Introduction to NSG

March 2019

Nippon Sheet Glass Co Ltd
TSE Code: 5202

Contents

I. NSG Group Today

NSG Group Today

One of the world's largest manufacturers of glass and glazing products

- Supplying Architectural and Automotive glass globally and promoting shift to higher added value
- Leading supplier of Technical Glass products including thin display glass, lenses for printers and scanners, specialty glass fiber products*1

Principal operations in approximately 30 countries around the world, with sales in over 100 countries

28 float lines worldwide*2 *3

Approximately 27,000 employees globally

Reference: Consolidated Revenue : JPY603.9bn (FY2018)

*1: Refer to slide 29 for Technical Glass products
*2: Refer to slide 49 for Float process
*3: Refer to slide 55 for the number of Float lines

History

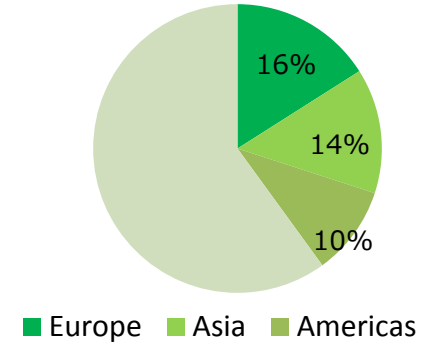
1918 - 1940s **Foundation & Expansion**	• 1918: America Japan Sheet Glass Co Ltd established in Osaka • 1931: Company name changed to Nippon Sheet Glass Co Ltd • 1935: Yokkaichi site opened
1950s - 1960s **Capacity Expansion and Start of Automotive Glass**	• 1950: Listing on stock exchanges in Japan • 1951: Maizuru site opened • 1963: Chiba site opened • 1965: First float glass production in Asia at Maizuru site
1970s - 1990s **Overseas Expansion & Diversification**	• 1971: First overseas investment made in Malaysia • 1978: Ultra Fine Float™ production started • 1979: Glass fiber business launched • 1995: Overseas investment expanded including China and Vietnam
2000s **Acquisition of Pilkington & Globalization**	• 2004: Headquarters moved from Osaka to Tokyo • 2006: Acquisition of Pilkington, becoming global leader in flat glass • 2007: "Company with committees" governance adopted • 2011: IFRS adoption
For Growth	• May 2014: Announcement of Long-term Strategic Vision and Medium-term Plan • Apr 2017: Medium-term Plan (MTP) Phase 2 started • Nov 2018: Announcement of "Our Vision"

Management Principles — "Our Vision" announced in November 2018

- From a glass company to 'Glass and more' company to create more value
- A team consisting of motivated individuals, leveraging its diversity, to achieve the shared goals

Businesses

Architectural: 40%

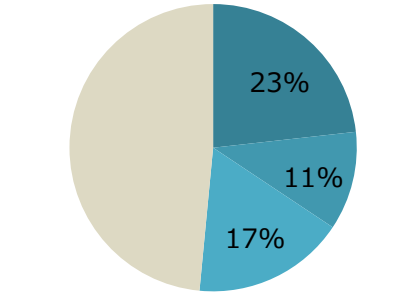


Products:
- Building glass & glazing
- Glass for solar panels

Business:
- 28 float lines operated globally
- Leading market position in each region
- Leading supplier for thin film solar panels

Granroof at Tokyo Station

Automotive: 52%

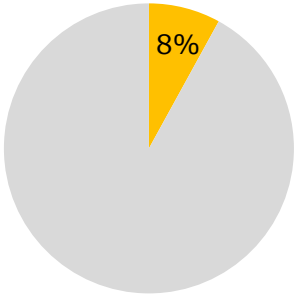


Products:
- Glazing for new vehicles
- Glazing for replacement markets

Businesses:
- Key operations in 14 countries
- Supplying the world's leading vehicle manufacturers
- Key player globally in automotive aftermarket (AGR) glazing distribution and wholesale

Photo: Toyota Motor Corporation

Technical Glass: 8%



Products:
- Thin glass for displays
- Lenses for printers and light guide
- Special glass fiber products such as battery separators, glass code for car engine timing belt, etc.

Business
- Key operations in Asia and Europe
- Unique 'Number One' and 'Only One' nisch products

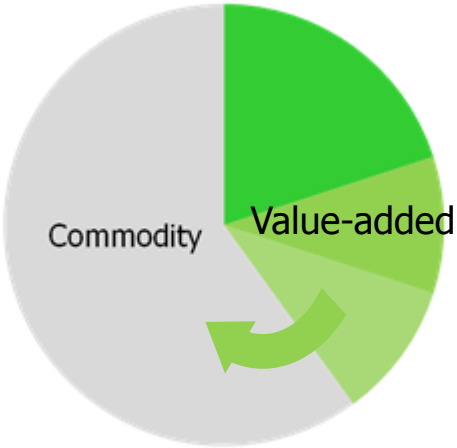
Super Glass Paper™

II. Long-term Strategic Vision & Medium-term Plan (MTP) Phase 2

Long-term Strategic Vision

Long-term Strategic Vision:

Transform into 'VA Glass Company'



Strategic Intent

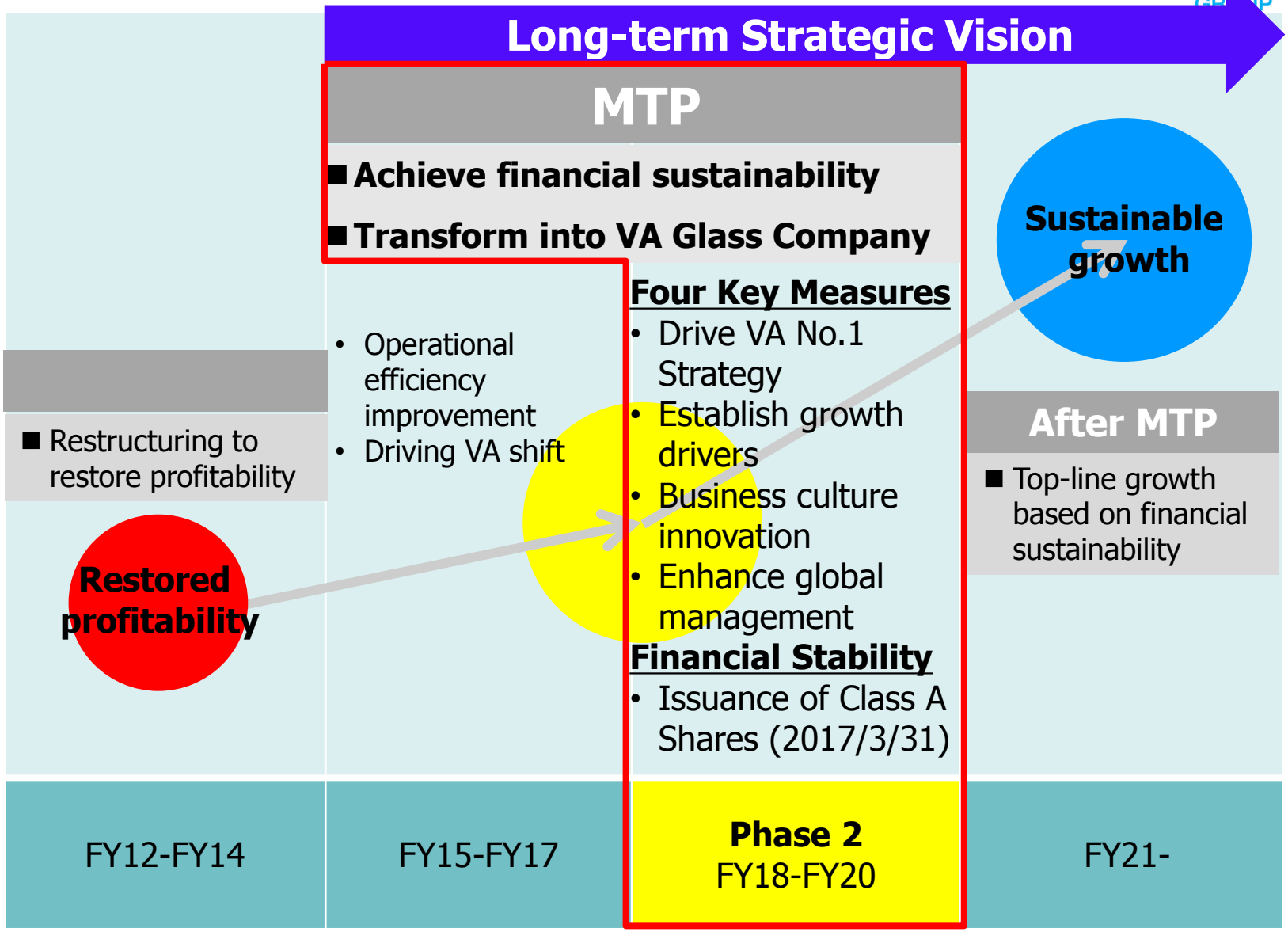
- Transform the whole Group structure into "VA-ready" while increasing the VA ratio in the Group's sales

Objectives

- Consolidate our trusted reputation as a glass specialist
- Work closely with customers worldwide to offer unique value through our products and services
- Transform business structure from a traditional model to a value-added model

* VA: Value-added

Positioning of MTP Phase 2



Medium-term Plan (MTP) Phase 2 (FY2018-FY2020)

Phase 2 Measures

Growth Measures

- Drive VA No.1 Strategy
- Establish growth drivers
- Business culture innovation
- Enhance global management

Financial Measures

- Enhance equity
- Reduce net debt
- Issue Class A Shares

MTP Targets

- **Financial sustainability**
- **Transform into VA Glass Company**

Financial Targets

Net debt / EBITDA: 3x

ROS > 8%

[Expectation after achieving MTP Targets]
(After redemption of Class A Shares)

- Equity Ratio: 20%
- ROE: 10%
- VA Sales Ratio: > 50%
- Trading Profit: JPY50-60 bn

VA: Value-added ROS (Return on Sales): based on trading profit (profit before amortization of non-tangible assets)

MTP Phase 2:
Four Key Measures for Growth

Drive VA No.1 Strategy

- Win leading position in the areas with "high growth potential" and "core strength"
- How:
  —Focus resources on VA shift in the areas where NSG technology and brand have the biggest advantage
  —Enhance customer relationship, build strategic alliance

Vacuum glazing
Online coating
High-precision press

Establish Growth Drivers

- Launch multiple, promising growth drivers
- Target areas:
  —Architectural Glass (energy-save/generation, health, design)
  —Automotive Glass (ADAS, connected, UV/IR shield, light-weight)
  —Technical Glass (new products/applications with proprietary technology)

