



## AGC, an Everyday Essential Part of Our World

AGC's unique materials and solutions make people's lives better around the world every day





"Look Beyond" is the AGC Group's corporate philosophy on which all the activities of the Group are founded. The following thoughts are expressed in "Look Beyond".

We will continue to

"Look Beyond" Anticipate and envision the future,

"Look Beyond" Have perspectives beyond our own fields of expertise, "Look Beyond" Pursue innovations, not becoming complacent with the status quo.

We will continue to create value worldwide, demonstrating the vast potential of the Group's entire organization.

### Structure and elements of "Look Beyond" Our Mission

"Our Mission" expresses the value that the Group should offer to the world, and represents the reason why the AGC Group exists.

Our Shared Values

"Our Shared Values" expresses the key ideas that all AGC Group members must share as the basis for every action we take.

#### **Our Spirit**

This founding spirit is precisely the 'AGC spirit' that has been handed down from generation to generation and shared by all Group members.

#### **Our Mission**

### AGC, an everyday essential part of our world

### -AGC's unique materials and solutions make people's lives better around the world every day-

We, the AGC Group, aim to continue being the "first choice" solution provider for our customers by building long-term trusted relationships with them through unique materials and solutions developed using our wide-ranging material and production technologies. We will continue offering products and solutions that customers and society need, thereby making people's lives better around the world every day.

### **Our Shared Values**

### **Innovation & Operational excellence**

- We will continuously seek innovations in the technology, products and services we provide by thinking beyond conventional ideas and frameworks.
- We will continuously create new value which satisfies the needs of our potential and future customers by thinking from the customer's perspective and accurately forecasting the changes in society and markets.
- We will continuously improve our operations for maximum efficiency and quality in every activity and will strive for the highest possible standard of performance.

### Diversity

- We will respect individuals with different capabilities and personalities, and our global management will operate without regard to nationality, gender or background.
- We will respect cultural diversity regardless of race, ethnicity, religion, language, and nationality.
- We will respect different perspectives and opinions at all times.

### Environment

- We, as good global citizens, will contribute to the creation of a sustainable society in harmony with nature.
- We will strive to ensure and further improve occupational health and safety in our working environment.

### Integrity

- We will build open and fair relationships with all of our stakeholders based on the highest ethical standards.
- We will strictly comply with applicable laws and regulations.
- We will fulfill our responsibilities in relation to all the products and services we provide to achieve customer satisfaction and trust.

### **Our Spirit**

### "Never take the easy way out, but confront difficulties."

The founding spirit of Toshiya Iwasaki, who established Asahi Glass Company in 1907.

Message from the President and CEO



The AGC Group's history began more than a century ago, when Asahi Glass Company took on the challenge of manufacturing the first flat glass in Japan, with a view to contribute to people's lives and the country's industrial development. Since that time, the Group has built up expertise and technologies in the fields of glass, electronics, chemicals and ceramics, while providing solutions to a wide range of industries, including the building materials, automotive and electronics industries. After the launch of its business operations in India in the 1950s, the Group expanded its business throughout Asia, Europe and North and South America, and its employees around the world have been striving for the development of local economy and society in each region. The basics of our business is to contribute to society through our unique materials and solutions developed using the Group's expertise and technologies.

Today, amid a major shift in our business environment, we will keep the basics of our business in our minds and continue to create value, with all employees and management working as one team. To this end, we established the

## Through Diverse Technologies, the AGC Group Offers Solutions that Contribute to People's Lives Worldwide.



"Vision 2025" in February 2016. It clarifies our aspirations and vision for the Group in the next 10 years, and lays out the management strategies for realizing them.

As we strive to achieve our "Vision 2025" goal of becoming a highly profitable, leading global material and solution provider, we will continue innovating and offering new solutions that are indispensable for society. Moreover, we remain strongly committed to the sustainable development of countries worldwide with the hope of ensuring a bright future for our planet. The AGC Group will continue making positive contributions moving forward to meet the expectations of our stakeholders around the world.

Stakaya.

Takuya Shimamura Representative Director, President and Chief Executive Officer

### The AGC Group is Realizing Vision 2025 by Enhancing Core Businesses and Expanding Strategic Businesses.

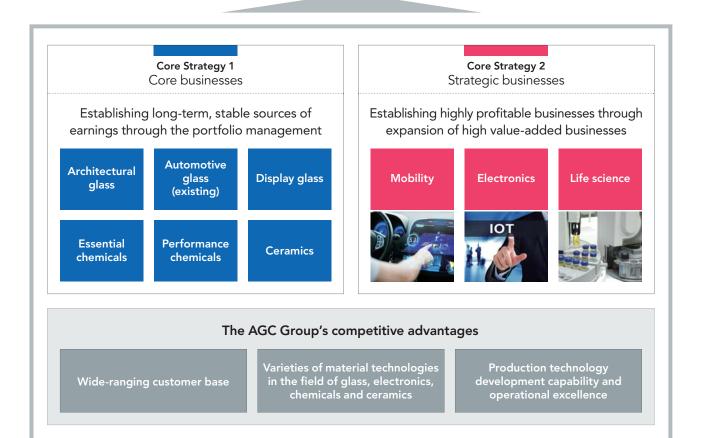
In February 2016, the AGC Group established Vision 2025, alongside a long-term management strategy for realizing its goals. Under the strategy, the Group has designated its glass, chemicals, display glass and ceramics businesses as Core Businesses for ensuring stable sources of earnings over the long term. By designating its mobility, electronics and life science businesses as Strategic Businesses, it will aim for high growth in targeted markets. Both of these business categories will serve as twin pillars for achieving Vision 2025. Based on the principle of always meeting customers' expectations and continuing to earn their trust, the AGC Group is pursuing strategic mergers, acquisitions and other investments aimed at generating value and growth, while working to allocate operational resources with an emphasis on asset efficiency.

Looking ahead, the AGC Group will continue offering value to customers and society as it aims to be a highly profitable, leading global material and solution provider.

### "Vision 2025"

By 2025, the AGC Group's Core Businesses will serve as solid sources of earnings, and Strategic Businesses will become growth drivers and lead further earnings growth.

In 2025, the AGC Group will continue being a highly profitable, leading global material and solution provider.



### Core Strategy 1 Core businesses

### Practicing Comprehensive Portfolio Management

The AGC Group now designates its architectural glass, automotive glass, chemicals and display glass businesses as Core Businesses. Through these businesses, the Group will establish long-term, stable sources of earnings while focusing on the effective allocation of resources based on its business portfolio. It will also carry out growth-oriented investments, including mergers and acquisitions.

The AGC Group has established a strong presence in Thailand and Indonesia through its glass and chemicals businesses. By taking advantage of growth in Asia in particular, this has created opportunity for business expansion from Southeast Asia to the Middle East (West Asia).

<b>Basic Strategies</b>	for Enhancing	Core Businesses

Business	Basic strategy
Architectural glass	<ul> <li>Select and concentrate on high growth countries &amp; countries that the Group has a competitive advantage</li> <li>Innovative business models to enhance the asset efficiency</li> </ul>
Automotive glass (existing)	<ul> <li>Respond to needs for more advanced functions and performance amid the expansion of the Eco-friendly vehicles and automated driving systems</li> <li>Further global expansion by M&amp;A etc.</li> </ul>
Display glass	<ul> <li>Optimize the allocation of production bases to respond to the demand shift in the LCD glass market</li> <li>Cultivate markets for new display applications</li> </ul>
Essential chemicals	• Further strengthen the business foundation of Chlor-alkali business in Southeast Asia
Performance chemicals	• Take advantage of the global demand increase in high performance materials for the growth of the fluorochemicals business
Ceramics	<ul> <li>Deliver new value propositions with a mix of materials, engineering &amp; services</li> <li>Establish business bases in Southeast Asia and expand the global sales</li> </ul>

### Growth Strategies in Asia



### Core Strategy 2 Strategic businesses

### **Expanding High Value-added Businesses**

Through its Strategic Businesses, the AGC Group is offering solutions with increased added value, targeting markets covering the three categories of mobility, electronics and the life science. The Group's mobility business provides solutions that help integrate information and communication technology (ICT) in automobiles and construct innovative infrastructures and new ecosystems for transportation. The electronics business supplies optical materials for digital cameras and signage-related products and technologies based on the vision of an Internet of Things (IoT) society, in which all types of products are interconnected via the Internet. Products in this business help further diversify input/output devices, as well as increase the speed of communications and the capacity of data storage media. Finally, the life science business provides products that facilitate advanced medical care and solutions for global food shortages.

