

# NSG

GROUP



# **NSG Group**

## **FY2018 Annual Results**

**(from 1 April 2017 to 31 March 2018)**

Nippon Sheet Glass Company, Limited  
11 May 2018

## **Shigeki Mori**

**Chief Executive Officer**

## **Clemens Miller**

**Chief Operating Officer**

## **Kenichi Morooka**

**Chief Financial Officer**

# Agenda

1. FY2018 Financial Results
2. FY2018 Business Update
3. Dividends
4. FY2019 Forecast
5. Medium-term Plan (MTP) Phase 2 Update
6. Summary

# Agenda

1. **FY2018 Financial Results**
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# FY2018 Results Highlights

Revenue	JPY603.9 bn (+4%)	Strong market demand; positive impact from weaker yen
Trading profit	JPY37.7 bn (+14%)	Robust European markets; improved results in Technical Glass; continued benefit from operational improvements
Profit before taxation	JPY22.2 bn (+50%)	Significant improvement from reduced financial expenses; improvement in JVs
Profit attributable to owners of the parent	JPY6.1 bn (+9%)	Year-on-year improvement despite deferred tax write-down of JPY9.6 bn
Free cash flow	JPY16.8 bn	Achieving the target of more than JPY10 bn
Ordinary dividend	JPY20/share	Resuming dividend payment based on sufficient recovery of performance

Revenue and profit growth; Resumption of dividend

# Consolidated Income Statement

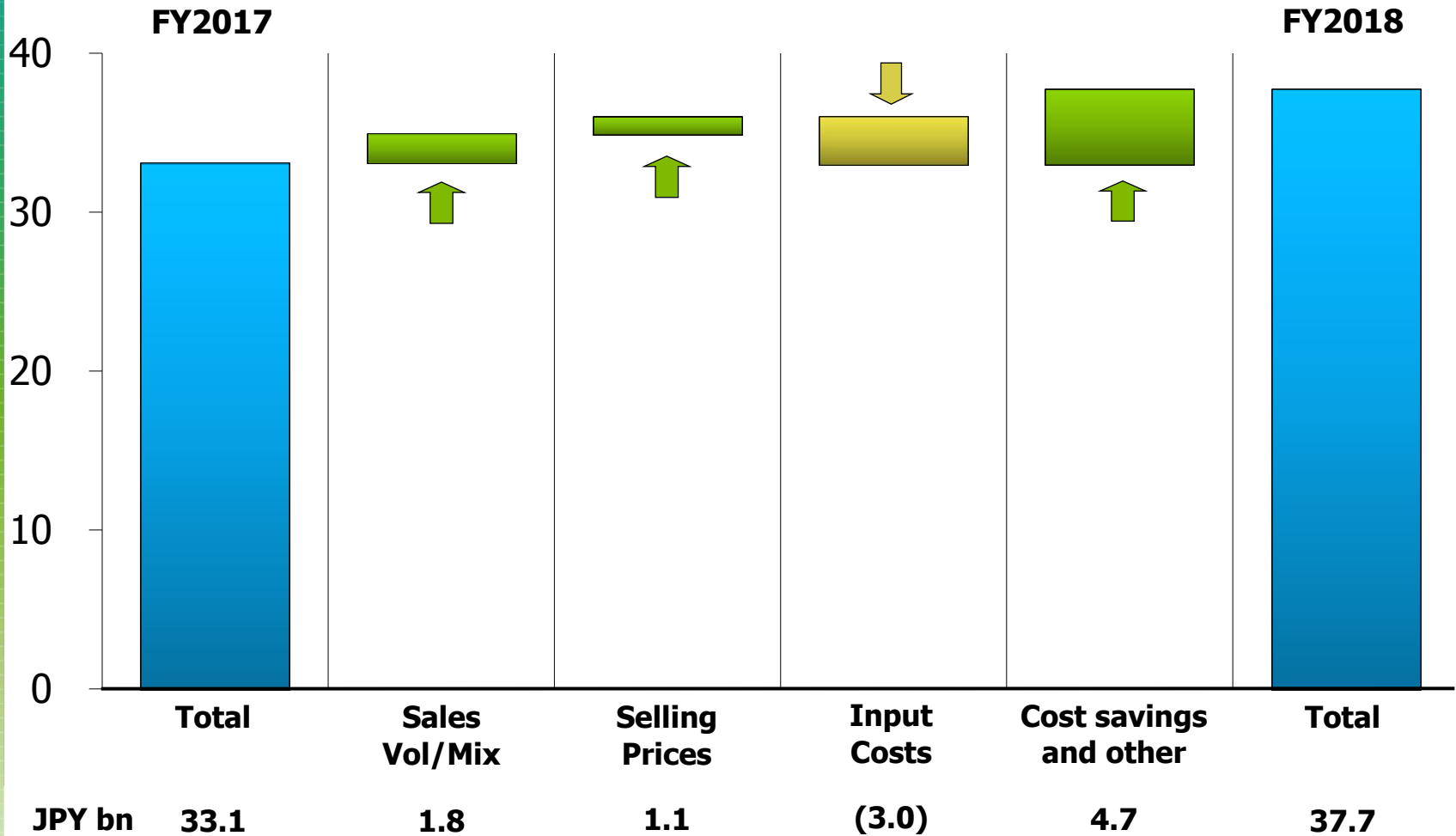
(JPY bn)	<u>FY2017</u>	<u>FY2018</u>
<b>Revenue</b>	<b>580.8</b>	<b>603.9</b>
<b>Trading profit</b>	<b>33.1</b>	<b>37.7</b>
Amortization *	(3.2)	(2.0)
<b>Operating profit</b>	<b>29.9</b>	<b>35.7</b>
Exceptional items	2.9	(1.3)
Finance expenses (net)	(19.1)	(14.6)
Share of JVs and associates	1.1	2.4
<b>Profit before taxation</b>	<b>14.8</b>	<b>22.2</b>
Taxation	(7.5)	(4.7)
Adjustment in respect of US tax rate change	-	(9.6)
<b>Profit for the period</b>	<b>7.3</b>	<b>7.9</b>
<b>Profit attributable to owners of the parent</b>	<b>5.6</b>	<b>6.1</b>
EBITDA	62.1	66.2

\* Amortization arising from the acquisition of Pilkington plc only

Continued improvement in profitability

# Change Analysis

## Trading profit



Trading profit continues to improve with cost savings



# Exceptional Items

<b>(JPY bn)</b>	<b><u>FY2017</u></b>	<b><u>FY2018</u></b>
Reversal of impairment of investments in JVs	-	<b>4.1</b>
Gain on disposal of non-current assets	8.2	<b>2.1</b>
Gain on disposal of investments in JVs and associates	0.9	<b>1.5</b>
Gain on settlement of insurance proceeds	-	<b>1.0</b>
Reversal of impairments of non-current assets	1.5	-
Restructuring costs	(4.8)	<b>(5.2)</b>
Suspension of facilities	-	<b>(4.6)</b>
Impairments of non-current assets	(3.9)	<b>(0.5)</b>
Other items	1.0	<b>0.3</b>
	<b>2.9</b>	<b>(1.3)</b>

JV impairment reversal – improving performance of business in Russia

# Consolidated Cash Flow Summary



<b>(JPY bn)</b>	<b><u>FY2017</u></b>	<b><u>FY2018</u></b>
Profit for the period	7.3	<b>7.9</b>
Depreciation and amortization	32.2	<b>32.0</b>
Net impairment	2.5	<b>(3.5)</b>
Gain on disposal of assets and exit of business	(9.9)	<b>(4.0)</b>
Tax adjustment in respect of US tax rate change	-	<b>9.6</b>
Tax paid	(5.0)	<b>(5.8)</b>
Others	(3.3)	<b>(0.6)</b>
<b>Net operating cash flows before movement in working capital</b>	<b>23.8</b>	<b>35.6</b>
Net change in working capital	6.6	<b>1.6</b>
<b>Net cash flows from operating activities</b>	<b>30.4</b>	<b>37.2</b>
Purchase of property, plant and equipment	(24.1)	<b>(31.6)</b>
Disposal proceeds	14.4	<b>10.3</b>
Others	(0.4)	<b>0.9</b>
<b>Net cash flows from investing activities</b>	<b>(10.1)</b>	<b>(20.4)</b>
<b>Free cash flow</b>	<b>20.3</b>	<b>16.8</b>

Achieved the target of more than JPY10 bn

# Key Performance Indicators

	<b><u>31-Mar-17</u></b>	<b><u>31-Mar-18</u></b>
Net Debt (JPY bn)	313	306
Net Debt/EBITDA	5.0x	4.6x
Net Debt/Equity Ratio	2.3x	2.2x
Shareholders' equity ratio	15.7%	17.0%
	<b><u>FY2017</u></b>	<b><u>FY2018</u></b>
Operating Return* on Sales	5.7%	6.2%

