

Power Electronics Systems Energy Business Strategies

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■ Business Overview

■ FY2020 Management Plan

- Business Policies
- Market Outlook
- Business Plan
- Priority Measures
- Capital Investment / Research and Development

Power Electronics Systems Energy Contribute to stabilization, optimization, and reliable supply of power

Energy Management



Grid connection and distribution control WHM Power, railroad, and general industry substation equipment Industrial power supply equipment

Power Supply and Facility Systems



Factory equipment Data centers Public infrastructure Securities / financial systems

Engineering / Services



Control equipment



Information solutions

IoT
EMS
O&M

Power electronics



Substation / control equipment

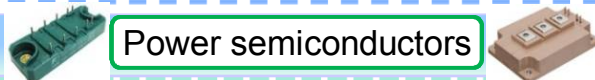
ED&C components



Measuring equipment






























Power semiconductors



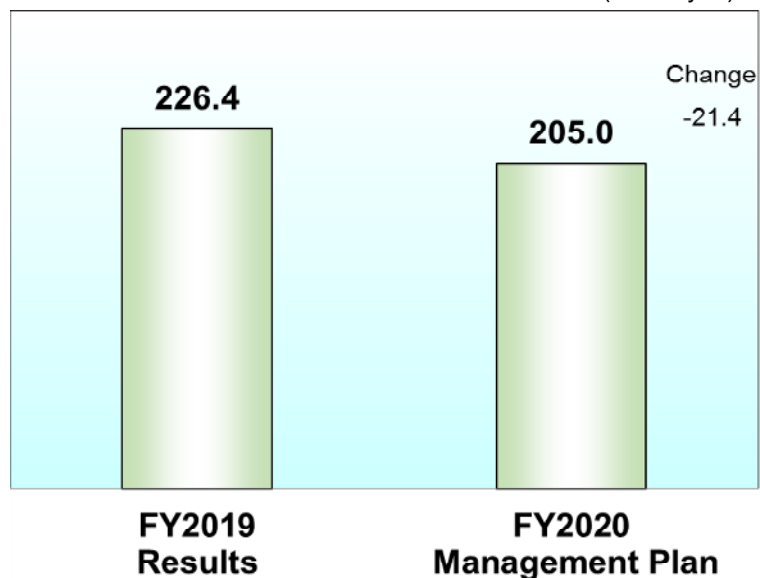
Sensors



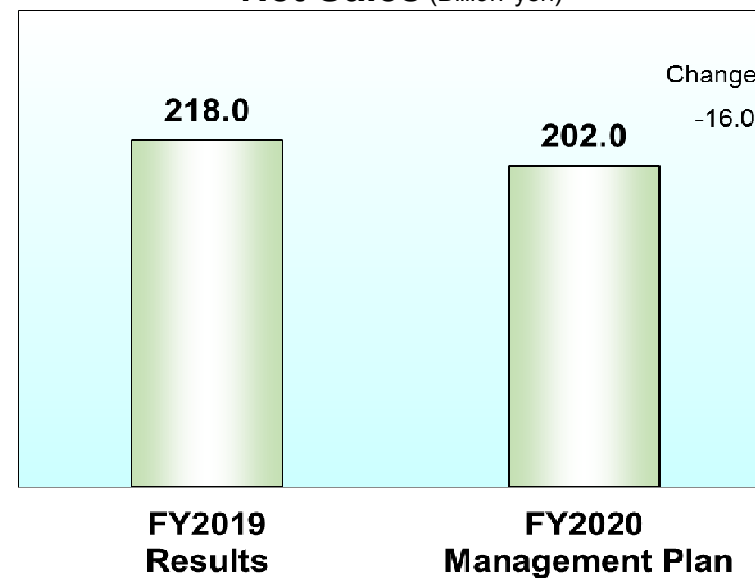
Market Outlook

	Field	Japan / Overseas	YoY		Market Outlook (FY2020)
			1H	2H	
Energy management 	Power	Japan			Only bare minimum necessary capital investments conducted
		Overseas			Upward trend in power distribution system investment in Southeast Asia and India due to growing power demand in these markets
	Industrial	Japan			Reevaluation and massive reduction of capital investment amounts
		Overseas			Delays in execution of large-scale projects and reduction of capital investment amounts as capital investments are reevaluated in FY2021 and subsequent fiscal years
