

# Company Overview



**AGC Inc.**

November, 2021

Your Dreams, Our Challenge

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# 1. Company Overview

# Basic Information

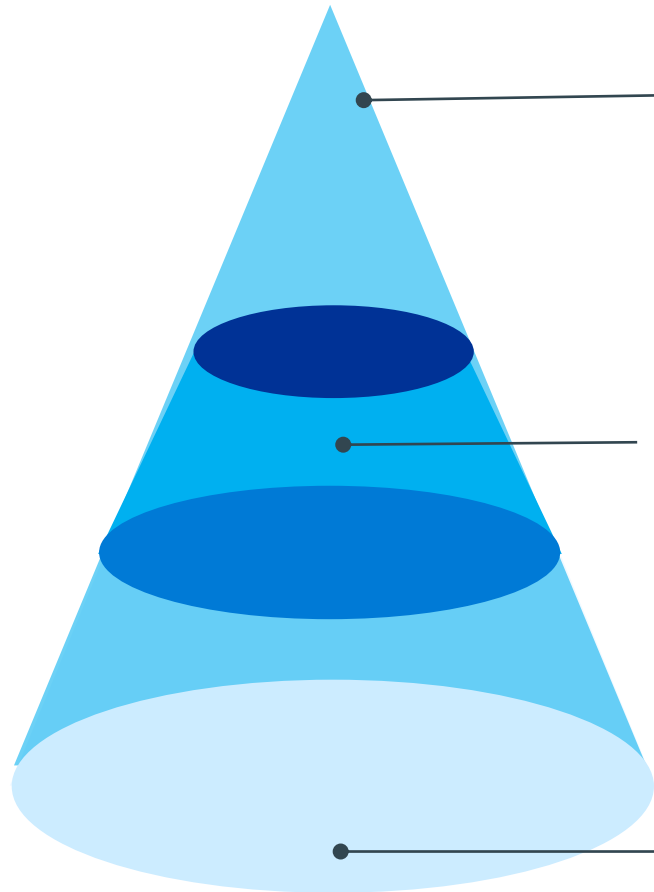
Company name	AGC Inc.
TSE code	5201
Established	September 8, 1907
Representative director	Yoshinori Hirai
Paid-in capital	¥90.9 billion*
Consolidated net sales	¥1,412.3 billion*
Consolidated no. of employees	56,179*
No. of consolidated subsidiaries	217 companies (Of which 179 are overseas)*

Representative director  
President & CEO  
Yoshinori Hirai



## ~ Shareholder notes ~

- Fiscal close  
December 31
- Annual general shareholders' meeting  
March of each year
- Date of record  
Annual general shareholders' meeting  
December 31  
Year-end dividend  
December 31  
Interim dividend  
June 30
- Shareholder registry administrator  
Mitsubishi UFJ Trust and Banking Corporation
- Number of shares per unit  
100 shares
- Number of shares outstanding  
227,441,381 shares



## **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.

## **Our Shared Values**

- ◆ **Innovation & Operational Excellence**
- ◆ **Diversity**
- ◆ **Environment**
- ◆ **Integrity**

## **Our Spirit**

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

# New businesses that have continually supported the development of society and paved the way for the future

## ■ Provide the necessary materials and solutions in line with changes of the times



Construction boom



Motorization



Coming of the era of TV



Expansion of environment-conscious businesses and products



Advancement of IT



Arrival of the IoT era



Strat of 5G communication

1907    1910s    1950s    1970s    1990s    2000s    2010s    2020s



Started manufacturing of refractories

Started manufacturing of soda ash



Started the automotive glass business



Founded Asahi Glass Co., Ltd.  
Started the flat glass business



Started the business of glass valves for CRTs



Succeeded in the development of ion-exchange membrane



Started the business of alkali-free glass for LCD



Started the production of alternative CFC AK-225



Started the business of filters for tone correction for digital cameras



Started the business of chemically tempered glass for smartphones



Started the business of EUV mask blanks

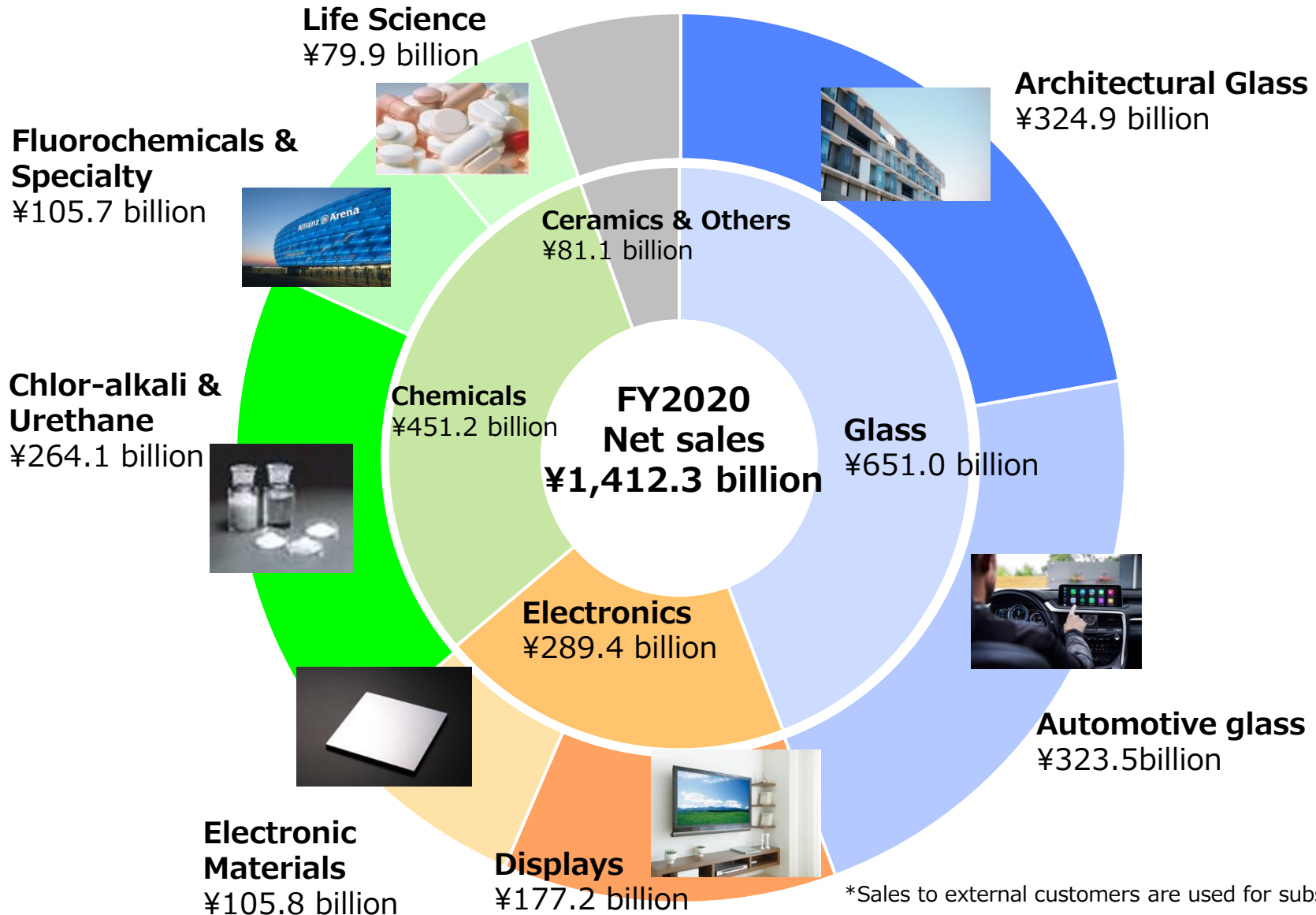


Started the contract production business of pharmaceutical and agrochemical intermediates



Developed glass antenna that adds cellular base station capabilities to windows

# Business Overview



\*Sales to external customers are used for subsegment sales.

**Business spans over 30 countries and regions**  
**Approx. 70% of sales are generated overseas,**  
**approx. 80% are employees of overseas subsidiaries**

Net sales: ¥1,412.3 billion Operating income: ¥75.8 billion Group employees: approx. 56,200

(FY12/2020)

## Europe

Net sales: ¥312.5 billion  
Operating income: ¥6.9 billion  
Employees: approx. 17,000

- Architectural Glass
- Automotive Glass
- Fluorochemicals
- Life Science

## Japan & Asia

Net sales: ¥945.3 billion  
Operating income: ¥101.7 billion  
Employees: approx. 34,100

- Architectural Glass
- Automotive Glass
- Display Glass
- Electronic Materials
- Chlor-alkali & Urethane
- Fluorine & Specialty
- Life Science
- Ceramics

## Americas

Net sales: ¥154.5 billion  
Operating income: ¥3.4 billion  
Employees: approx. 5,100

- Architectural Glass
- Automotive Glass
- Electronic Materials
- Fluorochemicals
- Life Science

\* Because the figures for sales and profits by region are before eliminations and common regional expenses, the sum of sales and profits by region does not correspond to the total sales and profits of the Company.



## Commands the top-ranking share in many products worldwide

**Float flat glass**  
**No. 1 Worldwide**



**Automotive glass**  
**Top share worldwide**



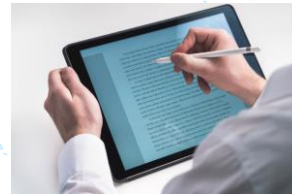
**Cover glass for car-mounted displays**  
**No. 1 Worldwide**



**For TFT LCD/OLED**  
**Glass substrates**  
**No. 2 Worldwide**



**Ultra-thin sheet for**  
**electronic equipment**  
**Soda lime glass**  
**No. 1 Worldwide**



**Caustic soda PVC**  
**No. 1 in Southeast Asia**



(Mountain of salt used as a raw material)

**Fluoropolymer resin ETFE**  
**No. 1 Worldwide**

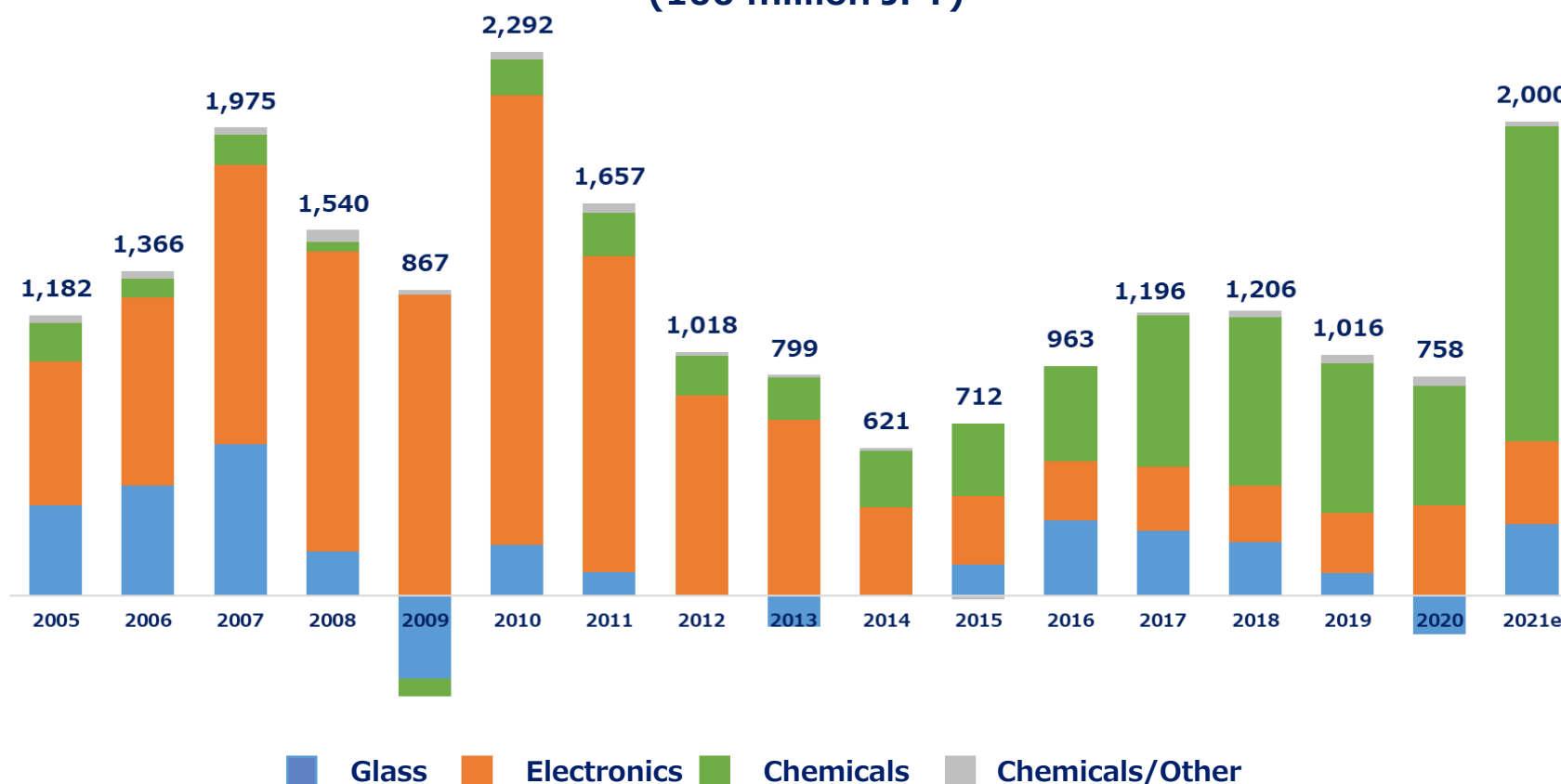


**Fluoropolymer resin**  
**for on-site coatings**  
**No. 1 Worldwide**



\*Based on AGC estimates.

## Operating Profit by Business Segment (100 million JPY)



## 2. Long-term Management Strategy

# Vision 2030

## **Vision 2030**

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

- **While the basic strategy remains the same as the previous long-term strategy, we will place more focus on social value creation.**

## Group-wide Strategy

With both core and strategic businesses as drivers, AGC will keep optimizing 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 Strength: we can provide differentiated materials to growth industries that will underpin future society.

