



Industry / Distribution / Water Field

Hitachi IR Day 2018

June 8, 2018

Masakazu Aoki

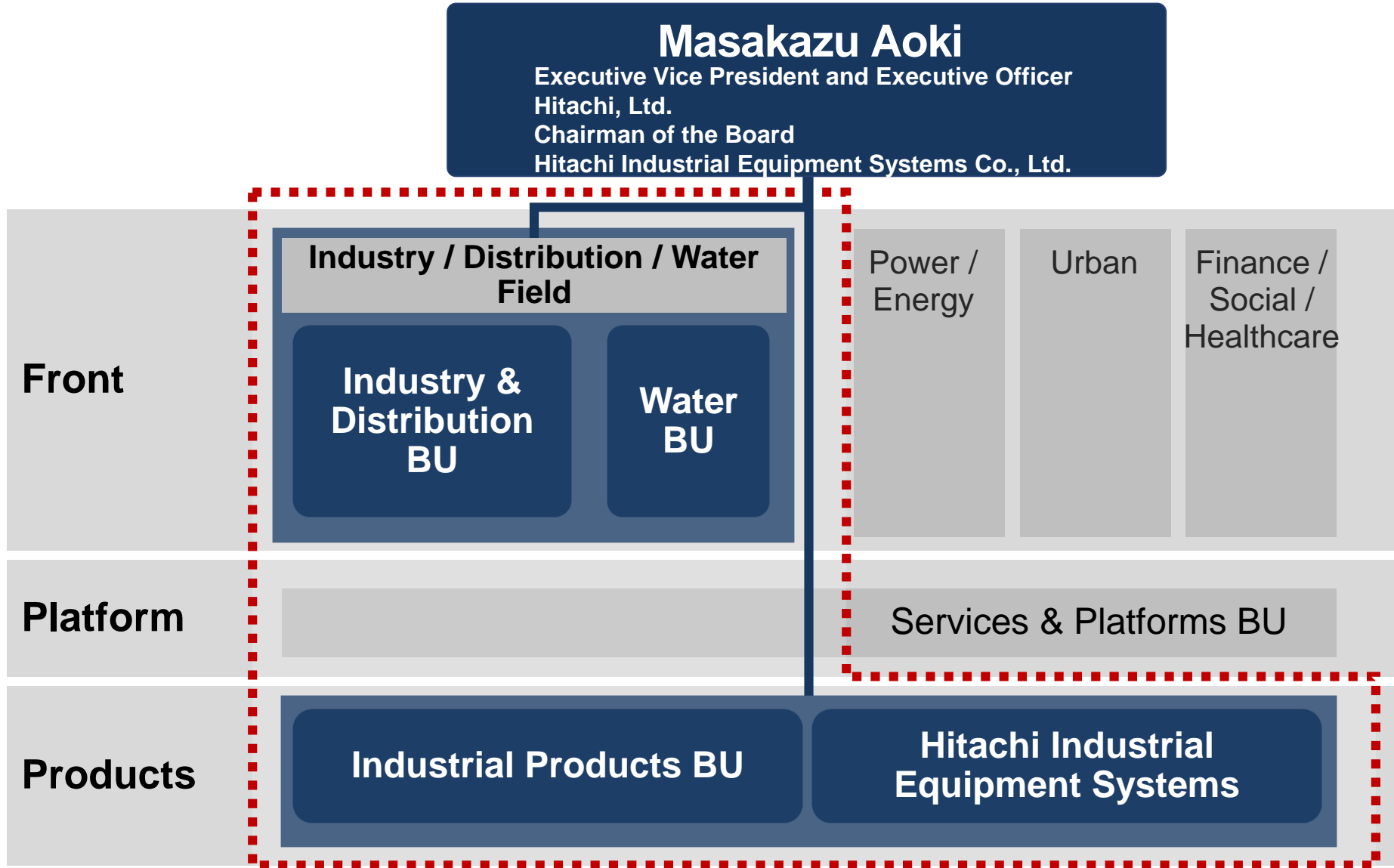
Executive Vice President and Executive Officer

General Manager of Industrial Equipment Management Division

Hitachi, Ltd.

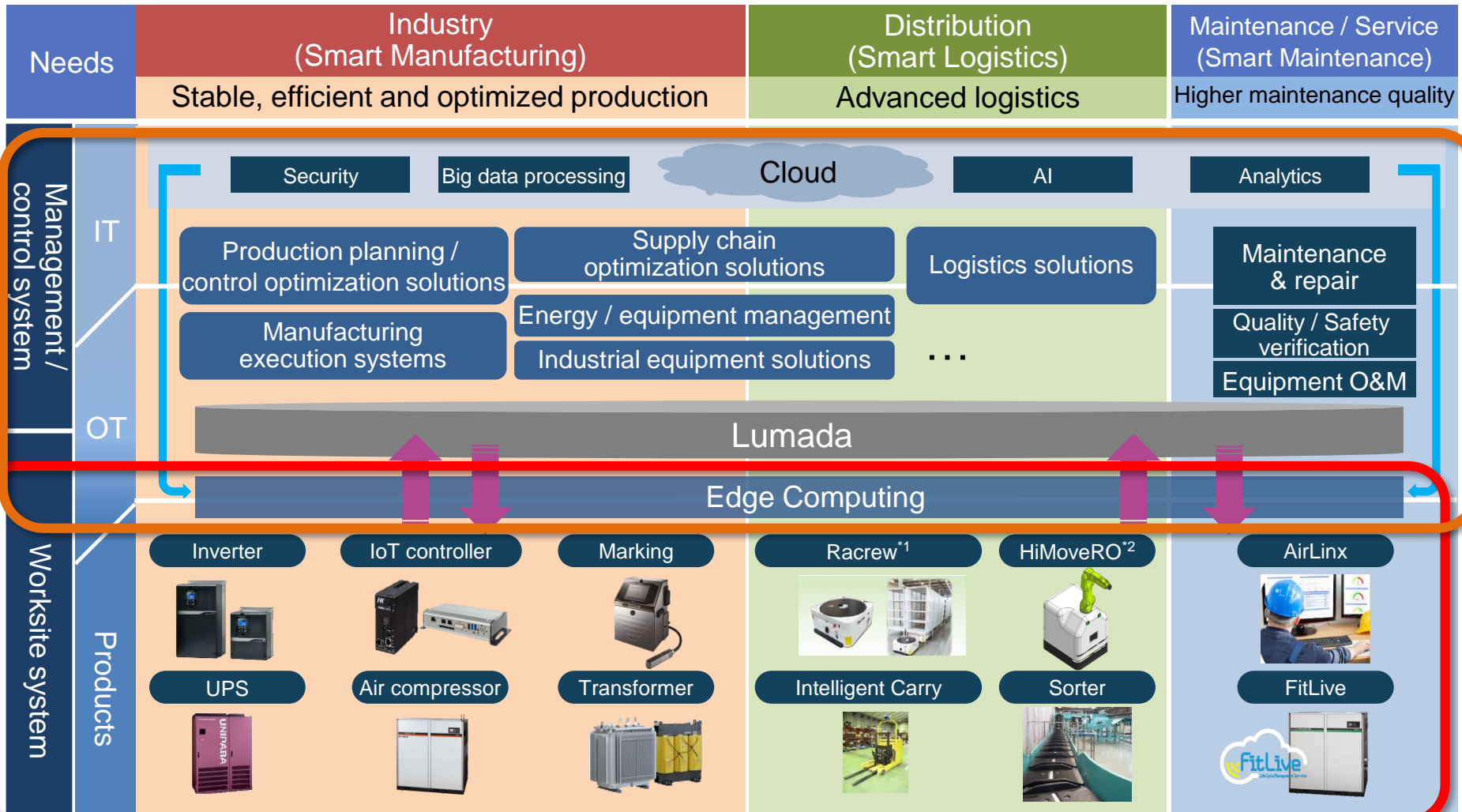
Chairman of the Board

Hitachi Industrial Equipment Systems Co., Ltd.



