

IR DAY 2022



Architectural Glass business
(Europe & Americas)

AGC Inc.

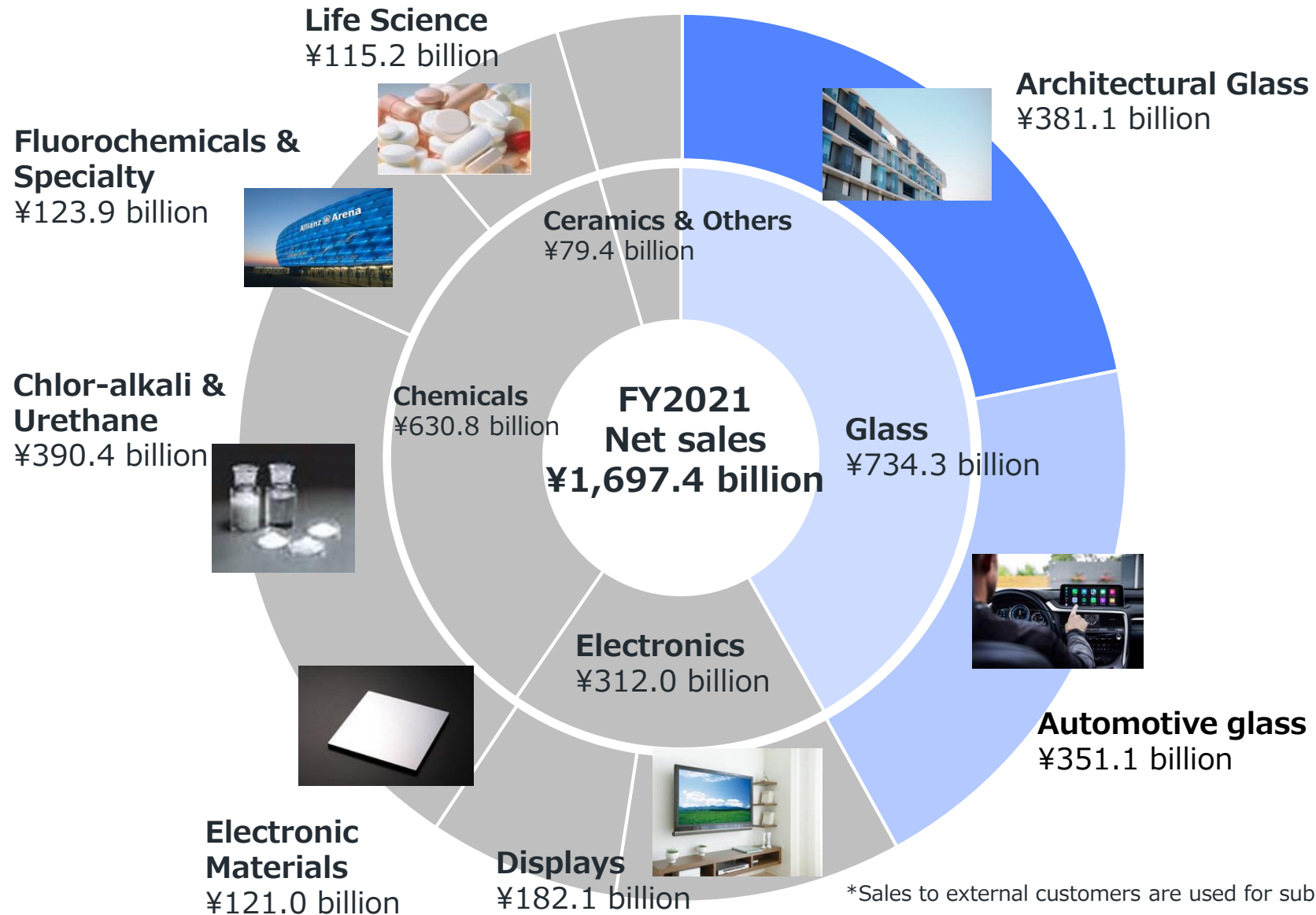
June 13, 2022

Your Dreams, Our Challenge

- Business Overview
- Key Issues in ***AGC plus-2023***
- Strength and Business strategy
- Today's Summary

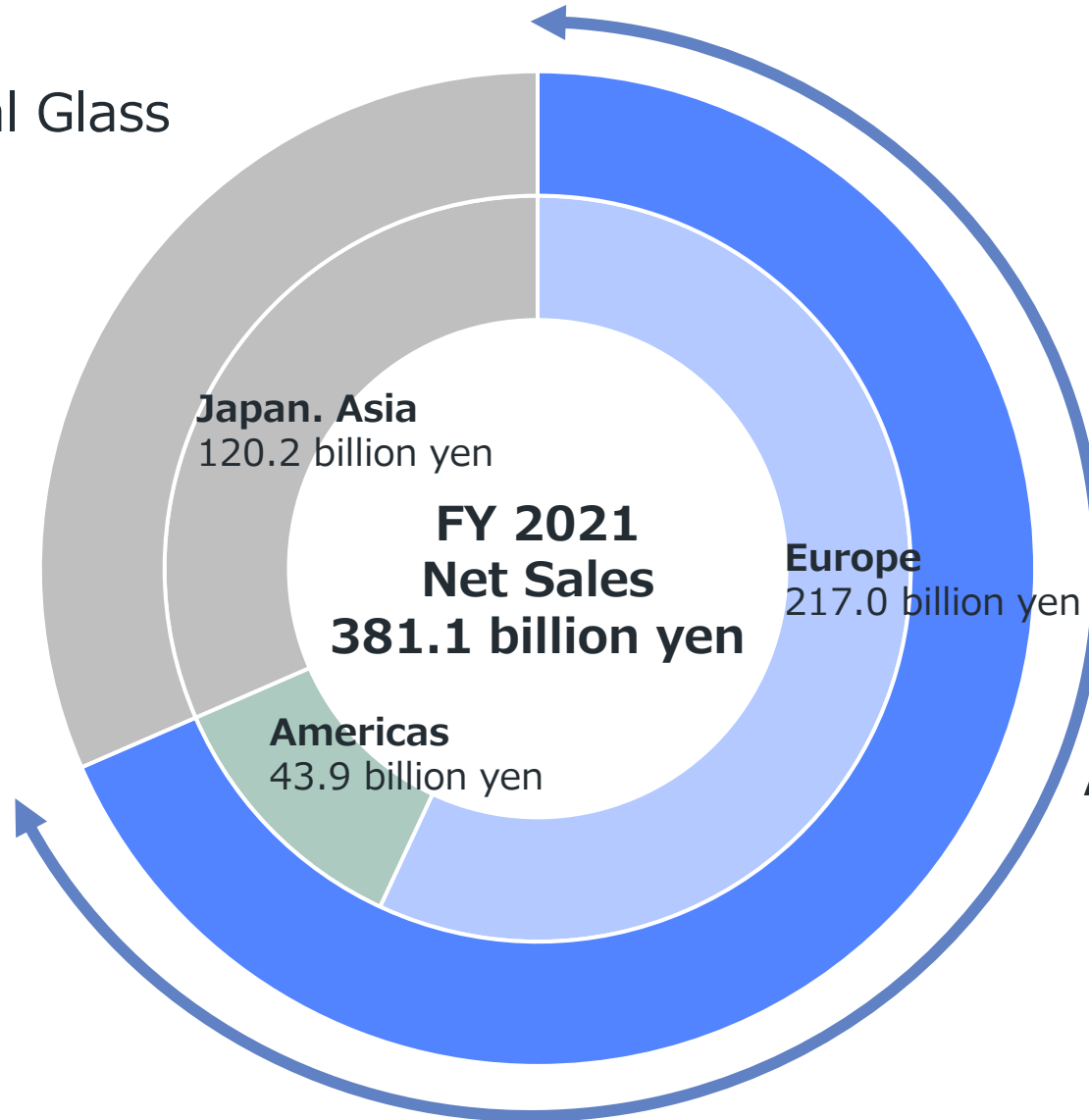
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Architectural glass business in the AGC Group



