

NSG

GROUP

NSG Group

FY2018 Second Quarter Results

(from 1 April 2017 to 30 September 2017)

Nippon Sheet Glass Company, Limited
2 November 2017

Shigeki Mori

Chief Executive Officer

Clemens Miller

Chief Operating Officer

Kenichi Morooka

Chief Financial Officer

Agenda

1. FY2018 H1 Key Points
2. Medium-term Plan Update
3. FY2018 Q2 Financial Results
4. FY2018 Q2 Business Update
5. Summary

FY2018 H1 – Key Points



- **Medium-term Plan (MTP) Phase 2**
 - Solid improvement towards **financial sustainability**
 - Expanding business opportunities and **progress in VA investment**
- **FY2018 Q2 Results**
 - **Good start** for the first year of MTP Phase 2
 - **Favorable market conditions**, especially in Europe
 - Continued **VA shift** and delivery of **operational improvements**

VA: Value-added

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Medium-term Plan (MTP) Phase 2

– Gear Shift to Growth (FY2018-FY2020)

Phase 2 Measures

Growth Measures

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

Financial Measures

- Enhance equity
- Reduce net debt

MTP Targets

- Financial sustainability
- Transform into VA Glass Company

Net debt/EBITDA: 3x

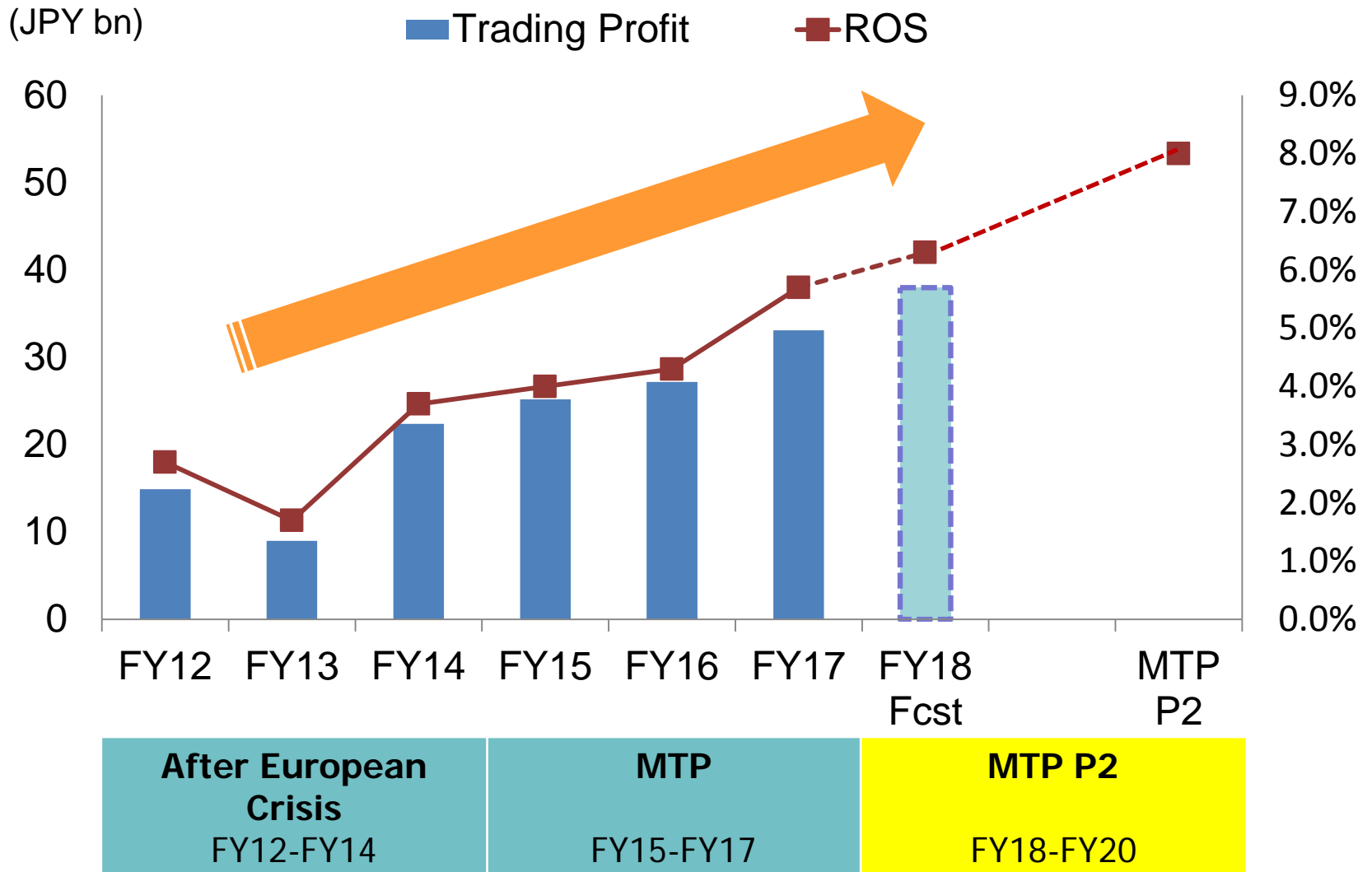
ROS > 8%

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

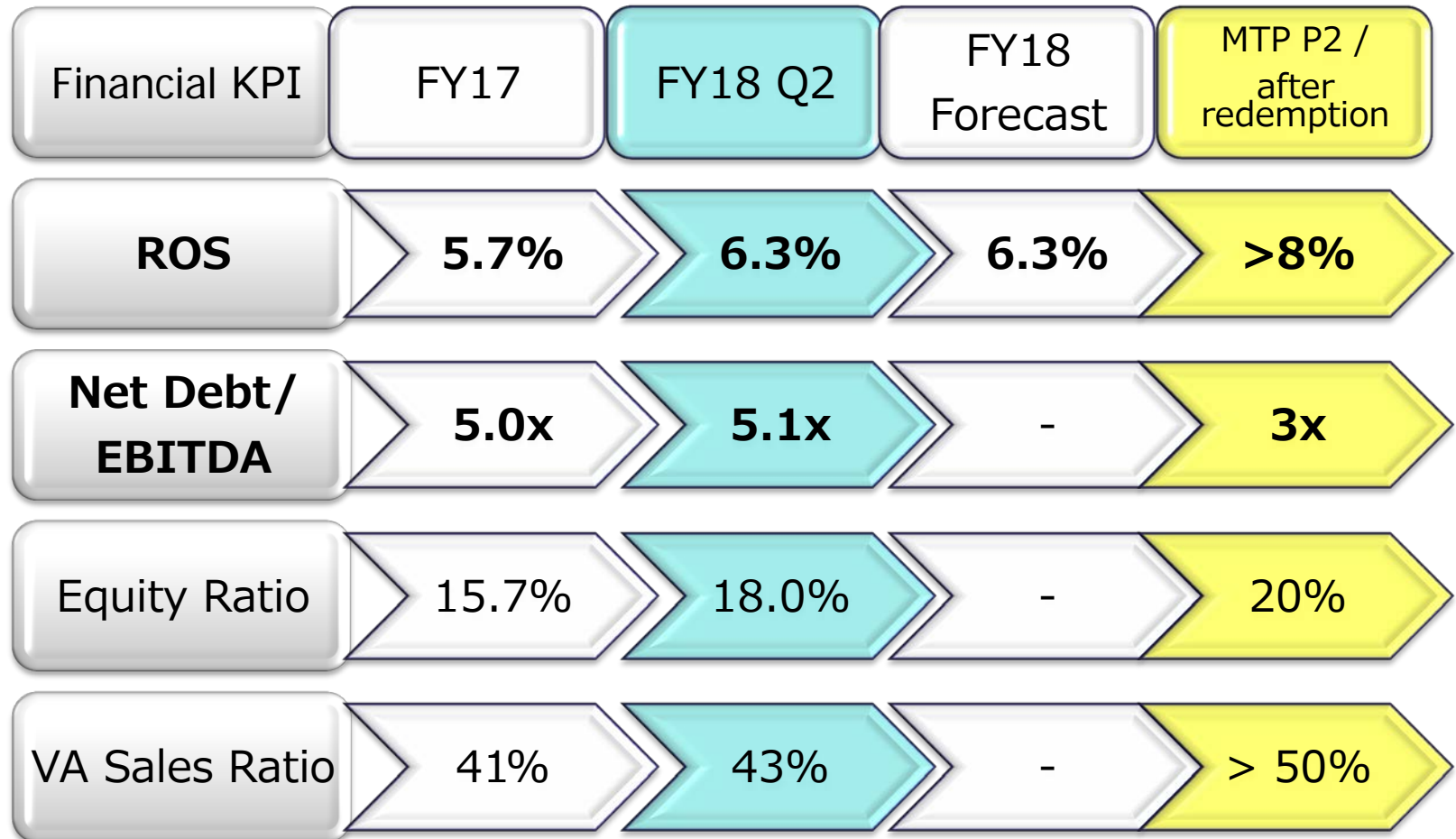
- Equity Ratio: 20%
- ROE: 10%
- VA Sales Ratio: > 50%
- Trading Profit: JPY50-60 bn