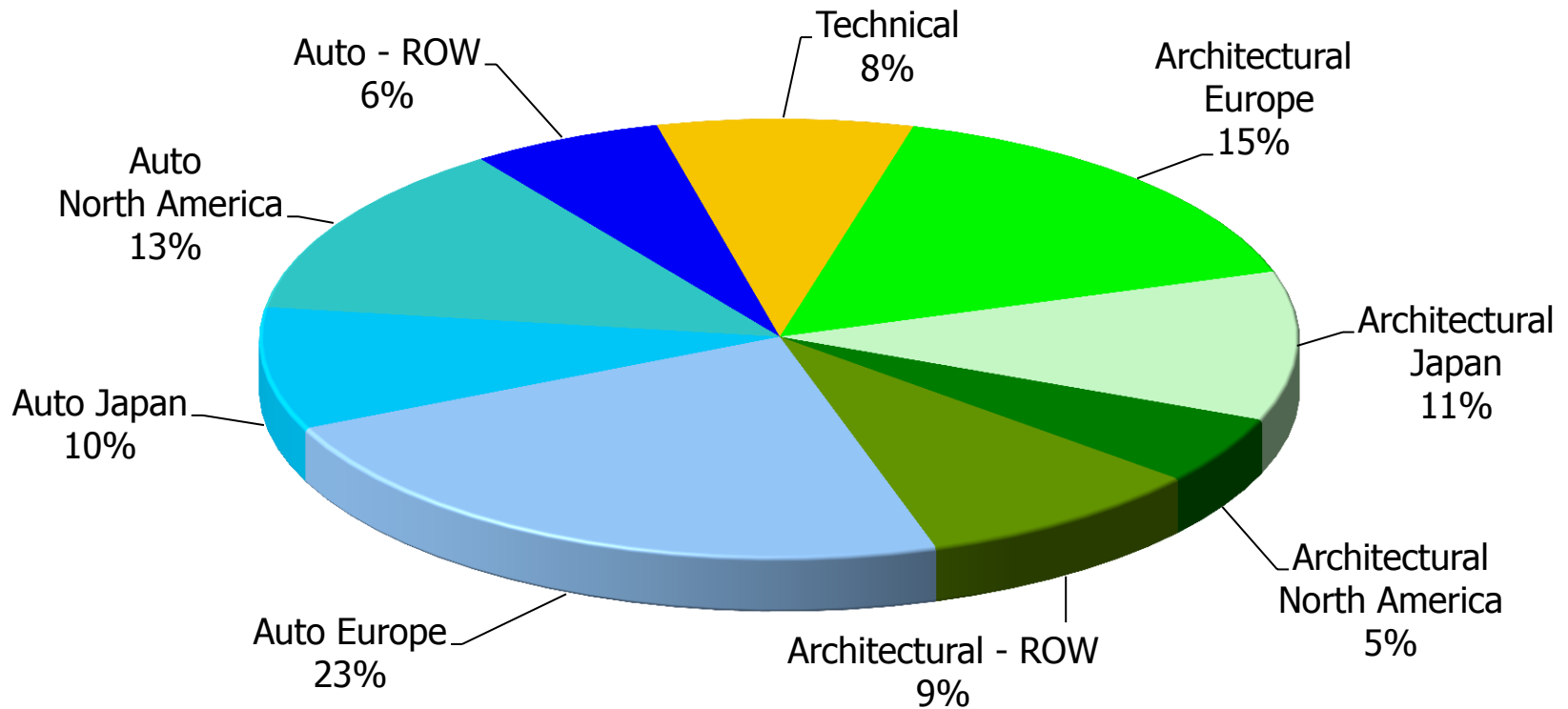
Improvements in financial KPIs

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# External Revenue - Group Businesses

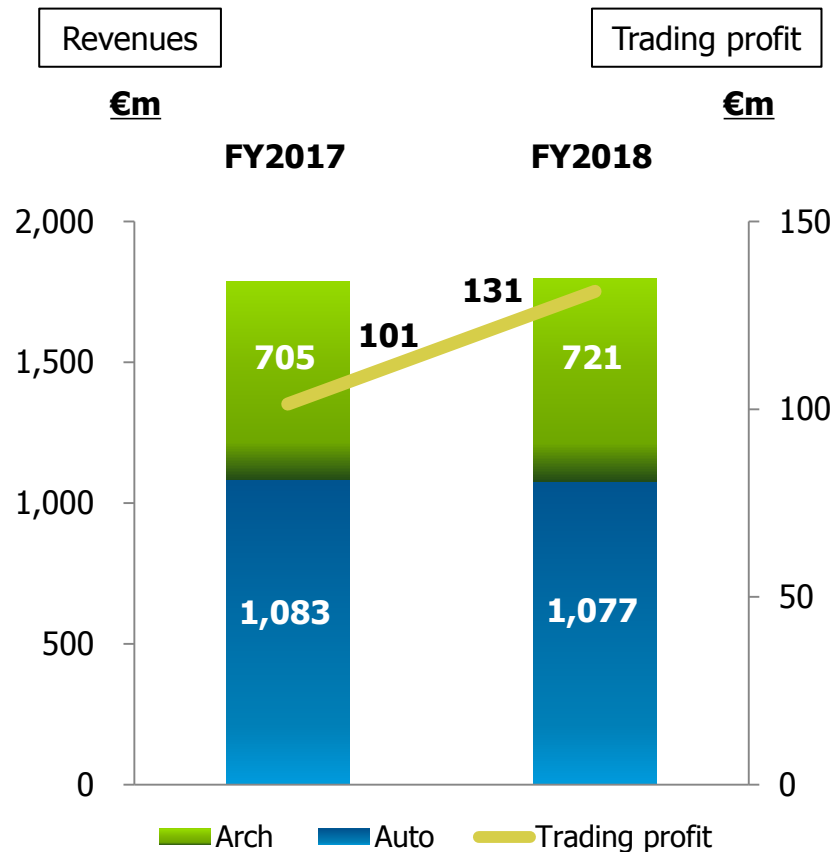
¥ 603.9 billion



**FY2018**

Diversified geographical coverage

# Europe FY2017 v FY2018



## Architectural

- Stable pricing environment supported by good demand
- Group's float line in Venice, Italy restarted

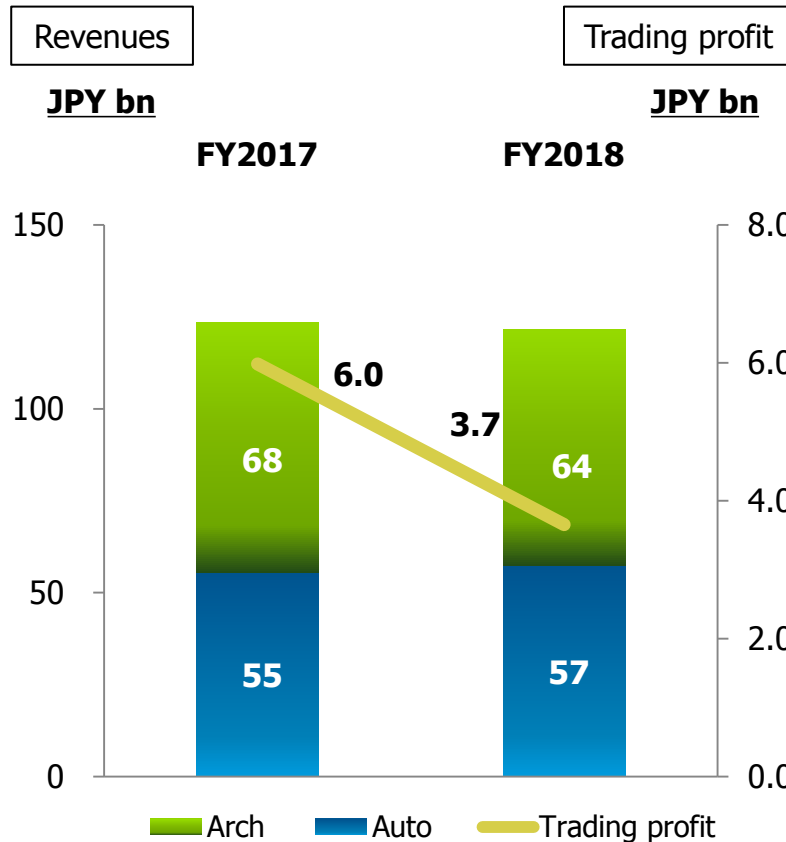
## Automotive

- Robust original equipment (OE) volumes
- Profits benefitted from increased VA sales and improved operational performance