ADAS
Energy saving & generation
Information Communication

VA Glass Company

Customer-oriented R&D & marketing
Lean structure, manufacturing

Rapid decision-making
Cost reduction

Business Culture Innovation

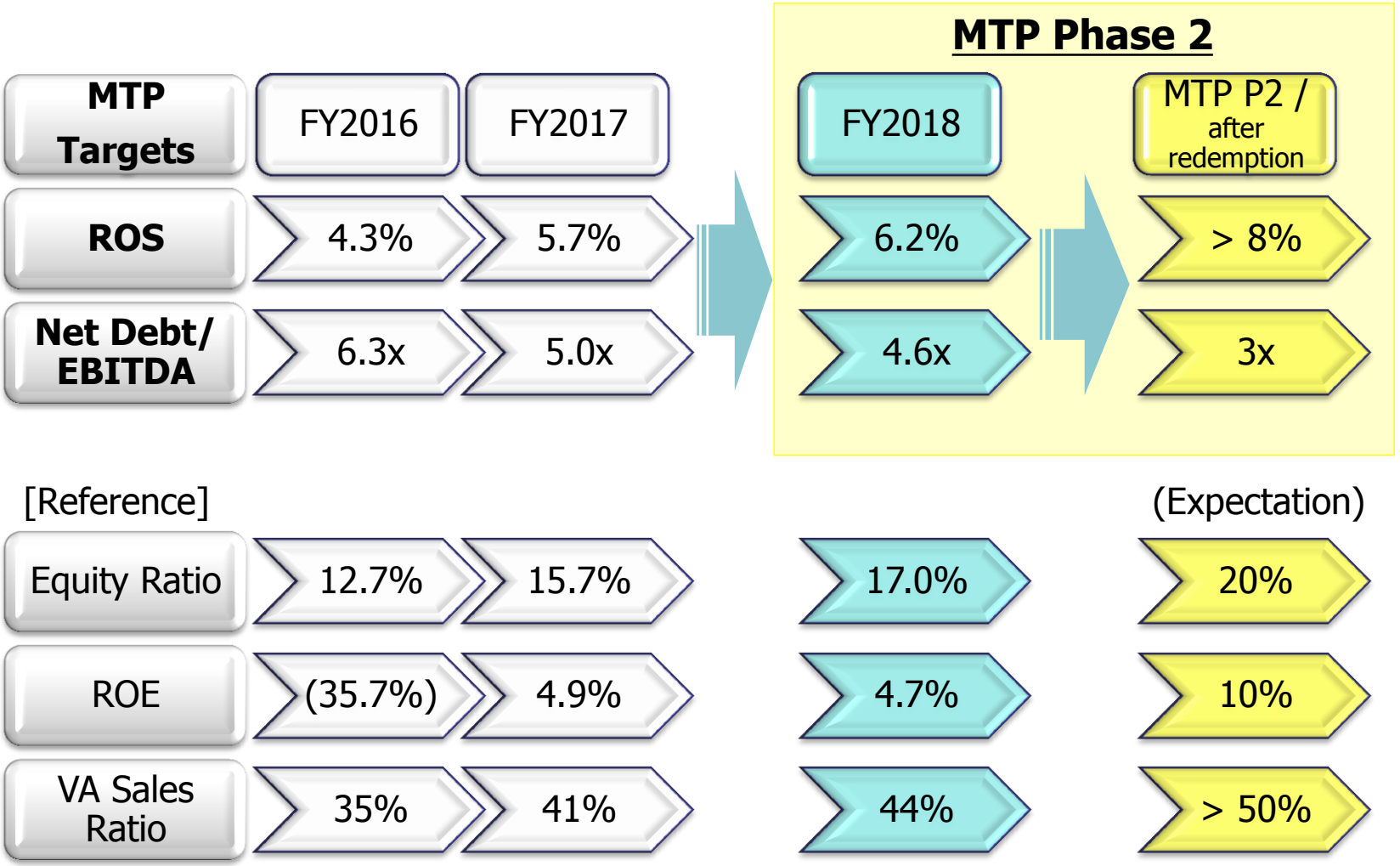
- Build leaner business structure
- How:
  —Optimize all work processes
  —Enhance manufacturing excellence in each region
  —Optimize global R&D with customer viewpoints
  —Strengthen customer-oriented marketing

Enhance Global Management

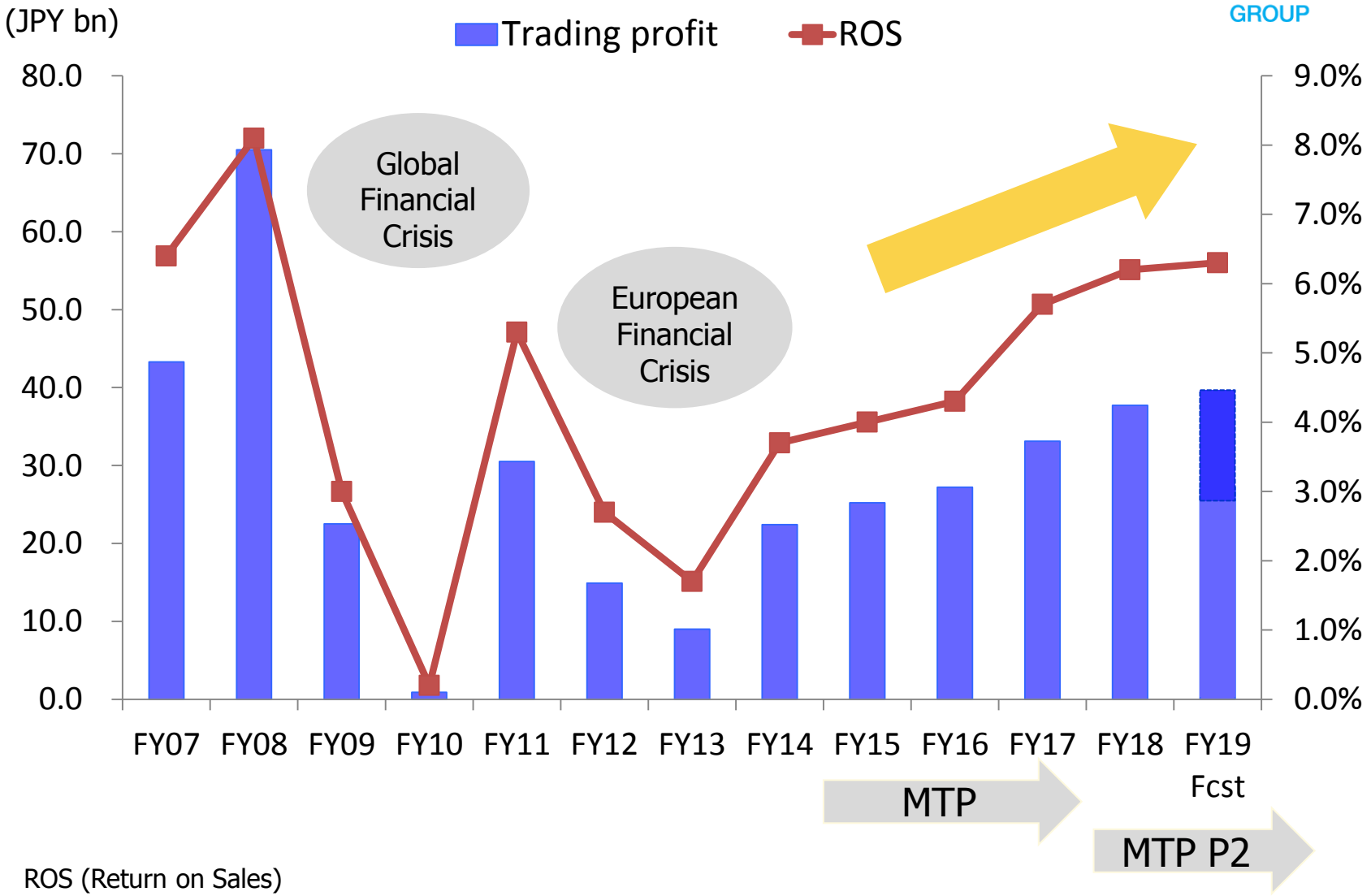
- Advance global management to achieve the Group's optimization
- How:
  —Drive talent development, promote diversity
  —Enhance faster decision-making with flexible organization management
  —Continue to reduce cost across the Group

MTP Phase 2: KPI Update

Steady improvement of KPIs toward financial sustainability

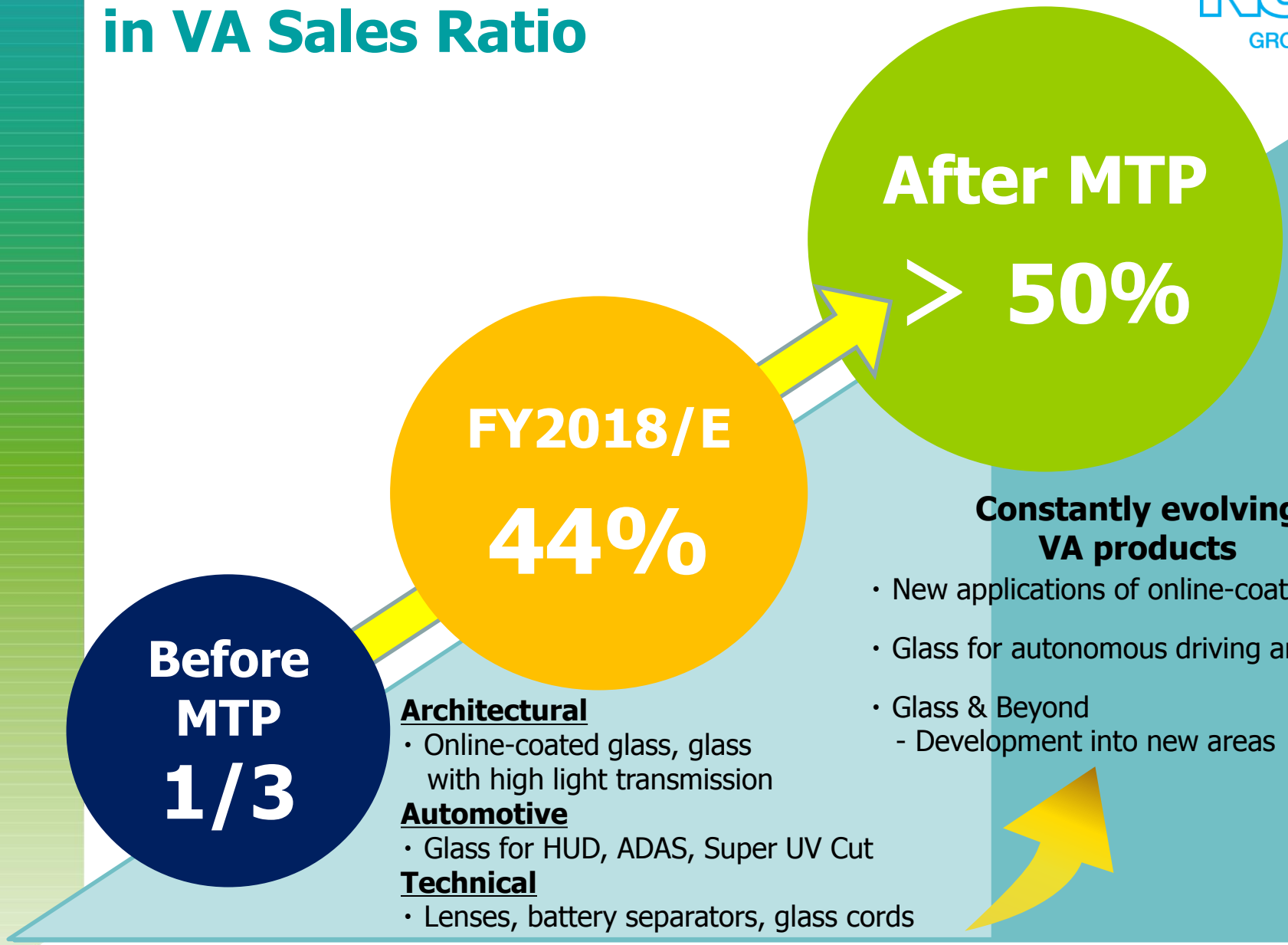


MTP Phase 2: Trading Profit & ROS



ROS (Return on Sales)
: based on trading profit (profit before amortization of non-tangible assets)

MTP Phase 2: Steady Improvement in VA Sales Ratio



Architectural
- Online-coated glass, glass with high light transmission

Automotive
- Glass for HUD, ADAS, Super UV Cut

Technical
- Lenses, battery separators, glass cords

Constantly evolving VA products
- New applications of online-coated glass
- Glass for autonomous driving and EV
- Glass & Beyond
  - Development into new areas

III. Shift to 'VA + Growth'

Shift to "VA + Growth"

Actions are being taken based on different growth phases

Core Business

Profitability Enhancement

- Profit improvement with VA shift
- Cost reduction with productivity improvement
- Review of underperforming businesses

Growth Business

Top-line Expansion

- Growth Investment in Emerging Markets (South America)
- Capacity expansion in thin-film solar panel glass
- New application development of online-coated glass
- Commercialization of new Technical Glass products

