

The AGC Group Mid-term Management Plan

The AGC logo is displayed in a white box on the right side of the slide. It consists of the letters 'AGC' in a bold, blue, sans-serif font. A small red square is positioned to the left of the letter 'C'.

“AGC plus-2020”

February 7, 2018

Takuya Shimamura
AGC Group CEO

AGC Asahi Glass

1. Brief review of ***AGC plus-2017***
2. New mid-term management plan
AGC plus-2020
3. Direction of strategic businesses
4. ESG measures

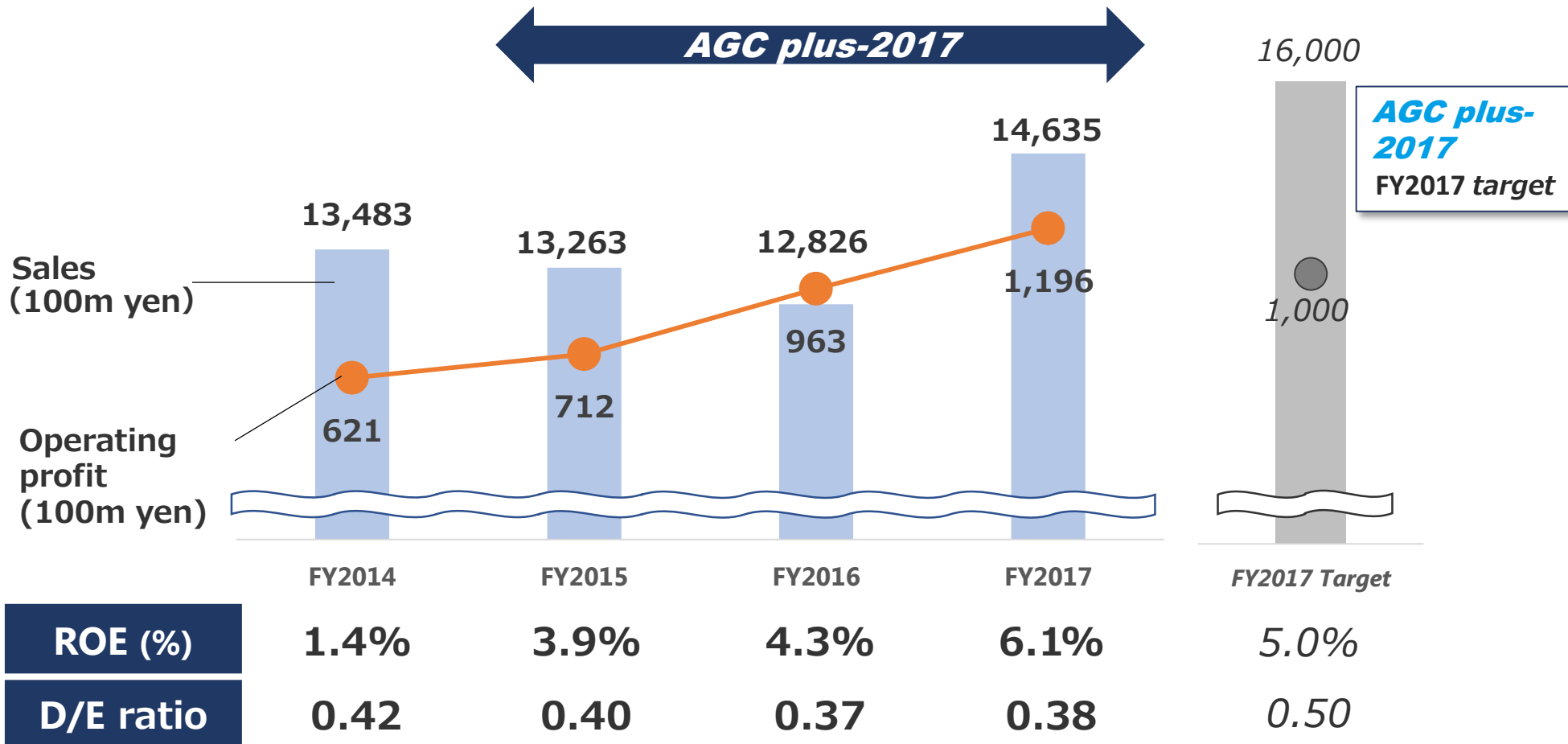
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<h2>Management Policy</h2>		<h3 style="color: #00AEEF; text-align: center;">AGC plus</h3> <p>The AGC Group adds a “plus” by:</p> <ul style="list-style-type: none"> • Providing safety, security and comfort to society; • Creating new value and functions for customers and business partners and building trust with them; • Enhancing job satisfaction among employees; and • Increasing the Group’s corporate value for investors.
<h3>Targets for 2017</h3>	<h4>Sales</h4>	<h2>¥ 1,600 billion</h2>
	<h4>Operating profit</h4>	<h2>more than ¥ 100 billion</h2>
	<h4>ROE</h4>	<h2>5% or above</h2>
	<h4>D/E</h4>	<h2>0.5 or less</h2>

Achieved profit growth

Maintained profit growth throughout the mid-term period

-Successfully achieved FY2017 targets except for sales which had been mainly affected by exchange rate fluctuations-



