

AGC Integrated Report 2021

For the Year Ended December 31, 2020

AGC
Your Dreams, Our Challenge





Shinji Miyaji
Representative Director,
Senior Executive Vice President, CFO, CCO

Yoshinori Hirai
Representative Director,
President & CEO

Hideyuki Kurata
Director,
Senior Executive Officer, CTO

Embarking on a New Voyage

With the COVID-19 pandemic, accelerated climate change, and increasingly complex international relations, the AGC Group's business environment is undergoing even-more dramatic changes. Against this backdrop, the Group launched a new senior management team in January 2021.

For more than 110 years, the AGC Group has continued to create numerous businesses by anticipating changes in society and catering to customer needs. For the AGC Group, which provides a wide range of materials and solutions that support society, changes in society are also opportunities to create new value. Willing to transform ourselves, we will steer a course toward the realization of a sustainable world, overcome the tempestuous seas of change, and move forward with our sails firmly set.

Brand Statement

Your Dreams, Our Challenge

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

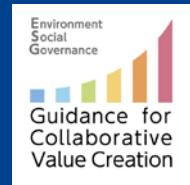
Editorial Policy

This report describes the AGC Group's initiatives for the long-term, sustainable enhancement of corporate value, focusing on a newly formulated long-term management strategy and Medium-Term Management Plan.

In accordance with its **"Look Beyond"** vision, the AGC Group is enhancing corporate value on a sustainable basis over the long term. With investors and a wide range of other stakeholders as its target readers, *AGC Integrated Report 2021* explains the management approach and specific measures that the Group is taking to enhance corporate value.

Along with messages from the new senior management team, this year's report provides detailed explanations of the preparation processes and content of the newly formulated long-term management strategy, Vision 2030, and the Medium-Term Management Plan, **AGC plus-2023**. We sincerely hope that this report will deepen readers' understanding of the far-sighted approach to business management that has always been our hallmark.

Further, in compiling this report, we referred to *Guidance for Collaborative Value Creation*, issued by Japan's Ministry of Economy, Trade and Industry.



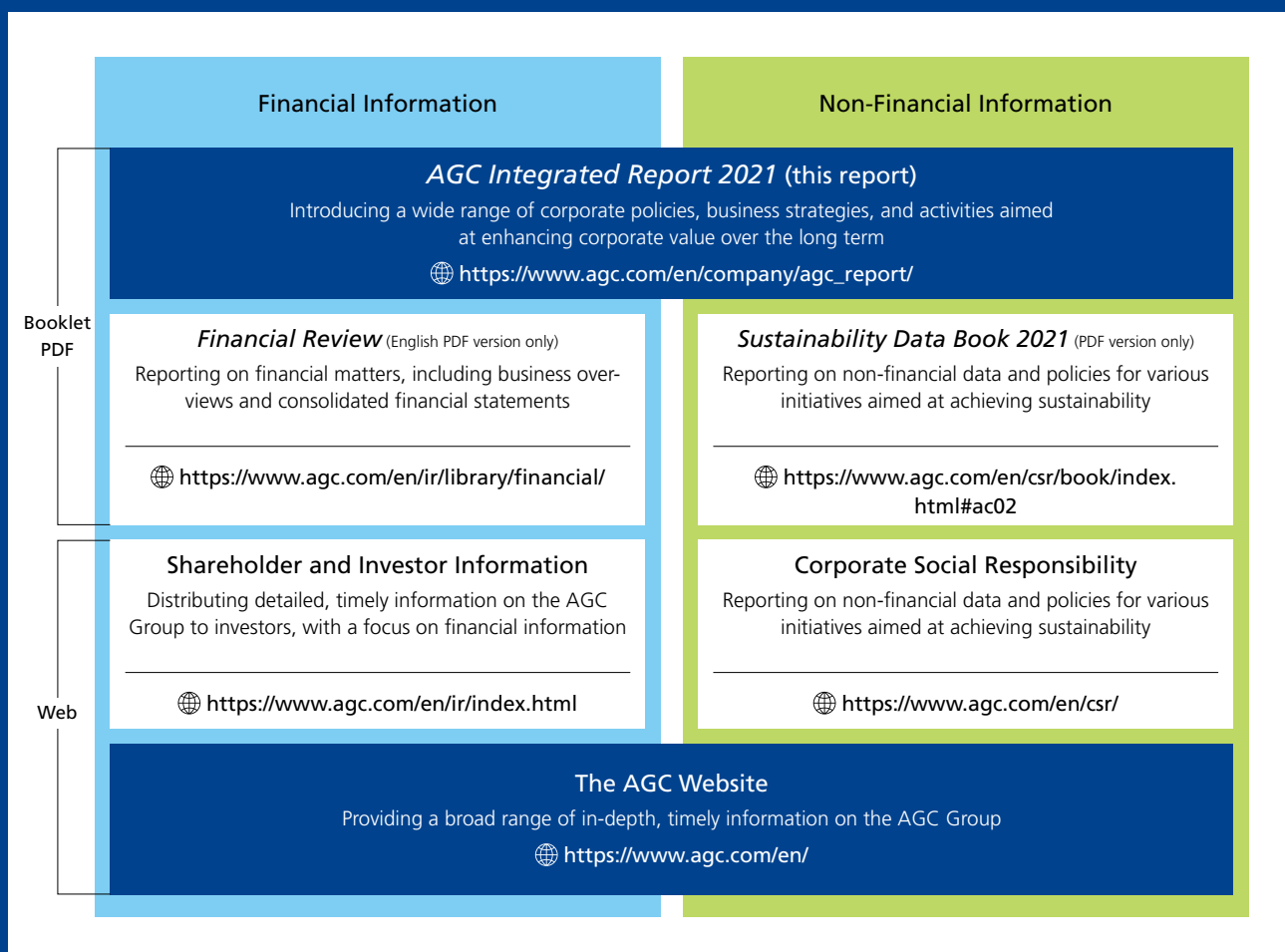
Reporting scope (report issued in June 2021)

Reporting period: January 1 to December 31, 2020

Reporting organizations: AGC Inc. and its 217 consolidated subsidiaries in and outside Japan

Principal expressions and their scope: "The AGC Group" refers to the abovementioned reporting organizations. "AGC" refers to AGC Inc. on a non-consolidated basis.

Main Communication Tools of the AGC Group



Social Media

YouTube

<https://www.youtube.com/user/AGCAsahiGlass>



Facebook

<https://www.facebook.com/agc.global>



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This section provides the basic information needed to understand the AGC Group's corporate value enhancement initiatives.

Yoshinori Hirai—who became president & CEO in January 2021—explains how the AGC Group will elevate its long-term corporate value.



Shinji Miyaji, the Group's chief financial officer, promotes understanding of the Group's far-sighted business management by explaining the formulation and giving an overview of the Group's new long-term management strategy and Medium-Term Management Plan.



We sought advice on the future from our three outside directors.



The presidents of each in-house company explain their strategies.



This part of the report focuses on initiatives aimed at strengthening the management foundations that support the AGC Group's sustainability.

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Forward-looking statements about forecasts, expectations, and plans in this report are based on the latest information available to the AGC Group at the time of compilation. However, please be forewarned that actual results and events could differ materially from these forward-looking statements due to such factors as changes in the business environment.

The AGC Group as a Whole

AGC's Group Vision

“Look Beyond”

“**Look Beyond**” is the AGC Group’s corporate philosophy underpinning all of the AGC Group’s business and social activities. When embarking on integrated global management in April 2002, the Group formulated this vision to ensure that its employees around the world would continue to evolve as one.

“**Look Beyond**” calls for the following mindset.

“**Look Beyond**” Anticipate and envision the future,

“**Look Beyond**” Have perspectives beyond our own fields of expertise, and

“**Look Beyond**” Pursue innovations, not becoming complacent with the status quo.

By realizing its burgeoning potential, the entire Group will continue providing the world with value.

The structure and three elements of “**Look Beyond**”

Our Mission

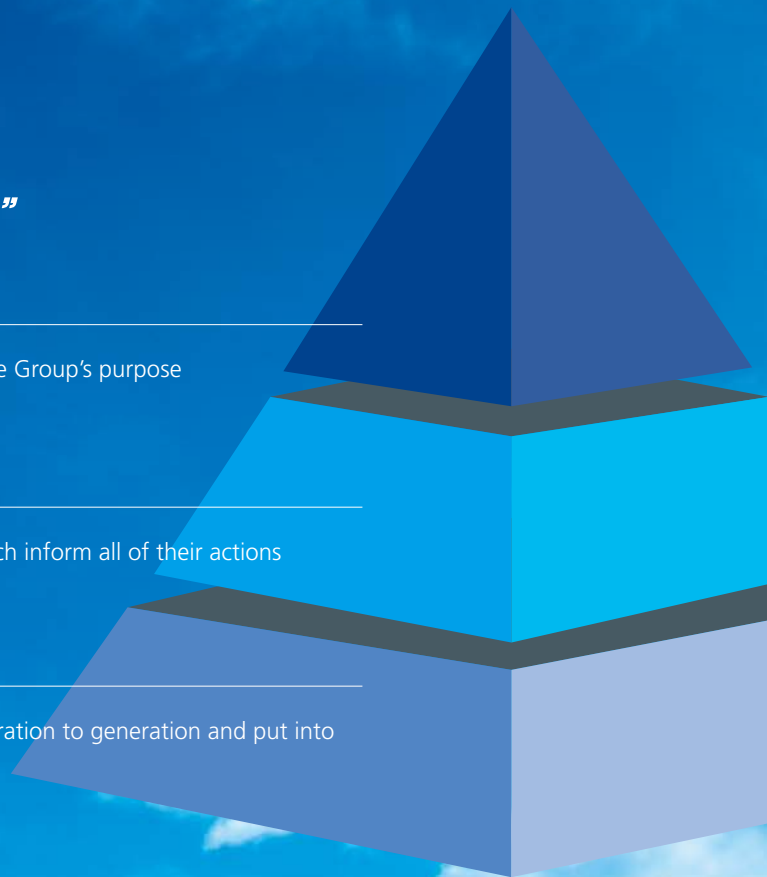
Setting out the value that the AGC Group should offer as well as the Group’s purpose

Our Shared Values

The key ideas that are shared by all AGC Group employees and which inform all of their actions

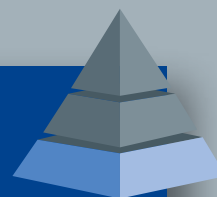
Our Spirit

Our fundamental mindset, which has been passed down from generation to generation and put into practice by all of our employees





Our Spirit



“Never take the easy way out,
but confront difficulties”

At the beginning of the 20th century, as Japan’s modernization continued apace and a plethora of industries were springing up, Toshiya Iwasaki, the founder of AGC, focused his attention on realizing the domestic production of flat glass.

At the time, demand for window glass was growing in Japan due to an increase in Western-style buildings, but the country was still dependent on imports of flat glass from overseas. This was because many different companies had tried to manufacture flat glass domestically, but all had failed as they were unable to compete with imported products.

Nonetheless, with the aim of creating a business that would help advance his society, Iwasaki decided to tackle the challenging problem. “I am prepared to face difficulties. Even if it takes a lifetime, I will realize domestic production.” With this declaration of intent, in 1907 he established Asahi Glass Company, the predecessor of AGC, and began constructing a large-scale factory that incorporated technology from Belgium. In 1909, the factory was completed and achieved industrial production of flat glass for the first time in Japan. Difficulties persisted, however, as the Company was still unable to match the quality and prices of imported products. Undaunted, Iwasaki introduced new technology from the United States to a factory completed in 1914, thereby bringing the prospect of rivaling imported products within reach. Furthermore, the outbreak of World War I halted imports of flat glass from Europe, providing a tailwind that rapidly spread domestically produced flat glass. Thus, Iwasaki’s unwavering commitment over half a lifetime finally bore fruit.

Iwasaki summed up his founding spirit with the motto “Never take the easy way out, but confront difficulties.” In evidence when our predecessors took on the ambitious goal of manufacturing flat glass domestically, this mindset has been passed down through the generations to the present day and remains the starting point of all of our business activities.





Our Shared Values

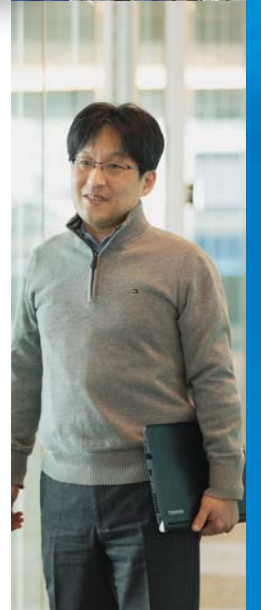
Innovation & Operational Excellence
Diversity Environment Integrity



Since its beginnings in the manufacture and sale of flat glass, the AGC Group has broadened its horizons and increased its business lines to encompass chemicals, ceramics, and a host of other products. At the same time, the Group has developed its businesses globally and currently employs approximately 56,200 people in more than 30 countries and regions. Regardless of their business, country, or region, each of our employees shares the four key values of Innovation & Operational Excellence, Diversity, Environment, and Integrity as the basis for everything they do.

Innovation & Operational Excellence

- We will seek innovations in technology, products, and services beyond conventional concepts and frameworks.
- We will create value directed at our current and potential customer needs, accounting for changes in the business environment and social and market evolution.
- We will continuously improve all aspects of our operations, striving to achieve benchmark performance.



Diversity

- We will respect the diversity of individuals with varied capabilities and personalities.
- We will respect cultural diversity in terms of race, ethnicity, religion, language, and nationality.
- We will respect different perspectives and opinions at all times.

Environment

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

Integrity

- We will build open and fair relationships with all of our stakeholders based on the highest ethical standards.
- We will comply with all applicable laws and regulations.
- We will fulfill our contractual and legal responsibilities to achieve customer satisfaction and trust.



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.

By providing a wide range of products and services in various fields, the AGC Group has contributed to people's peace of mind, safety, and comfort worldwide. Moreover, the Group boasts the largest shares of the global markets for many products, including float glass, automotive glass, and fluorinated resin (Fluon™ ETFE). These market shares are a testament to the trust placed in us by customers.

The AGC Group aims to continue being the first choice solution provider for customers by building long-term relationships of trust with them through the provision of unique materials and solutions developed using the Group's 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.

In the electronics field, we provide materials and components for displays and electronic equipment used in a variety of business situations as well as materials and components for semiconductors and communications equipment—which will be indispensable in the coming Internet of Things (IoT) and AI era as well as for the practical realization of 5G.

In the life science field, we provide materials and services for pharmaceuticals and agrochemicals that cater to demand resulting from population growth, food shortages, longer life expectancy, and increasingly sophisticated medical needs.

In the mobility field, we provide a variety of products that are essential to transportation equipment and which contribute to the realization of next-generation mobility that is safe and comfortable, including lightweight, high-performance window glass and cover glass for car-mounted displays.

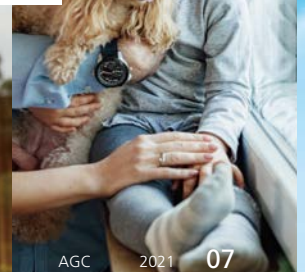
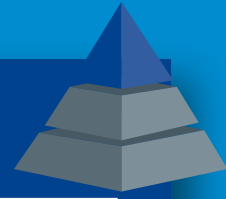
In the environmental field, we provide products that help realize environment-friendly smart cities, such as glass for buildings and houses, solar power generation mirror glass, and green refrigerant.

In the social infrastructure field, we offer fluoropolymer resin for coatings and architectural materials that help create reassuring, safe, and comfortable spaces as well as industrial materials that underpin such social infrastructure as water purification facilities and waste treatment facilities.

In the consumer products field, we market products that bring comfort and convenience to daily life as well as many of the materials vital to their creation.

For details of our products, please visit the website below.

<https://www.agc.com/en/products/search/>



Lineages of Our Strengths

In its more than 110 years of history, the AGC Group has adapted to changes in society by partnering with customers to take on ambitious technological innovations and by foraying into new business fields and regions. The strengths we have cultivated through this history are relationships with and the trust of clients throughout society and across a broad range of industries, differentiated materials and technologies, production technology and process development capabilities, globally integrated management that unites diverse personnel, and a corporate culture that encourages ambitious initiatives. This section traces the lineages of these strengths.

For details of the value the AGC Group has provided in each era and its ambitions for the future, please visit the website below.

<https://www.agc.com/en/hub/meet-agc/history.html>



Utilizing the Flat Glass Business to Extend Our Business Domain

After our foundation, we followed the successful production of flat glass in Japan by domestically manufacturing refractory bricks for glass furnaces in 1916. As the outbreak of World War I had made it difficult to import soda ash, which is a raw material for flat glass, we developed our own method of manufacturing the material in 1917. Thus, we established the basis for the stable production of flat glass. Moreover, rather than only using the refractory bricks and soda ash in-house, we commercialized them to establish businesses that became the foundations of our current Ceramics and Chemicals Segments. Further, by utilizing the

advanced technologies for materials, processing, surface treatment, and forming that it had developed through the manufacture of glass, ceramics, and chemicals, the Group launched the Electronic materials. In this way, using its founding flat glass business as a starting point, the AGC Group has unflinchingly taken on bold initiatives to extend its business domain. This series of ambitious ventures has created a cycle whereby we develop ties with customers in a wide range of industries and societies, and these ties then enable us to extend our business domain even further.

Building Global Capabilities to Meet Global Demand

The AGC Group launched overseas business expansion ahead of other Japanese companies with the establishment of a subsidiary in India in 1956. Subsequently, we established subsidiaries in Thailand and Indonesia to increase our presence in Asia. Our next step was to establish and grow businesses in Europe and North America. As part of these efforts, AGC acquired the Belgian company Glaverbel S.A. (now AGC Glass Europe S.A.) in 1981. From the 1990s onward, the Company further advanced the building of global capabilities by entering emerging countries, such as Mexico and Vietnam. In 2002, we began operating an integrated global management system in earnest through

such measures as the introduction of a global in-house company system. The same year saw the formulation of AGC's Group Vision "**Look Beyond**". On the occasion of its centennial and with a view to accelerating its global growth strategy, the Group made "AGC" its unified brand in 2007. Since 2010, we have established operations in Brazil, Morocco, and other countries. Also, we are continuing to advance the global capabilities of our businesses. As an example of these efforts, in 2018 the Group consolidated bioscience businesses in Japan, the United States, and Europe to enable the launch of integrated operations under the management of AGC Biologics S.p.A.

Developing Differentiated Materials and Technologies That Cater to Evolving Needs

With the emergence of various technological innovations, society's needs have changed. The AGC Group has catered to these evolving needs by developing differentiated materials and technologies. A good example of our adaptability is the response to Japan's rapid motorization in the 1960s. Symbolizing the dawn of the popular car era, Toyota Motor Corporation's first-generation Corolla shipped more than 1 million units. At the time, only the Group's Kawasaki Plant, which was the first in the industry to introduce gas furnaces, was able to produce the side glass (bending tempered glass) required for the Corolla's design. At a stroke, competence in this regard increased the Group's presence in the automotive

glass industry. Further, technological innovation can also be a threat to materials manufacturers. For example, technological innovations accompanying the evolution of televisions from black and white to color and from cathode-ray tubes to liquid crystal displays as well as the birth of smartphones have greatly changed the requirements for display-related materials and components, making long-established materials and technologies obsolete. By overcoming such threats through the development of new materials and technologies, the AGC Group has secured one of the largest shares of the global display-related market.

1900

1950

1980

Lineages of Our Products and Technologies ■ Glass ■ Electronics ■ Chemicals ■ Ceramics

1909

Began the first mass production of flat glass in Japan, using a Belgian technology based on hand-blown cylinders

1928

Commenced use of the Fourcault process to produce flat glass

1938

Began production of tempered glass and laminated glass

1917

Started in-house production of soda ash, a key raw material for flat glass, in Kitakyushu, Japan

1933

Began use of the ammonia method to produce caustic soda

1916

Commenced in-house production of refractory bricks for glass furnaces

1939

Began production of refractory bricks at the Iho Plant in Japan

1954

Started production of PairGlass™ double-glazing units

1956

Launched the automotive glass business in earnest to meet rapidly growing demand

1966

Began utilization of the float method, a new technology, to produce large, flat sheets of glass (float glass)
Commenced sales of heat-reflective glass in Japan

1970s

Began development of automotive glass antennas

1955

Began production of glass bulbs for television cathode-ray tubes

1961

Started production of propylene oxide and propylene glycol

1972

Developed AsahiGuard™ water and oil repellents and Aflon™ COP fluorinated resins

1975

Developed the Flemion™ fluoropolymer ion-exchange membrane electrolysis method for manufacturing caustic soda

1960s

Began full-scale production of monolithic refractories

1980

Commenced sales of insulating glass in Japan

1988

Began sales of Low-E insulating double-glazing glass in Japan

1980s

Began production of a glass delay line for VHS deck playback

1985

Started production of synthetic fused silica glass

1980

Developed a new ion-exchange membrane electrolyzer, the AZEC System

1980s

Began the contract manufacturing of fluorine-containing pharmaceutical intermediates

1982

Commenced production of LUMIFLON™ fluoropolymer resin for coatings

1982

Developed the high-quality fused cast refractory ZB-X950

Lineage of Our Globalization

1907

Established Asahi Glass Company (now AGC Inc.) in Amagasaki, Hyogo Prefecture, Japan

1914

Exported flat glass to the United Kingdom for the first time

1925

Established Shoko Glass Co., Ltd., in China

1952

Concluded an agreement for the export of caustic soda electrolysis equipment to Indonesia

1956

Founded a glass manufacturing subsidiary in India, thereby developing overseas businesses ahead of other Japanese companies

1964

Entered the flat glass market in Thailand

1972

Began flat glass operations in Indonesia

1981

Acquired Glaverbel S.A. of Belgium and entered Europe's flat glass market in earnest

1985

Entered the automotive glass business in the United States in earnest

1986

Entered the chlor-alkali business in Indonesia in earnest

Social Developments

Rapid construction of a modern nation



Advancement of motorization



Advent of the television age



Development of social infrastructure



Emergence of environmental problems



Global warming



1990 2010

Glass Electronics Chemicals Ceramics

2005
Began sales of automotive door glass that blocks infrared rays

1992
Started production of glass filters that absorb infrared rays in cameras

1995
Began production of glass substrates for TFT-LCDs

1997
Commenced production of glass for DVD/CD optical pickups

2003
Began production of CMP slurry for semiconductors
Participated in a consortium for photomask blanks for EUV lithography

1990
Developed CYTOP™ transparent amorphous fluoropolymer

1991
Started production of alternative fluorocarbon Asahiklin AK-225

2000
Began contract manufacturing of biopharmaceuticals

2008
Saw the use of high-performance Fluon® ETFE FILM for international sports venues in Beijing

2011
Began sales of UV Verre Premium Cool on™ tempered glass for automotive door windows

2013
Commenced production of cover glass for car-mounted displays

2014
Began sales of smart-glazing glass Wonderlite®

2015
Initiated sales of UV Verre Premium Privashield™ automotive glass that cuts 99.0% of UV rays in all directions

2011
Began worldwide sales of Dragontrail™ glass for smartphones and tablet computers

2017
Commenced production of photomask blanks for EUV lithography

2019
Entered the extremely low loss copper-clad laminates business by acquiring certain businesses from the U.S. companies Park Electrochemical Corp. and Taconic

2015
Began the supply of HFO-1234yf, a next-generation automotive refrigerant, with a low environmental burden

2017
Acquired leading biopharmaceutical CDMO CMC Biologics

1997
Entered Russia's flat glass market

2000
Established a base for the production of LCD glass substrates in Taiwan

2005
Established a base for the production of LCD glass substrates in South Korea

2007
Marked centennial by making "AGC" the Group's unified brand

2010
Established AGC Group Regional Headquarters for China in China

2011
Established a base for the production of LCD glass substrates in China

2013
Entered Brazil's flat glass market
Established AGC Group Regional Headquarters for Southeast Asia & Oceania in Singapore

2016
Founded bases for information gathering and market research and analysis in India and Dubai

2017
Acquired Vinythai Public Co., Ltd., of Thailand
Established an automotive glass production base in Morocco

2018
Consolidated bioscience businesses in Japan, the United States, and Europe and began integrated operations under AGC Biologics S.p.A.
Changed corporate name to AGC Inc.

2019
Built a tripolar system for the development of automotive glass antennas

Development of IT



Spread of LCD TVs



Development of biomedicine



Popularization of smartphones



Bold Initiatives for Sustained Growth and Development

Pursuing Further Growth in Both Core and Strategic Businesses

In 2016, the AGC Group set out its long-term management strategy Vision 2025, calling for further growth based on Core and Strategic Businesses. Core Businesses are based on existing technologies, products, and services—such as glass, chemicals, displays, and ceramics—and provide a stable long-term profit base. Meanwhile, Strategic Businesses act as growth engines by taking on the challenge of creating new technologies, products, and services in the target fields of Mobility, Electronics, and Life Science. For example, the Group launched its efforts in the Life Science field in the 1980s when the Chemicals Segment applied fluorination

technology in the contract manufacturing of the active ingredients and intermediates of small-molecule synthetic pharmaceuticals and agrochemicals. At present, we are achieving greater-than-expected business growth as a CDMO (contract development and manufacturing organization) not only for small-molecule synthetic pharmaceuticals but also for biopharmaceuticals, which are significantly increasing their presence in the global pharmaceuticals market. Moreover, we have already begun bold ventures in new fields, such as gene therapy, regenerative medicine, and next-generation antibodies.

Examples of Products and Services

Mobility

- Cover glass for car-mounted displays
- Fluorine based materials for fuel cells
- 5G-compatible glass antennas

Electronics

- Semiconductor-related materials
- Optoelectronics materials
- Components for next-generation high-speed communications
- Fluorinated products for electronics

Life Science

- Synthetic pharmaceuticals and agrochemicals
- Biopharmaceuticals

Five Strengths Cultivated Since Our Founding

Relationships with and trust of clients throughout society and across a broad range of industries

Since our foundation, we have extended our business domain to include an increasingly broad range of industries. Furthermore, we have used the contacts made in these industries to continuously create new applications that match market priorities. In this way, we have built unshakable relationships of trust with our customers. Going forward, we will use these relationships to realize co-creation with the leaders of each industry, thereby providing new value.

Differentiated materials and technologies

By always taking a long-term view of the likely changes in society, markets, and technologies and by developing materials and technologies in anticipation of customer needs, the AGC Group has been able to resolve customers' product issues and create new value. Thanks to this approach and the wide availability of our materials and technologies, customers continue looking to us for solutions—enabling us to create even more value.

Production technology and process development capabilities

In all of our businesses, we place importance on developing production technologies and facilities in conjunction with product development. With production technology and engineering capabilities honed over many years serving as a base, we will accelerate digital transformation to improve our production capabilities even further.

Globally integrated management that unites diverse personnel

Since our earliest days, we have proactively expanded businesses overseas. In tandem with these efforts, we have garnered capabilities for globally integrated management. Furthermore, the international character of our businesses has created a corporate culture of “cross-fertilization” in which self-confident personnel intermingle, and this culture has become a source of competitive strength. By preserving our corporate culture as the foundation of value creation, we will continue to further evolve globally integrated management.

A corporate culture that encourages ambitious initiatives

An openness that allows many different personnel to take on challenges without fearing failure is central to our founding spirit. Having become deeply rooted in our corporate culture, this openness has driven the growth of our organization and businesses. All employees of the AGC Group will drive its sustained growth by inheriting and preserving a corporate culture that encourages ambitious initiatives.

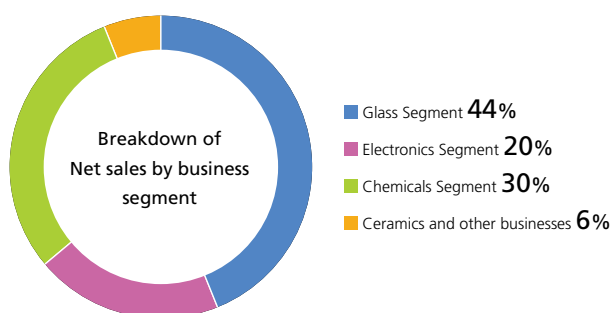
The AGC Group at a Glance

The AGC Group: Providing a Broad Range of Materials and Solutions Worldwide

Description of Businesses

(December 2020)

AGC Group
 Net sales: **¥1,412.3 billion**
 Operating profit: **¥75.8 billion**
 Group employees: Approx. **56,200**



Glass Segment	Net sales: ¥651.0 billion Operating loss: ¥16.6 billion	 Architectural glass Net sales: ¥324.9 billion
		 Automotive glass Net sales: ¥323.5 billion
Electronics Segment	Net sales: ¥289.4 billion Operating profit: ¥37.8 billion	 Display Net sales: ¥177.2 billion
		 Electronic materials Net sales: ¥105.8 billion
Chemicals Segment	Net sales: ¥451.2 billion Operating profit: ¥50.5 billion	 Chlor-alkali and urethane Net sales: ¥264.1 billion
		 Fluorochemicals & specialty chemicals Net sales: ¥105.7 billion
		 Life science Net sales: ¥79.9 billion
Ceramics and other businesses	Net sales: ¥81.1 billion Operating Profit: ¥4.2 billion	

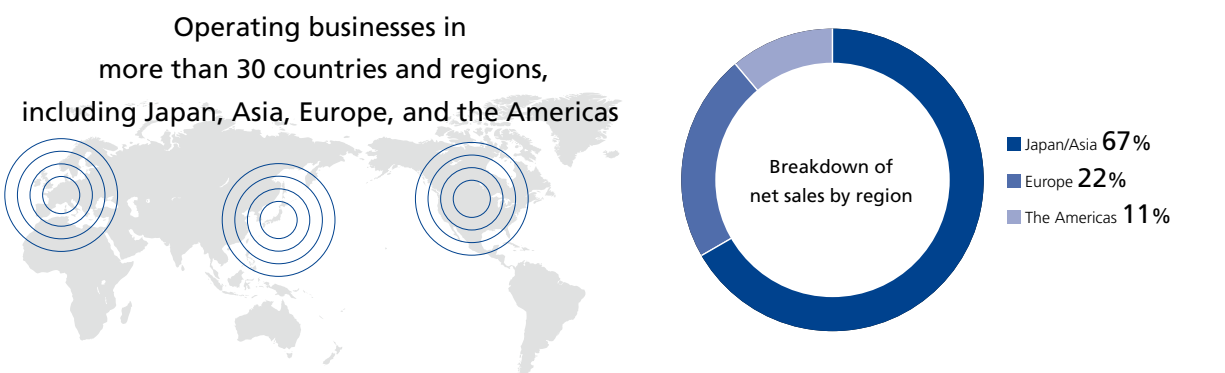
Note 1. Sub-segment net sales utilize net sales to external customers.

Note 2. As net sales and operating profit (loss) by business segment are before the deduction of eliminations, the sum of net sales by business segment does not equal Companywide net sales, and the sum of operating profit (loss) by business segment does not equal Companywide operating profit.

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 materials technologies, a broad customer base, and advanced production technologies as its strengths, cultivated from over 110 years of experience in our Glass, Electronics, Chemicals and Ceramics businesses.

Global Expansion

(December 2020)



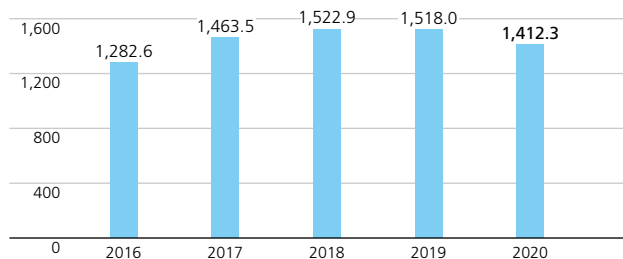
	Japan/Asia	Europe	The Americas
Net sales	¥945.3 billion	¥312.5 billion	¥154.5 billion
Operating profit	¥101.7 billion	¥6.9 billion	¥3.4 billion
Group employees	Approx. 34,100	Approx. 17,000	Approx. 5,100
Number of manufacturing bases	63	23 (including Africa)	13
Architectural glass	●	●	●
Automotive glass	●	●	●
Display	●		
Electronic materials	●	●	●
Chlor-alkali and urethane	●		
Fluorochemicals and specialty chemicals	●	●	●
Life science	●	●	●
Ceramics	●		

Note: As net sales and operating profit (loss) by region are before the deduction of eliminations and common regional expenses, the sum of net sales by region does not equal Companywide net sales, and the sum of operating profit (loss) by region does not equal Companywide operating profit (loss).