Overview of Industry & Distribution Field

Providing digital solutions with the strength of Products × OT × IT



*1 Compact and low-floor automated guided robot *2 Autonomous moving robot (Mounted robot made by FANUC)
 OT: Operational Technology O&M: Operation and Maintenance UPS: Uninterruptible Power Supply

Acquisition of Sullair

- ✓ Creating synergy by Products × OT × IT
- ✓ Obtaining customer base (e.g. North America)

Expansion of digital solution business

- ✓ Strengthening with IoT platform Lumada
- ✓ Collaborative creations with customers mainly in the manufacturing industry

Strengthening of product business

- ✓ Integrated operations of Industrial Products BU and Hitachi Industrial Equipment Systems
- ✓ Strengthening the business base by integrating large and small scale equipment businesses

To be the Best Solution Partner for Customers in the Industry and Distribution Field

- Provide products and digital solutions totally
- Approach wide range of customers which have been accumulated by product and maintenance businesses

Growth strategy

- Expand recurring business and accelerate global expansion
- Extend the range of target customers
(utilizing the customer base of
Hitachi Industrial Equipment Systems and Sullair)
- Enlarge service / solution business with
Products × OT × IT

Cautionary Statement

Certain statements found in this document may constitute “forward-looking statements” as defined in the U.S. Private Securities Litigation Reform Act of 1995. Such “forward-looking statements” reflect management’s current views with respect to certain future events and financial performance and include any statement that does not directly relate to any historical or current fact. Words such as “anticipate,” “believe,” “expect,” “estimate,” “forecast,” “intend,” “plan,” “project” and similar expressions which indicate future events and trends may identify “forward-looking statements.” Such statements are based on currently available information and are subject to various risks and uncertainties that could cause actual results to differ materially from those projected or implied in the “forward-looking statements” and from historical trends. Certain “forward-looking statements” are based upon current assumptions of future events which may not prove to be accurate. Undue reliance should not be placed on “forward-looking statements,” as such statements speak only as of the date of this document.

Factors that could cause actual results to differ materially from those projected or implied in any “forward-looking statement” and from historical trends include, but are not limited to:

- economic conditions, including consumer spending and plant and equipment investment in Hitachi’s major markets, particularly Japan, Asia, the United States and Europe, as well as levels of demand in the major industrial sectors Hitachi serves;
- exchange rate fluctuations of the yen against other currencies in which Hitachi makes significant sales or in which Hitachi’s assets and liabilities are denominated;
- uncertainty as to Hitachi’s ability to access, or access on favorable terms, liquidity or long-term financing;
- uncertainty as to general market price levels for equity securities, declines in which may require Hitachi to write down equity securities that it holds;
- fluctuations in the price of raw materials including, without limitation, petroleum and other materials, such as copper, steel, aluminum, synthetic resins, rare metals and rare-earth minerals, or shortages of materials, parts and components;
- the possibility of cost fluctuations during the lifetime of, or cancellation of, long-term contracts for which Hitachi uses the percentage-of-completion method to recognize revenue from sales;
- credit conditions of Hitachi’s customers and suppliers;
- fluctuations in product demand and industry capacity;
- uncertainty as to Hitachi’s ability to implement measures to reduce the potential negative impact of fluctuations in product demand, exchange rates and/or price of raw materials or shortages of materials, parts and components;
- uncertainty as to Hitachi’s ability to continue to develop and market products that incorporate new technologies on a timely and cost-effective basis and to achieve market acceptance for such products;
- increased commoditization of and intensifying price competition for products;
- uncertainty as to Hitachi’s ability to attract and retain skilled personnel;
- uncertainty as to Hitachi’s ability to achieve the anticipated benefits of its strategy to strengthen its Social Innovation Business;
- uncertainty as to the success of acquisitions of other companies, joint ventures and strategic alliances and the possibility of incurring related expenses;
- uncertainty as to the success of restructuring efforts to improve management efficiency by divesting or otherwise exiting underperforming businesses and to strengthen competitiveness;
- the potential for significant losses on Hitachi’s investments in equity-method associates and joint ventures;
- general socioeconomic and political conditions and the regulatory and trade environment of countries where Hitachi conducts business, particularly Japan, Asia, the United States and Europe, including, without limitation, direct or indirect restrictions by other nations on imports and differences in commercial and business customs including, without limitation, contract terms and conditions and labor relations;
- uncertainty as to the success of cost structure overhaul;
- uncertainty as to Hitachi’s access to, or ability to protect, certain intellectual property;
- uncertainty as to the outcome of litigation, regulatory investigations and other legal proceedings of which the Company, its subsidiaries or its equity-method associates and joint ventures have become or may become parties;
- the possibility of incurring expenses resulting from any defects in products or services of Hitachi;
- the possibility of disruption of Hitachi’s operations by natural disasters such as earthquakes and tsunamis, the spread of infectious diseases, and geopolitical and social instability such as terrorism and conflict;
- uncertainty as to Hitachi’s ability to maintain the integrity of its information systems, as well as Hitachi’s ability to protect its confidential information or that of its customers; and
- uncertainty as to the accuracy of key assumptions Hitachi uses to evaluate its employee benefit-related costs.

The factors listed above are not all-inclusive and are in addition to other factors contained in other materials published by Hitachi.

HITACHI
Inspire the Next 



Industrial Products Business Unit Business Strategy

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Industrial Products Business Unit Business Strategy

Contents

- 1. Business Overview and Analysis of Current Status**
2. Business Strategy
3. Business Performance Trends
4. Conclusion

Strong product business that contribute to industrial needs

Resources and Energy
Oil & Gas, Mining,
New Energy

Life Sciences
Pharmaceuticals,
Food, Daily Goods

Industry and Distribution
Manufacturing,
Distribution, e-Commerce

Social Infrastructure
Water & Sewage,
Roads, Railways

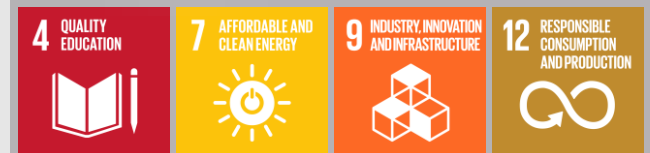
Industrial Products BU / Hitachi Industrial Equipment Systems

Business Sectors <small>Composition*</small>	Machinery 55%	Drive / Automation 30%	Power substation / Distribution 15%
Products	<p>Compressors, Marking Systems, Automated Guided Robots</p> 	<p>Motors / Inverters, UPS, PCS, IoT controllers</p> 	<p>Transformers, Power supply control</p> 

Social and Environmental Values

Provide key products on a global basis to meet the needs of the manufacturing and resources & energy sectors