Solid performance in both Architectural and Automotive

# Japan

## FY2017 v FY2018



### Architectural

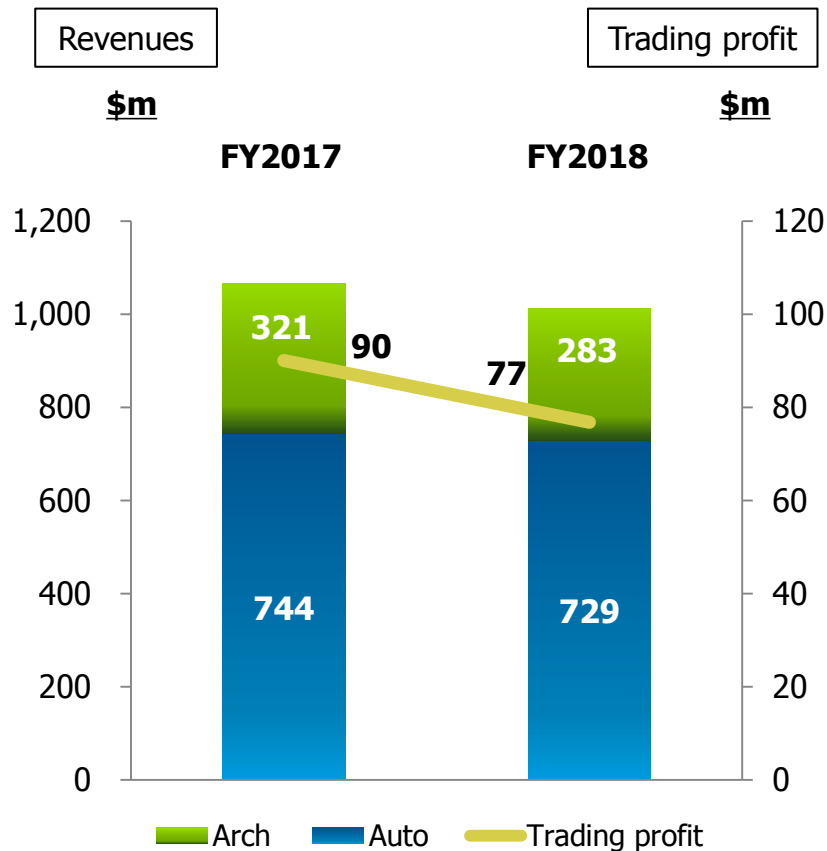
- Results affected by lower market volumes and other factors

### Automotive

- Revenues improved, consistent with increasing light-vehicle sales
- Profits affected by production cost increases of raw glass

Sluggish market conditions in Architectural

# North America FY2017 v FY2018



## Architectural

- Conventional architectural glass demand remained robust
- Volumes restricted by temporary reduction in NSG capacity at Ottawa, which restarted during Q4

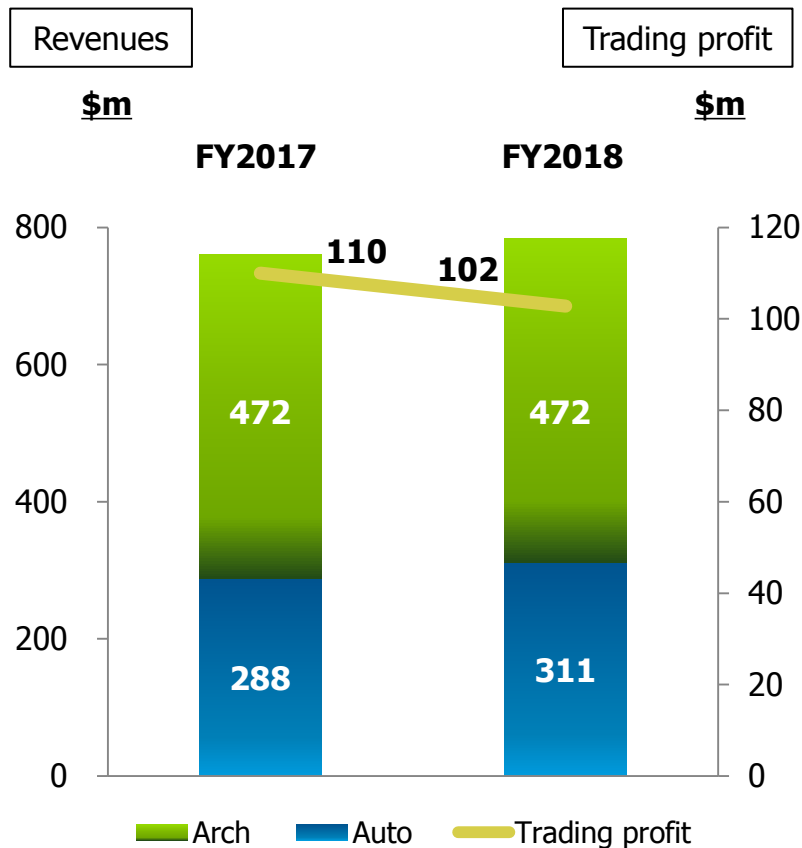
## Automotive

- Revenues and profits decreased due to slight fall in market volumes

Profitability affected by temporary factors in Architectural



# Rest of World FY2017 v FY2018



## Architectural

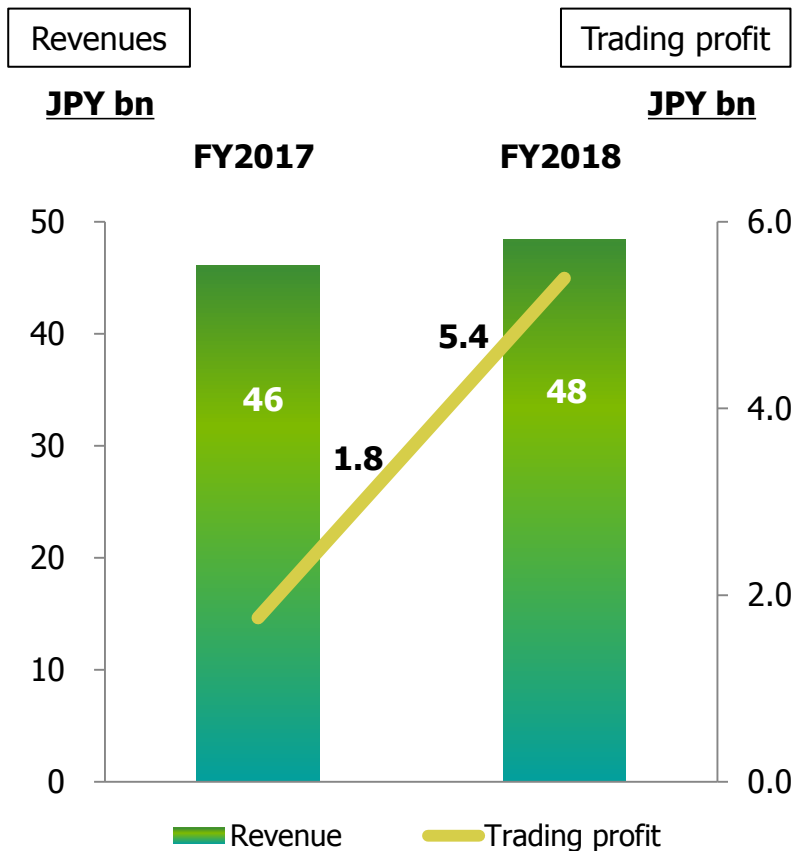
- Domestic markets generally improved from the previous year
- Results impacted by re-tooling at a major customer

## Automotive

- Market conditions in South America continue to recover

South American Automotive markets recovering

# Technical Glass FY2017 v FY2018



## Technical Glass

- Display's results improved from the previous year
- Demand for components used in multi-function printers strengthened
- Volumes of glass cord used in engine timing belts, glass flake for use in vehicle paints, and battery separators improved

Improvements across all business segments

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# Dividends

- Dividends for FY2018 and FY2019 Forecast

	FY2018 (year-end)	FY2019 (Q2 forecast)	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)	3.6	2.0	2.9	4.9
(Ordinary Dividends)	(1.8)	(0.9)	(1.8)	(2.7)
(Preferred Dividends)	(1.8)	(1.1)	(1.1)	(2.2)
Consolidated Payout Ratio (Ordinary)	42%			23%

- Background
  - The Group has intended to resume dividend payment as soon as its performance recovers sufficiently
  - Given the latest results and forecast, it decided to resume ordinary dividend payment, judging the level of recovery is sufficient
  - With view to the centennial of company establishment in November 2018, commemoration dividend is planned for the second quarter of FY2019