Financial Indicators

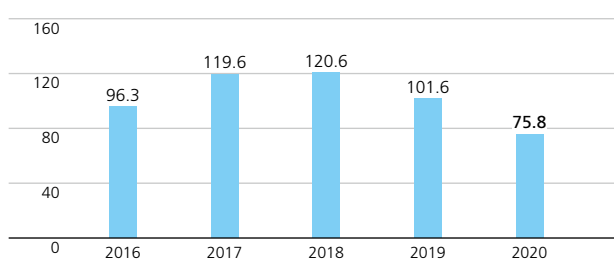
Net sales

(Billions of yen)



Operating profit

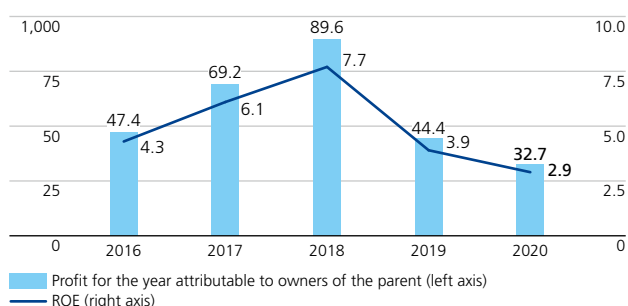
(Billions of yen)



Profit for the Year Attributable to Owners of the Parent and ROE

(Billions of yen)

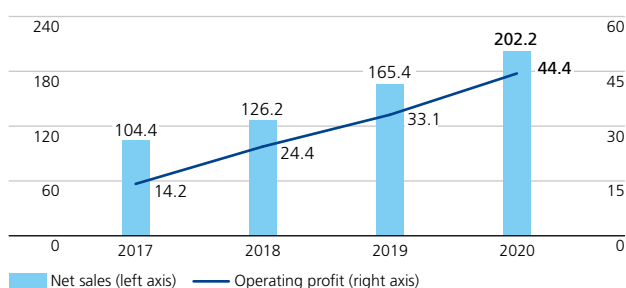
(%)



Net Sales and Operating Profit of Strategic Businesses

(Billions of yen)

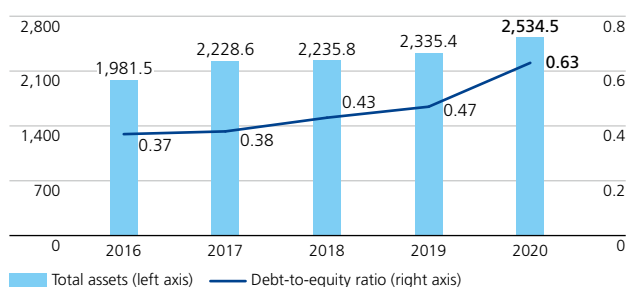
(Billions of yen)



Total Assets and Debt-to-Equity Ratio

(Billions of yen)

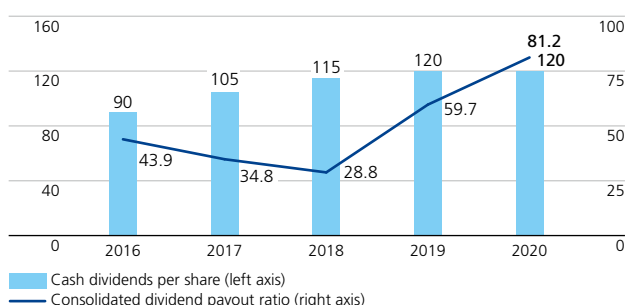
(Times)



Cash Dividends per Share and Consolidated Dividend Payout Ratio

(Yen)

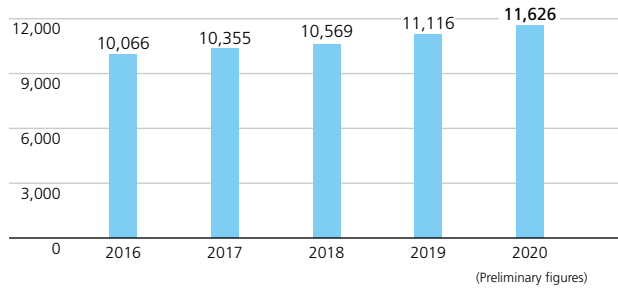
(%)



Non-Financial Indicators

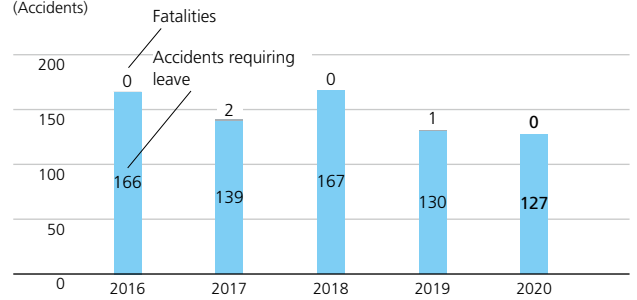
GHG Emissions (Scope 1 + Scope 2)

(Thousands of t-CO₂)



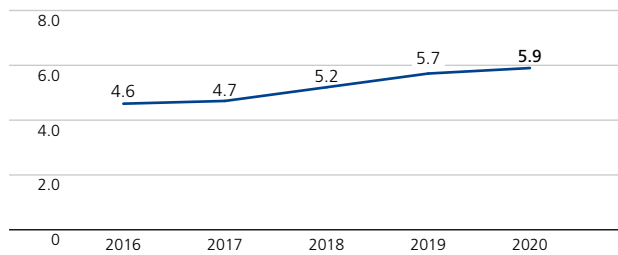
Number of Occupational Accidents

(Accidents)



Percentage of Female Managers (Supervisors and Above)* (AGC, Non-Consolidated Basis)

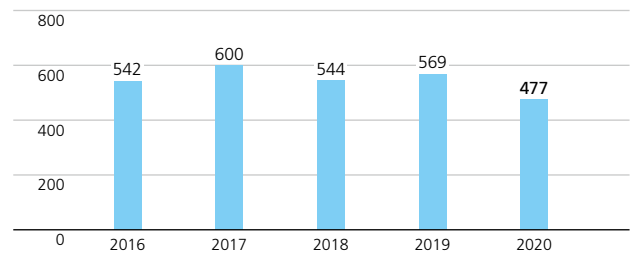
(%)



* As of December 31 of each year (excluding employees aged 60 and above)

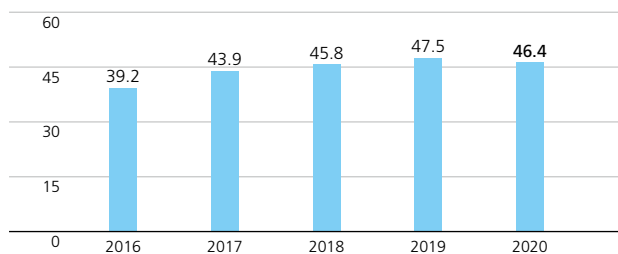
Social Contribution Expenditures

(Millions of yen)



Research and Development Expenses

(Billions of yen)



A Message from the President & CEO



Setting Out a Long-Term Management Strategy Based on AGC's Purpose

To begin with, allow me to introduce myself. I am Yoshinori Hirai and have been the president & CEO of AGC since January 2021. My involvement in the senior management team began with my appointment to the Board of Directors in 2014. I then became the chief technology officer (CTO) in 2015, when our current chairman, Takuya Shimamura, was appointed president & CEO. At the time, the AGC Group faced a challenging situation as profits had been declining for four consecutive years. Growth of the display market had been softening since 2010, the year we recorded our highest-ever operating profit thanks in large part to a significant increase in sales of glass for liquid crystal displays. Between 2011 and 2014, our financial performance

continued to deteriorate due to various changes in the external environment.

With our sights set on breaking out of the situation, Takuya Shimamura, Chief Financial Officer Shinji Miyaji, and I held many earnest discussions on long-term management strategy. We spent the most time on determining what the purpose of our business was. We concluded that the best course of action was to go back to our origins.

Founded in 1907, Asahi Glass Company began with the domestic production of flat glass, going on to add ceramics, chemicals, and electronics to the Company's business fields. That was our starting point. Since those early days, in each era we have provided the materials needed by society and

By providing differentiated materials and solutions, AGC strives to help realize a sustainable society and become an excellent company that grows and evolves continuously.

Yoshinori Hirai

Representative Director, President & CEO

customers, which has given rise to various innovations.

The AGC Group must always take on new challenges to deliver differentiated materials and solutions, and in doing so, help solve social issues. That was and remains our purpose. Our discussions reaffirmed that the trust of society and customers is indispensable for the AGC Group's sustained value creation.

Based on the reaffirmation, in February 2016 we formulated our long-term management strategy with the goal of realizing Vision 2025, which stated: "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." Further, we identified Core Businesses and Strategic Businesses as the two pillars of our long-term management strategy. Operating in such fields as glass, chemicals, displays, and ceramics, Core Businesses were to form a stable long-term profit base, while Strategic Businesses were to achieve strong growth by targeting the fields of mobility, electronics, and life science. With continued building of trust through the consistent meeting of customer expectations as a premise, we aimed to accelerate the transformation of our business portfolio by investing in growth and value creation—including strategic M&As—as well as by allocating management resources in a focused manner that emphasized asset efficiency.

Progressing Steadily with Business Portfolio Transformation

Five years have passed since we formulated Vision 2025. In other words, we have reached the halfway point. Looking back over the period since 2016, our Core Businesses saw two different outcomes in terms of performance. While the Chemicals Segment and the Display have generally progressed as planned, many issues remain to be resolved in the Glass Segment, which is partly attributable to the COVID-19 pandemic. Specifically, we have been unable to make sufficient progress in improving profitability and asset efficiency in the Architectural glass and Automotive glass. On the other hand, our Strategic Businesses have made significant advances. In particular, the Electronics Segment and Life science have been able to maintain high profitability and asset efficiency, even in the face of the deteriorating economic conditions caused by the COVID-19 pandemic. These performances prove not only the growth potential of the businesses but also their high degree of resilience to market fluctuations.

Our target under the long-term management strategy is to raise the percentage of total earnings contributed by

Strategic Businesses to 40% by 2025. As a milestone on the way to this target, we sought operating profit of ¥40.0 billion from Strategic Businesses in 2020. However, they surpassed this level, posting operating profit of ¥44.4 billion. Therefore, I believe that we have made steady progress in transforming our business portfolio and moving toward the realization of Vision 2025.

That being said, we have yet to gain sufficient market recognition with respect to the part of Vision 2025 stating that our goal is to become “a highly profitable, leading global material and solution provider.” In 2018, the Company changed its corporate name from Asahi Glass Company to AGC Inc., thereby removing the word “glass” from the name. At present, however, the media still refers to us as “the world’s largest glass company.” In becoming a more profitable, asset efficient corporate group, we need to earn recognition from our customers as a “leading material and solution provider” whose offerings include glass. To this end, we must redouble our efforts.

Identifying Long-Term Social Issues

The past five years have seen an increase in the importance of initiatives related to sustainability, such as these targeting climate change issues, as well as measures focused on rapid digitalization.

Taking a longer-term perspective, until the end of the 20th century the global economy was primarily focused on expanding markets and pursuing growth, with certain developed countries leading the way. Since the beginning of the 21st century, this paradigm has shifted dramatically. The realization of a sustainable society has become strongly advocated, and the leading role in economic growth has moved from developed to emerging countries. In addition, a wave of digitalization has rapidly grown the IT industry. As a result, today many of the world’s leading companies specialize in the IT field.

To fulfill our purpose of addressing social issues through the provision of differentiated materials and solutions, we must understand the changes in society and recognize what it needs from us. Since 2019, based on future trends in global social issues and risks as well as on the social issues that its customers are tackling, the AGC Group has been identifying major opportunities and risks that could affect corporate value and the long-term direction of business management. As a result, we have categorized long-term social issues of particular importance to us into 10 major

opportunities and risks, with *addressing climate change* and *effectively using resources* classified as both major opportunities and risks.

With respect to major opportunities, we have identified social issues that we can address through the use of our materials and technologies. Such social issues represent high-growth markets where we can provide value. For example, our Strategic Businesses in the fields of electronics and life science already see the social issues of *building an info-oriented and IoT society* and *facilitating better health and longevity* as opportunities to achieve significant growth, and these businesses promise to grow even more going forward.

Meanwhile, many of the AGC Group’s major risks arise from environment-related social issues. In part, this is because our businesses, particularly the Core Businesses, emit large amounts of greenhouse gas (GHG). With respect to measures that help realize a sustainable society by addressing climate change, society’s expectations are likely to become even higher. Accordingly, we will concentrate on growing businesses that are more environment friendly. As well as taking steps to reduce the GHG emissions from our business operations, we will increase the penetration of products that help avoid GHG emissions.

Setting Out Vision 2030

In light of the results achieved as well as the tasks and long-term social issues identified in the process of moving toward the realization of Vision 2025, we have partially revised the **AGC plus** Management Policy and established Vision 2030.

By adding “building a better future for coming generations” to the original wording, we have revised our management policy and renamed it **AGC plus 2.0**. The addition of this phrase underscores our commitment to the realization of a sustainable society. This commitment is also reflected in Vision 2030. In contributing to a sustainable society, the AGC Group must continue growing, evolving, and fulfilling its purpose. With this in mind, we decided to express Vision 2030 as follows. “By providing differentiated materials and solutions, AGC strives to help realize a sustainable society and become an excellent company that grows and evolves continuously.”

To realize Vision 2030, we will continue following the long-term management strategy that we have been pursuing to date, namely, a strategy of “organizational ambidexterity*” that is based on advancing both Core Businesses and Strategic Businesses. However, we will also increase our emphasis on creating social value. Furthermore, we have established a Groupwide strategy stating that “With both Core Businesses and Strategic Businesses as drivers, AGC

will keep optimizing its business portfolio and create economic and social value continuously.” With respect to economic value, we have set achieving record operating profit and a stable ROE of 10.0% or higher by 2030 as financial targets. Meanwhile, based on the long-term social issues that we have identified, which I explained earlier, we will create social value in five areas by contributing to the realization of *a sustainable global environment, safe and comfortable urban infrastructure, safe and healthy lifestyles, a healthy and secure society, and fair and safe workplaces*. We will help resolve social issues by setting sustainability targets in all of our business activities. As a materials manufacturer, contributing to the realization of *a sustainable global environment* is a particularly important social mission for us, which is why we have made the achievement of net zero carbon emissions by 2050 one of our major goals.

In accordance with the aforementioned Group-wide strategy, our goal is to heighten the competitiveness of each Core Business and build robust profit foundations that have long-term stability. At the same time, our goal for Strategic Businesses is to take on the challenge of making them into future pillars by utilizing our strengths to create and expand highly profitable businesses in high-growth fields. To achieve the above goals and provide differentiated materials

The AGC Group’s Management Policy **AGC plus 2.0**

Based on its **AGC plus 2.0** Management Policy, the AGC Group will realize sustainable growth by providing additional value to all stakeholders.

AGC plus 2.0

- Providing safety, security, and comfort to society,
- Creating new value and functions for customers and business partners and building trust with them,
- Enhancing job satisfaction among employees,
- Increasing the Group’s corporate value for investors, and
- Building a better future for the coming generations.

to the growth industries of the next generation, the AGC Group will leverage its strengths, which include relationships with and trust of customers throughout society and across a broad range of industries, differentiated materials and technologies, production technology capabilities and process development capabilities, globally integrated management that unites diverse personnel, and a corporate culture that encourages ambitious initiatives.

As part of the drive toward the realization of Vision 2030, in February 2021 the AGC Group announced its latest Medium-Term Management Plan, **AGC plus-2023**,

which sets out *pursuing ambidextrous management, promoting sustainability management, and gaining competitiveness by accelerating digital transformation* as basic strategies. Viewing the plan's three-year period as the second phase of efforts focused on achieving Vision 2025, we will refine and evolve our ambidextrous management and accelerate the transformation of our business portfolio. We will also move closer to realizing Vision 2030.

* Organizational ambidexterity refers to the ability of an organization to explore new technologies and markets while exploiting mature ones. This concept has been proposed by Professor Charles A. O'Reilly of Stanford University's Graduate School of Business in the United States.

Growing and Evolving Continuously in a Rapidly Changing Society

The global economy has been hit hard by the COVID-19 pandemic. The AGC Group has not been spared from the impact, which has been most apparent in the performance of Core Businesses. Nonetheless, the overall effect on the Group has been relatively limited.

Our comparative resilience is in large part attributable to our Strategic Businesses. In the Life science, our pharmaceuticals contract development and manufacturing organization (CDMO), which contributes to the stable supply of vaccines and other pharmaceuticals, has become even more socially significant. Further, in the electronics field, the swift spread of telecommuting, especially working from home, has led to rapid increases in the development of IT infrastructure and demand for mobile terminals. Consequently, shipments of materials for semiconductor manufacturing processes have grown.

Another reason we have been resilient is that, while many manufacturers faced disruptions to their global supply chains, we were not severely affected in this way because we were among the first in the industry to adopt digital technologies and introduce systems that allow us to provide technical support remotely. Not only pandemics but a range of other factors could disrupt supply chains in the future.

Therefore, I believe that preparation for such risks through the acceleration of digitalization will be even more important for the strengthening of our competitiveness.

The COVID-19 pandemic has brought about major changes in society. However, many of these changes have merely been the acceleration of changes that were already underway. The initiatives focused on Strategic Businesses and digitalization that I have mentioned are those we have been taking based on long-term projections of such social changes. As a result, we have been able to reduce the impact of the COVID-19 pandemic.

The development of materials and components requires a great deal of time before they can be put to practical use. For example, our EUV exposure photomask blanks, which are currently driving the growth of the Electronics Segment, are the product of development begun about 20 years ago. With this in mind, we have always valued long-term perspectives and decided what we should do by backcasting from our vision of the future. By repeating this process and increasing its precision and speed as society rapidly changes, we will remain an excellent company that is constantly growing and evolving.

Continuing to Take on Challenges Together with Our Stakeholders

With a view to realizing Vision 2030, we have clarified the direction and strategies needed. All that remains is implementation. To this end, ensuring widespread understanding of our direction and strategies among employees, customers, and other external stakeholders is important. In

addition, we must continue fostering a *corporate culture that encourages ambitious initiatives*, which I mentioned earlier as one of our strengths.

Over the past several years, the AGC Group has emphasized direct dialogue between the senior management team

and employees, facilitating hundreds of such dialogues. In this process, our current chairman, Takuya Shimamura, and other members of the senior management team have been reiterating key messages to employees, namely, that *we are a united team, our guiding principle is boldness, and you are the drivers of growth.*



Dialogue between the senior management team and employees

I am convinced that all AGC Group employees and our customers, partner companies, and other stakeholders are a united team and that taking on challenges as a united team will drive us toward the realization of Vision 2030. What is more, to achieve further growth in this volatile era, our organization must have the flexibility to adapt to changes in the operating environment, and the key to realizing such flexibility is diversity.

The AGC Group's personnel are diverse in terms of their nationalities and areas of expertise. As well as respecting this diversity, we will encourage each employee to give full play to their individuality.

In my former capacities as general manager of the Business Development Office and CTO, I spearheaded the growth of Strategic Businesses by developing new businesses and stepping up R&D. All of my life, I have aspired to be an entrepreneur, and this mindset will remain unchanged. I will support the further growth of Strategic Businesses so that they become worthy of being called Core

Businesses. At the same time, to ensure continuous growth and evolution, we will continue planting seeds for the creation of new Strategic Businesses. Meanwhile, in the pursuit of ambidextrous management, using the assets of Core Businesses as a foundation for creating new Strategic Businesses is extremely important. We will continue to further refine our Core Businesses and improve their profitability and asset efficiency.

We must pursue and evolve ambidextrous management and thereby advance the transformation of our business portfolio. My mission is to develop us into a lean, streamlined corporate group that earns the trust of society. Moreover, by fulfilling this mission, we will enable sustained growth of the Group's corporate value.

The AGC Group's brand statement is *Your Dreams, Our Challenge*, which encapsulates our commitment to realizing the aspirations of society and customers by taking on ambitious initiatives. Never losing sight of this commitment, we will continue providing value to our customers and society through differentiated materials and solutions. As we evolve, I would like to ask our stakeholders to continue supporting us and looking forward to our future.

May 2021

Yoshinori Hirai

Representative Director, President & CEO







Special Feature

Consistently Far-Sighted Business Management

—New Strategy for Value Creation over the Medium to Long Term—

As the title of AGC's Group Vision *Look Beyond* suggests, the Group has always anticipated the future and conducted business management based on long-term viewpoints. What is more, this far-sighted approach has become the core of our value creation strategy. To further understanding of our long-term approach to business management, this special feature explains how we formulated both Vision 2030—a new strategy for value creation over the medium to long term—and **AGC plus-2023**, our new Medium-Term Management Plan. In addition, Shinji Miyaji, our chief financial officer, provides an overview of the new strategy and plan.

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AGC's Value Creation Model

The chart below outlines the AGC Group's value creation model for the sustained enhancement of corporate value. With our founding spirit as the key starting point, we evolve and generate economic and social value by repeatedly following a distinctive value creation process developed during our long history.

In realizing the aforementioned approach to value creation, we constantly look ahead to the coming changes in society, industry, and technologies and set out a long-term vision accordingly. Backcasting from this vision, we then prepare and implement medium-term management plans.



Our 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

Management Policy

AGC plus 2.0

The AGC Group adds a “plus” by

- Providing safety, security, and comfort to society,
- Creating new value and functions for customers and business partners and building trust with them,
- Enhancing job satisfaction among employees,
- Increasing the Group's corporate value for investors, and
- Building a better future for the coming generations.

Medium-Term Management Plan

Strategies under **AGC plus-2023**

Accelerating the strategies below to ensure the realization of Vision 2030

Pursuing ambidextrous management

- We will accelerate growth in the Strategic Businesses area, and at the same time explore new business areas including those related to energy.
- In the Core Businesses, we will conduct a structural reform in the architectural glass and automotive glass businesses that need improvements in profitability and asset efficiency.
- For other business in the Core Businesses area, we will strengthen their profit foundations and cash generation.

Promotion of sustainability management

- Propelling materials innovation to help solve social issues
- Aiming for net-zero carbon in 2050
- Strengthening human resources and group-wide governance

Gaining competitiveness by accelerating digital transformation

- Taking a transformation of the business model itself into consideration, leverage digital technologies to improve the process from product development to sales activities
- Use digital technologies to provide value to customers and society and gain competitiveness

Long-Term Management Strategy

Vision 2030

By providing differentiated materials and solutions, the AGC Group strives to help realize a sustainable society and become an excellent company that grows and evolves continuously.

Financial targets

Achieving a new operating profit record* and a stable ROE of 10.0% or higher by 2030

* Current record for operating profit: ¥229.2 billion, fiscal 2010

Five types of social value the AGC Group wants to create

Contributing to the realization of a sustainable global environment



Contributing to the realization of safe and comfortable urban infrastructure



Contributing to the realization of safe and healthy lifestyles



Contributing to the maintenance of a healthy and secure society



Contributing to the creation of fair and safe workplaces



Long-Term Social Issues

Materiality

Key Opportunities

- Developing social infrastructure
- Achieving safe, comfortable mobility
- Addressing food crises
- Building an info-oriented, IoT-society
- Facilitating better health and longevity

Addressing climate change

Using resources effectively

Key Risks

- Creating a socially and environmental-conscious supply chains
- Ensuring fair and equal employment and workplace safety
- Considering relationships with local communities and environment

Sustainable Enhancement of Corporate Value

Brand Statement

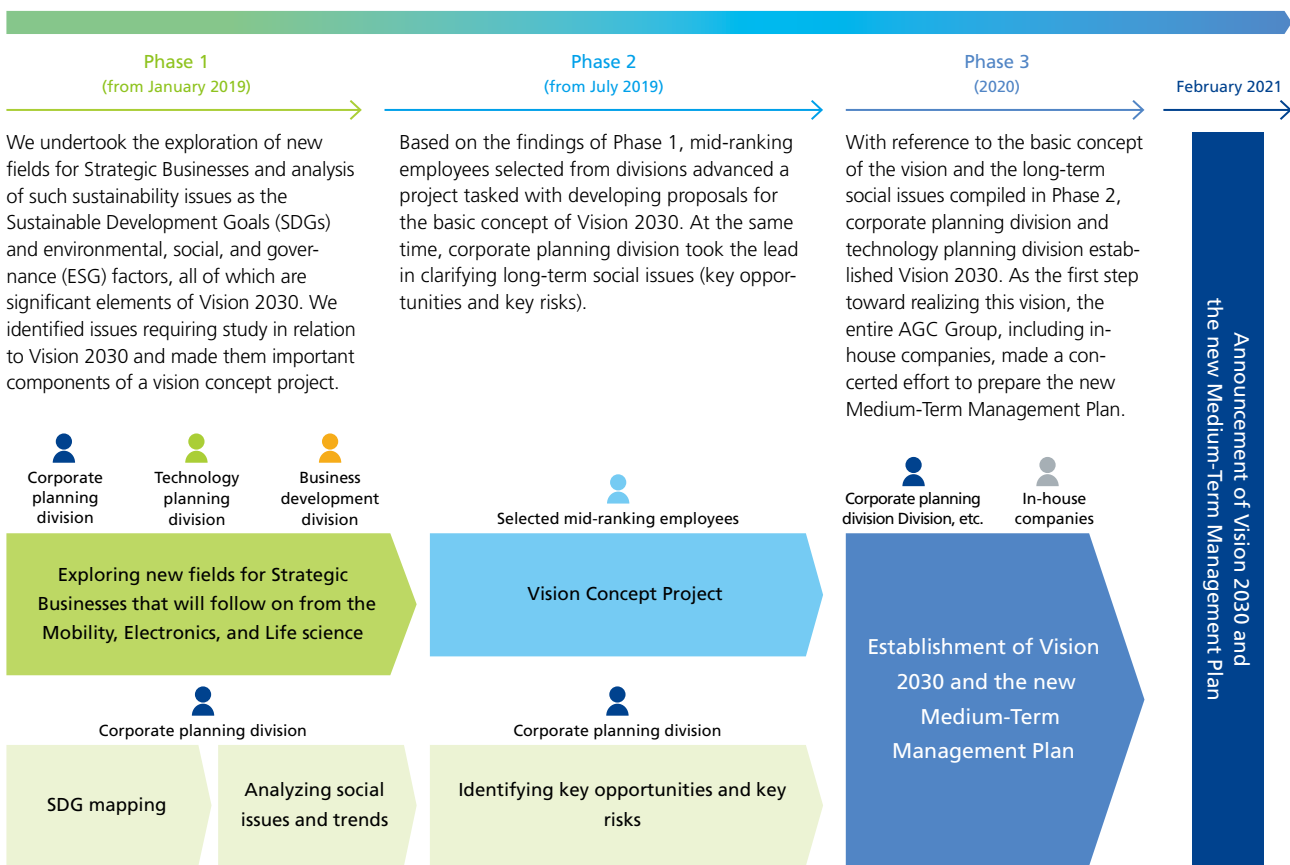
Your Dreams, Our Challenge

By working with others to combine knowledge and advanced technology in accordance with its founding spirit, AGC helps make ever-greater achievements possible, brings bolder ideas to life, and resolves the issues of customers, business partners, and society. In this way, we realize the sustainable enhancement of corporate value.

Formulation of Vision 2030 Based on a Long-Term Viewpoint

In preparing the new Medium-Term Management Plan, we first revised our long-term management strategy Vision 2025, established in 2016. Taking into account changes in the operating environment and the situations of businesses, we identified long-term social issues as key opportunities and key risks. We then set out Vision 2030 and incorporated into the Medium-Term Management Plan basic strategies and measures aimed at realizing our vision.

Formulation Process for the Long-Term Management Strategy Vision 2030 and the Medium-Term Management Plan *AGC plus-2023*



Clarifying Long-Term Social Issues (Materiality)

Through the formulation process below, the AGC Group clarified long-term social issues (materiality) that could affect corporate value and the long-term direction of the Group’s business management and identified key opportunities and key risks.

Formulation Process

- 1

SDG mapping

To enable analysis of our long-term social issues, we reconfirmed our current progress toward the realization of sustainability by using the 169 targets of the SDGs as the basis for analysis of the types of social issues addressed by our existing products.
- 2

Analyzing social issues and trends

In light of its current contributions to the resolution of social issues, important opportunities and risks for the Group going forward were identified through analysis of future trends in social issues. (The analysis results were also used as basic information in preparing Vision 2030.)
- 3

Identifying key opportunities and key risks

Based on the results of analyzing trends in social issues and in light of expert opinions, we identified key opportunities and key risks associated with simultaneously achieving sustainable development of the planet and society and sustainable growth as a corporate group. These opportunities and risks were used as the foundation for setting sustainability goals, designed to heighten the effectiveness of initiatives.

1

1. Focused on existing mainstay products in each business field
2. Calculated the “business impact score” for each product based on its sales and growth potential
3. Linked each product to the SDG targets to which it can contribute
4. Described the type of social value that AGC is creating in relation to each SDG by taking into account the contributions of all products linked to a given target
5. Added up the total “business impact score” of all products linked to each type of social value
6. Corrected the “business impact score” for each type of social value based on the degree of contribution to addressing the issue
7. Set the corrected results as the “social impact score” and identified the top 15 types of conspicuous social value



The above procedure identified fields where existing products can help address current social issues.



Energy saving, creation, and storage and climate change mitigation



Construction of smart cities



Provision of reliable, safe water resources



Realization of safe, comfortable mobility



Health improvement and realization of longer life spans

2

Compiled a list of social issues

- 169 targets of the SDGs
- Sustainability megatrends (circular economy, etc.)
- Based on the *Global Risks Report* (World Economic Forum), compiled a list of items representing opportunities and risks for AGC (79 items in total)

Assessed materiality for stakeholders

Social issues with opportunities

- With respect to the list of social issues,
- Identified social issues addressed by customers and competitors
 - Assessed materiality based on sustainability and megatrends

Social issues with risks

With respect to the list of social issues, assessed materiality based on the assessment indicators of major ESG rating organizations

Assessed materiality for AGC

Social issues with opportunities

With respect to the list of social issues, assessed materiality based on relevance to current Core and Strategic Businesses and the potential fields for the latter

Social issues with risks

With respect to the list of social issues, assessed materiality based on overviews of AGC’s value chains, including upstream and downstream

3

Key Opportunities	Key Risks
<ul style="list-style-type: none"> • Developing social infrastructure • Realizing safe, comfortable mobility • Addressing food crises • Building an information-oriented, IoT-enabled society • Facilitating better health and longer life spans 	<ul style="list-style-type: none"> • Addressing climate change • Using resources effectively • Creating socially and environmentally responsible supply chains • Ensuring fair and equal employment and workplace safety • Building relationships with local communities and achieving environment friendliness

Preparing the Long-Term Management Strategy Vision 2030

Although the identified long-term social issues (materiality) have not changed significantly since we set out Vision 2025, the importance of addressing such sustainability issues as climate change and digital transformation has increased markedly. Reflecting its awareness of these changes in the weightiness of certain issues, the AGC Group outlined Vision 2030 as follows. “By providing differentiated materials and solutions, the AGC Group strives to help realize a sustainable society and become an excellent company that grows and evolves continuously.”

The thrust of our basic strategy remains the same as in the past, but we have increased the emphasis on creating

social value. Accordingly, we have set out a Groupwide strategy stating that “With both Core and Strategic Businesses as drivers, AGC will optimize its business portfolio and create economic and social value continuously.” Based on this strategy, the AGC Group will leverage its strengths to supply differentiated materials to the growth industries that will support the next generation. In this way, the Group will reach its financial targets for 2030 while realizing sustainability goals through all business activities to create five types of social value.

Note: Going forward, we will steadily disclose details of our sustainability targets.

How Long-Term Social Issues (Materiality) Relate to AGC’s Business Activities

Key Opportunities

- **Addressing climate change**

Since the Paris Agreement was reached in 2015, a shift toward decarbonization has been gathering momentum. Stricter energy-related policies and statutory regulations are expected. Also, socially calls are growing for companies to achieve net-zero greenhouse gas emissions.

- **Effective use of resources**

There are concerns that stricter regulations on the use of depletable resources, such as rare earths, and higher demand for water resources accompanying further urbanization could seriously impact the production activities of companies. In addition, as the recycling-based economy accelerates, society increasingly expects companies to reduce waste and promote recycling.