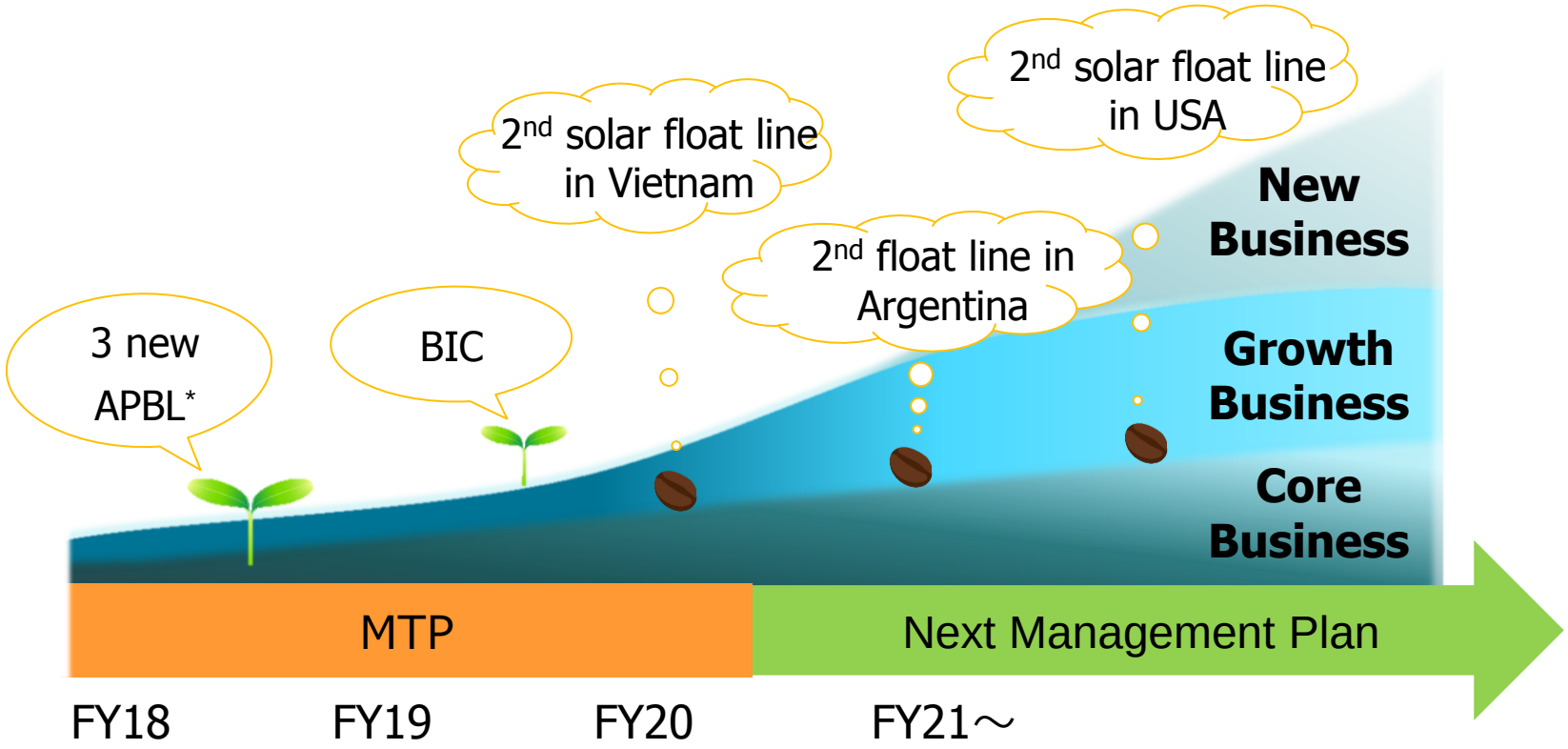
New Business

New Business Development and Creation of Customer Value

- Launch of Business Innovation Center

"VA＋Growth" – Seeds for Next Growth

Focused actions in the areas the Group has strengths or growth potential such as advanced automotive windscreens, online coating, South America and Technical Glass products

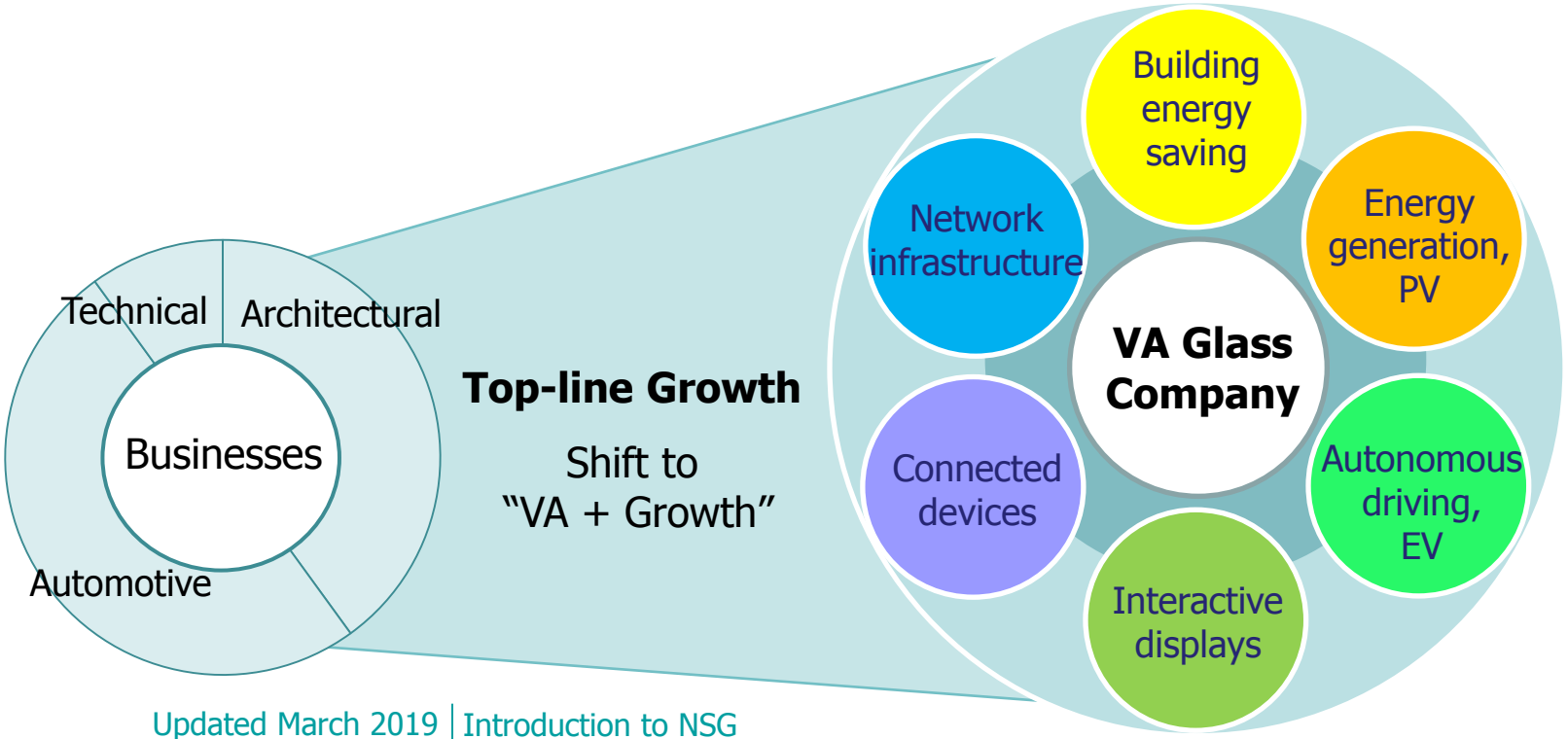


* APBL : Advanced Press Bending for Laminated

Creating New Businesses in response to External Changes

External changes

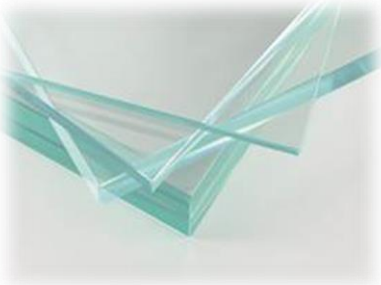
- Actions against climate change
- Aging and decline of population in developed countries
- Population explosion in developing countries
- Proliferation of IoT
- Arrival of Smart Mobility Society
- Increasing need for safety, security and comfort



Architectural Glass

Value creation based on energy saving & generation, health & safety, design & visibility

↑ Low e coated glass



↑ Optiwhite™
(High transmission glass)

↑ Conventional glass

↑ Glass for thin film Solar panels

↑ MirroView™
(High reflection glass)

↓ Spacia™
(Vacuum glazing)

↑ Electrochromic glass
(Photo: View Dynamic Glass)

↑ Optiwhite™ used for Midtown Hibiya in Tokyo

Architectural

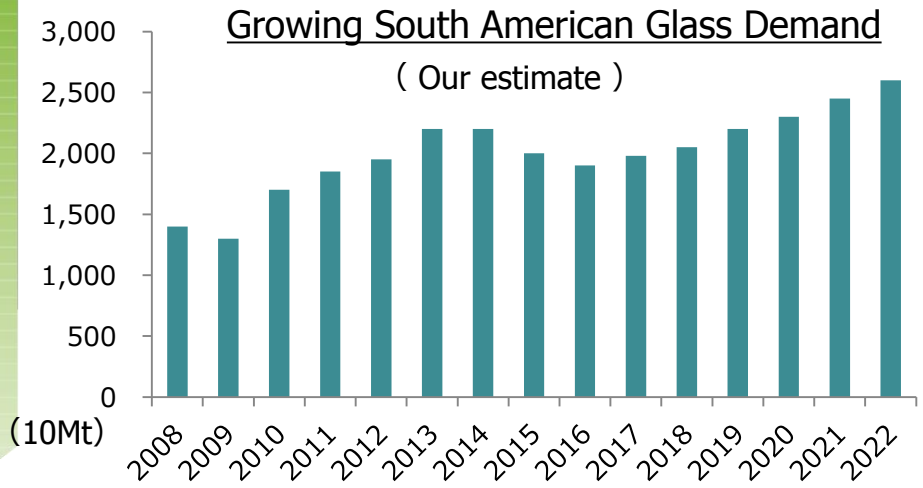
Capacity Expansion in Emerging Market (South America)

NSG GROUP

Investing in new float line in Argentina, leveraging 80 years of business experience and solid market position in South America

Summary

- Facility: 2nd float line for VASA * (capacity: 900 ton/day)
- Investment: USD200 m
- Site: Cardales (near Buenos Aires)
- Market: Argentina and neighboring countries
- Start up planned in first half of 2020

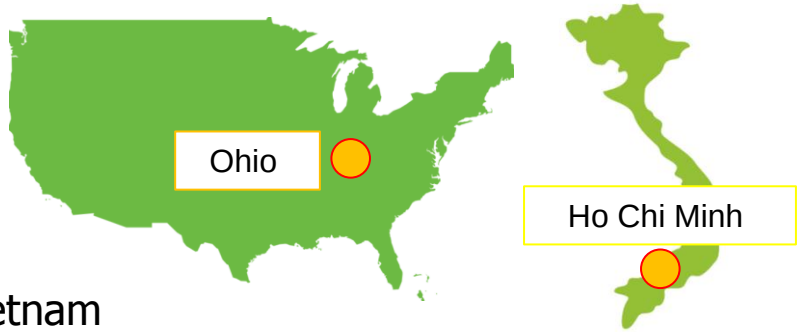


Architectural

Thin-film Solar Glass Capacity Expansion

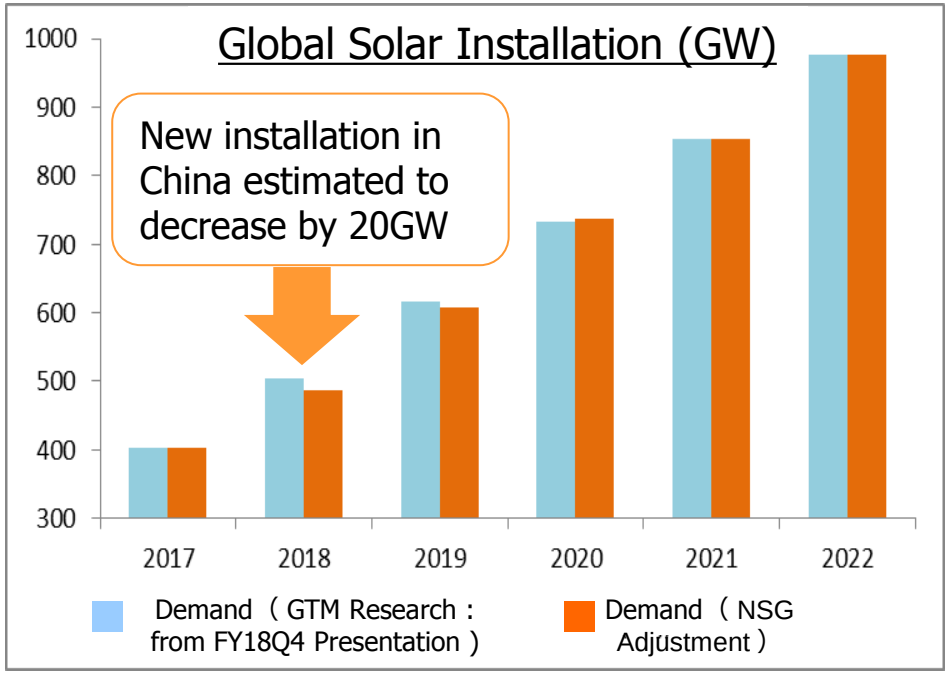
Expanding production facilities of growing Thin-film Solar Glass

- A total of 38 billion yen will be invested by the fiscal year ending March 2021
- Added 2 float lines with online coater
  - Renovation and restart of a float in Vietnam
  - New float line installed in North America



Med- and long-term growth

- Solar panel demand is growing in the medium to long term despite policy change in China affecting global demand in 2018/19