Corresponding SDGs



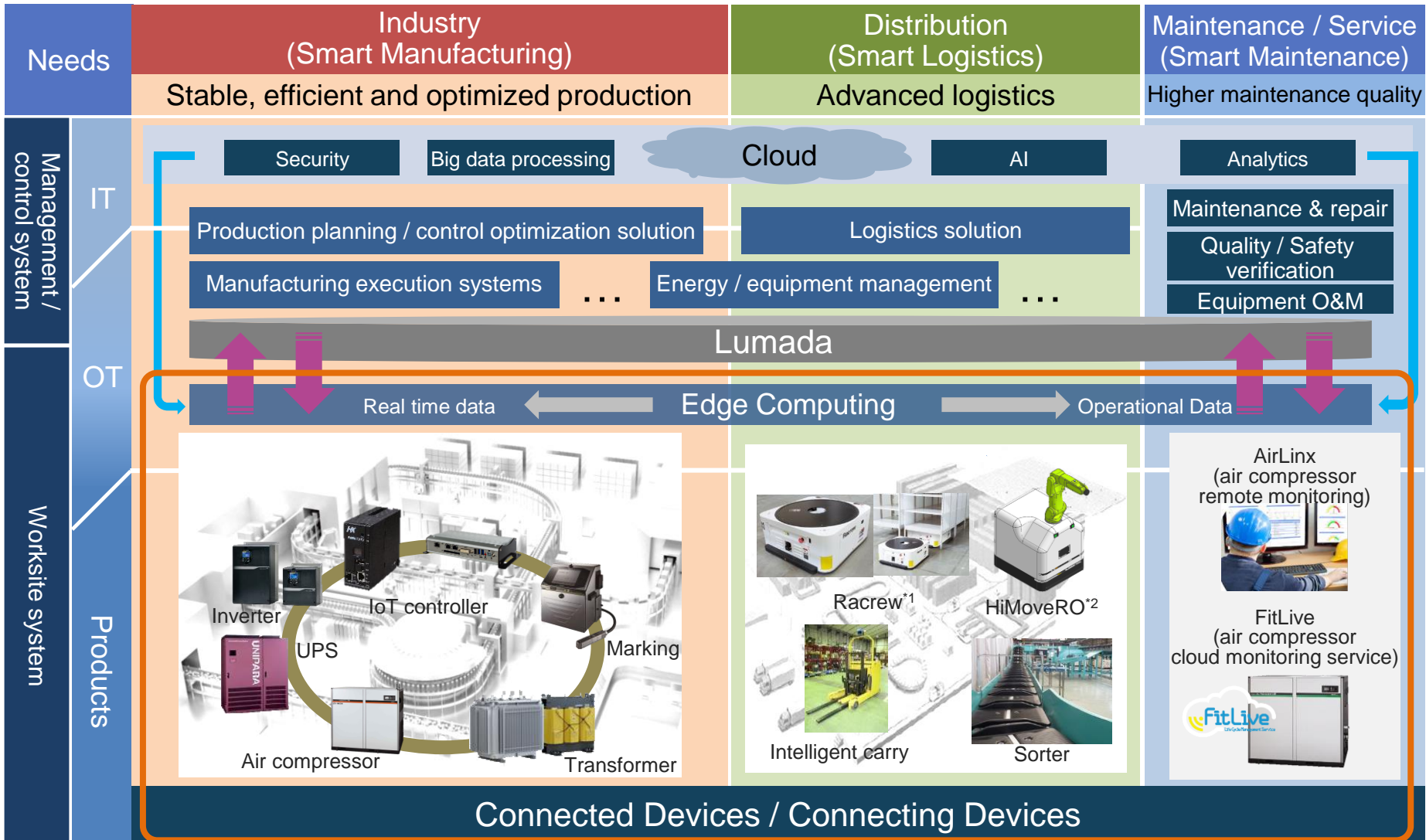
*Revenue Composition in FY2017
UPS: Uninterruptible Power Supply

PCS: Power Conditioning System

SDGs: Sustainable Development Goals

1-2. Positioning within the Hitachi Group

Providing digital solutions with the strength of Products × OT × IT

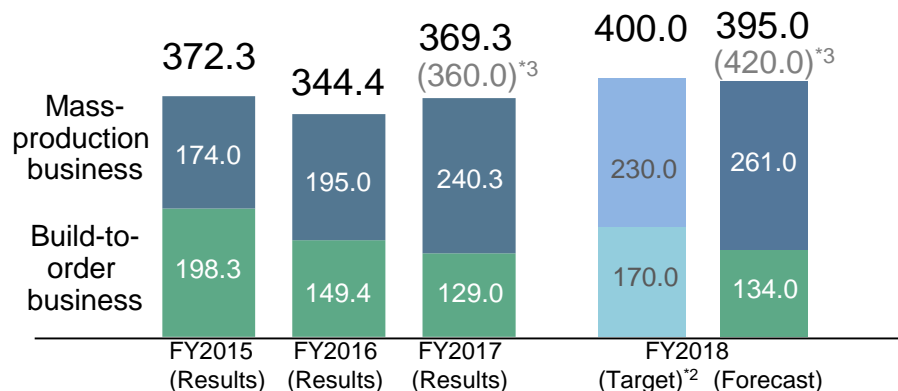


*1 Compact and low-floor automated guided robot *2 Autonomous moving robot (Mounted robot made by FANUC)
 OT: Operational Technology O&M: Operation and Maintenance

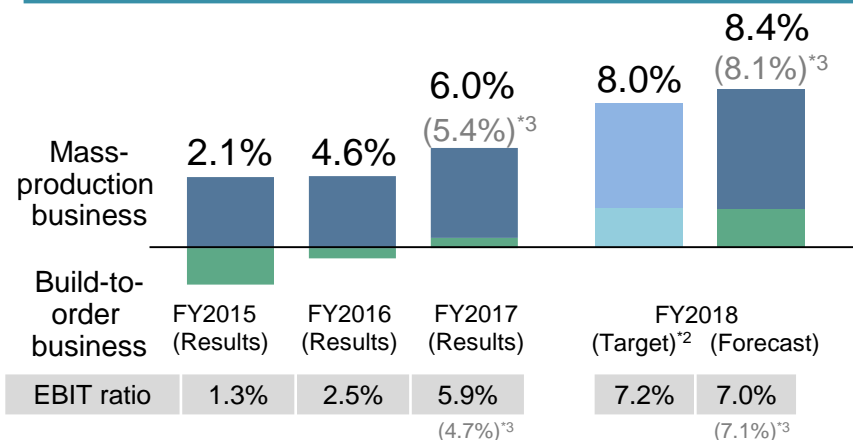
1-3. Progress of 2018 Mid-term Management Plan

Mass-production business: Accelerating global expansion of recurring business*¹ with investment for growth
 Build-to-order business: Reviewing business scale and priority areas and improving profits, strengthening the base for regrowth
 Common: Strengthening expansion of product-led IoT and digital solutions

Revenues (Billion yen)



Adjusted operating income ratio



Mass-production business

Results

- Expanding the air compressor business by the acquisition of Sullair
- Enhanced services for IoT-compatible products

Next Actions

- Further expansion of global business

Build-to-order business

- Returned to profitability by promoting structural reform
- Prioritized businesses by selection and concentration

- Further strengthening earning capacity
- Expanding orders received in growing markets (e.g. logistics)

- Strengthening digital solution & IoT-compatible products and intersystem coordination

*1 Recurring business: Business with continuous replacement market such as spare parts.
 *2 As of June 1, 2016 *3 As of June 8, 2017 EBIT: Earnings before interest and taxes

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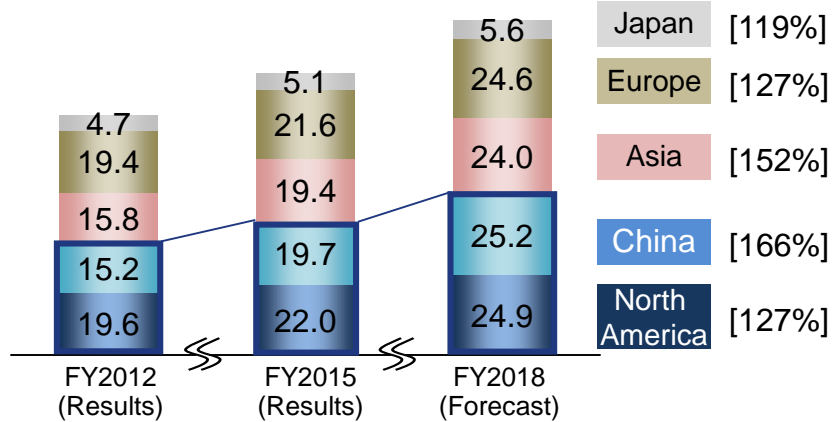
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Strengthen approach to growing markets and sectors

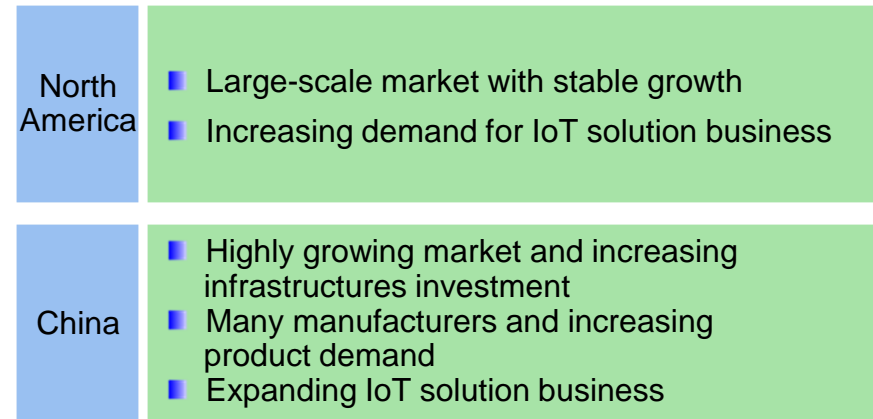
Nominal GDP by major regions*

(Unit: 1 trillion dollars)

[Comparison with 2012]