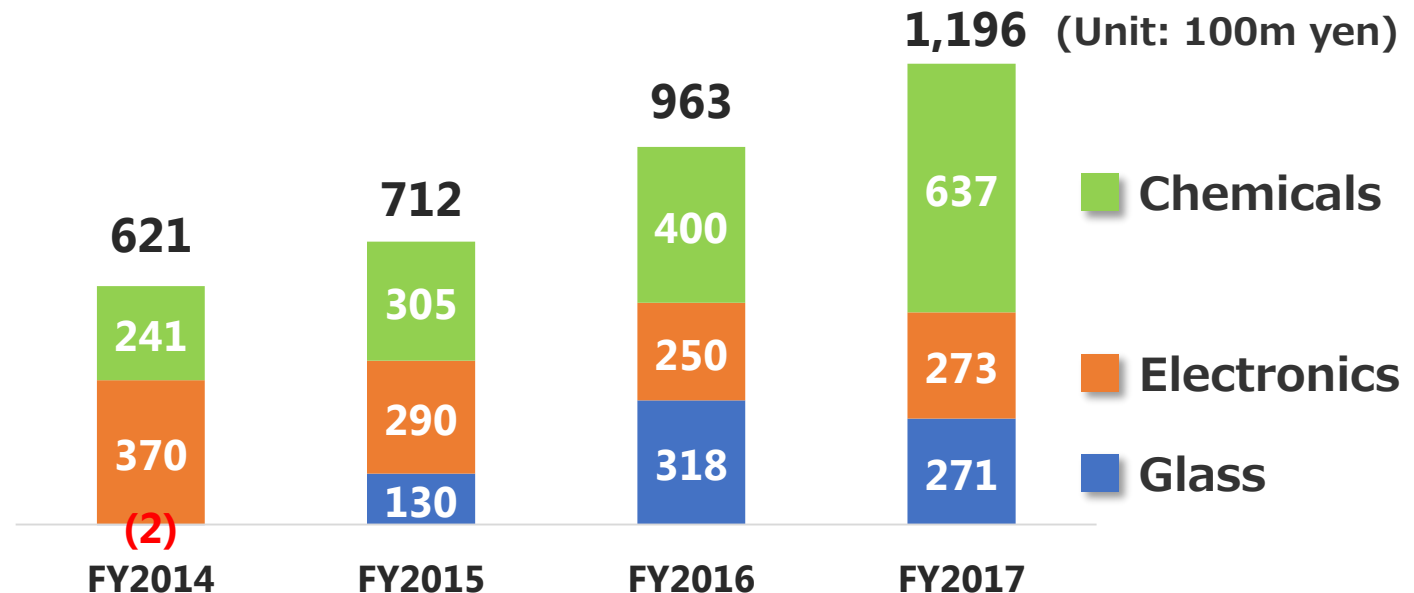
Drastic change in OP structure

Glass : Started generating profits as a result of the structural improvements in the architectural glass business in Europe and North America

Electronics : Staved off a decline in profits thanks to smaller reduction in LCD glass price decline and strong sales in electronics materials

Chemicals : Substantial sales increase for capacity increases in chlor-alkali production in Southeast Asia & growth of fluorine-related businesses

Operating profit by segment



Changes in OP variance

Continued increase in the “volume/quantity/product mix” section and decrease in purchase prices. For FY2017, the level of price decline has diminished.

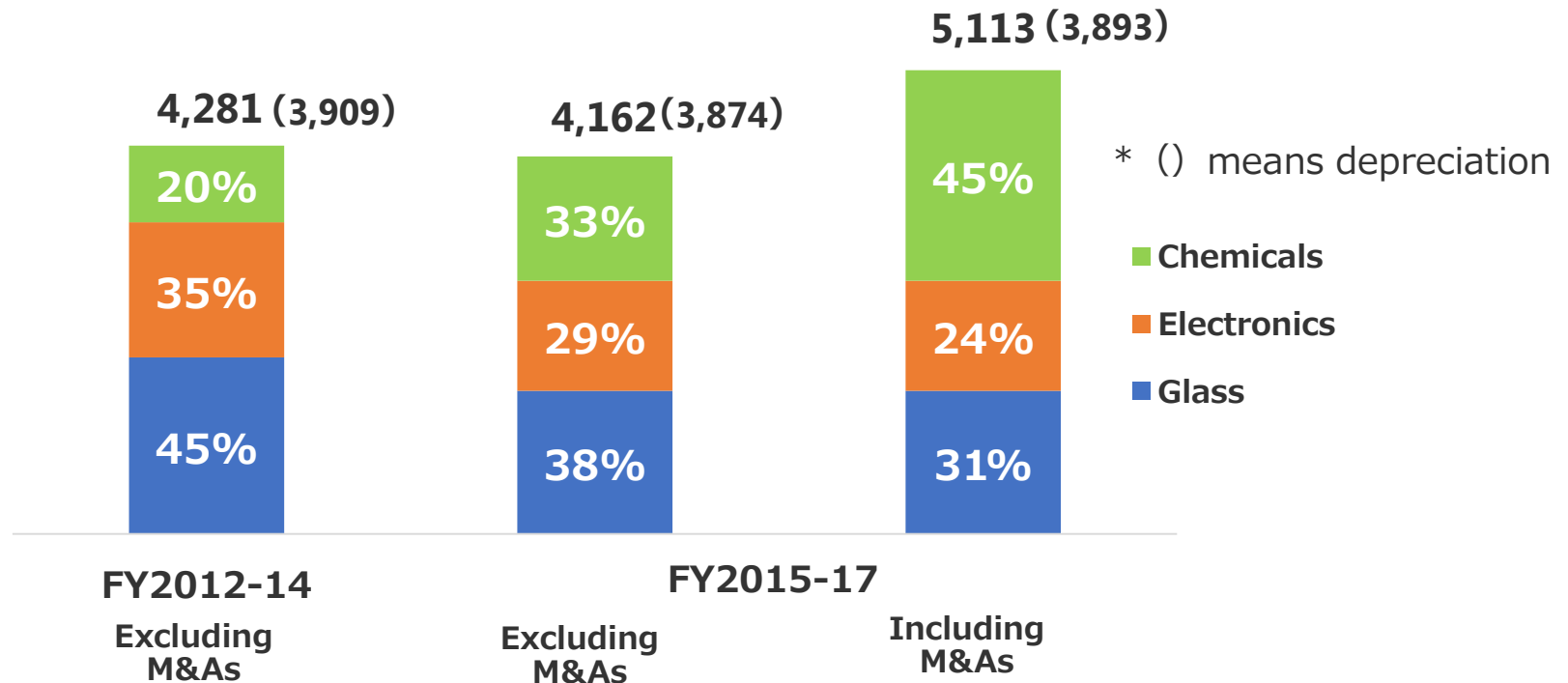
(Unit: 100m yen)