	Railway	Japan			Massive reduction in railway earnings due to COVID-19 pandemic Strong investment for replacing aged facilities
		Overseas			Progress in railway development plans centered on Asian emerging countries, investment execution projected for FY2021 or later
Power supply and facility systems 	Power supply and facility systems	Japan			Brisk investment in large-scale internet data center construction by European and U.S. operators Ongoing investment in replacing aged facilities
		Overseas			Expansion of internet data center construction plans from Singapore to surrounding countries Signs of recovery from currently curtailed semiconductor investment
	Facility electrical equipment	Japan			Recovery in semiconductor field despite continually limited general industry investment Strong investment for replacing aged facilities
		Overseas			Ongoing curtailment of investment in response to COVID-19 pandemic (2H) Market recovery in Southeast Asia
ED&C components 	Japan			Reduced demand among major machinery and switchboard manufacturing customer (2H) Significant recovery in demand among major customers not projected	
	Overseas			Overall deterioration of market conditions despite recovery of internal demand in China (2H) Relatively strong internal demand in China, but weak overall recovery	

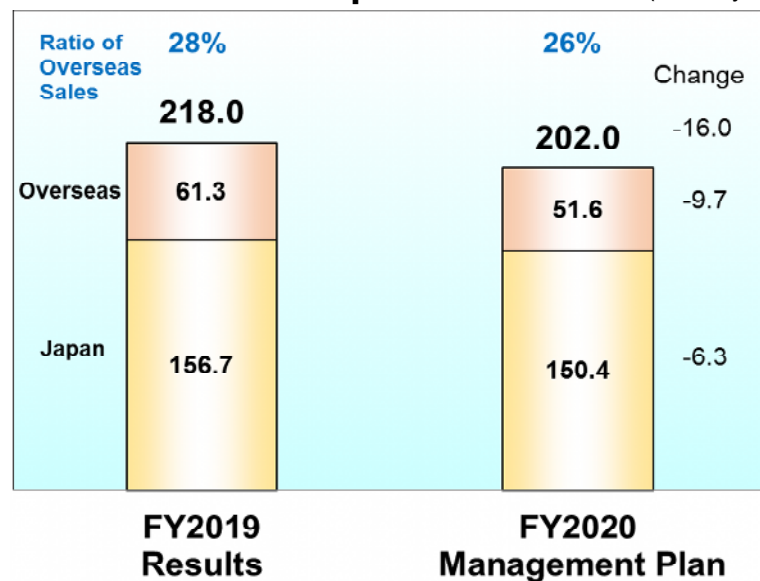
Amount of Orders Received (Billion yen)



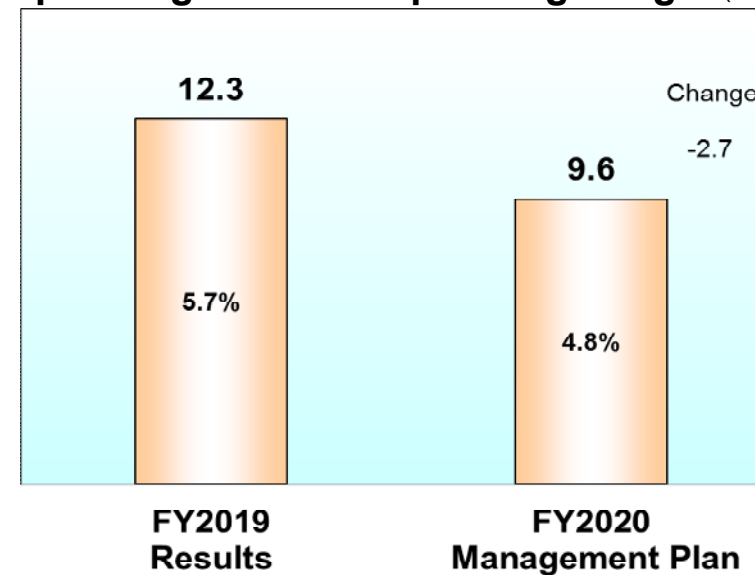
Net Sales (Billion yen)



