

# **Presentation for Fiscal Year Ending March 2016**

**May 12, 2016**

**JTEKT Corporation**

**1. Results for Fiscal Year 2015**

**2. Forecasts for Fiscal Year 2016**

**3. Progress of Mid-Term Management Plan**

# 1-1) Consolidated Performance

The highest sales & income in our history

(100 million yen)

	FY 2014	FY 2015	Increase/ Decrease	Increase/ Decrease (%)
<b>Net Sales</b>	<b>13,559</b>	<b>13,999</b>	+439	+3.2%
<b>Operating Income</b>	(5.5%) <b>741</b>	(5.9%) <b>819</b>	+77	+10.5%
<b>Ordinary Income</b>	(5.9%) <b>793</b>	(5.8%) <b>812</b>	+18	+2.4%
<b>Profit attributable to owners of parent</b>	(3.1%) <b>425</b>	(3.5%) <b>486</b>	+61	+14.5%
<b>Exchange rate</b>	110 yen/USD 138 yen/EUR	120 yen/USD 132 yen/EUR	+ 10 yen △ 6 yen	

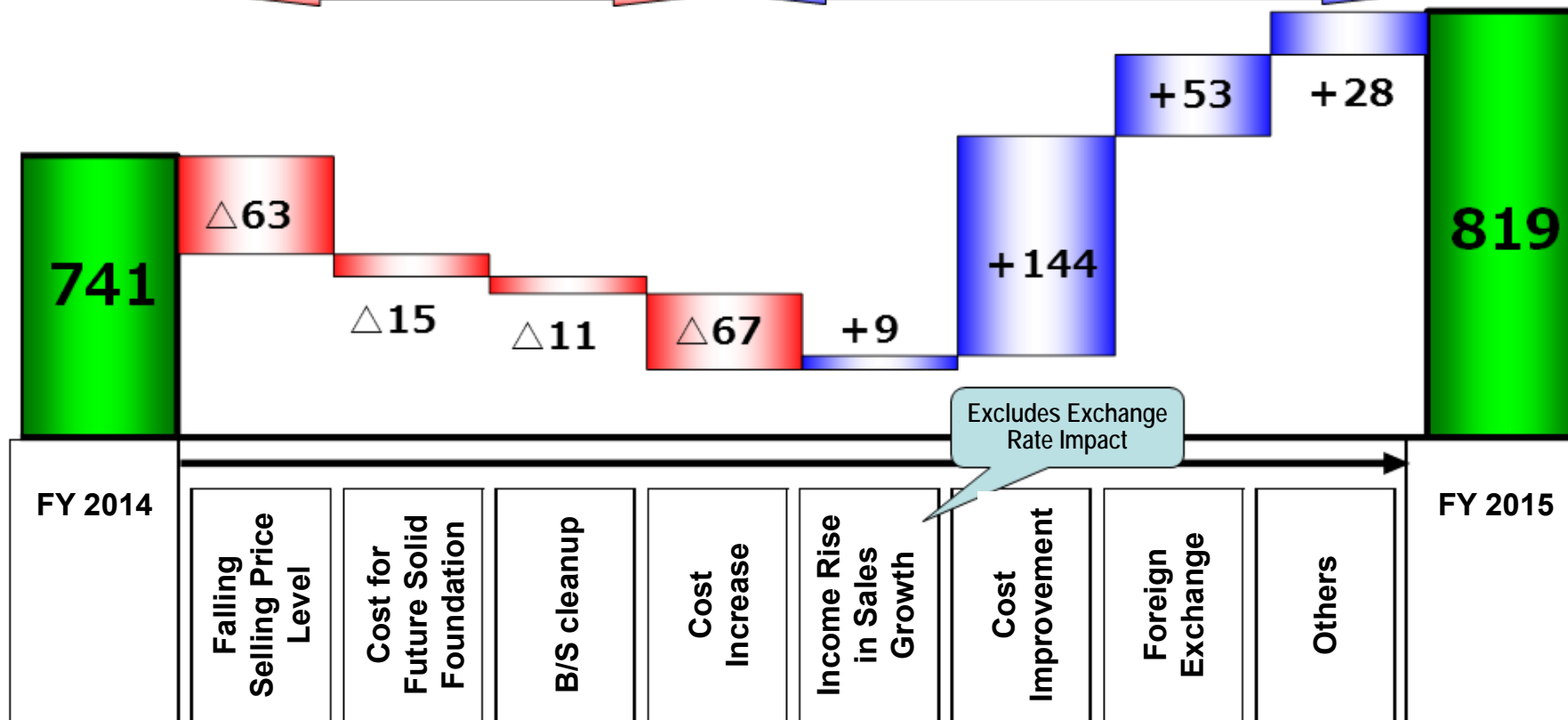
( ): Profit margin on sales

		FY 2014	FY 2015	Increase/Decrease
<b>Dividend</b>	<b>Interim</b>	<b>14 yen</b>	<b>21 yen</b>	<b>+ 7 yen</b>
	<b>Annual</b>	<b>20 yen</b>	<b>21 yen</b>	<b>+ 7 yen</b>

# 1-2) Operating Income Change Analysis

Increased costs including costs for solid future foundation and fixed costs are offset by cost improvements

**Operating Income +77**



# 1-3) Financial Results by Product (Mechanical Components) [1]

All business segments, including steering systems business recorded 12.9% higher operating income from last period

(100 million yen)

Mechanical Components		FY 2014	FY 2015	Increase/ Decrease	Increase/ Decrease (%)
Steering Systems	Net Sales	6,477	<b>6,783</b>	<b>+ 305</b>	+4.7%
Driveline Components	Net Sales	1,472	<b>1,482</b>	+9	+0.7%
Bearings	Net Sales	4,026	<b>4,085</b>	+58	+1.5%
Total	Net Sales	11,977	<b>12,351</b>	+374	+3.1%
	Operating Income	631	<b>712</b>	+81	<b>+12.9%</b>
	Operating Income (%)	5.3%	<b>5.8%</b>		

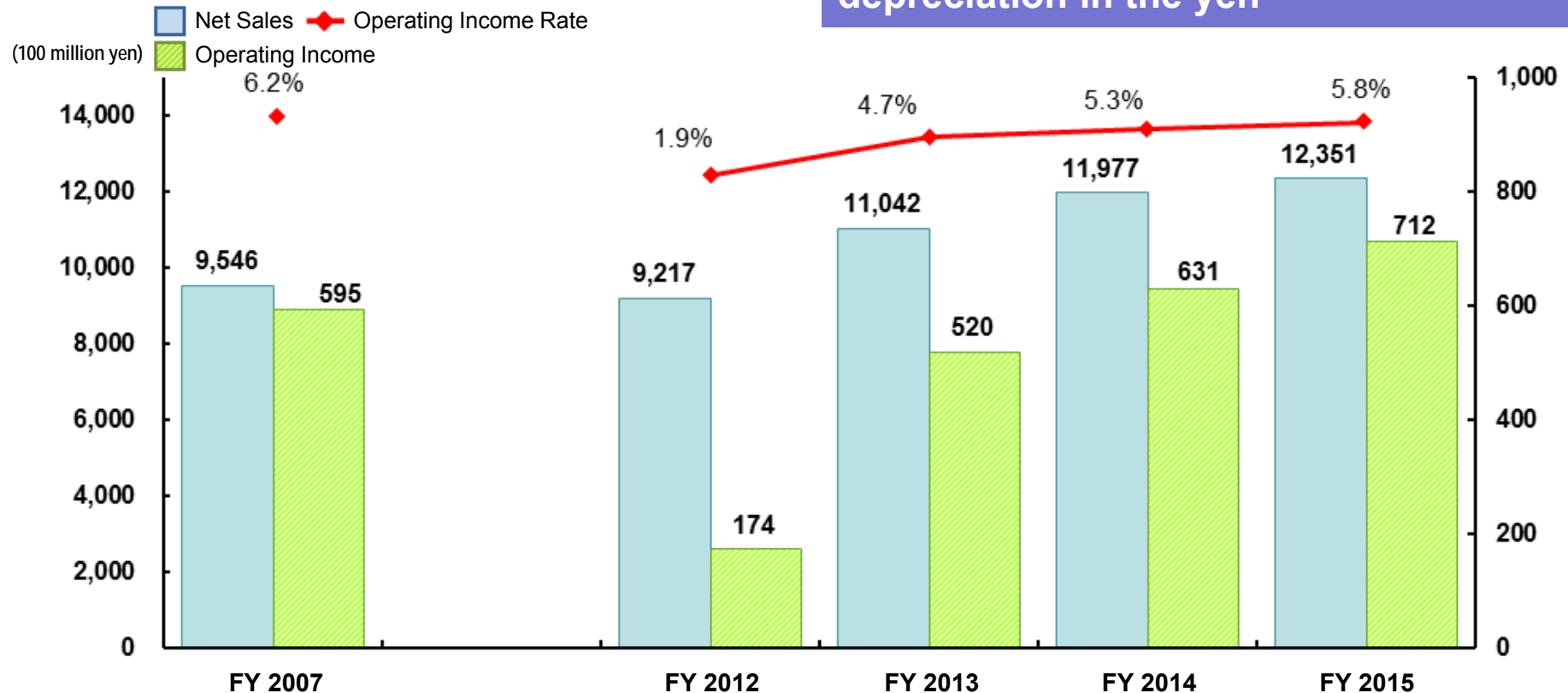
# 1-4) Financial Results by Product (Mechanical Components) [2]

(100 million yen)

	FY 2014	FY 2015	Increase/ Decrease
<b>Net Sales</b>	11,977	12,351	+374
<b>Operating Income</b>	631	712	+81
<b>Operating Income (%)</b>	5.3%	5.8%	

## Increase both in sales and profit

Both sales and profit increased mainly due to sales growth for steering systems in China, North America and Europe, as well as the effects of the depreciation in the yen



# 1-5) Financial Results by Product (Machine Tools & Others) [1]

Sales increased due to sales growth in Japan, but profit decreased due to impact mainly by sales mix

(100 million yen)

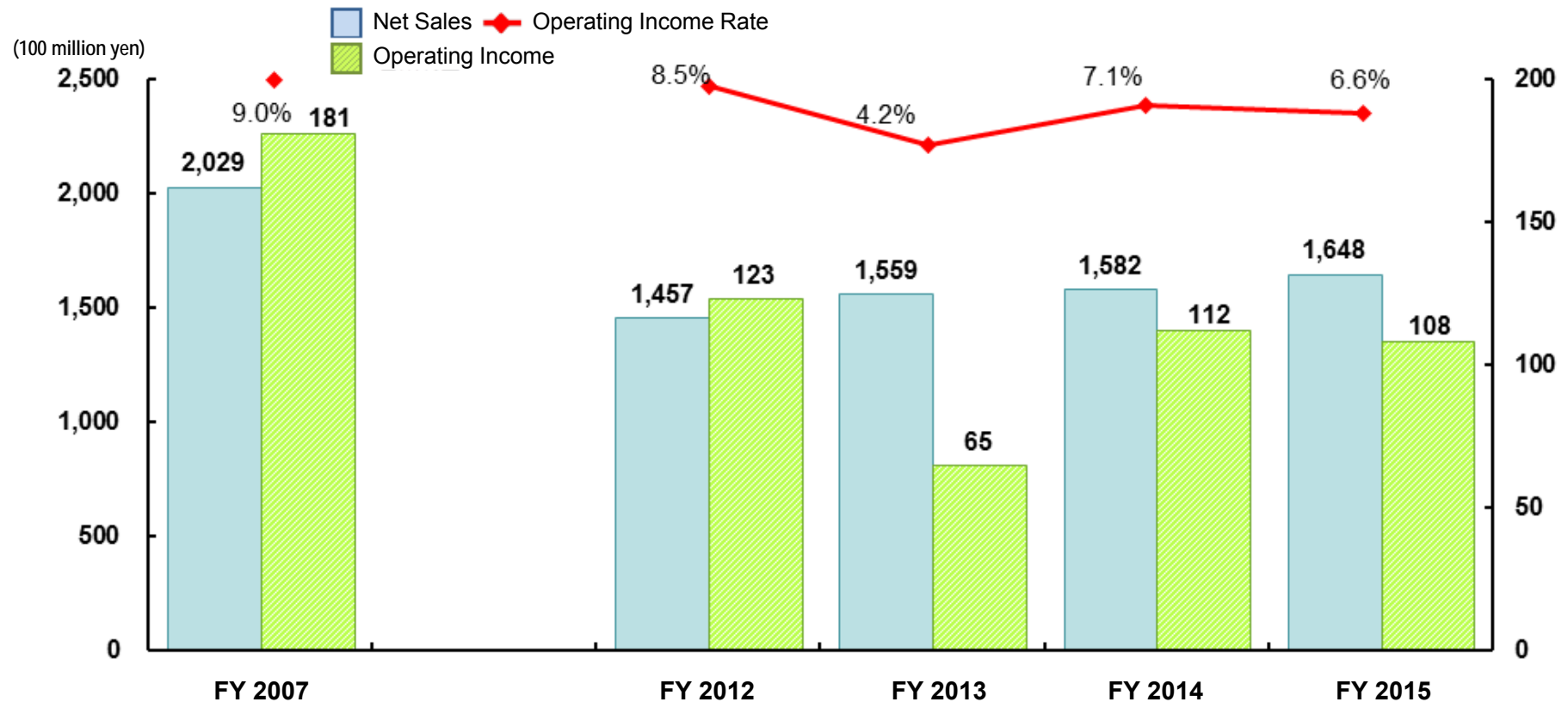
Machine Tools/Other		FY 2014	FY 2015	Increase/ Decrease	Increase/ Decrease (%)
Machine Tools	Net Sales	1,464	<b>1,525</b>	+60	+4.2%
	Operating Income	112	<b>108</b>	△3	△3.2%
Other	Net Sales	117	<b>122</b>	+4	+4.0%
	Operating Income	112	<b>108</b>	△3	△3.2%
Total	Net Sales	1,582	<b>1,648</b>	+65	+4.1%
	Operating Income rate(%)	7.1%	<b>6.6%</b>		

# 1-6) Financial Results by Product (Machine Tools & Others) [2]

(100 million yen)

	FY 2014	FY 2015	Increase/ Decrease
Net Sales	1,582	1,648	+65
Operating Income	112	108	△3
Operating Income (%)	7.1%	6.6%	

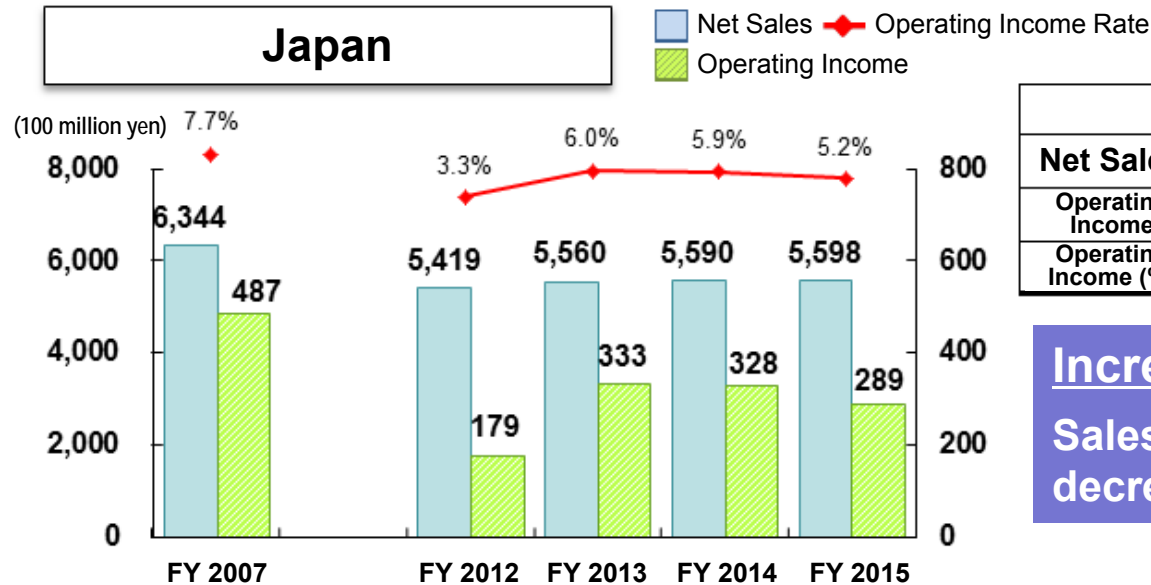
**Increase both in sales and profit**  
In spite of sales growth in Japan, profit was decreased due to impact mainly by sales mix





# 1-7) Financial Results by Region [1]

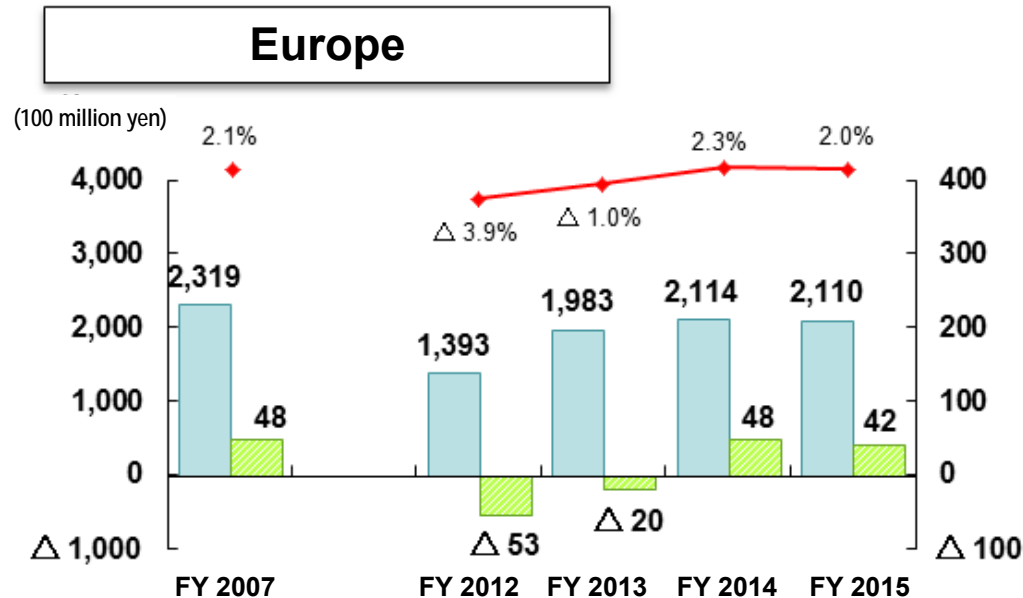
## Japan



	FY 2014	FY 2015	Increase/Decrease
Net Sales	5,590	5,598	7
Operating Income	328	289	△ 38
Operating Income (%)	5.9%	5.2%	

**Increase both in sales and profit**  
Sales slightly increased while profit decreased by sales mix

## Europe

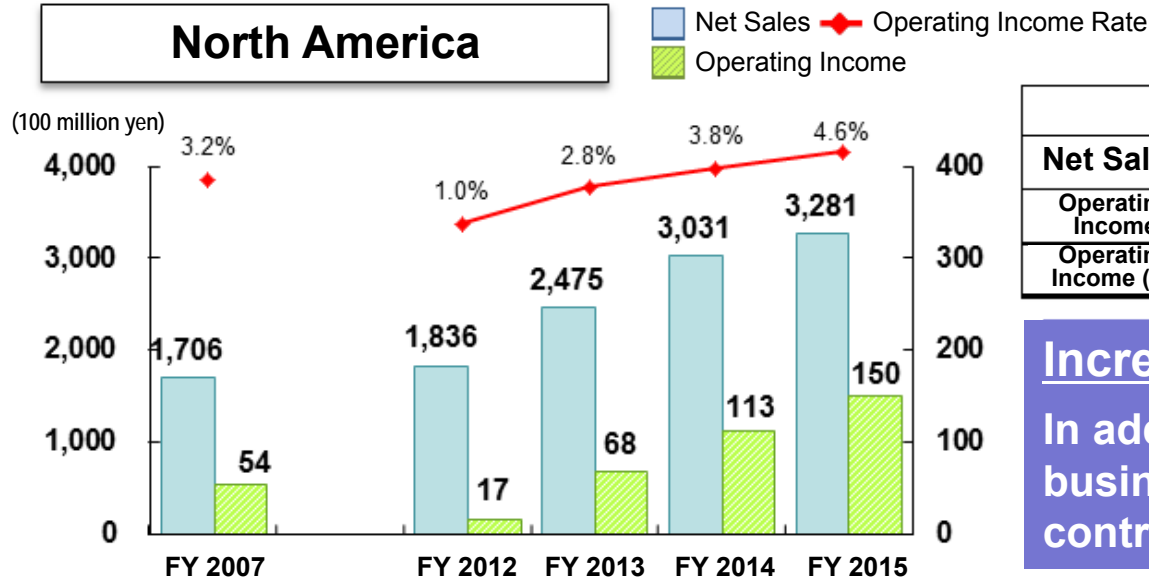


	FY 2014	FY 2015	Increase/Decrease
Net Sales	2,114	2,110	△ 4
Operating Income	48	42	△ 5
Operating Income (%)	2.3%	2.0%	

**Decrease both in sales and profit**  
Sales slightly decreased, and profit decreased a little while structural reform continues

# 1-8) Financial Results by Region [2]

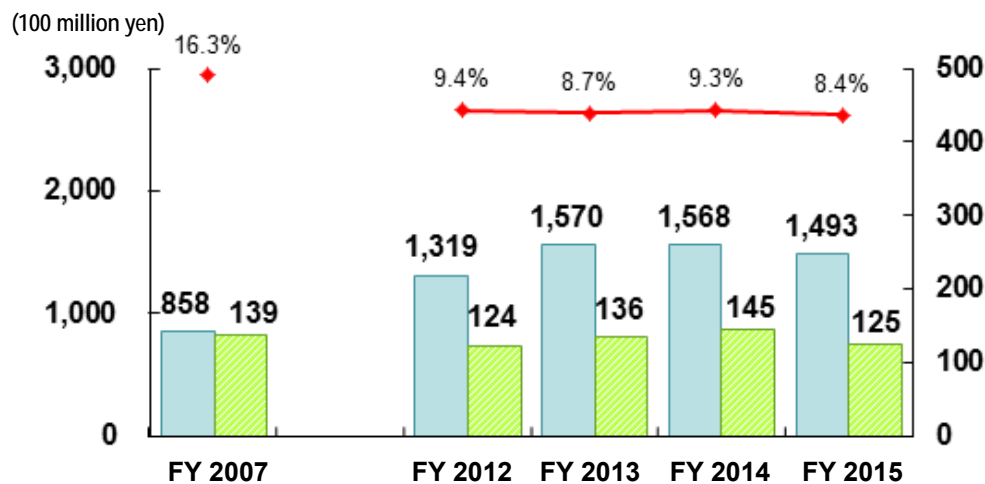
## North America



	FY 2014	FY 2015	Increase/Decrease
<b>Net Sales</b>	3,031	3,281	<b>250</b>
<b>Operating Income</b>	113	150	<b>36</b>
<b>Operating Income (%)</b>	3.8%	4.6%	

**Increase both in sales and profit**  
 In addition to sales growth in all business segments, cost improvement contributed to profit