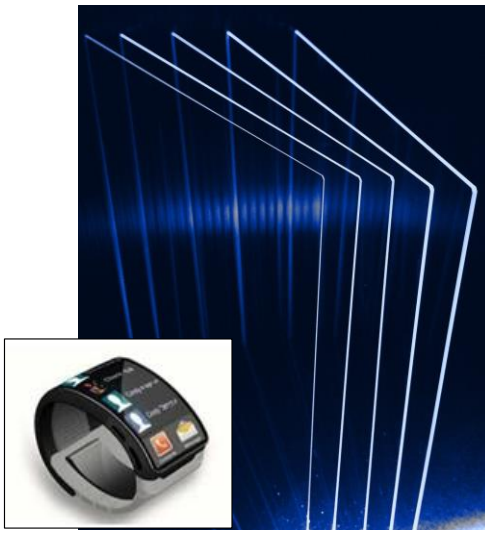
*Thin-film Solar Glass : Refer to slide 53

Architectural

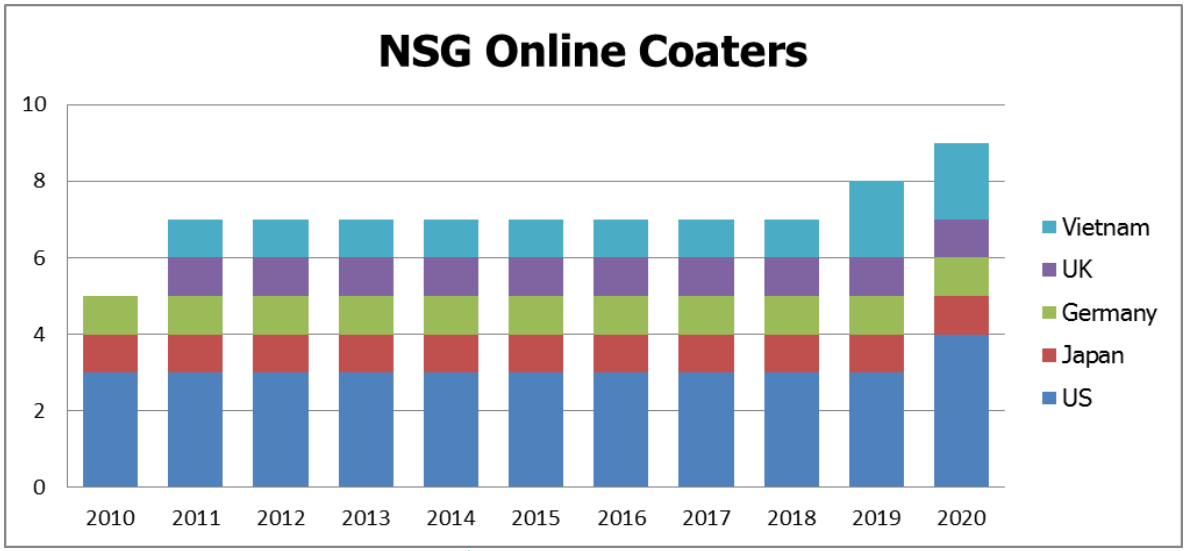
Growth of Online-coated Products

Function	Use
Conductivity	Heating glass
	Transparent conductive film for touch panels
	Transparent conductive film for thin film solar panels
Infrared reflection	Heat insulation glass
	Heat blocking glass
	Low e glass

Automotive application (Low e glass)



Super thin NSG **TEC™**



Architectural

Energy-saving Regulations – Growth Opportunity

- In response to heightening calls for CO2 emission reduction, governments across the globe have been tightening building energy-saving regulations and introducing zero-emission building targets.
- Behind in energy saving, the private sector including offices and houses are now adopting more functional windows such as triple grazing with low e coating instead of double glazing or single pane windows. Windows equipped with photovoltaics (BIPV) may pave its way into buildings soon.

<Zero Energy Building Targets>

Japan (Commercial buildings)
- 2020: All new public buildings
- 2030: Net zero of total of new buildings

Japan (Houses)
- 2020: All new standard houses
- 2030: Net zero of total new houses

BIPV (Building Integrated Photovoltaics)

Spacia™ (Vacuum glazing)

USA
- 2030: All new commercial buildings
- 2050: All commercial buildings

EU
- 2018: All new public buildings
- 2020: All new buildings

UK
- 2016: All new houses
- 2018: All new public facilities
- 2019: Zero carbonization for all commercial buildings

Automotive Glass
Value creation along with advanced automotive technologies (OE/AGR) *

* OE: Original Equipment AGR: Automotive Glass Replacement

Photo on bottom right: Licensed by Matzda

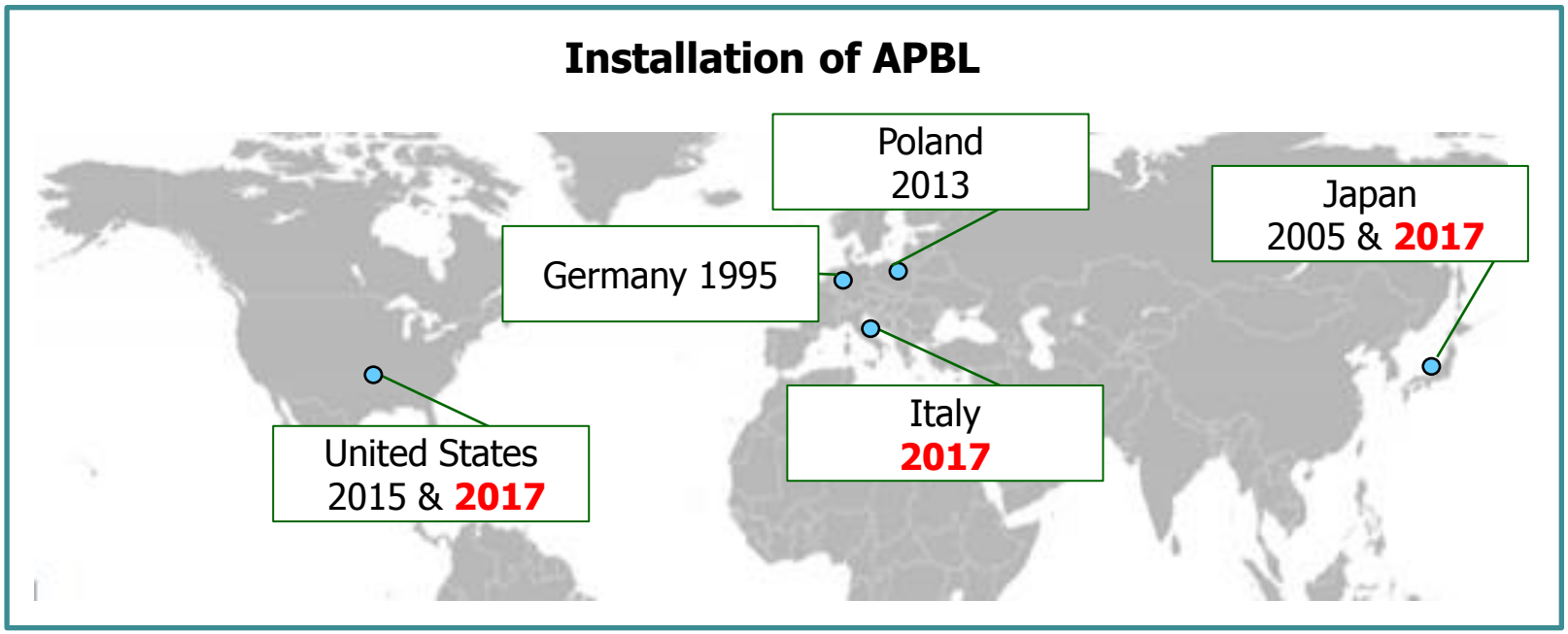
WS: Windshield; ISS: Idling stop & start; SL: Side light
ADAS: Advanced driving assistance system

Automotive

Respond to automotive innovation

Expanding press equipment for high precision windshields manufacturing globally

- With the advancement of automotive technology such as ADAS and HUD, highly accurate front glass molding that needs increase
- New lines of APBL (Advanced Press Bending for Laminated) glass started in Japan, Europe and the US in FY2018.
- Developed in house, and started production in Germany in 1995, ahead of competitors



Automotive

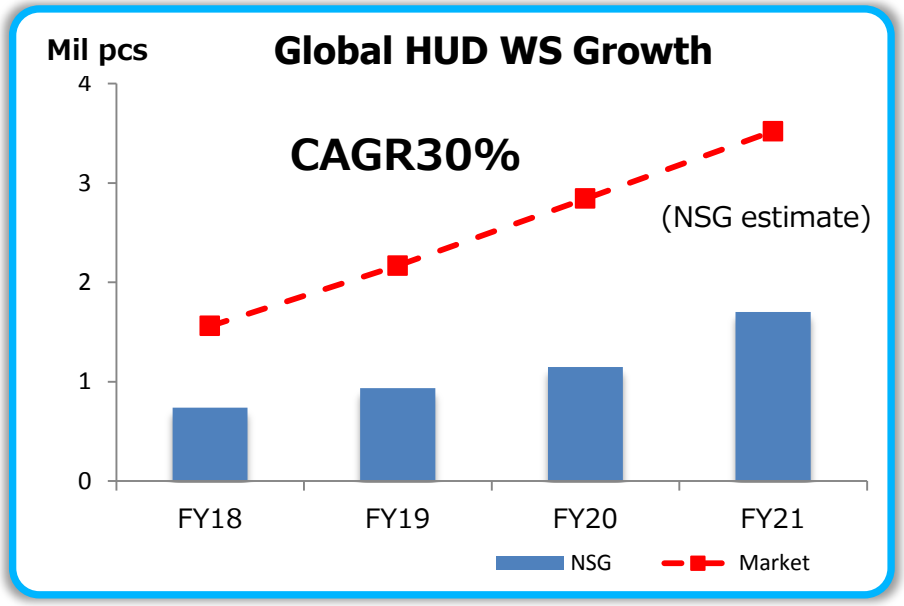
High precision glass required for ADAS · HUD

Accelerating glass demand for ADAS (Advanced Driver Assistance System)

- Many of ADAS features rely on cameras mounted to windshields
- High precision windshields required for proper sensing (OE and AGR)

High precision windshields also required for HUD (Head Up Display)

- Adopted for LEXUS LS windshield with a largest HUD and a pickup truck of GM (GMC Sierra)



Courtesy of TOYOTA Global Newsroom

Automotive

Value of AGR business

Working from wholesale to retail business, providing value to our customers

- Availability & product range
- Well-established wholesale network
- Customer focused services

ADAS calibration
- Impact of ADAS enabled us to offer new services

● Opportunity :

ADAS systems often require calibration of the cameras after windshield replacement

● Our Business

- Opti-Aim™ developed to support our customers in the US
- Training services for ADAS calibration are offered in South America

By OE Tech
Opti-Aim™
Your Calibration Tool

Technical Glass
Unique products and new business opportunities

glanova

↑ Super Glass Paper

↑ METASHINE™

↑ Glass cord

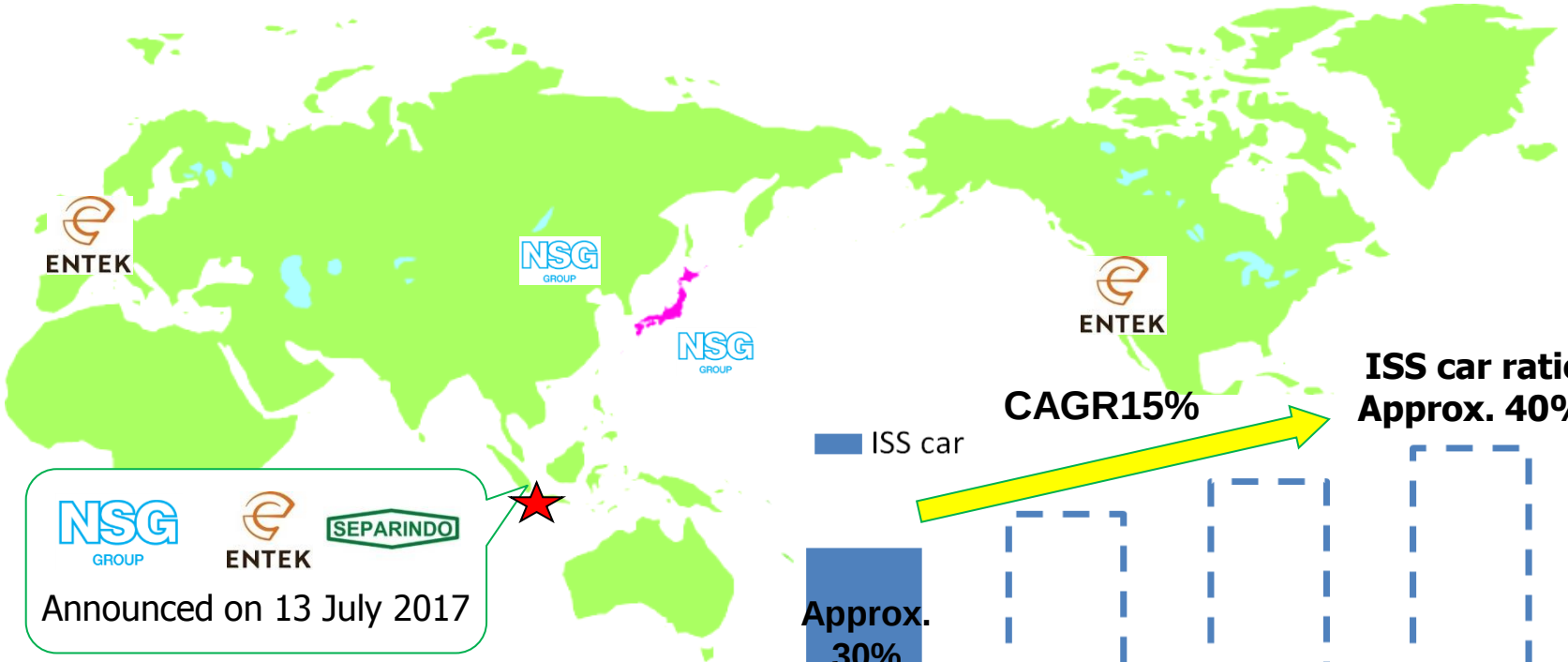
↑ GLASSFLAKE

↑ SELFOC ® Lens Array

← Battery separators
(Left : PE separator)
(Right : AGM separator)