Net Sales in Japan / Overseas (Billion yen)



Operating Income / Operating Margin (Billion yen)



Business Policies

- **Expand operations in Southeast Asia**
- **Improve profit margins by strengthening constitution of plant operations**

Priority Measures

Energy Management

- **Reinforcement of domestic and overseas engineering systems (Chiba Factory, FMT)**
- **Enhancement of lineup of products for global market**

Power Supply and Facility Systems

- **Expansion of comprehensive electrical equipment business (acquisition of orders and growth of sales for internet data center products)**
- **Strengthening of plant system operations (switchgear and controlgear standardization)**
- **Growth of Asian market (augmentation of Thailand Factory (FMT))**

ED&C Components

- **Drastic structural reforms (exhaustive reinforcement of sales, model lineup, and manufacturing operations)**

Reinforcement of Domestic Engineering System

(Chiba Factory and other Domestic Bases)

- ◆ Consolidation of product design, R&D, and engineering functions to strengthen global mother factory functions
- ◆ Swift launches of competitive new products (global transformers, GISs, etc.)

Product Lineup

Global transformers	Global GISs	Next-generation molded-case transformers	Next-generation power supplies	Large-capacity SOx scrubbers
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New Chiba Factory building

7,000 m² of floor space, scheduled to commence operation in December 2020

FMT: Fuji Electric Manufacturing (Thailand) Co., Ltd.

GISs of FMT (Thailand)



FTU: Fuji Tusco Co., Ltd.

Transformers of FTU (Thailand)







Enhancement of Lineup of Products for Global Market

Commercialization of differentiated, competitive components and expansion of differentiated product series through platforms

- ★ Launch
- ★ Scheduled commercialization

Energy Management

Power Supply and Facility Systems

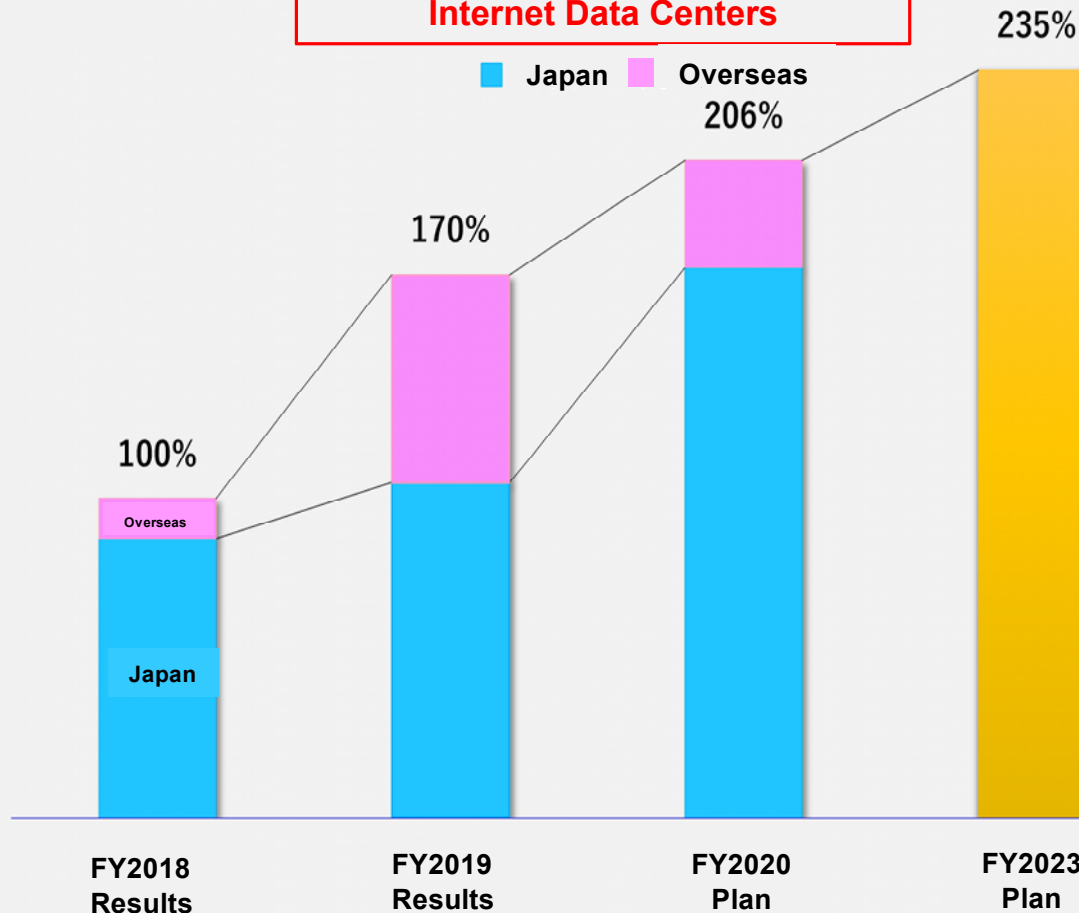
Products	Target Regions	FY2019	FY2020	FY2021	FY2022-23
Transformers 	Southeast Asia, Middle East	G-transformers 115kV/50MVA	★		
			High voltage, large capacity, expanded series		
GISs (gas insulated switchgears) 	Southeast Asia, Middle East	168kV/40kA		★	
		High voltage, high current, expanded series			★
UPSs (uninterruptible power systems) 	Southeast Asia, North America	★	Large-capacity module-type UPSs		★
			Large capacity, expanded series		
MV panels compliant with IEC standards 	Southeast Asia		24kV/25kA IEC Panels		★
			Expanded series		

