

Fiscal Year Ended March 31, 2019 (FY2018) Results and Fifth Mid-Term Management Plan Briefing



May 21, 2019

GS Yuasa Corporation

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FY2018 Financial Results

1. Net Sales/Profits

(Billion yen)

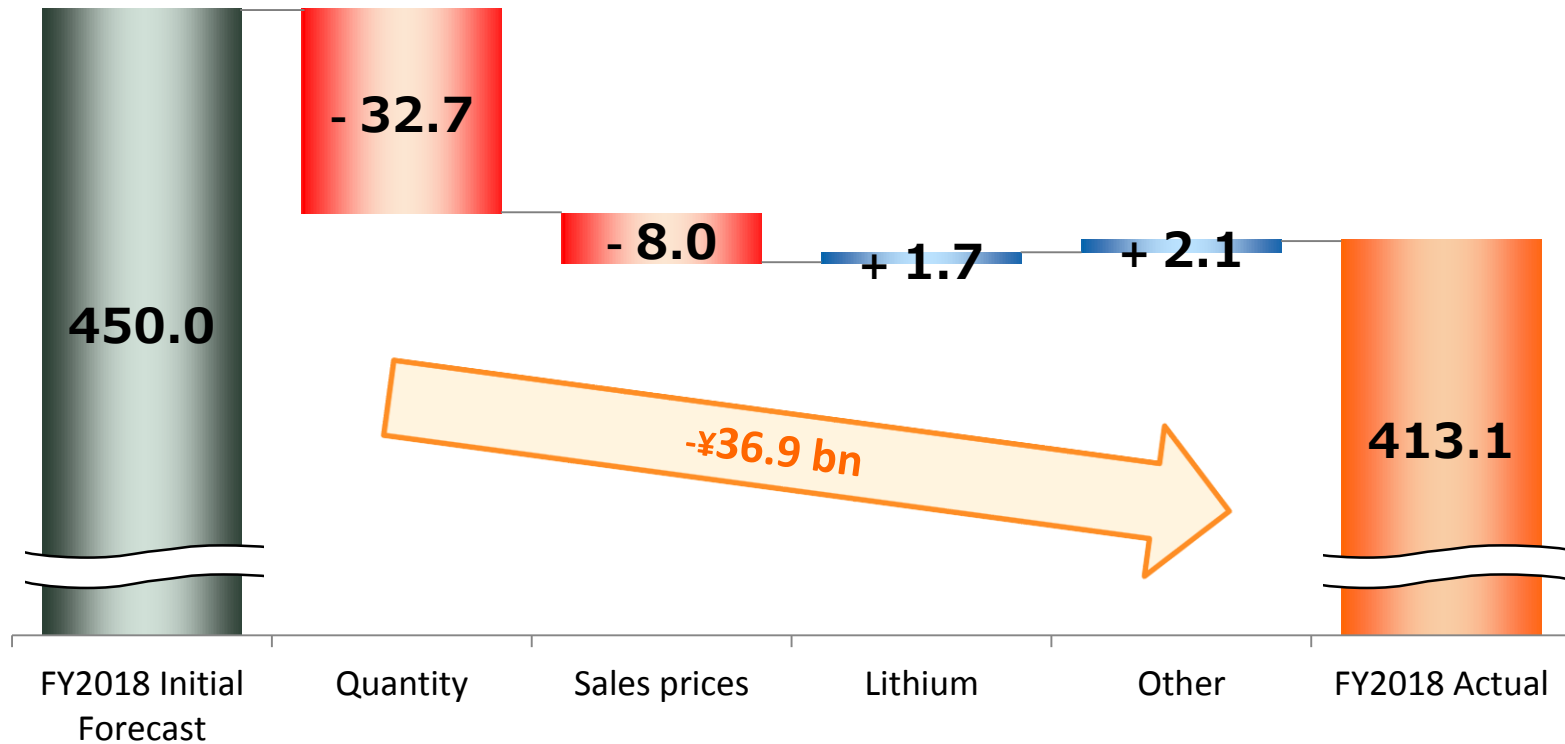
	FY2017	FY2018	Change	(YoY%)	[Reference] Feb. 2019 forecast
Net sales	411.0	Record 413.1	+2.1	(+0.5%)	420.0
Operating income	21.9	22.7	+0.8	(+3.3%)	23.0
Operating income before amortization of goodwill (Operating income ratio before amortization of goodwill)	24.1 5.9%	Record 25.1 6.1%	+1.0 +0.2pp		25.5 6.1%
Ordinary income	21.4	Record 24.7	+3.3	(+15.6%)	24.0
Extraordinary income	0.8	3.9	+3.1		-
Extraordinary loss	1.4	3.4	+2.0		-
Profit before income taxes	20.8	25.2	+4.4		-
Income taxes	5.4	8.1	+2.7		-
Profit attributable to non-controlling interests	3.9	3.6	-0.3		-
Profit	11.4	Record 13.5	+2.1	(+18.1%)	14.0
Profit before amortization of goodwill (Profit ratio before amortization of goodwill)	13.9 3.4%	Record 16.0 3.9%	+2.1 +0.5pp		16.5 3.9%
Dividend (yen/share)	50	50 (expected)	±0		50
Purchase of treasury stock	0.9	1.5 (expected)	+0.6		-

Note: GS Yuasa carried out a five-to-one reverse stock split of its common stock upon changing the number of shares per trading unit from 1,000 to 100 shares (effective date Oct. 1, 2018), and annual dividends for FY2017 and FY2018 take into account the share consolidation.

1. Net Sales/Profits

Factors for Net Sales Change (compared to initial forecast)

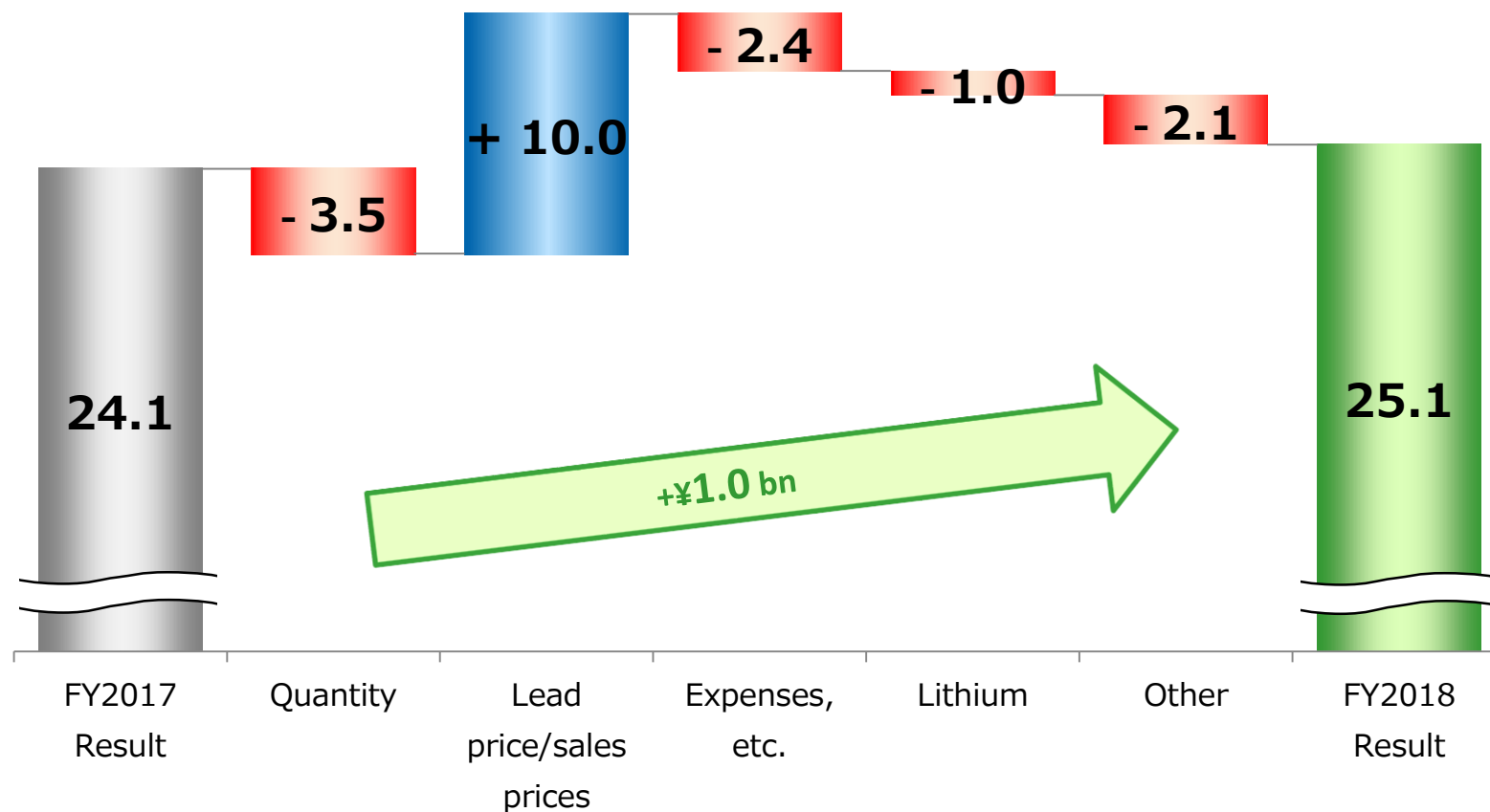
(Billion yen)



1. Net Sales/Profits

Factors for Operating Income Change (year on year)

(Billion yen)



Note: Operating income is operating income before amortization of goodwill.

2. Segment Results

(Billion yen)

		FY2017		FY2018		Change		[Reference] Feb. 2019 forecast	
		Net sales	Operating income (Op. income ratio: %)	Net sales	Operating income (Op. income ratio: %)	Net sales	Operating income (Op. income ratio: P)	Net sales	Operating income (Op. income ratio: %)
Automotive Battery	Japan	89.2	6.1 (6.9)	91.5	7.8 (8.5)	+2.3	+1.7 (+1.6)	92.0	7.0 (7.6)
	Overseas	185.6	9.0 (4.8)	187.1	10.6 (5.6)	+1.5	+1.6 (+0.8)	196.0	10.5 (5.4)
Industrial Battery and Power Supply		74.2	7.4 (9.9)	70.0	7.3 (10.5)	-4.2	-0.1 (+0.6)	71.5	7.5 (10.5)
Automotive Lithium-ion Battery		44.8	1.3 (2.9)	45.6	0.3 (0.7)	+0.8	-1.0 (-2.2)	44.0	0.5 (1.1)
Others		17.1	0.3 (1.7)	18.9	-0.9 (-4.6)	+1.8	-1.2 (-6.3)	16.5	- (-)
Total		411.0	24.1 (5.9)	413.1	25.1 (6.1)	+2.1	+1.0 (+0.2)	420.0	25.5 (6.1)

Note: Operating income is operating income before amortization of goodwill and operating income ratio is operating income ratio before amortization of goodwill.

2. Segment Results

(Billion yen)

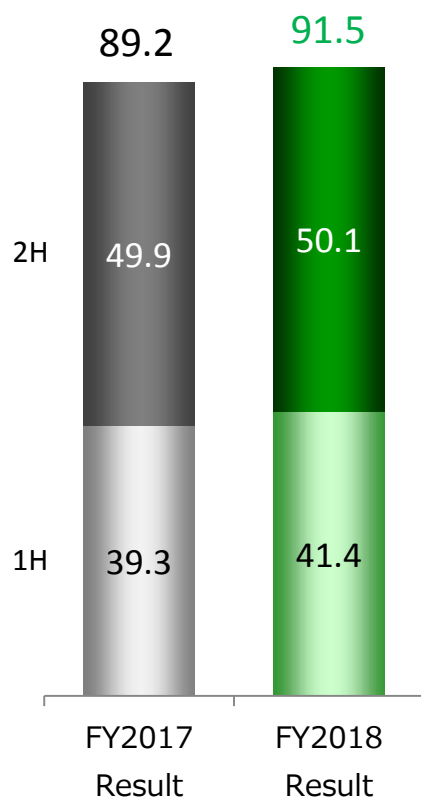
		FY2017	FY2018	Change
Capital Investment		15.2	21.5	+6.3
Automotive Battery	Japan	2.4	3.6	+1.2
	Overseas	6.3	6.9	+0.6
Industrial Battery and Power Supply		1.1	1.8	+0.7
Automotive Lithium-ion Battery		1.3	5.2	+3.9
Others		4.2	3.9	-0.3
Depreciation		16.5	16.1	-0.4
Automotive Lithium-ion Battery		5.2	4.3	-0.9
R&D Costs		11.2	9.9	-1.3
(Ratio of R&D expenses to net sales)		2.7%	2.4%	-0.3pp

2. Segment Results

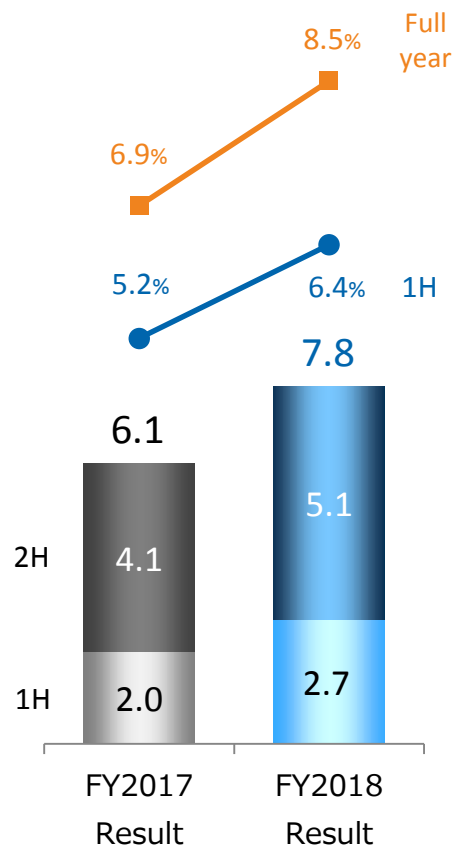
Automotive Battery (Japan)

(Billion yen)

Net sales



Operating income/ operating income ratio



FY2018 Sales Overview

- Among products for new automobiles, sales of EN Standard-compliant batteries increased
- Among replacement batteries, sales of batteries for start & stop (S&S) vehicles increased
- Increasingly passed on increased lead costs to sales prices

Main Profit Change Factors

Quantity	+0.1
Lead prices/sales prices	+2.3
Streamlining, expenses, etc.	-0.7

Note: Operating income is operating income before amortization of goodwill and operating income ratio is operating income ratio before amortization of goodwill.

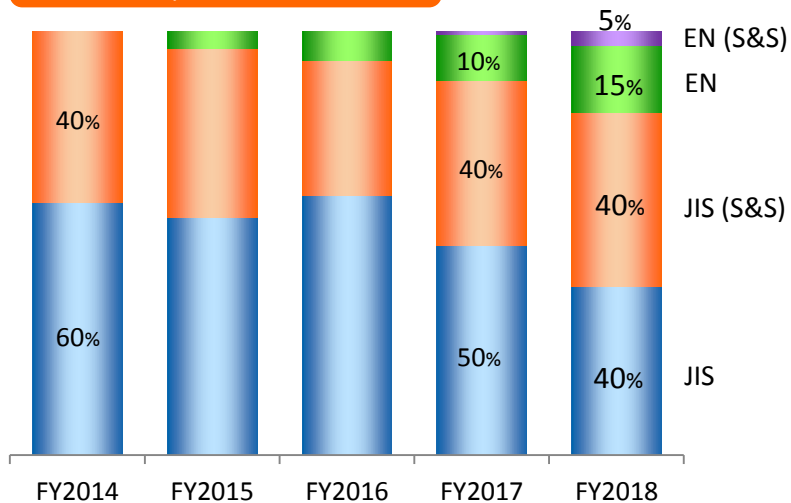
2. Segment Results

Automotive Battery (Japan)

Growing demand for lead-acid storage batteries for S&S vehicles and EN Standard-compliant batteries



New automobile battery shipment ratio

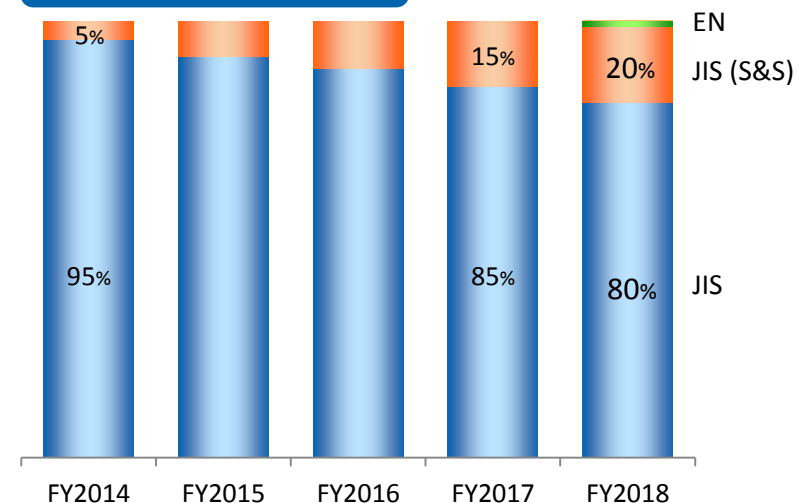


- High shipment ratio of lead-acid storage batteries for S&S vehicles maintained
- Number of manufacturers/vehicle models adopting EN Standard-compliant batteries is increasing
- Number of vehicles adopting EN (S&S) Standard compliant batteries is increasing



Expand market share with full line-up

Replacement battery shipment ratio



- Demand for replacement lead-acid storage batteries for S&S vehicles has been steadily expanding