Changes in the social environment	Targeted markets	Changes in the market trends	The AGC Group's solutions
• Evolution of	Mobility	<ul> <li>Integration of automobiles and ICT</li> <li>Innovation of transportation ecosystem</li> </ul>	Advancing automotive       Imovation in transportation infrastructure         Imovation in transportation infrastructure       Imovation in transportation infrastructure         Imovation in transportation infrastructure       Imovation in transportation infrastructure
<ul> <li>Evolution of transportation infrastructure</li> <li>Everything can be connected</li> <li>Anyone can be connected anytime</li> <li>Aging society</li> <li>Increase of global population</li> <li>Greater safety,</li> </ul>	Electronics	<ul> <li>Diversification of input/output devices</li> <li>Greater speed of communication and increased capacity for data storage media</li> </ul>	Folution of input devicesFolution of input devicesFor provide the input devicesFor provide the input devicesFor provide the input devicesFor provide the input devices
security, comfort	Life science	<ul> <li>Bipolarization of needs for advanced medical care and low-cost medical care</li> <li>Food shortage/Greater awareness for food safety</li> </ul>	Figh-quality and reliable pharmaceutical/ agrochemical intermediateImage: Construction advanced applying advanced medicinal technologyDevelopment of advanced medical technologyDevelopment of advanced medical technology

### The AGC Group's Solutions for Targeted Markets

# The AGC Group is Establishing the Basis for Long-term Growth with the Medium-term Management Plan, *AGC plus-2017*.

By effectively allocating resources and carrying out strategies based on its business portfolio, which has been created based on the profitability and growth potential for each of the Group's businesses, the AGC Group is aiming to achieve the management and financial targets set under the medium-term management plan, *AGC plus-2017*.

Having positioned 2015 as a year for laying the groundwork for medium- and long-term growth, the AGC Group proactively invested in growth areas and regions for each of its businesses, including the construction of a power plant in Indonesia and the acquisition of an automotive replacement glass company in Poland. It also made steady changes to the balance of its business portfolio, improving overall performance by restructuring the architectural glass business in Americas and Europe.

From 2016 through to 2017, the AGC Group plans to capitalize on its investment results over those two years in Indonesia, China, and other countries, while aiming for further growth by expanding new businesses and product lineups, including cover glass for vehicle interiors, new refrigerants for vehicle air conditioners and products for life science applications.

### Progress Under the Medium-term Management Plan, AGC plus-2017

	2015	2016	2017	2025
	Medium-te	rm management plan, AGC J	olus-2017	Long-term management strategies for realization of the Vision 2025
	Net sales (Billion yen) 1,326.3	1,400.0	1,600.0	Management targets for 2017 Net sales ¥1.6 trillion
	Operating profit (Billion yen) 71.2	75.0	100	Operating profit More than ¥100 billion ROE 5% or above
	2015	2016 (Forecast)	<b>2017</b> (Target)	<b>Debt to equity ratio</b> 0.5 or less
Glass		through a joint-venture	ion starts in Saudi Arabia	
Glass	Third automotive glass plant	in China starts operation		
		ant in Mexico starts operation ed Poland-based NordGlass in	order to bolster the autom	otive replacement glass business
	Increase polishing capacity i	n Shenzhen, China		
Electronics	Start LGP glass bus		at furnace relocated from J	lapan to China starts operation
		Increase chlor-alkali productio Increase PVC capacity by 50%		
Chemicals	Plant for new-generation	automotive refrigerant start c	оре	er generation plant starts ration in Indonesia
	Increase producti	on capacity of pharmaceutical	& agrochemical intermedia	tes and active ingredients

# The AGC Group Creates New Value in the Fields of Glass, Electronics, Chemicals and Ceramics.

The AGC Group's business extends into four fields: glass, electronics, chemicals and ceramics. Through more than a century of technological innovation, the Group has developed world-leading technologies and expertise through which it provides a diverse lineup of products for customers across a wide range of industries. From architectural glass and automotive glass and extending to liquid crystal display glass and electronic materials—as well as high-function materials such as chemicals and ceramics—the AGC Group proposes new solutions from its unique perspective as a manufacturer of glass and other materials. In order to further enrich society, the AGC Group is constantly pushing the limits in the creation of new standards of value.



 Note Numeric data is based on International Financial Reporting Standards (IFRS). (Subject organizations: Asahi Glass Co., Ltd. and its consolidated subsidiaries / Target period: Each business year ending December 31)
 Sales Ratio calculated from sales to external customers.



Corporate Data (As of the end of December 2015)

### Company Name

AGC Asahi Glass

Registered Company Name ASAHI GLASS CO., LTD

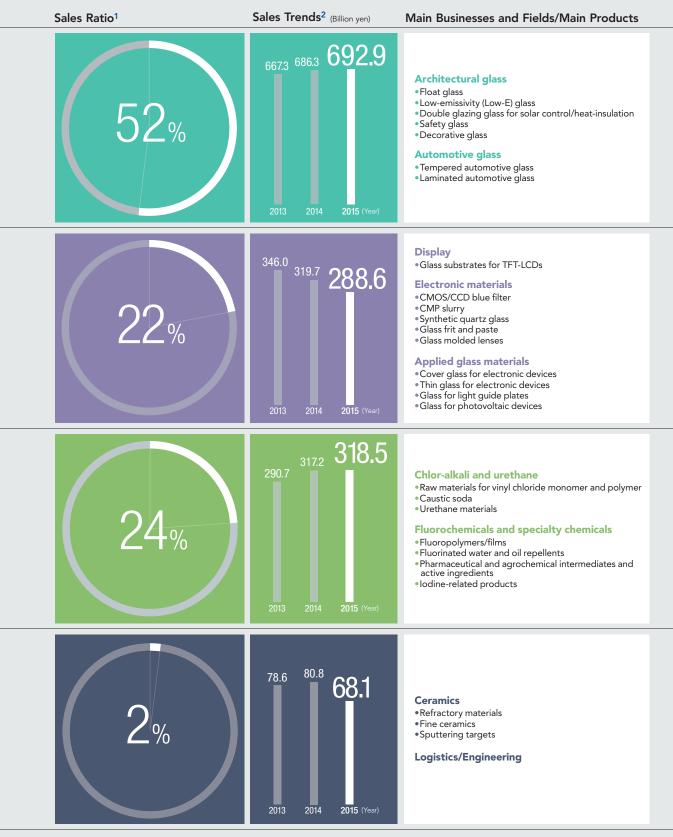
**Head Office** 1-5-1, Marunouchi, Chiyoda-ku, Tokyo 100-8405 JAPAN Founded September 8, 1907 Incorporated June 1, 1950

**Capital** 90,873 million yen **Outstanding Stock** 

1,186,705,905 shares Employees

50,852 (consolidated), 5,973 (non-consolidated)

**Consolidated Group Companies** 204 (166 overseas)



2 Sales by business were calculated before elimination, therefore the sum will not match company-wide sales when totaled.

### **Product Applications**

**Major Products** 

In a Wide Range of Places and Situations, the AGC Group's Diverse Products Support a Safe, Pleasant and Sustainable Society.