Technical

Battery Separator Business Development with Strategic Alliance



Expand supply for catering to growing lead-acid batteries, including ISS batteries

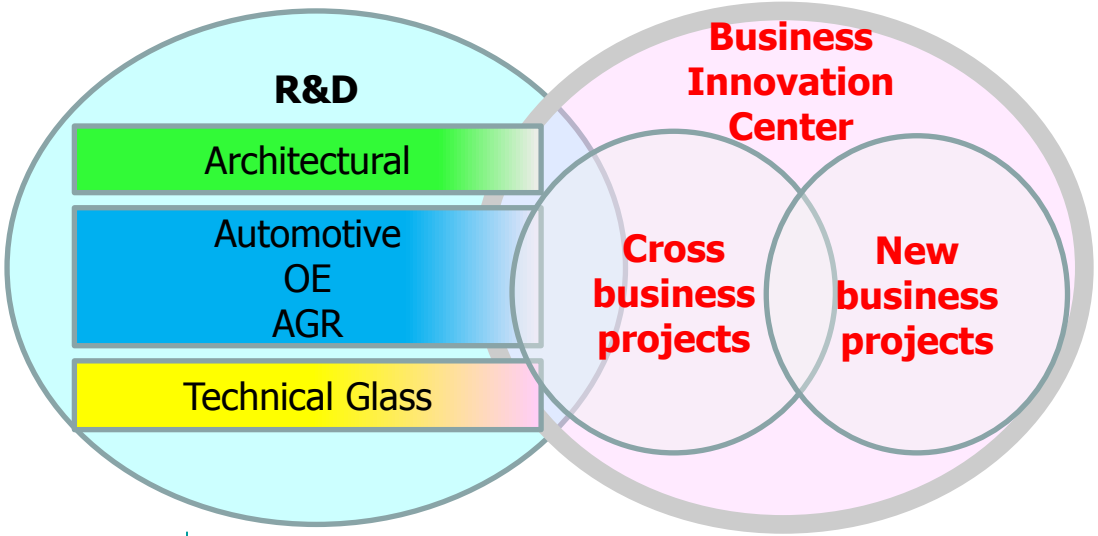
Aim for a world leading supplier, leveraging on technological, commercial and manufacturing strengths.

New site location: Production started in FY19Q4

New Business Development and Creation of Customer Value

Business Innovation Center (BIC) Established in July 2018

- An organization tasked to lead the Group's growth strategy, in developing new businesses customized for needs of different regions and markets
- External talent, Satoshi Ishino, Chief Development Officer, brought in to lead the organization, with the relevant new business experience to provide stimulus and a fresh
- To improve innovation and customer orientation throughout the Group



New Product Opportunities

Proliferation of IoT and Arrival of Smart Mobility Society

- Opportunities in growth of key technologies such as network infrastructure and connected devices

Smart cities
(Cities, houses, infrastructure)

Healthcare
(Wearable devices, medicine)

Smart Factories
(AI, robots)

Connected cars
(Autonomous driving, EVs)

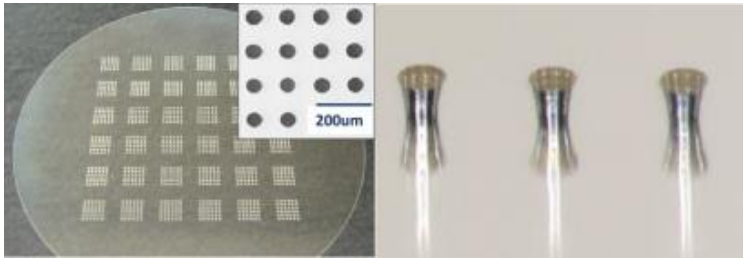
New Products

Information Devices

Displays

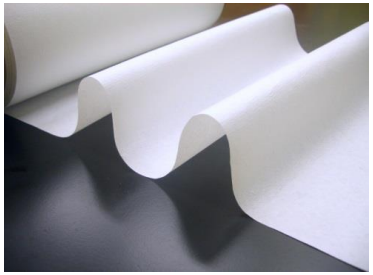
Separators

Functional Glass Cords



Through Glass Via (TGV)

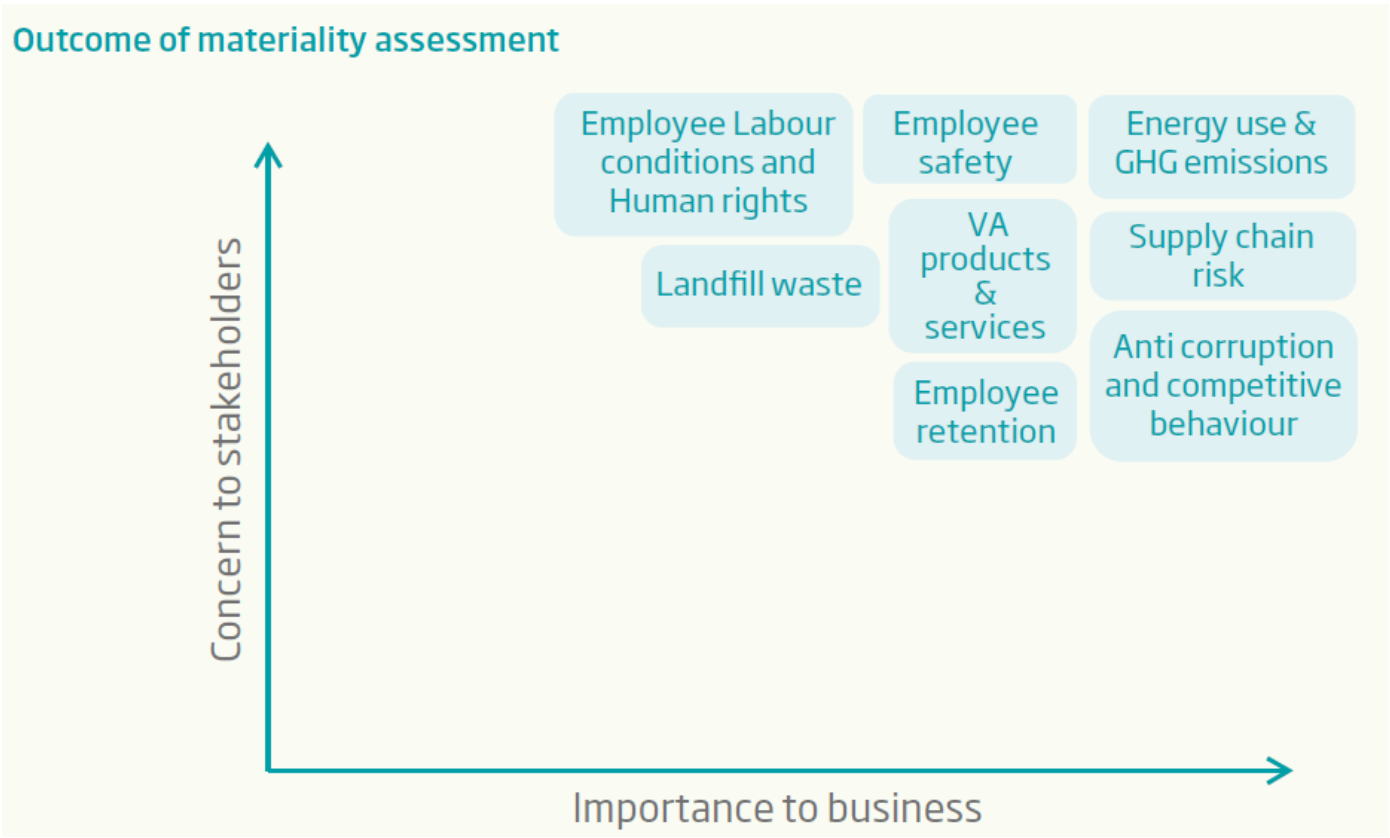
Mobile DNA Testing Equipment



Super Glass Paper

IV. ESG* for Creating Value

Materiality for NSG Group



* ESG: Environment, Social, Governance

Sustainability Targets & Progress

Quantitative targets and KPIs set based on identified materiality

	FY17/18 Progress	FY20 Targets
Safety	• 6% yoy improvement in FY18 with no fatalities	• Reduce Significant Injury Rate by 10% with no fatalities
Waste	• Exceeded target in FY18 with 10kt (33%) reduction	• Reduce waste to landfill by 12kt (40% reduction vs FY14)
Energy & CO2 reduction	• Achieved 1% reduction	• 1% yoy reduction in Co2 intensity across glass manufacturing operation
Sustainable VA products	• 44% in FY18	• Increase VA sales ratio to >50% • Demonstrate environmental and social benefit of products
Responsible sourcing & transportation	• 65% of key suppliers have agreed to SCoC etc.	• 10% yoy increase in Supplier Code of Conduct acceptance by key suppliers etc.
Employees	• Overall engagement score increased by 4% • 279 action plans created and 84% are on track	• Improve NSG engagement score by 5pts etc. • Increase inclusion & diversity awareness by training managers
Ethics & compliance	• The online code training was completed • Completed hotline communication	• Review, develop and enhance Ethics and Compliance educational modules, resources and overall culture, etc.

Corporate Governance
– Framework to bolster sustainable growth

Diversity & independence of Board of Directors – material decision making and supervision of executives, representing shareholders

- Clear separation of roles between Board chairman and CEO
- Robust succession plan based on nomination process

Key developments

2008: "Company with Committees"; 4 Independent External Directors

2012: All 3 Committees chaired by Independent External Director

2013: The Board chaired by Independent External Director

2014: Share purchase element in LTIP; shareholding targets for EOs

2015: Publication of NSG Group Corporate Governance Guidelines

2016: 1st Effectiveness Evaluation; compliance with all the principles of CGC

Board Effectiveness Evaluation

Led by Independent External Directors; the following action plans have been set and followed up

1) Deeper discussion on strategic direction including ESG; and
2) More robust risk management

Corporate Governance
– The Board & Committees all chaired by Independent External Director

General Meeting of Shareholders

Election / Dismissal

Director Nomination

Board of Directors

Chaired by Günter Zorn
(Former Executive Vice President North Pacific, DHL)

Executive Officer Nomination

Nomination Committee

Chaired by Masatoshi Matsuzaki

(Former CEO of Konica Minolta)

Appointment / Dismissal

Supervision

Audit

Audit Committee

Chaired by Toshikuni Yamazaki

(Former Executive Vice President Finance, JFE Holdings)

Executive Officers

Led by Shigeki Mori
President & CEO

Compensation Determination

Compensation Committee

Chaired by Yasuyuki Kimoto

(Former Chairman of Olympus)

Board of Directors
– Robust corporate governance with four Independent External Directors