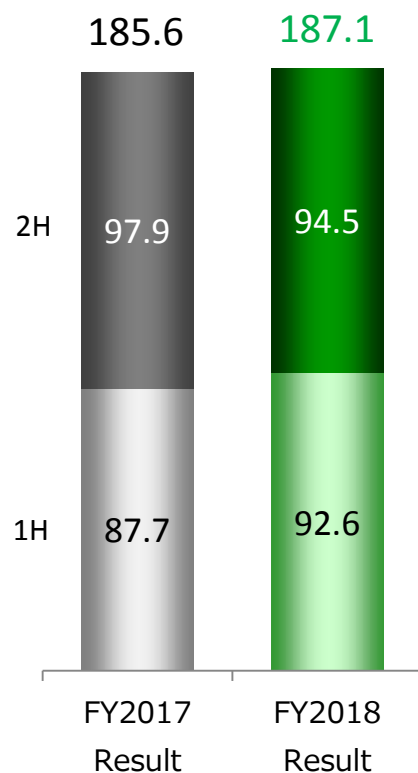
Enhance profitability by improving product mix

2. Segment Results

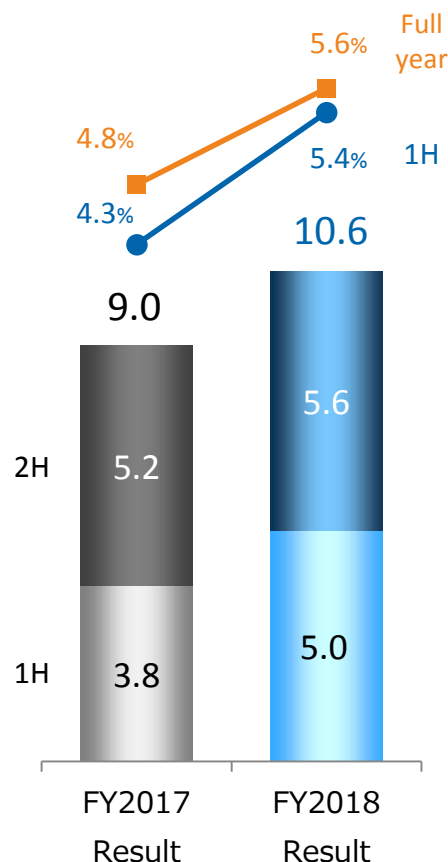
Automotive Battery (Overseas)

(Billion yen)

Net sales



Operating income/ operating income ratio



FY2018 Sales Overview

- While sales prices of automotive lead-acid storage batteries increased, sales volume declined mainly in China and Southeast Asia
- While sales of motorcycle lead-acid storage batteries increased in Thailand, they declined in China and Vietnam
- Increasingly passed on higher lead prices to sales prices

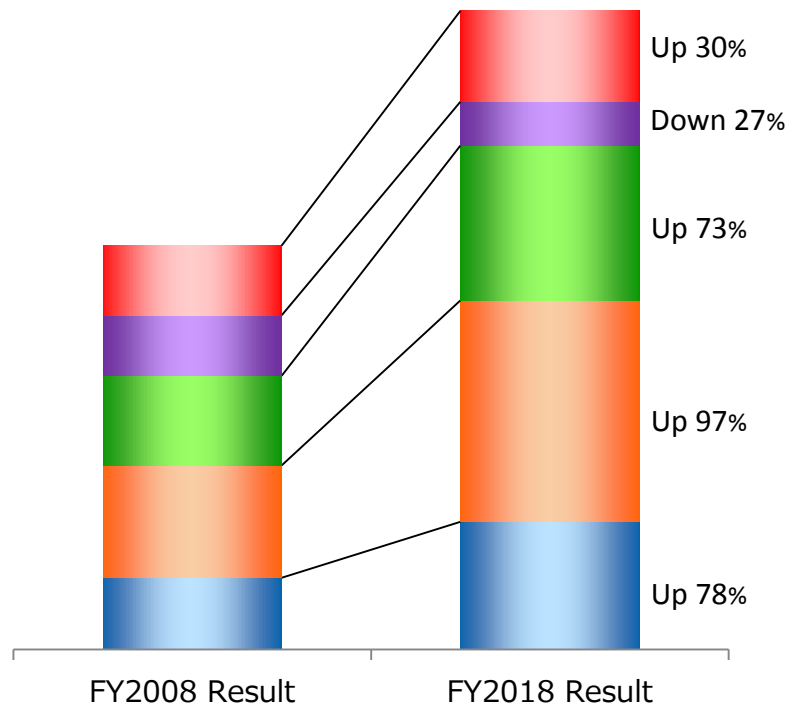
Main Profit Change Factors

Quantity	-3.0
Lead prices/sales prices	+7.0
Streamlining, expenses, etc.	-1.5
Foreign exchange rate	-0.9

2. Segment Results

Automotive Battery (Overseas)

Sales ratio by region



[China]

- Sales of automotive lead-acid storage batteries increased with economic growth

[Asia]

- Sales of automotive and motorcycle lead-acid storage batteries increased with economic growth
- Impact of turning equity method affiliates in Thailand and Indonesia into consolidated subsidiaries

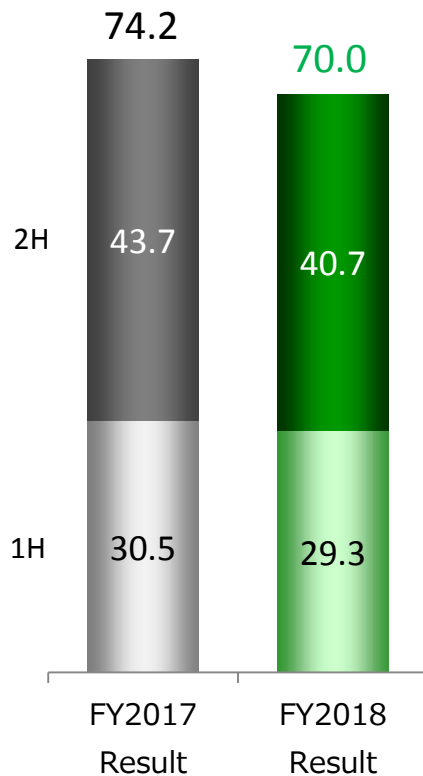
- Other
- North America
- Europe
- Asia
- China

2. Segment Results

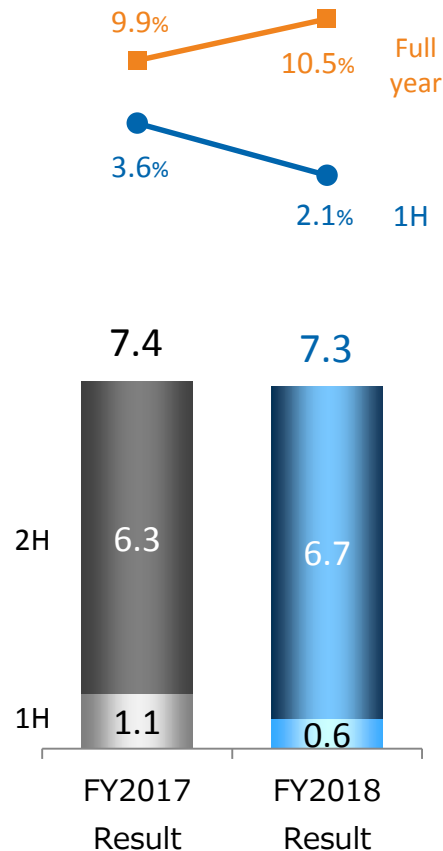
Industrial Battery and Power Supply

(Billion yen)

Net sales



Operating income/ operating income ratio



FY2018 Sales Overview

- Sales of lead-acid storage batteries for battery-operated forklifts remained strong
- Sales of power supply systems decreased
- Transferred specialized equipment business

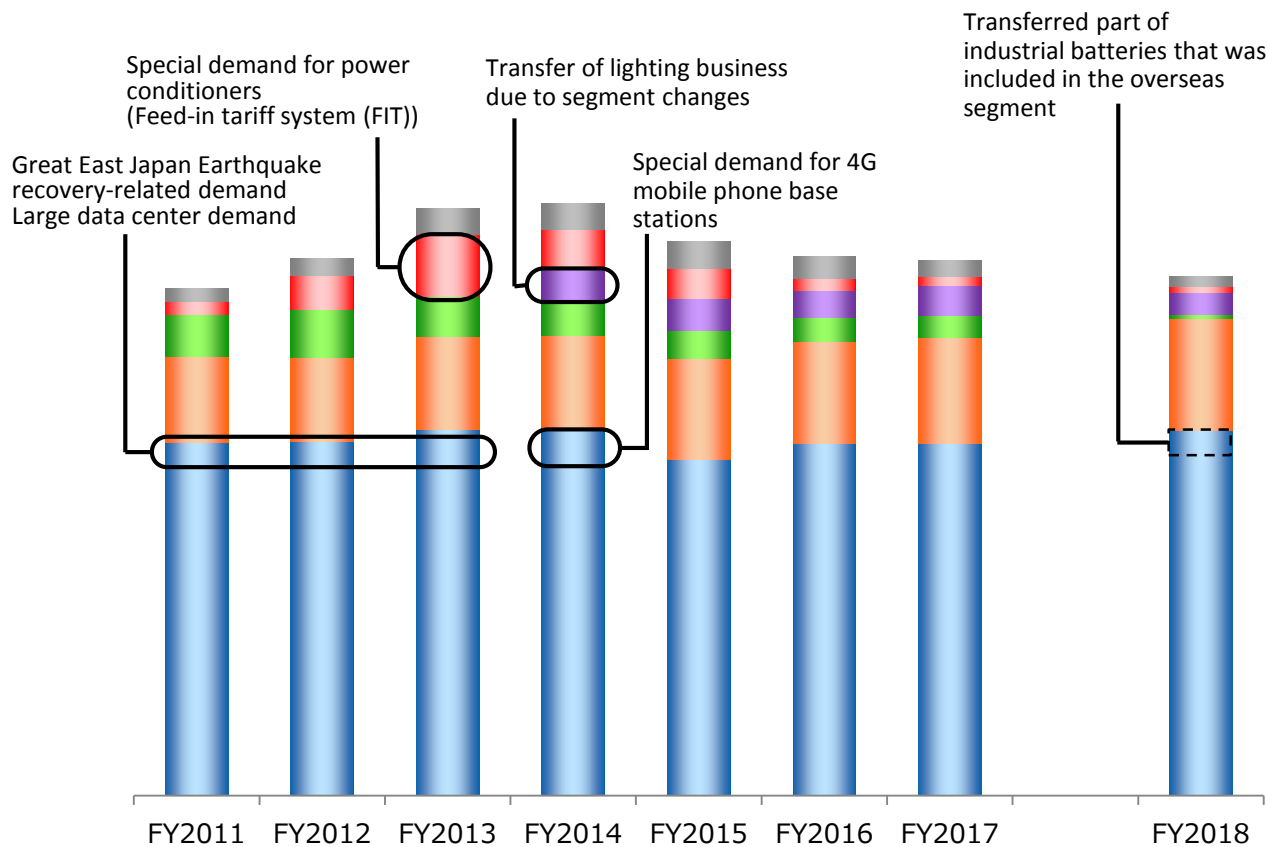
Main Profit Change Factors

Quantity	-0.5
Lead prices/sales prices	+0.7
Streamlining, expenses, etc.	-0.3

2. Segment Results

Industrial Battery and Power Supply

Sales trends by product category



- The backup field, an earnings pillar, is stable
- However, sales in FY2018 temporarily declined
- One factor is a decline in capital investment in Japan

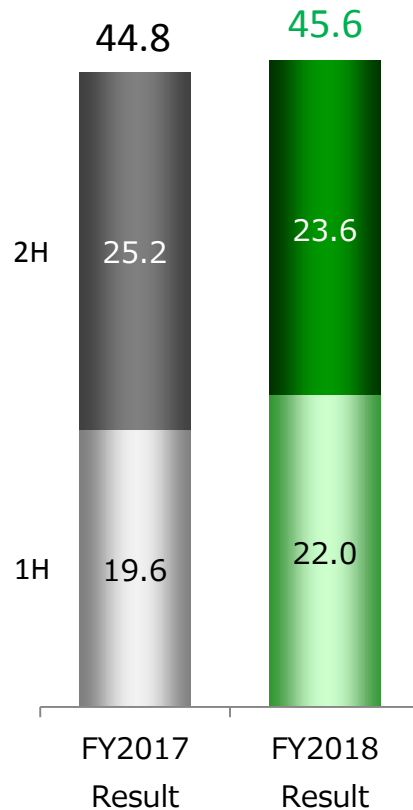
- Industrial lithium-ion batteries
- Power conditioners
- Lighting
- Specialized equipment
- Batteries for forklifts
- Backup
(Power supply systems, industrial batteries)

2. Segment Results

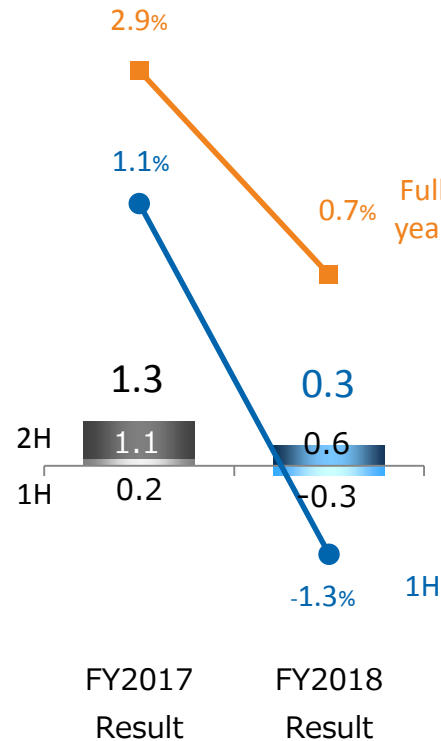
Automotive Lithium-ion Battery

(Billion yen)

Net sales



Operating income/ operating income ratio



FY2018 Sales Overview

- Lithium Energy Japan (LEJ)
Sales of lithium-ion batteries for plug-in hybrid electric vehicles increased, as sales of plug-in models rose
- Blue Energy
Sales of lithium-ion batteries for hybrid vehicles temporarily declined

Main Profit Change Factors

Raw materials price rises

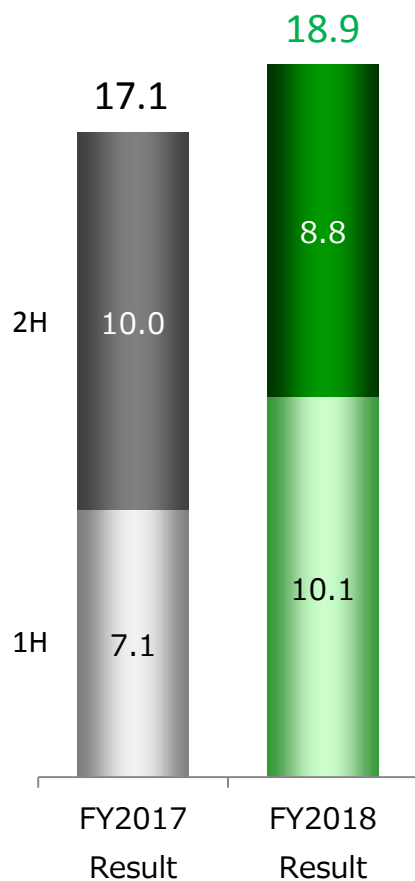
Increased R&D cost burden

2. Segment Results

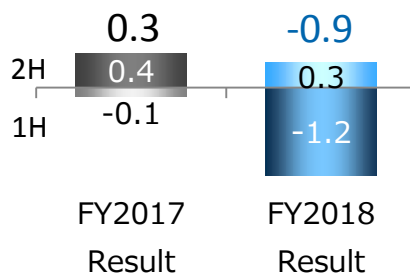
Others

(Billion yen)

Net sales



Operating income/ operating income ratio



FY2018 Sales Overview

- Production of lithium-ion batteries for submarines increased
- Sales of lithium-ion batteries for aircraft increased

Main Profit Change Factors

Increase in R&D expenses

3. Balance Sheet

(Billion yen)

	3/31/2018	3/31/2019	Change		3/31/2018	3/31/2019	Change
Current assets	179.4	176.0	-3.4	Liabilities	183.6	176.5	-7.1
• Cash and deposits			+4.7	• Notes and accounts payable			-1.3
• Notes and accounts receivable			-5.5	• Electronically recorded obligation			+2.0
				• Borrowings and CP			+6.8
				• Bonds and convertible bonds with subscription rights to shares			-15.0
• Inventories			-1.9				
Fixed assets	209.8	208.2	-1.6	Net assets	205.6	207.7	+2.1
• Property, plant and equipment			+1.4	• Retained earnings			+10.8
• Intangible assets including goodwill			-1.9	• Foreign currency translation adjustments			-5.8
• Investment securities			-0.6	• Adjustment in net defined benefit			-1.4
				• Non-controlling interests			-0.5
Total assets	389.2	384.2	-5.0	Total liabilities and net assets	389.2	384.2	-5.0

	3/31/2018	3/31/2019
Equity ratio	45.2%	46.4%
ROE (return on equity)	8.2%	9.0%
Interest-bearing debt	¥75.1 bn	¥66.9 bn

Note: ROE is based on profit before amortization of goodwill.

4. Cash Flow Statements

(Billion yen)

Operating C/F		Investing C/F		Financing C/F	
	31.5		-17.6		-11.7
• Profit before income taxes	25.2	• Purchase of property, plant and equipment	-19.9	• Increase in borrowings	9.4
• Depreciation and amortization	17.8	• Sale of property, plant and equipment	4.8	• Bond issuance	10.0
• Decrease in receivables	4.1	• Purchase of shares of a subsidiary	-2.8	• Redemption of convertible bonds	-25.0
• Increase in inventories	-1.7			• Dividends paid	-5.4
• Increase in trade accounts payables	-1.6				
• Income taxes paid, etc.	-7.2				
Balance of Cash and Cash Equivalents					
		April 1, 2018	19.8	March 31, 2019	23.4

Free C/F ^{*1} 13.9

Highlights

- Operating C/F totaled ¥31.5 billion, significantly exceeding the preceding year's ¥21.9 billion.
- As a result, free C/F came to ¥13.9 billion despite capital investment and purchase of shares in a subsidiary, and this was used for redemption of convertible bonds with subscription rights to shares and payment of dividends.