Glass Electronics Chemicals Ceramics/Other Supporting Mobility Fluoropolymer resin Beginning with lightweight, high-function automotive for coatings glass, the AGC Group provides a wide range of products that are vital to transportation equipment. Architectural glass Bus glass Automotive glass Cover glass for console panels LED/OLED lighting components Urethane materials for car seats Fluoropolymer resins and rubber for automotive components Train platform screen doors Railway glass

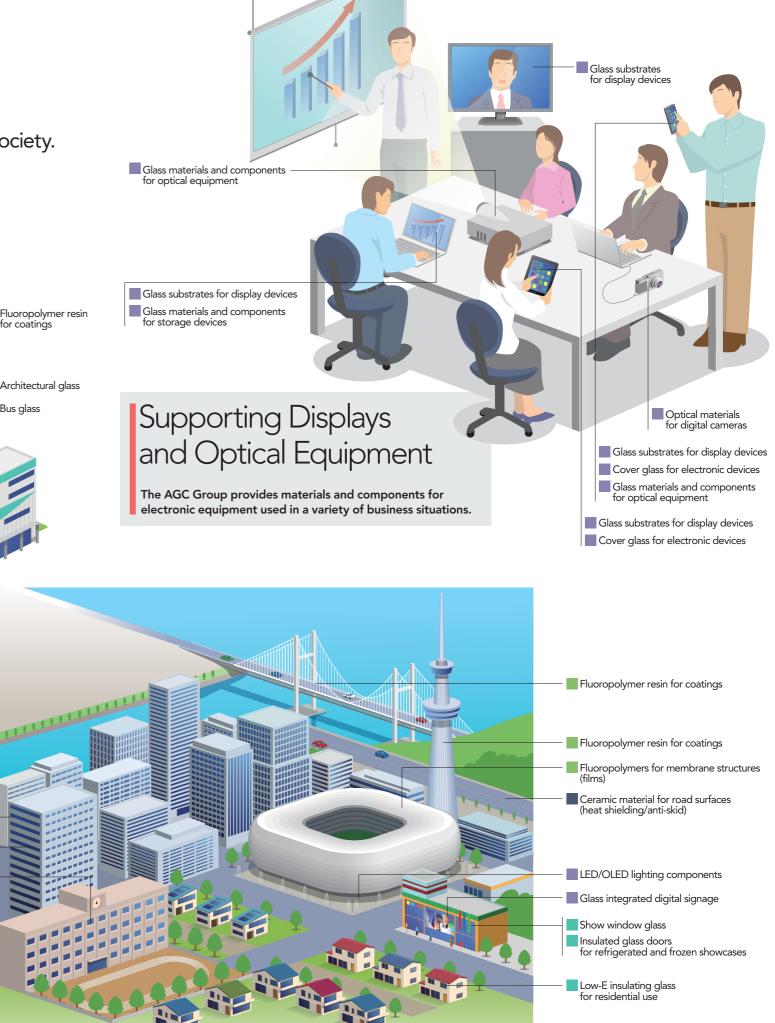
Photovoltaic devices for buildings

Glass for office buildings —

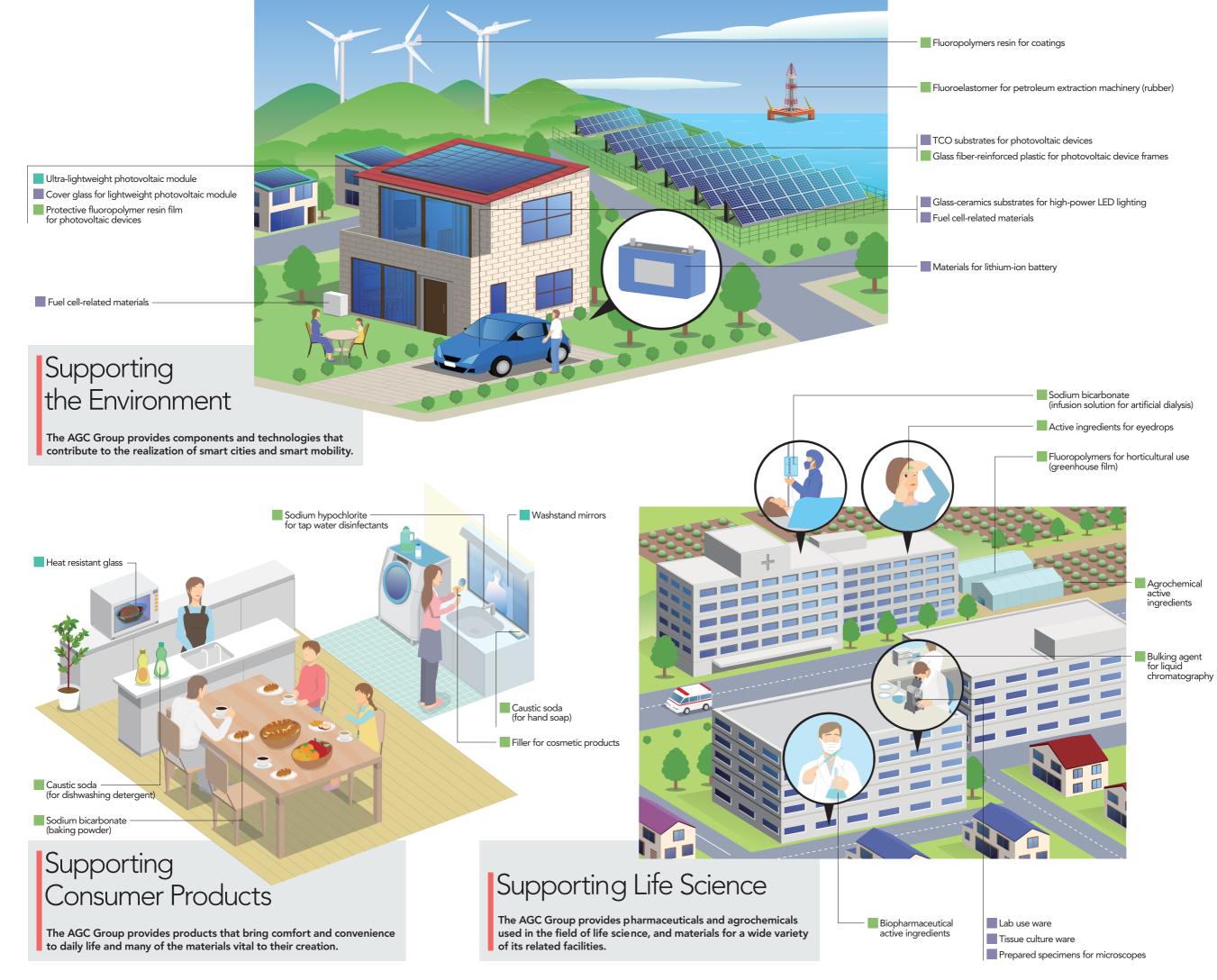
Laminated safety glass for public facilities –

## Supporting Construction and Social Infrastructure

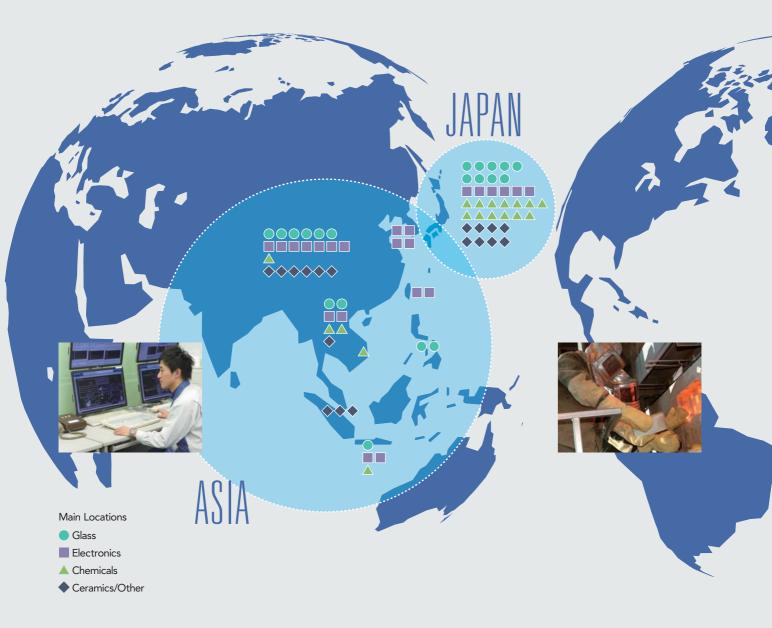
The AGC Group provides architectural materials that contribute to the creation of safe and pleasant spaces, and industrial materials that strengthen social infrastructure.



Truck glass



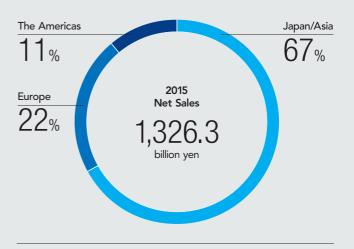
The AGC Group's Global Business is Built on Three Regional Pillars: Japan/Asia, Europe and the Americas.