## Asia/Oceania (including India)



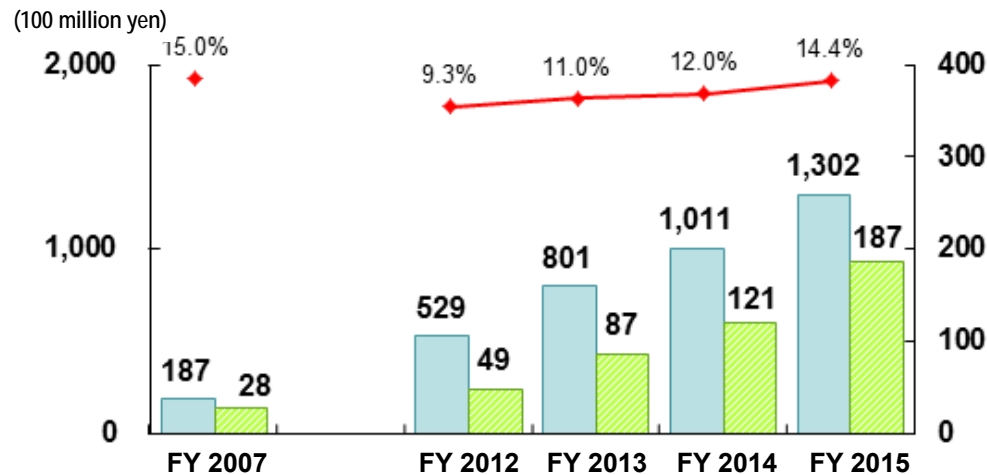
	FY 2014	FY 2015	Increase/Decrease
<b>Net Sales</b>	1,568	1,493	<b>△ 75</b>
<b>Operating Income</b>	145	125	<b>△ 20</b>
<b>Operating Income (%)</b>	9.3%	8.4%	

**Decrease both in sales and profit**  
 Automotive production remained low in ASEAN region, resulting in decrease in profit due to sales decline

# 1-9) Financial Results by Region [3]

## China

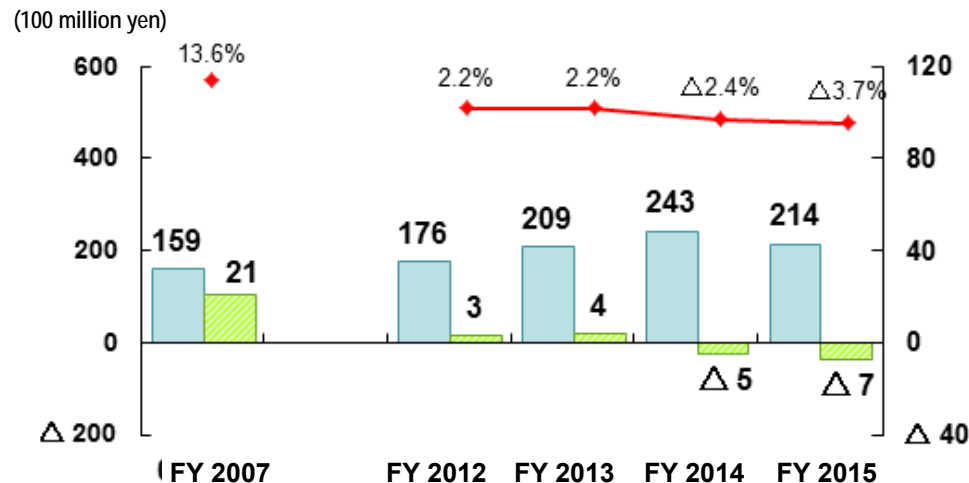
Net Sales Operating Income Rate  
Operating Income



	FY 2014	FY 2015	Increase/Decrease
Net Sales	1,011	1,302	291
Operating Income	121	187	66
Operating Income (%)	12.0%	14.4%	

**Increase both in sales and profit**  
Both sales and profit increased due to steady sales in automobile as well as effects of new project

## South America/Others



	FY 2014	FY 2015	Increase/Decrease
Net Sales	243	214	△ 29
Operating Income	△ 5	△ 7	△ 2
Operating Income (%)	△ 2.4%	△ 3.7%	

**Decrease both in sales and profit**  
Both sales and profit decreased due to impacts of economic climate and currency depreciation

1. Results for Fiscal Year 2015

**2. Forecasts for Fiscal Year 2016**

3. Progress of Mid-Term Management Plan

## 2-1) Forecast for External Environment

### Forecast for External Environment

- Continuing strong yen
- Sustainable in developed countries
  - US Market continues to expand at a moderate pace
  - Modest recovery continues in European Market
- Chinese Market gradually slowing
- Emerging countries except China persist with weak growth
- Restrained recovery in Japan

### Our Focus

- Automotive
  - Japanese automotive manufacturer's production in China
  - Automotive production in Asia and Japan where the market is sluggish
- Industrial Machine/Machine Tools
  - Demand trends in steel and construction machinery sectors, which seem to be slowing down or sluggish, and agricultural machinery
  - Demand trend in wind power generation and machine tool sectors, which remain steady

## 2-2) Forecasts for Fiscal 2016

Both sales and profit are expected to decrease due to significant impact of exchange rate fluctuation (strong yen)

(100 million yen)

	FY 2015 (Actual)	FY 2016 (Forecast)			Increase/ Decrease	Increase/ Decrease (%)
		1st Half	2nd Half	Full Year		
Net Sales	13,999	6,400	6,600	13,000	△999	△7.1%
Operating Income	(5.9%) 819	(4.2%) 270	(5.0%) 330	(4.6%) 600	△219	△26.8%
Ordinary Income	(5.8%) 812	(4.4%) 280	(5.0%) 330	(4.7%) 610	△202	△24.9%
Profit attributable to owners of parent	(3.5%) 486	(3.0%) 190	(3.3%) 220	(3.2%) 410	△76	△15.8%
Exchange Rate (Apr ~ Mar)	120 yen/USD 132 yen/EUR	105 yen/USD 120 yen/EUR	105 yen/USD 120 yen/EUR	105 yen/USD 120 yen/EUR	△15 yen △12 yen	
Capital Expenditure	631	347	453	800	+168	26.7%
Depreciation	584	280	310	590	+5	1.0%
Dividend	42円	21円	21円	42円	-	

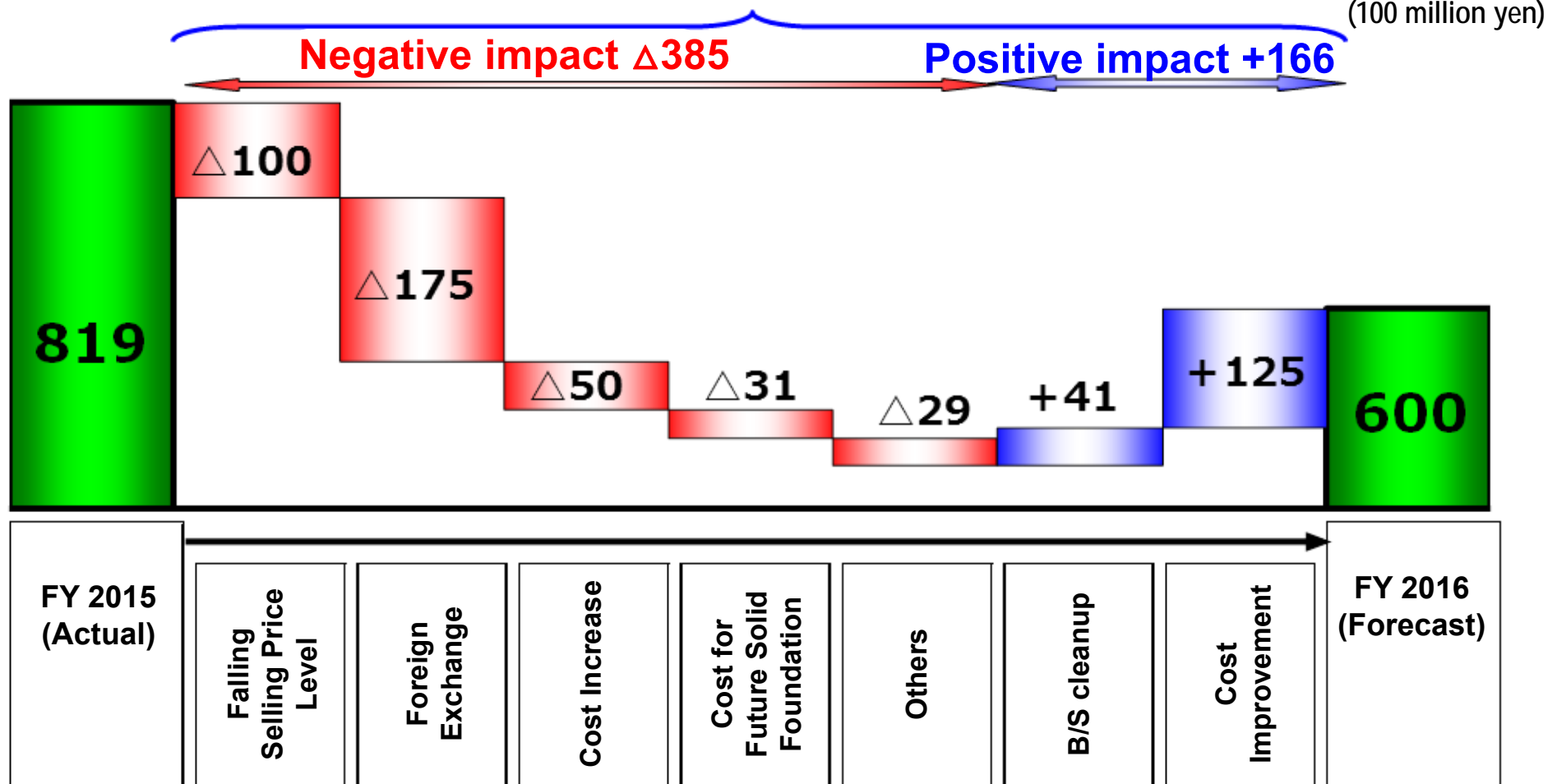
( ): Profit margin on sales

# 2-3) Operating Income Change Analysis

Profit is expected to decrease due to increase in R&D expense, such as for ADAS and IoE, and expenses related to retirement benefits, as well as impact of exchange rate fluctuation (strong yen)

**Operating Income  $\Delta 219$**

(100 million yen)



## 2-4) Net Sales by Product

(100 million yen)

		FY 2015 (Actual)	FY 2016 (Forecast)			Increase/ Decrease	Increase/ Decrease (%)
			1st Half	2nd Half	Full Year		
Mechanical Components	Steering Systems	6,783	3,130	3,305	6,435	△348	△5.1%
	Driveline Components	1,482	695	680	1,375	△107	△7.2%
	Bearings	4,085	1,805	1,810	3,615	△470	△11.5%
	[ Total ]	12,351	5,630	5,795	11,425	△926	△7.5%
Machine Tools/Other	Machine tools	1,525	700	735	1,435	△90	△6.0%
	Others	122	70	70	140	+17	+14.2%
	[ Total ]	1,648	770	805	1,575	△73	△4.5%
[ Total Net Sales ]		13,999	6,400	6,600	13,000	△999	△7.1%



## 2-5) Net Sales by Region

(100 million yen)

	FY 2015 (Actual)	FY 2016 (Forecast)			Increase/ Decrease	Increase/ Decrease (%)
		1st Half	2nd Half	Full Year		
Japan	5,598	2,610	2,725	5,335	△263	△4.7%
Europe	2,110	970	1,025	1,995	△115	△5.5%
North America	3,281	1,395	1,365	2,760	△521	△15.9%
Asia/Oceania	1,493	705	720	1,425	△68	△4.6%
China	1,302	590	635	1,225	△77	△6.0%
South America/ Others	214	130	130	260	+45	+21.4%
[ Total Net Sales ]	13,999	6,400	6,600	13,000	△999	△7.1%

1. Results for Fiscal Year 2015

2. Forecasts for Fiscal Year 2016

**3. Progress of Mid-Term Management Plan**

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### 1. Review (FY 2014 and FY 2015)

### 2. Progress Status of Mid-term Management Plan

- 1) Steering Systems Business Operations
  - 2) Drivelines Business Operations
  - 3) Bearing Business Operations
  - 4) Machine Tools & Mechatronics Business Operations
- (Enhancement of Fundamentals)
- 5) Global HR Management
  - 6) Strengthening Financial Basis
  - 7) Operational Reform of Indirect Departments
  - 8) Establishment of Global Business Basis

## 1. Review (FY 2014 and FY 2015)

Summary

Profit & Loss Trend

Management Index (Consolidated)

# 3-1) Review – Summary

[Review of FY 2014 and FY 2015]

## Mid-term Management Plan started in April 2014.

- Rolling over every year while considering what can be done right now for 5 years later -

### Major activities

#### Solidifying footing

(Sales method)

- Enhanced cooperation with customers at development stage through frontloading activity
- Restructuring of sales companies and dealers  
 Enhancement of sales areas and rearrangement of sales engineers

(Supply system)

- Restructuring/improvement of bases and building of small-lot production and inventory control systems to meet demands

(Fundamentals)

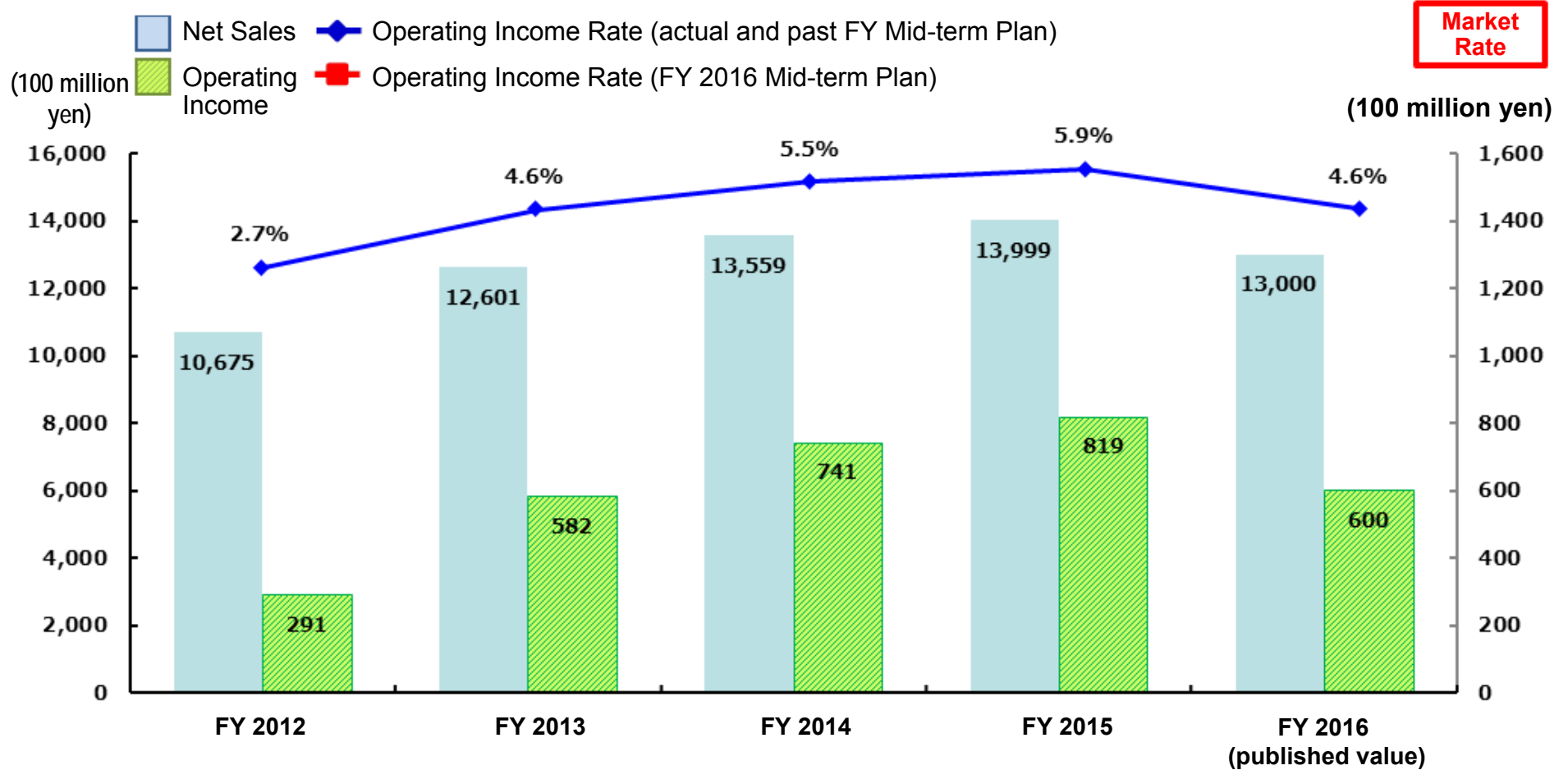
- Development of global HR, establishment of strong financial basis, and operational reform/promotion of adoption of IT

#### Bullet loading

- Development of next-generation leading products
- Examination of new business

# 3-1) Review – Profit & Loss Trend (Market rate)

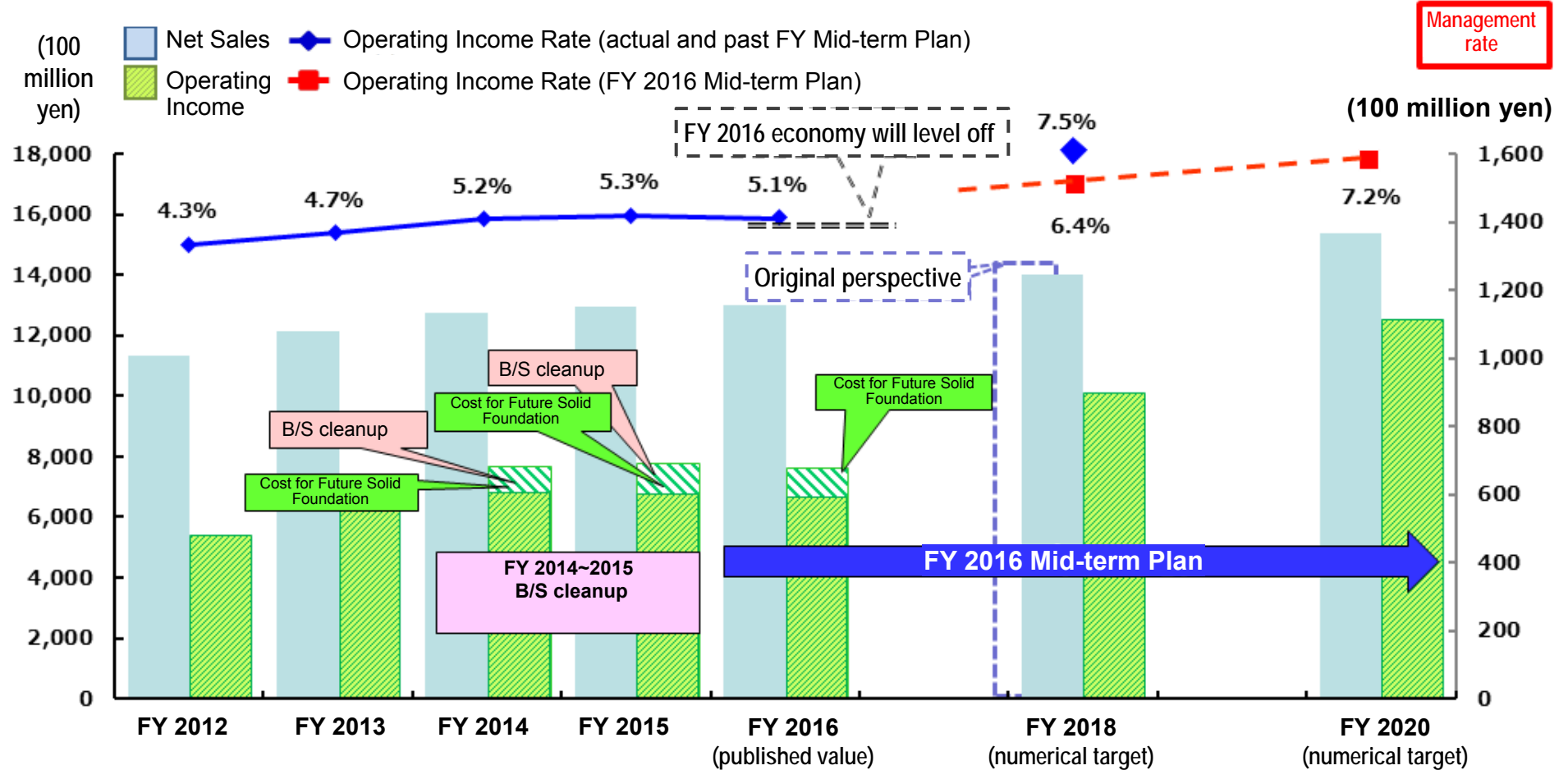
- The highest sales & income in JTEKT history at market rates
- Both sales and profit in FY 2016 are expected to decrease due to the impact of exchange fluctuation



# 3-1) Review – Profit & Loss Trend (Management rate)

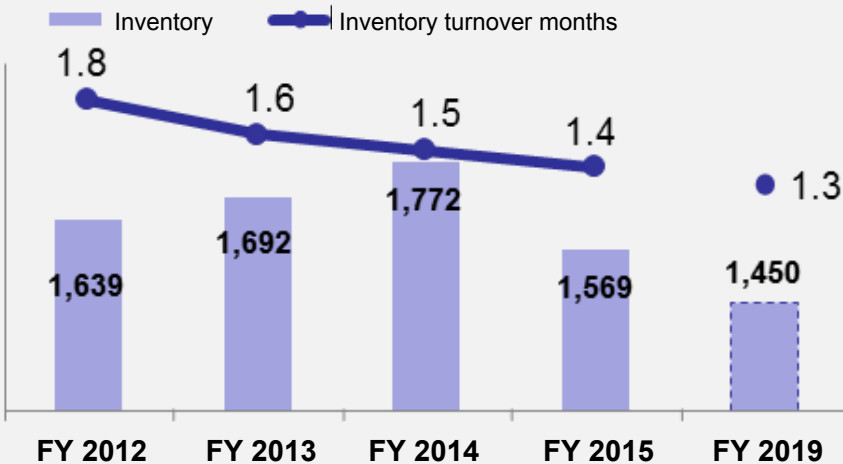
<Business structure evaluation with fixed exchange rate> (Management rate – USD: 95 yen, EUR: 130 yen)

- Business structure is improving well, but a difference from the original perspective is recognized (leveling off)
- Review the measures, and review the plan