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

Forecasting Fifth Year of Profit Growth in FY2018



Solid Progress towards Establishing Financial Sustainability



Capturing Opportunities in Advancing Car Technologies

'Car Windows and Much More'



NSG Products Contributing to Next-generation Car Technologies



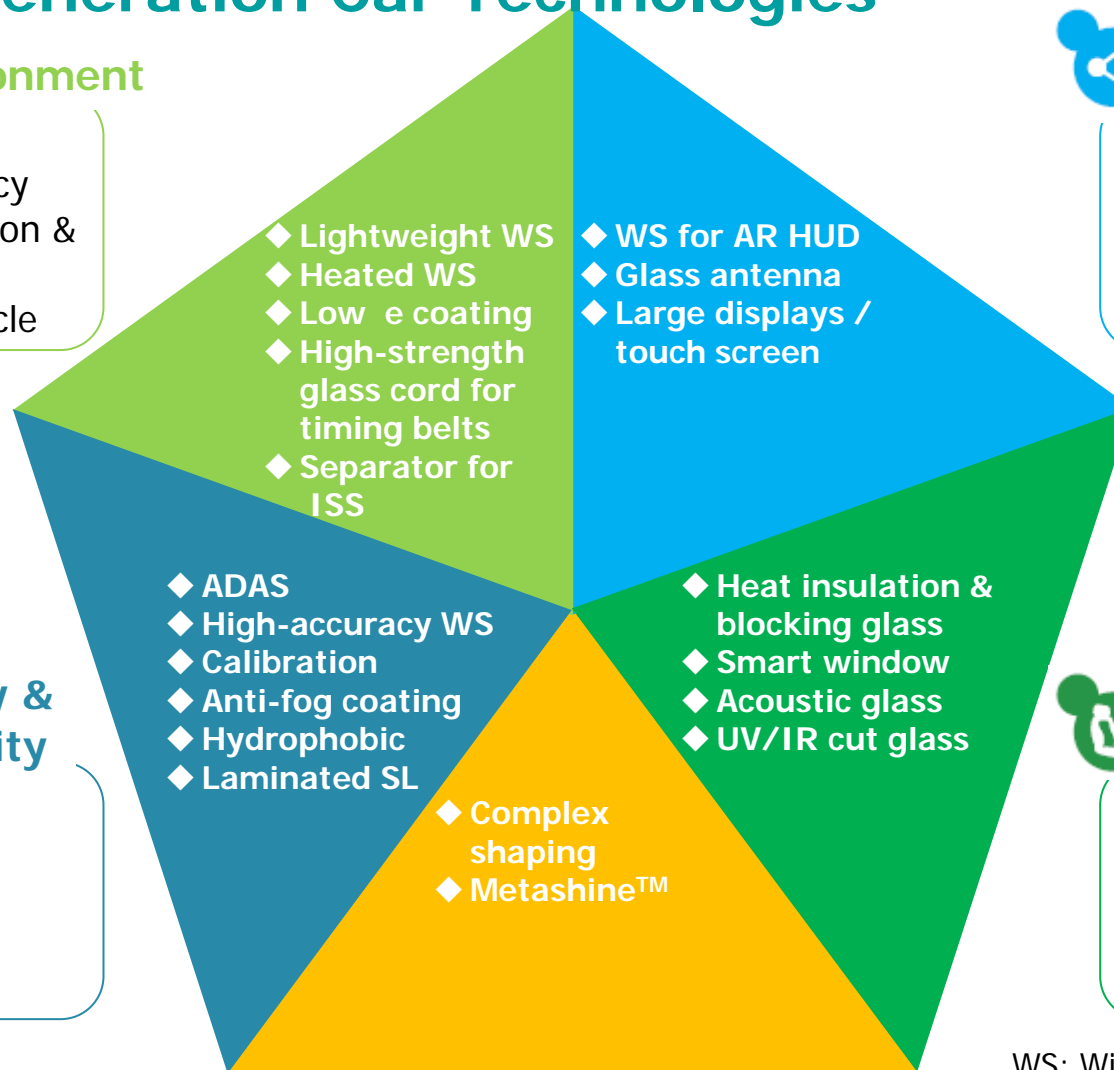
Environment

- Lightweight
- Fuel efficiency
- Heat insulation & blocking
- Electric vehicle



Connectivity

- Augmented reality head up display (AR HUD)
- Internet of Things (IoT)



