a positive impact on the design and sustainable use of vehicles.

Glass has always been a key component in vehicle safety, and CASE advancements are extending our products to be an integral component in actively protecting occupants and pedestrians. One example is the sensors used for ADAS (Advanced Driver Assistance Systems) that require a windshield with high optical quality to ensure their accurate performance. Another is the Head-Up-Display(HUD) that

highlights critical driver information and requires the glass component to operate as part of a fully integrated system.

The Group's supply chain extends into the aftermarket where NSG Group is a global operator in the distribution and supply of automotive glazing. Aftermarket glass replacement requires customer-focused services, and our customers value our well-established distribution channels and ability to supply a full range of products and services with a fast response.

Our Automotive business will continue to offer a full range of glass solutions to our customers, who value our reliability as a supply partner, to deliver innovative technology through our global supply chain.

Value-Added Products

VA Products

Our segment exclusive Head-Up-Display technology is featured in the all-new 2019 GMC Sierra and 2019 Chevrolet Silverado models; the first full-size trucks to ever offer this technology. NSG Group's proprietary advanced press bending technology supports the production of complex shaped, laminated windshields with HUD, an increasingly popular option in the market.

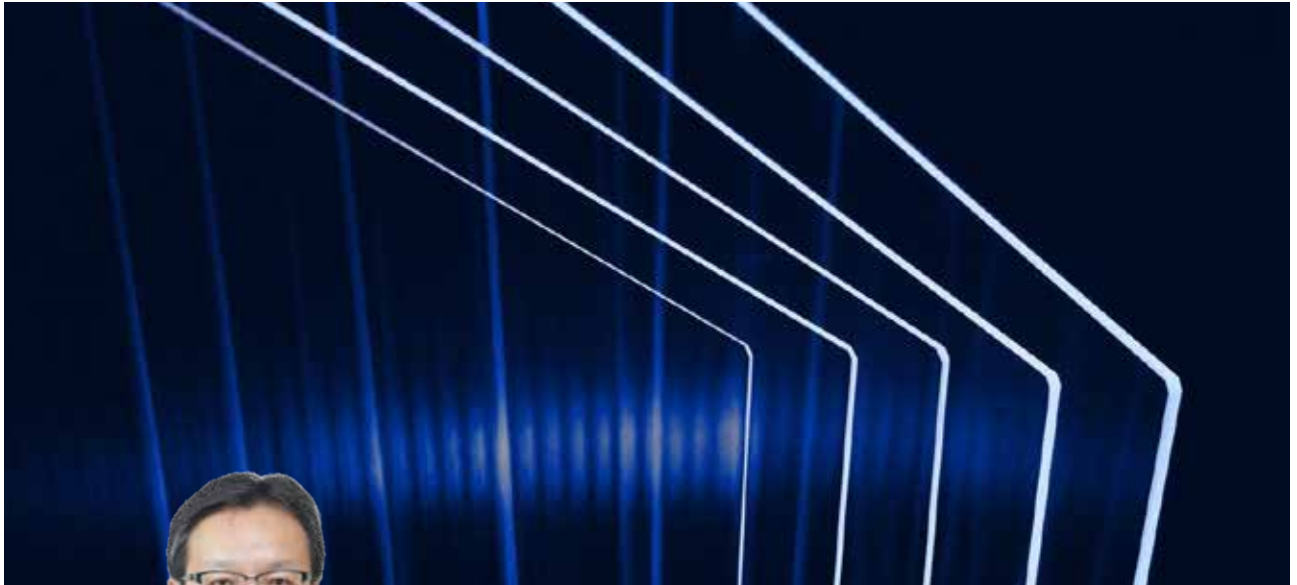


VA Services

NSG Group has recently extended its aftermarket service network in Brazil. We are leveraging our position to further grow the network, successfully opening 25 new outlets in FY19, improving our proximity to the final consumer, raising the quality and safety standards of the industry and embracing Inclusion and Diversity.



TECHNICAL GLASS



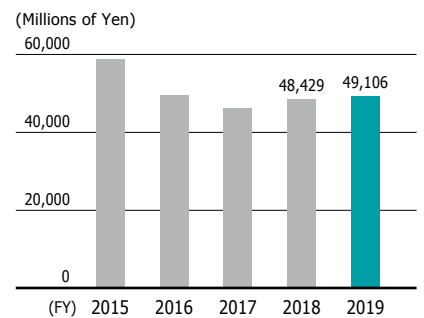
Technical Glass SBU is a world leader in thin glass for display and various applications and optical devices for office machinery, as well as glass fiber for battery separators and timing belts.

Hiroshi Nishikawa
Senior Executive Officer
Head of Technical Glass SBU

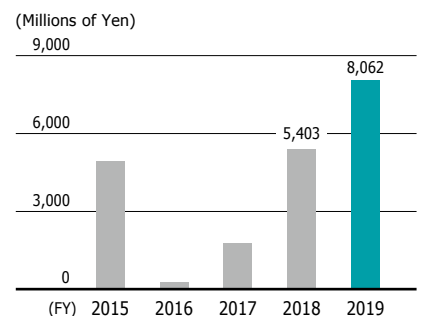
Business Results

Following FY18, profit in the Technical Glass business has significantly improved. Especially in our Fine Glass (former Display) business, which improved significantly through cost reductions, increased productivity and improved VA product sales. In other areas, our printer lens business remained in strong demand maintaining high profitability through production cost reduction - despite the strong Yen's exchange rate. Similarly, demand in our battery separator business remains firm. Idling Stop and Start System (ISS) demand in Japan is still growing particularly for aftermarket; demand for the high performance separator for ISS is expanding. Although glass cord for engine timing belts was affected by economic slowdown in EU and China, Metashine® for new applications, such as car paint, has been successfully expanding. As a result, the Technical Glass business recorded revenues of ¥49,106 millions and an operating profit of ¥8,062 millions.

Revenue



Trading profit



Business Environment

The Technical Glass market has been favorable throughout FY19. Our Fine Glass products are in demand for display on white goods, signage and so on. Furthermore, we are investigating other prospective markets and applications such as anti-glare glass. Glass cord for the engine belts market looks set for growth in China and Europe; car paint demand

for Metashine® is in great demand globally because of its beauty and functionality; the battery separator for our Idling Stop and Start System (and replacement application) shows stable growth in Japan, which is expected to spread to other countries - particularly in China and North America for our VRLA type battery using our AGM separator.

Strategy

Our target is to continue to evolve our portfolio, to introduce new innovations to our existing products and to develop complementary products in adjacent markets. We will improve productivity and cost competitiveness, whilst maintaining the highest quality, in order to meet customer expectations and enhance profitability. We will enhance marketing to identify new fields in which to exploit our

technologies. Our Technical Glass business has many advantages and strengths that can be utilized in such areas as automated optical inspection, automotive interior and separators for idling stop/start car batteries. The challenge for the future will continue with an effort to expand footprint of select businesses to a global scale.



Glass cord



PE separator



METASHINE®

Value-Added Products

SELFOC® Lens Array for automated optical inspection (AOI)

Technical Glass is active in the area of automated optical inspection. Generally CCD (Charge-Coupled Device) camera is used for the application worldwide. However automated optical inspection unit with our SELFOC® Lens Array has a huge advantage on its cost, keeping same quality as current camera. SELFOC® Lens Array is mainly used for printer scanner and we developed it for automated optical inspection field. We are confident that this new inspection system will soon have various applications all over the world.



Courtesy of Tichawa Vision GmbH 