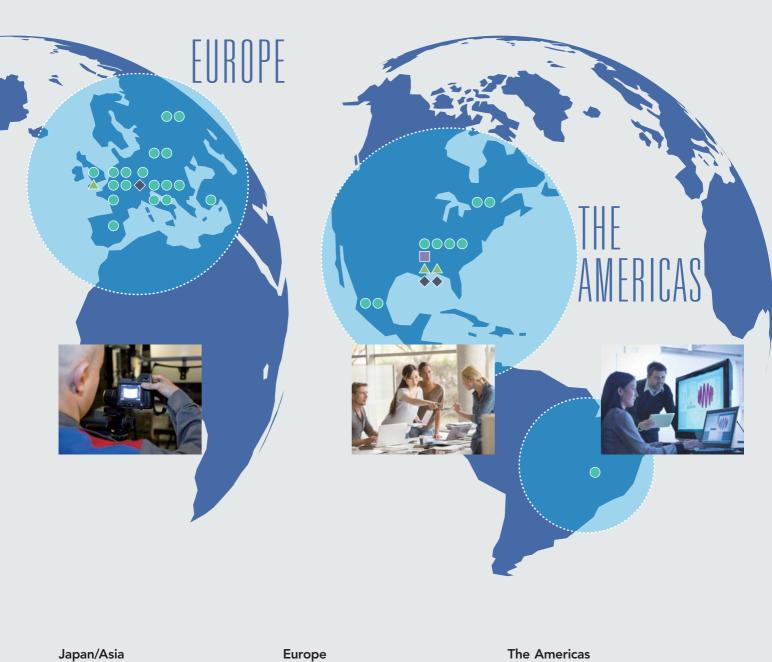
As economic globalization advances, the AGC Group's business extends into over 30 countries and regions with the regional pillars in Japan/Asia, Europe and the Americas. In its glass business, which has markets around the world, the Group has product development and manufacturing bases in each of these three regions. In its electronics business, as its client businesses are concentrated in East Asia, development and manufacturing bases are concentrated in Japan and other Asian countries. In the chemicals business, the Group has been working on the enhancement of its manufacturing bases with a focus on Southeast Asia, where infrastructure development is progressing.

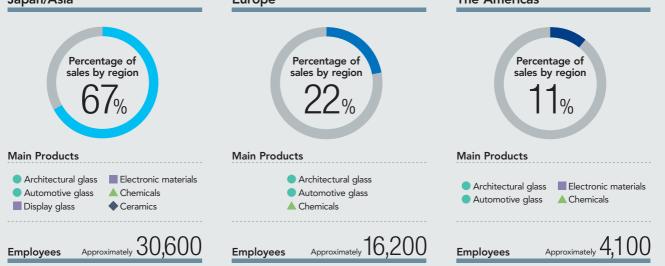
Utilizing such a global network, the AGC Group strives to expand businesses and grow even deeper roots in local communities, while exploring opportunities to develop new business areas.

#### Sales Ratio<sup>1</sup> (As of the end of December 2015)



1 Sales Ratio calculated from sales to external customers.





### **Business Overview**



The AGC Group provides diverse products and solutions as a leading architectural glass and automotive glass manufacturer.

### Architectural Glass Business

The AGC Group's architectural glass business supplies a wide range of products—such as float glass, fabricated glass, decorative glass and glass for photovoltaic devices—which are tailored to the needs of each region and client. The AGC Group is also committed to the development and sale of functional glass products that offer comfort and reduce environmental impact. For buildings, the AGC Group provides glass with solar control and heat insulation, and glass

with anti-condensation and anti-reflective properties. The Group's architectural glass business holds a world-leading market share.

Market share rankings for main products (Based on fiscal 2015 estimates by AGC)

Float glass Global No.1



Low emissivity (Low-E) insulating glass unit High solar control and heat insulation properties



"Lacobel™" painted glass for indoor applications Outstanding coloring properties making interiors look brighter



"ATTOCH™" Low-E glass for on-site retrofitting installation Ideal for remodeling buildings and stores



Coating glass Suitable for all climates



"Clearsight™" anti-reflective glass Minimizing light reflections on the glass surface



"Sunjoule™" building integrated photovoltaic devices Glass with integrated photovoltaics

### Automotive Glass Business

The AGC Group's automotive glass business holds a world-leading market share in the sale of laminated glass and tempered glass. The Group makes use of its global marketing functions, production networks and cutting-edge technologies to pursue greater product safety, design, comfort and environmental performance. It has a wide variety of products, including UV cut glass, infrared ray cut glass, water repellent glass for doors and glass antennas.



"Temperlite™" tempered automotive glass Several times the strength of general-purpose flat glass



"UV Verre Premium™" series for automotive glass A global first!" All-around 99% UV cut, providing safety and comfort in the vehicle

1 AGC survey as of November 2015 (when single-glazed glass is used for everything but the windshield)



Light Control glass "WONDERLITE™" Contributing to improved in-car comfort and energy conservation



Glass for railroads Outstanding weather resistance, sound insulation and heat insulation

Architectural glass pursues superior design, improved comfort and reduced environmental impact

Market share rankings for main products

(Based on fiscal 2015 estimates by AGC)

Automotive glass

Global No.1



"Lamisafe™" laminated automotive glass Designed with safety in mind, shatterproof even when broken

### **Business Overview**



The AGC Group will continue to offer high value-added products and solutions that support the evolution of the electronics industry.

### **Display Business**

In its display business, the AGC Group holds a number-two global market share in glass substrates used for thin-film-transistor (TFT) liquid crystal displays (LCDs). The Group leverages its unique manufacturing methods and advanced production techniques to increase its global competitiveness, while focusing on developing materials for next-generation display devices.

Market share rankings for main products (Based on fiscal 2015 estimates by AGC) Glass substrates for TFT-LCDs

Global No.2



Glass substrates for TFT-LCDs Key materials for LCD displays

### Applied Glass Materials Business

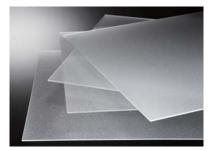
With a view to offering new value in the marketplace, the AGC Group established its Applied Glass Materials General Division in January 2015 by integrating operations that had previously been divided among its glass business and electronics business. The division is promoting the advantages of the Group's "thin, light and strong" specialty glass in an effort to create new applications, while broadening the Group's product lineup, which includes cover glass for smartphones and tablet devices, and glass substrates for photovoltaic devices and touch panels.



"Leoflex<sup>™M"</sup> chemically strengthened specialty glass Used for various applications in architecture, solar cells and more



Glass substrates for touch panels The world's thinnest electronic device glass



TCO substrates for photovoltaic devices Improving the power generating efficiency of thin film silicon photovoltaic devices



"Dragontrail™ X" specialty glass for chemical strengthening Cover glass for electronic devices



"XCV™" glass for light guide plates Enabling liquid crystal displays to be made thinner

### **Electronic Materials Business**

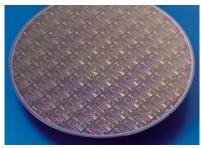
In its electronic materials business, the AGC Group contributes to the most advanced sectors of the electronics industry by applying the leading-edge technologies it has fostered in its glass, chemicals, and ceramics businesses, including material, processing, surface treatment and molding technologies. The business supplies a wide lineup of products, such as synthetic quartz glass—a product boasting a world-leading market share—as well as high-purity silicon carbide (SiC) jigs and other semiconductor manufacturing components, CMOS/CCD blue filters and other optical materials for smartphones and digital cameras, and glass frit and paste display materials for electrical insulation and sealing.

Market share rankings for main products (Based on fiscal 2015 estimates by AGC)

Quartz materials for stepper lenses **Global No.1** 



CMOS/CCD blue filter Enabling image sensors to match the luminosity of the human eye



Chemical mechanical polishing (CMP) slurry and polishing solutions Enabling multi-layered components to be made extremely flat and even



Synthetic quartz glass Ensuring high quality in semiconductor processing



Glass frit Used for electrical insulation, airtight seals, and other applications in various industries



"Roiceram<sup>TM</sup>-HS" high-purity SiC jigs Used for heat treatment and other semiconductor processes



Glass substrates for TFT-LCDs contribute to innovations in image display technology



### **Business Overview**



The AGC Group's products and solutions help create an affluent, safe and secure society while promoting environmental conservation.