Safety & Security

- Autonomous driving
- Visibility
- High rigidity



Comfort & Convenience

- Heat insulation & blocking
- Ambient lighting
- Acoustic
- UV/IR cut









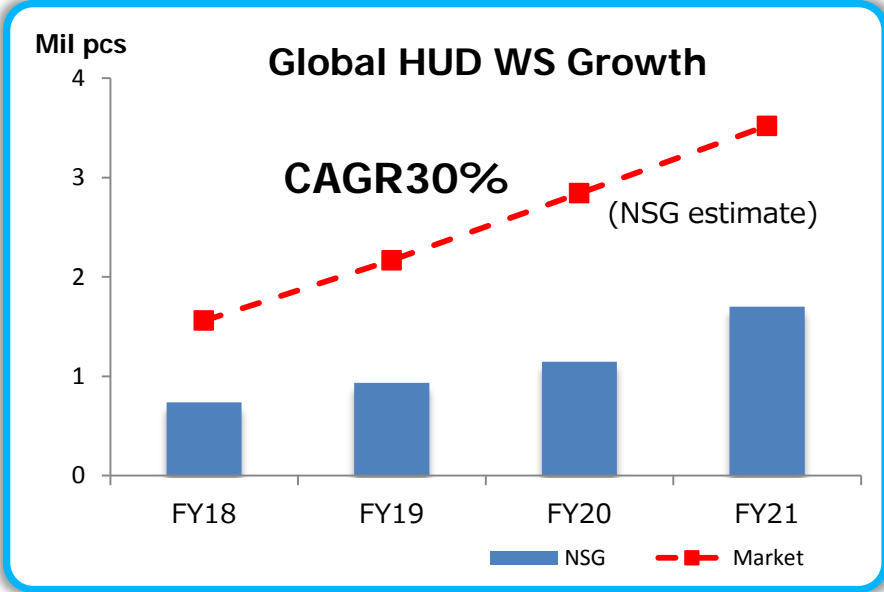
Style

- Streamline design
- Exterior

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

Rapidly Growing HUD Windshields

-  World's leading supplier of HUD windshields due to:
 -  Best-in-class shaping capability - APBL
 -  Simulation technology – developed in house
-  Adopted for new LEXUS windshield with a largest HUD
-  Awarded world's first windshield with AR HUD
 -  AR – a key innovation in the automotive industry

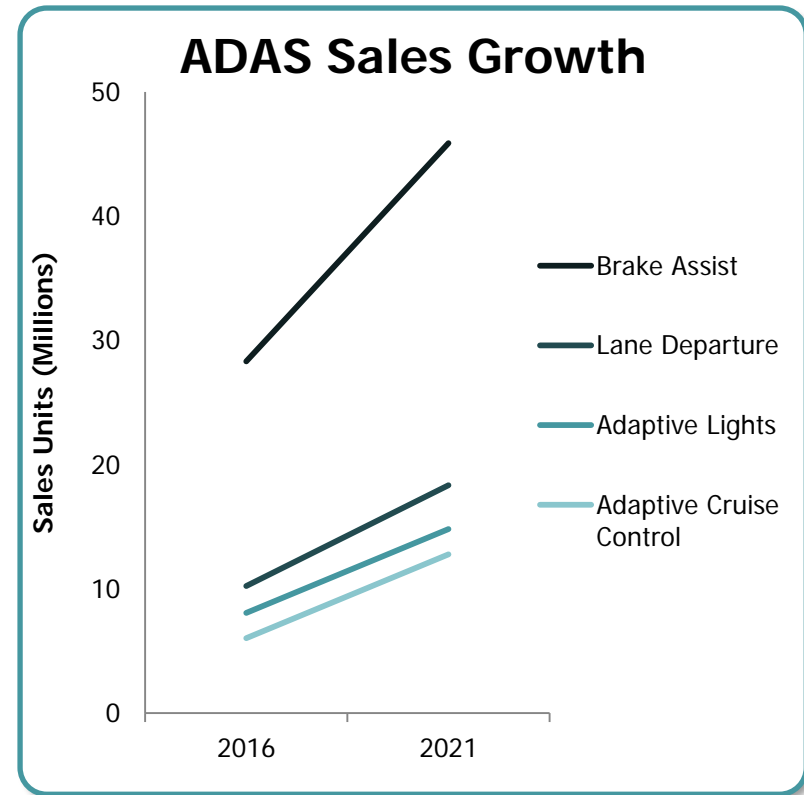


Courtesy of TOYOTA Global Newsroom



Rising Glass Demand for Autonomous Driving & ADAS

- Accelerating glass demand for increasingly complex Advanced Driving Assistance System (ADAS)
- Many of ADAS features rely on cameras mounted to windshields
- Increasing complexity and quality of glass (for new cars and repairs)



(NSG estimate)

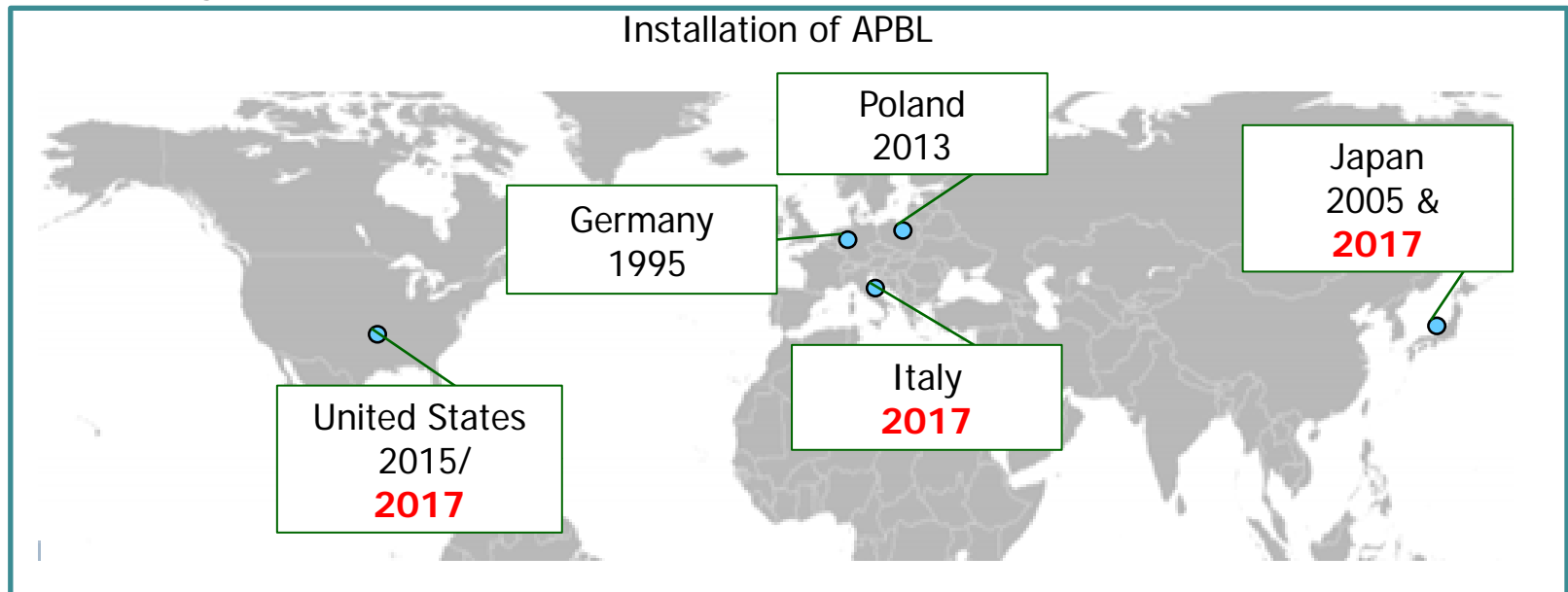
Accurate glass shaping is key for accurate sensing



