AGC

Your Dreams, Our Challenge

AGC Integrated Report 2020

For the Year Ended December 31, 2019

Editorial Policy

Under the Group vision ***"Look Beyond,"*** the AGC Group is pursuing initiatives to realize its long-term management strategy, Vision 2025, formulated in February 2016. The AGC Integrated Report is designed to deepen stakeholder understanding of the AGC Group's corporate activities and management philosophy regarding long-term, sustainable corporate value improvement.

This year's report details the growth strategies of business units to improve the Group's long-term sustainable corporate value, and group-wide efforts to strengthen non-financial capital. In particular, a special article is included on the Group's sustainable corporate value improvement in the life science business—a growth strategy area we're looking forward to sharing with you. Also, the report includes detailed descriptions of the Group's efforts to strengthen non-financial capital in respective areas based on the framework of the International Integrated Reporting Council (IIRC).

Lastly, this report is prepared according to the Guidance for Collaborative Value Creation provided by Japan's Ministry of Economy, Trade and Industry (METI).

Environment Social Governance
Guidance for Collaborative Value Creation

Scope

Reporting Period
Fiscal 2019 (Jan.–Dec. 2019)

Organizations Covered in the Report
AGC Inc. and its 213 consolidated subsidiaries (Group companies in and outside Japan)

Primary Notation and Report Targets Used in the Report
- The AGC Group
  Same as "Organizations Covered in the Report" mentioned to the left
- AGC Inc./the Company
  AGC Inc. (on an unconsolidated basis)

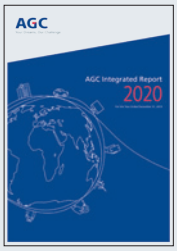
Published May 2020

AGC's Communication Tools

For all stakeholders

AGC Integrated Report 2020
(This report)
https://www.agc.com/en/csr/book/

A broad overview of the AGC Group's corporate vision, business strategies and activities, all aiming for increased corporate value in the long term



AGC Group Website
https://www.agc.com/en

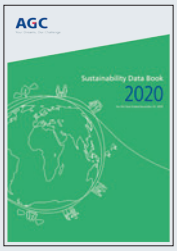
Provides information about the AGC Group in more detail

For stakeholders primarily interested in non-financial information

Sustainability Data Book 2020
https://www.agc.com/en/csr/book/

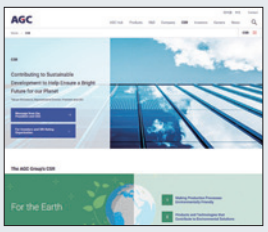
A report on policies and efforts towards realizing sustainability, and non-financial data (PDF only)

* This information was published as the "CSR Activity Report (Detailed)" until 2018.



CSR Website
https://www.agc.com/en/csr/

Introduces the AGC Group's corporate social responsibility activities and topics



For shareholders and investors

Financial Review
https://www.agc.com/en/ir/library/financial/

Reports the AGC Group's business outline and financial information including consolidated financial statements (PDF file only)

Social media

YouTube
https://www.youtube.com/channel/UCrUfls-RlSZiGawDRsFHnjw

Facebook
https://facebook.com/agc.global

af THE ASAHI GLASS FOUNDATION

The Asahi Glass Foundation provides research grants related to science and technology, recognizes individuals and organizations that have contributed to solving global environmental problems (through the Blue Planet Award) and provides scholarship grants.
https://www.af-info.or.jp/en/

Regarding Future Assumption, Forecasts and Plans
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.

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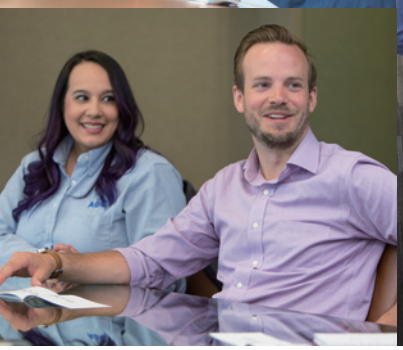
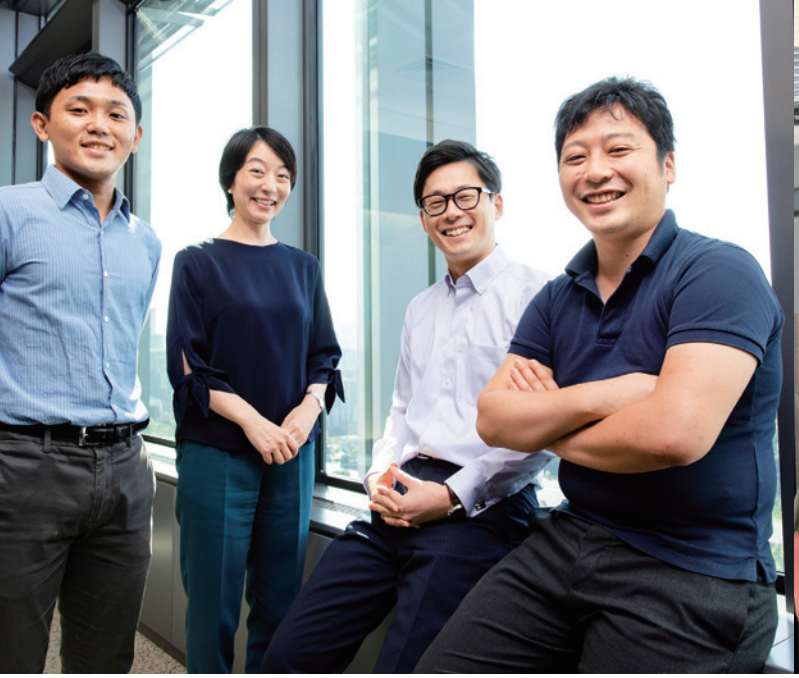


AGC's Group Vision

"Look Beyond"

Anticipate and envision the future.
Have perspectives beyond our own fields of expertise.
Pursue innovations, not becoming complacent with the status quo.
We will continue to create value worldwide.



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
Diversity
Environment
Integrity

Our Spirit

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

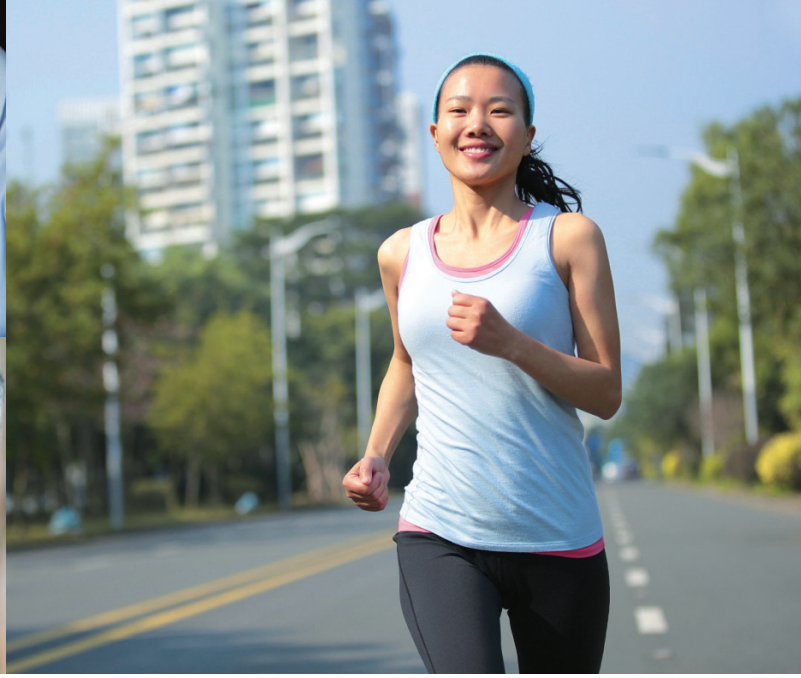
The founding spirit of Toshiya Iwasaki, who established Asahi Glass Company in 1907.

Toshiya Iwasaki aspired to launch a business that would contribute to the development of society. He was the first to succeed in the domestic production of architectural glass, an undertaking that had proven too challenging for many of his predecessors. In this way, he directly contributed to the modernization of Japan.

* AGC's Group Vision, Look Beyond, was formulated in April 2002.

AGC Group's Brand Statement

Your Dreams, Our Challenge



Never take the easy way out, but confront difficulties
Trust is the best way to inspire people
Strive to develop technologies that will change the world
A sense of mission leads us to advance

For more than a century, AGC has been guided by these founding spirits. Our unique materials, solutions and reliable partnerships have facilitated leading innovations across diverse industries and markets.

Today, by working with others to combine knowledge and advanced technology, we help make ever greater achievements possible, and bring bolder ideas to life.

Your Dreams, Our Challenge

The AGC Group: providing a broad range of materials and solutions worldwide

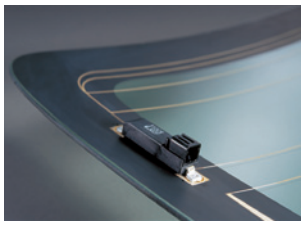
Description of Business

(December 2019)

Glass

Net sales: 742.9 billion yen
Operating profit: 9.3 billion yen

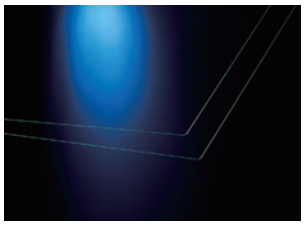
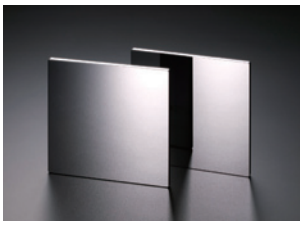
Architectural glass ..... Net sales: 352.7 billion yen
Automotive glass ..... Net sales: 388.3 billion yen

Electronics

Net sales: 276.7 billion yen
Operating profit: 25.6 billion yen

Display ..... Net sales: 174.7 billion yen
Electronic materials ..... Net sales: 90.5 billion yen

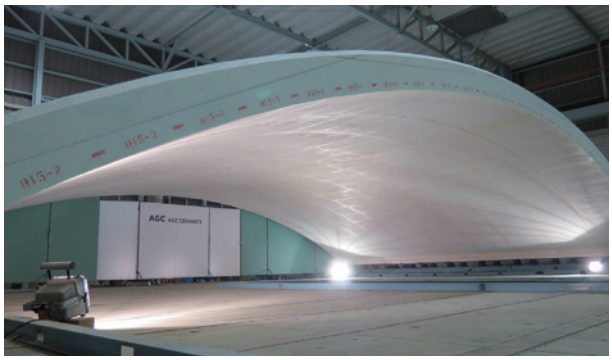
Chemicals

Net sales: 475.8 billion yen
Operating profit: 63.0 billion yen

Chlor-alkali and urethane ..... Net sales: 292.8 billion yen
Fluorochemicals and specialty chemicals ..... Net sales: 119.9 billion yen
Life Science ..... Net sales: 61.7 billion yen


Ceramics/Other

Net sales: 83.2 billion yen
Operating profit: 3.9 billion yen

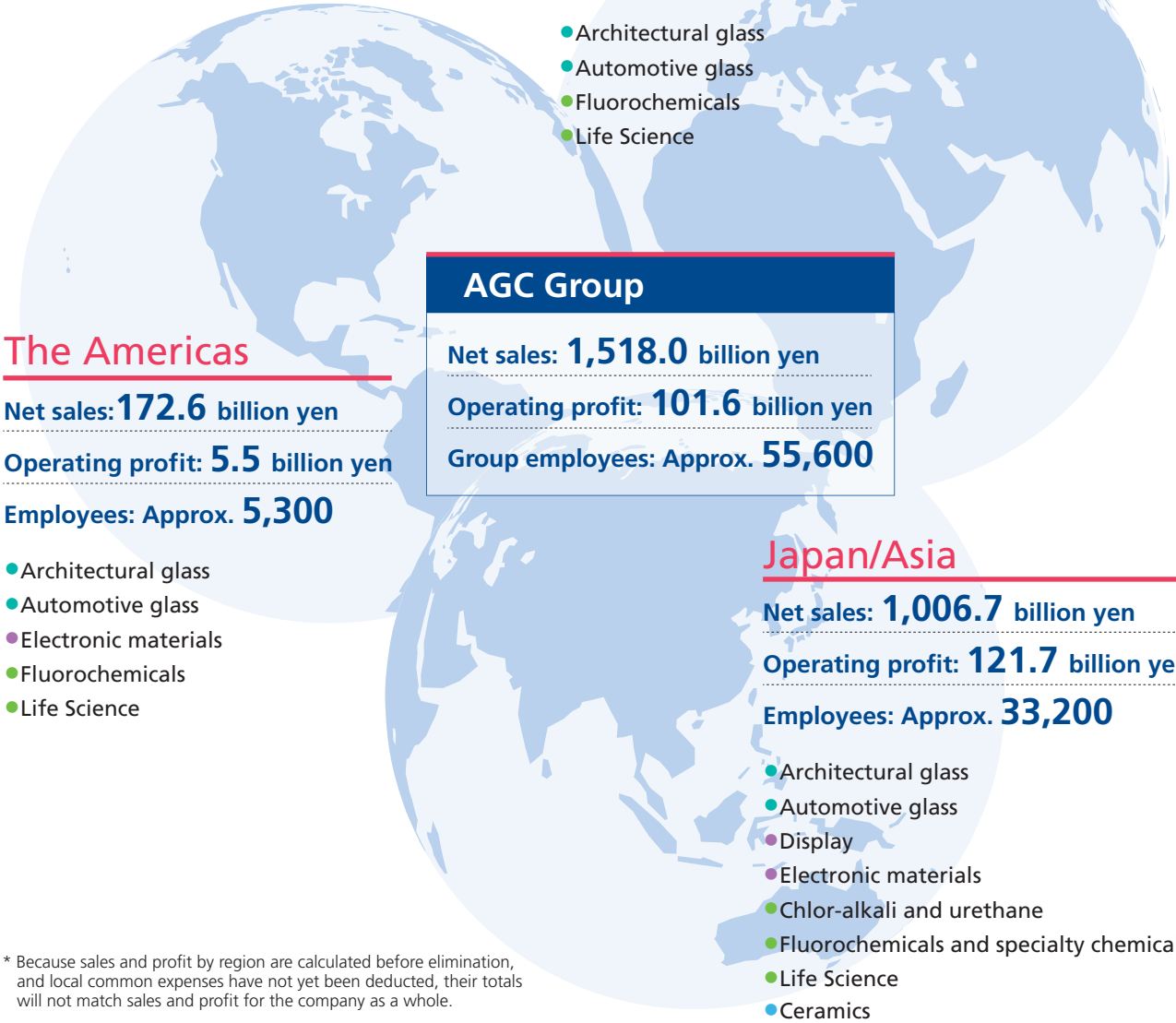


* Sub-segment net sales utilize net sales to external customers.
* Because sales and profit by segment are calculated before elimination, their totals will not match sales and profit for the company as a whole.

The AGC Group has established a global business foundation in Japan/Asia, Europe and the Americas. The Group strives to create new value with globally top-class, diverse material technologies, a broad customer base and advanced production techniques as its strengths, cultivated from over 110 years of experience in our Glass, Electronics, Chemicals and Ceramics businesses.

Global Expansion

(December 2019)



Europe

Net sales: 338.7 billion yen

Operating profit: 15.1 billion yen

Employees: Approx. 17,100

- Architectural glass
- Automotive glass
- Fluorochemicals
- Life Science

AGC Group

Net sales: 1,518.0 billion yen

Operating profit: 101.6 billion yen

Group employees: Approx. 55,600

The Americas

Net sales: 172.6 billion yen

Operating profit: 5.5 billion yen

Employees: Approx. 5,300

- Architectural glass
- Automotive glass
- Electronic materials
- Fluorochemicals
- Life Science

Japan/Asia

Net sales: 1,006.7 billion yen

Operating profit: 121.7 billion yen

Employees: Approx. 33,200

- Architectural glass
- Automotive glass
- Display
- Electronic materials
- Chlor-alkali and urethane
- Fluorochemicals and specialty chemicals
- Life Science
- Ceramics

* Because sales and profit by region are calculated before elimination, and local common expenses have not yet been deducted, their totals will not match sales and profit for the company as a whole.

In a wide range of places and situations, the AGC Group's diverse products support a safe, pleasant and sustainable society.

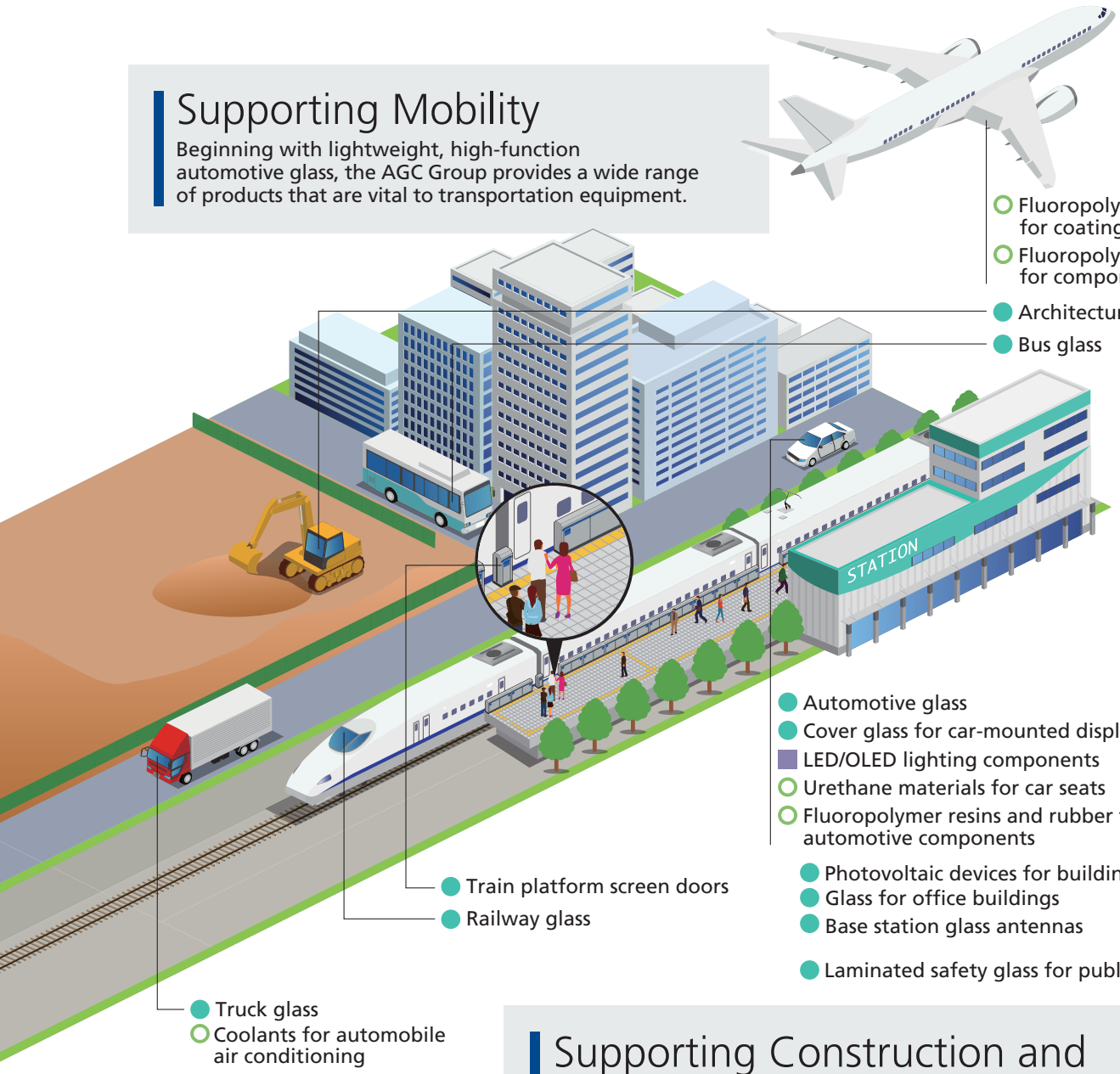
Major Products

● Glass ■ Electronics
○ Chemicals ◆ Ceramics/Other

Click here for product details
https://www.agc.com/en/products/search/index.html

Supporting Mobility

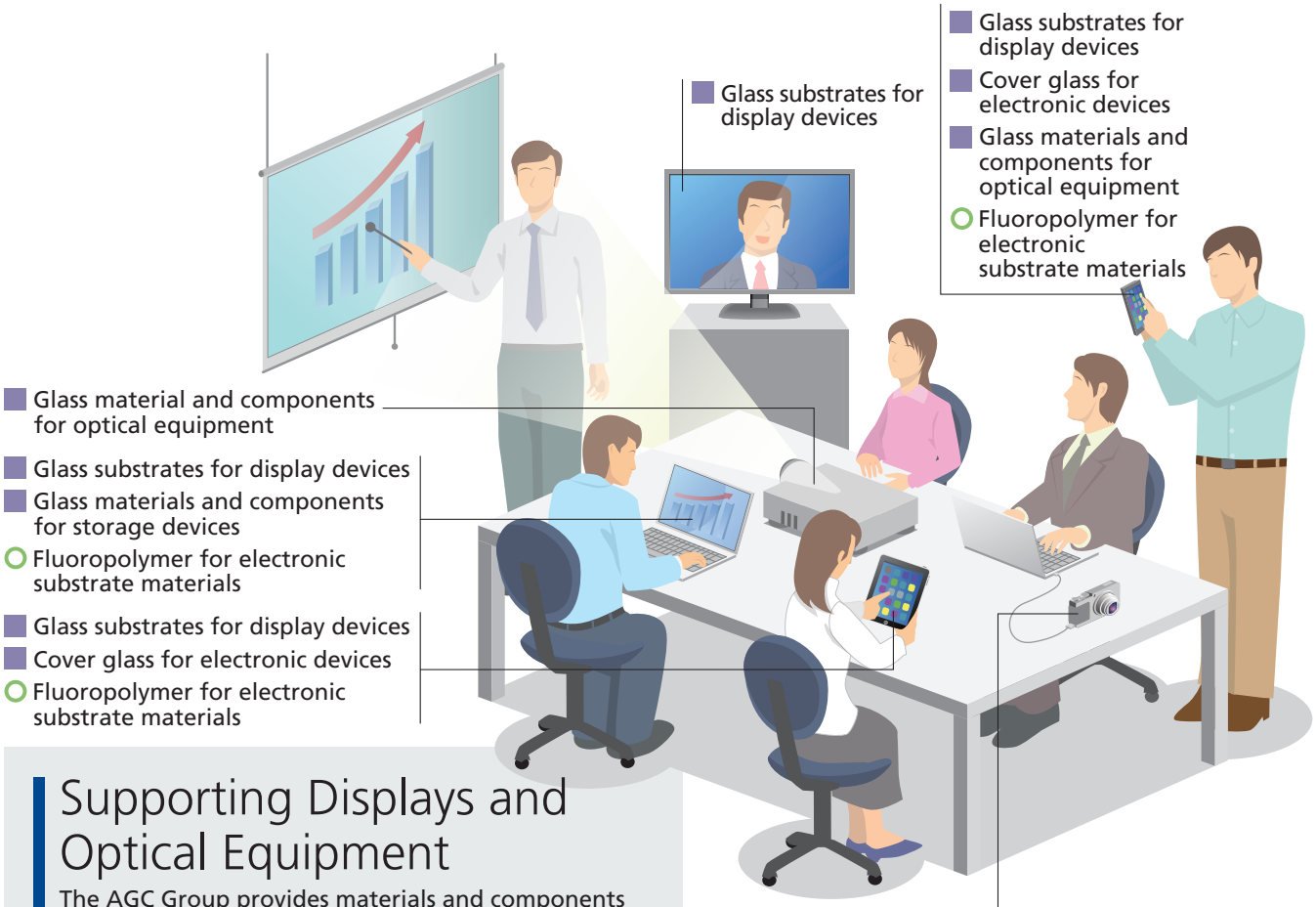
Beginning with lightweight, high-function automotive glass, the AGC Group provides a wide range of products that are vital to transportation equipment.



- ○ Fluoropolymer resin for coatings
- ○ Fluoropolymer resin for components
- ● Architectural glass
- ● Bus glass
- ● Automotive glass
- ● Cover glass for car-mounted displays
- ■ LED/OLED lighting components
- ○ Urethane materials for car seats
- ○ Fluoropolymer resins and rubber for automotive components
- ● Photovoltaic devices for buildings
- ● Glass for office buildings
- ● Base station glass antennas
- ● Laminated safety glass for public facilities
- ● Train platform screen doors
- ● Railway glass
- ● Truck glass
- ○ Coolants for automobile air conditioning

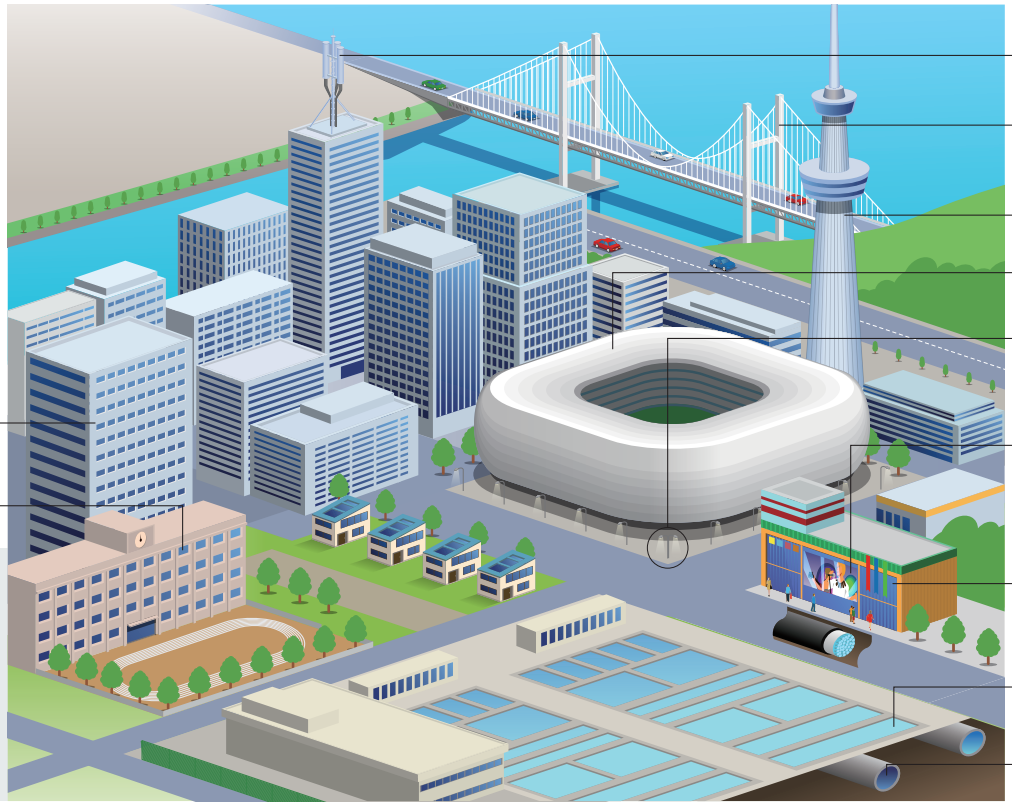
Supporting Construction and Social Infrastructure

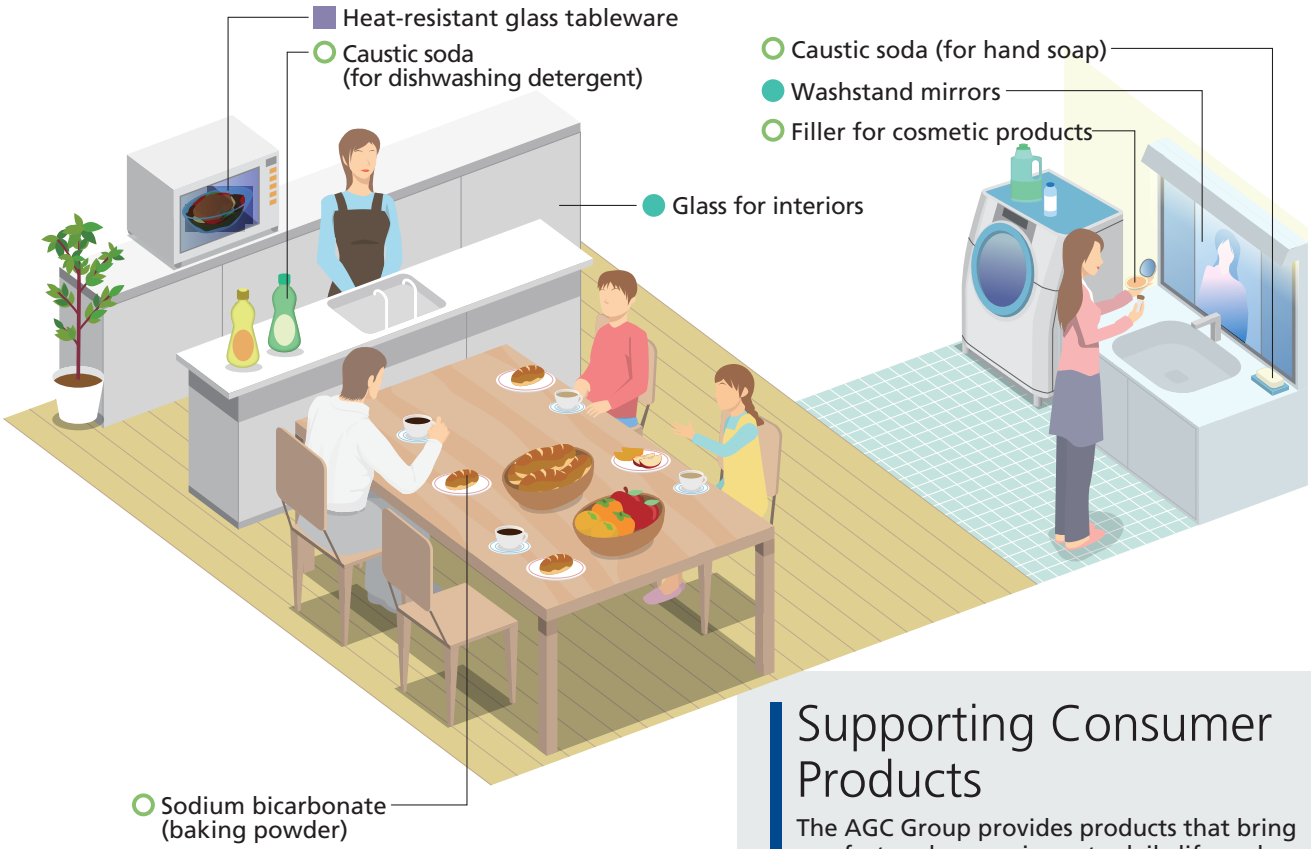
The AGC Group provides architectural materials that contribute to the creation of safe and pleasant spaces, and industrial materials that strengthen social infrastructure.