### **Chemicals Business**

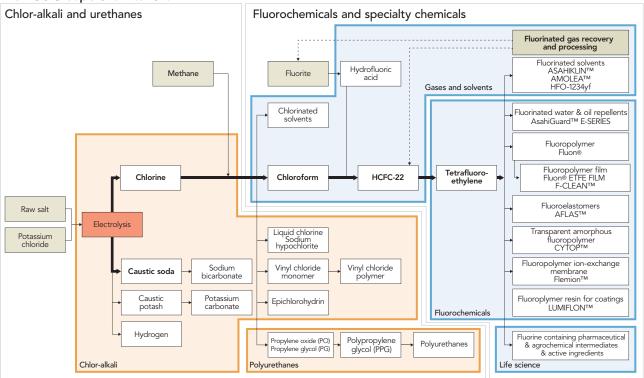
The AGC Group's chemicals business originally began with the production of soda ash, the main raw material for producing glass.

The Group subsequently developed a wide variety of products through its own chemical chain, which enables full use of by-products generated through chemical reaction process. While working to keep its environmental impact to a minimum, the AGC Group supplies a broad lineup of products ranging from basic chemicals like caustic soda to highly functional chemicals such as Fluon<sup>®</sup> ETFE, which holds the number-one global market share for fluorinated resins.

Market share rankings for main products (Based on fiscal 2015 estimates by AGC)

Fluorinated resins (Fluon<sup>®</sup> ETFE) Global No.1

### The AGC Group's Chemical Chain





#### Chlor-alkali and urethane

In its chlor-alkali and urethane business, the AGC Group supplies highly versatile basic chemical products—such as caustic soda and sodium bicarbonate—used in various industries. In addition, its urethane-related products are used as raw materials in thermal insulation, vehicle seats and other products that are vital for providing comfort in our everyday lives.



"EXCENOL™" polymer polyols Used for products like mattresses and vehicle seats



Sodium bicarbonate Used widely, including medical applications such as dialysis fluid

IN THE P

#### Fluorochemicals and specialty chemicals

In its fluorine and specialty chemicals business, the AGC Group's fluorochemical products have gained a strong reputation for their outstanding heat resistance, chemical resistance and weather resistance. Led by Fluon® ETFE fluorinated resin—which holds top global market share—the business' wide range of high-performance products are used in various industries. For example, its fluorinated resins and fluorinated elastomers



"Fluon® ETFE FILM" Fluoropolymer film Used for a wide range of applications due to its excellent transparency and weatherability



"HFO-1234yf" refrigerant for next-generation vehicle air-conditioners Helping to reduce environmental load Photo HFO-1234yf manufacturing plant

are commonly applied in the automotive and aircraft industries, and its fluoropolymer films and fluoropolymer resins for coating are used in the building construction industry. Likewise, its multifunctional materials are used in electronic devices and displays. In addition, the AGC Group contributes to the life science industry by supplying services and products such as pharmaceutical and agrochemical intermediates and active ingredients.



"LUMIFLON™" highly weather-resistant fluoropolymer resin for coatings Used for coating buildings and structures



"Tafluprost" pharmaceutical active ingredients Used in medications for treating glaucoma Note A glaucoma and ocular hypertension therapeutic agent jointly developed with Santen Pharmaceutical Co., Ltd.

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## Allianz (II) Arena

Fluon® ETFE FILM used for the Allianz Arena, a soccer stadium in Germany

### **Business Overview**



The AGC Group offers a variety of products and solutions that contribute to innovation in glass production processes and environmental conservation.

### **Ceramics Business**

The AGC Group's ceramics business has a long history, dating back to 1916, when it began producing refractory bricks for glass melting furnaces. The business is now operated by AGC Ceramics Co., Ltd. With its core businesses in glass engineering, environmental and energy-related domains, the company leverages its diverse lineup of refractory products and leading-edge engineering technologies.

In the glass engineering business, the company aims to help its customers improve energy efficiency and extend the service life of their glass furnaces, as well as ensure stable operations and lower lifecycle costs by supplying high-durability, high-performance fused cast bricks and related solutions.

In environmental and energy-related businesses, AGC Ceramics offers a wide range of ecological solutions, implementing castable refractories that make industrial furnaces more energy efficient and reduce environmental load. The company also focuses on developing ceramic materials that help reduce global environmental impact, such as high-temperature fine ceramic fans and sputtering targets for eco-friendly glass.



"Tough Coore™" ceramic material for heat shielding road surfaces Alleviates heat island phenomenon



"THERMOTECT<sup>IM</sup>" high thermal insulating ceramic furnace materials Outstanding durability and heat insulation for long-term insulation performance under high temperatures, helping to reduce costs by conserving energy



Castable refractories for industrial furnaces Supporting stable operations with an extensive lineup



### **New Products**

### Products for New Markets

Combining diverse technologies, the AGC Group is creating products with even higher added value for new markets.

### For Next-generation Communications Markets

Making all the glass around us into an information interface

### infoverre™

Glass integrated digital signage

### Transforming Glass into an Informational Device by Integrating Liquid Crystal Displays

Comprised of an LCD directly attached on building exterior or interior glass, infoverre™ digital signage creates the effect of images floating in the air. The AGC Group has enabled non-reflective, clear images by applying integrated optical technologies cultivated through its chemicals business.



Attached to the windows of the Shin-Marunouchi Building in Tokyo, 55-inch infoverre™ LCDs show a range of advertisements. This product received a 2015 Digital Signage Award in the Technology category.

### Glascene™ Transparent glass screen

### **Opening Up New Possibilities for Projectors** by Enabling Image Projection Onto Transparent Glass

Manufactured using a unique process, Glascene™ is a glass screen that enables images to be projected onto it. This new type of screen retains its transparency while images are projected. The images can be projected from the front or rear sides of the screen, which can be produced at sizes over 100 inches.



Glascene™ displays beautiful images while retaining its transparency.



Just ordinary glass when not in use.

### For Next-generation Mobility Markets

Making vehicle interiors more comfortable with user-friendly touch panels

### **Cover Glass for Console Panels**

### Realizing More Comfortable and Reliable Touch Panel Operation through Electronic Device Cover Glass Technology

In recent years, the automotive industry has been developing technologies that integrate the operation of various vehicle equipment, including stereos, navigation systems and air conditioners. Having outstanding strength, scratch resistant and anti-reflective properties, the AGC Group's Dragontrail<sup>™</sup> cover glass for electronic devices is now used for the console panels of vehicle equipment.



# The AGC Group is Combining a Diverse Range of Core Technologies to Drive All-New Innovations.

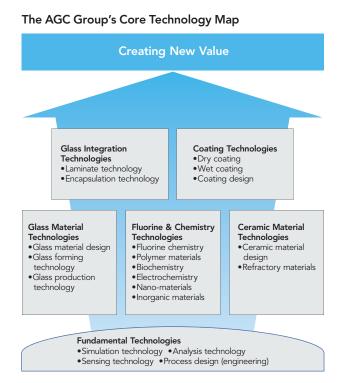
### Core Technologies

As shown in the following diagram, the AGC Group has accumulated a diverse range of core technologies: glass and ceramic material technologies respond to various needs in society, coating and glass integration technologies add more value to products, and fluorine and chemistry technologies are used for creating advanced high-performance products. To underpin such research and development initiatives, the AGC Group is also working on the development and sophistication of its fundamental technologies such as simulation, analysis, sensing and process design technologies.

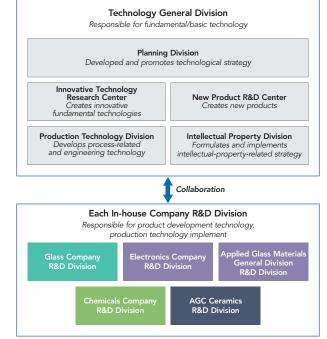
By combining and integrating these technologies and then drawing from the vast technological possibilities that result, the AGC Group intends to drive innovations that bring new value to trades and communities, while also meeting the needs of customers and helping resolve the challenges they face.

### A New Framework for Research and Development

In January 2016, AGC Asahi Glass reorganized its research and development operations with the aim of developing more competitive and innovative core technologies and new products. As part of this reorganization, the new Innovative Technology Research Center was established in the company's Technology General Division, and given the tasks of creating innovative core technologies and applying advanced fundamental technologies to promote progress in product development. At the same time, the New Product R&D Center was set up for the purpose of creating new products and solving technical issues concerning existing products. The Production Technology Division was also created to develop and refine production technologies. Based on an approach that integrates market and product development, AGC Asahi Glass is working on R&D in an agile manner while promoting close cooperation between five relevant organizations in its Technology General Division, which now includes a new Planning Division and Intellectual Property Division, and the R&D divisions of each respective In-house Company.