*1: Total of cash flow from operating activities and cash flow from investing activities

FY2019 Financial Results Forecast

1. Net Sales/Profits

	FY2018 Actual	FY2019 Forecast	(Billion yen) Change
Net sales	413.1	430.0	+16.9
Operating income	22.7	20.0	-2.7
Operating income before amortization of goodwill	25.1	22.0	-3.1
(Operating income ratio before amortization of goodwill)	6.1%	5.1%	-1.0pp
Ordinary income	24.7	22.0	-2.7
Profit	13.5	12.0	-1.5
Profit before amortization of goodwill	16.0	14.5	-1.5
(Profit ratio before amortization of goodwill)	3.9%	3.4%	-0.5pp
ROE (return on equity)	9.0%	-	-
Dividend	50 yen/share (forecast)	50 yen/share (forecast)	±0 yen/share
Purchase of treasury stock (amount planned for the next fiscal year)	1.5	-	-
Total return ratio	35.1%	-	-
Domestic lead price quote	¥298,900/t	¥300,000/t	-
LME	\$US 2,122/t	\$US 2,100/t	-
Exchange rate	¥111.07/\$US	¥110.0/\$US	-

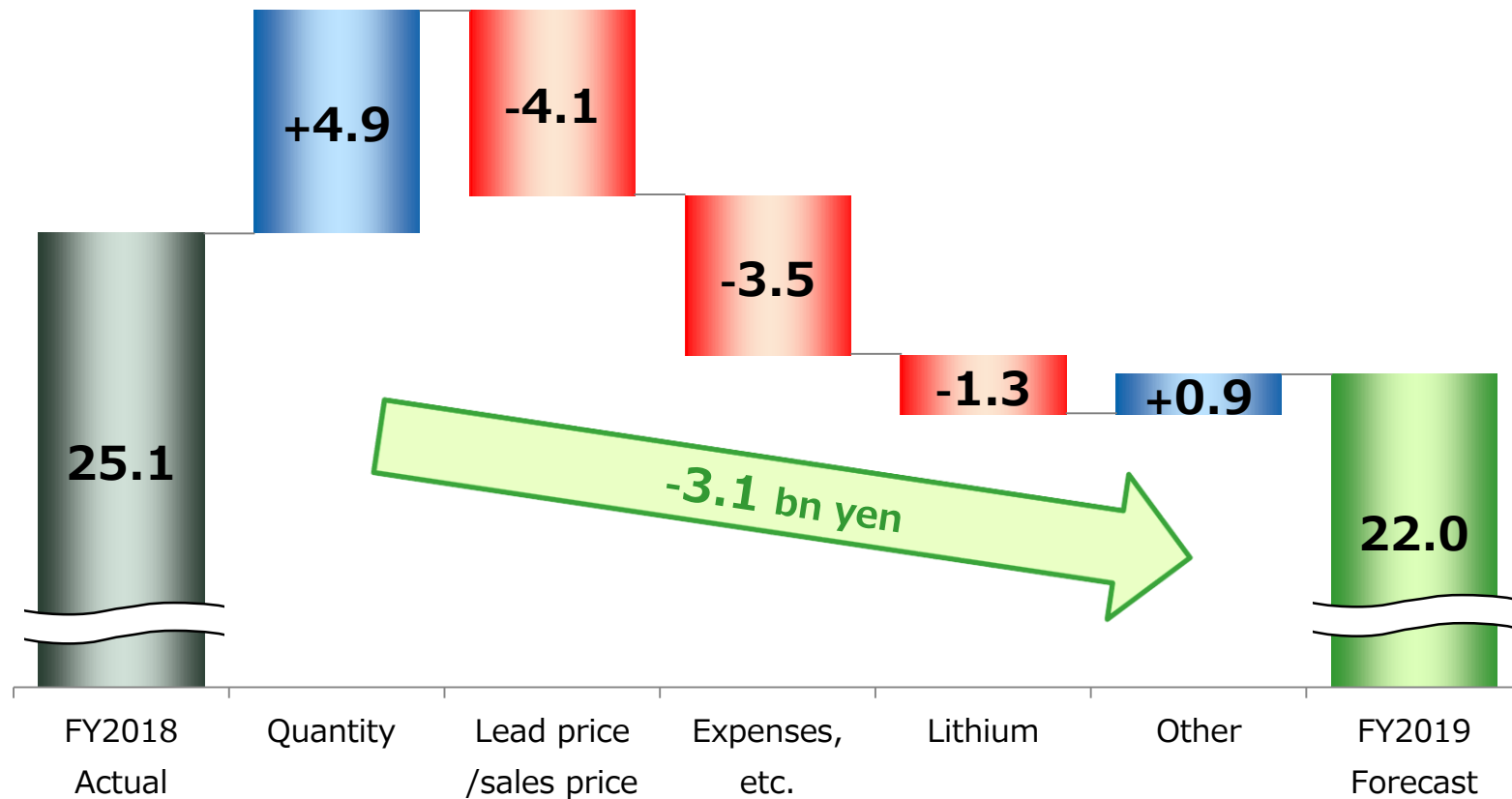
Notes: 1. ROE and total return ratio are based on profit before amortization of goodwill.

2. GS Yuasa carried out a five-to-one reverse stock split of its common stock upon changing the number of shares per trading unit from 1,000 to 100 shares (effective date Oct. 1, 2018), and annual dividends for FY2017 and FY2018 take into account the share consolidation.

1. Net Sales/Profits

Factors for Operating Income Change (actual vs. plan)

(Billion yen)



Note: Operating income is operating income before amortization of goodwill.

2. Segment Results

(Billion yen)

		FY2018 Actual		FY2019 Forecast		Change	
		Net sales	Operating income (Op. income ratio: %)	Net sales	Operating income (Op. income ratio: %)	Net sales	Operating income (Op. income ratio: pp)
Automotive Battery	Japan	91.5	7.8 (8.5)	90.0	6.0 (6.7)	-1.5	-1.8 (-1.8)
	Overseas	187.1	10.6 (5.6)	188.0	9.5 (5.1)	+0.9	-1.1 (-0.5)
Industrial Battery and Power Supply		70.0	7.3 (10.5)	87.0	7.5 (8.6)	+17.0	+0.2 (△1.9)
Automotive Lithium-ion Battery		45.6	0.3 (0.7)	47.0	-1.0 (-2.1)	+1.4	-1.3 (△2.8)
Others		18.9	-0.9 (-4.6)	18.0	-	-0.9	-
Total		413.1	25.1 (6.1)	430.0	22.0 (5.1)	+16.9	-3.1 (-1.0)

Note: Operating income is operating income before amortization of goodwill and operating income ratio is operating income ratio before amortization of goodwill.

2. Segment Results

Background of profit decline year on year



		Factors
Automotive Battery	Japan	<ul style="list-style-type: none">➤ Impact of lead prices (Profit in fiscal 2018 was boosted by decline in lead price)➤ Increase in personnel expenses
	Overseas	<ul style="list-style-type: none">➤ Economic situation in China and ASEAN➤ Impact of lead prices and sales unit prices➤ Increases in personnel expenses mainly in Asia
Automotive Lithium-ion Battery		<ul style="list-style-type: none">➤ Increase in expenses due to launch of 12V lithium-ion battery business in Hungary

3. Capital Investment, Depreciation, R&D Costs

(Billion yen)

		FY2018 Actual	FY2019 Forecast	Change
Capital Investment		21.5	27.0	+5.5
Automotive Battery	Japan	3.6	3.0	-0.6
	Overseas	6.9	9.0	+2.1
Industrial Battery and Power Supply		1.8	2.0	+0.2
Automotive Lithium-ion Battery		5.2	7.0	+1.8
Others		3.9	6.0	+2.1
Depreciation		16.1	18.0	+1.9
Automotive Lithium-ion Battery		4.3	4.0	-0.3
R&D Costs		9.9	11.0	+1.1
(Ratio of R&D expenses to net sales)		2.4%	2.6%	+0.2pp

Review of Fourth Mid-Term Management Plan

Mid-Term Management Policy



We will ensure long-term, sustainable growth with the aim of becoming the “New GS Yuasa,” an energy device company.

- Ensure profitability of new business (lithium-ion business) and firmly set the business on a stable growth track

Result

- The business posted profits for three consecutive years in FY2016, FY2017, and FY2018.
- Constructing a plant in Hungary to produce lithium-ion batteries for starting vehicles, aiming for further growth

- Further expand business domain of growth business (overseas operations) and enhance its profitability

Result

- Built a new plant that uses cutting-edge technologies in Turkey to bolster sales to Europe, Middle East, and North Africa.
- Currently constructing a new plant that uses cutting-edge technologies and equipment in China (Tianjin)
- Enhanced production capacity in Thailand and established a new company in Myanmar to strengthen sales to the Mekong Subregion

- Expand and stabilize the cash flow from existing businesses (automotive battery business and industrial battery and power supply business) and make investments for future growth

Result

- Revenue expanded with transfer of Panasonic’s lead-acid battery business
- Expanded applications of industrial-use lithium-ion batteries into railways, housing, renewable energy, and other fields
- Received order for the world’s largest storage battery facility for stabilizing wind power output fluctuations

2. Management Targets and Results

Final targets and results



(Billion yen)

		FY2018 (Apr. 2018-Mar. 2019)				Rate of achievement, difference	
		Final targets		Actual			
Net sales		480.0		413.1		86.1 %	
Operating income ratio		8 % or more		6.1 %		-1.9 pp	
ROE (return on equity)		10 % or more		9.0 %		-1.0 pp	
Total return ratio		30 % or more		35.1 %		+5.1 pp	
		Automotive Battery		Industrial Battery and Power Supply	Automotive Lithium-ion Battery	Others	Total
		Japan	Overseas				
FY2018 (Apr 2018 – Mar 2019) final targets	Net sales	86.0	230.0	90.0	56.0	18.0	480.0
	Operating income ratio	10 %	7 %	13 %	5 %	—	8 %
FY2018 (Apr 2018 – Mar 2019) actual	Net sales	91.5	187.1	70.0	45.6	18.9	413.1
	Operating income ratio	8.5 %	5.6 %	10.5 %	0.7 %	—	6.1 %
Difference	Net sales	+5.5	-42.9	-20.0	-10.4	+0.9	-66.9
	Operating income ratio	-1.5 pp	-1.4 pp	-2.5 pp	-4.3 pp	—	-1.9 pp

Note: The above indices are based on income before amortization of goodwill (operating income and profit).

2. Management Targets and Results

Factors behind non-achievement by segment



		Factors
Automotive Battery	Japan	<ul style="list-style-type: none">● The speed of expansion of high value added batteries market is slower than expected
	Overseas	<ul style="list-style-type: none">● Slowdown of Chinese economy● Lack of success in capturing untapped regions
Industrial Battery and Power Supply		<ul style="list-style-type: none">● Delay in market penetration into the industrial lithium-ion batteries market in the new energy field
Automotive Lithium-ion Battery		<ul style="list-style-type: none">● Demand for electric vehicles and other eco-friendly cars did not progress as expected



Streamlining was not enough to absorb increases in expenses relating to personnel, distribution, and certain raw materials, and cost reduction was also insufficient.

2. Management Targets and Results

Capital investment and depreciation



(Billion yen)

		Second Mid-Term Management Plan (FY2010 - FY2012)	Third Mid-Term Management Plan (FY2013 - FY2015)	Fourth Mid-Term Management Plan (FY2016 - FY2018)	
		Results (3-year total)	Results (3-year total)	Targets (3-year total)	Results (3-year total)
Capital Investment		92.0	42.5	90.0	56.6
Automotive Battery	Japan	1.8	3.4	8.0	7.9
	Overseas	11.2	12.2	36.0	16.9
Industrial Battery and Power Supply		2.8	4.5	6.0	4.1
Automotive Lithium-ion Battery		65.5	11.5	11.0	8.3
Others		10.7	10.9	29.0	19.4
Depreciation		34.7	43.9	55.0	47.9
Automotive Lithium-ion Battery		12.3	16.1	17.0	15.0

2. Management Targets and Results

Financial measures



	FY2015 (Apr. 2015 – Mar. 2016)	FY2018 (Apr. 2018 – Mar. 2019)	
	Results	Final targets	Results
Interest-bearing debt	¥73.6 bn	¥80.0 bn or less	¥66.9 bn
Ratio of interest-bearing debt to cash flow *1	2.5 years	2.0 years or less	2.2 years
Total return ratio *2	45.7 %	30 % or more	35.1 %

*1 Interest-bearing debt (incl. lease obligations) / Operating cash flow

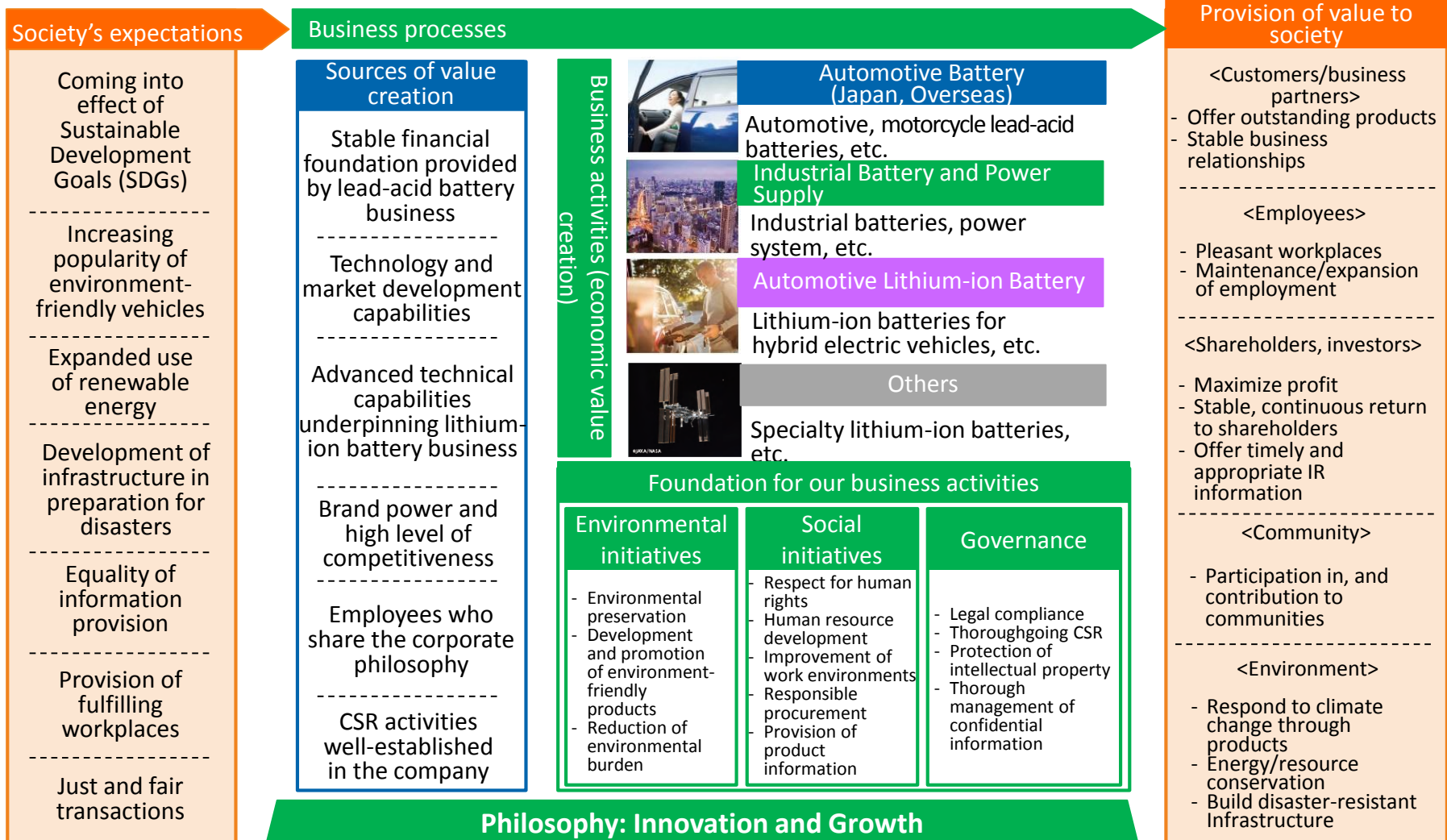
*2 Total return ratio for FY2018 is the ratio before amortization of goodwill.

