

Financial Results Presentation

Fiscal Year ended March 2018



Sanken Electric Co., Ltd.

May 8, 2018

Part I Financial Results

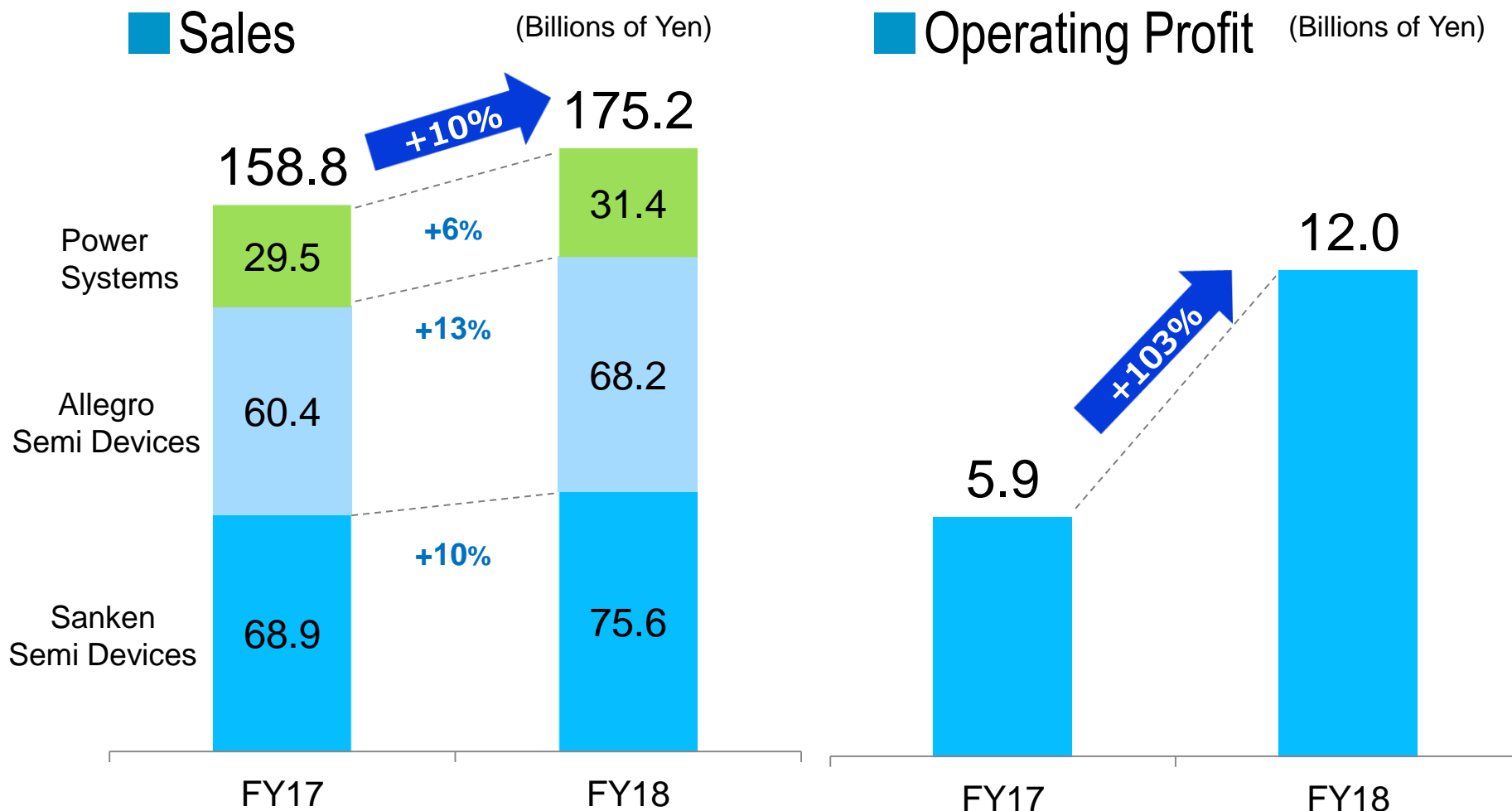
- Financial Results FY March 2018
- Guidance for FY March 2019

Part II New Midterm Management Plan

- Midterm Management Plan
- Semi Devices Business Strategy
Power Systems Business Strategy

Summary of Results in FY March 2018

Achieved increase in sales and profit boosted by Sanken's white goods and Allegro's auto businesses



• Exchange rate (Yen/US\$) : FY 17 108.39 FY 18 110.86

Consolidated Results: FY March 2018

(Billions of Yen)

	FY17	FY18			Y on Y Changes (%)	Guidance issued Oct 2017	Achieved (%)
	Full Year	1H	2H	Full Year			
Sales	158.8	86.0	89.2	175.2	+10.3	173.0	101.2
Semi. Devices	129.3	71.7	72.1	143.8	+11.2	144.3	99.6
Power Systems	29.5	14.3	17.1	31.4	+6.4	28.7	109.4
Operating Profit	5.9	5.5	6.5	12.0	+103.3	10.0	120.0
Ordinary Profit	5.0	5.7	6.1	11.8	+136.0	9.0	131.1
Extraordinary Income and losses	-0.4	-16.5	-1.8	-18.3	—	-17.8	-
NI attributable to controlling shareholder	1.7	-13.1	1.7	-11.4	—	-13.7	-

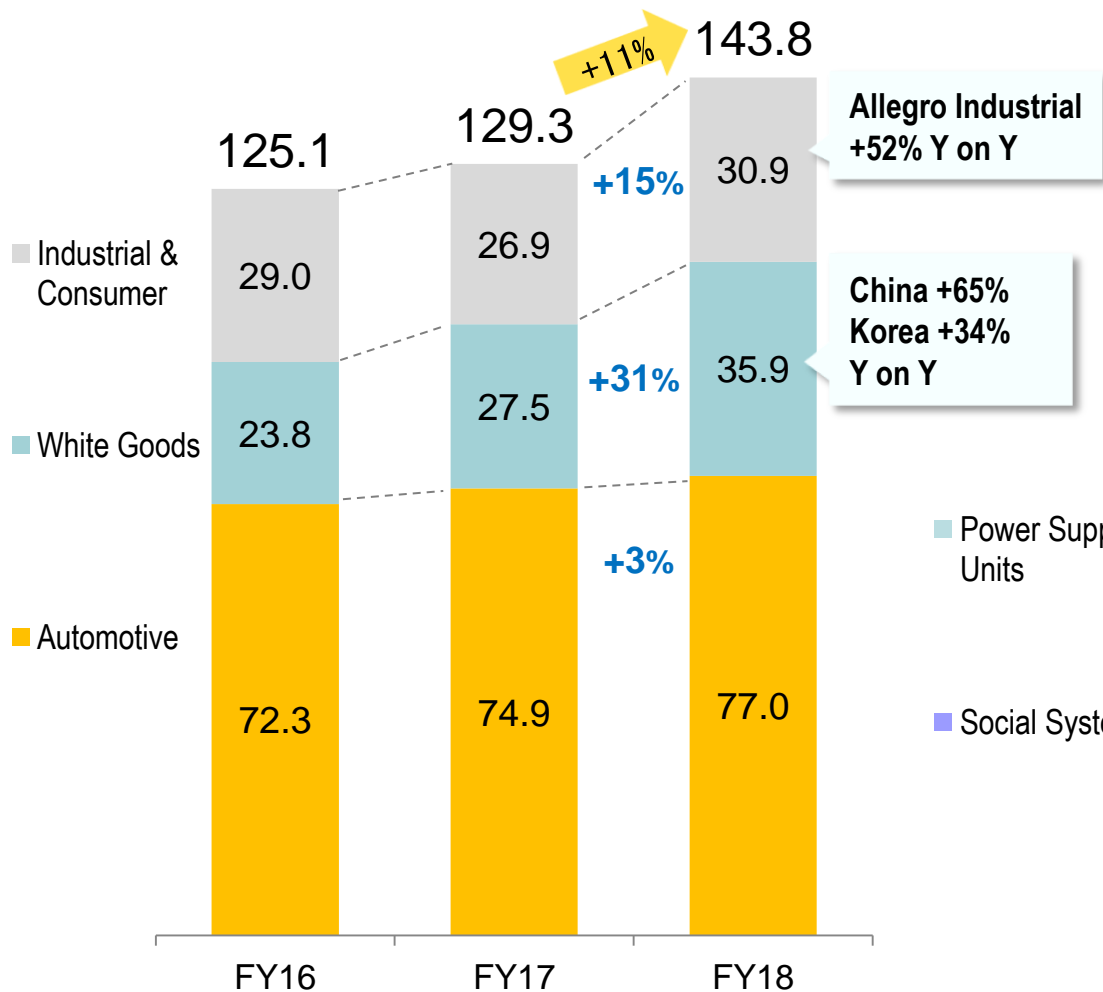
• “Y on Y Changes” are derived from the figures presented here expressed in billions of yen.



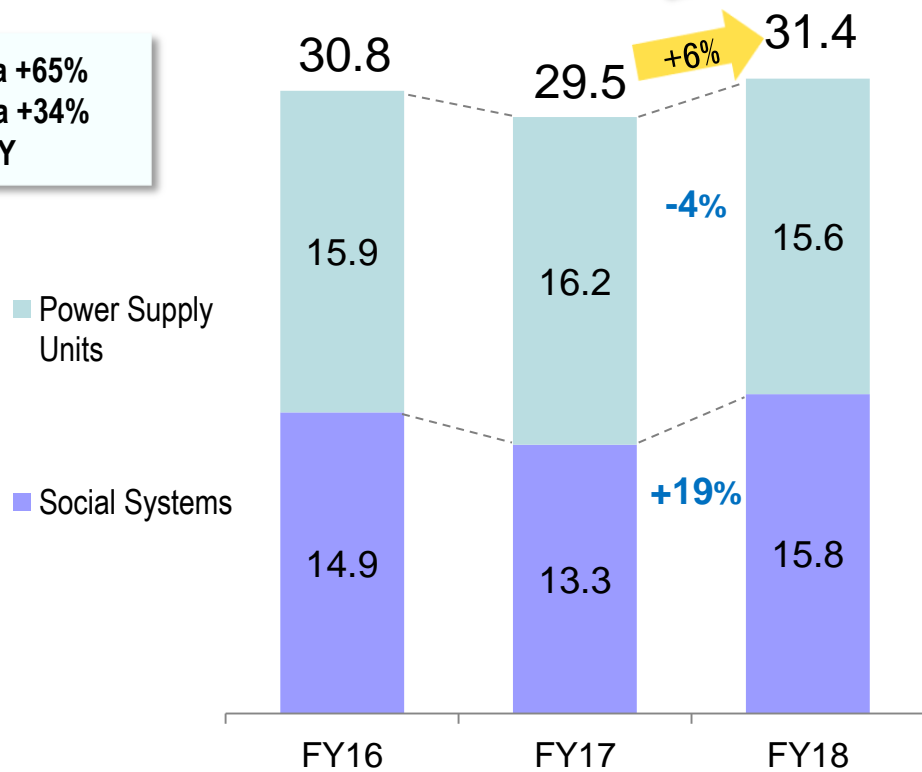
Consolidated Net Sales by Market

Semi Devices Net Sales (Billions of Yen)

Power Systems Net Sales (Billions of Yen)



Tele-comm. sales increase covered sales decline in the former PM business.



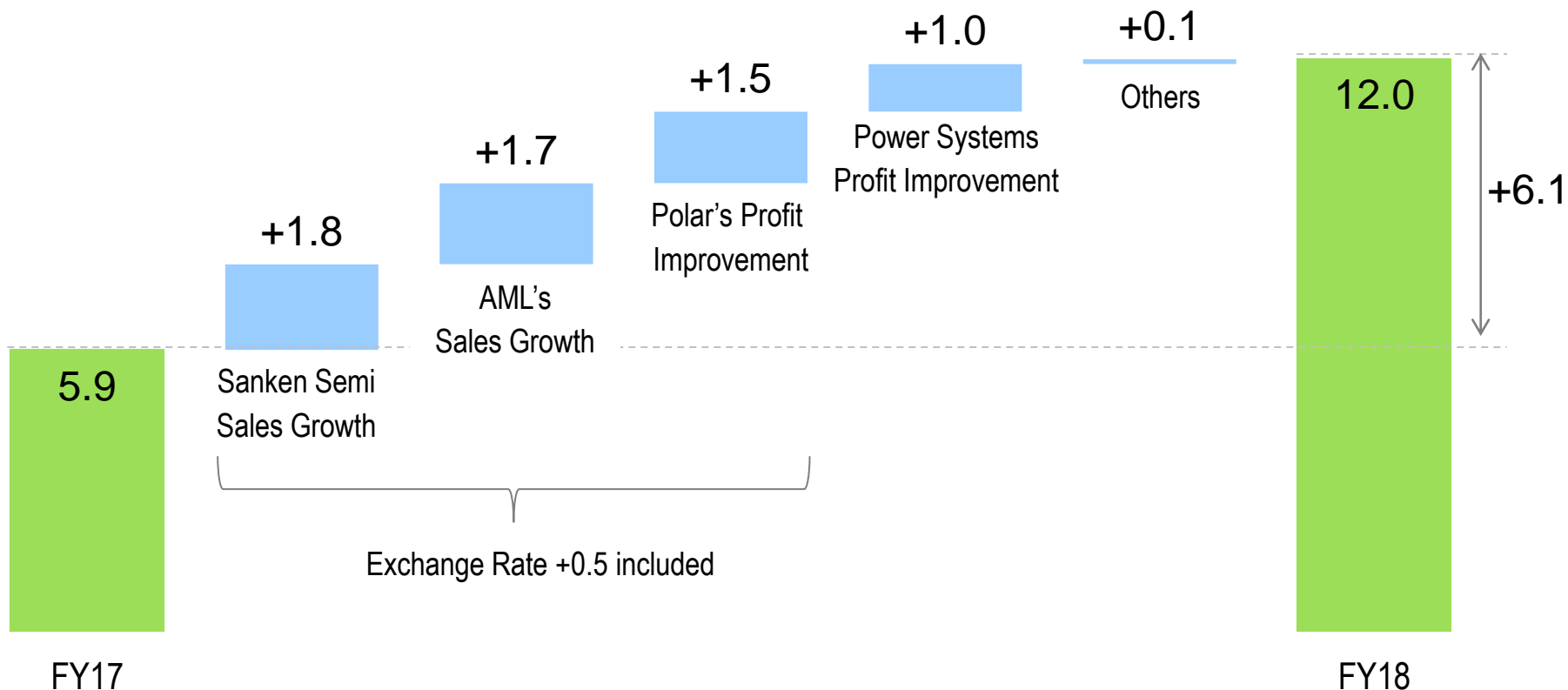
Exchange Rate (Yen/US\$)	FY16	FY17	FY18
	120.15	108.39	110.86

- Power Supply Units : Comprised of the former PM products
- Social Systems : Includes products for renewable energy

Factors of Change in Operating Profit

Year on Year Changes

(Billions of Yen)



Achieved a substantial profit growth driven by increased sales and JPY1.8 billion restructuring gains.