VA Investment Progress – Three New APBL Lines

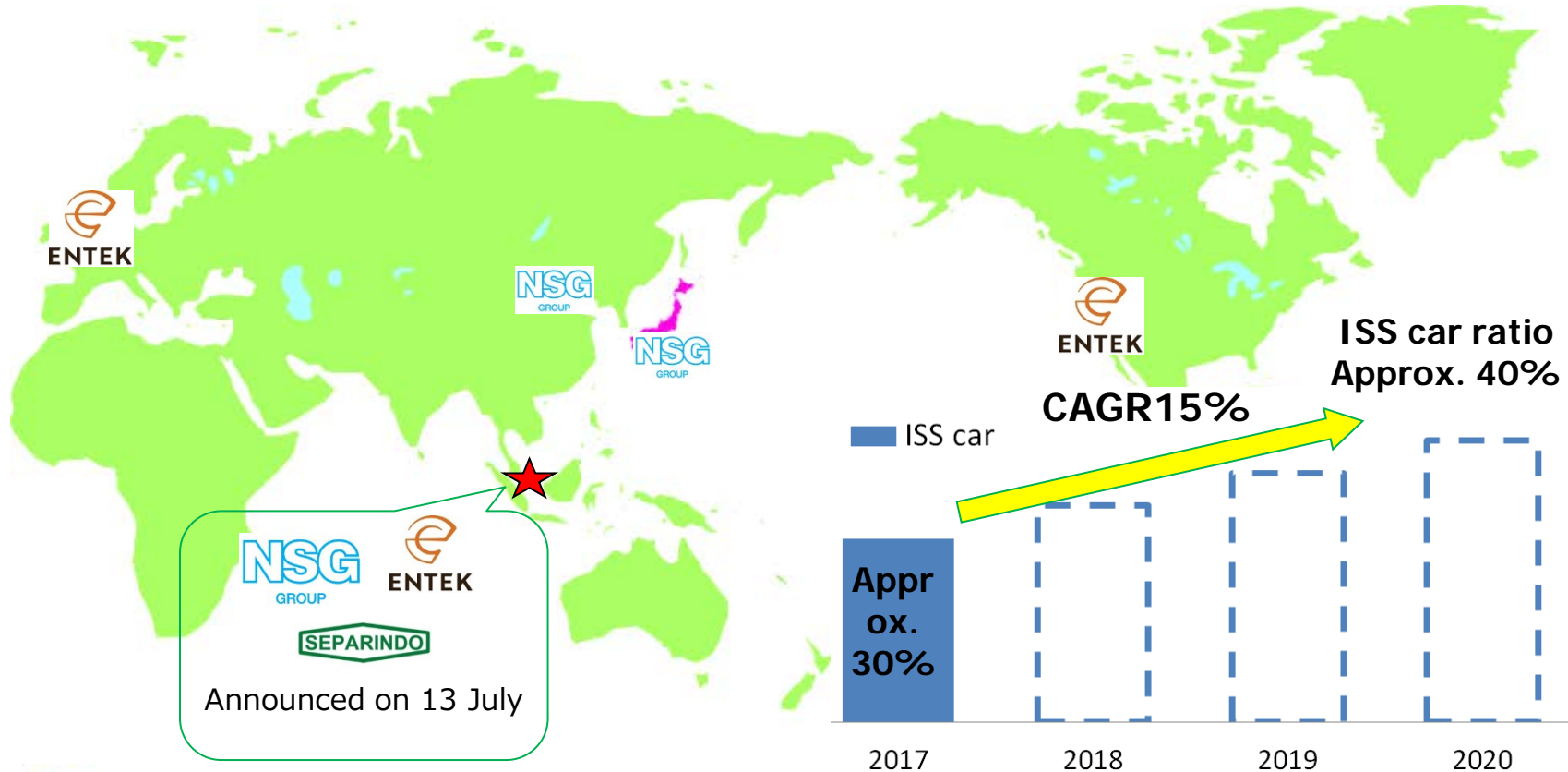
(Advanced Press Bending for Laminated glass)

- New Lines starting in Japan, Europe and the US in FY2018
- Best-in-class shaping capability for windshield
- Developed in house and rolled out globally, ahead of competitors
- Existing APBL lines in Japan, Europe and US in full operation





Battery Separator Business Development with Strategic Alliance



- Expand supply base for catering to growing lead-acid batteries, including ISS batteries
- Aim for a world leading supplier, leveraging on technological, commercial and manufacturing strengths.

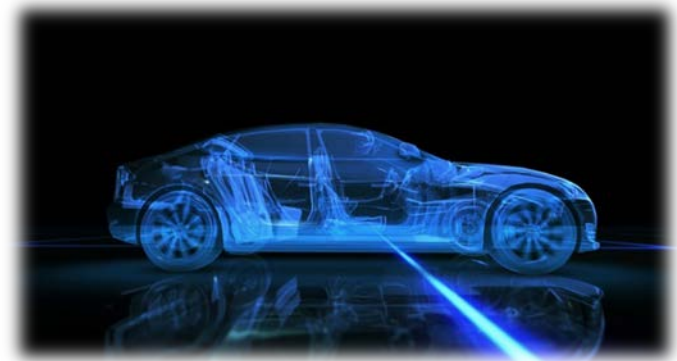
ISS: Idling Stop & Start

Enhancing Manufacturing Excellence

- Materialization of productivity improvement efforts, especially in Automotive Glass business
 - Yield/labor productivity improvement + production line consolidation in Europe and the US
- FY18: Focus on automotive glass labor productivity improvement
 - Actions : - New labor productivity KPIs
 - Laminating/Toughening: MMP (man minute per piece)
 - Tertiary: VAA% (value added activity %)
 - New improvement tool
 - Utilization of robots & IoT
 - Roll-out of best practices
 - Incorporation in development



- Solid performance improvement towards establishing **financial sustainability**
- **Expanding business opportunities** especially in the automotive area. Progress in **VA investment**.
- Heading for growth based on **proprietary technologies**
- Relentless efforts for **manufacturing excellence**



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FY2018 Q2 Results Highlights



Revenue	JPY 297.0 bn (+2.5%)	Volume growth in robust European markets and positive impact from weakening Yen
Trading profit	JPY 18.7 bn (+19%)	Robust European markets, improved results in Technical Glass, continued benefit from operational improvements
Operating profit	JPY 17.7 bn (+31%)	
Profit attributable to owners of the parent	JPY 4.9 bn (+15%)	Year-on-year improvement despite no repeat of previous year exceptional credit (disposal of non-current assets ¥ 7.9bn)

Free cash flow	JPY (7.1) bn	Negative cash flow arising from seasonal working capital movements. Positive cash flow expected for full year.
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Improved results from the previous year, in line with forecast