	3-year total for Third Mid-Term Management Plan	3-year total for Fourth Mid-Term Management Plan	
	Results	Targets	Results
Operating cash flow	¥69.6 bn	¥130.0 bn	¥88.3 bn
Investing cash flow	-¥41.6 bn	-¥120.0 bn	-¥71.3 bn
Financing cash flow	¥28.0 bn	¥10.0 bn	¥17.0 bn

Fifth Mid-Term Management Plan

1. Long-Term Vision/Targets

Value Creation Process



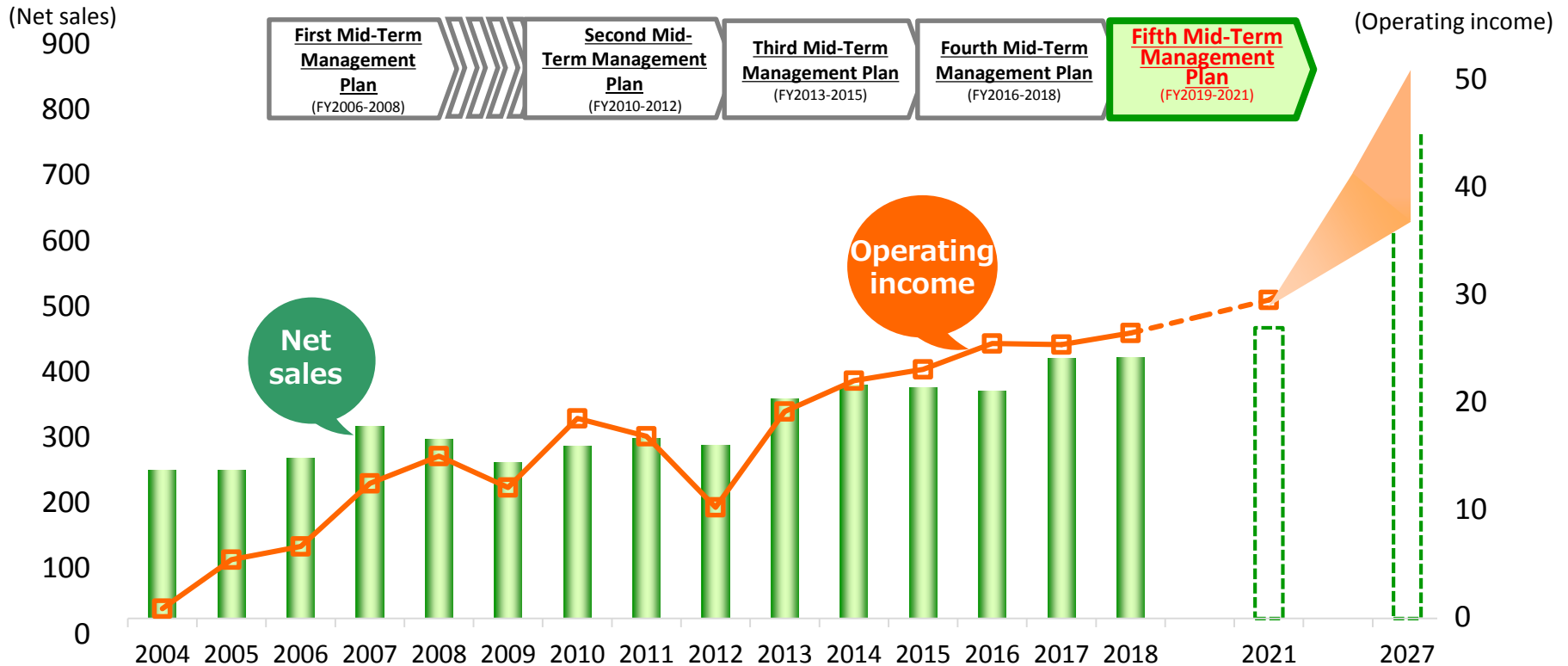
1. Long-Term Vision/Targets

Overview



Long-Term Management Policy

~ Become an energy device company that continually creates new value ~



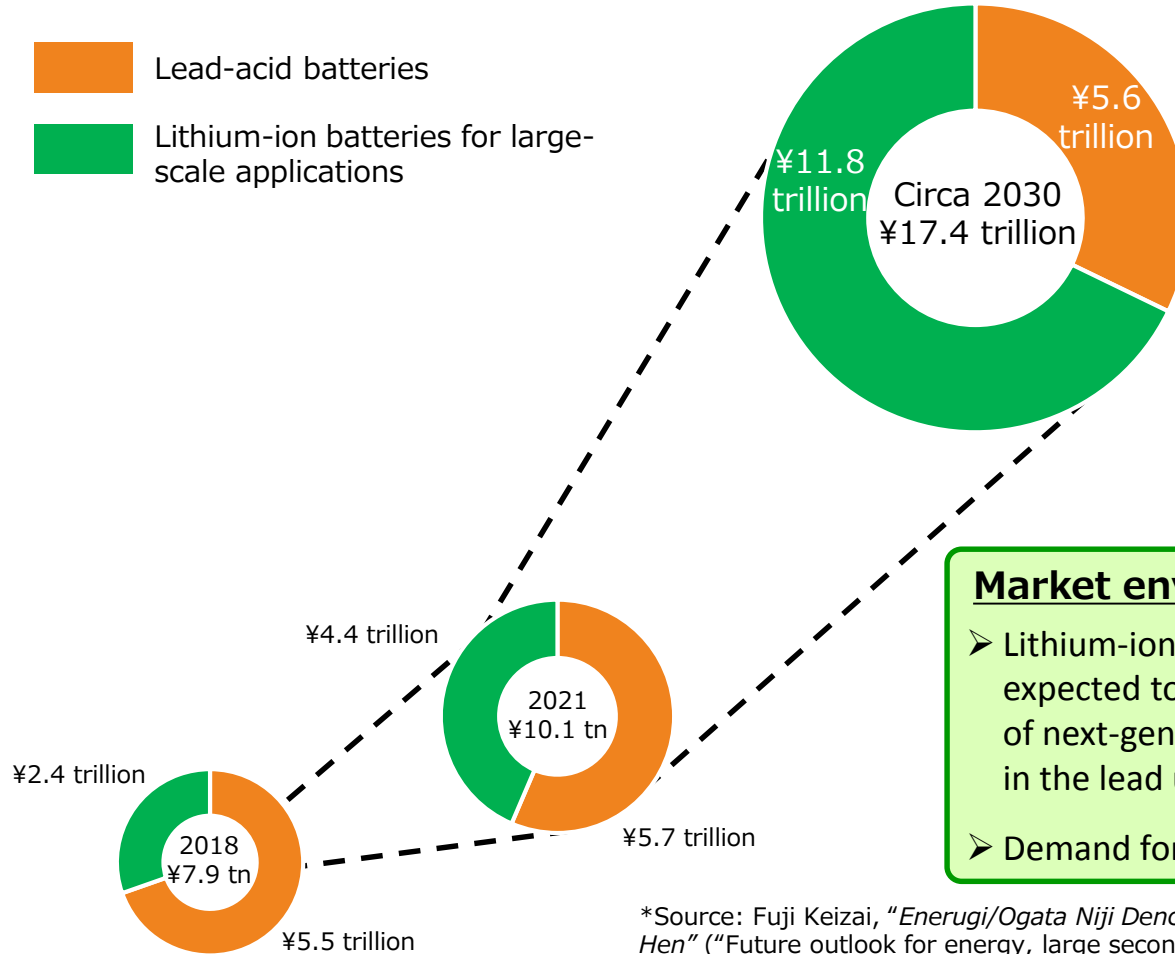
Note: The indexes for FY2016-2027 are based on operating income before amortization of goodwill.

1. Long-Term Vision/Targets

Business environment circa 2030



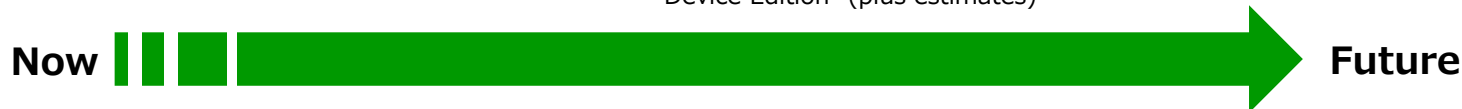
- Lead-acid batteries
- Lithium-ion batteries for large-scale applications



Market environment circa 2030

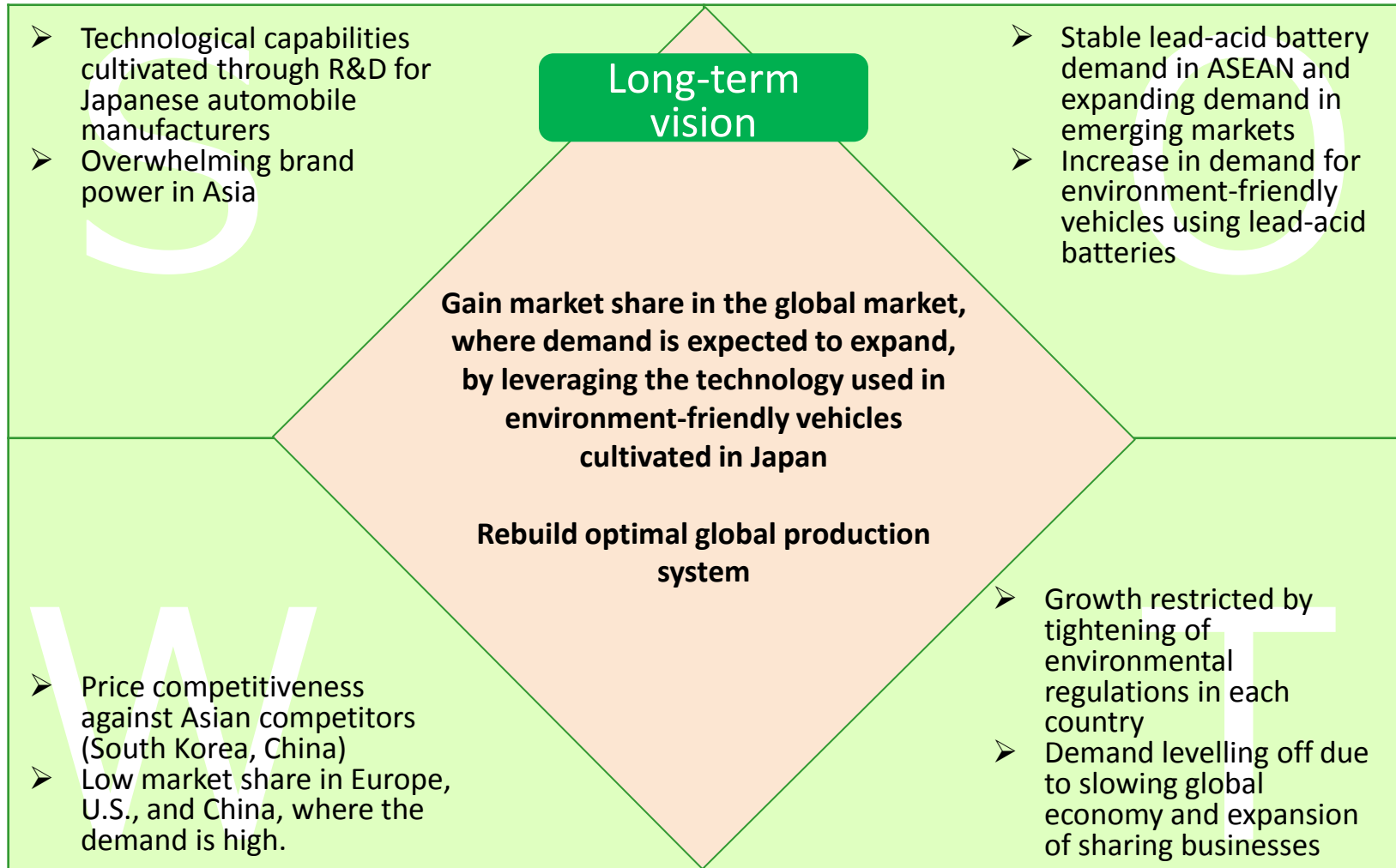
- Lithium-ion battery for large-scale applications is expected to grow significantly primarily in the field of next-generation environment-friendly vehicles in the lead up to the 2030s
- Demand for lead-acid batteries to remain flat

*Source: Fuji Keizai, "Enerugi/Ogata Niji Denchi Zairyo no Shorai Tenbo 2018 Enerugi Debaisu Hen" ("Future outlook for energy, large secondary batteries, and materials 2018 -Energy Device Edition" (plus estimates)



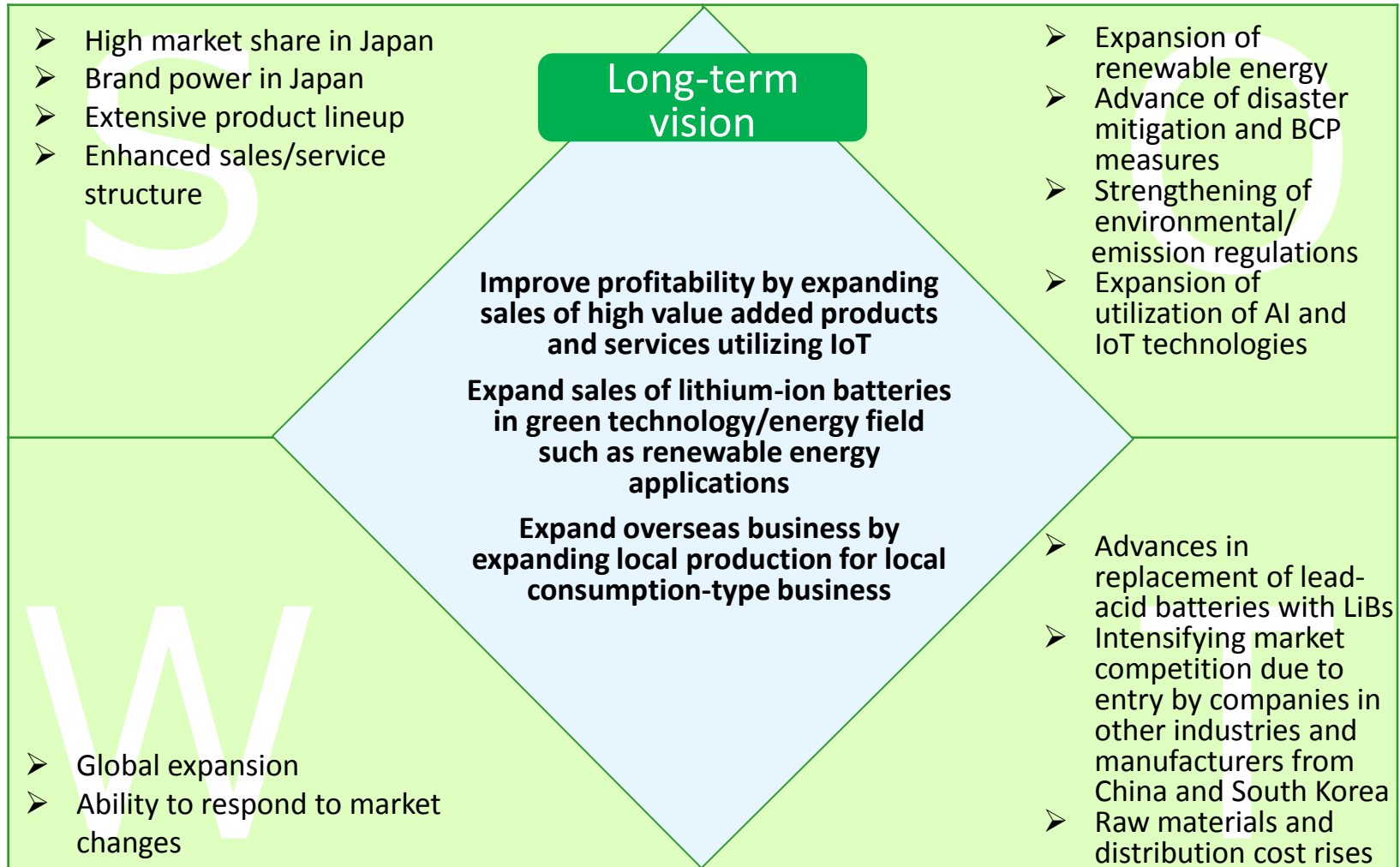
1. Long-Term Vision/Targets

Long-term strategy for the automotive battery business (Japan / Overseas)



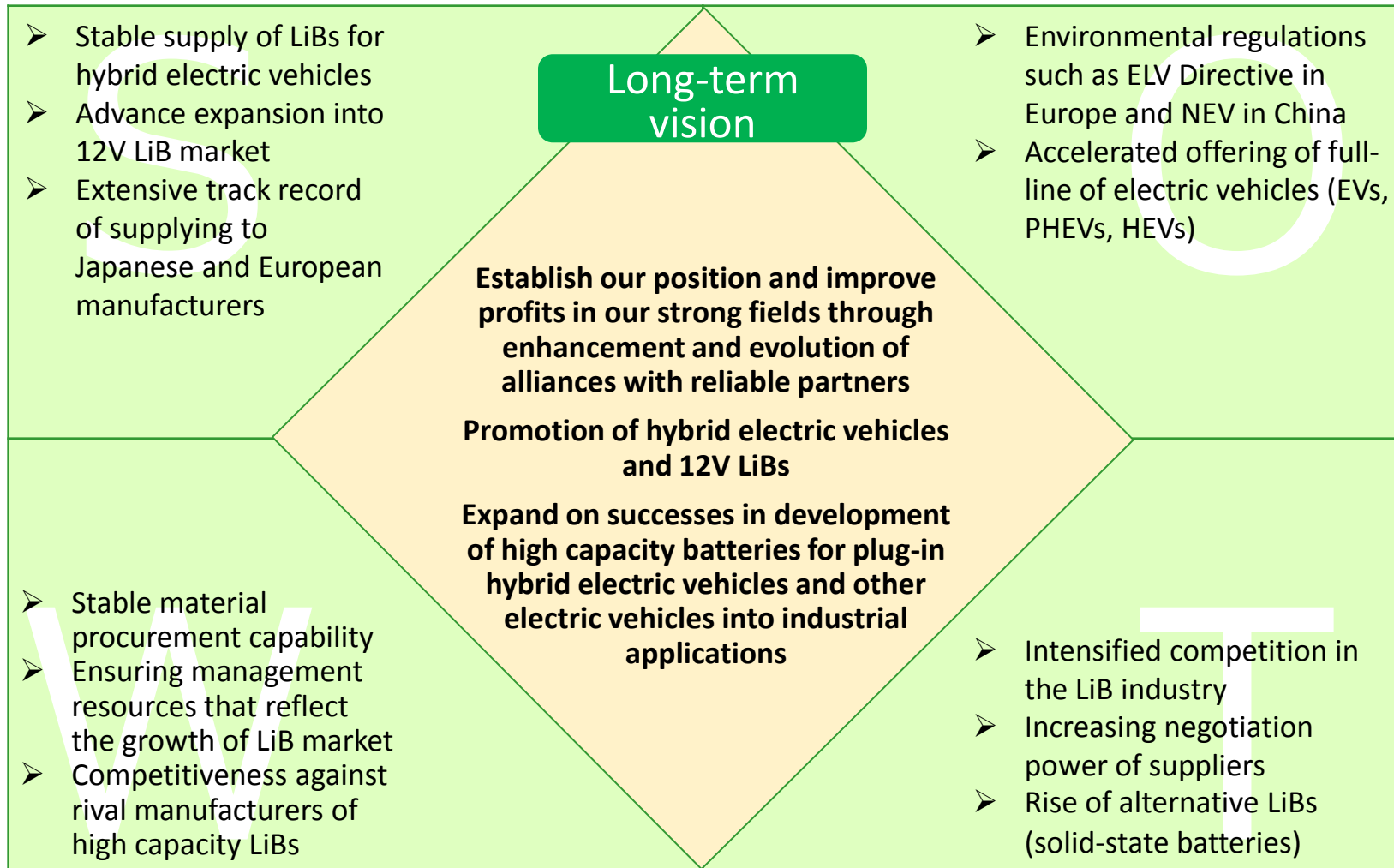
1. Long-Term Vision/Targets

Long-term strategy for the industrial battery and power supply business



1. Long-Term Vision/Targets

Long-term strategy for the automotive lithium-ion battery business



1. Long-Term Vision/Targets

Progress that needs to be made



Current issues

- There are growing overseas markets in which the automotive battery business has low market shares
- The core of the industrial battery and power supply business is replacement demand for infrastructure/facilities of existing businesses in Japan
- Excessive capital investment competition in the automotive lithium-ion battery business