Günter Zorn
External Director
Chairman of the Board

Toshikuni Yamazaki
External Director

Yasuyuki Kimoto
External Director

Masatoshi Matsuzaki
External Director

Yuji Takei
External Director

Shigeki Mori
Director
President
Chief Executive Officer

Clemens Miller
Director
Executive Vice President
Chief Operating Officer

Kenichi Morooka
Director
Executive Vice President
Chief Financial Officer

Nomination Committee	Audit Committee	Compensation Committee
Masatoshi Matsuzaki (Chairperson) Günter Zorn; Toshikuni Yamazaki; Yasuyuki Kimoto; and Shigeki Mori	**Toshikuni Yamazaki (Chairperson)** Günter Zorn; Yasuyuki Kimoto; and Masatoshi Matsuzaki	**Yasuyuki Kimoto (Chairperson)** Günter Zorn; Toshikuni Yamazaki; Masatoshi Matsuzaki; and Shigeki Mori

Executive Officers
– International management team

Shigeki Mori
President and Chief Executive Officer (CEO)

Clemens Miller
Executive Vice President and Chief Operating Officer (COO)

Kenichi Morooka
Executive Vice President and Chief Financial Officer (CFO)

Jochen Settelmayer
Head of Architectural Glass

Tony Fradgley
Head of Automotive AGR and Head of Automotive OE

Phil Wilkinson
Chief Information Officer and Global Head of Automotive AGR

Hiroshi Nishikawa
Head of Technical Glass

Yutaka Nakashima
Chief Human Resources Officer

Koichi Hiyoshi
Chief Legal Officer and Company Secretary

Satoshi Ishino
Chief Development Officer
Head of Business Innovation Centre

Hiroshi Kishimoto
Chief Risk Officer (CRO)

Environment: Reducing CO2 Emission

For reducing CO2 emission

- One percent year on year reductions in CO2 across glass manufacturing operations
- Supplying low e and other energy saving products, contributing to the reduction of greenhouse gas emissions and mitigation of the effects of climate change

FY2018/2019 Actions

- Science based targets (SBT) for greenhouse gas reduction:

  Committed in August 2018; targets being developed
- Shift to renewable energy

Green Energy

In Europe, contract in place to switch 50 percent of electricity to green energy

Solar Energy

Planning to install PV panels at Lathom (UK), Northwood (US) and other Group sites

Architectural DS site in Kyushu, Japan

*ESG: Environment, Social and Governance

Social

Employees

- Global and regional talent development programs and succession planning
- Leadership development programs to identify and develop talent pool
- Competency model to define expectations for Group employees
- Promotion of inclusion & diversity

Supply Chain

- Based on "Supplier Code of Conduct" issued in 2009, more than 350 suppliers audited by FY2018 for its compliance, with coverage increasing 20 percent p.a.

Ethics and Compliance

- Rolling out "Code of Ethics" and maintaining 100% annual training completion
- Communications on Ethics & Compliance Hotline and encouraging reporting

NSG Foundation

- NSG Foundation was established to commemorate the 60th anniversary of NSG with the aim to contributing to the promotion of R&D activities on inorganic materials through research grants, which amounts to JPY1,610 million for 1,237 projects cumulatively.

NSG Integrated Report Published

Refer to the NSG Group Integrated Report 2018 for sustainability details:
http://www.nsg.com/en/investors/ir-library/annual-reports

NSG Group Integrated Reports (Annual Reports)

Integrated Report 2018 [PDF 4.55MB/46Pages]
Sustainability Data Book 2018 [PDF 1.44MB/21Pages]
Annual Consolidated Financial Statements 2018 [PDF 1.40MB/70Pages]

V. Capital Allocation

Redemption of Class A Shares Started (Acquisition & Cancellation)

Considering the continued improvement in net profitability, the Group started to redeem a portion of its Class A shares from December 2018

Number of shares has been acquired and cancelled: 5,000

Amount: JPY5,800m including JPY750m premium and JPY50m dividends

Date of acquisition and cancellation: 7 December 2018

Number of outstanding shares after redemption:
35,000 (Issued value: JPY35,000m)

Redemption Policy:

- The Group's policy is to redeem Class A Shares at the earliest possible timing, considering net profit and preferred and ordinary dividends, while maintaining financial stability.
- By reducing the outstanding shares, the amount of preferred dividends and redemption premium is to be reduced.

Dividend Policy

The Group's dividend policy is to secure dividend payments based on sustainable business results.

Once Class A Shares redeemed, the Group aims to maintain a consolidated dividend payout ratio of 30 percent.

Based on the Group's performance recovery, it decided to resume ordinary dividend payment

	FY2018 (year-end)	FY2019 (Q2 *)	FY2019 (Q4 forecast)	FY2019 Total forecast
Ordinary (JPY/share)	20	-	20	20
Commemoration (JPY/share)	-	10	-	10
Total Ordinary Dividend	20	10	20	30
Dividend Amount (JPY bn) (Ordinary Dividends) (Preferred Dividends)	3.6 (1.8) (1.8)	2.0 (0.9) (1.1)	2.8 (1.8) (1.0)	4.8 (2.7) (2.1)
Consolidated Payout Ratio (Ordinary)	42%			23%

* Centennial commemoration dividend

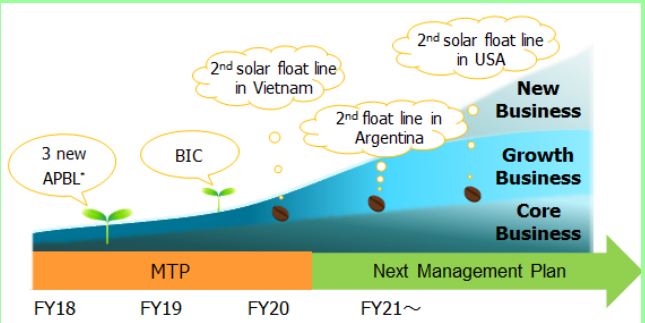
"VA+Growth" – Financial Sustainability

Mid- to long-term policy to improve financial sustainability remains unchanged; Allocation of increased profit to be balanced among financial improvement, growth and return to shareholders

Operating Profit

Net Profit

Free Cash Flow



Redeem Class A share
(Pref dividend & premium reduction)

Reduce Debt
(Finance expense reduction)

Invest in Growth Opportunities

Make Return to Shareholders

Shareholders' Equity

Shareholders' Value

Credit Ratings

Toward Further Growth

Notice

The projections contained in this document are based on information currently available to us and certain assumptions that we consider to be reasonable. Hence the actual results may differ. The major factors that may affect the results are the economic and competitive environment in major markets, product supply and demand shifts, currency exchange and interest rate fluctuations, changes in supply of raw materials and fuel and changes and laws and regulations, but not limited.

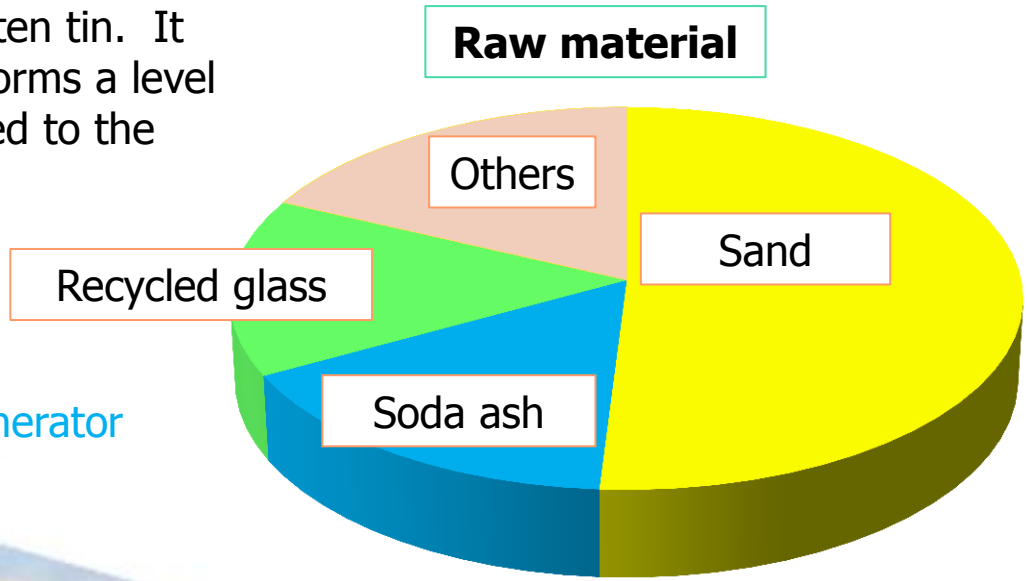
Nippon Sheet Glass Company, Limited

VI. Appendix

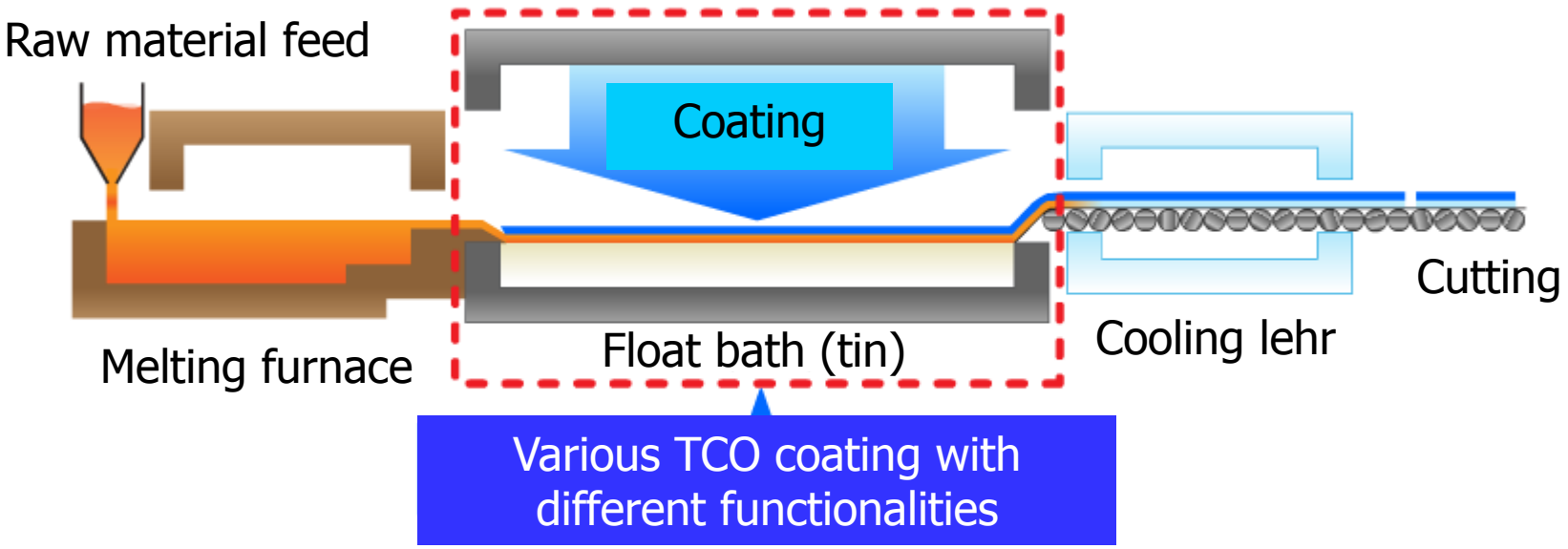
1. Manufacturing Process

Float Process

Float glass:
Molten glass is poured continuously from a furnace onto a shallow bath of molten tin. It floats on the tin, spreads out and forms a level surface. This method was introduced to the world as the float process in 1959.