	Operating profit	YOY change	YoY Variance Analysis			
			Sales Volume /Quantity, Product Mix	Selling prices	Purchase Price Fuels/Raw Materials	Cost Reduction /Others
FY2015	712	+91	+0	▲199	+175	+115
FY2016	963	+251	+110	▲307	+300	+148
FY2017	1,196	+234	+226	+26	▲65	+47

Investments in Chemicals business have increased drastically due to investments & M&As in growth areas

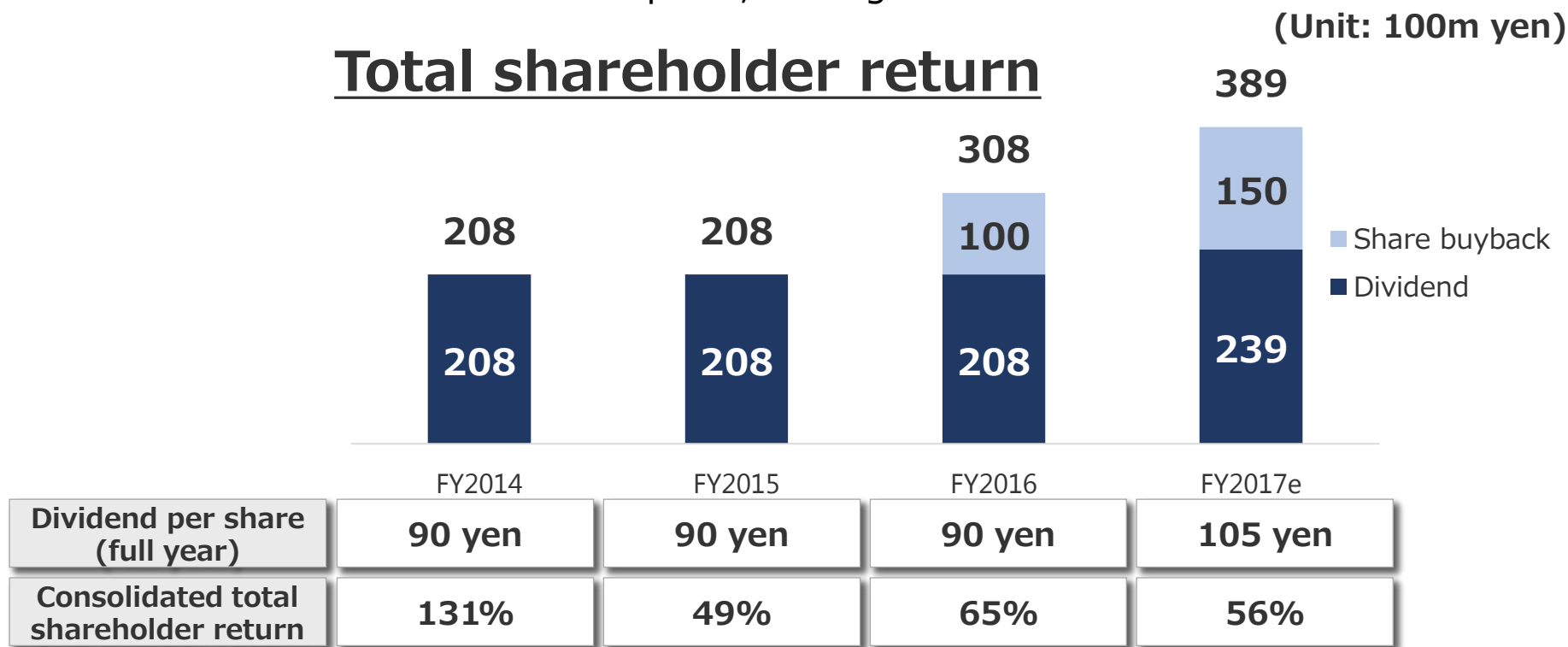
Investment breakdown by segment

(Unit: 100m yen)



Company policy (revised in February 2016)

Aiming at the consolidated total shareholders return of 50% or more including the annual dividend payment per share maintained at the current levels or more and the purchase of treasury stock, the AGC Group strives to proactively return profits to shareholders while giving comprehensive consideration to the Group's consolidated business results and future investment plans, among others.



*Share repurchases for 2016 was conducted in February 2017

*Dividend per share is calculated including the impact of the consolidation of shares on July 1, 2017

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"Vision 2025"

The AGC Group's Core Businesses will serve as solid sources of earnings, and Strategic Businesses will become growth drivers and lead further earnings growth.
The AGC Group will continue being a highly profitable, leading global material and solution provider.