Priority markets



Market environment

- Digitalization
- Rising labor cost
- Food-safety consciousness
- Low-carbon society
- Energy saving

Needs

- Automation / Labor Saving / IoT
- Environmental harmony, higher efficiency
- Stronger traceability
- Stronger security

Priority businesses

- Air compressor
- Marking system
- Drive / Automation
- IoT solution

*Source: IMF, April 2018

Strong product business that contribute to industrial needs

Basic policy

- Expand priority businesses and accelerate global expansion (recurring businesses)
- Expand service and solution businesses by Products × OT × IT
- Resource concentration and strategic investment in growing businesses

Priority businesses		Positioning	Policy
Global	Air compressor	Growth engines (promoting recurring businesses)	<ul style="list-style-type: none"> ■ Continuous global investment ■ Further global expansion with Sullair ■ Expanding IoT-compatible products, expanding service businesses
	Marking system		
IoT	Drive / Automation	Switching to high value-added sectors	<ul style="list-style-type: none"> ■ Collaborative creation with customers (built-in type) ■ Strengthening product capabilities for the IoT market
		Targeting to edge computing	<ul style="list-style-type: none"> ■ Strengthening IoT controller capabilities ■ Expanding M2M communication devices
	IoT solution	Catering to growing markets	<ul style="list-style-type: none"> ■ Expanding into growing industries (e.g. logistics) ■ Incorporating needs for robots and automation

Expanding priority businesses and accelerating global expansion

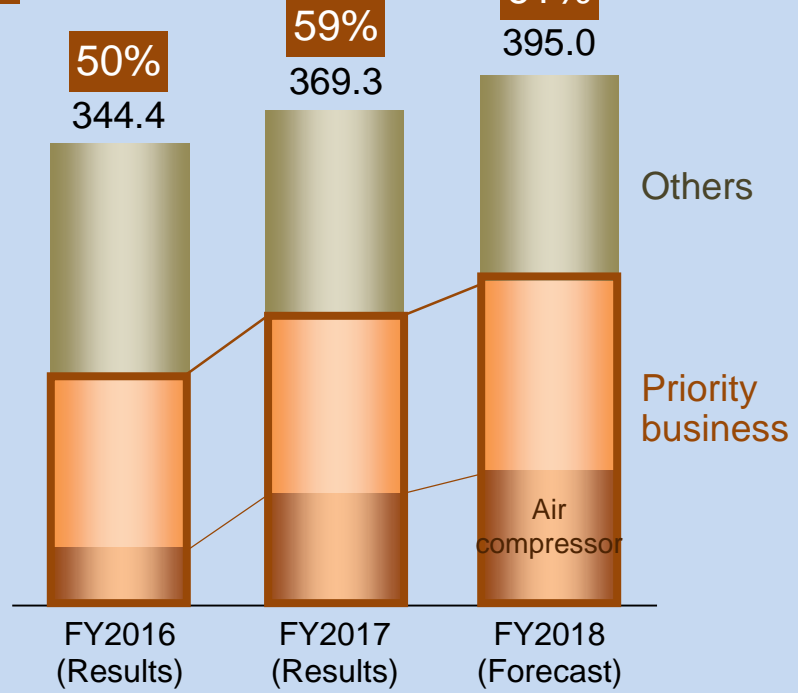
Enhancement policy

- Accelerating growth by combining organic growth and alliances
 - Expansion of priority businesses and focusing on priority regions (North America and China) -

■ Revenues (by business)

Unit: Billion yen

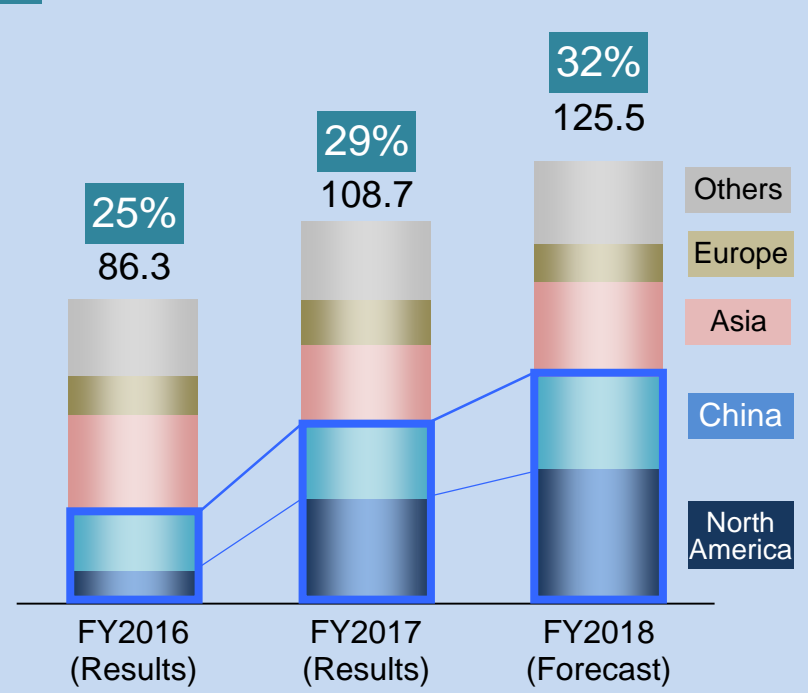
■ Priority business ratio



■ Overseas revenues (by region)

Unit: Billion yen

■ Overseas revenue ratio



2-4. Growth Strategy for Air Compressor Business (1)

Air compressor business revenues to exceed 100 billion yen in FY2018

Maximize Sullair & Hitachi synergies

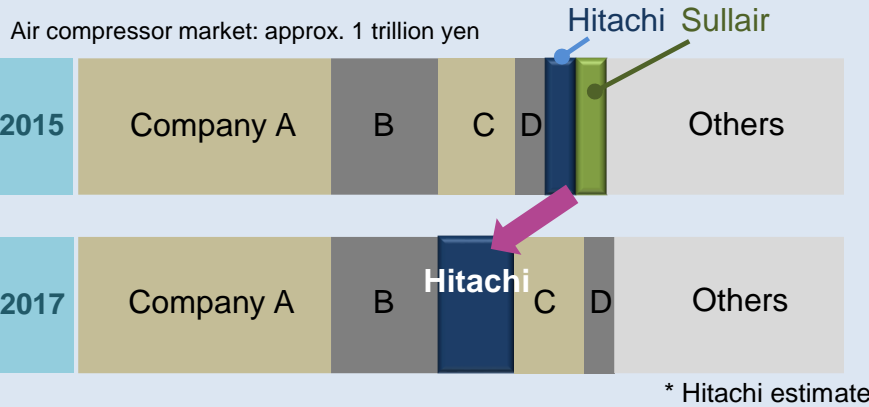
- Enhance product line-up and regional complement (North America and China)
- Expand customer base and strengthen sales networks
- Optimize global procurement and production

Create Global No. 1 product and expand solution business

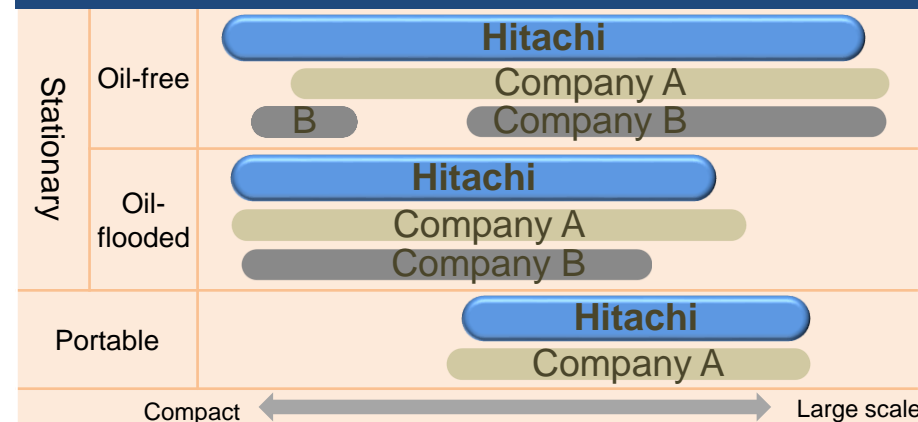
- Improve efficiency: Develop high-efficiency air ends
- Ultra-compact: Apply amorphous motors
- IoT-compatible: Communication functions mounted as a standard feature



