NSG GROUP

NSG Group

FY2018 Second Quarter Results

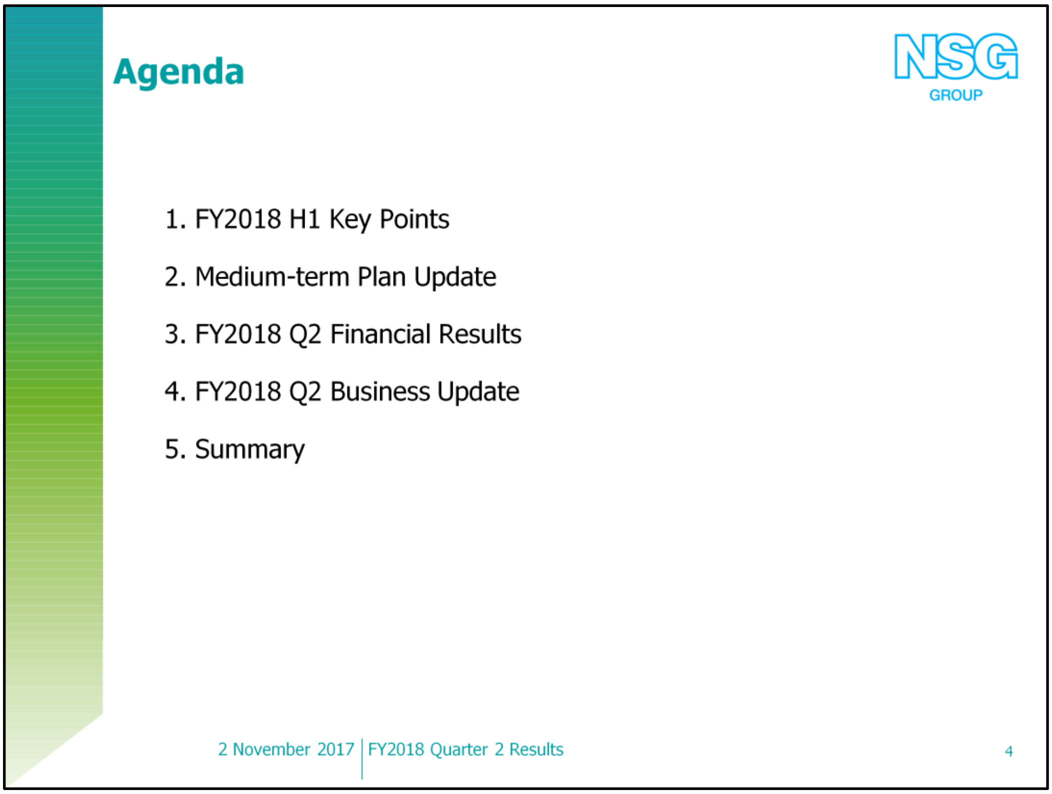
(from 1 April 2017 to 30 September 2017)

Nippon Sheet Glass Company, Limited
2 November 2017

Shigeki Mori
Chief Executive Officer

Clemens Miller
Chief Operating Officer

Kenichi Morooka
Chief Financial Officer



Slide 4 shows the agenda for today’s presentation.

First, I will talk about the key points regarding the first half of FY2018 as well as the progress we are making on the Medium-term Plan (MTP).

Kenichi will follow to discuss FY2018 second quarter financial results and the performance of each of our regional businesses.

After our presentation, we will have some time for questions and answers.

FY2018 H1 – Key Points

NSG GROUP

- **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**

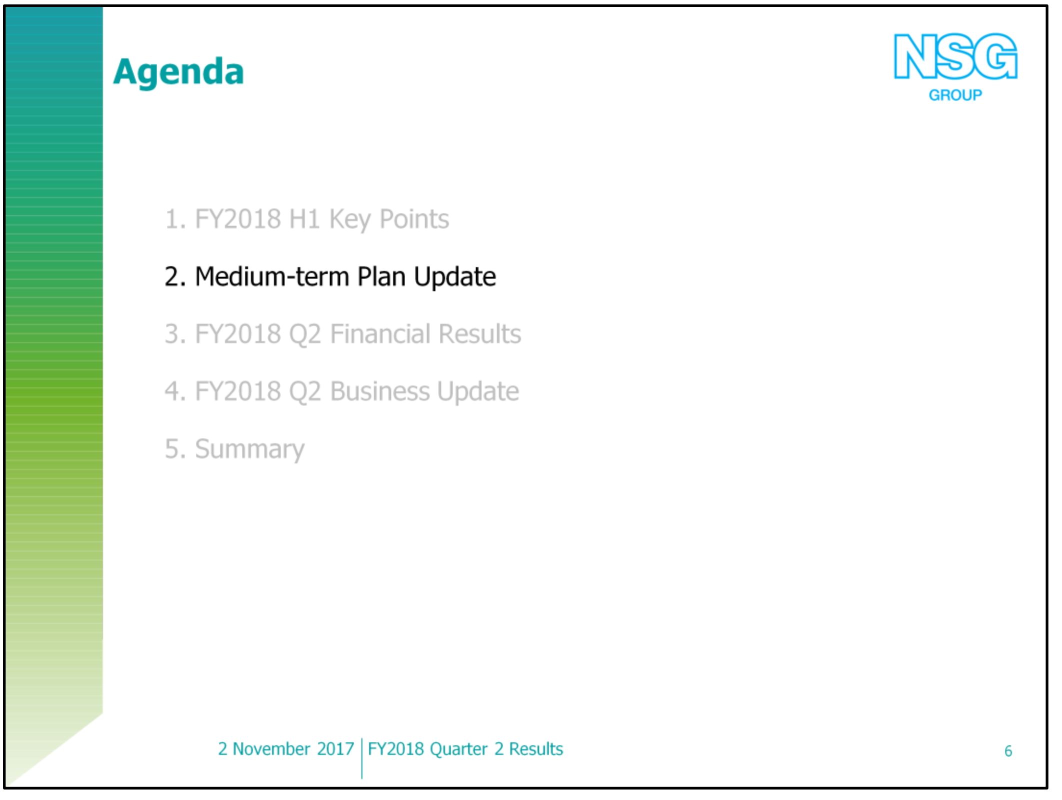
VA: Value-added

Both revenues and trading profits for the first half of FY2018 exceeded our forecast that we announced at the beginning of this financial year.