- **Developing social infrastructure**

While the economic growth of emerging countries necessitates the development of such social infrastructure as housing, roads, railroads, and public services, developed countries must deal with the aging of their social infrastructure. Moreover, there is a growing need to develop resilient infrastructure that can withstand the intensified disasters being caused by climate change.

- **Achieving safe, comfortable mobility**

The spread of automobiles in emerging countries is causing concern over rising traffic accident deaths. Meanwhile, addressing the mobility needs of the elderly, those living in less-populated areas, and other vulnerable groups in society is becoming increasingly important. Further, as autonomous driving becomes more widespread, expectations are increasing with respect to the establishment of safety technologies, such as sensors and cameras, and the enhancement of in-car entertainment.

- **Addressing food crises**

The problems of hunger and malnutrition in the world’s poorest regions have yet to be resolved, and there are concerns that the situation will worsen due to disasters and droughts caused by the climate change of recent years. Also, to cope with a growing world population, food productivity must improve.

- **Building an info-oriented, IoT society**

With the spread of information and communication technologies in emerging countries, reliable, inexpensive access to information needs to be provided. In developed countries, the early dissemination of next-generation high-speed communication technologies, such as 5G, promises to improve the quality of remote medical care and information transmission.

- **Facilitating better health and longevity**

Given that the number of young people losing their lives due to non-communicable diseases remains high worldwide, there is a need to reduce such deaths by providing stable supplies of pharmaceuticals for prevention and treatment. In addition, a trend toward increased division and specialization in the pharmaceutical industry, which is aimed at improving the productivity of the industry as a whole and diversifying its risks, is becoming more pronounced.

Key Risks

- **Creating socially and environmental-conscious supply chains**

As supply chains become more globalized and complex, the risk of issues arising in relation to illegal employment, such as forced labor and child labor, at suppliers and subcontractors is increasing. Further, tighter environmental regulations are leading to concern over potential regulatory violations at operating bases.

- **Ensuring fair and equal employment and workplace safety**

There is a growing need for compliance in employment and respect for workers’ rights as well as for safety measures at manufacturing sites due to the increasing number of unskilled and elderly workers.

- **Considering relationships with local communities and the environment**

Due to population growth and urbanization in various parts of the world, interest in expanding living areas and maintaining biodiversity in surrounding areas is growing. Also, in emerging countries there is an increasing focus on improving quality of life as living standards improve. Efforts to build good relationships with local residents and governments in the vicinity of operating bases are also becoming more important.

Vision 2030

By providing differentiated materials and solutions, the AGC Group strives to help realize a sustainable society and become an excellent company that grows and evolves continuously.

Financial Targets

Achieving record operating profit* and securing a stable ROE of 10.0% or higher by 2030

* Current record for operating profit: ¥229.2 billion, 2010

Five Types of Social Value the AGC Group Wants to Create

Addressing social issues and creating five types of social value through business activities

Contributing to the realization of a sustainable global environment

Contributing to the realization of safe and comfortable urban infrastructure

Contributing to the realization of safe and healthy lifestyles

Contributing to the maintenance of a healthy and secure society

Contributing to the creation of fair and safe workplaces

Concept for Realizing Vision 2030

Groupwide Strategy

With both Core and Strategic Businesses as drivers, AGC will optimize its business portfolio and create economic and social value continuously.

Core Businesses

Heighten the competitiveness of each business and build robust profit foundations that have long-term stability

Strategic Businesses

Focusing on high-growth fields, utilize our strengths to create and expand high-profit businesses that will become our future pillars

AGC Group's Strengths: Constantly Providing Differentiated Materials to Growth Industries That Will Underpin the Society in the Future

Relationships with and trust of clients throughout society and across a broad range of industries

Differentiated materials and technologies

Production technology and process development capabilities

Globally integrated management that unites diverse personnel

Corporate culture that encourages ambitious initiatives

A Message from the Chief Financial Officer

In this section Shinji Miyaji, our chief financial officer (CFO) explains the goals of the new Medium-Term Management Plan and the overall strategies for achieving them.



Shinji Miyaji

Representative Director,
Senior Executive Vice President, CFO, CCO
General Manager of the Corporate Planning General Division

A Review of the Previous Medium-Term Management Plan

Having positioned 2018 through 2020 as a period for laying the foundations for realizing Vision 2025, the AGC Group advanced initiatives based on its previous Medium-Term Management Plan, **AGC plus-2020**. To become the *highly profitable, leading global material and solution provider* set out in Vision 2025, we placed particular emphasis on ROE, targeting a stable ROE of 10% or more in 2025. However, taking a comprehensive view of the Group's business mix when Vision 2025 was formulated reveals that a significant percentage of businesses had low asset efficiency or were susceptible to market fluctuations. Consequently, reaching this target by simply improving the profitability and asset efficiency of each business would have been almost impossible. Therefore, we changed course significantly and began focusing on the transformation of our business portfolio.

► Major Strategies

With a view to transforming our business portfolio, we set out four major strategies in the previous plan. The first major strategy was to *strengthen high-value-added businesses that are resilient to market fluctuations*. Exemplifying such businesses, Strategic Businesses grew their net sales to the ¥200.0 billion level. However, the Group's overall progress in establishing high-value-added operations was insufficient, particularly in the Glass Segment. With respect to the second major strategy, which was to *promote growth strategies of Strategic Businesses*, we achieved results that surpassed expectations, especially in the Electronics Segment and life science. As for efforts to *concentrate management*

resources in growing and winnable regions in accordance with the third major strategy, the Chlor-alkali of the Chemicals Segment expanded steadily in Southeast Asia. However, many issues remain to be addressed in the Glass Segment. The final major strategy was to *achieve sustainable growth through strategic M&A*. In this regard, we progressed well with integration efforts following M&As implemented in the Life science and the Chlor-alkali in Southeast Asia, and this progress enabled very significant achievements. However, the printed circuit board materials business—which we acquired with sights set on the penetration of the 5G next-generation communications standard—has been greatly impacted by trade friction between the United States and China and consequently has yet to produce benefits.

► Financial Targets

In 2020, the final year of the previous Medium-Term Management Plan, revenues and earnings declined. We recorded year-on-year decreases of ¥105.7 billion in net sales, to ¥1,412.3 billion, and ¥25.8 billion in operating profit, to ¥75.8 billion. These declines were mainly due to the significant impact that the COVID-19 pandemic had on the Glass Segment and the Chemicals Segment. Further, we estimate that the pandemic resulted in decreases of approximately ¥135.0 billion in net sales and ¥50.0 billion in operating profit. Therefore, we believe that in the absence of the pandemic's effect revenues and earnings would have probably grown year on year.

AGC plus-2020 Financial Targets at a Glance

	2017 result	2020 target	2020 result	Excluding estimated effect of COVID-19
Operating profit	¥119.6 billion	¥160.0 billion	¥75.8 billion	¥125.0 billion
ROE	6.1%	At least 8.0%	2.9%	6%
Strategic Businesses				
Percentage contribution to total earnings	12%	At least 25%	59%	36%
Operating profit	¥14.2 billion	¥40.0 billion	¥44.4 billion	No effect
Debt-to-equity ratio	0.38	0.5 or lower	0.63	0.53

With respect to the financial targets set in the previous Medium-Term Management Plan, we fell far short of the operating profit target, which was ¥160.0 billion or higher. As a result, ROE was 2.9%. Without the impact of the COVID-19 pandemic, ROE would still only have reached 6%, well below our target of at least 8%. Thus, even allowing for the effect of the pandemic, operating profit and ROE did not reach our targets, which we view as a disappointing performance. Meanwhile, Strategic Businesses surpassed the target

of ¥40.0 billion to post operating profit of ¥44.4 billion, for they were not negatively impacted by the pandemic. The debt-to-equity ratio rose to 0.63 times due to an increase in interest-bearing debt, which reflected our accumulation of cash and cash equivalents in response to uncertainty over the outlook for the pandemic. Even if the additional accumulation of cash and cash equivalents is excluded, the debt-to-equity ratio was around 0.53 times and did not reach the target of 0.5 times or lower.

Overview of the New Medium-Term Management Plan

Recently, we formulated Vision 2030, a new long-term management strategy. The basic strategy set out in Vision 2025—namely, positioning Core Businesses and Strategic Businesses as the Group's two principal drivers and transforming the business portfolio—remains unchanged. However, in anticipation of the long-term social issues that we have identified, we have increased our emphasis on creating social value.

As a step toward realizing Vision 2030, we have prepared a new Medium-Term Management Plan, **AGC plus-2023**, ending in 2023. The plan's basic strategies are pursuing ambidextrous management, promoting sustainability management, and gaining competitiveness by accelerating digital transformation.

Regarding the financial targets of **AGC plus-2023**, raising ROE to 8% is a priority task from the viewpoint of cost of capital. In addition, we aim to exceed the current record for operating profit and achieve a stable ROE of 10% or higher by 2030.

► Pursuing Ambidextrous Management

First of all, we will increase the pace of growth in Strategic

Businesses. In relation to these businesses, plans call for net sales of ¥300.0 billion and operating profit of ¥70.0 billion by 2023, and net sales of ¥400.0 billion and operating profit of ¥100.0 billion by 2025. Looking further ahead, we will continue increasing investment in Strategic Businesses while focusing on the exploration of new areas for the establishment of Strategic Businesses. In particular, given that energy-related and other environment-related business areas promise growth, we will analyze the feasibility of establishing new businesses in such areas.

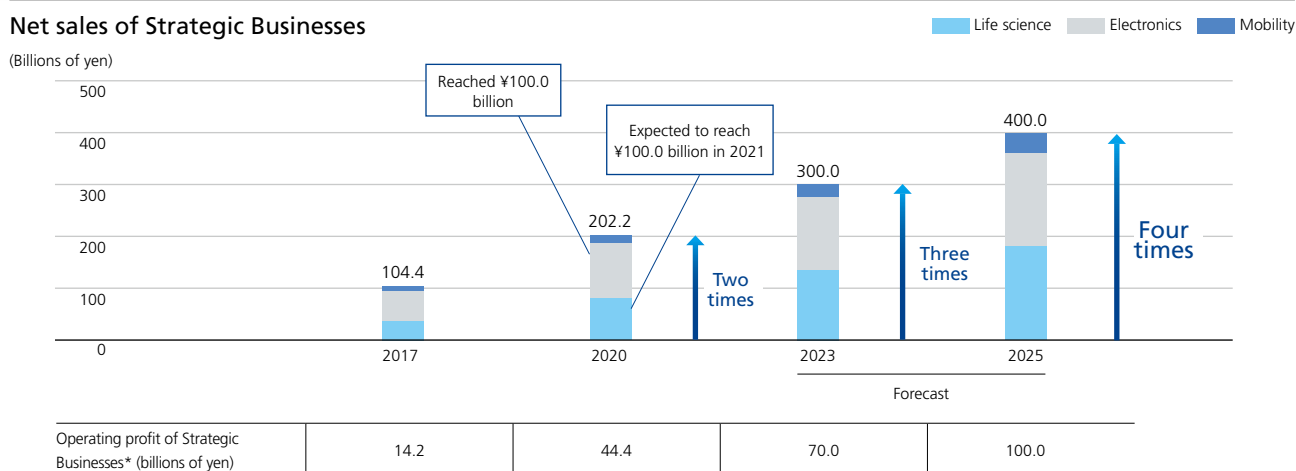
Meanwhile, as I explained earlier, one of the unaccomplished tasks in relation to the previous Medium-Term Management Plan was that we did not make sufficient progress in improving the profitability and asset efficiency of Core Businesses. If we are to become a corporate group capable of securing a stable ROE of 10% or more, we cannot avoid tackling this matter. Particularly in the Glass Segment, which still has many issues, we will take structural improvement measures to achieve a ¥15.0 billion cost reduction, mainly in fixed costs, by 2023. As for the Architectural glass, we are shifting to a production scale that meets regional demand, and we have already shut down a float furnace in France.

Also, the Automotive glass will introduce highly efficient facilities, consolidate production, and focus on high-value-added products. In the Glass Segment as a whole, we will reduce the workforce and general and administrative expenses in Europe and other regions and ensure that investment does not exceed 80% of depreciation.

With respect to improving the profitability and asset

efficiency of the Architectural glass, there is a limit to what the AGC Group can do on its own, which is in part due to the structure of the architectural glass industry. Accordingly, in my capacity as CFO, I have launched and assumed leadership of a structural reform project. As a leader in the industry, the Group will advance initiatives rapidly with an eye to industry restructuring.

Net sales of Strategic Businesses



* In accordance with the expansion of Strategic Businesses, the allocation standard for common expenses has been changed from the operating profit ratio to the budget sales ratio. This change has also been retrospectively applied to 2020 and earlier fiscal years.

► Promoting Sustainability Management

Over the past few years, social interest in the Sustainable Development Goals (SDGs)*¹ has been growing. For about two years, the AGC Group has been analyzing and categorizing the kinds of contributions that it can make to the SDGs. Since the nature of our businesses results in large greenhouse gas (GHG) emissions, we have already been concentrating efforts on environmental initiatives. Looking at environmental matters from the perspective of the SDGs, however, has made us realize that there is an even wider range of social value we can provide through our products, technologies, and corporate activities. To be more precise, we will provide social value in five areas by helping realize a *sustainable global environment, safe and comfortable urban infrastructure, safe and healthy lifestyles, a healthy and secure society, and fair and safe workplaces.*

With the aim of contributing to the realization of a *sustainable global environment*, we will step up initiatives focused on reducing GHG emissions. To provide a focus for these initiatives, we have set net zero carbon emissions as a goal for 2050. As milestones of progress toward this goal, we aim to achieve reductions versus 2019 levels of 30% in

GHG emissions and 50% in GHG emissions per unit of sales by 2030. To reduce GHG emissions per unit of sales, on top of lowering emissions per unit of sales in each business, it will be necessary to increase the proportion of businesses with relatively low GHG emissions, which we will mainly achieve by growing Strategic Businesses.

Since its foundation, the AGC Group has helped address social issues and catered to the needs of the times by using its relationships of trust with customers as a foundation for pursuing ambitious long-term initiatives focused on R&D and the realization of commercial operations. Going forward, we will continue contributing to the sustainability of the planet and society through the provision of differentiated materials and solutions.

► Gaining Competitiveness by Accelerating Digital Transformation

In 2015, the AGC Group's digital transformation efforts began in earnest. We started with the creation of smart factories. In other words, we undertook digital transformation at manufacturing sites. Since then, we have been moving forward with digital transformation in a range of

business processes, including R&D, sales, and back-office work. Moreover, our efforts have garnered external recognition. For example, in 2020 AGC was selected as a DX (digital transformation) Brand 2020.*² However, our efforts are still inadequate when compared with those of leading global companies. Determined to lead the way among Japanese companies with respect to digital transformation, we will continue accelerating our efforts in this regard.

Going forward, we will not only evolve and further embed individual initiatives in each business process but also undertake digitalization that transforms entire categories of business processes associated with customers and markets. Moreover, we will transform business models themselves.

In achieving the initiatives, fostering personnel with the skills needed for digital transformation is essential. At the same time, we believe that having digital transformation

carried out by personnel who possess an in-depth understanding of our technologies and businesses is important. Accordingly, we will foster dual skilled personnel who have advanced data analysis skills in addition to operational knowledge of such areas as materials development, production, sales and logistics.

In our view, progress in digital transformation will become a differentiating factor in the competitiveness of companies. For this reason, we will further accelerate digital transformation to establish a competitive advantage and provide new added value to our customers and society.

*1 The Sustainable Development Goals are 17 goals that the United Nations has adopted. The goals are to be reached between 2016 and 2030.

*2 DX Brand 2020 companies are TSE-listed companies jointly selected and announced by the Ministry of Economy, Trade and Industry (METI) and the Tokyo Stock Exchange (TSE). By industry category, METI and TSE selected companies that have facilitated corporate value growth by building internal systems to promote digital transformation and which have outstanding track records in the utilization of digital technologies.

Improvement of Profitability and Asset Efficiency through Reform of Investment Resource Allocation

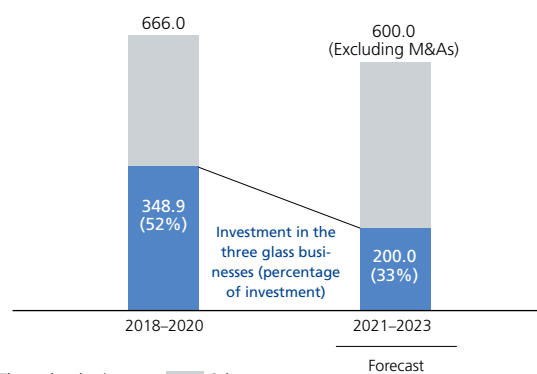
Next, I would like to explain our allocation of investment resources. In the past few years, our investment levels have been high because our acceleration of investment for growth in Strategic Businesses coincided with a period of heavy capital investment in Core Businesses. As a result of these higher investment levels and the COVID-19 pandemic, we saw deterioration in the debt-to-equity ratio, which we use as an indicator of financial soundness. As soon as possible, we intend to return to a normal level, which is 0.5 times or

lower. Total investment during the previous Medium-Term Management Plan was approximately ¥666.0 billion. Under the new Medium-Term Management Plan, we will invest ¥600.0 billion, excluding M&As. Furthermore, as a percentage of total investment we will lower the share of the three major glass businesses from 52% to 33%, while increasing the share of Strategic Businesses from 25% to 33%.

Through this focused allocation of investment resources, the AGC Group will forge ahead with business portfolio

Investment*¹ in the Three Glass Businesses*²

(Billions of yen)



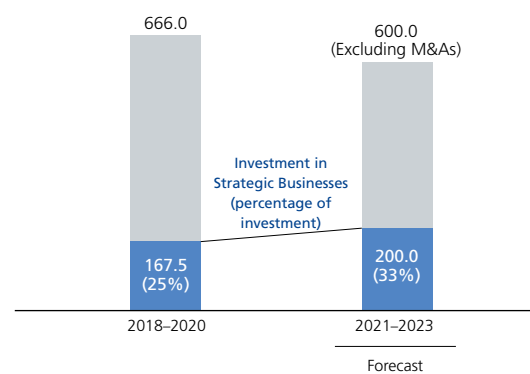
■ Three glass businesses ■ Other

*1 Total investment offset for capital investment, M&As, and sales of securities and fixed assets, etc.

*2 The Architectural glass, Automotive glass, and Display

Investment in Strategic Businesses*²

(Billions of yen)



transformation that improves profitability and asset efficiency. The chart on the right gives an overall idea of how our return on capital employed (ROCE) and earnings before interest, taxes, depreciation, and amortization (EBITDA) will change during the period of the new plan. Compared with its performance in 2019, the AGC Group will raise ROCE from 5.9% to 7.5% and increase EBITDA by approximately ¥100.0 billion. From the perspective of improving profitability and asset efficiency, focusing only on ROCE is a possible approach. However, as this approach can lead to a state of contracted equilibrium, we are evaluating the transformation of our business portfolio based on both ROCE and EBITDA. Furthermore, the priority given to the two indicators when setting targets depends on the nature of the business. For example, with respect to the display business—which is a cash cow—we will focus on improving EBITDA rather than ROCE.

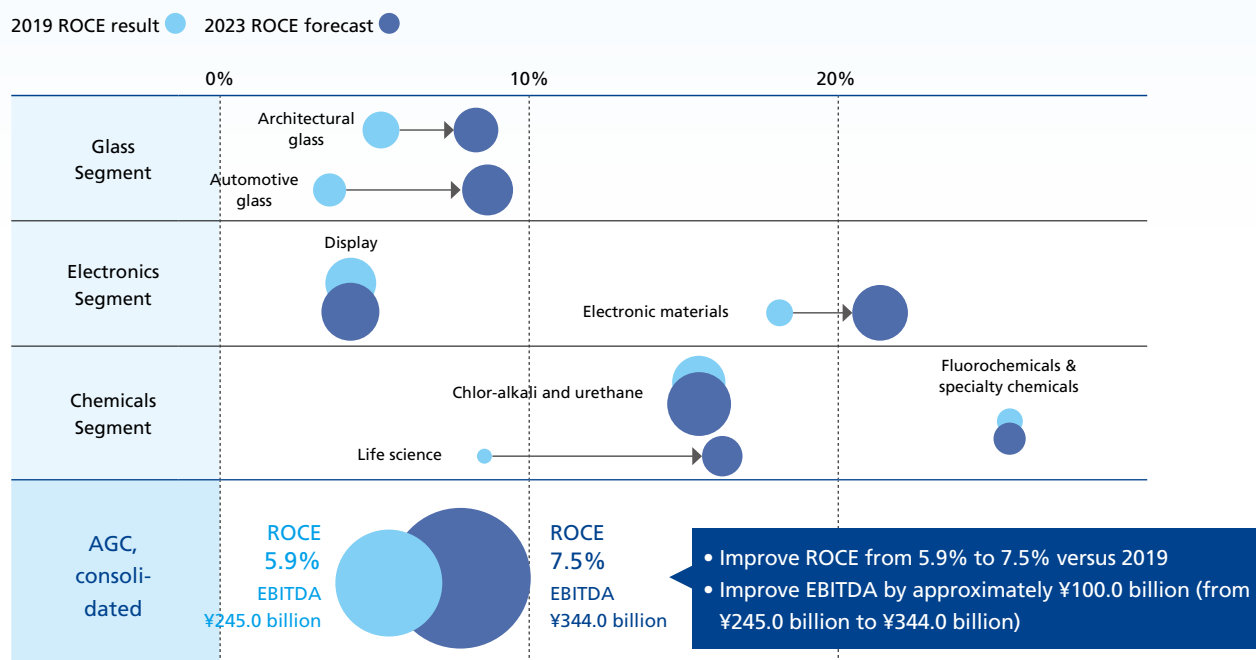
In addition, to maintain financial soundness over the medium to long term while securing opportunities for investment in Strategic Businesses and other growth businesses, we have changed our policy on shareholder returns. Until now, our basic policy has been to continue paying

dividends equivalent to or higher than the current annual dividend per share while aiming for a consolidated total return ratio of 50% or more, which included the acquisition of treasury stock. However, we have changed to a policy of continuing to pay stable dividends with a consolidated dividend payout ratio of 40% as a target while acquiring treasury stock flexibly.

With respect to dividends for 2020, based on consideration of business performance trends, the business environment, and future business development, we decided to pay an annual dividend of ¥120 per share, comprising interim and year-end dividends of ¥60 per share. As a result, both the consolidated dividend payout ratio and the consolidated total return ratio were 81%. As for the outlook in 2021, we expect a gradual recovery in business performance, with year-on-year increases of ¥237.7 billion in net sales, to ¥1,650.0 billion, and ¥84.2 billion in operating profit, to ¥160.0 billion. Also, continued monitoring of the economic impact of COVID-19's resurgence is necessary. We plan to pay an annual dividend of ¥140 per share, comprising interim and year-end dividends of ¥70 per share.



Overview of Business Portfolio Transformation and ROCE*



* ROCE = Forecast of operating profit for the year ÷ Forecast of operating assets for the year-end
 Consolidated operating profit is after the allocation of common costs, while the operating profit of business segments is before the allocation of common costs.
 With the exception of AGC's consolidated EBITDA, the diameters of circles correspond to EBITDA amounts.

My Role as CFO

In AGC, the CEO, CFO, and chief technology officer (CTO) form a management team that leads the entire Group in tandem. Although these officers have ultimate responsibility in their fields—business management, finance, and technology, respectively—this does not mean that, for example, it is acceptable for the CFO to have little understanding of technology. One of the CFO's roles is to make appropriate financial decisions. To do this, however, broad knowledge that spans business management, technology, and the Group's overall businesses is indispensable. It is important to be constantly exposed to a variety of information and to see things from multiple perspectives. Multifaceted knowledge will enable me to offer precise support to the CEO and help guide the AGC Group toward its vision.

At this juncture, what is my most important task as CFO? I believe it is to achieve transformation of the business portfolio. In other words, the CFO should enable AGC to become a corporate group capable of securing a stable ROE of 10.0% or more—the goal I mentioned at the beginning of this message. The road to this goal will not be an easy one. Nonetheless, what we need to do is clear. By achieving the goals of the Medium-Term Management Plan, we aim to move toward realization of Vision 2030.

Shinji Miyaji

Representative Director,
 Senior Executive Vice President, CFO, CCO
 General Manager of the Corporate Planning General Division

Outline of the **AGC plus-2023** Medium-Term

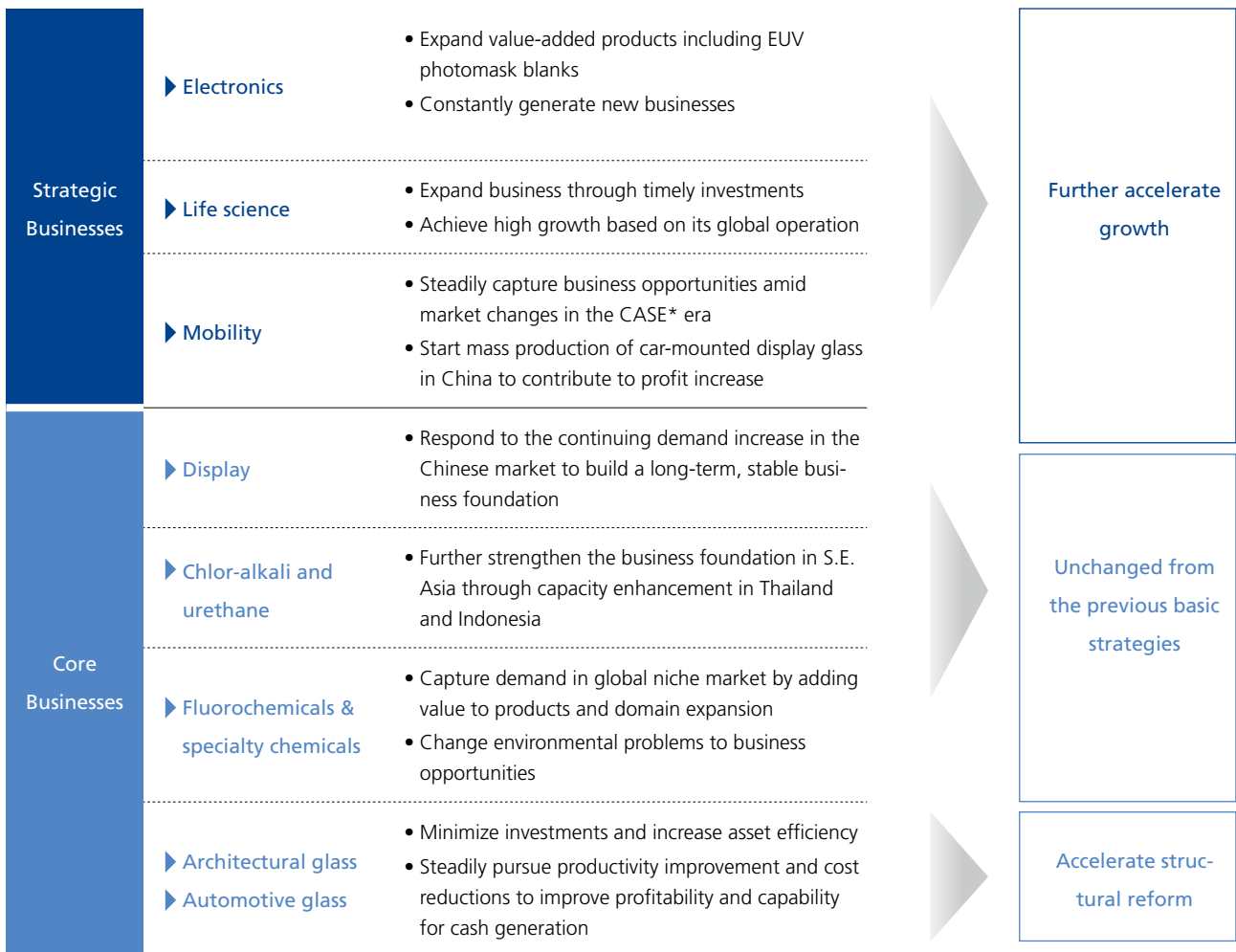
Strategy 1 ▶ Pursuing ambidextrous management

- We will accelerate growth in the Strategic Businesses area, and at the same time explore new business areas including those related to energy.
- In the Core Businesses, we will conduct a structural reform in the architectural glass and automotive glass businesses that need improvements in profitability and asset efficiency.
- For other business in the Core Businesses area, we will strengthen their profit foundations and cash generation

Strategy 2 ▶ Promotion of sustainability management

- Propelling materials innovation to help solve social issues
- Aiming for net-zero carbon in 2050
- Strengthening human resources and group-wide governance

1. Pursuing Ambidextrous Management



* An acronym coined from "connected," "autonomous," "shared," and "electric"

Management Plan

Strategy 3 ▶

Gaining competitiveness by accelerating digital transformation

- Taking a transformation of the business model itself into consideration, leverage digital technologies to improve the process from product development to sales activities
- Use digital technologies to provide value to customers and society and gain competitiveness

▶ Financial Targets

	2023 target
Operating profit	¥160.0 billion
ROE	8%
Operating profit of Strategic Businesses	¥70.0 billion
Debt-to-equity ratio	0.5 times or lower

2. Promotion of Sustainability Management

Propelling innovation in material to help solve social issues



Since its foundation, AGC has been working to solve social issues in response to the demand of the times through long-term R&D and taking on the challenges of commercialization based on a relationship of trust with customers.

Through our unique materials and solutions, we will continue to fulfill Our Mission (Purpose) of AGC, *an everyday essential part of our world* and contribute to the realization of global and social sustainability.

3. Gaining Competitiveness by Accelerating Digital Transformation (DX)

We will advance and deepen our initiatives for each business process and promote digitalization of complex business process towards the full realization of DX.



A Discussion among Our Three Outside Directors

Far-sighted plans are central to the AGC way.

Yasuchika Hasegawa

Chairman of the Board of Directors

Mr. Hasegawa has served as the director, president & CEO as well as the director and chairman of the board of Takeda Pharmaceutical Company Limited. Drawing on a wealth of experience in the corporate management of this company, which is proactively advancing business management globalization in the life science market, he provides recommendations on the overall business management of AGC, including the globalization of its business management.

Years of service as a director: Four



Proposals for the Future of the AGC Group

The AGC Group's three outside directors held a discussion on Vision 2030, newly formulated in February 2021; the Medium-Term Management Plan **AGC plus-2023**, established to realize the vision; and the selection process for the recent appointment of the new president & CEO.



Vision 2030 is very impressive as it reflects the Group's high aspirations.

Keiko Honda

Chairman of the Compensation Committee

Before becoming an adjunct professor specializing in environmental, social, and governance (ESG)-related investment at Columbia University in the United States, for many years Ms. Honda was engaged in consulting work on corporate strategy, M&As, and alliances at McKinsey & Company, Inc., and other firms, and served as the representative of a multinational organization. Utilizing extensive knowledge on the management of corporations and global organizations, she provides expert recommendations on the AGC's overall business management.

Years of service as a director: One

The new Medium-Term Management Plan sends an even stronger message with respect to transformation of the business portfolio.

Hiroyuki Yanagi

Chairman of the Nominating Committee

Mr. Yanagi is the chairman and representative director of Yamaha Motor Co., Ltd., previously serving as the company's president, CEO and representative director. Based on abundant experience in the corporate management of this company, which is proactively advancing global development in the mobility market, he provides recommendations on the overall business management of AGC, including the strengthening of the global development of the Company's businesses.

Years of service as a director: Two



What are your evaluations of the recently released Vision 2030 and the new Medium-Term Management Plan, which is aimed at moving toward the realization of the vision?

Hasegawa I was appointed as an outside director of AGC in 2017, the year before the beginning of the previous Medium-Term Management Plan. At the time, my impression of AGC was that it had a lot of talented people who thought things through logically and then carried them out. This approach is clearly reflected in the AGC Group's management strategy. Similarly, the new Medium-Term Management Plan deserves praise for its rational and well-thought-out content.

The previous plan set forth Vision 2025 as a long-term goal and incorporated into strategies the tasks that the AGC Group needed to tackle to realize the vision. By setting out Vision 2030, however, the new plan has gone a step further. Consistency in preparing and then putting into practice far-sighted plans reflects the AGC way of doing things. This approach gives cohesion to the Group's overall management strategy.