Vision for 2021

- Expanded global automotive battery business share through applying technologies developed for environment-friendly vehicles in Japan
- Focus in the industrial battery and power supply business is on utilization of IoT and renewable energy
- Promoting LiBs for hybrid electric vehicles and 12V LiBs in the automotive lithium-ion battery business



Future vision

- Build optimal global production framework for the automotive battery business
- Overseas expansion of the industrial battery and power supply business with local production for local consumption-type business
- In the automotive lithium-ion battery business, expand industrial applications and utilize post-LiB research findings

2. Mid-Term Management Policy/Tasks

Mid-Term Management Policy

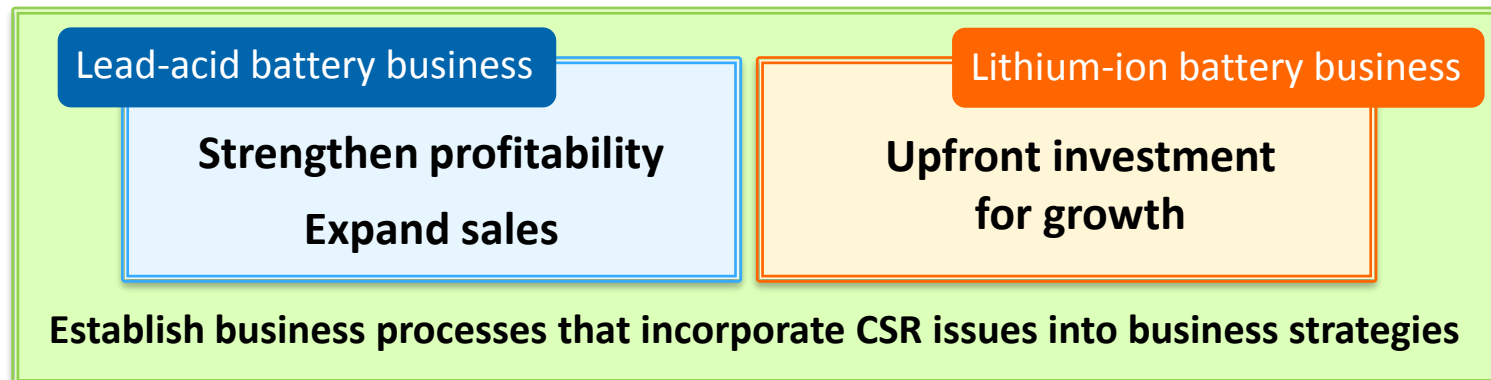


Based on the *Mono-Koto Zukuri* (product and service creation) concept, GS Yuasa will engage in strategic activities that lead to sustainable growth of both the lead-acid battery and lithium-ion battery businesses through creation of new value.

Key points



- As demand for lithium-ion batteries for both automotive and industrial applications is expected to increase significantly, we will leverage our strengths relating to hybrid electric vehicle, 12V LiBs, and batteries for industrial applications in order to pursue further expansion
- Global demand for lead-acid batteries is stable



We aim to achieve sustainable business growth and contribute to the sustainable development of society

2. Mid-Term Management Policy/Tasks

Important mid-term strategic tasks



- Step-up our initiatives pertaining to priority CSR tasks identified in our business processes.
- Strengthen the management platform through enhanced profitability of the lead-acid battery business and overseas business expansion.
- Lay the foundations for expanding the scale and profits of the lithium-ion battery business from the period covered by the Sixth Mid-Term Management Plan onward.

Business tasks by segment



	Tasks
Automotive Battery	In Japan/Asia, the business's core region, we will further increase profitability through offering high quality, high value added products and enhancing productivity. We will also deploy sales expansion measures in regions where have low market share or no presence. To meet demand for environment-friendly technologies and in response to the shift toward electric cars, we will pursue development and expansion of the market for 12V lithium-ion batteries.
Industrial Battery and Power Supply	In existing markets, we will work to expand business by further enhancing profitability and expanding overseas through <i>Mono-Koto Zukuri</i> (product and service creation) utilizing AI and IoT. Against the backdrop of demand for replacement of lead-acid batteries and the new and expanding green technology and energy fields, we will further promote development and sales of industrial-use lithium-ion batteries.
Automotive Lithium-ion Battery	We will gain a unique market position by leveraging our strengths and deploy measures for stable growth and enhancement of profitability. In particular, we position increased business expansion for hybrid electric vehicle applications and development and mass production of 12V lithium-ion batteries as business growth drivers and will therefore pursue these. We will apply the knowhow gained in batteries for electric vehicle/plug-in hybrid electric vehicle applications and will seek to expand sales of batteries for industrial applications.

2. Mid-Term Management Policy/Tasks

ESG-related initiatives



	Tasks for sustainable growth	Activities/targets
Environment: Contribute to sustainability of the global environment as an energy device company		
E	<ul style="list-style-type: none"> ➤ Development and global sales of environment-friendly products ➤ Reduction of environmental burden of business activities 	<ul style="list-style-type: none"> ➤ Ratio of environment-friendly products to overall sales: 35% (2021) ➤ Group-wide CO₂ emission reduction target: 6%/3 years ➤ Group-wide water use reduction target: 8%/3 years
Social: Respect for human rights and contribution to society		
S	<ul style="list-style-type: none"> ➤ Respect for human rights ➤ Enhancement of productivity and motivation through human resources development ➤ Enhancement of work environments and occupational health and safety ➤ Products and information sharing that is reassuring to consumers ➤ Contribution to the addressing of societal issues with responsible procurement and reduction of procurement risks 	<ul style="list-style-type: none"> ➤ Enhance human rights education and risk management ➤ Nurture independent human resources and establish groundwork for utilizing diverse human resources ➤ Promote measures to improve work-life balance ➤ Achieve group-wide quality improvement
Governance: Promotion of fair, transparent, and swift group-wide governance		
G	<ul style="list-style-type: none"> ➤ Respect for international norms and compliance with laws of respective countries ➤ Protection of intellectual property ➤ Thorough management of confidential information ➤ Swift and appropriate management decision-making 	<ul style="list-style-type: none"> ➤ Promote compliance education, preparation of legal information ➤ Contribute to elimination of counterfeit goods and bolster patent infringement prevention activities ➤ Management that is mindful of the corporate governance code

2. Mid-Term Management Policy/Tasks

Plan period



Three years from April 2019 to March 2022

Mid-Term Management Targets (targets for FY2021)

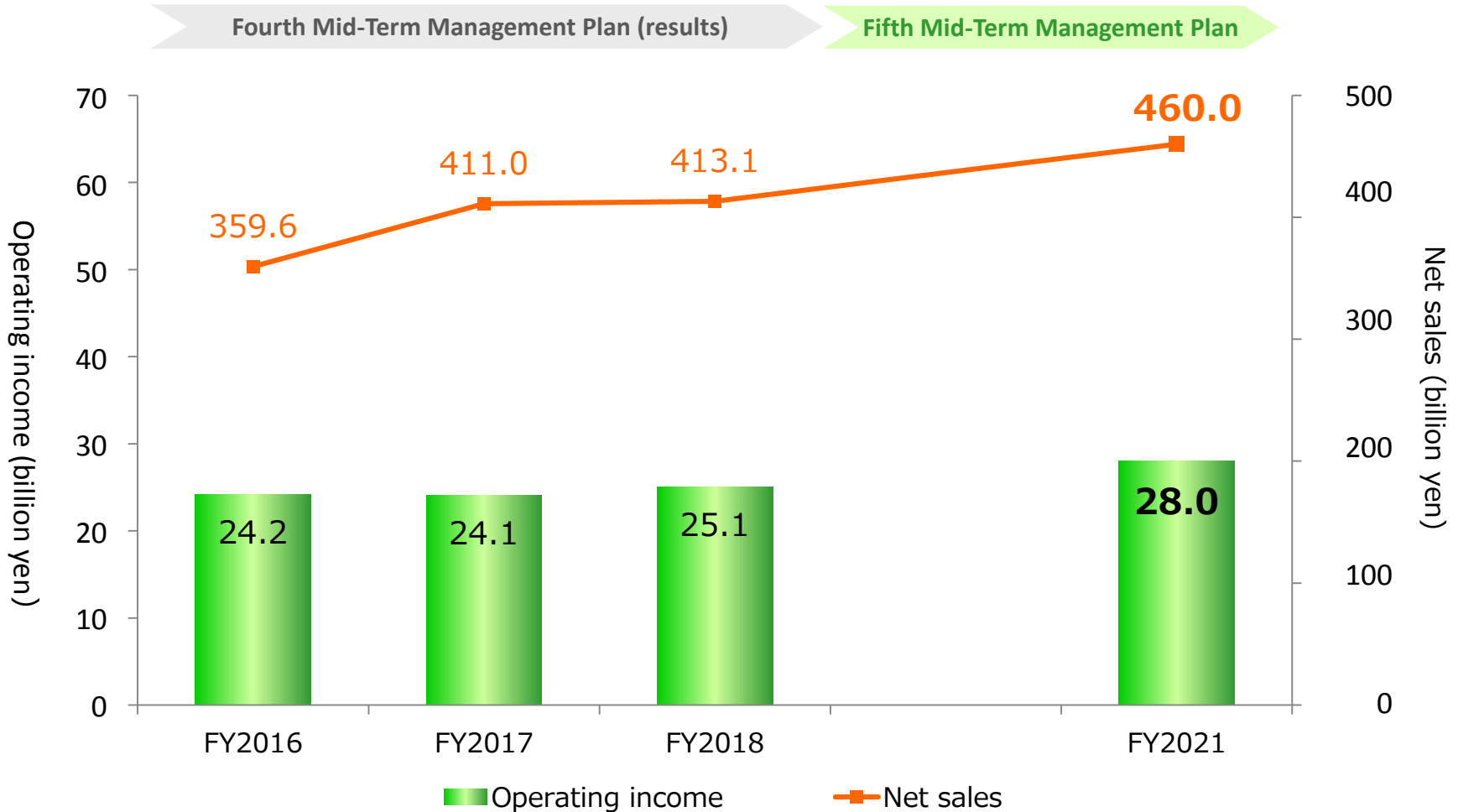


Net sales	¥460.0 bn or more
Operating income	¥28.0 bn or more
ROE (return on equity)	8 % or more
Total return ratio	30 % or more
Domestic lead price quote	¥300,000 /t
LME	\$US2,100 /t
Exchange rate	¥110 /\$US

Note: The above indices are based on income before amortization of goodwill (operating income and profit).

2. Mid-Term Management Policy/Tasks

Business results and management targets



Note: Operating income is operating income before goodwill amortization.

2. Mid-Term Management Policy/Tasks

Financial policy



- Emphasis on ROE (target: 8% or more) as a management index, pursue enhanced invested capital efficiency
- Achieve total return ratio (before goodwill amortization) of 30% or more (achieve stable dividend payments to shareholders and enhance capital efficiency)

	FY2021 targets (Apr. 2021 – Mar. 2022)
Interest-bearing debt to cash flow ratio *1	Less than 3 years
Total return ratio *2	30 % or more
Equity ratio	Maintain at 45 % or more

*1 Interest-bearing debts (including lease obligations)/operating cash flow

*2 The total return ratio for FY2021 is before goodwill amortization.

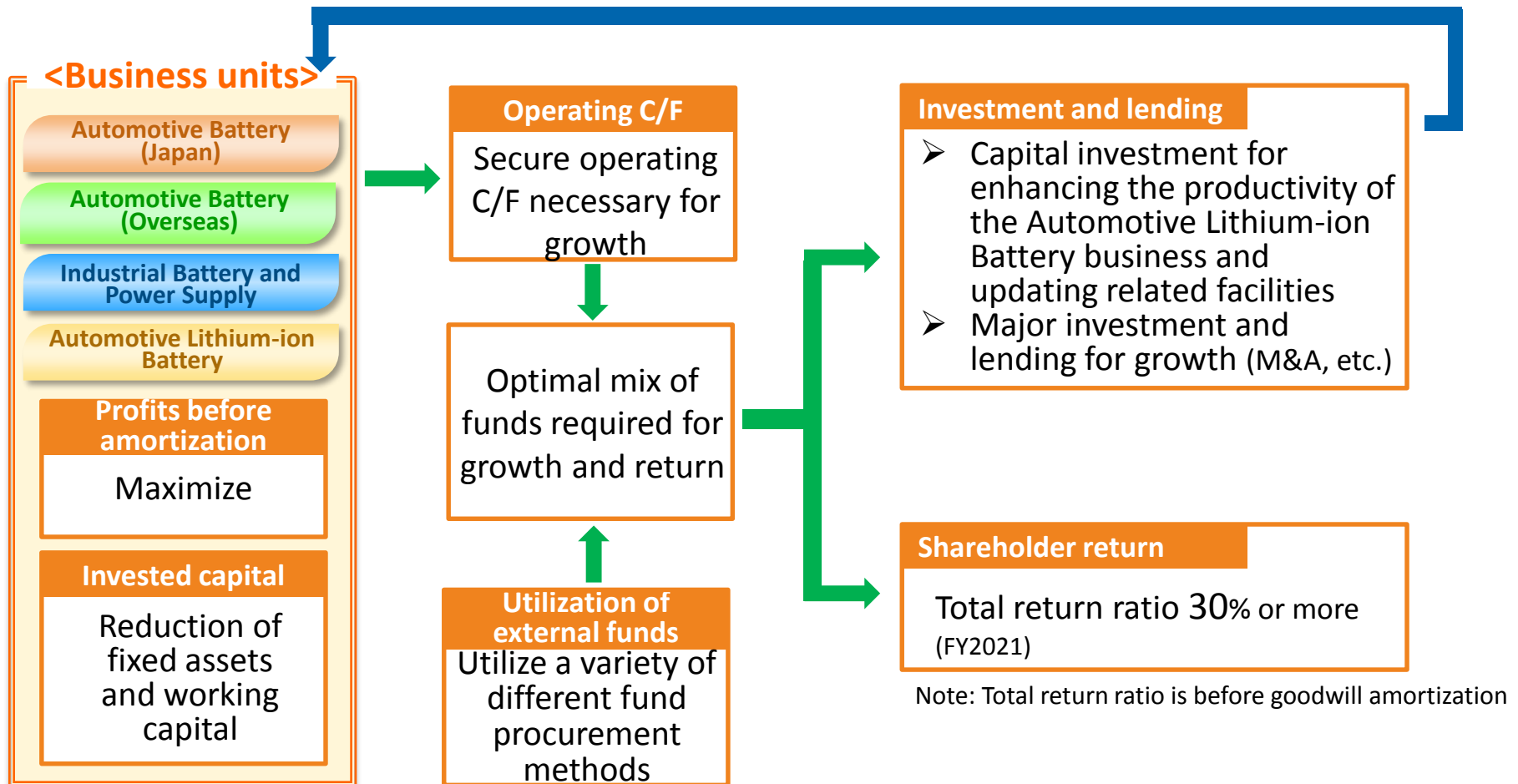
	Fifth Mid-Term Management Plan 3-year total
Operating cash flow	¥100.0 bn
Investment cash flow	-¥95.0 bn
Free cash flow	¥5.0 bn

2. Mid-Term Management Policy/Tasks

Capital policy



Emphasis on efficient business management to realize medium- to long-term growth
 In addition to maximization of revenue, we will work on ROIC management (optimal fixed asset management and reduction of working capital)



2. Mid-Term Management Policy/Tasks

Capital investment/depreciation



(Billion yen)

		Second Mid-Term Management Plan (FY2010 to FY2012)	Third Mid-Term Management Plan (FY2013 to FY2015)	Fourth Mid-Term Management Plan (FY2016 to FY2018)	Fifth Mid-Term Management Plan (FY2019 to FY2021)
		Results (3-year total)	Results (3-year total)	Results (3-year total)	Plan (3-year total)
Capital Investment		92.0	42.5	56.6	95.0
Automotive Battery	Japan	1.8	3.4	7.9	10.0
	Overseas	11.2	12.2	16.9	14.0
Industrial Battery and Power Supply		2.8	4.5	4.1	8.0
Automotive Lithium- ion Battery		65.5	11.5	8.3	48.0
Others		10.7	10.9	19.4	15.0
Depreciation		34.7	43.9	47.9	48.0
Automotive Lithium- ion Battery		12.3	16.1	15.0	14.0

2. Mid-Term Management Policy/Tasks

R&D Expenses



(Billion yen)

	Fourth Mid-Term Management Plan (FY2016 to FY2018)	Fifth Mid-Term Management Plan (FY2019 to FY2021)
	Results (Total for 3 years)	Forecast (Total for 3 years)
R&D costs	30.6	35.0
(Ratio of R&D expenses to net sales)	2.6 %	2.7 %

Key R&D point in the Fifth Mid-Term Management Plan

Demand for 12V backup batteries for self-driving vehicles and industrial-use lithium-ion batteries has been rising and we will invest more management resources in research and development

Automotive Battery (Japan, Overseas)

- Research on 12V backup LiBs for self-driving vehicles

Automotive Lithium-ion Battery

- Focus will move to batteries for hybrid electric vehicles and automotive 12V LiBs
- Basic post-LiB research

Industrial Battery and Power Supply

- R&D on lithium-ion batteries in the new energy field and in the industrial field e.g. forklifts, etc.