Global market trend and position*



Realized full line-up by acquisition of Sullair



No. 3 worldwide → Aim to become No. 2

Obtain new customers through acquisition of Sullair (US market examples)

Strengthen expansion to “Products × digital solutions” by obtaining excellent customers

Materials and resources

Air over the fence



Compressor station,
Dow Chemical

Natural gas application



Service and entertainment industries

Fountain driving system



Bellagio Hotel & Casino,
Las Vegas

Drying circuit road surfaces



Rentals and retails channels



2-4. Growth Strategy for Air Compressor Business (3)

Obtain new customers through acquisition of Sullair (China market examples)

Strengthen expansion to “Products × digital solutions” by obtaining excellent customers

Car manufacturing plants



Oil & Gas



EV manufacturing plants



Mining (copper)



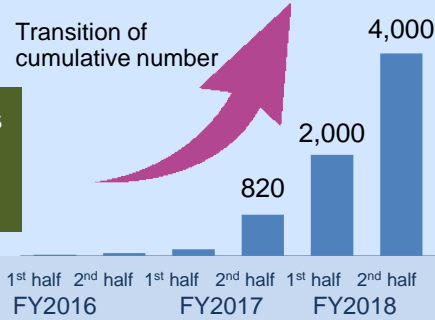
Aiming for the superior position in the connected product business

Realize Smart Maintenance through proposals for maintenance and services

Communication functions mounted as standard

- Own terminal devices and connection services
- Utilize Hitachi Group's cloud infra-structure
- Apply to Lumada
- Provide data to the sales and service channels

More Connected products
Target 10,000 units
(FY 2020 cumulative)



Smart maintenance utilizing operational data

- Reduce downtime, realize planned maintenance
- Shift to predictive diagnostics menus

Shift to "As a service"
- Extend to "Pay per use" -

FitLive service

Connecting service Secure connection via closed network

Connected products October 2017: Mounted on major air compressors as standard

Device ID	Status	Location
00000001	正常 / アップロード	(愛媛) 海老名車庫所
00000002	正常 / アップロード	(愛媛) 朝幡車庫所(富)
00000003	停止 / アップロード	(愛媛) 朝幡車庫所(富)
00000004	正常 / 異常 / アップロード	(愛媛) 朝幡車庫所(富)
00000005	異常発生中!	(愛媛) 朝幡車庫所(富)
00000006	異常発生中!	(愛媛) 清水車庫所

AirLinx (Sullair)

Engine Status On

Operational Mode Normal

Working Hours (Estimated) 0:00:00

Discharge Temperature 100.00°C

Discharge Pressure 11.02 psi

Active Alerts (0)

Maintenance (0)

Expanding business domain and accelerating global growth strategy

- Obtaining major customers by expanding product portfolio
- Gaining new customers by launching new products through Sullair's sales network

Expanding product portfolio

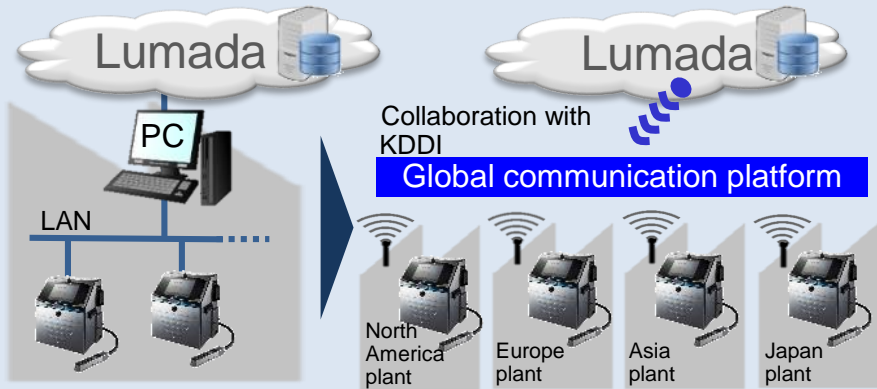
Expanding from ink-jet (world No.3) to laser systems



Specialized → Total Marking

Realize connected product

Introducing KDDI's global communication platform

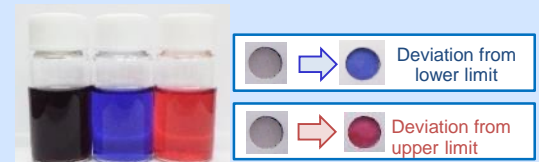


Strengthening self-development of inks

Responding to environmental and security needs, and stronger traceability

Exempt from the Organic Solvent Ordinance (Enhanced ethanol resistance)

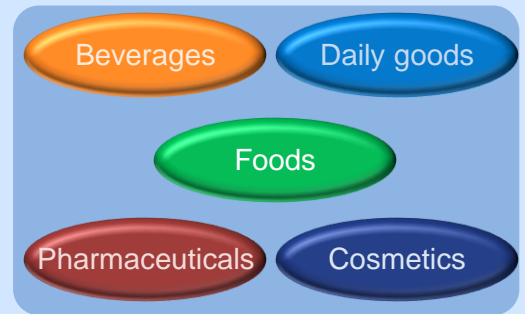
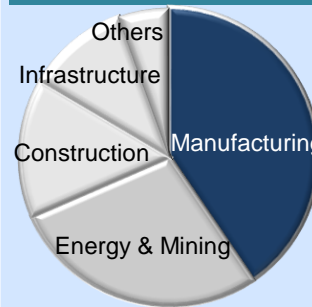
Temperature detection traceability (for distribution quality control)



Irreversible color changes according to the temperature change outside the upper/lower limit

Expanding to Sullair customers

Sullair customers



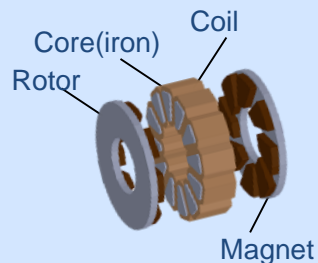
* Hitachi estimate

Developing high value-added customer products through collaborative creation

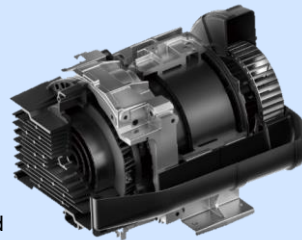
- Strengthening built-in type products attributes:
Realize downsizing, higher efficiency, and quicker responding machines and devices
- Contributing to Hitachi Group's priority businesses through drive technologies

Amorphous motors

- Adopted amorphous alloy
- World's highest efficiency level (IE5*)
- Ultra-thin and flat structure



Prime Minister's Award
Japan Industrial
Technologies



For air compressors
(amorphous motor integrated type)

Built-in type PM motors



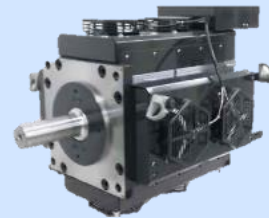
For air compressors



For pumps

Built-in type high-capacity servo drive

- High torque and high accuracy
- Energy saving
- Longer-life devices
- Meet IoT needs



For machine tools



For mold injection machines

Developing high value-added customer products through collaborative creation

- Strengthening built-in type product capabilities:
more robust, more compact machines and devices and more advanced control
- Contributing to Hitachi Group's priority businesses through drive technologies