Yanagi I agree. Since the previous plan, the AGC Group has been transforming its business portfolio based on clearly defined Core Businesses and Strategic Businesses. Many companies set out "portfolio management" strategies. However, most of these companies make an adjustment in emphasis rather than change their mainstay businesses. In contrast, the Group is attempting to change its mainstay businesses themselves. The previous plan clearly showed the Group's determination to take on this difficult task. The new plan sends an even stronger message in this regard through the establishment of *pursuing ambidextrous management* as a basic strategy. Consequently, Strategic Businesses have grown rapidly over the past two or three years. By presenting such a consistent message, the Group gives not only its employees but also external stakeholders a tangible sense that it is steadily progressing toward its goals.

Honda The emphasis on creating social value and the establishment of *promoting sustainability management* as a basic strategy are commendable. In recent years, interest in environmental, social, and governance (ESG) management has been growing. In my opinion, this interest is attributable to two major factors. One is that the issue of climate change has become viewed as a real business risk. The second factor is the global pandemic that is currently rocking the world. In fact, the *Global Risks 2015* report, issued

by the World Economic Forum, ranked "rapid and massive spread of infectious diseases" as the second highest global risk among global risks that would have a significant impact upon actualization. This risk has now become a reality in the form of the spread of COVID-19. As a result, I believe that many investors and corporate executives have become more aware that some things cannot be understood within the framework of the business management parameters on which they once relied.

Given these trends, there are calls for companies to redefine their purposes, by which I mean the significance of companies' existence to society. I feel that the strong sense of purpose clearly evident in the following excerpt from the AGC Group's Vision 2030 is very impressive. "By providing differentiated materials and solutions, AGC strives to help realize a sustainable society." In particular, as it emits a large amount of CO₂ through manufacturing processes, the Glass Segment urgently needs to address the issue of climate change. With a view to *contributing to the realization of a sustainable global environment*, the new plan declares that the Group aims to achieve net zero carbon emissions by 2050. I would like to express my respect for the Group's commitment to taking on this extremely difficult task.

Yanagi Also, the plan's basic strategies are *pursuing ambidextrous management, promoting sustainability management, and gaining competitiveness by accelerating digital transformation*. As the plan is built around these three basic strategies, its main points are well organized and clear.

I would like to talk a little about digital transformation. Although many companies are now seriously tackling digital transformation, they are still at the stage where each initiative is only focused on a "point." Unless the number of "points" is increased so that they turn into "areas," digital transformation will not produce true competitiveness. Ahead of its competitors, the Group has been increasing the number of "points" in each business process, including manufacturing, R&D, marketing, and back-office operations. Adequately discussing and sharing with all employees what the organization will look like once these "points" have formed into an "area" is important. Accordingly, I would like AGC to create a target profile that reflects its unique character.

What do you think the AGC Group should focus on most in the new Medium-Term Management Plan?

Hasegawa Without a doubt, the greatest achievement of the previous Medium-Term Management Plan was the growth of Strategic Businesses.

In particular, the Life science has been conducting M&As and post-merger integration effectively and progressing well. While many Japanese companies struggle to make the most of M&As, the AGC Group is doing a great job in this respect. The same can be said for the Electronics Segment. The robust growth of the life science and Electronics Segment alone is on track to meet the overall targets set for Strategic Businesses in the new plan.

On the other hand, the Mobility has yet to make a full-fledged contribution to business performance, even if we allow for the impact of the COVID-19 pandemic. I fully understand that sometimes a lot of time is needed before we see results. This was the case with EUV exposure photo-mask blanks, which entered into development about 20 years ago and are now driving the growth of the Electronics Segment. However, we must ensure that we have backups in case results do not emerge as expected. I feel that the time has come for the Group to further expand businesses that are currently growing and simultaneously nurture the buds of new growth.

For example, the senior management team has put forward the idea of exploring energy-related fields as a new area for development of Strategic Businesses, and I urge the Group to take up this challenge. In February 2021, U.S. President Biden signed an executive order calling for the reform of supply chains in four major product categories. One of these categories is the large-capacity fuel cells used for such applications as electric vehicles. Lithium-ion batteries originated in Japan. Moreover, the Group has a proven track record in the field of fuel cells. I hope that the Group will utilize its inorganic and organic technology platforms to establish new business areas in energy-related fields, such as power generation and storage. These initiatives will also provide a reminder to the world of Japan's technological prowess.

Yanagi As Mr. Hasegawa said, in reality things do not always turn out as planned. Therefore, only tackling initiatives focused on themes that are currently apparent may not be enough to realize Vision 2030. First of all, accomplishing initiatives focused on current themes is necessary. At the same time, however, the senior management team

must look for potential new themes.

Further, I would like the senior management team to be aware of how AGC's brand value can be increased. For example, if the Group makes progress in transforming its business portfolio, a corresponding rise in AGC's brand value is likely. On the other hand, if problems related to quality, safety, compliance, or the environment occur, brand value could be lost at a stroke. The Group has to consistently focus efforts on maximizing its positive attributes while minimizing its negative attributes so that in 2030 employees can say with pride that "the Group's brand value is much higher."

Honda With regard to business portfolio transformation, as both of you have already mentioned, Strategic Businesses have made remarkable strides forward. Meanwhile, in Core Businesses, the improvement of profitability and asset efficiency in the Glass Segment has not progressed as expected and has consequently become a major task left over from the previous Medium-Term Management Plan.

The inclusion of ROE as a financial target for 2030 by the AGC Group and, with the aim of realizing this target, its adoption of return on capital employed (ROCE) as a management indicator deserve considerable praise. Earlier, I mentioned ESG management, but meeting the expectations of shareholders is still an important part of corporate management. As with many Japanese companies, the Group needs to work on improving ROE.

To achieve this goal, fundamental reform of the Glass Segment is essential. The glass industry as a whole is going through a challenging phase, and the Group has already reached the limits of what it can do on its own. In addition, I appreciate that reform is psychologically difficult because the Glass Segment is the Group's founding business. However, I believe the Group will not be able to achieve Vision 2030 if the task is avoided.

Hasegawa You are absolutely right. In this respect, the clear setting out of measures for structural improvement of the Glass Business in the new Medium-Term Management Plan is a major step forward. Furthermore, to ensure that structural reform of the Architectural Glass Business advances steadily, a project led by the chief financial officer (CFO) has been launched and has begun implementing initiatives in earnest.

Precisely because Strategic Businesses are performing

I feel that the time has come for the Group to further expand businesses that are currently growing and simultaneously nurture the buds of new growth.



well, the Group should be in a position to take decisive measures. I would like to see the Group take bold steps to ensure that it realizes Vision 2030.

Hasegawa You are absolutely right. In this respect, the clear setting out of measures for structural improvement of the Glass Segment in the new Medium-Term Management Plan is a major step forward. Furthermore, to ensure that structural reform of the Architectural glass advances

steadily, a project led by the chief financial officer (CFO) has been launched and has begun implementing initiatives in earnest.

Precisely because Strategic Businesses are performing well, the Group should be in a position to take decisive measures. I would like to see the Group take bold steps to ensure that it realizes Vision 2030.

The new president & CEO was appointed in January 2021. Could you please explain the selection process?

Yanagi To begin with, I will explain the process from my standpoint as Chairman of the Nominating Committee. In selecting the new president & CEO, we proceeded carefully, following due process and spending a great deal of time examining and deliberating the matter. In this process, I believe that the Nominating Committee, the Board of Directors, and the Audit & Supervisory Board adequately performed their respective roles.

Next, I would like to share my personal thoughts. Four years ago, I was also involved in the process of appointing a new president & CEO in another company, and I believe that there are three major roles required of those appointed to the position. The first is to exercise leadership as a corporate executive, the second is to build relationships with external parties and disseminate information, and the last is to foster successors. In other words, developing successors is a very important responsibility for corporate executives.

Hasegawa The AGC Group's succession planning and selection process have been designed very precisely.

Through a broad approach to evaluation, a large number of potential successors are gradually narrowed down over time. In this process, we refer to personnel evaluations and other types of assessments.

The type of leader who is suitable for a company depends on the situation in which it finds itself. Partly due to the COVID-19 pandemic, I believe that in managing the Group the emphasis has shifted a little toward making sure that new buds of growth are nurtured into mainstay businesses. In this regard, when he served in positions of general manager of the Business Development Office and CTO, President & CEO Yoshinori Hirai established a track record of creating the buds of new businesses and nurturing them into Strategic Businesses. I am confident that his guidance of business management will put the Group onto a new growth trajectory.

Honda As I was appointed as an outside director in March 2020, I was only involved in the final stages of the selection of the new president & CEO. However, as Mr. Hasegawa

said, President &CEO Yoshinori Hirai has led the way in fostering Strategic Businesses, and without a doubt this has made the Group shine. Charles A. O'Reilly, a professor at Stanford University's Graduate School of Business in the United States, has cited the Group as an excellent example of "organizational ambidexterity*" which he advocates. I hope the Group continues earning plaudits from such management world authorities.

Yanagi I have always said that the most important aspect of human resource development is to nurture people who embody the corporate brand. The most important component of the AGC brand is the "the pursuit of technological innovation." I believe this phrase sums up AGC's unique attributes. Given that "the pursuit of technological innovation" has enabled the Group to create new value, contribute to society, and grow, President &CEO Yoshinori Hirai's advanced level of technical expertise makes him the perfect

person to embody the AGC brand. I had a chance to talk directly with him before he became a director. At that time, he informed me that he had learned firsthand about the distinctive management style of start-up companies in Silicon Valley in the United States. As you might expect, "the pursuit of technological innovation" calls for an entrepreneurial mindset. New things cannot be created by a conservative mindset. I believe that President & CEO Yoshinori Hirai instilled in the Group the entrepreneurial mindset he had acquired from his own experience and that this led to the growth of Strategic Businesses. I hope that he continues to demonstrate his skills in the role of president &CEO.

* Organizational ambidexterity refers to the ability of an organization to explore and exploit both mature and new technologies and markets. This concept has been proposed by Professor Charles A. O'Reilly of Stanford Graduate School of Business in the United States.

Lastly, could you please tell us about your role as an outside director?

Honda I would like to contribute to three particular areas. The first area is transformation of the business portfolio, which will take a lot of time and effort to accomplish. In this area, I will do my utmost to be a pacemaker for the management team. The second area is ROE improvement. My background is basically in finance, so I will provide detailed support in this area. Thirdly, since my specialty as a

university professor is ESG investment, I would like to offer my opinions and advice on such sustainability issues as how to deal with climate change so that the AGC Group can come up with the best solutions.

Yanagi If we divide a company's organization into vertical and horizontal axes, the vertical axes are the businesses. In the AGC Group's case, the Glass, Electronics, and Chemicals



In Core Businesses, the improvement of profitability and asset efficiency in the Glass Segment has not progressed as expected and has consequently become a major task left over from the previous Medium-Term Management Plan.

Although not all external opinions are correct, referring to evaluations made from different perspectives is useful.



businesses are the main vertical axes. Each business has its own themes and conducts its own business operations. These disparate activities alone, however, are not sufficient for the Company as a whole to function properly. As the vertical axes are strengthened, such horizontal axes as human resources, finance, safety, and the environment must also be strengthened. Finding the right balance between these two types of axes is difficult. Strengthening only the vertical axes will result in a company that lacks stability, while strengthening only the horizontal axes will not produce growth. Finding this balance is one of the essentials of business management. I think the Group should arrive at optimal decisions by bouncing ideas off people inside and outside the Group who can offer a range of different evaluations and opinions. Although not all external opinions are correct, referring to evaluations made from different perspectives is useful. In light of the experience I have accumulated, I will do my best to help the Group advance in the right direction by sharing my opinions on a holistic view of the Group's vertical and horizontal axes.

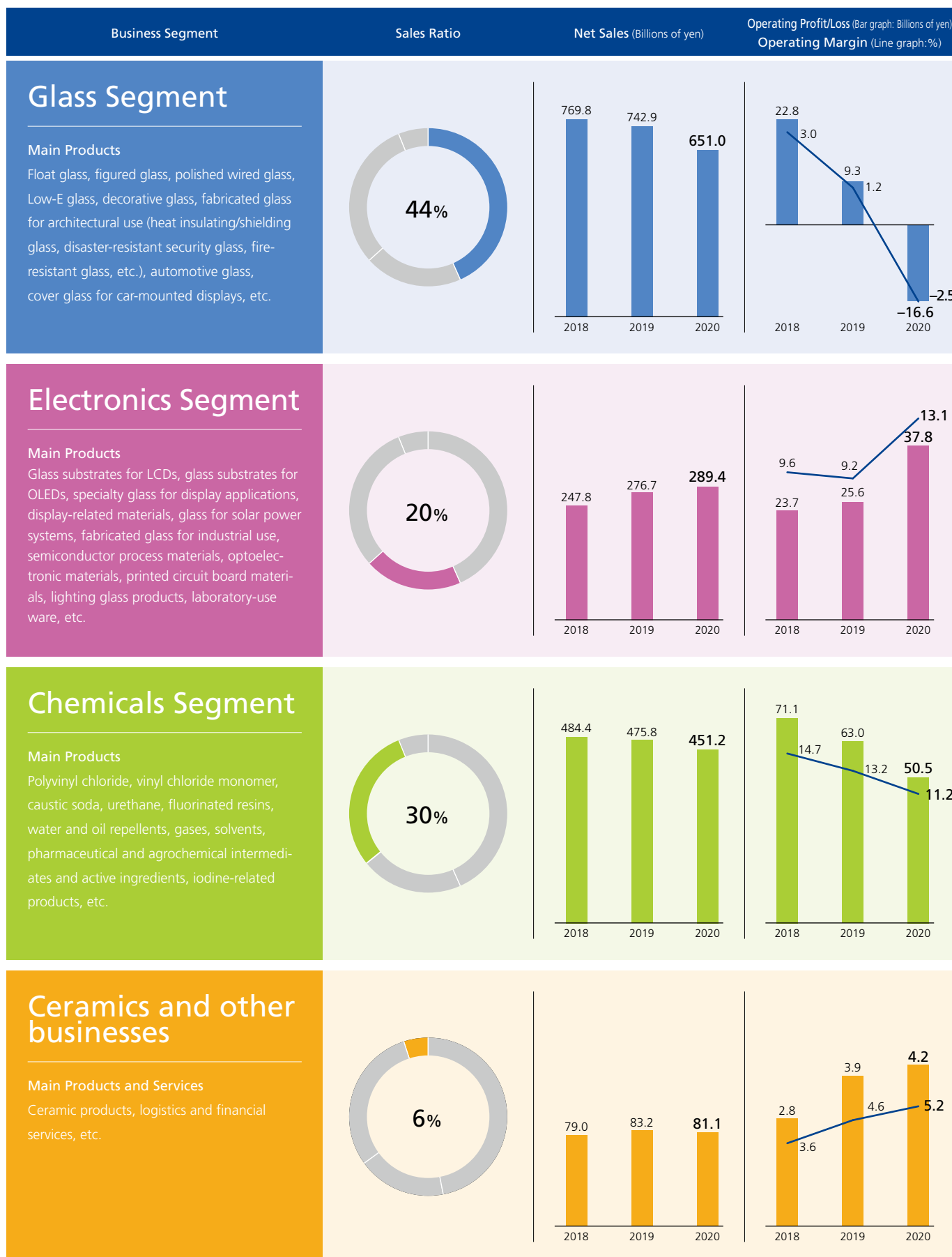
Hasegawa When I first became an outside director, I was concerned about whether I could really be of help in this role because I do not have a technical background.

However, by drawing on my experience to identify trends in the global market and provide opinions and recommendations on where best to take on challenges, I hope I have been of some use.

The AGC Group's largest markets are Japan and Asia. Therefore, the Group has a good understanding of where it can realize its strengths in these regions. In contrast, my impression is that the Group does not have such a firm grasp of the U.S. and European markets and struggles to achieve results therein. While the risks are admittedly high, it is a fact that many companies are succeeding in these markets. I look forward to seeing the Group put down roots in these markets and become a corporate group that continuously generates profits.

To achieve such expansion, the AGC Group has to make steady progress in diversifying human resources in terms of gender and nationality. As a whole, the Group has a well-balanced lineup of talented personnel. When selecting the next generation of leaders from among these personnel, it will be necessary to take diversity into account. By offering opinions and suggestions on what aspects of diversity should be given particular weight, I hope to help AGC become a global corporate group rich in diversity.

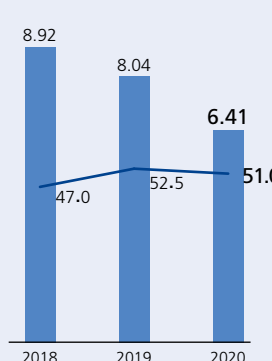
Overview by Business Segment

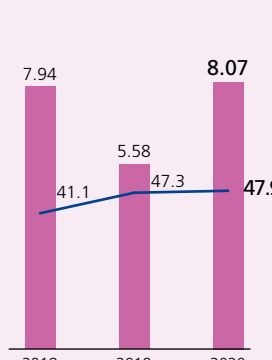


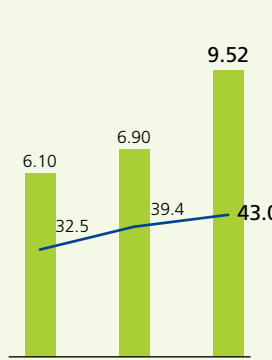
Notes 1. Sub-segment net sales are based on net sales to external customers.

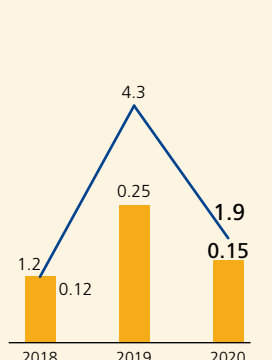
2. As net sales and operating profit (loss) by business segment are before the deduction of eliminations, the sum of net sales by business segment does not equal Companywide net sales, and the sum of operating profit (loss) by business segment does not equal Companywide operating profit.

Group Companies (As of December 31, 2020)	Manufacturing Bases (As of December 31, 2020)	CAPEX (Bar graph: Billions of yen) Depreciation (Line graph: Billions of yen)	Number of Employees (As of December 31, 2020)
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<p>154 companies</p> <p>Domestic 14 companies</p> <p>Overseas 140 companies</p>	<p>46 locations</p> <p>Japan/Asia 21 locations</p> <p>Europe 16 locations</p> <p>The Americas 8 locations</p> <p>Africa 1 locations</p>	 <table border="1"> <caption>CAPEX and Depreciation (Billions of yen)</caption> <thead> <tr> <th>Year</th> <th>CAPEX</th> <th>Depreciation</th> </tr> </thead> <tbody> <tr> <td>2018</td> <td>8.92</td> <td>47.0</td> </tr> <tr> <td>2019</td> <td>8.04</td> <td>52.5</td> </tr> <tr> <td>2020</td> <td>6.41</td> <td>51.0</td> </tr> </tbody> </table>	Year	CAPEX	Depreciation	2018	8.92	47.0	2019	8.04	52.5	2020	6.41	51.0	<p>32,519</p> <p>Japan/Asia 12,860</p> <p>Europe 15,453</p> <p>The Americas 4,206</p>
Year	CAPEX	Depreciation													
2018	8.92	47.0													
2019	8.04	52.5													
2020	6.41	51.0													

<p>27 companies</p> <p>Domestic 6 companies</p> <p>Overseas 21 companies</p>	<p>25 locations</p> <p>Japan/Asia 22 locations</p> <p>Europe 1 locations</p> <p>The Americas 2 locations</p>	 <table border="1"> <caption>CAPEX and Depreciation (Billions of yen)</caption> <thead> <tr> <th>Year</th> <th>CAPEX</th> <th>Depreciation</th> </tr> </thead> <tbody> <tr> <td>2018</td> <td>7.94</td> <td>41.1</td> </tr> <tr> <td>2019</td> <td>5.58</td> <td>47.3</td> </tr> <tr> <td>2020</td> <td>8.07</td> <td>47.9</td> </tr> </tbody> </table>	Year	CAPEX	Depreciation	2018	7.94	41.1	2019	5.58	47.3	2020	8.07	47.9	<p>11,770</p> <p>Japan/Asia 11,471</p> <p>Europe 30</p> <p>The Americas 269</p>
Year	CAPEX	Depreciation													
2018	7.94	41.1													
2019	5.58	47.3													
2020	8.07	47.9													

<p>37 companies</p> <p>Domestic 14 companies</p> <p>Overseas 23 companies</p>	<p>23 locations</p> <p>Japan/Asia 15 locations</p> <p>Europe 5 locations</p> <p>The Americas 3 locations</p>	 <table border="1"> <caption>CAPEX and Depreciation (Billions of yen)</caption> <thead> <tr> <th>Year</th> <th>CAPEX</th> <th>Depreciation</th> </tr> </thead> <tbody> <tr> <td>2018</td> <td>6.10</td> <td>32.5</td> </tr> <tr> <td>2019</td> <td>6.90</td> <td>39.4</td> </tr> <tr> <td>2020</td> <td>9.52</td> <td>43.0</td> </tr> </tbody> </table>	Year	CAPEX	Depreciation	2018	6.10	32.5	2019	6.90	39.4	2020	9.52	43.0	<p>8,263</p> <p>Japan/Asia 6,130</p> <p>Europe 1,548</p> <p>The Americas 585</p>
Year	CAPEX	Depreciation													
2018	6.10	32.5													
2019	6.90	39.4													
2020	9.52	43.0													

<p>25 companies</p> <p>Domestic 10 companies</p> <p>Overseas 15 companies</p>	<p>5 locations</p> <p>Japan/Asia 5 locations</p>	 <table border="1"> <caption>CAPEX and Depreciation (Billions of yen)</caption> <thead> <tr> <th>Year</th> <th>CAPEX</th> <th>Depreciation</th> </tr> </thead> <tbody> <tr> <td>2018</td> <td>1.2</td> <td>4.3</td> </tr> <tr> <td>2019</td> <td>0.12</td> <td>0.25</td> </tr> <tr> <td>2020</td> <td>1.9</td> <td>0.15</td> </tr> </tbody> </table>	Year	CAPEX	Depreciation	2018	1.2	4.3	2019	0.12	0.25	2020	1.9	0.15	<p>3,627</p> <p>Japan/Asia 3,602</p> <p>Europe 4</p> <p>The Americas 21</p>
Year	CAPEX	Depreciation													
2018	1.2	4.3													
2019	0.12	0.25													
2020	1.9	0.15													

Glass Segment

Architectural Glass

Based on our vision of *"inspiring people by using glass to connect them with their surroundings,"* we provide a wide variety of products that meet the needs of each region.



Jean-François Heris

President of the Building & Industrial Glass Company

Strengths of the Architectural Glass

In 1909, we became the first company to successfully produce flat glass in Japan. Since then, we have moved beyond the domestic market and expanded our business activities overseas. Today, we boast the largest share of the global market for float glass. In the field of architectural glass, the key is to establish an operational management system that can respond accurately and promptly to unique changes in demand and conditions in each region. To this end, we delegate authority to regional presidents. Delegation enables us to provide products and services that are appropriate for local conditions. In addition, by working closely together on a global basis, we have built a system for sharing best practices and other information, which has become a major strength of the Architectural Glass.

In times of emergency, the aforementioned strengths are particularly effective. By quickly coordinating across regions and maintaining an optimal production system, the Architectural Glass has been able to minimize the impact of supply chain interruptions resulting from the current COVID-19 pandemic and meet demand without any major problems.

Another strength of the Architectural Glass is its ability to develop differentiated new products, such as high-performance glass, by utilizing the AGC Group's advanced technological capabilities. In recent years, we have succeeded in developing many new products, including an advanced vacuum-insulated window and double-glazing glass that is long-lasting and easy to recycle.

Business Strategies

Aiming to become a resilient business entity that is less susceptible to market fluctuations, we have set out four business strategies.

The first strategy is to diversify our product mix, target industries, and target regions. Since architectural glass is a product vulnerable to market fluctuations, reducing their impact by having a wide range of options is important. For this reason, while concentrating management resources in industries and regions with growth potential, we aim to build a well-balanced business portfolio that is not overly dependent on any particular industry or region.

Our second business strategy is to expand the value chain of the business as a whole into areas that are farther downstream. By expanding and enhancing our business in areas closer to end users and further strengthening our relationships with them, we will provide new value to society.

The next strategy entails developing businesses in new fields that promise to generate stable earnings. The glass antennas we are currently introducing to Japan are good examples of this strategy. Together with the major telecommunications company NTT DOCOMO, INC., we have jointly developed glass antennas based on the concept of "turning windows into base stations" without adversely affecting cityscapes or indoor environments. Through this establishment of a relationship with a new client in the telecommunications industry, we have created a foothold that will enable us to provide new products and solutions to the telecommunications industry—which has robust growth potential. In June 2020, we completed the development of 5G-compatible glass antennas in Japan, and we have started up a mass production plant to meet growth in demand for these antennas going forward. Also, we have begun telecommunications trials with our sights set on rolling out the antennas in Europe.

The fourth strategy of the Architectural Glass is to focus on return on capital employed (ROCE). We view improving profitability and asset efficiency as the most important task of the business. Accordingly, we use ROCE as an indicator for investment decisions. Our aim is to achieve a sound asset mix by examining all possibilities and analyzing the returns we can get from our investments.

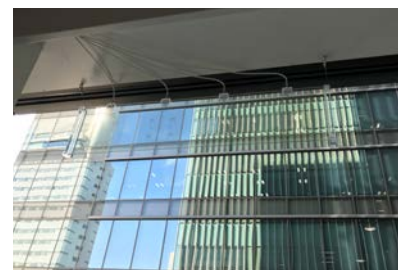
In 2020, shipments of architectural glass decreased steeply due to the COVID-19 pandemic. Over the long term, however, the global market for architectural glass is expected to remain



Low-E glass



Building glass-integrated photovoltaic solar cell module



Glass antenna that adds cellular base station capabilities to windows

firm. Our initiatives and measures based on the four above-mentioned business strategies will rebuild production systems so that they reflect the level of demand in each region and focus on improving the profitability and asset efficiency of existing operations. At the same time, we will accelerate the creation of stable earnings in new business fields.

Toward Sustainable Growth

Given that transitioning to a carbon-neutral society is a major long-term task, the Architectural Glass is taking steps to reduce its greenhouse gas emissions. Specifically, we are considering switching over the energy used in manufacturing processes from fossil fuels to electricity. Further, we are actively promoting research and development aimed at creating environment-friendly products. These efforts include making glass thinner without sacrificing strength, thereby reducing CO₂ emissions per unit of surface area.

The transition to a carbon-neutral society represents a great opportunity. Architectural glass with advanced thermal insulation properties improves the heating and cooling efficiency of buildings and homes. It is estimated that for every ton of CO₂ emitted in producing the AGC Group's architectural glass, approximately 10 tons of CO₂ are saved when the glass is used. For example, in Europe there is growth in demand for the retrofitting of glass windows that have advanced thermal insulation properties. With this in mind, in Europe the Group has begun marketing a vacuum-insulated window with industry-leading performance, which was developed in collaboration with Panasonic Corporation. In 2019, in Japan we launched Thermocline™, a new type of double-glazing glass that has excellent thermal insulation performance and retains this level of performance for approximately 20 years—twice as long as previous products. Moreover, this new product is easy to recycle. Going forward, we will continue focusing efforts on the development of high-performance glass with excellent environmental characteristics.

Based on its vision of “inspiring people by using glass to connect them with their surroundings,” the Architectural Glass will continue to provide a wide variety of products that both meet the needs of each region and the changing needs of society as a whole.

A Message from an Employee

I will take the initiative to ensure that the solutions we offer are customers' first choice.

I am responsible for sales of the WAVEATTOCH™ glass antenna. Glass antennas function as antenna base stations, which transmit and receive communication radio waves. At present, telecommunications carriers are moving forward rapidly with the build-out of antenna base stations in preparation for the penetration of 5G, the next-generation telecommunications standard. Sometimes, however, normal antennas cannot be installed due to structural or aesthetic considerations, and in such cases glass antennas are often installable. My role is to propose to telecommunications construction companies the introduction of glass antennas and enable their installation.

As glass antennas are a completely new type of product, giving customers detailed explanations of installation requirements and methods is needed. For this reason, I make a point of proactively communicating with customers by visiting locations where antennas are to be installed, so that I can provide on-site explanations of the features of the product and how it will look upon installation. Also, I am always focused on identifying changes in the market as early as possible and coming up with proposals that address the issues customers are facing.

At the moment, I am devoting all of my efforts to the accumulation of as many examples of glass antenna installation as possible. In the future, however, I would like to be involved in launching new products from scratch. With this ambition in mind, my current job is giving me invaluable firsthand experience of the telecommunications industry's rapidly changing needs. In performing my duties, I will take the initiative to ensure that the solutions we offer are customers' first choice.



Honoka Kitamura

Telecommunication
Business Development Group,
Japan Division
Asia Pacific General Division
Building & Industrial Glass
Company

Glass Segment

Automotive Glass

Globally, we will provide high-performance automotive glass that helps create safe, comfortable cars. At the same time, we will continue contributing to the realization of next-generation mobility by developing high-value-added products.



Yoshinori Kobayashi
President of the Automotive Company

Strengths of the Automotive Glass

In 1956, the AGC Group began manufacturing automotive glass in response to growing demand for automobiles in Japan. Later, we established technology development bases not only in Japan but also in Europe and North America to support the global expansion of automobile manufacturers. As a result of building capabilities for the worldwide supply of high-quality products and services, we have secured the largest share of the global automotive glass market. Our significant market share is also a testament to the trust we have earned from customers. More specifically, we have become part of a virtuous cycle whereby our ability to meet the expectations of customers leads them to ask us for assistance in achieving their next goals.

Further, the ability of the business to realize product development that leverages the AGC Group's comprehensive strengths is a major source of differentiation. For example, we have led the world in the development of a wide range of high-performance glass, including glass that cuts ultraviolet and infrared light and light controll glass used in roof glass. The advanced coating and glass processing technologies used for these products are combined technologies that include elemental technologies developed in other business divisions. In addition, our diverse, talented personnel are an important foundation supporting product development capabilities.

Business Strategies

Since 2017, global automobile unit production has been trending downward. Furthermore, in 2020 the COVID-19 pandemic

significantly impacted the automotive industry. As such, our automotive glass shipments have also declined. Reflecting these circumstances and the proactive capital investment of the Automotive Glass over the past few years, profitability and asset efficiency have declined. Viewing improvement in these regards as pressing tasks, we are implementing reforms at our 23 manufacturing bases around the world to reduce costs and enhance productivity. Also, we will reduce fixed costs by consolidating production through the introduction of highly efficient equipment. Further, to reduce general and administrative expenses, we have begun taking such measures as reducing personnel numbers in Europe and other regions, and we plan to curb investment for the time being.

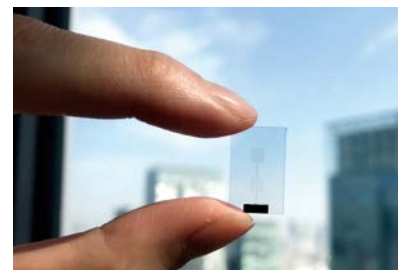
In parallel with the aforementioned measures, we will accelerate our transition to high-value-added products with the aim of improving profitability and asset efficiency. The key to this transition will be the Mobility, which the Group has identified as one of its Strategic Businesses. A wave of changes—often referred to by the acronym CASE (connected, autonomous, shared, and electric)—is spreading through the automotive industry, while the new service format known as Mobility as a Service (MaaS) is becoming more widespread. As these trends emerge, automobiles are rapidly incorporating IT. Increasingly, they are being seen not simply as a means of transportation but as comfortable mobility spaces. With the increased incorporation of IT, demand is rising for car-mounted touch-panel displays that are larger, more complexly shaped, and offer higher performance. In response, the AGC Group has developed the world's first cover glass for car-mounted displays with complex three-dimensional shapes. As well as meeting the technical specifications of such displays, this product realizes the high degree of design flexibility expected of glass and the level of safety needed for automotive interiors. Thanks to these attributes, the product has claimed a large market share centered on high-end European cars. Anticipating future demand growth, we plan to build a new manufacturing base for cover glass for car-mounted displays in China and start up mass production in 2022. Further, in Japan automotive window glass is set to become a new medium for disseminating information. Our Glascene™ transparent glass screens will be used for a new



Cover glass for car-mounted displays



Automotive laminated glass and tempered glass



5G glass antenna

taxi-window-based mobile signage service, which News Technology Inc. and S.RIDE Inc. plan to launch. While realizing the levels of safety and durability essential for automotive window glass, the glass screens will enable the projection of high-contrast advertisements onto the transparent side windows of taxis.