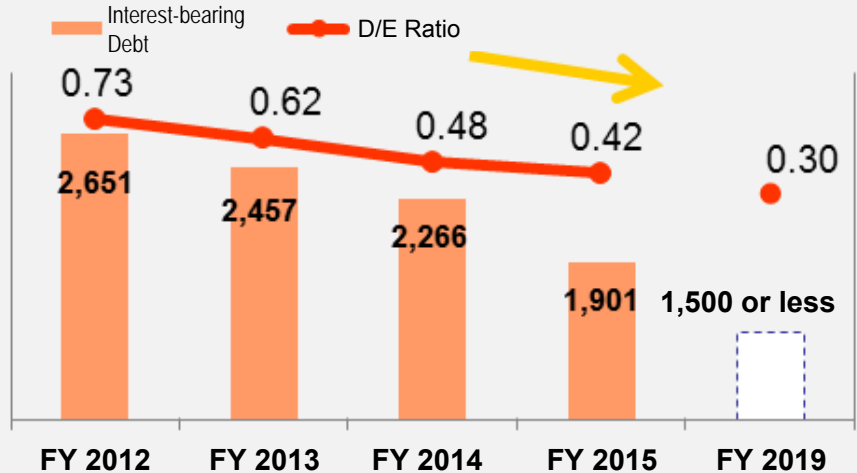


# 3-1) Review – Management Index (Consolidated)

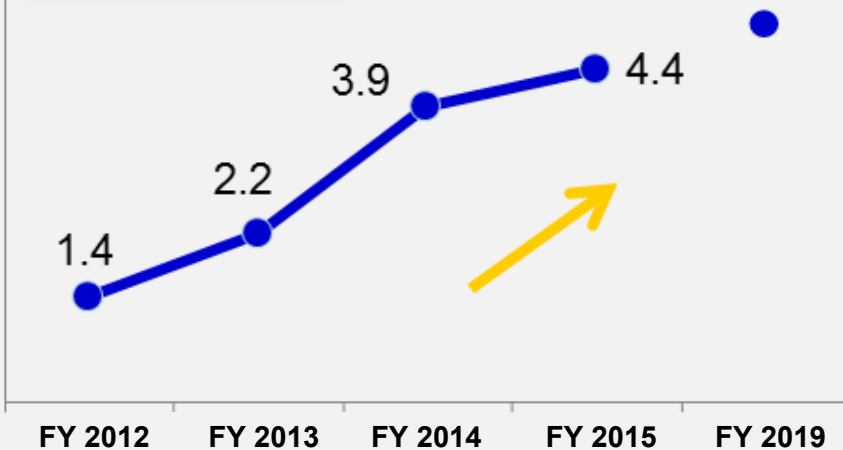
## Inventory



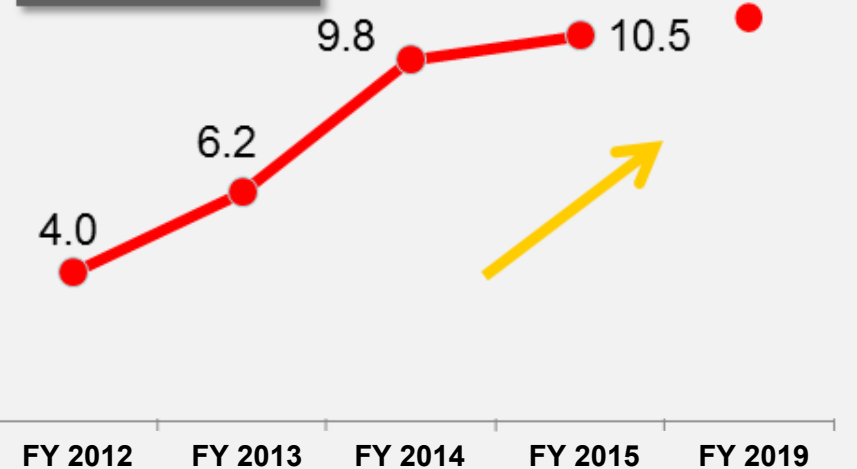
## Interest-bearing Debt



## ROA



## ROE





# 1) Steering Systems Business Operations

# 3-2-1) Roles & Aims

## Roles & Aims

With “World No. 1” & “Only One” spirit, continually deliver value to our customers and keep evolving as the all-time leading supplier in the market

<b>Mid-term target</b> Steering systems	Maintain the top global share for automotive steering systems	<table border="1"> <tr> <td style="padding: 2px 10px;"><b>Share</b></td> <td style="padding: 2px 10px;"><b>25%</b></td> </tr> </table>	<b>Share</b>	<b>25%</b>
<b>Share</b>	<b>25%</b>			

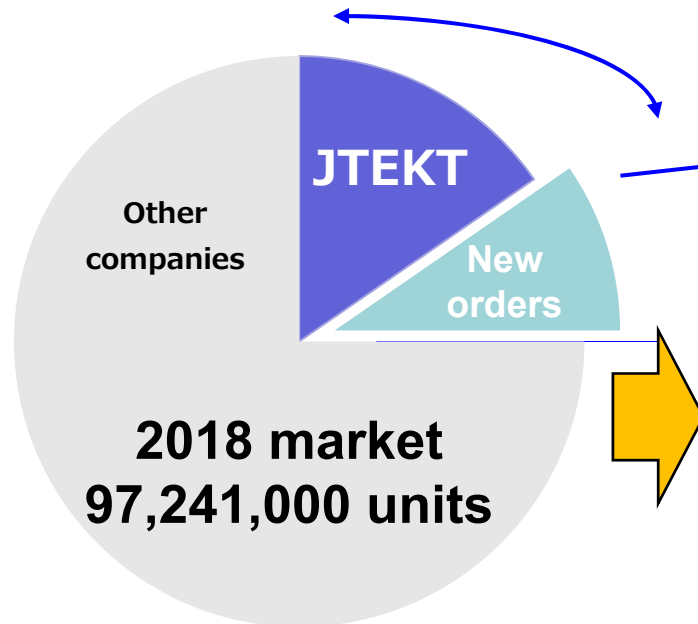
## Priority activities

<b>Strengthen product potential</b>	<ul style="list-style-type: none"> <li>• Corresponding to functional safety, small, lightweight, fuel-saving</li> <li>• Introduce competitive products to the market</li> <li>• Accelerate promotion of ADAS development</li> </ul>
<b>Business model revolution</b>	<ul style="list-style-type: none"> <li>• Strengthen global projects/front loading activities</li> <li>• Strengthen sales price strategy/cost planning potential</li> </ul>
<b>Improve supply method</b>	<ul style="list-style-type: none"> <li>• Organize a global supply system</li> <li>• Establish a global production preparation PM system</li> <li>• Clarify MCU/column business deployment</li> </ul>

# 3-2-1) Forecast to Accomplish 2018 Mid-term Plan

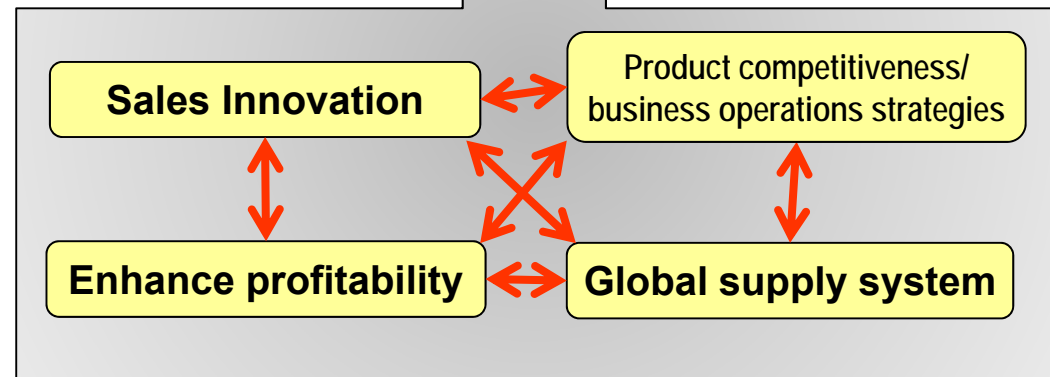
## Market share forecast for FY 2018

\*According to JTEKT research based on market data

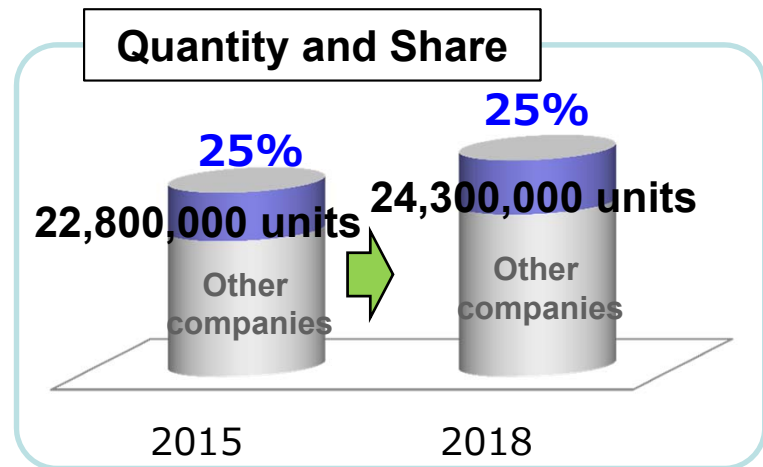


**New orders in FY 2015  
Mid-term plan target  
25% share achieved**

## Results of FY 2015 activities for receiving orders



**Forecast to maintain top share for FY 2018 completed**



# 3-2-1) Forecast to Accomplish 2018 Mid-term Plan

## Sales/profit forecast for FY 2018

(Based on management rate)

**Both sales and profit in 2018 will steadily increase, but will not reach the original numeric value perspective.**

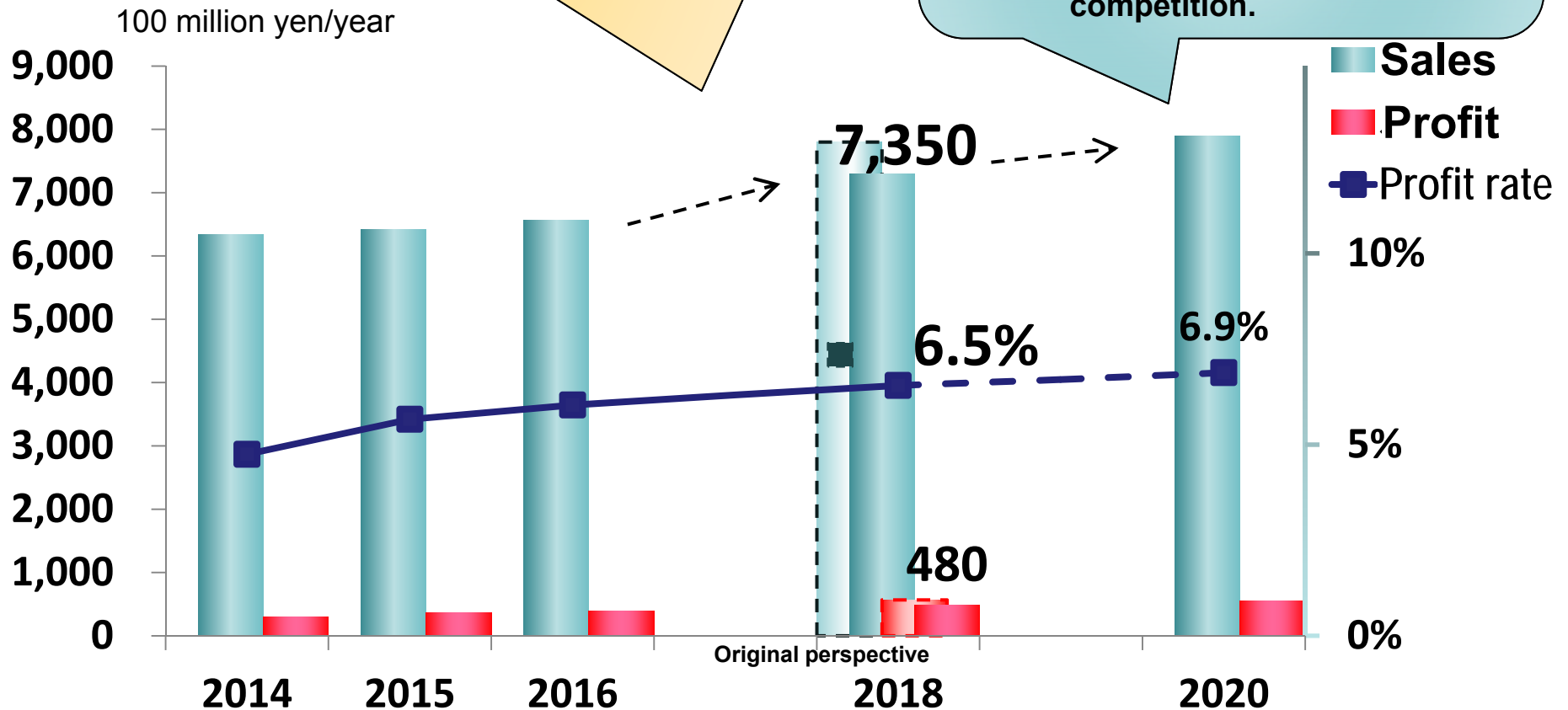
**Sales** Slow market growth (compared to original market prospects)

**Profit** Cost reductions will be strongly promoted, but profit will suffer greatly from a drop-off in sales, intense market competition, and increases in fixed costs.

**2020**

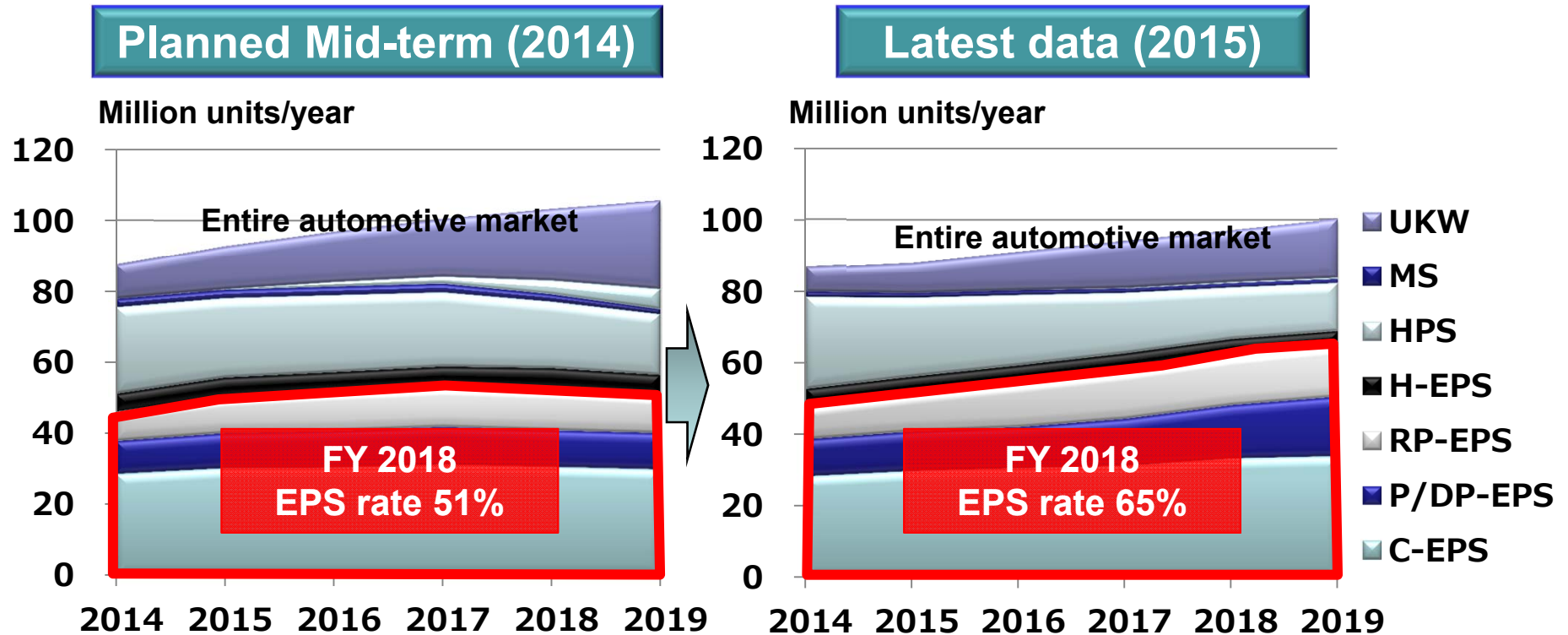
**Sales** Steady increase expected

**Profit** Cost reduction will be continuously promoted, but it will be tough to meet the goal due to intense market competition.



# 3-2-1) Global Steering Market Trend

\*According to JTEKT research based on market data



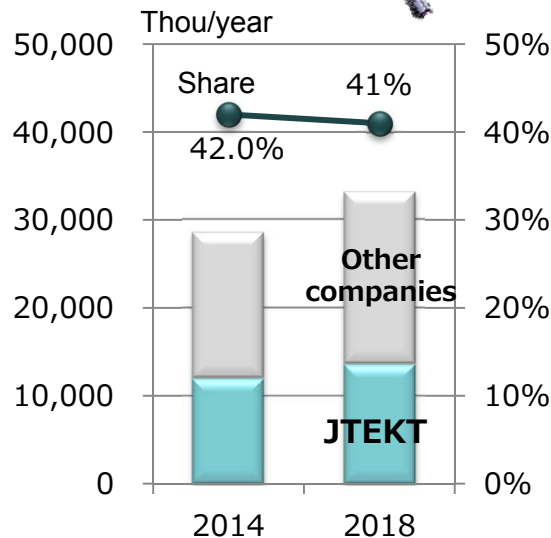
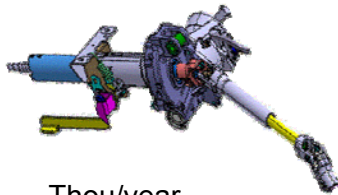
### <Steering market trends>

- ✓ Entire automotive market is growing, but the growth rate has slowed down.
- ✓ On the other hand, EPS production has accelerated more than expected. Surely expand market share by fully utilizing JTEKT advantages of EPS lineups covering C-EPS to downstream assist EPS.

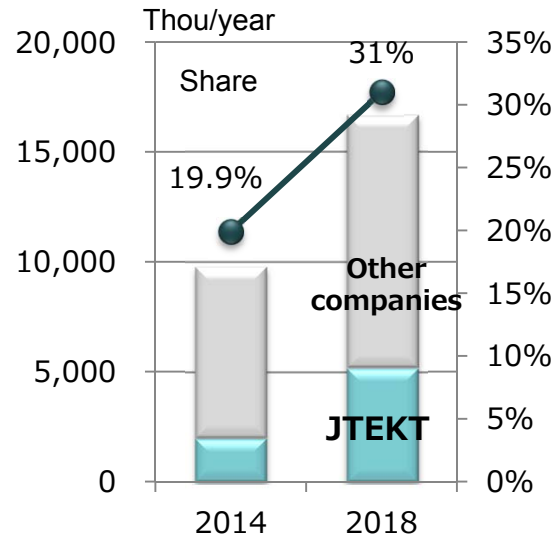
# 3-2-1) Positions of JTEKT EPS Products in the Industry

\*According to JTEKT research based on market data

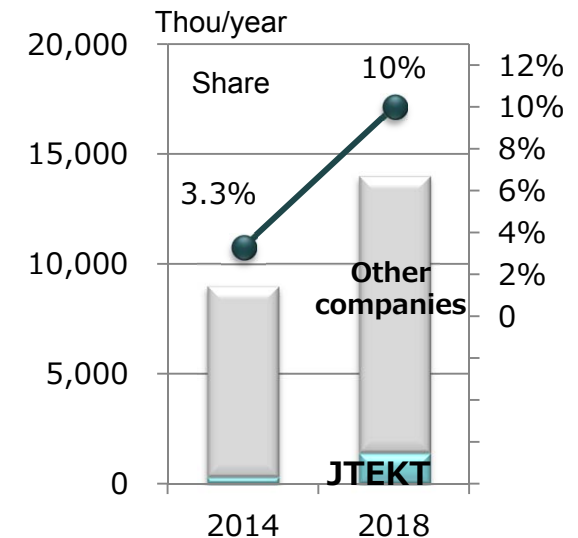
## C-EPS (column type)



## DP-EPS (dual pinion type)



## RP-EPS (rack parallel type)



### <Surely maintain the top share of EPS systems>

- ✓ C-EPS steadily increased in quantity. However, the share was reduced by 1 point.
- ✓ DP-EPS expanded its share more than planned; approaching top share.
- ✓ RP-EPS made up for delay and steadily increased its share and quantity.

# 3-2-1) FY 2015 review

		FY 2015 action items and review	2016 activities
Sales Innovation	Achievements	<ul style="list-style-type: none"> <li>✓ PM System strengthening mechanism has taken root.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Strengthen PM System (Project Management)                             <ul style="list-style-type: none"> <li>• Promotion of frontloading to D3</li> </ul> </li> <li>➤ Establish PM System for production preparation</li> </ul>
	Challenges	<ul style="list-style-type: none"> <li>✓ Intense market competition</li> <li>✓ Global PJ production preparation has items to be solved.</li> </ul>	
Enhance profitability	Achievements	<ul style="list-style-type: none"> <li>✓ Sales price/cost strategy activities have taken root.</li> <li>✓ Sales price/cost strategy in China has made great achievements.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Continue enhancement of sales price/ cost strategy                             <ul style="list-style-type: none"> <li>Enhance association with the project</li> <li>Reflect results into mass produced components</li> <li>Expand the range of target products (added by the Subcommittee)</li> </ul> </li> </ul>
	Challenges	<ul style="list-style-type: none"> <li>✓ Activities have taken root, but are partially delayed in execution.</li> <li>✓ Delay in reflection of results to PJ</li> </ul>	
Strengthening product potential Business operations strategies	Achievements	<ul style="list-style-type: none"> <li>✓ Prospects put on a strategy for internal manufacturing of core components                             <ul style="list-style-type: none"> <li>Prospects put on MCU development</li> <li>Prospects put on mass production of PF3 column and RP-EPS</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>➤ Strengthen frontloading activities                             <ul style="list-style-type: none"> <li>=&gt; Accelerate development of ADAS-supported ST</li> <li>=&gt; High output DP, RP-EPS for large-size vehicles</li> <li>Development acceleration and frontloading activities</li> </ul> </li> </ul>
	Challenges	<ul style="list-style-type: none"> <li>✓ Increase in ADAS-supported projects, requiring accelerated development</li> </ul>	
Global supply system	Achievements	<ul style="list-style-type: none"> <li>✓ CEPS production in Mexico started</li> <li>✓ PF2A column production started</li> </ul>	<ul style="list-style-type: none"> <li>➤ Enhance the basis in North America (correspond to expansion in Mexico/correspond to new PJ in North America)</li> <li>➤ Production of downstream assist EPS increased in China.</li> </ul>
	Challenges	<ul style="list-style-type: none"> <li>✓ Reinforce Mexico JAMX infrastructure</li> <li>✓ Establish goals for mass production of RP-EPS</li> </ul>	

## 2) Drivelines Business Operations



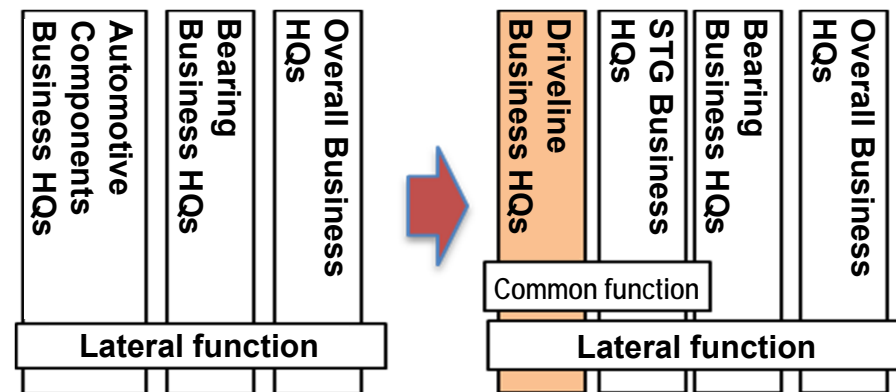
## 3-2-2) Introduction - Purpose of Establishment of Driveline Business HQ -

Automotive Systems Business HQ was divided into two sections for steering systems and drivelines, establishing Driveline Business HQ (Apr. 1, 2016).