Consolidated Income Statement



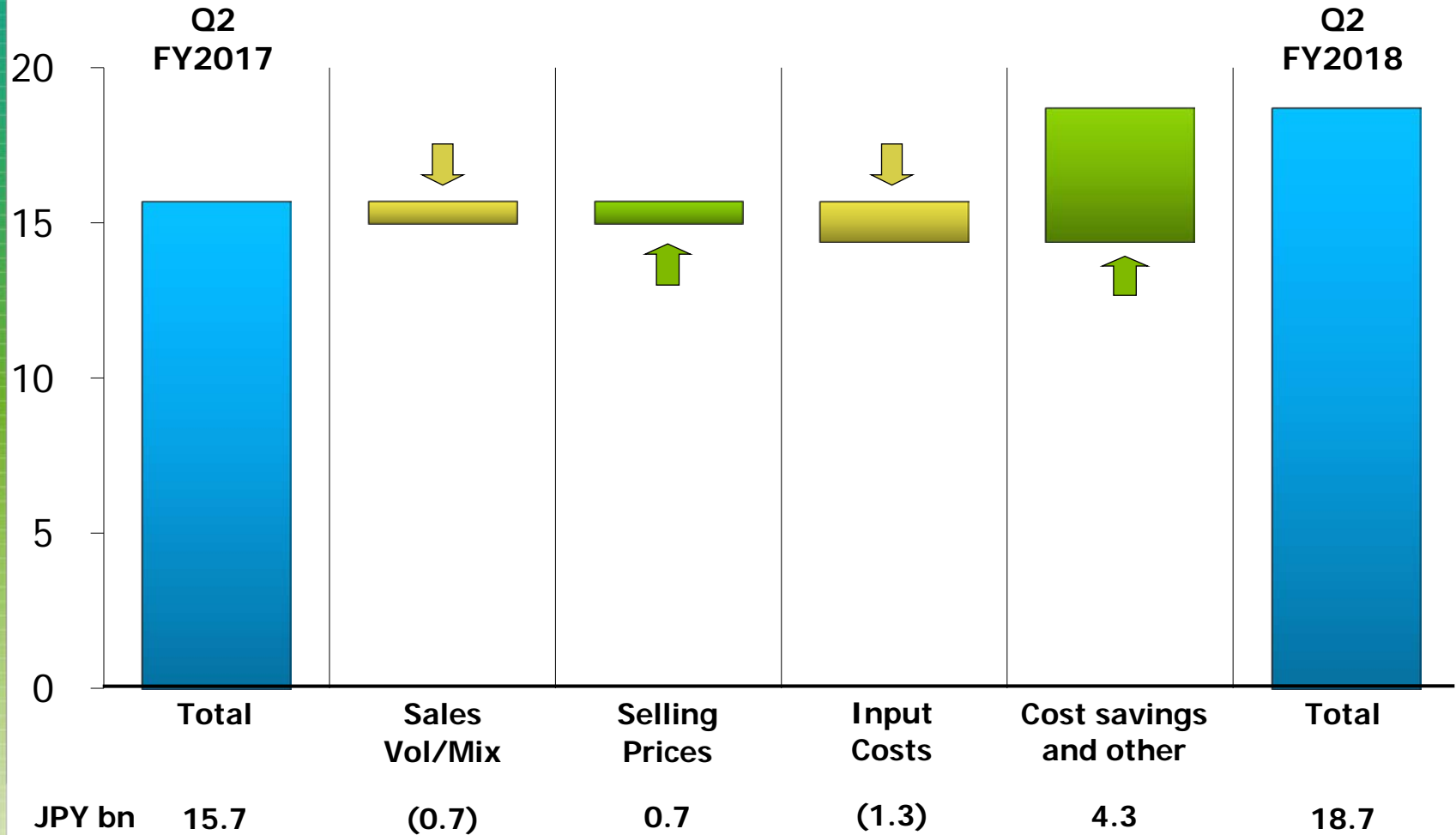
(JPY bn)	<u>FY2017</u> <u>Q2</u>	<u>FY2018</u> <u>Q2</u>	<u>FY2018</u> <u>Forecast</u>
Revenue	289.8	297.0	600.0
Trading profit	15.7	18.7	38.0
Amortization *	(2.2)	(1.0)	(2.0)
Operating profit	13.5	17.7	36.0
Exceptional items	6.4	(1.8)	(6.0)
Finance expenses (net)	(9.3)	(7.6)	(15.0)
Share of JVs and associates	0.3	1.0	2.0
Profit before taxation	10.9	9.3	17.0
Profit for the period	5.1	5.7	10.0
Profit attributable to owners of the parent	4.2	4.9	8.0
EBITDA	30.0	33.0	

* Amortization arising from the acquisition of Pilkington plc only

Results in line with forecast

Change Analysis

Trading profit



Supported by improvements in operational efficiency

Key Performance Indicators

	<u>31-Mar-17</u>	<u>30-Sep-17</u>
Net Debt (JPY bn)	313	330
Net Debt/EBITDA	5.0x	5.1x
Net Debt/Equity Ratio	2.3x	2.2x
Shareholders' Equity Ratio	15.7%	18.0%

FY2017
Q2

FY2018
Q2

Operating Return* on Sales

5.4%

6.3%

* trading profit

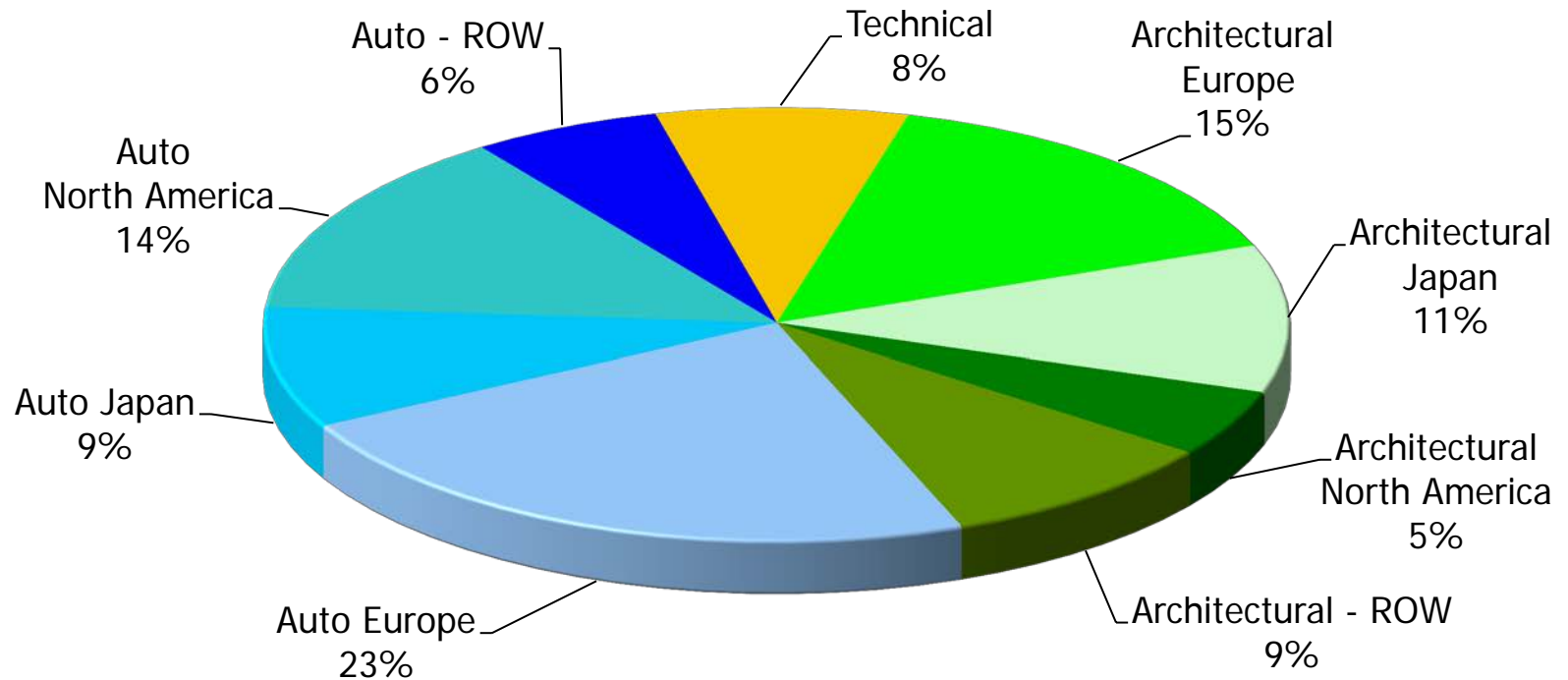
Continued improvement in Return on Sales