Expansion of Comprehensive Electrical Equipment Business

(Acquisition of Orders and Growth of Sales for Internet Data Center Products)

- Acquisition of comprehensive electrical equipment orders through design collaboration with foreign internet data center operators
- Highly successful acquisition of orders through overseas business negotiations by utilizing Asian engineering centers

Domestic and Overseas Sales for Internet Data Centers



Products for Internet Data Centers



GISs (gas insulated switchgears)



Generators



Transformers



Switchboards



UPSs (uninterruptible power systems)

Strengthening of Plant System Operations

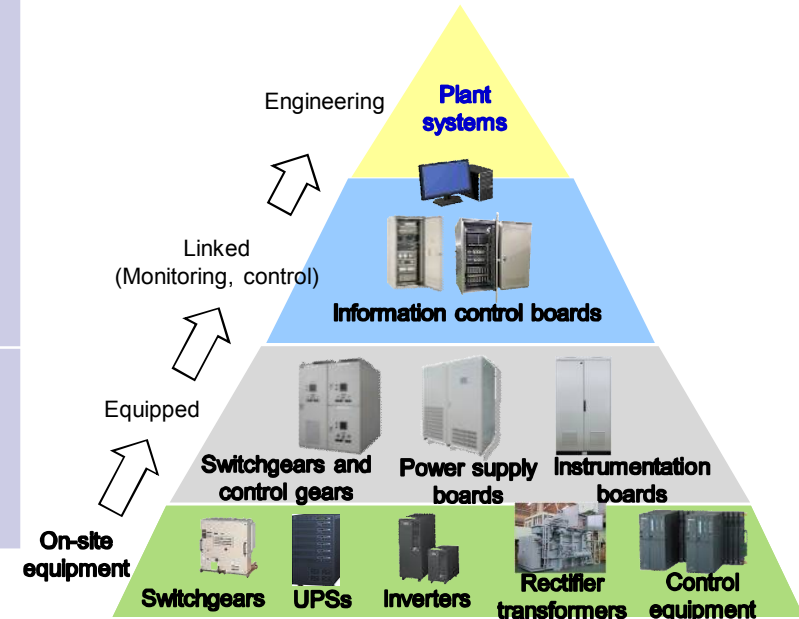
(Switchgear and Control Gear Standardization)

■ **Enhancement of competitiveness of switchgear and controlgear systems, which are standard components for plant systems, and expansion of plant system operations**
 – Expansion of in-house production and reduction of lead times through extensive standardization of switchgear and controlgear systems –