Core businesses

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

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


Strategic businesses

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

- Mobility
- Electronics
- Life science

Management target toward 2025

- Achieve a record operating profit
- Increase the profit contribution ratio of strategic businesses to 40% or more of the Group's total operating profit



	FY2017	FY2020 target	FY2025 target
Operating profit (100m yen)	1,196	1,600 or more	2,292 or more (record high)
R O E	6.1%	8.0% or more	10.0% or more
Strategic business Contribution ratio	10%	25% or more	40% or more
D/E	0.38	0.5 or less	0.5 or less

AGC plus-2020 serves as the cornerstone toward 2025

- Develop high-value added businesses that do not get affected by market fluctuations
- Promote growth strategies for strategic businesses
- Concentrate management resources in growth regions/where we can win
- Achieve sustainable growth through strategic M&As

Strength-building measures have been mostly completed during last mid-term management (MTP) plan. In the new MTP starting 2018, we will accelerate growth strategies. (Revision marked in **red**)

	Growth	Cash Generator	Strength building
Glass	<ul style="list-style-type: none"> • Building & Industrial glass (Emerging market/Highly functional products) • Automotive 	<ul style="list-style-type: none"> • Building & Industrial glass (Matured market/General-purpose products) 	
Electronics	<ul style="list-style-type: none"> • Electronics 	<ul style="list-style-type: none"> • LCD glass 	
Chemicals	<ul style="list-style-type: none"> • Chlor-alkali (other than Japan) • Fluorine • Life science 	<ul style="list-style-type: none"> • Chlor-alkali (Japan) 	

Glass	<p>【Building & Industrial glass】</p> <ul style="list-style-type: none">•Focus on growth regions/where we can win•Promote highly functional glass for the upcoming smart-city era <p>【Automotive】</p> <ul style="list-style-type: none">•Respond to needs for highly functional products designed for eco-friendly cars/automated driving
Electronics	<p>【LCD glass】</p> <ul style="list-style-type: none">•Achieve a smooth shift of production to China/larger-size products and further cost reduction <p>【Electronics】</p> <ul style="list-style-type: none">•In semiconductor-related products & optoelectronic materials businesses, get ahead of the times to provide differentiated products
Chemicals	<p>【Chlor-alkali】</p> <ul style="list-style-type: none">•In addition to maximizing the M&A impact, further expand the business base, including capacity increase, in Southeast Asia <p>【Fluorine】</p> <ul style="list-style-type: none">•Steadily capture niche global markets by taking advantage of AGC's unique technologies <p>【Life Science】</p> <ul style="list-style-type: none">•Expand the business base by maximizing the effect of M&As

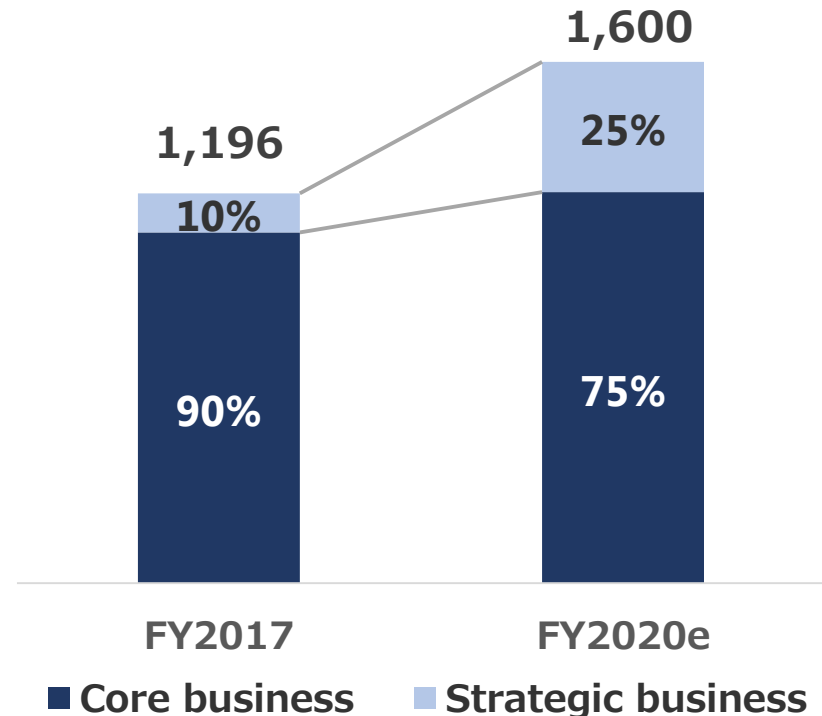
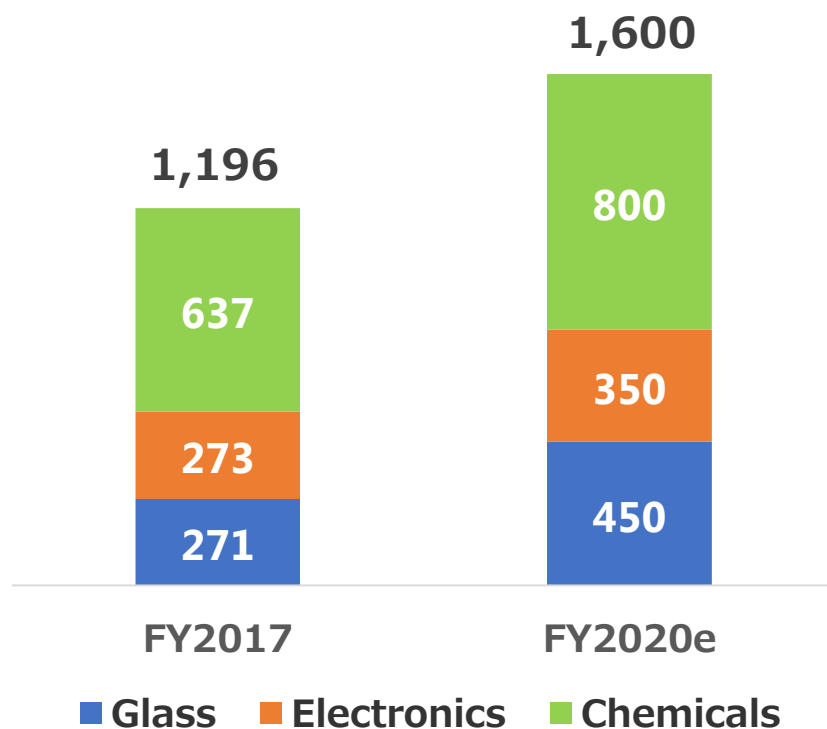
FY2020 OP structure (to-be image)

Target: Strategic businesses account for 25% or more of the group's total profit

(unit: 100m yen)

By segment

Core business/
Strategic business



※The above graphs do not include "Ceramics/Other" segment and elimination, thus the sum total doesn't make the group's operating profit.