Supporting Displays and Optical Equipment

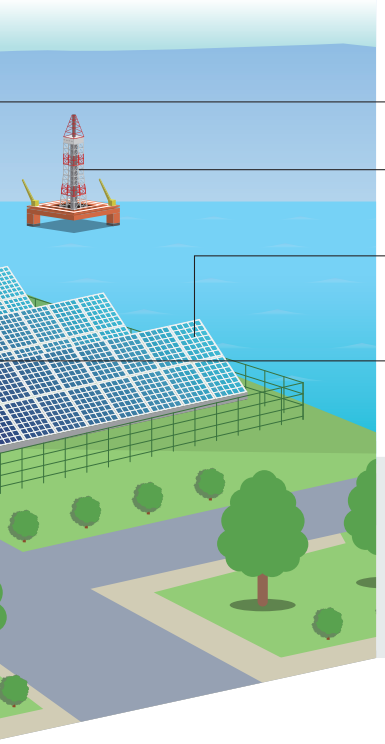
The AGC Group provides materials and components for electronic equipment used in a variety of business situations.





Supporting Consumer Products

The AGC Group provides products that bring comfort and convenience to daily life and many of the materials vital to their creation.



- Fluoropolymers resin for coatings
- Fluoroelastomer for petroleum extraction machinery (rubber)
- TCO substrates for photovoltaic devices
- Glass fiber-reinforced plastic for photovoltaic device frames
- Protective fluoropolymer resin film for photovoltaic devices

Supporting the Environment

The AGC Group provides components and technologies that contribute to the realization of smart cities and smart mobility.

- Biopharmaceutical active ingredients
- Small molecule drug substances/intermediates
- Bulking agent for liquid chromatography
- Lab use ware
- Tissue culture ware
- Prepared specimens for microscopes
- Sodium bicarbonate (infusion solution for artificial dialysis)
- Active ingredients for eyedrops
- Fluoropolymers for horticultural use (greenhouse film)
- Agrochemicals and intermediates

Supporting Life Science

The AGC Group provides pharmaceuticals and agrochemicals used in the field of life science, and materials for a wide variety of its related facilities.

Value Creation Model

From the origin of our founding spirit, we will focus on the future and create new value and trust.

Your Dreams,

The Social Changes Surrounding the AGC Group

- Climate change
- Depletion of resources
- Advancing urbanization
- Food shortages
- Accelerating CASE
- A connected society (expanding Internet of Things)
- Longer life expectancy
- Respect for human rights

AGC Group's Origin

Founding spirit

- Never take the easy way out, but confront difficulties
- Trust is the best way to inspire people
- Strive to develop technologies that will change the world
- A sense of mission leads us to advance

AGC Group's Strengths

Strength 1

A customer base across a wide swath of industries and society

- Unwavering trust from customers
- Cooperative relationships with leaders of each industry

Strength 2

Wide range of material technologies

- Advanced material technologies in glass, electronics, chemicals and ceramics
- Common basic technologies that support development and production

Strength 3

Advanced production techniques and operational excellence

- Highly sophisticated production technologies and engineering expertise
- Global supply chain

Our Challenge

When preparing the AGC Integrated Report 2019, members of senior management created AGC's value creation model through multiple discussions, taking another look at the Group's founding spirits, group vision, history, products and technologies. The AGC Group will stay focused on social change and continue to create new value and trust.

AGC Group's Value Creation Process

Step 1
Research needs and social issues, focusing on the future

Step 2
Develop unique materials and solutions that utilize Group technologies

Step 3
Mutually integrate customer knowledge and technologies with our own, seeking to resolve next-generation needs and social issues

Step 4
Build stable, solid sources of earnings and invest management resources in growth engines

Implementation of Long-term Growth Strategy

The AGC Group's long-term management strategy, Vision 2025

(Established February 2016)

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 to be a highly profitable, leading global material and solution provider.

Core businesses

Establishing long-term, stable sources of earnings through portfolio management

- Architectural glass
- Automotive glass (existing)
- Essential chemicals
- Fluorochemicals
- Display
- Ceramics

Strategic businesses

Establishing highly profitable businesses through expansion of high value-added businesses

- Mobility
- Electronics
- Life Science

Value Creation

For the world

- Provision of safety, security and comfort

For customers and business partners

- Creation of new value and functions
- Creation of trust

For employees

- Creation of job satisfaction

For investors

- Creation of corporate value

For a sustainable society

- Contributions to the resolution of social issues

Company History

1900

Social Movements

Construction boom in building a modern nation

Global Business Expansion

1907
Asahi Glass Company (now AGC Inc.) established in Amagasaki, Hyogo Prefecture, by Toshiya Iwasaki.

1914
The first export of flat glass to England.

1925
Shoko Glass Co., Ltd. established in China as the company's first business outside Japan.

Evolution of Products and Technologies

Glass

1909
Mass production of flat glass using a Belgian method of producing glass with hand-blown cylinders begins for the first time in Japan.

1928
Production of flat glass by the Fourcault process begins.

1938
Production of tempered glass and laminated glass begins.

Electronics

1955
Manufacture of glass bulbs for television picture tubes begins.

Chemicals

1917
In-house production of soda ash, a key raw material for glass, begins in Kitakyushu, Japan.

1933
Caustic soda production using the ammonia method begins.

Ceramics

1916
In-house production of refractory bricks for melting furnaces begins.

1939
Production of refractory bricks begins at the Iho Plant in Japan.

1950

Arrival of the television age

Advancement of motorization

Global Business Expansion

1952
Agreement concluded to export caustic soda electrolysis equipment to Indonesia.

1956
Glass manufacturing subsidiary established in India, demonstrating progress in expanding internationally ahead of other Japanese companies.

Evolution of Products and Technologies

Glass

1956
Automotive glass business launched on a full scale to respond to rapidly growing demand.

1960

Development of social infrastructure

Global Business Expansion

1964
Entry into the flat glass market in Thailand.

Evolution of Products and Technologies

Glass

1966
Production of float glass begins.

1966
Sales of heat-reflective glass launched in Japan.

Chemicals

1961
Production of propylene oxide and propylene glycol begins.

1970

Outbreak of environmental problems

Global Business Expansion

1972
Glass production operations commence in Indonesia.

Evolution of Products and Technologies

Chemicals

1972
Product development of AsahiGuard™ water and oil repellants and Aflon™ COP fluorinated resins begins.

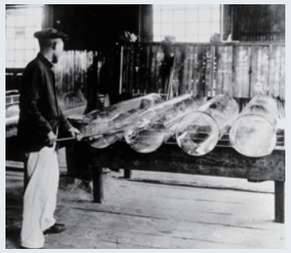
1975
Development of the Flemion™ fluoropolymer ion-exchange membrane electrolysis method for manufacturing caustic soda.

Products and Businesses Supporting Society

Glass

Architectural glass

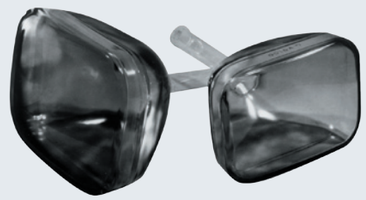
AGC was the first company to achieve domestic production of flat glass in Japan, supporting the modernization of a rapidly transforming society.



Electronics

Glass bulbs for TV cathode ray tubes

Improved product performance and increased production capacity supported the popularization of black-and-white and color TVs, as well as advances in video technology.



Glass

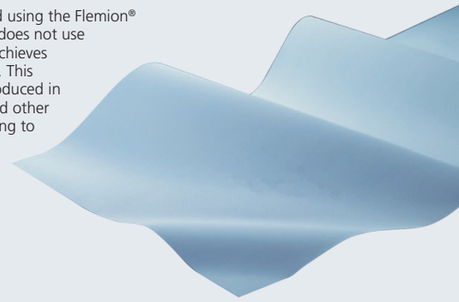
Automotive glass business

In response to tremendous increase in automobile demand, AGC established a mass production system for automotive glass and developed the necessary manufacturing technology.

Chemicals

Flemion® ion exchange membrane electrolysis method for caustic soda production

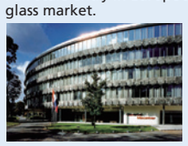
AGC's electrolysis method using the Flemion® ion exchange membrane does not use harmful substances and achieves significant energy savings. This technology has been introduced in AGC's own businesses and other industry companies working to prevent environmental pollution.



1980

Advances in global warming

1981
Glaverbel S.A. in Belgium acquired. Full-scale entry in Europe's flat glass market.



1985
Full-scale entry of the automotive glass business in the United States.

1986
Full-scale entry of the chlor & alkali business in Indonesia.

1980
Production of a glass delay line for VHS deck playback begins.

1985
Synthetic Fused Silica Glass production begins.

1980
AZEC System, a new ion-exchange membrane electrolyzer, developed.

1982
Production of LUMIFLON™ fluoropolymer resin for coatings begins.

1982
High-quality fused cast refractory ZB-X950 development begins.

1990

IT development

1997
Entry into Russia's glass market.

1988
Sales of Low-E insulating double glazing glass launched in Japan.

1992
Production of glass filters that absorb infrared rays in cameras begins.

1995
Production of glass substrates for TFT-LCDs begins.

1997
Production of glass for optical pickups in DVDs/CDs begins.

2003
Production of CMP slurry for semiconductors begins.

1990
CYTOP™ transparent amorphous fluoropolymer developed.

1991
Production of Asahiklin AK-225, an alternative fluorocarbon, begins.

2000

Popularization of LCD TVs

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

2005
Sales of automotive door glass that blocks infrared rays launched.

2000
Contract manufacturing of biopharmaceuticals begins.

2008
High-performance Fluon® ETFE FILM used for various sports venues at the global sports event in Beijing.

2010

Proliferation of smartphones and progress in biopharmaceuticals

2013
- Entry into Brazil's flat glass market.
- Southeast Asian regional headquarters established in Singapore.

2016
- Automotive glass production base established in Morocco.
- Information gathering and marketing bases established in India and Dubai.

2018
- Bioscience businesses in Japan, Europe and the U.S. consolidated and integrated management as AGC Biologics begins.
- Change of corporate name to AGC Inc.

2011
UV Verre Premium Cool on™ tempered glass for automotive door windows sales begin.

2013
Production of cover glass for car-mounted displays begins.

2014
Sales of smart glazing glass Wonderlite® launched.

2015
Sales of UV Verre Premium Privashield™ automotive glass that cuts 99% of UV rays in all directions launched.

2011
Worldwide sales of Dragontrail™ glass for smartphones and tablet computers begin.

2017
Production of EUV exposure photomask blanks begins.

2015
Supply of HFO-1234yf, a next-generation automobile refrigerant with a low environmental burden, begins.

2017
Acquired leading biopharmaceutical CDMO CMC Biologics.

Chemicals

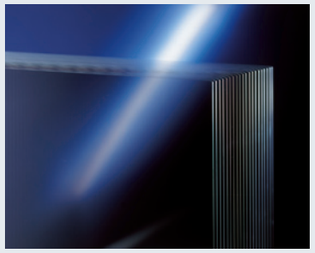
Alternative fluorocarbon Asahiklin AK-225

As fluorocarbon regulations become stricter, Asahiklin AK-225 is attracting attention as the world's first alternative fluorocarbon. This product received the 1994 EPA (U.S. Environmental Protection Agency) Stratospheric Ozone Protection Award.

Electronics

Glass for thin-film-transistor (TFT) liquid crystal displays (LCDs)

AGC has responded to the rapid increase in demand for flat-screen TVs since 2000 by improving its manufacturing technology and mass production system for TFT LCD glass.



Electronics

Dragontrail® glass for smartphones and tablets

Dragontrail glass is a type of chemically strengthened special glass created through the combination of multiple technologies. This glass is used in smartphones, tablet PCs and car-mounted displays to make everyday life more comfortable and convenient.

Chemicals

Biopharmaceutical contract manufacturing business

AGC conducts contract production of medical and agricultural small molecule chemicals that the company pioneered, as well as intermediates and drug substances for biopharmaceuticals. Through these products, AGC contributes to the realization of a healthy society with high life expectancy.

Sustainability and Digitalization. Faced with two intersecting paradigm shifts, AGC's value creation model continues to evolve.

Takuya Shimamura
Representative Director,
President and
Chief Executive Officer

The Significance of AGC in the Century of Sustainability

We are living in a 21st century focused on sustainability, and as an executive, this is the most important theme of AGC's business. Since the industrial revolution of the 18th century, humankind has tirelessly pursued prosperity and growth. Along the way, we have consumed a vast amount of resources to manufacture innumerable products only to discard them after use. These actions were taken based on the perception that our Earth and society will last forever. However, capitalism has perhaps gone too far. Global economic competition has intensified due to an overemphasis on growth, which has led to many environmental and social problems. The assumption of the 20th century—that our Earth and society will last forever—is now in question. I believe it is imperative to stop and look back to our guiding principles.

Since I took office in January 2015, I have repeatedly stressed the importance of returning to these guiding principles when in doubt. In other words, we must ask ourselves: "What are we working for?" At the time of AGC's founding, we embarked on a challenge to successfully manufacture flat glass in Japan to meet demand created by the rapid Westernization of buildings. Later, we developed and supplied automotive glass to support motorization and glass for cathode-ray tubes and glass substrates for flat-panel displays in the age of television. Through these examples, AGC has contributed to the enrichment of people's lives and society. We have also focused on the development of products with a reduced environmental impact, including window glass with high energy-saving performance and refrigerants with low global warming potential. Our oxygen combustion technology used in glass melting also promotes energy and resource savings in our manufacturing processes. Accordingly, AGC is rooted in providing solutions that sustain prosperity through innovation in materials including glass, chemicals and ceramics, and I believe this makes AGC a truly meaningful company. We will continue to keep this notion in mind and let it direct our actions.

As a compass to guide us in these actions, last year AGC identified the company's long-term management direction and opportunities to influence corporate value based on global social issues, future risk trends and the social issues that customers are working to solve. Going forward, AGC will formulate long-term strategies, medium-term management plans and long-term environmental goals that take these opportunities and risks into account.

Major opportunities	Major risks
Addressing climate change	
Effective use of resources	
Developing societal infrastructure Realizing safe and comfortable mobility Addressing food crises Building an info-oriented and IoT society Facilitating better health and longevity	Socially and environmentally-conscious supply chain Ensuring fair and equal employment and workplace safety Relationships with local communities and environmental consideration

Based on the above, the AGC Group plans to incorporate specific business opportunities, risks, initiatives and goals into the next medium-term management plan.

An Evolving Value Creation Model Centered on Core Businesses and Strategic Businesses

Our shift into the era of sustainability is an opportunity to build a new value creation model and transform it into a business portfolio for sustainable growth.

In 2016, AGC formulated its long-term management strategy, Vision 2025 in efforts to continue providing new materials solutions for full and sustainable lives. This vision takes particular characteristics of the materials industry into account, including the fact that a single product can require between 10 to 20 years from basic research through to commercialization. There are the two groups of businesses directing AGC's business growth moving forward.

The first are core businesses, which are made possible through existing technologies, businesses, products and the human resources that create them. These businesses are focused on growth from the perspective of AGC's customers' needs and market development. The second group are strategic businesses, in which we create new technologies, products and services from a perspective that incorporates backcasting, anticipating social issues and technological changes in the next 20 to 30 years. The aim of this two-fold strategy is to achieve sustainable growth by expanding our strategic businesses, which we invest in from a long-term perspective, while maintaining stable cash flow through our core businesses.

In our core businesses, it is important to take advantage of the strengths of our existing glass, chemicals, displays and ceramics businesses, bringing products to market that meet an array of needs. In the architectural and automotive glass business, we are increasing production capacity in growth markets including Brazil and Morocco. In the chemicals business, we are strengthening our production infrastructure in Southeast Asia while conducting M&A and reinforcing our base of top suppliers in the region. We are promoting strategies with clear intent, such as withdrawing from businesses and regions that cannot provide added value, and investing with precision. Our core businesses are affected by global economic and market fluctuations, and we have begun to feel an impact in this area since 2019.

Additionally, due to the spread of the coronavirus infection (COVID-19) in 2020, global social and economic activity became highly stagnant, making it difficult to project future market trends. Given these circumstances, each division at AGC is working to respond quickly to customer requests in preparation for market recovery. Initiatives include new product planning, production technology development and production process testing that can't be undertaken in times when supply and demand are under severe pressure.

Meanwhile, in our strategic businesses, initiatives are underway in the three areas of mobility, electronics and life sciences. In the life sciences area, synthetic pharmaceuticals and biopharmaceuticals are growing more than expected, with AGC functioning as a Contract Development and Manufacturing Organization (CDMO). In electronics, we have developed EUV exposure photomask blanks for semiconductor manufacturing as a future growth driver. In addition, the 5G market is expected to go into full-scale operation in the near future, and we are working with NTT DOCOMO, Inc. to develop base station receiving antennas that can be mounted on building windows in urban areas. In the area of mobility, demand for glass

AGC Group's long-term management strategy, Vision 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.
The AGC Group will continue being a highly profitable, leading global material and solution provider.

Core businesses

Establishing long-term, stable sources of earnings through the portfolio management

- Architectural glass
- Automotive glass (existing)
- Essential chemicals
- Fluorochemicals
- Display glass
- Ceramics

Strategic businesses

Establishing highly profitable businesses through expansion of high value-added businesses

- Mobility
- Electronics
- Life Science

antennas and vehicle display glass that enables connected cars will increase moving forward. As a result of these initiatives, our strategic businesses' contribution to overall revenue is steadily increasing.

To provide solutions through our core businesses and strategic businesses that match the respective growth stage of each region and market in a timely manner, we will continue to strengthen our global development and production infrastructure, invest in M&A and practice open innovation. To this end, we will actively promote cooperation with external parties.

Tackling Two Future Intersecting Paradigm Shifts

Four years have passed since AGC announced its "Vision 2025." Furthermore, our medium-term management plan, "***AGC plus-2020***," is now in its final year, and we are seeing substantial results. Last year, as a starting point for discussions on our next medium-term management plan (beginning fiscal 2021), we implemented a project that gave mid-career members of the AGC Group a chance to describe their vision for the management of AGC from 2030 to 2040. These people, who will lead the AGC Group in 10 or 20 years' time, held wide-ranging discussions and made proposals for their vision of AGC's future. Themes included the Group's ideal corporate image, business domains, growth strategy and organizational structure. During further discussions based on their proposals, I stated that we must envision two paradigm shifts.

The first shift is rooted in sustainability, which entails a change in the competitive axis of companies that management is based on. ESG investment has become mainstream throughout the financial market. In our era, management that does not consider the environmental and societal impact of its business activities and products will fail to receive support from stakeholders and thus, be unable to raise sufficient funds.

The second shift is the rapid progress of digitalization. Products, services and business models that utilize digital technology are now essential in all industries and markets, including electronics and mobility.

I see these two paradigm shifts as intersecting movements. For example, the digitization of all our business processes is being led by the Smart AGC Promotion Division founded within the Corporate Planning General Division. At our plants, we are digitalizing manufacturing processes using AI and the IoT. Specifically, we are creating smart factories that reduce environmental impact, generate products without human involvement, improve overall quality and shorten delivery timeframes to boost customer satisfaction. This has the added benefit of contributing to resolving societal issues, including climate change and the decreasing workforce population. In the coming era, we must keep an eye on the two major paradigm shifts of sustainability and digitalization in our search for optimal solutions.

However, no matter how the times change, I believe that value created by tangible elements—materials, in our industry—will not decrease. Future value designed through digital technology must still be given physical shape, and our role is to maximize the value we can provide to our customers and society.

Collaborative Innovation for Far-reaching Optimization

In response to the shifts of sustainability and digitalization, it is essential to pursue optimization through collaborative creation with our worldwide partners, rather than individualized optimization centered on company profits.

The AGC Yokohama Technical Center, a new R&D facility that will gradually begin operations in 2020, is a symbol of this collaboration. The facility promotes innovation through collaboration with industry, government and academia, under the key phrase of "a collaborative creation space." In recent years, AGC has been actively collaborating through research projects with universities and partnerships with startups, both examples of this forward-thinking initiative.

Of course, creating a place devoted to innovation won't automatically drive new discovery. These spaces within the company should be used to engage with outside knowledge and develop human resources who actively seek external resources to gain knowledge and create opportunity. AGC leverages its strengths—which include a client base of leading companies in each industry—and directly engages new entities or individuals for discussion on what's possible for both sides through an AGC partnership. In this manner, we are able to discover technologies and products that can be realized today, and also initiatives that AGC is uniquely poised to accomplish in the coming years. Through these collaborative dialogues and activities, we want people outside the company to know AGC's potential. At the same time, we want all AGC employees to be aware of this potential and communicate it to stakeholders around the world with confidence. These are the ideas behind opening the AGC Yokohama Technical Center.

Human Resources and Culture Are the Keys to Sustainable Growth

Human resources are the key to realizing open innovation and creating technologies and businesses that respond to paradigm shifts in management. I believe that the most important job management faces is to develop human resources that will pave the path leading forward.

Since I took this position, I have visited about 50 sites annually in Japan and overseas along with AGC's CTO and CFO in an effort to create workplaces where everyone can maximize their potential. I have taken part in discussions on this topic throughout the year, both at large and small venues, for the past five years. Executives are tasked with many responsibilities other than communication with employees—including making decisions on the Board of Directors and envisioning strategy—but I try to consciously spend a lot of time talking to our people. One reason is that management is in the best position to talk about the founding spirit and purpose of the company—important ideas that I hope all staff are aware of through our valuable communication.

The sustained growth of a company requires a thorough growth strategy and management plan, an organization and a governance system that can execute them, and the necessary human resources and culture serving as the key. I will continue to encourage our personnel to take on new challenges every day, and to maintain a culture of openness and confidence. Leaders must play important roles for this to happen. By sympathizing with the concerns of your subordinates and colleagues and truly listening to their ideas, you can inspire them to achieve more. Before becoming CEO, I asserted this sentiment in a letter I sent to all Group employees. By continuing to pass this belief on, I hope we can embrace the idea of "Your Dreams, Our Challenge" along with our customers and worldwide partners while respecting all four principles of AGC's founding spirit, the foremost of which is, "Never take the easy way out, but confront difficulties."

AGC's Founding Spirits

Never take the easy way out,
but confront difficulties

Trust is the best way to inspire people

Strive to develop technologies that will change the world

A sense of mission leads us to advance

Continuing our long-term investment strategy and building an optimized business portfolio

Shinji Miyaji
Representative Director,
Senior Executive Vice President, CFO, CCO
Corporate Planning General Division

Sales Were Comparable to Previous Year, but Profits Declined Due to Market Deterioration and Production Issues

Despite global economic slowdown, AGC Group sales in the fiscal year ended December 31, 2019 remained comparable to the previous term at 1,518 billion yen (down 0.3% year-on-year) by properly addressing business operation issues in each department. Operating income was 101.6 billion yen (down 15.7% year-on-year) due to factors such as market deterioration and production issues, although our strategic businesses in the three fields of mobility, electronics and life science expanded steadily. Profit before tax was 76.2 billion yen (down 40.6% year-on-year) due to the recording of an impairment loss on fixed assets in the automotive glass business in North America, and net income attributable to owners of the parent company was 44.4 billion yen (down 50.4% year-on-year), representing a significant decrease in both areas.

Regarding shareholder returns, we increased our annual dividend by 5 yen from the previous year to

Financial indicators

(billion yen)

	IFRS				
	December 2017	December 2018	December 2019	December 2020 Forecast*2	December 2025 Target
Net sales	1,463.5	1,522.9	1,518.0	1,550.0	–
Operating profit	119.6	120.6	101.6	120.0	229.2
Profit before tax	114.4	128.4	76.2	107.0	–
Profit for the year attributable to owners of the parent	69.2	89.6	44.4	69.0	–
Return on equity*1	6.1%	7.7%	3.9%	6.0%	10.0% or above

*1 Return on equity = Profit for the year attributable to owners of the parent/Total equity attributable to owners of the parent
*2 The 2020 forecast does not include the impact of the spread of coronavirus (COVID-19)

120 yen (60 yen in the second quarter and 60 yen at the end of the year). Going forward, we will make it a matter of policy to continue to pay dividends above the current annual dividend per share. We will also strive to return profits to shareholders while aiming for a consolidated total return ratio of 50% or more, including the acquisition of treasury stock.

Regarding business results for the fiscal year ending December 31, 2020, due to the elimination of a temporary factor that increased manufacturing costs in the fiscal year ended December 2019 and further growth in our strategic business, we forecasted that net sales in this fiscal year would reach 1,550 billion yen and operating profit 120 billion yen (as of February 2020). Profits before tax were expected to reach 107 billion yen, and net income attributable to the owners of the parent company were expected to increase again to 69 billion yen. However, after February 2020, the business performance of the AGC Group was expected to be greatly affected by the disruption and stagnation of economic activities due to the global spread of coronavirus (COVID-19). In these circumstances, we will respond to requests from society and our customers wherever we can, striving to collect information, promptly and appropriately responding to this crisis to minimize the impact on our business.

Managing Each Business Using EBITDA and ROCE for an Optimized Business Portfolio

In the fiscal year ending December 31, 2019, we were able to achieve results while making progress in terms of "***AGC plus-2020***." This included steady progress in the structural reform of our business portfolio.

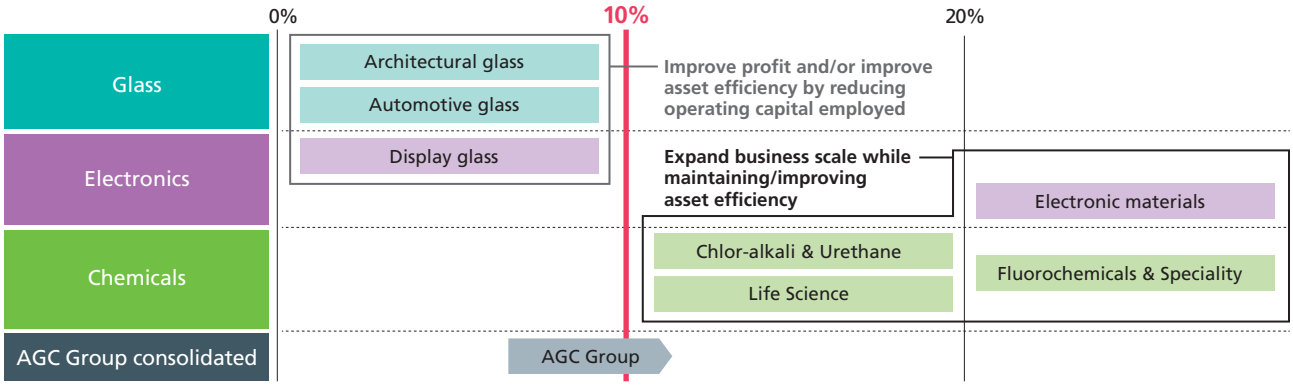
The AGC Group is promoting the development of Strategic Businesses that will serve as growth engines moving forward based on the Core Businesses that form our stable long-term profit base. One of our goals is for the Strategic Business profit ratio (profit contribution ratio) to be 25% or more by 2020 (against total company profit).