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External Revenue – Group Businesses

¥ 297.0 billion

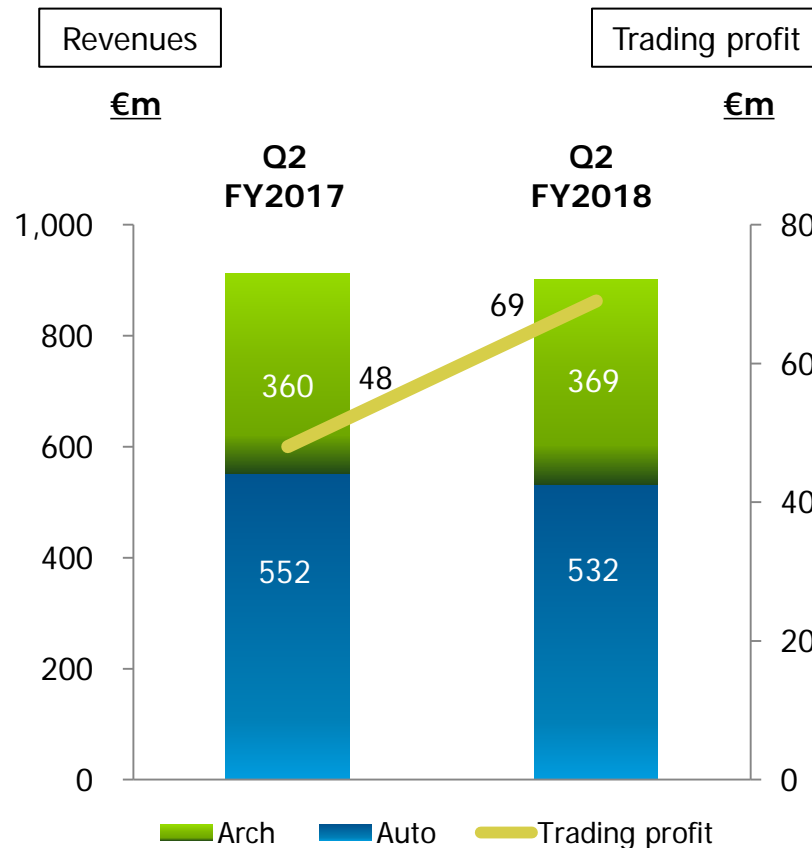


FY2018 Quarter 2

Diversified geographical coverage

Europe

Q2 FY2017 v Q2 FY2018



Architectural

- Strong demand leading to a robust pricing environment
- Profits benefitted from favorable production performance

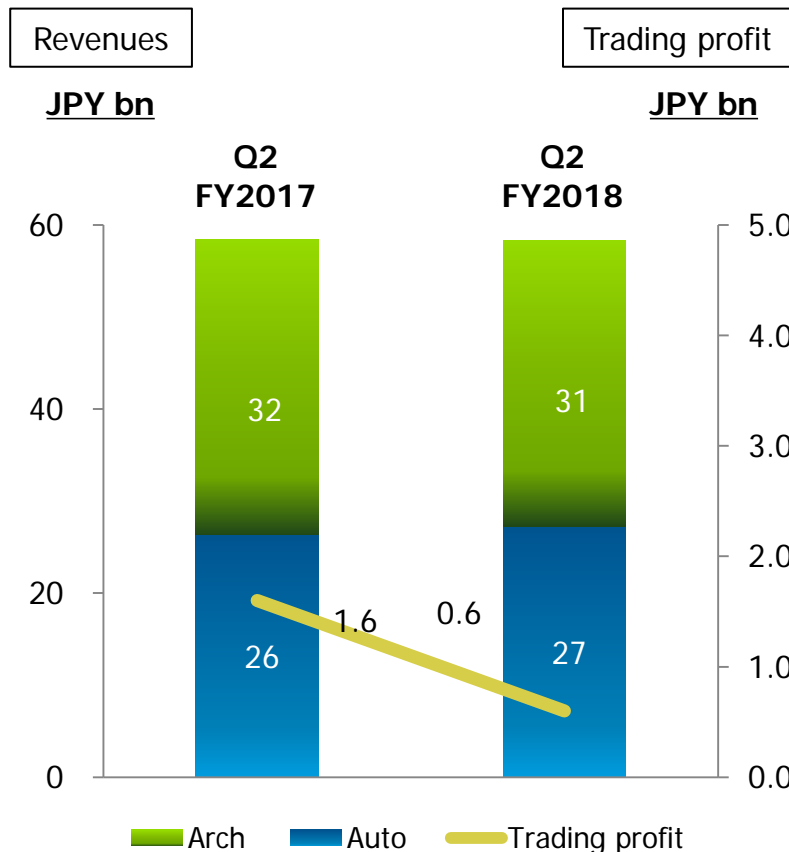
Automotive

- Profits increased with improved operational performance

Robust performance in both Architectural and Automotive

Japan

Q2 FY2017 v Q2 FY2018



Architectural

- Revenue affected by lower market volume
- Results include non-recurring charges incurred in the first quarter

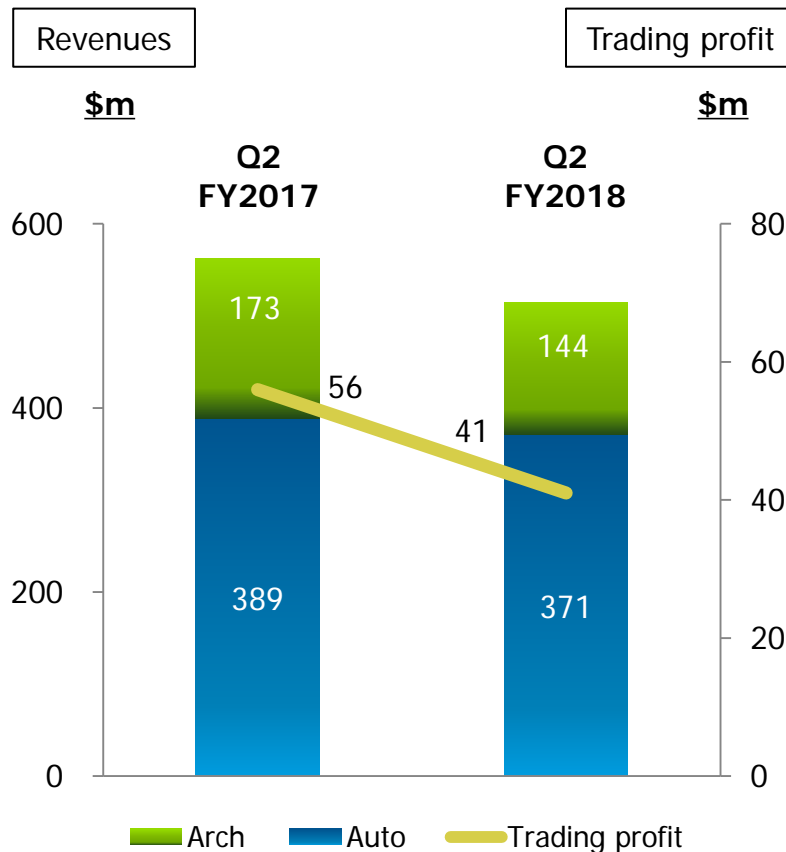
Automotive

- Revenues improved, consistent with increasing light-vehicle sales

Stable underlying performance, but one-off factors affected results

North America

Q2 FY2017 v Q2 FY2018



Architectural

- Results affected by temporary reduction in NSG capacity and re-tooling at a major customer