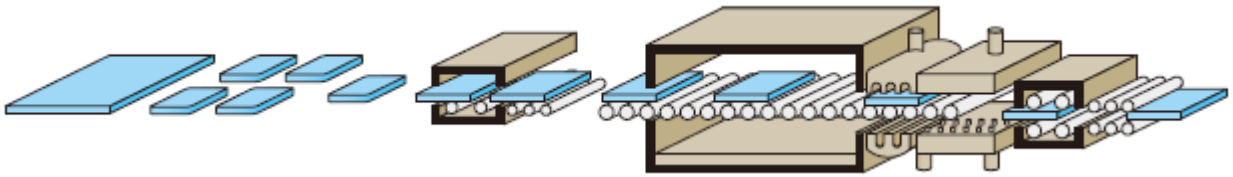
Online Coating

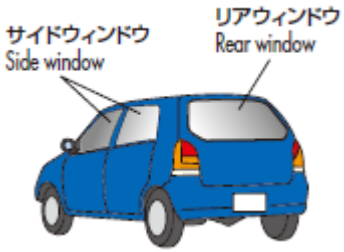


- Thin, uniform metallic oxide film deposited over glass while being formed inside the float bath
- Cost competitive, available in large size
- Durable: suitable for further processing & for use as an external glass pane
- Versatile: architectural, solar & automotive applications
  - Technical applications include thin or curved displays, OLED lighting and thin-film sensors

Automotive Glazing – Toughening

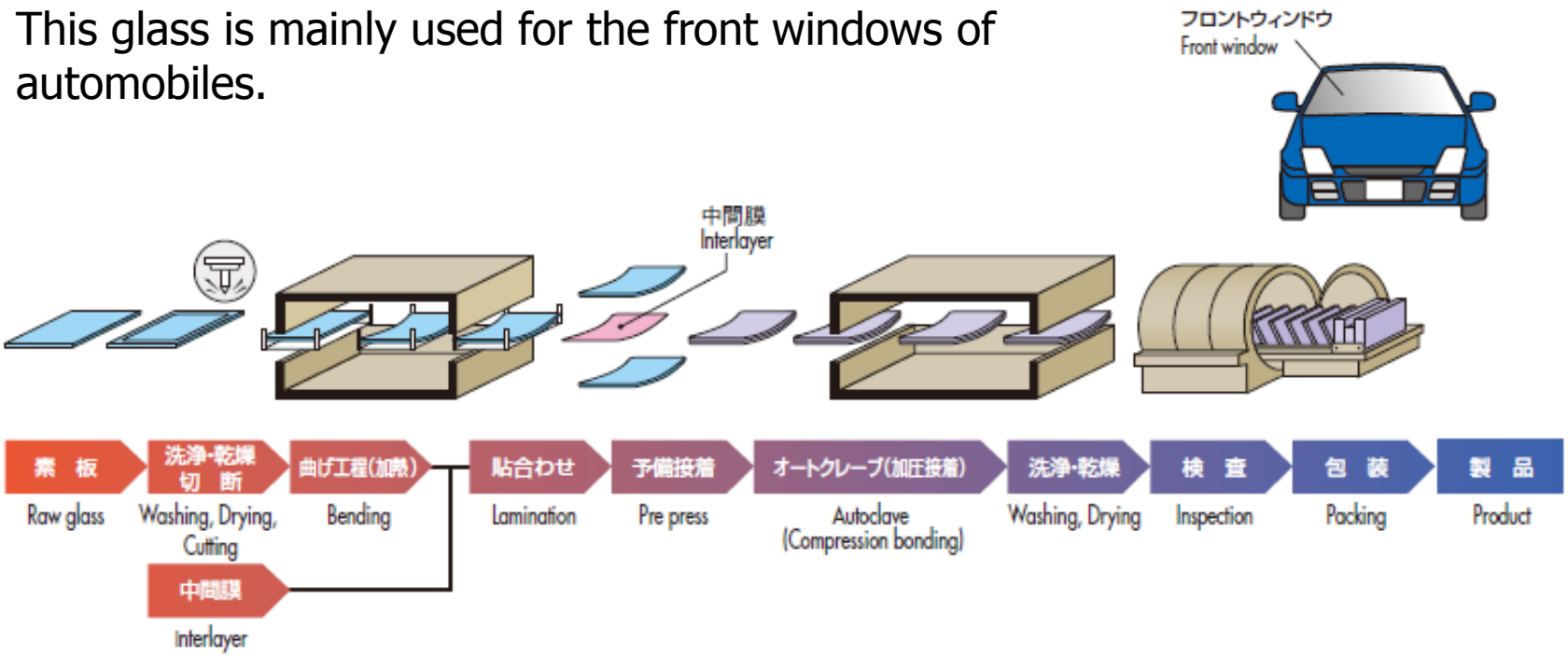
Toughened Glass:
Flat glass is placed in a tempering oven, and heated to between 650 and 700°C, which is near the glass softening temperature.
Then the glass is quenched by blowing air evenly on both sides, causing the surface to harden first, with the inside cooling and shrinking later. The result is the formation of a stable compressive stress layer at the surface, and the glass is 3 to 5 times more resistant to impact than ordinary glass.
This glass is mainly used for the side and rear windows of automobiles.





Automotive Glazing – Laminating

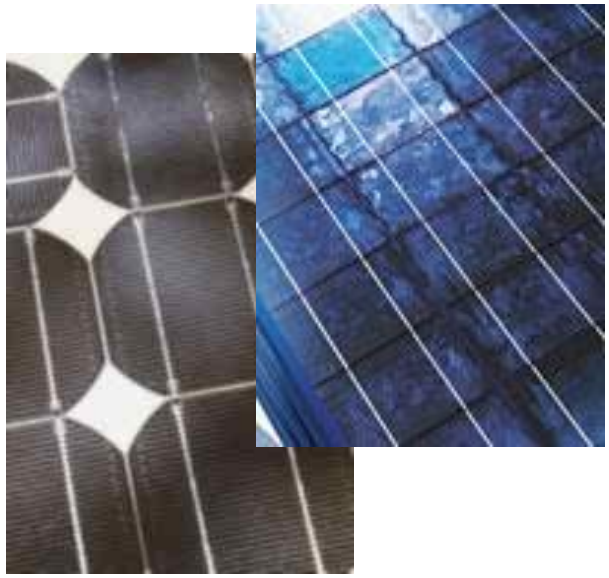
Laminated Glass:
Laminated glass consists of two pieces of glass with a sandwich of transparent plastic interlayer.
This is then placed into an air-pressure autoclave, and treated at high temperature and pressure.
Some special products are made with 3 or more sheets of glass.
This glass is mainly used for the front windows of automobiles.



Solar Panels & Glass: Crystalline vs Thin Film

Crystalline Silicon Sola Panels

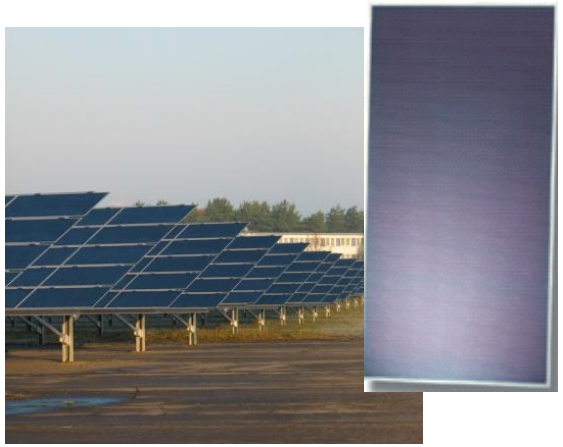
High efficiency, Chinese manufacturers



Low iron rolled glass + AR coating, mainly for cover glass

Thin film solar panels

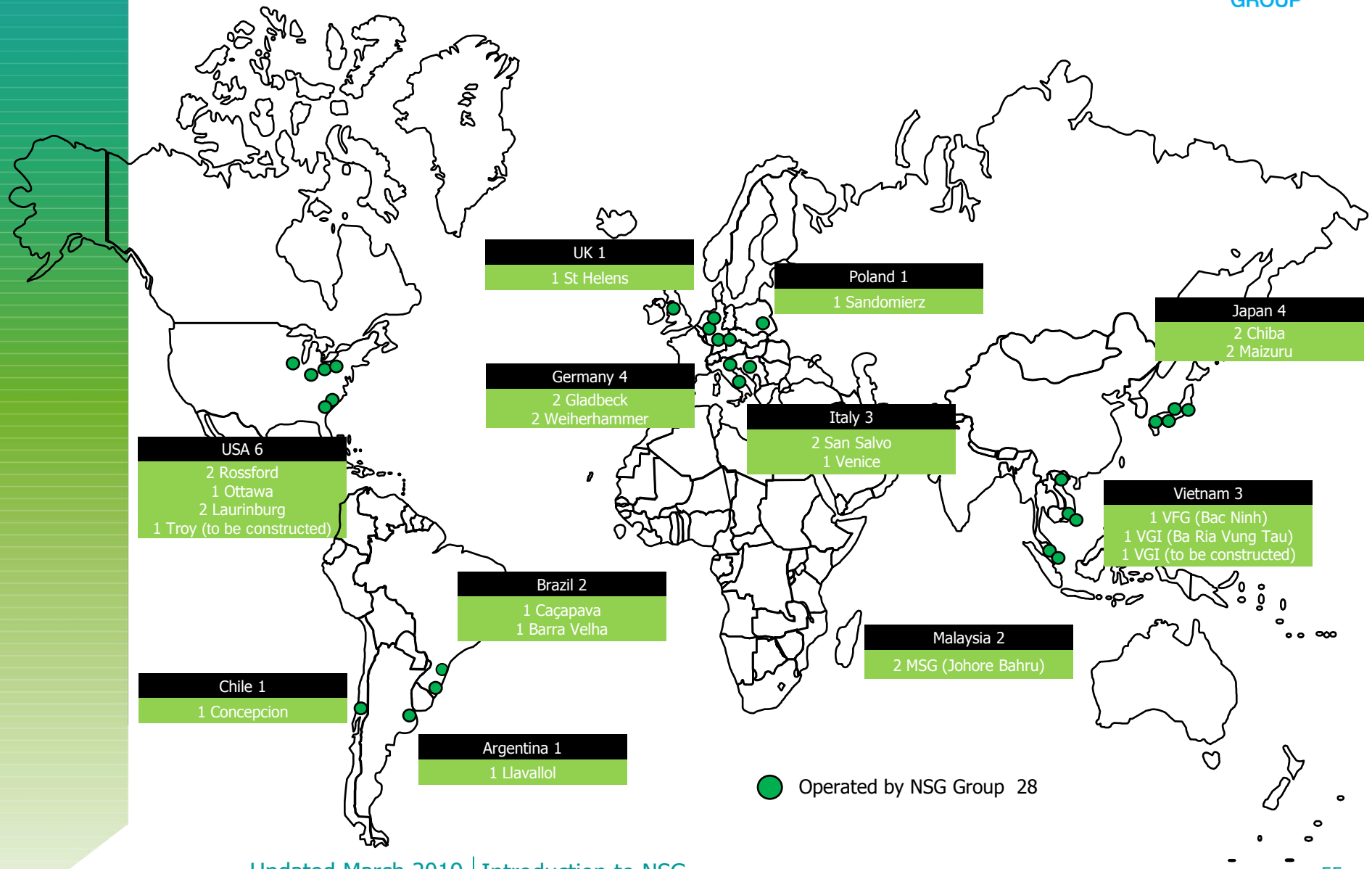
Total cost competitiveness, strength in large size and high temperature applications



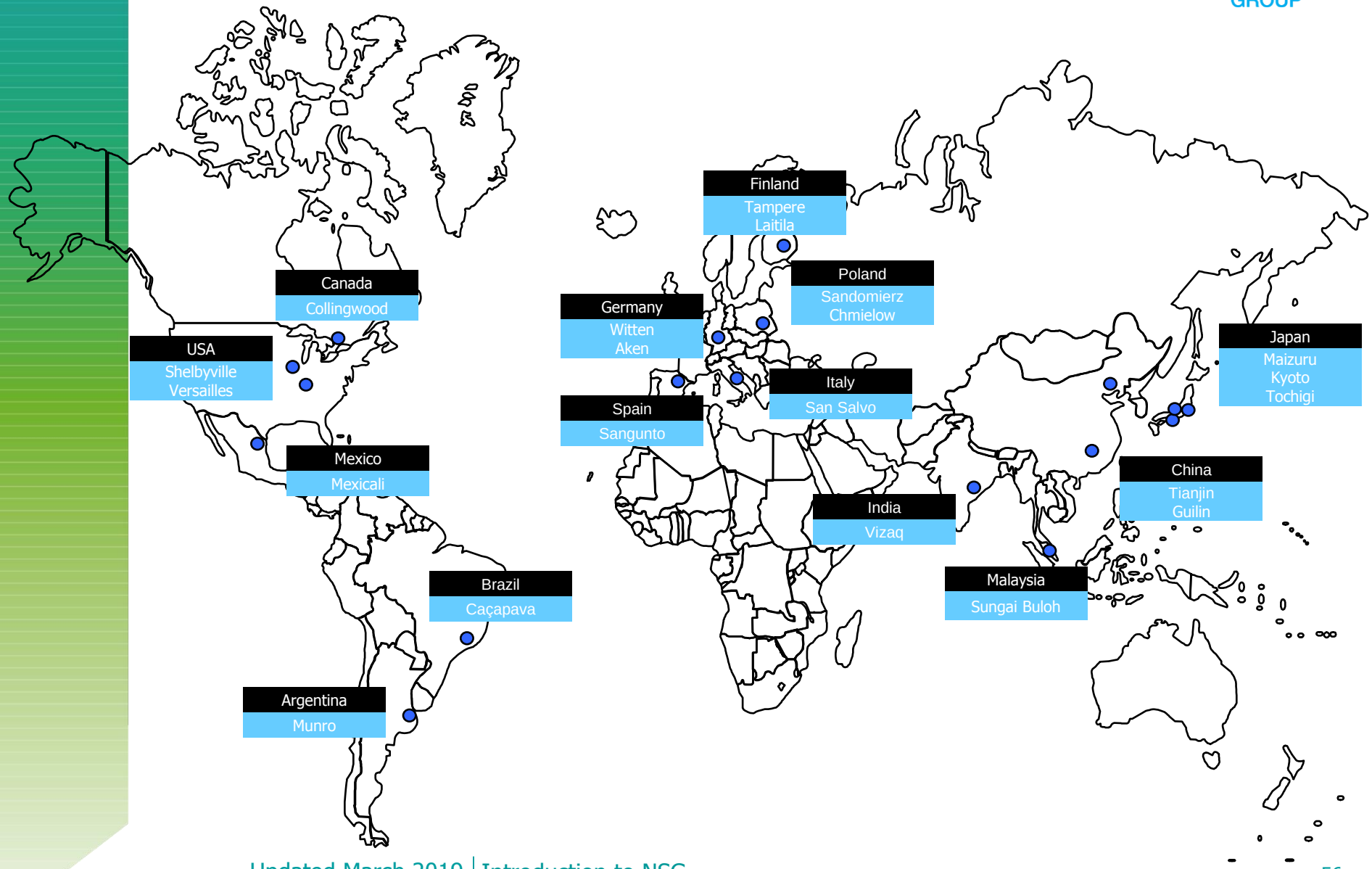
TCO coated flat glass, forming part of solar cell