Similarly, in the CASE era ever-higher demand for glass antennas is expected. In anticipation of the realization of vehicle-to-everything (V2X) technology, which will allow vehicles to exchange a variety of information with external data servers and other entities, the AGC Group successfully developed a vehicle-mounted 5G glass antenna in 2018. Moreover, our development bases in Japan, Europe, and the United States are equipped with anechoic chambers, which we will use to accelerate the development of fundamental technologies for antennas compatible with 5G networks as well as antennas suitable for the next generation of high-speed communications.

Toward Sustainable Growth

The advance of CASE-related initiatives and the popularization of MaaS are expected to generate an array of growth opportunities for the AGC Group, as it is able to draw on a broad range of elemental technologies. In addition to cover glass for car-mounted displays and glass antennas, we will support the evolution of cars in other ways through our diverse range of materials and products. For example, we will develop glass with optimal transparency in the wavelength range used by autonomous-driving sensors. Also, we will develop lightweight glass and sound-insulating glass for electric vehicles. In particular, the Group will focus on antennas, displays, and sensors as fields in which it can take advantage of its strengths.

Further, in the context of transitioning toward a carbon-neutral (carbon-free) society, reducing the greenhouse gas emissions of in-house manufacturing processes is one of our most important tasks. Through proactive digital transformation, we will innovate manufacturing processes, help protect the environment, and strengthen our competitiveness even further.

A Message from an Employee

By utilizing on-site experience in both sales and production operations, I will ensure overall optimization.

I began working for the AGC Group in a technical position. Three years later, I had an opportunity to work in sales, following which I gained technical experience at plants. I am now engaged in technical sales of cover glass for car-mounted displays. Technical sales personnel have two important roles. The first is to inform customers, in a manner that matches their needs, about the value that the Group can offer. Cover glass for car-mounted displays—for which the Group pioneered mass production—has extremely significant competitive advantages. Through an ongoing process of trial and error, we must accurately identify the particular needs of each customer and then draw their attention to the features and advantages of our products.

Our second role is to plan new products in light of information gathered from customers about their needs. To realize commercial products, we need to coordinate with each production site and establish a system that ensures overall optimization. Technical sales involve a lot of work, but the job is also rewarding because it allows me to fully utilize my on-site experience in both sales and production operations.

In the future, I believe that staying aware of developments in fields other than the mobility field in which I am currently involved will be important. With this in mind, I actively participate in employees' knowledge- and experience-sharing efforts that transcend the boundaries of in-house companies. I will continue educating myself with the aim of helping the entire Group provide new added value that consistently matches the evolving needs of customers and the times.



Ryosuke Tajima

Sales & Marketing
Department
In-Vehicle Design Glass
Division
Automotive Company

Electronics Segment

Guided by a vision calling on it to *contribute to a sustainable society*, the Electronics Segment will continue tackling business, environmental, and social issues.



Kenzo Moriyama
President of the Electronics Company

Strengths of the Electronics Segment

Advanced technological capabilities are the first strength of the Electronics Business that should be mentioned. For example, there are two methods of manufacturing glass substrates for liquid crystal displays (LCDs): the float method and the fusion method. However, the AGC Group is the only entity in the world with the technology to manufacture high-quality glass substrates for LCDs using the float method, which is better suited to the mass production of large-sized glass than the fusion method. Therefore, as the size of television screens continues to increase, we are establishing a high level of competitiveness. As a result, the Group's glass substrates for LCDs have secured the No. 2 position in the global market. Used worldwide as specialty glass for such display applications as the cover glass of leading-brand smartphones and tablet computers, our Dragontrail™ products have earned an excellent reputation for their strength, scratch resistance, and surrounding texture.

Furthermore, we have enjoyed similar success in the field of electronic materials. We are the world's only corporate group able to realize integrated manufacturing of photomask blanks for EUV lithography—from glass materials through to coating. In recent years, these products have driven the growth of the Electronics Segment and established a strong reputation among our customers.

In the aforementioned ways, we use advanced technological capabilities to manufacture high-value-added products. Unlike manufacturers of commoditized products, we must provide customers with solutions that include technical support. In other words, marketing capabilities are important. Another strength of the Electronics Segment is that it can deliver such solutions not only domestically but also globally. Ahead of competitors, the AGC Group has established global bases, creating a large international footprint that allows the Group to accurately identify the needs of manufacturers and promptly provide them with solutions both in Japan and overseas. With respect to glass substrates for LCDs, we have been providing display glass since cathode-ray tube televisions were mainstream, and in partnership with our customers we have supported the evolution of televisions. The relationships of trust developed during this evolution have become the foundations of our marketing power.

Business Strategies

Display

In recent years, demand for glass substrates for LCDs has been growing steadily as television screens have been enlarged. In 2020, shipments of glass substrates for LCDs rose as demand for televisions increased worldwide amid requests to citizens from governments to refrain from going outdoors during the COVID-19 pandemic. Going forward, China's market is expected to see particularly robust growth, and the Group is proactively developing its supply system in the country. Given the likelihood of a marked increase in demand for 11th-generation TFT-LCD glass substrates, we have built a furnace dedicated to their manufacture, which began mass production in 2019. Thanks to this new facility, we are steadily capturing the growing demand in China's market. For 11th-generation TFT-LCD glass substrates, we will continue increasing our supply capacity while improving productivity with the aim of enhancing profitability and asset efficiency. Further, by maintaining and developing strong relationships with Chinese manufacturers that have notable shares of the global market for LCD



Cover glass for electronic devices



TFT-LCD glass substrate



Glass substrates for displays used in medical monitors

televisions and other products, we will establish business foundations that remain stable over the long term.

In addition, shipments of our specialty glass for displays—which boasts outstanding strength and scratch resistance—have declined due to the decrease in smartphone unit sales accompanying the COVID-19 pandemic. However, smartphone unit sales are expected to grow steadily going forward. Also, demand remains high for products with advanced functionality, such as strength, scratch resistance, and compatibility with the 5G next-generation telecommunications standard. Accordingly, we will focus on developing new products to meet these needs and actively expand the business.

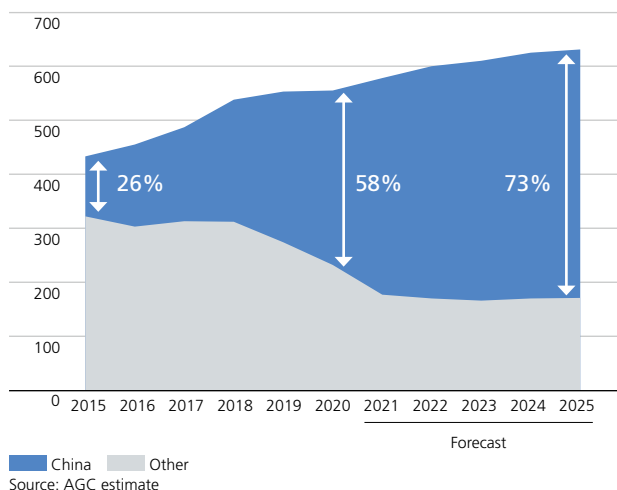
Electronic Materials

As society rapidly digitalizes, demand for higher-performance, more-compact electronic devices is constantly growing. Meeting this demand requires miniaturization of semiconductor chip circuits, which increases computational process speeds, data capacity, and integration. Against this backdrop, EUV lithography technology has attracted attention because it enables further miniaturization. From early in the first decade of the 2000s, the AGC Group began developing photomask blanks, which are processing materials needed for semiconductor production that uses EUV lithography technology. Thanks to these efforts, we successfully met exacting quality standards and started up production in 2017. Since then, EUV exposure photomask blanks have proliferated. By expanding our mass production system in step with market growth, we aim to achieve net sales of at least ¥40.0 billion by 2025. To this end,

LCD Glass Demand by Region

Further increase in demand in China through 2025

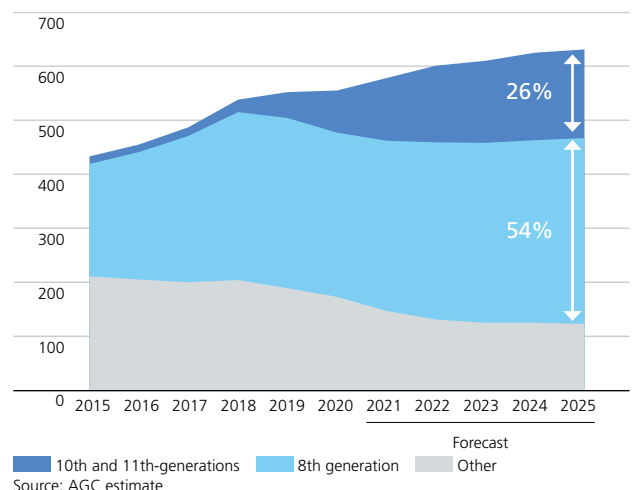
(Million square meters per year)



LCD Glass Demand by Generation

Increasing capacity to cater to growing demand for 11th-generation sizes in China

(Million square meters per year)

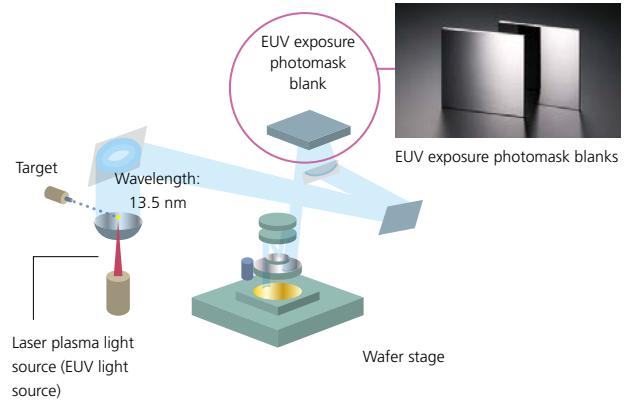


in July 2020 we decided to significantly ramp up supply capacity, and we will continue aggressively implementing capital investments to accelerate the growth of EUV exposure photomask blanks. In addition to these products, we will develop new high-value-added products, thereby realizing steady business growth in the field of semiconductor processing materials.

As for optoelectronic components, demand is steadily growing for glass filters that absorb infrared light and which are compatible with the multiple-lens, high-performance cameras increasingly being included in smartphones. Going forward, we will proactively develop new products for next-generation devices that promise to follow on from the success of smartphones and to form significant new markets. For example, we will develop glass substrates for augmented reality and mixed reality eyewear devices. In addition, we will use the businesses, which include printed circuit board materials businesses, acquired from the U.S. companies Park Electrochemical Corp. and Taconic in 2018 and 2019, respectively, to lay business foundations in the copper-clad laminates

market. These laminates have significant growth potential as printed circuit board materials for high-performance applications, such as advanced driver assistance systems and 5G systems.

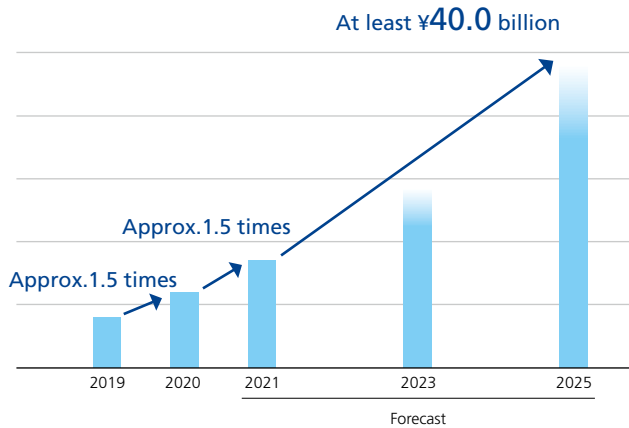
Overview of an EUV Lithography System



Net Sales of AGC's EUV Exposure Photomask Blanks

EUV lithography technology spreading rapidly due to the miniaturization of semiconductor chip circuits

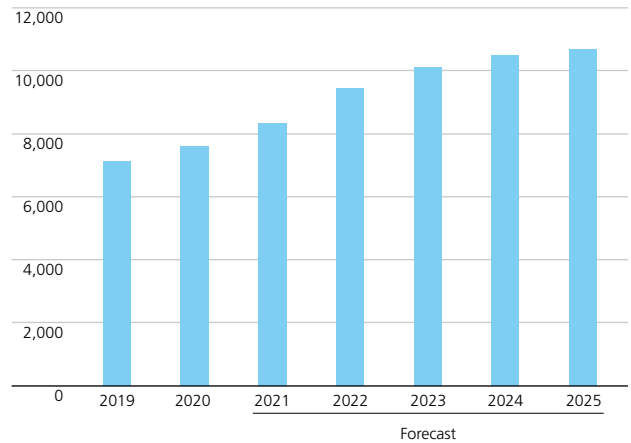
(Billions of yen)



Number of Camera Image Sensors

Although smartphone demand softening, numbers of lenses and cameras in smartphones increasing

(Millions of units)



Source: AGC estimate

Toward Sustainable Growth

The Electronic Materials is the key business and the growth driver of the Electronics Segment—one of the AGC Group's Strategic Businesses. Meanwhile, the Display is one of the Group's cash cows. Our strategy is to maximize the cash generation of the Display by continuing to achieve steady growth and improving profitability and asset efficiency. We will use the cash generated as a source of funds for aggressive investment in the growth of the Electronic Materials. Also, we will pursue operational excellence and significantly improve productivity by promoting innovation in manufacturing processes and utilizing the Internet of Things and artificial intelligence. These initiatives are also important from the perspective of benefiting the global environment because they will improve efficiency in the use of energy and resources.

To strengthen our management base for sustainable growth, we will build a stronger business operation system by revising our supply chain in light of the issues raised by the recent COVID-19 pandemic. In addition, we will continue focusing on becoming an organization where each and every employee feels motivated to work and realize their full potential, by promoting the establishment of workplaces in which diverse personnel want to work and by building a safe occupational health environment. Guided by a vision calling on it to *contribute to a sustainable society*, the Electronics Business will continue tackling business, environmental, and social issues.

A Message from an Employee

I will help the Electronics Segment move into its next growth stage.

I am in charge of technical sales for optoelectronic components. Our customers are primarily overseas companies, many of which are leaders in the global market. One attraction of this job is that it keeps me abreast of the latest industry trends.

Among the product lineups of the Electronics Segment, optoelectronic components face particularly fierce competition and their product cycles are short. Therefore, timely development of new products is critical. To shorten the lead time from the development concept of a new product through to its commercialization, we have to rapidly put in place the capabilities needed for product commercialization. Arranging such capabilities is also one of my important roles, and I try to find the best ways of doing this by thoroughly discussing matters with each plant and related department while keeping in mind the overall balance of the Group. During my career, I have gained on-site experience of all aspects of manufacturing, production engineering, and development, and this experience has proven useful in my efforts to arrange product commercialization capabilities.

Of the Group's Strategic Businesses, the Electronics Segment is achieving particularly robust growth. The next step is to develop the business into a Core Business that can continue to generate stable profits. To achieve this, new product development is essential. I will therefore facilitate product development that helps the Electronics Segment move into its next growth stage by discovering customer needs through my technical sales role and then using them to arrive at ideas for new products. Moreover, I will actively acquire technologies and knowledge related not only to the products I am directly responsible for but also to other fields, in anticipation that doing so will contribute to the planning of new products.

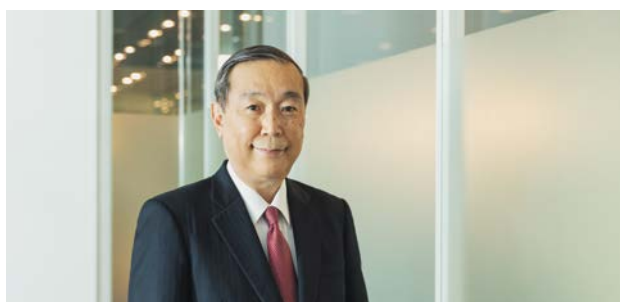


**Takeru
Wakabayashi**

Technology Group, Products
Planning Department
Photonic Components
Division, Electronic Materials
General Division
Electronics Company

Chemicals Segment

We will sustain growth by further reducing the burden we place on the global environment and by providing a diverse lineup of products and services that contribute to *safety, security, and comfort*.



Masao Nemoto

President of the Chemicals Company

Strengths of the Chemicals Segment

The Chemicals Segment comprises three businesses: Chlor-Alkali and urethane, Fluorochemicals & specialty chemicals, and Life Science. The greatest strength of the Chemicals Segment is that all three of its businesses have favorable growth potential and clear growth strategies. However, building our current business foundations took time.

In 2013, the Chemicals Segment changed course significantly and began investing in growth areas. In 2012, net sales were around ¥250.0 billion, with operating profit at the ¥15.0 billion level. By 2018, however, our business results were significantly better. We posted net sales of approximately ¥480.0 billion, while operating profit rose steeply to surpass ¥70.0 billion.

The Chlor-Alkali and urethane supports critical social infrastructure by leveraging the advantages of a sales and distribution network—built up over many years in Japan—to supply products suitable for local production for local consumption, such as caustic soda and chlorine derivatives. In addition, the Chlor-Alkali and urethane achieves stable operations and improves its overall competitiveness by offering a lineup that has an unparalleled variety of chlorine derivatives, including urethane and fluorinated products. Overseas, mutual cooperation among bases in Indonesia, Thailand, and Vietnam enables operations with a stable electrolysis balance. Using this as a strength, we have established operational infrastructure capable of catering to Southeast Asia's bur-

geoning demand.

Meanwhile, the Fluorochemicals & specialty chemicals has established a highly profitable business foundation by capturing market demand—including demand in leading-edge fields—through the exploitation of advantages in development and mass production technologies for high-performance materials. Also, the business has identified key sustainability issues that can be addressed through the functionality of its fluorine products and begun introducing new products, technology development, and mass production that help solve these issues.

As for the Life science, it is investing to gain entry into new fields and procuring facilities for existing pharmaceuticals at moderate prices through M&As with CDMOs (contract development and manufacturing organizations) for pharmaceuticals. In parallel with these measures, the business is continuously increasing in-house capacity. A strength of the business is that the acquisition of the aforementioned CDMOs allows it to reduce the lead time, cost, and personnel recruitment needed for capacity enlargement while rapidly gaining manufacturing technologies, quality assurance capabilities, inspection experience, and geographic complementarity. Further, the 2020 acquisition of Molecular Medicine S.p.A. (currently AGC Biologics S.p.A.) incorporated into the Life science a CDMO with expertise in the leading-edge medical field of gene and cell therapy, thereby giving the business the ability to offer an even wider range of CDMO services.

Business Strategies

Chlor-Alkali and Urethane

Having identified the East Japan region as a key target market domestically and Southeast Asia as a key target market overseas, we are strengthening our competitiveness through a *regional concentration strategy*.

In Japan, although the market environment is expected to remain challenging, we aim to ensure supply stability while securing profits. To this end, we will further bolster cost competitiveness and roll out high-value-added urethane, potash, and sodium bicarbonate products.



Fluoropolymer films for soccer stadiums



Contract development and manufacturing of pharmaceutical and agrochemical intermediates and active ingredients



Chlor-alkali in Southeast Asia

Overseas, to make the most of our strong market presence in Southeast Asia, we will actively invest in increasing production capacity in line with market expansion. In Indonesia, P.T. Asahimas Chemical increased caustic soda and PVC resin production capacity in 2016. Moreover, the company will raise its PVC resin production capacity even further by starting up additional operations at the end of 2021. In Vietnam, meanwhile, PVC resin manufacturer AGC Chemicals Vietnam Co., Ltd., also ramped up production capacity in 2016. As for

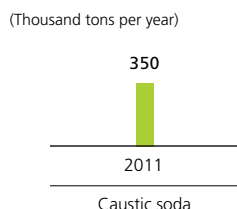
Thailand, preparations are currently underway to increase the production capacity of Vinythai Public Co., Ltd.

In Southeast Asia, infrastructure projects and the manufacturing industry continue to expand in tandem with economic growth, and demand for chlor-alkali products is expected to grow at an annual rate of about 4.0% going forward. By further increasing its production capacity, the AGC Group will solidify its position as the No. 1 supplier in Southeast Asia and contribute to the development of the region.

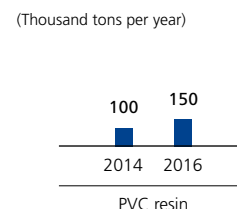
Increase in Production Capacity in Southeast Asia

Note: The years shown denote when operations started up after investments to increase production capacity.

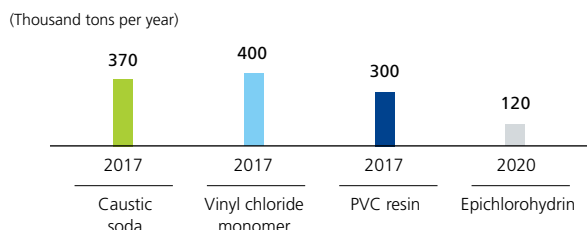
AGC Chemicals Thailand Co., Ltd. Established in 1964



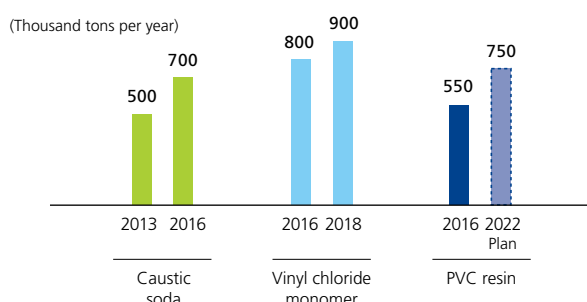
AGC Chemicals Vietnam Co., Ltd. Established in 2014



Vinythai Public Co., Ltd. Acquired in 2017



P.T. Asahimas Chemical Established in 1986



Fluorochemicals & Specialty Chemicals

The Fluorochemicals & Specialty Chemicals develops differentiated, high-performance products by leveraging the advantages of the AGC Group's proprietary organic synthesis technology. At the same time, the business pursues a *global niche top strategy*, which entails focusing strongly on clearly defined targets to secure large market shares in specific fields.

To date, the priority fields we have targeted include aerospace, transportation equipment, and semiconductors—all of which have demanding standards. By using its technological prowess to meet the needs of customers in such leading-edge fields, the business has heightened its competitiveness and profitability. Further, fluorinated materials are attracting attention in relation to their suitability for 5G systems and other next-generation high-speed communications equipment. In recent years, interest in these materials has also been growing due to their promising compatibility with environment-friendly product applications. In fields with strong growth potential such as these, we will concentrate on developing high-performance products.

In 2020, shipments of products for transportation equipment, such as aircraft, declined due to the COVID-19 pandemic. Nonetheless, given the strong demand for fluorinated materials in many fields, we expect stable business growth going forward. At present, we are augmenting production capacity at the Chiba and Kashima plants, and we will start up supplementary operations as soon as possible. Including investments for these production capacity increases, the Fluorochemicals & specialty chemicals will implement capital

investments totaling approximately ¥70.0 billion and gradually begin contributing to earnings from 2021.

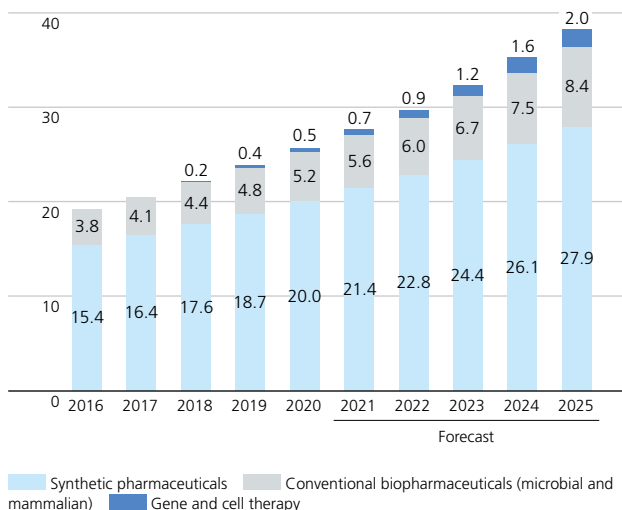
Life Science

Viewing the Life science as one of its Strategic Businesses, the AGC Group has been expanding the business by proactively acquiring and investing in CDMOs involved in synthetic pharmaceuticals and agrochemical field as well as in biopharmaceutical field.

The global pharmaceutical CDMO market is expected to continue growing over the medium to long term due to a rising world population, longer life spans, and an increase in the outsourcing of pharmaceutical manufacturing by pharmaceutical manufacturers. In these conditions, we are receiving a steadily growing number of contracts for synthetic pharmaceuticals and agrochemicals as well as biopharmaceuticals. As a result of these contracts together with new contracts received in relation to the development of vaccines for COVID-19, in 2021, we expect to achieve net sales of ¥100.0 billion—four years ahead of our initial plan. We will continue growing the CDMO business on a global scale by capitalizing on the track record and reliability we have established in the markets of Japan, the United States, and Europe. We will expand synthetic pharmaceutical and agrochemical CDMOs by leveraging development technology capabilities, including process optimization and fluorination technologies. Meanwhile, biopharmaceutical CDMOs will cater to a wide range of production methods, including new methods such as continuous production; increase mammalian cell production; and advance the global

Pharmaceutical CDMO Market Net Sales—Results and Forecast

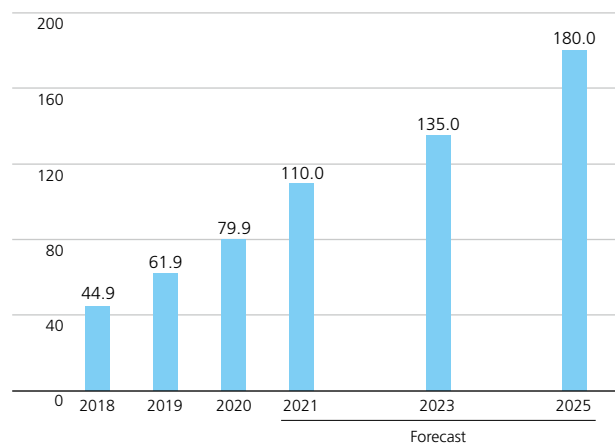
(Billions of US dollars)



Source: AGC estimate based on the EvaluatePharma® World Preview 2017, Outlook to 2022, etc.

Life Science Field Net Sales—Results and Forecast

(Billions of yen)



rollout of gene and cell therapy. Through the aforementioned measures, the Life science aims to achieve robust growth and realize net sales of ¥180.0 billion in 2025.

Toward Sustainable Growth

Over the past 10 years, the Chemicals Segment has significantly expanded the scale and scope of its operations. As a result, the workforce has expanded from approximately 5,000 to over 8,000 personnel. Given that the Chlor-Alkali and urethane, Fluorochemicals & specialty chemicals, and Life science are likely to continue growing, securing even more human resources will be a must. To this end, we are actively recruiting not only in Japan but also overseas. M&As, which we have implemented in rapid succession in recent years, are another effective way of bringing in human resources from outside. For example, the Group has received a positive stimulus through the addition of outstanding personnel who are instilled with the philosophy, corporate culture, and practices of Vinythai, which was established by a Belgian chemical company and has a history of more than 20 years. In addition, we will actively utilize outsourcing as it is useful not only for securing personnel but also for absorbing external capabilities. At the same time, we will accelerate digital transformation to improve efficiency and realize laborsaving measures.

In achieving further growth, we must maintain and improve the overall standard of corporate management. At a stroke, an oversight with respect to a corporate management prerequisite—such as high-quality products and services, occupational safety, and rigorous compliance—could destroy everything that we have achieved so far. To avoid such pitfalls, we have to secure talented management personnel. Moreover, achieving a high standard of corporate management includes taking steps to benefit the global environment. Accordingly, in 2008 the Chemicals Segment formulated its Chemistry for a Blue Planet vision, which sets out the direction the business should take for the sustainable development of the planet and humanity. The vision expresses our commitment to using the power of chemistry both to reduce the burden that we place on the global environment and to provide human society with greater *safety*, *security*, and *comfort*. Pursuant to this vision, we will develop, produce, and provide stable supplies of the chemical products that are essential for modern society. In recognition of environmental efforts, in 2020 EcoVadis SAS awarded one of our main chemical plants, the Kashima Plant, a platinum sustainability rating, which is given to the top 1.0% of the companies surveyed. Also, since 2017 our Chiba Plant has earned a gold sustainability rating for being in the top 5.0%.

Going forward, the Chemicals Segment will continue realizing sustainable growth by further reducing the burden it places on the global environment and by providing a lineup of differentiated products and services that contribute to *safety*, *security*, and *comfort*.

A Message from an Employee

I will help build an organization that enables high levels of performance and engagement.

In 2017, I joined AGC Biologics after working in other industries such as finance, IT, and real estate, where I led global teams in creating and driving human resource strategic plans, and managed general business operations. Since joining AGC Biologics, I have served as the global vice president of Human Resources. In the space of just four years, AGC Biologics has expanded its operations significantly, doubling the company's operating manufacturing sites. Consequently, employee numbers have increased rapidly. Our people and culture are both the source of our competitive advantage and our most important asset, and it is no exaggeration to say that our talented personnel hold the key to the continued growth and success of the company. Our role in Human Resources is challenging, as the life science industry is complex and dynamic, with high demand for skilled personnel. We work hard to sustain a strong and clear employee value proposition to ensure that we attract, retain and engage the right talent, improving the overall employee experience and wellness.

My mission is to provide excellence in Human Resources leadership, in support of AGC Biologics' mission, our team, and our customers, working across all AGC Biologics sites to develop a unified global culture that inspires and fosters high performance and high employee engagement. Initiatives range from talented personnel management strategies to recruitment, branding, communication, systems for evaluation and training, and many others. I feel honored to be part of AGC Biologics, building and managing a great business with an impressive team of people full of courage, passion, dedication, and discipline, providing services that contribute to the health of people around the world.



Executive Vice President,
Human Resources
AGC Biologics Inc.

Daisy Szabo

Ceramics Business

Aiming to help society save energy and resources, realize high levels of efficiency, and protect the global environment through ceramic materials and products, AGC Ceramics Co., Ltd., provides refractories for high-temperature equipment as well as functional products that utilize inorganic materials.



Masaru Ota

President of
AGC Ceramics Co., Ltd.

Strengths of the Ceramics Business

In infrastructure-related industries, our refractories are essential for high-temperature equipment used in the production of such materials as glass, iron, and cement. Since it began manufacturing refractory bricks for glass furnaces in 1916, the AGC Group has supported these industries by offering an extensive lineup of products with reliable quality. As a result, the Ceramics Business has established a structure that is relatively unaffected by resilient to sudden changes in the market, such as those triggered by the recent COVID-19 pandemic.

Business Strategies

The Ceramics Business actively develops new materials and provides solutions, including application proposals, design and construction engineering, and operational support. However, our main market—the refractories market—is unlikely to see significant overall growth. For this reason, we urgently need to expand the Fine ceramics, which we view as an exploratory field, and launch a ceramic 3D molding business engaged in

additive manufacturing. We will clarify and set out a growth story based on two main strategies: maximizing the value of the Fine ceramics from a Companywide viewpoint and leveraging open innovation to accelerate the launch of additive manufacturing in the United States, Europe, and China, which are the major markets leveraging the Group's assets to expand the Fine ceramics and launching additive manufacturing in China, which is a major potential market. Further, we will strengthen our mainstay businesses, which center on refractories. Specifically, we will advance digital transformation and introduce smart factories while collaborating with our manufacturing bases in China to expand the local market and realize further brand penetration.

Toward Sustainable Growth

Increasingly vociferous calls for carbon neutrality and a carbon-free society are forcing companies with high-temperature equipment to change production processes that are major sources of greenhouse gas emissions. The Ceramics Business will use these changes in society's expectations as growth opportunities by developing and offering refractories compatible with new production processes and proposing solutions based on newly designed equipment. Meanwhile, for our production processes, we will establish a circular economy. We envision new processes that reuse not only materials left over from our production processes but also our customers' waste refractories. In addition, our efforts to create next-generation mainstays by exploring the fields of fine ceramics and additive manufacturing promise to yield functional materials that help save energy and resources and enable high levels of efficiency.



Fused cast refractories for glass-melting furnace crowns



Monolithic refractory for industrial furnaces



Our fine ceramics have excellent heat and corrosion resistance and are used in fields related to iron, aluminum, and electronics.