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

Differentiated materials and technologies

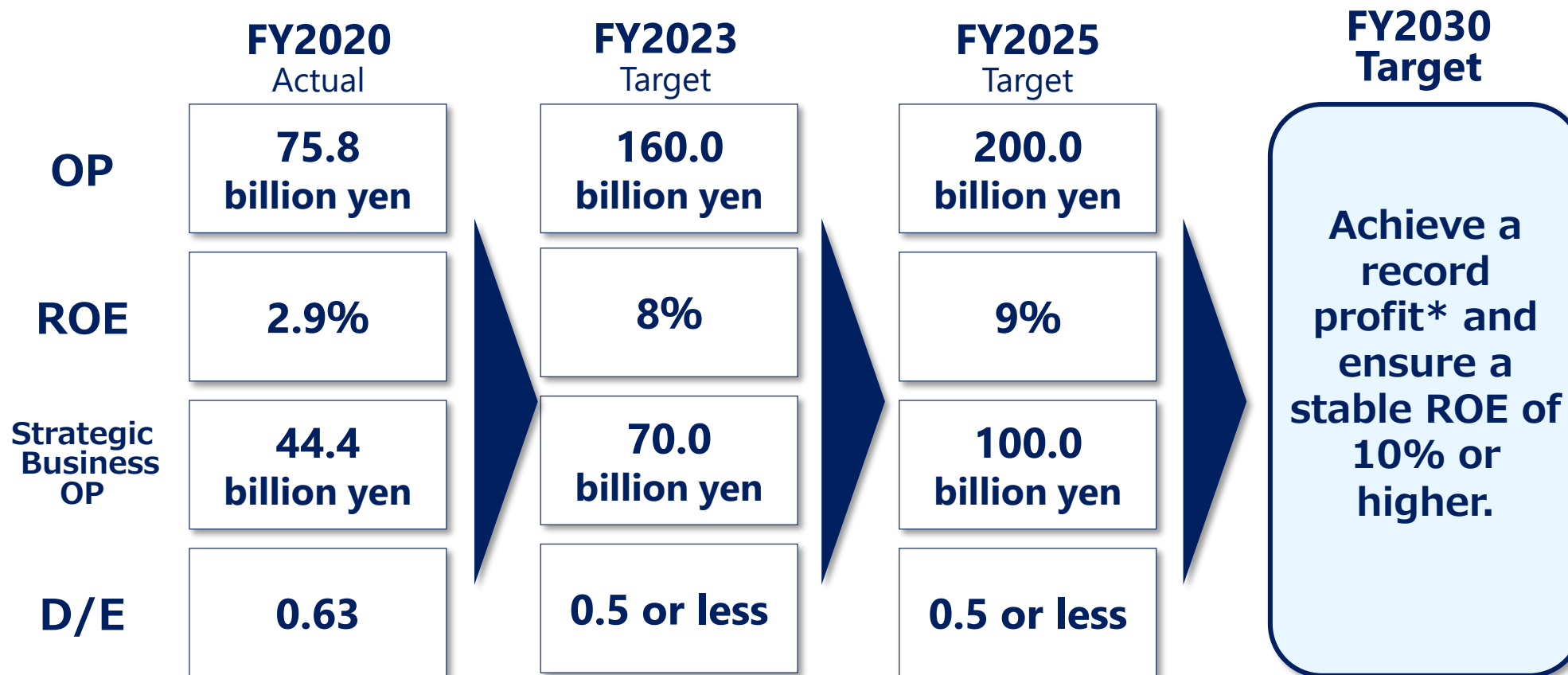
Production technology and process development capabilities

Globally integrated management that unites diverse personnel

Corporate culture that encourages ambitious initiatives

# Financial Targets under Vision 2030

- By 2030, AGC will achieve a record profit and ensure a stable ROE of 10% or higher.



\* Past record:  
OP 229.2 billion yen in 2010

# Social Value the AGC Group Wants to Create

- Through its business activities, AGC will create social value in the following five areas to help solve social issues.

Contributing to the realization of safe and comfortable urban infrastructure

Contributing to the realization of safe and healthy lifestyles

Contributing to the realization of a sustainable global environment

Contributing to the maintenance of a healthy and secure society

Contributing to the creation of fair and safe workplaces

Work toward the sustainability goals in all business activities

## Major Opportunities

- Developing social infrastructure
- Achieving a safe and comfortable mobility
- Addressing food crises
- Building an info-intensive and IoT society
- Facilitating better health and longevity
- Addressing climate change
- Effective use of resources

## Major Risks

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

### 3. New Medium-term Management Plan

# ***AGC plus-2023***



## ■ AGC will accelerate the following strategies toward Vision 2030.

### Pursuing ambidextrous management

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

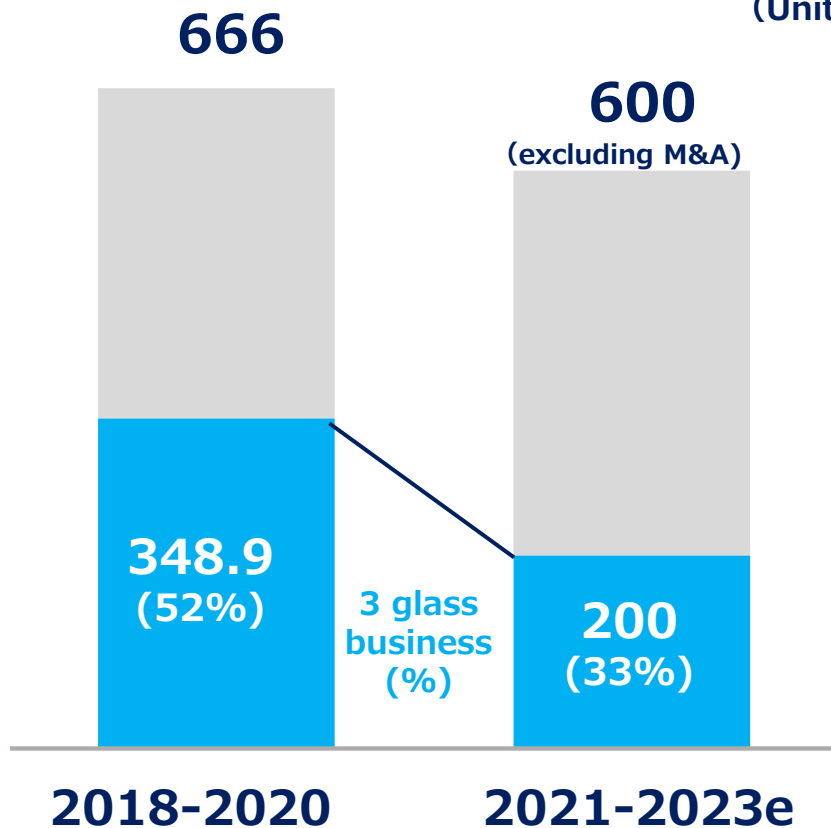
# ***AGC plus-2023*** Financial Targets

	<b>FY2020 Actual</b>		<b>FY2023 Target</b>
<b>OP</b>	<b>75.8 billion yen</b>		<b>160.0 billion yen</b>
<b>ROE</b>	<b>2.9%</b>		<b>8%</b>
<b>Strategic Business OP</b>	<b>44.4 billion yen</b>		<b>70.0 billion yen</b>
<b>D/E Ratio</b>	<b>0.63</b>		<b>0.5 or less</b>

- Strengthen investments in growth areas such as strategic businesses and reduce the investment ratio in the three glass businesses.※<sup>1</sup>

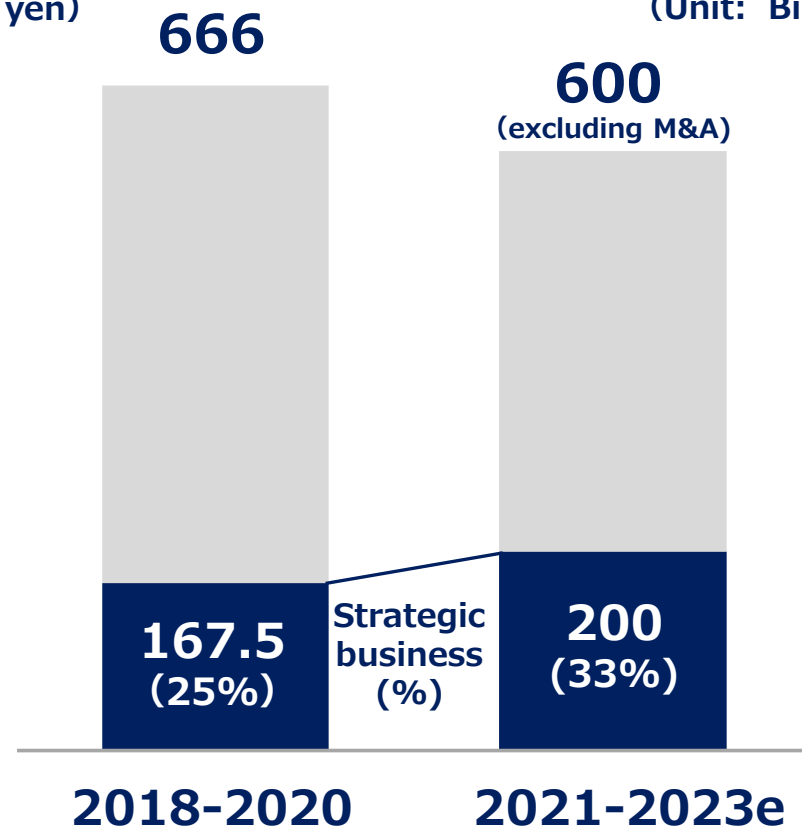
Investment ratio of 3 Glass businesses※<sup>2</sup>

(Unit: Billion yen)



Investments※<sup>2</sup> to strategic businesses

(Unit: Billion yen)

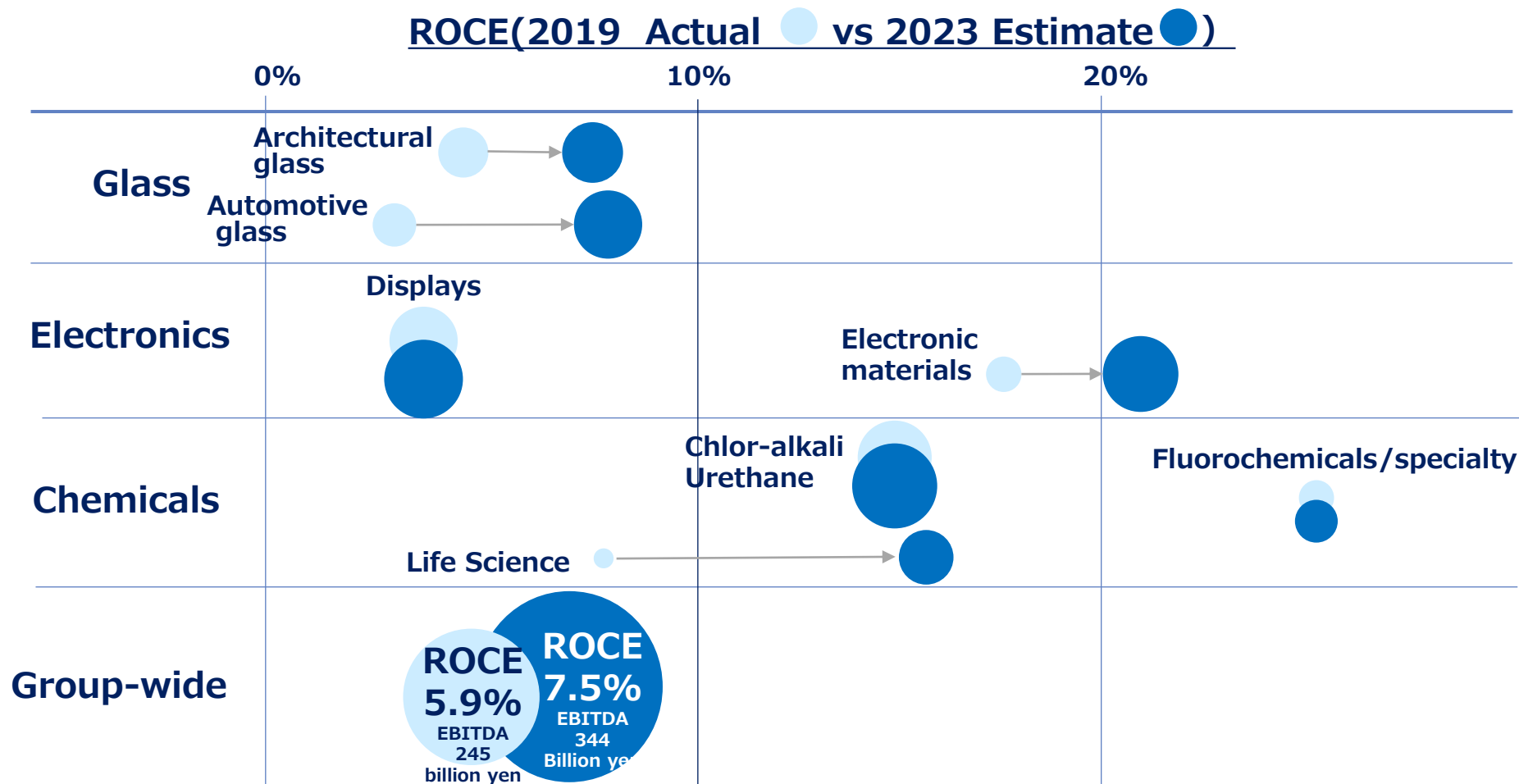


※1: Architectural glass, Automotive glass, Displays

※2: Total investment: offset CAPEX, M&A, securities/fixed asset sales etc.

# Business Portfolio Reform (ROCE) To-be Image

- Improve ROCE to 7.5% from 5.9%, and EBITDA by approx. 100 billion yen (245 billion yen to 344 billion yen).



ROCE: (OP forecast of the year) ÷ (Operating asset forecast at the year end), OP by business is before allocation of common expenses

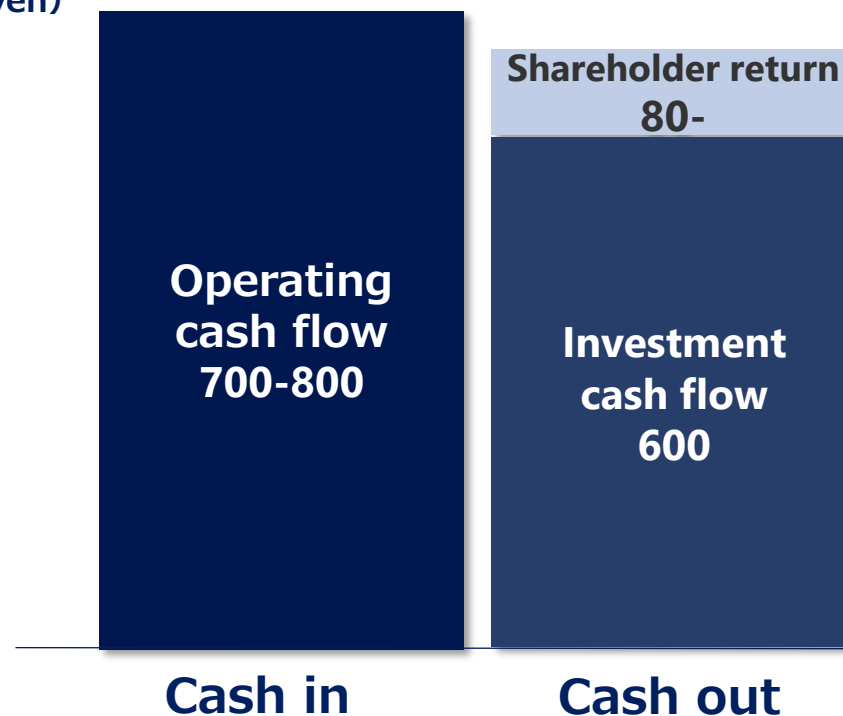
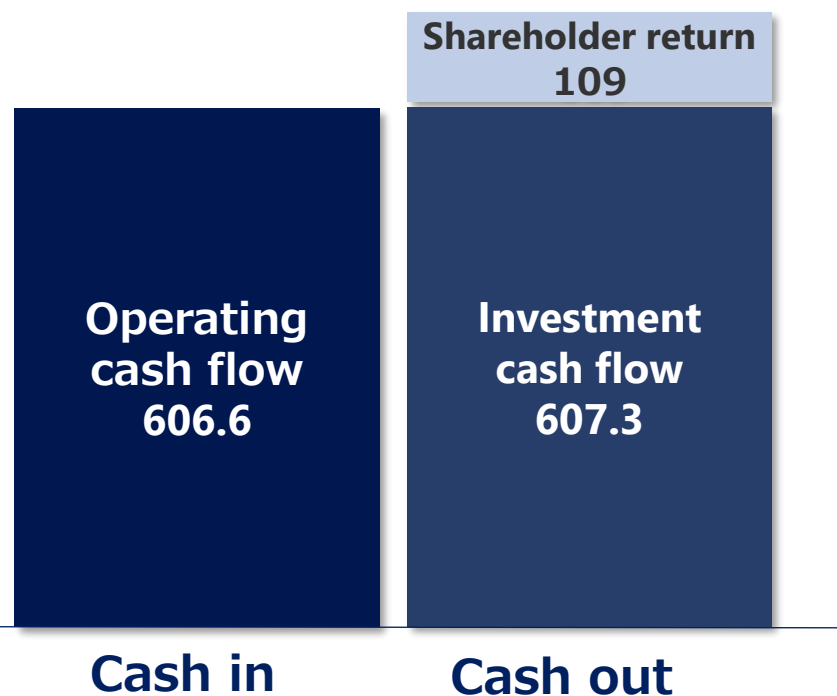
Diameter of each circle (excluding those of the group-wide section): the size of EBITDA

- We will allocate cash mainly to businesses with high asset efficiency and growth business while securing financial soundness.
- We reduced cross-holding shares by approx. 110 billion yen in the past five years, with 85 billion yen during the previous medium-term plan. We will continue to achieve further reduction.