Others

- Development of high safety, high energy density technologies able to withstand use in special applications

3. Policies, Strategies, and Tasks by Segment

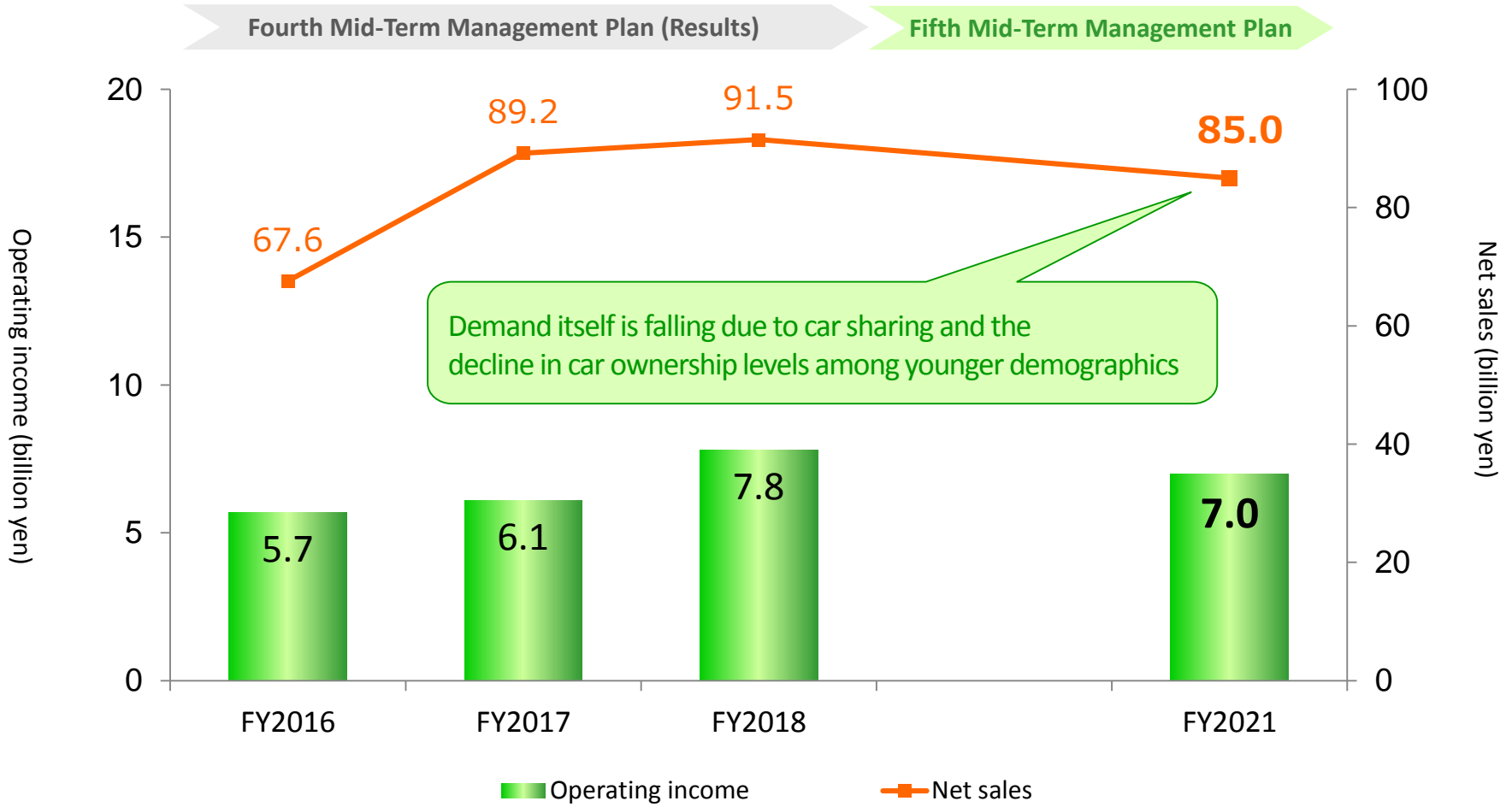
(Billion yen)

		Results		Fifth Mid-Term Management Plan			
		FY2018 (Apr 2018 to Mar 2019)		FY2021 (Apr 2021 to Mar 2022)		Change (Mar 2019 to Mar 2022)	
		Net sales	Operating income (Op. income ratio: %)	Net sales	Operating income	Net sales	Operating income
Automotive Battery	Japan	91.5	7.8 (8.5)	85.0	7.0	-6.5	-0.8
	Overseas	187.1	10.6 (5.6)	200.0	13.0	+12.9	+2.4
Industrial Battery and Power Supply		70.0	7.3 (10.5)	100.0	8.0	+30.0	+0.7
Automotive Lithium-ion Battery		45.6	0.3 (0.7)	55.0	1.0	+9.4	+0.7
Others		18.9	-0.9 (-4.6)	20.0	-1.0	+1.1	-0.1
Total		413.1	25.1 (6.1)	460.0	28.0	+46.9	+2.9

Note: Operating income is operating income before amortization of goodwill and operating income ratio is operating income ratio before amortization of goodwill.

3. Policies, Strategies, and Tasks by Segment

Automotive Battery (Japan)



Note: Operating income is operating income before amortization of goodwill

Automotive Battery (Japan)

Business policy



Aim to shift to a more robust and streamlined business structure through optimal earnings mix

Strategy and important tasks



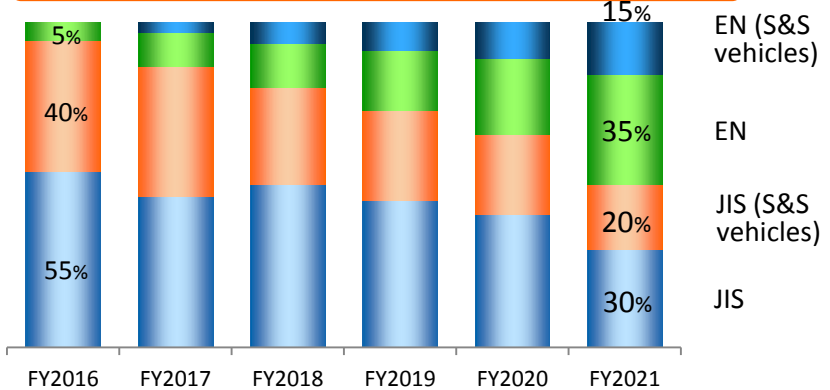
- Work to optimize market share and earnings by advancing selection and concentration with emphasis on profits
- Fully demonstrate the strengths of the GS Yuasa brand and increase the weighting of high value-added products
- Improve productivity through introduction of labor-saving equipment and pursue cost reduction through streamlining design and production
- Deliver highly satisfying products to customers by continuously developing high performance, high quality products
- Create synergies from transfer of Panasonic's lead-acid battery business

3. Policies, Strategies, and Tasks by Segment

Automotive Battery (Japan)

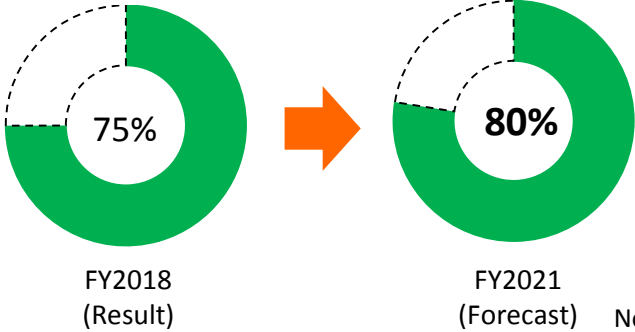
New automobile battery market trends and strategies

New automobile battery market trends



- Increasing number of manufacturers and vehicle models adopting EN batteries
- High ratio of lead-acid storage batteries for S&S vehicles including EN Standard-compliant batteries
- Ratio of JIS (general) lead-acid storage batteries declining

Market share for new automobile batteries



Market share for new automobile batteries will increase, as demand for batteries for start & stop vehicles and EN Standard batteries rises

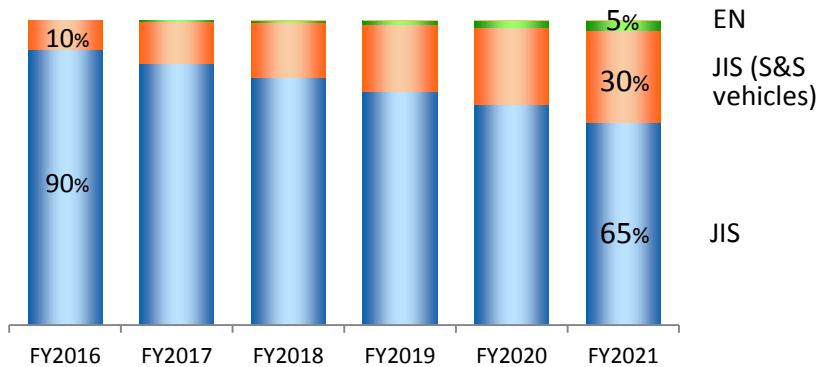
Note: Figures for FY2019 onwards are forecasts

Note: Based on GS Yuasa's research

Automotive Battery (Japan)

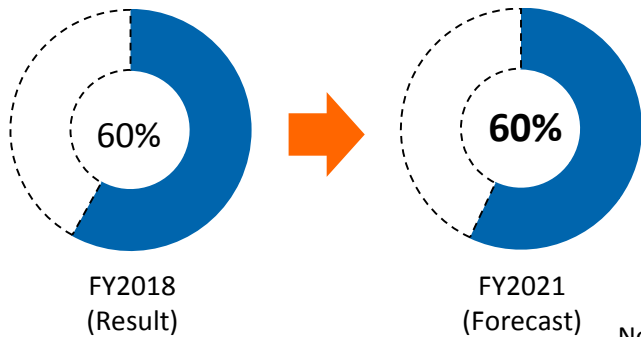
Replacement battery market trends and strategies

Replacement battery market trends



- Emergence of demand for EN Standard-compliant replacement batteries
- Ratio of lead-acid storage batteries for S&S vehicles increasing
- Declining trend for JIS (general) lead-acid storage batteries along with decline in demand for new automobile batteries

Market share for replacement batteries



Note: Figures for FY2019 onwards are forecasts



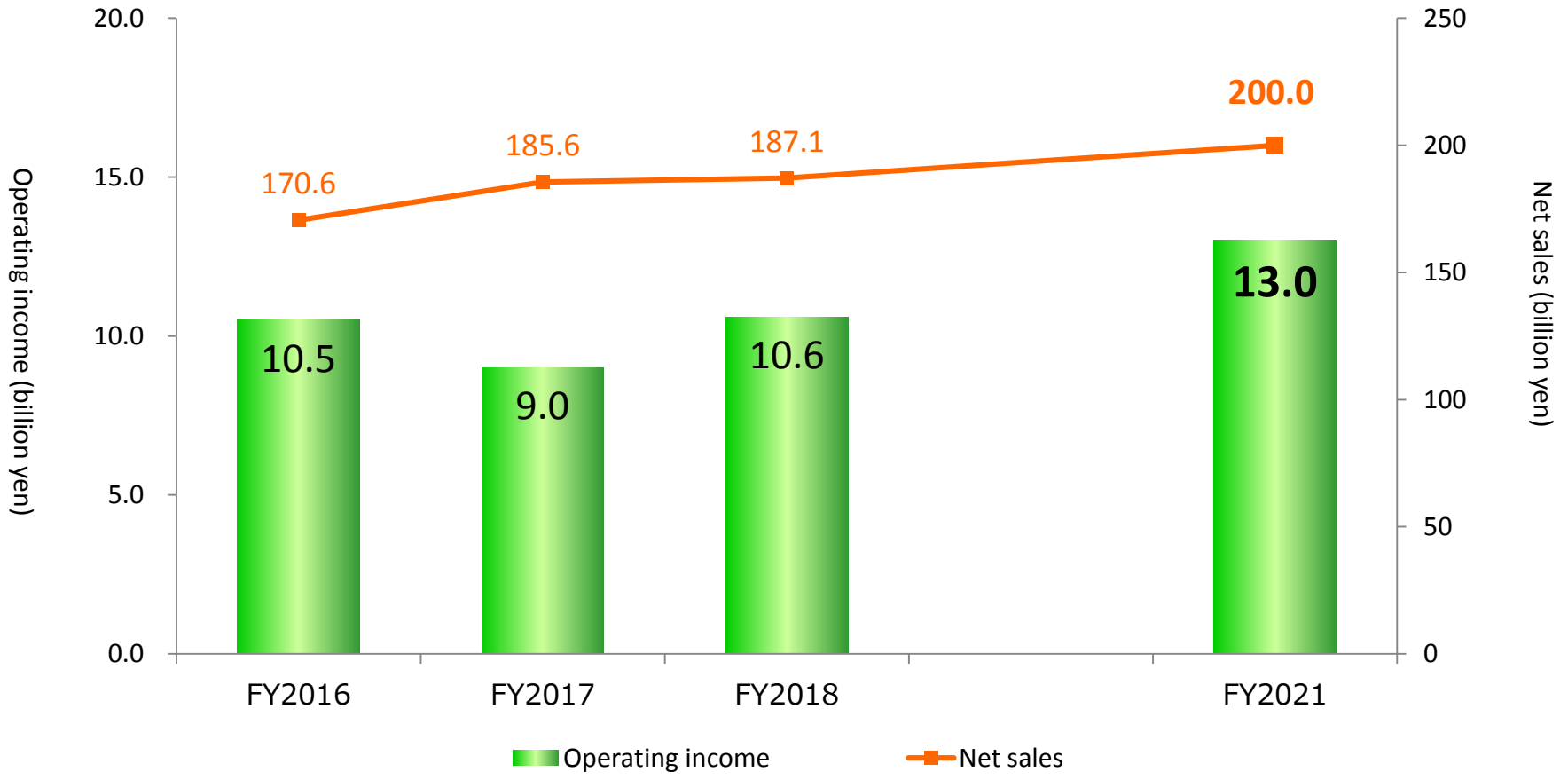
Steadily capturing replacement demand for high-value-added lead-acid storage batteries for S&S vehicles in order to improve product mix and achieve high levels of profitability

Note: Based on GS Yuasa's research

3. Policies, Strategies, and Tasks by Segment

Automotive Battery (Overseas)

Fourth Mid-Term Management Plan (Results) Fifth Mid-Term Management Plan



Automotive Battery (Overseas)

Business policy



Aim to secure profits through selection and concentration of production and sales

Strategy and important tasks



- Work to enhance profit ratio by introducing new products and building an optimal production structure, while maintaining our share in regions with high market shares
- In regions with low market share, ensure sales expansion through enhancement of product line-up by building a sales and service framework
- Expand into each untapped region strategically, leveraging existing production bases

3. Policies, Strategies, and Tasks by Segment

Automotive Battery (Overseas)

Circumstances & strategies at key measure bases in regions where we are pursuing profits



Taiwan

- Replacement demand is stagnant due to subsidy incentives for new vehicles
- Economy is also experiencing a slowdown

[Automobiles] Enhance lineup
[Motorcycles] Market growth through low-priced products



Vietnam

- Import restriction on completed cars in automobile market
- Gradual growth in motorcycle demand

[Automobiles] Increase sales by expanding lineup
[Motorcycles] Gain competitiveness through labor-saving measures and enhanced productivity



Thailand

- Domestic market is strong partly thanks to replacement demand
- Exports for Southeast Asia are strong

[Automobiles] Maintain and expand new automobile battery volume
[Automobiles] Expand replacement sales, open up new sales channels, and use products to differentiate from competitors
[Automobiles] Expand sales in Greater Mekong Subregion



U.S.A.