Europe & Americas operation in the Architectural glass business

Architectural Glass
Asia Pacific
Company



**FY 2021
Net Sales
381.1 billion yen**

**Europe
217.0 billion yen**

**Americas
43.9 billion yen**

**Architectural Glass
Europe & Americas
Company**

261 billion yen

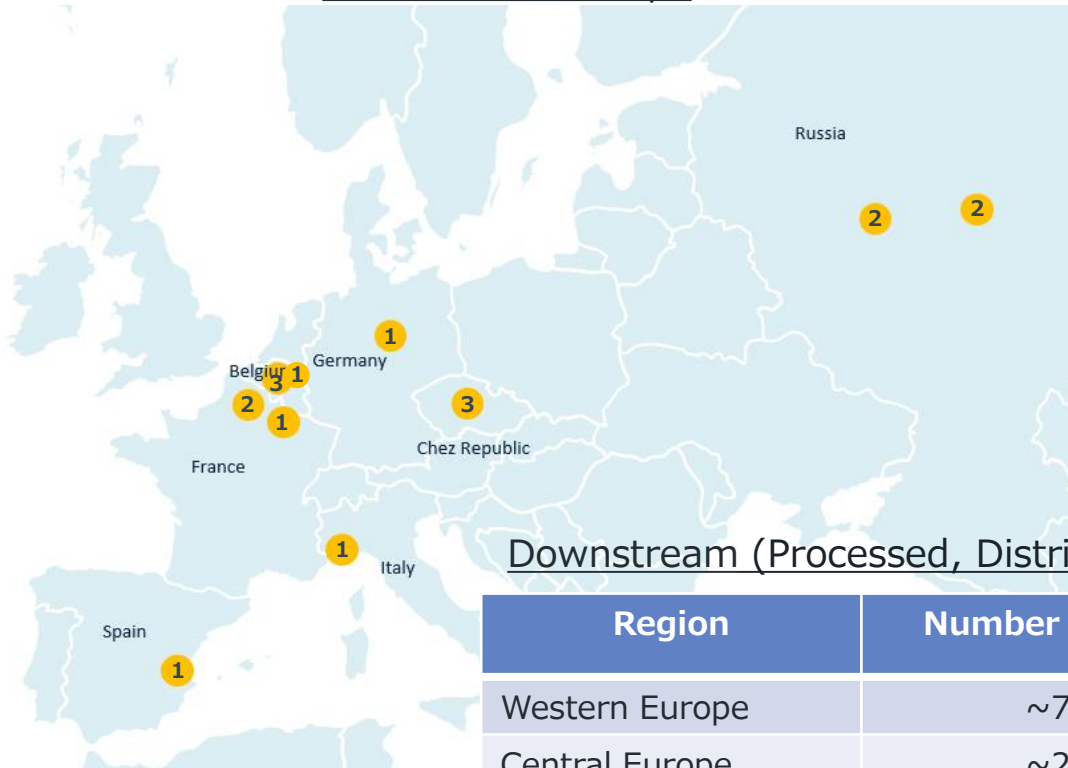
*Including AGC Soda sales

Geographical coverage

- Architectural Glass Europe and Americas Company covers Europe and South America.

Number of sites in each region

Upstream
Float sites in Europe



Downstream (Processed, Distribution)