• AML: Allegro MicroSystems, LLC.

Extraordinary Losses FY March 2018

(Billions of Yen)

	Initiatives	Actions	Amount		
			1H	2H	Full Year
Started in the current FY18	Discontinue PM business	<ul style="list-style-type: none"> • Dispose inventory • Downsize SKI 	8.3	0.1	8.4
	Terminate unprofitable semi-products	<ul style="list-style-type: none"> • Dispose inventory 	6.6	1.7	8.3
	Special early separation program	<ul style="list-style-type: none"> • Head count reduction of 131 at SanKen HQ 	1.7	-	1.7
	Sub-total		16.5	1.9	18.4
Started in FY17	Reduce other fixed costs	<ul style="list-style-type: none"> • Record SPS liquidation loss • Take on KSK restructuring costs 	0.4	-	0.6
	Total		17.1	1.9	19.0

- Inventory disposal in 2H Semi Devices : Resulting from more focused reviews on strategic market
PM : Resulting from re-inspection in overseas sales subsidiaries

• SKI: P.T. Sanken Indonesia SPS: Sanken Power Systems (UK) KSK: Korea Sanken



Guidance for FY March 2019

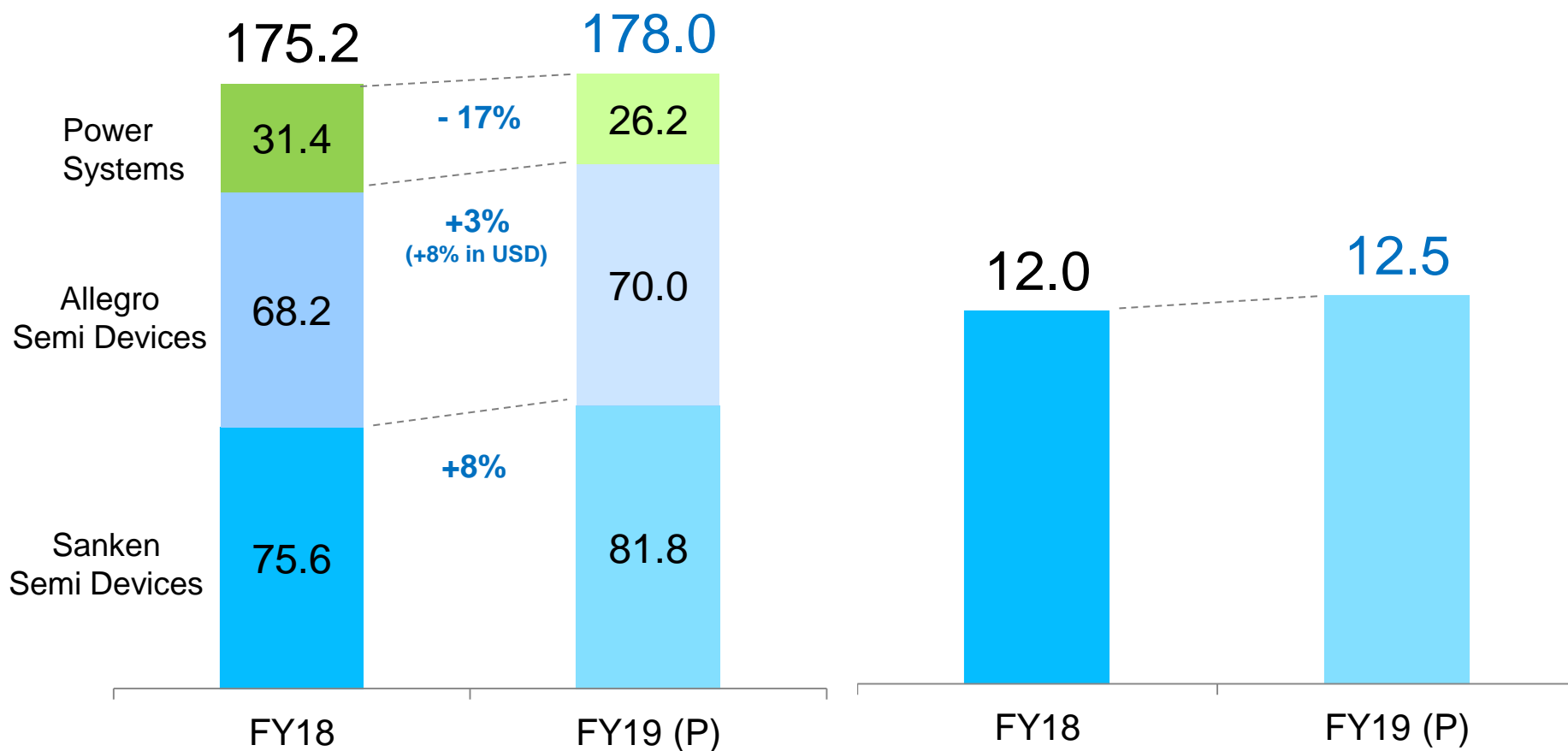
Expect restructuring gains, but partly offset by wafer price hike and forex fluctuation

Sales

(Billions of Yen)

Operating Profit

(Billions of Yen)



• Exchange rate (Yen/US\$) : FY18 110.86 FY19 105.00

Guidance for FY March 2019

(Billions of Yen)

	FY18 Actual			FY19 Projection			Y on Y Changes	
	1H	2H	Full Year	1H	2H	Full Year	Amount	%
Sales	86.0	89.2	175.2	87.2	90.8	178.0	+2.8	+1.5
Semi. Devices	71.7	72.1	143.8	75.8	76.0	151.8	+8.0	+5.5
Power Systems	14.3	17.1	31.4	11.4	14.8	26.2	-5.2	-16.5
Operating Profit	5.5	6.5	12.0	5.2	7.3	12.5	+0.5	+4.1
Ordinary Profit	5.7	6.1	11.8	4.4	6.6	11.0	-0.8	-6.7
NI attributable to controlling shareholder	-13.1	1.7	-11.4	1.5	3.3	4.8	+16.2	-

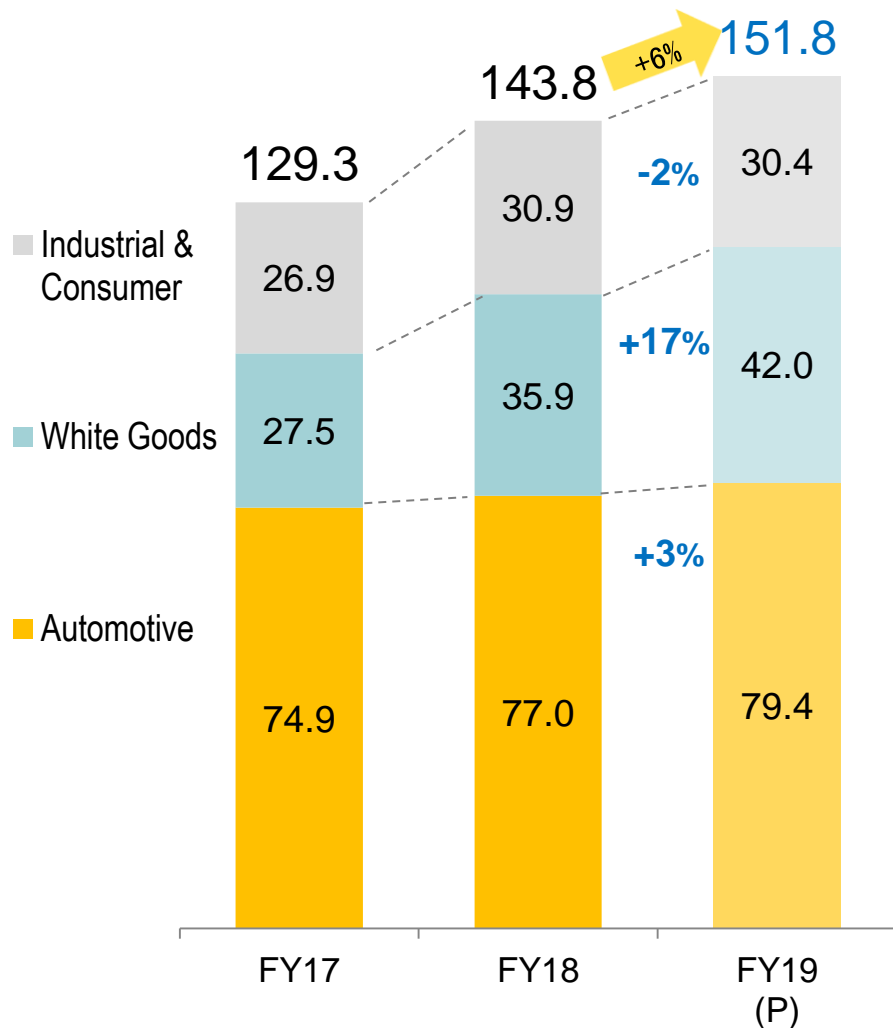
• Exchange rate : 105 Yen/US\$

• “Y on Y changes” are derived from the figures presented here expressed in billions of yen.

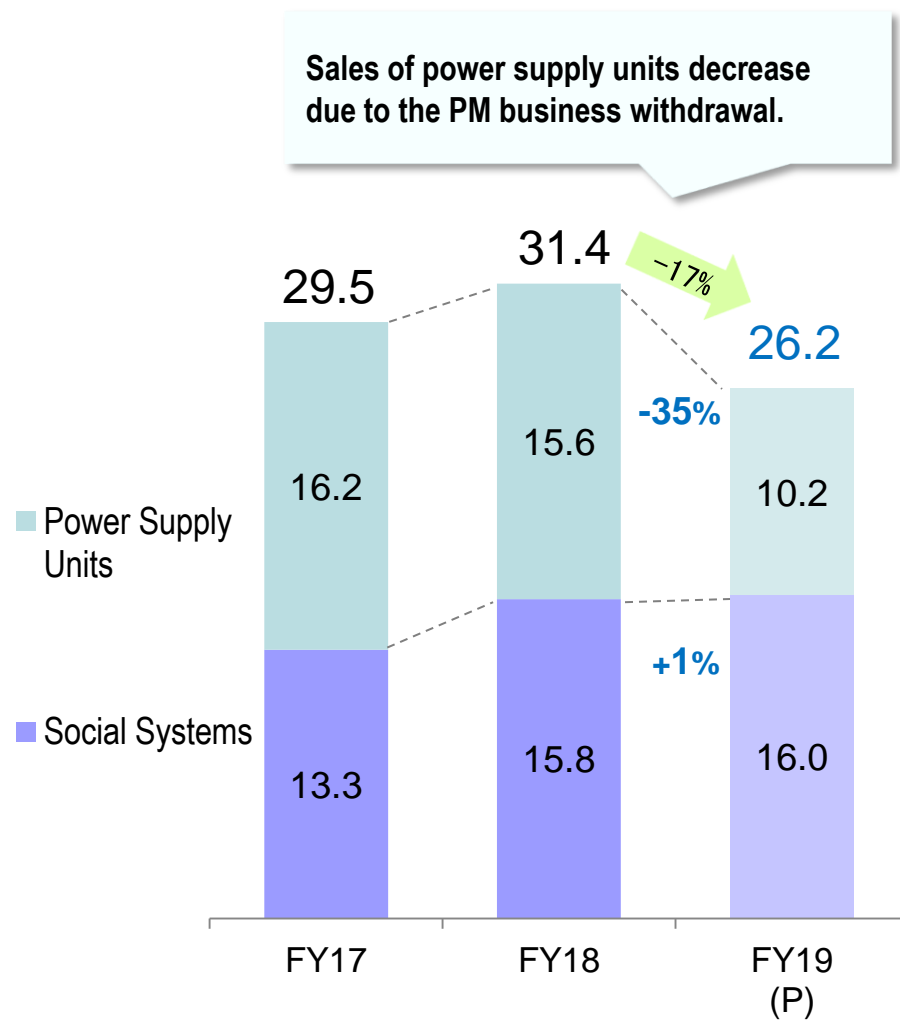


Guidance for Consolidated Net Sales by Market

■ Semi Devices Net Sales (Billions of Yen)



■ Power Systems Net Sales (Billions of Yen)



Sales of power supply units decrease due to the PM business withdrawal.

Exchange Rate (Yen/US\$)

108.39

110.86

105.00

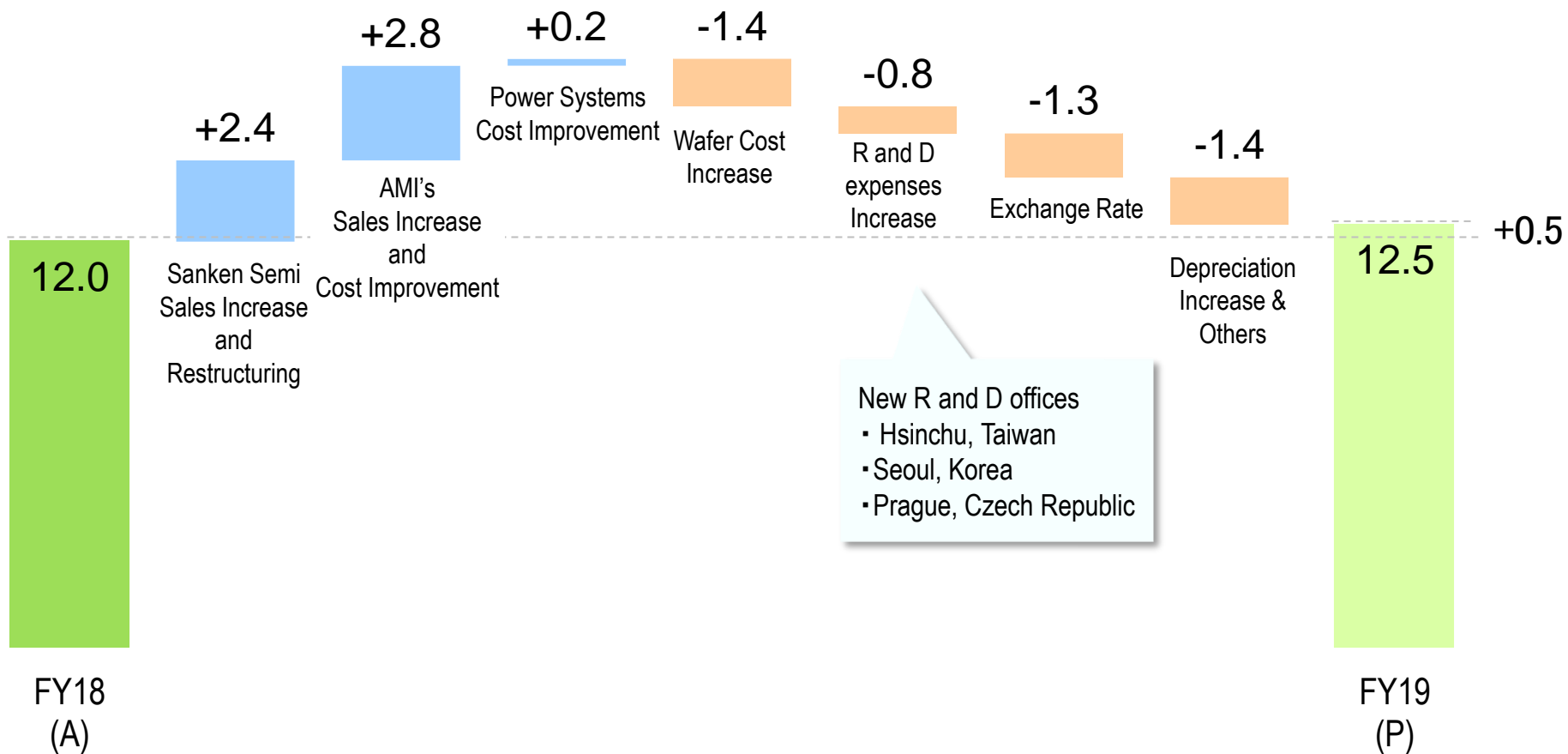
• Power Supply Units : Comprised of the former PM products
• Social Systems : Includes products for renewable energy



Factors of Change in FY19 Operating Profit

Year on Year Changes

(Billions of Yen)



Restructuring gains at HQ, plus Sanken and AMI's sales and profit growth cover cost increase of wafers, R and D etc.