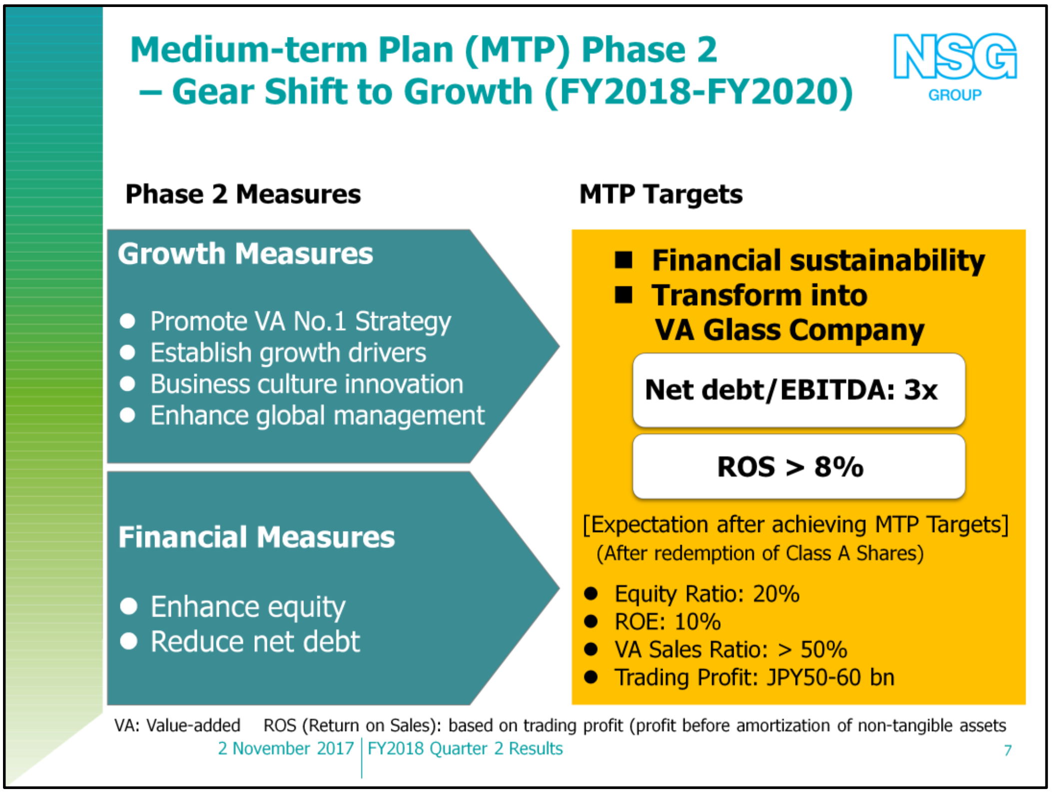
As a result, we could make a steady progress in terms of financial KPIs, towards establishing financial sustainability as touted in the MTP. I will expand on this later.

Our actions for growth are also progressing. Today, we will focus on rapidly advancing technologies in the car industry where we are witnessing business opportunities for our various products and services.

In the first half of FY2018, we made a good start. While we enjoyed the robust market conditions, especially in Europe as an external factor, the results also show the benefits achieved with our continued efforts since the start of MTP back in FY2015 to drive the shift to VA (value-adding) and manufacturing improvements.



From this Slide 6, I will provide an update on the MTP progress first.



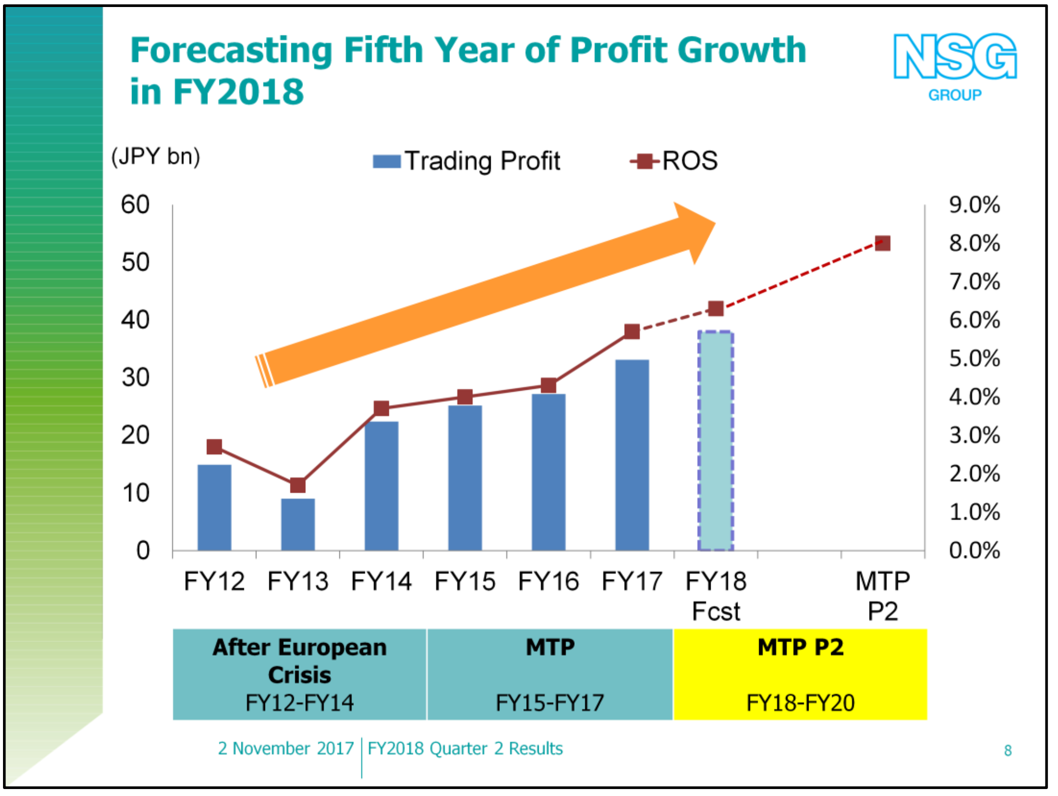
Moving to slide 7, here is a summary of Medium-term Plan (MTP) Phase 2.

In the second phase of MTP, which started in April 2017, with the key phrase of “Gear Shift to Growth”, we are executing the four growth measures as well as improving our financial stability.

With these measures we intend to achieve the targets of MTP: to establish financial sustainability; and to start transforming into a VA Glass company.

The financial KPIs and the targets are for us to achieve Net debt/ EBITDA of 3x; and Return on Sales of 8% or more.

(Note: Return on Sales is based on trading profit).



Slide 8 shows the trend of our trading profit.

As you can see, we have been improving trading profit continuously, bottoming out after FY2013.

For FY2018, the first year of MTP Phase 2, we are forecasting another year of profit growth, planning to achieve a 6.3 percent Return on Sales for the full year.

The first half results were solid, resulting in 6.3 percent return on sales, exceeding the original forecast of 6.0 percent.

Building on these results, we are aiming for profit growth in five consecutive years. By steadily improving profitability, we intend to achieve a eight percent or more of Return on Sales in FY2020.

Solid Progress towards Establishing Financial Sustainability

NSG GROUP

Financial KPI	FY17	FY18 Q2	FY18 Forecast	MTP P2 / after redemption
ROS	**5.7%**	**6.3%**	**6.3%**	**>8%**
Net Debt/ EBITDA	**5.0x**	**5.1x**	-	**3x**
Equity Ratio	15.7%	18.0%	-	20%
VA Sales Ratio	41%	43%	-	> 50%

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Please turn to slide 9.

The other financial KPI of the MTP, besides Return on Sales, is Net debt/ EBITDA. This KPI had a slight set back due to seasonal increases in working capital but we would expect this ratio to improve as our cash flow turns positive during the remainder of the year.

The equity ratio, the target of which is 20 percent, improved from the end of previous financial year, partly helped by the tailwind of depreciation of the Japanese yen.
(Note: 20% is our expectation after the redemption of Class A Shares issued at the end of FY2017.)

The VA Sales ratio, which shows the ratio of sales of value added products, is also steadily increasing.