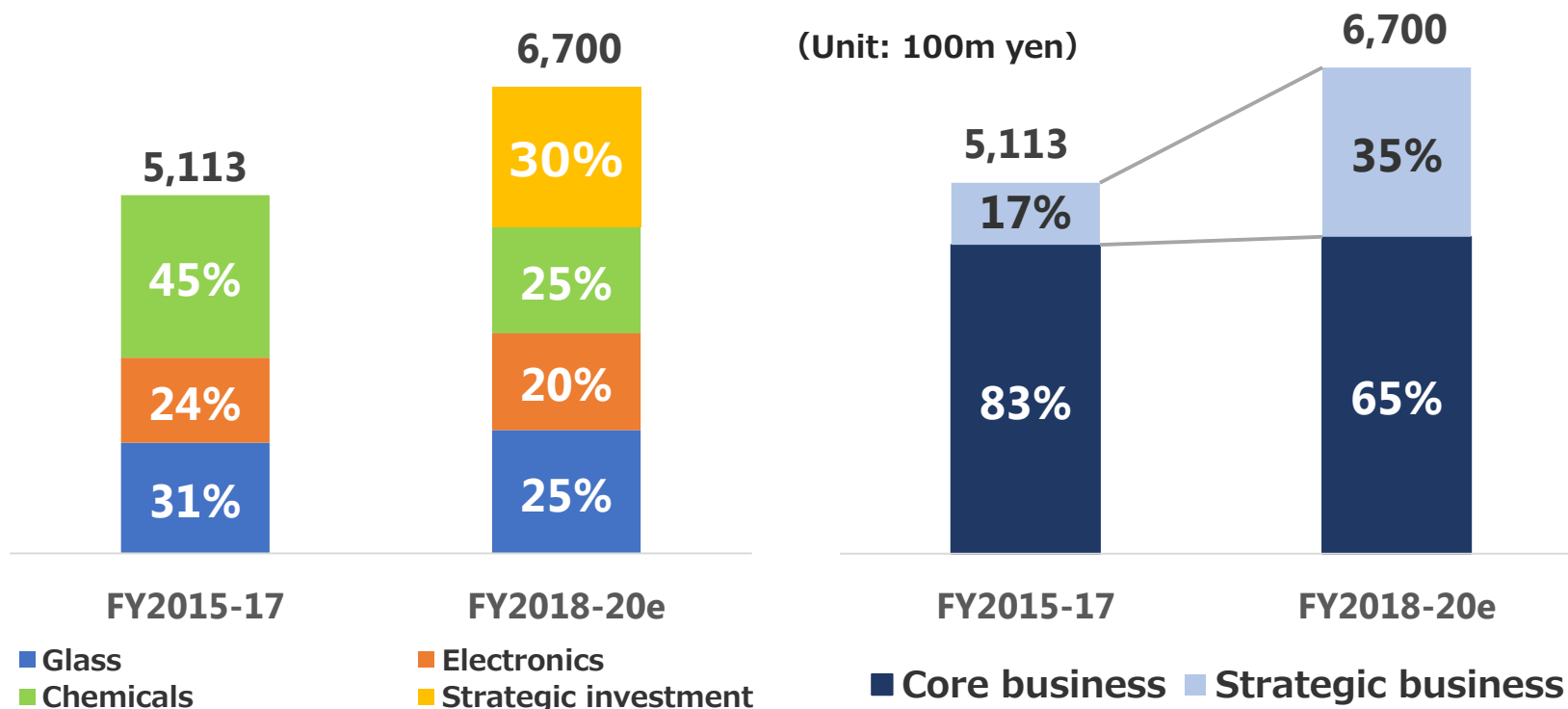
Investment allocation (to-be image of CAPEX/M&As)