• AMI: Allegro MicroSystems, Inc. (the former "SKN")



Updates on Expected Gains from Restructuring

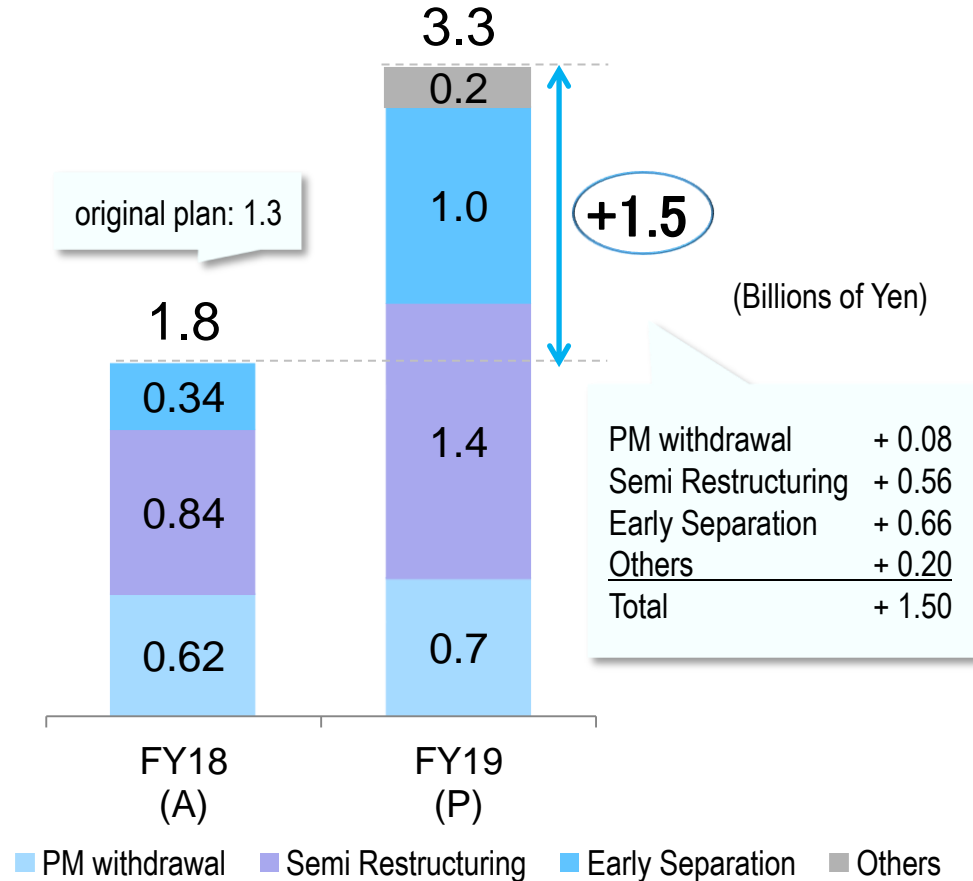
Projected restructuring gains in FY19 compared with FY17, the base year

(Billions of Yen)

Actions	Impact
Withdrawal from PM business	0.7
Restructuring in Semi Devices	1.4
Special early separation program	1.0
Other fixed costs reduction	0.2
Total	3.3

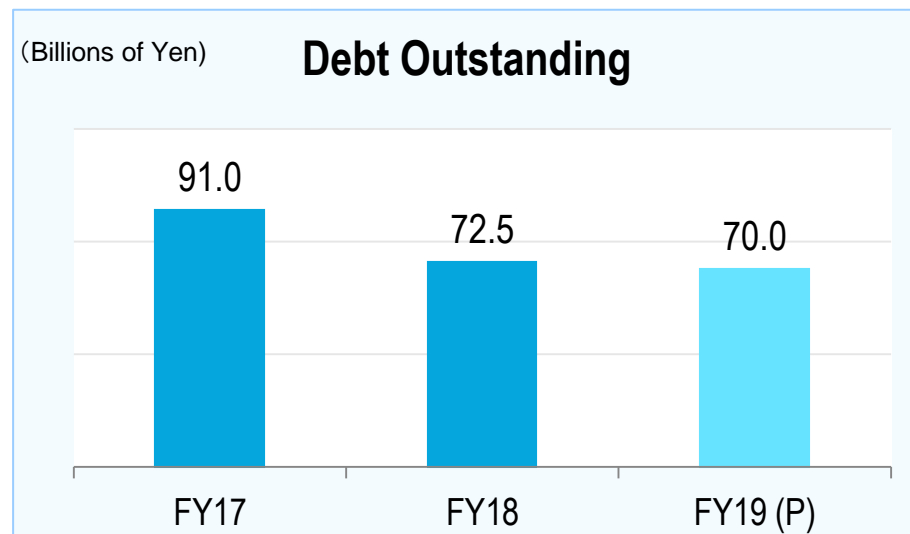
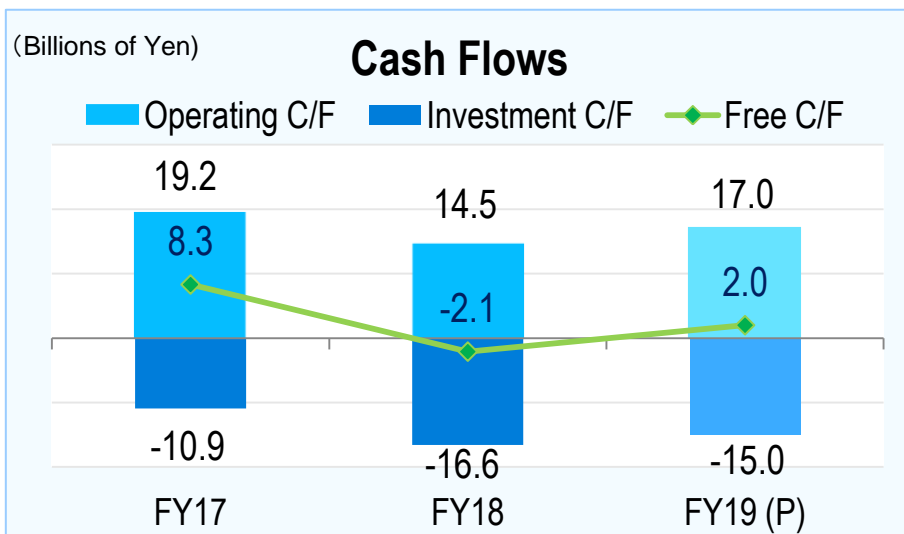
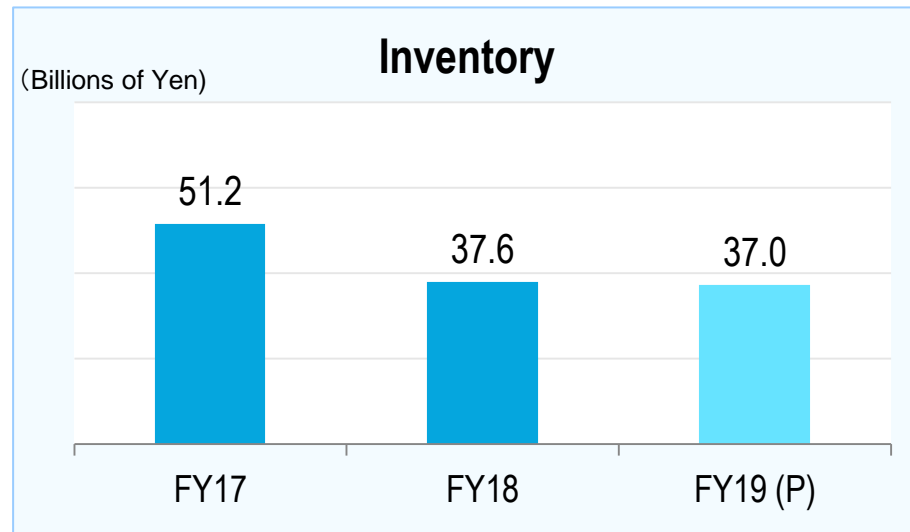
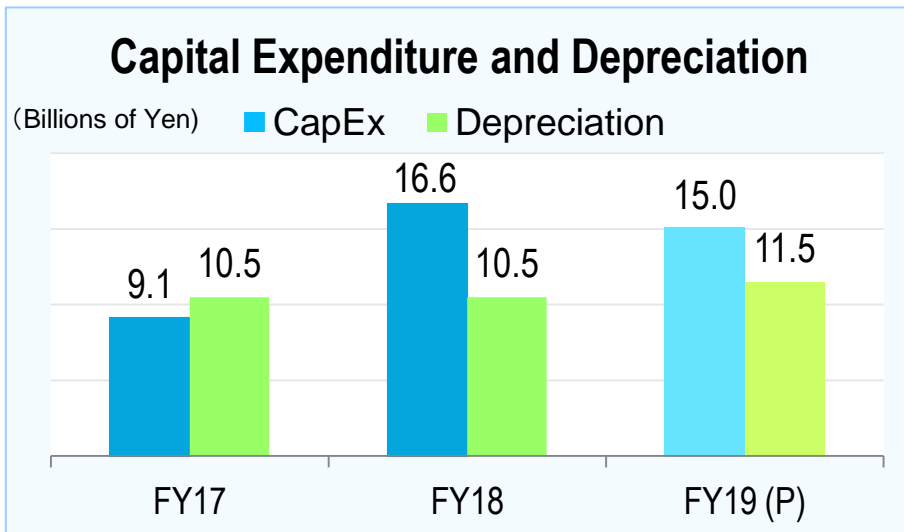
Yearly effect in FY19 compared with FY17

(Billions of Yen)



Full-year restructuring gains for FY19 are expected to be JPY1.5 billion Y on Y.

FY19 Consolidated Financial Targets



- Continue capital investment mainly in AMI for FY19.
- Keep the total inventory level stable, despite an increase at AMI.

Midterm Management Plan 2018

Automotive

- Stricter regulations for fuel efficiency, exhaust emission, and safety
- Greater momentum to shift to EV
- ◆ AMI's favorable performances continued

White Goods

- Huge expansion of inverter-driven air conditioners after inventory adjustment in China
- ◆ Overseas market saw significant sales growth

Industrial

- Growth of machine tools, manufacturing equipment, and servers etc.
- ◆ AMI expanded power IC sales

Power Supply

- Tele-comm. market rebounded
- Sluggish renewable energy market
- ◆ Larger power supply equipment recorded flat sales

Restructuring

- Withdrawal from non-strategic market and improved financial conditions
- ◆ Growth strategy was started

Business Review from FY16 to FY18

FY18	Target	Actual
Sales	JPY 200.0 billion	JPY 175.2 billion
OP Margin	10%	7%

Technology Development	Slow growth of OP margin, due to i) delays in launch of high value-added new products for strategic focus markets and ii) cost improvement of existing products
Production	Unable to fill all the demands for IPMs for white goods due to “mismatched” fabrication process outs of various dies
Inventory	Inventory level remained flat, excluding the impact of inventory disposal from restructuring
Automotive market	Slow start of sales growth for SanKen Japan’s auto products for ADAS and electrification
Renewable Energy Market	Delayed sales growth in Power Systems due to the current sluggish renewable-energy market

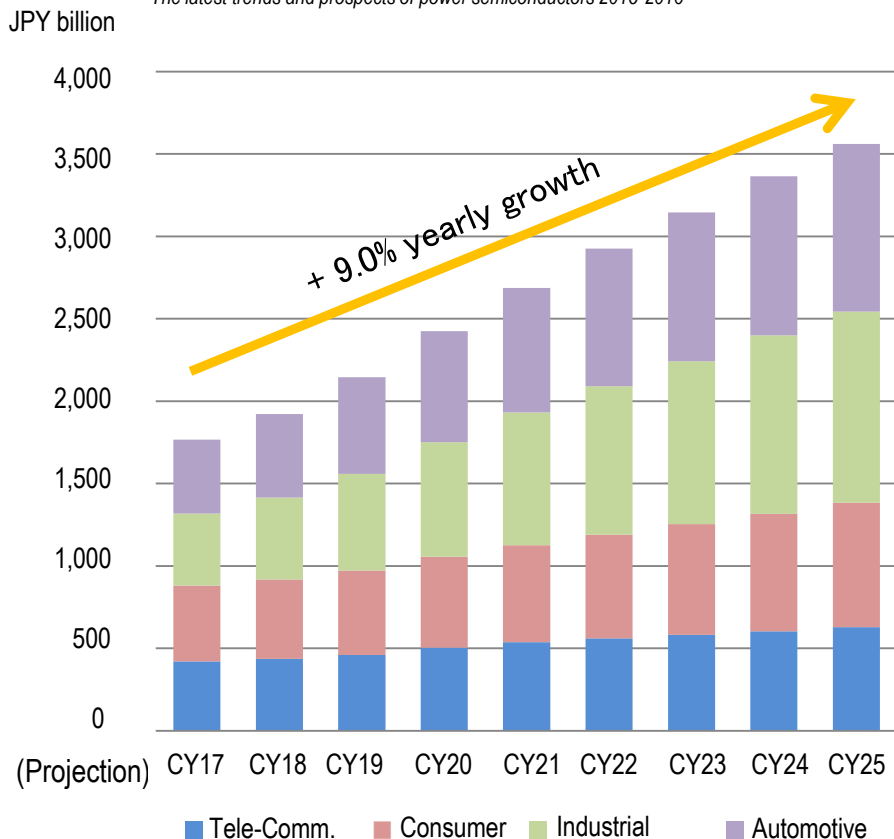
Executed Restructuring in FY18 and Will Work on Growth Strategy