### An R&D Framework to Achieve Greater Competitiveness





The AGC Group's Approach to Innovation

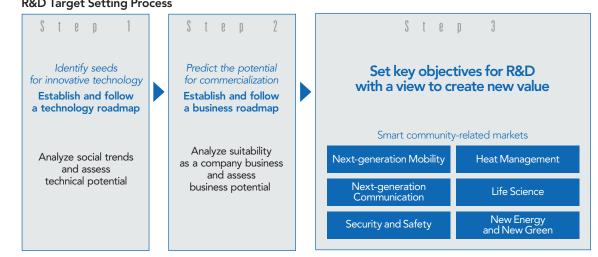
The AGC Group is Accelerating Innovation Based on a Global Perspective and a Medium- to Long-term Outlook

To chart a course for its R&D over the medium and long terms, the AGC Group draws its own technology roadmap called "Technology Outlook," which is based on projections of the products and technologies that will be in high demand over the next 10 to 20 years. To develop and commercialize such products and technologies, the AGC Group also creates a business roadmap called "Business Outlook" which consists of survey results on whether they are suitable for the Group and can sustainably generate profits. As a result of extensive studies and analysis, smart community-related markets have been identified as crucial R&D targets to explore in the future. The AGC Group is now moving forward with proactive R&D and business development in related areas.

A key to successful commercialization of new products and technologies is a close link between the market and product development. Under an initiative called Global Technology Networking (GTNET), the

AGC Group gathers and studies leading-edge technological information and market trends through expert personnel sent to strategic locations in Japan, Southeast Asia, Europe and the United States, where universities and corporate research facilities are concentrated. This activity helps strengthen the relationship between marketing and product development operations on a global scale, explore the seeds of new businesses, build on the Group's technologies and expand business networks.

Another R&D initiative is open innovation. By making extensive use of resources from outside through strategic business alliances as well as mergers and acquisitions, the AGC Group aims to accelerate technical innovations and opportunities for new market creation, and shorten product development lead times. The Group also participates in national projects related to smart communities, collaborating with other companies and research institutions.



### **R&D** Target Setting Process

# By Identifying Material Issues in CSR, the AGC Group Promotes CSR Management within Corporate Management.

### Approach to CSR and Related Policies

The AGC Group Vision **"Look Beyond"** (see page 2) is comprised of "Our Mission," "Our Shared Values" and "Our Spirit." This Vision provides the basis for the Management Policy **AGC plus**, through which the Group strives to offer added value (add a "plus") to all stakeholders. By following this approach, the Group strives to both foster trust and meet the expectations of the community and contributes to the creation of a sustainable society.

In addition, the AGC Group has established "the AGC Group Charter of Corporate Behavior," which outlines the corporate social responsibility expected of Group companies, and "the AGC Group Code of Conduct," which clarifies the standards of behavior for all employees.

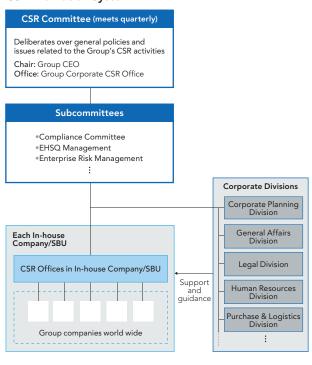
### CSR Promotion System

The AGC Group established the CSR Committee in 2005 as an in-house organization dedicated to promoting CSR. On the CSR Committee, the AGC Group CEO presides as the committee chair, while the heads of each business and corporate division deliberate over general policies and issues related to the Group's CSR activities on a quarterly basis.

The results of deliberations by the CSR Committee are shared globally across the AGC Group through subcommittees specializing in compliance and risk management, as well as Environment, Occupational Health, Safety and Quality (EHSQ) management. The information is then reflected in measures implemented by the Group's In-house Companies and Strategic Business Units (SBUs).



### CSR Promotion System



#### AGC Group Charter of Corporate Behavior

The Group Charter sets forth and declares the perspectives that form the basis of our behavior to ensure that the AGC Group will remain a good corporate citizen.

#### AGC Group Code of Conduct

The Code of Conduct sets forth standards to be observed by all Group members from the perspective of "integrity" in Our Shared Values under the AGC Group Vision **"Look Beyond."** 

#### Management Policy AGC plus

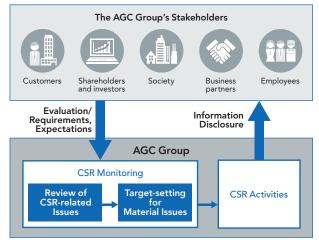
The Management Policy sets forth the course of action for all the Group's business activities providing social and business aspirations, guidelines and directives. It is revised as necessary to reflect changes in the business environment and circumstances of the Group



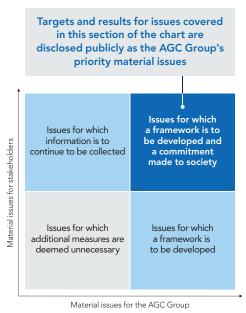
### The PDCA Cycle and Material Issues

In 2011, the AGC Group began to develop the CSR monitoring framework based on ISO 26000 to assess the Group's CSR activities from the perspective of stakeholders and strengthen measures and policies that benefit the community. As a specific initiative, it created a matrix that categorizes four types of CSR issues according to their importance. One of these categories, "issues for which a framework is to be developed and a commitment made to society," is recognized as being important for both the AGC Group and its stakeholders. Accordingly, the Group has designated this category as a priority material issue, and is disclosing related targets and results to stakeholders via its CSR website.

### The CSR PDCA Cycle



### Matrix of CSR Issues



### The AGC Group's Material Issues in Relation to ISO 26000 International Standards

ISO 26000 Items		AGC Group's material issues	
Core subjects Issues			
Organizational Governance	Decision-making processes and structures	Organizational governance	
	Conditions of work and social protection	Fair working conditions	
Human Rights and Labor Practices	Health and safety at work	Occupational health & safety	
	Human development and training in the workplace	Human resource development	
	Prevention of pollution	Pollution prevention	
The Environment	Sustainable resource use	Sustainable use of resources	
	Climate change mitigation and adaptation	Response to climate change	
	Anti-corruption	Anti-corruption	
Fair Operating Practices	Fair competition	Compliance with antitrust laws	
	Promoting social responsibility in the value chain	Social responsibility in the supply chain	
Consumer Issues	Protecting consumers' health and safety	Product safety	

WEB Please visit the AGC Group's CSR website for more information about its CSR management and activities: http://www.agc.com/english/csr/index.html

# The AGC Group is Raising the Transparency and Agility of Management Oversight and Execution.

### Approach to Corporate Governance

Under the AGC Group Corporate Governance Basic Policy, AGC Asahi Glass strives to strengthen and improve its corporate governance with a view to ensuring its sustainable growth and raising the AGC Group's corporate value over the medium and long term.

The Company is responsible for managing the AGC Group as a whole, beyond the conventional framework of a parent company and subsidiaries. On that basis, the following is the Company's basic approach to its corporate governance system:

- The management oversight function and management execution function shall be clearly separated
- In the execution of management, corporate functions and the business execution function shall be clearly separated

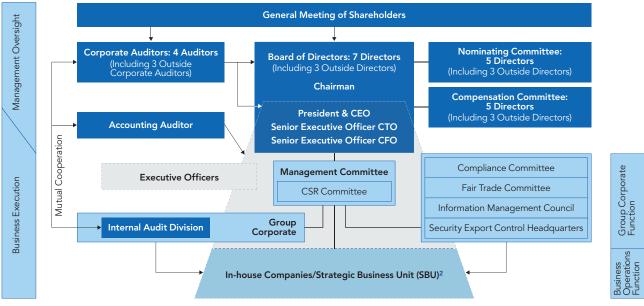
### Framework for Management Oversight

### Structure and Role of the Board of Directors

The Board of Directors of AGC Asahi Glass consists of seven directors, each appointed to a one-year term, and includes three outside directors, including one female director<sup>1</sup>. The Board is responsible for the approval of the AGC Group's basic policies and monitoring its management.

The Company first employed outside directors in 2002 in an effort to enhance the management oversight function. Outside directors are appointed in compliance with the requirements under the Companies Act of Japan as well as the Company's own selection criteria designed to ensure director independence.