	Category	Scope of Standardization	Details	Contributions to Customers
Japan	Switchboards	Internet data center power supply systems	Standardization of peripheral switchboards through system standardization	<ul style="list-style-type: none"> • Shortened delivery times • Improved quality • Reduced space requirements
	High-voltage switchgears and controlgears	High-voltage switchgears and control gears for internet data center and industrial applications	Development of units for mounted equipment	
	MCC*	Wastewater processing and industrial applications	Integration of model specifications	
	Information control boards	Process control boards	Improvement of I/O mounting density (250% improvement after standardization)	
Overseas	High-voltage switchgears and controlgears	Power and industrial applications in Asia	Development of IEC standard-compliant 7.2 KV and 24 KV series	<ul style="list-style-type: none"> • Shortened delivery times • Improved quality

* MCC: Motion control center

Plant System Sales Targets



Expansion of Operations in Asia (Augmentation of Thailand Factory (FMT))

● Construction of system factory to address growing Asian market (commenced operation in April 2020)

* Solar panels with generation capacity of 1,400 KW (500 KW + 900 KW(newly)) installed on roof

First Factory Components



Operations commenced
in December 2013
(Three stories, floor space of 25,000 m²)

Second Factory Industrial transformer units



Operations commenced
in December 2013
(One story, floor space of 10,000 m²)

Third Factory Systems factory, engineering center



Operations commencing
in April 2020
(Two stories, floor space of 15,000 m²)

- ◆ Enhancement of plant systems businesses through installation of additional engineering functions
- ◆ Augmentation of switchboard production capacity
- ◆ Reduction of cost through in-house processing of sheet metal