In the fiscal year ended December 31, 2019, this profit contribution ratio improved from 17% to 26%, year-on-year. In the electronics field, expansion in optoelectronics materials, EUV exposure photomask blanks and other semiconductor-related materials, and components for next-generation high-speed communications contributed greatly to Strategic Business profits. Expansion in synthetic pharmaceuticals, agrochemicals and biopharmaceuticals also contributed significantly in the life science field.

On the other hand, profit management in each business is also important to build a highly profitable

Business portfolio management ROCE (forecast for the end of December, 2020)

ROCE target: 10% or more



* ROCE (OP forecast for FY2020)/(FY2020 year end operating capital employed (Trade receivables+Inventory–Trade payables+Fixed assets)). Corporate expense is not allocated to OP forecast of each sub-segment.

business portfolio. The AGC Group has two internal management indicators, Earnings Before Interest, Taxes, Depreciation and Amortization (EBITDA)*1, representing cash generating capacity and Return on Capital Employed (ROCE)*2, representing capital efficiency. These indicators are used to rigorously evaluate the profitability and capital efficiency of each business to improve the overall profitability of the AGC Group. From the perspective of company-wide optimization, we also consider options such as business transfer or withdrawal for businesses that do not meet certain standards and appear not to have a productive future. In the fiscal year ended December 2019, we agreed to hold discussions with Central Glass Co., Ltd. regarding the integration of its domestic architectural glass business and business promotion, while enhancing and complementing each other's strengths. For mature businesses, depending on the situation it can be necessary to take such drastic structural reform measures. On the other hand, regarding businesses with high asset efficiency, we will aim to maximize profits by expanding the scale of business through active investment.

*1 Earnings Before Interest, Taxes, Depreciation and Amortization (EBITDA): Income before interest payments and tax payments, and before depreciation and amortization of tangible fixed and intangible fixed assets

*2 Return on Capital Employed (ROCE): Profit divided by operating assets

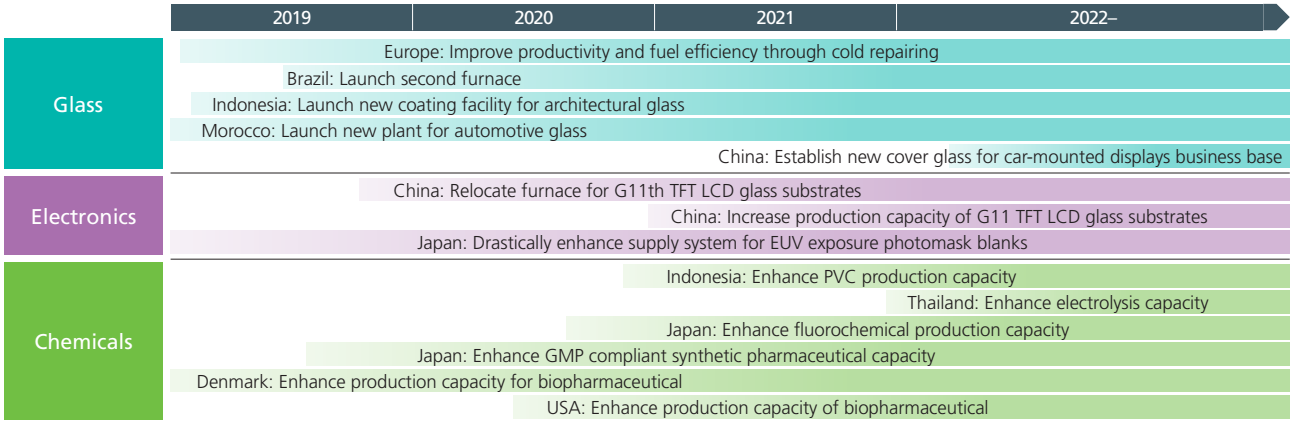
Continuing Aggressive Growth Investment from Both Medium-term and Long-term Perspectives

Recently, the AGC Group has made strategic investments in both its Core Businesses and Strategic Businesses. We established a new automotive glass plant in Morocco and a second float glass plant in Brazil, relocated a glass substrate furnace for 11th generation TFT liquid crystal displays in China, significantly expanded our system for supplying EUV exposure photomask blanks in Japan, acquired a printed circuit board materials business from US companies and globally expanded the life science business. The effects of some of these investments have been delayed due to market condition shifts and other factors, but we expect to generate profit from 2020 to 2022. Due to aggressive investments in Strategic Businesses, in 2025 we're aiming for these businesses to contribute 40% of total earnings.

From a long-term perspective, however, it is also important to invest in growth with an eye on the more distant future. Many of our currently growing businesses required 10 or 15 years to reach this point from the preparatory stages. It is necessary to take a longer-term perspective regarding investments for growth, in parallel with an investment strategy that is in line with the medium-term management plan. Since

Major investment plans and timing of profit generation

Investment effect generating from 2020, and gaining momentum from 2021



our industry business environment is changing more rapidly than ever before, we recognize that it is also necessary to "plant seeds outside the company" through aggressive M&As, as we have done in the life science business, rather than focusing solely on in-house development. While maintaining a D/E ratio of 0.5 or less, we will continue strategic investment, including M&As.

Strengthening and Utilizing Non-financial Capital as a Brand That Enhances All of Society

AGC is currently working on the formulation of its next medium-term management plan, which will commence in 2021. The concept of sustainability is at the core of the plan. The idea of sustainability is to balance the development of the earth and society with the growth of the AGC Group. To this end, strengthening our non-financial capital is essential.

I believe the overall value of respective types of non-financial capital are apparent in a brand. We must successfully transfer our brand assets, including technology, equipment, human resources, customer relationships and community connections that we have been cultivated since the "Asahi Glass" era to our new "AGC" brand. To this end, the most important factor is our employee's sense of call to action. We will continue to build trust in the AGC brand by amalgamating the strengths of all AGC Group members. Concrete strategies and actions to this end will be detailed in the next medium-term management plan.

To realize sustainability, it is essential to tackle the social issues represented in the SDGs. Among these, reducing energy consumption and CO_2 emissions in the manufacturing process are extremely important issues, and we will take responsibility in this regard as an industry leader. We will allocate management resources in technological innovation, human resource development, capital investment and other areas that lead to reductions in energy consumption and CO_2 emissions and implement measures that consider the cost of carbon. We are aware of our responsibility as an industry leader to provide a stable supply of glass and chemicals essential to our world. While strengthening and utilizing non-financial capital, we will manage the company in a way that enhances all of society.

The CFO's Mission Is to Embody the CEO's Vision through Strategy Building and Resource Allocation

My role as CFO is to realize the management policy and vision of the CEO through strategy building and resource allocation. To achieve this, we will need to flexibly make decisions from a long-term perspective that consider optimization of the whole company. To help the company grow, we allocate resources for investment in human resource and R&D, as well as capital investment and M&A. At the same time, we know this implies taking a certain amount of risk. It will be necessary to devise a bolder strategy than ever before to achieve further growth. The question that remains, however, is whether we have the ability to execute it. To build a strong business portfolio, it may be necessary to make decisions based on a philosophy that differs from the commitments of each business division.

If we are to enhance our ability to execute strategy as a unified company, I recognize that steering discussions in these situations is an important role of the CFO. Moving forward, we will continue to meet our stakeholders' expectations by implementing our growth strategy, with a strong drive to achieve sustainability throughout the AGC Group's business activities.

With our finger on the pulse of social issues, we will continue to provide new value to our customers and society by investing in facilities, opportunities and human resources that drive innovation.

Yoshinori Hirai
Representative Director,
Executive Vice President, CTO

Innovation and Solving Social Issues Go Hand-in-hand

In recent years, the sustainability of the Earth and society has become a pressing global issue, and SDGs and ESG have been established as new criteria for corporate evaluation. At AGC, we focus on resolving social issues by developing materials and solutions that contribute to preserving the global environment and ensure safe and secure lives for all, while reducing the environmental burden incurred at our business sites worldwide.

Looking back on the history of industrial development, industry has always been associated with the social issues of each era, and companies have worked hard to innovate and develop technologies that help solve them. As evidenced by its growth and development since 1907, AGC is no exception. Today, more than 110 years since our founding, we continue to work with our customers to create technologies and businesses that contribute to resolving social issues.

In line with this tradition and in anticipation of long-term social and market changes, our long-term management strategy, Vision 2025 (announced in 2016), defines our core businesses as "a solid earnings base" and our strategic businesses as "a growth engine that drives earnings expansion." We positioned the period leading up to 2020 as a "base building" period for realizing our vision, and to this end we've been focusing on strategic business investment and R&D.

A Solid Foundation for Strategic Business Expansion

In our core businesses of glass, electronics, chemicals and ceramics, we are working to improve our products and reduce costs while also selecting regions and markets where we can be market leaders and build a stable long-term earnings base. In our strategic businesses that focus on growth markets including mobility, electronics and life sciences, we are making aggressive investments and aiming for a 40% profit contribution ratio in 2025.

We are already making progress towards this goal. In the electronics field, we are expanding our supply of optical components for smartphones and semiconductor process components for increasingly sought-after EUV, in addition to high-speed information communication components like copper-clad laminate (CCL) substrates and ultra-low-loss materials. We are steadily building a business structure for the coming ICT/IoT era that will be driven by the spread of 5G networks, including the development of glass materials for augmented reality (AR) and mixed reality (MR).

In the growing life science field, we are strengthening global development of our bioscience business. Since 2016, we have acquired leading European and US CMO[*1]/CDMO[*2] and established new business bases in Japan, Europe and the US. Following these acquisitions, we have been aggressively strengthening our production infrastructure. In 2018, we integrated our bioscience

businesses from different sites and started a global integrated operation under the organizational structure of AGC Biologics. We also established a new bioscience R&D center in Seattle, Washington to accelerate the research and development of next-generation technologies.

In the mobility field, sales of AGC cover glass for car-mounted displays are steadily expanding. These products employ especially complex technologies such as optical thin coating, decorative printing and composite molding of complex curved surfaces. AGC's products in this field have been highly praised for their quality and performance and boast a high market share, mainly in European vehicles. They have also been adopted by major Japanese automakers. To further grow demand, we are preparing to open a third production base in Suzhou, China (mass production to begin in 2022) in addition to our two bases in Japan. In order to further accelerate the development of automotive glass antennas, which will be essential for autonomous driving in the 5G era, we have installed anechoic chamber facilities in Japan, Europe and the US and expanded our global research and development infrastructure.

*1 CMO (Contract Manufacturing Organization): Contract Manufacturing Organization for pharmaceuticals

*2 CDMO (Contract Development and Manufacturing Organization): Contract Development and Manufacturing Organization for pharmaceuticals

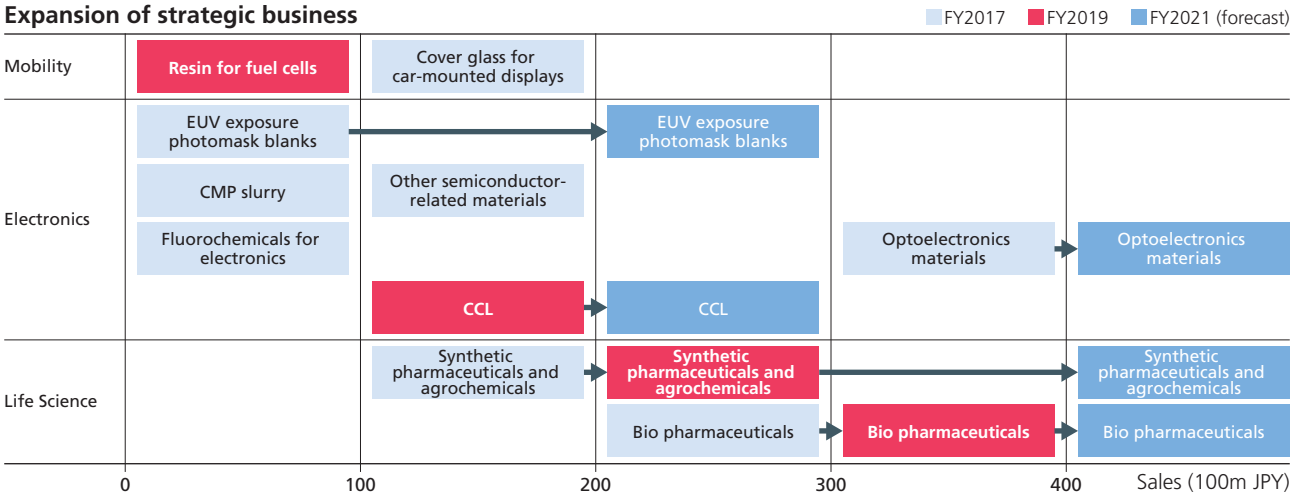
Fostering Fruitful Innovation from a Long-term Perspective

At AGC, in addition to short- and medium-term product development and commercialization, we conduct research and development of new materials from a long-term perspective. It is not uncommon for 10, 20 or even 30 years to pass from the start of basic research on a new material to its practical application. For this reason, we are bolstering the stock of our "technology cabinet," allowing us to continue presenting ideas for material solutions required by customers in any industry. To this end, we allocate R&D resources to different strategically selected themes by back-casting from long-term macro trends in society and technology.

For example, in the life science field, we expect that the market for gene therapy and regenerative medicine will expand significantly in the future, and we are promoting R&D to grow this area into a pillar of our business from 2030 and beyond. In the mobility field, we expect that within the next 10 years commercial autonomous driving vehicles will be launched through a 5G network-enabled transportation infrastructure, and our glass antennas will be key devices at this time.

At AGC, we have formulated "Technology Outlook," a medium- to long-term roadmap for research and development, with a view to providing value to a variety of social issues in light of the above-mentioned

Expansion of strategic business



macro trends. Medium- and long-term R&D in an uncertain era always requires a clear awareness of timelines and potential value that can be provided.

Reforming Manufacturing and Tackling Climate Change

As the problem of climate change worsens, it will be necessary to change the methods of manufacturing itself. The keys to this puzzle will be digital technology and manufacturing process innovation. For example, the glass melting process requires a large amount of thermal energy. In the past, operations at manufacturing sites were managed based on individual experience, but today we are utilizing AI to promote energy efficiency through big data related to our operations. As a long-term research and development theme, we are also working on the development of a glass melting process that uses the smallest amount of fossil fuels possible. Moreover, due to its ability to produce hydrogen using renewable energy when excess supply is available, the electrolysis process of chlor-alkali products has great potential to popularize renewable energy and contribute to a hydrogen-focused society, among other beneficial characteristics.

Of course, we are also working every day to further limit the environmental impact of our business activities by directly reducing the energy used in our manufacturing processes and other means. Many of our glass melting facilities have already switched from oil to natural gas, which has a relatively lower environmental impact.

The production of glass and chemicals consumes a vast amount of energy. For this reason, we have been urgently working on developing technology to improve energy efficiency and reduce CO_2 emissions. The mission of AGC's R&D department is to turn the current atmosphere of impending environmental crisis into a positive impetus, while retaining large-scale aspirations that can be linked to the next generation.

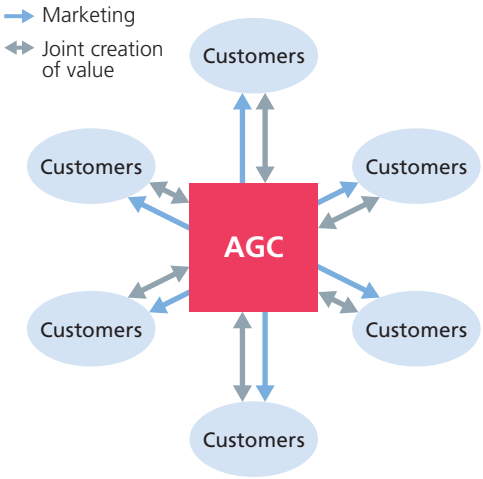
Promoting Proprietary Open and Closed Strategies

We are actively developing open innovation as a mechanism to accelerate our R&D efforts through two different strategies.

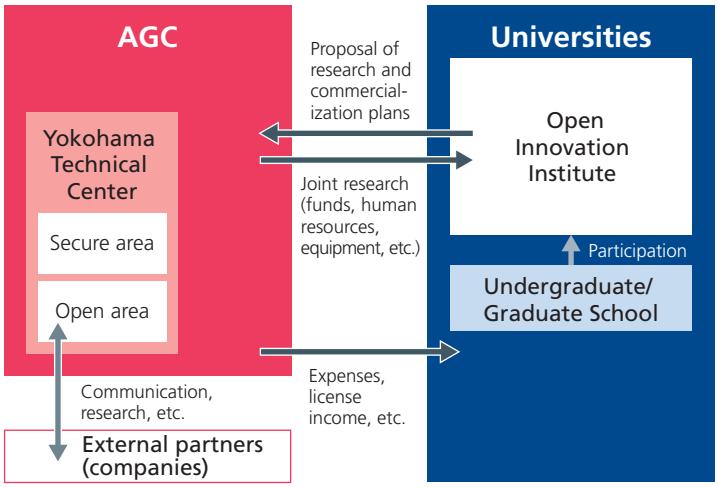
The first strategy focuses on joint development with leading domestic and overseas manufacturers that are our customers. It may seem unusual to characterize this as open innovation, but we have always created new value through active marketing and joint creation with the leading players of each era. AGC's strengths include the strong relationships it has with its customers, which have fostered a foundation for value creation that the Group will continue to emphasize moving forward.

AGC's open innovation

1. Joint development with leading domestic and overseas manufacturers (customers)



2. Strategic collaboration with companies, universities and research institutions



The second strategy further strengthens and expands focused collaboration with companies, universities and research institutions. For example, in the case of collaboration between industry and academia, the development of the Institute for Open Innovation* has made joint research possible in a closed competitive domain, in addition to the open collaborative domain active to date. We are currently promoting large-scale joint research with the University of Tokyo and Tokyo Institute of Technology through the Institute for Open Innovation.

To add impetus to these strategic collaborations, a new R&D facility titled AGC Yokohama Technical Center (scheduled to gradually begin operations in 2020) will feature a proprietary, closed secure area for the promotion of value creation, in addition to an open area for research, prototyping and communication with external partners, including our customers. In this regard, AGC continues to pursue strategies that are both open and closed, respectively.

* Institute for Open Innovation: An organization that supports full-scale joint research between companies and universities. In the past, collaborative research was limited to collaboration between corporate R&D departments and individual researchers at universities, but this institute is focused on sustainable large-scale collaborative research across multiple organizations.

The Key to Digital Transformation Is Human Development

The central themes of our joint research and development efforts are R&D for new materials, their applied technology and innovation in production technology. For example, we have recently been collaborating with companies and specialists outside the manufacturing industry in the areas of product design, psychology and environmental and urban planning. In addition to pursuing new innovations through collaborative creation with specialists in a wide range of fields, AGC also wants to be a company where human resources can hone their skillsets on the right side of the brain, including those used in design and art.

In addition, the promotion of digital transformation (DX) will be indispensable for us to come out on top in future global competition. The Smart AGC Promotion Division within the Corporate Planning General Division at AGC will be the driving

force in this regard. In addition to promoting smart factories by digitizing production processes, we will utilize the latest digital technologies including AI, IoT, big data analysis and AR/VR in transforming all of our business processes. To promote this change, we are focusing on human resource development through a "data scientist" training program that solves specific business problems through data science. Some companies hire similar human resources externally. However, because our employees already understand AGC's business and technology, in addition to having unique skillsets, we strive to develop internal resources who can apply a knowledge of data science in time-sensitive business scenarios.

In the coming era, in addition to human resources in business divisions that directly interact with customers and markets, researchers and manufacturing engineers will need to hone their awareness of changing social issues. When they do, they will be more capable of responding to issues at hand and independently defining new issues that can be solved to create value for society. Exchanging knowledge with customers and external researchers is indispensable to enhance these instincts and capabilities. The open innovation planned at the AGC Yokohama Technical Center will be important on our path to this goal. AGC will continue to provide new value to our customers and society by investing in facilities, opportunities and human resources that drive innovation in the materials industry.

AGC continues to develop its stable business portfolio as a highly-profitable leading global material and solution provider.

The AGC Group's long-term management strategy, Vision 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. The AGC Group will continue being a highly profitable, leading global material and solution provider.

Business Targets

Operating profit ..... 229.2 billion yen

ROE ..... over 10.0%

Strategic business contribution ratio 40%

D/E ..... 0.5 or less

AGC was selected for a Stanford Graduate School of Business case study

https://www.agc.com/en/news/detail/1200567_2814.html

AGC was chosen for a Stanford Graduate School of Business case study on its way to achieving Vision 2025, for its way of practicing "organizational ambidexterity" that generates the greatest possible benefit from existing core businesses while exploring business potential through new strategic businesses.

Strategy One Stabilizing core businesses earnings

In AGC's core businesses of architectural glass, automotive glass, displays and chemicals, a long-term stable earnings base will be established by investing in growth areas while precisely distributing resources based on our business portfolio. From a geographical perspective, we will identify "promising regions" where growth is expected over the medium to long term, and where we can demonstrate our strengths and execute business strategies. From a product perspective, each business will work on value-added products that are resistant to market fluctuation.

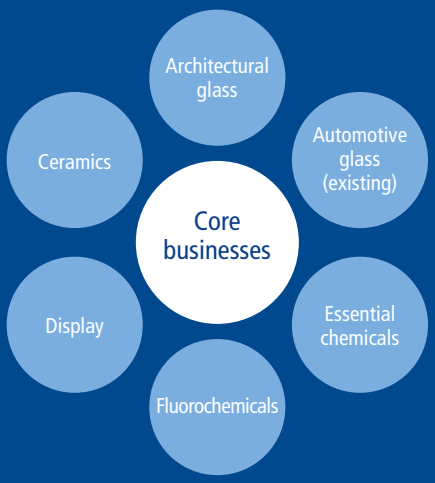
Strategy Two Expanding strategic businesses

Through AGC's strategic businesses, we are focusing on areas where we anticipate long-term market growth and innovation and the AGC Group's technologies and customer base can be leveraged to expand high value-added businesses, keeping in mind changes in the macro environment.

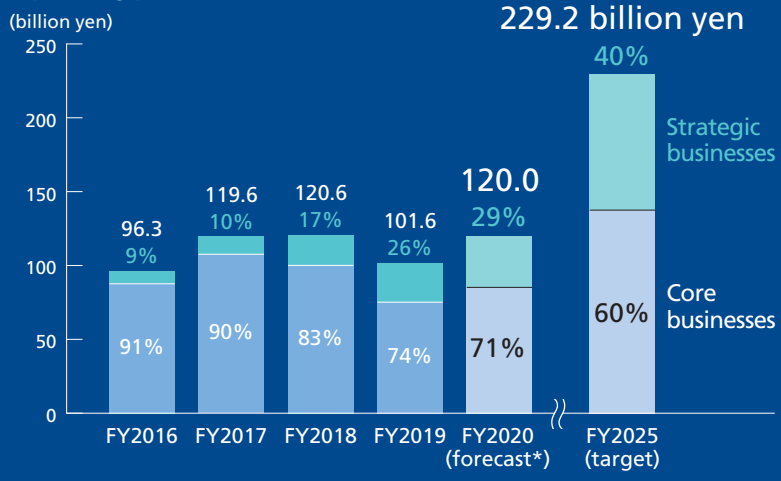
Specifically, in the three strategic business areas of mobility, electronics and life sciences, we are taking steps to increase demand for semiconductors, biopharmaceuticals and other products that present market opportunities, and carrying out bold M&A and capacity expansion. Through these measures, we are establishing businesses that will serve as growth engines for the AGC Group.

In 2016, the AGC Group announced its long-term management strategy, Vision 2025. This strategy, which seeks to shape AGC into its ideal form by 2025, is built on two pillars: core businesses that create a solid long-term earnings base, and strategic businesses that drive the growth of the entire Group. In this regard, AGC aims to build a strong business portfolio while precisely allocating management resources with an emphasis on asset efficiency. In the Group's medium-term management plan AGC plus-2020—formulated based on the strategies in Vision 2025—the three-year period from 2018 to 2020 is positioned as an opportunity to lay the foundation for realizing AGC's ideal form. With this in mind, the AGC Group is proactively investing in growth while maintaining sound financial health.

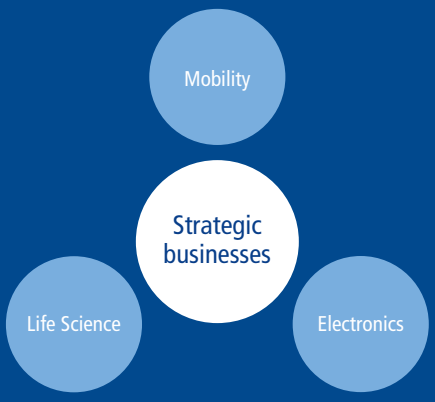
Establishing long-term, stable sources of earnings through the portfolio management



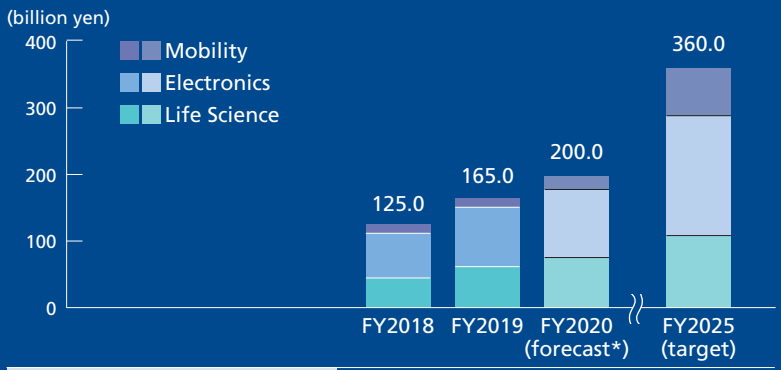
Profit contribution ratio for core businesses/strategic businesses (operating profit)



Establishing highly profitable businesses through expansion of high value-added businesses



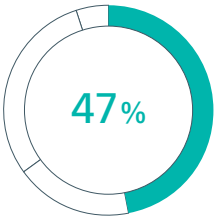
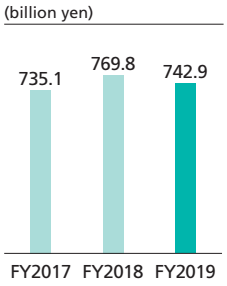
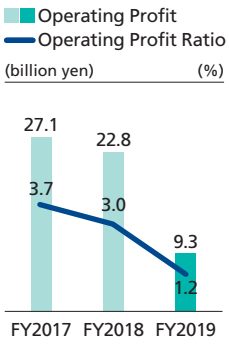
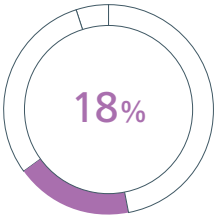
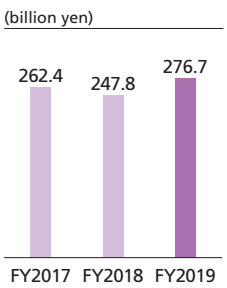
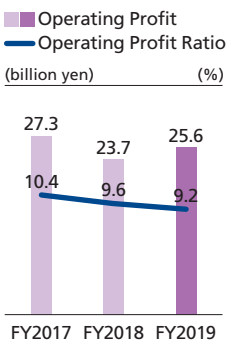
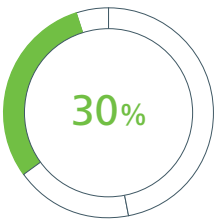
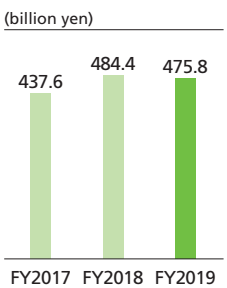
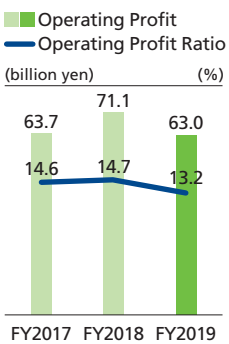
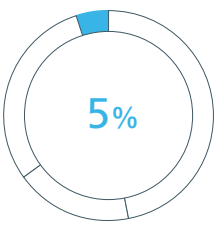
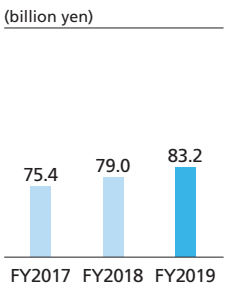
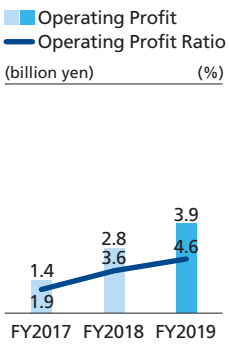
Trends in strategic businesses sales



	FY2018	FY2019	FY2020 (forecast*)	FY2025 (target)
Strategic business operating profit (billion yen)	21.0	26.5	35.0	90.0
Operating profit contribution ratio (vs. company operating profit)	17%	26%	29%	40%

* As of February 2020. Effects of the spread of coronavirus (COVID-19) have not been incorporated.