**Grow the driveline business as a core business.**

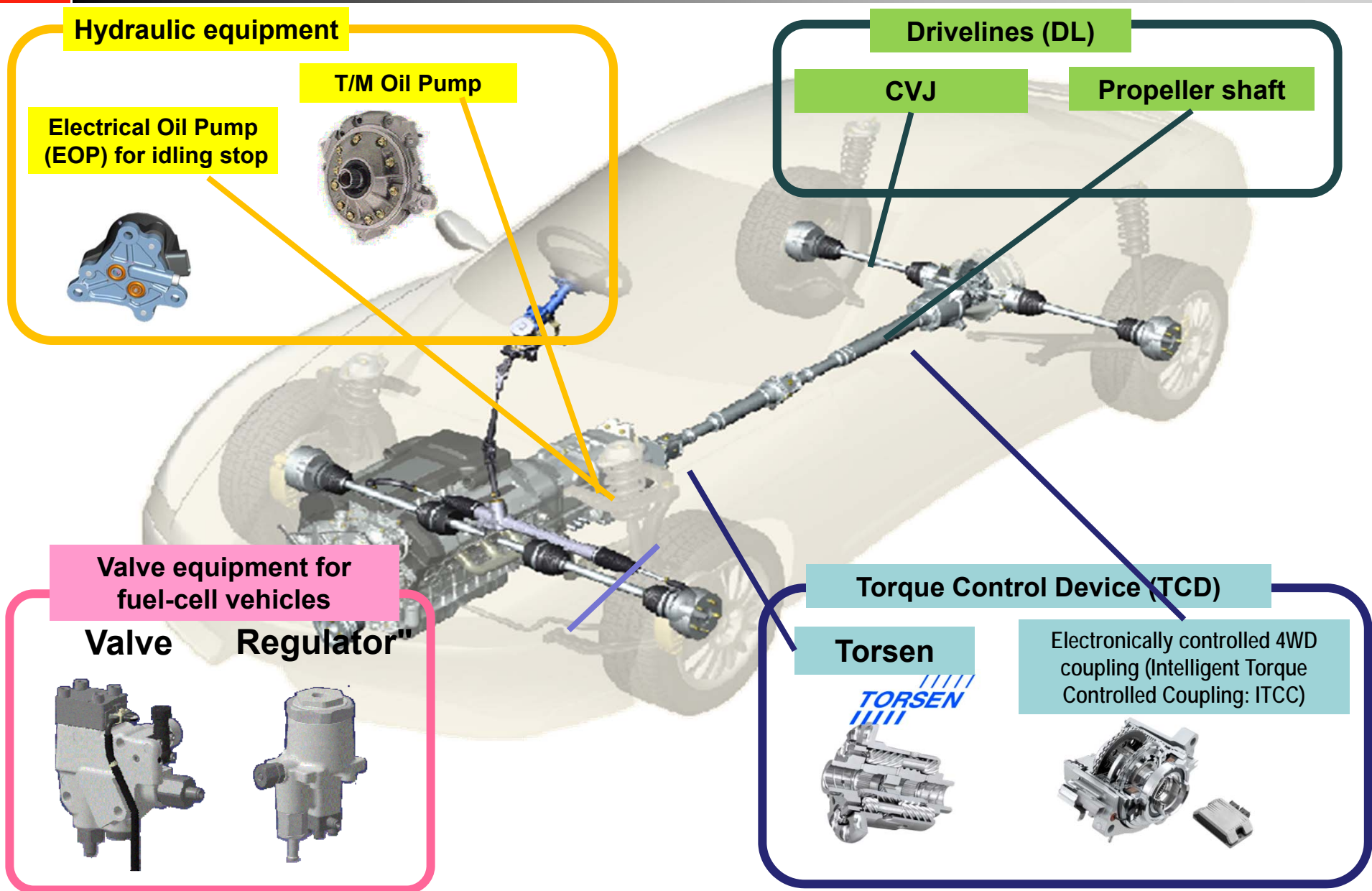
### Purpose

- 1) Growth of drivelines business operations only
- 2) Clarification of business operation responsibility and profit responsibility
- 3) Improving Mobile Power (Prompt Decision Making)



Based on bearing business and machine tools & mechatronics business as fundamental technologies, steering systems business and driveline business are separated from automotive systems business and linked to each other to refine their technologies, following the advanced automotive technologies.

# 3-2-2) Introduction of Driveline Business HQ Products



## 3-2-2) Roles & Aims

**With “World No. 1” & “Only One” spirit, continually deliver value to our customers and keep evolving as the all-time leading supplier in the market**

**Mid-term target Drivelines** Advance to be a leading global company as a supplier of driveline systems

### Priority activities

#### Business model revolution

- Strengthen global business capabilities/frontloading activities
- Strengthen sales price strategy/cost planning ability
- Enhance the CVJ business operations foundation
- Strengthen system capabilities

#### Strengthening product potential Business operations strategies

- Size reduction/Cost reduction/High performance
- Unitization/Modularization
- New field product development

#### Global supply system

- Reestablishment of global production hub fully through maximum use of production capacity

# 3-2-2) Forecast to Accomplish 2018 Mid-term Plan

(Based on management rate)

**Severe external environment continues from 2016 to 2020.**

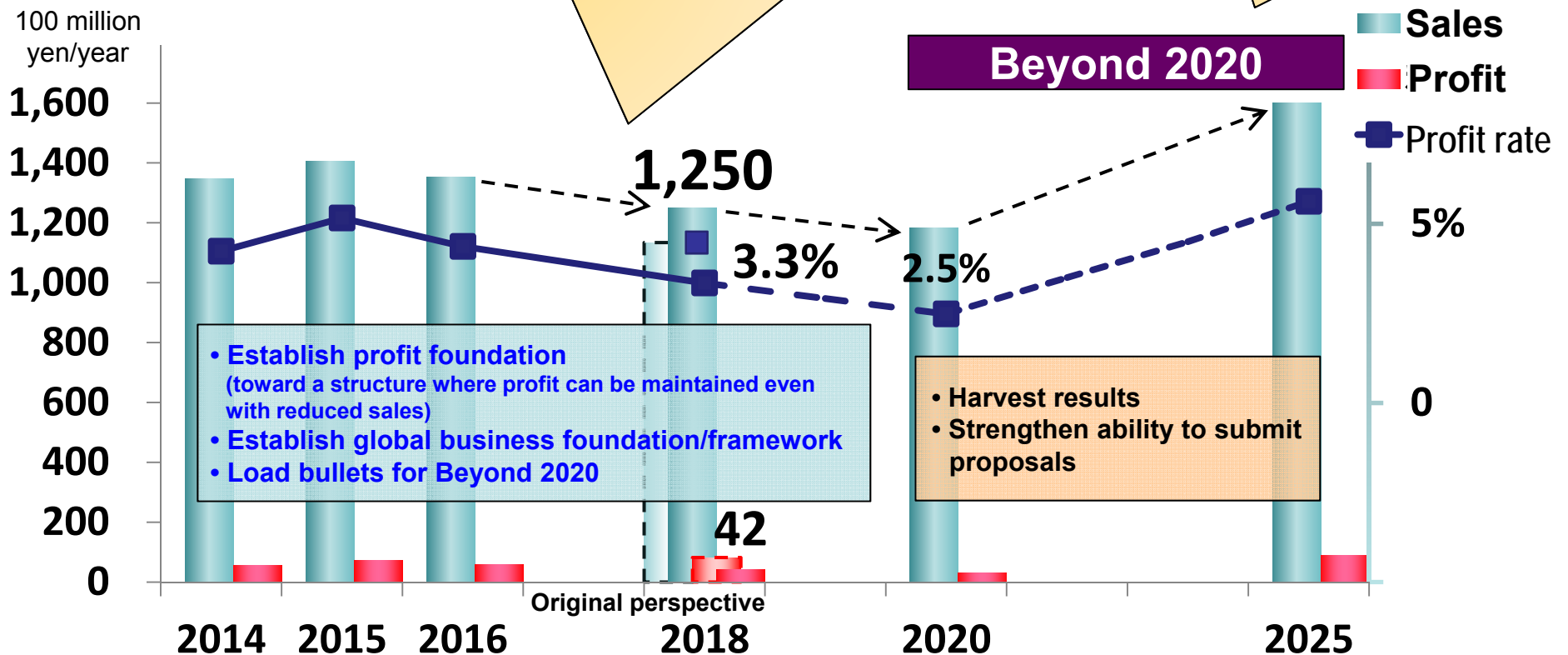
**Sales**

- Concentration on CVJ business reduces workload
- Delayed modularization reduces ITCC workload in North America.

**Profit**

- Reduced due to decrease in sales
- Intense market competition
- Increased fixed costs

**Aim at advance to be a leading company growing continuously after 2020**



• Establish profit foundation (toward a structure where profit can be maintained even with reduced sales)

• Establish global business foundation/framework

• Load bullets for Beyond 2020

• Harvest results

• Strengthen ability to submit proposals

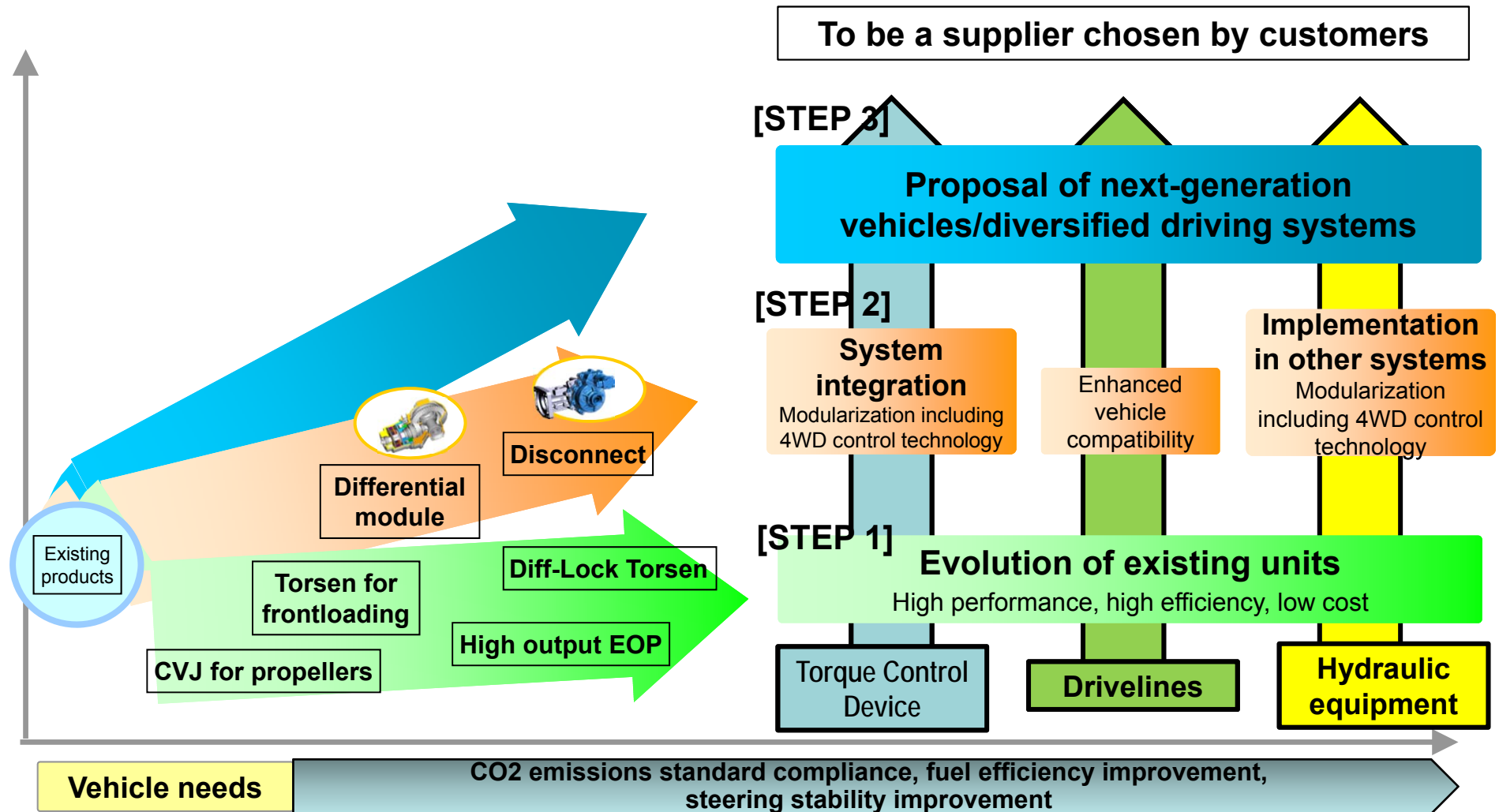
# 3-2-2) FY 2015 review

		Action items in FY 2015 and review
Sales Innovation	Achievements	<ul style="list-style-type: none"> <li>✓ PM System strengthening mechanism has taken root.</li> <li>✓ EU market survey activity (MS-EDM)</li> </ul>
	Challenges	<ul style="list-style-type: none"> <li>✓ Not leading to actually receiving orders</li> </ul>
Enhance profitability	Achievements	<ul style="list-style-type: none"> <li>✓ Sales price/cost strategy promoted</li> <li>✓ Oobeya activity promoted</li> </ul>
	Challenges	<ul style="list-style-type: none"> <li>✓ Not spread to other series. Correspondence to project framework on footing</li> <li>✓ Strengthening overseas CVJ profitability</li> </ul>
Strengthening product potential Business operations strategies	Achievements	<ul style="list-style-type: none"> <li>✓ Bullet loading for the future</li> <li>✓ Correspondence to selection and concentration of business (dampers)</li> </ul>
	Challenges	<ul style="list-style-type: none"> <li>✓ Accelerate development completion of differential module</li> </ul>
Global supply system	Achievements	<ul style="list-style-type: none"> <li>✓ Global supply system Thorough use of existing production capability. Promoted reorganization of plants in North America</li> </ul>
	Challenges	<ul style="list-style-type: none"> <li>✓ No effective results after examination of production in North America</li> </ul>

2016 activities
<ul style="list-style-type: none"> <li>➤ Strengthen global business capabilities                             <ul style="list-style-type: none"> <li>• Continue PM System enhancement</li> <li>• Overseas market research and sales expansion activities (MS-EDM)</li> <li>~ Cross-sectional implementation of activities in China mainly by EU/US makers</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>➤ Promote enhancement of sales price/cost and Oobeya activities                             <ul style="list-style-type: none"> <li>• Result reflection in actual PJ and cross-sectional implementation of series</li> <li>• Implementation of global activities =&gt; Strengthen global CVJ profitability</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>➤ Enhancement of new product development planning, differential module development, clutches for disconnect sailing, next-generation Torsen, etc.</li> <li>➤ Commercialization of CVJ for propellers</li> </ul>
<ul style="list-style-type: none"> <li>➤ Restructure North American plants Reestablish scenario for North American manufacturing hub bearing in mind future technologies and sales expansion.</li> </ul>

# 3-2-2) Concept of product potential strengthening

**Role & Aim: Make use of JTEKT advantages in business operations to produce products superior to those of other companies, contributing to improvement of added values of vehicles.**



# 3) Bearing Business Operations Strategies

### 3-2-3) Target image

Long-term vision for bearing operations

**Continue creating value, impress customers, and be praised for business operations**  
**— Lift the "Koyo" brand to be the top brand in the world —**



<b>Target image</b>	<b>Bearing Operations HQ</b>	<ul style="list-style-type: none"> <li>• Be a highly profitable business unit by transitioning from quantity to quality</li> <li>• Build lean and competitive structure (Enhance the business structure to solidify footing for growth)</li> </ul>
	<b>Automotive BRG</b>	<ul style="list-style-type: none"> <li>• Enhance frontloading activities</li> <li>• Bring high value-added products to the market in a timely manner by forecasting changes</li> <li>• Maintain position as one of Top 2 suppliers in the world</li> </ul>
	<b>Industrial/aftermarket BRG</b>	<ul style="list-style-type: none"> <li>• Implement solution proposal-type business that exceeds expected values</li> <li>• Create No. 1 &amp; Only One products and provide new technologies/services</li> <li>• Aftermarket field: Improve presence in the global market</li> </ul>



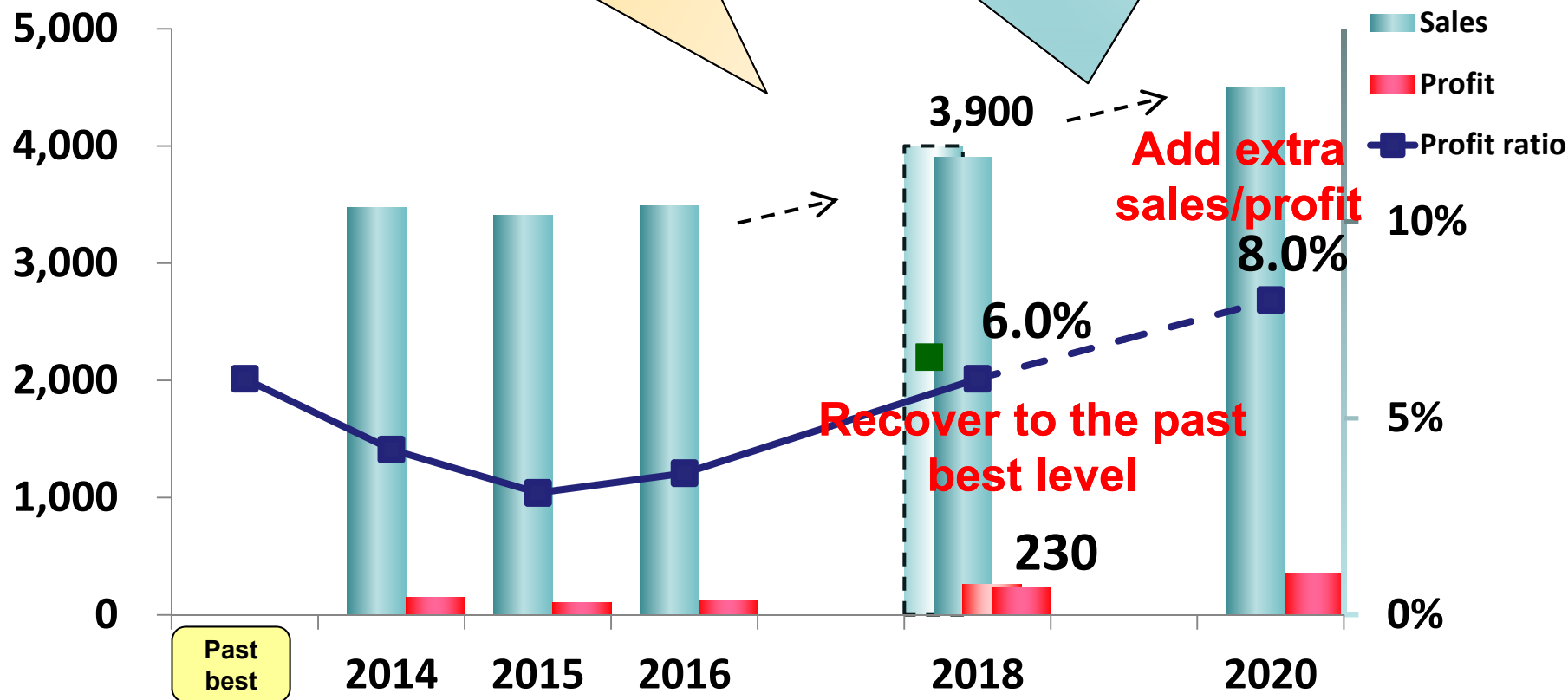
# 3-2-3) Forecast to Accomplish 2018 Mid-term Plan

(Management rate)

<Actions for priority tasks>  
 Analyze internal/external environmental factors for the past best and establish a structure that can deal with changes flexibly (carry out structural reform). Then, achieve 2018 Mid-term business plan with new measures.

<Realize strategies by industry/bearing type>  
 Add extra profit to the past best level by realizing strategies by industry/bearing type, then, achieve 2020 Mid-term business plan.

100 mill. JPY/year



# 3-2-3) Story for Achieving Mid-Term Management Plan

Actions for priority tasks  
(structural reform, production,  
sales, engineering)



Strategies by industry/bearing type

		FY2015	FY2016	FY2017	FY2018	FY2019	FY2020
<b>Harvest effects</b>		③, ④ : Reform sales method/Enhance industrial bearing business/ Create product/service in new areas ②, ④ : "Innovate manufacture & production engineering/enhance product marketability" ①, ② : Structural reform, enhance production capacity ③ : "Strengthen revenue base" by expanding short-/mid-term aftermarket sales					
		Operating profit amount					
<b>Measures</b>	<b>Structural reform /Production</b>	① Structural reform ② Production capacity, Production eng. capability			Realize strategies by industry/bearing type		
		Complete structural reform			Further reform to leap forward		
		Enhance production capacity·Establish production engineering capability (Innovate production engineering)			Raise the level		
		③ Reform sales method					
	<b>Sales</b>	Significantly accelerate the enhancement of aftermarket activity			Achieve Mid-Term Management Plan on industrial machinery/aftermarket		
		Strengthen sales system			Optimization by continuous promotion		
		Build the best sales process to win business					
		④ Develop high-value-added products					
<b>Engineering</b>	Strengthen global development system, Implement road map			Develop No.1 & only one high-value-added products			
				Create products/services in new areas			

# 3-2-3) FY 2014/FY 2015 Review

## FY 2014/FY 2015 Review and Challenges

	Achievements	Challenges
<b>Structural reform</b>	<ul style="list-style-type: none"> <li>• Determined directionality of each base</li> <li>• Profit improvement through structural reform</li> </ul>	<ul style="list-style-type: none"> <li>• Delay in reformation of Kokubu Plant as a flagship plant for industrial machine bearings</li> <li>• Delay in efficiency improvement of NRB business production base</li> </ul>
<b>Production</b>	<ul style="list-style-type: none"> <li>• Install model line for reduction of investment per unit</li> <li>• Install model line for multi-product/small-lot production</li> </ul>	<ul style="list-style-type: none"> <li>• Delayed establishment of flexible, firm production system</li> <li>• Investment effectiveness worsened by excessive plant investment</li> </ul>
<b>Sales</b>	<ul style="list-style-type: none"> <li>• Activities for important customers of industrial machine bearings have taken root</li> <li>• Aftermarket: Enhanced commercial distribution of dealers in Japan</li> </ul>	<ul style="list-style-type: none"> <li>• Cooperate between Business and Sales, clarify technologies to be applied</li> <li>• Enhance the global aftermarket system</li> </ul>
<b>Engineering development</b>	<ul style="list-style-type: none"> <li>• Review design system in Europe and North America</li> <li>• Create technological roadmap, clarify exit strategy</li> </ul>	<ul style="list-style-type: none"> <li>• Clarify areas to take priority actions</li> <li>• Insufficient "bullet loading" in new business areas</li> </ul>

## Actions to tasks

- Accelerate and accomplish structural reform to realize profitable business in all regions/all product types in 2018
- Improve competitiveness through productivity improvement
- Further operation of small-lot production lines
- Establish automated, unmanned production lines
- Action to improve investment effectiveness
- Harvest effects of activities for important customers of industrial machine bearings
- Aftermarket: Strengthen the global system, improve packaging, enhance lineup
- Enhance global development system (In particular, NRB business)
- Select priority target areas and execute actions
- Promote product development for new areas

# 3-2-3) Priority Measures in Mid-term Plan

<b>Priority Measures in Mid-term Plan</b> * HUB (hub unit) TRB (Tapered Roller Bearing) NRB (Needle Roller Bearing) SBB (Single Ball Bearing)		<Realization of strategies for industry/product type>		
		For industry		For product type
		Industrial/aftermarket	Automotive	
		Steel, Wind power, Agricultural/Construction equipment, Machine tool	Chassis, Powertrain, Drivetrain	TRB, HUB, NRB, SBB
<b>Priority tasks</b>	(1) Structural reform			
	(2) Establish productivity and production engineering capability			
	(3) Reinforce sales force through Sales innovation	Only projection for details		
	(4) Strengthen development of high value-added products			