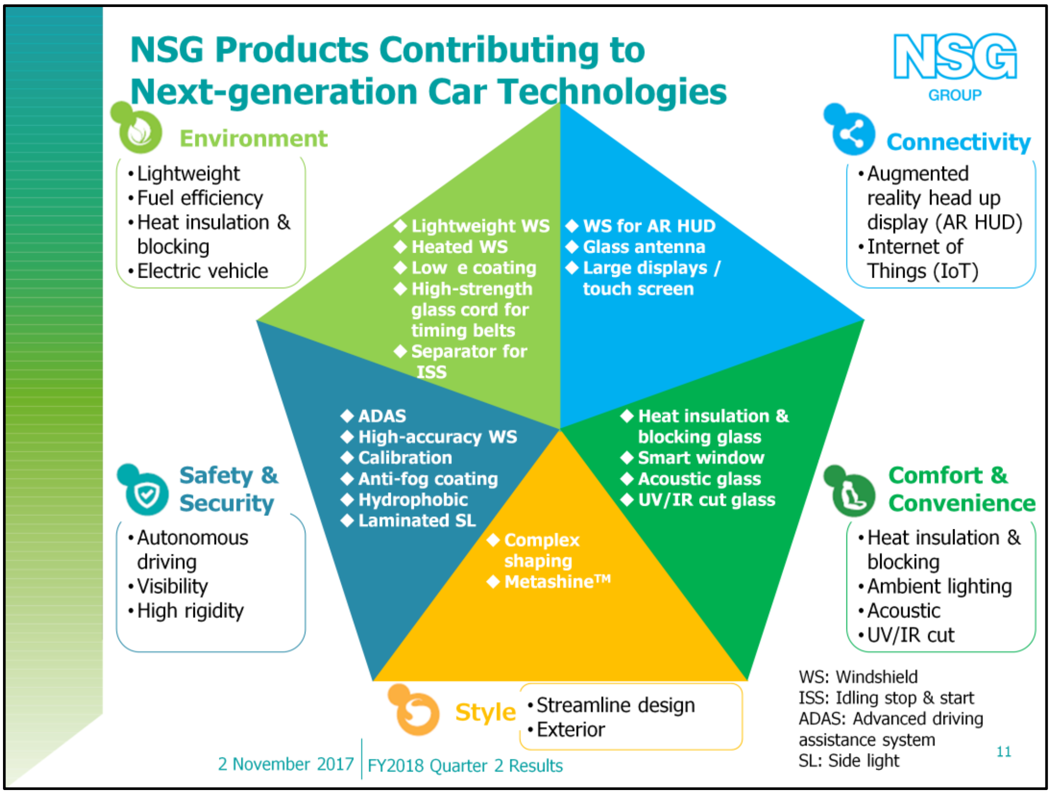
Moving to slide 10, I would like talk about the developments of our VA shift under the MTP.

Today, I will focus on our opportunities in relation to increasingly important and very exciting innovations in car technologies.

This week the Tokyo Motor show is underway and it is a good timing to talk about the car industry-related theme.

Obviously we are supplying car glass but we have much more to offer.

We regard the development of car technologies as a big opportunity for our other products such as battery separators and glass cord for timing belts.

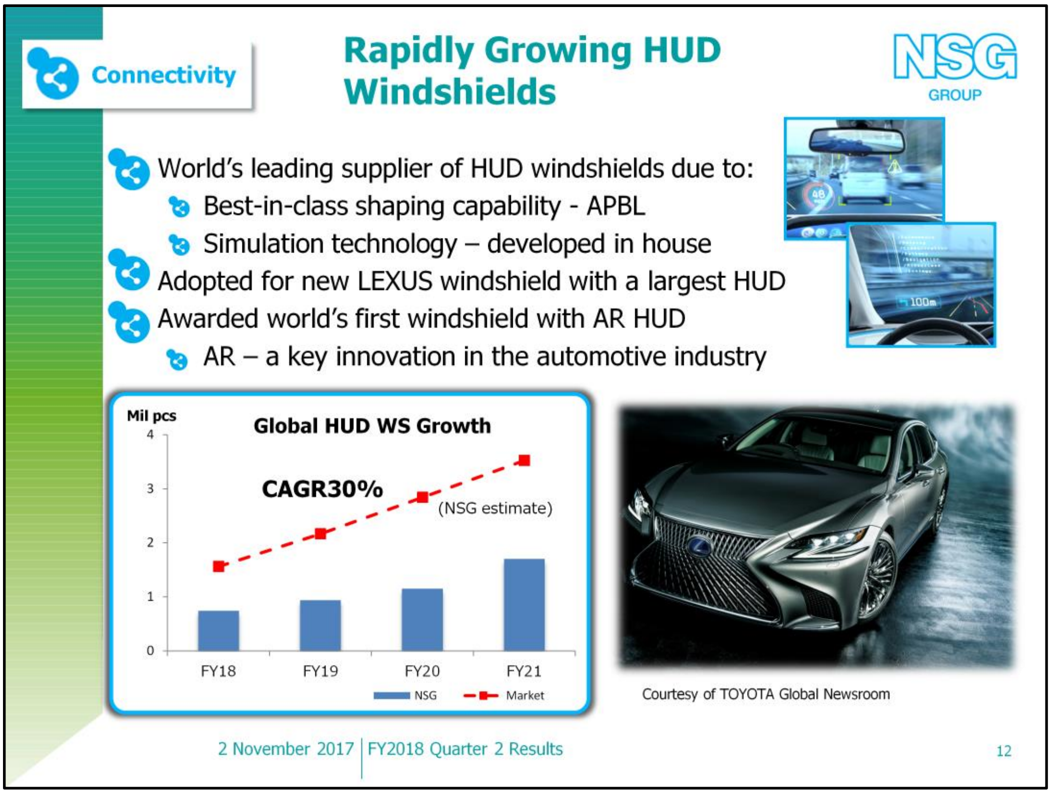


This pentagon chart on Slide 11 shows our products and technologies, based on the five major features of next generation cars: Environment; Safety& Security; Connectivity; Comfort & Convenience; and Style.

We are well position to respond to the increasing demand for new functionalities of car windows, such as lightweight and various coatings, we have other products and technologies to satisfy these five areas of requirements.

To give one example, we have glanova™ , thin glass developed for display applications, which is a good solution for light weighted windshields.
Low e coating is a widely used technology in the architectural glass field and provides good heat insulation and blocking properties. When used for car windows, it could reduce battery usage, which is particularly required for EVs.

Today, I will discuss some of them.

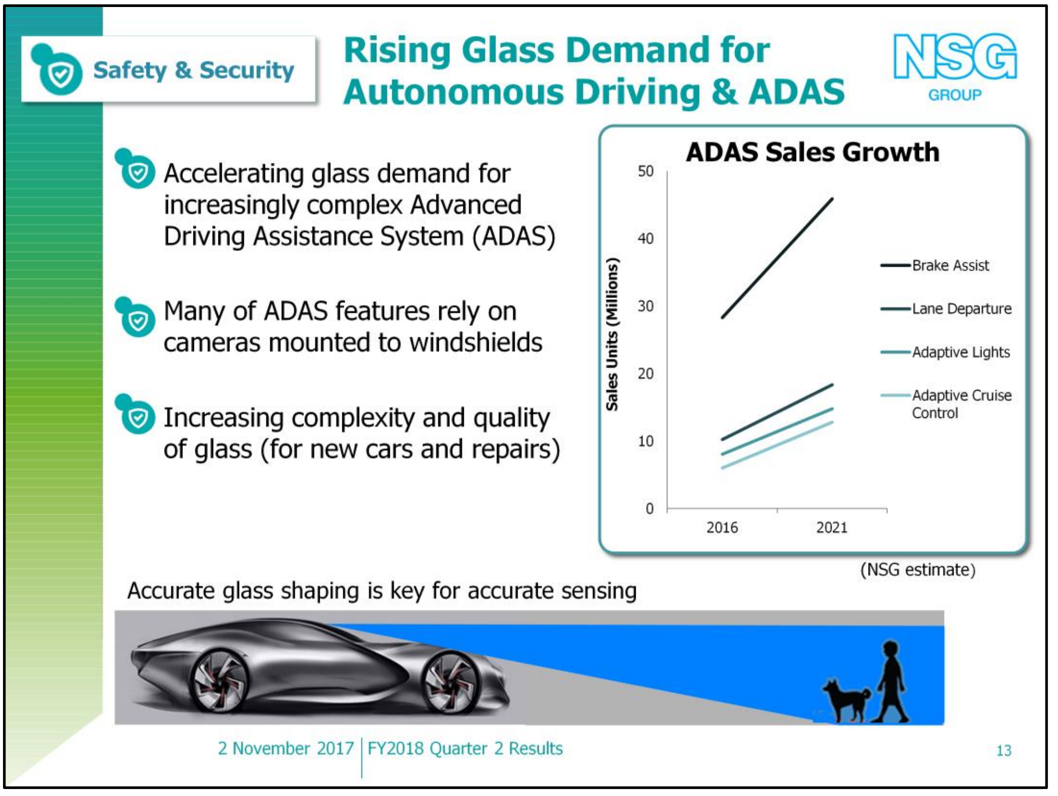


We will now proceed to Slide 12.