Make a shift to active & well-focused investment strategies

By segment

Core business/
Strategic business

*Including M&As

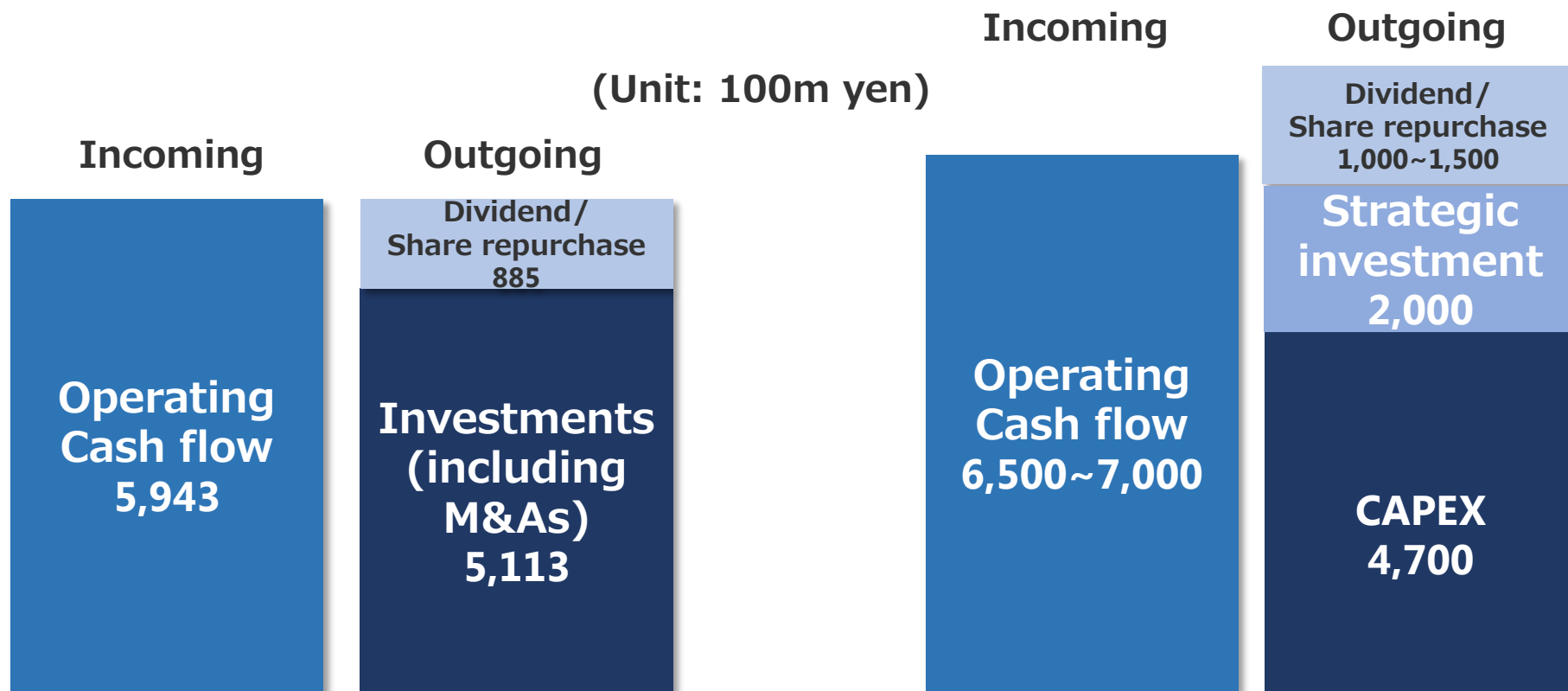


Cash allocation (to-be image)

Continue the active shareholder return measures from the previous MTP. Accelerate investments in strategic businesses based on the stable financial strength

FY2015 - 17

FY2018 - 20



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Strategic Businesses : Highly profitable businesses with growth potential

【Changes in the macroscopic environment】

Arrival of IoT era

Longer life expectancy

Evolution of transportation infrastructure

Increase of global population

Building new eco-system

Greater safety, security, comfort



Mobility

Connected cars/
Automated driving,
Evolution of information
display, Lighter-weight
transportation means

Electronics

Arrival of IoT/AI era,
Next-generation high-
speed communications/
Automated driving, Use of
novel devices

Life Science

Safe & secure medical
care, Longer life
expectancy, Increase of
global population

Strategic Businesses

AGC's unique & diverse core technologies respond to the need for more advanced functionalities.

Big waves of change



Automated driving
Connected cars



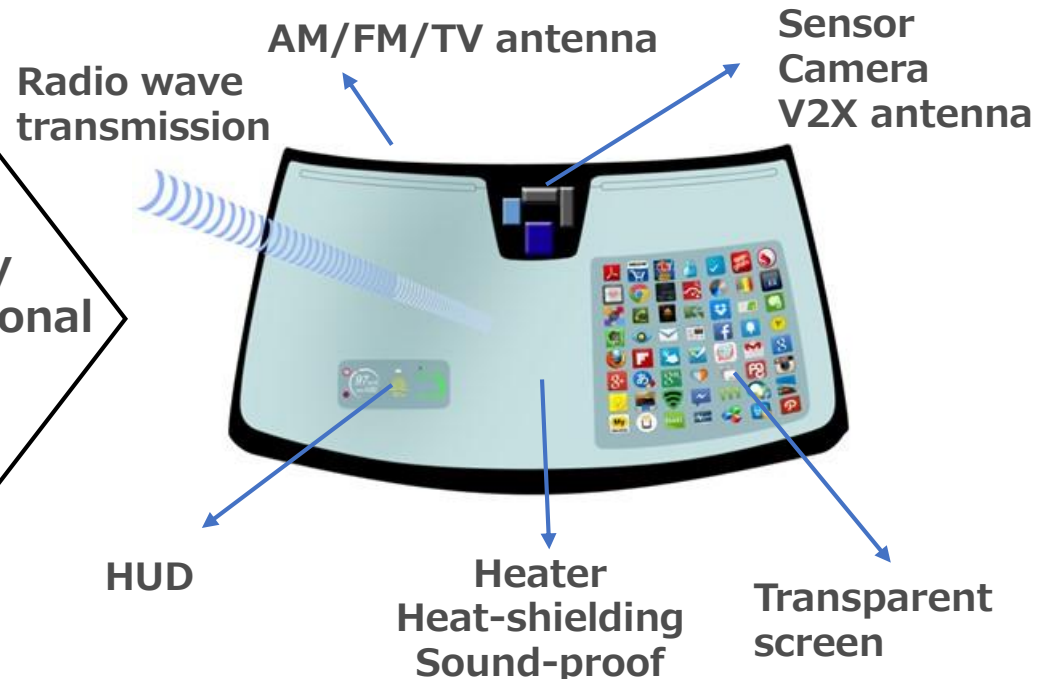
Evolution of
information display



Eco-friendly vehicles
(EV)

Highly
functional
glass

Key phrases for next-generation glass
"Glass located at best place"
"Multi-function"





Automated driving
Connected cars

**First in the glass industry to build
Global, tri-polar antenna R&D!**

(Europe facility will be completed at the end of 2018)

**Accelerate R&D for next-generation
“connecting” antennas**



Evolution of
information display

**360° “user-friendly”
information display**

- A wide range of advanced solutions for information display
- Molding techniques enabling design flexibility

(Display cover glass/Glascene™/HUD, etc.)