**Actions for Priority Tasks and  
Corresponding Actions  
(Structural reform, production,  
sales, engineering)**

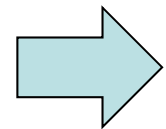
# 3-2-3) Priority Tasks (Structural Reform)

## ◆ Structural reform <Focus on structural reform by region>



### Reflection, Tasks

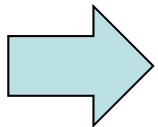
- 1) Delay in the action to strengthen Kokubu Plant as a flagship plant for bearings for industrial machinery applications in spite of the management objective of strengthening industrial machinery section
- 2) Delay in streamlining production base after the acquisition of NRB business in 2009
- 3) Weak business foundation of overseas bases (Indonesia/India) established in/after 2012
- 4) Efforts to enhance competitiveness including reform of manufacture (North America, UK, China)



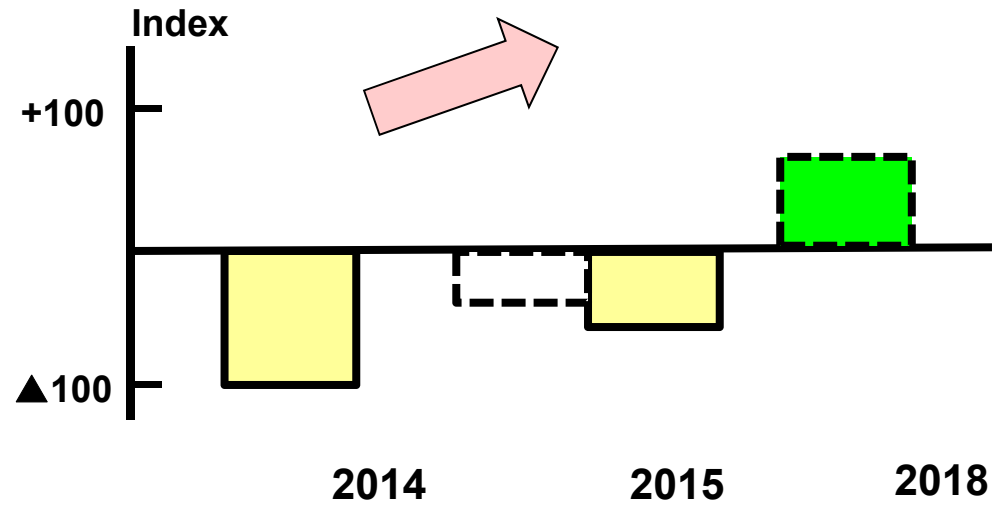
※ HUB (hub unit), TRB (tapered roller bearing)  
NRB (needle roller bearing), SBB (single-row ball bearing)

# 3-2-3) Priority Tasks (Structural Reform)

- Actions for achieving profitable business in 2018**
- 1) Business reorganization in Japan  
(Kokubu Plant: Profit improvement of Kokubu Plan as a flagship plant for industrial machine bearings and competitiveness improvement due to HUB/TRB forging line transfer)
  - 2) Completion of Europe NRB revival plan
  - 3) Indonesia/India: Management stabilization through structural reform
  - 4) North America/UK/China: Execution of fundamental reform toward profitable business operations



**Global operating income plan, results (index)**



**Realize profitable business in all areas/all product types in 2018**

# 3-2-3) Priority Tasks (Structural Reform)

## ◆ Business reorganization in Japan

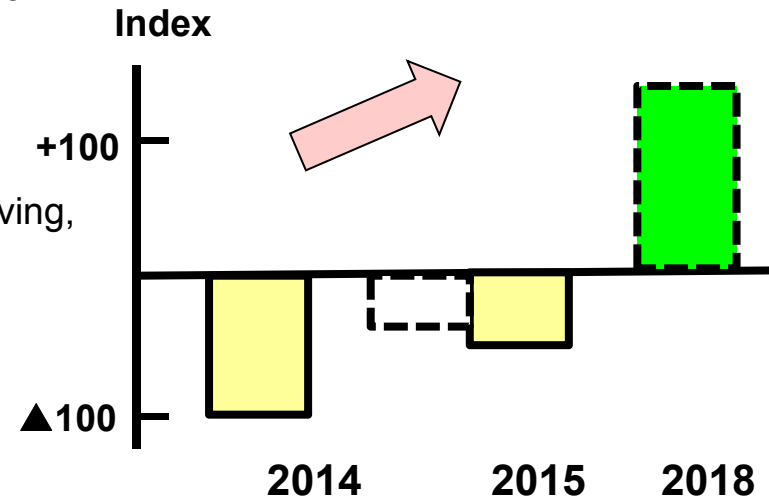


Completion of Kameyama plant's new building  
HUB model plant  
Cost competitiveness improvement, logistics improvement, energy saving, working environment improvement



March 18, 2016  
Completion ceremony for Kameyama plant's new building

Operating income plan, result (index)



	Concept	Actions taken and to be taken
(1)	Kokubu Plant: Reform as a flagship plant for industrial machine bearings	Install mid-/large-sized small-lot bearing production lines, install innovative production lines for machine tools, improve competitiveness through production/design reformation – Sales expansion of industrial machine bearings
(2)	Improve HUB competitiveness	Kameyama Plant's new building completed (Mar. 2016), improve cost competitiveness by installing innovative lines and compact lines in association with line relocation (up to Dec. 2016)
(3)	Relocate TRB forging and turning process in Shikoku area	New forging machine operation starts (Apr. 2016) Improve the supply chain Challenge to new production method for the enhance competitiveness



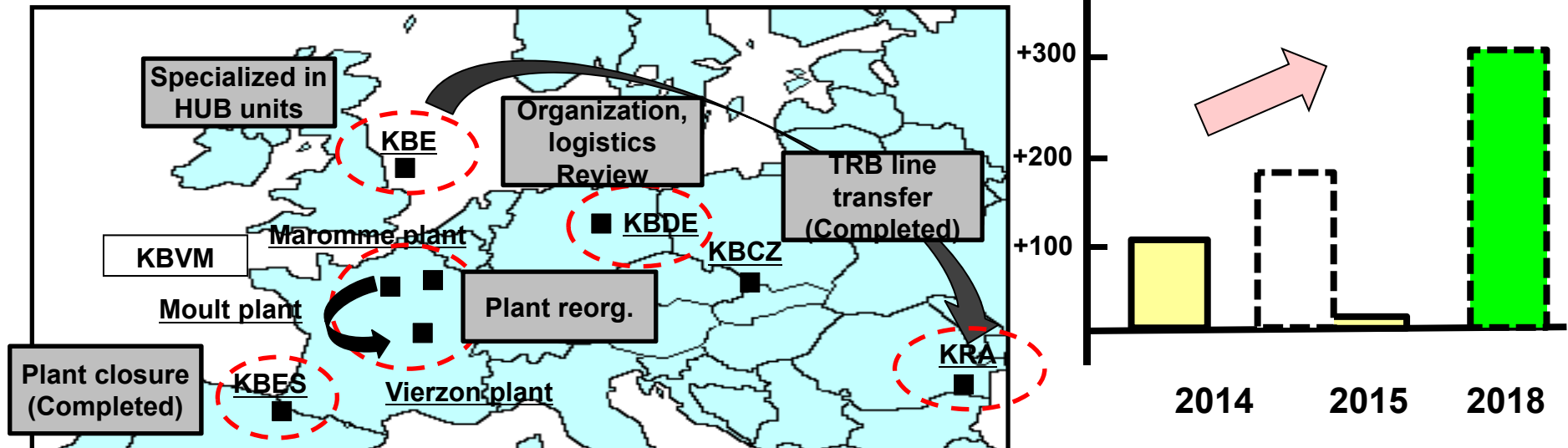
# 3-2-3) Priority Tasks (Structural Reform)

## ◆ Structural reform map of bearing plants in Europe

Enhance profit foundation mainly by reorganizing NRB plant

Index

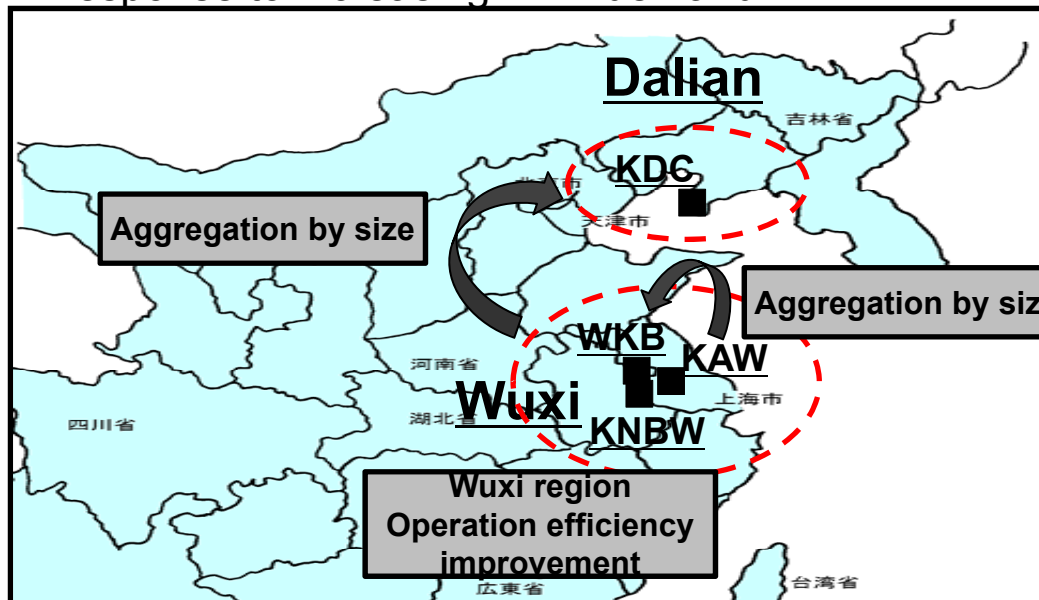
Operating income plan, result (index)



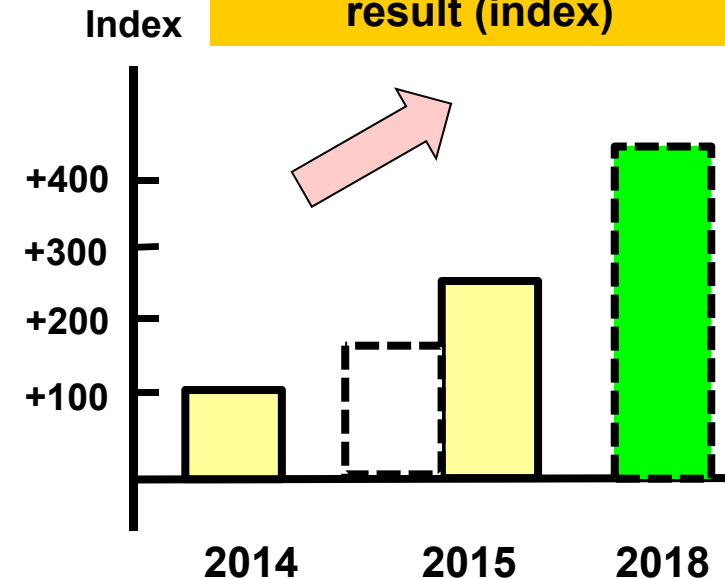
Plant (Country)	Concept	Actions taken and to be taken
KBE (UK)	Avoid exchange risk, specialize in HUB units to enhance management efficiency	Complete TRB transfer (Sep. 2016) Action to improve productivity by specializing in HUB units is being promoted Recover from delay in effects harvesting in 2016
KBVM (France)	Reorganize plant and administration section	For transfer from Moulton Plant to Vierzon Plant, long delay has occurred in startup Completion of NRB revival plan in 2016
KBDE (Germany)	Review company organization and logistics	Close KBDE Warehouse (Dec. 2016), establish logistics traffic lines in plant, prepare IT system for aftermarket sales expansion (Oct. 2016)

# 3-2-3) Priority Tasks (Structural Reform)

- ◆ **Structural reform map of bearing plants in China**  
Reorganization of SBB plants for each size and response to increasing NRB demand



Operating income plan, result (index)



Plant (Region)	Concept		Actions taken and to be taken
KDC (Dalian)	Miniature and Small dia. SBB	Improve production efficiency by clarifying classification of production plants by processing size	Classification by processing size is almost completed Promote productivity improvement and sales expansion Examine further production efficiency improvement including Wuxi NRB plant KNBW to meet increasing NRB demand in China
WKB (Wuxi)	Small-sized SBB		
KAW (Wuxi)	Mid-sized SBB		

# 3-2-3) Priority Tasks (Productivity/ Production engineering capability)

## 1) Enhance competitiveness

- Enhance operational availability and productivity

## 2) Respond to small-lot demand

System that can quickly deal with demand fluctuation

- Construct small-lot lines at each base (up to Dec. 2016)
- Reduce production lead time (L/T)

## 3) Innovate production by automating mass-production lines

- Construct fully automated & unmanned lines  
...Set up model unmanned lines (up to Mar. 2017)
- Reform production line system by IoE

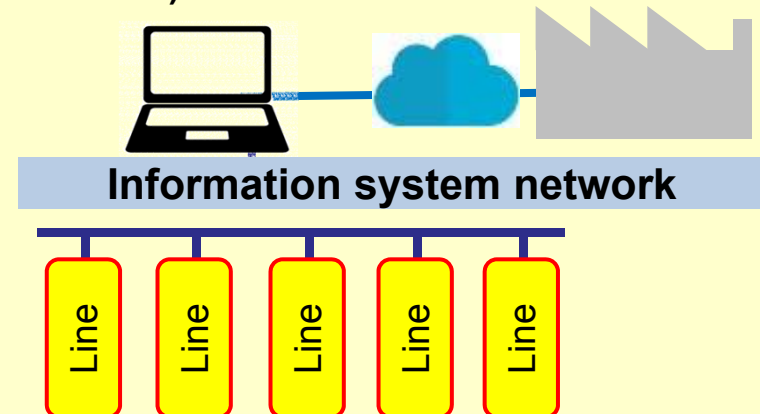
## 4) Enhance investment efficiency

- Realistic, optimum & minimum investment (suitable to our capability)
- Reduce investment per unit (innovative technology/lower equipment cost)

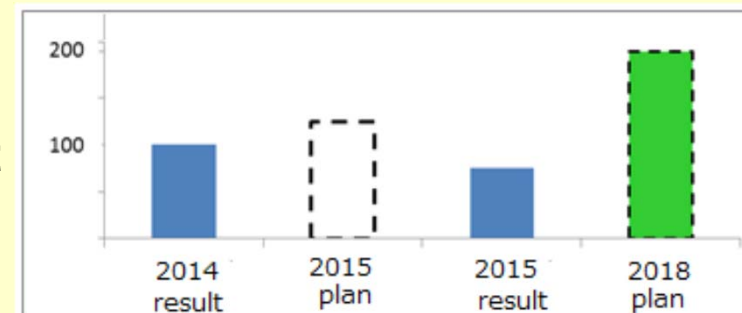
## [Smart Factory, IoE]

### Implement self-developed IoE system in JTEKT plants

1. Maintenance IoE (control the sign of the end of life & abnormality)
2. Quality IoE (control the sign on the quality)
3. Production IoE (enhance productivity incl. workers)



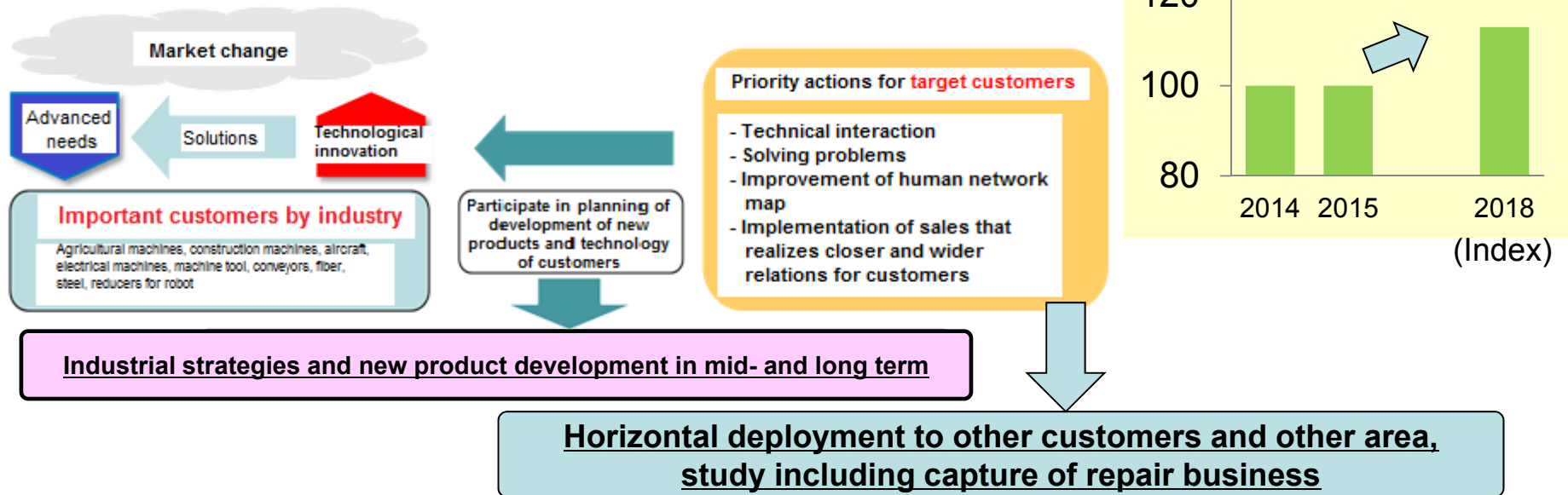
## [Planned profit & result from factories] (index)



# 3-2-3) Priority Tasks (Sales)

Sales figure of industrial/aftermarket regarding the figure of 2014 as 100

## 1) Action for important customers by Industry



## 2) Strengthening aftermarket actions

Strengthen sales of commercial flow in agency	Japan	Merger of Koyo Sales (1st step), enhancement of agency sales (2nd step)
Enhance product variety of aftermarket stock and improve the brand potential	Overseas	Strengthening sales based on agency strategies by region
New item for aftermarket		'15/3 ⇒ '17/3 Increased item number by 30% Improve a fancy box and introduction of new design (From 2016 Apr.) ⇒ Introduction of Koyo brand tag line and strengthening public relations

**Key of Your Operation**  
Introduction of dedicated items of aftermarket for automotive bearings or oil seal

## 3-2-3) Priority Tasks (Technology Development)

### ◆ Common

- 1) Enhance global development system (in particular, **NRB business efficiency improvement** and strengthening)
- 2) Enhance development of high-value-added products (**select priority action areas and execute development roadmap**)
- 3) Develop products in new areas (utilize tribology and control technologies **to expand the area of bearing application**)

### ◆ Industrial machines

- 1) Develop solution proposal-type businesses by visualizing customers' problems
- 2) **Develop No. 1 & Only One products** for industrial machine applications
- 3) **Establish new engineering services (from tangible to intangible)** in the maintenance market

### ◆ Automotive

- 1) Forecasting vehicle evolution, **select priority action areas and develop No. 1 & Only One products**
- 2) By forming a target project (exit strategy), **strengthen frontloading activities**
- 3) Develop components toward motorization, "x by Wire" and ADAS (**powerfully promote bullet loading activities**)

**Realization of strategies for  
industry/product type**

# 3-2-3) Realizing Strategies for Industry type

## ◆ Actions to enhance business in the industrial machine field

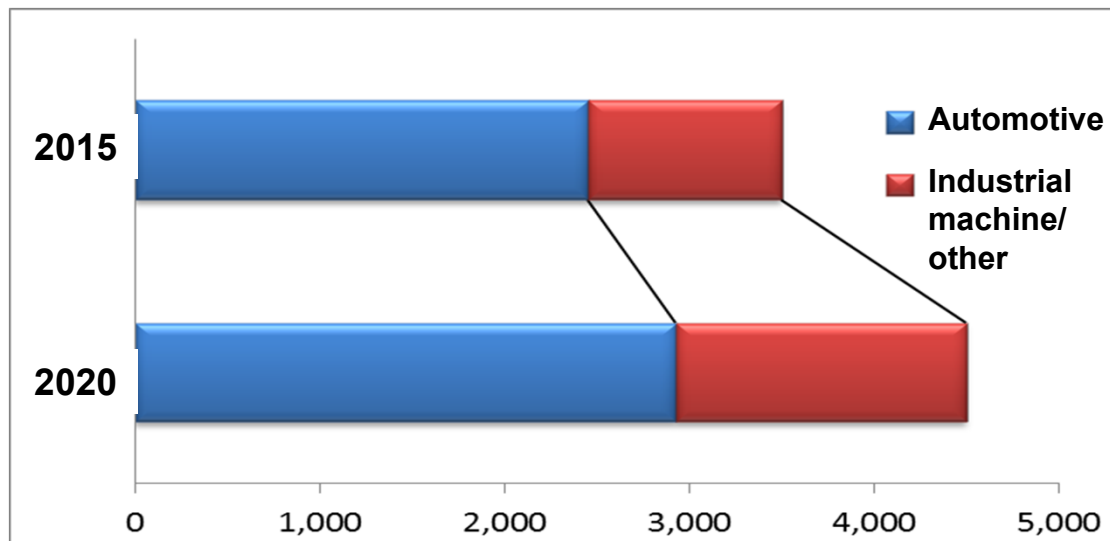
Enhance business operations for industrial machines to promote well-balanced growth and increase profits

**Reform Kokubu Plant as a flagship plant for industrial machine bearings  
 (strengthen small-lot production capability, reduce lead time)  
 Strengthen capability to meet demands in industrial machine field through service  
 correspondence and dealer network enhancement**



**Further strengthen actions for each industry to develop/supply high value-added products  
 for priority applications**

### Sales amount plan, results



# 3-2-3) Strategies for Industry type (Industrial Machines)

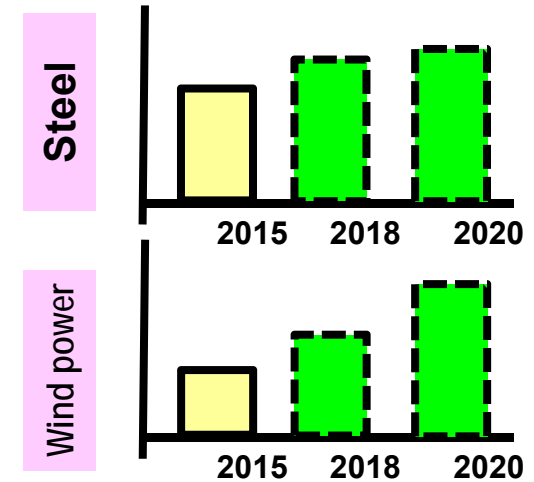
## ◆ Strategies for each priority application

### Actions for steel, wind power

- Maintain the top share in Japan (Steel)
- Establish technologies for further increasing performance level (long life, lower temperature rise) (Steel)
- Contribute to stable machine operation for customers by monitoring conditions and providing maintenance services (Steel, Wind power)
- Establish re-manufacturing business (Steel)
- Develop products for increasing size of off-shore wind turbines and establish technologies for producing those products (Wind power)

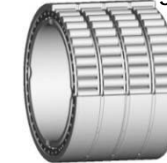
Industry	2015	2016	2017	2018	2019	2020
Steel Wind power	Extend life by development of new materials					
	Increased speed by developing technology capable of inducing a lower temperature rise					
	Develop technology for failure analysis by monitoring, and monitor equipment status					
	Establish re-manufacturing business for bearings and drive shafts (repair service, remaining life diagnosis)					
	Establish production technology corresponding to large off-shore turbines					