Now, more and more cars, especially in Europe, are equipped with head up displays. The new Lexus of Toyota has a 24-inch head up display, which is one of the largest in the world.
The windshield of this car is our glass.

When the size of HUD becomes larger, and cameras and sensors are mounted inside the car, shaping windshields precisely becomes even more important.

As you can see in the graph, we are a significant supplier of windshields with HUD. Recently, we have been awarded with a windshield with augmented reality HUD in Europe, a further advanced HUD.



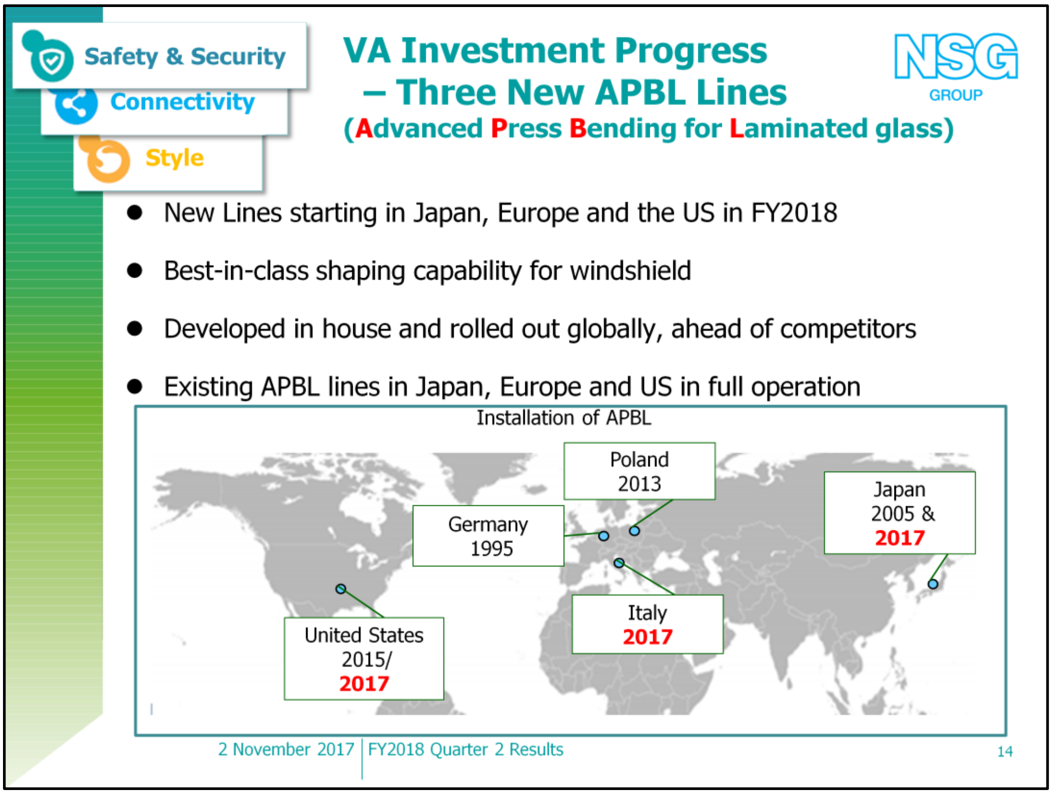
Moving to slide 13.

With a view to autonomous driving in the future, more cars are being equipped with advanced driving assistance systems (ADAS).

Most of ADAS today rely on cameras, which are mounted inside the car, often close to the rear-view mirror.
For the cameras to detect people and objects outside properly, it is essential for windshields to be precisely shaped.

To illustrate, as you can see, if the angle of windshield differs from the design, the camera could be looking at a totally different place.

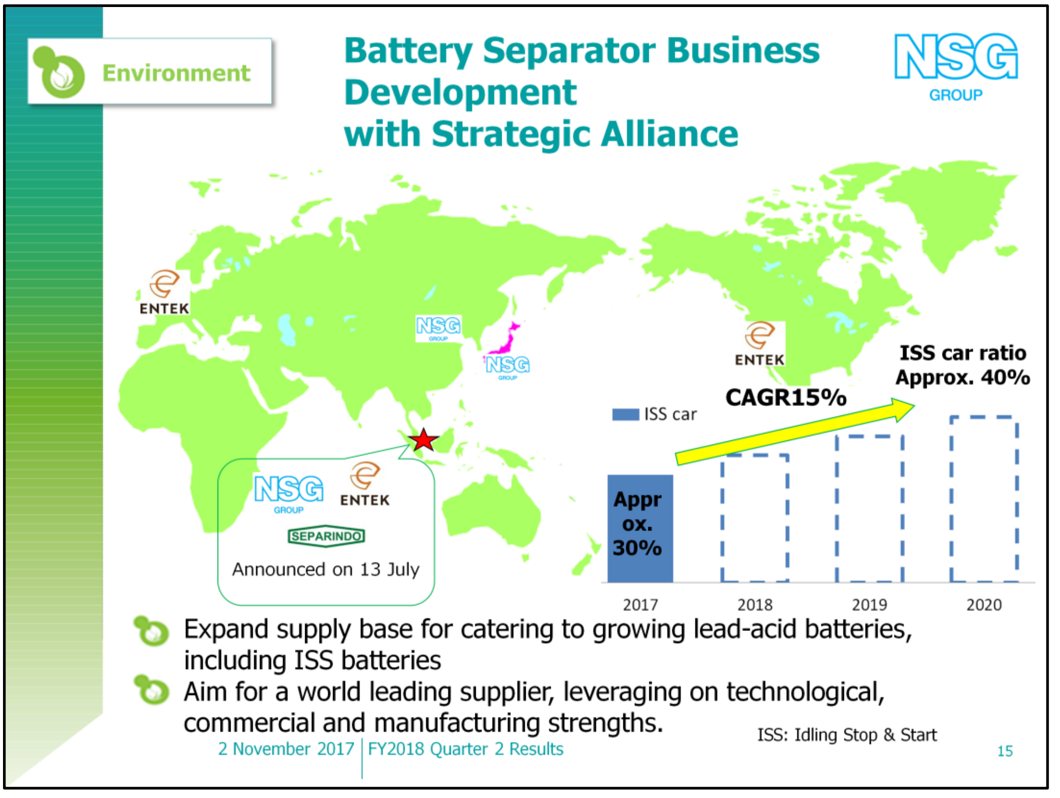
In this field also, our press bending technology, APBL, plays a key role.



Turning to slide 14.

In anticipating of these new demands, we have been installing new press bending capabilities, as part of our VA investment. In this area, our press bending technology, APBL has more advantage than conventional sag bending methods, because of its shaping capability.

The press process was developed in house, originally in the mid-1990s in Europe, ahead of our competitors.
We have improved the process and technology over the years, and in this financial year, we are adding three new lines in Japan, Europe and the US.



Now on Slide 15, I will talk about separators used for lead-acid batteries.

While the hot topics for batteries these days may be lithium ion batteries, but lead-acid batteries are also growing with the increase in the idling stop & start system. As you can see in the graph, we are expecting a significant growth of CAGR 30% in ISS installed cars.