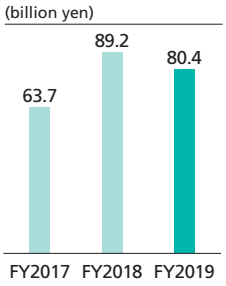
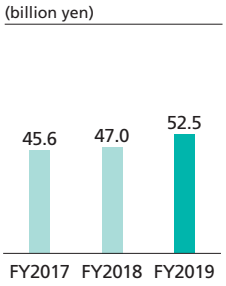
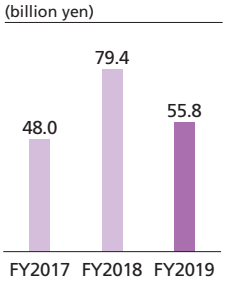
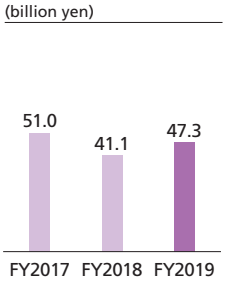
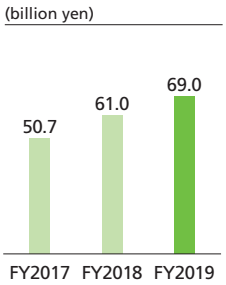
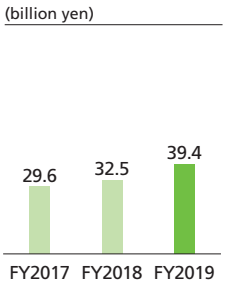
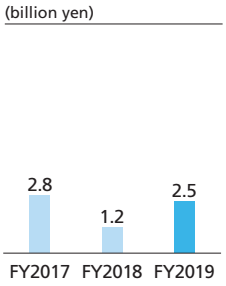
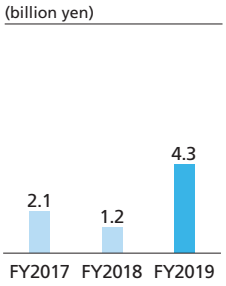
Overview by Segment

Business Segment	Sales Ratio	Net Sales	Operating Profit/ Operating Profit Ratio
Glass 			
Electronics 			
Chemicals 			
Ceramics/Other 			

* For the latest data on environment-related natural capital, please refer to the Sustainability Data Book 2020 scheduled to be issued in July 2020.

Manufactured Capital

Human Capital

Manufacturing Plants (as of December 31, 2019)	Capital Investment	Depreciation	Number of Employees (as of December 31, 2019)
46 locations Japan/Asia ····· 22 locations Europe ····· 15 locations The Americas ··· 8 locations Africa ····· 1 location			**33,459** Japan/Asia ····· 12,914 Europe ····· 16,049 The Americas ···· 4,496
22 locations Japan/Asia ····· 21 locations The Americas ···· 1 location			**11,063** Japan/Asia ····· 10,741 Europe ····· 32 The Americas ···· 290
26 locations Japan/Asia ····· 18 locations Europe ····· 5 locations The Americas ···· 3 locations			**7,502** Japan/Asia ····· 5,998 Europe ····· 1,046 The Americas ···· 458
5 locations Japan/Asia ····· 5 locations			**3,574** Japan/Asia ····· 3,544 Europe ····· 4 The Americas ···· 26

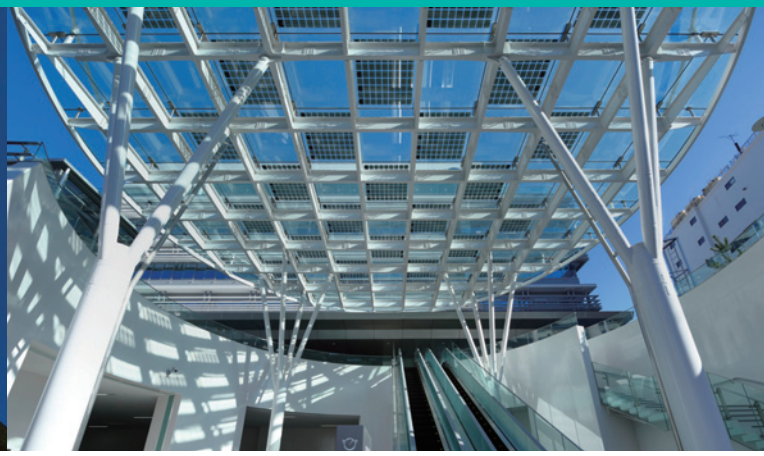
Glass Business

Architectural Glass Business

Providing diverse products that fulfill customers' needs across the globe, connecting people with their environment to inspire excitement through glass

Jean-François Heris
President of Building & Industrial Glass Company

Heat-reflective and heat-absorbing glass



Building glass integrated photovoltaic solar cell module

Float flat glass
Global No.1
* Production capacity/Our research
(Based on fiscal 2019 estimates by AGC)

Under the theme of "transparent glass sheets as materials evolving to functional building materials," working to reduce environmental burden through functional products

The AGC Group's Building and Industrial Glass Company (hereafter BIGC) is endeavoring to support environmental sustainability while maintaining strong corporate growth.

On the products side, BIGC delivers solutions to create the most energy-efficient buildings and homes possible. For every ton of CO_2 emitted in producing AGC glass, 10 tons of CO_2 are saved when the glass is installed.

The issue is even more challenging on the manufacturing side. BIGC must continue to develop technology that sustainably reduces CO_2 emissions in this extremely energy-intensive industry. As an industry leader, the company believes its emission rating is very competitive and it works tirelessly to meet the strict benchmarks it sets every year.

Business Activities

AGC succeeded in the production of flat glass for the first in Japan in 1909, and it maintains the top market share for this product worldwide today. Originally, the AGC Group developed the architectural glass business as a stable profit foundation, but today, new business development focused on high-performance glass products and products supporting the environment are at the forefront.

Examples include float flat glass for houses and buildings and fabricated glass for architectural use, where BIGC has developed high-performance glass including insulating/shielding glass and laminated glass that excels in crime prevention applications. BIGC also responds flexibly to customer needs depending on geographic region, under the theme of "transparent glass sheets as materials evolving to functional building materials," to reduce stress on the environment.

Business Strategy

As BIGC aims for balanced business expansion that adds value to society, it has implemented multiple business strategies:

- Concentrating management resources in growth areas and areas with competitive advantages (including investment in South America and withdrawal from the Philippines)
- Expanding sales of high value-added products that are more resistant to market fluctuations (multi-layered glass, special film-coated glass, etc.)
- Maintaining optimal operations while focusing on a balance between supply and demand
- Improving efficiency by promoting digitization across the board, from manufacturing to customer service
- Contributing the realization of a low-energy consumption society through advanced glass products

The global architectural glass market is expected to become increasingly firm in the long term leading up to 2025, presenting BIGC with great opportunity accompanied by healthy competition. The keyword for existing businesses is resiliency. To achieve it, BIGC will increase revenue streams through new products, providing added value to society and guaranteeing efficient asset allocation through closer relationships with end customers.

Our Challenges

BIGC faced adverse effects of poor market conditions in Europe during 2019. However, a number of products were successfully developed during this time, including Halio, a new dynamic window that automatically adjusts opacity according to light exposure, directly increasing your level of comfort in an energy-efficient way, and a new vacuum-insulated window that greatly mitigates the effect of global warming.

Due to the effects of the spread of coronavirus (COVID-19) in early 2020, our collective future is currently uncertain. However, against this backdrop, BIGC has established three missions for the future:

- To offer tailor-made glass solutions in each geographical area
- To lead the world in creating comfortable, carbon-free buildings
- To deliver sophisticated glass systems that make daily life more comfortable

The people supporting the AGC Group and BIGC are key to the success of these missions. When the individuals involved are inspired and motivated in a safe, organized and mindful environment, there is no limit to the future success of the entire AGC Group, its customers and stakeholders worldwide.

Dynamic opacity-adjusting glass, Halio

Developing a glass antenna that uses building windows as base stations

In areas with high communication volume, it is necessary to install antennas to support the widespread use of smartphones and other digital devices. However, there is a limit to how many can be installed on building rooftops and walls, and maintaining an aesthetically pleasing cityscape is also an issue.

Alongside NTT Docomo, Inc., AGC has developed glass that functions as an antenna. Since October 2019, the glass antenna has been installed in a building in Tokyo used for 4G (LTE) mobile phone service. AGC plans to develop a 5G compatible glass antenna in 2020, continuing to support seamless communications infrastructure.

Glass antenna

Glass Business

Automotive Glass Business

AGC provides high-performance automotive glass across the globe, creating safe and comfortable cars and high value-added products to realize a next-generation mobility society.

Yoshinori Kobayashi
President of
Automotive Company

Cover glass for car-mounted displays

Automotive laminated glass/tempered glass

Automotive glass
Top Share Worldwide
* Sales base/Our research
(Based on fiscal 2019 estimates by AGC)

Enhancing development of high value-added products for a sustainable, safe and comfortable mobility society

In 1956, the AGC Group started manufacturing automotive glass in response to increased demand for automobiles in Japan spurred by motorization. Since then, we have worked with automobile manufacturers and their suppliers to develop glass products with lower weight for energy savings, enhanced strength for safety improvement and anti-fogging and UV protection functions for comfort. The AGC Group responds to great demand for automotive glass around the world, including emerging countries, as one of its Core Businesses. The Group also focuses on developing and proposing high value-added products in the Strategic Business area of mobility.

Business Activities

The AGC Group has established technological development bases in Japan, Europe and the United States in response to automobile manufacturers' global expansion. We have secured a top-level global share in this area by providing high-quality products, services and solutions worldwide. In the Core Business of automotive window glass, we provide glass that reduces ultraviolet and infrared rays, water-repellent door glass that ensures visibility even in rainy weather, light controlling glass that can alter the amount of transmitted light and glass antennas that make clear communications possible. In the Strategic Business area of mobility, we lead the world in advanced coating and glass processing technology, mainly for cover glass for car-mounted displays, with an aim to continue growing sales in the future.

Business Strategy

The automotive industry is currently undergoing a major technological revolution known as CASE (Connected, Autonomous, Shared, Electric). Preventive safety devices that feature automatic braking and automatic steering devices that use

radar and cameras have already been brought to market. These products help improve the safety and comfort of automobiles, and are becoming increasingly popular and indispensable for realizing a safer mobility society. The AGC Group will leverage its comprehensive ALL-AGC strengths by consolidating core Group technologies, including in the areas of high-performance glass materials, electronics and chemicals.

In the connected technology area, AGC contributes materials and product groups that support automobile evolution. For example, we have created a glass antenna compatible with 5G communications, glass with optimal transparency in the wavelength range used for camera sensors and autonomous driving sensors, and glass for electric vehicles (EVs) with reduced weight, as well as anti-fogging and sound insulating qualities.

In addition, we have positioned cover glass for car-mounted displays as a key business, given the increased importance of vehicle interiors in CASE. With the evolution of IT in automobiles, customers require larger touch panel displays with complicated shapes and high functionality. Further, the need for cover glass for car-mounted displays that ensures improved visibility and operability while guaranteeing the level of safety required for automobile interiors continues to increase. Accordingly, AGC has developed the first cover glass for car-mounted displays that has a complex 3D shape, establishing a strong position as top player in the industry.

Current Status and Outlook

Our outlook remains uncertain due to a decline in global automobile production in 2018–2019 and the particularly serious impact of the spread of coronavirus (COVID-19) on the automobile industry beginning early 2020. However, with the progress of CASE and the emergence of a new service called MaaS (Mobility as a Service), the automobile industry will undergo a major transformation into a mobility industry centered on sustainability, including mobile services. Against this backdrop, the AGC Group will strive to develop higher-performance automotive glass and expand our supply of cover glass for car-mounted displays in line with demand, a main focus of our Strategic Business area of mobility. Regarding AGC's production sites, we are proceeding with plans to establish a new site in China for cover glass for car-mounted displays, aiming to launch mass production in 2022. Meanwhile, in the existing automotive glass business, the AGC Group will utilize its Morocco plant, the AGC Group's first business site on the African continent that commenced commercial operations in 2019. We will continue to implement reforms to improve productivity at our 23 global manufacturing sites, working to both recover and strengthen profitability.

Cover glass for car-mounted displays (Installed in the new Lexus RX, available since 2019)

Automotive glass antenna development system established at three global locations

In March 2019, AGC installed a new anechoic chamber in Belgium to strengthen the Group's development system for automotive glass antennas. In the advanced IoT era, automobiles will have many different communication functions as mobile spaces capable of connecting with everything outside. AGC's glass antennas are in increasing demand as key devices that enable high-speed communications (including 5G) without compromising vehicle design.

Taking advantage of our global glass antenna development system, AGC supports its customers in Japan, Europe and the United States as we pursue advanced automobile development contributing to a safe and comfortable mobility society.

Anechoic chamber (illustration)

Electronics Business

AGC is pursuing technologies and products that support innovation in the evolving world of electronics.

Kenzo Moriyama
President of Electronics Company

Cover glass for electronic devices

Glass substrates for TFT-LCD glass

Enhancing social prosperity through materials and innovative products

Providing illumination; operating machines and facilitating mobility with motors; storing documents and audiovisual data; and displaying stored contents on a display—all of these electronic technologies are essential to our daily lives. AGC's strategic electronics business is supporting the continued proliferation of electronics in society. Based on its materials knowledge developed in the glass, chemicals and ceramics businesses that make advanced technologies including forming, processing and surface treatment possible, AGC continues to develop its display business. Focus products include glass substrates for LCD displays—a core component in flat panel displays (FPDs)—and specialty glass for display applications supporting the evolution of mobile terminals. AGC is also developing its electronic materials business, which handles materials for the semiconductor process leading the evolution of electronics, and optoelectronic materials that enhance the functionality of mobile terminals. Through innovative products and material development, we are contributing to the enhancement of industry and people's lives. In addition to saving energy and resources, reducing CO_2 emissions by boosting production process efficiency and improving functionality and safety, AGC also addresses life cycle-related issues. These include product development that keeps a close eye on energy consumption and CO_2 emissions during product use. AGC continues to develop technologies for the realization of a sustainable society.

Display Business

TFT LCD/organic EL glass substrates

Global No.2

* AGC estimate on FY2019 sales basis

Business Activities

The display business is centered on glass substrates for liquid crystals used in applications including televisions, which have larger screens year by year. We develop and provide glass substrates for organic LEDs (OLEDs), specialty glass for displays in mobile terminals, glass substrates for solar applications and fabricated glass for industrial use. Alongside our customers in the field of glass substrates for LCDs—a mainstay of our business—we are looking to achieve thinner, larger screens with higher definition, leveraging our advanced production technologies (including float process technology). We currently have the second largest global market share in this area. In addition, our "thin, light and strong" specialty glass for displays is used in smartphones and other devices worldwide.

Business Strategy

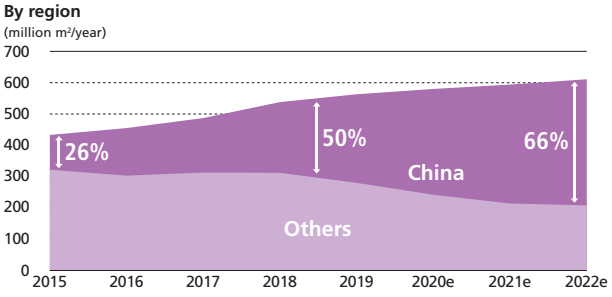
Screens are getting larger in the display market, and the demand for glass has increased by multiple percentage points over the past few years. Against this backdrop, AGC continues to work closely with manufacturers in locations including China (high global market share for LCD TVs) while focusing on developing glass composition for next-generation display devices and improving production technology. One of the fruits of our labors is the glass substrate we created for 11th-generation TFT-LCD Glass Substrates. The AGC Group opened a manufacturing base in China and started operation of a dedicated glass substrate manufacturing furnace. Moving forward, we will continue to strengthen our system for long-term stable cash generation by continuously improving capacity to supply 11th-generation glass substrates. The market for specialty glass for display applications will not grow significantly on a unit basis due to the proliferation of smartphones. However, there is demand for highly functional glass products that are both strong and scratch resistant, as well as those compatible with next-generation 5G mobile communications networks. AGC is supporting global demand for highly functional specialty display glass products through increased technological development capacity.

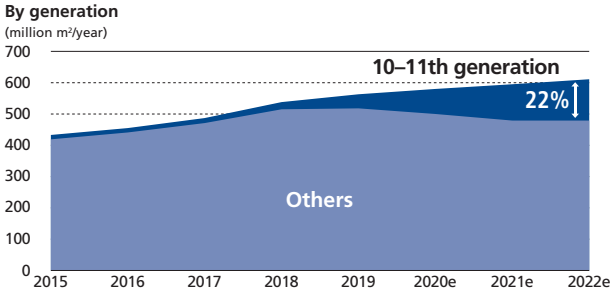
Current Status and Outlook

In 2021, to match our customers' expansion in technological capacity, we will continue to invest in production capacity increase for 11th-generation TFT-LCD Glass Substrates. From 2022 onwards, this will generate a stable cash flow and support the growth of our electronics business. Regarding production technology, which is one of the AGC Group's strengths, we will continue to improve operational excellence, recognizing there is still room for energy saving and productivity improvement in the area of TFT-LCD glass substrates.

Demand trends for 11th-generation LCD Glass Substrates

Responding to increasing demand for 11th-generation TFT-LCD Glass Substrates in China





Source: AGC estimation

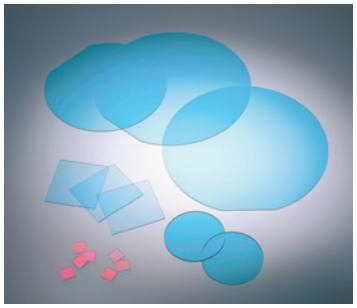
Electronic Materials Business

Business Activities

We are currently expanding our electronics materials business, focusing on synthetic fused silica glass (a product AGC has high-level global market share for), EUV exposure photomask blanks, high-purity SiC jigs, semiconductor process materials such as CMP slurries and parts for optoelectronics, including glass filters that absorb infrared ray in smartphones and digital cameras.

Business Strategy

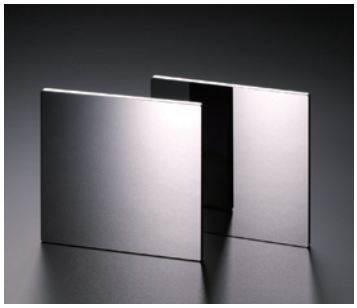
In the field of semiconductor processing materials, demand for EUV exposure photomask blanks has been increasing rapidly in recent years. These blanks support high-speed calculation processing, great amounts of data and a high level of integration in semiconductor chips, all of which are indispensable for highly functional and compact electronic devices. To achieve higher speeds, greater capacity and closer integration, it is necessary to further miniaturize semiconductor chip circuits, but there are limitations to conventional manufacturing processes. AGC has integrated glass materials technology, glass processing technology and coating technology to develop EUV exposure photomask blanks that can further miniaturize circuits. As the world's only manufacturer of the photomask blanks that can handle every aspect from glass materials to coating, we have established a mass production system to meet growing market demand. Meanwhile, in the field of optoelectronic components, demand is steadily growing for glass filters that absorb infrared ray in cameras, as these are compatible with highly versatile dual and triple compound camera lenses in smartphones. Moving forward, AGC will continue to provide products and technological development in line with electronic device evolution.



Glass filters that absorb infrared light in cameras

Current Status and Outlook

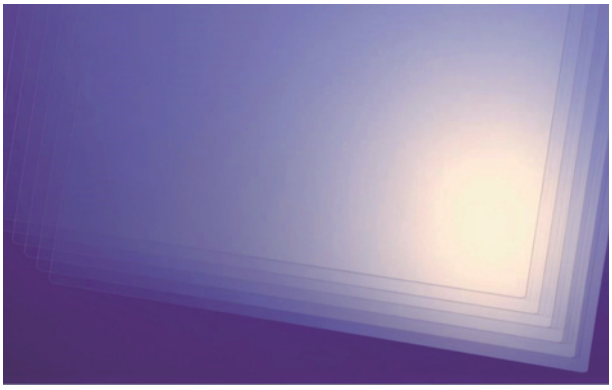
With the advent of the IoT and 5G, electronic devices will continue to become more sophisticated and compact. AGC will strengthen its mass production system for EUV exposure photomask blanks and continue aggressive investment in the field, with the aim of achieving a global market share of 50%. We also aim to further improve the functions of optoelectronic components with our global customers. Above all, demand is expected to grow for glass substrates used in augmented reality (AR) and mixed reality (MR) eyewear devices, the next wave of digital devices after smartphones.



EUV exposure photomask blanks

AGC develops glass substrates for high-definition and large-screen displays

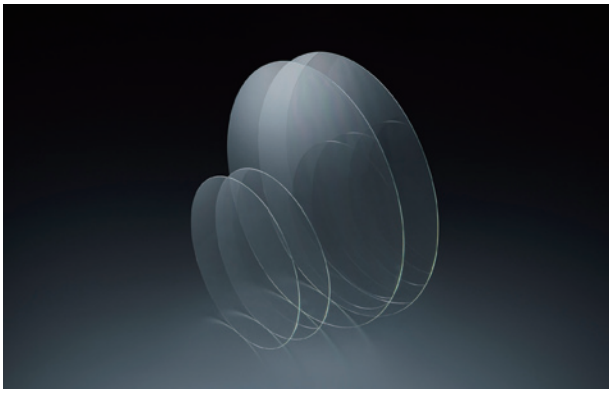
AGC has developed a large glass substrate called AN Rezosta™ for high-definition and large-screen displays. There is increasing adoption of large displays that support 8K images and medium-sized displays that support high-definition and high-speed screen drivers. However, when manufacturing these display panels, suppressing warping of glass substrates, or shrinkage that can occur during heat treatment is a major challenge. AN Rezosta™ solves this problem to make large screen, ultra-high definition and high-speed screen drivers possible, and will contribute to the advancement of the display industry by creating richer, more detailed images.



AN Rezosta™

AGC commences sales of glass substrates for AR/MR glasses

In recent years, eyewear devices that support augmented reality (AR) and mixed reality (MR), which display virtual visual information over existing physical landscapes, are attracting attention. AGC has been providing glass substrates for semiconductor packages, as well as optical and electronic components for these devices, which are known as AR/MR glasses. We have also developed a new glass substrate with a high refractive index and high transmission, and established a mass production system in Japan. Going forward, we will actively promote use of this substrate not only in AR/MR glasses but also for other markets and customers, including the automotive market. In these ways, AGC continues to contribute to the development of society.



Glass substrate for AR/MR

Chemicals Business

Under the in-house company vision of "Chemistry for a Blue Planet," AGC provides chemical solutions that contribute to the creation of a sustainable society.

Masao Nemoto
President of Chemicals Company

Fluoropolymer films for football stadiums

Contracting for development and manufacture of pharmaceutical and agrochemical substances and intermediates

Pursuing safety, comfort and a better environment, supporting the sustainable development of the Earth and humankind

Humankind has harnessed the power of chemistry to create materials and products that enrich people's lives and enhance their comfort. However, it cannot be denied that this comes at a cost: the burden on the global environment and society due to greenhouse gas emissions and an increase in waste. In the 21st century, the global environment has been deteriorating due to climate change. In light of this, in 2008 the Chemicals Company formulated its corporate vision, "Chemistry for a Blue Planet." This vision represents the Chemicals Company goal to achieve sustainable development for the Earth and humankind, by reducing the burden on the global environment through the power of chemistry and further improving human society, providing safety, comfort and security.

Under this vision, the Chemicals Company is committed to developing and manufacturing chemicals that are essential to modern society. For example, in the caustic soda manufacturing process that is part of the chlor-alkali and urethane businesses, we developed a more environmentally friendly method in the 1970s using ion exchange membranes. This method is now used at all of our plants, and through sales of the membranes, we are contributing to a worldwide reduction in environmental impact. In the fluoroproducts and specialty businesses, we are focusing on developing and providing fluorine-based refrigerants and solvents that also have reduced environmental impact. The life sciences business provides global services from process development and contract manufacturing of biopharmaceuticals (including other pharmaceutical and agrochemical intermediates and active ingredients) and drug discovery under a three-tiered global system based in Japan, Europe and the United States. Through this business, the AGC Group helps people realize safe and healthy lives.

At the Chemicals Company, we will strive to further reduce the burden on the global environment and aim for sustainable growth by providing a diverse lineup of products and services that contribute to people's safety, security and comfort.

Chlor & Alkali, Urethanes Business

Business Activities

AGC provides versatile basic chemicals such as caustic soda and polyvinyl chloride (PVC) that are essential to various industries. The Group has production bases in Japan and Southeast Asia, securing the top market share in Southeast Asia at over 50%, based on production volume. We also manufacture and sell urethane products that are used to make items essential for a comfortable life, such as insulating materials and automobile seats.

Business Strategy

In the chlor-alkali and urethane businesses, we are promoting differentiation through a regional concentration strategy. In Japan, we have earmarked the East Japan region, where the AGC Group's main plant is located, as a priority market. The Group is always looking to raise its competitiveness by streamlining transportation costs and improving business efficiency. Overseas, we have consolidated manufacturing bases in Southeast Asia, where high economic growth is expected in the medium to long term. We currently have manufacturing bases in Indonesia, Thailand and Vietnam, and are working to increase our production capacity to meet strong demand in ASEAN.

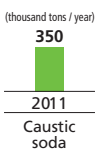
Current Status and Outlook

In the domestic businesses, which continue to face difficult market conditions, we have implemented far-reaching structural reforms. By 2012, we had consolidated our manufacturing bases in the East Japan region, including the Chiba Plant, Kashima Plant and Hokkaido Soda Co., Ltd. At the same time, in the area of marketing, we have shifted to a regional sales system centered on East Japan. As a result, although our domestic sales have declined, profitability has improved due to factors such as increased production efficiency and reduced transportation and fixed costs. The Group's competitiveness has also improved. We will continue to strive for a stable supply of products while securing profits through this regional concentration strategy.

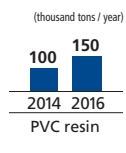
In Southeast Asia, we have been expanding capacity by positioning the entire ASEAN region as a target for our regional concentration strategy, following its successful implementation in Japan. In response to growth in the region, we increased our caustic soda and PVC production capacity in 2016, and commenced private power plant operations in 2019. We are currently working to further increase PVC production capacity toward the start of operations in the second quarter of 2021. In Vietnam, 2016 marked an increase in the production capacity of the PVC manufacturing company we acquired in 2014. In Thailand, we are currently preparing to increase the production capacity of Vinythai Public Company Limited (Vinythai), a caustic soda/PVC manufacturing and sales company acquired in 2017. By leveraging these production systems, we will further strengthen our position as the No. 1 supplier to the Southeast Asian market.

Trends in operational capacity increase in Southeast Asia

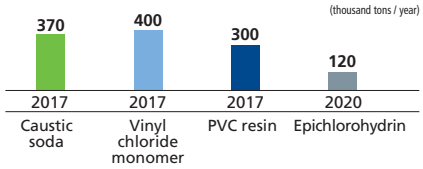
AGC Chemicals Thailand Co., Ltd.
Established in 1964



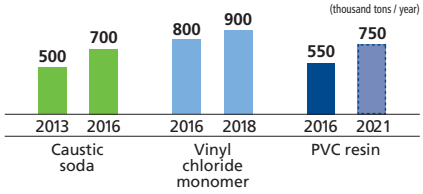
AGC Chemicals Vietnam Co., Ltd.
Acquired in 2014



Vinythai Public Co., Ltd.
Acquired in 2017



P.T. Asahimas Chemical
Established in 1986



* Years indicated denote when operations commenced with increased operational investment.

Fluorochemicals, Specialty Chemicals Business

Fluoropolymer (Fluon™ ETFE)

Global No.1

(Based on fiscal 2019 estimates by AGC)

Business Activities

The AGC Group has a wide range of highly functional products, including fluoropolymer Fluon™ ETFE (top global share) and fluoropolymers, fluoroelastomers, fluoropolymer films, fluoropolymer resins for coatings, fluorinated gases/solvents, fluorinated water and oil repellents, products with separating functions, fluorinated antifouling and functional coating agents valued for their resistance to heat, chemicals and climate. Applications for these products span industrial fields ranging from automobiles and aircraft to semiconductors, construction, electronics and air conditioning equipment. These materials and products are indispensable for the realization of safe and comfortable social infrastructure in urban and residential spaces.

Business Strategy

In the fluorochemicals and specialty chemicals businesses, the AGC Group develops a diverse range of highly functional products by utilizing proprietary organic synthesis technology—a strength of the AGC Group. We also pursue a "global niche top strategy" that clearly narrows down the target and secures a high market share in selected fields. To date, we have focused on areas including aerospace, transportation equipment and semiconductors that require a high level of functionality and strict quality control. By responding to these cutting-edge customer needs with technological capacity, we aim to improve the Group's competitiveness and profitability. Fluorine-based materials are drawing attention for next-generation high-speed communications equipment such as 5G, which is expected to become common place in the future. In this area, the Group will focus on developing high-performance products that meet customer expectations.