Introduction cases in Hitachi group

For offshore wind turbines



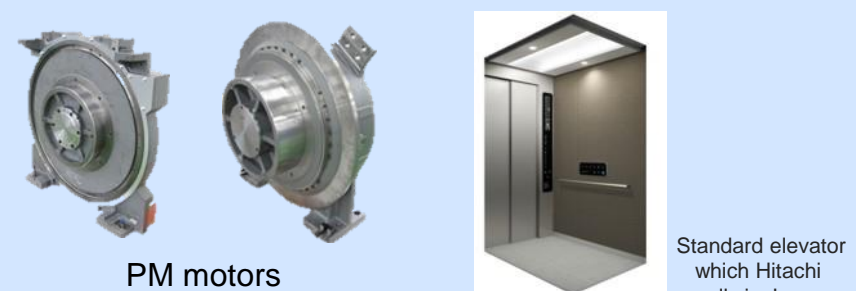
For construction machineries



For trains



For elevators

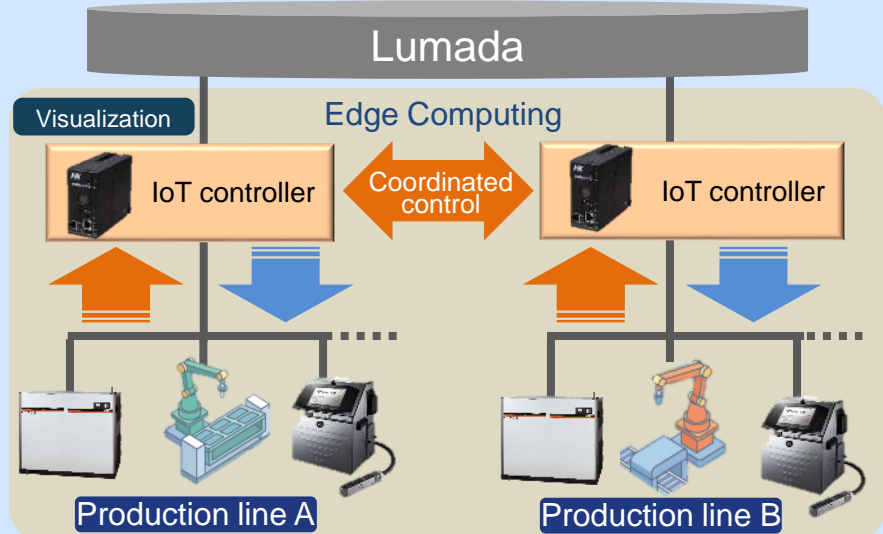
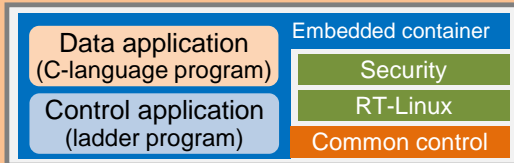


Integrate control (OT) and data (IT) via IoT controllers

Market trend*1 Industrial IoT devices*2 are rapidly increasing: 3 billion units in FY2016 ▶ 9.5 billion in FY2021 (CAGR 26%)

Optimized production utilizing IoT controllers

- Execute data app at production lines (coexistence with control)
- Support data programming languages and remote programming
- Optimized control by making the existing systems open

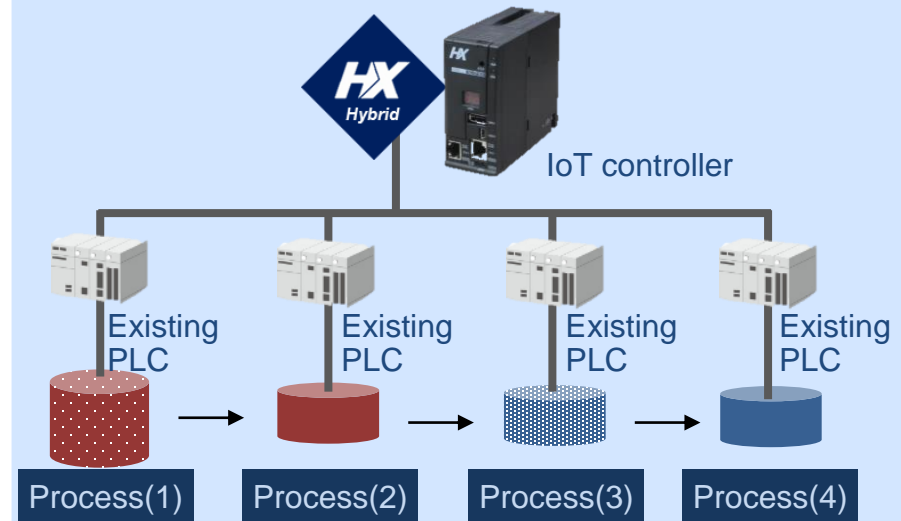


Example (Process Line)

Real time analysis and visualization of quality

Points for adoption

- Compatibility by use of C language: Modifiable by customers (Fourier-transform, Mahalanobis' generalized distance, etc)
- Data linkage function (control ↔ data)
- Real time monitoring: OPC*3 server, visualization



*1 Source: WHITE PAPER, Information and Communications in Japan, Ministry of Internal Affairs and Communications 2017

*2 Industrial equipment such as automation for industries and buildings, illuminations, energy-related, security, inspection & measuring instruments

*3 Standards for mutual operations aiming at safe and reliable data exchange in the industrial automation sector, etc.

CAGR: Compound Average Growth Rate PLC: Programmable Logic Controller

Strengthening expansion of product-led IoT / digital solutions

- Enhance initiatives for IoT solutions
- Expand robot/Automation SI business

Smart Manufacturing

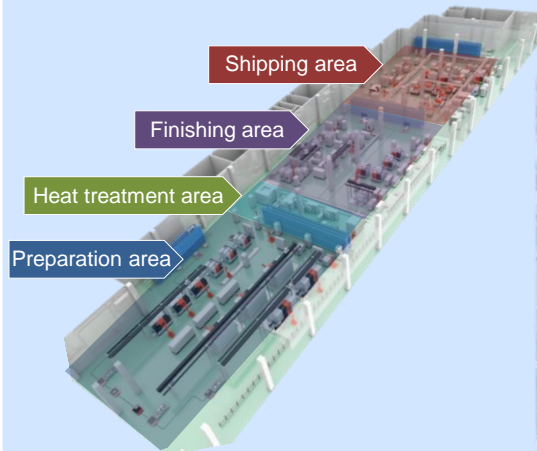
Customer case (machining tool manufacturer) AMADA HOLDINGS CO.,LTD.

T876 Factory, Toki Works

- Constructed total IoT line working 365 days by collaborative creation with the customer

Interlinkage among on-site equipment and visualization of equipment operations

Contribute to establishing a same-day delivery system within 3 hours minimum



Deeply cultivate collaborative creation with customers in cooperation with Industry & Distribution BU
Development from supply of products and systems to delivery of the digital solutions

Strengthen expansion of product-led IoT / digital solutions

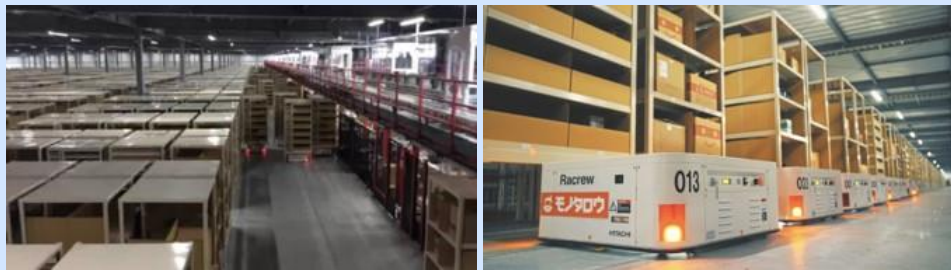
- Enhance initiatives for IoT solutions
- Expand robot / Automation SI business

Smart Logistics

Customer case (Distribution center) **MonotaRO Co., Ltd.**

Kasama distribution center*

IoT solution led by Racrew



- New picking system (2-3 fold productivity)