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# FY2019 Forecast

(JPY bn)	<u>Actuals</u> <u>FY2018</u>	<u>Forecast</u> <u>FY2019</u>
<b>Revenue</b>	<b>603.9</b>	<b>630.0</b>
<b>Trading profit</b>	<b>37.7</b>	<b>43.0</b>
Amortization*	(2.0)	(2.0)
<b>Operating profit</b>	<b>35.7</b>	<b>41.0</b>
Exceptional items	(1.3)	(7.0)
Finance expenses (net)	(14.6)	(13.0)
Share of JVs and associates	2.4	3.0
<b>Profit before taxation</b>	<b>22.2</b>	<b>24.0</b>
<b>Profit for the period</b>	<b>7.9</b>	<b>16.0</b>
<b>Profit attributable to owners of the parent</b>	<b>6.1</b>	<b>14.0</b>

\* Amortization arising from the acquisition of Pilkington plc only

Revenue Growth; forecasting sixth year of trading profit growth.  
Continued net profit improvement

# Results & Forecast Summary

- **FY2018 Results**
  - Fifth year of trading profit growth, significantly improved profit before taxation
  - Achieving the target of more than JPY10 bn free cash flow
  - Resuming dividend payment based on sufficient recovery of performance
- **FY2019 Forecast**
  - Revenue growth
  - Forecasting sixth year of trading profit growth. Net profit improvement expected
- **FY2019 Assumptions**
  - Markets to remain overall stable for all businesses; to accelerate VA shift
  - Improving core business profitability, with more efficient management
  - Architectural
    - Europe: Continued robust market; driving VA shift with coated glass etc
    - Japan: Making best of Olympic and energy-saving demand increases
    - North America: Robust conventional architectural market, with full-year contribution of restarted Ottawa
    - Solar: Volume recovery, markets to remain robust
  - Automotive
    - Stable mature markets and continued recovery in South America
    - Productivity improvement; opportunities in ADAS and EV
  - Technical: Continued cost improvement and VA revenue growth; new products

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# 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%**

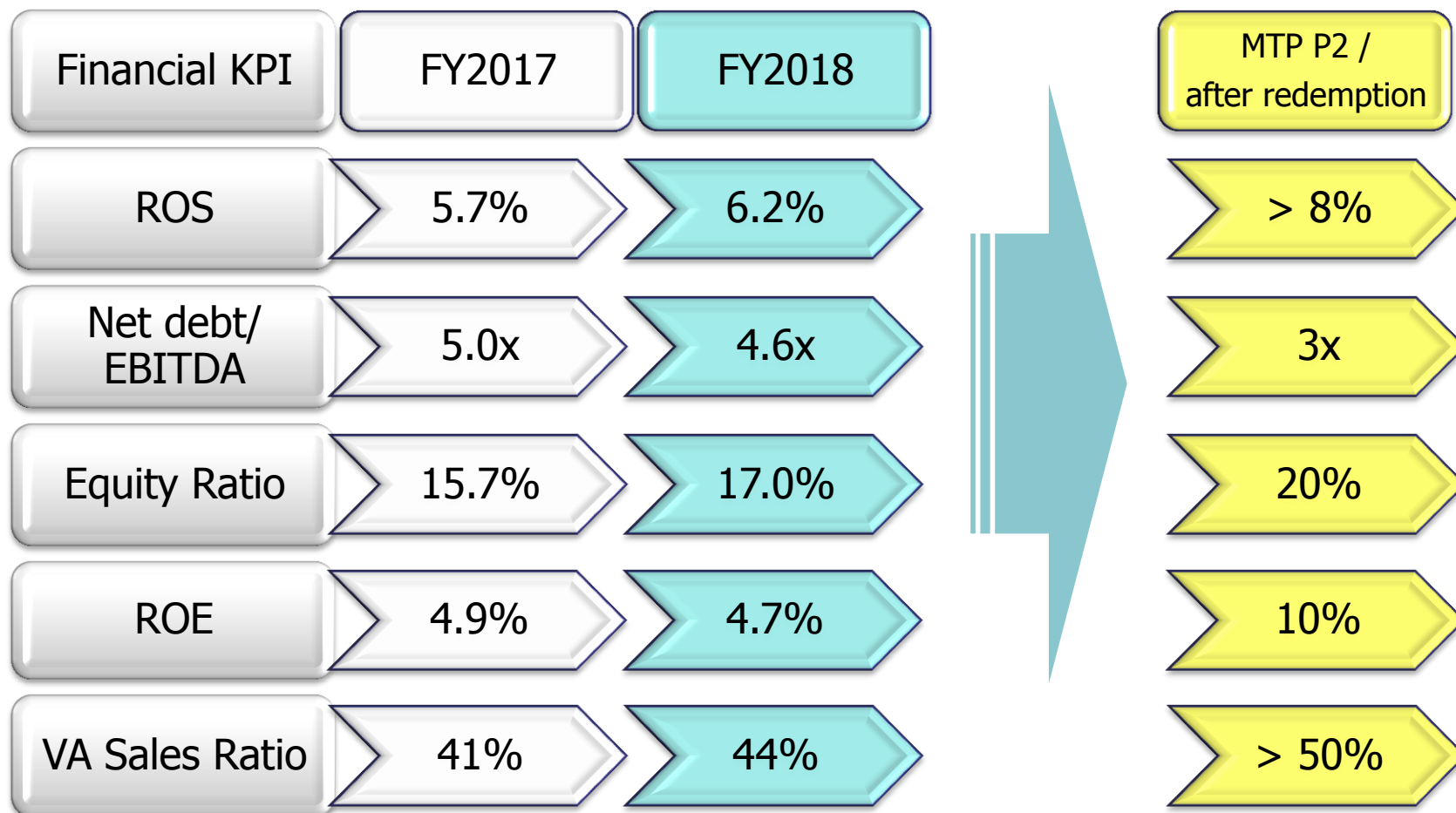
[Expectation after achieving MTP Targets]  
(After redemption of Class A Shares)

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

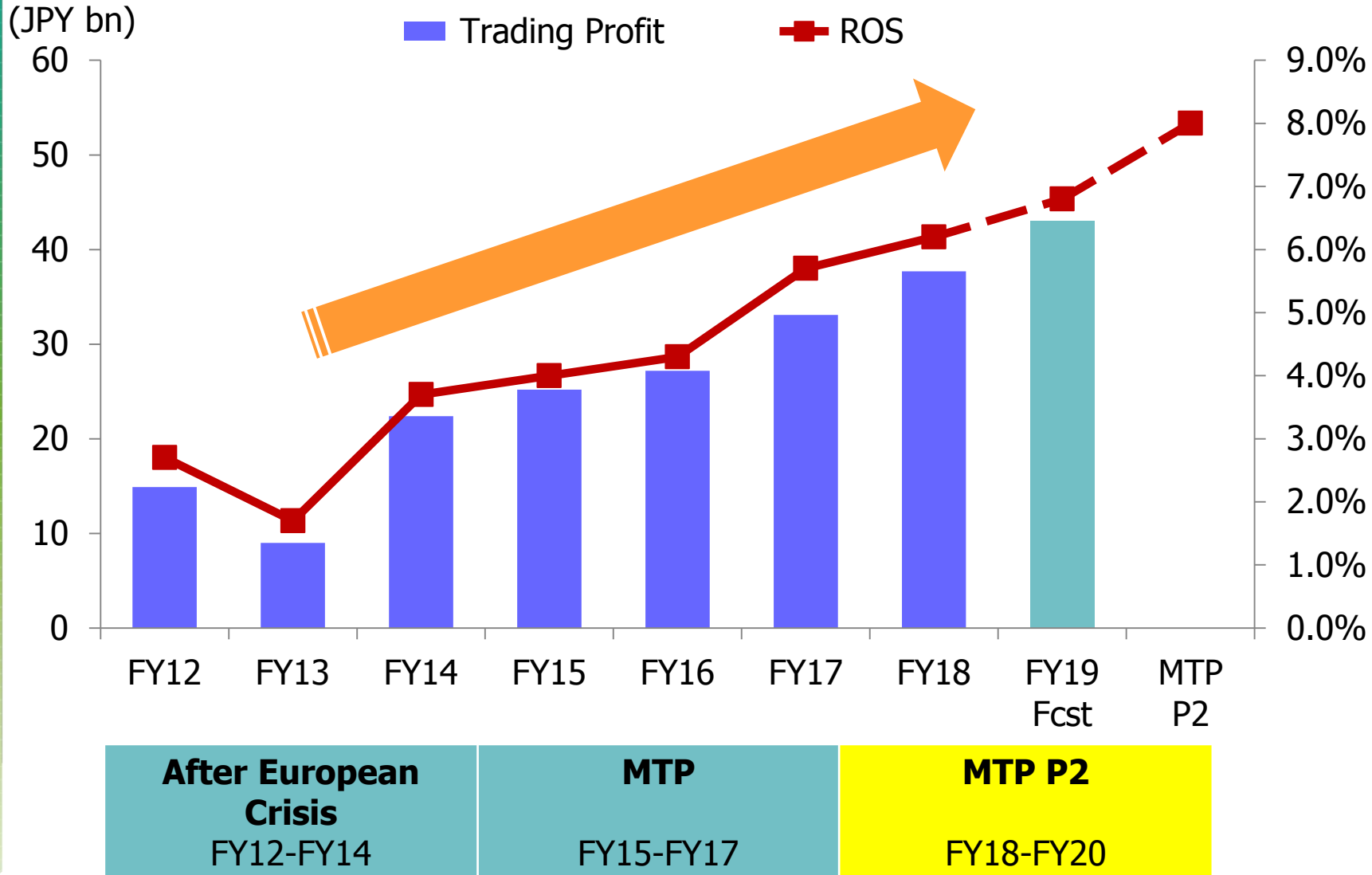
VA: Value-added    ROS (Return on Sales): based on trading profit (profit before amortization of non-tangible assets)