Outside directors monitor issues concerning the Group's business management and offer advice to the Board of Directors from an independent and objective standpoint, based on their extensive experience in global



### Overview of Corporate Governance Structure (as of March 30, 2016)

2 An In-house Company is defined as a business unit with net sales exceeding 200 billion yen which conducts its business globally. At present, there are three In-house Companies: the Glass Company, the Electronics Company and the Chemicals Company. Business units smaller than this are defined as Strategic Business Units (SBUs).



corporate management and knowledge of corporate governance related issues. In principle, meetings of the Board of Directors are chaired by an outside director. 1 As of March 30, 2016

Meetings of the Board of Directors in Fiscal 2015

Meetings held	13
Attendance rate of members of the Board of Directors	95%

### Assessment of the Effectiveness of the Board of Directors

The effectiveness of the Board of Directors of AGC Asahi Glass is subject to assessments and evaluations. As a result of the assessments, it was confirmed that the Company's Board of Directors is effectively fulfilling its responsibilities of overseeing management execution and approving basic action plans for the AGC Group.

## Structure and Roles of the Nominating Committee and Compensation Committee

AGC Asahi Glass established its Nominating and Compensation Committees in 2003 as voluntary advisory committees of the Board of Directors.

Committee Activities in Fiscal 2015

	Number of members	Duties	Number of meetings held
Nominating Committee	5 Directors (of which 3 are outside directors)	Deliberate on candidates for director and executive officer positions, and make recommendations to the Board of Directors	3 times
Compensation Committee	5 Directors (of which 3 are outside directors)	Deliberate on the compensation system for directors and executive officers, directors' compensation limits and bonuses to be reported to the general shareholders meeting, and the amount of compensation for executive officer	8 times

### Structure and Role of the Board of Corporate Auditors

The Board of Corporate Auditors audits the performance of directors by attending important meetings, including meeting of the Board of Directors and the Management Committee, and by holding regular meetings with representative directors. The corporate auditors also enhance the effectiveness of auditing by exchanging views and checking information concerning audit results and other matters in cooperation with accounting auditor and the Internal Audit Division. As of March 30, 2016, AGC Asahi Glass employed four corporate auditors in total, of which three were outside corporate auditors.

### Meetings of the Board of Corporate Auditors in Fiscal 2015

Meetings held	13
Attendance rate of members of the Board of Corporate Auditors	100%

## Ensuring the Independence of Outside Directors and Outside Corporate Auditors

AGC Asahi Glass has set standards to ensure the independence of outside directors and outside corporate auditors.

To help enable outside directors to effectively oversee operations, the Corporate Planning Division, which serves as the Secretariat of the Board of Directors, provides them with relevant information and documents prior to Board of Directors meetings, as well as comprehensive explanations of issues to be debated by the Board in advance when necessary.

Similarly, the Secretariat of the Board of Corporate Auditors assists outside corporate auditors by holding Board of Corporate Auditors meetings, attending important meetings, and helping them coordinate meetings with representative directors and accounting auditor.

### Framework for Management Execution

At AGC Asahi Glass, the management execution function is the responsibility of executive officers below the president & CEO. As an advisory committee to the president & CEO, the Company establishes the Management Committees and discusses business management monitoring and decisions regarding management execution. A system of In-house Companies (quasi-subsidiaries within the Group) has been introduced and a global consolidated management system is adopted with regard to business execution. Much of the responsibility and authority for business execution has been delegated to the In-house Companies and Strategic Business Units.

### Compensation System

### Basic Philosophy on Compensation System for Directors and Corporate Auditors

In its Compensation Principles, AGC Asahi Glass sets out its basic stances and philosophies on overall compensation for officers as follows.

- The compensation system shall be one that enables the Company to attract, secure and reward diverse and talented personnel, in order to establish and expand the Company's edge over its peers.
- The compensation system shall be one that promotes continued improvement of corporate value, and in this way allows shareholders and management to share gains
- The compensation system shall be one that gives motivations to achieve performance goals relating to management strategies for the AGC Group's continuous development.
- The decision-making process of determining compensation shall be objective and highly transparent

## Composition of Compensation for Directors and Corporate Auditors

Under the company's compensation system, directors who also serve as executive officers receive a fixed monthly salary, performance-linked bonuses, and stock compensation-type stock options, while directors who do not serve as executive officers receive a fixed monthly salary and stock compensation-type stock options. Meanwhile, outside directors and corporate auditors only receive a monthly salary.

Composition of	Compensation for	Directors and Co	porate Auditors
0011100010011011			

	Type of compensation		Eligible persons
Directors	Fixed compensation	Monthly compensation	All directors
	Performance-linked compensation	Performance-linked bonuses	Directors who also serve as executive officers
		Stock compensation-type stock options	Directors excluding outside directors
Corporate auditors	Fixed compensation	Monthly compensation	All corporate auditors

The amount of the Bonuses, which is aimed at motivating recipients to achieve their single-fiscal-year business results goals, varies depending on consolidated business results for a single fiscal year. The stock compensation-type stock options are intended to allow recipients to share benefits and risks associated with stock price fluctuations with our shareholders, and enhance their motivation and morale so as to raise business results and corporate value on a medium to long term basis.

### **Compensation Determination Process**

The Compensation Committee deliberates on matters such as the compensation system and level for directors and executive officers based on the Compensation Principles, makes proposals regarding them to the Board of Directors, and verifies the results of compensation payments in order to increase the objectivity and transparency of the compensation determination process.

#### Compensation to Directors and Corporate Auditors<sup>1</sup> in Fiscal 2015

	Number of recipients	Total payment (millions of yen)
All directors	9	439
Outside directors only	3	46
All corporate auditors	6	93
Outside corporate auditors only	5	57

1 Figures include remuneration to a total of four directors and corporate auditors (including outside corporate auditors) who either retired or resigned in March 2015.

### Internal Control

In response to the enactment of the Companies Act of Japan, AGC Asahi Glass established a basic policy for internal control in May 2006, with the aim of confirming that its business execution systems, including the compliance system, were functioning appropriately.

Furthermore, the Company adopted an internal control reporting system in compliance with Japan's Financial Instruments and Exchange Act, and on that basis, created the AGC Group Internal Control over Financial Reporting Implementation Regulations, and is maintaining and implementing the system to ensure sound financial reporting.

### Board of Directors



Kazuhiko Ishimura Representative Director & Chairman



Masahiro Sakane Director (Outside)

Appointed in March 2011 Member of the Nominating Committee and Compensation Committee . Councilor to Komatsu Ltd. Outside Director of Tokyo Electron Ltd. Outside Director of Nomura Holdings, Inc. Outside Director of Nomura Securities Co., Ltd. Outside Director of Takeda Pharmaceutical Co., Ltd. Outside Director of Kajima Corporation



Takuya Shimamura Representative Director and President & CEO



Hiroshi Kimura Director (Outside)

Appointed in March 2013 Member of the Nominating Committee and Compensation Committee Special Advisor to Japan Tobacco Inc. Outside Director of Nomura Holdings, Inc.



Yoshinori Hirai Directo



Masako Egawa Director (Outside)

Appointed in March 2014 Member of the Nominating Committee and Compensation Committee Professor, Graduate School of Commerce and Management, Hitotsubashi University Outside Director of Tokio Marine Holdings, Inc. Outside Director of Mitsui Fudosan Co., Ltd.