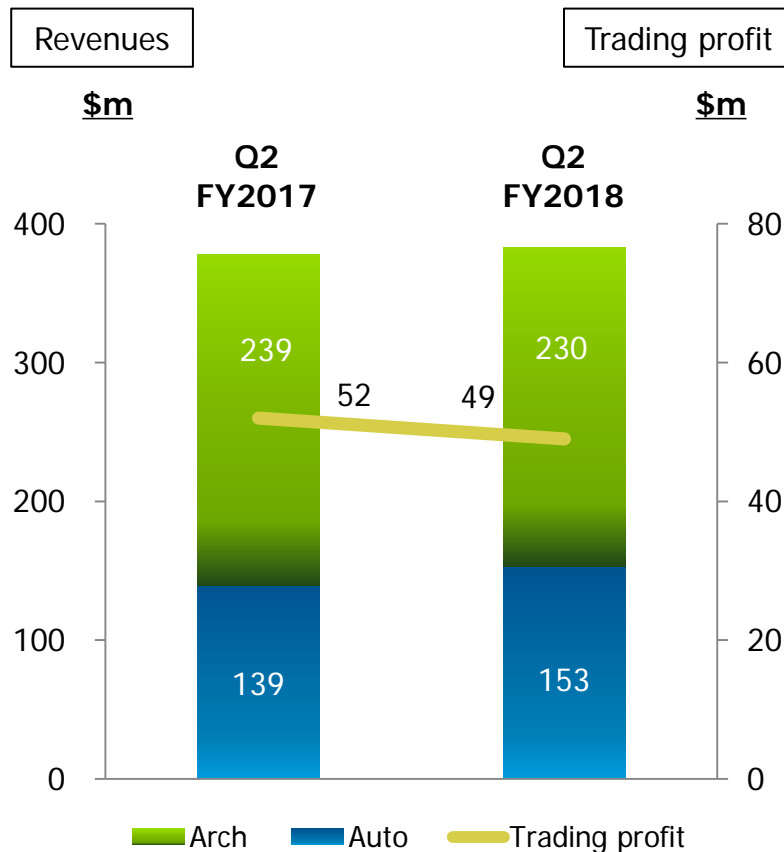
Automotive

- Revenues and profits decreased due to fall in market volumes
- Operational efficiency continues to improve

Temporary factors constraining profitability

Rest of World

Q2 FY2017 v Q2 FY2018



Architectural

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

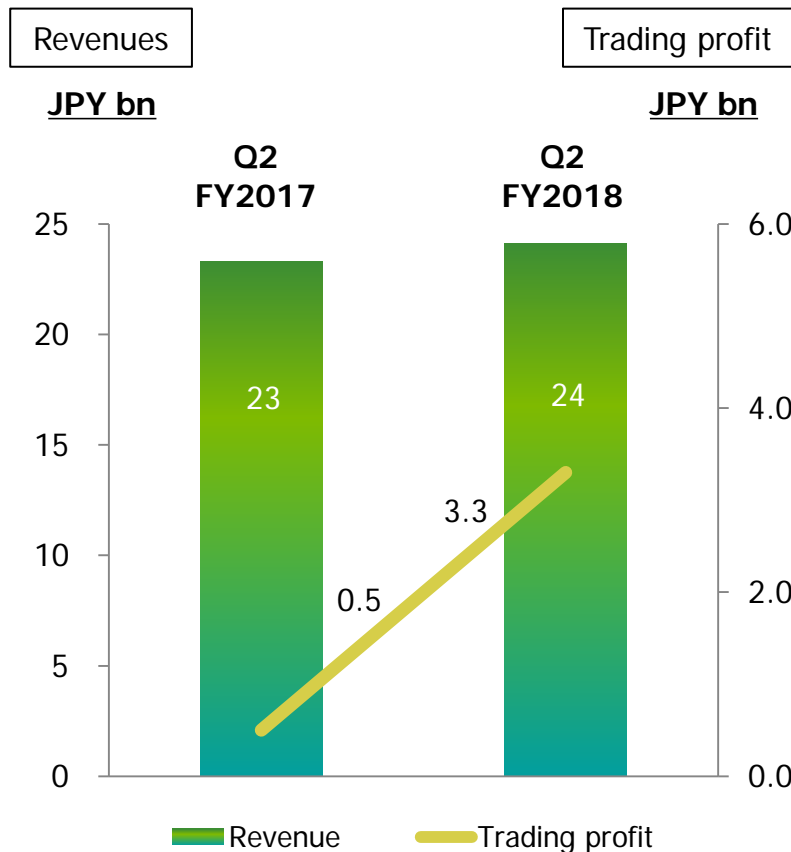
Automotive

- Market conditions in South America showing signs of a sustainable recovery

Improvements in underlying domestic market conditions

Technical Glass

Q2 FY2017 v Q2 FY2018



Technical Glass

- Display's results improved
- Strong demand for components used in multi-function printers, glass cord used in engine timing belts, and battery separators
- Positive contribution from the disposal of non-current assets

Improvements across all business segments

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Summary

- FY2018 H1
 - **Significant year-on-year improvement** reflecting favorable market conditions and cost reduction efforts
- FY2018 H2 Outlook
 - Architectural & Automotive Glass
 - Europe: Good market conditions to continue
 - North America: Automotive market to stabilize. Architectural market to remain robust
 - Japan: Markets to remain stable
 - Rest of the World: Clearer signs of recovery in South American automotive market
 - Technical Glass: Continued cost reduction efforts and growth in VA products
- **Making solid progress to achieve the year-end forecast**

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

- FY2018 Q2 Results
 - Exceptional items
 - Revenue by Business & Regions
 - Trading Profit by Business & Regions
 - Consolidated Cash Flow Summary
 - Consolidated Balance Sheet
 - Exchange Rates
- Medium-Term Plan (MTP)
 - MTP Phase 2: Four Key Measures
 - Reference: Autonomous Driving

Exceptional Items

(JPY bn)	<u>FY2017</u> <u>Q2</u>	<u>FY2018</u> <u>Q2</u>
Gain on disposal of investments in JVs and associates	0.7	1.5
Gain on settlement of insurance proceeds	-	1.0
Gain on disposal of non-current assets	7.9	-
Gain from exit of business	0.9	-
Restructuring costs	(1.6)	(2.2)
Suspension of facilities	-	(2.1)
Impairments of non-current assets	(1.3)	(0.2)
Other items	(0.2)	0.2
	6.4	(1.8)