New Business Creation Initiatives of the Business Development Division

Through tireless pursuit of ambitious innovation from a far-sighted perspective, the Business Development Division will propose and advance new businesses, thereby enabling the AGC Group to realize sustainable business growth and address social issues.

► Mission of the Business Development Division

In 2011, the Business Development Division was established as a dedicated organization for the creation of businesses that allow the AGC Group to take maximum advantage of its comprehensive strengths in business areas and regions with considerable growth potential. The division has two missions: business creation and human resource development. Further, the division is responsible for creating businesses that will sustain the Group's growth. The business creation process includes exploring ideas for new businesses and analyzing the feasibility of commercialization (market research and analysis), developing businesses for incorporation into an in-house company (incubation), and handing over business management to in-house companies (transfer). As for the development of human resources, through flexible assignment the Business Development Division increases the number of personnel who gain experience of business creation. This approach simultaneously realizes "incubation" of businesses and personnel and fosters numerous in-house entrepreneurs, who we refer to as "intrepreneurs."

► Collaboration with Business Partners

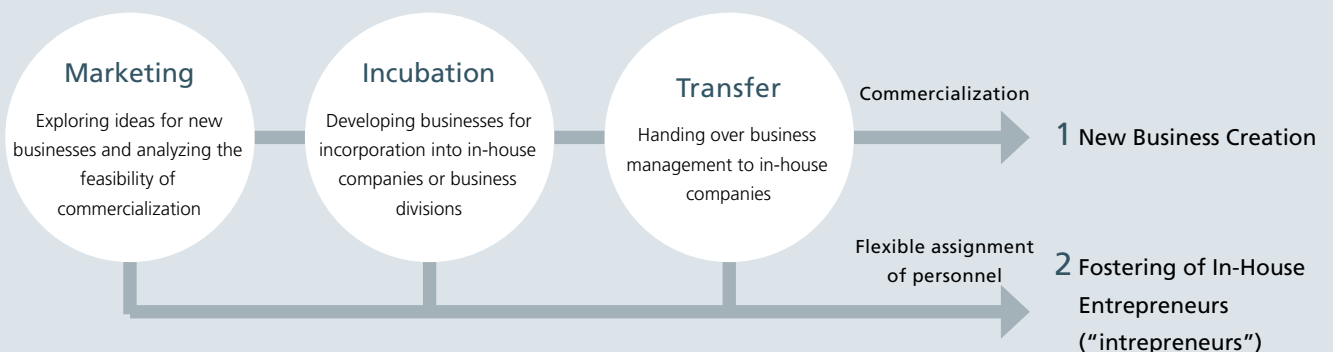
As well as analyzing macro trends to discover promising ideas, the Business Development Division analyzes the commercialization of projects that would be difficult for in-house companies to analyze. In preparing proposals for and advancing new

businesses, the division collaborates not only with various organizations in the Group—such as in-house companies and the Technology General Division—but also with external partners, including educational institutions and venture capital companies. Moreover, the division develops new businesses on a global scale by partnering with AGC Business Development America and AGC (China) Holdings Inc., the Group's bases in the United States and China, respectively.

► Achievements and Outlook

Through the aforementioned activities, the Business Development Division has transferred to in-house companies the management of Strategic Businesses tasked with manufacturing such products as biopharmaceuticals, EUV exposure photomask blanks, cover glass for car-mounted displays, and copper-clad laminate substrates for high-speed communications. Currently, the division is proposing and advancing new businesses by undertaking market research and analysis and incubation for projects related to the Electronics, Mobility, and Life science, which are the Group's Strategic Businesses. Through tireless pursuit of ambitious innovation from a far-sighted perspective, the Business Development Division will propose and advance new businesses, thereby enabling the AGC Group to realize sustainable business growth and address social issues.

Two Missions



A Message from the Chief Technology Officer

Hideyuki Kurata, the chief technology officer (CTO), discusses initiatives aimed at strengthening AGC's technologies, the source of its competitive edge, during the period of the new Medium-Term Management Plan.

Hideyuki Kurata

Director,
Senior Executive Officer, CTO,
General Manager of Technology General Division



Promoting Research and Development with an Eye on the Future

I am Hideyuki Kurata, and I became CTO in January 2021.

The year 2020 was marked by adversity on a global scale due to the impact of the COVID-19 pandemic, which also significantly impacted the AGC Group's businesses. Despite these circumstances, our Strategic Businesses are on the cusp of a great leap forward. In particular, robust growth in the electronics and life science fields is driving profit growth for the Group as a whole. Moreover, we expect the recent advancement of connected, autonomous, shared & service, and electric (CASE) vehicles in the automobile industry to prompt business growth of the mobility field going forward.

However, the research and development (R&D) for the materials and technologies that underpin these businesses cannot be completed overnight. For example, we began R&D on EUV exposure photomask blanks—a growth driver in the electronics field—approximately 20 years ago. Technologies including material design and manufacturing technologies for zero-expansion glass, highly reflective film deposition technologies for EUV, and precision polishing and cleaning technologies that realize both extremely clean and flat substrates were only made possible following many years of development efforts. In the life science field, the technologies and businesses we have introduced through mergers and acquisitions (M&As) are flourishing thanks to technologies and businesses accumulated over a period of 30 years, including our technology for small-molecule pharmaceutical and agrochemical intermediates and active ingredients, manufacturing and quality control systems on a par with good manufacturing practices (GMPs) for pharmaceuticals, and biotechnologies. The combination of our long history of persistently taking on challenges while constantly looking 10 or 20 years into the future provides the cornerstone for AGC's growth.

In the short to medium term, it will be crucial to focus on R&D that both spurs the growth of our current Strategic Businesses and boosts the competitiveness of our Core Businesses. Nonetheless, another important role I must fulfill as

CTO is to facilitate the creation of new technologies that will serve as seeds of new growth, by identifying business commercialization themes from a long-term perspective leading to the establishment of new business domains in the future. Although we have a relatively full range of themes for the next five years, we will accelerate our efforts while carrying out R&D looking further into the future.

Working to Create New Value

In the formulation of its medium-term management plans, the AGC Group makes use of forecasts regarding the technologies and products that will be required of AGC in the future while analyzing social issues, changes in the industrial structure, and technological changes expected to materialize 10 or 20 years into the future. At the same time, the Group will continuously carry out such activities as formulating medium- to long-term scenarios for new businesses based on such analyses. For example, for semiconductor-related products, further miniaturization and integration have become necessary due to the increase in the information-processing capacity required of semiconductor devices accompanying the development of computers. As a result, we have seen a major shift in which the manufacturing method for semiconductor devices products has changed from the conventional ultraviolet (UV) exposure technology to the EUV exposure technology. As there will be a need for significant improvements in AGC's products used in the manufacture of these devices, it is vital that we advance R&D anticipating such changes. In this way, we carefully assess industrial fields and technological domains on which the Group should focus by analyzing major macro trends and narrowing down R&D themes by exploring changes. Meanwhile, the sustainability perspective will become increasingly important for social issues projected to emerge going forward. In regard to the environment in particular, we will contribute to the realization of a carbon-neutral society by working on the reciprocal themes of technology for reducing the greenhouse gas (GHG) emissions generated

from the AGC Group's manufacturing processes and other activities and of technology required for products with functions for mitigating GHG emissions in the wider world.

Throughout its history, when faced with significant changes and difficulties in a given era, AGC has contributed to society by viewing such challenges as business opportunities and creating new value through new technologies and products. We will aim to create new value by continuing to take a long-term perspective.

The promotion of digital transformation (DX) is indispensable to advancing value creation. AGC has been working to make use of digital technologies for many years, launching its efforts with the smartification of manufacturing. We have also promoted DX in R&D to develop materials leveraging materials informatics (MI) and products utilizing advanced digital technologies such as augmented reality (AR) and virtual reality (VR). We use AR and VR technologies when introducing glass products to customers and to allow customers to select product varieties in our efforts to promote DX in our businesses. In parallel with these activities, we are broadening our DX efforts by focusing on the cultivation of human resources well versed in data analytics. The AGC Group is currently in Phase 2 of its DX Vision. In this phase, we will create new value for customers and society by promoting the digitalization of all business processes, including those for development and manufacturing (please see page 66 for details on our DX Vision.). In addition to these initiatives, we are determined to strengthen our use of open innovation. We will accelerate innovation through collaboration with external companies, research institutions, universities, and other entities while stepping up the promotion of collaborations among businesses within the Group.

One such collaboration is the AO (AO/AGC Open Square), a collaborative creation space opened on the premises of the AGC Yokohama Technical Center (YTC) in November 2020. Based on the concepts of "connect," "create," and "materialize," we have established a platform for collaborative creation with such partners as external companies, research institutions, and universities. We will develop new business domains and aim to create new value by fully leveraging this platform to accelerate open innovation. Meanwhile, we had hitherto divided the Group's R&D functions into two bases, namely, the Research Center (Kanagawa Ward, Yokohama), which promoted product development, and the former Keihin Plant (Tsurumi Ward, Yokohama), which promoted the development of production technologies. However, we have since integrated both of these functions in the YTC to establish a system seamlessly connecting everything from materials and process development to equipment technology development. Through the development of materials while constantly focusing on the end product, we will significantly speed up R&D.

Aiming to Further Improve Our Technological Capabilities

The AGC Group has broadened the scope of its technologies in order to address changing times and customer needs. In the process of expanding the range of materials we handle,

beginning with glass materials and extending to inorganic and organic materials as well as ceramic materials, we have cultivated materials technologies. Based on these technologies, we have refined both the functional design that realizes the compositing and advanced levels of functionality of the aforementioned materials and the production technologies underpinning the innovative processes and unique facilities enabling high-quality, reliable product manufacturing. Besides these three core technologies, we have long accumulated and strengthened common basic technologies, such as those relating to analysis, evaluation, and simulation. I believe that the Group's technological strength lies in not only its high-level technologies but also its comprehensive technological capabilities.

There are three tasks I must address as CTO to continuously improve the AGC Group's technological capabilities. The first task is to develop globally respected researchers and engineers. It is critical that we continuously develop human resources with industry-leading expertise and skills in their given field of specialization. I strongly believe that the AGC Group already possesses a great many world-class, outstanding researchers and engineers. My second task is to enhance the precision of our R&D theme selection. Given that management resources are finite, we will select themes by accurately identifying business domains in which the Group can draw upon its competitive edge to create technologies and products serving as new seeds of growth while combining internal and external technologies. Such efforts will contribute to the creation of future Strategic Businesses.

My third and final task is to maintain and develop our corporate culture of continuously taking on the challenge of creating new businesses. To that end, we must pass on our founding spirit to future generations. Continuously taking on the challenge of developing new technologies, without being content with its existing technology base, has been the source of the Group's comprehensive technological capabilities. I aim to provide a platform upon which those who will lead future generations can challenge each other to use their own capabilities to the maximum extent possible, without fear of failure. Even if they do not succeed, the experience will help them grow in the future. Continuously taking on challenges is part of the DNA that we at AGC have inherited. I will work to take the AGC Group's technological capabilities to even greater heights while maintaining that DNA.

Our 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**

Research and Development

With an eye on the future needs of society and customers, we will continue taking on the challenge of creating new technologies.

The AGC Group's Technological Foundations

The use of differentiated materials and technologies is a policy the AGC Group has upheld since its foundation in 1907. Moreover, we have continuously improved the resulting products as well as the advanced production technologies used to manufacture them. Over the course of our history, we have developed such core technologies as materials technology, functional design, and production technology in a wide range of fields, including glass, electronics, chemicals, and ceramics. Further, by combining these core technologies with common basic technologies—including analysis and evaluation,

simulation, data science, sensing, and smart factory technologies—we are able to provide high-value-added solutions that cannot be achieved with a single technology. To be the first company customers call on and with an eye on the future needs of society and customers, we will continue taking on the challenge of creating new technologies.

For details of the AGC Group's research and development, please visit the website below.
<https://www.agc.com/en/innovation/>



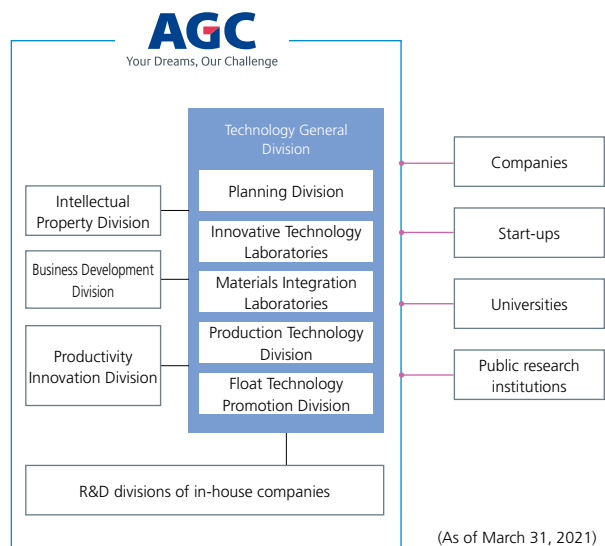
Research and Development Structure

The AGC Group's Technology General Division conducts R&D aimed at developing innovative core technologies and new products. With "linking R&D to the market" as their overriding goal, corporate divisions such as the Intellectual Property, Business Development, and Productivity Innovation divisions advance R&D flexibly by working in close collaboration with a range of other divisions, including the R&D divisions of in-house companies.

We have established a seamless R&D system by consolidating all R&D functions—from basic research through to materials development and mass production processes—at the AGC Yokohama Technical Center. Also, the Group is accelerating product development and the creation of innovations by encouraging collaboration between this technical center and the domestic and overseas laboratories and technical centers of in-house companies.

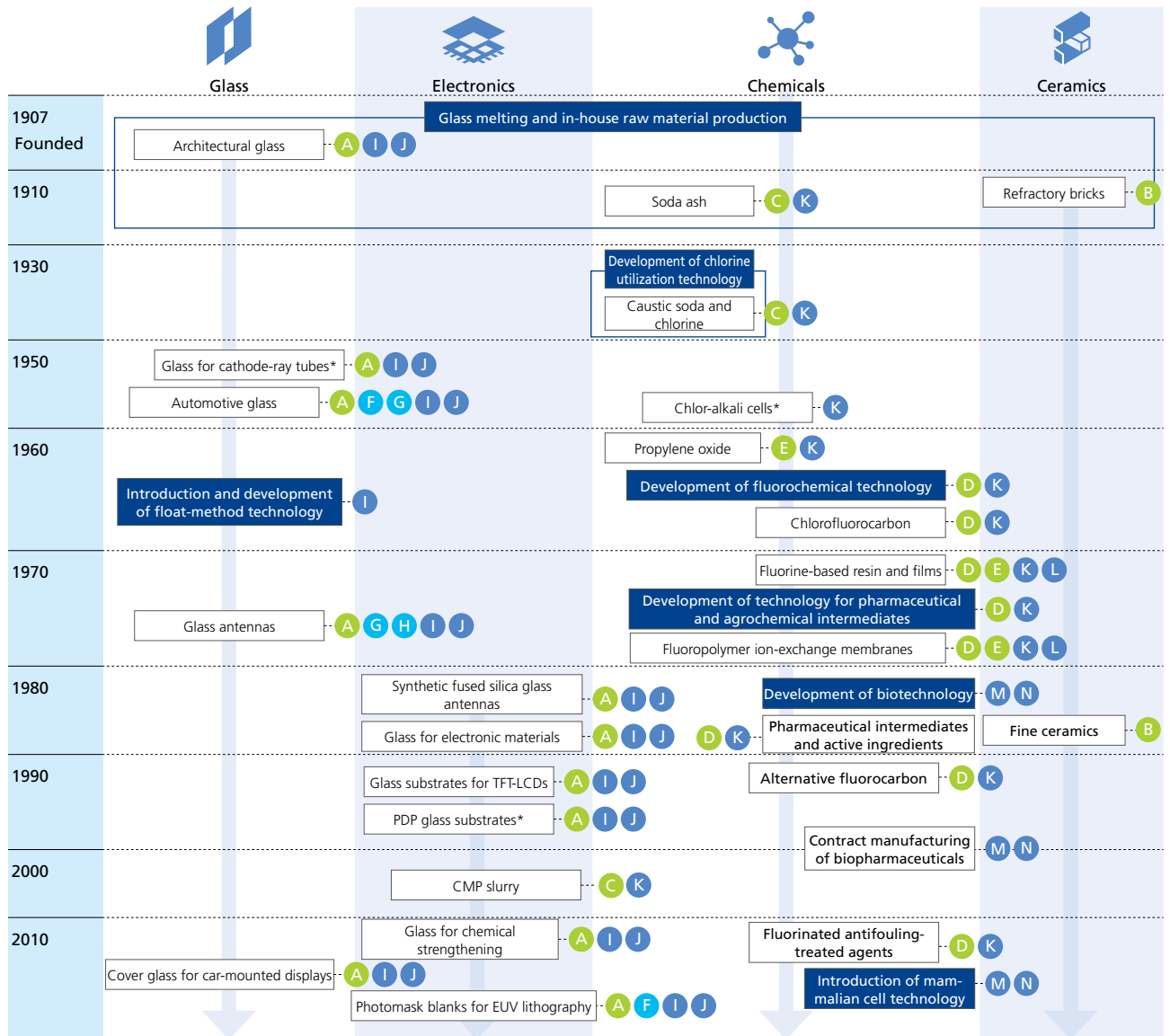
In addition, to strengthen our technological capabilities even further, we are actively promoting open innovation. Specifically, we are conducting many joint research projects with academia in Japan and overseas. With the aim of evolving and expanding these projects, we have launched large-scale industry-academia collaborative programs with the Tokyo Institute of Technology, the University of Tokyo, and Nagoya

University. Further, we are realizing technological evolution and complementary benefits and accelerating product development by strengthening the networks that link us to start-ups in Japan and overseas and by promoting collaboration, technology introduction, and alliances with them. We also collaborate with other companies, including our customers, with a view to leveraging each other's strengths to realize technological evolution.

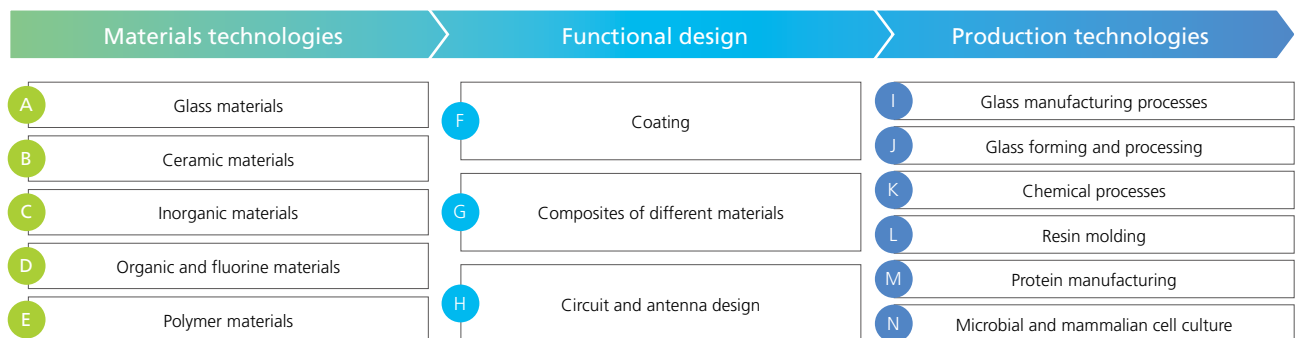


Lineage of Our Core Technologies

* Business discontinued



Core Technologies



Common Basic Technologies



Technology Roundtable

A Technological Lineage Comprising Ambitious Initiatives

Recently, four of the AGC Group's technical managers with responsibility for different technologies and business fields participated in a web conference themed on the strengths, issues, and future of the Group's technologies.

Roundtable discussion participants (positions at the time of the discussion)



Kazuo Hamazaki
Strategy Director
Planning Division,
Technology General Division



Masaaki Konishi
Strategy Director
Planning Division,
Technology General Division



Yasundo Ariga
Strategy Director
Planning Division,
Technology General Division



Makoto Fukawa
General Manager
Marketing Group
Business Development
Division

Konishi To begin, I would like to talk about the technological strengths of the AGC Group as a materials manufacturer. Personally, I believe that having technologies for both glass and chemicals is one of our key strengths.

Hamazaki That is right. In addition, while the Group has improved individual technologies, it has also fostered technologies born of the intermingling of these discrete technologies, and this process has made the AGC Group highly distinctive. As I have long been involved in the Chemicals Segment, I will explain the process in terms of chemicals. First, the roots of our Chemicals Segment can be traced back to the beginning of in-house production of soda ash—the raw material for glass—embarked upon to secure a stable supply of soda ash and improve its quality. Manufacturing soda ash involves inorganic chemistry. In its subsequent development, the Chemicals Segment expanded into the field of organic halogen chemistry, including fluoropolymers that could also help create high-performance glass by coating on it. Utilizing the resulting capabilities to handle Florine, we also developed the Life science, now a Strategic Business encompassing biotechnology. This type of development is one of the distinctive aspects of the AGC Group as a chemicals manufacturer. Further, glass manufacturing calls for advanced, large-scale manufacturing facilities, making the industry's entry barrier high. For this reason, only a few companies are able to manufacture glass. Consequently, worldwide the number of companies with both glass and chemicals technologies is limited.

Ariga Many of the product lineups that are driving the growth of the Electronics Segment, a Strategic Business, would not have been possible without the materials created through the use of material design and manufacturing technologies for glass and the added functionality created through the use of precision processing and coating technologies. There are very few companies in the world that possess all of these technologies, which is why the Electronics Segment has been able to secure leading market shares for a range of products.

Fukawa At present, I belong to the Business Development Division. With respect to Strategic Businesses, our efforts in the life science field began with the application of fluorination technology for chemicals to the manufacture of agrochemical

intermediates and active ingredients. These products were created through the application of chemicals technology. Further, the Electronics Segment is developing 5G antennas by combining glass and chemicals technologies. As Mr. Hamazaki mentioned earlier, some technologies have been honed separately and specifically for glass and chemicals while others have been developed through the combination of these technologies. What is more, the diversity of the technologies formed in this way is a wellspring for the creation of yet more new technologies.

Ariga When we think about what the root of such a cycle is, we can trace it back to our founding spirit. Our founder, Toshiya Iwasaki, took on the difficult task of domestically producing glass because he wanted to be of service to society, and that mindset remains with us to this day. Rather than creating new technologies as an end in itself, the AGC Group's engineers focus on first asking "why," "what," and "how" in relation to development initiatives. They ask, "Why is AGC taking on this challenge? Will it benefit society and our customers? What technologies are needed, and how can we create them?"

Konishi I agree. Through communication with customers, we try to discover what problems they are facing and grasp their latent needs, which form the basis for finding the "why" that is the starting point of an initiative. Another key point is that, based on the latent needs of our customers, we anticipate future social issues and technological changes from long-term perspectives and then develop technologies ahead of time. This enables us to respond quickly when we actually receive specific consultations from our customers.

Ariga I think increasing the number of technologies that we establish in advance is important as doing so allows us to meet customer requests. The AGC Group has a culture that encourages ambitious initiatives and tolerates initiatives that do not produce results in the short term or even fail. This tolerance has provided fertile ground for the creation of diverse technologies. Going forward, I hope that we are careful to preserve this tolerant attitude.

Hamazaki I am proud of the fact that customers feel AGC is likely to meet their expectations because we have a reputation for sincerely working through, taking on, and resolving the

issues presented by each request from our customers. By meeting their expectations, we have further strengthened our relationships of trust with them, and I believe that they will call on us again.

Fukawa In terms of trust, the AGC Group's production technology and the quality based thereon are highly trusted, which is one of the important reasons why customers of our existing businesses choose us. With respect to the new businesses that I am working on now and the new customers I am dealing with, it is not always possible for me to entirely convince them of our reliability. This brings home to me the importance of the relationships of trust that our existing businesses have cultivated with customers.

Konishi You mentioned new businesses. As the AGC Group's business domain changes, we are having to cater to customers who have different cultures and senses of speed from those of our existing customers. Traditionally, we began moving toward mass production once the development of a new technology was completed. However, in the Electronics Segment, for example, we must proceed with both stages of development almost simultaneously to meet the time frames required by our customers.

Ariga "Earnest" manufacturing underpins the AGC Group and is one of its strengths in the Glass and Chemicals businesses; however, this earnestness may sometimes be a hindrance in the Electronics Segment, where speed is of the essence.

Fukawa We have a tendency to be a little too cautious, and this slows us down. It is true that in some respects we have not been able to keep up with the speed needed in the Electronics Segment, and we must make improvements in the future.

Konishi At the beginning of this discussion, I mentioned the fusion of glass and chemicals technologies. The number of projects that cannot be realized by applying just the technologies of a single in-house company is likely to increase. One of the roles of the Technology General Division, to which I belong, is to create collaboration among the in-house companies. In this respect, the open atmosphere in the Group is an advantage. Recently, an increasing number of engineers are being recruited mid-career in Japan, and such engineers often tell me how impressed they are with AGC's openness.

Hamazaki I think that Cross-Divisional Network Activities (CNAs) help foster openness among the in-house companies (For details on CNAs, please refer to the Human Resources section on page 68.). Each in-house company receives requests from customers, and being able to casually discuss cases that your own in-house company cannot resolve independently with CNA members who belong to another in-house company is very reassuring. CNAs play an extremely important role as a consultation channel when I hit a wall or am given a new proposition.

Fukawa The Business Development Division searches for the seeds of new businesses in areas that straddle the boundaries between in-house companies. For example, when we take up the global environment as a theme, the AGC Group has an open atmosphere allowing frank discussions that transcend the boundaries of in-house companies and focus on what kinds of technologies are needed and what fields should be given priority, which is very helpful.

Ariga I believe that an open, non-hierarchical culture has taken root globally in AGC. In this culture, personnel are able to acknowledge each other and frankly express their opinions, not only between companies but also between countries, regions, employee ranks, and generations. In my opinion, this kind of culture is a driving force for maintaining and improving both our technological capabilities and our competence as a corporate group.

Hamazaki Also, when information comes into the in-house Company, it is important that a single in-house organization does not keep the information to itself for too long. For example, if an in-house company receives a request from a customer, six months may quickly pass while the company is tackling the request internally. Then, the in-house company in question realizes that it requires basic examination by the corporate R&D (Technology General Division), and this can delay the start of a project for solutions. I think that in many cases sharing information at an earlier stage can lead to solutions. The newly opened R&D hub-function of the AGC Yokohama Technical Center has been designed to serve as a place for such information sharing, and I have high expectations of the hub-function of the facility.

Konishi In preparation for formulating the new Medium-Term Management Plan, **AGC plus-2023**, the Technology General Division drafted its own medium-term management plan. From both near-term and medium- to long-term perspectives, we began with the "why" of why we need to tackle certain tasks. We then devoted a great deal of effort to thoroughly considering "what" in terms of what technologies are necessary to achieve the tasks. Next, we took stock of the technologies that we currently lack and set out a scenario for the future. To acquire these technologies going forward, open innovation in collaboration with outside parties will be essential, and M&As may also be necessary. Given that there are limits to what the AGC Group can do on its own, we need to make the most of outside capabilities as we move forward. There are still countless things to be done, and I have been reminded that there is no end to technological development. Let's keep working hard and taking on challenges so that, as a corporate group, we remain of importance to the world. Although we only had a limited amount of time, I think today's discussion was fruitful. Thank you all for participating.

Digital Transformation

Using the Latest Digital Technologies to Create New Value

Formulation of a Digital Transformation (DX) Vision

We have been pursuing digitalization in the field of manufacturing since 2015, when we set ourselves the goal of realizing “smart factories.” Also, we have been digitalizing in the R&D field through the establishment of “smart R&D.” In these manufacturing and R&D initiatives, we have begun by focusing on areas with particular importance for a materials manufacturer, and our efforts have mainly increased productivity and quality. Moreover, in 2017 the Company’s Corporate Planning General Division established the DX Promotion Division as a specialized entity tasked with promoting digital transformation across the

entire Company. Since then, we have been advancing the digitalization of many different business processes, including those in sales and marketing, logistics, and office work. In 2020, the AGC Group formulated the Groupwide DX Vision. With the creation of new value through the use of the latest digital technologies as a basic strategy, we are tackling and accelerating initiatives in three areas: *pursuing operational excellence*, *strengthening the Group’s competitive foundation as a materials manufacturer*, and *providing added value to customers*.

Creation of New Value

The chart below shows the time lines of our digital transformation initiatives in three areas. In phase 1, the AGC Group built a foundation for the realization of digital transformation by primarily focusing on *pursuing operational excellence* and *strengthening the Group’s competitive foundation as a materials manufacturer*. These initiatives involved establishing independent, optimized in-house processes. As for phase 2, which is currently underway, we are tackling initiatives aimed at

realizing full-fledged digital transformation. The current phase has added *providing added value to customers* as a new area of focus for digital transformation initiatives. In these initiatives, we are concentrating on using digital technologies to create new value not only for clients but also for society. Our newest initiatives are already producing a range of benefits, including the pallet IoT system—described in the next part of this section—and marketing automation.

The AGC Group’s DX Vision



Pallet IoT System

When transporting glass, special pallets are used. In March 2020, the AGC Group began the full-fledged use of an independently developed pallet IoT system in Japan. The system allows us to track and manage the locations of glass pallets and currently covers 1,400 large pallets. In Japan, every year approximately 10%*1 of glass pallets—returnable carriers made

of iron—become unrecoverable. Since the missing pallets cannot be found, they cannot be used to ship glass, which gives rise to inefficient logistics operations and additional costs for the manufacture of pallets.

Our pallet IoT system displays on a map information sent from logistics trackers,*2 thereby visualizing each pallet’s location, movement history, and stagnation information.

“Stagnation information” indicates where, how long, and how many pallets are at a standstill. By enabling logistics managers to see the locations and movements of pallets in real time, the system improves the efficiency of logistics work and prevents pallets from being lost or from “stagnating” due to prolonged standstill times. The AGC Group’s introduction of the pallet IoT system will create far-reaching benefits for society by halving the loss of pallets, reducing costs, improving transport efficiency, and lowering CO₂ emissions during transport. For this reason, we are considering raising the number of pallets included in the system to 30,000 by 2022, through an increase

in the products covered by the system and the introduction thereof to Europe and Asia.

*1 Source: Based on a press release issued by the Flat Glass Manufacturers Association of Japan
 *2 IoT modules developed by Alps Alpine Co., Ltd., for the management of logistics materials



A pallet used for the transport of glass



A logistics tracker mounted on a glass pallet

Marketing Automation

Demand is growing for the improvement of energy efficiency and comfort through the creation of double-glazing windows that heighten thermal insulation performance. However, replacing window glass in office buildings and commercial facilities requires large-scale construction work, including the erection of scaffolding on the outsides of buildings. In contrast, retrofitting windows from the inside of buildings with the AGC Group’s ATTOCH® Low-E glass converts the windows into double-glazing windows. As ATTOCH® is installed entirely from the inside of buildings, the upgrading of windows can be completed quickly and without the need to assemble scaffolding. Moreover, it is not necessary to dispose of existing glass.

Aiming to leverage digital technologies to increase points of contact with customers and open up a market for ATTOCH®, the AGC Group has introduced marketing automation. We are bringing potential clients into sharper focus by using an

integrated database to manage client information collected from trade shows and sales visits as well as by utilizing webinars, emails, and websites. These efforts are creating more opportunities for us to directly approach customers who need ATTOCH®, boosting the percentage of orders we receive. As ATTOCH® is one of the Group’s main energy-saving products, its widespread use will also help reduce the impact on the global environment.

This new offering exemplifies the steps we are taking to deliver new value to our clients and society. While continuing to exploit the power of digital technology to grow sales of ATTOCH® even further, we will develop digital marketing for other products.



ATTOCH®

Fostering of Dual Skilled Personnel

We will achieve industry-leading digital transformation, with personnel being the drivers of this innovation. Accordingly, we are not only adopting digital technologies from outside but also fostering dual skilled personnel who have expertise both in their existing work and in digital technologies.

Data Scientist Training Program

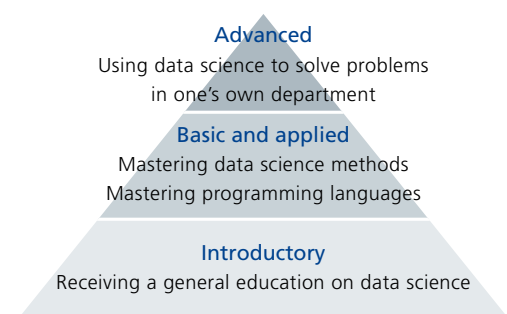
Data Science Plus

The AGC Group has established **Data Science Plus** to foster personnel who have advanced data analysis skills and work-specific expertise in such operations as materials development, production, sales, and logistics. These multiskilled personnel will enable us to use digital transformation to establish competitive advantages and provide customers and society with new added value.