FY2018~2020

(Unit: Billion yen)

FY2021~2023e



### 3. New Medium-term Management Plan

# ***AGC plus-2023***

- **Pursuing ambidextrous management**
- Promotion of sustainability management
- Gaining competitiveness by accelerating digital transformation

## Company-wide strategy

With core and strategic businesses as twin engines continuously create economic and social value by transforming into an optimal business portfolio

### Core businesses

Strengthen the competitiveness of each business and build a solid, long-term, and stable earnings base



Architectural Glass



Automotive Glass (Existing)



Displays



Chlor-alkali & Urethane



Fluorine & Specialty



Ceramics

### Strategic businesses

Create and expand high-profit businesses that will be the pillars of the future by leveraging our strengths in high-growth fields



Electronics



Life Science



Mobility

# AGC plus-2023 Key Issues by Segment

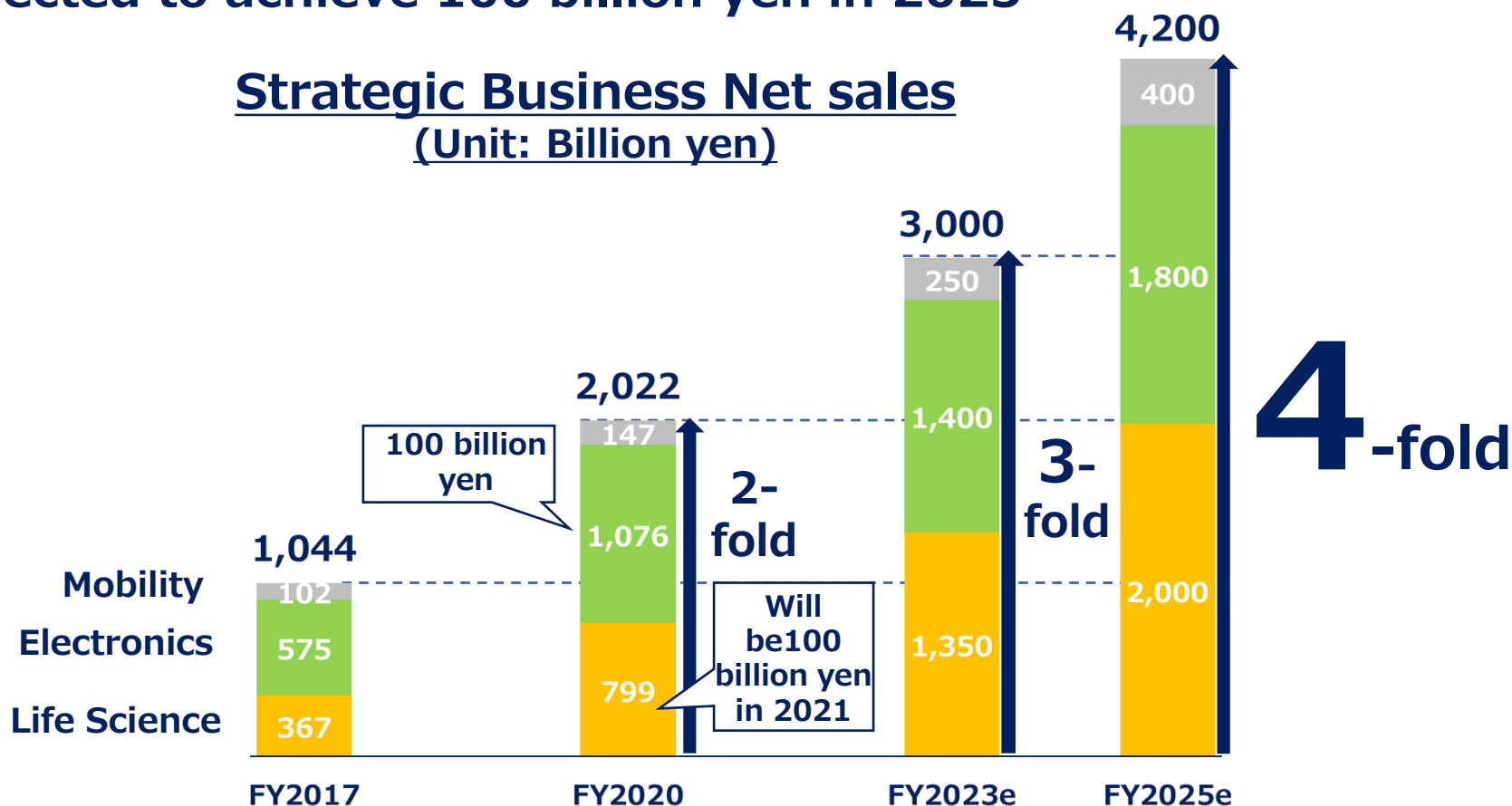
	<u>Business</u>	<u>Key issues</u>	<u>Direction</u>
<b>Strategic Business</b>	<b>Electronics</b>	<ul style="list-style-type: none"> <li>• Expand value-added products including EUV photomask blanks</li> <li>• Constantly generate new businesses</li> </ul>	<b>Further accelerate growth</b>
	<b>Life Science</b>	<ul style="list-style-type: none"> <li>• Expand business through timely investments</li> <li>• Achieve high growth based on its global operation</li> </ul>	
	<b>Mobility</b>	<ul style="list-style-type: none"> <li>• Steadily capture business opportunities amid market changes in the CASE era</li> <li>• Starting mass production of car mounted display glass in China to contribute to profit increase.</li> </ul>	
<b>Core Business</b>	<b>Display</b>	<ul style="list-style-type: none"> <li>• Respond to the continuing demand increase in the Chinese market to build a long-term stable business foundation</li> </ul>	<b>Unchanged from the previous basic strategies</b>
	<b>Chlor-Alkali</b>	<ul style="list-style-type: none"> <li>• Further strengthen the business foundation in S.E. Asia through capacity enhancement in Thailand and Indonesia</li> </ul>	
	<b>Fluorochemicals &amp; Specialty</b>	<ul style="list-style-type: none"> <li>• Capture the demand in global niche markets by adding value to products and domain expansion</li> <li>• Change environmental problems to business opportunities</li> </ul>	<b>Accelerate structural reform</b>
	<b>Architectural glass Automotive glass</b>	<ul style="list-style-type: none"> <li>• Minimize investments and increase asset efficiency</li> <li>• Steadily pursuing productivity improvement and cost reduction to improve profitability and capability for cash generation</li> </ul>	



# Accelerate Growth of Strategic Businesses

- **Electronics:** Achieved net sales of 100 billion yen in 2020
- **Life Science:** Expected to achieve net sales of 100 billion yen in 2021
- **OP:** Expected to achieve 100 billion yen in 2025

**Strategic Business Net sales**  
(Unit: Billion yen)



Strategic Business OP  
(billion yen) \*

FY2017	FY2020	FY2023e	FY2025e
14.2	44.4	70	100

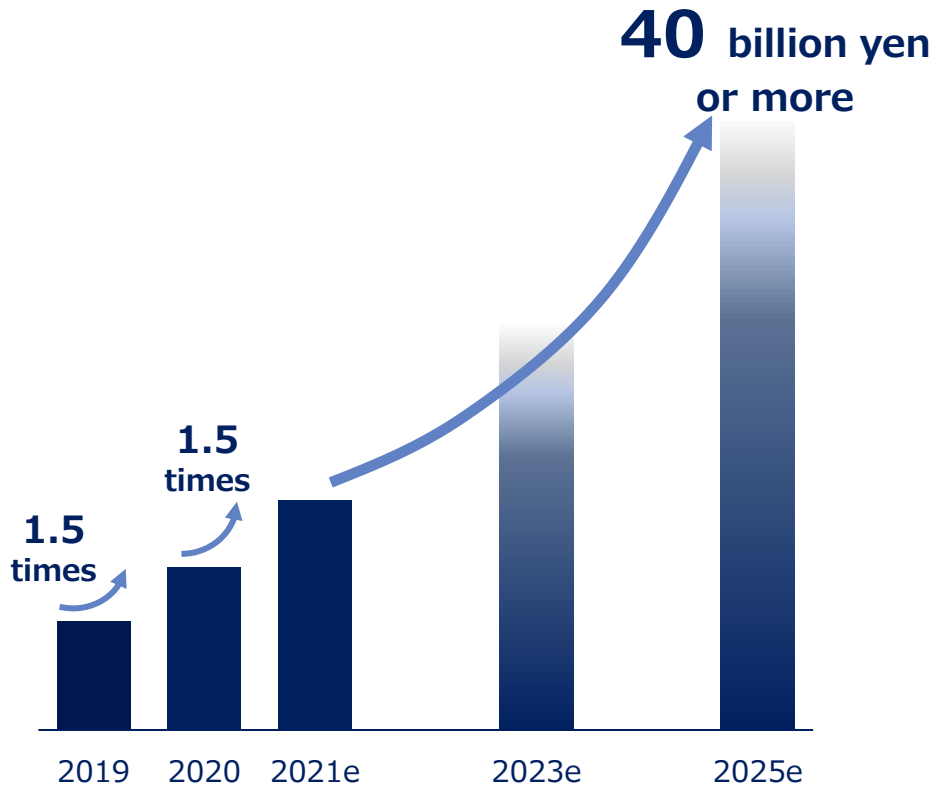
## EUV Mask Blanks

- EUV lithography disseminated rapidly by miniaturization of circuit patterns on semiconductor chips

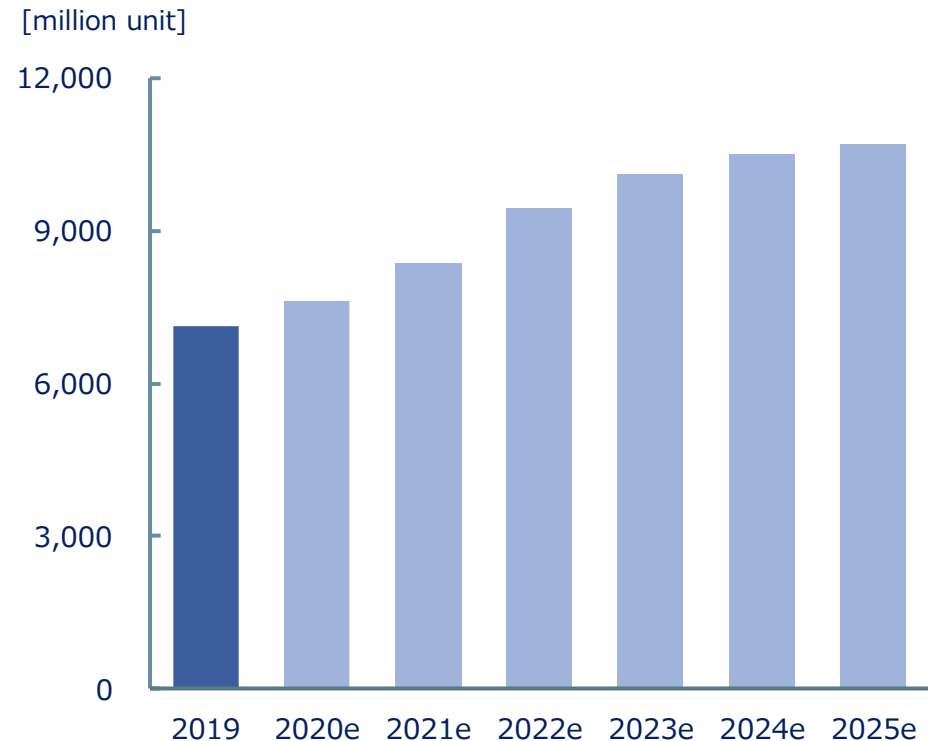
## Optoelectronics materials

- While the growth of smartphones will slow, the number of cameras used will continue to grow as smartphones will be equipped with more camera lenses.