### Sales amount target (index)



### Representative products for steel making machine

4-row cylindrical roller bearing



Support for heavy load, high speed

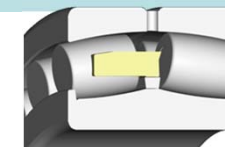
Drive shaft



High strength, long life

### JHS Series

### Representative products for wind power generator



Low torque, less temperature rise

Highly functional self-aligning roller bearing



# 3-2-3) Strategies for Industry type (Industrial Machines)

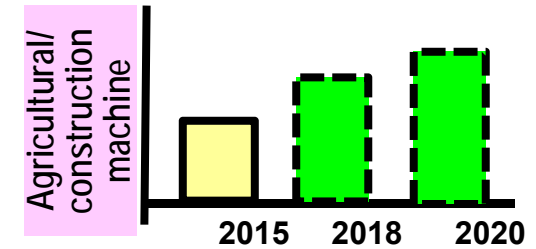
## ◆ Strategies for each priority application

### Actions for agricultural/construction machine

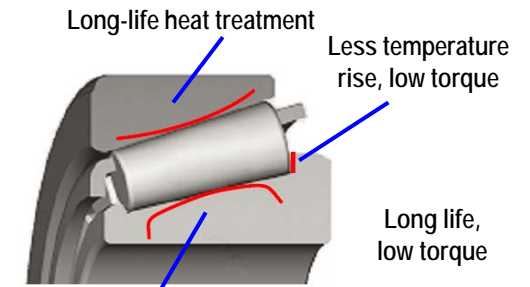
- Further improve reliability by highly functional technologies
- Enhance actions for large-sized drive shafts
- Contribute to lifecycle cost reduction (enhance actions for re-manufacturing)
- Establish small-lot production system to expand demand

Industry	2015	2016	2017	2018	2019	2020
Agricultural/ construction machine	Extend life by development of new materials			Develop next-generation highly functional TRB		
	Improve product capability of large drive shafts (extended life, enhanced reliability)			Technical development for failure prediction		
	Technical development for bearing fatigue level			Build small-lot production line		

### Sales amount target (index)



### Representative products for agricultural/construction machine



Optimum crowning  
**Highly functional tapered roller bearing**



**High wing series drive shaft**

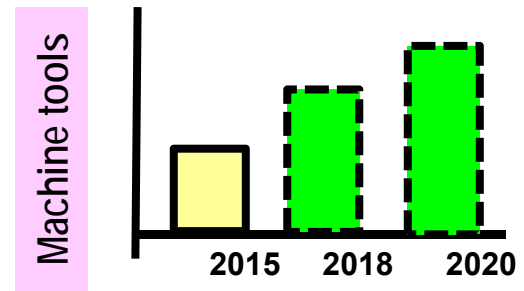
# 3-2-3) Strategies for Industry type (Industrial Machines)

## ◆ Strategies for each priority application

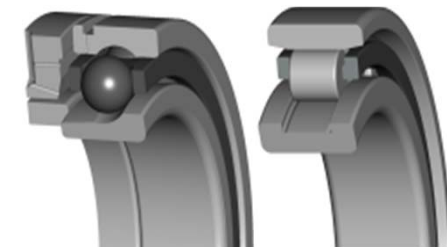
### Actions for machine tools

- Contribute to high efficiency processing by highly functional technologies
- Improve product capability by unitization technologies
- Contribute to stable processing of customers by condition monitoring
- Establish innovative production lines to further improve product quality and productivity

### Sales amount target (index)



### Representative products for machine tool



High speed, high precision, high reliability

### New High-ability bearing series

Industry	2015	2016	2017	2018	2019	2020
<b>Machine Tools</b>	Develop angular ball bearing with lower temperature rise (lubrication control) →					
	Develop high-speed double-row cylindrical roller bearing →					
	Develop angular ball bearing with micro lubricator →					
	Develop technology for equipment status monitoring →					
	Build innovative production line for machine tools (high cleaning level, L/T reduction) →					

### 3-2-3) Realization of Strategy by Bearing Type

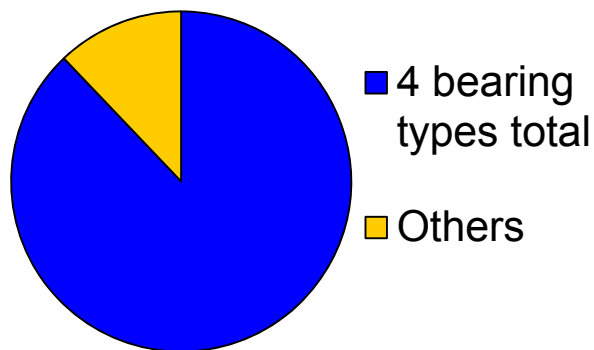
#### ◆ Actions for four major bearing types (TRB, HUB, NRB, SBB)

Increase profit by realizing a strategy by bearing type (mainly for automotive applications)

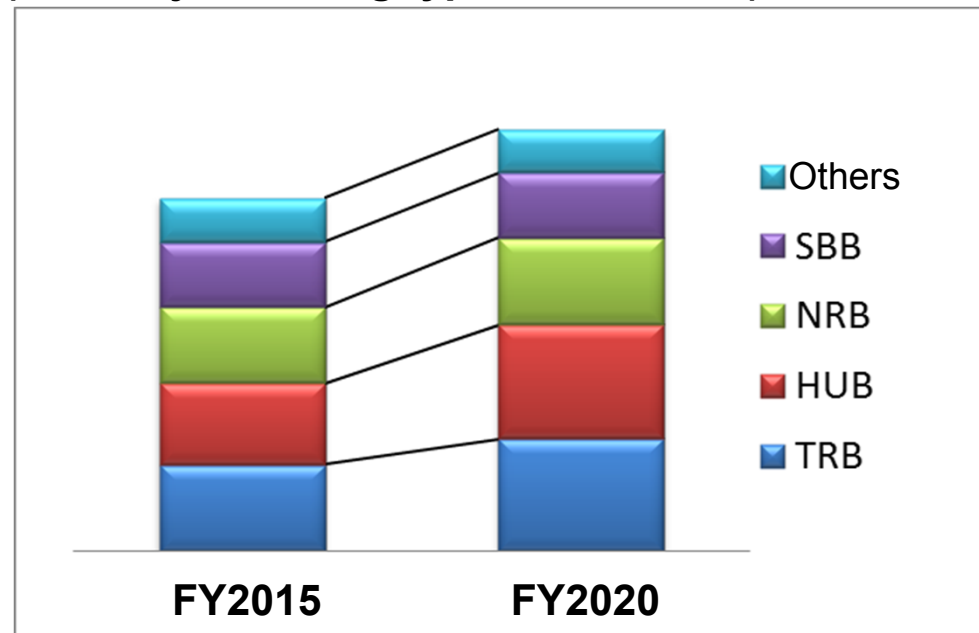
**Develop and introduce high-value-added products in four major bearing types**

Sales ratio of four major bearing types

FY2020 Plan



Planned sales amount and past result (four major bearing types and others)

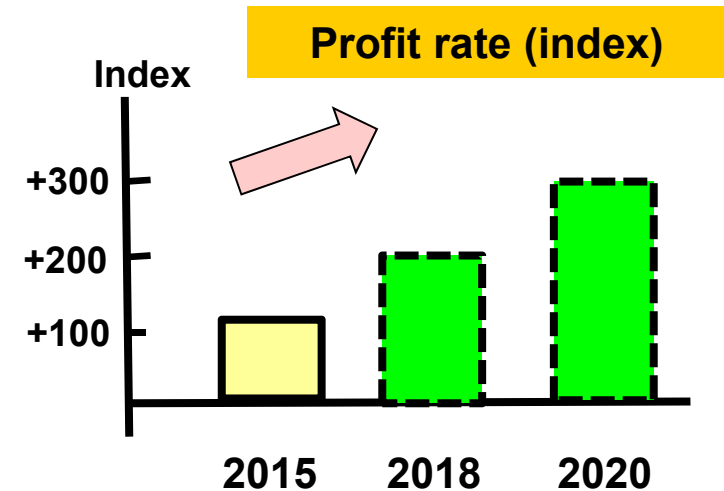


TRB, HUB, NRB: increased      SBB: same

# 3-2-3) Strategy by Bearing Type (TRB)

- Deploy innovative manufacturing methods used in Japan globally
- Shift from globally identical specifications to optimum specifications for each region

Region	2015	2016	2017	2018	2019	2020
Japan	Introduce high-speed production line Establish small-lot production system		Deploy these globally			
North America	Reorganize optimum production line, improve production efficiency of preceding process				Introduce innovative manufacturing method	
China	Expand local procurement					
Europe	Consolidate production bases, expand local procurement		Regionally optimum specifications			
Thailand	Expand local procurement					
India	Enhance sales for aftermarket, expand local procurement					



## ◆ Example of new product development

Next-generation ultra-low torque tapered roller bearing LFT-IV has been developed



- Realized more than 50% torque reduction (max.) compared to standard low-torque TRB (LFT-II)
- Highly effective in applications with oil lubrication such as differential units and transmissions
- Sales target: 10 billion yen/year

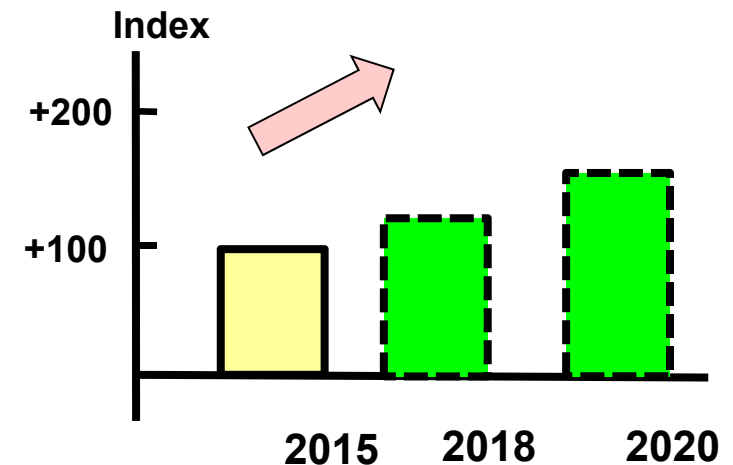
- We will try to deploy energy-saving technologies for automobiles to the industrial machinery field.

# 3-2-3) Strategy by Bearing Type (HUB)

- B-HUB: Strengthen cost competitiveness
- Develop low-torque technologies and hub units for ADAS
- T-HUB: Expand sales

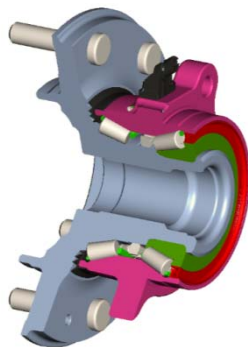
Segment	2015	2016	2017	2018	2019	2020
Mini-sized vehicle	Develop compact line		Introduction		Deploy concept	
A/B	Rebuild production bases in Japan		Deploy low-torque HUB		Deploy ultra long life HUB with low-torque seal	
C/D					Deploy HUB for ADAS	
SUV			Examine expansion of production overseas Expand T-HUB (North America, ASEAN, etc.)			
Aftermarket	Introduce small-lot production line			Enhance/expand sales for aftermarket		

Profit rate (index)



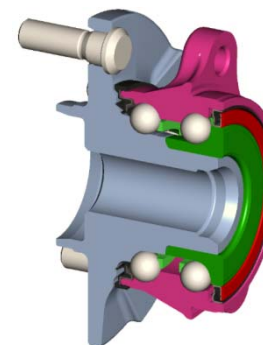
## ◆ Example of new product development

### T-HUB (TRB hub unit)



- Torque reduction ▲50%**
- Optimized shapes/surface roughnesses of contact parts of inner ring rib and rollers
  - Optimized raceway crowning profile
  - Ultra-low torque grease
  - Ultra-low torque high reliability seal

### B-HUB (Ball bearing hub unit)

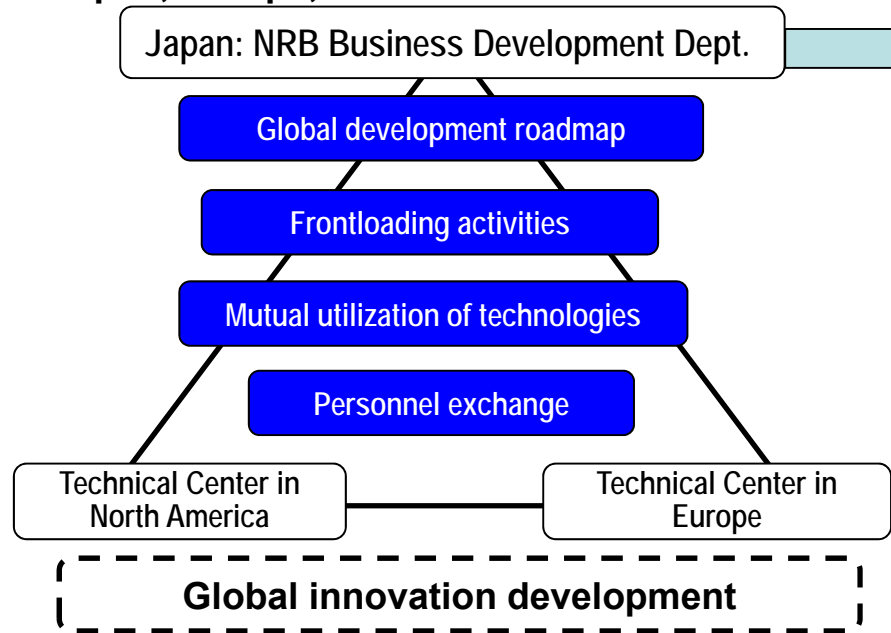


- Torque reduction ▲40%**
- Ultra-low torque grease
  - Ultra-low torque high reliability seal

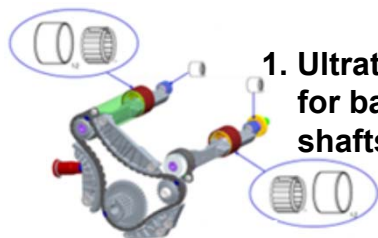
# 3-2-3) Strategy by Bearing Type (NRB)

## Strengthen global development system (establish 3-base development system)

- Effective product development by job sharing
- Acquisition of global projects by frontloading activities
- Mutual utilization of technologies among technical centers in Japan, Europe, and USA



### Example of mutual utilization of technologies

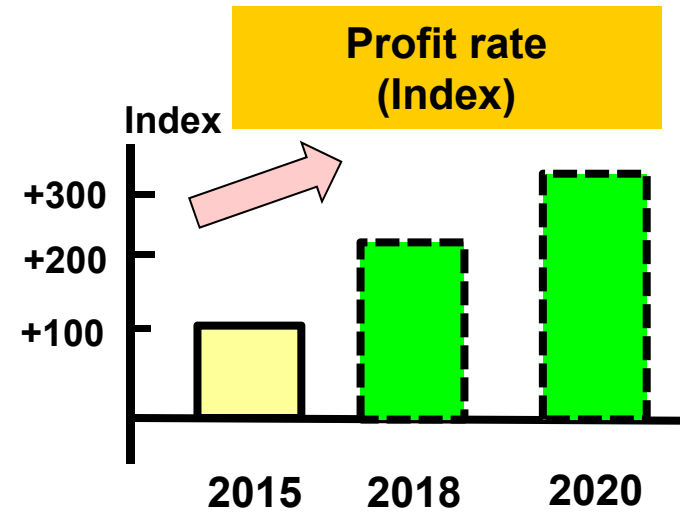


1. Ultrathin NRB for balancer shafts



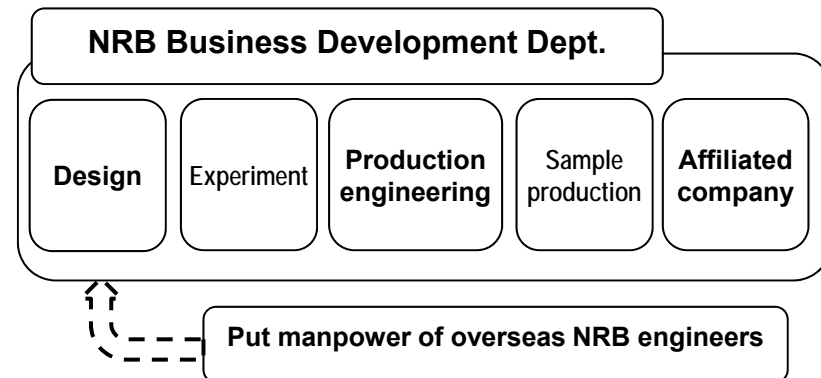
2. Long-life planetary shaft

DURACASE™



## Enhance domestic development system

- Restructure the organization around Kanto area (Cooperation among three companies including two affiliates)
- Consolidate functions to realize integrated process from development to mass production



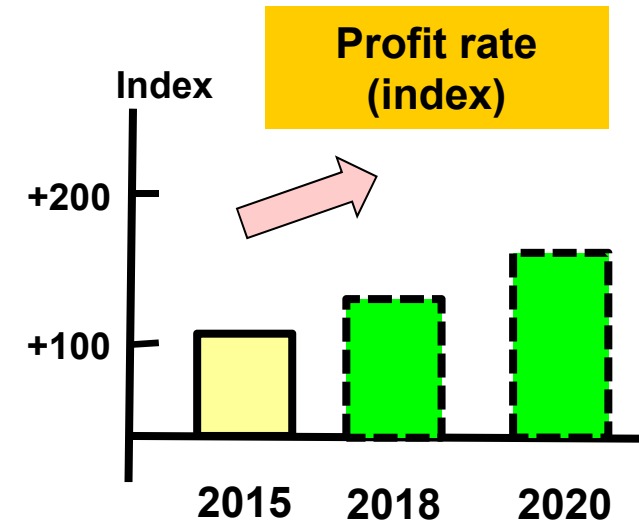
# 3-2-3) Strategy by Bearing Type (SBB)

- Develop innovative manufacturing method
- Strengthen & expand aftermarket sales
- Reconstruct global production system
- Develop high-value-added products

Industrial Machines: High-performance motor, ultrathin bearings (speed reducers)

Automotive: SBBs responding to motorization and engine downsizing

Measures	2015	2016	2017	2018	2019	2020
Develop high-speed production line	Introduction	Expansion				
Reconstruct global production system	Stabilize business in China, ASEAN and India			Further develop business		
Strengthen & expand aftermarket sales	Study small-lot production line	Introduce small-lot production line	Expand aftermarket sales			
Develop high-value-added products	Review scenario	Develop products				



## ◆ Examples of new product development

### New ceramic ball bearing for motors



For motor applications that require countermeasures against electric pitting

- Developed new ceramic material
- Sales target: 1 billion yen/year

### Rolling bearing unit for turbochargers

Respond to increasing demand for turbochargers due to expansion of engine downsizing



- Power loss reduction by 60% or more by changing from sliding bearings to rolling bearings has contributed to fuel efficiency improvement.
- Sales target: 1.8 billion yen/year

# Key of your operation

# Koyo



# 4) Machine Tools & Mechatronics Business Operations Strategies

# 3-2-4) Roles and Aims (Mid-term Plan)

**Roles & Aims**

**True total production system integrator that is trusted by customers**  
**Provide value at all phases of monozukuri**

**Business Operations Strategies**

**Solidify the basis for “connectable” business from business focusing on new machines (up to 2016), and enhance the constitution for sustainable growth (up to 2019)**

<b><u>Grinders</u></b> Make strong grinders firmer to become Global No. 1	<b><u>Cutting machine Machining center</u></b> Enhance our non-automotive market by improving our presence	<b><u>Gear skiving center</u></b> No. 1 & Only One in Gear-cutting market	<b><u>Control systems</u></b> No. 1 & Only One in line control systems
<b><u>Customer support</u>: No. 1 with full-fledged and extended customer support values</b>			

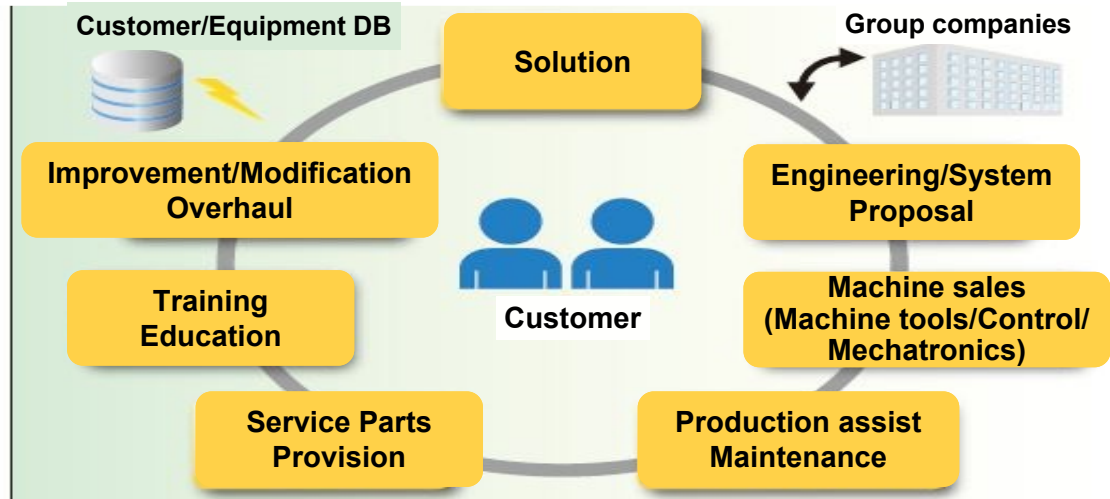
**Priority activities**

<b>Strengthen sales capability</b>	<b>Strengthen product potential</b>	<b>Monozukuri Revolution</b>
<b>Cultural reform and reduction of L/T</b>		

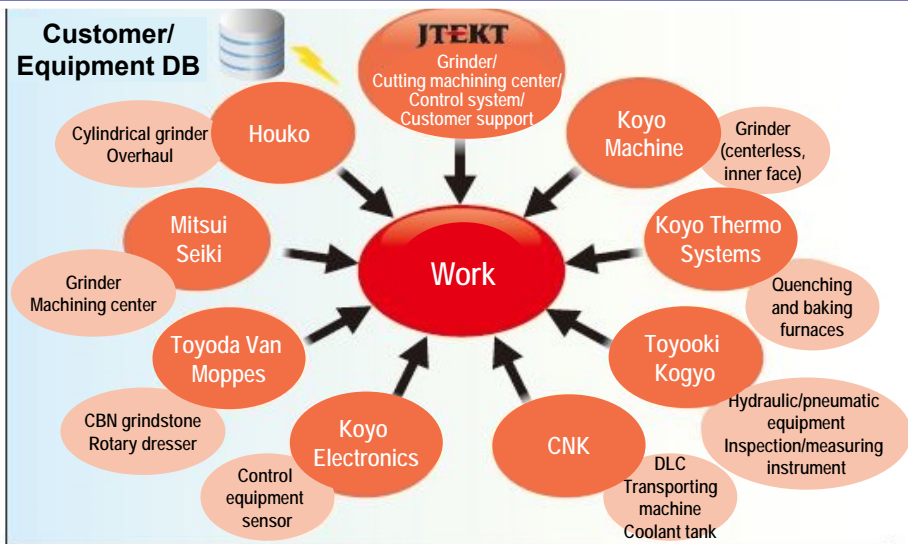
# 3-2-4) Business Operations Strategies (Mid-term Plan)