We announced our decision to invest in a joint venture with Entek and Separindo in the battery separator business to set up a new plant in Jakarta, Indonesia, while the NSG Group is operating plants in Gifu, Japan and Tianjin, China.

Entek, a US company, is the global leader in the PE separator business, and we are the third.
We will respond to the growing global demand for battery separators, leveraging on our strengths.

Slide 16 shows some of our actions regarding manufacturing improvements.

Manufacturing excellence is an important part of the “business culture innovation”, one of the four key growth measures of MTP Phase 2.

While we have been always improving our manufacturing operations as a manufacturer, especially for the past several years we have been focusing on improving yield, labor productivity and consolidation of processing lines.

This year, we are redoubling our efforts to improve operations including assembling, meaning adding various parts to glass, such as clips to attach the glass to a car. Specifically, we have added new labor productivity KPIs and rolled out best practices across the group.
We are using more robots and IoTs as part of the overall improvement program.

MTP Update Summary

NSG GROUP

- 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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Slide 17 is to summarize my presentation.

We have been improving our financial performance steadily, with the aim to achieve financial sustainability, our target under the MTP.

At the same time, we are seeking business growth, capturing new opportunities arising, especially in the automotive industry.

Needless to say, we will keep focusing on manufacturing excellence, the very basics for a manufacturer, based on our proprietary technologies.

This time I focused on automotive related business but next time I would like to show you various VA products in architectural and technical glass business.

The next slides are FY2018 second quarter financial results and the performance of each of our regional businesses.

Agenda

NSG GROUP

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

FY2018 Q2 Results Highlights

NSG GROUP

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.

Improved results from the previous year, in line with forecast

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Slide 19 is the Highlights of Q2 Results.

Revenue increased by 2.5% from the previous year to 297 billion yen, due to robust market conditions in Europe and the weakened Japanese yen.

Trading profit improved by 3 billion yen from the previous year to 18.7 billion yen, due to robust market conditions in Europe, improved results in Technical Glass and continued benefit from operational improvements.

Profit attributable to owners of the parent improved to 4.9 billion yen, despite no repeat of last year’s disposal gains credited to Exceptional items.

Free cash flow of minus 7.1 billion yen has been affected by seasonal working capital movements, but we expect this to improve towards the end of this financial year and result in positive cash flow for the year.

As you can see, our results are continuing to improve, and at this stage are least in line with forecast.

Consolidated Income Statement

NSG GROUP

(JPY bn)	FY2017 Q2	FY2018 Q2	FY2018 Forecast
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

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Moving to slide 20. Here we can see the income statement in the usual format.

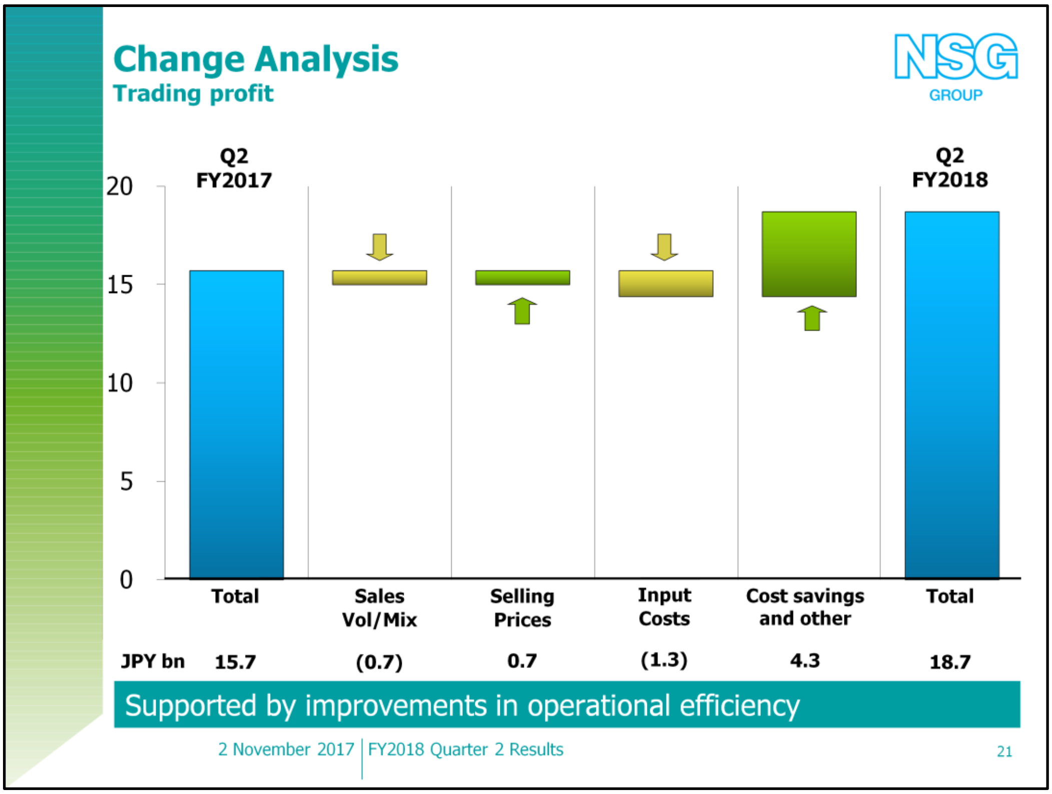
Operating profit has improved from the previous year to 17.7 billion yen, which is in line with our forecast.

Last year's exceptional items included a significant credit due to sale and leaseback transaction in Japan and Malaysia, which did not recur this year.

Net finance expenses have fallen from the previous year, as result of lower average debt levels and reduced costs of borrowings as our balance sheet and financial results continue to strengthen. Our share of joint ventures and associates' profits has increased from the previous year.

Profit attributable to owners of the parent has improved from the previous year, without a repeat of the previous-year Exceptional credits.

Reflecting the underlying improvements in business performance, EBITDA increased by 10% from the previous year to 33 billion yen.



On slide 21 we can see an explanation of the year on year movement in trading profits.

Volumes were negatively affected due to re-tooling at a major customer, and a temporary reduction of capacity in Architectural North America, but some improvements were seen in Technical Glass.

Prices have improved in Architectural, particularly in Europe.

Increase of energy costs in some regions have affected Group's input costs.

The cost savings and other column shows the effect of our improvements in operational efficiency and cost reduction, which is something we are continuously working towards.