### Sales of AGC's EUV mask blanks



### Image sensor for camera

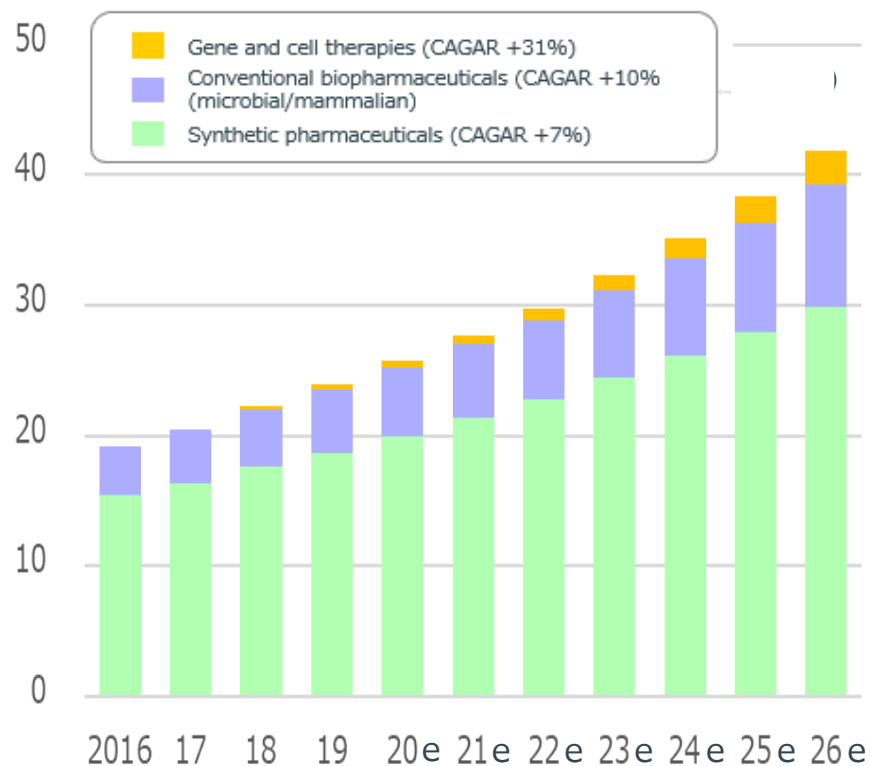


Source: AGC's estimate

- Synthetic pharmaceuticals & agrochemicals will expand business based its development technologies
- Biopharmaceuticals will achieve a high growth in specific regions/technologies

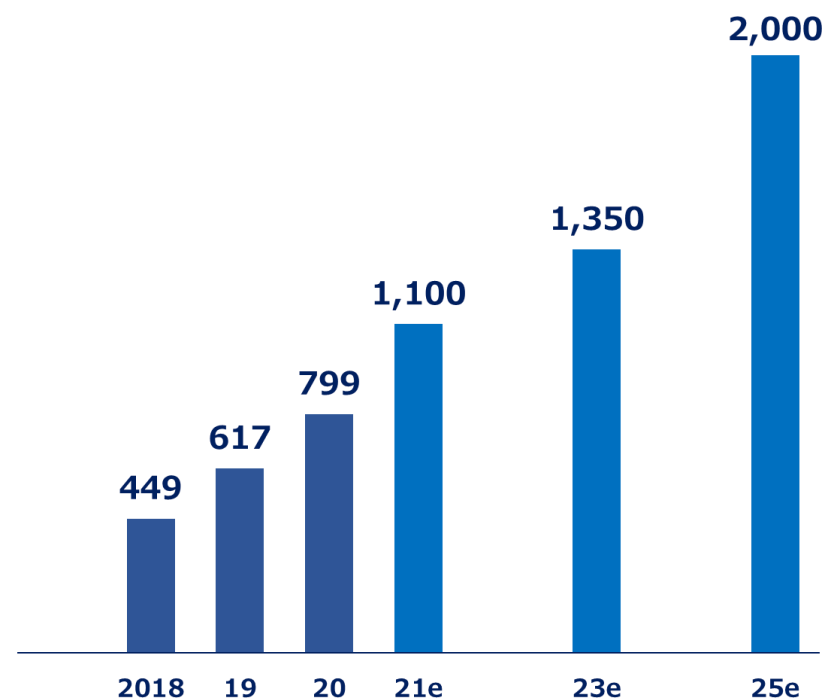
## Pharmaceuticals CDMO Market Outlook

Unit: Billion \$



## Life Science Net Sales

(Unit: 100 million yen )

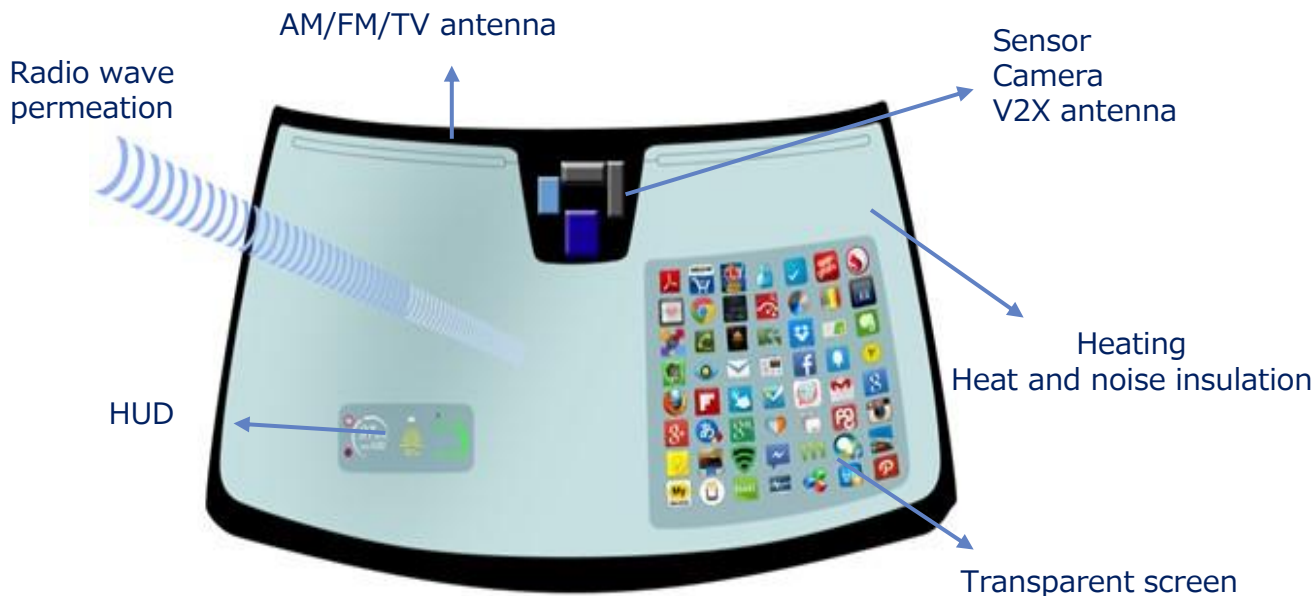


# Strategic business: Mobility

■ Make sure to seize business opportunities with a view to the market changes brought about by CASE

■ Contribute to earnings by starting mass production of automotive display glass in China

## Automotive glass



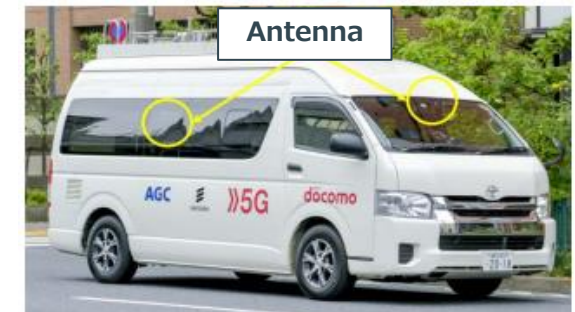
**Providing not only materials but also solutions through the use of glass displays and the addition of communication functions**

## Cover glass for car-mounted displays



Adopted in the LEXUS RX released in 2019 and other models and has the No.1 share worldwide

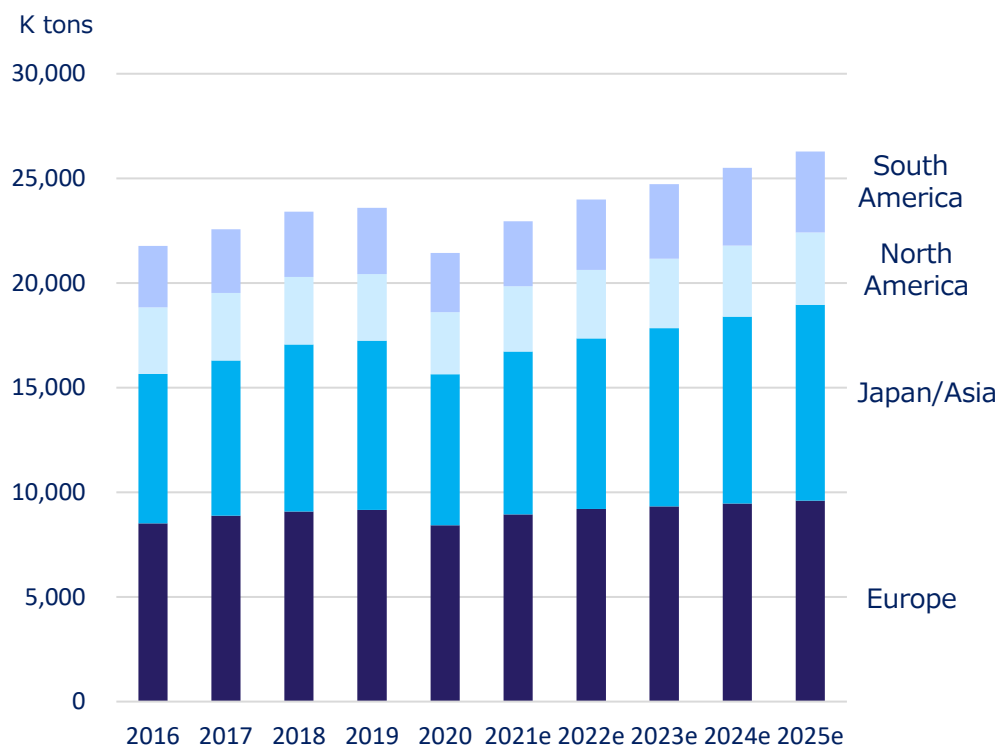
## Car-mounted antenna compatible with 5G



Successful development of 5G-compatible glass antenna together with NTT DOCOMO and Ericsson

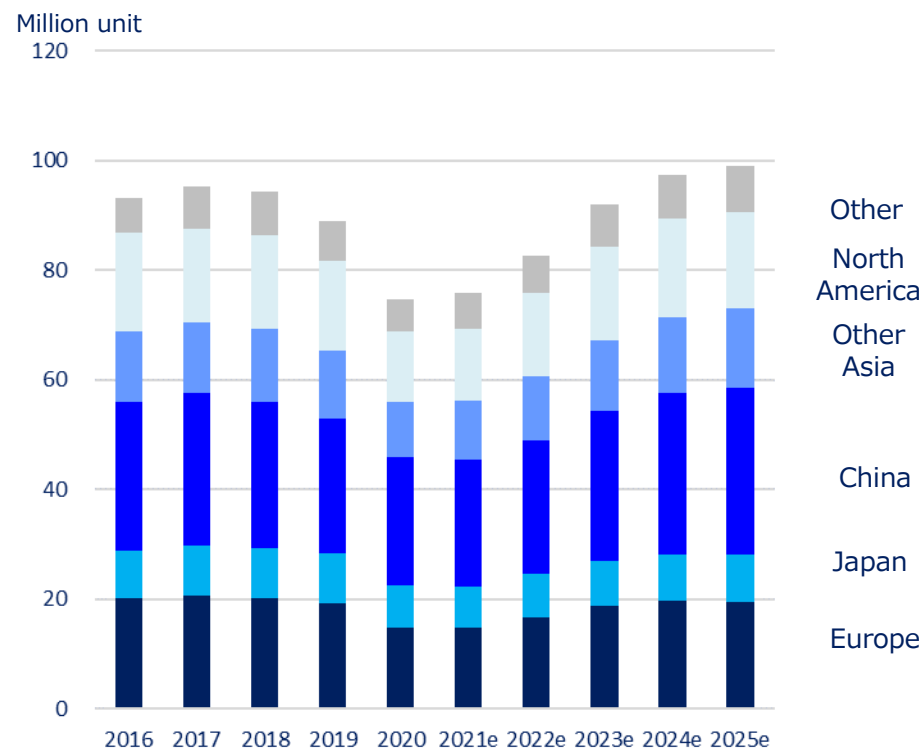
- Demand for architectural glass will be back to the 2019 level in 2022.
- Demand for automotive glass will be back to the 2019 level in 2023.

### Demand for architectural glass (by region)\*1



\* 1: AGC's estimate (based on the regions it operates)

### Automobile production (by region) \*2



\* 2: Created based on IHS data as of September 16, 2021

# Structural Reform in Architectural/Automotive Glass Businesses

- AGC will promote a structural reform of the architectural glass and automotive glass businesses to improve the profitability.

## Architectural glass

- Structural reform that responds to the situation in each region
- Manufacturing system that correspond to demands
- Closed a furnace in Boussois (FRA)

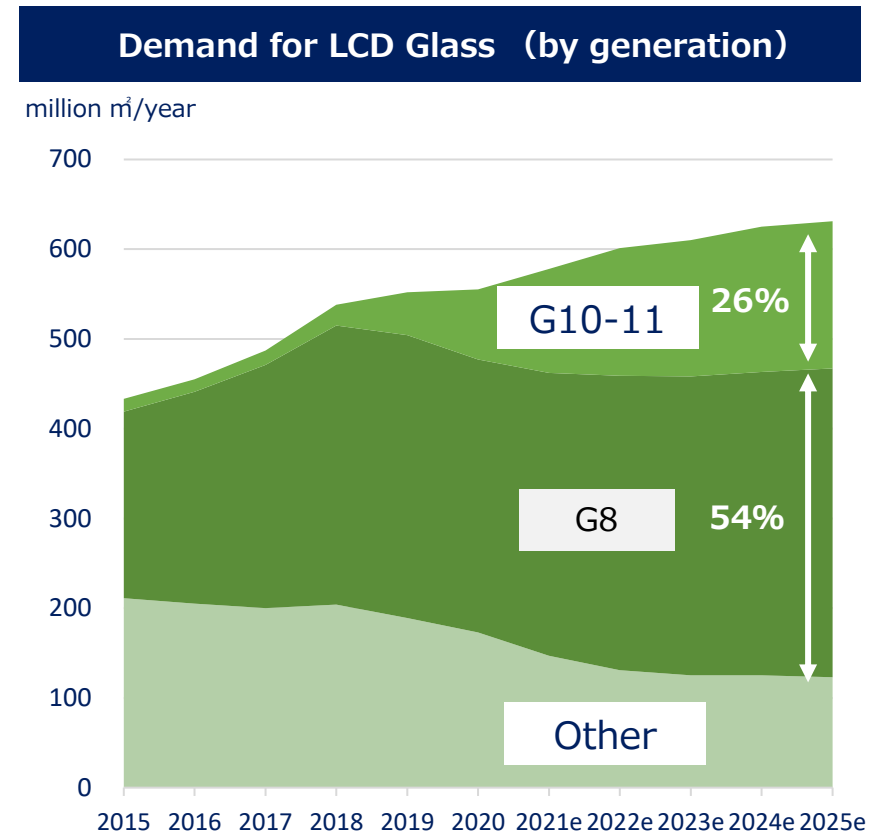
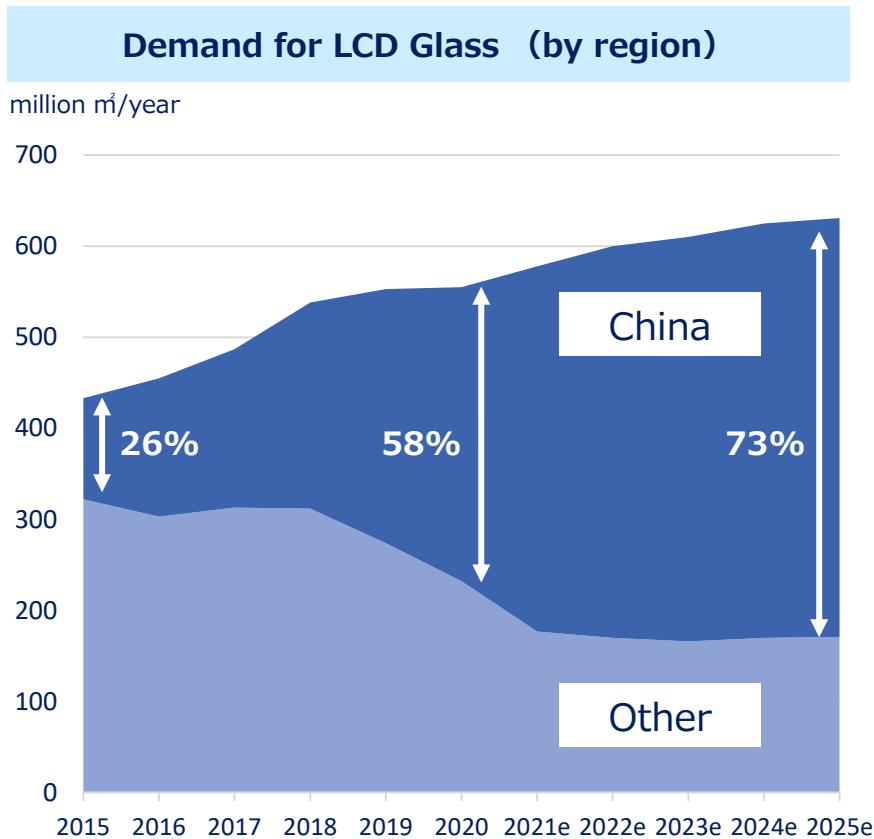
## Automotive glass