Group employees in Japan and overseas taking part in the data science training program proceed in stages through introductory, basic and applied, and advanced training courses. Those who have completed the applied course and moved on to the advanced course spend between six months and two years studying at the Group’s Innovative Technology Laboratories, which conduct R&D on in-house process technologies and common basic technologies. In one case,

employees who had completed the training program and become certified advanced data scientists went on to develop an AI-enabled automated inspection system in-house. This inspection system has not only demonstrated the benefits of our training program but has actually been introduced into our glass manufacturing processes and is helping heighten product quality even further.

As of 2020, the program has trained approximately 1,600 employees, of whom 40 have received in-house certification as advanced data scientists. To ensure that AGC becomes a byword for outstanding personnel in the era of digital transformation, the data scientist training program is on course to train roughly 5,000 employees and certify 100 advanced data scientists by 2025.



Human Resources

Aiming to Realize the Company with our People Management Slogan, "AGC People: the driver of our growth!"

Basic Approach to Human Resource Management

In order to continuously grow as a truly global enterprise, the AGC Group carries out human resource management in accordance with its 7 Key Principles for People, which define the Group's desired status for human resource management.

The Group is also promoting human resource management in a cohesive manner together with its long-term management strategy. Since introducing the global in-house company system in 2002, we have introduced frameworks and personnel systems for responding to the globalization of management. These include the establishment of personnel functions at each company and the introduction of leader training programs with a focus on succession planning in 2004. We believe that organizational functions and teams of human resources that can respond flexibly to changes in the business environment (in other words, a resilient organization) are required to achieve Vision 2030, our long-term management strategy. Based on this belief, we are pursuing diversity and inclusion and strengthening of the individual as the basic policy of our personnel strategy. Through the reform of workstyles, promotion of

health and productivity management, and revision of various systems and frameworks, we are aiming to create the company with our people management slogan, "AGC People: the driver of our growth!".

Please see our *Sustainability Data Book 2021* at the following website for details on the 7 Key Principles for People. <https://www.agc.com/en/csr/>



AGC People: the driver of our growth!

By enabling each and every employee to fully demonstrate their capabilities, we are creating an organization that is stronger than the sum of its parts, as we achieve our business strategies and organizational targets while delivering corporate and individual growth.

Pursuing diversity and inclusion and strengthening of the individual

A corporate culture that encourages ambitious initiatives
Globally integrated management that unites diverse human personnel

Human Resource Development

Leadership Development Programs

To develop the management personnel who will lead the Group into the future, the AGC Group carries out development of management personnel in a manner organically linking Group- and global-level Leadership development programs with those at the divisional and regional level.

The basis for this effort is the AGC Leadership Competency model. This model clarifies the capabilities and qualities required of leadership personnel in the AGC Group and defines eight competencies and 43 concrete types of behavior in the two areas of self-development and team leadership.

We promote the development of management personnel by first selecting leadership candidates on divisional and regional bases based on the AGC Leadership Competency model. As part of the development process, next-generation management personnel at the Group and global levels are chosen from among those candidates, provided with training,

and promoted to Group management.

At the core of our development of management personnel is the concept of the "stretch assignment," which promotes an individual's growth by placing them in a position that requires a level of capability above that which they possess. We have formulated development plans from the perspective of overall optimization through such strategies as assigning next-generation management personnel candidates at the Group and global levels to key Group positions in a cross-divisional manner. Moreover, we implement Leadership development programs Groupwide and globally, in addition to doing so divisionally and regionally, in order to improve the effectiveness of management personnel development. For example, we provide Global Leadership Sessions and the Global Leadership Journey for business managers and senior management, while offering AGC University and AGC Management College courses in each region.

In these ways, the AGC Group encourages candidates to acquire the experience and knowledge necessary for management through planned assignments, training, and other developmental activities while reviewing the level of their performance and leadership displayed in their current positions and reflecting it in placement and development plans for the following year. The HR Committee—comprising chief executive officers, the general manager of the Human Resources Division, and the presidents of each in-house company—is involved in this development cycle and members of management participate directly in the discovery and development of next-generation management personnel in ways that include having outside directors give lectures at training programs.

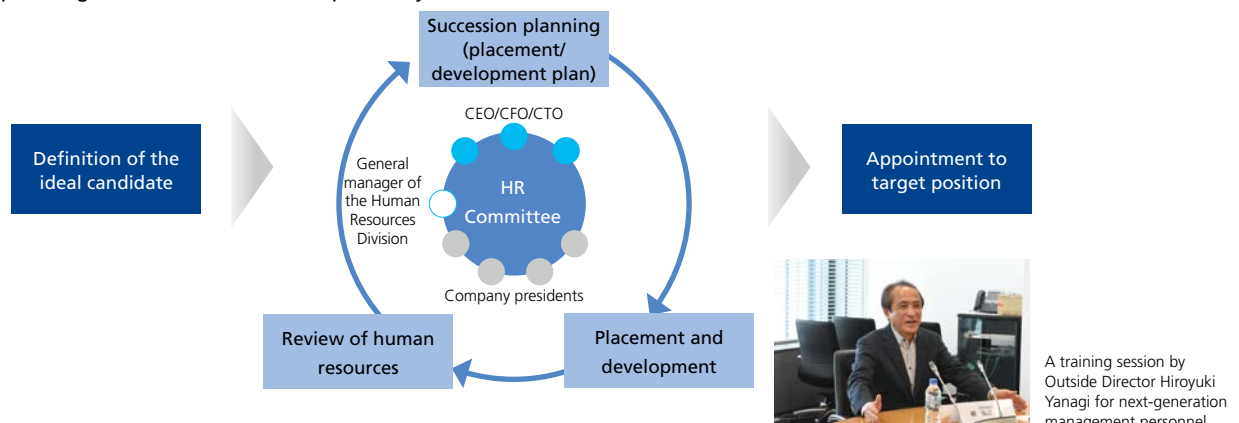
Skills Map

The AGC Group has been operating a skills map since 2010

with the goal of promoting cross-divisional human resource placements and communication. This map visualizes the skills of AGC Group employees in Japan and overseas, and employees register their own skills from among 40 specialist skills categories (28 technical categories and 12 sales and administrative categories).

Making use of this skills map, we launched Cross-Divisional Network Activities (CNAs) in 2011. Centered on skill leaders appointed for each category, the AGC Group encourages cross-divisional activities among employees possessing the same skills. These activities include the holding of workshops, in-house seminars, and study groups in their respective communities. Initially held only in Japan, we currently operate these activities on a global basis and are developing them to include activities spanning multiple skills as well as activities that are carried out jointly with external companies.

Group Management Personnel Development Cycle



CNA—the Third Place

CNA, which were established in 2011, reached a turning point in 2015. At the forum where all Skill leaders assemble once a year to exchange information with top management, participants raised the issue that CNA, which should be performed on a voluntary basis, had become obligatory and burdensome. In an effort to reflect this viewpoint, senior management at the time once again positioned CNA as voluntary and creative activities and laid out a policy of not demanding accomplishments while also removing the sense of obligation attached to CNA. As a result, CNA were reinvigorated and have since been held continuously, becoming firmly established.

Today, as platforms for learning for the individual and learning for the organization, these activities contribute to the creation of a corporate culture that encourages employees to take on challenges as well as to the cultivation of a sense of Group unity. In light of this role, we established the CNA Philosophy in 2020, as shown on the right. The term “third place” signifies a comfortable space for individuals, distinct from their home (first place) and workplace (second place).

Guided by this philosophy, the AGC Group will continue to provide support for CNA to establish them as part of the organizational culture, transcending divisions, countries, and regions.

CNA Philosophy

As a professional club, CNAs shall be a third place where individuals and organizations grow and evolve together.



During the COVID-19 pandemic, technical employees used the online meeting system to hold a technical conference. Group employees from Europe also took part. In addition to this conference, events were held with the participation of Group employees from the United States, China, and Singapore.

Basic Personnel System

The AGC Group operates equitable personnel and compensation systems with an emphasis on capabilities and achievements, with the aim of creating systems and environments that allow diverse human resources to work comfortably, regardless of gender, age, nationality, or whether or not they have a disability.

In 2006, we transitioned to a results-oriented personnel evaluation framework through the introduction of a job-grading system both globally and Groupwide.

In addition, we are working to establish employee-friendly workplaces through the introduction of systems such as those listed on the right, so that employees can demonstrate their talents to the greatest extent possible by working with peace of mind at various life stages. In 2020, to address circumstances resulting from COVID-19, we implemented a range of measures providing support for employees engaged in teleworking, such as the payment of a temporary allowance during the pandemic.

Introduced Workstyle Systems and Measures (AGC, non-consolidated)

- 1989** Flextime system without core working times
- 1992** Shortened work hours and leave system for childcare and nursing-care purposes
- 2012** Teleworking system for childcare and nursing-care purposes
- 2017** System providing leave when an employee's spouse is relocated
- 2017** Teleworking system not limited to childcare and nursing-care purposes (unlimited number of days)
- 2018** Satellite offices under a contract

Engagement Survey

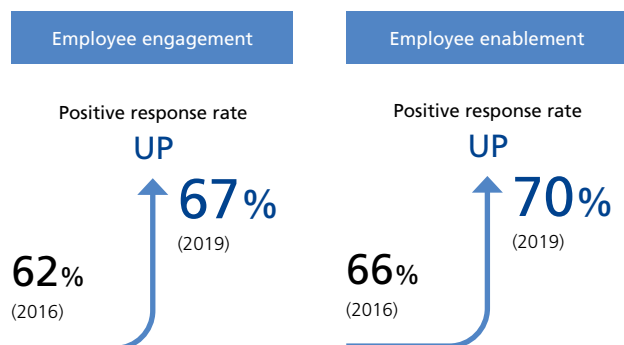
The AGC Group has been carrying out employee engagement surveys since 2005, with a focus on the reciprocal benefits realized through individuals who work with a high level of motivation and a company that fosters a better organizational culture. Since carrying out the second such survey in 2007, we have been conducting them every three years based on the implementation of a cycle in which we analyze the survey results, identify issues, and make improvements. In 2019, we carried out the sixth employee engagement survey.

The 2019 survey covered all Group employees and we received responses from approximately 42,000 employees, or roughly 90% of our total workforce, in 43 countries and regions. Previous surveys had been both paper- and online-based. However, a switch to a completely online-based survey prompted an increase in the response rate, while the period for calculating and analyzing results was shortened significantly from three months to one. The survey results saw improvements in all categories since the 2016 survey, with particularly large increases in the positive response rate for "employee engagement" and "employee enablement." On the other hand, as the positive response rate was relatively low in regard to "achievement of ambitious targets," "level of recognition for work," and "resources to carry out work effectively," we are working to improve those areas.

The survey results were ultimately compiled to include survey analysis results together with a message from the CEO and distributed to all Group employees in 22 languages as the Engagement Survey Report. Based on the survey results, employees, managers, and top management are exploring ways to solve problems through various forms of dialogue and implement those together, thereby helping maintain and create a better organizational culture.

Overview of Engagement Survey Results (2019)

Among the multiple survey question categories, "employee engagement" and "employee enablement" are key categories influencing engagement.



Promoting Integrated Reforms Encompassing Everything from Personnel Systems to Workstyles and Organizational Culture

Takashi Misu

Senior Executive Officer, General Manager of the Human Resources Division



As someone involved in human resource management, there is one matter on which I place the utmost importance. That is, that policies and systems related to personnel operate for the benefit of the business, rather than for us, the Human Resources Division. The enhancement of personnel systems and other measures is not an end in itself but a means for promoting and developing business. It goes without saying that, even if a given system or measure itself is outstanding, it will only end up being an exercise in self-satisfaction on the part of the Human Resources Division if it does not contribute to the development of the business. For this reason in particular, I endeavor at all times to be aware of where the AGC Group is headed and what actions the Human Resources Division must take to get it there.

The phrases “we are a united team,” “our guiding principle is boldness,” and “you are the drivers of growth,” which top management personnel communicate to Group employees at a variety of forums, serve as the basis for the AGC Group’s human resource management. With this in mind, top management personnel have set forth “engaging sincerely with the motivations and feelings of diverse individuals” and “sparing no effort in developing, evaluating, and nurturing individual careers” in terms of their expectations of human resource management. To meet these expectations, I recognize that the mission of the Human Resources Division is to realize the company with our people management slogan, “AGC People: the driver of our growth!” through the promotion of integrated reforms encompassing everything from personnel systems to workstyles and organizational culture.

The AGC Group recently formulated **AGC plus-2023**, its new Medium-Term Management Plan, and established Vision 2030, its long-term management strategy. To achieve this plan and vision, the Human Resources Division has defined six medium-term major issues, including delivering excellence in terms of recruiting talented personnel, improving the AGC Group as a place to work, and promoting strategic human resource development. For example, in respect to delivering excellence in terms of recruiting talented personnel, factors including the growth of the AGC Group’s Strategic Businesses and the furthering of digital transformation (DX) have made the acquisition of human resources who differ from those we have hitherto possessed a pressing task. Accordingly, we are advancing the creation of frameworks to that end. Meanwhile, with regard to promoting strategic human resource development, we will examine how to make further use of human resource data, such as via the introduction of a global cloud-based system, in order to achieve planned placements and development by planning medium- to long-term placements and development from an early stage, after creating a database of young and new human resources with potential. Through these efforts, we will continue pursuing diversity and inclusion and strengthening the individual while improving engagement, as we aim to build a resilient organization.

It is likely that the frameworks and systems needed to be maintained by the Human Resources Division will continue evolving in the face of rapid changes in society. However, even if we maintain such frameworks and systems, they will be meaningless unless they are operated and entrenched in daily operations. I believe it is vital that we understand whether systems are employee-friendly and whether frameworks help improve the corporate value of the AGC Group while meticulously creating and utilizing them and in good faith. The Human Resources Division will continue to strengthen and improve the AGC Group’s business strategies and corporate culture by carefully assessing and implementing the actions necessary to realize the company with our people management slogan, “AGC People: the driver of our growth!”.

Measures to Improve Engagement by Top Management

Members of top management visit a variety of global bases to hold engagement meetings with Group employees. In 2019, the CEO paid visits to 40 bases in Japan and overseas in the course of carrying out a total of 120 engagement meetings. Although 2020 was marked by the COVID-19 pandemic, we continued these meetings by holding them online in a variety of creative ways.

The AGC Group instituted the annual AGC Group CEO Award System on a global basis, with the objective of creating an organizational culture marked by mutual respect and the giving and receiving of praise among employees for their respective accomplishments and efforts. The Group operates this system while constantly reviewing ways to recognize and praise the accomplishments of employees, so that they can attain and maintain a higher level of motivation.



AGC Group CEO Award System (2019)

The Environment



Contributing to the Creation of a Sustainable Society in Harmony with Nature

Fundamental Approach to Environmental Management

Expectations are mounting for corporate initiatives to resolve global environmental issues and realize the creation of a green society, including efforts to achieve the Sustainable Development Goals (SDGs). With this in mind, the AGC Group views environmental initiatives as one of its most important management tasks, in order to become a group that grows sustainably with a society. In its Group Vision, *Look Beyond*, the AGC Group positions the environment as one of its Shared Values and sets out contributing as a good global citizen to creation of a sustainable society in harmony with nature, in adherence to its Code of Conduct for the Group employees.

In line with our Group Vision, we have established the AGC Group Environmental Policy, which declares that the AGC Group will realize a sustainable global environment and business through initiatives encompassing all of its business

activities—from procurement to manufacturing, sales, logistics, product use, and product disposal—and expresses its fundamental approach with regard to fostering environmental activities.

Guided by this recognition and approach, the AGC Group ensures legal compliance as a matter of course at its bases throughout the world. In addition, with the intention of contributing to resolving of various environmental issues, we proactively carry out initiatives in terms of both reducing the environmental impacts generated through our business activities to the greatest extent possible and mitigating the impacts on the environment from our products.

For details on our environmental initiatives, click here to see our *Sustainability Data Book* on our website.
<https://www.agc.com/en/csr/book/index.html#ac02>



Environmental Management System

Based on its belief that the strong involvement of management personnel is necessary to achieve highly effective and practicable environmental activities, the AGC Group has established an environmental management system with the chief technology officer serving as environmental management officer. The AGC Group assesses the level of improvement regarding environmental activities as a whole through a management review conducted by the individual in charge, as stipulated by ISO 14001—the international standard that specifies requirements for an effective environmental management system. The AGC Group then reflects the results of said review in the formulation of the following year's policy and plan. Moreover, the Sustainability Committee, which is chaired by the president & CEO, shares information on social trends related to the environment, a society, and corporate governance and discusses the

role that the AGC Group should fulfill and how it should address issues that may pose business risks.

The AGC Group's Environmental Management System (as of March 31, 2021)



Environmental Targets

The AGC Group has carried out greenhouse gas emissions reduction initiatives for a number of years, under a slogan outlining its aim to reduce CO₂ emissions in 2020 by an amount six times that of the Group's CO₂ emissions in that year through

energy-saving and energy-creating products, which was set in 2014. We set as the indicator the total amount of greenhouse gas emissions reduction contributions attained during the use periods*¹ of energy-saving and energy-creating products sold by

the AGC Group in a given year, compared with our annual greenhouse gas emissions (Scope 1 + Scope 2), and aimed to increase the ratio between the two amounts. In 2019,*² we largely achieved the abovementioned target, recording an amount 5.6 times more than that of the Group's annual CO₂ emissions in that year.

We have since established sustainability targets for creating social value, a priority for the AGC Group, in AGC plus-2023, the new Medium-Term Management Plan formulated in February 2021. Among these targets, the AGC Group has set tackling climate change, contributing to creation of a circular economy, and helping build a society in harmony with nature as the three themes of its environmental targets, and has established key performance indicators (KPIs) for each of them for 2025. In order to contribute to tackling climate change, in particular, we aim to achieve net zero greenhouse gas emissions (Scope 1 + Scope 2) resulting from our business activities by 2050. Our long-term target is to contribute to achieving net zero carbon emissions globally by leveraging our products and technology.

The AGC Group has set targets for 2030 in the four areas listed on the right as milestones for its long-term targets for 2050, and it will make concerted efforts to strengthen initiatives aimed at ensuring their achievement. We also plan to examine raising the targets and implementing specific measures for them.

In addition, the AGC Group announced its endorsement of

the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) in May 2019. Details of our initiatives to address climate change in line with the TCFD framework are listed in our *Sustainability Data Book*.

*1 Product use periods defined as the product life spans stipulated for each product
*2 The ratio for 2019 used as 2020 was an irregular year marked by the significant impact of COVID-19

1. **Reduction of greenhouse gas emissions from our business activities**
 - Greenhouse gas emissions (Scope 1 + Scope 2): Reduce by 30% compared with 2019
 - Greenhouse gas emissions per unit of sales: Reduce by 50% compared with 2019
2. **Reduction of greenhouse gas emissions generated from our supply business activities**
 - Expand diverse examples of collaborative projects with major suppliers
3. **Products and technologies contributing to reducing greenhouse gas emissions**
 - Popularize and expand range of products and technologies contributing to the achievement of net zero carbon emissions
4. **Business models contributing to reducing greenhouse gas emissions**
 - Expand diverse practical examples that leverage business assets

Scope 1: Direct emissions from the business operation (fuel combustion, industrial processes)

Scope 2: Indirect emissions derived from the use of electricity, heat, and steam supplied by other parties

Scope 3: Indirect emissions not included in Scope 1 and Scope 2 (emissions from upstream and down stream activities)

Uniting as "One Team" to Achieve Our Environmental Targets



Shigekuni Inoue

Senior Executive Officer
General Manager of
Environment, Occupational
Health & Safety and Quality
Division
General Manager of AGC
Yokohama Technical Center

The AGC Group views the environment as the basis for conducting all of its business activities, in the same manner as it does for safety, quality, and legal compliance. Senior management personnel, led by the president & CEO, are working to spread awareness of the environment by taking initiatives and setting a good example for others within the Group, including providing explanations to employees in a variety of settings on related initiatives.

We have long viewed conserving the environment as the prerequisite for continuing our business activities. To that end, we have steadily advanced environmental activities for carrying out stable business operations, chiefly including prevention of environmental pollution at our manufacturing sites and compliance with environmental regulations. We will continue to focus on and bolster these initiatives. Going forward, as the executive officer in charge of the environment, I believe that it is my mission to go one step further to contribute to corporate value improvement through our environmental initiatives.

In recent years, the significance of environmental activities for companies has not only become important from the perspective of protecting the global environment but also from the perspectives of corporate governance and economics. For example, from the

perspective of economics, we have seen rapidly increasing interest in environmental, social, and governance (ESG) investment, which has resulted in information disclosure and other factors relating to the environment having a major impact on investment decisions. Against such a backdrop, the AGC Group laid out fostering sustainability management as one of the basic strategies of AGC plus-2023, its new Medium-Term Management Plan, and set a target of achieving net zero carbon emissions by 2050 with regard to the environment. The AGC Group also established targets for 2030 as a milestone toward achieving its 2050 target and set up three task forces as it advances the formulation of a specific road map.

In addition, we have adopted new targets focusing on 2025 and initiated actions aimed at their achievement, in which the involvement and participation of all AGC Group employees will be essential. I myself joined AGC as a plant engineer, and I worked for many years on construction and operation of plants. For this reason, I have experienced firsthand on production floors worldwide the impact on the environment of the AGC Group's production activities. However, it is a fact that, depending on the department they belong to, there are many employees for whom this impact is difficult to fully appreciate. Accordingly, we are carrying out awareness-raising activities using online seminars and other methods for the employees of a range of departments, such as sales and development as well as production. Through these initiatives, I will fulfill my mission as the executive officer in charge of the environment by doing my utmost to ensure that the AGC Group can achieve its environmental targets as "One Team."

Corporate Governance

How AGC Works to Achieve Sustainable Growth and Raise Corporate Value over the Medium to Long Term

Fundamental Approach

The AGC Group has established the AGC Group Corporate Governance Basic Policy and strives to strengthen and improve its corporate governance while operating in a manner that transcends the boundaries of the parent and its subsidiaries, in order to achieve sustainable growth and improve corporate value for the Group over the medium and long term. The Group has transitioned to a Company with an Audit & Supervisory Board corporate governance system and works to strengthen the management oversight function through the

clear separation of the management oversight and management execution functions. Meanwhile, for management execution the Group's basic policy is to accelerate business execution by clearly dividing the Group's corporate function and the business operation function.

For further details, please refer to the Corporate Governance Report submitted to the Tokyo Stock Exchange.

<https://www.agc.com/en/company/pdf/governance.pdf>



Framework for Management Oversight

Composition and Role of the Board of Directors

Comprising seven directors, each appointed to a one-year term, the Board of Directors of AGC is responsible for approving the AGC Group's basic policies and performing oversight of its business execution. Three of the aforementioned directors, one of whom is female, are outside directors registered with the Tokyo Stock Exchange as independent officers who have satisfied AGC's own criteria for independence*1. The Board of Directors convened on 15 occasions in 2020. At these meetings, the Board performed oversight of the business execution of the AGC Group while determining candidates for director, nominating

and determining executive officer positions for the next year, and approving important matters, such as the acquisition and disposal of important assets, and budgets.

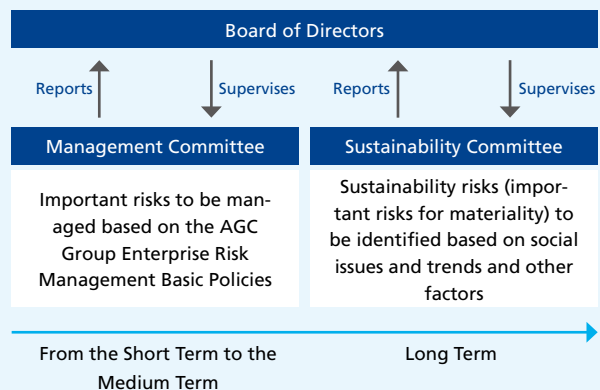
Independent directors monitor issues concerning the Group's business management and offer advice to the Board of Directors from an independent and objective standpoint, based on their extensive experience in global corporate management and knowledge of corporate governance-related issues. In principle, meetings of the Board of Directors are chaired by an independent director.

*1 As of March 31, 2021

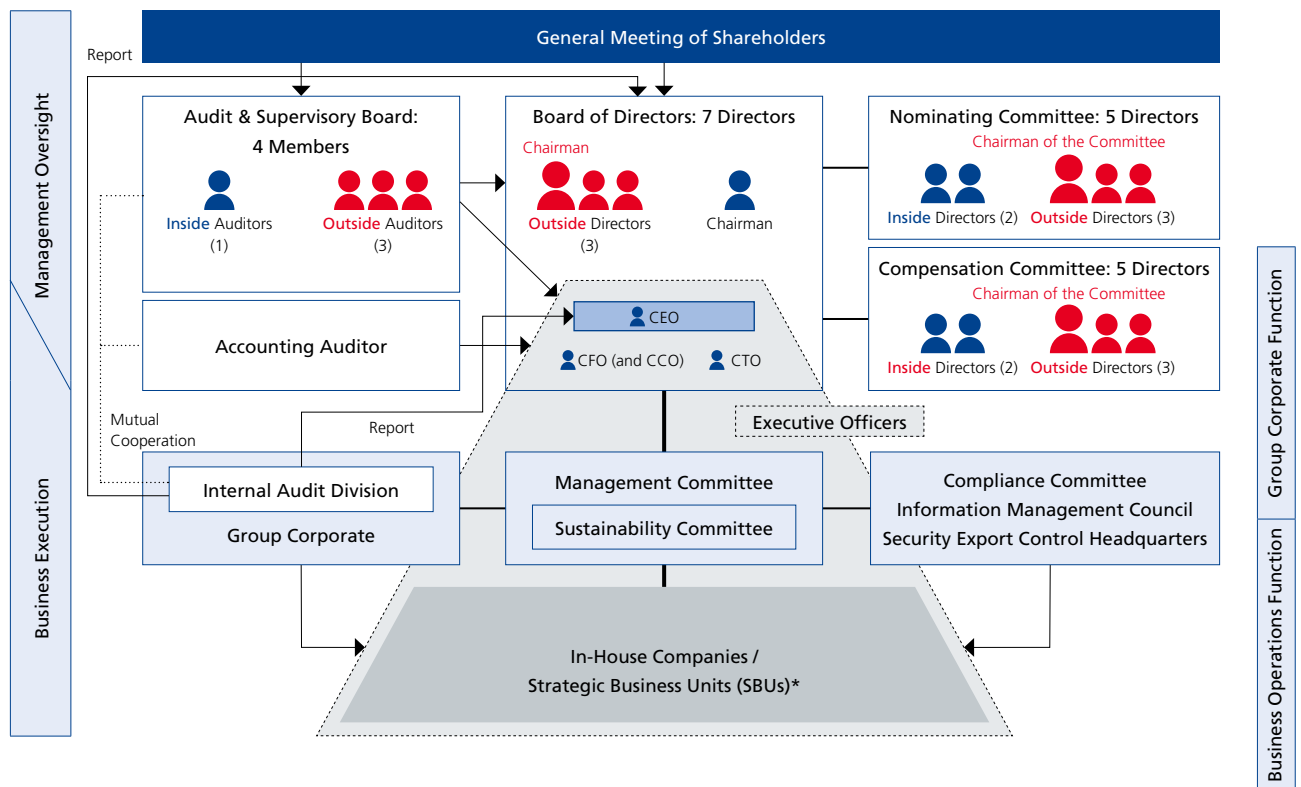
AGC's Risk Management System

AGC defines important risk factors pertaining to the Group and regularly deliberates on the status of risk management at meetings of the Board of Directors. Under the AGC Group Enterprise Risk Management Basic Policies, the Company maintains risk management and crisis response systems for short- to medium-term risks while, in regard to sustainability risks (long-term risks) identified based on social issues and trends and other factors, the Sustainability Committee ascertains the status of progress on sustainability targets and maintains a management system aimed at achieving these targets through such activities as deliberating future measures in light of the status of progress.

For details on risks: <https://www.agc.com/en/ir/policy/risk/>



The AGC Group's Corporate Governance System (As of March 31, 2021)



- Inside directors or inside Audit & Supervisory Board members
- Outside directors or outside Audit & Supervisory Board members who satisfy AGC's criteria for independence of outside officers

* An in-house company is defined as a business unit that has net sales exceeding ¥200 billion and 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).

Structure and Roles of the Nominating Committee and Compensation Committee

AGC established the Nominating Committee and the Compensation Committee, both of which are composed of mainly outside directors, as voluntary advisory committees of the Board of Directors, in order to improve objectivity regarding the evaluation, appointment, and compensation of directors and executive officers. Both committees are chaired by outside directors.

Composition of Committees / Topics of Discussion / Number of Meetings Held (2020)

Members	Nominating Committee		Compensation Committee	
	Inside	Outside	Inside	Outside
Yasuchika Hasegawa*		○		○
Hiroyuki Yanagi		◎		○
Keiko Honda		○		◎
Takuya Shimamura	○		○	
Yoshinori Hirai	○		○	
Number of members	5 directors (of whom 3 are outside directors)		5 directors (of whom 3 are outside directors)	
Topics of discussion	Selection of director and Audit & Supervisory Board member candidates and their recommendation to the Board of Directors; deliberations on the criteria for appointing directors and executive officers and their roles, assignment and development		Revision of performance-linked compensation and stock-based compensation for directors and executive officers; determination of amounts of performance-linked compensation for executive officers and establishment of their performance targets for the next year; deliberations on analysis and review of compensation levels for directors, Audit & Supervisory Board members, and executive officers; and proposals to the Board of Directors	
Number of meetings held	10 times		8 times	

* Chairman of the Board of Directors ◎: Committee Chairman ○: Committee member

Evaluation of the Effectiveness of the Board of Directors

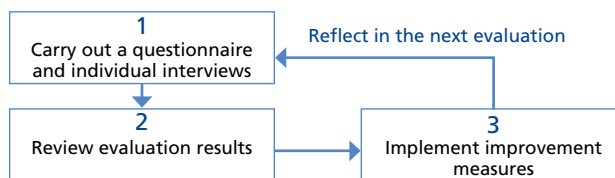
AGC believes that continuously strengthening and enhancing its corporate governance is vital to achieving sustainable corporate growth and raising corporate value over the medium to long term. As part of these efforts, the Company carries out an annual analysis and evaluation of the effectiveness of the Board of Directors based on the AGC Group Corporate Governance Basic Policy, with the goal of improving the effectiveness of the Board and increasing stakeholder trust in AGC's corporate governance.

Evaluation Method

The Company incorporates new perspectives and acts objectively when carrying out its evaluation by regularly cooperating with external organizations. In 2020, drawing on the results of the 2019 evaluation, conducted in tandem with an external organization, the Board of Directors, Nominating Committee, and Compensation Committee were evaluated by directors and

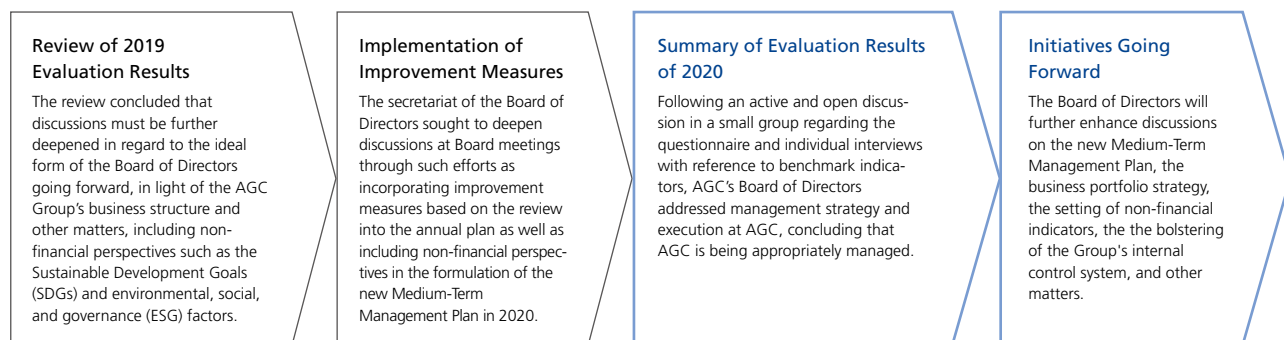
Audit & Supervisory Board members in the form of self-evaluations. The results confirmed that the three entities are functioning sufficiently effectively.