Key Performance Indicators

NSG GROUP

	31-Mar-17	30-Sep-17
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

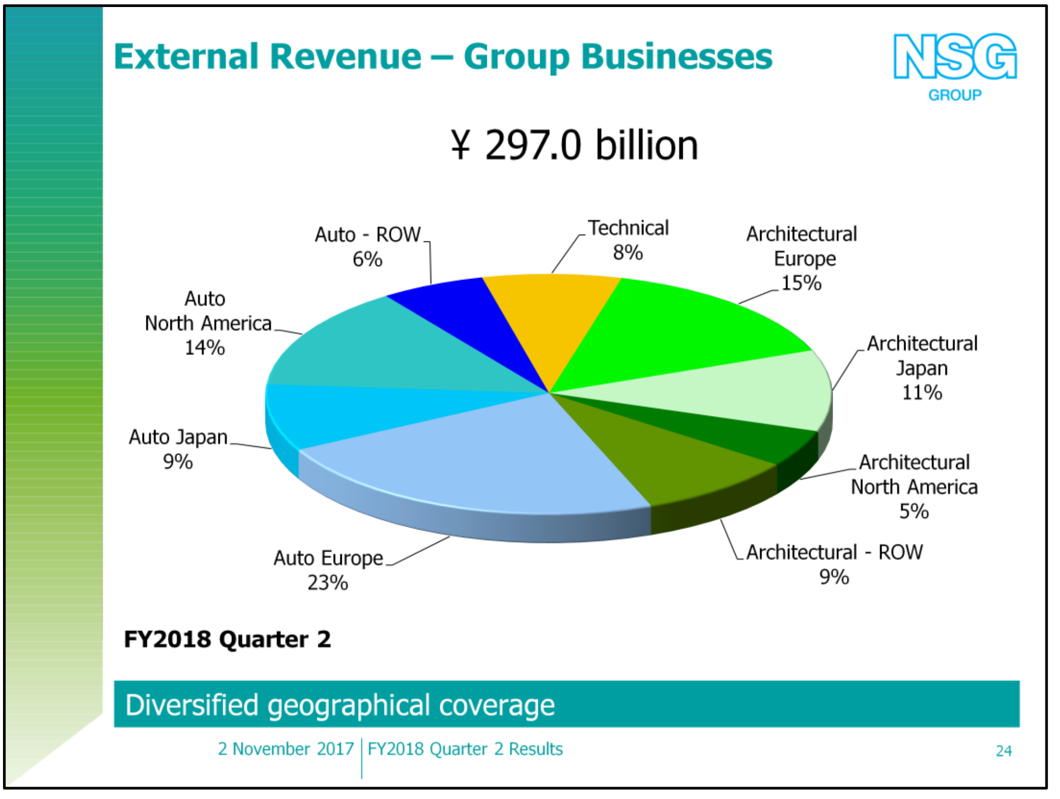
Continued improvement in Return on Sales

On slide 22 we show the key financial ratios.

Net debt has worsened by 16.3 billion yen from end of March 2017, mainly due to seasonal increases in working capital and also translational differences arising from the weakening Yen.

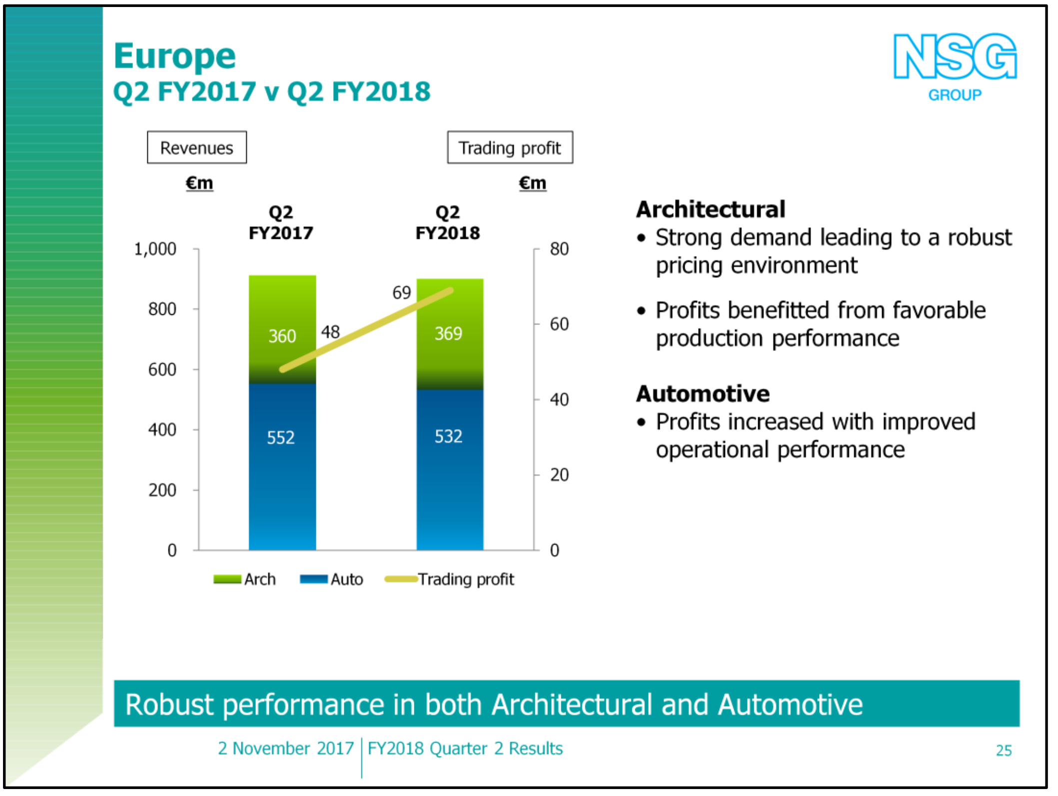
In the other hand, operating return on sales has improved to 6.3% from 5.4% in the previous year, reflecting the improvements in the Group's underlying business performance.

Agenda



Slide 24 shows the proportion of sales generated by each of the Group's business segments.

40 percent of the Group's sales are in Europe, 24 percent in Japan, 19 percent in North America and 17 percent in the rest of the world.

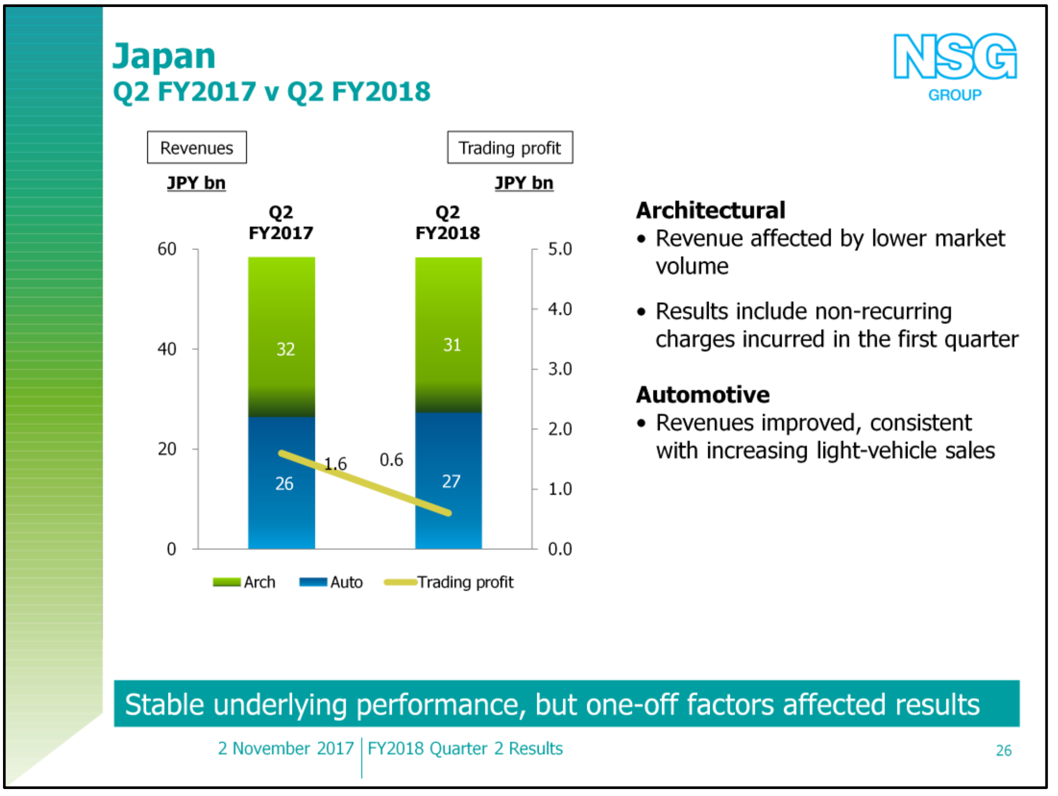


Turning to slide 25, we can see the performance of the Group’s flat glass businesses in Europe.