- High-efficient facilities for intensive manufacturing
- Focus on high-value added products
- Streamlining in Chuderice (CZE) and Seneffe (BEL)

- Streamlining in Europe and other regions to reduce general and administrative expenses
- Investments to be kept at 80% of its depreciation costs or less

**By 2023, we will reduce 15 billion yen\*, mainly fixed costs, by promoting a structural improvement measures.**

- Demand in China will continue to expand until 2025
- Enhance capacity to respond to growing demand for G11 in China

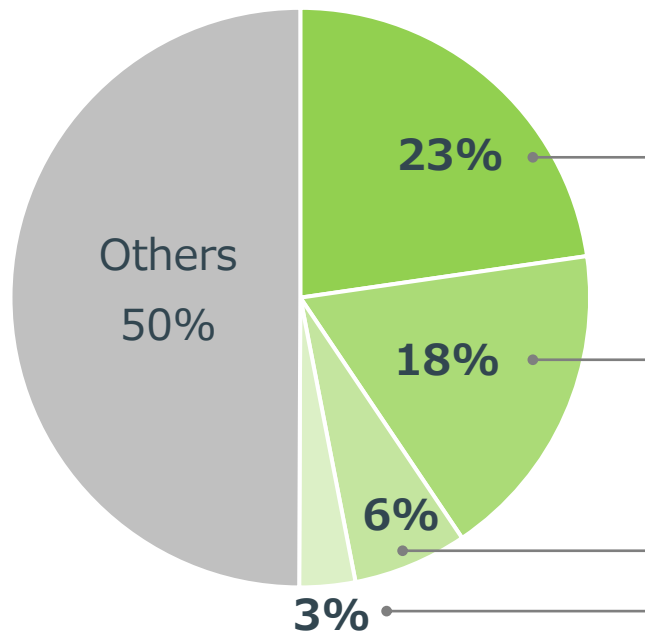


Source: AGC's estimate

# Core businesses: Fluorochemicals & Specialty

- Capture demand in global niche markets by increasing added value and expanding business areas
- Turning environmental issues into business opportunities

Sales ratio by application (2019)



**Transportation equipment**



**Electronics**



**Building**



**Energy**





### 3. New Medium-term Management Plan

# ***AGC plus-2023***

- Pursuing ambidextrous management
- **Promotion of sustainability management**
- Gaining competitiveness by accelerating digital transformation

## ■ Propelling innovation in materials to help solve social issues

Since its foundation, AGC has been working to solve social issues in response to the demands 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.

# Social value the AGC Group wants to create

- Through its business activities, AGC will create social value in the following five areas to help solve social issues.

## Major Opportunities

- Developing social infrastructure
- Achieving a safe and comfortable mobility
- Addressing food crises
- Building an info-intensive and IoT society
- Facilitating better health and longevity
- Addressing climate change
- Effective use of resources

## Major Risks

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

Work toward the sustainability goals in all business activities

Contributing to the realization of safe and comfortable urban infrastructure

Contributing to the realization of safe and healthy lifestyles

Contributing to the realization of a sustainable global environment

Contributing to the maintenance of a healthy and secure society

Contributing to the creation of fair and safe workplaces

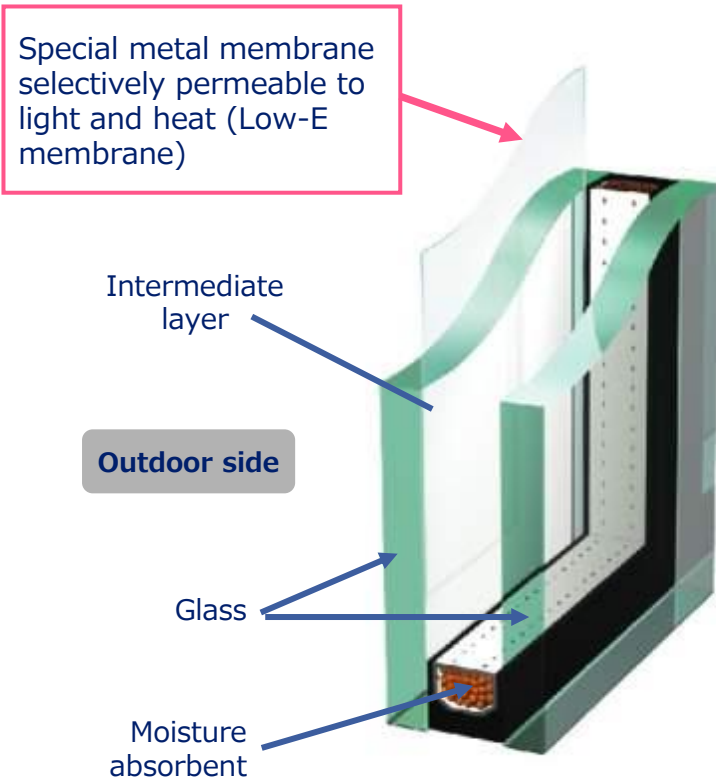
# Create social values through products, technologies, and company activities

Business Social values	Glass	Electronics	Chemicals	Ceramics
<p><b>Contribution to the realization of a sustainable global environment</b></p>	<ul style="list-style-type: none"> <li>- Float flat glass (products using recycled raw materials, Thinned glass)</li> <li>- Low-E double glazing glass</li> <li>- Coating glass</li> <li>- Photovoltaics-embedded glass</li> <li>- Thinned glass(chemically strengthened glass)</li> <li>- Automotive glass etc.</li> </ul>	<ul style="list-style-type: none"> <li>- Display glass (products using recycled raw materials)</li> <li>- Solar cell TCO glass</li> <li>- Float cover glass for PV module</li> <li>- Optical Materials</li> <li>- Materials for high-speed communication</li> <li>- High power LED glass ceramics substrate etc.</li> </ul>	<ul style="list-style-type: none"> <li>- Environmentally friendly refrigerant and solvents</li> <li>- Materials for fuel cells</li> <li>- Fluoropolymer</li> <li>- Fluoropolymer resin for coatings</li> <li>- Fluoropolymer resin for solar cell etc.</li> </ul>	<ul style="list-style-type: none"> <li>- Refractory (products using recycled raw materials)</li> <li>- High thermal insulation ceramic wall for furnace</li> <li>- Refractory/engineering for biomass power boilers</li> </ul> <p style="text-align: center;">etc.</p>
<p><b>Contribution to the realization of safe and comfortable urban infrastructures</b></p>	<ul style="list-style-type: none"> <li>- Low-E double glazing glass</li> <li>- Disaster-resistant/security glass</li> <li>- Antennas installed in construction windows</li> <li>- Automotive glass</li> <li>- Cover glass for car-mounted displays</li> <li>- Sound insulation glass</li> <li>- Light control glass</li> <li>- Integrated glass antenna for cars</li> <li>- HUD components etc.</li> </ul>	<ul style="list-style-type: none"> <li>- Display glass</li> <li>- Materials for onboard sensing/radar</li> <li>- Semiconductor processes and materials</li> <li>- Materials for high-speed communication</li> <li>- Glass substrates for AR/MR etc.</li> </ul>	<ul style="list-style-type: none"> <li>- Polyvinyl chloride</li> <li>- Caustic soda</li> <li>- Sodium hypochlorite</li> <li>- Sodium bicarbonate etc.</li> </ul>	<ul style="list-style-type: none"> <li>- Refractory/engineering for industrial furnace</li> <li>- Refractory/engineering for waste incinerator</li> </ul> <p style="text-align: center;">etc.</p>
<p><b>Contribution to the realization of safe and healthy lives</b></p>	<ul style="list-style-type: none"> <li>- Low-E double glazing glass</li> <li>- UV cut glass</li> </ul> <p style="text-align: center;">etc.</p>	<ul style="list-style-type: none"> <li>- Display glass for medical monitors</li> <li>- Materials for high-speed communication</li> <li>- Laboratory glass ware</li> <li>- Tissue culture products</li> </ul> <p style="text-align: center;">etc.</p>	<ul style="list-style-type: none"> <li>- Pharmaceutical active and intermediates ingredient</li> <li>- Agrochemical active and intermediates ingredients</li> <li>- Green house film</li> <li>- High-function membrane for water treatment</li> <li>- Sodium bicarbonate (infusion for dialysis)</li> </ul> <p style="text-align: center;">etc.</p>	

# Low-E double glazing glass

- Selectively transmit light and heat and helps to improve the energy efficiency of buildings
- Approximately 78% less heat transfer than single pane glass\*

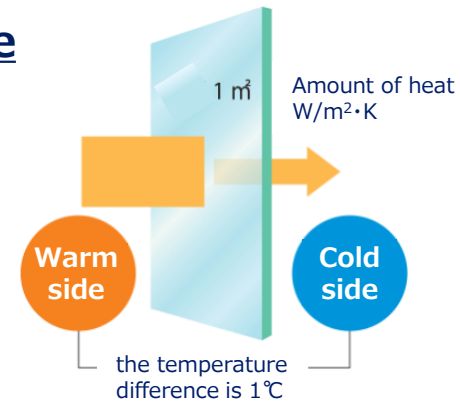
## Structure of Low-E double glazing glass



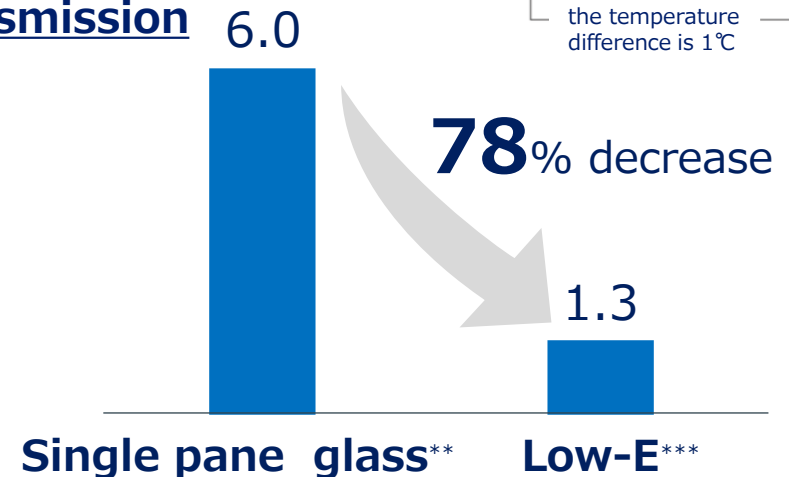
## Effect of Low-E double glazing glass

### Thermal transmission rate

Amount of heat passing per 1 m<sup>2</sup> for 1 hour with a temperature difference between inside and outside is 1 °C.

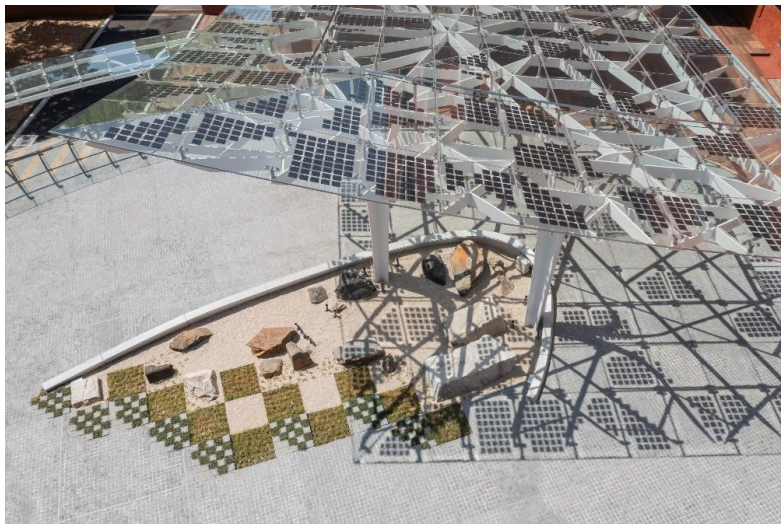


### Thermal transmission rate





- Glass that can generate electricity by solar power
- Encapsulates a solar power generation cell in two glass plates
- Realizes both energy creation and design performances and help bring about a carbon-neutral society



Entrance canopy of  
Global Zero Emission Research Center of AIST



New Punggol campus of Singapore Institute of  
Technology

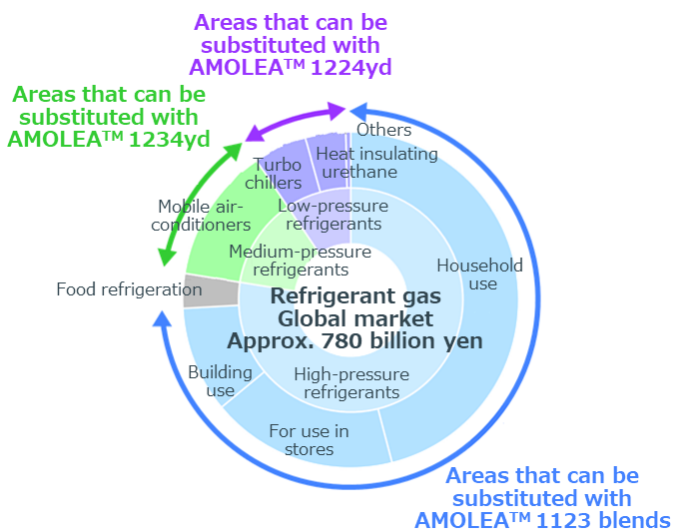
# Environment-friendly refrigerant/solvent: AMOLEA™ series

- Sells new environment-responsive refrigerant/solvent with extremely low global warming potential (GWP\*)
- Contributes to the prevention of global warming

Target market\*\*

Refrigerant for car air conditioning

Refrigerant for turbo-type refrigerating machines



**GWP**

1,430

R134a\*\*\*



Less than 1

AMOLEA1™ 1234yf

**GWP**

1,030

R245fa\*\*\*



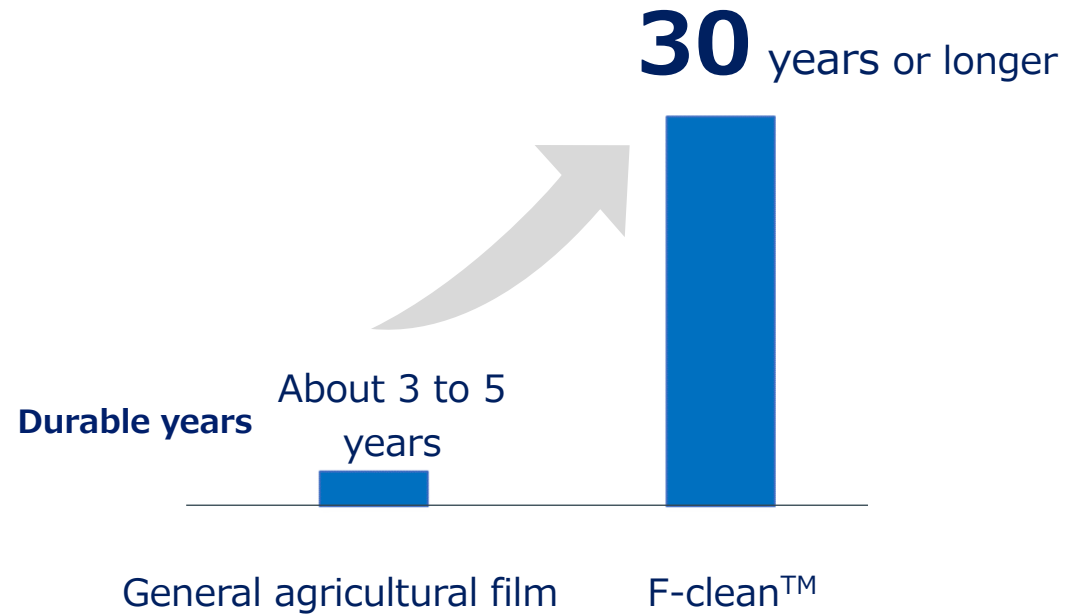
Less than 1

AMOLEA™ 1224yd

- **Contributes to reduction of plastic waste thanks to its long life**
- **Contributes to improvements in the productivity and quality of agricultural products thanks to its high light transmittance**



Case of adoption in greenhouse





# Fluoropolymer resin for coatings: Lumiflon™

- Decreases the frequency of repainting and contributes to the reduction of CO<sub>2</sub> emissions in the life cycle thanks to its high weather resistance
- Has actually been used in various cases from buildings to transport equipment for 40 years since its release



Pearl River Tower  
(China)



Akashi Kaikyo Bridge  
(Japan)



Ferrari World Abu Dhabi  
(U.A.E.)