Revenue by Business & Regions

FY2017 Q2 v FY2018 Q2

<u>(JPY bn)</u>	<u>FY2017</u> <u>Q2</u>	<u>FY2018</u> <u>Q2</u>	<u>Change</u>
Architectural	118.4	119.3	0.9
Europe	42.8	46.6	3.8
Japan	32.0	31.0	(1.0)
North America	18.3	16.1	(2.2)
Rest of World	25.3	25.6	0.3
Automotive	147.9	153.1	5.2
Europe	65.7	67.3	1.6
Japan	26.4	27.3	0.9
North America	41.2	41.4	0.2
Rest of World	14.6	17.1	2.5
Technical Glass	23.3	24.1	0.8
Europe	3.5	3.7	0.2
Japan	12.0	12.3	0.3
North America	0.5	0.6	0.1
Rest of World	7.3	7.5	0.2
Other Operations	0.2	0.5	0.3
Europe	0.0	0.3	0.3
Japan	0.2	0.2	0.0
North America	0.0	0.0	0.0
Rest of World	0.0	0.0	0.0
Total	289.8	297.0	7.2

Trading Profit by Business & Regions

FY2017 Q2 v FY2018 Q2

<u>(JPY bn)</u>	<u>FY2017</u> <u>Q2</u>	<u>FY2018</u> <u>Q2</u>	<u>Change</u>
by SBU			
Architectural	13.4	13.3	(0.1)
Automotive	5.3	5.9	0.6
Technical Glass	0.5	3.3	2.8
Other Operations	(3.5)	(3.8)	(0.3)
Total	15.7	18.7	3.0
by Region			
Europe	4.9	8.2	3.3
Japan	(0.4)	0.6	1.0
North America	5.7	4.3	(1.4)
Rest of World	5.5	5.6	0.1
Total	15.7	18.7	3.0

Consolidated Cash Flow Summary



(JPY bn)

	<u>FY2017</u> <u>Q2</u>	<u>FY2018</u> <u>Q2</u>
Profit for the period	5.1	5.7
Depreciation and amortization	16.5	15.7
Impairment	1.3	0.3
Gain on disposal of assets and exit of business	(9.8)	(2.4)
Tax paid	(2.5)	(2.8)
Others	(0.2)	(2.3)
Net operating cash flows before movement in working capital	10.4	14.2
Net change in working capital	(4.3)	(8.0)
Net cash flows from operating activities	6.1	6.2
Purchase of property, plant and equipment	(12.0)	(14.4)
Disposal proceeds	10.9	1.5
Others	(0.8)	(0.4)
Net cash flows from investing activities	(1.9)	(13.3)
Free cash flow	4.2	(7.1)

Consolidated Balance Sheet

(JPY bn)	<u>31-Mar-17</u>	<u>30-Sep-17</u>	<u>Change</u>
Assets	790.2	788.4	(1.8)
Non-current assets	527.8	550.9	23.1
Goodwill & intangible assets	162.3	174.3	12.0
Property, plant and equipment	245.2	254.3	9.1
Other	120.3	122.3	2.0
Current assets	262.4	237.5	(24.9)
Cash and cash equivalents	84.9	51.4	(33.5)
Other	177.5	186.1	8.6
Liabilities	656.5	637.9	(18.6)
Current liabilities	223.2	249.7	26.5
Financial liabilities	79.8	109.9	30.1
Other	143.4	139.8	(3.6)
Non-current liabilities	433.3	388.2	(45.1)
Financial liabilities	319.6	272.5	(47.1)
Other	113.7	115.7	2.0
Equity	133.7	150.5	16.8
Shareholders' equity	124.1	142.1	18.0
Non-controlling interests	9.6	8.4	(1.2)
Total liabilities and equity	790.2	788.4	(1.8)

Exchange Rates

	<u>FY2017</u> <u>Q2</u>	<u>FY2017</u> <u>Full-year</u>	<u>FY2018</u> <u>Q2</u>	<u>FY2018</u> <u>Forecast</u>
Average rates used:				
JPY/GBP	145	142	144	140
JPY/USD	106	108	112	110
JPY/EUR	119	119	126	120
Closing rates used:				
JPY/GBP	130	139	151	
JPY/USD	101	111	113	
JPY/EUR	112	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)



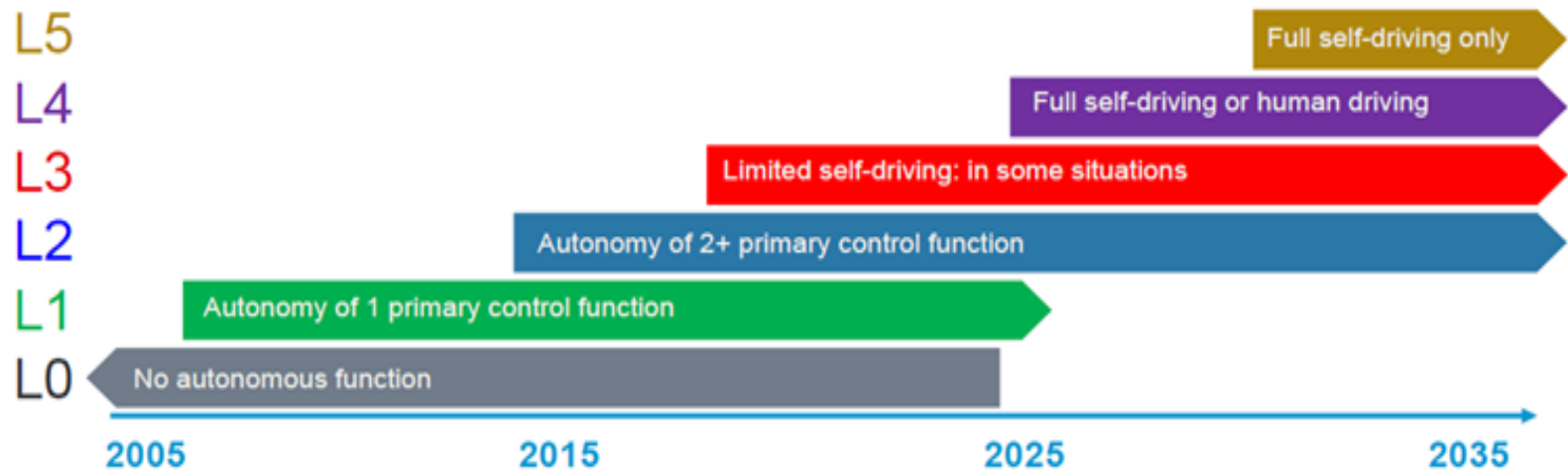
Business Culture Innovation

- 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

Reference: Autonomous Driving



Level	Definition	Examples
5 Full Automation		
4 High Automation	System is in control and Driver is no longer needed.	City Pilot, Valet Parking
3 Conditional Automation	System is in control, but Drivers must control when needed.	Highway Pilot, Remote Parking
2 Partial Automation	System supports a combination of Acceleration, Steerage and Braking	Lane Change Assist, Automatic Cruise Control
1 Drier Assistance	System supports either one of Acceleration, Steering and Braking	Automatic Braking, Lane Keep Assist

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