Architectural businesses benefitted from robust market conditions, with improved pricing environment supported by strong demand. Group’s production lines are operating at full capacity and favorable production performance is contributing to improved profits.

Re-commissioning of the float line in Venice, Italy is continuing in line with our expectations and we expect to restart soon.

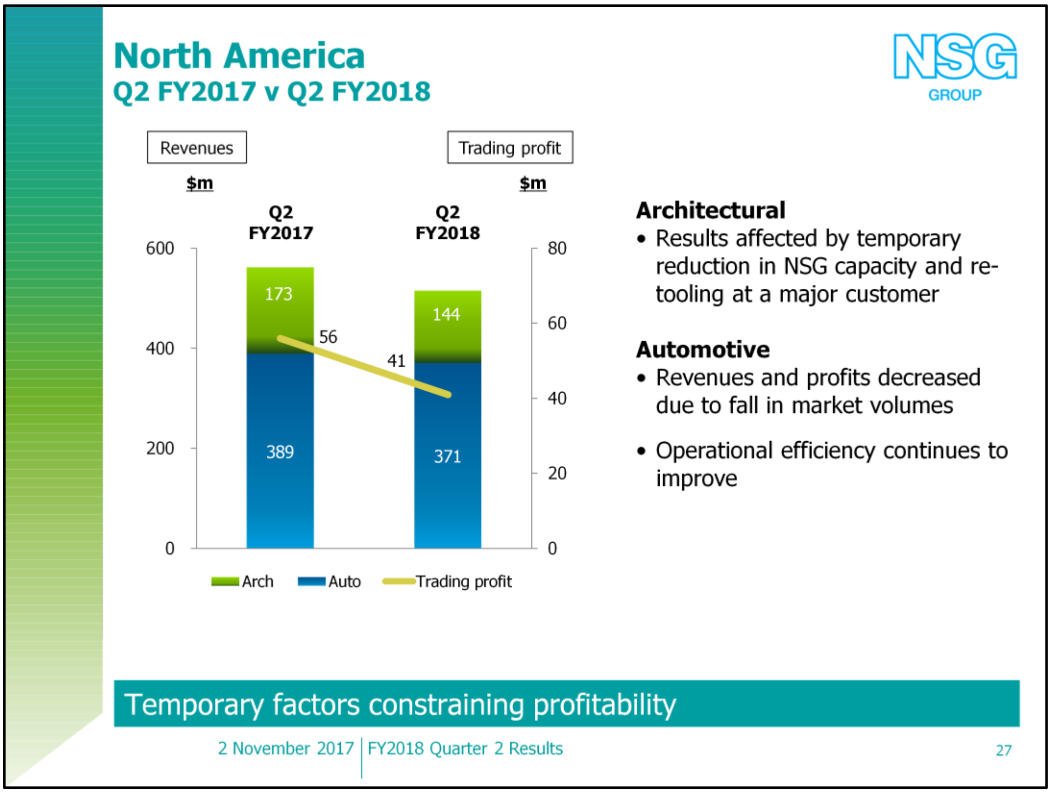
Automotive profits also increased, largely due to improvements in operational performance. Underlying automotive market conditions continue to strengthen with further recovery of light-vehicle sales in the region.



Slide 26 is Japan.

In Architectural, revenues were affected by lower market volumes. We are continuing to address our cost base and promoting value-added products to ensure the Group can achieve satisfactory levels of profitability even at current market demand.

In Automotive, our revenues improved, reflecting the increase in light-vehicle sales.

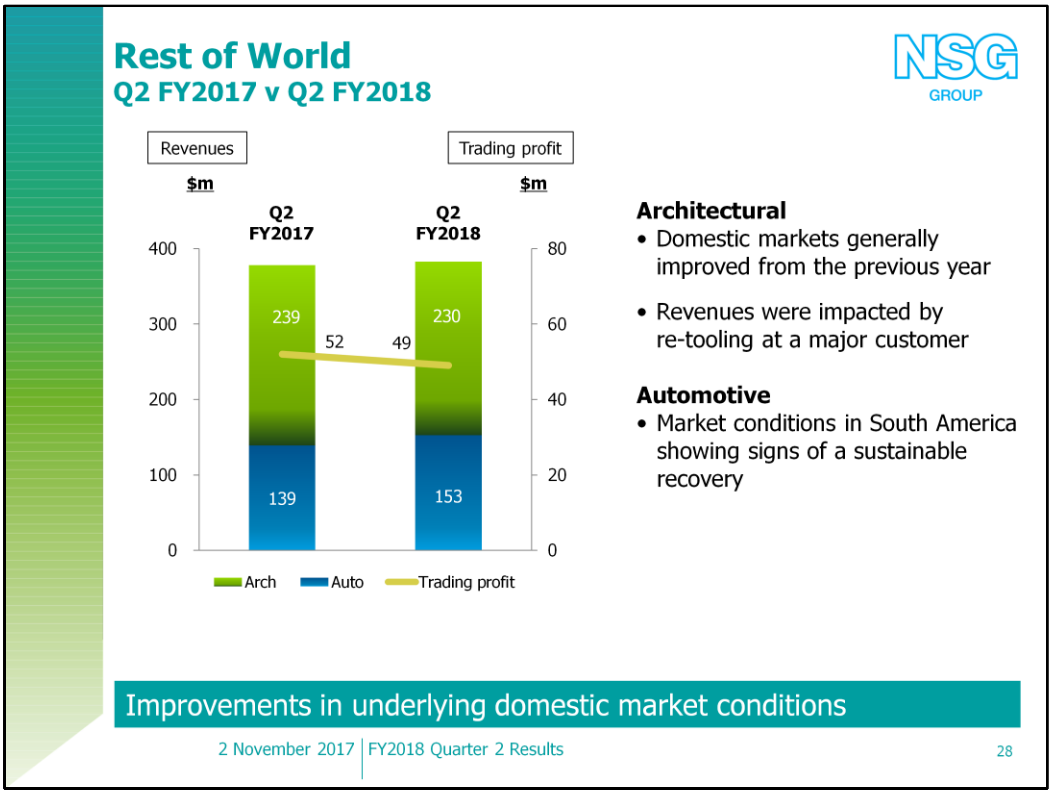


Turning to North America on slide 27.

Architectural revenues and profits were below the previous year, as the Group's capacity has been temporarily reduced due to an expedited repair. In addition, sales of solar energy glass have slowed during a period of re-tooling at a major customer, but the domestic architectural markets are maintaining its strength.

As previously announced, we are conducting an expedited cold repair of the float facility at Ottawa, Illinois. This is progressing in accordance with our plan, and we expect to restart this facility towards the end of this calendar year.