Region	Number of sites
Western Europe	~70
Central Europe	~20
Eastern Europe	~30

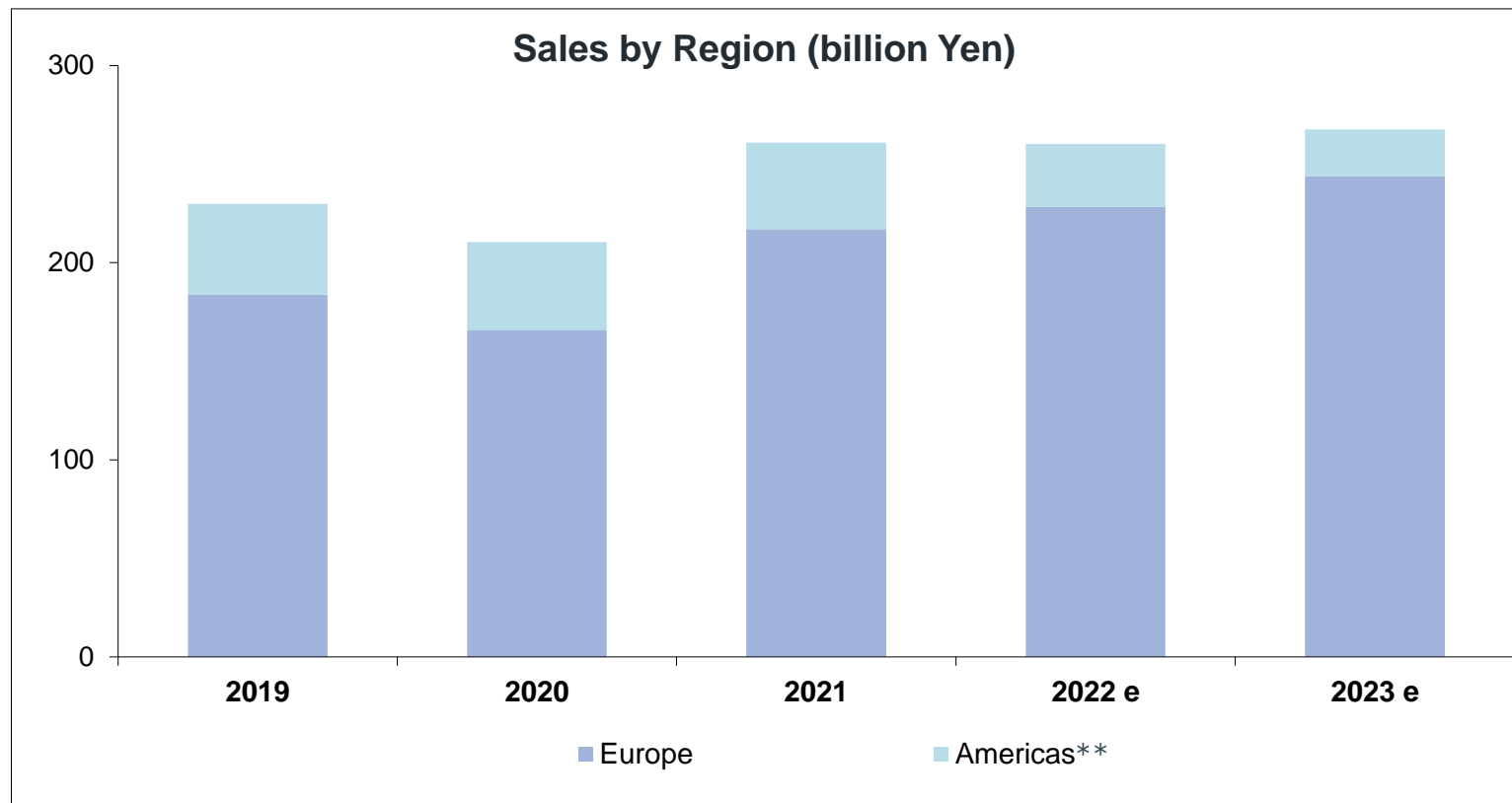
Upstream
Float sites in South America



*NB: The number in the yellow circle (Ex. 1) indicate the number of float line.

Sales trends by region

- Shipment recovered from the COVID-19 impact and remained steady.
- Demand in Europe and South America is expected to grow in the future.
- Completed the transfer of the North American business in 2021
- Completed the sale of AGC Soda* interest in the Solvay Soda Ash JV



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Division policy
WE LEAD THE WAY FOR A BETTER WORLD

Social Value

Economic Value

Social Value

Contributing to the maintenance of a healthy and secure society

Contributing to the realization of a sustainable global environment

Contributing to the realization of safe and healthy lifestyles

Contributing to the realization of safe and comfortable urban infrastructure

Contributing to the creation of fair and safe workplaces

Economic Value

Stable ROCE of
10% or higher
(2021 ROCE 22.9%)

	<u>Business</u>	<u>Key issues</u>
Core Business	Display	<ul style="list-style-type: none"> • Respond to the continuing demand increase in the Chinese market to build a long-term stable business foundation
	Chlor-Alkali	<ul style="list-style-type: none"> • Further strengthen the business foundation in S.E. Asia through capacity enhancement in Thailand and Indonesia
	Fluorochemicals & Specialty	<ul style="list-style-type: none"> • Capture the demand in global niche markets by adding value to products and domain expansion • Change environmental challenges to business opportunities
	Architectural glass Automotive glass	<ul style="list-style-type: none"> • Structural reforms toward the industrial realignment • Optimize investments and streamline production to increase asset efficiency • Steadily pursuing productivity improvement and cost reduction to improve profitability and capability for cash generation

Break down to Our goal

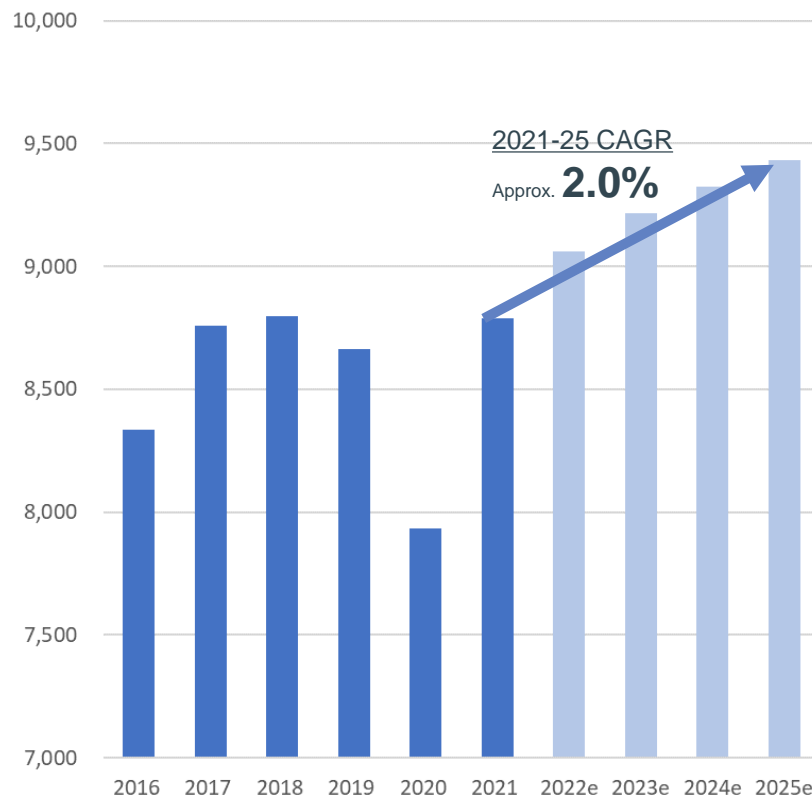
Architectural Glass Europe & Americas	Be the long-term stable source of earnings by increasing competitiveness in our core markets
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Market environment in Europe

- Less impacted by economic cycles and enjoying a growth of $\approx 2\%/y$
- EU's Recovery and Resilience Facility (RRF: €672.5 billion) will boost renovation through national plans including "Energy efficiency and building renovation".

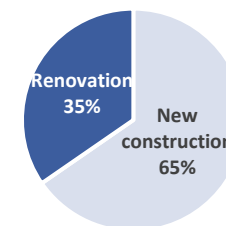
Unit: Kton Glass Demand in West and Central Europe



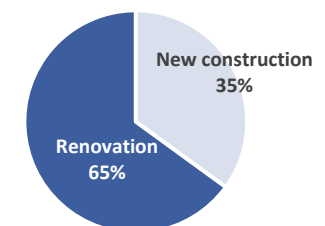
Source: EUROCONSTRUCT 12/2021 (EU-19)