# Progress of MTP Phase2

KPIs have been improving as planned for establishing financial sustainability

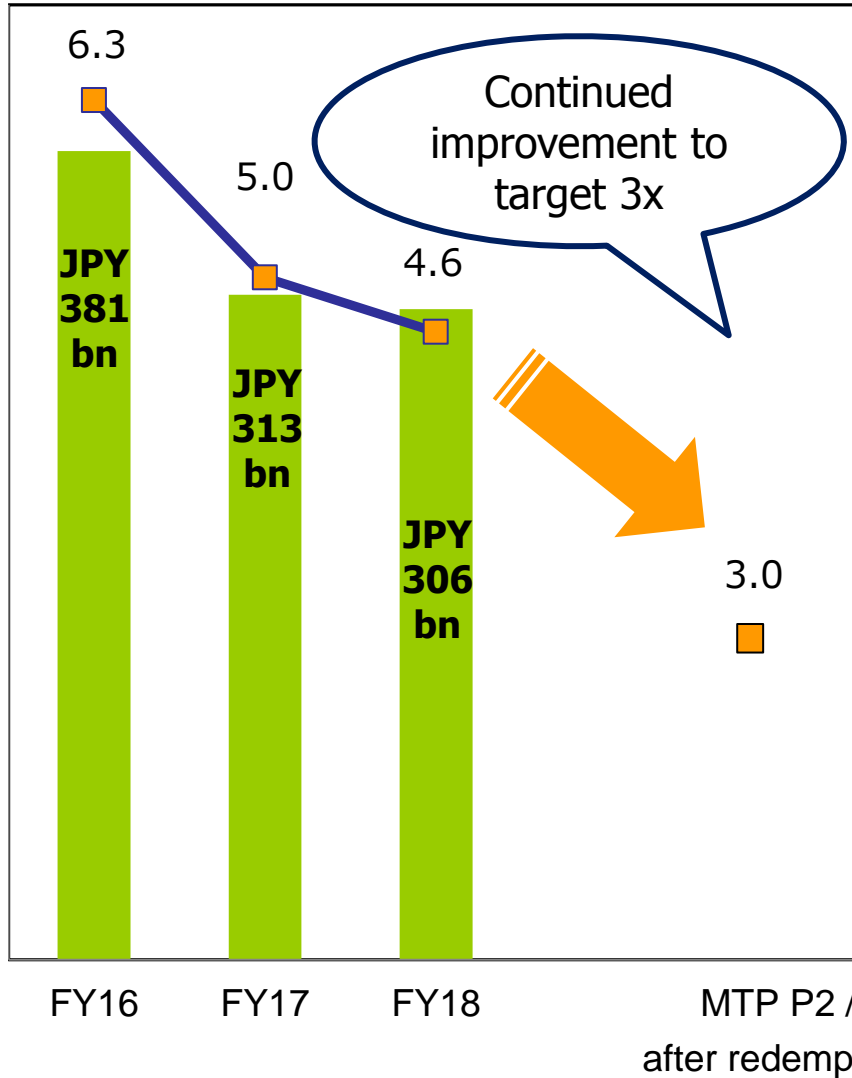


# Forecasting Sixth Year of Profit Growth in FY2019

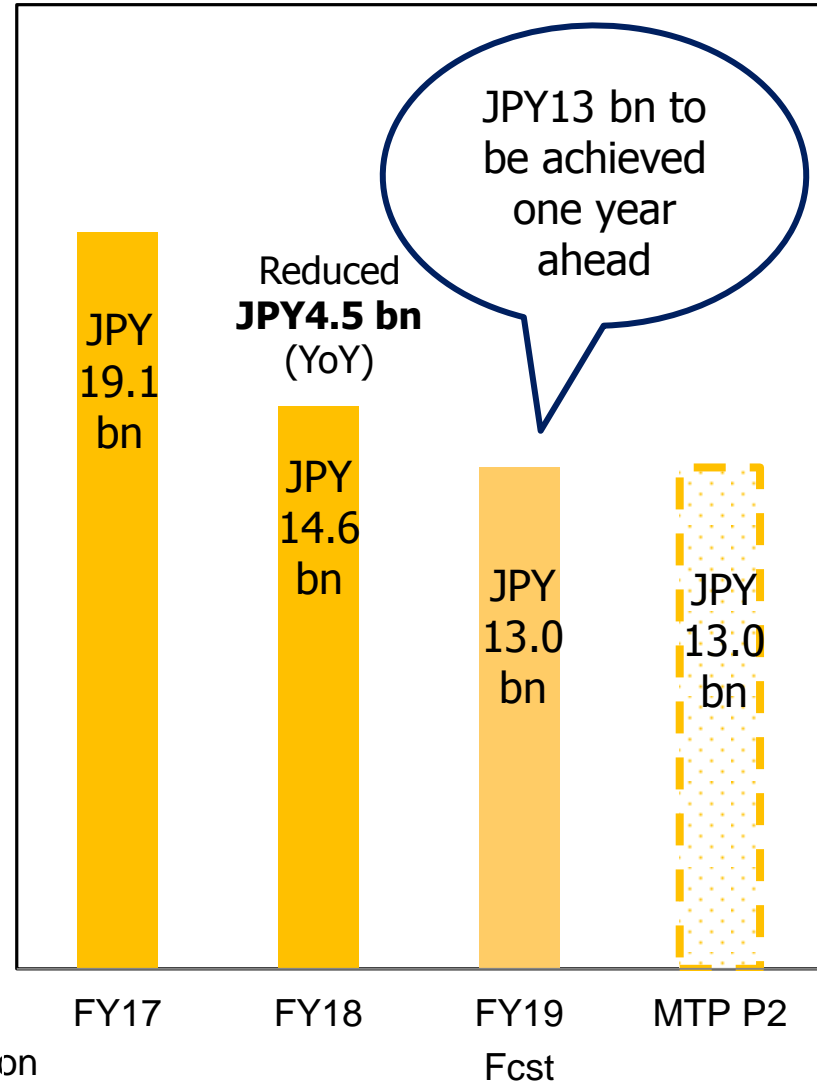


# Steadily Progress towards Financial Sustainability

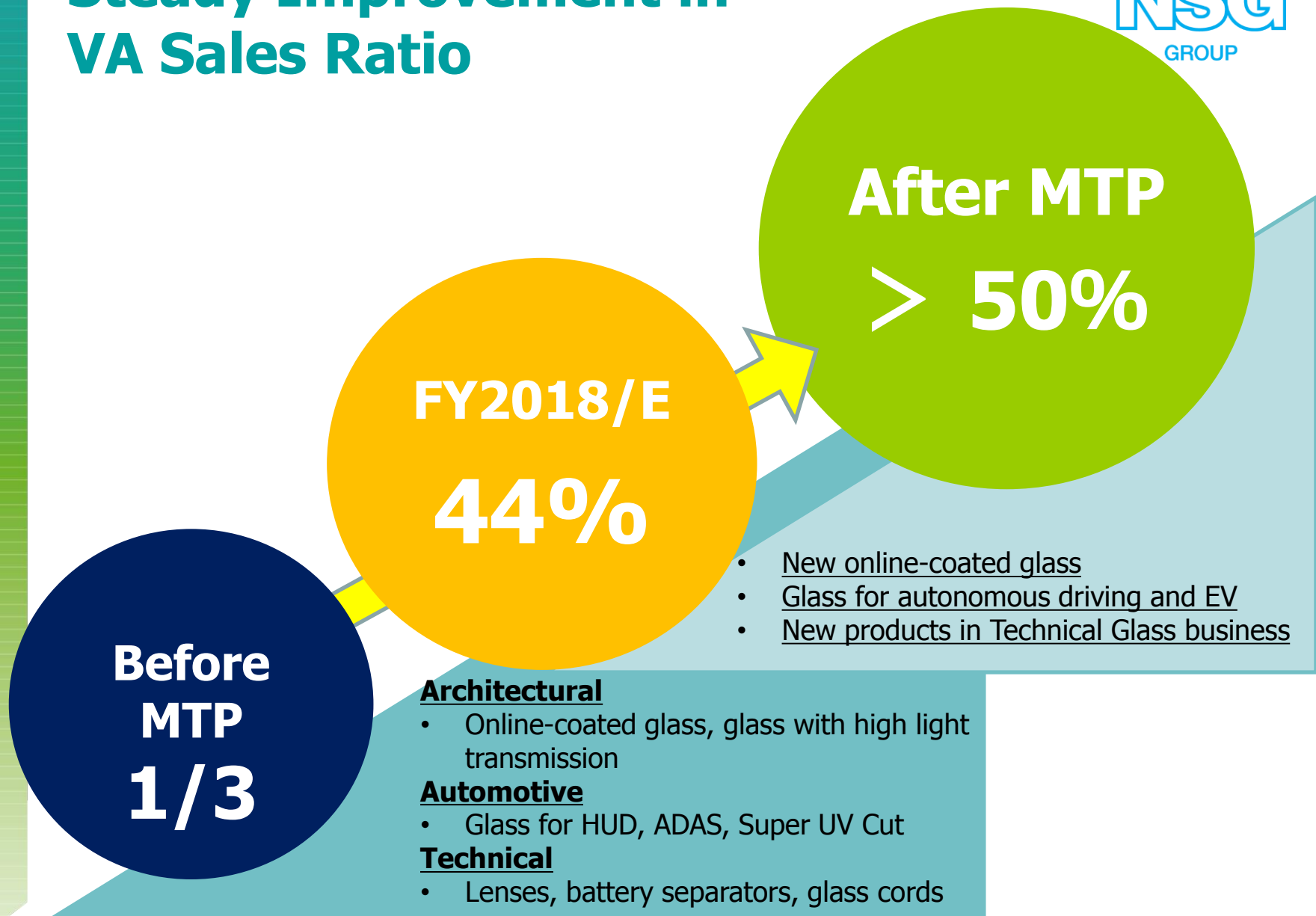
## Net debt/EBITDA



## Finance Expenses



# Steady Improvement in VA Sales Ratio



# Driving 4 Key Measures (1)

- ◆ **Good start for first year of MTP Phase 2**  
⇒ **Further profit improvement**
- ◆ **Accelerating actions to achieve MTP targets**

## Key Measures

### 1. Drive VA No.1 Strategy

- New APBL<sup>(\*1)</sup> lines installed in Japan, the US and Europe
- New plant for battery separators to be built in Indonesia by joint venture with Entek and Separindo

### 2. Establish Growth Drivers

- Expediting new business development by managing promising R&D projects as **Star Projects**



Planned site for new facility in Indonesia

# Driving 4 Key Measures (2)

## Key Measures

### 3. Business Culture Innovation

- Enhancing Manufacturing Excellence  
Focus on productivity improvement in Automotive  
(Production line integration, new KPIs (MMP (\*1) •VAA% (\*2)), robots etc. )
- More focus on Marketing  
“Marketing Workshop” led by Global Marketing Director