Current Status and Outlook

Demand for fluorine materials is strong in many fields, and stable business growth is expected moving forward. Since all of the Group's manufacturing facilities have already been operating close to full capacity, we are currently working to increase production capacity at the Chiba and Kashima plants, aiming to start these bolstered operations as soon as possible. In the fluorochemicals and specialty chemicals business, we are making capital investments totaling 70 billion yen, including the aforementioned investments in the Chiba and Kashima plants, with plans to sequentially contribute to earnings starting in 2021.

The Next-generation eco-friendly refrigerant/solvent series "AMOLEA®"

AGC's AMOLEA® series of next-generation eco-friendly fluorinated solvent and refrigerants reduces environmental load, with lower ozone depletion and global warming potential compared to conventional products, while maintaining performance. Mainly in Europe and the United States, AMOLEA®1234yf has been adopted as an air conditioning refrigerant for automobiles since it went on sale in 2015. In 2017, AMOLEA®1224yd was the first product made by a Japanese company to obtain approval from the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) as a new chemical substance. It is being currently adopted for various air conditioners and refrigeration equipment. Moreover, the solvent AMOLEA®AS-300 is used for a wide range of applications, including cleaning precision and optical parts and for diluting silicone oil, due to its excellent safety, cleaning ability and low environmental impact.

AMOLEA®1224yd

Life Science Business

Business Activities

We are globally expanding our CDMO business, which covers everything from process development and contract manufacturing of pharmaceutical and agrochemical intermediates and active ingredients to drug discovery. We are focusing not only on synthetic drug CDMOs based on organic synthetic technology cultivated in the fluorine business, but also on CDMOs for biopharmaceuticals, which have seen increased global demand in recent years. With business bases in Japan, Europe and the United States, we will contribute to the health, security and comfort of people around the world through high-quality services that meet the needs of customers in each market.

Business Strategy

The global CDMO market is expected to continue growing in the medium to long term against a backdrop of outsourcing of pharmaceutical manufacturing by pharmaceutical companies. In this market environment, AGC will grow its CDMO business on a global scale by leveraging its track record and reliability in supplying numerous commercial drugs to markets in Japan, Europe and the United States. In the field of biopharmaceuticals, we are focused on building a development and production system that can flexibly meet customer needs ahead of our competition, including the introduction of highly efficient and versatile single-use bioreactors for mammalian cell cultures. Going forward, we will focus on the entire process from drug discovery to commercial production of orphan drugs for rare diseases as a priority target, and will also seek to enter new fields including gene therapy, regenerative medicine and next-generation antibodies.

Current Status and Outlook

In 2016, we acquired the German company Biomeva, and in 2017 we acquired CMC Biologics—which has bases in the US and Europe—to build a biopharmaceutical CDMO business structure that spans Japan, Europe and the United States. The company was renamed AGC Biologics in 2018 to standardize our global CDMO business structure. Headquartered in Seattle, USA, the company provides high-quality services to customers in their respective regions under unified quality standards and business policies. In response to the growth of the biopharmaceutical market, we are increasing production capacity on a global scale in locations including Japan, the United States, Germany and Denmark. Meanwhile, in the world of synthetic pharmaceuticals, in 2019 we increased our manufacturing capacity of intermediates and active ingredients at our Chiba Plant 10-fold, and acquired the Spanish synthetic pharmaceutical active ingredient manufacturing company Malgrat Pharma Chemicals from Boehringer Ingelheim to expand our operations in Europe.

Expanding the small molecule pharmaceutical CDMO business in Europe from our base at AGC Pharma Chemicals Europe

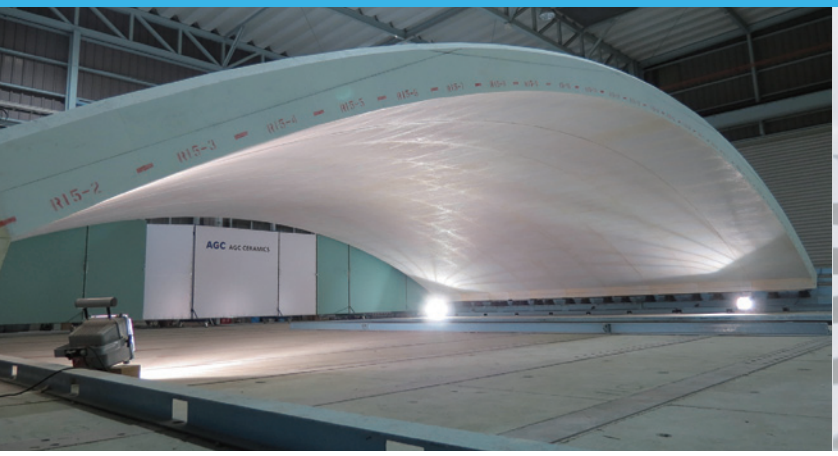
In March 2019, AGC acquired Malgrat Pharma Chemicals, a small molecule pharmaceutical manufacturing and sales company based in Catalonia, Spain, from Boehringer Ingelheim. In October of the same year, the company was renamed as AGC Pharma Chemicals Europe (hereinafter APCE). APCE has a long history and an excellent track record of manufacturing substances for small molecule pharmaceuticals and supports a wide range of production in developmental and commercial drugs. Accordingly, the Group has achieved integrated production from small molecule pharmaceutical intermediates to drug substances in Europe. By so doing, we have further strengthened our presence in the European market, where demand is expected to grow significantly. We will continue to bolster our capacity to further strengthen our global synthetic drug CDMO business structure.

AGC Pharma Chemicals Europe

Ceramics Business

AGC Ceramics provides refractories for high-temperature equipment as well as functional products that utilize inorganic materials, based on the philosophy of “contributing to energy and resource savings alongside highly efficient operations in ceramic technology to protect the global environment.”

Masaru Ota
President and CEO
AGC Ceramics Co., Ltd.



Fused cast refractories for glass melting furnace crowns

Monolithic refractories for industrial furnaces

Focusing on refractories as core business and fostering growth businesses that contribute to the realization of a sustainable society

The AGC Group’s ceramics business began in 1916 with the manufacture of refractory bricks for glass furnaces. Building on these technologies and expertise over the years, today AGC Ceramics provides refractory materials for glass, steel and cement industry plants under the management policy of “Earth Saving.” The company is also focused on nurturing growth businesses that contribute to the realization of a sustainable society by making use of the technologies and expertise it has cultivated to date.

Business Activities

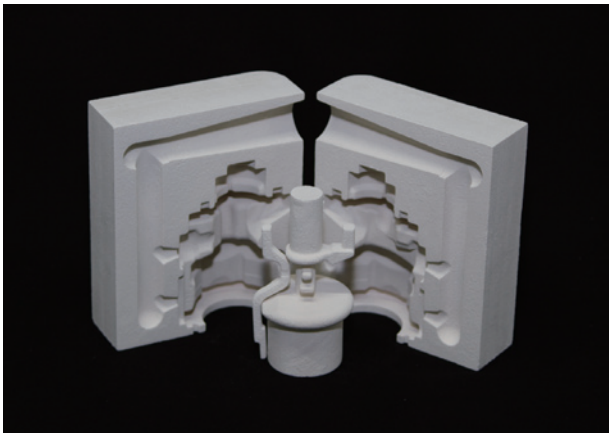
In refractories, our main business, we provide highly durable and high-performance fused cast refractories that extend the service life of glass furnaces, save energy in the glass production process and reduce CO_2. For other industries, we provide bonded refractories for use in cement plants in Japan and overseas, as well as monolithic refractories that contribute to energy saving and environmental load reduction in industrial furnaces. In addition, to reduce the environmental impact and total cost of the customers’ manufacturing processes, we also provide our own engineering service and conduct product development using inorganic materials and ceramics.

Business Strategy

AGC Ceramics has two growth strategies. The first is enhancing the value of high-performance, high-quality refractories through engineering services. By approaching the business from the viewpoint of the life cycle cost of customers' plants and adding solutions in equipment design, construction support and remote operation monitoring, AGC Ceramics provides added value in the form of energy savings, environmental load reduction, extending plants' lives, stable operations and total cost savings. In other words, by transforming and deepening our business model from "Products" to "Solutions," we aim to maximize growth for our customers and our company while also adding social value by contributing to environmental issues. The second strategic direction for AGC Ceramics is to pursue sustainable growth by exploring business opportunities for products with new functions taking advantage of the unique characteristics of inorganic materials, particularly products that help solve social issues related to the environment and energy.

Current Status and Outlook

In recent years, both in Japan and overseas AGC Ceramics has had an increased number of projects in which we have acted as a business partner alongside our customers, providing services (from the equipment design stage to plant operation) in the field of glass bottle manufacturing furnaces. Demand for large-scale waste incineration plants is growing due to urbanization in emerging countries. Accordingly, we are developing a system that enables remote monitoring of furnace wall conditions so that operations can be performed safely, even in rural areas. We are also considering commercializing a service that identifies the ideal time for necessary repairs. AGC Ceramics hopes to build on this momentum to deepen and expand our global business development. In a more exploratory field, we are commercializing Brightorb™, a ceramic molding agent for 3D printers. This molding agent uses ultra-fine ceramic beads that use recycled materials as the main raw material. Being highly fire resistant and amenable to precise molding, it has great promise as a mold for casting precision parts for automobiles, aerospace and medical care applications. Until now, it took several months to manufacture this kind of precision casting mold by the lost-wax process, but with a 3D printer the time required has been significantly reduced. This agent has also been attracting attention for use in artistic lighting fixtures and pottery/porcelain plate applications in the arts and crafts world, taking advantage of the fact that it does not shrink significantly during sintering and is resistant to deformation. Brightorb™ has drawn praise from customers and new applications for the agent are expanding. In other fine ceramics products that we have been working on for many years, we are promoting the development of components used in renewable energy facilities, with a focus on contributing to solving environmental and energy problems. While deepening our research into existing fields and exploring new fields as described above, we are aiming for clear operational management by withdrawing from businesses that are not expected to grow. By discussing and consolidating our thoughts through one-on-one dialogue, we will continue to aspire for growth while "never taking the easy way out."



Brightorb™ modeled with a 3D printer

Strengthening the Strategic Businesses

The AGC Group is aiming to further boost its revenue as a highly-profitable leading global material and solution provider by 2025. To achieve this goal, the Group has chosen three areas as strategic businesses expected to show significant growth in the future: mobility, electronics and life science. AGC will develop its business in each of these areas while pursuing medium- to long-term business growth and earnings expansion.

Mobility

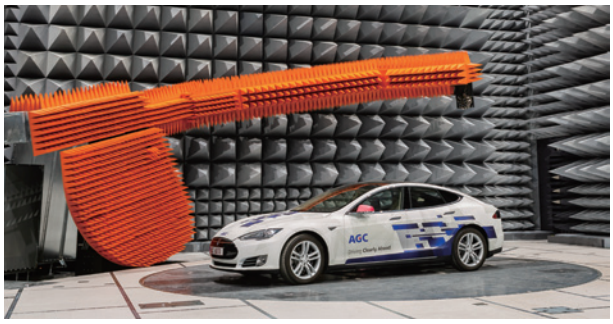
AGC will provide products and solutions that contribute to the computerization and automation of vehicles while reducing their environmental impact.

Market Environment and Growth Strategy

The automotive industry is currently undergoing a major wave of change known as CASE.* The roles and functions of cars are expected to evolve accordingly, and AGC will contribute to this industry development through its advanced, multifunctional glass products. For example, as human-machine interfaces that enable safer and more comfortable driving become indispensable in automated driving and computerization of cars, AGC has developed cover glass products for car-mounted displays that can be adapted to large formats, curved surfaces and complicated shapes through AGC technologies for advanced materials, displays and molding. The Group has a high market share in this area, mainly in European luxury cars, and aims to expand sales in Japan, Europe and the United States by targeting high-end models.

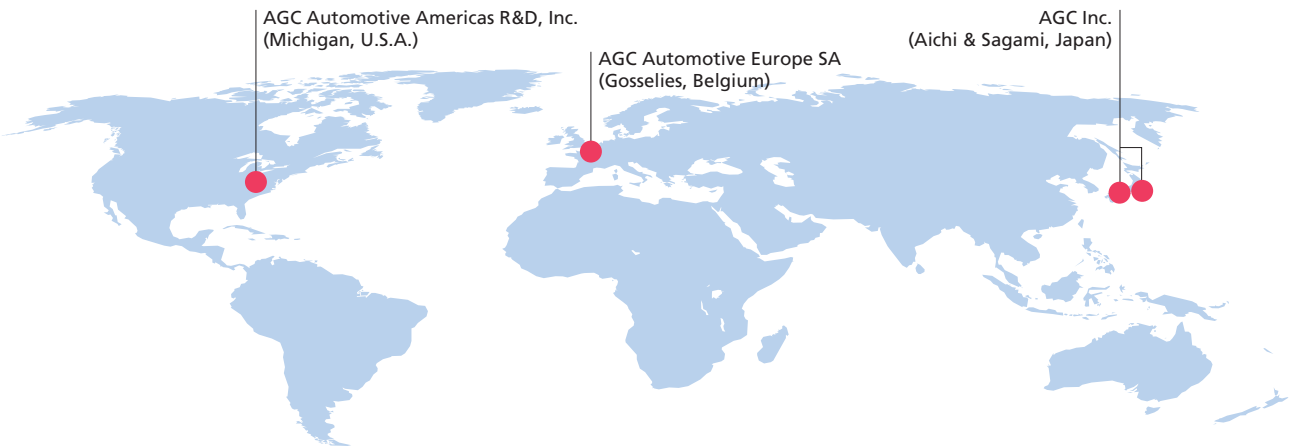
To make advanced levels of automated driving possible in the future, it is necessary to establish Vehicle-to-Everything (V2X) technology that allows vehicles to communicate with external data servers. AGC has developed a vehicle-mounted 5G glass antenna in anticipation of V2X, and has successfully conducted communication experiments for its use during high-speed driving. The Group also has development bases equipped with anechoic chambers in Japan, Europe and the United States to accelerate the development of fundamental antenna technologies for high-speed communication on 5G networks and beyond.

* CASE (Connected, Autonomous, Shared, Electric)



Anechoic chamber in Europe

Development framework for automotive on-glass antennas



Electronics

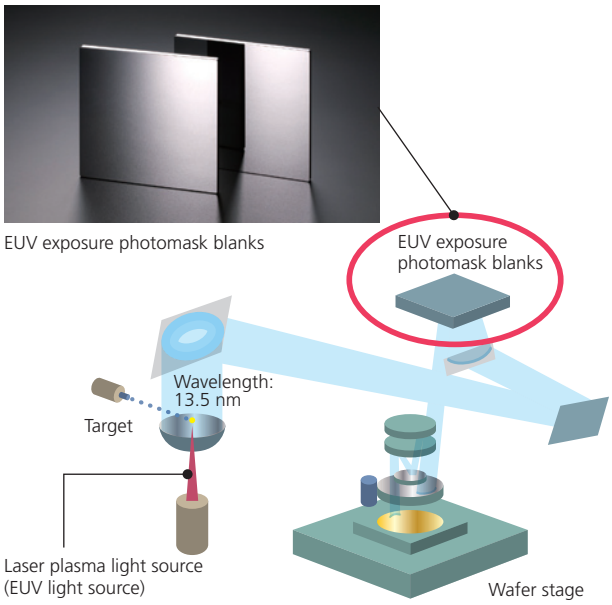
AGC develops and supplies cutting-edge semiconductor components and devices that support ultra-high-speed communications.

Market Environment and Growth Strategy

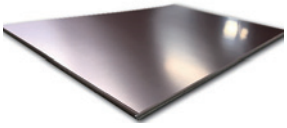
With the advent of the fully-fledged IoT/AI era and the implementation of 5G, the electronics market is expected to only continue expanding. For example, in the IoT era, semiconductors and sensors will be a part of all electronic devices and ultra-fine circuit formation technology will be indispensable to achieve further miniaturization, closer integration and lower power consumption for semiconductor chips. AGC has successfully developed and mass produced high-precision composite photomask blanks for extreme ultraviolet (EUV) exposure. The Group is increasing production capacity for this product and is aiming to achieve sales of more than 40 billion yen by 2025.

5G is a next-generation wireless communication network that uses a high-frequency millimeter wave band for ultra-high-speed and high-capacity communications, with full implementation expected to begin in 2025. Millimeter-wave communication has weaknesses, including sizable transmission loss and the relative inability of the wave to pass around physical objects. To this end, materials with low transmission loss are required to implement a truly usable service. AGC has the advantage of experience in the fields of fluororesin and quartz glass, which are promising materials with extremely low transmission loss. In 2018 and 2019, the Group acquired an ultra-low transmission loss copper-clad laminate (CCL) businesses. Through these acquisitions, AGC established a business platform in the high-end rigid CCL market, which is expected to grow significantly with the spread of 5G and automated driving in the years ahead.

Overview of the EUV exposure system

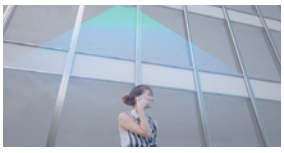


AGC's materials and applications for next-generation high-speed communications

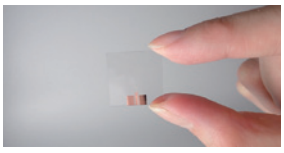


Super high-end rigid CCL

Fluon+™ EA-2000



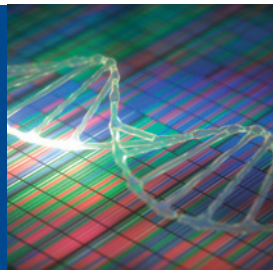
Glass antenna for turning windows into base stations



Synthetic fused silica glass for 5G

Life Science

AGC will expand its global pharmaceutical and agrochemical CDMO business structure to meet the needs of people seeking safe, secure medical treatment.



Market Environment and Growth Strategy

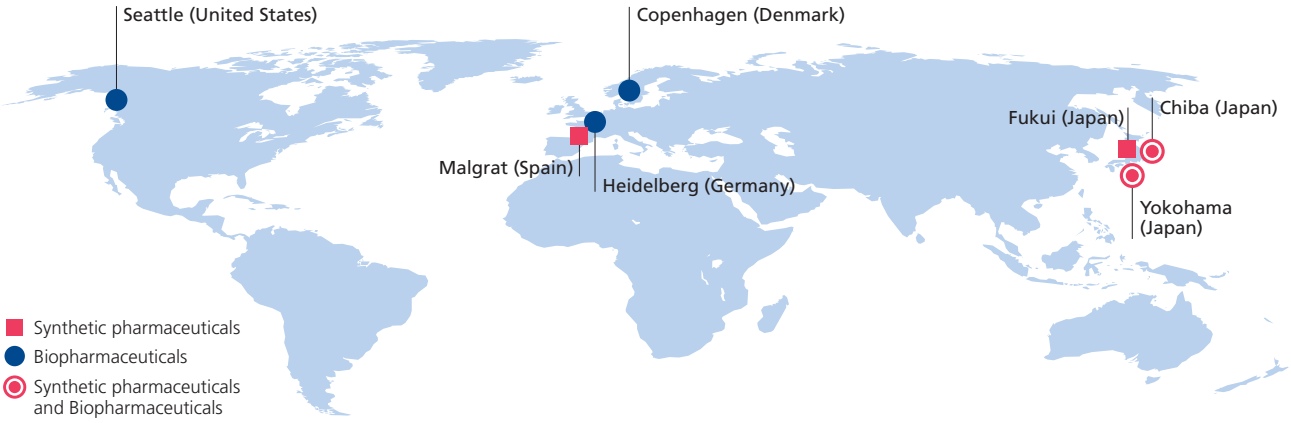
The need for safe and secure medical treatment is always prevalent, and the global pharmaceutical market is expected to grow over the medium to long term as global population and life expectancy continue to increase. Pharmaceutical companies are concentrating management resources on basic research and preclinical stages in intense competition for new drug development, while accelerating the outsourcing of drug substance development and manufacturing. For this reason, the global market for CDMOs, which develop and manufacture active pharmaceutical ingredients under contract, is expected to grow at a higher rate than the pharmaceutical market, particularly in regard to biopharmaceuticals.

With these trends in mind, AGC is actively investing in its life science business. Since 2016, the Group has been acquiring leading companies in Germany and the United States/Denmark—particularly in the biopharmaceutical field, which has high growth potential—to build a global trilateral system covering Japan, Europe and the United States. In addition to increasing production capacity in each of these sites, the Group has established a unified management system centered on AGC Biologics. The Group will also continue to develop personalized medicine and support unmet medical needs*, areas where demand is expected to grow. This will be possible through the Group's extensive track record of supplying commercial pharmaceuticals in Japan, the United States and Europe, and its history of development, production and quality control systems for responding to customer needs with agility. In addition, the Group is working to commercialize cutting-edge fields including gene therapy and regenerative medicine, which require stable and efficient manufacturing systems.

Moving forward, AGC will continue to make aggressive strategic investments, including new mergers and acquisitions, aiming to achieve sales of over 100 billion yen in the life science business area in 2025.

* Medical needs for rare diseases that don't currently have available therapies.

Life Sciences business bases



In Focus Life Science

CDMO business potential

In 2016, AGC named Life Science as one of three Strategic Businesses when it announced its long-term management strategy, Vision 2025. Since then, the Group has been actively investing in the growth of this business, building an integrated global management system in the small molecule pharmaceutical, agrochemical and biopharmaceutical CDMO (contract development and manufacturing organization) sphere. Noriyuki Komuro, General Manager of the Life Science General Division, introduces the business environment and future prospects.

Responding to Pharmaceutical Product Demand through an Integrated Management System across Japan, Europe and the United States

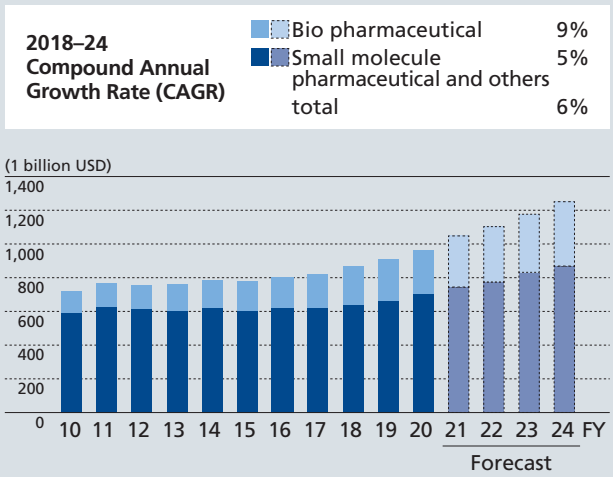
The AGC Group's life science business began in the 1980s as a contract manufacturing organization (CMO) of active ingredients and intermediates for small-molecule synthetic pharmaceuticals and agrochemicals using fluorination technology. In the bioscience field, AGC has engaged in research and development related to gene expression since the 1980s and developed a proprietary protein production technology called ASPEX in 1997. In 2000, this endeavor progressed into a CDMO business that AGC uses to establish production processes and produce biopharmaceutical protein for customers. In 2008, a new biologics plant was built in the Chiba Plant that was 10 times larger than the original plant from 2000, and today AGC is the number one Japanese CDMO in this field.

The global pharmaceutical market continues to grow steadily against the backdrop of an increasing global population, longer lifespans and more sophisticated medical needs. It is predicted that its compound annual growth rate (CAGR) will be 6% from 2018–2024, (9% in biopharmaceuticals alone) with total sales to exceed $1.2 trillion by 2024.

As pharmaceutical companies accelerate the outsourcing of drug substance manufacturing, the global drug substance CDMO market is also expected

Noriyuki Komuro
General Manager
Life Science
Gen. Div.
AGC Chemicals
Company

Pharmaceutical market size trend



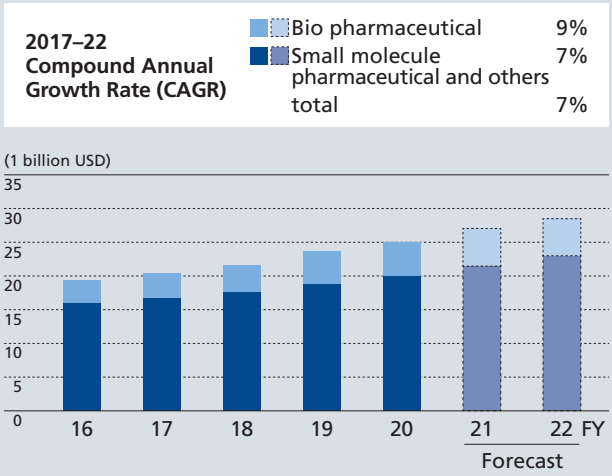
Source: Chart made by AGC based on data from EvaluatePharma® World Preview 2018, Outlook to 2024

to grow at a high CAGR of 7% for 2017–2022, at 9% for biopharmaceuticals alone.

With this market environment in mind, AGC is actively investing in its life science business. In 2016, the German biopharmaceutical CMO Biomeva was acquired to expand our business development footprint, and in 2017 we acquired the Danish/US CDMO CMC Biologics, adding mammalian cell technology to our capabilities and increasing market presence. With sites spanning the three regions of Japan, Europe and the United States, we made great efforts to align and integrate our operations, and in 2018, we began to operate globally under the unified brand name AGC Biologics. By setting up business headquarters in Seattle and unifying quality standards and business operation methods, we are capable of providing uniform high-quality services across the globe and serving customers in each region seamlessly.

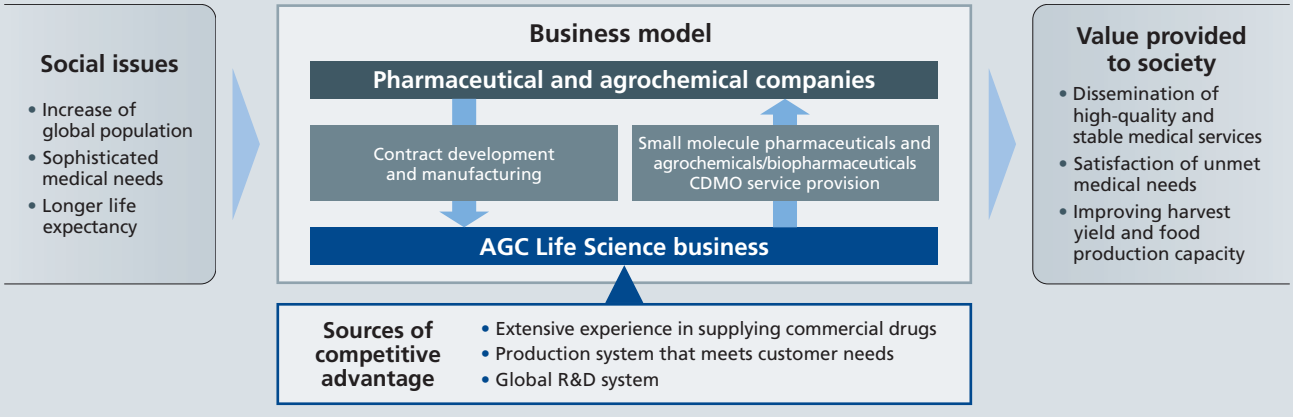
We will continue to expand each business site and aim for further growth.

Active pharmaceutical ingredient CDMO market size trend



Source: The chart made and estimated by AGC based on data from Evaluate Pharma® World Preview 2017, Outlook to 2022

Value creation model for the Life Science business



An Extensive Record of Supplying Commercial Drugs through a Production System That Meets Customer Demand

Since the 2000s, R&D expenses for a pharmaceutical company developing just one new drug have risen more than 10 times in comparison to the 1970s.* As hurdles for creating new drugs continue to rise, requirements for CDMOs including track record, technical capabilities and production systems are becoming more stringent. Even if the drug is approved after a massive sum invested in basic research and clinical trials, delays in a drug's launch due to problems with process development and commercial production can result in a great loss of opportunity. For this reason, CDMOs must have a proven track record in this field, from phase I–III clinical production through to commercial production.