Renovation vs New Construction

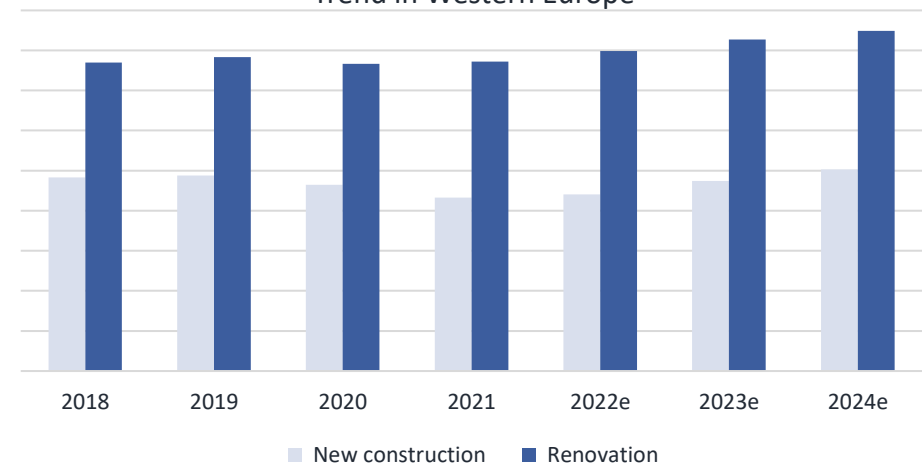
World in 2021



Western Europe in 2021



Trend in Western Europe



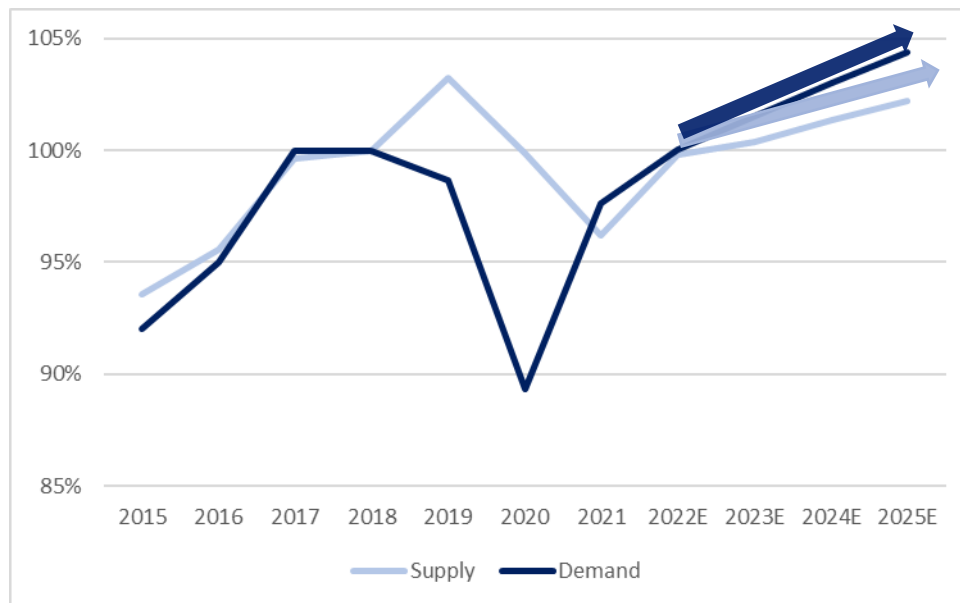
Source: AGC estimation from various sources

Market structure change in Europe

- The supply & demand balance in Western and Central Europe recovered to the well-balanced 2018 level.
- The selling prices also increased following the supply and demand balance improvement.
- Increases in supply are contained by the high capital cost and the GHG concerns.

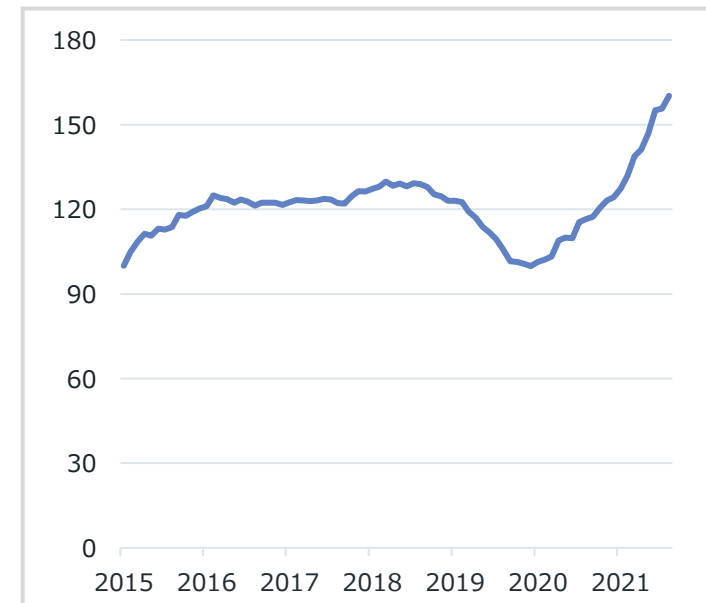
Supply & demand balance

(FY2018 benchmarked as 100)



German Flat Glass Price Index *

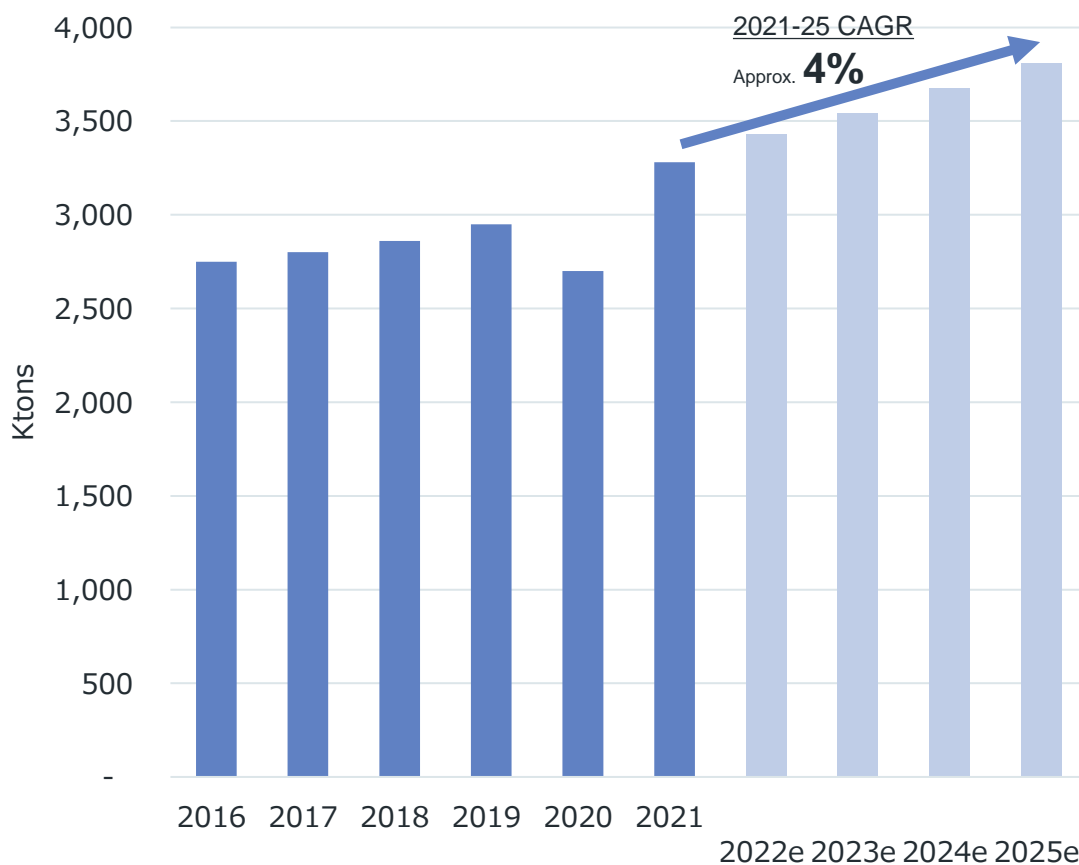
(FY2015 benchmarked as 100)



Market environment in South America

- In South America, the market is expected to expand in line with economic growth.
- By high presence in South America, capture market expansion

Glass Demand in South America



<AGC Glass Brazil>

Recognized as the best glass player in terms of quality and service in Brazil.