Carbon Fiber Reinforced Thermoplastic (CFRTP) with enhanced performance for lighter-weight transportation means

- **As the mass-producible carbon fiber reinforced plastic, the CFRTP market is expected to grow drastically.**
- **Through the performance enhancement using our unique technology, we help expand the usage of CFRTP.**

Carbon fiber reinforced plastic

CFRP (Thermoset)

Used for aircraft, etc.

Superior mechanical strength but unfit for mass production because of its long molding times

CFRTP
(Thermoplastic)

Lower mechanical strength but suitable for mass production owing to its substantially shorter molding times
The market is expected to grow drastically, centering automotive use

AGC's
• Fluorine
• Compound technologies



Improved CFRTP offers:

- Lower water absorption (greater productivity)
- Higher impact strength

Provide consumable materials, highly functional parts and materials to the electronics parts/materials market that continue growing

Arrival of IoT/AI era

Next-generation high-speed communications, Automated driving

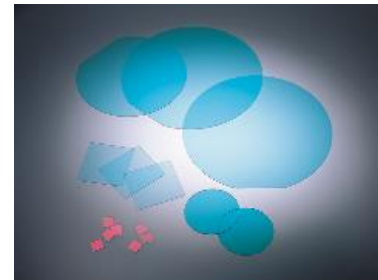
Use of novel devices (AR/VR/drones, etc)

Sustainable growth of the electronics-related markets

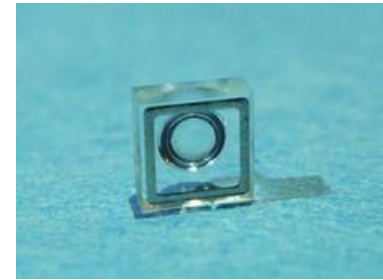
Semiconductor/sensor will be used in all products in the world

Parts and materials will be required to have more advanced functionality (lighter-weight, greater strength, higher heat dissipation, superior heatproof, lower loss, etc.)

Infrared absorbing glass filter



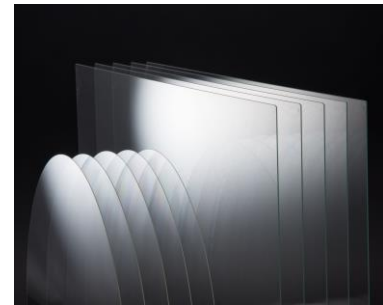
Quartz Lens for Deep Ultraviolet LEDs



EUV mask blanks



Glass substrates for semiconductor process



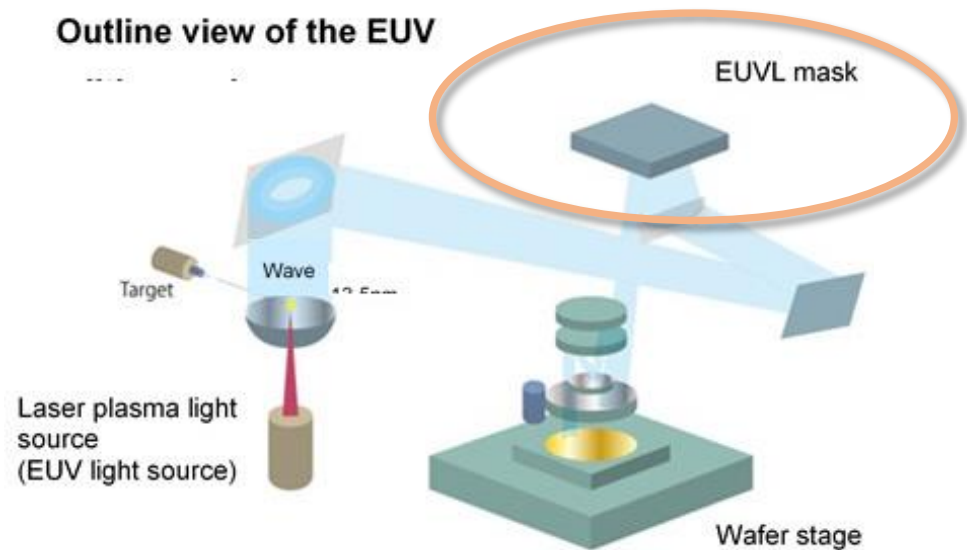
Expanding the supply system for EUVL mask blanks

**Developed by combining AGC's core technologies
AGC is the only manufacturer in the world capable
of handling every aspect of photomask
blanks—from the glass material to coating process.**

EUV lithography:

Next-generation lithography technique that enables the modeling of the "7nm node" miniaturized patterns

- Higher-speed calculation for semiconductor chips
- Higher volume data
- Required for high integration



Advanced technology to meet the needs of the times

Longer life expectancy

Increase of global population

Safe/secure medical care



Low-molecular
Pharmaceutical/
agrochemical

AGC business domain (CDMO)

Synthetic
pharmaceutical/agrochemical
intermediates and AI

Bio-pharmaceutical

Microbial protein

Mammalian protein

Cellular/Regenerative medicine

Becoming more common to outsource to CMOs equipped with advanced know-how & specialized facilities