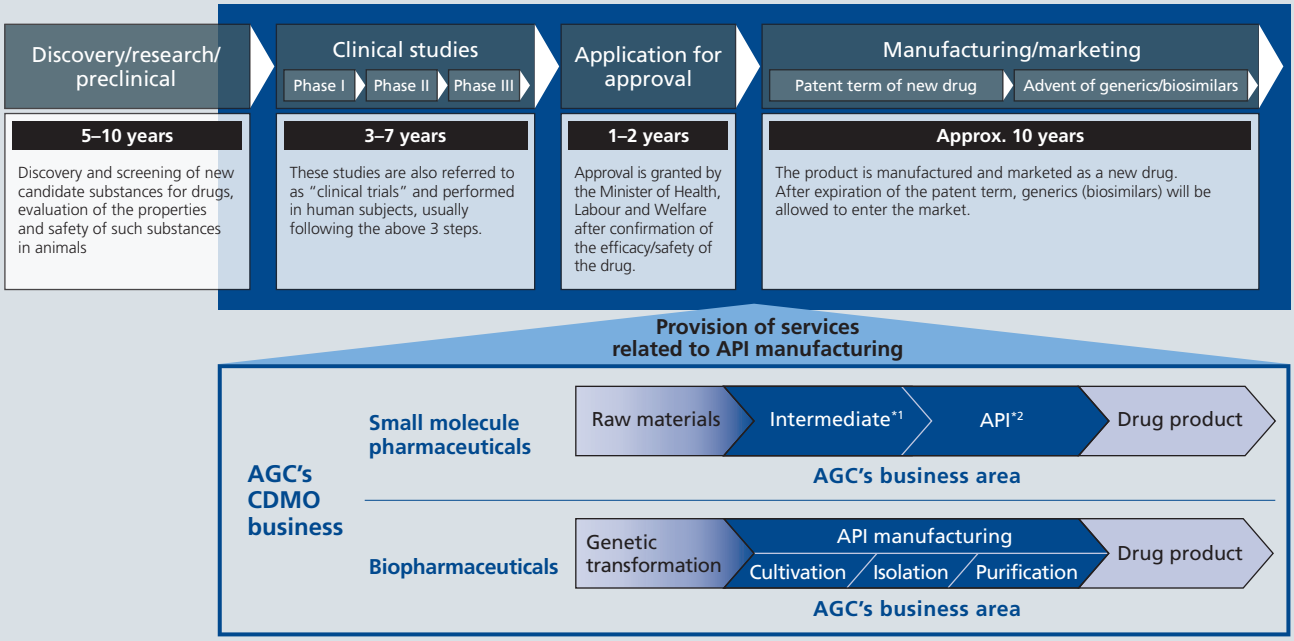
AGC has received inspections by the Pharmaceuticals and Medical Devices Agency (PDMA), US Food and Drug Administration (FDA) and European Medicines Agency (EMA), drug regulatory authorities respectively located in Japan, the United States and Europe. We have built a strong track record in supplying commercial pharmaceutical products to each of these markets.

Another of AGC's strengths is a flexible production system that can meet our customers' wide range of demands. In addition to being able to handle large-volume/single-product production and small-volume/multi-product production, we are flexible in responding to customer needs, introducing new production processes and ensuring compliance with quality regulations.

In the CDMO business for pharmaceuticals, quality and production problems can be a major risk. They can directly affect patients' well-being, and if a quality inspection reveals a critical issue, the company's credibility will be greatly damaged and business will be negatively affected, even if faulty products have not actually been shipped. As we build on our track record in this field, we will continue self-assessment and improvement to ensure that our quality control systems and operations always meet market standards.

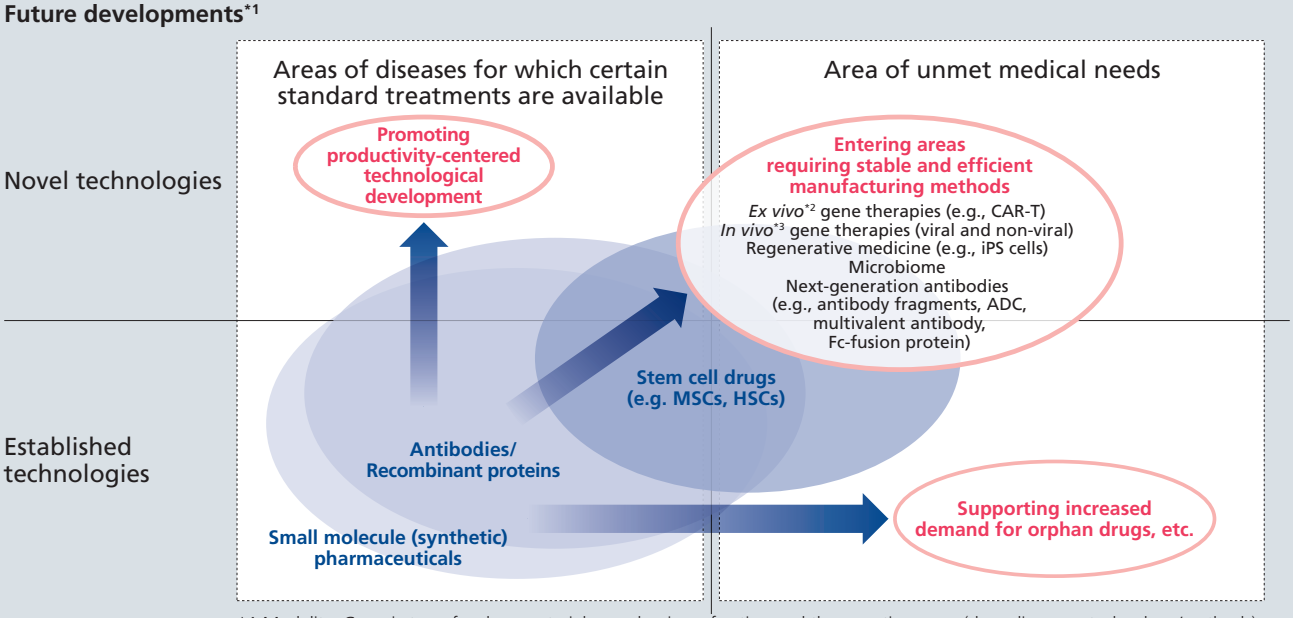
* Source: DiMasi et al, Innovation in the pharmaceutical industries: New estimates of R&D costs, Journal of Health Economics, 47(2016), 20-33

New drug development process and AGC's business areas



*1 Intermediate (a product that requires one more reaction step before it becomes a drug substance)
*2 API (the active ingredient of a drug)

Future developments*1



*1 Modality: Generic term for drug materials, mechanism of action and therapeutic means (drug discovery technology/methods) including new treatment methods such as regenerative medicine
*2 *Ex vivo*: A method in which a gene is introduced into cells outside the patient's body using a viral vector* or other means, after which the cells are introduced into the patient's body
*3 *In vivo*: A method in which a gene is directly introduced into the patient's body using a viral vector* or other means
* Viral vector: A virus that carries the therapeutic gene of interest into the cell or cell nucleus

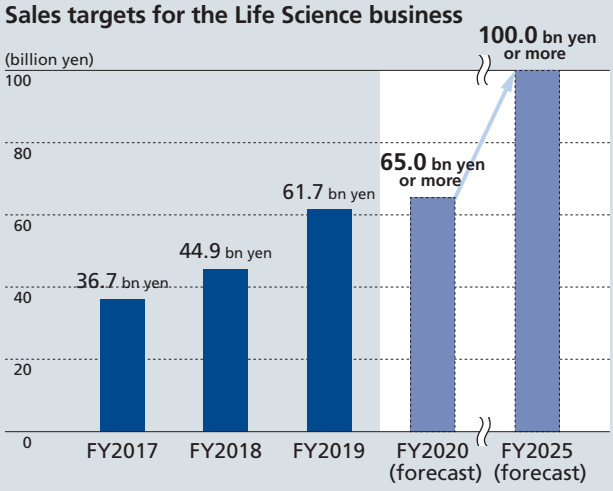
Responding to Demand That Exceeds Expectations and Accelerating Plans for Increase Production

Utilizing AGC's strengths, we will work to further serve manufacturing needs in personalized medicine, an area that is expected to become more commonplace in the future, and unmet medical needs, including the rare diseases area. We will actively engage in R&D and business development in areas that require stable and efficient manufacturing methods, including gene therapy, regenerative medicine and next-generation antibodies. In fields that have established production technologies, such as small-molecule drug synthesis technology and antibody/recombinant protein production, we are pursuing further productivity improvement, including moving from batch production to continuous production.

Since 2016, when AGC accelerated its investment in life sciences, our CDMO business has continued to grow faster than expected. As a result, each of our sites is expanding ahead of schedule. Our long-term management strategy has set a goal of Life Science business sales of 100 billion yen or more in 2025. We expect to achieve this goal even sooner.

AGC will continue to make aggressive growth investments in the life science business, contributing to the improvement of global medical services and stable food production through high-quality pharmaceutical and agrochemical drug substances.

Sales targets for the Life Science business



Achieving sustainable growth for the AGC Group by strengthening non-financial capital

Intellectual Capital

Creating high value-added solutions by combining material science, functional design technology, process technology and basic technologies, including simulations and data science.

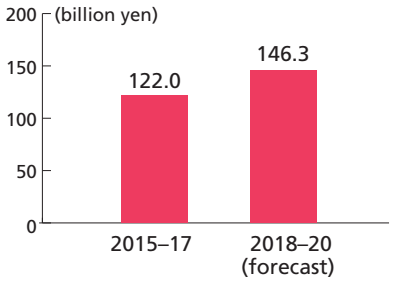
Manufactured Capital

At our global business bases, we are working on development and introduction of production technology and equipment linked to our product development. By consistently refining this production technology and equipment, we have achieved a high level of product functionality, quality and cost reduction.

Breaking Down our Different Types of Capital

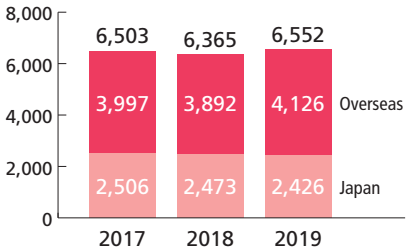
R&D investment amount

47.5 billion yen (2019)



Number of patents

Approx. 6,500 (2019)



* Selected as a Derwent Top 100 Global Innovator 2020 by US patent analysis company Clarivate Analytics (third consecutive year)

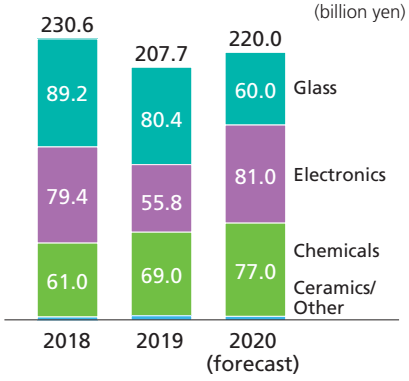
Number of manufacturing bases by region (as of December 31, 2019)

Japan/Asia
66 locations

Europe/Africa
21 locations

The Americas
12 locations

Capital expenditure (excluding M&A)



Non-financial capital is the foundation that supports the AGC Group's sustainable growth. Since our founding, we have expanded our global business bases while striving to develop innovative technologies and trusting relationships with our diverse customers.

By expanding the scale of our business, we have also expanded our non-financial capital. As our business environment continues to change drastically, we will continue to diligently strengthen non-financial capital and achieve sustainable growth.

Human Capital

Approximately 55,600 global employees are promoting the realization of Diversity, one of the values outlined in our corporate philosophy "*Look Beyond*" formulated in 2002.

Social and Relationship Capital

By establishing direct contact with customers and markets we have grown throughout over 110 years of business, we create new value by assessing the expectations and needs of our stakeholders.

Natural Capital

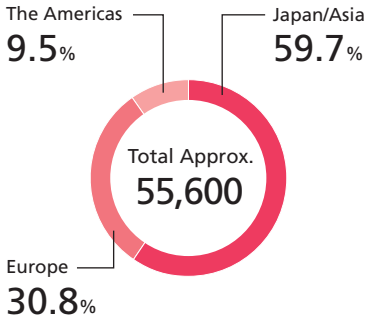
We contribute to energy conservation and energy creation through production activities that utilize natural capital, including water and energy, bringing an increased number of products to market with a focus on energy conservation.

Number of employees by region
(as of December 31, 2019)

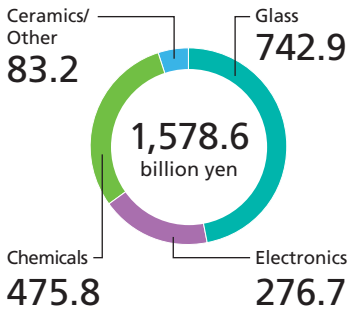
Japan/Asia
Approx. 33,200

Europe
Approx. 17,100

The Americas
Approx. 5,300



Sales by business
(as of December 31, 2019)



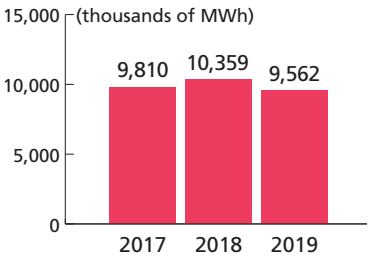
Customer industry

- Architecture
- Housing
- Aircraft
- Display
- Optical equipment
- Agrochemical
- Energy
- Civil engineering
- Automobile
- Railway
- Life Science
- Medicine
- Electronics
- Daily commodities

Other

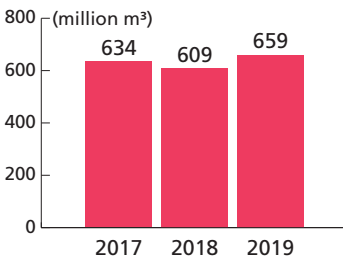
Electrical energy consumption

9,562 thousand MWh



Total water intake

659 million m³



* Water intake excluding ocean water but including tap water, industrial water, rivers, canals, lakes and ground water

In Focus Value Creation and Human Capital

A corporate culture of "cross-fertilization" in which strong human resources intermingle as basis for value creation

The foundations of value creation at the AGC Group are a distinctive corporate culture and the strong individuals (human resources) that comprise it. How were these particular strengths of AGC created and made even stronger? Shinji Miyaji, Representative Director, Senior Executive Vice President, CFO and GM of the Corporate Planning General Division, explains.

Corporate Culture Evolved through Major Historical Transformation

In 2002, AGC implemented a policy of globally-integrated management that turned out to be a major turning point in the history of the AGC Group.

At the time, CEO Mr. Ishizu implemented major company-wide changes, including reforms in governance, organizational structure and human resource management to deal with accelerating globalization and a decline in the AGC Group's profitability. Specifically, AGC introduced an "in-house company system" and appointed Belgian and American executives to the top positions of two major companies. We also launched a system for discovering and nurturing the next generation of management personnel on a global scale. In addition, we introduced a standardized global job grade system to promote transfers across local and national borders. All of these actions were bold, advanced steps for a Japanese company to take at the time. However, the number of foreign national employees who have been promoted to Group executive management has not increased significantly (three total, as of May 2020).

Shinji Miyaji
Representative Director
Senior Executive Vice President
CFO and CCO
GM of the Corporate Planning General Division

In Asia particularly, although we made progress in promoting local staff to department manager positions, we have not made considerable progress in establishing more localized management.

However, the above changes pushed the AGC Group to evolve in an unexpected direction, and the AGC Group's operations and working styles have changed significantly. In each business division and R&D division, exchange and collaboration across national and local borders have become prevalent, and are now treated as a matter of course. This process has encouraged mutual exchange of expertise, created new organizational knowledge and fostered the individual growth of human resources.

The most important idea underlying the transformation implemented by Mr. Ishizu was "cross-fertilization." Cross-fertilization is a biology term, and in the case of the AGC Group, it indicates that an organization with a heterogeneous mix of strong individuals is more apt to respond to change and evolve to survive in comparison with a similar yet homogeneous organization. The transformation ushered in by Mr. Ishizu created a new corporate culture of cross-fertilization at the AGC Group.

An Era of Corporate Culture Directly Linked to Competitiveness

Today, the seeds of various Strategic Businesses have sprouted in the fertile soil created through Mr. Ishizu's work—our life science business is a great example of this. The Chemicals Company had long been expanding its chlor-alkali business and fluorine business, mainly in Japan and Southeast Asia. Yet in the newly added life

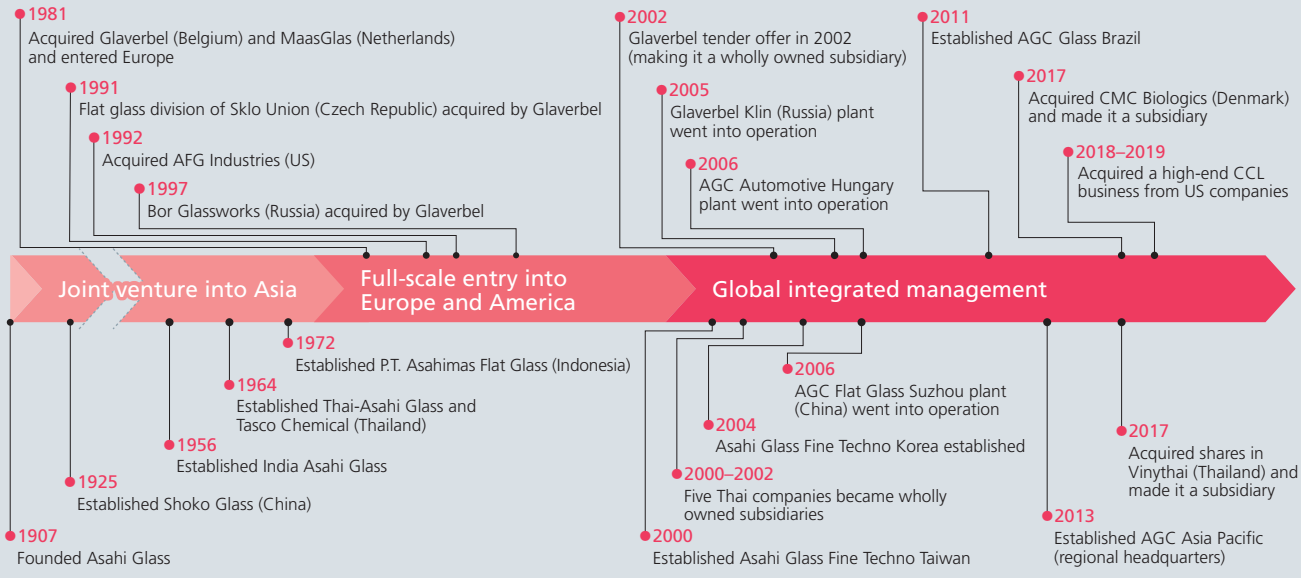
science business, we will make full use of the AGC Group's corporate culture and organizational capabilities to welcome Western companies into the group through M&A, quickly establish PMI* and global business operations and expand the business beyond expectations (see pages 55–58).

Another example is our Brazilian glass business subsidiary AGC Glass Brazil, which began operations in 2013. For the AGC Group's first full-scale expansion into South America, we brought outstanding engineers together from Japan, Europe and the United States and set up the best possible team to work on the construction of a new plant. The first president to be appointed was an up-and-coming Italian executive in the European division of our architectural glass business. He was successful in this role, and is now active as the Americas business manager in our automotive glass business (see page 64).

I believe that while the upcoming era may reveal uncertantities, it will also be one in which corporate culture is directly linked to a company's competitiveness. A corporate culture that utilizes diverse human resources will further attract excellent individuals who strengthen the organization and boost business. Further, corporate culture is created and evolves over a long history of business activities and societal relationships—a company cannot easily copy the corporate culture of another. As the foundation of sustainable growth for the AGC Group, we plan to continue to protect our corporate culture based on the idea that cross-fertilization equals diversity.

* PMI: Post-merger integration

History of globalization



Cultivating management personnel who lead sustainable growth

Since 2004, the AGC Group has been working to nurture leaders who will take charge of the future of the Group's management by organically linking management personnel development systems at the global level, throughout business divisions and at the regional level.

At the core of this initiative is AGC Leadership Competency. AGC Leadership Competency is a model that clarifies the abilities and qualities required for group leaders and defines eight competencies and 43 concrete actions in the two areas of self-development and team leadership.

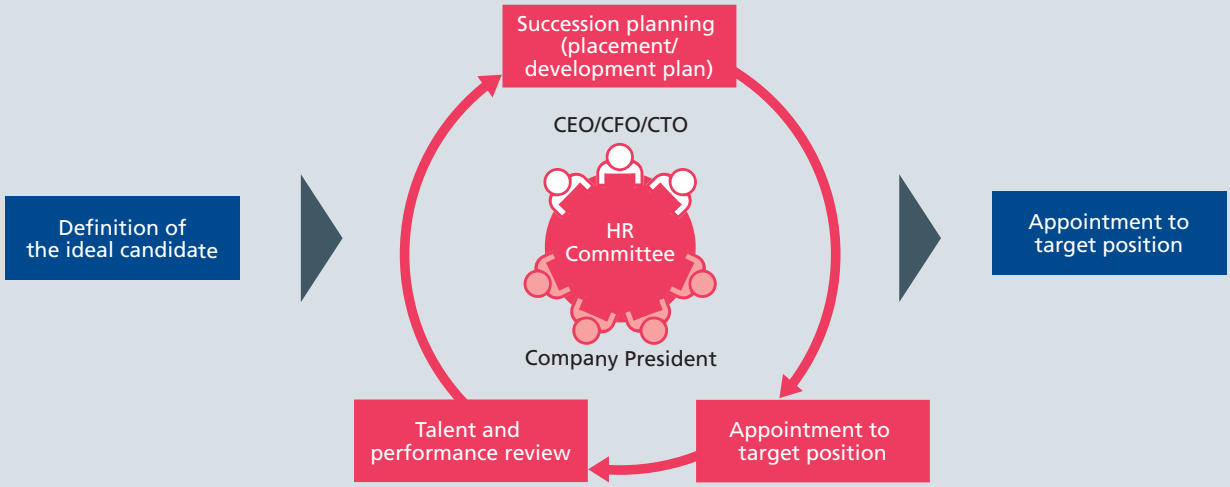
When fostering management personnel, regardless of nationality or division, a search is conducted throughout the AGC Group to find a suitable candidate. This individual is then strategically placed in a key position within the Group with a focus on overall optimization. The key to fostering excellent management personnel is the concept of the "stretch assignment," wherein an individual's growth is promoted by placing them in a position that requires more than what they're currently capable of.

In addition to placing people within AGC in this manner, each individual also participates in a training program that we implement across the globe and in each region. For example, we provide Global Leadership Sessions and Global Leadership Journey for business managers and senior management, and AGC University and AGC Management College in respective regions.

Through these programs, the AGC Group encourages employees to acquire the experience and knowledge necessary for their work through planned placement and training. Management personnel also participate in these activities and review employees' performance and display of leadership in their current position.

The AGC Group operates a number of different businesses in many markets and regions, and Group management personnel are required to have a wide range of business experience, superior management skills and excellent leadership capabilities. We have been improving our management personnel development program since its launch in 2004 to solve these difficult issues. In the Case Study on the next page, we will introduce examples of our endeavors in developing management personnel.

Group management personnel development cycle



Case Study

Establishing a glass plant in Brazil with specialists from global business sites

In April 2011, the AGC Group decided to establish its first business site in South America, in Brazil. It was an unprecedented challenge for the Group to acquire the vast site in Guaratinguetá, Sao Paulo while simultaneously commencing production of architectural and automotive glass in the same location.

At the time, the glass market in Brazil was an oligopoly, with a small number of competing manufacturers, yet the market showed growth potential due to the scheduled FIFA World Cup in 2014 and Olympics in 2016 in Brazil. At the start of the project, 15 individuals from five countries—Italy, France, the Czech Republic, Belgium and Japan—were sent to the site. Their motto at the time was "AGC is here to grow together with Brazil," and they promoted the project as AGC planted roots in the region to grow in sync with local development.

Subsequently, an expert team of AGC employees with diverse knowledge and experience visited the site from AGC Group companies in 13 countries. They pledged themselves to a commitment: "Production will begin without fail within 18 months." During a local recruitment drive conducted in parallel with plant construction, a three-month training program was provided free of charge for potential employees, allowing them to acquire the qualifications and skills required for work at the plant. Many of the trainees were eventually hired as employees.

Production finally began in October 2013. The Brazilian economy deteriorated immediately after the plant went into operation, and the company struggled at first. Yet the business gradually recovered due to its quality assurance, supply and ordering system, logistics, and customer support, which placed it a cut above competitors. A second production line was launched at the plant in 2019, and AGC continues to promote growth in Brazil today.

Message from Project Leader

The combined strengths of project team members and local hires led to a successful project in Brazil

In 2010, I was appointed to conduct a feasibility study for AGC's expansion into Brazil. It was a great challenge to lead a multinational team of people from 13 countries with little knowledge of the circumstances in the region.

We were able to simultaneously build the plant, consolidate the management division and establish the AGC brand due to our multinational team and locally hired members working together with phenomenal dedication. It was quite difficult for individuals across different languages and cultural backgrounds to understand each other and communicate their intentions accurately. Yet under the motto of "AGC is here to grow together with Brazil," we accomplished our goal of establishing a new identity for AGC Glass Brazil. It was a truly rewarding challenge.

Davide Cappellino
Inaugural President of AGC Glass Brazil (currently Regional President for the Americas at AGC Automotive)

Intellectual Capital

Delivering Solutions That Meet Customer Expectations through Intellectual Capital

The AGC Group has accumulated a wealth of technologies and expertise over its long history of business development. Today, we create vast array of products based on our intellectual capital, increasing our competitiveness.

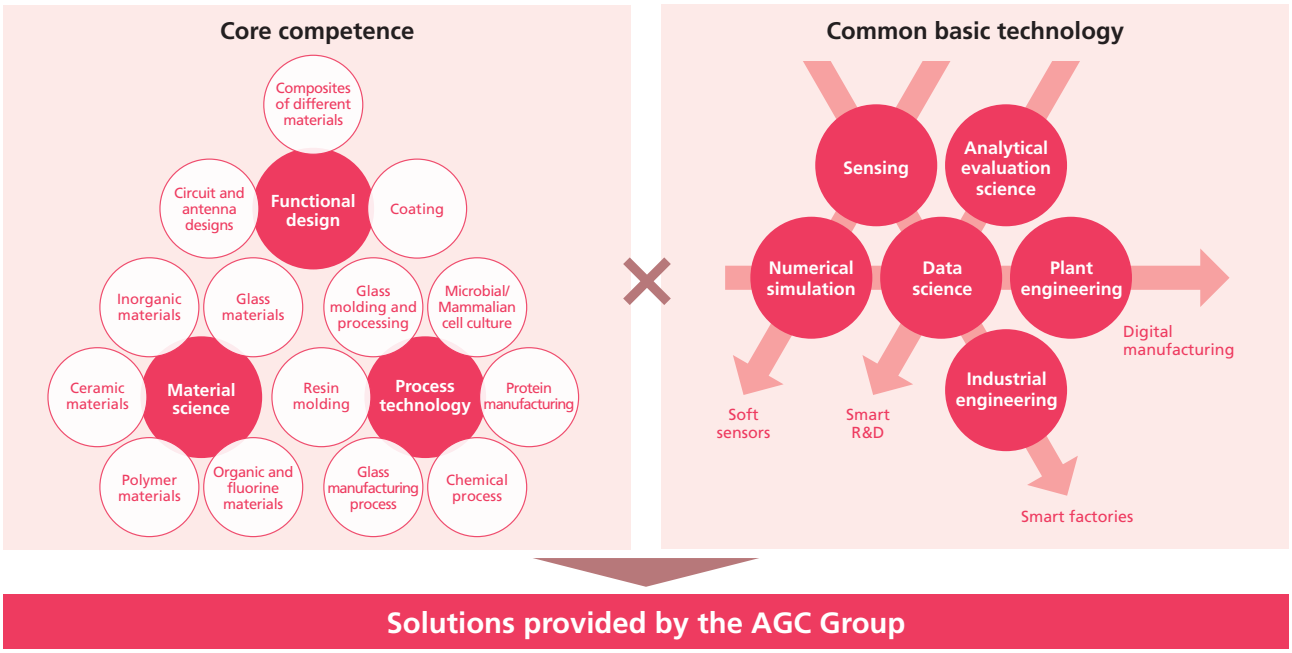
"Material science," "functional design" and "process technology" are at the core of AGC's intellectual capital across many fields, from glass to electronics, chemicals, ceramics and life science. By combining common basic technologies including simulation, data science, analysis and evaluation science technology, sensing technology and smart factory technology, AGC provides high value-added solutions not possible through a single technology in isolation. For example, our cover glass for car-mounted displays used by many automobile manufacturers is characterized as "strong and very well designed." It is developed by fusing multiple technologies, including glass materials, glass molding/processing, numerical simulation and plant engineering.

It takes time to develop new materials. In order to be the first company that our customers call on, the AGC Group will continue to develop intellectual capital to create new value, while keeping a close eye on the needs of society and our customers moving forward.

Creating New Value by Enhancing Technological Capability through Open Innovation

The AGC Group is promoting open innovation to further strengthen its technological capabilities through two approaches. The first includes joint development and introduction of technology. We have engaged in a number of joint development projects with academia globally, and recently we also started a large industry-academia collaboration program with Tokyo Institute of Technology and the University of Tokyo, which has led to these efforts evolving and expanding. In addition, we are strengthening our network of start-up companies in Japan and overseas, promoting collaboration, introduction of technology and alliances. We're aiming for rapid product development while supplementing and advancing existing technology.