Market Growth Assumptions

Growth Projections for Power IC Market

Courtesy of Yano Research Institute
"The latest trends and prospects of power semiconductors 2015-2016"

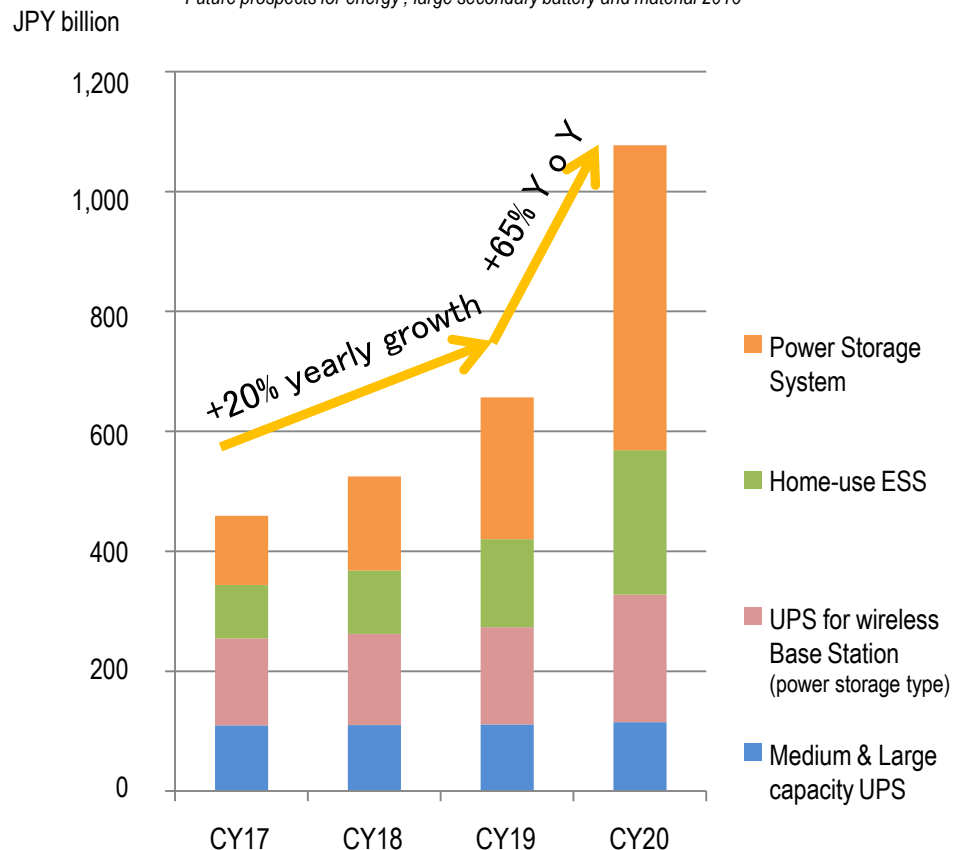


Note: Manufacturer shipment price base, Projection as of January 2016

- Industrial and auto markets lead the demand growth
- Steady growth in consumer market led by white goods

Growth Projections for Renewable Energy Market

Courtesy of Fuji Keizai
"Future prospects for energy, large secondary battery and material 2016"

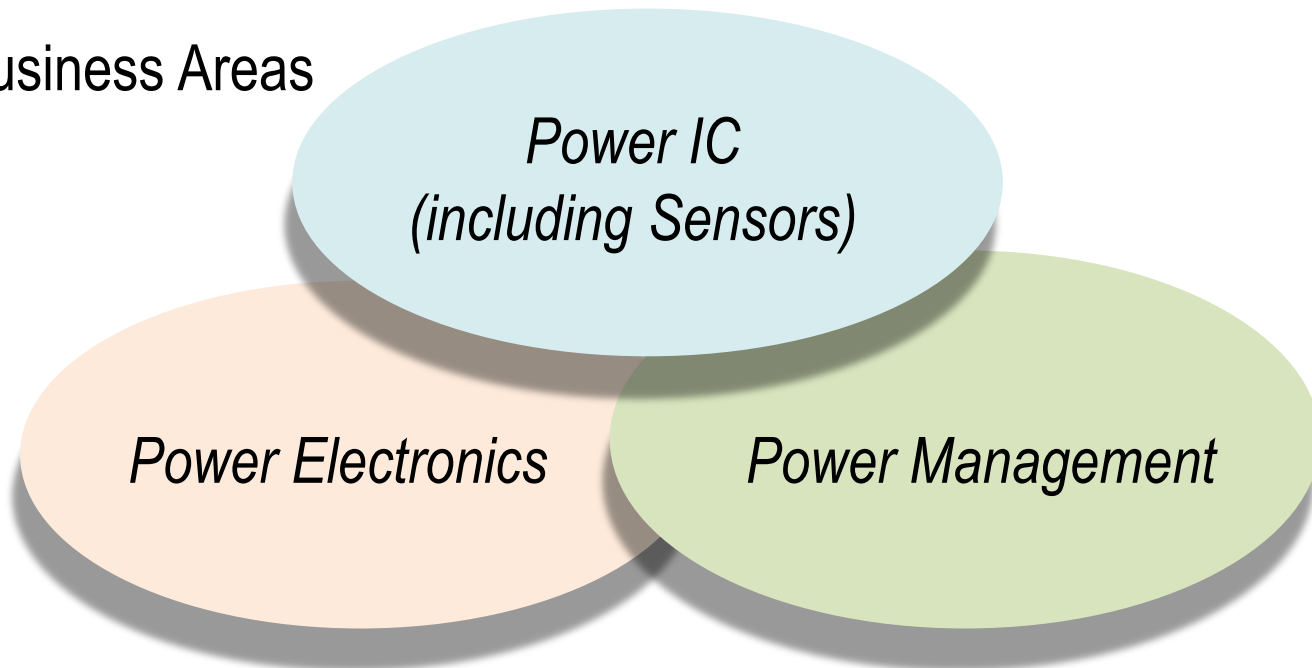


- Expanded use for energy storage systems
 - ◇ Increased demand for solar power in ASEAN nations
 - ◇ Rapid growth in Japan prompted by VPP

• VPP: Virtual Power Plant

To become a highly profitable company through unique set of technologies, and energized output from people and organizations

Business Areas



In 10 years : Sales of JPY 330 billion, OP margin of 15% or more

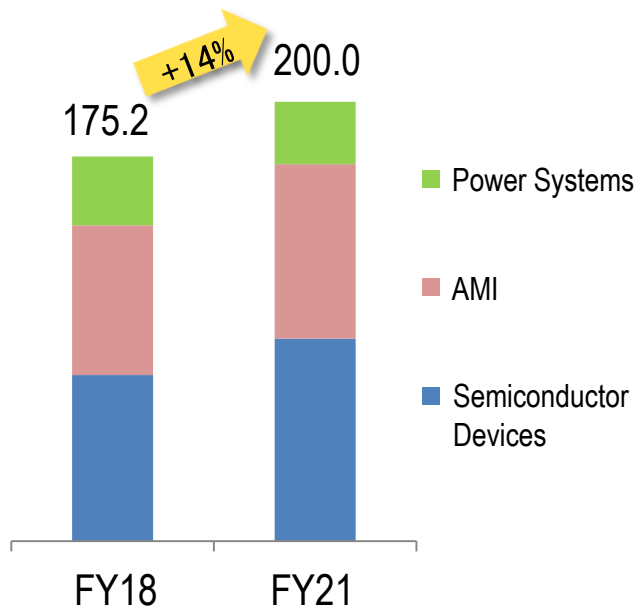


New Midterm Management Plan from FY19

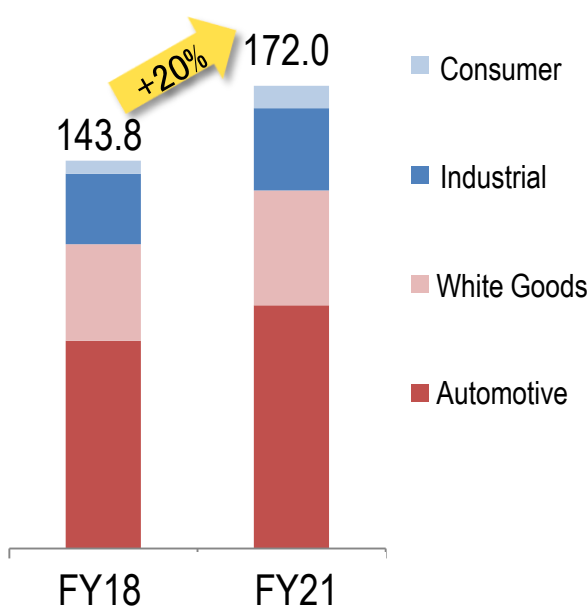
Targets for FY March 21

Sales	JPY 200 billion
OP Margin	10%

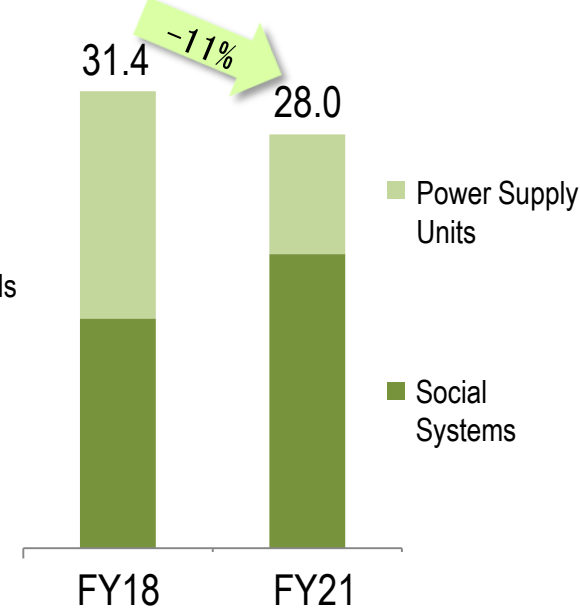
■ Sales (JPY billion)



■ Semi Conductors Sales (JPY billion)

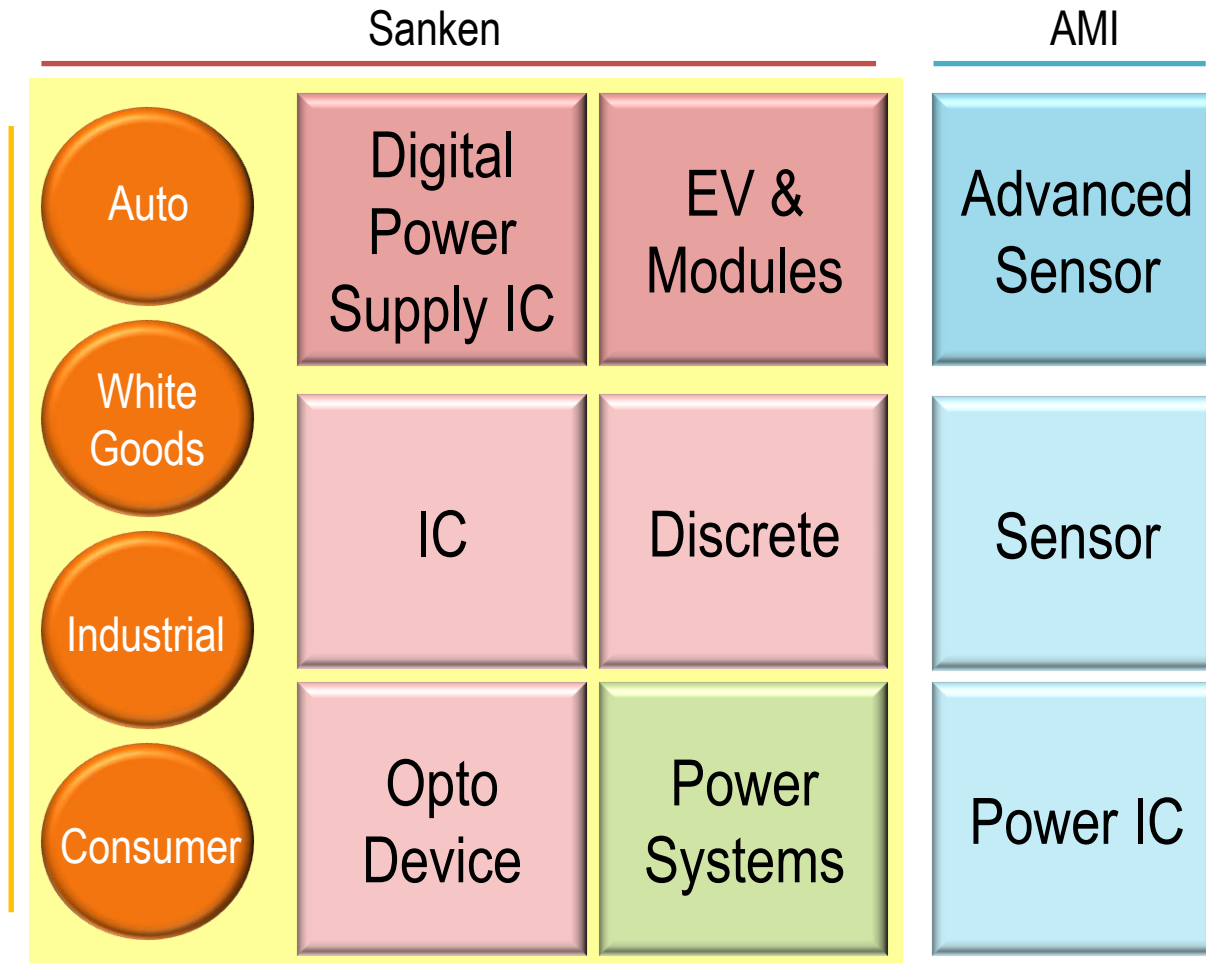


■ Power Systems Sales (JPY billion)



Execution of Growth Strategy

- Focus on growth drivers such as digital power supply IC, EV & modules, and advanced sensors
- Clarify management system by business and market for SanKen



Market-by-market oversight and control by designated senior management member

AMI Accelerate Its Growth Strategy

Automotive

- XEV's : Electric motor, power management
- ADAS : EPS, power management, electric motor
- IC vehicle : Transmission, camshaft, ABS