No Walking

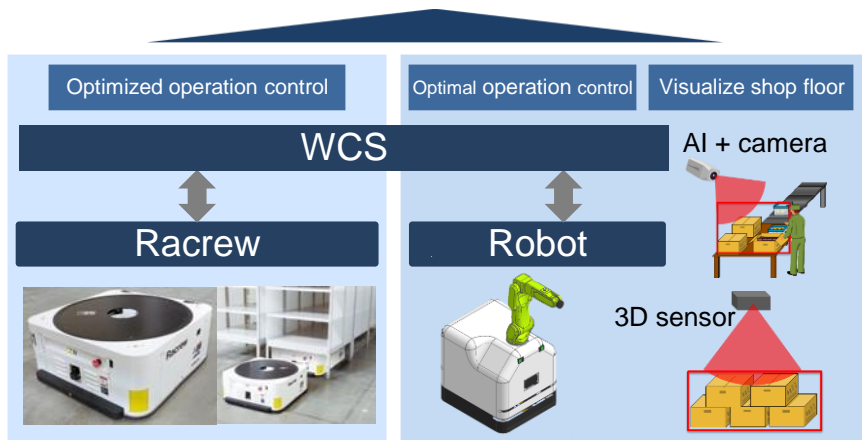
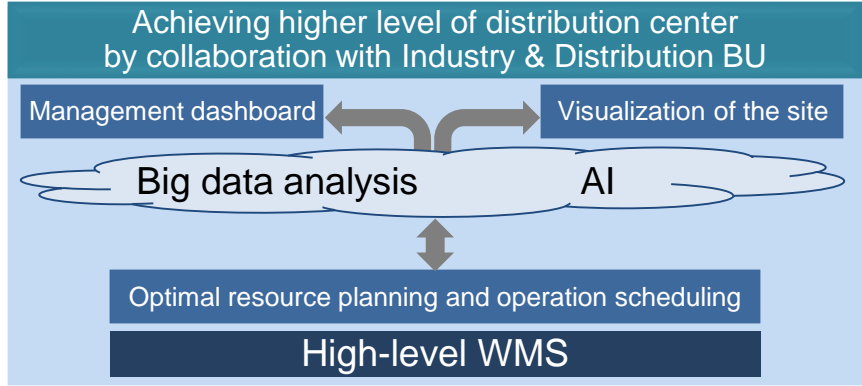
Streamlined picking operation by Racrew

Smart Routing

WCS manages Racrews' positions and assigns the shortest route

Various Stock Shelves

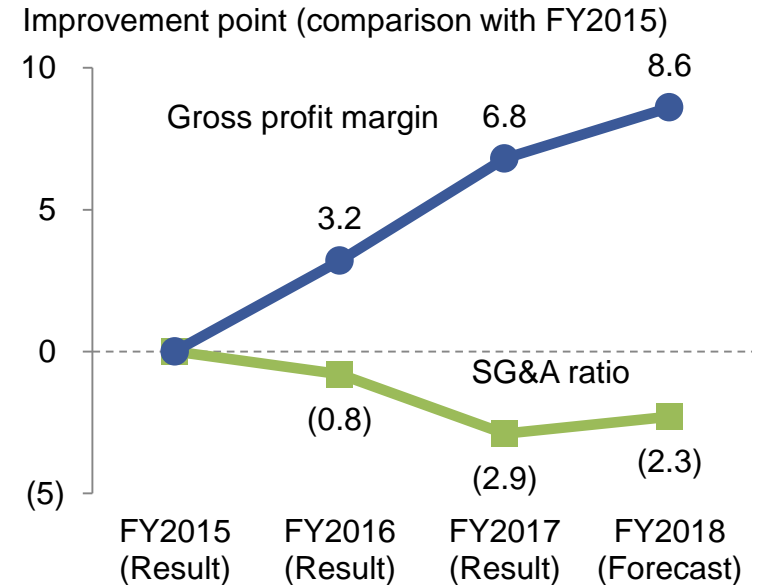
Capable of handling various sizes of stock items



*A distribution base of MonotaRO Co., Ltd., one of the largest e-commerce company of industrial materials (fully operational in April 2017)
WCS: Warehouse Control System WMS: Warehouse Management System

Improve operation efficiency

SG&A expense	Mass production	<ul style="list-style-type: none"> Improve productivity per capita, reduce fixed costs
	Build-to-order production	<ul style="list-style-type: none"> Reduce fixed costs by promoting indirect operation innovation
Gross profit	Mass production	<ul style="list-style-type: none"> Reduce direct material costs by strengthening global procurement capabilities <ul style="list-style-type: none"> Use common parts with Sullair Expand procurement in China and Asia region
	Build-to-order production	<ul style="list-style-type: none"> Cost planning management at the time of development of new product
Cash Generation	Mass production	<ul style="list-style-type: none"> Improving CCC through business process reform (inventory reduction, lead time reduction) Creating synergy with Sullair
	Build-to-order production	<ul style="list-style-type: none"> Thorough management of project profit & loss Shortening product lead time with End to End process reform



	FY2016 (Result)	FY2017 (Result)	FY2018 (Forecast)
CCC	107.5 days	100.9 days	97.4 days

CCC: Cash Conversion Cycle

Industrial Products Business Unit Business Strategy

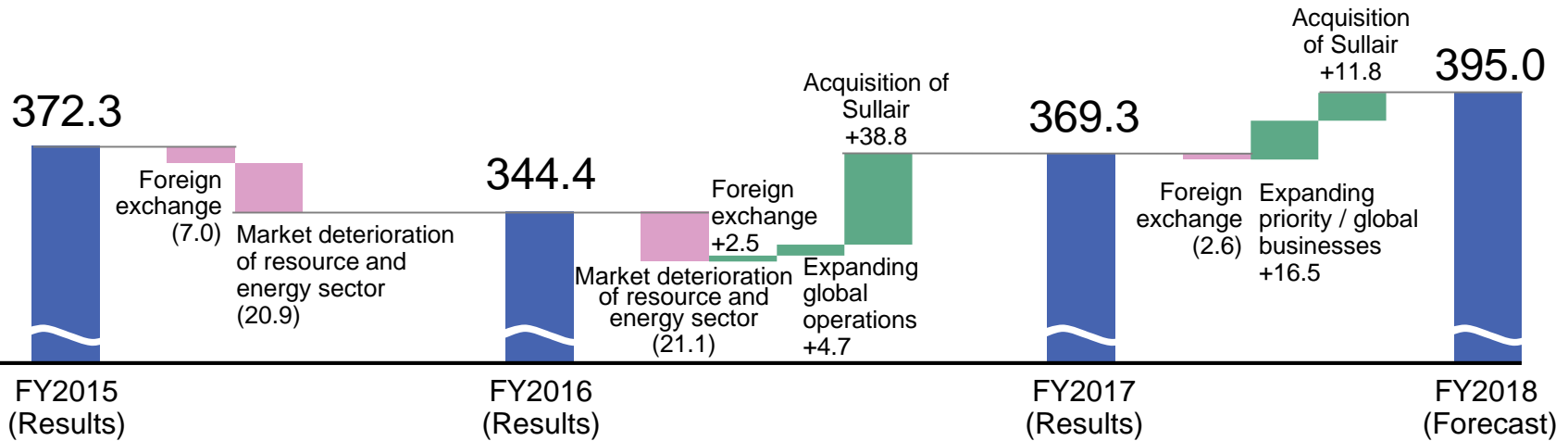
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3-1. Business Performance Trends

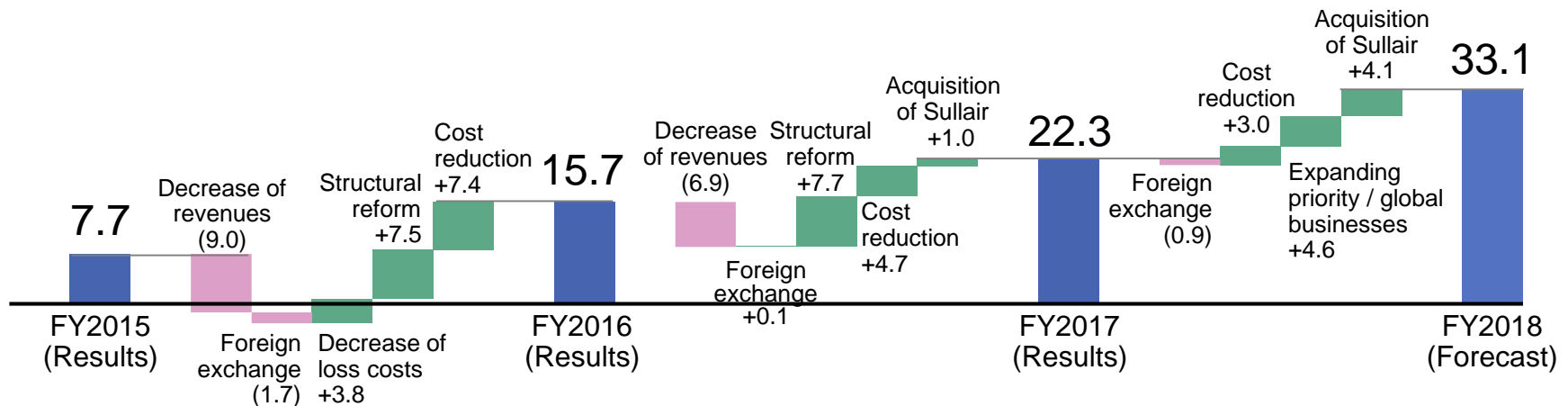
Revenues

(Unit: Billion yen)