Steps for Evaluating the Effectiveness of the Board of Directors



- 1 A questionnaire* and individual interviews are carried out for all directors and Audit & Supervisory Board members.
* The questionnaire includes questions on global standards for governance and benchmark questions, in addition to evaluation items asking about changes over time to the operational status of the relevant entity.
- 2 The Board of Directors reviews the evaluation results of the questionnaire and interviews and discusses measures to improve its effectiveness.
- 3 Improvement measures are implemented and the results of all of the above are reflected in the following year's evaluation.

Summary of Evaluation Results and Future Efforts



Composition and Role of the Audit & Supervisory Board

Audit & Supervisory Board members audit the performance of directors by attending important meetings, including meetings of the Board of Directors and the Management Committee, and by holding regular meetings with representative directors. In 2020, the Audit & Supervisory Board convened on 14 occasions, at which it worked to conduct audits systematically and efficiently in accordance with the Corporate Policy over Internal Control, in order to properly oversee and verify whether the Group's internal control system and its components—such as the compliance system, risk management system, and the

system for ensuring the accuracy of the consolidated financial statements—have been adequately established and are functioning appropriately, as set out in the basic policy concerning the Group's internal control system.

The Audit & Supervisory Board works in collaboration with the accounting auditor and the Internal Audit Division, which executes the internal audit function, to improve the effectiveness of audits by confirming audit results and information and exchanging views. There are four Audit & Supervisory Board members, three of whom (including one female) are outside Audit & Supervisory Board members.*

* As of March 31, 2021

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 established the Management Committee 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 has been adopted with regard to business execution. Much of the responsibility and authority for business execution has been delegated to the in-house companies and Strategic Business Units.

Compensation System

Basic Philosophy on Compensation System

In its Compensation Principles, the AGC Group sets out its basic stance and philosophy 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 engenders motivation 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 compensation amounts 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 Audit & Supervisory Board Members (2020)

	Number of recipients	Total payment (millions of yen)
All directors	8	454
Outside directors only	4	52
All Audit & Supervisory Board members	4	100
Outside Audit & Supervisory Board members only	3	64

Composition of Compensation

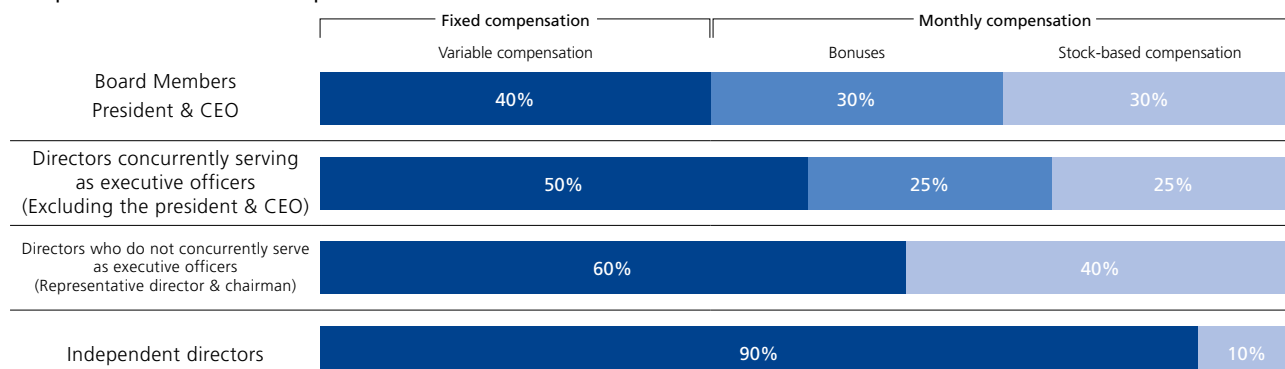
For the AGC Group, which provides materials and solutions that aim to realize development from a long-term perspective, medium- to long-term technological development and investment in human resources and equipment are sources of competitiveness, in addition to the Group's single-year business strategy. Accordingly, the Group has introduced an incentive system as one of the means for AGC's executive officers to take a balanced view of the short, medium, and long terms, 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 given Medium-Term Management Plan. Under the stock-based compensation system, executive officers granted shares must retain them during their terms of office, with the aim of motivating them to contribute to the improvement of corporate value over the medium to long term and to create mutual interests between the executives and shareholders.

In February 2021, the Company made the following changes to improve the effectiveness of its compensation system, in accordance with its Compensation Principles.

- In view of the importance of asset efficiency as well as business profitability, the performance indicator for bonuses was changed from operating profit to return (business profit) on capital employed, and the status of the improvement of non-financial capital, progress on portfolio conversion, and other indicators were added as evaluation items.
- In order to further increase the willingness of executive officers to contribute to the improvement of corporate value and promote the steady implementation of the new Medium-Term Management Plan, the performance evaluation method for stock-based compensation was changed to evaluate performance based on factors including the level of achievement of performance targets for each year.

Composition of Executive Compensation



Note: If none of the above applies, the matter is discussed within the Compensation Committee and the Board of Directors makes a resolution.

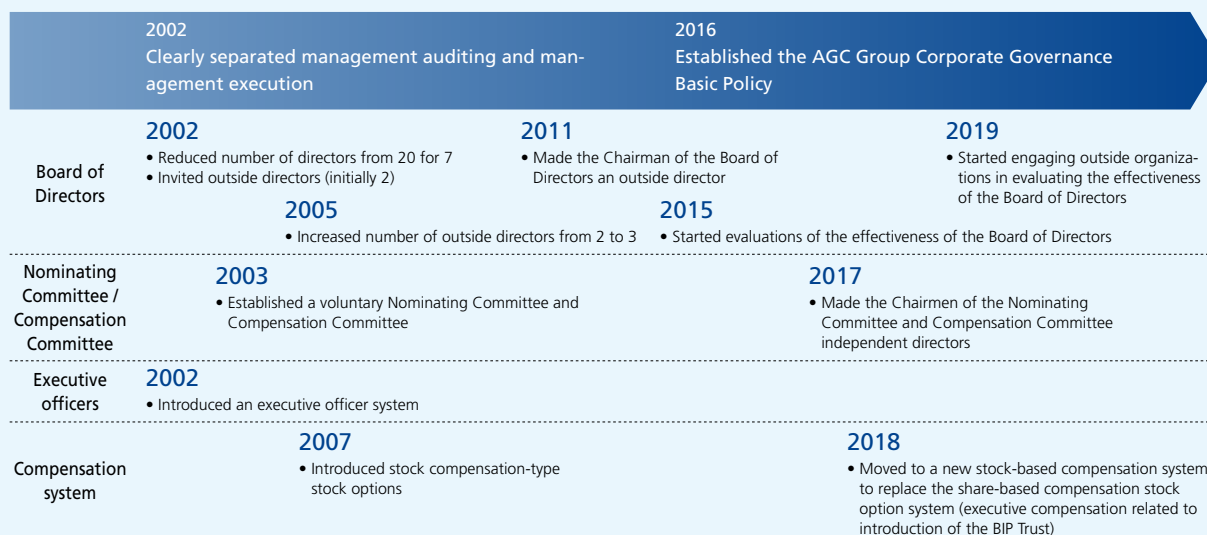
Variable Compensation

	Bonuses	Stock-based compensation
Overview	An amount according to each executive officer's position is adjusted in accordance with the level of consolidated performance indicators for a single year, in order to further enhance their motivation to achieve performance goals for a single year.	The plan is intended to enhance the motivation to contribute to medium- to long-term improvements in corporate value and to promote a sharing of interests with shareholders, as well as to further enhance the motivation to achieve the performance goals in the Medium-Term Management Plan. Compensation under the plan consists of a performance-linked component, whereby the Company issues AGC shares—the number of which varies in accordance with each executive officer's position and their level of achievement of the consolidated performance indicators in the Medium-Term Management Plan—and a fixed component, whereby a fixed number of AGC's shares are issued in accordance with each executive officer's position.
Performance Indicators	Performance indicators shall be return (operating profit) on capital employed (calculated by dividing operating profit by operating assets) and cash flows, given the importance of improving business profitability and asset efficiency, as well as of generating cash flows.	Performance indicators shall be return (business profit) on capital employed (calculated by dividing business profit by operating assets), to encourage achievement of the target for ROE—an important performance target in the new Medium-Term Management Plan—and EBITDA, in consideration of the importance of achieving sustainable corporate profitability. Return (business profit) on capital employed and EBITDA each account for 50% of the performance-linked component.
Variable elements	The amount shall vary in accordance with the level of achievement of the target for return (operating profit) on capital employed and the level of improvement of cash flows compared with the previous year. Further, the amount shall vary within a range of 0% to 200% of the standard payment amount, in principle, with consideration for factors including the improvement of non-financial capital and progress on portfolio conversion as well as individual performance.	The performance-linked component is calculated as a weighted average with prescribed ratios (25% for the first year, 25% for the next year, and 50% for the final year) regarding the level of achievement of these indicators in each year during the Medium-Term Management Plan. In principle, the amount shall vary within a range of 0% to 200% of the standard amount. Executive officers shall continue to hold AGC shares acquired through the stock compensation plan following the conclusion of the Medium-Term Management Plan until they retire from office.
Results for compensation Based on 2020 performance indicators	<p>2020 Business Performance</p> <ul style="list-style-type: none"> Operating profit was ¥75.8 billion, falling short of the operating profit indicator's target of ¥120.0 billion. The cash flow indicator declined compared with the previous year. Based on these two indicators, the amount of bonuses to be paid to directors serving concurrently as executive officers was set at 85% of the standard payment amount. 	<p>2020 Business Performance</p> <ul style="list-style-type: none"> Return (business profit) on capital employed, also a target of the new Medium-Term Management Plan, fell substantially short of the 9% target. EBITDA, also a target of the new plan, fell significantly short of the ¥326.0 billion target. Based on these two indicators, the performance-linked component of stock-based compensation to be paid to directors serving concurrently as executive officers was set at 0%.
Target	<p>2021 Target</p> <p>The target for the return (business profit) on capital employed indicator is 5.3% or more.</p>	<p>New Medium-Term Management Plan (2023) Targets</p> <p>Levels of return (business profit) on capital employed and EBITDA that are generally equivalent to an ROE of 8%, a 2023 target in the new Medium-Term Management Plan, are set as the baseline for targets. The target for return (business profit) on capital employed is 7% or higher, while the EBITDA target is ¥344.0 billion or more.</p>

Improvements 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.

History of AGC's Governance Reforms



AGC Group Corporate Governance System

The AGC Group has set forth the promotion of sustainability management as one of its strategies in AGC plus-2023, its new Medium-Term Management Plan. With that in mind, the Group is working to further strengthen its governance. Specifically, to prevent scandals and compliance violations at its subsidiaries, the AGC Group has established management regulations on the governance and internal control systems of these companies and implements any measures deemed necessary. The Group's basic approach is for the parent company, AGC, to resolutely carry out management oversight of its subsidiaries while emphasizing the autonomous functioning of the Board of Directors and internal control system of each subsidiary.

The system for ensuring appropriate operations is as follows.

- With respect to governance, AGC conducts management oversight and supervision with objectivity and independence by dispatching an individual with experience as a president (or similar executive role) at a subsidiary, who also belongs to one of the corporate divisions of AGC, to major subsidiaries in Japan and overseas as a temporary director-cum-auditor.
- In its risk management system, AGC manages downside risks, such as those related to legal and regulatory compliance and information security, in addition to business risks at subsidiaries

based on the AGC Group Enterprise Risk Management Basic Policies. Specifically, after gauging the status of risk management at subsidiaries through periodic self-inspections, the divisions and business divisions under the jurisdiction of a certain corporate division collaborate to strengthen and implement measures in response to risks, thereby helping make improvements for the next year. As for crisis response, the Group has established a crisis response reporting line and maintains a system facilitating prompt and appropriate initial responses.

- Regarding its compliance system, AGC implements initiatives for ensuring observance of the AGC Group Code of Conduct and for educating and informing employees about it. The Group has also established a helpline, the operational conditions and status of consultations of which are reviewed and reported to the Board of Directors. In addition, the Group maintains its compliance system by periodically carrying out compliance awareness surveys.

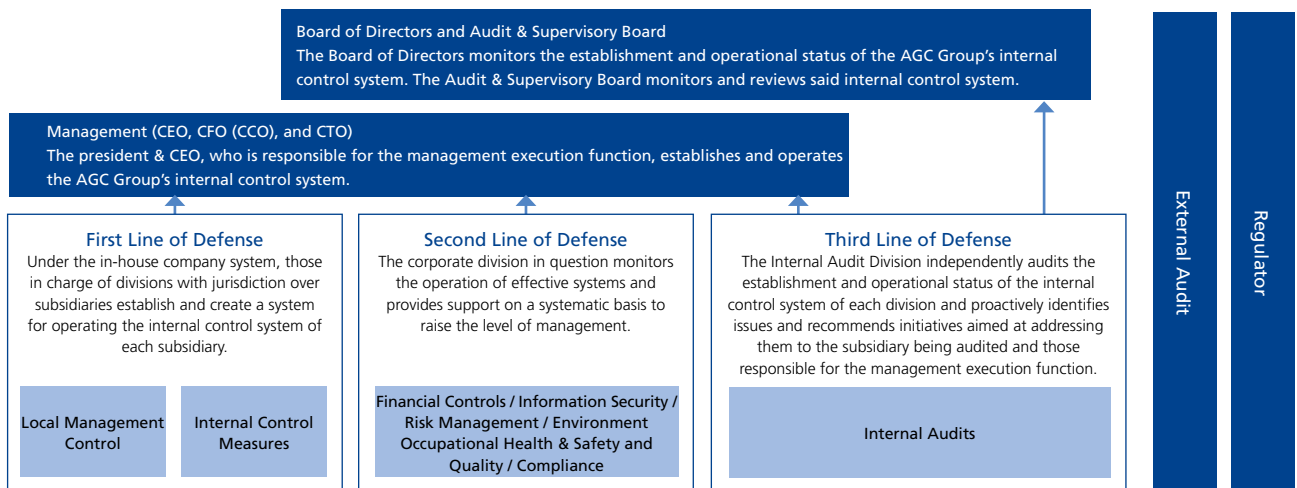
For details on our compliance system:
<https://www.agc.com/en/csr/society/>



For details on the Corporate Policy on Internal Control:
<https://www.agc.com/en/company/internalcontrol/>



The AGC Group's Three-Line Defense Model (Reference: The Institute of Internal Auditors—Japan)



Post-Merger Integration in Mergers and Acquisitions

Since formulating its AGC plus Management Policy in 2015, the AGC Group has expanded its business through proactive mergers and acquisitions (M&As) in strategic business areas. With a view to making use of M&As, the Group has also laid out a strategy in AGC plus-2023 of accelerating business growth in strategic business areas and searching for new business areas.

Regarding M&As, it is vital to achieve a smooth post-merger integration (PMI) process that helps deliver business synergies and maximize corporate value for the Group. In everything from management policy formulation to governance, management resources, and risk management, the AGC Group has established Group common practices and functions as important matters that

make up its Groupwide foundations, which serve as common guidelines when implementing PMIs. Based on these practices and functions, business divisions and other bodies within the Company gradually integrate companies acquired through M&As, beginning with key functions such as finance and accounting, sales systems and branding, quality assurance, and management accounting.

We engage in dialogue with acquired companies and generally complete the integration process in less than six months, following which we periodically monitor the status of integration. In addition, we improve organizational knowledge as a group by carrying out reviews at meetings of the Management Committee and the Board of Directors, which include progress on PMI status for important projects within one to two years following integration.

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

(As of March 30, 2021)

Board of Directors



Takuya Shimamura

Director,
Chairman

- Apr. 1980 Joined Asahi Glass
- Jan. 2009 Executive Officer and GM of Planning & Coordination Officer, 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
- Jan. 2021 Director and Chairman (incumbent)



Hideyuki Kurata

Director,
Senior Executive Officer,
CTO,
GM of Technology General
Division

- Apr. 1987 Joined Asahi Glass
- Jan. 2018 Executive Officer and GM of Life Science General Division, Chemicals Company
- Jan. 2019 Senior Executive Officer and GM of Technology General Division
- Jan. 2021 Senior Executive Officer, CTO, and GM of Technology General Division
- Mar. 2021 Director, Senior Executive Officer, CTO, and GM of Technology General Division (incumbent)



Yoshinori Hirai

Representative Director,
President & CEO

- 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 CTO, GM of Technology General Division
- Jan. 2016 Director and Senior Executive Officer, CTO, GM of Technology General Division
- Jan. 2018 Director and Executive Vice President and CTO, GM of Technology General Division
- Jan. 2021 Representative Director and President & CEO (incumbent)



Yasuchika Hasegawa

Outside Director

- Apr. 1970 Joined Takeda Pharmaceutical Company Limited
- Jun. 1999 Director of said company
- Jun. 2003 Director and President & CEO of said company
- Jun. 2014 Director and Chairman of the Board of said company
- Mar. 2017 Director at AGC (incumbent)
- Jun. 2017 Corporate Counselor of Takeda Pharmaceutical Company Limited
- Jun. 2019 Retired from Takeda Pharmaceutical Company Limited



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 and Senior Vice President of AGC Flat Glass North America, Inc.
- Feb. 2013 Executive Officer and Regional President of North America, Glass Company
- Oct. 2013 Executive Officer and GM of Strategy Officer, 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 and GM of Officer of the President
- Jan. 2016 Director and Senior Executive Officer, CFO and GM of Corporate Planning Division
- Jan. 2018 Director and Executive Vice President, CFO and CCO
- Oct. 2019 Director and Executive Vice President, CFO and CCO, GM of Corporate Planning General Division
- Mar. 2020 Director and Senior Executive Vice President, CFO, CCO and GM of Corporate Planning General Division (incumbent)



Hiroyuki Yanagi

Outside Director

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



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
- Jul. 1999 Partner of said company
- Jul. 2007 Director (Senior Partner) of said company
- Jul. 2013 Executive Vice President & CEO of Multilateral Investment Guarantee Agency, World Bank Group
- Oct. 2019 Retired from said agency
- Mar. 2020 Director at AGC (incumbent)



Tetsuo Tatsuno

Audit & Supervisory Board Member

Apr. 1982 Joined AGC
 Jan. 2009 Executive Officer and GM of Finance & Accounting Center
 Jul. 2009 Executive Officer and Deputy GM of Finance & Control Office
 Apr. 2010 Executive Officer and Vice President, Planning and Coordination, Glass Company
 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 CEO
 Mar. 2017 Audit & Supervisory Board Member (full-time)



Yoshiyuki Morimoto

Audit & Supervisory Board Member (Outside)

Apr. 1981 Joined Bridgestone Tire Co., Ltd. (currently Bridgestone Corporation)
 Mar. 2008 Vice President and Office of said company
 Mar. 2011 Vice President and Senior Officer of said company
 Mar. 2012 Director and Vice President and Senior Officer of said company
 Jan. 2013 Director and Senior Vice President, CTO Responsible for Technology of said company
 Mar. 2015 Executive Vice President
 Mar. 2016 Advisor of said company
 Dec. 2017 Retired from said company
 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 of said company
 Jun. 2010 Managing Executive Officer of said company
 Jun. 2011 Senior Managing Director of said company
 Jun. 2014 Director and Executive Vice President of said company
 Jun. 2017 Retired from said company
 Mar. 2018 Auditor at AGC (incumbent)



Yaeko Takeoka

Audit & Supervisory Board Member (Outside)

Apr. 1985 Registered as an Attorney (Daini Tokyo Bar Association)
 Jan. 2007 Joined KOHWA SOHGOH Law Offices (incumbent)
 Mar. 2019 Auditor at AGC (incumbent)

Executive Officers

President & CEO

Yoshinori Hirai
CEO

Senior Executive Vice President

Shinji Miyaji
CFO, CCO, GM of Corporate Planning General Div.

Executive Vice Presidents

Masao Nemoto
President of Chemicals Company

Yoshinori Kobayashi
President of Automotive Company

Senior Executive Officers

Jean-François Heris
President of Building & Industrial Glass Company

Kenzo Moriyama
President of Electronics Company

Takashi Misu
GM of Human Resources Div.

Hideyuki Kurata
CTO, GM of Technology General Div.

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

Toshiro Kasuya
GM of Finance & Control Div.

Executive Officers

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.

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 Mobility Business Development Office, Automotive Company
GM of Mobility General Div., Automotive Company
GM of Strategy & Planning Office, Automotive Company

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

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.

Tadashi Murano
GM of Strategy & Planning Div., Corporate Planning General Div.

Masaru Ota
President of AGC Ceramics Co., Ltd.

Noriyuki Komuro
GM of Life Science General Div., Chemicals Company

Takashi Narushima
GM of Global OEM Management Office, Automotive Company

Financial Data

Organizations covered in the report: AGC Inc. and its consolidated subsidiaries

Reporting period: January 1 to December 31

All numeric data of 2011 is based on Japan's financial reporting standards.

Since 2012, the Company has adopted International Finance Reporting Standards (IFRS) for the preparation of its financial results.

	2011 J GAAP	2012 IFRS	2013 IFRS	2014 IFRS
Business Results				
Net sales	¥1,214,672	¥1,189,952	¥1,320,006	¥1,348,308
Operating profit	165,663	101,751	79,894	62,131
Recurring profit	166,739			
Profit before taxes	–	74,998	44,381	41,163
Profit for the year	95,290	52,512	19,023	20,475
attributable to owners of the parent	–	48,433	16,139	15,913
Depreciation	110,056	117,856	135,751	137,200
CAPEX	152,705	155,334	138,480	118,170
Research and development expenses	46,442	47,074	46,882	44,758
Cash flows from operating activities	152,223	170,165	167,371	135,790
Cash flows from investing activities	(123,581)	(158,646)	(145,978)	(108,754)
Free cash flow	28,641	11,519	21,392	27,035
Major Investment Indicators				
Market value	¥ 746,737	¥ 723,394	¥ 755,867	¥ 680,791
Return on equity* ¹	11.8%	5.8%	1.6%	1.4%
Return on assets* ²	9.6%	5.6%	4.0%	3.0%
Price/earnings ratio (PER) (times)	7.89	14.94	46.81	42.77
Price/book value ratio (PBR) (times)	0.92	0.80	0.70	0.61
Return on invested capital (ROIC)* ³	7.1%	2.9%	1.0%	0.9%
EBITDA* ⁴	259,444	200,044	186,570	185,905
Earnings per share (yen)* ^{5, *6}	379.40	197.25	68.65	67.90
Cash dividends per share (yen)* ⁶	130.00	130.00	90.00	90.00
Consolidated dividend payment ratio	31.7%	62.1%	128.8%	130.7%
Asset and Efficiency Indicators				
Total assets	¥1,691,556	¥1,916,394	¥2,120,629	¥2,077,338
Property, plant and equipment	842,563	956,806	1,059,946	1,066,193
Inventories	194,325	208,031	236,611	239,497
Trade receivables	233,675	244,396	260,901	262,091
Total asset turnover (times)* ⁷	0.70	0.66	0.65	0.64
Fixed asset turnover (times)* ⁸	1.43	1.32	1.31	1.27
Inventory turnover (months)* ⁹	2.8	3.0	2.7	2.8
Receivables turnover (months)* ¹⁰	2.3	2.4	2.3	2.3
Stability				
Shareholders' equity* ¹¹	¥ 807,432	¥ 908,304	¥1,087,216	¥1,113,126
Shareholders' equity ratio	47.7%	47.4%	51.3%	53.6%
Debt-to-equity ratio (times)* ¹²	0.57	0.56	0.50	0.42

*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

					(millions of yen)
2015 IFRS	2016 IFRS	2017 IFRS	2018 IFRS	2019 IFRS	2020 IFRS
¥1,326,293	¥1,282,570	¥1,463,532	¥1,522,904	¥1,518,039	¥1,412,306
71,172	96,292	119,646	120,555	101,624	75,780
84,522	67,563	114,424	128,404	76,213	57,121
46,287	53,362	79,297	101,991	55,515	41,164
42,906	47,438	69,225	89,593	44,434	32,715
137,381	121,803	128,226	121,668	143,361	143,716
125,103	126,025	165,095	230,598	207,661	241,348
38,927	39,212	43,912	45,755	47,450	46,444
187,170	203,637	203,504	189,287	191,906	225,392
(115,951)	(113,596)	(209,560)	(194,450)	(182,636)	(230,248)
71,218	90,041	(6,055)	(5,162)	9,269	(4,855)
¥ 804,604	¥ 920,461	¥1,102,752	¥ 758,663	¥ 869,552	¥ 796,764
3.9%	4.3%	6.1%	7.7%	3.9%	2.9%
3.5%	4.8%	5.7%	5.4%	4.4%	3.1%
18.75	19.40	16.15	8.59	19.57	24.35
0.74	0.84	0.93	0.67	0.75	0.71
2.6%	2.9%	4.1%	5.0%	2.4%	1.6%
228,381	195,767	249,880	259,425	231,857	208,459
184.85	204.25	300.65	397.58	199.95	147.24
90.00	90.00	105.00	115.00	120.00	120.00
48.5%	43.9%	34.8%	28.8%	59.7%	81.2%
¥1,991,262	¥1,981,451	¥2,228,560	¥2,235,776	¥2,335,415	¥2,534,458
982,296	937,869	1,060,601	1,108,934	1,177,691	1,246,885
235,374	227,284	261,708	277,014	291,224	274,835
241,294	241,476	260,497	260,111	264,102	266,177
0.65	0.65	0.70	0.68	0.66	0.58
1.29	1.34	1.46	1.40	1.33	1.16
2.9	3.0	2.8	2.9	3.1	3.2
2.3	2.3	2.1	2.1	2.1	2.3
¥1,094,172	¥1,095,438	¥1,184,034	¥1,137,204	¥1,157,097	¥1,115,142
54.9%	55.3%	53.1%	50.9%	49.5%	44.0%
0.40	0.37	0.38	0.43	0.47	0.63

*5 Profit for the year attributable to owners of the parent in IFRS

*6 The Company consolidated its common shares at a ratio of 5 shares to 1 share on July 1, 2017. Accordingly, per-share data is calculated on the assumption that the consolidation of shares was conducted at the beginning of 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 receivables) / (Net sales / 12)

*11 Shareholders' equity = Net assets – Treasury shares – Minority interest

*12 Debt-to-equity ratio = Interest-bearing debt / Net assets (equity)

External Evaluations

The major socially responsible investment (SRI)- and environmental, social, and governance (ESG)-related indices for which the AGC Group has been selected, as well as the main external recognition of the Group's ESG activities, are as follows.

Inclusion in SRI and ESG Investment Indices

AGC has been selected for the FTSE4 Good Index Series, an SRI index created by FTSE Russell (headquartered in the United Kingdom), and the FTSE Blossom Japan Index, an integrated ESG index that acknowledges the performance of Japanese companies' excellence in ESG activities, also created by FTSE Russell.



External Recognition of AGC's ESG Activities

In 2020, for the second consecutive year AGC was selected by the Ministry of Economy, Trade and Industry (METI) and the Tokyo Stock Exchange as a Nadeshiko Brand for being a company that excels in promoting the advancement of women.



AGC was recognized as a "White 500" company for the second consecutive year under the 2021 Certified Health & Productivity Management Outstanding Organizations Recognition Program, organized by the METI and Nippon Kenko Kaigi, in recognition of its efforts to strategically implement health management for employees. In addition, AGC Display Glass Yonezawa Co., Ltd., was recognized under the Certified Health & Productivity Management Organization Program.



AGC was selected as a Digital Transformation Stock (DX Stock) 2020 by the METI and the Tokyo Stock Exchange as a company that has established internal systems for promoting DX, which contributes to improving corporate value, and for achieving outstanding digital technology utilization.



AGC received the Special Jury Prize in the NIKKEI Smart Work Awards 2021, organized by Nikkei Inc. Excellent companies that will lead the next generation are selected for these awards following a comprehensive evaluation of initiatives aimed at utilizing human resources, innovation capabilities, and market development capabilities.



In sustainability assessments by EcoVadis (headquartered in France), AGC's Kashima Plant has received the Gold rating, which is awarded to companies in the top 5% in the overall assessment, every year since 2017, and the plant received the Platinum rating, awarded to companies in the top 1%, in 2020 and 2021. In 2020, AGC's Chiba Plant and AGC Pharma Chemicals Europe, S.L.U. both received the Gold rating, while AGC Biologics' Copenhagen facilities, received the Silver rating, which is awarded to companies in the top 25%.



AGC was awarded a QualityScore of 1, the highest possible rating, in each of the categories for Board of Directors' composition, executive compensation, shareholder rights, and auditing and risk management in the 2021 governance assessment conducted by Institutional Shareholder Services (ISS), an advisory company for exercising voting rights.

AGC was selected for the sixth time and the fourth consecutive year among the Clarivate Top 100 Global Innovators, as determined by Clarivate plc (headquartered in the United States). This global information services company analyzes intellectual property trends based on its own patent data to select the 100 most innovative companies and research institutions in the world.

Corporate and Stock Information

(As of December 31, 2020)

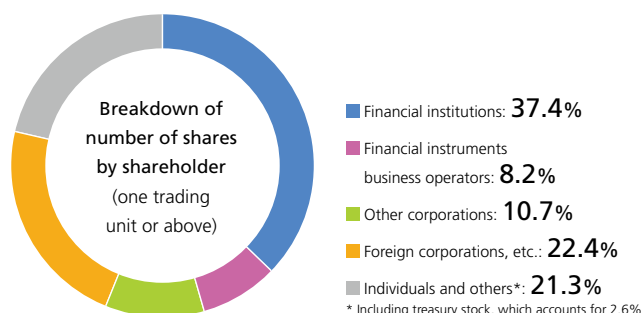
Corporate Information

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	Yoshinori Hirai Representative Director, President
Capital	¥90,873 million
Number of consolidated subsidiaries	217 (including 179 overseas)

Stock Information

Stock listing	Tokyo Stock Exchange
Industry	Glass and ceramic products
Securities code	5201
Trading unit	100
Fiscal year	From January 1 to December 31
Ordinary general meeting of shareholders	March
Stock authorized	400,000,000 shares
Stock issued	227,441,381 shares
Total number of shareholders	74,150

Stock Information



Major Shareholders

	Number of shares held (1,000 shares)	Shareholding ratio
The Master Trust Bank of Japan, Ltd. (Trust Account)	23,050	10.40
Japan Trustee Services Bank, Ltd. (Trust Account)	14,921	6.73
Meiji Yasuda Life Insurance Company (Standing proxy: Custody Bank of Japan, Ltd.)	9,615	4.34
Barclays Securities Japan Limited	6,066	2.74
The Asahi Glass Foundation	5,982	2.70
Mitsubishi Estate Co., Ltd.	4,540	2.05
Asahi Glass Business Partner Shareholding Association	4,492	2.03
JPMorgan Securities Japan Co., Ltd.	4,400	1.99
SMBC Nikko Securities Inc.	4,036	1.82
Nippon Life Insurance Company	3,662	1.65

Note 1. In addition to the above, AGC Inc. holds treasury stock of 5,813,165 shares.
2. The shareholding ratio is calculated excluding treasury stock.

af THE ASAHI GLASS FOUNDATION



For Coming Generations

The Asahi Glass Foundation was established in 1933 to commemorate the 25th anniversary of the establishment of Asahi Glass Company (now AGC Inc.). The foundation engages in two main activities: funding research in science and technologies that will lead the way to the next generation and giving commendations to individuals or organizations that have made significant contributions to solving environmental issues.

To coincide with the holding of the Earth Summit in 1992 and with the aim of restoring the global environment, the foundation instituted the Blue Planet Prize, which has become the centerpiece of the foundation's award activities. We established the prize in the hope that our blue planet will be a shared asset capable of sustaining human life far into the future.

In 2020, the foundation awarded the Blue Planet Prize to Professor David Tilman of the United States and Dr. Simon Stuart of the United Kingdom. The former has demonstrated that plant-based foods are beneficial to both human health and the environment and advocated shifts towards diets and agricultural practices that are better for human health and the global environment. The latter has led the development of the categories and quantitative criteria for the International Union for Conservation of Nature's Red List of Threatened Species and made conspicuous contributions to global efforts for the conservation of amphibians.

 <https://www.af-info.or.jp/en/>

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