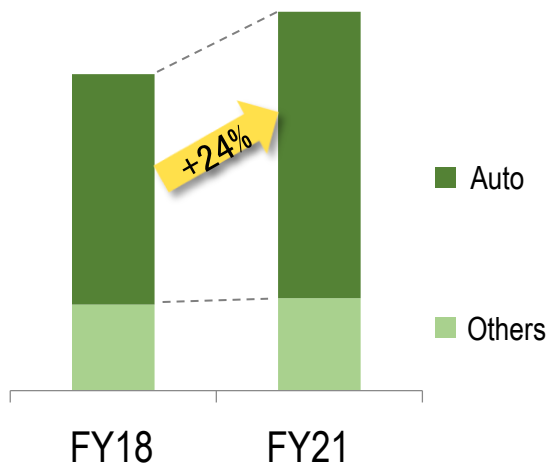
Industrial, Consumer

- Server : Fan motor

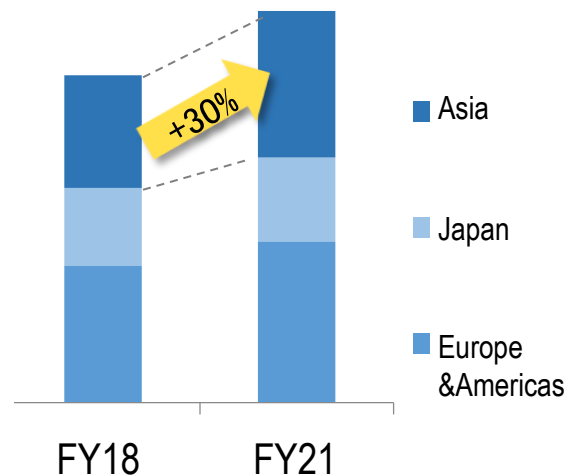
Product

- Speed sensor, current sensor, linear sensor, BLDC motor driver IC

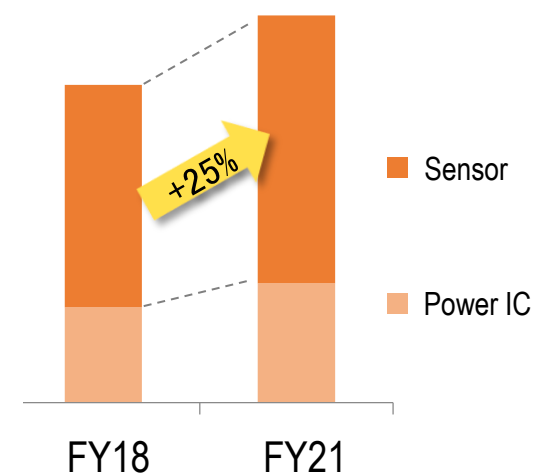
■ MTP Sales target by Application



■ MTP Sales target by Region



■ MTP Sales target by Product

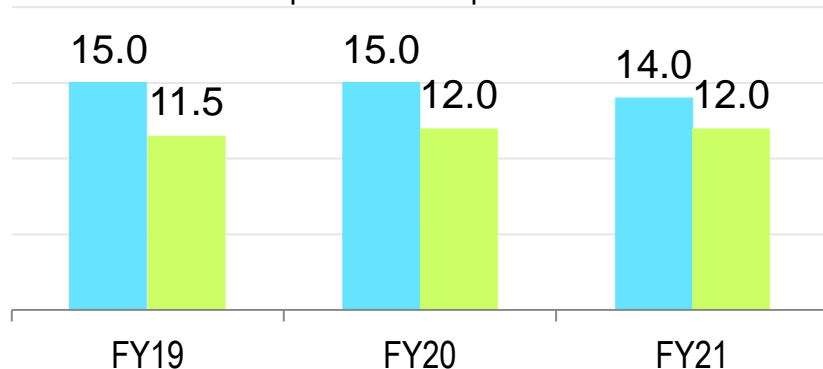


Building Stronger Financial Position FY19 to FY21

Capital Expenditure and Depreciation

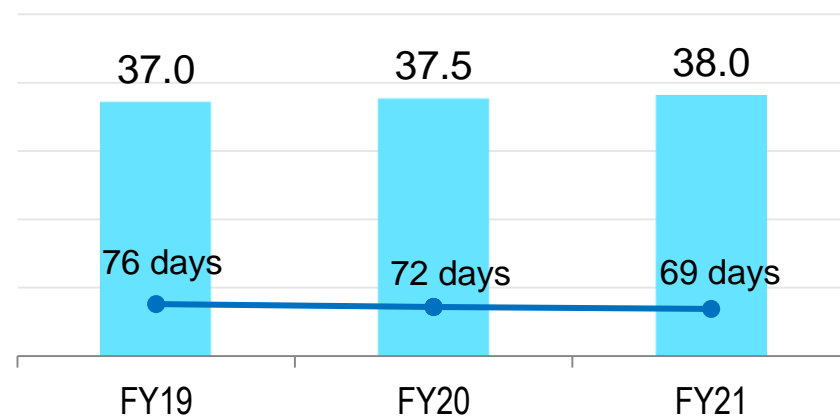
(Billions of Yen)

■ CapEx ■ Depreciation



Inventory & turnover period

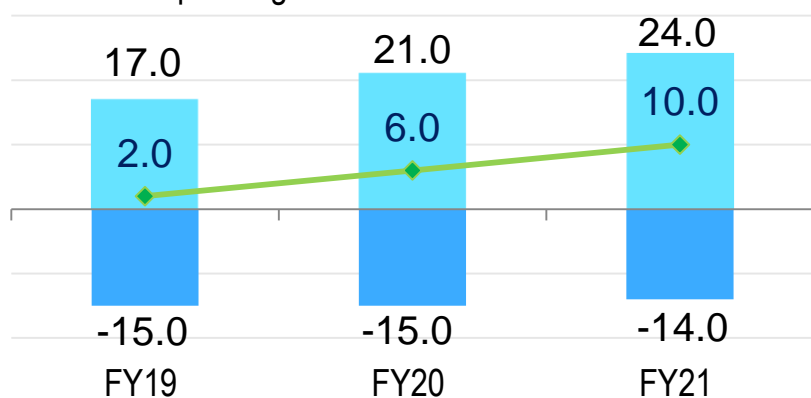
(Billions of Yen)



Cash Flows

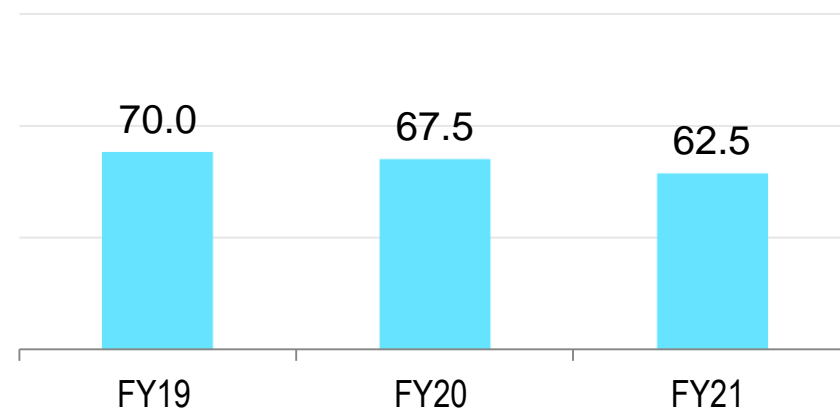
(Billions of Yen)

■ Operating C/F ■ Investment C/F ◆ Free C/F



Debt Outstanding

(Billions of Yen)



■ CapEx

SanKen : Capacity expansion for new and existing products, better and efficient equipment, factory automation

AMI : Relocation of AMI's development organizations, expansion of assembly and test, 8" productivity improvement



Tighter Control of Inventory

Management

SCM Management

- : Reformulate supply chain from procurement, production through inventory to align with long-term strategy
- : Start to evaluate divisions by turnover period, benchmarking industry's leading companies

Technology Development

Technology Development

- : Establish the concept of "SPP", for standardized and unified design process

Sales

EOL Control

- : Take better control of EOL actions with customers and trading companies

Production Plan

Production Organization

- : Stick to production based on PO's and maximize the use of "die-bank" operation
- : New organization to integrate production planning and procurement operations

Manufacturing

Production Innovation

- : Intensify efforts to shorten production cycle time

IT System

Infrastructure

- : Maximize the use of advantages of ERP system

*SPP : SanKen Power-electronics Platform

Semi Devices Business Strategy

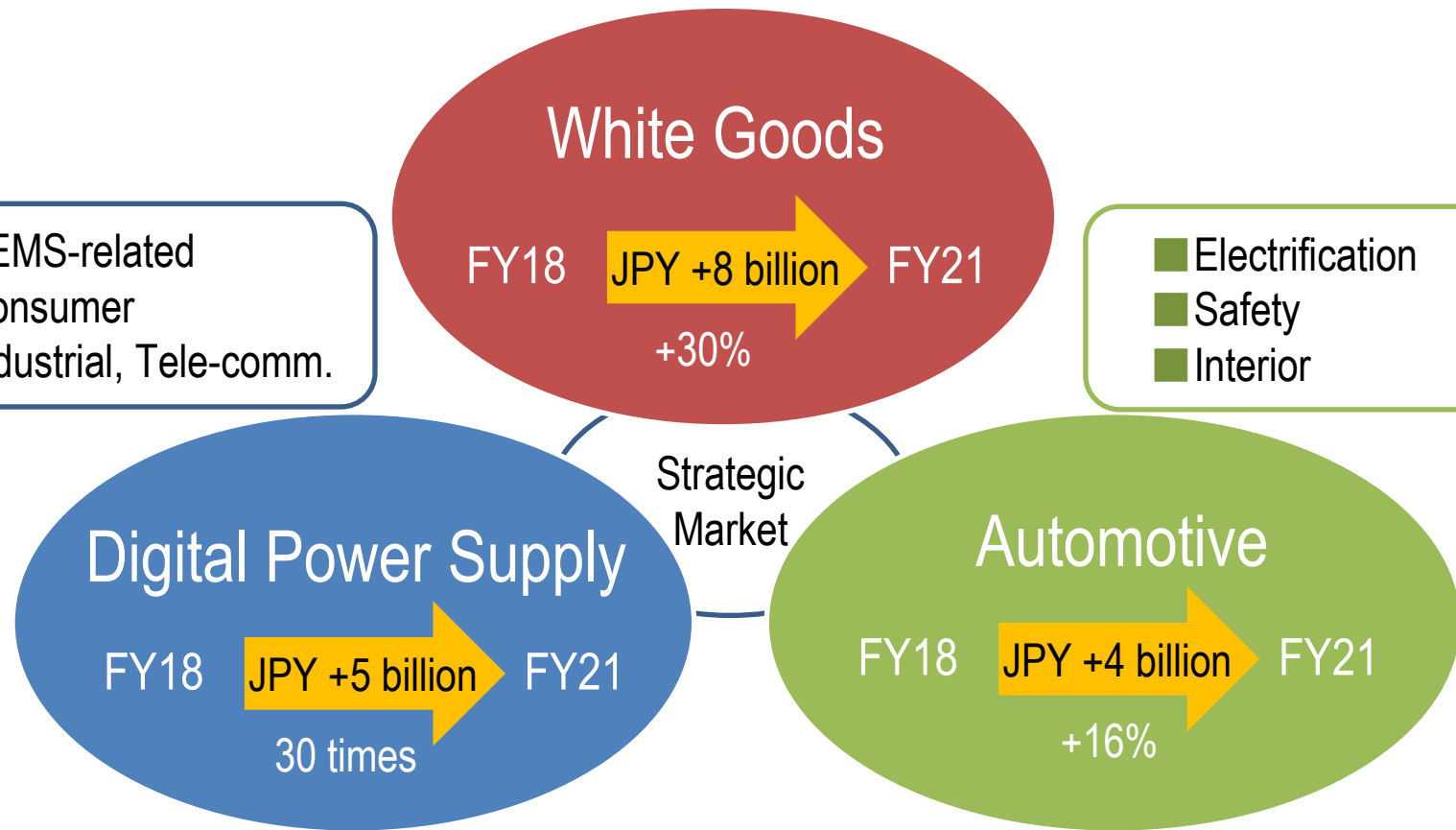


Strategic Market for Sanken Semi Business

- Air conditioner
- Washer, Refrigerator
- Small home appliances

- BEMS-related
- Consumer
- Industrial, Tele-comm.

- Electrification
- Safety
- Interior

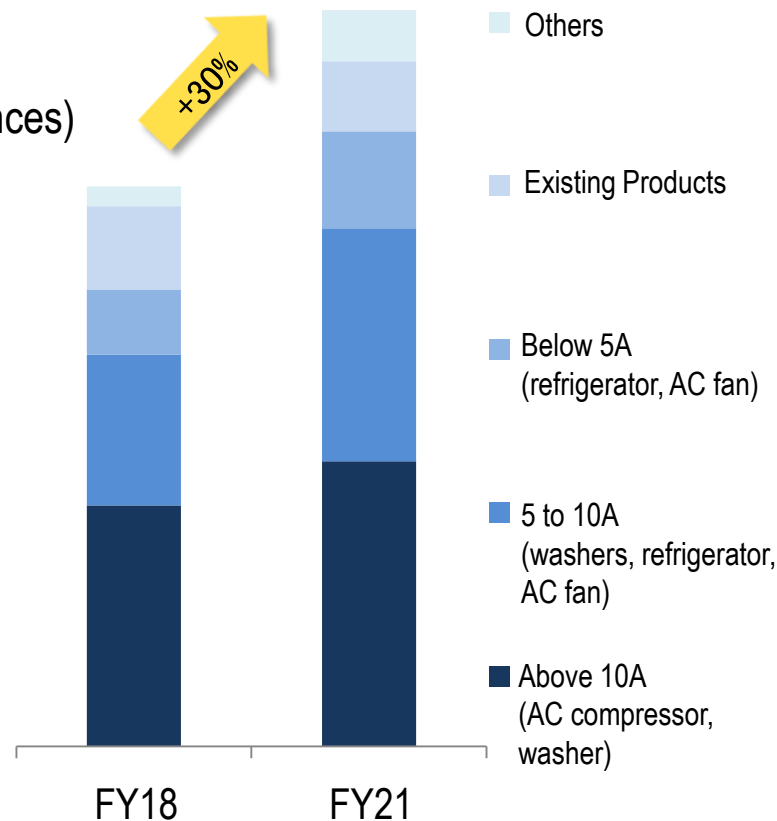
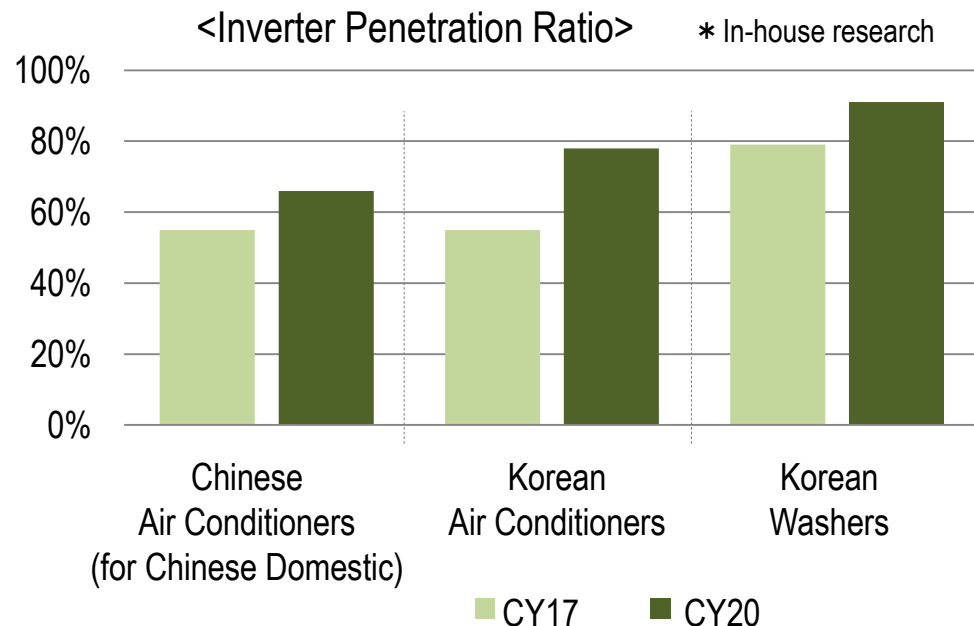