- Founded in 2012
- Facility: 2 float lines, 1 coater line, 1 mirror line

WE LEAD THE WAY FOR A BETTER WORLD

BE THE BEST PLAYER IN OUR CORE BUSINESSES

We will focus resources, innovate, and build the best supply chain to become the most reliable and the most profitable player in each of our markets.

INTEGRATED VALUE CHAIN APPROACH

We will continue optimizing our upstream/downstream approach in every market to maximize profitability and resilience.

QUICK INNOVATION, WITH A PURPOSE

We will improve speed and efficiency of innovation on products, business models and processes. We will focus innovation efforts where we can be winners.

LEADER IN SUSTAINABILITY

We will be the leader in our industry in the transformation of markets and technologies driven by sustainability.

BUSINESS EXCELLENCE AND WINNING CULTURE

We will establish a culture of challenge, courage and obsession with continuous improvement.

Our strength to support our strategy

Our strategy

BE THE BEST PLAYER IN OUR
CORE BUSINESSES

INTEGRATED
VALUE CHAIN
APPROACH

QUICK
INNOVATION
WITH A
PURPOSE

LEADER IN
SUSTAINABIL
ITY

BUSINESS
EXCELLENCE
AND WINNING
CULTURE

Multinational
reach with
local
deployment

Best variety of
product mix in
the industry

The most
integrated value
chain in the
industry

Leader in Glass Technology

Business
excellence and
winning culture

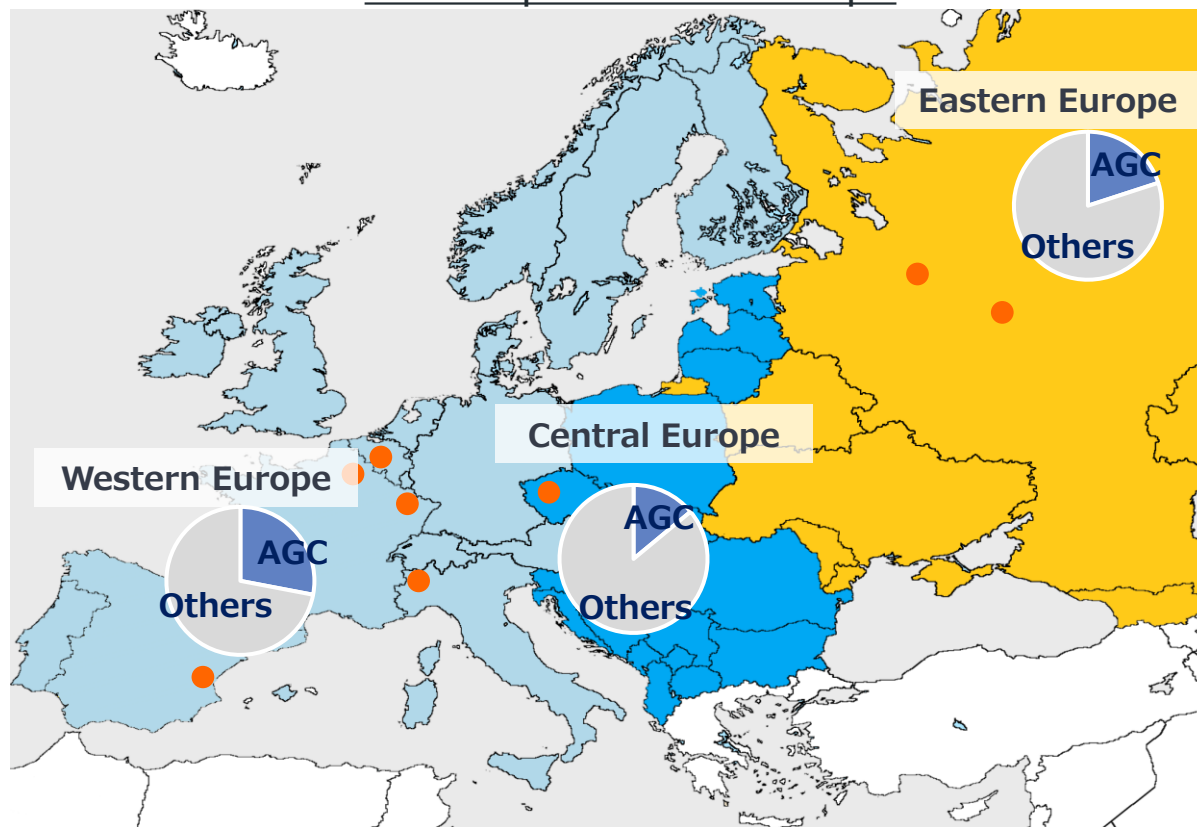
Our strength

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 - Best variety of product mix in the industry
 - The most integrated value chain
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Multinational reach with Local deployment

- Deploy operations in regions where we can win while demonstrating synergy globally
- This regional diversification reduces the risk of demand fluctuations by counterbalancing economic cycles between regions.

Market position in Europe



● Float glass manufacturing base

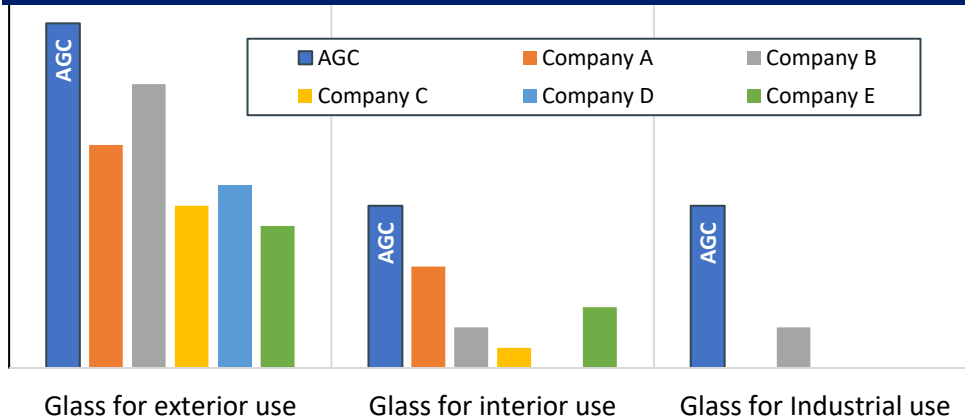
Market position in Brazil



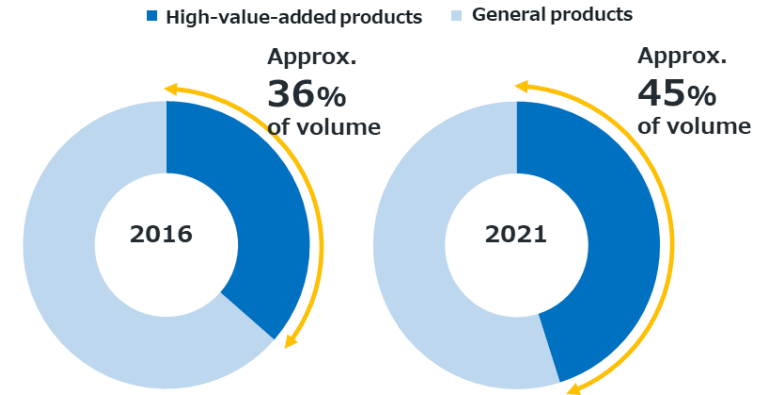
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Best variety of product mix in the industry