# Move on to the next stage for the realization of a sustainable global environment

- Expected to achieve the CO<sub>2</sub> reduction target set in 2014
- Aim to achieve net zero carbon in 2050



2019 Actual:

**5.6-fold reduction**

AGC CO<sub>2</sub> emissions: 11,369k tons  
CO<sub>2</sub> emission reduction contribution : 63,700k tons



Low-E glass



Next-generation low GWP fluorinated refrigerator

**2030 milestone** (from the 2019 figure)

- GHG emissions **30%** reduction  
(Scope 1+2 emission)
- GHG emissions per unit of sales **50%** reduction  
(Scope 1+2emission/sales)

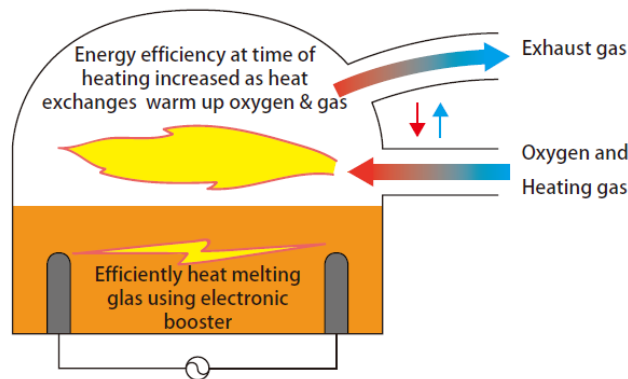
# Initiatives to Achieve Net Zero Carbon

- AGC strives for net zero carbon both in its business activities and in society.

## Innovation in manufacturing process

Reduce emissions through technological innovation

### <Example>



### ■ Glass melting process

- Introduce energy-efficient oxygen combustion methods and electric melting boosters that will lead to reduced fuel consumption in the glass melting process
- Accelerate the electrification of melting heat sources

## Contribution to CO<sub>2</sub> reduction

Development and dissemination of products contributing to CO<sub>2</sub> reduction

### <Example>



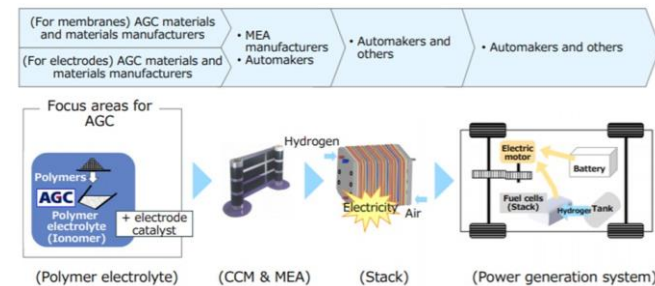
### ■ Vacuum glazing

- With Panasonic Corporation, developed vacuum insulated glass with the industry's highest class of insulation performance\*.
- Contributing to improved living environment in Europe that is the largest insulation glass market

## Next-generation energy

Development and dissemination of products contributing to hydrogen/renewable energy

### <Example>



### ■ Fluorine-based electrolyte polymers for fuel cell membranes

- Used in the power generating system for FCV
- Overwhelming No.1 position with its high power generation and durability

\* Heat transfer coefficient of a single vacuum insulated glass unit of approx. 6 mm thickness is 0.7 W/ (m<sup>2</sup>K).  
As of October 15, 2018, based on AGC research

### 3. New Medium-term Management Plan

## ***AGC plus-2023***

- Pursuing ambidextrous management
- Promotion of sustainability management
- **Gaining competitiveness by accelerating digital transformation**

# Gaining competitiveness by accelerating digital transformation

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

Latest DX

Expand and deepen initiatives for each business process



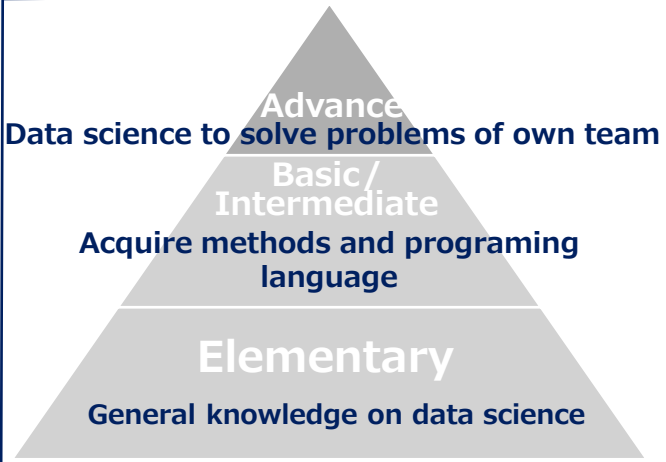
DX of complex business process based on customers and markets



Standardization and increased efficiency in any place including back office

Transform business models to gain competitiveness and provide new value to customers and society

HR development



	2020	2023 target	2025 target
Advance Data science to solve problems of own team	40 people	70 people	100 people
Basic/Intermediate Acquire methods and programming language			
Elementary General knowledge on data science	1,600 people	3,500 people	5,000 people

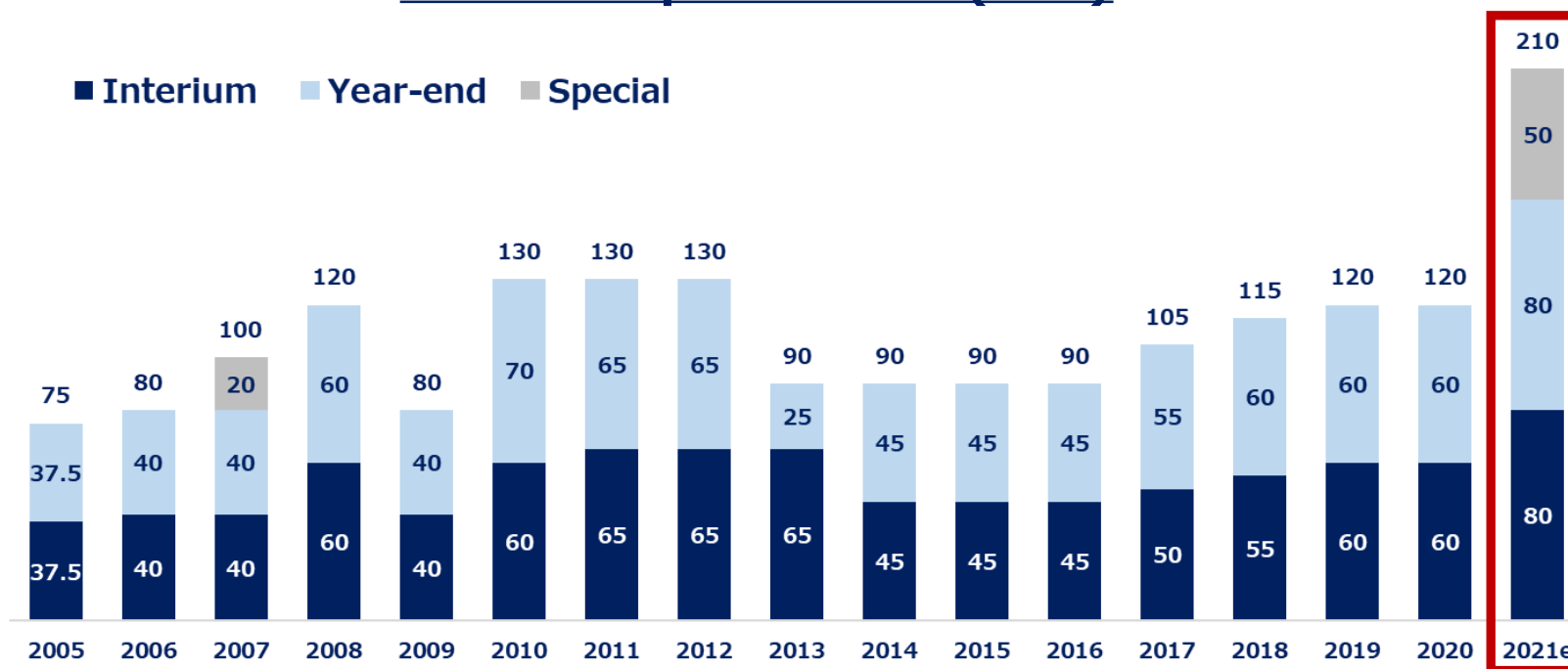
Develop personnel with both business knowledge (materials development, production, sales, distribution, etc.) and advance data analysis skills

## 4. Shareholder Return

- Expected to achieve the record high in the year-total dividend per share

## Dividend per share\* (JPY)

■ Interim    ■ Year-end    ■ Special



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021e
Consolidated Payout ratio	29%	42%	34%	72%	93%	25%	32%	62%	129%	131%	48%	44%	35%	29%	60%	81%	36%

### Share buyback

Share buyback (100 million JPY)	—	—	—	66	—	—	82	—	—	—	—	100	150	200	—	—	—
Consolidated total return ratio	29%	42%	34%	88%	93%	25%	40%	62%	129%	131%	48%	65%	56%	51%	60%	81%	36%

\*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.

# 5. Outlook for FY2021



- Significant increase is expected in net sales and operating profit thanks to recovery of businesses affected by the coronavirus pandemic & continued high PVC prices.

(100 million JPY)

	FY2020	FY2021e As of Aug 2, 2021	FY2021e As of Nov 1, 2021
<b>Net sales</b>	14,123	16,700	<b>16,900</b>
<b>Operating profit</b>	758	1,800	<b>2,000</b>
<b>Profit before tax</b>	571	1,870	<b>2,070</b>
<b>Profit for the year attributable to owners of the parent</b>	327	1,170	<b>1,290</b>
<b>Dividend (JPY/share)</b>	120	210	<b>210</b> (Ordinary 160) (Special 50)
<b>Operating profit margin</b>	5.4%	9.7%	11.8%
<b>ROE</b>	2.9%	7.4%	11.6%*
<b>FOREX (Average)</b>			
	<b>JPY/USD</b>	106.8	108.6
	<b>JPY/EUR</b>	121.8	129.5
<b>Crude Oil (Dubai, Average)</b>	<b>USD/BBL</b>	42.2	69.2
<b>Ethylene (CFR SEA)</b>	<b>USD/MT</b>	713	1,012

\* ROE of FY2021e is calculated using the figures of Profit for the year attributable to owners of the parent as of Dec 31, 2020

# Outlook of Net sales/Operating profit by segment

(100 million JPY)

	FY2020		FY2021e As of Nov 1		Change		FY2021e As of Aug 2		Change	
	(a)		(b)		(b)-(a)		(c)		(b)-(c)	
	Net sales	Operating profit	Net sales	Operating profit	Net sales	Operating profit	Net sales	Operating profit	Net sales	Operating profit
Glass	6,510	▲ 166	7,200	300	+ 690	+ 466	7,400	350	▲ 200	▲ 50
Electronics	2,894	378	3,200	350	+ 306	▲ 28	3,200	330	+ 0	+ 20
Chemicals	4,512	505	6,200	1,330	+ 1,688	+ 825	5,800	1,100	+ 400	+ 230
Ceramics/Other	811	42	800	20	▲ 11	▲ 22	800	20	+ 0	+ 0
Elimination	▲ 603	▲ 1	▲ 500	0	+ 103	+ 1	▲ 500	0	+ 0	+ 0
<b>Total</b>	<b>14,123</b>	<b>758</b>	<b>16,900</b>	<b>2,000</b>	<b>+ 2,777</b>	<b>+ 1,242</b>	<b>16,700</b>	<b>1,800</b>	<b>+ 200</b>	<b>+ 200</b>

## Outlook for FY2021 4Q

<p><b>Glass</b></p>	<p><b>(Architectural glass)</b></p> <ul style="list-style-type: none"> <li>• Strong performance is expected thanks to a good supply-demand balance will continue mainly in Europe.</li> <li>• Impacts of a fuel price hike will be a concern.</li> </ul> <p><b>(Automotive glass)</b></p> <ul style="list-style-type: none"> <li>• Global vehicle production will continue to be affected by the component supply shortages including semiconductor.</li> <li>• Impacts of a fuel price hike will be a concern.</li> </ul>
<p><b>Electronics</b></p>	<p><b>(Display)</b></p> <ul style="list-style-type: none"> <li>• Shipments of LCD glass substrates and specialty glass for display applications will remain strong.</li> <li>• Depreciation expense will increase due to the launch of new facility for LCD glass substrates.</li> </ul> <p><b>(Electronic materials)</b></p> <ul style="list-style-type: none"> <li>• Shipments of semiconductor-related materials will increase due to the expansion of the semiconductor and semiconductor production equipment market.</li> <li>• Shipments of optoelectronics materials will increase as the strong demand continues.</li> </ul>
<p><b>Chemicals</b></p>	<p><b>(Chlor-alkali/urethane)</b></p> <ul style="list-style-type: none"> <li>• The PVC market will remain at the high price level.</li> </ul> <p><b>(Fluorine/specialty chemicals)</b></p> <ul style="list-style-type: none"> <li>• Demand for automotive and aircraft applications will recover gradually.</li> </ul> <p><b>(Life science)</b></p> <ul style="list-style-type: none"> <li>• Business will remain strong with the capacity enhancement through M&amp;A and CAPEX, also thanks to contracts relating to anti-coronavirus vaccines.</li> </ul>

# Accelerating the Growth of Strategic Businesses

- No change from the announcement in Aug 2021
- Expected to make a steady growth

## Major products & businesses

### Mobility

- Cover glass for car-mounted displays
- New materials for mobility, including 5G communications