* BEMS: Building Energy Management System

White Goods: IPM Business

Respond to accelerated penetration of inverter-driven or DC motor installed appliances:
IPM sales in 3 years to increase by 30%

- Air Conditioner : compressor & fan motor
- Washer : main motor
- Refrigerator : compressor motor
- Small appliances : low-voltage motor (cordless appliances)

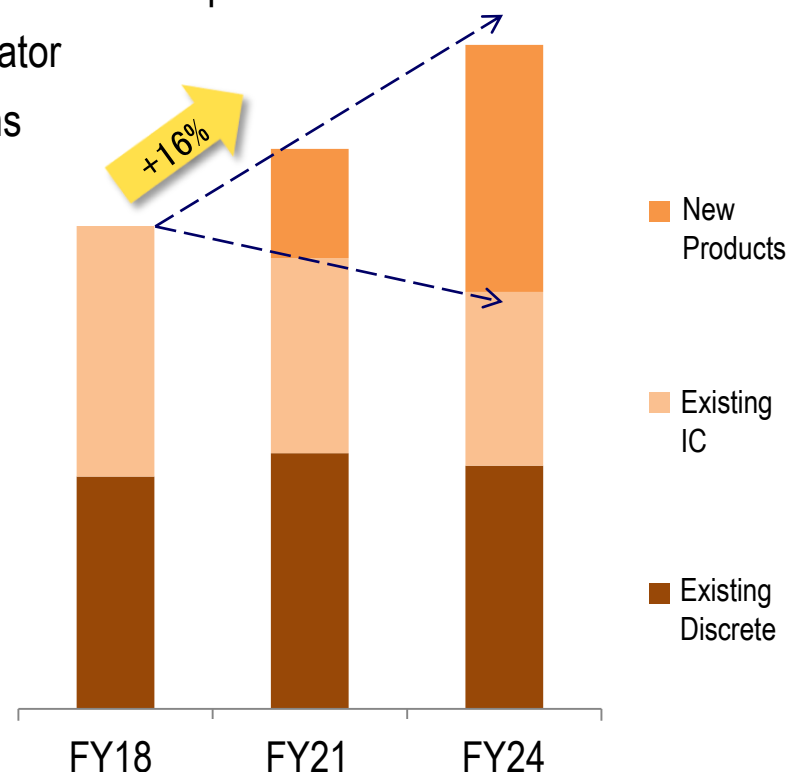
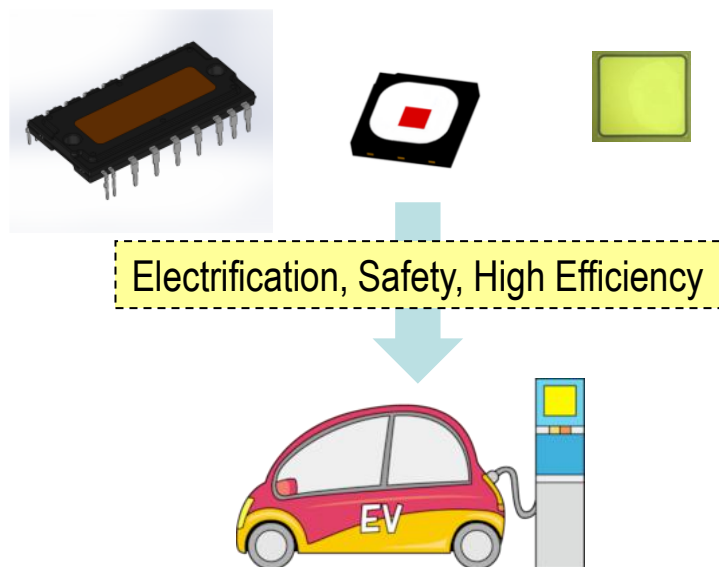


* IPM: Intelligent Power Module

Electrification, Safety, High Efficiency : Sales increase by JPY 4 billion in 3 years
Now focusing on new products to be released in FY22 or later

<Major New Products>

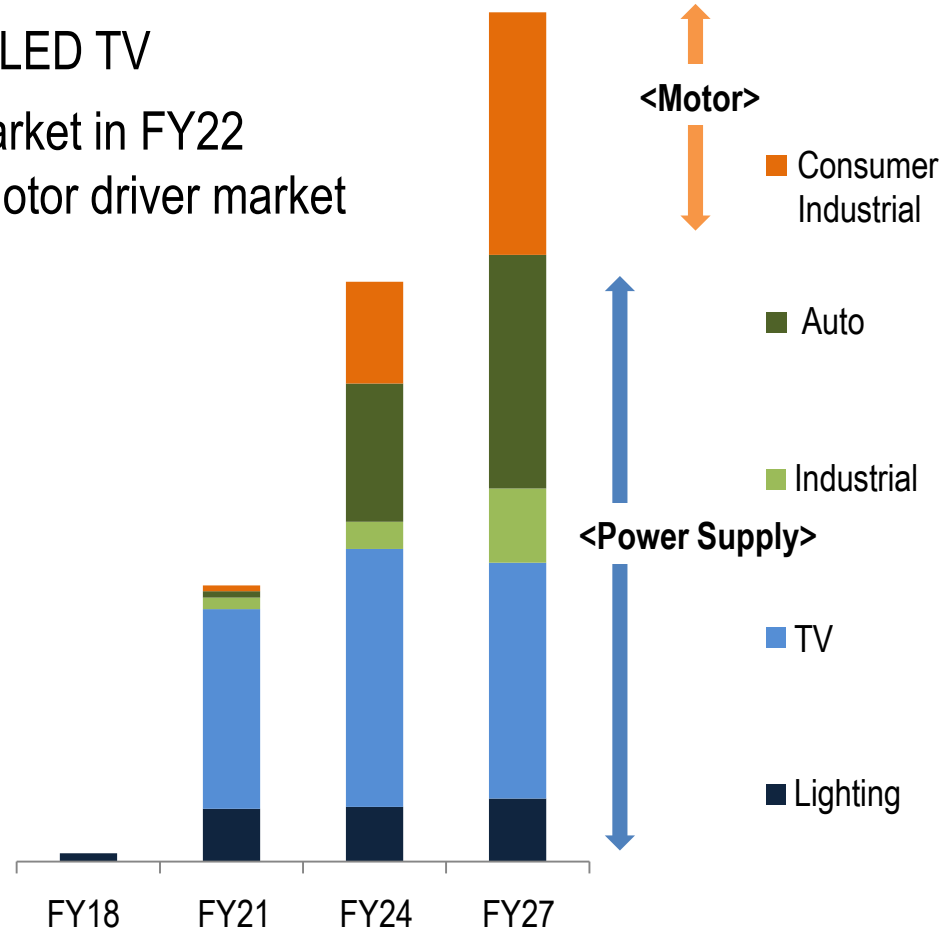
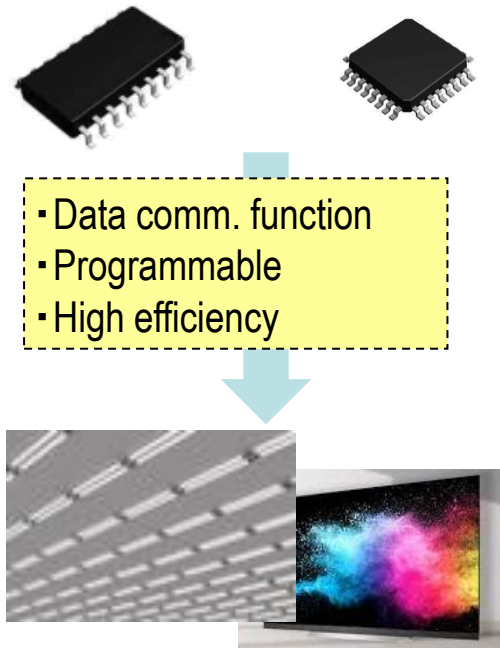
- Electrification : Module products for auxiliary motors and battery
- Safety Related : Sales growth of bare die and surface mount products for EPS
- Improve Efficiency : High efficiency diodes for alternator
- Car Interior : Chip LED for interior applications





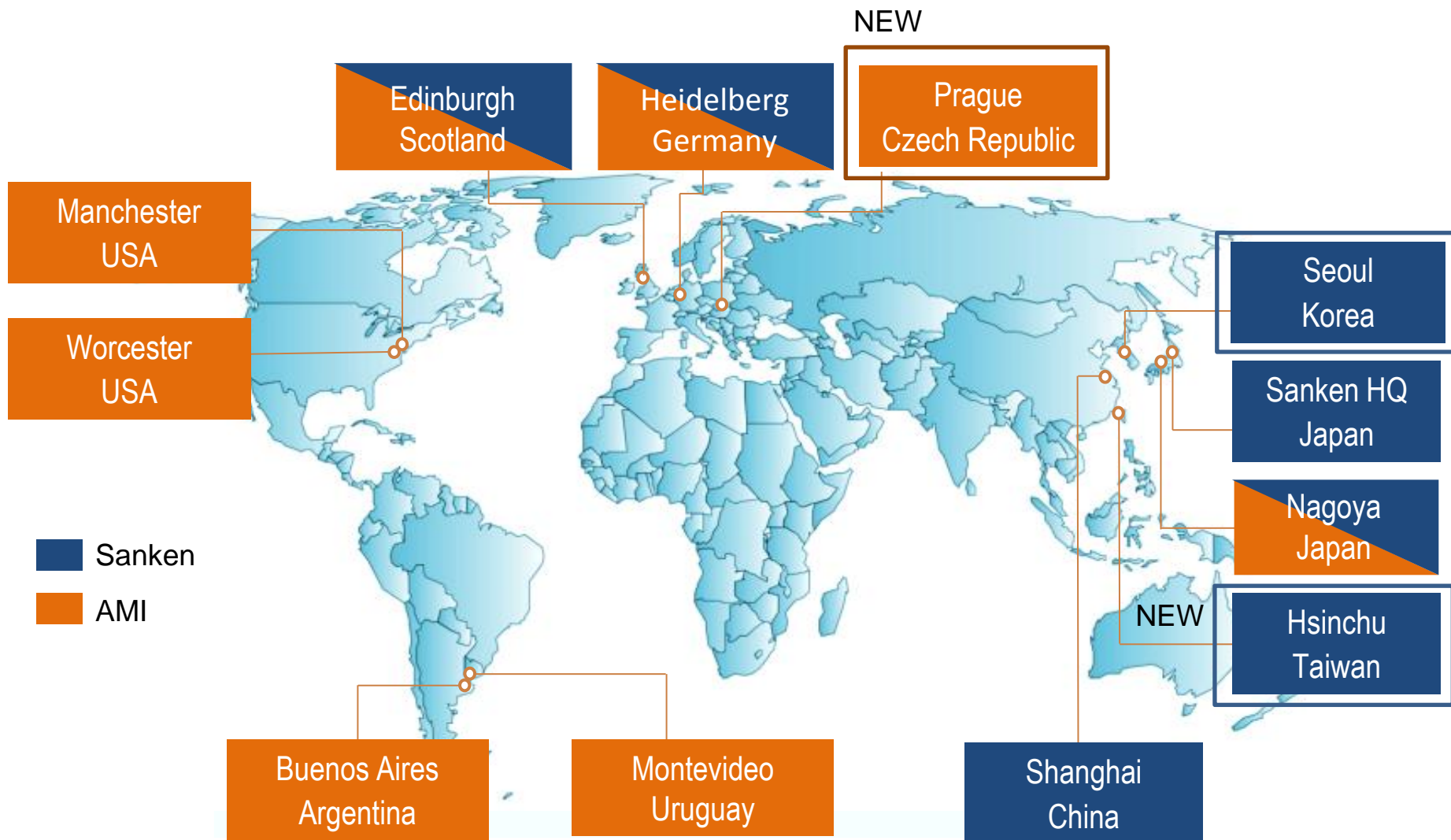
: Sales boosted by JPY 5 billion in 3 years

- Sales start from LED Lighting applications, followed by JPY 5 billion sales gain from OLED TV
- Additional JPY 5 billion by entering auto market in FY22
Another JPY 5 billion by entering electric motor driver market