Number of product lines: AGC vs other companies in Europe



Trends in the ratio of AGC High-value added products sales



Thanks to AGC Technovation Center located in Belgium, and in cooperation with other AGC's Research centers globally, we develop the best variety of products which contribute to the sustainable global environment and the safe/comfortable life in the industry.

Contributing to sustainable global environment

Contributing to safe and comfortable life



Thermal insulation



Energy generation



Security



Decoration



Solar control

Best variety of product mix in the industry

Contributing to the realization of safe and comfortable urban infrastructure

Contributing to sustainable global environment



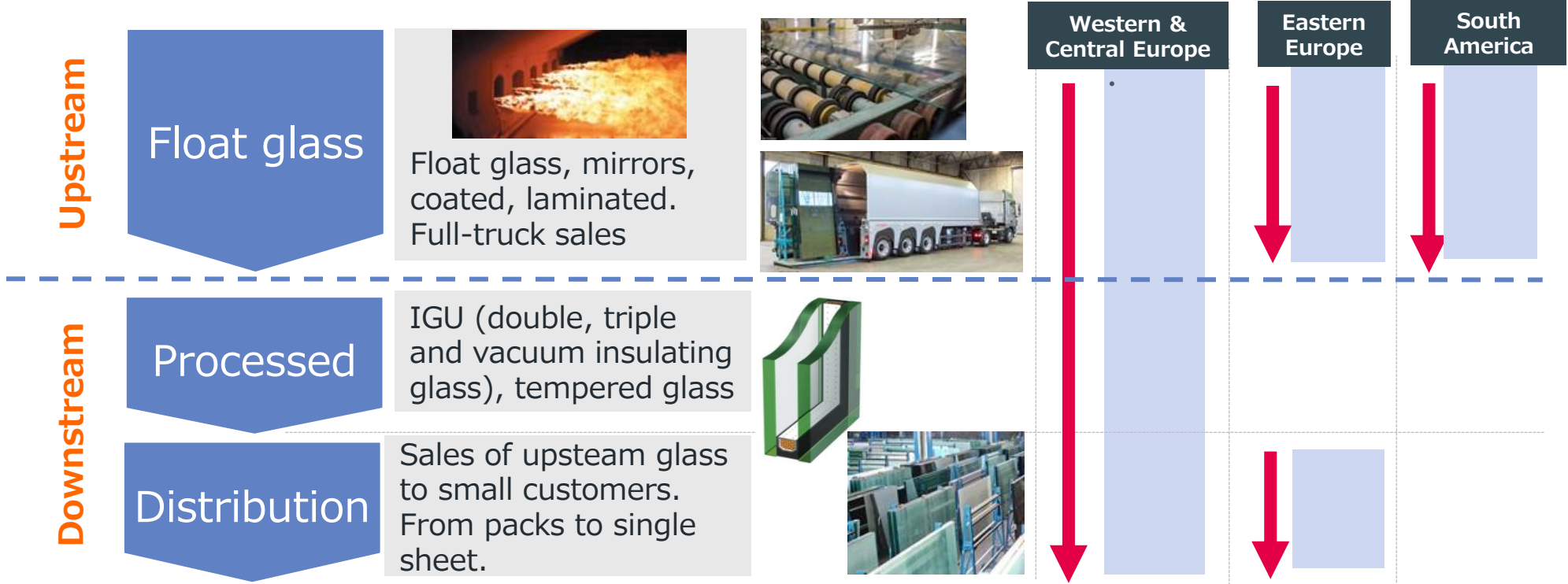
FINEO™ glass = Vacuum Insulating Glass (VIG)



- Environment and Energy conservation will remain at the forefront of future product requirements.
- VIG is a double glazing which has the thermal insulation performance equivalent to triple glazing with the thickness of a single glazing. Thus, this product fits well to the “renovation” of old buildings to improve its energy efficiency.

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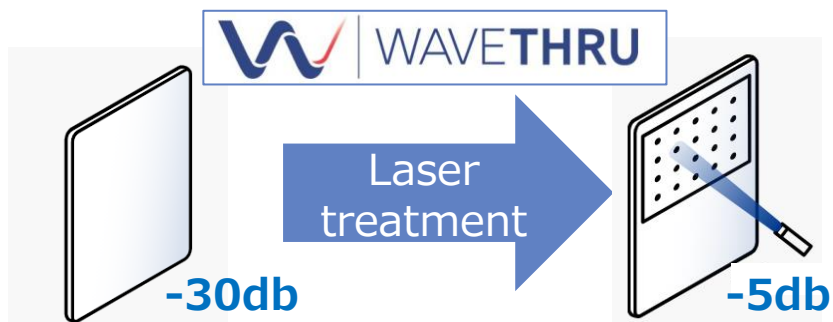
The most integrated value chain



- We are building robust supply chain from upstream towards downstream into different depths, from substrate manufacturing to glass distribution, depending on each market's maturity.
- Our wide range of manufacturing capabilities, from melting, forming, coating, to processing, and the proximity to customers combined with the best product mix, allow us to satisfy customers and increase our sales.