### **Executive Officers**

### President & CEO

Takuya Shimamura CEO l eader of AGC Group Improvement Activities

**Executive Vice President** 

Yoshiaki Tamura President of Glass Company

### **Senior Executive Officers**

Marehisa Ishiko GM of Automotive General Division, Glass Company

Jean-François Heris GM of Building & Industrial General Division, Glass Company; President & CEO of AGC Glass Europe

### Yoshinori Hirai

GTO GM of Technology General Division; Oversight of Electronics Company and Applied Glass Materiale General Division Materials General Division Deputy Leader of AGC Group Improvement Activities

#### Tetsuo Tatsuno GM of Finance & Control Division

### Shinji Miyaji

CFO GM of Corporate Planning Division

GM of Export Compliance Control Directorate Deputy Leader of AGC Group Improvement Activities

Yoshinori Kobayashi President of Electronics Company

Masao Nemoto President of Chemicals Company

### **Executive Officers**

Tadayuki Oi GM of Strategy & Planning Office, Glass Company

Shinichi Kawakami GM of General Affairs Division

Akinobu Shimao President of AGC Ceramics Co., l td

Tomoya Takigawa GM of Innovative Technology Research Center, Technology General Division

Takashi Shimbo Chief Representative of AGC Group for China

Kimikazu Ichikawa Chief Representative of AGC

Group for Southeast Asia Kazuyoshi Watanabe

GM of Display Glass General Div., Electronics Company **Kihachiro Okamoto** 

Deputy GM of Automotive General Division, Glass Company Shigekuni Inoue

GM of Production Technology Div., Technology General Division

Hiroyuki Watanabe GM of New Product R&D Center, Technology General Division

Takayasu Ide GM of Technology Management General Div., Chemicals Company

Seigo Washinoue Deputy GM of Display Glass General Div.; GM of Marketing & Sales Management Div., Display Glass General Div., Electronics Company

Kazuaki Koga GM of Essential Chemicals General Div., Chemicals Company

Kenzo Moriyama GM of Strategy & Planning Office, Corporate Planning Division

Takashizu Minato GM of Performance Chemicals General Div., Chemicals Company

Masahiro Takeda Deputy GM of Building & Industrial General Div., Glass Company; GM of Japan/Asia Pacific Div., Building & Industrial General Div., Glass Company

Takashi Misu GM of Human Resources Division

Tatsuo Sugiyama GM of Japan/Asia Pacific Div., Automotive General Div., Glass Company

Takahisa Sugiyama GM of Electronic Materials General Div., Electronics Company

Note GM: General Manager



Shinji Miyaji Director

### Corporate Auditors

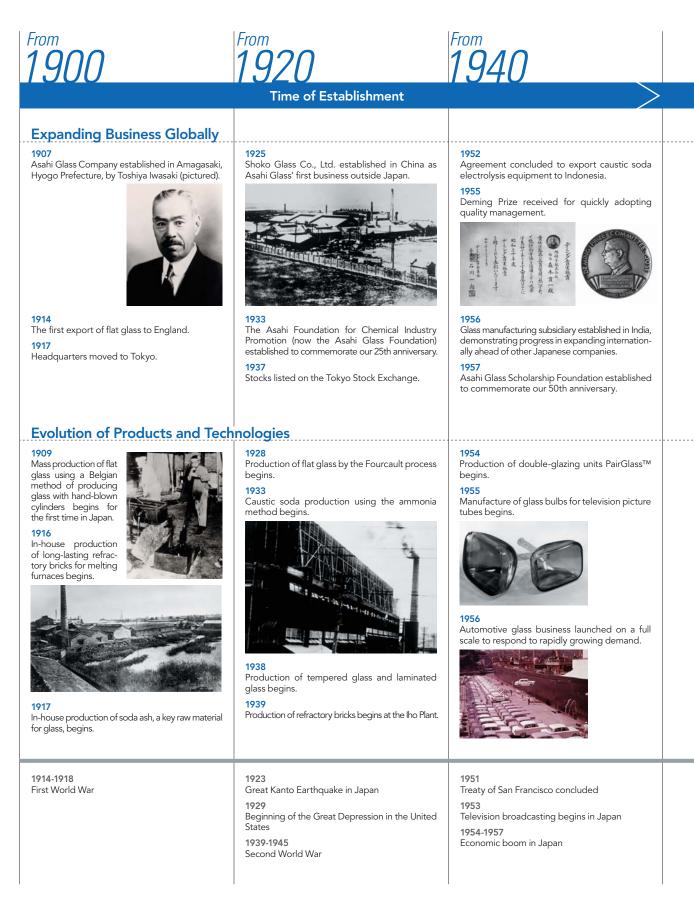
Shukichi Umemoto Yasushi Marumori (Outside)

Toru Hara (Outside)

Hiroshi Kawamura (Outside)

As of 30 March, 2016

With Over 100 Years of History, the AGC Group Aims to Continue Contributing to Society for Years to Come.





Period of Growth and Expansion



### Toward Global Operations

#### 1964

Entry into Thailand's flat glass market.



#### 1972

Glass production operations commence in Indonesia.



#### 1961

Production of propylene oxide and propylene glycol begins.

#### 1966

Production of float glass begins.



#### 1972

Product development of AsahiGuard<sup>™</sup> water and oil repellants and Aflon<sup>™</sup> COP fluorinated resins begins.

**1975** Development of the Flemion<sup>™</sup> fluoropolymer ion-exchange membrane electrolysis method for manufacturing caustic soda.





**1985** Full-scale entry of the automot

Full-scale entry of the automotive glass business in the United States.

### **1986**

From

1981

1981

Full-scale entry of the chlor-alkali business in Indonesia.

**1997** Entry into Russia's glass market.



### 1980

AZEC System, a new ion-exchange membrane electrolyzer, developed.

**1982** Production of fluoropolymer resin for coatings

(LUMIFLON™) begins. 1990 CYTOP™ transparent amorphous fluoropolymer developed.



**1995** Production of glass substrates for TFT-LCDs begins.



### 2002

Creation of AGC Group Vision, **"Look Beyond"**. In-house Company system introduced.

**2007** Group brand unified as "AGC" to mark its 100th anniversary.



### 2013

The Brazil Plant, one of the most environmentally friendly factories in South America starts operation. Entry into Brazil's flat glass market.

#### 2013

Regional headquarters established in Singapore with the aim of business expansion in Southeast Asia.

\C

2015 "AGC plus" management policy implemented.

#### 2005

Sales of automotive door glass that blocks infrared rays launched.

#### 2008

High-performance Fluon® ETFE FILM used for various sports venues at the global sports event in Beijing.

#### 2011

Worldwide sales of Dragontrail  ${}^{\rm TM}$  glass for smartphones and tablet computers begin.

#### 2011

UV Verre Premium Cool on™ tempered glass for automotive door windows sales begin.



Supply of HFO-1234yf, a next-generation automobile refrigerant with a low environmental burden, begins.

#### 1960

Color television broadcasting begins in Japan **1964** 

Tokaido *shinkansen* bullet train service commences in Japan and the Olympic Games held in Tokyo **1970** 

Expo '70 world's fair held in Osaka 1973 and 1979 First and second oil crises

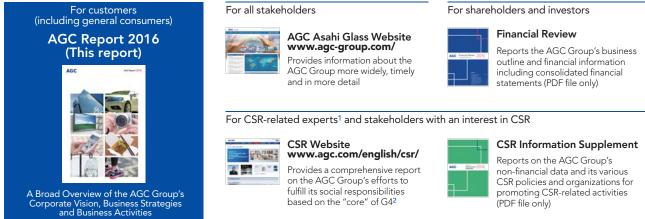
### 1983 Birth of the Internet 1985 Plaza Accord concluded 1993 European Union established 1997 Kyoto Protocol adopted

2003 Terrestrial digital broadcasting begins in Japan 2008 Global financial crisis begins

2011 The Great East Japan Earthquake and tsunami disaster in Japan's Tohoku region

**2014** FIFA World Cup held in Brazil

### Main Communication Tools Used to Reach Each of Our Stakeholders



1 ESG research agencies, etc. 2 The 4th edition of the GRI Sustainability Reporting Guidelines

#### Scope

Reporting Period

Fiscal 2015 (Jan.–Dec. 2015)

- Some information includes content from both fiscal 2014 and 2016 Organizations Covered in the Report
- Asahi Glass and its 204 consolidated subsidiaries (Group companies in and outside Japan)

#### **Related Information**

WEB Articles with this mark have related information on the AGC Asahi Glass website (www.agc.com/english/).

•Primary Notation and Report Targets Used in the Report The AGC Group Same as "Organizations Covered in the Report" mentioned at left. The AGC Group (Japan) Group companies in Japan including Asahi Glass Co., Ltd. AGC Asahi Glass/the Company Asahi Glass Co. Ltd. (on an unconsolidated basis)

#### Date of Publication

April 2016 (Last date of publication: May 2015)

#### **Regarding Future Assumption, Forecasts and Plans**

regar only rune Assumption, runetass and rians Future perspectives described in this report are based on the latest information available to the AGC Group at the time of editing this report. Nevertheless, please note that results and consequences may vary with fluctuations in the business environment.

### AGC ASAHI GLASS

### www.agc.com/english/

1-5-1, Marunouchi, Chiyoda-ku, Tokyo, 100-8405, JAPAN

Corporate Communications & Investor Relations Office, Corporate Planning Division Tel: +81-3-3218-5603 Fax: +81-3-3218-5390





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