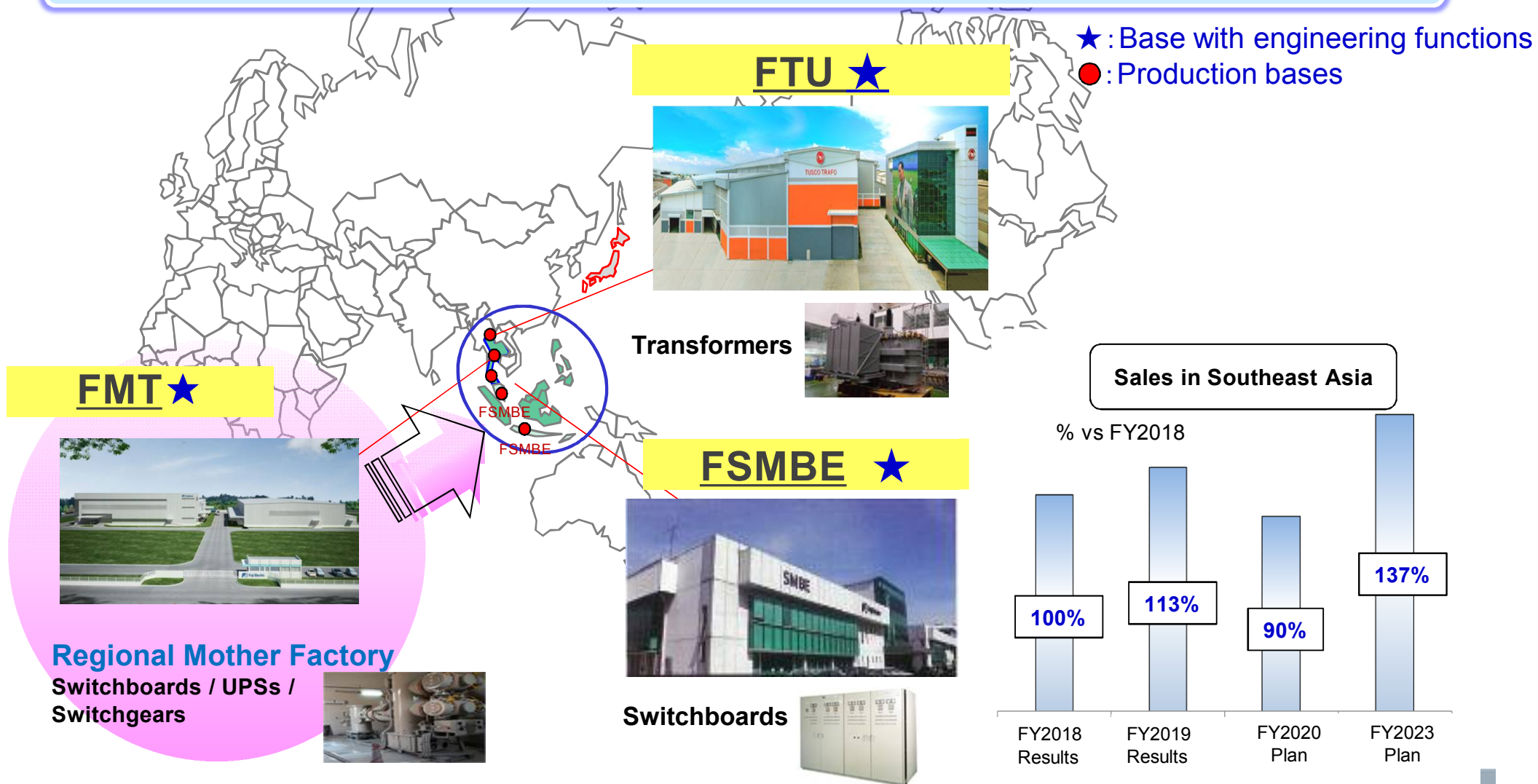
Switchboards



New blank-laser integrated unit

Reinforcement of Domestic and Overseas Engineering System (Overseas Production)

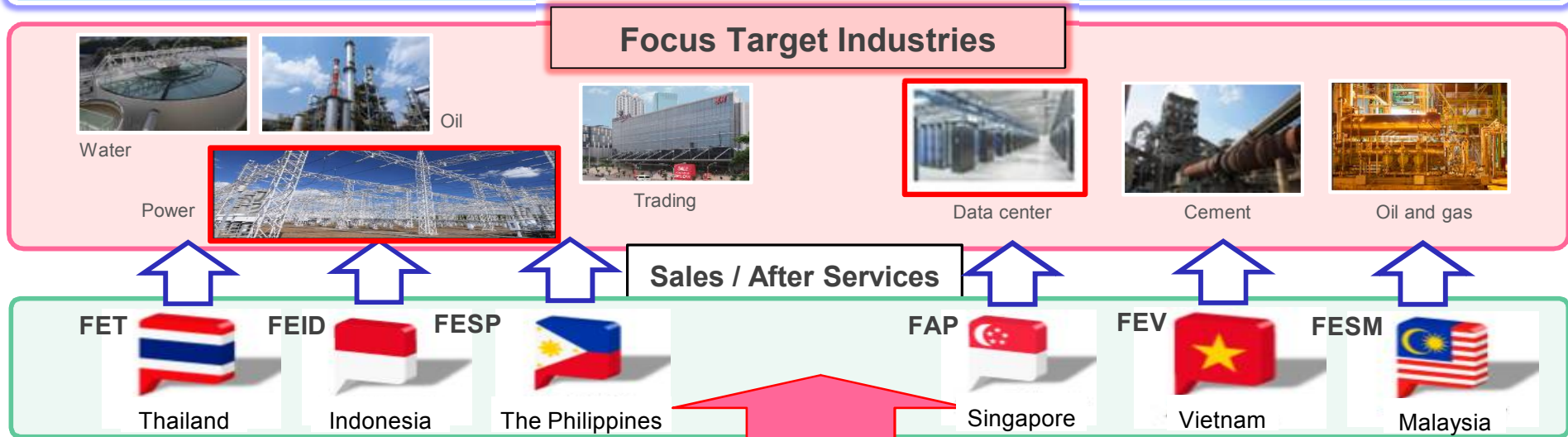
- Manufacturing and engineering support for Asian bases from FMT, which functions as **a regional mother factory**
- Expansion of systems businesses in Southeast Asia



Expansion of Operations in Asia

● Enhancement of engineering support to expand of systems businesses in Asia

Accommodation of systems projects through coordination between overseas sales companies and FMT's engineering center



Current Conditions

Several years required to recover to pre-2019 level given incredibly difficult market stemming from U.S.-China trade friction and the COVID-19 pandemic