- Preferential policies for U.S. companies reflecting emerging protectionism

[Motorcycles] Expand lineup of replacement VRLA batteries
[Motorcycles] Win orders for new motorcycle batteries through offering optimal products



Australia

- Continued economic growth but growth rate is slowing
- New vehicle sales levelling off

[Automobiles] Enhance sales network
[Motorcycles] Enhance customer services



Indonesia

- Demand for automobiles expanding with infrastructure improvement
- Demand for motorcycles is gradually recovering

[Automobiles] Reinforce replacement battery business and expand export lineup
[Motorcycles] Expand sales with new models

Automotive Battery (Overseas)

Circumstances & strategies at key measure bases in regions where we are expanding sales

Turkey, EU

- Maintain Turkey as a base, and leverage its geographic advantage to use it as a bridge not only to the EU but also to regions where we have no contacts, such as the Middle East and North Africa

[Automobiles]
Collect information regarding new vehicle manufacturers in the EU and sell to them

[Automobiles]
Expand sales into untapped regions such as the Middle East and North Africa

China

- Economic conditions rapidly worsening and automotive market in disarray
- In the long term, demand for environment-friendly vehicles and electric vehicles will increase

[Automobiles] Respond to demand for lead-acid storage batteries for S&S vehicles with operation of the new Tianjin plant

[Automobiles] Respond to increasing replacement demand

India

- Significant increase in demand for both automobiles and motorcycles

[Automobiles] Respond to changes to demand amid solid demand increase

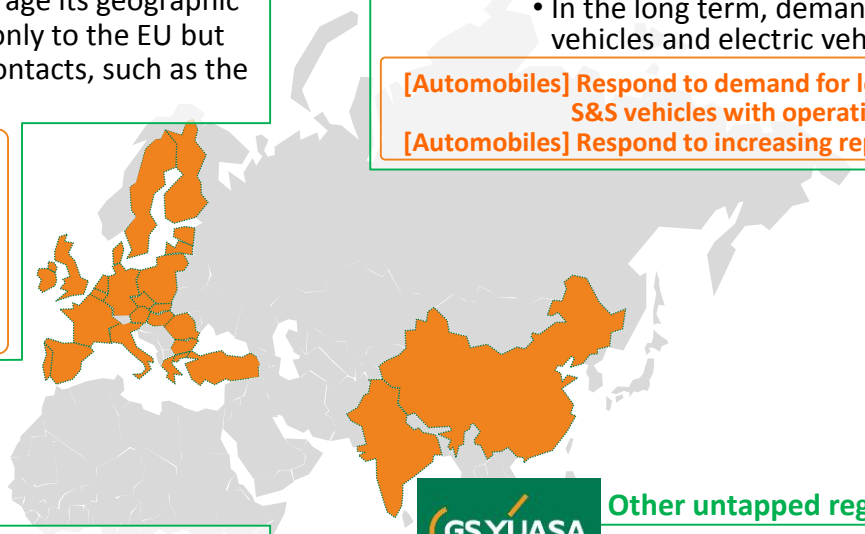
[Motorcycles] Develop framework for production of 7 million units in FY2021

GSYUASA **Other untapped regions (Central/South America, etc.)**

- Demand increasing for both automobiles and motorcycles
- Need to respond to certification standards of each country against the background of trade protectionism

[Automobiles] Make preparations to respond to demand in Central and South America, Asia-Pacific, etc.

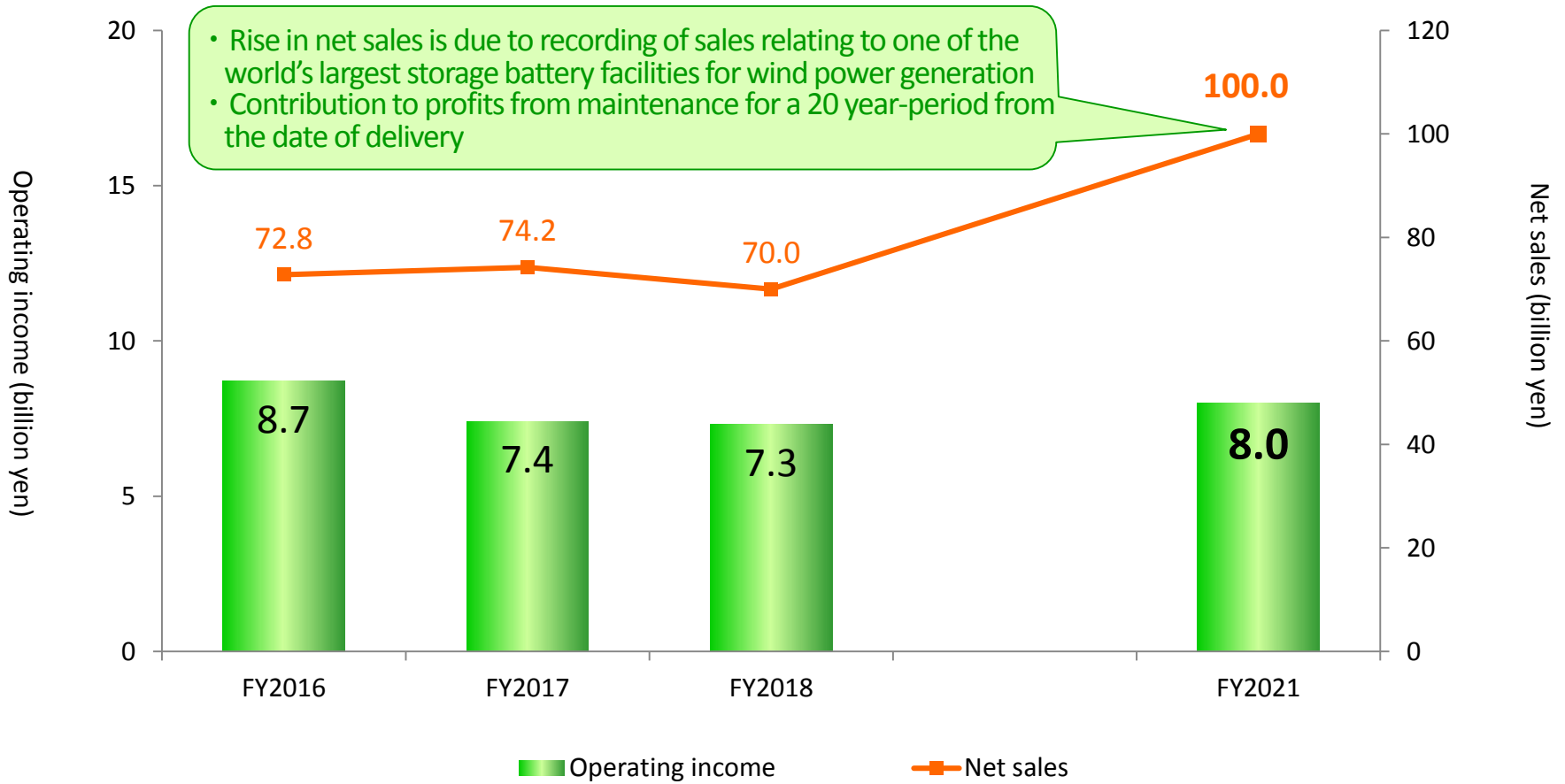
[Automobiles] Seek out promising local partners



3. Policies, Strategies, and Tasks by Segment

Industrial Battery and Power Supply

Fourth Mid-Term Management Plan (Results) Fifth Mid-Term Management Plan



Industrial Battery and Power Supply

Business policy



Lay the groundwork for transition to a global energy solutions company that contributes to societal and environmental safety and security

Strategy and important tasks



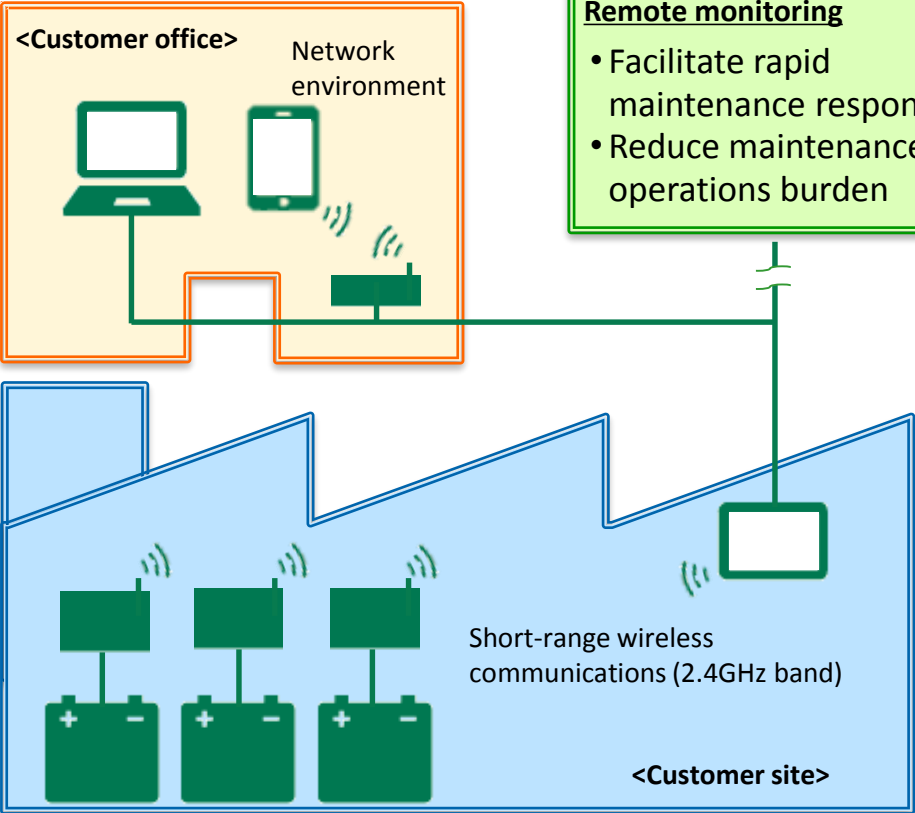
- Introduce high value-added products and services to ensure survival in existing fields
- Secure market position by making a strategic shift to new businesses in the green technology and energy fields
- Leverage the ability, cultivated in the domestic market, to propose products, technologies, and services, in order to develop and nurture businesses in overseas markets that are optimized for each region

Industrial Battery and Power Supply

Existing business to shift from *Mono* (products) to *Koto* (services)

Overview of storage battery monitoring system

Simple operation using PCs/tablets



- Domestic demand for backup batteries and power supplies has levelled off
- Lack of sales growth necessitates enhancements in profitability
- Enhance after-sales service including maintenance

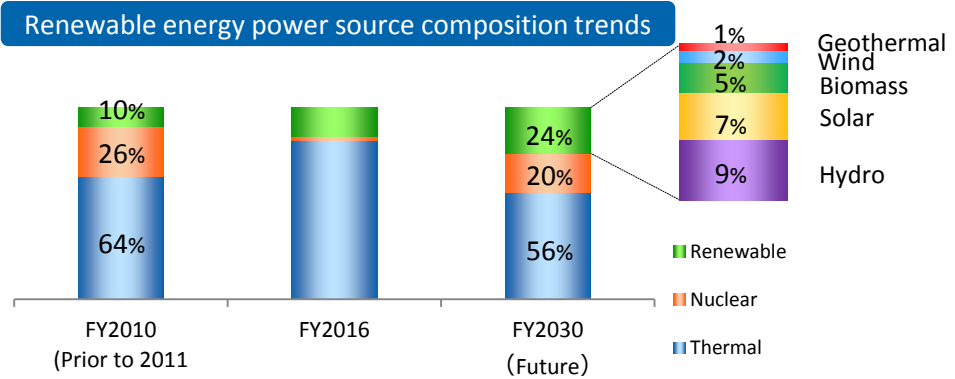


Shift from *Mono* to *Koto*
Offer services utilizing IoT and AI
Enhance after-sales service in the Japanese market and maintain sales and profits

3. Policies, Strategies, and Tasks by Segment

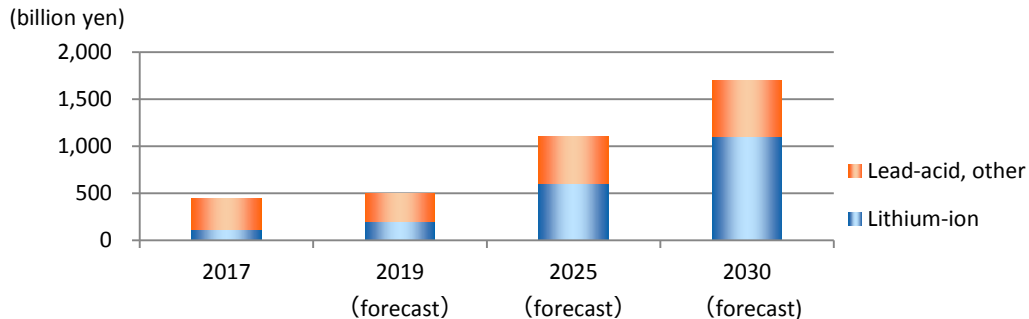
Industrial Battery and Power Supply

Expansion of storage battery demand for renewable energy



- Demand for renewable energy increasing
- Demand for self-consumption to increase as Feed-in Tariff System for Renewable Energy (FIT) ends
- Demand to increase for storage battery facilities that can stably supply power

Lithium-ion battery demand in the power storage field



Source: Fuji Keizai, "Enerugi/ogata nijidenchi/zairyo no shorai tenbo 2018 Doryoku, denryoku chozo, kaden bunya hen" (Future prospects for energy, large secondary batteries, and materials 2018 - Motive power, electric power storage, and home appliances fields edition)

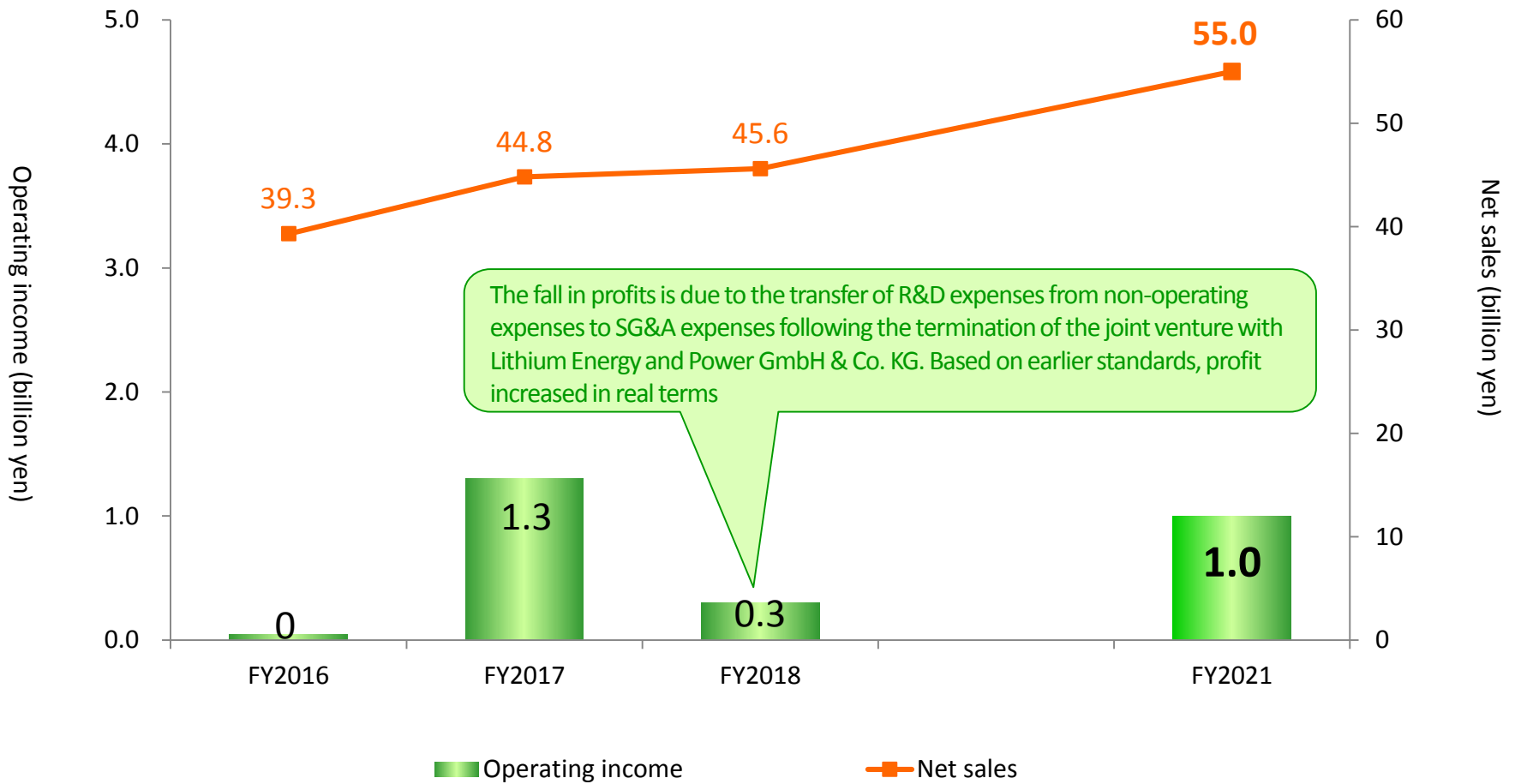


Opportunities for business targeting both individuals and companies to increase with the shift from selling electricity to electricity storage and self-consumption

3. Policies, Strategies, and Tasks by Segment

Automotive Lithium-ion Battery

Fourth Mid-Term Management Plan (Results) Fifth Mid-Term Management Plan



Automotive Lithium-ion Battery

Business policy



Build the foundation for a differentiation strategy with a view to future business expansion by grasping changes in the business environment in advance