From business focusing on new machines to "3-factor connectable" business

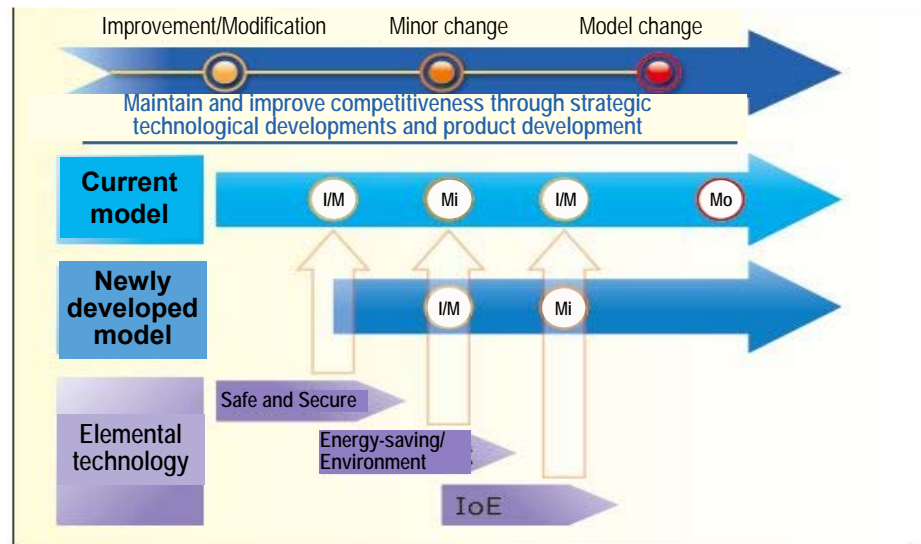
## ◆ Value connectable



## ◆ Process/technology connectable



## ◆ Product potential connectable



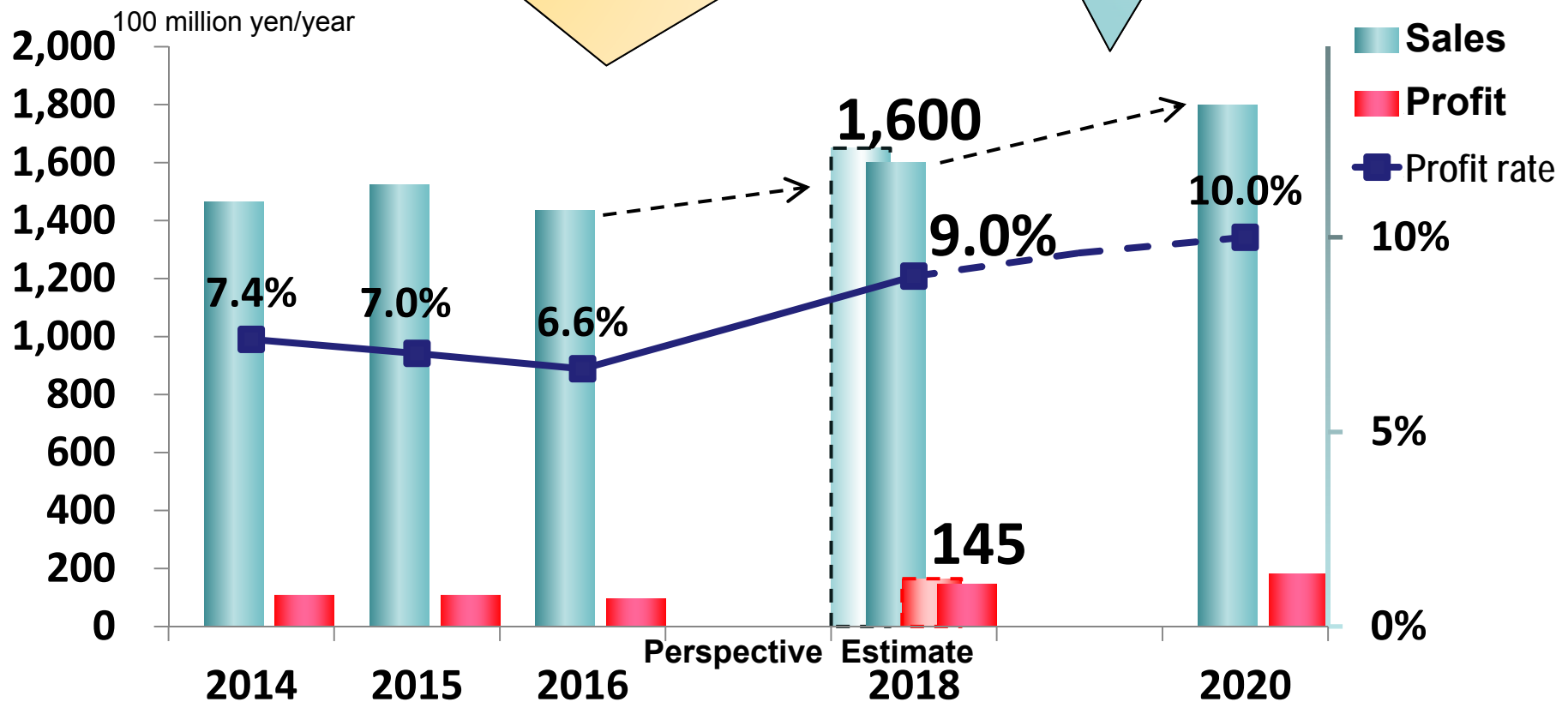
# 3-2-4) Accomplishment Status of 2018 Mid-term Plan

## Sales/profit forecast of FY 2018

- Investment was suppressed in 2016 due to continued appreciation of the yen and concern about global economic prospects  
→ Profit decline estimated
- 2018 profit is also estimated to be less than the original target, and it is planned to secure the original target value of the profit rate by enhancing aftermarket segments

(Based on management rate)

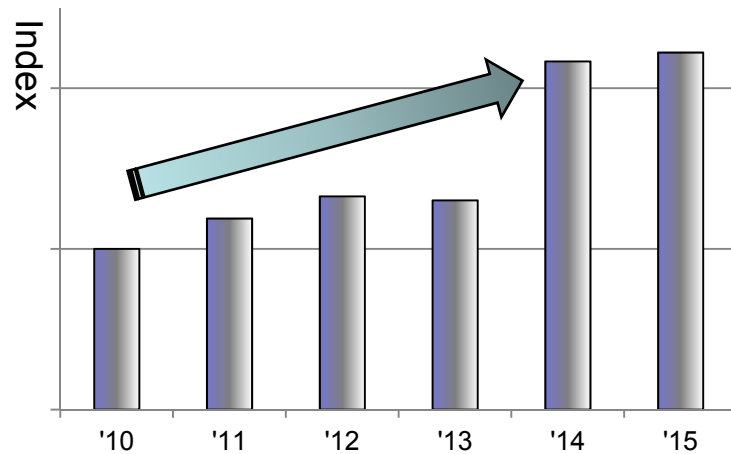
2019 sales/operating profit targets are expected to be achieved in 2020



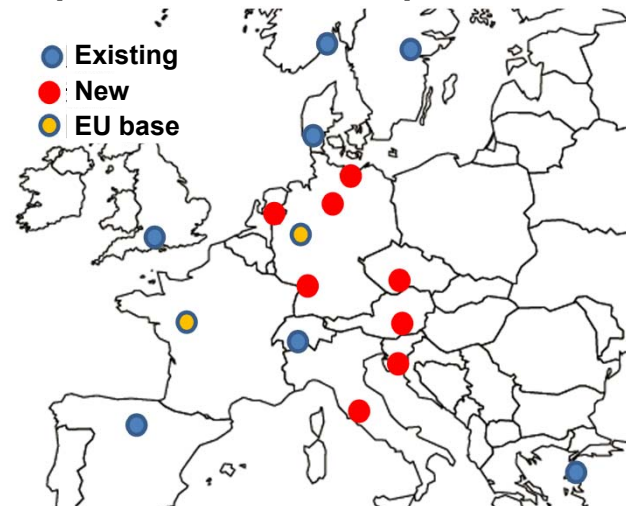
# 3-2-4) Review of FY 2014 and FY 2015 [Priority activities (1): Sales capability]

	FY 2014	FY 2015
Achievements	Increase in sales of control systems	Further sales expansion with series products
	Expansion of dealers in Europe	Completed organization of dealers in Europe (13 countries)
		Expansion and organization of dealer networks in North America (including Mexico) are completed

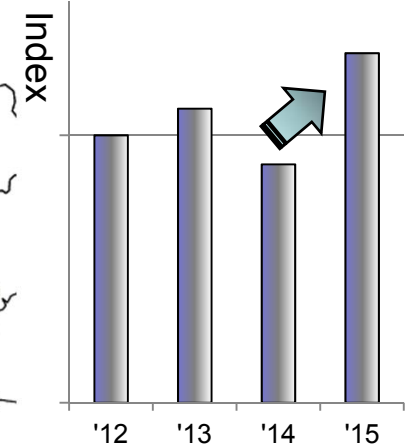
**Control system sales trend**



**Map of dealers in Europe**



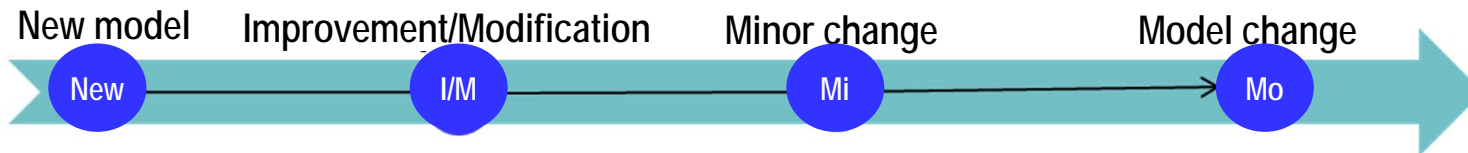
**Order acceptance trend**



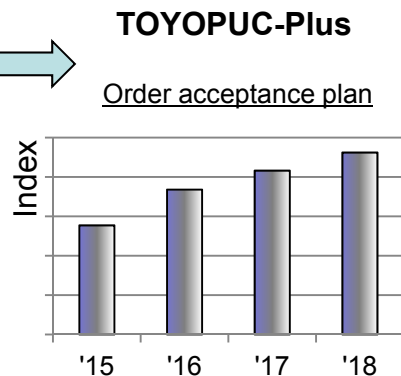
Non-achievements	Cannot break away from business operations based on the principle of focusing on new machines
	Insufficient correspondence to speed of market changes
	Insufficient transition to value-based business
	Insufficient capability for submitting proposals to customers

# 3-2-4) Review of FY 2014 and FY 2015 [Priority activities (2): Product potential]

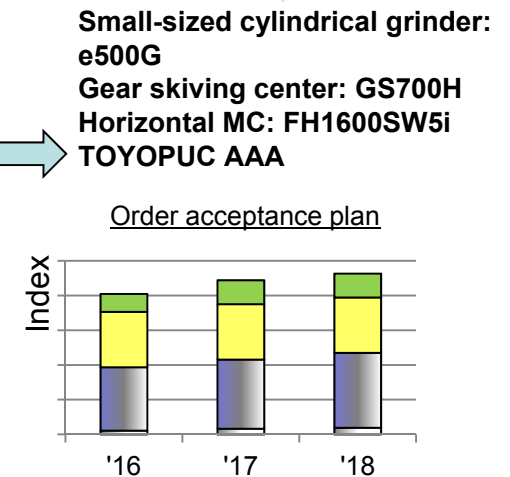
	FY 2014	FY 2015
Achievements	Model change to new machine/sales expansion (Cylindrical grinders GE4i/GL4i/GL5i)	Story-backed technology development and timely product development



FY 2014	Quantity
New model	1
Model change	4
Minor change	0
Improvement/Modification	5



FY 2015	Quantity
New model	5
Model change	2
Minor change	0
Improvement/Modification	3



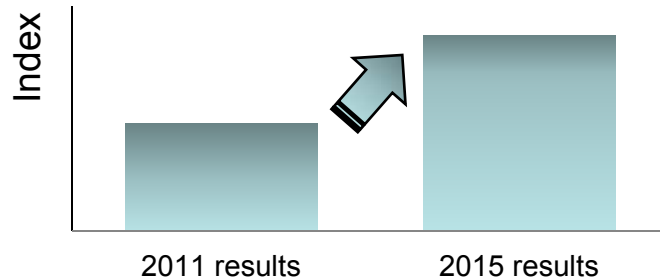
Non-achievements	Weak connectivity to market release of products (tendency of selling products on one-shot basis, insufficient sales planning)
	Delayed market release due to slow start of product planning/development (losing sales opportunities)

# 3-2-4) Review of FY 2014 and FY 2015

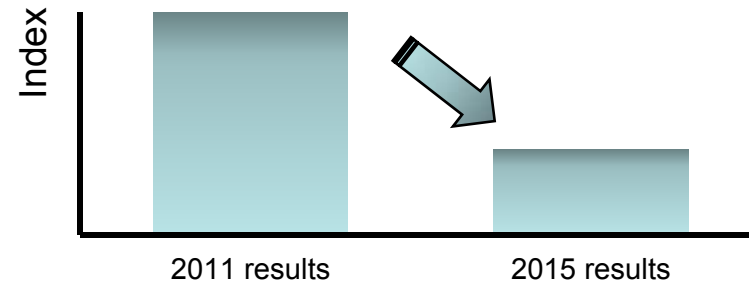
## [Priority activities (3): Monozukuri revolution]

	FY 2014	FY 2015
Achievements	Execution of Kariya ReBORN (unmanned FMS operation, no scraping, etc.)	Start of reforming into smart factory by utilizing IoT (building of production management system, visualized system)
	Cost reduction of standard parts by Oobeya activities	Reveal a mechanism from inquiry to acceptance Enhancement of management of manpower planning

1) No. of units producible monthly



2) Assembly lead time (mid-sized horizontal machining center)



Non-achievements	Cannot harvest effects of ReBORN (hardware measures)	Lax schedule management was exposed during production load concentration (specification determination, drawing releasing, arrangement of procurement items)
		Insufficient accuracy of in-house load/manpower planning Late correspondence to load Flexible procurement of internally/externally manufactured items according to load fluctuation Insufficient activities for cost reduction

# 3-2-4) Review of FY 2014 and FY 2015 [Business operations strategies (1): Grinder]

	FY 2014	FY 2015
Achievements	Development of complex cam (concave cam) grinder	<p>Market supply of equipment with concave cam grinding technology implemented</p> <p>Development of CNC cylindrical grinder "e500G" for mass production processing of small shaft components</p>

**GC20Ri** complex cam (concave cam) grinder



- Efficient equipment operation due to process aggregation
- Mixed flow production enabled by auto changeover
- Improvement of concave cam productivity

**e500G** CNC cylindrical grinder



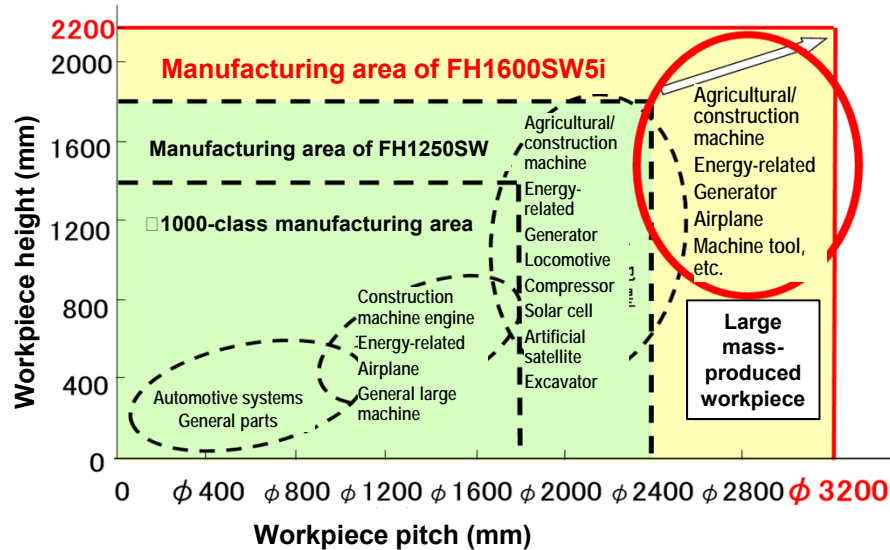
- Stable grind precision
- Fastest cycle time in the same class
- Smallest space in the same class
- No changeover required
- Easy operation



# 3-2-4) Review of FY 2014 and FY 2015

## [Business operations strategies (2): Cutting machine/MC]

	FY 2014	FY 2015
Achievements	Commercialization of real-time thermal displacement correction (FH630SX-i: Thermal displacement 1/5)	Development of large horizontal machining center (FH1600SW5i)
	Development of DD rotary table	Start of local production in TMD (Dalian) (e640V Vertical machining center)
		Startup of system line (6 systems)

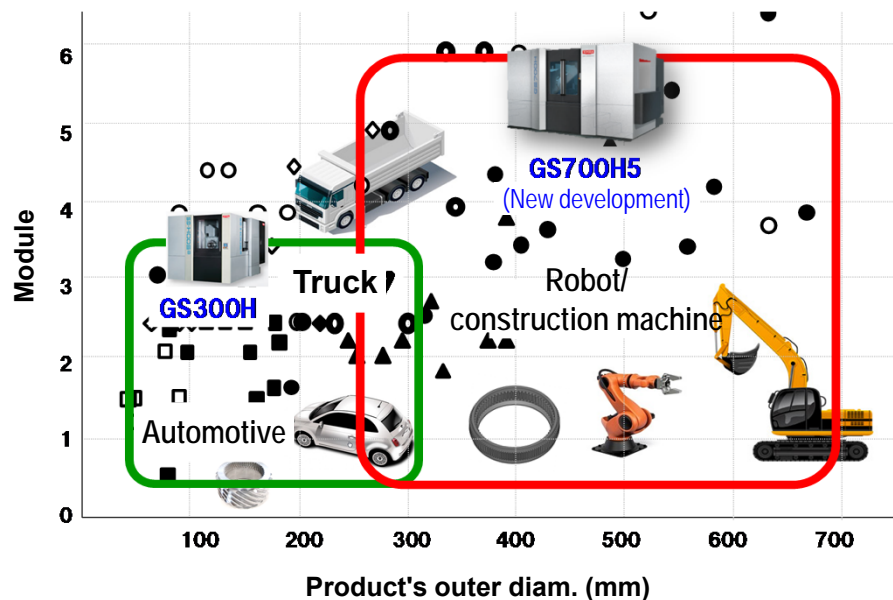


**FH1600SWi** Large horizontal machining center



# 3-2-4) Review of FY 2014 and FY 2015 [Business operations strategies (3): Gear skiving]

	FY 2014	FY 2015
Achievements	Start of supply to gear processing market	
	Development of mid-sized machine for gear skiving center (GS300H)	Development of large machine for gear skiving center (GS700H5)
	Received "Grand Prize of 2014 New Top 10 Product Awards" from Nikkan Kogyo Shimbun, Ltd.	



**GS700H5** Gear skiving center



# 3-2-4) Review of FY 2014 and FY 2015

## [Business operations strategies (4): Control system 1]

IoE: Abbreviation of **Internet of Everything**

JTEKT aims to connect everything including not only "goods" but also "matters" such as services

**Construct a smart factory based on IoE (Internet of Everything)**

**Production management system**

**Anyone can perform stable manufacturing**  
Equipment only

**Next step that anyone can understand can be taken**  
Entire plant

Easy operation  
Easy programming

High productivity

Safe and stable  
high-precision  
manufacturing

Visualize  
operation and  
abnormalities

Visualize  
deterioration

Visualize  
production  
Bottleneck process  
can be identified

Compliance guaranteed (quality control, product guarantee)

Equipment diagnosis (preventive maintenance, failure estimation)

**HMI to implement IoE**

**PLC to implement IoE**

**Software to implement IoE**

Network  
**<Cloud>**



Customer

Supplier

Office

Plan  
review



Construction office

Actions to  
increase  
productivity



Production line

Quick  
response to  
issues

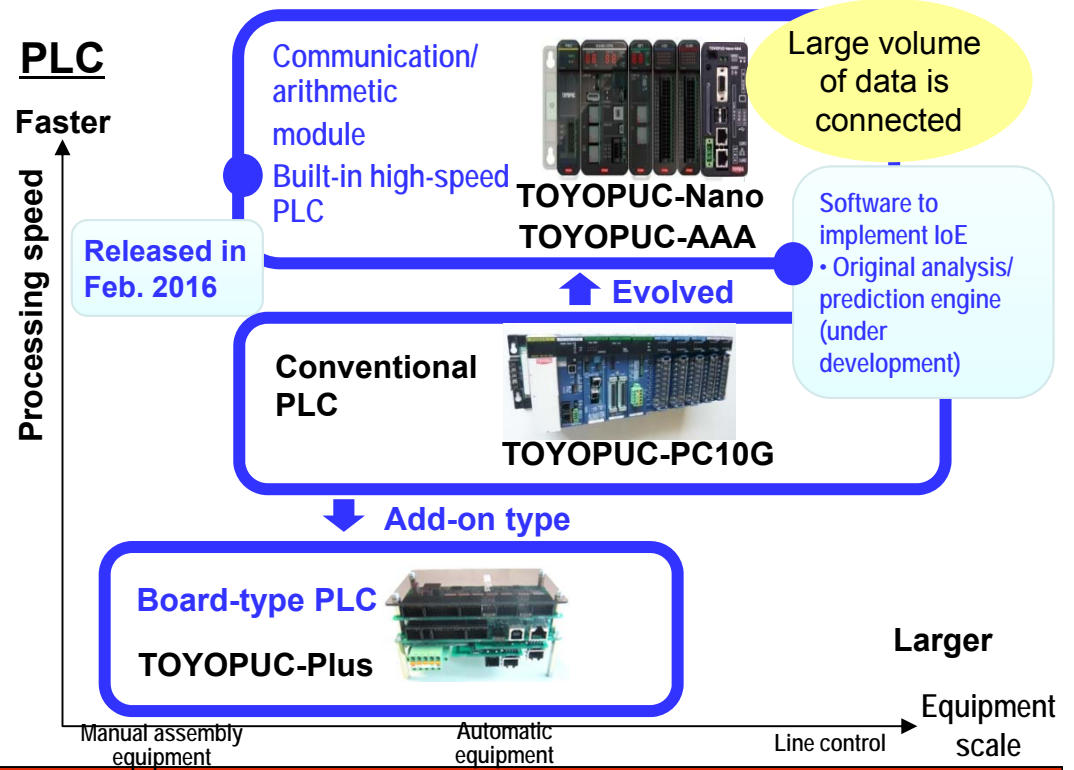
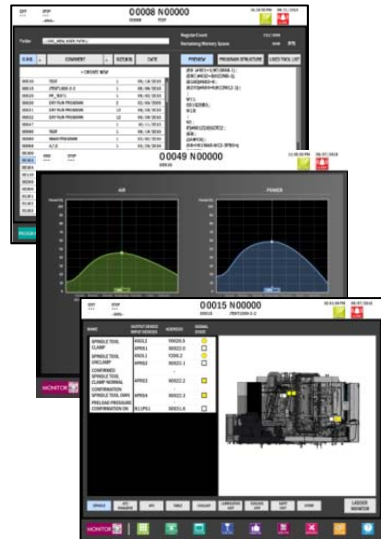


# 3-2-4) Review of FY 2014 and FY 2015

## [Business operations strategies (4): Control system 2]

	FY 2014	FY 2015
Achievements	TOYOPUC full model change (business implementation in general market)	Full-scale entry to IoE business (remote diagnosis available HMI: TOYOPUC-Touch) (Big data processing module: TOYOPC-Nano, AAA)
	Establishment of business model for Andon system	Evolution of production management system