Expand R&D Base to Strengthen Development



Reforms in design and operational processes
by use of common development concept

Semi Devices

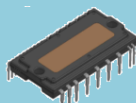
Focus on platform

IT-enhanced simulation and virtual technology

Extra-thin
back-ground
wafers



Power Module



Power Systems

Focus on modular design

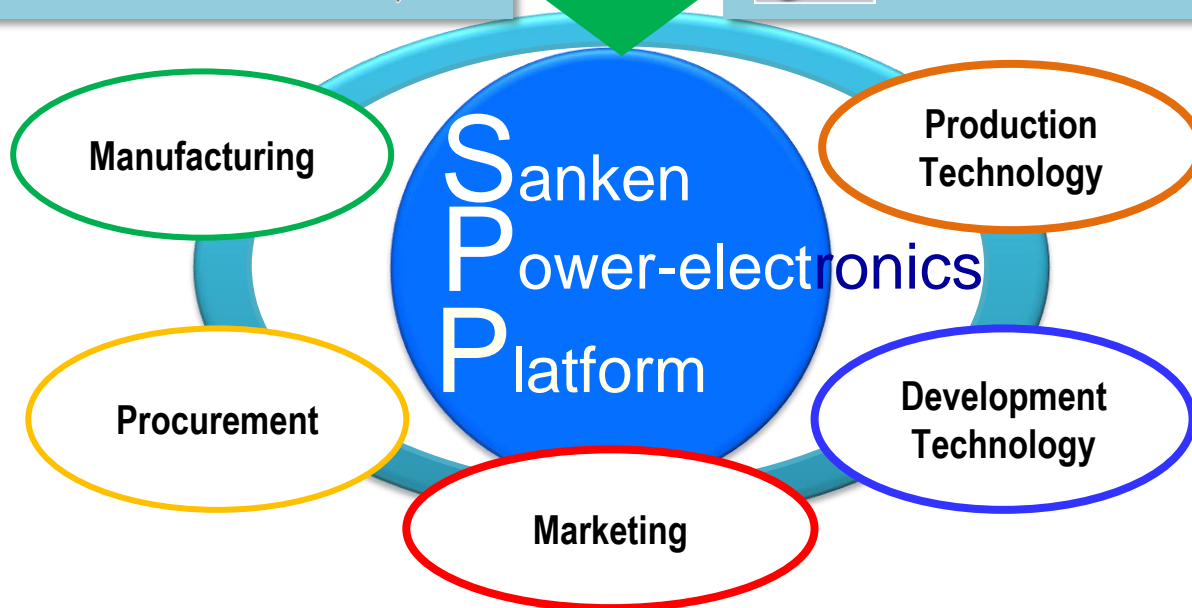
Concurrent engineering



10~50kVA UPS

Exterior design unification

10kVA Unit

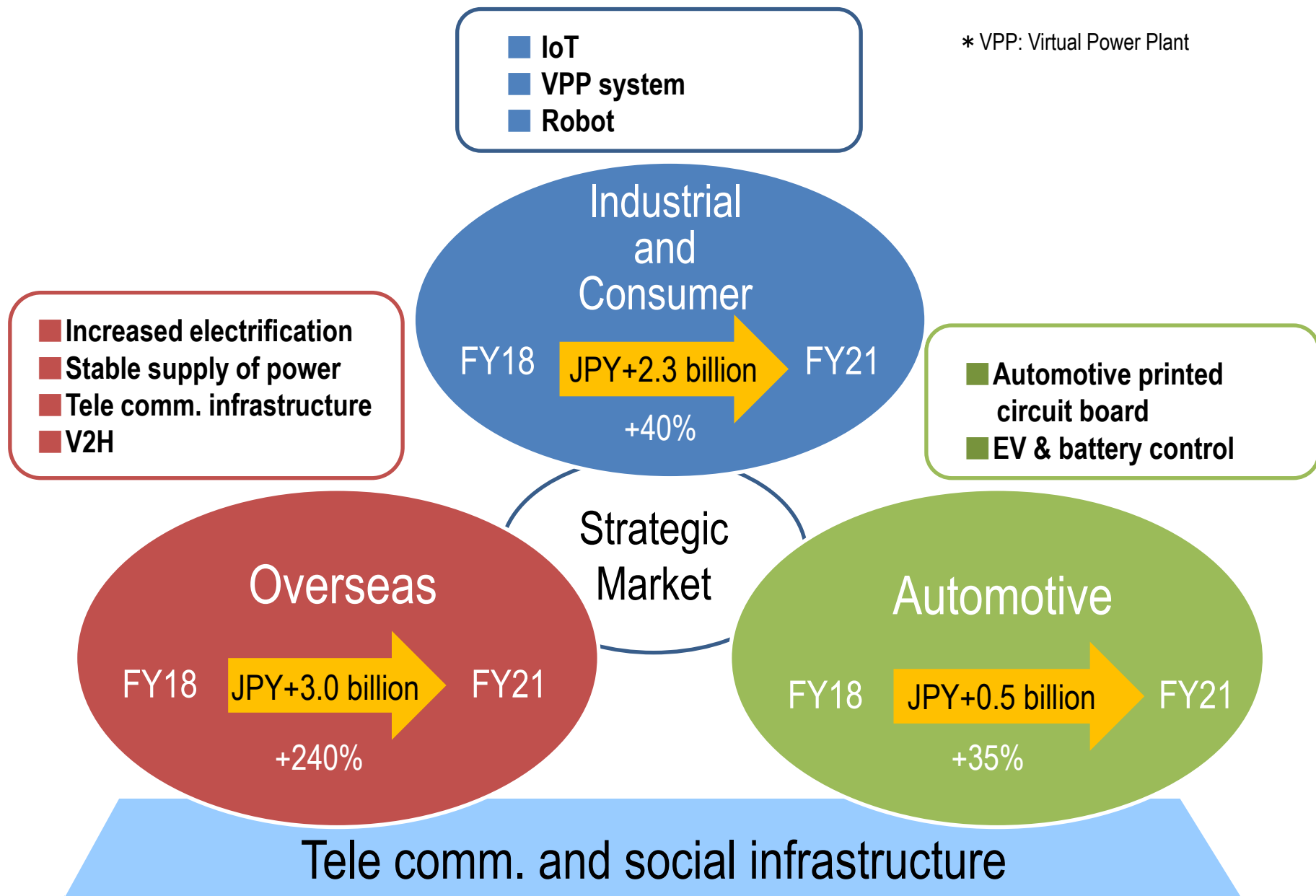


Power Systems Business Strategy

Power Systems: Focus on Growth Market

- IoT
- VPP system
- Robot

* VPP: Virtual Power Plant

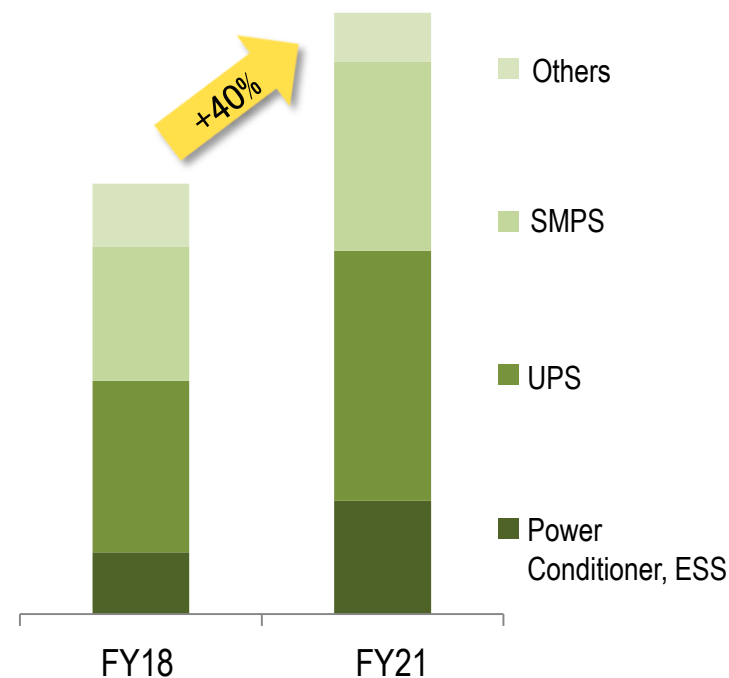
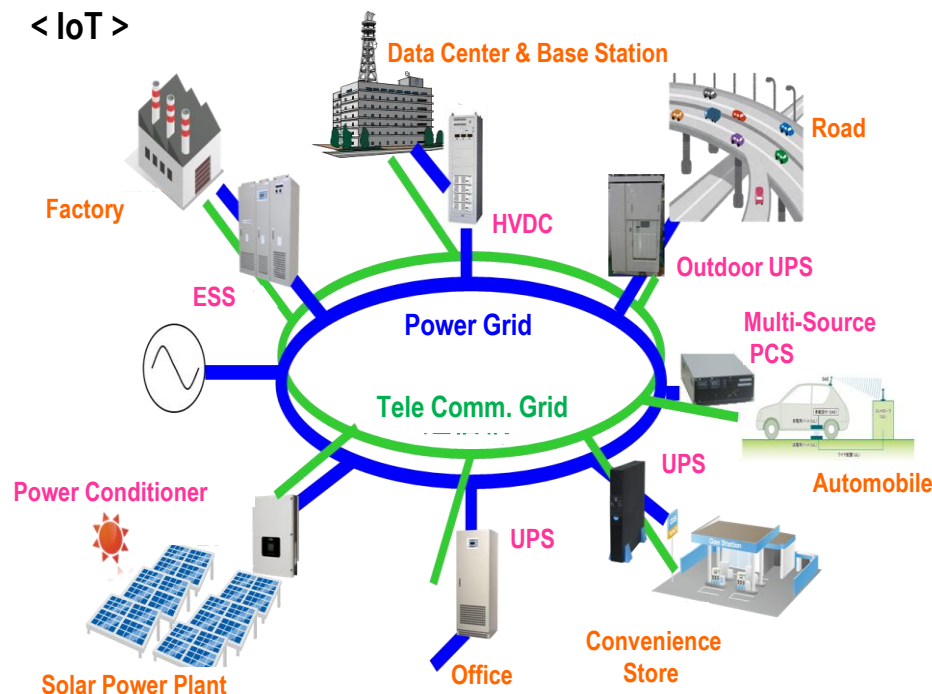




Sales growth by JPY 2.3 billion in 3 years

- IoT : With wider use of decentralized, smaller power supply units, resources are mobilized to sell more of all-weather outdoor UPS
- VPP : Provide ESS for liberalized electricity market
- Industrial : Marketing efforts to sell more of compact and highly efficient SMPS to industrial market such as robots
- Services : Expansion of services such as periodic maintenance and constant monitoring of equipment sold

< IoT >

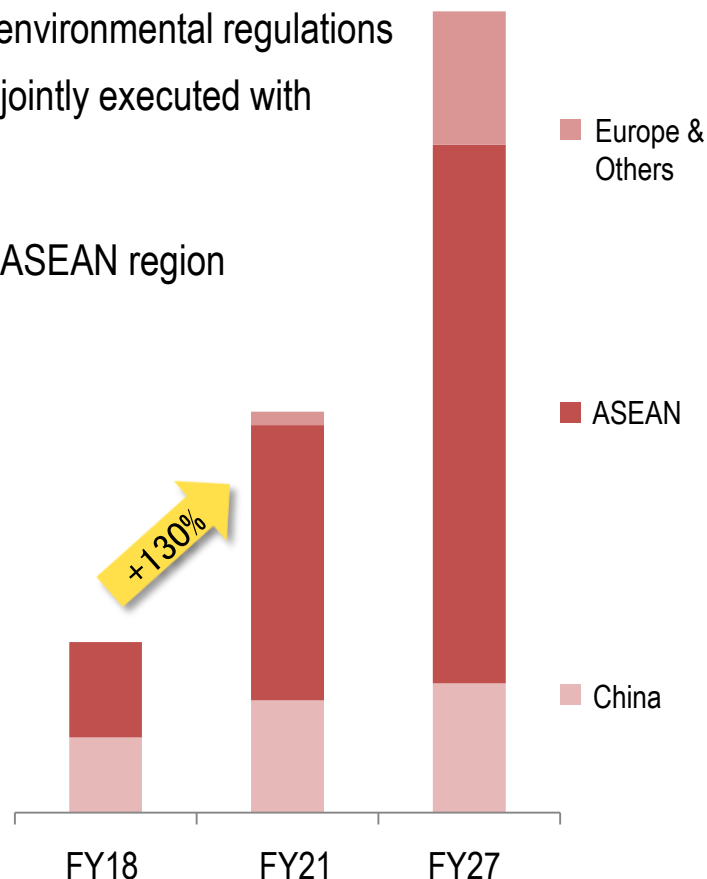


Overseas expansion : Sales increase by JPY 3.5 billion in 3 years

- ASEAN : Satisfy needs of increased electrification & stable supply of electric power
Sales expansion for telecommunication infrastructure
- China : VVVF inverter sales growth in China to meet stricter environmental regulations
- Europe : Expansion of V2H integrated energy storage system jointly executed with partner companies
- Automotive : Expand automotive printed circuit board business in ASEAN region



Forming alliances with Indonesian companies to sell PCS, ESS and UPS



■ Differentiated technology : Flywheel energy storage system

1. Long product life even in hot and humid environments
2. Unlimited number of charge and discharge

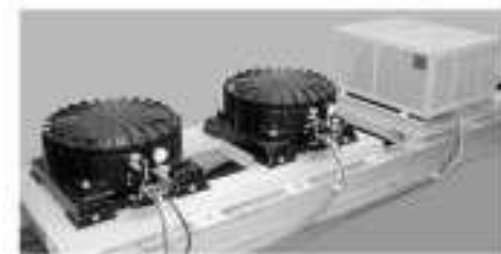
■ Train station platform door

Real-world test at
JR Urawa station in FY18



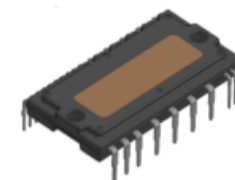
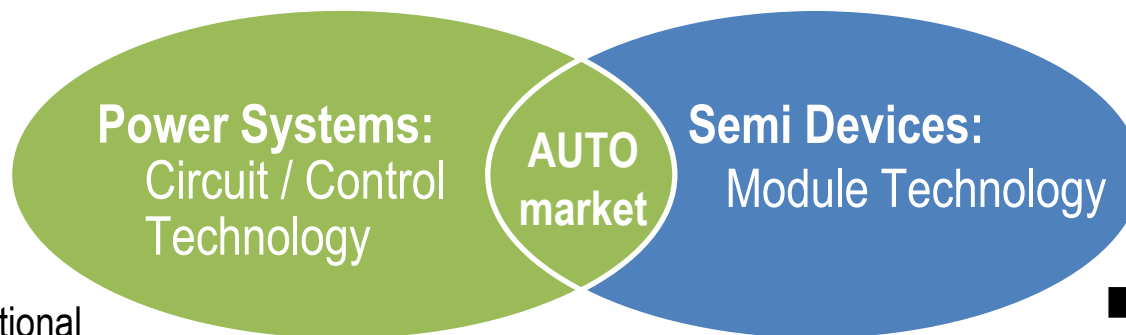
■ Wind-power generation

Power stabilization system for wind power generation in remote islands



Expected Life: 20 years or more (battery life: usually 4 to 5 years)

■ Synergy with Semi Devices technology: expansion of automotive opportunities



■ Insulated Bi-Directional DC / DC Converter for V2H

- ◆ Miniaturization and weight saving for DC / DC Converter
- ◆ Inverter module for large capacity motor
- ◆ Wireless power supply