Robot used at automotive assembly line

### 4. Global Management Enhancement

- Developing Shared Service Center  
Selected sites located in Poland, Japan, China and Brazil providing services globally
- Inclusion & Diversity  
Attracting diverse talents, supporting inclusion, stimulating innovation and promoting business development



\*1) MMP: Man Minute per Piece \*2) VAA%: Value Added Activity percent

## Shift to “VA + Growth”

- Profitability Enhancement
- Top-line Increase





# Actions for FY2019 (1)

## Core Business

### Profitability Enhancement

- Continuous review of underperforming businesses
- Acceleration of profit improvement with VA shift
- Continuous cost reduction with productivity improvement
- Work style reform to improve efficiency

## Growth Business

### Top-line Increase

- New investment in solar glass capacity expansion
- New application development of online-coated glass in Automotive and Display businesses
- Commercialization of new Technical glass products

## New Business

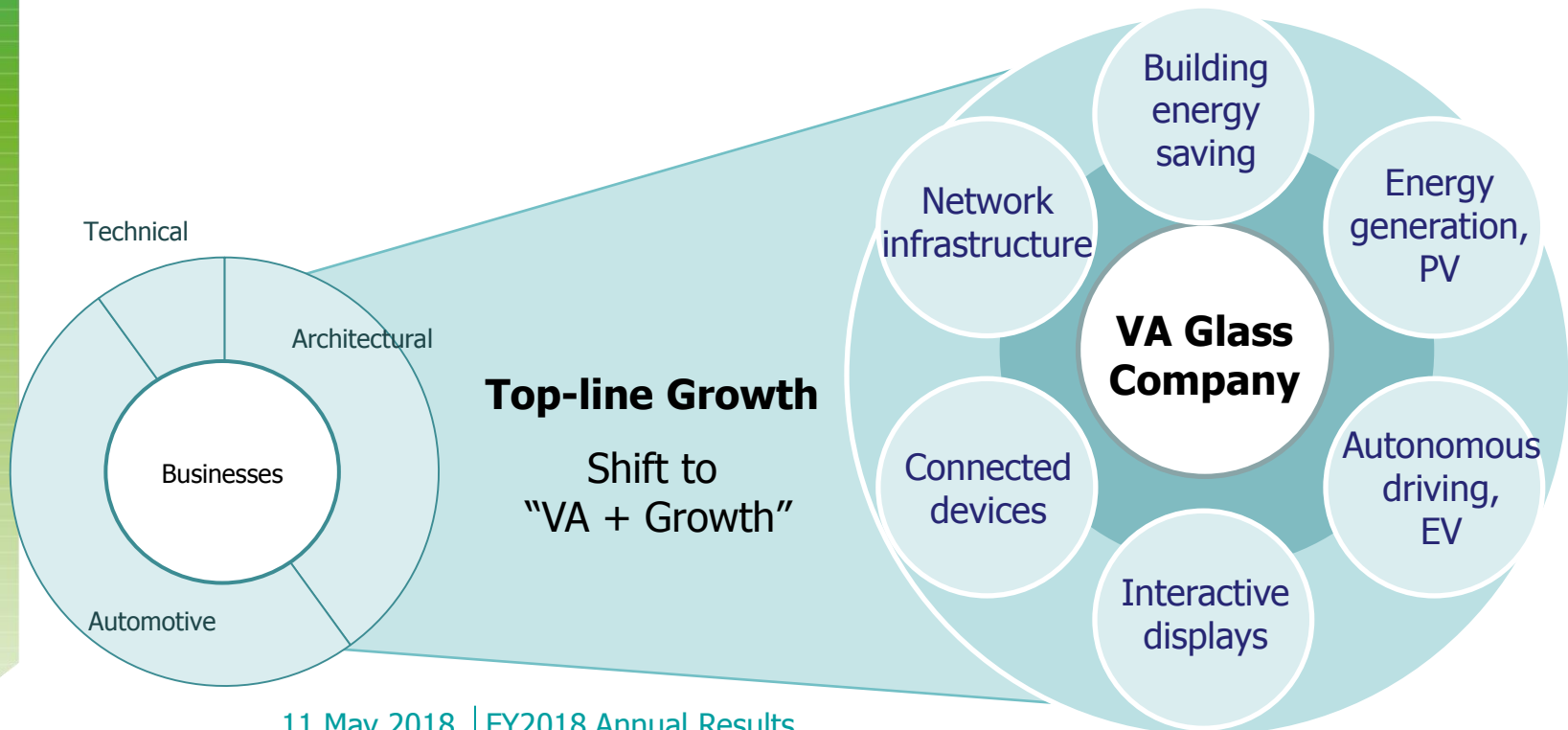
### New Business Development and Creation of Customer Value

- Establishing new organization, Business Innovation Center

# Actions for FY2019 (2)

- **Creating new businesses, in response to 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