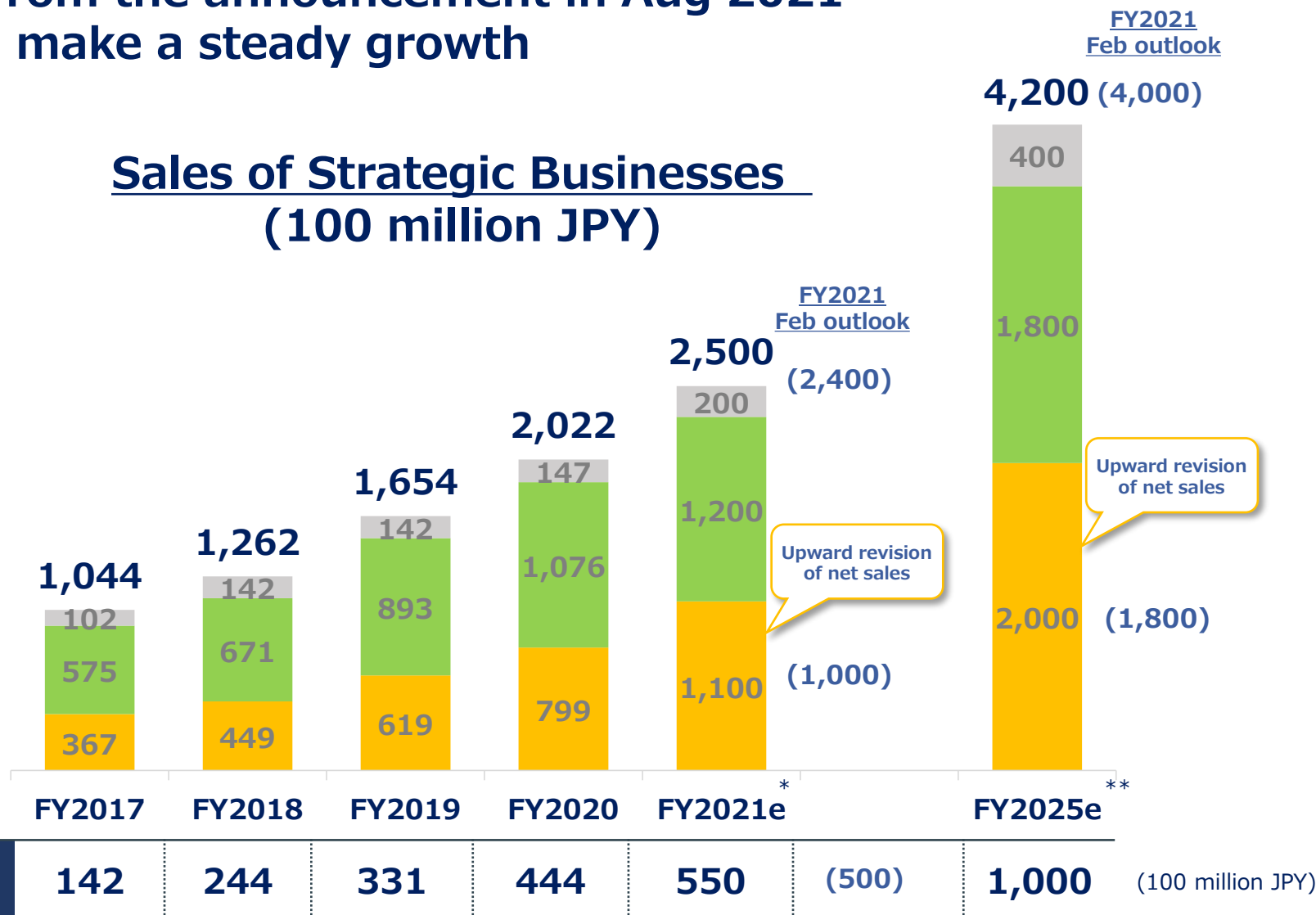
### Electronics

- Semiconductor-related products
- Optoelectronics materials
- Next-generation high-speed communication related products
- Fluorinated products for electronics

### Life science

- Synthetic pharmaceutical and agrochemical
- Bio CDMO

## Sales of Strategic Businesses (100 million JPY)



\*Sales outlook of Strategic Business for FY2021 were revised upward at the time of the announcement for FY2021.1Q result.

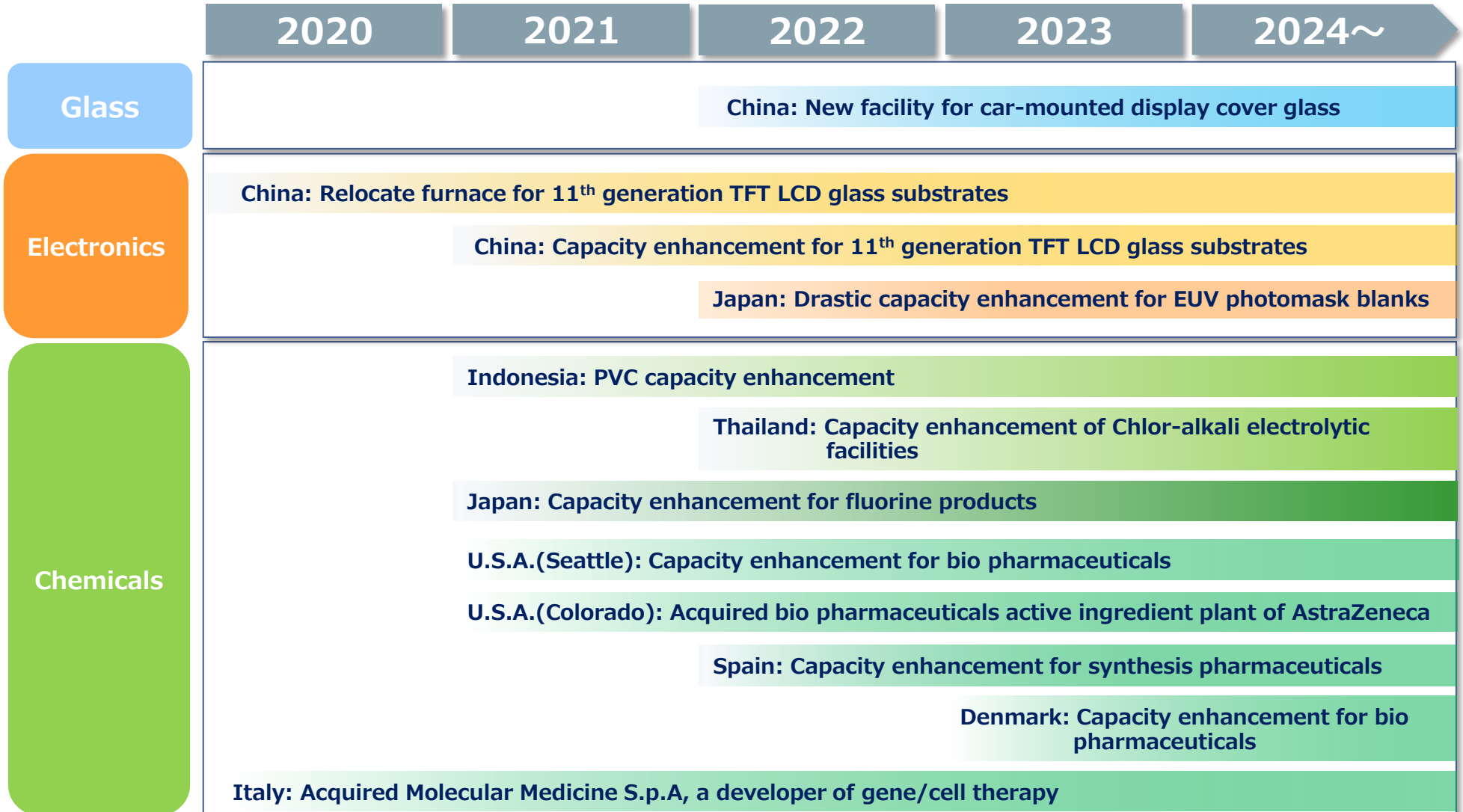
\*\*Sales outlook of Strategic Business for FY2025 were revised upward at the time of the announcement for FY2021.2Q result.

# 6. Appendix

Risk factors	Impact on OP	Rate used	Supplementary info
Dubai crude oil	<b><u>300 million yen * loss</u></b> if increased by 1 dollar per barrel	50USD	*excluding impact of oil hedging
Chemicals market	1) Caustic soda: \$ <b><u>1 M loss</u></b> if the international market down by \$ 1 2) PVC spread: \$ <b><u>1.2M loss</u></b> * if decreased by \$ 1	—	*PVC spread: PVC market - (ethylene market×0.5)
Exchange rate	<b><u>200 million yen*loss</u></b> if yen appreciated by 1%	1USD =105 yen	*Impact when all currencies fluctuate at the same proportion against JPY

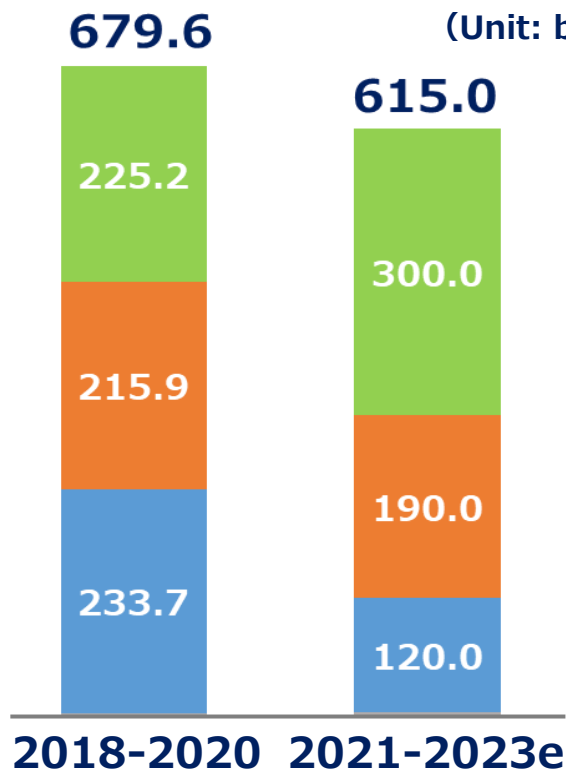
# AGC plus-2023 Major investments and timeline for profit generation

## Major investments and profit generation



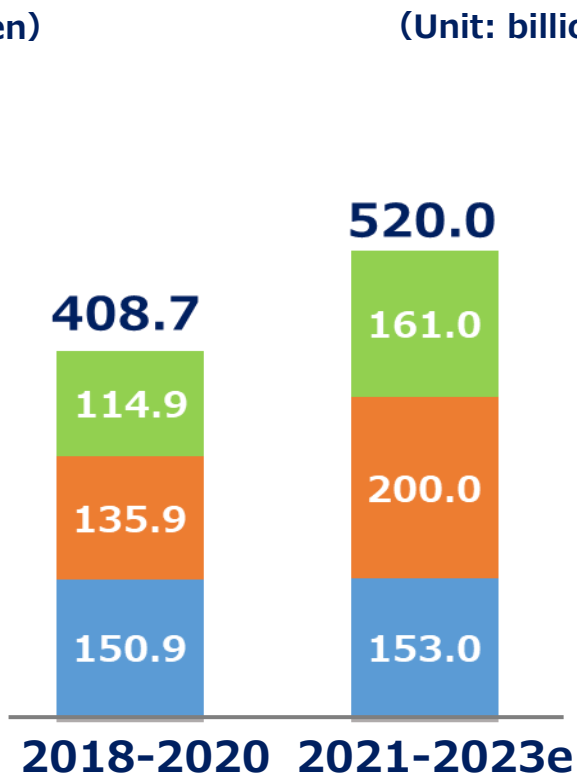
## CAPEX

(Unit: billion yen)



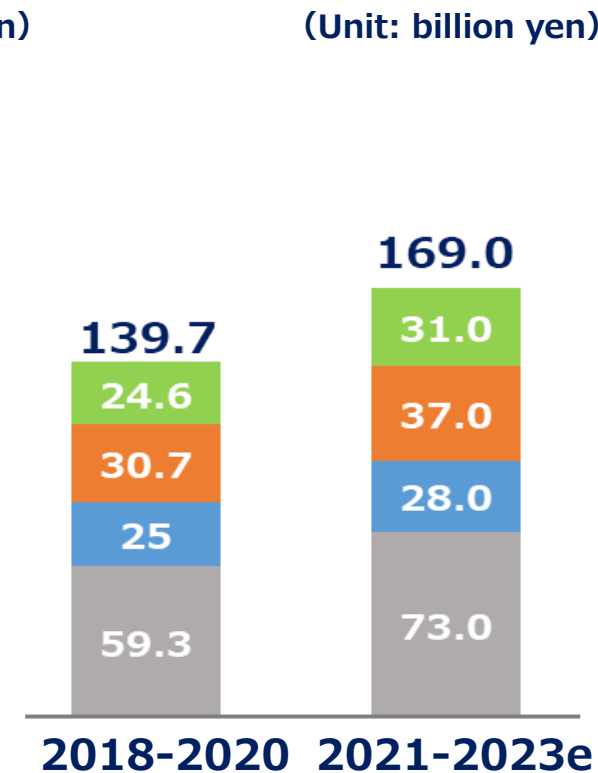
## Depreciation cost

(Unit: billion yen)



## R&D

(Unit: billion yen)



■ Glass 
 ■ Electronics 
 ■ Chemicals 
 ■ Ceramics/others (corporate)



(100 million JPY)

<b>Glass</b>	3Q.19	4Q.19	1Q.20	2Q.20	3Q.20	4Q.20	1Q.21	2Q.21	3Q.21
<b>Net Sales</b>	1,840	1,837	1,693	1,249	1,717	1,851	1,806	1,912	1,729
Architectural Glass	875	905	801	706	840	901	891	991	916
Automotive Glass	963	923	889	534	869	943	908	915	808
(Inter Segment)	3	9	3	8	7	7	7	6	5
<b>Operating profit</b>	23	▲ 4	▲ 26	▲ 182	▲ 12	53	97	106	50

<b>Electronics</b>	3Q.19	4Q.19	1Q.20	2Q.20	3Q.20	4Q.20	1Q.21	2Q.21	3Q.21
<b>Net Sales</b>	761	760	692	693	715	792	710	705	816
Display	449	460	433	433	448	458	461	429	474
Electronic Materials	283	276	238	247	257	316	230	257	318
(Inter Segment)	28	24	22	13	10	19	19	20	24
<b>Operating profit</b>	109	87	89	85	99	106	86	54	105

<b>Chemicals</b>	3Q.19	4Q.19	1Q.20	2Q.20	3Q.20	4Q.20	1Q.21	2Q.21	3Q.21
<b>Net Sales</b>	1,197	1,275	1,142	983	1,091	1,296	1,373	1,508	1,626
Chlor-alkali & Urethane	745	768	695	559	632	755	822	940	1030
Fluorochemicals & Specialty	302	311	283	247	250	278	269	299	329
Life science	147	193	160	173	207	260	279	265	265
(Inter Segment)	4	3	4	5	3	3	3	4	3
<b>Operating profit</b>	177	191	151	75	98	180	255	340	365

## Trend of shipment and price

				2020				2021			
				1Q	2Q	3Q	4Q	1Q	2Q	3Q	
<b>YoY comparison</b>											
Glass	Architectural (AGC)	Japan & Asia	shipment	-low single-digit	-high single-digit	+mid single-digit	+low single-digit	+10%	+low 10% range	-mid single-digit	
			price (Japan)	+low single-digit	+mid single-digit	+low single-digit	+low single-digit	flat	flat	flat	
		North America	shipment	-high single-digit	-low 20% range	+low single-digit	+low 10% range	+mid 10% range	+mid 30% range	-	
			price	-high single-digit	-mid single-digit	-mid single-digit	-mid single-digit	+low single-digit	+low 10% range	-	
	Europe	shipment	flat	-low 20% range	+low single-digit	-mid single-digit	+low single-digit	+high 20% range	+mid single-digit		
		price	-low 10% range	-mid 20% range	-high 10% range	-low single-digit	+high single-digit	+high 30% range	+high 30% range		
	Automobile production* <sup>1</sup>	Japan	volume	-7%	-48%	-12%	+4%	-5%	+54%	-19%	
		North America	volume	-11%	-68%	+0%	+0%	-4%	+132%	-23%	
		Europe & Russia	volume	-17%	-60%	-7%	+1%	+1%	+84%	-21%	
Electronics	Display panel demand* <sup>2</sup>	Global	area	-0%	+5%	+12%	+7%	+17%	+10%	-3%	
<b>Spot market price</b>											
Chemicals	Chlor-alkali (Southeast Asia)	Caustic soda* <sup>3</sup>	price	USD/MT	290	290	275	266	264	342	422
		PVC* <sup>3</sup>	price	USD/MT	805	790	970	1,230	1,367	1,437	1,363
		Ethylene* <sup>3</sup>	price	USD/MT	500	800	805	920	955	963	1,007

\*<sup>1</sup> Source : IHS Markit data as of September 16, 2021.