Adjusted operating income

(Unit: Billion yen)

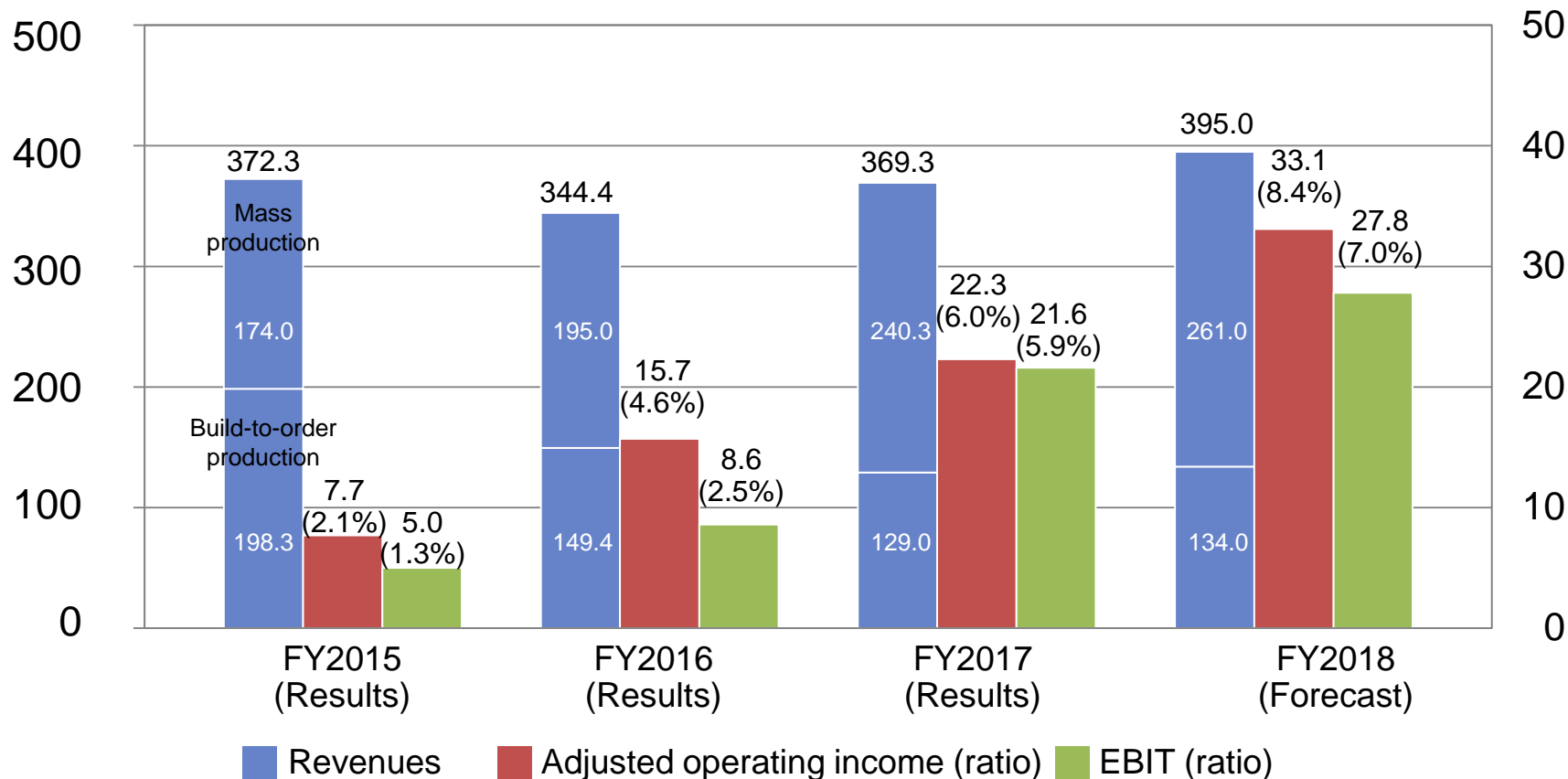


3-2. Business Performance Trends

	FY2015 (Results)	FY2016 (Results)	FY2017 (Results)	FY2018 (Forecast)
Overseas revenue ratio	27%	25%	29%	32%

Revenues
(Billion yen)

Adjusted operating income
/ EBIT (Billion yen)



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FY2018 Target

	FY2018	Comparison with FY2015
Revenues	395.0 billion yen	+22.7 billion yen [+6.1%]
Adjusted operating income [ratio]	33.1 billion yen [8.4%]	+25.4 billion yen
EBIT [ratio]	27.8 billion yen [7.0%]	+22.8 billion yen
Overseas revenue ratio	32%	+5%

- Expand priority businesses and accelerate global expansion (recurring businesses)
- Focus resources on growing businesses and strategic investment
- Expand service and solution businesses based on Products × OT × IT (Concentrate Hitachi Group's comprehensive power including Industry & Distribution BU)

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- economic conditions, including consumer spending and plant and equipment investment in Hitachi’s major markets, particularly Japan, Asia, the United States and Europe, as well as levels of demand in the major industrial sectors Hitachi serves;
- exchange rate fluctuations of the yen against other currencies in which Hitachi makes significant sales or in which Hitachi’s assets and liabilities are denominated;
- uncertainty as to Hitachi’s ability to access, or access on favorable terms, liquidity or long-term financing;
- uncertainty as to general market price levels for equity securities, declines in which may require Hitachi to write down equity securities that it holds;
- fluctuations in the price of raw materials including, without limitation, petroleum and other materials, such as copper, steel, aluminum, synthetic resins, rare metals and rare-earth minerals, or shortages of materials, parts and components;
- the possibility of cost fluctuations during the lifetime of, or cancellation of, long-term contracts for which Hitachi uses the percentage-of-completion method to recognize revenue from sales;
- credit conditions of Hitachi’s customers and suppliers;
- fluctuations in product demand and industry capacity;
- uncertainty as to Hitachi’s ability to implement measures to reduce the potential negative impact of fluctuations in product demand, exchange rates and/or price of raw materials or shortages of materials, parts and components;
- uncertainty as to Hitachi’s ability to continue to develop and market products that incorporate new technologies on a timely and cost-effective basis and to achieve market acceptance for such products;
- increased commoditization of and intensifying price competition for products;
- uncertainty as to Hitachi’s ability to attract and retain skilled personnel;
- uncertainty as to Hitachi’s ability to achieve the anticipated benefits of its strategy to strengthen its Social Innovation Business;
- uncertainty as to the success of acquisitions of other companies, joint ventures and strategic alliances and the possibility of incurring related expenses;
- uncertainty as to the success of restructuring efforts to improve management efficiency by divesting or otherwise exiting underperforming businesses and to strengthen competitiveness;
- the potential for significant losses on Hitachi’s investments in equity-method associates and joint ventures;
- general socioeconomic and political conditions and the regulatory and trade environment of countries where Hitachi conducts business, particularly Japan, Asia, the United States and Europe, including, without limitation, direct or indirect restrictions by other nations on imports and differences in commercial and business customs including, without limitation, contract terms and conditions and labor relations;
- uncertainty as to the success of cost structure overhaul;
- uncertainty as to Hitachi’s access to, or ability to protect, certain intellectual property;
- uncertainty as to the outcome of litigation, regulatory investigations and other legal proceedings of which the Company, its subsidiaries or its equity-method associates and joint ventures have become or may become parties;
- the possibility of incurring expenses resulting from any defects in products or services of Hitachi;
- the possibility of disruption of Hitachi’s operations by natural disasters such as earthquakes and tsunamis, the spread of infectious diseases, and geopolitical and social instability such as terrorism and conflict;
- uncertainty as to Hitachi’s ability to maintain the integrity of its information systems, as well as Hitachi’s ability to protect its confidential information or that of its customers; and
- uncertainty as to the accuracy of key assumptions Hitachi uses to evaluate its employee benefit-related costs.

The factors listed above are not all-inclusive and are in addition to other factors contained in other materials published by Hitachi.

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