■ Insulated Bi-directional DC / DC Module for EV and HEV

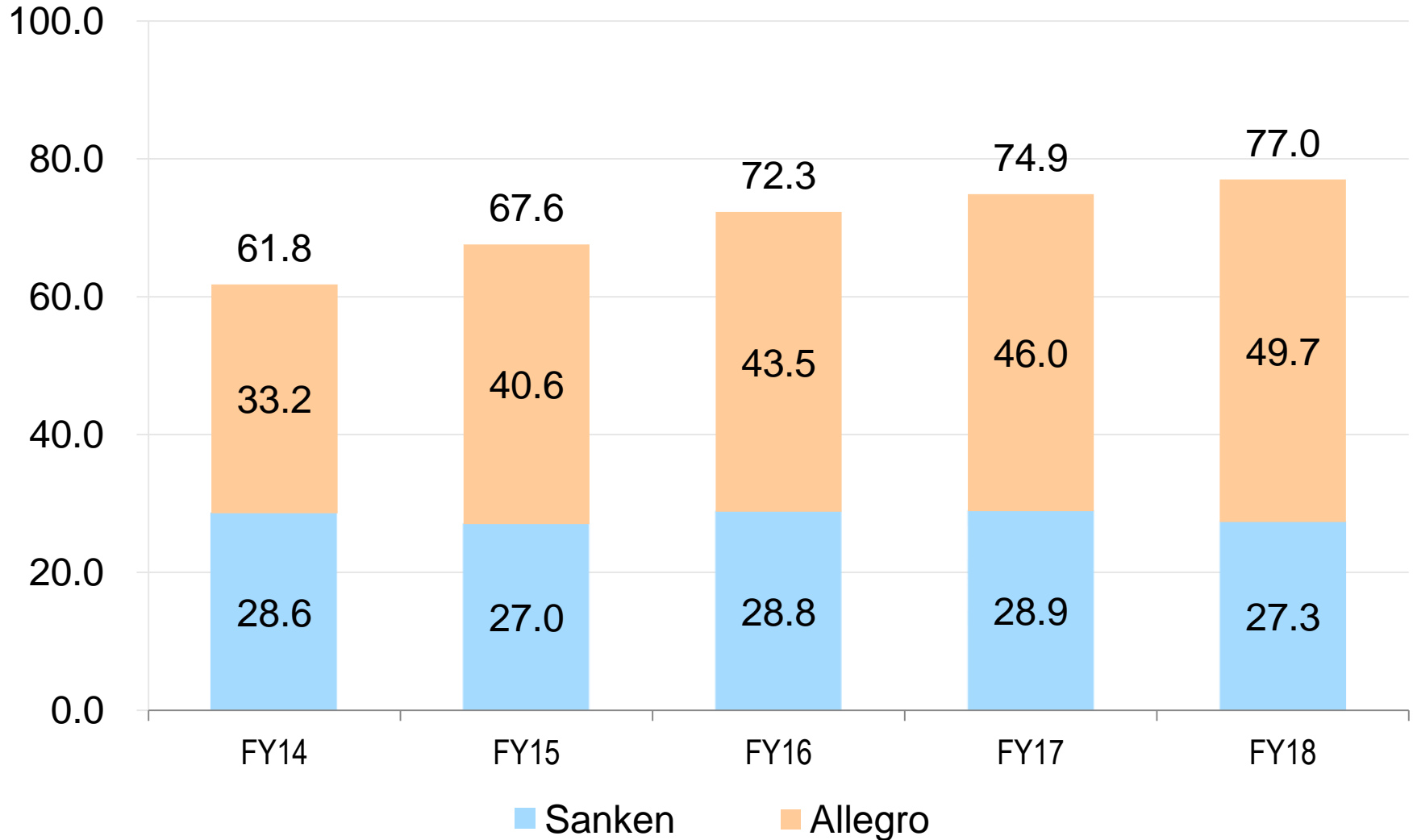




Sales of Automotive Products

(JPY Billion)

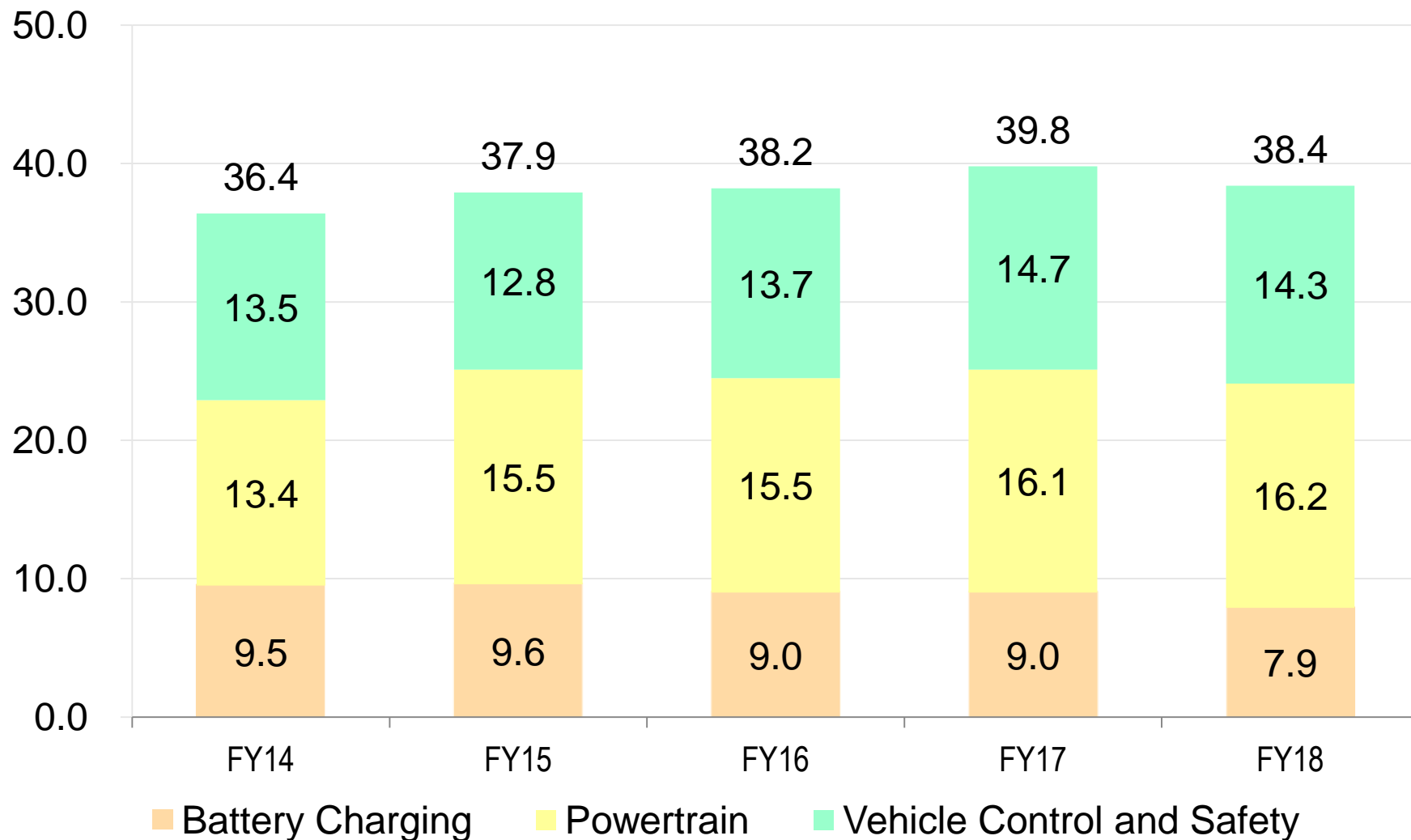
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Sales of Automotive Products by application

(JPY Billion)

< SanKen Non-consolidated >

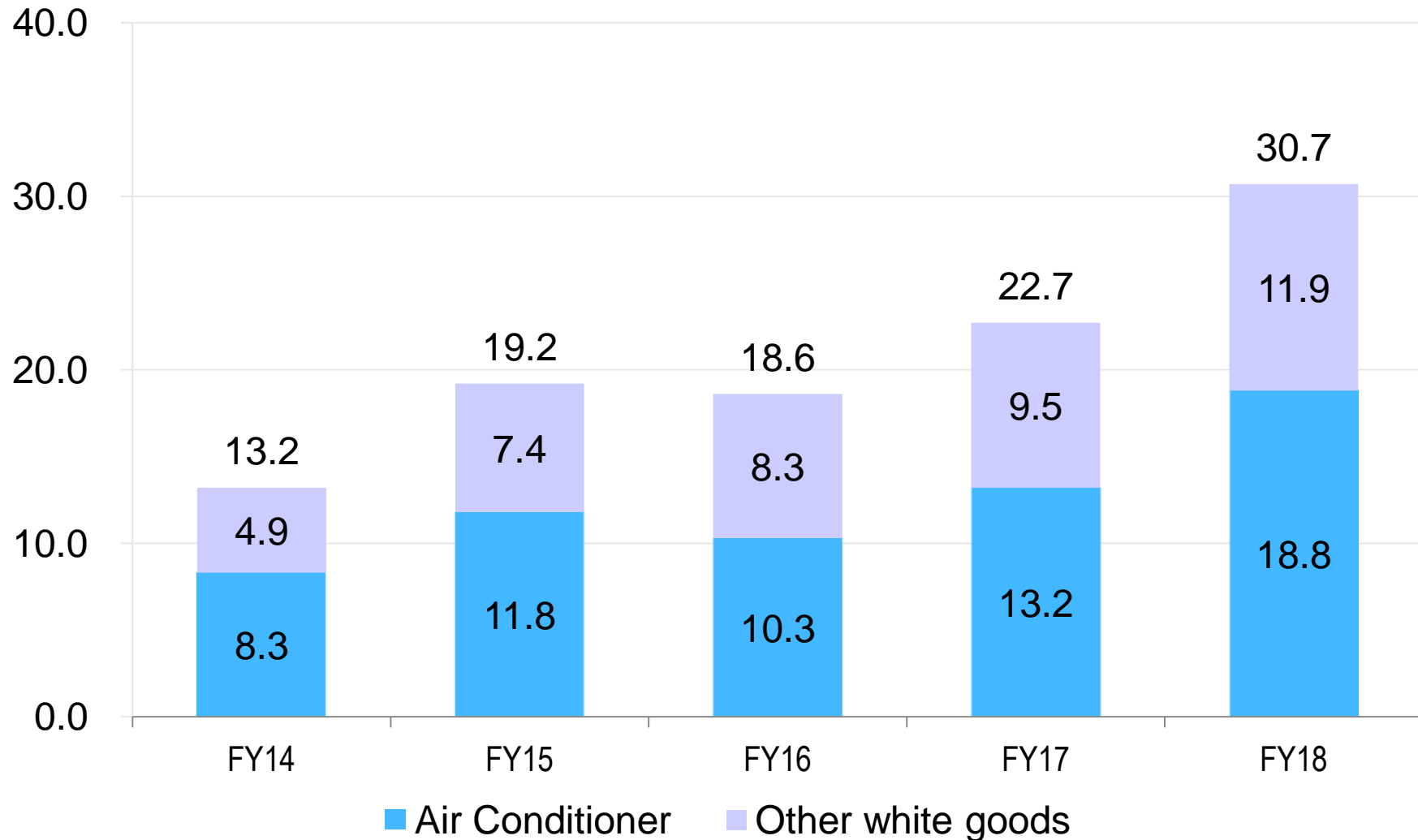




Sales for White Goods

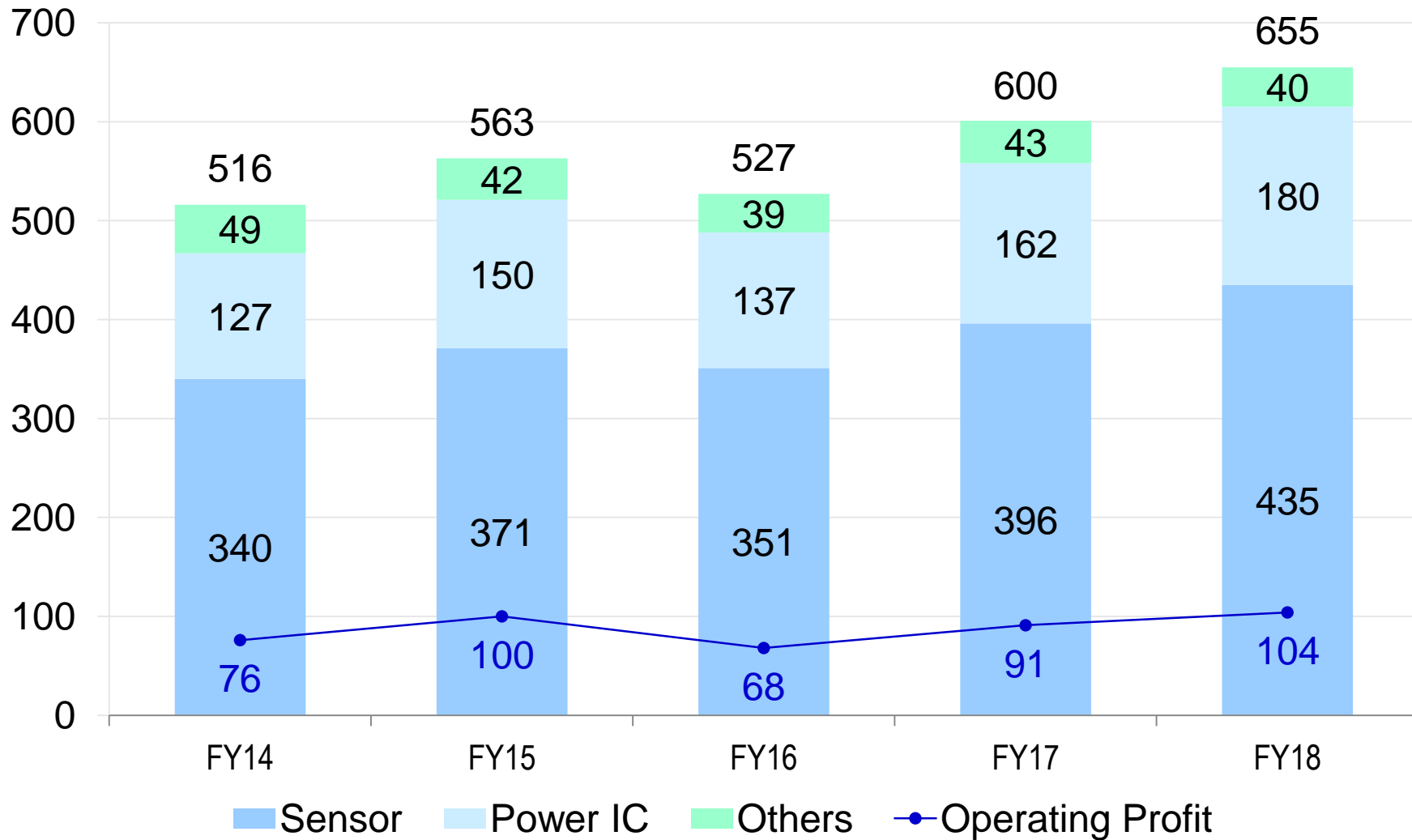
(JPY Billion)

<Sanken Non-consolidated>



Performance of Allegro MicroSystems, LLC

(\$ million)



Notice on Forward-looking Statement

This presentation contains forward-looking statements with respect to the Company's and its group affiliates' future results, plans and policies, strategies, performance goals and scheduled targets, and the management's views and judgments that are not yet firmly established facts. These forward-looking statements are formed based on the currently available information and assumptions deemed reasonable at present, and conditional upon known and unknown risks, uncertainties and many other factors. These risks, uncertainties and many other factors could cause actual results to be materially different from any future results that may be expressed or implied by such forward-looking statements. The Company does not undertake any obligation to update or revise any forward-looking statements, including, but not limited to, revisions of financial result forecast, unless the Company is enforced to do so by the provisions of applicable laws and regulations.

The electronics industry to which the Company belongs is constantly exposed to rapid changes in business environment and the Company's business performance and financial conditions are subjected to risks, uncertainties and other factors, which include, but not limited to, (i) macroeconomic environment, market demand and supply situations, and competitive conditions, (ii) fluctuations in the exchange rates, (iii) success or failure to catch up with technological innovation, (iv) rising prices and availability constraints of parts, supplies and materials, (v) changes in legal framework of various nations and political sub-divisions or sudden changes of social circumstances, and (vi) any other contingencies.