Future Challenges

Development of management constitution that is resilient to demand fluctuations by substantially lowering break-even point

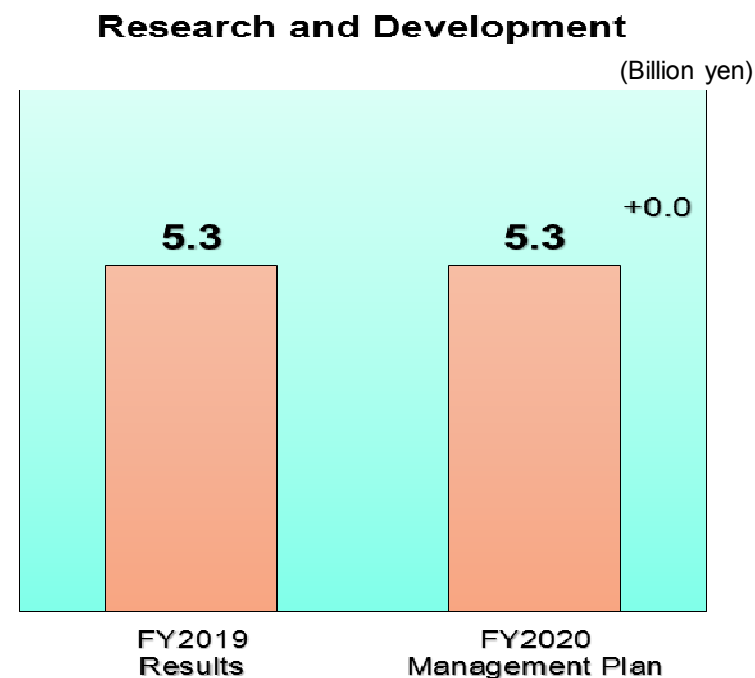
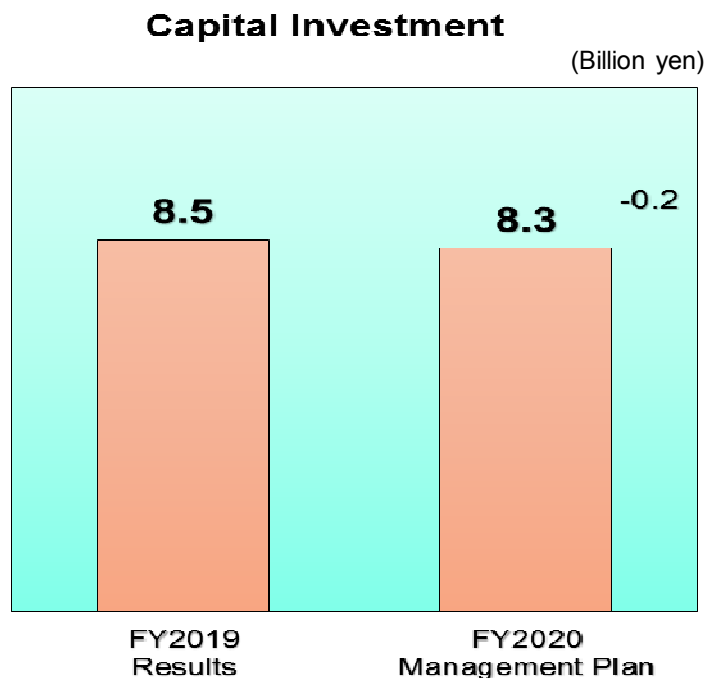
Differentiated Product Development

Sales Systems Reinforcement

Manufacturing Enhancement

Fixed Cost Reduction

Withdrawal from Underperforming Lines



- ◆ Energy Management
Construction of new Chiba Factory building
- ◆ Power Supply and Facility Systems
Factory rationalization and automation
- ◆ ED&C Components
Rationalization, upgrades, and repairs

- ◆ Energy Management
Transformers, gas insulated switchgears (GISs)
- ◆ Power Supply and Facility Systems
Uninterruptible power systems (UPSs)
- ◆ ED&C Components
Core equipment

Note: The R&D expenditure figures above represent expenditures that have been allocated to segments based on theme and may therefore differ from figures contained in consolidated financial reports.

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