# Growth (1) Solar Glass Business

- **Growing solar market**

The US accounts for about 20 percent of global solar panel market

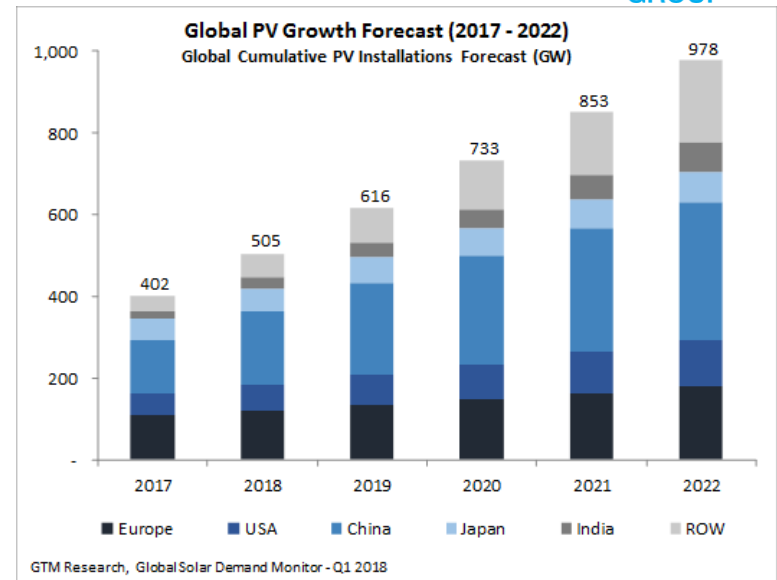
Southeast Asia, Middle East and Africa are to grow going forward

- **New investment to expand solar glass manufacturing capacity**

In the backdrop of growing demand for solar glass, JPY38 bn will be invested to install two furnaces with online coating capabilities in next two years

- Upgrade and restart furnace in Vietnam
- Build new line in the US

- **Long-term supply contract entered into with First Solar**



## First Solar: Capacity Expansion Plan



Source: First Solar website

# Growth (2) Online-coated Products

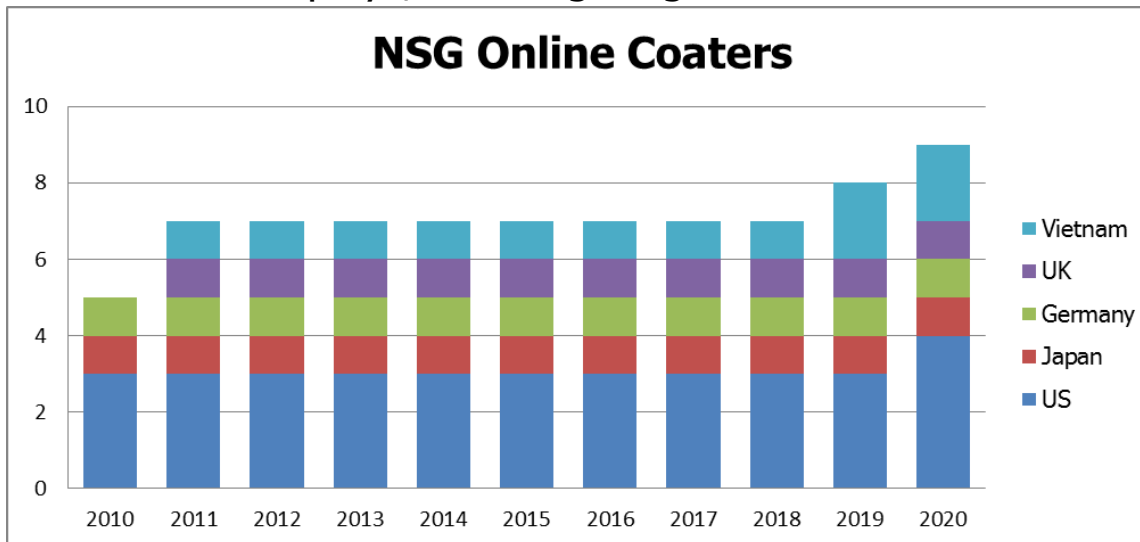
- **Developing new applications – thin-film technology**

Thin, uniform metallic oxide film deposited over glass while formed inside the float bath:

- Durable - suitable for further processing,
  - suitable for use as an external glass pane
- Versatile - architectural and solar applications
  - low-e properties for automotive applications
  - technical applications include thin or curved displays, OLED lighting and thin-film sensors



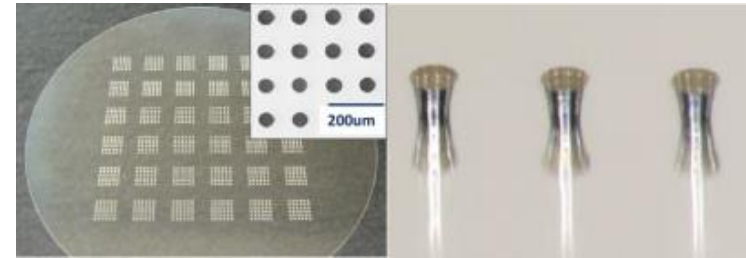
Automotive application  
(low-e glass)



Super thin NSG **TEC™**

# Growth (3) Technical Glass Products

- **Proliferation of IoT and Arrival of Smart Mobility Society**
- Opportunities in growth of key technologies such as net work infrastructure and connected devices



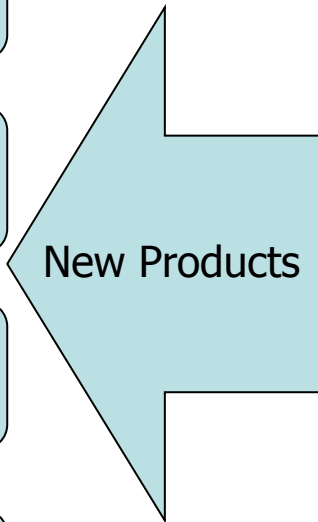
Through Glass Via (TGV)

Smart cities  
(Cities, houses, infrastructure )

Healthcare  
(Wearable devices, medicine)

Smart Factories  
(AI, robots)

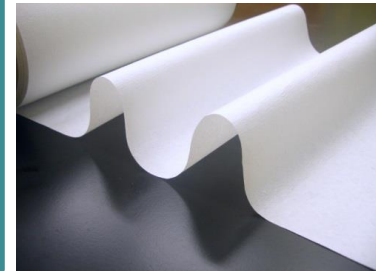
Connected cars  
(Autonomous driving, EVs)



- Information Devices
- Displays
- Separators
- Functional Glass Cords



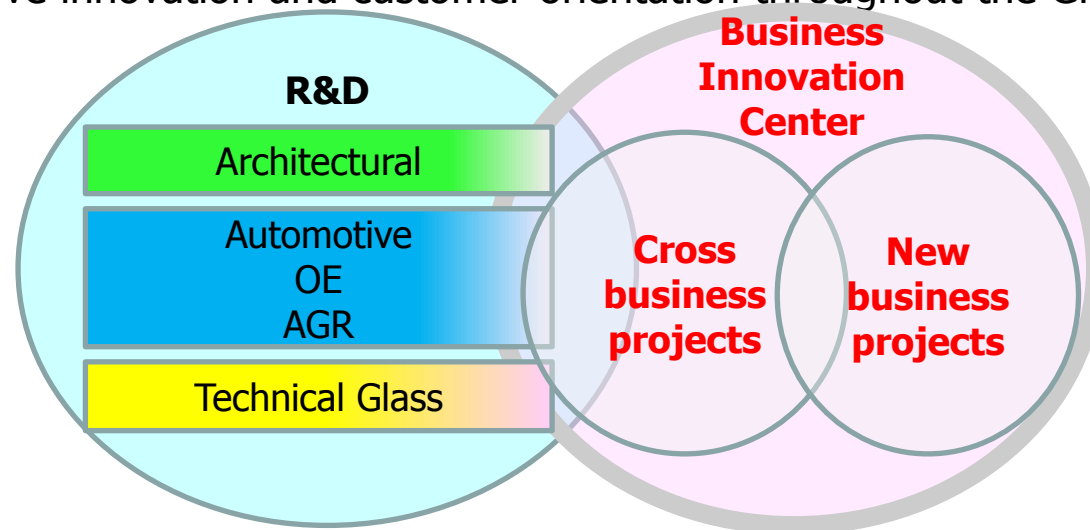
Mobile DNA Testing Equipment



Super Glass Paper

# New Business Development and Creation of Customer Value

- **To establish Business Innovation Center (BIC) 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
  - With mission to grasp the needs of customers, create and deliver customer value
  - Close cooperation with a wide-range of third parties including educational or research institutions, start-up companies and investors expected
  - External talent to be brought in to lead the organization, with the relevant new business experience to provide stimulus and a fresh perspective
  - Playing a role that encourages the whole NSG Group to be innovative
  - To improve innovation and customer orientation throughout the Group



# ESG\* Drive for Increasing Corporate Value (1)

- **Environment: Reducing CO2 emissions**

- Group Target

- One percent year on year reductions in CO2 intensity across glass manufacturing operations

- Science based targets (SBT) for greenhouse gas reduction being developed for committing in summer 2018

- 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



\*ESG: Environment, Social and Governance

Architectural DS site in Kyushu, Japan  
Copyright © 2014, First Solar, Inc. All rights reserved.

# ESG Drive for Increasing Corporate Value (2)

- **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 JPY1,568 million for 1,197 projects cumulatively.