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Contributing to the realization of safe and comfortable urban infrastructure

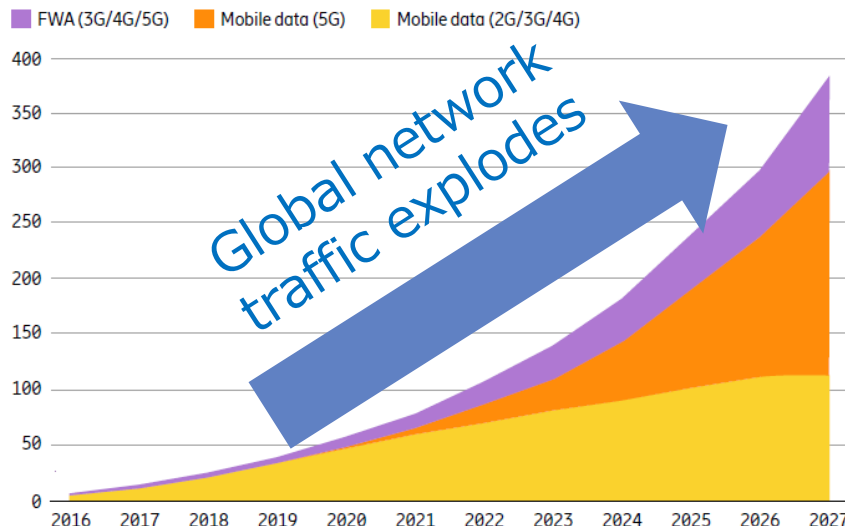


Insulated double glazing

Better radio transmittance (x30)

NB: db measures the signal strength

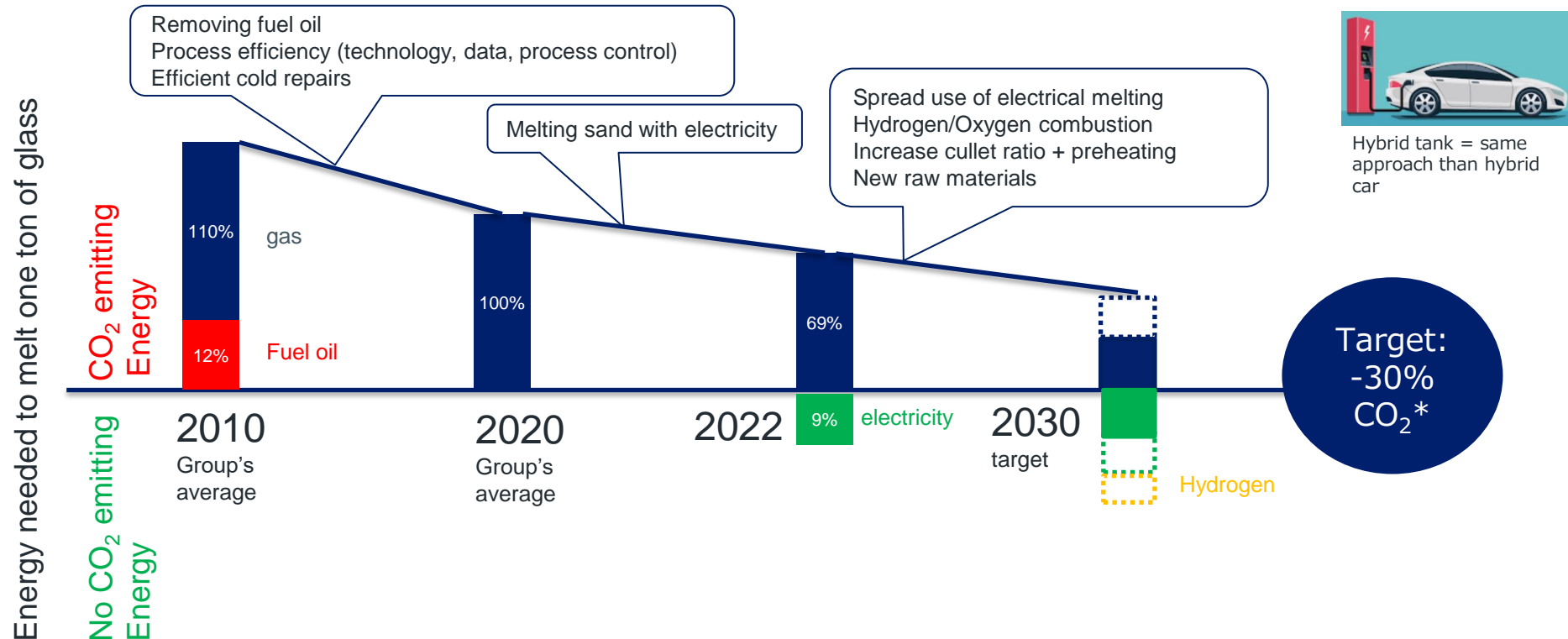
Global mobile network data traffic (EB per month)



- The explosion of “global network traffic” is a good opportunity for us to contribute socially, because by treating properly the glass surfaces, window can act as “a barrier”, “a path”, or “a relay point” to transmit radio signal between inside/outside of buildings.
- “**WAVETHRU™**” after-market service can allow radio signal to go through insulating window by on-site laser treatment.

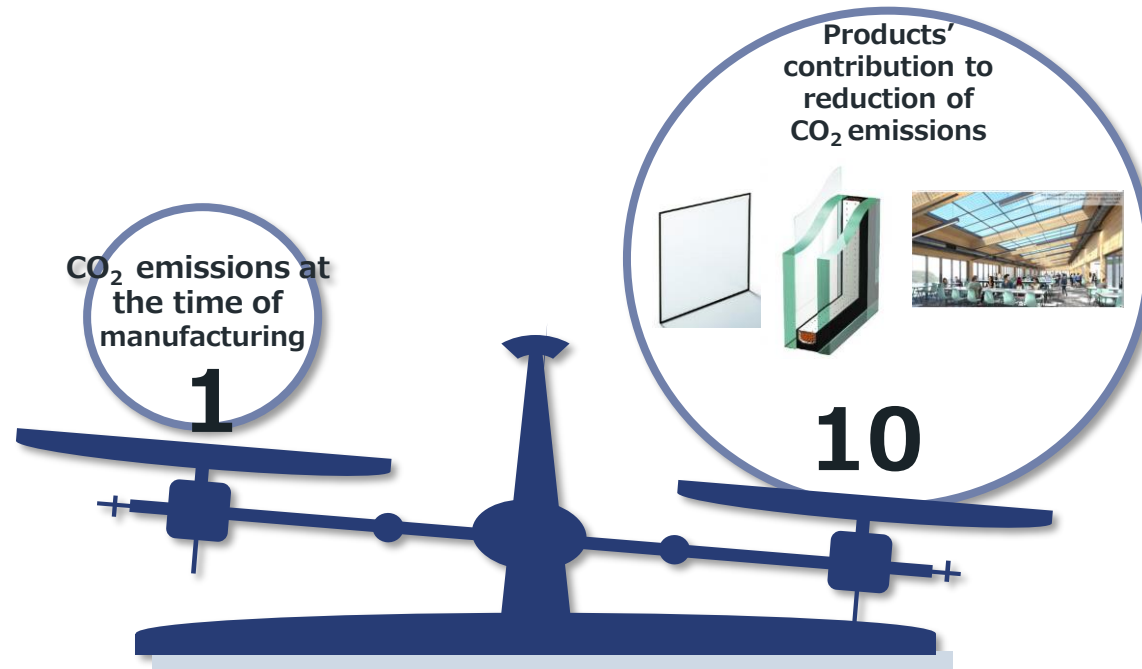
Contributing to sustainable global environment

Hybrid melting: replacing natural gas by electricity on the short-term and by hydrogen on the mid-term, to melt raw materials



- We will achieve 30% reduction of CO₂ emission in 2030 by utilizing the technological savvy in AGC's other glass segments.