The second approach includes collaboration with customers and other companies. In some cases, we set specific targets and collaborate, and in others, we aim to create value through design looking toward the future. In each case, we leverage each other's strengths in the pursuit of technological evolution.



Focus

AGC Yokohama Technical Center opened to accelerate open innovation

In January 2020 the AGC Group brought together two separate R&D bases in Yokohama by opening the AGC Yokohama Technical Center, and activities at the new facility will commence in stages during 2020.

By consolidating each research and development function in one location, including basic research, material development and mass production process development, we will accelerate the development of products and solutions in each business area and innovate rapidly.

We have established spaces at the AGC Yokohama Technical Center for interaction with people from outside of the company with a view to open innovation, including a lab space for internal and external collaboration and an exhibition space for introducing samples under development. Through these spaces, we are strengthening dialogue with our customers and fostering collaborative creation activities with research institutions and business partner companies.

In addition, by consolidating each research and development function, we are making progress in terms of exchange and cooperation between engineers. We have already started activities through new approaches that eclipse the boundaries of our in-house organization, and we will promote open innovation with the world outside of AGC by taking advantage of the results.

There is no end to research and development at AGC. The AGC Yokohama Technical Center provides a base for disseminating technologies and perspectives related to materials, allowing AGC to create a new era alongside anyone who visits the center. The Group will continue R&D work principally at the center, aiming to achieve further evolution and growth throughout the entire AGC Group.

1F entrance hall (conceptual drawing)

The interior of the entrance hall is designed so an installation* that stimulates the right brain can be constructed through collaborative creation with our customers.

* An exhibition that allows guests to experience the value provided by products made from AGC's materials throughout the exhibition space

4F exhibition room (conceptual drawing)

A space to view and experience the source of AGC's innovation, our wide range of technologies and approaches through our expertise in materials.

Manufactured Capital

Promoting Digital Transformation to Strengthen Manufactured Capital

The AGC Group established the Smart AGC Promotion Division in 2017 as a division dedicated to promoting digital transformation (DX) throughout the company. Based on the core policy of creating new value by utilizing the latest digital technologies, the Group has taken a number of measures to strengthen its manufactured capital in areas outlined in the Group's DX Vision. These include operational excellence, strengthening the Group's competitive foundation as a materials manufacturer, and providing added value for customers.

Steady Progress in Efforts to Strengthen Manufactured Capital

The Group's efforts to strengthen manufactured capital through DX are steadily producing results. For example, the Group has used an operations management system at its chemical plants to improve the efficiency of information sharing between workers, share the content and progress of on-site work, promote safe and stable plant operation and pass on technologies and skills. In the field of glass manufacturing, the knowledge of skilled workers has also been rendered into visible "explicit knowledge" using artificial intelligence (AI), facilitating the transfer of skills to young engineers, including those overseas.

Promoting DX in R&D

The AGC Group is also promoting DX in the area of research and development. As part of this, we are introducing electronic experiment notebooks and working on "materials informatics," which develop original materials and products using AI.

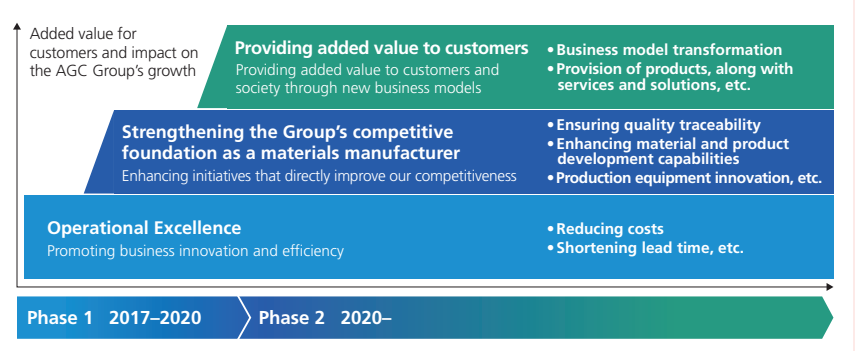
Going forward, the AGC Group will continue to provide new value and functionality to customers with the aim of achieving further growth. In Europe, the Group has already begun a novel business that creates a computer simulation of the heat resistance and design of architectural glass alongside customers, providing them with a prototype based on their demands within the same day.

Focus

Formulating the DX Vision and promoting it in every division and field

The AGC Group is incorporating the DX strategy into its medium-term management plan and endeavoring to create new value by utilizing the latest digital technologies. In 2020, the Group formulated the DX Vision, which outlines the basic policies of this initiative as we work across all divisions and fields. AGC is also focusing on developing human resources necessary for promoting this vision, utilizing the Group's proprietary educational program "Data Science Plus." This will provide the Group with a greater number of data scientists and enhance digital education at production sites.

The AGC Group's DX Vision



Human Capital

Creating New Value from the Power of Diverse Employees

The AGC Group has about 55,600 employees worldwide (Japan/Asia: approx. 33,200, Europe: approx. 17,100, the Americas: approx. 5,300) and the individual strengths of these diverse employees are the source of value creation within the Group. In the Group Vision ***"Look Beyond"*** formulated in 2002, we established "Diversity" as one of the values that all employees should share. To this end, we leverage the skills, abilities and perspectives of each employee in group management and business activities.

Diversity

- We will respect individual diversity, including varied capabilities and personalities.
- We will respect cultural diversity of race, ethnicity, religion, language and nationality.
- We will respect different perspectives and opinions at all times.

Focusing on Measures to Enhance Job Satisfaction among Employees

The management policy ***AGC plus*** formulated in 2015, establishes enhancing "job satisfaction among employees" as a Group policy. As part of this, the CEO and other executives regularly visit global bases for dialogue on the theme of AGC's founding spirit and the significance of our work.

To discover whether efforts to "increase individual motivation for work" and "cultivate a better corporate climate" by both individual employees and the company as a whole have been successful, we have conducted a global employee engagement survey since 2005. In addition, a CEO award system has been implemented since 2006 with the aim of recognizing and honoring initiatives that directly connect to realizing the Group Vision. In fiscal 2019, we presented awards to 42 such initiatives. Through cross-divisional and Group-wide study of best practices, we are working to enhance our organizational capabilities and foster excellent corporate climate.

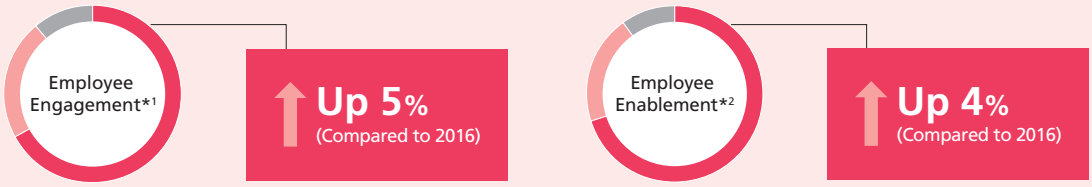
AGC plus
https://www.agc.com/en/company/policy/index.html

Focus

More than 40,000 employees participate in the 2019 employee engagement survey

Since 2005, the AGC Group has been conducting global employee engagement surveys. In the 2019 survey, the favorable response rate increased compared to the previous survey (2016), showing that progress had been made in resolving issues at each workplace and fostering mutual understanding among executives, managers and employees.

Results of engagement survey (2019) ■Favorable ■Neutral ■Unfavorable



*1 Whether employees are willing to work of their own volition, are proud of the company and have a sense of belonging
*2 Whether the right people are in the right place and employees feel worthwhile in their work, and whether an environment for highly-productive work has been established

Social and Relationship Capital

Providing New Value to Society through Customer Relationships

Founded in 1907, the AGC Group was the first company in Japan to succeed in domestic production of flat glass. Since that time, we have provided our customers across diverse industries with a range of products and solutions including architectural glass, automotive glass, chemicals, display glass, electronic components and ceramics. In this way, we have contributed to people's lives and the development of society.

The AGC Group's greatest strengths are its range of business fields and vast customer base cultivated over a long history. As many of the Group's products are materials, it is difficult to provide value to end users. We can only provide value to end users through our customers, who use our materials to create end products. The AGC Group creates new value by deepening relationships with its diverse customers and responding to their individual needs and challenges.

Strengthening Relationships by Participating in Exhibitions and Other Events

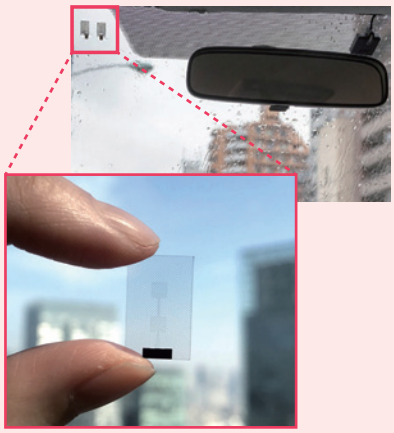
The AGC Group proactively disseminates information on its technologies, products and solutions to strengthen relationships with stakeholders, including customers and business partners, creating new value and boosting the Group's competitiveness.

In October 2019, we exhibited for the first time at CEATEC 2019, an international exhibition on cutting-edge technologies and products in IT and electronics. Here, we introduced AGC's materials and technologies that contribute to solving social issues, focusing on two fields: next-generation high-speed communication (5G) and next-generation displays (AR/MR). AGC Group companies are also using these opportunities to explore new collaborations and resolve social issues.

Focus

The world's first successful 5G communication with a glass integrated antenna

AGC is working with NTT DoCoMo, Inc. (Docomo) and Ericsson Japan, Inc. (Ericsson) to develop antennas for 5G terminals, which are expected to quickly become commonplace in the near future. While advances are prevalent in IoT and automated driving, large-capacity communications and simultaneous connections will become possible in 2025 meaning low-latency 28 GHz 5G communications will become fully operational. This development will significantly change people's lives. However, one problem with the 28 GHz band is that the frequency of the radio waves becomes highly attenuated as they propagate and cannot travel long distances. AGC has been designing, developing and manufacturing automotive antennas for about 40 years and has also developed automotive glass that incorporates different types of antennas. In 2018, utilizing its technology and expertise in cooperation with DoCoMo and Ericsson, the Group achieved the world's first successful 5G communications (at up to 8 Gbps) in a vehicle moving at high speed equipped with a vehicle glass-mounted antenna. In 2019, 5G communication in the 28 GHz band was also achieved with a glass-integrated antenna in a vehicle driving in urban areas—one step closer to the realization of a "connected car."



Glass-integrated 5G antenna

Natural Capital

Continuously Reducing the Environmental Impact of Energy Use While Actively Developing Energy-saving and Energy-creating Products

The AGC Group utilizes many natural resources to conduct its business. Our glass business and other businesses use large amounts of energy, and we recognize that energy is a particularly important type of natural capital.

For this reason, the AGC Group is actively working to promote energy saving in its manufacturing processes, introducing cogeneration systems, switching fuel sources and reducing fluorocarbon emissions. We are also working to expand the introduction of renewable energy at AGC Group company sites.

In addition, the AGC Group is also striving to develop products and solutions that contribute to energy conservation and energy creation. We contribute to mitigating climate change by providing eco-glass that enhances the cooling and heating effect of buildings and houses, refrigerants with extremely low GWP (global warming potential) and solar power generation systems. A recent initiative at the Group involved constructing an office building at the AGC Kashima Plant that uses its own products to create more energy than it consumes. It was given the highest rating in the ZEB* (Zero Energy Building) three-tier classification system.

* ZEB (Zero Energy Building): A building that aims to reduce annual primary energy consumption to zero through energy conservation and renewable energy. It is classified into three levels based on degree of reduction in energy usage.

Conducting a Pilot Scenario Analysis Based on TCFD Recommendations

The AGC Group conducted a pilot scenario analysis using the TCFD recommendations framework to analyze the specific risks and opportunities associated with climate change. As a result, a particular emphasis was confirmed on one of the major risk items, "the impact of carbon pricing."

The AGC Group is considering further measures to reduce greenhouse gas emissions, setting long-term targets and introducing internal carbon pricing based on the result. We will also work to thoroughly disclose information on this topic.

Focus

Selected as an A list company in the CDP's Water Security Field

Water resources are indispensable natural capital for the AGC Group as we aim to create a sustainable society. The Group is promoting reduction of water usage, effective use of water resources, prevention of water pollution and disclosure of water consumption during the product life cycle. In addition, we conduct comprehensive assessments on water risks that are ubiquitous in the region, using AQUEDUCT*1 from the World Resources Institute (WRI). In February 2020, CDP*2, an international non-profit organization addressing environmental issues, gave the AGC Group the highest possible rating in the field of Water Security as an A List*3 company that excels in sustainable water resource management.

*1 AQUEDUCT: A tool that provides water risk status for specific companies and regions
*2 A non-profit organization whose main activity is to encourage companies and local governments to disclose information on their measures to tackle climate change and promote water resource protection and forest preservation, in turn advancing these measures even further.
*3 In 2020, 72 companies worldwide were selected as A List companies in the CDP's Water Security field.

Corporate Governance

Fundamental Approach

Under the AGC Group Corporate Governance Basic Policy, the AGC Group 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.

AGC has chosen to have a company structure featuring a board of corporate auditors, and manages the entire AGC Group beyond the boundaries of the parent and its subsidiaries. A basic policy within the Group is to clearly separate management oversight and management execution within the corporate governance system. This not only strengthens the management oversight, but also allows the corporate and business execution functions to be clearly divided within the corporate governance system, and accelerates decision-making in business execution.

Framework for Management Oversight

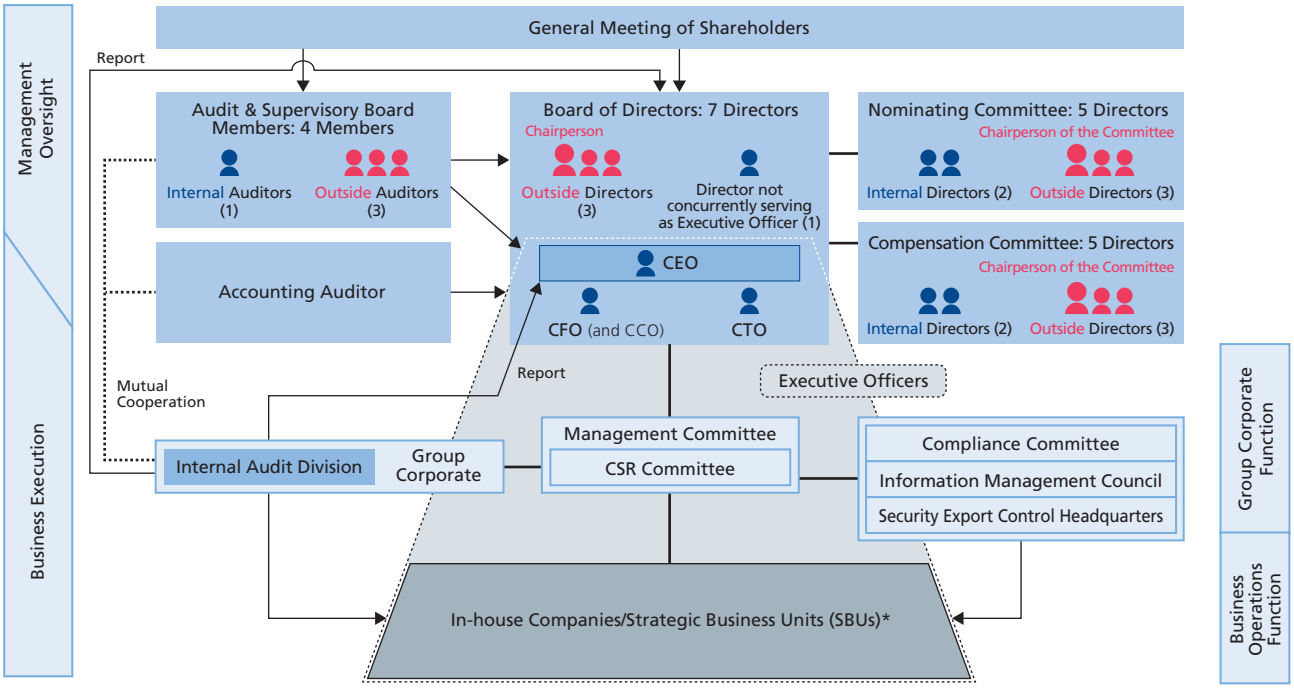
Structure and Role of the Board of Directors

The Board of Directors of AGC consists of seven directors, each appointed to a one-year term, and includes three independent directors, including one female director[*1]. The Board is responsible for the approval of the AGC Group's basic policies and monitoring its management.

The Company first employed independent directors in 2002 in an effort to enhance the management oversight function.

Independent 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. Independent directors monitor issues concerning the Group's business management and offer advice to the Board of Directors from an

The AGC Group's corporate governance structure (As of March 27, 2020)



Internal directors or internal Audit & Supervisory Board Members
Outside directors or outside Audit & Supervisory Board Members who satisfy AGC's "standards for independence of outside officers"

* 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 four In-house companies: the Building & Industrial Glass Company, the Automotive Company, the Electronics Company and the Chemicals Company. Business units smaller than this are defined as Strategic Business Units (SBUs).

independent and objective standpoint, based on their extensive experience in global corporate management and knowledge of corporate governance related issues. In principle, meetings of the Board of Directors are chaired by an independent director.

*1 As of March 27, 2020

Structure and Roles of the Nominating Committee and Compensation Committee

AGC established its Nominating and Compensation Committees in 2003 as voluntary advisory committees of the Board of Directors. The chairmen of both committees are independent directors.

Committee activities in fiscal 2019

	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	12
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

Structure and Role of the Board of Corporate Auditors

Audit & Supervisory Board members audit 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. Of the four corporate auditors, three (including one woman) are outside corporate auditors.*2

*2 As of March 27, 2020

Number of meetings of the Board of Directors and the Board of Corporate Auditors in fiscal 2019

	Number of meetings held
Board of Directors	14
Corporate Auditors	14

Framework for Management Execution

At the AGC Group, 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.

Internal Control

The AGC Group established Basic Items for Internal Control with the aim of confirming that the Group's business execution systems, including the compliance system, function appropriately.

Basic Items for Internal Control

- Compliance Program
- Information Retention and Management System with respect to business operations
- Risk Management System
- System to ensure efficient and effective business execution
- System for reporting from Group companies to AGC
- Corporate Auditors' audit system

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.

Changes in Corporate Governance

AGC has been working to strengthen and enhance its corporate governance since 2002. The Group established a voluntary Nominating Committee and Compensation Committee in 2003, and in 2005 implemented progressive activities such as appointing three independent directors. In 2011 an independent director was appointed as chairman of the Board of Directors in order to further enhance the objectivity and transparency of management. Since then, the Group's corporate governance system has continuously evolved.

In 2019, the AGC Group received the highest governance evaluation given by Institutional Shareholder Services (ISS), a company that provides shareholder voting advice in the United States, for its efforts to date. In the areas of Board of Directors structure, executive compensation, shareholder rights, auditing and risk management, the Group was awarded a Quality Score (1), the highest possible rating.

Evaluation of the Functionality of the Board of Directors

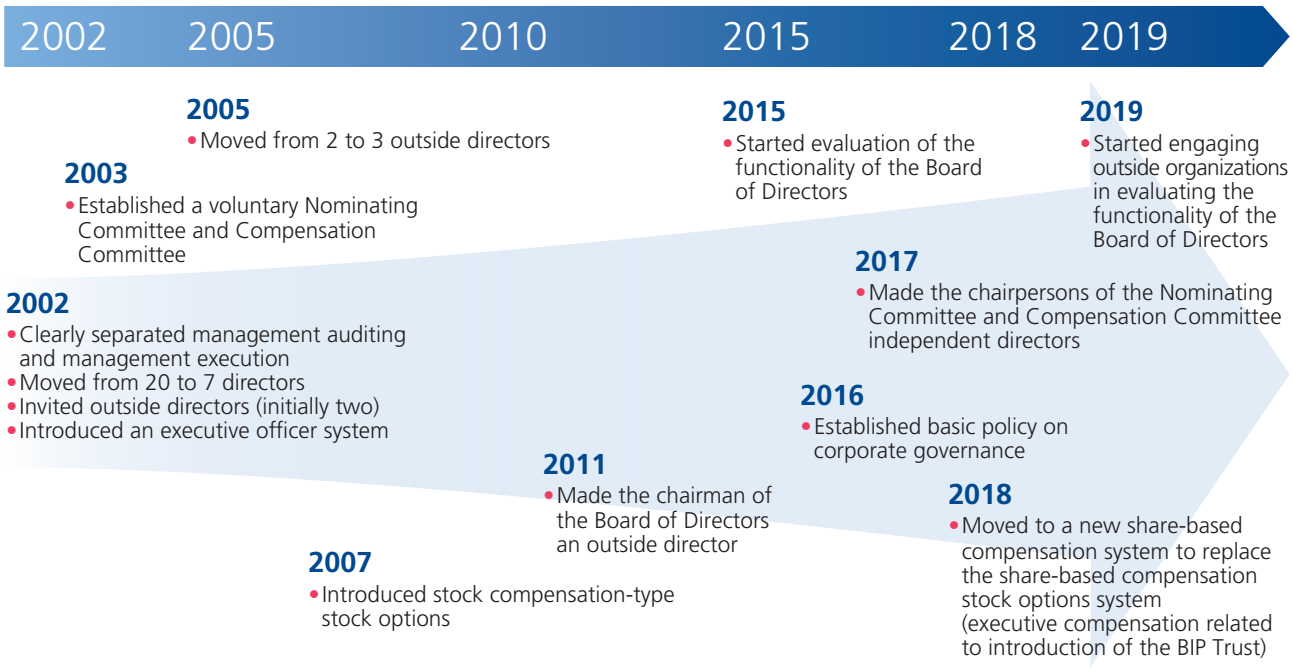
Method of Evaluation of the Functionality of the Board of Directors

AGC analyzes and evaluates the functionality of the Board of Directors every year.

In 2019, AGC evaluated its Board of Directors with the cooperation of external organizations. In conducting an individual interview of each director and engaging in discussion, the Group aimed to address issues not yet noticed internally, including enhancing the functionality of the Board of Directors and the future direction of the company.

Following the interviews, the Board of Directors verified the evaluation results and discussed measures to further enhance the board's functionality.

History of AGC governance reform



Summary of Evaluation Results and Future Efforts

The results of the evaluation showed AGC's Board of Directors, Nominating Committee and Compensation Committee to be fully apt and functional.

Following an active and open discussion in a small group regarding the questionnaire and individual interviews with reference to benchmark indicators, AGC's Board of Directors addressed management strategy and execution at AGC, concluding that AGC is being appropriately managed.

To further enhance the functionality of the Board of Directors moving forward, discussions will be held on the ideal function of the Board of Directors based on the AGC Group's business structure, including non-financial perspectives such as SDGs and ESG.

Development and Appointment of Human Resources in Management

Since 2002, the AGC Group has separated the management oversight and management execution functions, and has been operating the business units (companies/SBUs) together as a global group. From the beginning, the Group has been strategically working to develop and promote human resources in management, including appointing company presidents from countries other than Japan in its Architectural Glass and Automotive Glass businesses.

Specifically, for the purpose of improving the quality of the entire group and business management in a long-term and sustainable manner, the AGC Group will identify personnel from across the Group who may be appointed as Group management personnel, and encourage them to acquire the necessary experience and knowledge to be involved in management through strategic placements and training.

In addition, within the Nominating Committee, independent directors discuss and share information regarding human resources, such as requirements for directors and other executives at the AGC Group, programs for training successor candidates, and plans for placement and development. The Nominating Committee met 12 times in 2019 and held in-depth discussions. In addition, at the Global Leadership Session, a training program for general managers, an independent director gives lectures and discussions are conducted based on actual business management experiences. Through such efforts involving independent directors, the Group is working to enhance the set of candidates who will be responsible for the Group's management in the future.

AGC Group Governance System

To prevent scandals and compliance violations at its subsidiaries, the AGC Group has established management regulations on governance and internal control of these companies, and implements any measures necessary. The key to AGC's philosophy on this issue is ensuring that governance at the parent company, AGC, is effectively implemented. The Board of Directors and internal control systems at each subsidiary must also function reliably.

As a concrete example of the Group's initiatives in this area, a person with experience as president (or in a similar executive role) at a subsidiary, who also belongs to the corporate division of AGC, is dispatched to major subsidiaries in Japan and overseas, acting as a temporary director-cum-auditor to objectively and independently monitor and supervise management.

Compensation System

Basic Philosophy on Compensation System

In its Compensation Principles, the AGC Group 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

Compensation Determination Method

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

in Fiscal 2019

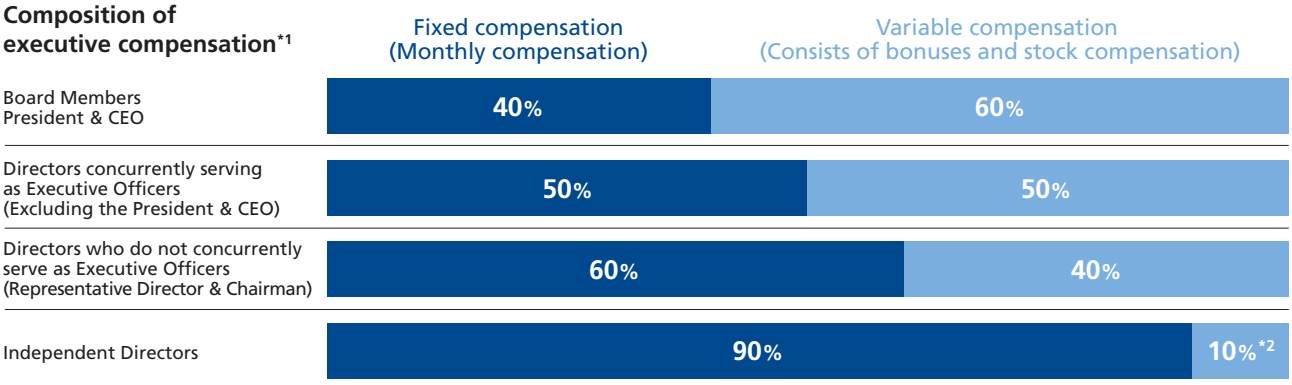
		Number of recipients	Total payment (millions of yen)
All directors		8	579
	Outside directors only	4	52
All corporate auditors		6	100
	Outside corporate auditors only	5	64

Composition of Compensation

For the AGC Group, which provides materials and solutions that tackle development from a long-term perspective, medium- and long-term technological development and investment in human resources and equipment are sources of competitiveness in addition to the Group's single-year business strategy. Accordingly, the Group has introduced an incentive system as one of the means for its executives to have a balanced view of the short, medium, and long term, and to further motivate them to achieve their goals for each time frame.

In addition to bonuses linked to organizational performance in a single year, the Group has introduced stock-based compensation, in which the number of shares granted is determined on the basis of performance and other factors within the period of the medium-term management plan. Under the stock-based compensation system, those granted shares must keep them while in office. This is done with the aim of motivating them to contribute to the improvement of corporate value over the medium to long term, and create mutual interests between the executives and shareholders.

Composition of executive compensation*1



*1 If none of the below applies, the matter is discussed within the Compensation Committee and the Board of Directors makes a resolution.
*2 Only stock compensation

Risk Management/Compliance

Risk Management Structure

The AGC Group has established the AGC Group Enterprise Risk Management Basic Policies and has formulated a system for risk management and crisis response.

As regards risk management, important risk factors in the group are defined based on internal regulations, and the risk management status is regularly discussed and monitored at management meetings and within the Board of Directors at AGC. In addition, individual risks in the Group's business operations for each business or project are analyzed by the Corporate Sections, in-house companies, and the Strategic Business Unit (SBU), who also investigate appropriate management measures in light of the risks. When necessary, the Group Management Committee and Board of Directors deliberate on matters of concern. In addition, with regard to risks pertaining to the AGC Group's compliance, the environment, disasters, quality and other factors, each division within the Group formulates and disseminates guidelines and other material, and conducts training and monitoring as appropriate.

With regard to crisis response, the Group has established a crisis management reporting line that promptly and reliably reports and shares information with the President and CEO and executive officers in accordance with internal rules in preparation for any unforeseen situations that may have a significant impact on the Group's business performance and financial position. In addition, a Group Taskforce Headquarters is immediately established at the discretion of the President and CEO and executive officers, which allows the Group to create a system that facilitates a prompt and appropriate initial response.

Compliance Structure

AGC has appointed a Chief Compliance Officer (CCO) as the person in charge of overseeing and promoting the AGC Group's compliance system. This position is held by an executive officer to whom authority has been transferred from the President and CEO. Under the CCO, the Group has established Global Compliance Leader and Global Compliance Committee, as a specialized organization for legal and corporate ethics compliance that plans and implements compliance measures within the Group. To behave strictly according to laws and corporate ethics, the AGC Group has formulated the AGC Group Code of Conduct, which defines common global compliance matters as well as compliance matters specific to certain countries and regions. Moreover, the Group uses a compliance system, and provides education and training on the topic of compliance.