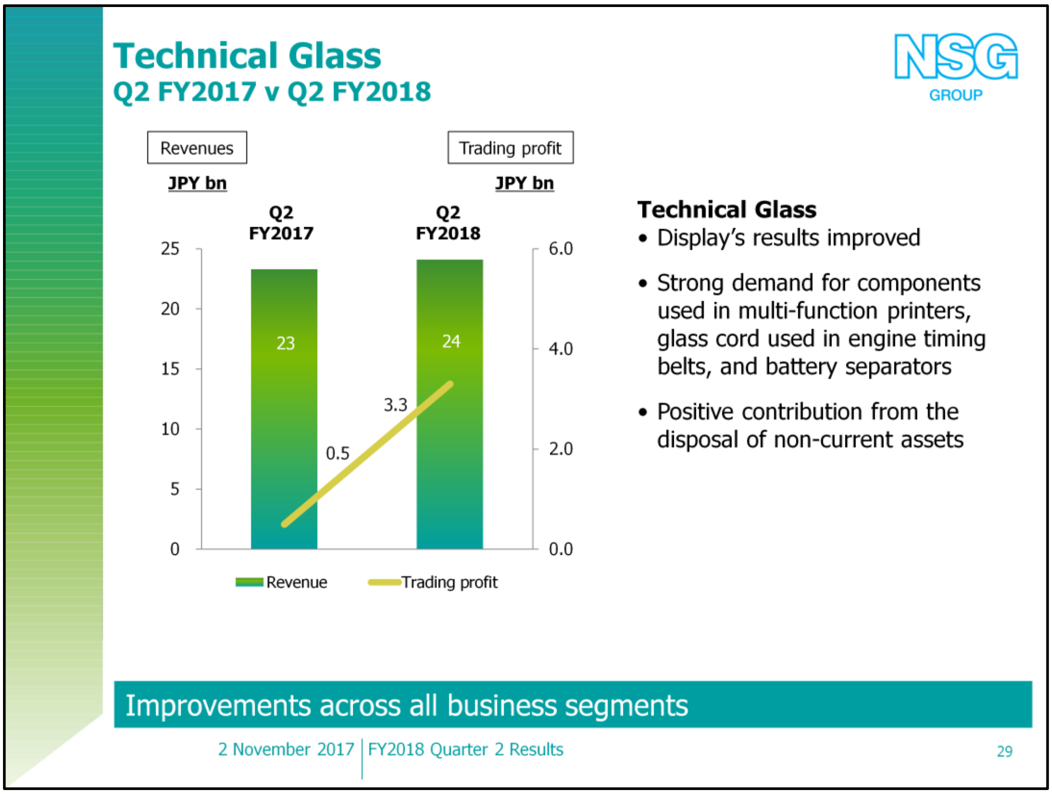
Automotive revenues and profits were affected by a fall in market volumes, despite the improvements to the Group's operational efficiency. Group has initiated restructuring of sites and production lines to improve the cost base.



Slide 28 is Rest of the World.

Domestic architectural markets in South America and South East Asia were generally improved, although in South East Asia volumes were adversely affected by re-tooling at a major customer.

In Automotive, market conditions in South America are showing signs of recovery. For example in Brazil, although cumulative light-vehicle sales were only slightly ahead of the previous year, the recovery seems to be gaining momentum with positive vehicle sales level recorded during the previous few months.



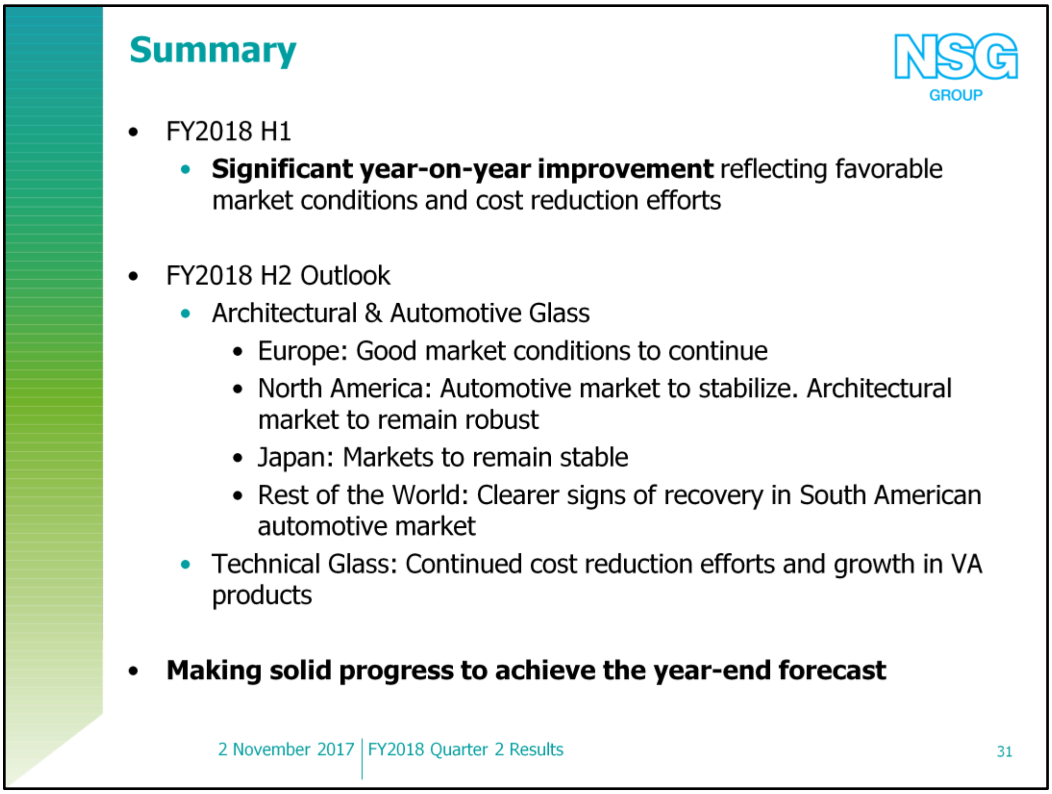
Turning to slide 29, Technical Glass.

Display's results continue to improve, driven by improved production efficiency and increased prices.

Volumes of components used in multi-function printers, glass cord used in engine timing belts, and battery separators increased from the previous year, due to strong demands in their respective markets.

As a result of the strengthening conditions of each of the sectors, profitability in the Technical Glass business continues to improve, as is clearly shown by the chart in this slide.

Agenda



Slide 31 is the summary of today's presentation.

Group made a good start for the first year of Medium-term Plan Phase 2, as results were in line with our expectations.

Group benefitted from robust market conditions in Europe and improved profitability in Technical Glass.

Improvements in operational performance and cost reductions also contributed to the results.

FY2018 forecast remain unchanged. The markets are generally expected to be stable, and the Group will maintain its focus on VA strategy, operational efficiency improvements and further cost reductions.

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 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

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(JPY bn)	FY2017 Q2	FY2018 Q2
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

(JPY bn)	FY2017 Q2	FY2018 Q2	Change
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

(JPY bn)	FY2017 Q2	FY2018 Q2	Change
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

NSG GROUP

(JPY bn)	FY2017 Q2	FY2018 Q2
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

NSG GROUP

(JPY bn)	31-Mar-17	30-Sep-17	Change
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

NSG GROUP

	FY2017 Q2	FY2017 Full-year	FY2018 Q2	FY2018 Forecast
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

NSG GROUP

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)

Vacuum glazing

Online coating

High-precision press

Customer-oriented R&D & marketing

Lean structure, manufacturing

VA Glass Company

Energy saving & generation

ADAS

Information Communication

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

Reference: Autonomous Driving

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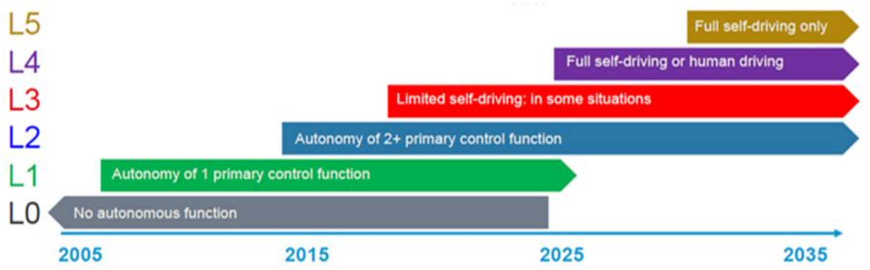

Level	Definition	Examples
5 Full Automation		
4 High Automation	System is in control and Driver is no longer needed.	City Pilot, Valet Parking
3 Conditional Automation	System is in control, but Drivers must control when needed.	Highway Pilot, Remote Parking
2 Partial Automation	System supports a combination 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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