# ESG Drive for Increasing Corporate Value (3)

- **Corporate Governance: Framework to support sustainable growth**
  - Diversity and 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
  - Global incentive scheme – alignment of shareholder interest and management objectives
  - Key developments
    - 2008: Adoption of “Company with Committees” style; four Independent External Directors
    - 2012: Each of all three Committees chaired by Independent External Director
    - 2013: The Board chaired by Independent External Director
    - 2014: Share purchase factor in LTIP; shareholding targets for Executive Officers
    - 2015: Publication of NSG Group Corporate Governance Guidelines
    - 2016: First Board Effectiveness Evaluation; compliance with all the principles of CGC
    - 2018: Third Board Effectiveness Evaluation underway
  - Board Effectiveness Evaluation
    - Led by Independent External Directors to evaluate the performance of Board annually
    - Based on evaluation in FY2017, the following action plans were set and followed up
    - 1) Deeper discussion on strategic direction including ESG; 2) More robust risk management

# Dividends Policy

- The Group's dividend policy is to secure dividend payments based on sustainable business results
- Once and after all Class A Shares have been redeemed and cancelled, while the Group maintains this basic policy in all respects, the Group will continue to use the sincere efforts to declare dividends with introduction of consolidated dividend payout ratio of 30 percent as a guide

# Progress of MTP Phase2 & FY2019 Actions

- Good start for first year of MTP P2
- Accelerating actions in second year, based on Shift to “VA + Growth” through three key initiatives – Profit enhancement in core business; top-line increase in growth business; and new business development
  - Expanding coated products capacity, responding to thin film solar demand
  - Business Innovation Center to expedite new business development
- ESG (environment, social and governance) drive to bolster sustainable growth
- Continue to aim for securing dividend payments based on sustainable business results

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# Summary

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  - Good start for first year of MTP P2
  - Accelerating actions in second year, based on Shift to “VA + Growth” through three key initiatives - Profit enhancement in core business; top-line increase in growth business; and new business development
    - Investment in two new lines for coated products
    - Business Innovation Center to expedite new business development

# 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 environment in major markets (such as Europe, Japan, the U.S. and Asia), product supply/demand shifts, and currency exchange fluctuations.

**Nippon Sheet Glass Company, Limited**

# Appendices

- FY2018 Annual Results
  - Revenue by Business & Regions
  - Trading Profit by Business & Regions
  - Consolidated Balance Sheet
  - Depreciation & Amortization, CAPEX
  - Exchange Rates
- MTP (Four Key Measures)

# Revenue by Business & Regions FY2017 v FY2018

<u>(JPY bn)</u>	<u>FY2017</u>	<u>FY2018</u>	<u>Change</u>
<b>Architectural</b>	<b>237.7</b>	<b>241.7</b>	<b>4.0</b>
Europe	84.1	93.8	9.7
Japan	67.7	64.4	(3.3)
North America	34.8	31.3	(3.5)
Rest of World	51.1	52.2	1.1
<b>Automotive</b>	<b>296.6</b>	<b>312.7</b>	<b>16.1</b>
Europe	129.3	140.2	10.9
Japan	55.5	57.5	2.0
North America	80.6	80.6	0.0
Rest of World	31.2	34.4	3.2
<b>Technical Glass</b>	<b>46.1</b>	<b>48.4</b>	<b>2.3</b>
Europe	7.0	7.9	0.9
Japan	24.1	25.0	0.9
North America	1.0	1.3	0.3
Rest of World	14.0	14.2	0.2
<b>Other Operations</b>	<b>0.4</b>	<b>1.1</b>	<b>0.7</b>
Europe	0.0	0.6	0.6
Japan	0.4	0.4	0.0
North America	0.0	0.0	0.0
Rest of World	0.0	0.1	0.1
<b>Total</b>	<b>580.8</b>	<b>603.9</b>	<b>23.1</b>



# Trading Profit by Business & Regions FY2017 v FY2018

<u>(JPY bn)</u>	<u>FY2017</u>	<u>FY2018</u>	<u>Change</u>
<b>by SBU</b>			
Architectural	27.0	26.2	(0.8)
Automotive	12.7	14.3	1.6
Technical Glass	1.8	5.4	3.6
Other Operations	(8.4)	(8.2)	0.2
<b>Total</b>	<b>33.1</b>	<b>37.7</b>	<b>4.6</b>
<b>by Region</b>			
Europe	9.4	16.3	6.9
Japan	2.4	2.4	0.0
North America	9.2	7.4	(1.8)
Rest of World	12.1	11.6	(0.5)
<b>Total</b>	<b>33.1</b>	<b>37.7</b>	<b>4.6</b>

# Consolidated Balance Sheet

(JPY bn)	<u>31-Mar-17</u>	<u>31-Mar-18</u>	<u>Change</u>
<b>Assets</b>	<b>790.2</b>	<b>791.9</b>	<b>1.7</b>
<b>Non-current assets</b>	<b>527.8</b>	<b>538.9</b>	<b>11.1</b>
Goodwill & intangible assets	162.3	169.8	7.5
Property, plant and equipment	245.2	252.8	7.6
Other	120.3	116.3	(4.0)
<b>Current assets</b>	<b>262.4</b>	<b>253.0</b>	<b>(9.4)</b>
Cash and cash equivalents	84.9	64.8	(20.1)
Other	177.5	188.2	10.7
<b>Liabilities</b>	<b>656.5</b>	<b>649.1</b>	<b>(7.4)</b>
<b>Current liabilities</b>	<b>223.2</b>	<b>255.2</b>	<b>32.0</b>
Financial liabilities	79.8	97.6	17.8
Other	143.4	157.6	14.2
<b>Non-current liabilities</b>	<b>433.3</b>	<b>393.9</b>	<b>(39.4)</b>
Financial liabilities	319.6	275.1	(44.5)
Other	113.7	118.8	5.1
<b>Equity</b>	<b>133.7</b>	<b>142.8</b>	<b>9.1</b>
Shareholders' equity	124.1	134.3	10.2
Non-controlling interests	9.6	8.5	(1.1)
<b>Total liabilities and equity</b>	<b>790.2</b>	<b>791.9</b>	<b>1.7</b>

# Depreciation and Amortization, CAPEX and R&D expenditures

<b>(JPY bn)</b>	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018
Depreciation and Amortization	36.6	40.4	41.7	40.9	32.2	32.0
Capital expenditures	26.0	31.6	36.6	28.2	28.0	33.1
R&D expenditures	7.3	7.9	8.2	9.8	8.5	9.1

# Exchange Rates

	<u>FY2017</u>	<u>FY2018</u>	<u>FY2019</u> <u>Forecast</u>
Average rates used:			
JPY/GBP	142	147	150
JPY/USD	108	111	110
JPY/EUR	119	130	130
Closing rates used:			
JPY/GBP	139	150	
JPY/USD	111	106	
JPY/EUR	119	132	

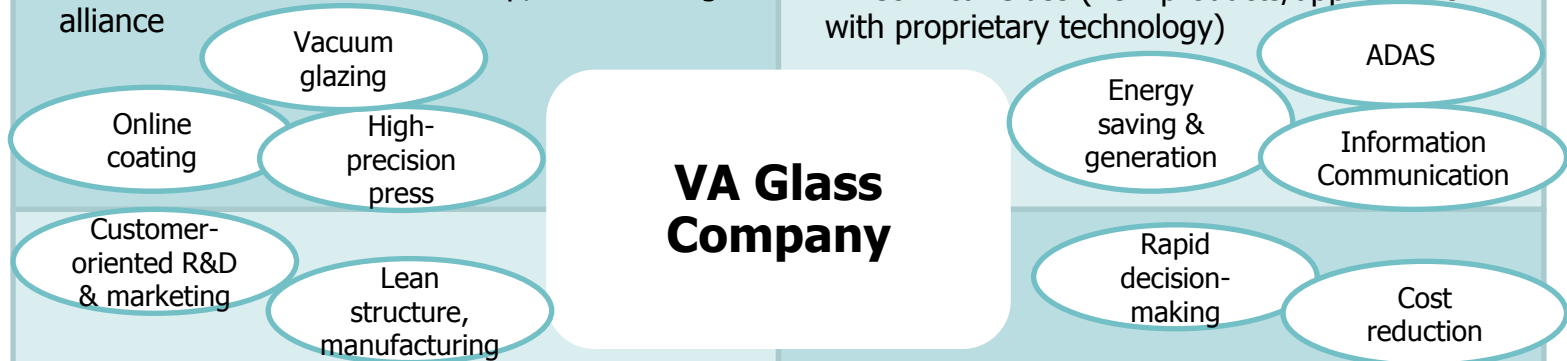
# MTP Phase 2: Four Key Measures

## 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

## 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)



## 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

# NSG

GROUP