To deal with reports and consultations related to compliance, the AGC Group has established a reporting/consulting counter (helpline). All AGC employees and executives of subsidiaries are obliged to submit a pledge that they will comply with the code of conduct.

The status of the group's compliance and the operating status of the notification and consultation system related to compliance are regularly reported to the Board of Directors of AGC. In addition, the AGC Group has established a Group legal management system in order to understand information on important legal issues and regularly report these issues to the Board of Directors.

With regard to internal audits of the Group, the Internal Audit Division and audit personnel assigned to each area audit the legality and appropriateness of the management and operation systems and business execution based on the annual audit plan and other guidelines. The results are reported to the President and CEO, and regularly reported to the Board of Directors. To ensure the credibility of the Group's financial reports based on the Financial Instruments and Exchange Act, the Group has stipulated the AGC Group Internal Control over Financial Reporting Implementation Regulations and has developed an internal control system for financial reporting.

Board of Directors, Audit & Supervisory Board Members and Executive Officers

(As of April 21, 2020)

Board of Directors

Takuya Shimamura
Representative Director, President & CEO

Apr. 1980	Joined Asahi Glass
Jan. 2009	Executive Officer and GM of Planning & Coordination Office, Chemicals Company
Jan. 2010	Executive Officer and Chemicals Company President
Jan. 2013	Senior Executive Officer and Electronics Company President
Jan. 2015	President & CEO
Mar. 2015	Representative Director and President & CEO (incumbent)

Yoshinori Hirai
Representative Director, Executive Vice President, CTO

Apr. 1987	Joined Asahi Glass
Jan. 2012	Executive Officer and GM of Business Development Office
Jan. 2014	Senior Executive Officer and GM of Technology General Division
Mar. 2014	Director and Senior Executive Officer and GM of Technology General Division
Jan. 2016	Director and Senior Executive Officer and CTO, GM of Technology General Division
Jan. 2018	Director and Executive Vice President and CTO, GM of Technology Division
Jan. 2019	Director and Executive Vice President and CTO (incumbent)

Yasuchika Hasegawa
Outside Director

Apr. 1970	Joined Takeda Pharmaceutical Company Limited
Jun. 1999	Director
Jun. 2003	President and CEO
Jun. 2014	Chairman of the Board of Directors
Mar. 2017	Director at AGC (incumbent)
Jun. 2017	Advisor at Takeda Pharmaceutical Company Limited
Jun. 2019	Retired as advisor at Takeda Pharmaceutical Company Limited

Keiko Honda
Outside Director

Apr. 1984	Joined Bain & Company Japan Incorporated
May. 1986	Joined Shearson Lehman Brothers Securities Co., Ltd.
Jul. 1989	Joined McKinsey & Company, Inc. Japan Branch
Jul. 1999	Partner
Jul. 2007	Director (Senior Partner)
Jul. 2013	CEO of Multilateral Investment Guarantee Agency, World Bank Group
Oct. 2019	Resigned as CEO of Multilateral Investment Guarantee Agency, World Bank Group
Mar. 2020	Director at AGC (incumbent)

Shinji Miyaji
Representative Director and Senior Executive Vice President
CFO, CCO
GM of Corporate Planning General Division

Aug. 1990	Joined Asahi Glass
Jan. 2010	Executive Officer and Group Leader of Corporate Planning Group, Office of the President
Nov. 2012	Executive Officer (Senior Vice President of AGC Flat Glass North America)
Feb. 2013	Executive Officer and Regional President of North America, Glass Company
Oct. 2013	Executive Officer and GM of Strategy Office, Glass Company
Jan. 2014	Executive Officer and GM of Electronics General Division, Electronics Company
Jan. 2015	Senior Executive Officer and GM of Office of the President
Mar. 2015	Director and Senior Executive Officer of Office of the President
Jan. 2016	Director and Senior Executive Officer and CFO, GM of Corporate Planning Division
Jan. 2018	Director and Executive Vice President and CFO, CCO
Oct. 2019	Director and Executive Vice President and CFO, CCO, GM of Corporate Planning General Division
Mar. 2020	Director and Senior Executive Vice President and CFO, CCO, GM of Corporate Planning General Division (incumbent)

Kazuhiko Ishimura
Director

Apr. 1979	Joined Asahi Glass
Jan. 2006	Executive Officer
Jan. 2007	Senior Executive Officer and GM of Electronics & Energy General Div.
Mar. 2008	Director and President & COO
Jan. 2010	Director and President & CEO
Jan. 2015	Representative Director & Chairman
Mar. 2020	Director (incumbent)

Hiroyuki Yanagi
Outside Director

Apr. 1978	Joined Yamaha Motor Co., Ltd.
Mar. 2007	Executive Officer
Mar. 2009	Senior Executive Officer
Mar. 2010	President and CEO
Jan. 2018	Chairman of the Board of Directors (incumbent)
Mar. 2019	Director at AGC (incumbent)

Audit & Supervisory Board Members

Tetsuo Tatsuno
Audit & Supervisory Board Member

Apr. 1982	Joined AGC
Jan. 2009	Executive Officer and GM of Accounting Center
Jul. 2009	Executive Officer and Deputy GM of Finance & Control Office
Apr. 2010	Executive Officer and Vice President of AGC Glass Company (in charge of planning and management)
Jan. 2013	Executive Officer and GM of Finance & Control Office
Jan. 2015	Senior Executive Officer and GM of Finance & Control Office
Jan. 2016	Senior Executive Officer and GM of Finance & Control Division
Jan. 2017	Senior Executive Officer and Assistant to President
Mar. 2017	Full-time Auditor (incumbent)

Yoshiyuki Morimoto
Audit & Supervisory Board Member (Outside)

Apr. 1981	Joined Bridgestone Tire Co., Ltd. (currently Bridgestone Co., Ltd.)
Mar. 2008	Executive Officer
Mar. 2011	Senior Executive Officer
Mar. 2012	Director and Senior Executive Officer
Jan. 2013	Director and Executive Vice President, CTO and Technical Supervisor
Mar. 2015	Executive Vice President
Mar. 2016	Advisor
Dec. 2017	Resigned as Advisor
Mar. 2019	Corporate Auditor at AGC (incumbent)

Akio Sakumiya
Audit & Supervisory Board Member (Outside)

Apr. 1975	Joined Tateishi Electric Co., Ltd. (currently OMRON Corporation)
Jun. 2003	Executive Officer
Jun. 2010	Senior Executive Officer
Jun. 2011	Executive Vice President
Jun. 2014	Senior Executive Vice President
Jun. 2017	Resigned as Executive Vice President
Mar. 2018	Auditor at AGC (incumbent)

Yaeko Takeoka
Audit & Supervisory Board Member (Outside)

Apr. 1985	Certified as attorney (Daini Tokyo Bar Association)
Jan. 2007	Joined KOHWA SOHGOH LAW OFFICES (incumbent)
Mar. 2019	Auditor at AGC (incumbent)

Executive Officers

•President & CEO
Takuya Shimamura
CEO

•Senior Executive Vice President
Shinji Miyaji
CFO, COO, GM of Corporate Planning General Div.

•Executive Vice Presidents
Yoshinori Hirai
CTO

Masao Nemoto
President of Chemicals Company

•Senior Executive Officers
Jean-François Heris
President of Building & Industrial Glass Company

Yoshinori Kobayashi
President of Automotive Company

Kenzo Moriyama
President of Electronics Company

Takashi Misu
GM of Human Resources Div.

Hideyuki Kurata
GM of Technology General Div.

•Executive Officers
Kimikazu Ichikawa
Chief Representative of AGC Group for Asia Pacific

Shigekuni Inoue
GM of EHSQ General Div., GM of AGC Yokohama Technical Center

Seigo Washinoue
GM of Display Glass General Div., Electronics Company

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

Masahiro Takeda
Regional President for Asia Pacific, Building & Industrial Glass Company

Tatsuo Sugiyama
GM of Technology Office, Automotive Company

Jean-Marc Meunier
Regional President for Europe, Automotive Company

Naoki Sugimoto
GM of Materials Integration Laboratories, Technology General Div.

Fumiaki Hayashi
GM of Purchase & Logistics Div.

Katsufumi Yajima
Senior Vice President of Automotive Company

Toshiro Kasuya
GM of Finance & Control Div.

Tadashi Hiraoka
GM of Technology Management General Div., Chemicals Company

Philippe Bastien
Regional President for Europe, Building & Industrial Glass Company

Toshihiro Ueda
Chief Representative of AGC Group for China

Atsushi Ichikawa
Senior Vice President of Building & Industrial Glass Company

Yoshio Takegawa
GM of Strategy & Planning Div., Corporate Planning General Div.

Satoshi Takada
GM of Business Development Div., GM of Multi-Material General Div.

Hiroyoshi Kitagawa
GM of Performance Chemicals General Div., Chemicals Company

Junichi Kobayashi
GM of Legal Div., GM of General Affairs Div.

Nobuyuki Suzuki
GM of Electronic Materials General Div., Electronics Company

Hiroki Kamiya
GM of Innovative Technology Laboratories, Technology General Div.

Shinya Mine
GM of Production Technology Div., Technology General Div.

Naoko Araki
GM of Internal Audit Div.

A Discussion among Outside Directors

Advanced Corporate Governance to Realize Transformation of the AGC Group

AGC has a total of seven board members, including three outside directors (as of February 2020). These outside directors recently gathered to discuss the Group's progress in "developing the human resources necessary to manage the Group in the future" and "promoting further diversity"—both mentioned in last year's AGC Integrated Report—as well as the ideal state of corporate governance at AGC and other challenges moving forward.

Directly engaging AGC executives in detailed discussions on developing human resources for management

—Last year's Integrated Report covered the issue of "developing the human resources necessary to manage the Group in the future." What has happened in this regard since then?

Egawa: At Nominating Committee meetings in 2019, we discussed the criteria and processes regarding personnel selection, including the qualities required of future executive managers. We also reviewed our efforts to date and identified challenges in discovering and developing human resources for future management roles in light of recent changes in our business environment. For example, AGC has an in-house company system, and this limits opportunities to acquire management experience beyond established boundaries. As a result, we still need to investigate the best method to determine ideal characteristics for human resources responsible for managing the Group as a whole, including the CEO position, and promote their development.

Hasegawa: I too participated in the discussions as a member of the Nominating Committee, and saw that our discussions were getting deeper with each meeting. I have never seen the development and appointment of human resources for management discussed as deeply as I have at AGC. It is clear that the Group is tackling this issue head-on.

Yanagi: AGC has a well-developed mechanism for handling human resources for management. The process within the Group of intentionally providing management experience for specific generations of employees at a certain point in their career to develop future executives is working smoothly. However, I believe the Group's employees could start gaining experience from an even younger age and be appointed as executive officers even sooner. The most important thing in human resource development is to foster individuals who embody the corporate brand. We need a great number of human resources like this, and the employees that shine should take the top positions. To that end, it is essential that we are clear about what the AGC brand is and what it embodies, and that we share this information with the Group's employees.

Egawa: Moreover, managers in the future will need to take the lead on digitalization which is vital in terms of increasing productivity and in creating new business models.

Hasegawa: I agree. But while the people at the top don't have to be well versed in specific digital technologies, they do need to understand the essence of digitalization and its future potential and indicate what direction the company should move in.

Yanagi: To create a new business, it is essential to combine technologies, including digital tech. This requires experts in specialized fields and human resources who can analyze general trends in technology and outline scenarios that link technologies to markets. It is important for us to develop human resources with these abilities in the future.

Welcoming diverse human resources into an environment where everyone can demonstrate their abilities

—Last year's report cited the "further promotion of diversity" as an important issue. How do you view the current status of diversity at AGC and what issues remain relevant?

Egawa: AGC has been promoting diversity to execute its growth strategy in response to the global expansion of the Group's business. However, there are still only three non-Japanese executive officers. Given the geographical expansion of our business areas, I believe it is necessary to hire more executives from other countries and regions.

Hasegawa: It's very important to define which profiles are the best match for management and departmental executive positions. Then we must hire

the most appropriate candidate and help them develop. If no such individual exists within the company, we should look for an external candidate. In this manner, we can realize diversity that impels our business to new heights.

Egawa: That's right. Intrinsic diversity in the form of a wealth of abilities and experience is more important than outward-facing attributes. Compared to people working at companies abroad, Japanese employees still have less experience in changing jobs. For this reason, we should consider making more active use of newly hired career employees with different experiences and skills. But no matter how many people we have, it doesn't make sense if they can't fully demonstrate their abilities. Based on the results of the engagement surveys reported by the Board of Directors, it is important to create an environment where all of our employees can demonstrate their abilities in an active role.

Yanagi: I have been an outside director for 10 months, and while AGC has a wealth of people who can address technology, there aren't as many who can address the market. Companies today are engaged in an all-out battle in terms of global competition, so we need people who are knowledgeable in both technology and the market. Although each area may have different personnel in charge, we should develop individuals with diverse skills to move forward with agility. I think that will lead to the realization of diversity that will contribute to the execution of our business strategies.

Companies operating internationally should be responsible for the future of global society

—So far, we have discussed "developing the human resources necessary to manage the Group in the future" and "promoting further diversity." What other issues do you see AGC is facing right now?

Egawa: The biggest issue on the business front is improving the profitability of the glass business. In the past, the architectural glass business was in a difficult situation, but recently the automotive glass business has also become very challenging. Turning advanced technology into profit is a major challenge.

Yanagi: The market environment is deteriorating in the glass business. When the market environment enters a negative cycle, it is important to make quick decisions and take thorough measures. We have world-class technology and a great deal of human resources who are passionate about glass. If we take advantage of these two factors, we can transform our business.

Hasegawa: As you said, strengthening the earnings base of the core businesses, including the glass business, is imperative. But it will be difficult to achieve sustainable growth through this strategy alone. AGC is a company with a great deal of potential and strong human resources, particularly engineers and researchers. Yet if we cannot secure sufficient human resources for our strategic

businesses in the future, it will be necessary to headhunt outside the company and take more aggressive measures to acquire talented people and businesses through M&As.

Egawa: We will also need to think from the perspective of sustainability. In the future, important issues related to SDGs and ESG should be determined alongside specific goals. Discussions have already begun on this topic within the Board of Directors. By publicizing these initiatives externally, we will be recognized as a company that wants to work for future generations, and in turn attract high-quality human resources.

Hasegawa: Companies that operate globally have a responsibility for the future of our global society. As a materials manufacturer, we have a wide range of themes available to us, but we must tackle them head-on.

AGC must further strengthen its cooperation between in-house companies—global competition is a battle requiring all hands on deck

—In closing, can you share your opinions and suggestions from your perspective as outside directors regarding how the AGC Group's corporate governance can be further strengthened?

Egawa: I believe that AGC is one of the most effective Japanese companies in terms of supervising management, including the appointment of outside directors as Chairman of the Board of Directors, Chairman of the Nominating Committee and Chairman of the Compensation Committee. However, to respond to ever-greater changes in the business environment, it will be necessary to continue to create new businesses, and our level of corporate governance must be enhanced even further. I believe that our outside directors work from an objective standpoint as they oversee corporate execution,

acting as partners that make AGC a better global company. I myself will retire in March, but I would like to ask the other outside directors to renew their commitment in both supervisory and partnership-centric roles.

Yanagi: AGC is very strong in terms of vertical organization, but I feel that the horizontal initiatives across the group are slightly lacking. In the future, to compete globally through the collective strength of the Group, it will be necessary to further strengthen cooperation between in-house companies. For my part, I hope to use my corporate management experience to support Group-wide initiatives, including quality assurance and branding strategies. I would also like to actively visit sites and deepen my understanding of the business, rather than just attending meetings of the Board of Directors held at business sites.

Hasegawa: AGC is undergoing a period of major seismic shift in response to changes in our business environment, which include globalization, digitalization and sustainability. We must actively promote technological innovation and the creation of new business models to achieve true transformation. As Chairman of the Board of Directors, I will ensure that our efforts to deal with these challenges do not slow down or head in the wrong direction.

Financial Data

Organizations Covered in the Report: AGC Inc. and its consolidated subsidiaries
Reporting Period: Consolidated fiscal year ending December 31
All numeric data up to and including FY2011 is based on Japan's financial reporting standards.
From FY2012 the data is based on International Financial Reporting Standards (IFRS).

	2010 J-GAAP	2011 J-GAAP	2012 IFRS
Business results			
Net sales	¥1,288,947	¥1,214,672	¥1,189,952
Ordinary income	229,205	165,663	101,751
Recurring profit	226,806	166,739	
Profit before tax			74,998
Profit for the year	123,184	95,290	52,512
attributable to owners of the parent			48,433
Depreciation	109,966	110,056	117,856
CAPEX	117,439	152,705	155,334
R&D	39,399	46,442	47,074
Cash flows from operating activities	285,669	152,223	170,165
Cash flows from investing activities	(124,644)	(123,581)	(158,646)
Free cash flow	161,025	28,641	11,519
Major investment indicators			
Market value	¥1,107,467	¥ 746,737	¥ 723,394
Return on equity*1	15.8%	11.8%	5.8%
Return on assets*2	12.9%	9.6%	5.6%
Price/earnings ratio (PER) (times)	8.99	7.89	14.94
Price/book value ratio (PBR) (times)	1.37	0.92	0.80
Return on invested capital (ROIC)*3	8.9%	7.1%	2.9%
EBITDA*4	308,401	259,444	200,044
Earnings (per share)*5,6	489.20	379.40	197.25
Cash dividends per share (yen)*6	130.00	130.00	130.00
Consolidated total return	25%	40%	69%
Asset and efficiency indicators			
Total assets	¥1,764,038	¥1,691,556	¥1,916,394
Property, plant and equipment	861,395	842,563	956,806
Inventories	176,353	194,325	208,031
Trade receivables	237,962	233,675	244,396
Total asset turnover (times)*7	0.73	0.70	0.66
Fixed asset turnover (times)*8	1.44	1.43	1.32
Inventory turnover (months)*9	2.6	2.8	3.0
Receivables turnover (months)*10	2.2	2.3	2.4
Stability			
Equity*11	¥ 808,242	¥ 807,432	¥ 908,304
Equity ratio	45.8%	47.7%	47.4%
Debt-to-equity ratio (times)*12	0.60	0.57	0.56

*1 (J-GAAP) Return on equity = Net income/Shareholders' equity
(IFRS) Return on equity = Profit for the year attributable to owners of the parent/Equity attributable to owners of the parent
*2 Return on assets = Operating profit/Total assets
*3 (J-GAAP) Return on Invested Capital = Net income/Average invested capital
(IFRS) Return on Invested Capital = Profit for the year attributable to owners of the parent/Average invested capital
Invested capital = Total equity + Interest-bearing debt
*4 Earnings before interest, tax, depreciation and amortization (EBITDA) = Profit before taxes + Depreciation + Interest expenses
*5 Profit for the year attributable to owners of the parent in IFRS

(millions of yen)

2013 IFRS	2014 IFRS	2015 IFRS	2016 IFRS	2017 IFRS	2018 IFRS	2019 IFRS
¥1,320,006	¥1,348,308	¥1,326,293	¥1,282,570	¥1,463,532	¥1,522,904	¥1,518,039
79,894	62,131	71,172	96,292	119,646	120,555	101,624
44,381	41,163	84,522	67,563	114,424	128,404	76,213
19,023	20,475	46,287	53,362	79,297	101,991	55,515
16,139	15,913	42,906	47,438	69,225	89,593	44,434
135,751	137,200	137,381	121,803	128,226	121,668	143,361
138,480	118,170	125,103	126,025	165,095	230,598	207,661
46,882	44,758	38,927	39,212	43,912	45,755	47,450
167,371	135,790	187,170	203,637	203,504	189,287	191,906
(145,978)	(108,754)	(115,951)	(113,596)	(209,560)	(194,450)	(182,636)
21,392	27,035	71,218	90,041	(6,055)	(5,162)	9,269
¥ 755,867	¥ 680,791	¥ 804,604	¥ 920,461	¥1,102,752	¥ 758,663	¥ 869,552
1.6%	1.4%	3.9%	4.3%	6.1%	7.7%	3.9%
4.0%	3.0%	3.5%	4.8%	5.7%	5.4%	4.4%
46.81	42.77	18.75	19.40	16.15	8.59	19.57
0.70	0.61	0.74	0.84	0.93	0.67	0.75
1.0%	0.9%	2.6%	2.9%	4.1%	5.0%	2.4%
186,570	185,905	228,381	195,767	249,880	259,425	231,857
68.65	67.90	184.85	204.25	300.65	397.58	199.95
90.00	90.00	90.00	90.00	105.00	115.00	120.00
129%	131%	49%	65%	56%	51%	60%
¥2,120,629	¥2,077,338	¥1,991,262	¥1,981,451	¥2,228,560	¥2,235,776	¥2,335,415
1,059,946	1,066,193	982,296	937,869	1,060,601	1,108,934	1,177,691
236,611	239,497	235,374	227,284	261,708	277,014	291,224
260,901	262,091	241,294	241,476	260,497	260,111	264,102
0.65	0.64	0.65	0.65	0.70	0.68	0.66
1.31	1.27	1.29	1.34	1.46	1.40	1.33
2.7	2.8	2.9	3.0	2.8	2.9	3.1
2.3	2.3	2.3	2.3	2.1	2.1	2.1
¥1,087,216	¥1,113,126	¥1,094,172	¥1,095,438	¥1,184,034	¥1,137,204	¥1,157,097
51.3%	53.6%	54.9%	55.3%	53.1%	50.9%	49.5%
0.50	0.42	0.40	0.37	0.38	0.43	0.47

*6 The Company consolidated its common shares at a ratio of 5 shares to 1 share on July 1, 2017. Accordingly, per share data are calculated on the assumption that the consolidation of shares is conducted at the beginning of fiscal 2007.
*7 Total asset turnover = Net sales/Total assets
*8 Tangible fixed asset turnover = Net sales/Tangible fixed assets (Property, plant and equipment)
*9 Inventory turnover = Inventories/(Cost of sales/12)
*10 Receivables turnover = Trade notes and accounts receivable (Trade receivable)/(Net sales/12)
*11 Shareholder's equity = Net Assets - Treasury shares - Minority interest
*12 Debt-to-equity ratio = Interest-bearing debts/Net assets (equity)

External Evaluations

The main SRI/ESG investment indexes and ratings that the AGC Group has been selected for, as well as the main external evaluations of the AGC Group's ESG activities, are listed as follows.

Inclusion in the SRI/ESG Investment Indices

AGC has been selected to feature on the SRI index FTSE4 Good Index Series created by FTSE Russell (UK) and on the ESG integrated index FTSE Blossom Japan Index that reflects the performance of Japanese companies demonstrating excellent Environmental, Social and Governance (ESG) practices.

AGC has been selected for the MSCI Japan ESG Select Leaders Index, an integrated ESG index featuring companies that have been highly evaluated for their ESG practices. The index contains a selection of companies from the MSCI ESG Leaders Index* that have already been highly evaluated for their ESG practices, as well as companies from the MSCI Japan IMI Top 500 Index.

In the SRI index Ethibel Investment Register, created by the non-profit organization Forum Ethibel (Belgium), AGC was selected for the highest-ranking Ethibel PIONEER Investment Register.

AGC was selected for the SRI index Euronext Vigeo World 120 Index jointly created by the SRI research firm Vigeo Eiris (France, UK) and NYSE Euronext (USA).

External Evaluation of ESG Activities

CDP, an international non-profit organization addressing environmental issues including climate change, gave the AGC Group the highest possible rating in the field of water security as an "A List" company that excels in sustainable water resource management.

AGC was selected by the Ministry of Economy, Trade and Industry and the Tokyo Stock Exchange as a "Nadeshiko Brand" in fiscal 2019 as a company that excels in promoting the advancement of women.

AGC acquired certification in 2020 as a "White 500" company through the Health & Productivity Management Outstanding Organizations Recognition Program of the Ministry of Economy, Trade and Industry and the Nippon Kenko Kaigi (Japan Health Council) in recognition of initiatives to promote strategic health management for its employees.

In a sustainability evaluation by EcoVadis, the AGC Kashima Plant received gold certification for being in the top 5% of companies in overall evaluation since 2017, and received platinum certification in 2020 for being in the top 1% of the companies surveyed. The Chiba Plant's evaluation results will be finalized in July 2020.

* THE INCLUSION OF AGC Inc. IN ANY MSCI INDEX, AND THE USE OF MSCI LOGOS, TRADEMARKS, SERVICE MARKS OR INDEX NAMES HEREIN, DO NOT CONSTITUTE A SPONSORSHIP, ENDORSEMENT OR PROMOTION OF AGC Inc. BY MSCI OR ANY OF ITS AFFILIATES. THE MSCI INDEXES ARE THE EXCLUSIVE PROPERTY OF MSCI. MSCI AND THE MSCI INDEX NAMES AND LOGOS ARE TRADEMARKS OR SERVICE MARKS OF MSCI OR ITS AFFILIATES.

Corporate Information/Stock Information

(As of December 31, 2019)

Head office	1-5-1, Marunouchi, Chiyoda-ku, Tokyo 100-8405 JAPAN
Company name	AGC Inc.
English company name	AGC Inc.
Founded	September 8, 1907
Incorporated	June 1, 1950
Representative	Takuya Shimamura Representative Director, President
Capital	90,873 million yen
Number of consolidated subsidiaries	213 (including 177 overseas)

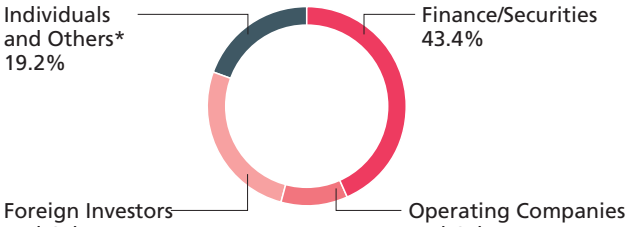
Information on stocks

Stock listings	Tokyo
Industry	Glass and Ceramics products
Securities code	5201
Unit number of shares	100
Fiscal year	From January 1 to December 31
Ordinary general meeting of shareholders	March

Stocks

Stock authorized	400,000,000 shares
Stock issued	227,441,381 shares
Total number of shareholders	61,744

Stock information



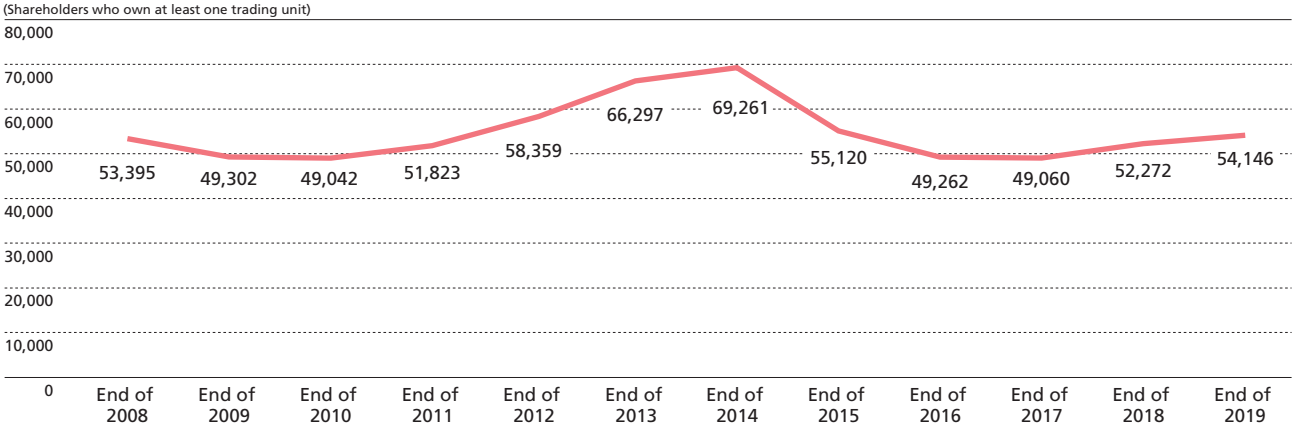
* 2.6% of treasury stock is included.

Major shareholders

	Number of shares held (1,000 shares)	Percentage of total (%)
The Master Trust Bank of Japan, Ltd. (Trust Account)	18,886	8.52
Japan Trustee Services Bank, Ltd. (Trust Account)	12,867	5.81
Meiji Yasuda Life Insurance Company	9,615	4.34
Barclays Securities Japan Limited	6,057	2.73
The Asahi Glass Foundation	5,982	2.70
Mitsubishi Estate Co., Ltd.	4,540	2.05
Asahi Glass Business Partner Shareholding Association	4,318	1.95
Japan Trustee Services Bank, Ltd. (Trust Account 5)	4,009	1.81
SMBC Nikko Securities Co., Ltd.	3,771	1.70
Japan Trustee Services Bank, Ltd. (Trust Account 9)	3,757	1.70

* In addition to the above, AGC Inc. holds treasury stock of 5,870,670 shares.
* The shareholding ratio is calculated excluding treasury stock.

Trend in shareholder number



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