Contributing to sustainable global environment



- Developed several environmentally friendly products such as vacuum insulated glass, building integrated photovoltaic power generation glass
- Architectural glass contributes to reduction of energy consumption and CO₂ emissions during product use by 10 times* the amount of energy used and CO₂ emitted during manufacturing.

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Business excellence and winning culture



Safe workplace and product

- Eradicate all severe accidents
- Professionalization of business continuity plan

Leader in digital operation and technology



- Digitalization process to increase process support and efficiencies
- Factory of the future

Customers at center



People performing at their best

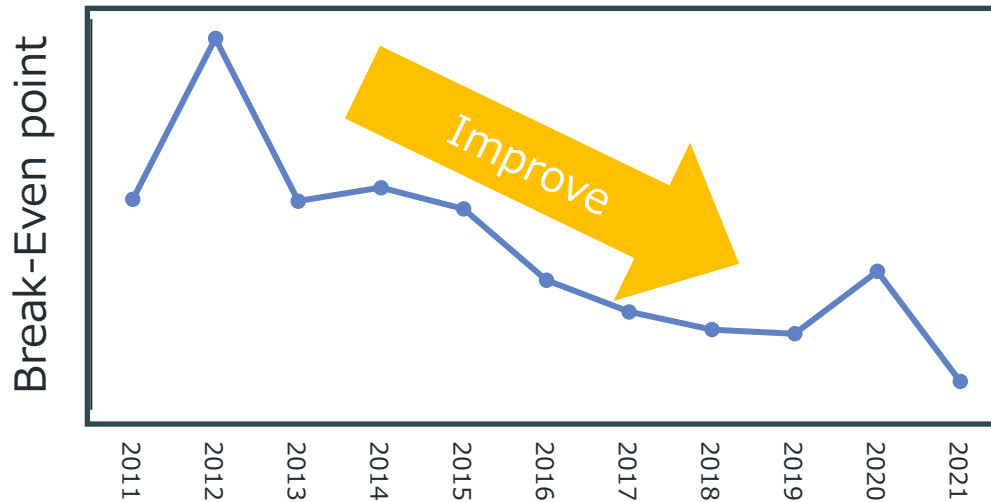
- New skills implementation: Digitalization, change management...
- Standardization of operations and processes

Sustainable Operations



- Towards first CO₂ zero float
- Reduction of energy consumption in plant facilities and utilities

Break-Even point improved by 25% in ten years



- Optimal upstream/downstream mix.
- Supply chain optimization with the creation of manufacturing hubs
- Continuous cost reduction programs
- Pricing optimization
- Lean organization
- Balanced R&D investment for new product development

- Thanks to our good execution of “business excellence”, we have continuously reduced break even point of our business.
- We will continue to execute our **business excellence** to maximize profitability and resilience, while contributing to the **sustainable global environment** through both products and production processes.

Appendix

EU Renovation Wave

Flagship initiative to renovate inefficient buildings by 2030

EU Targets:

- (1) increase building renovation rates by at least 2-3% annually
- (2) achieve a Zero Emissions building stock by 2050

France



France Relance

€39.4 billion

€6.7bn allocated to building renovation.

- schools & public administration €4 bn
- private housing €2bn
- social housing €0.5bn
- businesses €0.2bn

'PAI immobilier' (Real Estate Investment Support Plan) of €1.3bn.

Italy



Ecobonus, Sismabonus and Superbonus

€6.8 billion

€4.7bn is directed towards energy efficiency and seismic engineering of private and public housing.

€3.9bn is allocated to school buildings and social housing.

Spain



National Building Renovation Plan

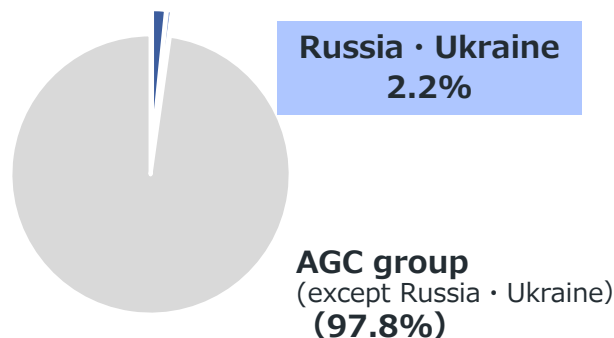
€7.8 billion

Focus on renovation across residential and public buildings (€6.8bn)

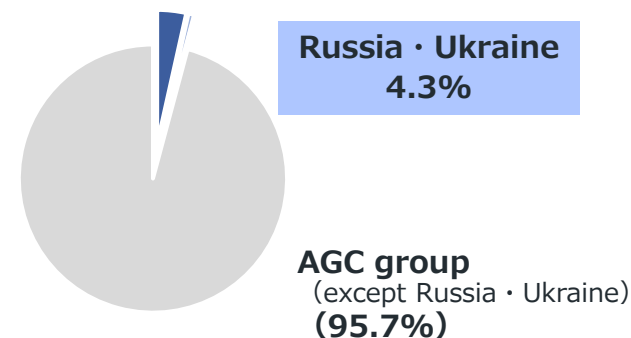
€1bn for a 'Regeneration and Demographic Challenge' programme focused on smaller municipalities and low-income areas.

FY2021

Percentage of sales in Russia and Ukraine



Percentage of OP in Russia and Ukraine



Country	Business	Location	Employees	Operating asset
Russia	Manufacture and sale of architectural and automotive glass	Bor, Klin, Moscow	Approx. 2,000 people	Less than 30 billion yen
Ukraine	sale of architectural and automotive glass	Kyiv, Lviv		

Current possible risks	Response to risks
Soaring gas price in West and Central Europe	Implementation of Energy Surcharge, in place since February Gas hedge for the longer term
Cooling economies in West and Central Europe	Capacity management to meet the demand level Until today we see no signs of economic downturn.
Cooling economy in Russia	Capacity management to meet the demand level Some adjustments already introduced.

AGC VIG advantages versus competitors

- Better U-value than competitors' products, with one exception
- Locally produced and short supply chain
- Better quality of coatings
- Better sealing durability
- Better Aesthetics, No visible evacuation hole and getter

WaveAttoch vs WaveThru

1 **Glass Antenna for Outdoor Coverage**
(transparent “stealth” small cell)

WAVEATTOCH

Challenge

Coverage of dense urban areas

Roadblocks

Location for new antennas is difficult to find and costly to deploy
Urbanistic regulations limit possibilities for small cells

AGC value proposition

“stealth” transparent antenna enables seamless indoor or outdoor placement in line with urban aesthetics constraints

2 **Improved Indoor Coverage with no Network Investment**

WAVETHRU

Indoor coverage for radio signal at higher frequencies

Radio signal is blocked by walls and windows, alternative systems are needed to get signal indoor

Easy solution to increase signal indoor

Leader in glass technology

Contributing to sustainable global environment



- Utilization of solar panel and wind turbine to supply power for head quarter and plants



Your Dreams, Our Challenge

END

Disclaimer:

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