Strategy and important tasks



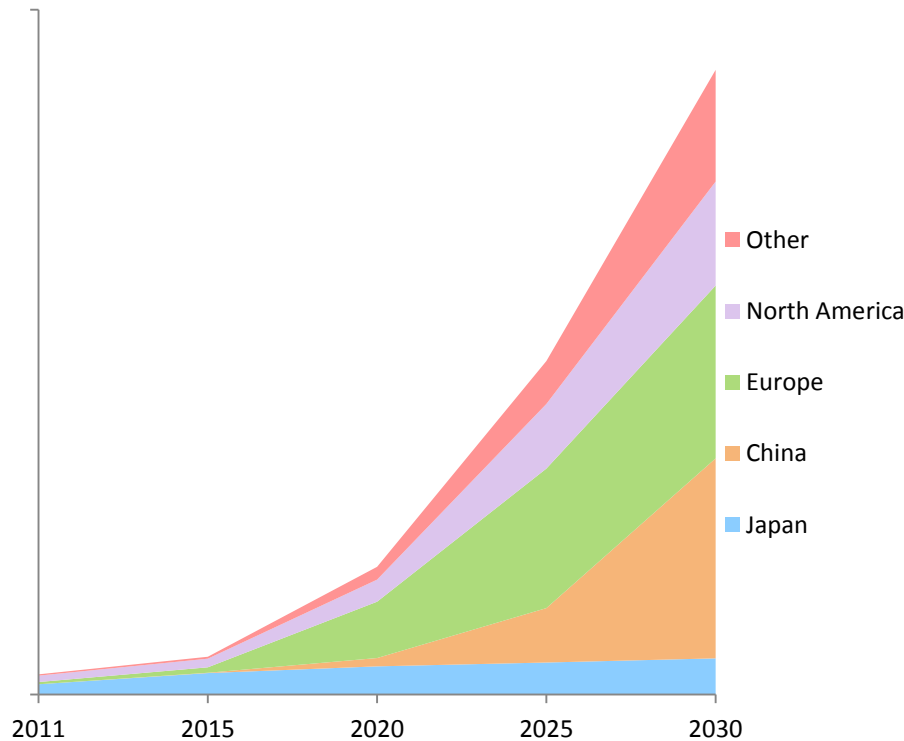
- Focus on lithium-ion batteries for hybrid electric vehicles primarily for Japanese manufacturers, 12V lithium-ion batteries for European manufacturers, and industrial-use lithium-ion batteries
- Strengthen coordination with existing customers for long-term dealings involving lithium-ion batteries for plug-in hybrid electric vehicles and other electric vehicles
- Promote development of future technologies that will differentiate us from competitors

Automotive Lithium-ion Battery

Respond to expanding hybrid electric vehicle demand primarily from Japanese manufacturers



Hybrid electric vehicle market trends



Source: GS Yuasa estimates from various materials

- Demand for hybrid electric vehicles is increasing, primarily in China, Europe, and North America
- Hybrid electric vehicles have the advantage of eliminating concerns about cruising range and are expected to increase in popularity in Europe and North America (both regions characterized by car-based lifestyles)
- Automakers, particularly Japanese companies, are focusing on hybrid electric vehicles
- Tightening of automobile mileage standards in various countries through introduction of Corporate Average Fuel Economy (CAFE) standards



Focus on lithium-ion batteries for hybrid electric vehicles requiring high input/output performance: Products in which GS Yuasa can leverage its technological capabilities

Automotive Lithium-ion Battery

Expand supply of 12V LiBs for starting vehicles and backup 12V LiBs



Strategy for 12V LiBs for starting vehicles

- Automakers in Europe, where people are highly conscious of reducing environmental impacts, are considering replacements for lead-acid storage batteries for their new models
- Start supplying mainly to European manufacturers releasing new luxury models

Strategy for backup 12V LiBs

- CASE, will bring about structural transformation of the automobile industry and an increase in the number of self-driving vehicles
- With increasing redundancy in power supply systems, backup power sources will become necessary

Gain market share by supplying 12V LiBs to European automakers (to whom we currently deliver only a limited quantity of lead-acid storage batteries)

Also deliver to Japanese automakers supplying to Europe

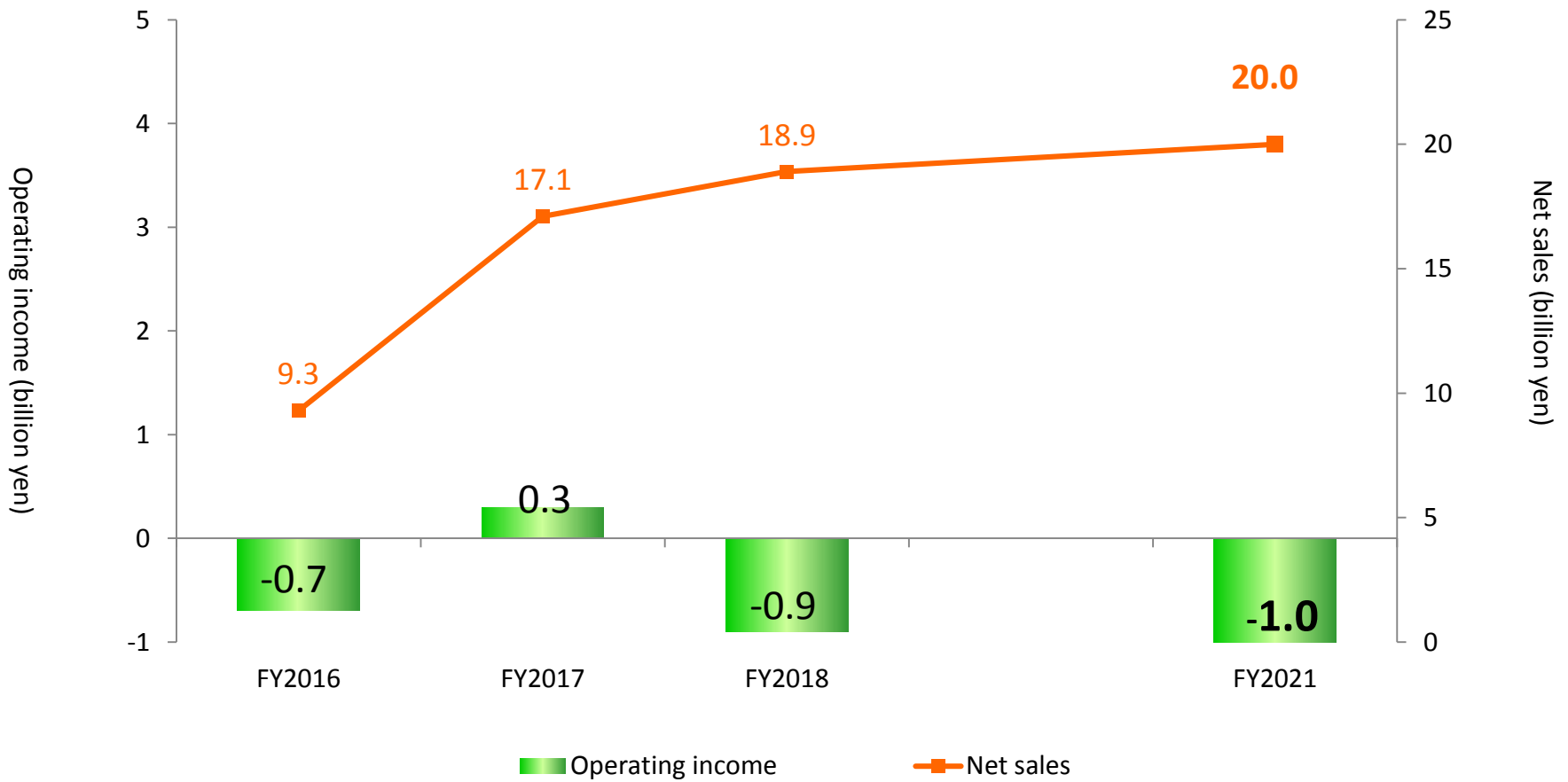
Leverage 12V LiB knowhow in Hungary and enjoy the benefits that come from being an industry pioneer

Supply products leveraging the brand power we have built up through our lead-acid storage battery business

3. Policies, Strategies, and Tasks by Segment

Others

Fourth Mid-Term Management Plan (Results) Fifth Mid-Term Management Plan



3. Policies, Strategies, and Tasks by Segment

Others

Business policy



Contribute to the building of new societal infrastructure through batteries with the highest level of performance and quality

Strategy and important tasks



- Work to provide stable supply of lithium-ion batteries for submarines and enhance their quality
- Expand sales of lithium-ion batteries for aircraft and satellites by improving reliability and durability

3. Policies, Strategies, and Tasks by Segment

Others

Use in extreme environments is proof of high technological capabilities and reliability 

The "Ibuki-2" Greenhouse Gases Observation Satellite-2 (GOSAT-2)



Boeing 787 "Dream Liner"



SS "SOURYU" Class



(source: Maritime Self-Defense Force)

Point

Extreme environments from deep sea to outer space



Pursue further improvements to technological capabilities by providing storage batteries able to continue supplying power even under harsh conditions

Although this document has been prepared with information believed to be correct, GS Yuasa Corporation does not guarantee the accuracy or the completeness of such information. Also, the information herein contains forward-looking statements regarding the Company's plans, outlooks, strategies and results for the future. All the forward-looking statements are based on judgments derived from information available to the Company at the time of release. Certain risks and uncertainties could cause the Company's actual results to differ materially from any projections presented herein.



Reference

CSR Policy



- Besides legal compliance, we respect international norms, guidelines, and initiatives related to social responsibility, work on sustainable development of our business through developing energy storage technologies, and contribute to people, society, and global environment.

1. Developing fair, transparent, and sound business, and anti-corruption
2. Respect for human rights
3. Conservation and improvement of adequate working environment
4. Fulfillment of our responsibilities to provide safe and secure products and services
5. Global environmental conservation
6. Building better relationships with local communities
7. Ensuring social responsibility within our supply chain

CSR Code of
Conduct for all
employees' code
of conduct

Participation in United Nations Global Compact (UNGC)



WE SUPPORT



SUSTAINABLE DEVELOPMENT GOALS
17 GOALS TO TRANSFORM OUR WORLD



The Ten Principles of the UN Global Compact

<Human Rights>

Principle 1 Businesses should support and respect the protection of internationally proclaimed human rights; and

Principle 2: make sure that they are not complicit in human rights abuses

<Labour>

Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;

Principle 4: the elimination of all forms of forced and compulsory labour;

Principle 5: the effective abolition of child labour; and

Principle 6: the elimination of discrimination in respect of employment and occupation.

<Environment>

Principle 7: Businesses should support a precautionary approach to environmental challenges;

Principle 8: undertake initiatives to promote greater environmental responsibility; and

Principle 9: encourage the development and diffusion of environmentally friendly technologies.

<Anti-corruption>

Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.

External ratings



CSR evaluations

	ESG rating by MSCI (U.S.) *1	CSR assessment by Toyo Keizai Inc. *2				CSR assessment by EcoVadis (France) *3
		HR utilization	Environment	Corporate governance	Sociality	
2018	AA	AA	AA	AA	AA	57 points (rank: silver)
2017	AA	AA	AA	AA	AA	50 points (rank: silver)
2016	A	C	C	B	C	37 points (rank: bronze)

*1: ESG rating of MSCI (U.S.) is done by Japan ESG Select Leaders Index and is seven-grade evaluation of AAA, AA, A, BBB, BB, B and CCC.

*2: Toyo Keizai Inc.'s CSR assessment is five-grade evaluation of AAA, AA, A, B and C.

*3: EcoVadis (France) Total marks for CSR assessment is 100 points. The average score of the companies surveyed is 44.0 points.

Evaluation, certification and accreditation for GS Yuasa's CSR-related efforts

- Received the highest rank “particularly excellent in terms of initiatives for employees’ health” from DBJ Employees’ Health Management Rating
- Selected as a certified company of the Company with Excellent Health Management 2019 –White 500- by the Ministry of Economy, trade and Industry
- Received Kurumin Mark, certified as a company that supports child care by the Ministry of Health, Labour and Welfare



Net sales / Operating income

(Billion yen)

FY2018	1Q	2Q	3Q	4Q	Six months	Nine months	Full year
Net sales	96.3	99.2	110.2	107.4	195.4	305.6	413.1
Operating income	2.9	4.0	7.4	8.3	7.0	14.3	22.7
FY2017	1Q	2Q	3Q	4Q	Six months	Nine months	Full year
Net sales	87.8	96.4	112.8	114.0	184.2	297.0	411.0
Operating income	2.9	3.1	7.7	8.2	6.0	13.7	21.9
FY2016	1Q	2Q	3Q	4Q	Six months	Nine months	Full year
Net sales	75.4	83.5	95.4	105.3	158.9	254.3	359.6
Operating income	3.0	4.2	7.5	8.4	7.2	14.7	23.1
FY2015	1Q	2Q	3Q	4Q	Six months	Nine months	Full year
Net sales	81.6	89.5	94.2	100.3	171.1	265.3	365.6
Operating income	3.1	3.7	7.3	7.8	6.8	14.2	21.9
FY2014	1Q	2Q	3Q	4Q	Six months	Nine months	Full year
Net sales	82.3	89.2	94.9	103.3	171.5	266.5	369.8
Operating income	3.1	4.5	5.8	7.5	7.6	13.4	20.9

	Fiscal year	2014	2015	2016	2017	2018
Operating income ratio	(%)	5.7	6.0	6.7	5.9	6.1
Return on equity (ROE)	(%)	6.7	5.7	8.7	8.2	9.0
Return on invested capital (ROIC)	(%)	9.3	9.8	11.1	10.9	11.3
Earnings per share (EPS)	(¥)	121.66	109.39	165.95	168.55	194.58
Dividend per share	(¥)	50	50	50	50	50 (planned)
Purchase of treasury stock (amount planned for the next fiscal year)	(¥bn)	-	-	1.0	0.9	1.5 (planned)
Total return ratio	(%)	41.1	45.7	37.4	36.3	35.1

	Fiscal year	2014	2015	2016	2017	2018
Interest-bearing debt	(¥bn)	82.2	73.6	74.2	75.1	66.9
D/E ratio	(x)	0.63	0.54	0.52	0.50	0.42
Equity ratio	(%)	44.9	44.4	43.6	45.2	46.4
Debt to cash flow ratio	(year)	4.3	2.5	2.2	3.5	2.2

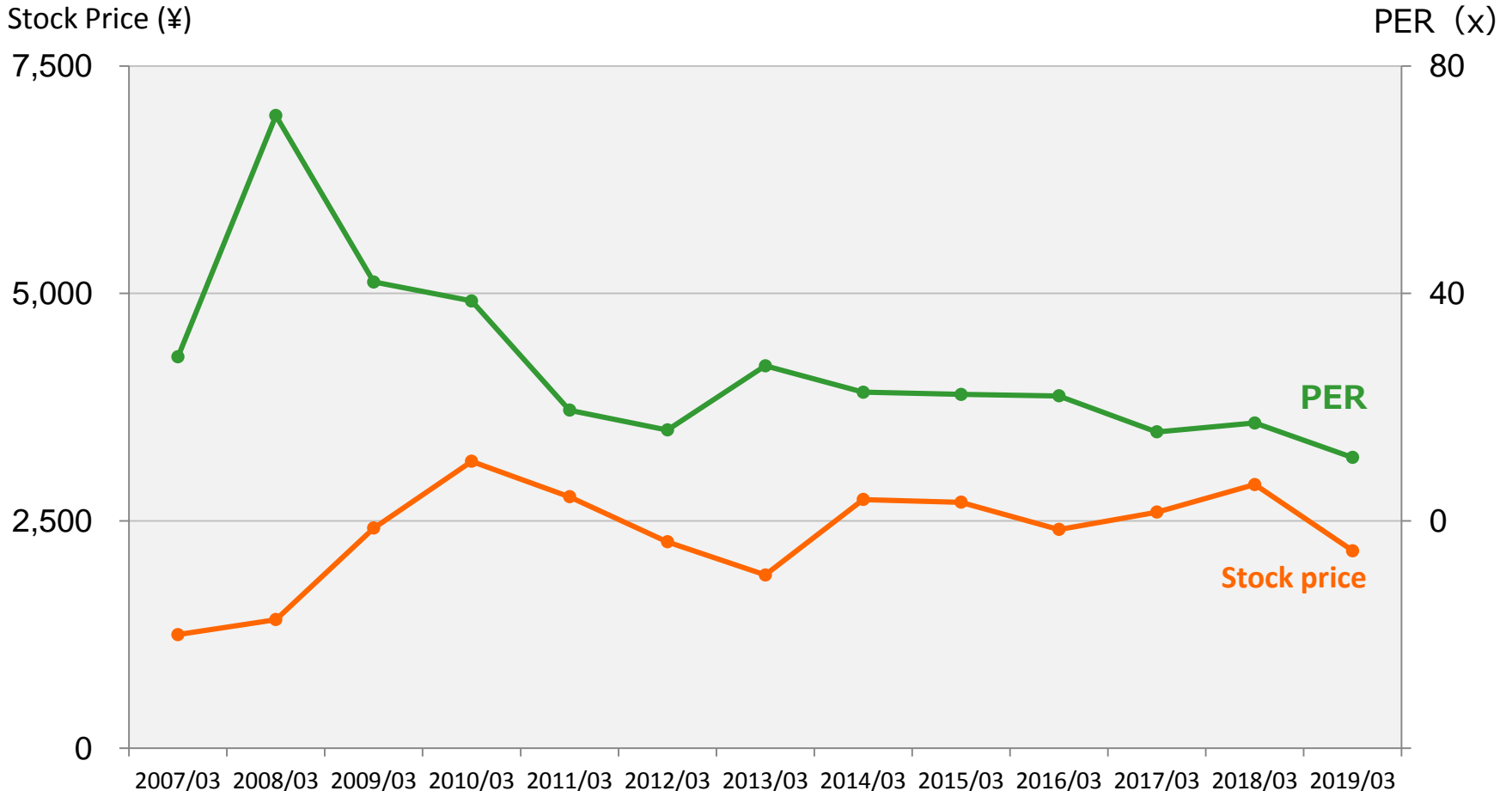
Notes: 1. The above indices for FY2016 and FY 2017 are based on profit before amortization of goodwill (operating income, profit).

2. ROIC is calculated as follows:

Operating income before amortization of goodwill ÷ invested capital (fixed assets [excl. goodwill amortization] + working capital).
Invested capital is the average of amount at beginning and end of term.

3. GS Yuasa carried out a five-to-one reverse stock split of its common stock upon changing the number of shares per trading unit from 1,000 to 100 shares (effective date Oct. 1, 2018), and EPS and Dividend per share take into account the share consolidation.

Stock Price, Price to Earnings Ratio (PER)



- Notes: 1. Closing price on the last trading day of March.
 2. PER is based on profit before amortization of goodwill.
 3. GS Yuasa carried out a five-to-one reverse stock split of its common stock upon changing the number of shares per trading unit from 1,000 to 100 shares (effective date Oct. 1, 2018), and Stock Price and PER take into account the share consolidation.

Raw Materials Prices