2. Operational Footprint

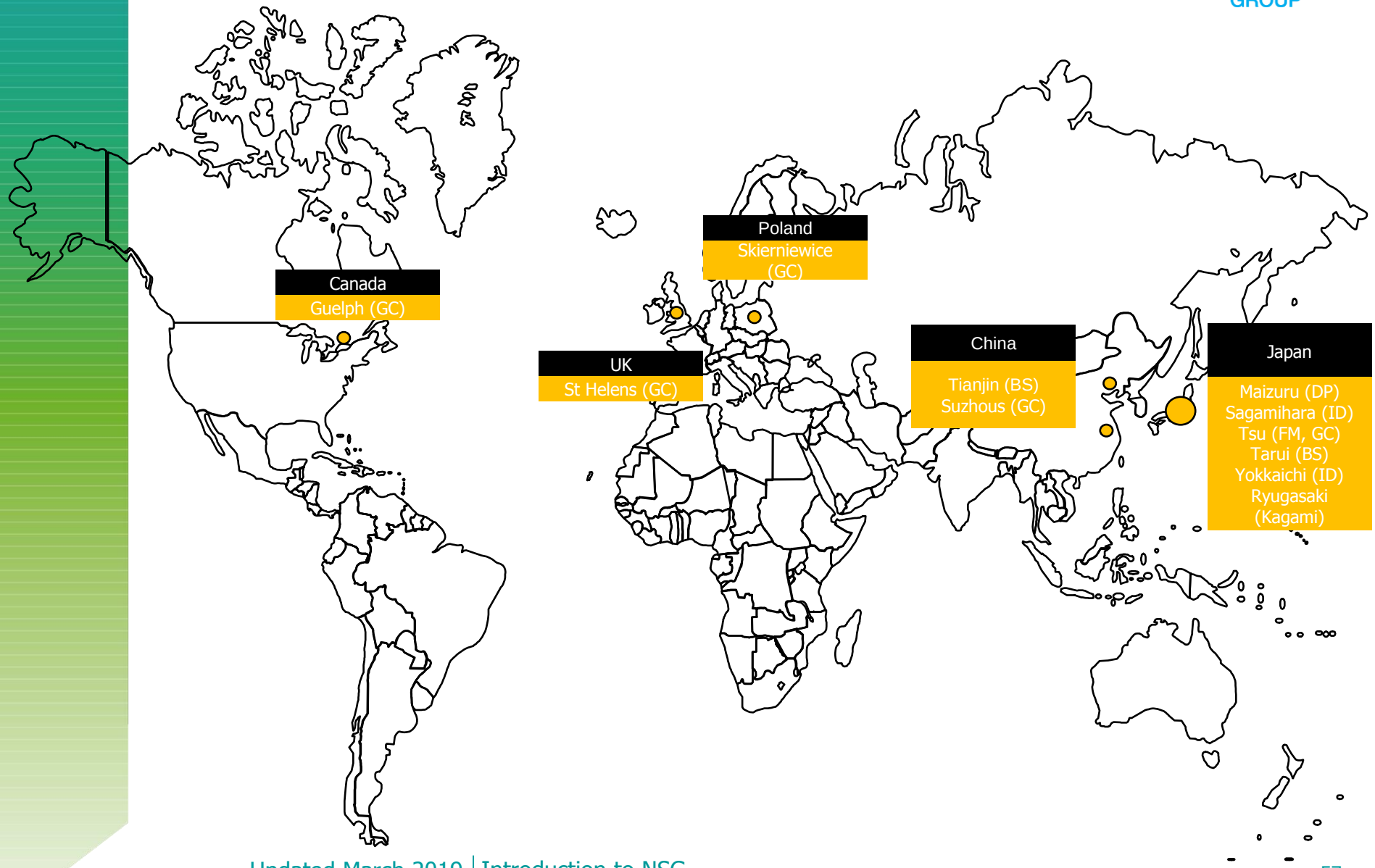
Global Float Operations



Global Automotive Operations



Global Technical Glass Operations



4. Financial Data

Financial Data (1)

		FY14	FY15	FY16	FY17	FY18
Revenue	¥ billion	606.1	626.7	629.2	580.8	603.9
Architectural		240.6	252.9	262.6	237.7	241.7
Automotive		305.1	314.0	316.3	296.6	312.7
Technical Glass		59.4	58.7	49.5	46.1	48.4
Others		1.0	1.1	0.8	0.4	1.1
Trading profit	¥ billion	22.5	25.3	27.2	33.1	37.7
Architectural		11.0	17.0	24.6	27.0	26.2
Automotive		11.2	9.4	9.8	12.7	14.3
Technical Glass		5.9	4.9	0.3	1.8	5.4
Others		-5.6	-6.0	-7.5	-8.4	-8.2
Operating profit ratio to revenue	%	2.4%	2.7%	3.1%	5.1%	5.9%
Architectural		4.6%	6.7%	9.4%	11.4%	10.9%
Automotive		3.7%	3.0%	3.1%	4.3%	4.6%
Technical Glass		9.9%	8.4%	0.5%	3.8%	11.1%
Exceptional items	¥ billion	-13.8	5.5	-35.1	2.9	-1.3
Finance expenses (net)	¥ billion	-16.9	-17.9	-18.2	-19.2	-14.6
Share of JVs and associates	¥ billion	1.0	0.4	-3.4	1.1	2.4
Income before income taxes/Profit before taxation	¥ billion	-15.1	4.8	-37.4	14.8	22.2
Net income/Profit attributable to owners of the parent	¥ billion	-16.6	1.7	-49.8	5.6	6.1

Note: Early IFRS adaption since FY2011

Financial Data (2)

		FY14	FY15	FY16	FY17	FY18
Assets	¥ billion	926.2	920.1	812.1	790.2	791.9
Interest-bearing debt	¥ billion	455.3	442.7	437.0	399.4	372.7
Shareholders' equity	¥ billion	184.0	175.7	103.1	124.1	134.3
Called up share capital	¥ billion	116.4	116.4	116.4	116.5	116.5
Net debt	¥ billion	379.1	374.1	381.0	313.3	306.5
EBITDA	¥ billion	54.4	57.8	60.3	62.1	66.2
Net debt/EBITDA		7.0x	6.5x	6.3x	5.0x	4.6x
Net debt/Equity ratio		2.0x	2.0x	3.4x	2.3x	2.2x
Shareholders' equity ratio	%	19.9%	19.1%	12.7%	15.7%	17.0%
Trading profit ratio	%	3.7%	4.0%	4.3%	5.7%	6.2%
Net cash flows from operating activities	¥ billion	17.9	24.6	21.8	30.4	37.2
Net cash flows from investing activities	¥ billion	-17.1	-23.2	-26.4	-10.2	-20.4
Cash flow before financing activities	¥ billion	0.8	1.4	-4.6	20.3	16.8
Capital expenditures	¥ billion	31.6	36.6	28.2	28.0	33.1
R&D costs	¥ billion	7.9	8.2	9.8	8.5	9.1
Depreciation and amortization	¥ billion	40.4	41.7	40.9	32.2	32.0
Numbers of shares of common stock*1		903,551	903,551	903,551	90,366	90,487
Earnings per share*1	¥	-18.4	1.9	-55.2	62.0	47.9
Book value per share*1	¥	203.78	194.6	114.14	941.76	1033.24
Cash dividends Yen*1	¥	0	0	0	0	20
Stock price (High)	¥	154	149	142	951	1080
Stock price (Low)	¥	90	94	64	600	743
*1: Effective as from 1 October 2016, the Company conducted a share consolidation in which every ten common shares						

Note: Early IFRS adaption since FY2011

Financial Data (3)
- Exchange rate trend① -

Average rates used

	FY14	FY15	FY16	FY17	FY18
GBP	159	177	181	142	147
EUR	134	139	132	119	130
USD	100	110	120	108	111
BRR	44.4	44.5	33.5	32.8	34.4
ARS	16.27	13.10	11.35	7.22	6.30

Closing rates used

	FY14	FY15	FY16	FY17	FY18
GBP	171	178	161	139	150
EUR	141	130	127	119	132
USD	103	120	113	111	106
BRR	45.5	37.3	31.3	35.5	32.1
ARS	12.84	13.66	7.69	7.24	5.30

Financial Data (3)
- Exchange rate trend② -

NSG GROUP

Average rates used

	FY17	FY18				FY19		
	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
GBP	142	142	144	146	147	149	147	146
EUR	119	122	126	128	130	131	130	129
USD	108	111	112	111	111	110	111	111
BRR	32.8	34.6	35.0	34.8	34.4	30.4	29.3	29.3
ARS	7.22	7.06	6.74	6.65	6.30	4.70	4.01	3.62

Closing rates used

	FY17	FY18				FY19		
	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
GBP	139	146	151	152	150	145	148	141
EUR	119	128	132	136	132	128	132	127
USD	111	112	113	113	106	111	113	111
BRR	35.5	34.0	35.4	33.9	32.1	28.6	28.2	28.5
ARS	7.24	6.81	6.42	6.03	5.30	3.94	2.84	2.93

5. Class A Shares Detail

Class A Shares Detail

Amount (No of Shares)	JPY40 billion (40,000 shares)				
Planned Allottees (Amount & No of shares)	Japan Industrial Solutions Fund II				JPY20 billion (20,000 shares)
	UDS III Corporate Mezzanine Limited Partnership				JPY10 billion (9,000 shares)
	UDS IV Corporate Mezzanine Limited Partnership				JPY10 billion (11,000 shares)
Voting Rights	None				
Preferred dividend rate (Cumulative)	31 March 2017 ~ 31 March 2018	4.5%			
	1 April 2018 ~ 31 March 2020	5.5%			
	1 April 2020 ~	6.5%			
Call option (Company's option) – Consideration	Cash		Put option (Planned Allottees' option) – Consideration	Ordinary Shares	
Call option (Company's option) – Redemption	1 April 2018 or later		Put option (Planned Allottees' option) – Redemption	1 July 2020 or later, unless conversion restriction removal reason exists	
Call option (Company's option) – Redemption Amount per share	Paying-in amount per share + cumulative accrued dividend amount + daily prorated accrued preferred dividend amount + redemption premium <Redemption premium> 1 April 2018 ~ 30 June 2018 : 1.08 1 July 2018 ~ 30 June 2019 : 1.15 1 July 2019 ~ 30 June 2020 : 1.22 1 July 2020 ~ 30 June 2021 : 1.29 1 July 2021 ~ 30 June 2022 : 1.36 1 July 2022 ~ : 1.43		Put option (Planned Allottees' option) – No. of Ordinary Shares to be Issued per Class A Share	(Paying-in amount per share X ordinary share redemption premium) / acquisition price <Ordinary share redemption premium> 1 April 2017 ~ 30 June 2017 : 1.05 1 July 2017 ~ 30 June 2018 : 1.08 1 July 2018 ~ 30 June 2019 : 1.15 1 July 2019 ~ 30 June 2020 : 1.22 1 July 2020 ~ 30 June 2021 : 1.29 1 July 2021 ~ 30 June 2022 : 1.36 1 July 2022 ~ : 1.43	
Design	• In principle, the Planned Allottees may not exercise their put option before 1 July 2020. • The Planned Allottees may exercise their put option for 4,000 or less Class A Shares, when the Company notifies the exercise of its call option for the entire outstanding Class A Shares.				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