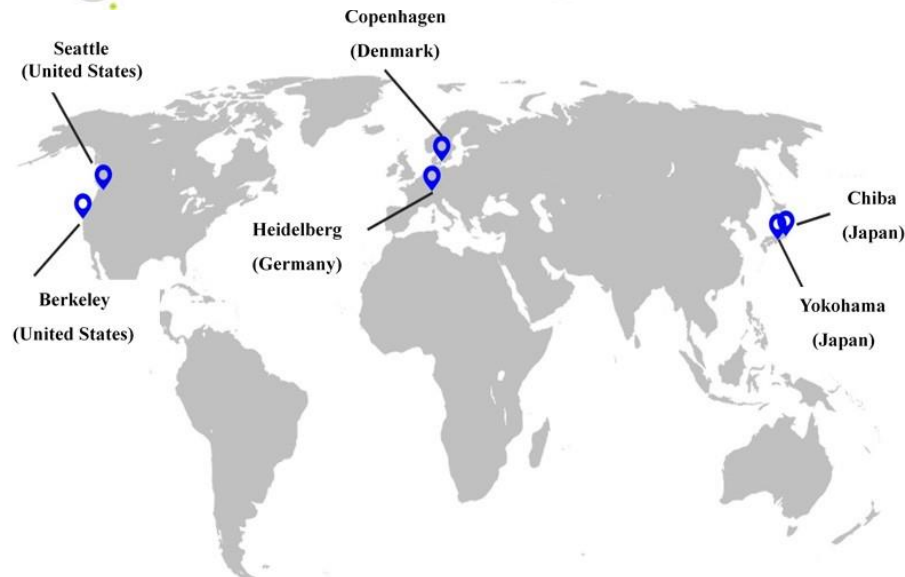
Expanding/developing existing businesses, applying to multiple domains



Exploring future business opportunities

Started global, integrated management of AGC's bioscience business to provide high-quality services to customers around the world

- Integrated businesses in Japan, United States and Europe as "AGC Biologics" (Headquarter in Seattle, from January 2018 onward)
- Further capacity increase at a plant in Europe (scheduled from 3Q 2018)



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FY2014 slogan for CO2 emissions avoided through environment-related products

The AGC Group, through its energy-saving and energy-creating products, will enable avoidance of over six times AGC Group's own annual CO2 emissions in 2020.



In addition to the above slogan,

The AGC Group will formulate a long-term environmental goals toward 2030 to further revitalize its environmental management.

Helps to solve social problems through sales of environmental products.



- Energy-saving glass (Low-E glass, etc.)



- Fluoropolymer film for agricultural use F-CLEAN™ (Help increase productivity)



- Next-generation refrigerant AMOLEA™ (drastically reduce GWP)



- FORBLUE™ family: solution for separating chemicals FLEMION™ (Caustic soda production without using mercury)

About 25,000 AGC Group members in 20 countries and regions, including Japan, Asia, Americas and Europe, participates in social contribution activities every year.

(Example activities)



■ Coral reef conservation using PVC pipes (Thailand/Indonesia)

PVC is lighter-weight and easier to install than cement materials.

■ Educational support (Brazil)

- Helping train educators through the Ayrton Senna Institute, a local NGO.
- Provide education to children to encourage social participation through Casa Betânia, a charitable organization

Net asset
Approx. 32.9 billion yen (FY2016)

Net Asset
Approx. 5.1 billion yen (FY2016)

The Asahi Glass Foundation (established in 1933)

The Asahi Glass Scholarship Foundation (established in 1957)

Commendation program

Research grant program

Scholarship program

- "Environmental
Doomsday Clock"
- Global environmental
award "Blue Planet Prize"
(since 1992)

- Research subsidies for
universities in Japan,
Thailand and Indonesia

Grants provided since
its foundation:

Approx. 8,000 projects
Approx. 10 billion yen

- Scholarship for Japanese
and international students
- Scholarship for students
affected by the Great East
Japan Earthquake

Scholarship provided since
its foundation:

4,095 students/Approx. 2.9
billion yen

Help solving
environmental issues

Building foundations for
next-generation

Human resources
development assistance

AGC's corporate governance

- 2002 Launched corporate governance reform
 - Clearly separated management oversight function and management execution function
 - Streamlined the number of directors to 7 from 20, and appointed outside directors (2 outside directors in 2002, and 3 in 2005 onward)
 - Adopted the executive officer system
- 2003 Established nominating committee and compensation committee on a voluntary basis
- 2007 Started the stock compensation-type stock option
- 2011 An outside director chairs the Board of Directors meeting
- 2017 An outside director chairs nominating/compensation committees**
- 2018 A new stock compensation-type stock option (executive compensation BIP trust) will be introduced to replace the current stock compensation type stock option. (subject to the shareholders meeting in March 2018)**

Third-party/effectiveness evaluation

- Highest rank "1" for all aspects of the ISS Quality Score (※) (FY2017)
 - (※) "Board structure", "Compensation", "Shareholder Rights", "Audit/Risk Oversight"
- Effectiveness evaluation by the Board of Directors (starting in 2015)
 - The results of the evaluation showed that appropriated management is conducted and adequate performance is secured through active and frank discussion.

Established SDGs Division under Corporate Planning Division (January 2018 -)



By putting together the AGC Group’s technologies and human resources, AGC will accelerate the efforts to solve social issues around the world.

New corporate name from July 1st, 2018^(※)

AGC Inc.

(※)This corporate name change is subject to the approval of a partial amendment of the Company's Articles of Incorporation at the Ordinary General Meeting of Shareholders to be held March 29 2018.

AGC plus

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; and
- Increasing the Group’s corporate value for investors.

Disclaimer

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