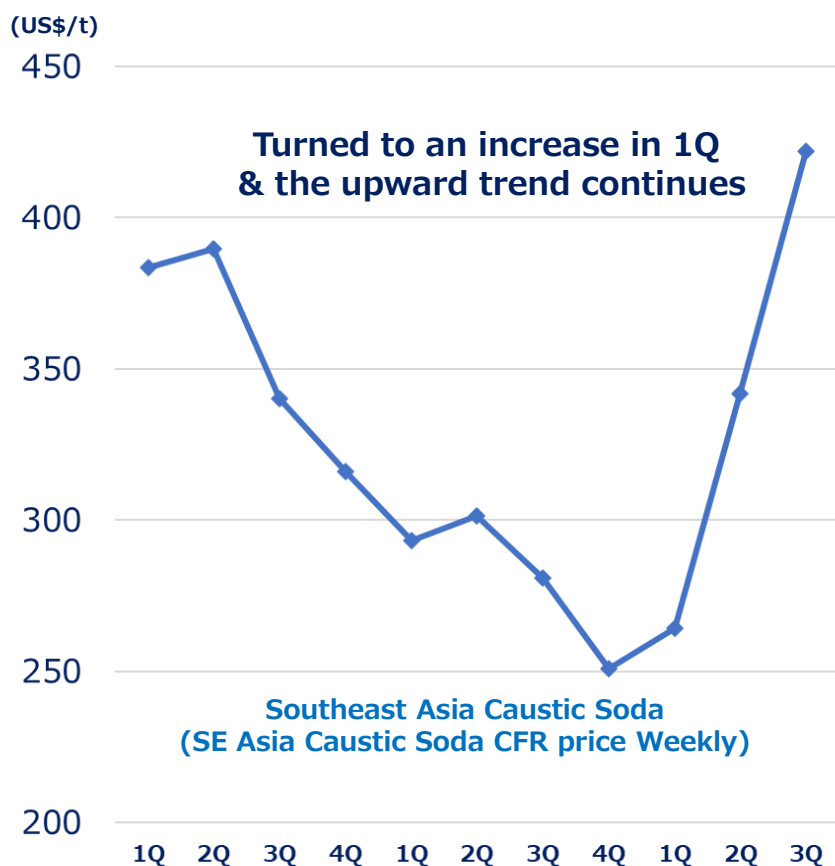
\*<sup>2</sup> Source : Omdia-Display Long-Term Demand Forecast Tracker – 2Q21 Pivot  
Results are not an endorsement of AGC Inc. Any reliance on these results is at the third-party's own risk.

\*<sup>3</sup> Source : Bloomberg

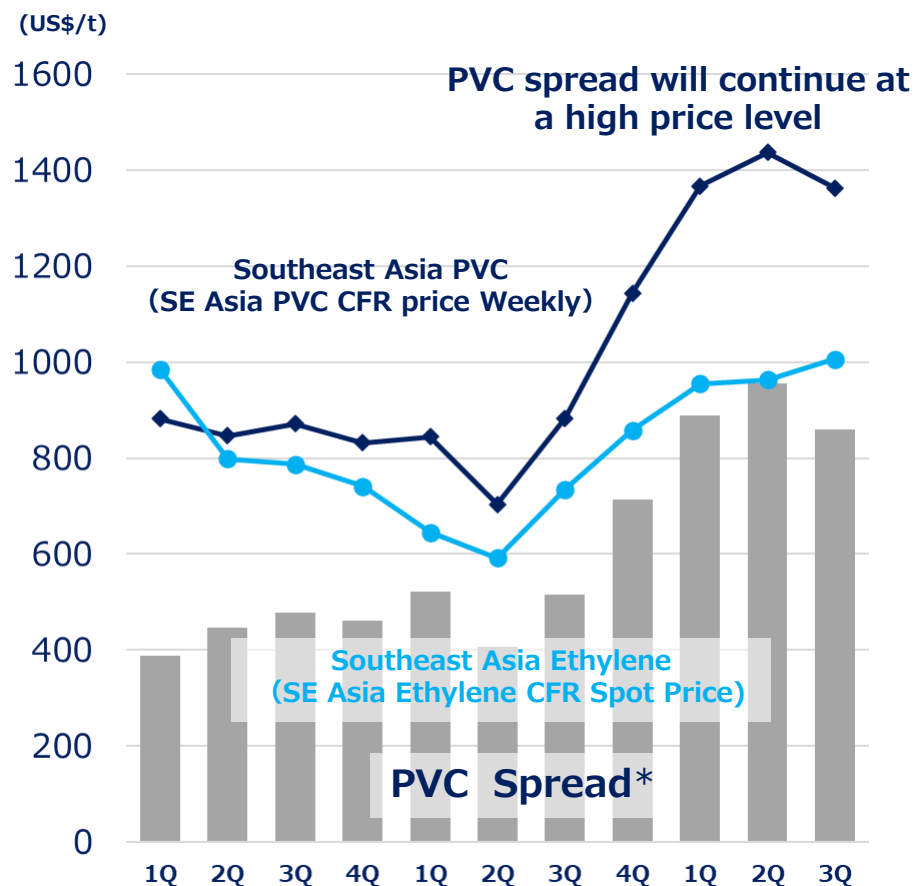
# (Reference) Caustic Soda & PVC markets in Southeast Asia

- The caustic soda market is continuing an upward trend due to further tightening of the supply-demand balance.
- The PVC market is at a high price level as the supply-demand balance remains tight.

## Caustic Soda



## PVC



		IFRS				
		16/12	17/12	18/12	19/12	20/12
Net sales	Million JPY	1,282,570	1,463,532	1,522,904	1,518,039	1,412,306
Operating profit	Million JPY	96,292	119,646	120,555	101,624	75,780
OP margin	%	7.5	8.2	7.9	6.7	5.4
Attributable to owners of the parent	Million JPY	47,438	69,225	89,593	44,434	32,715
Return on equity (ROE) *1	%	4.3%	6.1%	7.7%	3.9%	2.9
Return on assets (ROA) *2	%	4.8%	5.7%	5.4%	4.4%	3.1
Equity ratio	%	55%	53%	51%	50%	44
D/E (Interest-bearing debts • Net assets)	times	0.37	0.38	0.43	0.47	0.63
CF from Operating Activities/Interest-bearing debt	times	0.47	0.42	0.35	0.32	0.29
Earnings per share(EPS) *3	JPY	205.14	302.12	399.51	200.85	147.84
Cash dividends per share	JPY	90	105	115	120	120
EBITDA *4	Million JPY	195,767	249,880	259,425	231,857	208,459
Exchange rates (average)	JPY/USD	108.84	112.19	110.43	109.05	106.82
	JPY/EUR	120.33	126.66	130.42	122.07	121.81

\*1 Profit for the year attributable to owners of the parent/Total equity attributable to owners of the parent(average)

\*2 Operating profit/Total assets(average)

\*3 Earnings per share is adjusted to reflect the 5 into 1 share consolidation implemented on July 2017.

\*4 EBITDA (Earnings Before Interest, Taxes, Depreciation and Amortization) = Profit before taxes + Depreciation + Interest expenses

For other financial indicators, please see here. [https://www.agc.com/ir/pdf/data\\_all.pdf](https://www.agc.com/ir/pdf/data_all.pdf)

# Sustainability: Products and technologies to create social value

## Material opportunities

## AGC Group's materials and solutions

## Social value

## Related SDGs

Addressing climate change

Architectural glass, Green refrigerant, automotive infrared cut glass, refractories for biomass boiler, etc.

Contributing to the realization of a sustainable global environment



Effective use of resources

Fuel cell materials, products for recycled raw materials (glass, refractories, etc.)

Developing social infrastructure

Architectural glass, caustic soda, sodium hypochlorite, sodium bicarbonate, PVC, etc.

Contributing to the realization of safe and comfortable urban infrastructure



Achieving a safe and comfortable mobility

Automotive glass antennae, components for automotive sensing radar, HuD components, etc.

Building an info-intensive and IoT society

Antenna for buiding windows, materials for semiconductor production, Display glass, high-speed communication parts, etc.

Contributing to the realization of safe and healthy lifestyles



Addressing food crises

Agrochemical active ingredients/intermediates, film for agricultural green houses



Facilitating better health and longevity

Pharmaceuticals active ingredients/intermediates, high-speed communication parts, high-performance membrane for water treatment



# Sustainability: create social value through healthy corporate activities

## Material risks

## AGC Group corporate activities

Addressing climate change

Continuous energy-saving, development of production technology/facilities to reduce GHG emissions, etc.

Effective use of resources

Use of recycled raw materials/materials, Reduction of land, etc.

Creating a socially and environmental-conscious supply chain

Supplier selection based on respect for human rights/environmental protection

Ensuring fair and equal employment and workplace safety

Reduce water usage, protect biodiversity, prevent environment accidents, supporter-making, etc.

Considering relationships with local communities and the environment

Increase employee engagement, prevention of serious disaster/ accidents requiring a leave, etc.

## Social value

## Related SDGs

Contributing to the realization of a sustainable global environment



Contributing to the maintenance of a healthy and secure society

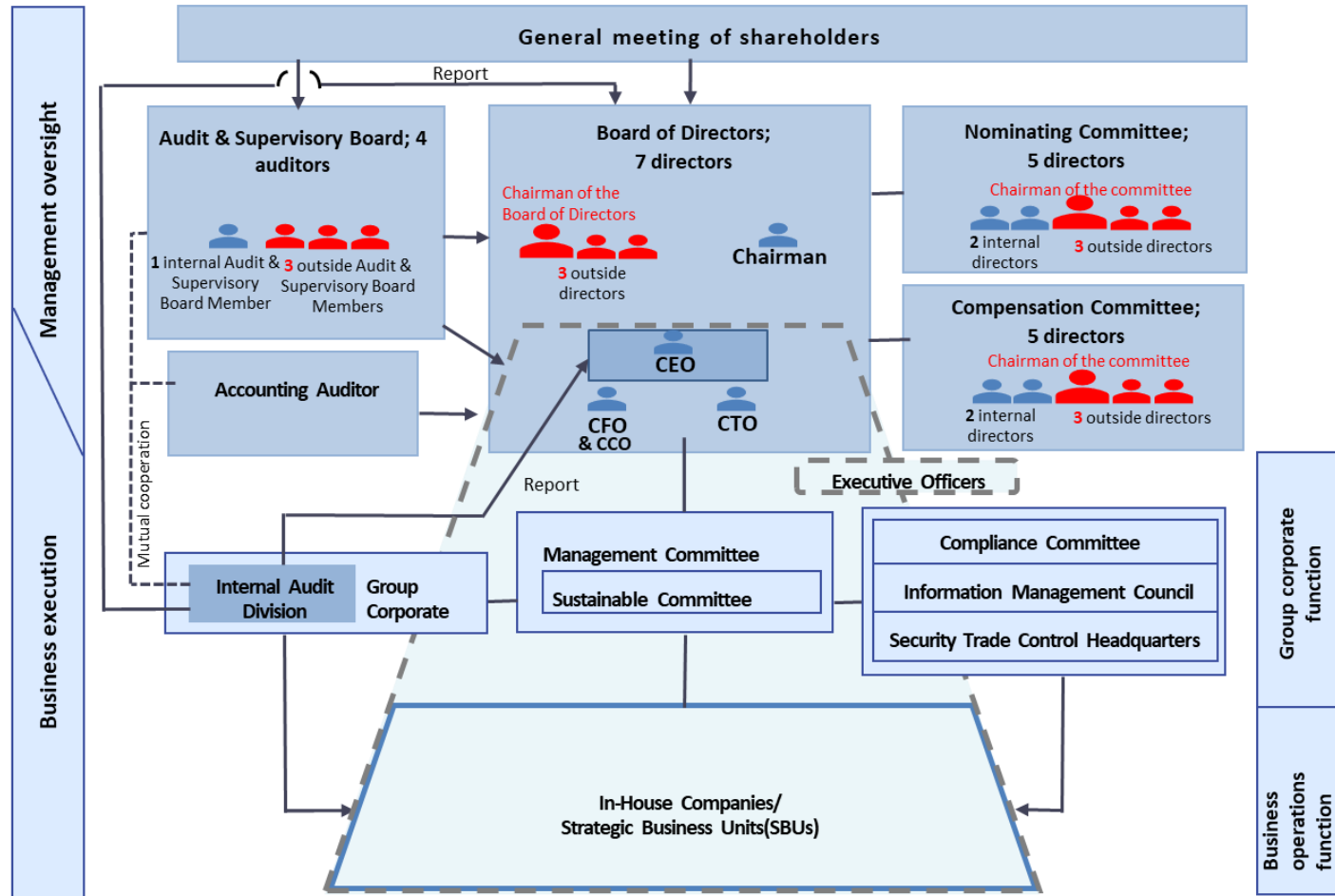


Contributing to the creation of fair and safe workplaces



# AGC's Corporate Governance Structure

< Effective as of March 30, 2021 >



- : Internal directors or internal Audit & Supervisory Board Member
- : Outside directors or outside Audit & Supervisory Board Members who satisfy Company's "Standards for independence of outside officers"

## FTSE4Good Index Series



FTSE4Good

## FTSE Blossom Japan Index



FTSE Blossom  
Japan

## Nadeshiko Brand

as a company that excels in promoting the advancement of women



## NIKKEI Smart Work Awards 2021 Special Jury Prize



## “White 500” Company

in recognition of initiatives to promote strategic health management for its employees



## EcoVadis Supplier Evaluations

PLATINUM rated for the Kashima plant

GOLD rated for the Chiba plant and AGC Pharma Chemicals

SILVER rated for the AGC Biologics' Copenhagen



## Derwent Top 100 Global Innovator 2021

## Noteworthy DX Company for 2021

in recognition of digital transformation efforts



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

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

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

# Your Dreams, Our Challenge



Your Dreams, Our Challenge

**END**

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