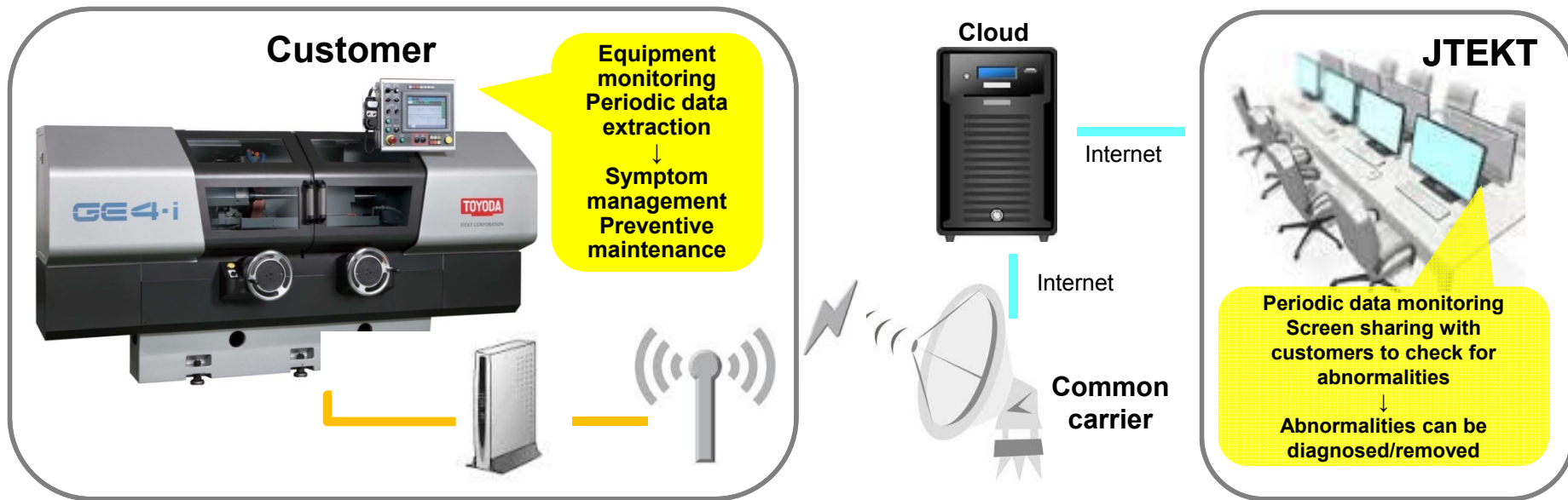
### TOYOPUC-Touch



# 3-2-4) Review of FY 2014 and FY 2015

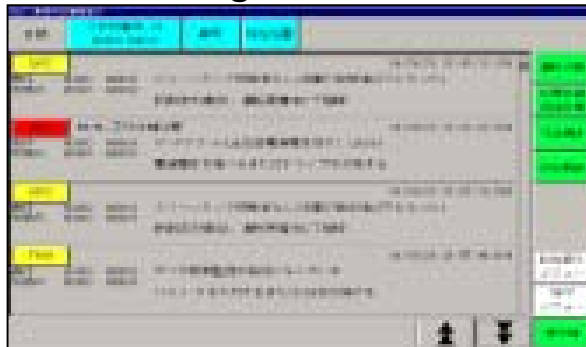
## [Business operations strategies (5): Customer support]

Internet maintenance system (remote diagnosis, waveform diagnosis, parts life management)

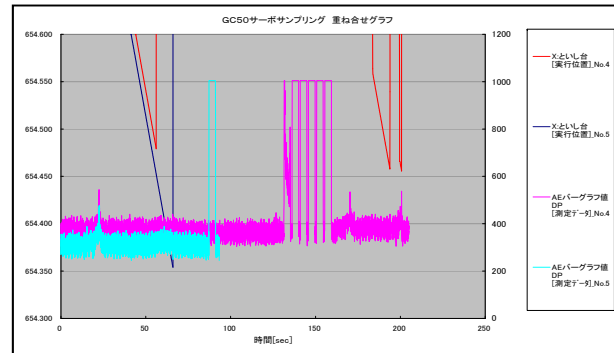


Remote screen operation and output file acquisition from CNC

Remote diagnosis



Waveform diagnosis



Parts life/maintenance cycle

項目番号	名称	経過時間/回数	設定時間/回数
1	油圧コンタクタ	1361 回	8000 回
2	油圧リレー	1345 回	4000 回
3	油圧コンタクタ	1345 回	10000 回
4	油圧リレー	133 回	4000 回
5	ヘッドブローキリレー	120000 回	120000 回
6	吹電流	345 回	7000 回
7		3 回	0 回
8	油圧リレー	1345 回	8000 回

### 3-2-4) Actions for FY 2016 (1)

	Environmental changes in FY 2015	Incorporation into FY 2016
Entire	<ul style="list-style-type: none"> <li>Deterioration of business situation            “2016 first half estimated amount of orders: 23 billion yen (Year on year: Δ9%)”</li> </ul>	<ul style="list-style-type: none"> <li>Improve to surviving constitution from constitution that depends on sales increase</li> <li>Strengthen customer service engineering business</li> </ul>
Sales	<ul style="list-style-type: none"> <li>Provide information infrastructure capable of linking to after-market support information</li> <li>Identification of problems when specifications are determined</li> </ul>	<ul style="list-style-type: none"> <li>Change to sales activities for selling values from those focused on new machines</li> <li>Enhance system from inquiry to order acceptance</li> <li>Enhance project management</li> </ul>
Engineering	<ul style="list-style-type: none"> <li>Increase price competition → Increase cost cutting pressure</li> <li>Increase effect on latter processes due to overloading</li> <li>Vulnerability of development system has been revealed.</li> </ul>	<ul style="list-style-type: none"> <li>Develop sales engineers capable of technical proposals for optimum specifications and proposal sales               <ul style="list-style-type: none"> <li>Strengthen actions for reducing specification determination L/T</li> </ul> </li> <li>Strengthen development management system</li> </ul>
Manufacturing	<ul style="list-style-type: none"> <li>Start of reforms into smart factory</li> <li>Reestablish on-site management based on standards and performance</li> <li>Visualization of load (in-house and external production, personnel plan)</li> </ul>	<ul style="list-style-type: none"> <li>Evolution of smart factory</li> <li>Solidify upgrading work sites</li> <li>Improve precision on load management</li> </ul>
Revenue	<ul style="list-style-type: none"> <li>Problems have been identified in wasteful cost structure through BS cleaning</li> </ul>	<ul style="list-style-type: none"> <li>Review the way of working to remove wasteful cost</li> <li>Strengthen cost review/estimate management system</li> </ul>

### 3-2-4) Actions for FY 2016 (2)

	Environmental changes in FY 2015	Incorporation into FY 2016
Grinder Cutting machine Machining center	<ul style="list-style-type: none"> <li>• Performance improvement of competitors</li> <li>• Accelerated trend to use multi-functional machines/multi-axis machines due to needs such as process omission</li> <li>• Changes in the way of manufacturing items (removal → addition)</li> </ul>	<ul style="list-style-type: none"> <li>• Review development strategy</li> <li>• Improve competitiveness of grinders</li> <li>• Examine development of multi-functional processing machine and new production method</li> </ul>
Gear skiving center	<ul style="list-style-type: none"> <li>• Improved customer awareness</li> <li>• Aggravation of pursuit by other companies</li> <li>• Delivery of mass production machines</li> <li>• Start of preparation for cutting tool supply system</li> </ul>	<ul style="list-style-type: none"> <li>• Establish cutting tool supply system</li> <li>• Serialize products (development of small machines) and strengthen proposal capability for each gear type</li> </ul>
System integrator	<ul style="list-style-type: none"> <li>• Large investment of competitors, and shift from single machine to system business</li> </ul>	<ul style="list-style-type: none"> <li>• Reinforce utilization of technologies held by the group and establish a necessary system</li> </ul>
IoE measures	<ul style="list-style-type: none"> <li>• Shift to IoE is accelerated</li> <li>• Development competition between companies</li> </ul>	<ul style="list-style-type: none"> <li>• Strengthen capability of proposing for existing lines</li> <li>• Reform JTEKT into smart factory</li> <li>• Establish Monozukuri service business based on IoE</li> </ul>

- 1. Evolution of the grinding machine business .**
- 2. Sales promotion of the control unit and establish business models of IoE.**
- 3. Promote business model of customer service**
- 4. Production innovation of KARIYA Plant.  
(distribution improvement, smarter factory device)**
- 5. Identify own duties and improve the way of working.**



# Enhancement of Fundamentals

Global HR Management

Strengthening Financial Basis

Operational Reform of Indirect Departments

Establishing Global Business Basis

# 3-2-5) Global HR Management

## Roles & Aims

- (1) Appointment/development/optimized assignment of global management HR
- (2) Improvement of ability/organizational capabilities of individual employees

Being created/Being implemented/Being operated

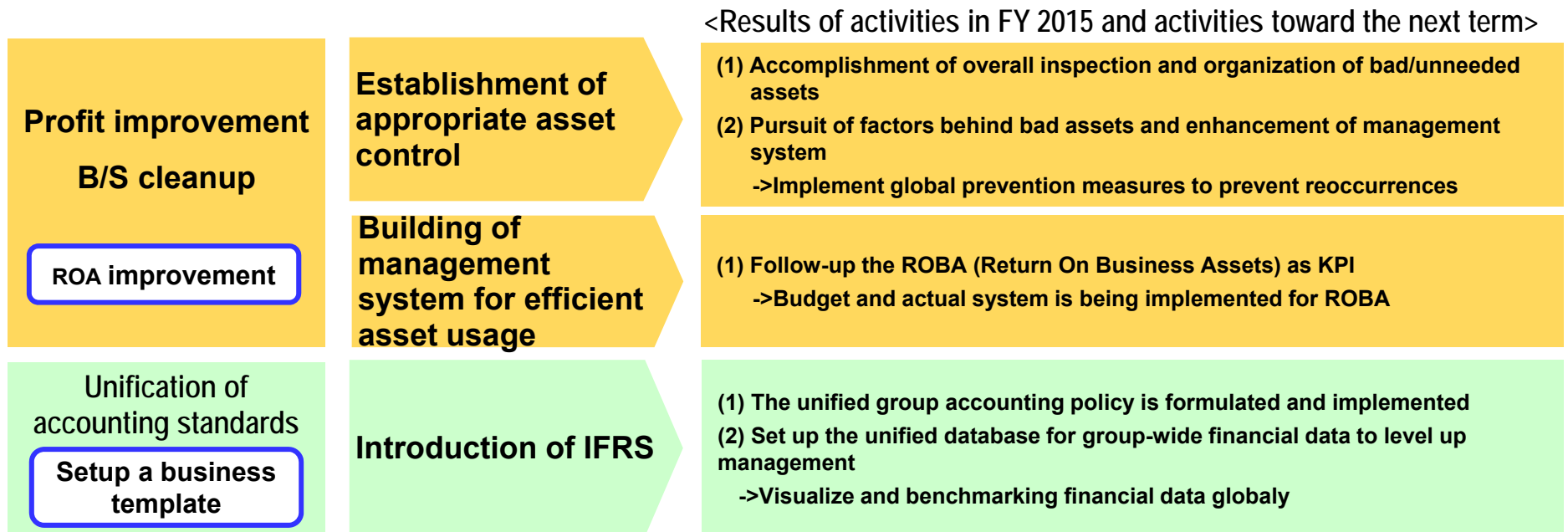
### Actions to be taken in and after FY 2015

### Present (end of FY 2015)

		Actions to be taken in and after FY 2015	Present (end of FY 2015)
(1)	Introduction of succession plan	Practice of <b>global succession</b> and <b>global transfer</b>  From appointment to development of next-generation executive manager candidates	[Japan] Already introduced to department managers and line managers [Overseas] Already introduced to department manager class  Training for selected 1st candidates Selected 2nd candidates: 36 persons (including 17 from subsidiaries outside Japan)
	Global HR system	Creation of <b>global grade/evaluation/compensation systems</b>	Completion of evaluation system design
(2)	Problem-solving ability	Seminar for all employees Expansion to group companies and to overseas	Launch of development of global trainers
	Engineering/supervisory ability	Global expansion of JFMS training (JTEKT Floor Management System)	JFMS education is being promoted in Japan Being examined by Training Program GPC
	Creation of JTEKT WAY	Announced in Apr. 2016 Spread to group companies and overseas	Creation completed (execution of trainer training)
	Promotion of diversity	Greater employee awareness Work-life balance support	Seminar for executive officers, department managers, and female employees Enhanced child-care support measures (holiday baby-care system)

# 3-2-6) Strengthening Financial Basis (1)

<b>Roles &amp; Aims</b>	<p><b>Building of financial basis as "Excellent Company"</b></p> <ul style="list-style-type: none"> <li>• <b>Build change-resistant financial basis</b></li> <li>• <b>Secure sufficient strategic funds</b></li> </ul> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>[Company-wide numerical targets]</p> <ul style="list-style-type: none"> <li>• 150 billion yen or less in interest-bearing debt</li> <li>• D/E ratio: 0.3 or less</li> <li>• Strategic funds to be secured: 20 billion yen or more per year</li> </ul> </div>
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**Promote improvements both profitability and efficiency for investment sustaining sound finance**

## 3-2-6) Strengthening Financial Basis (2) – B/S Cleanup Activities

B/S cleanup activity was carried out to realize "building of change-resistant financial basis" in FY 2014 and FY 2015

**Actual amount**

(100 million yen)

	<b>FY 2014</b>	<b>FY 2015</b>	<b>Total</b>
Operating	29	41	70
Non-operating, special loss	85	58	143
<b>Total</b>	<b>114</b>	<b>99</b>	<b>213</b>

**Overall inspection and organization of assets were accomplished as a whole group in two years**

### **Future actions**

- Create preventive measures against the possibility of reoccurrence for unneeded assets
- Build monitoring system on global basis

**Construct the system to detect the alert globally  
=>Strengthen essential company institution**

# 3-2-7) Operational Reforms for Indirect Departments

## Roles & Aims

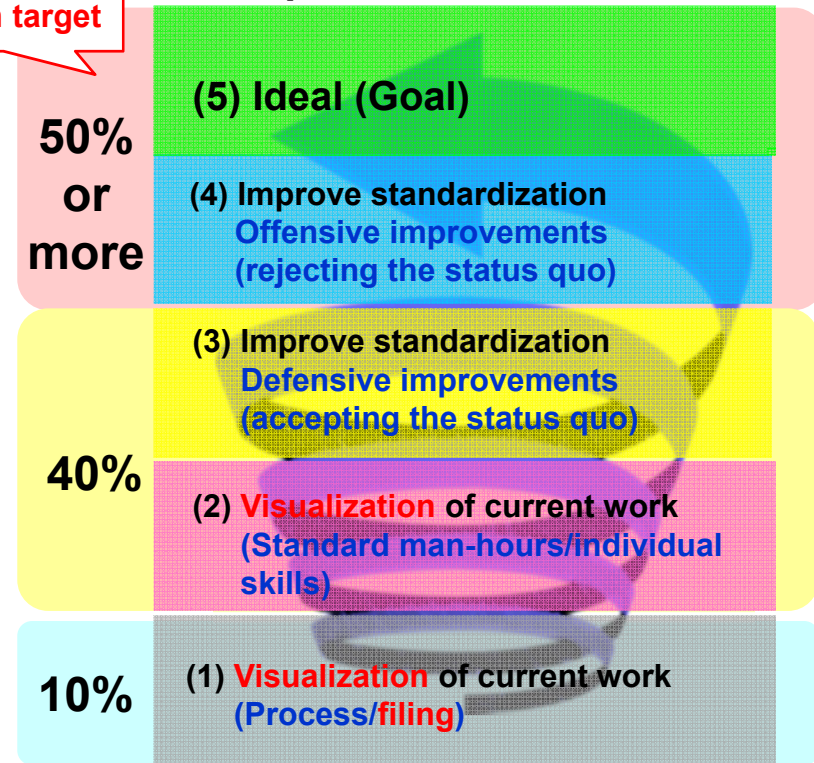
- Upgrade the standardization of daily work among all the indirect departments of the JTEKT group and **establish small HP/small indirect departments!!**
- Globally implement standardized work to realize **the same system in all JTEKT group companies!!**

## Progress status

	FY 2014	FY 2015	FY 2016	FY 2017
(Non-consolidated) Mass production design	(1)		(2), (3)	
(Non-consolidated) Other indirect departments		(1)		(2), (3)
All group companies				(1)

Man-hour reduction target

### <Operational Reforms>



## 3-2-8) Establishing Global Business Basis (Information System)

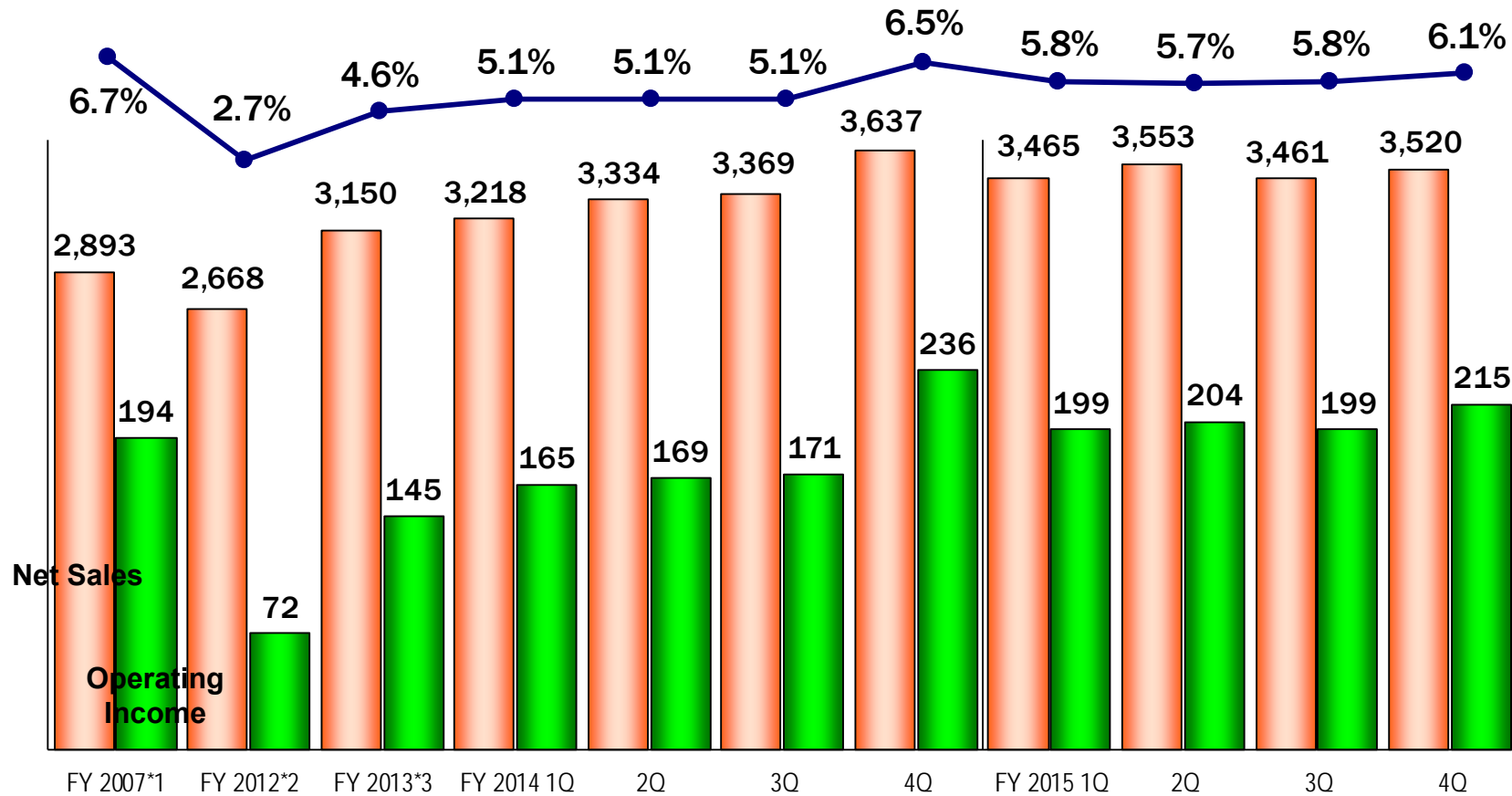
Introduce IT to standardized core business operations on global basis to build information-sharing infrastructure and reduce cost of indirect departments!!

Main measures		Implementation	Target effect (million yen)
<b>(1) IT introduction to standardized core business operations</b>			
• Sales	Supply and demand management system Inquiry and project correspondence system	Jan. 2018 Jul. 2018	215
• Production Management	Global parts process chart	Oct. 2017	125
• Quality Assurance	Global sharing of quality issues	Jul. 2016	55
• Accounting/Financial	Real-time collection and analysis of management information	Jan. 2019	23
<b>(2) Build information sharing infrastructure on global basis</b>			
	Cyber attack countermeasures (Overseas regions; Japan: Completed)	Sep. 2016 to Feb. 2018	Suppression of information leak/business suspension
	Productivity improvement for indirect departments (chat, information sharing, etc.)		390

# (Reference) Quarterly trend

Operating income rate

(100 million yen)



1 USD	113 yen	82 yen	99 yen	101 yen	103 yen	113 yen	118 yen	120 yen	121 yen	120 yen	113 yen
1 EUR	160 yen	105 yen	133 yen	139 yen	136 yen	141 yen	133 yen	132 yen	134 yen	131 yen	125 yen

\*1 Quarterly Average to compare with “Before Financial Crisis”.

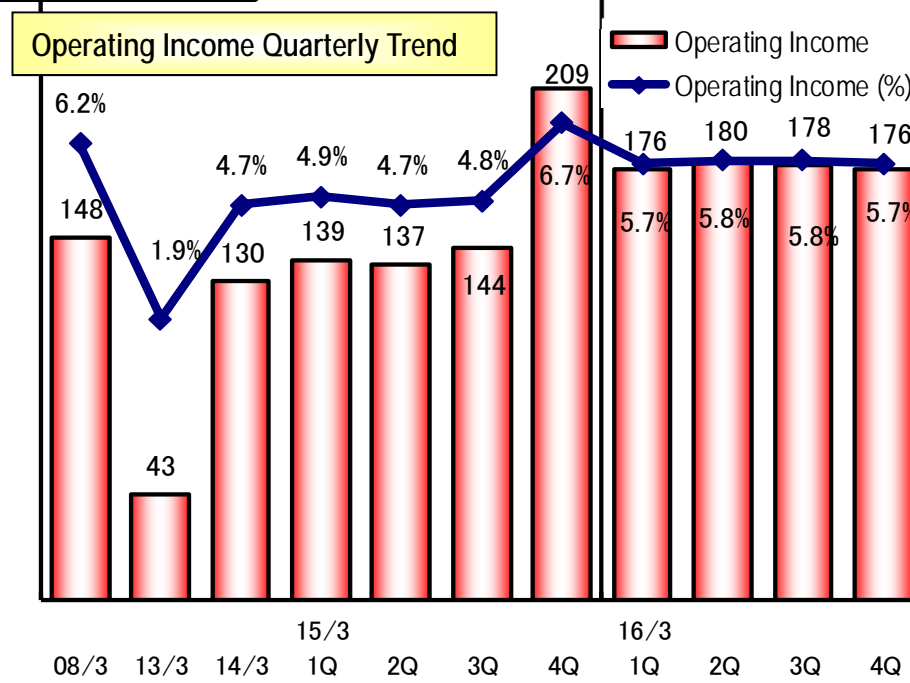
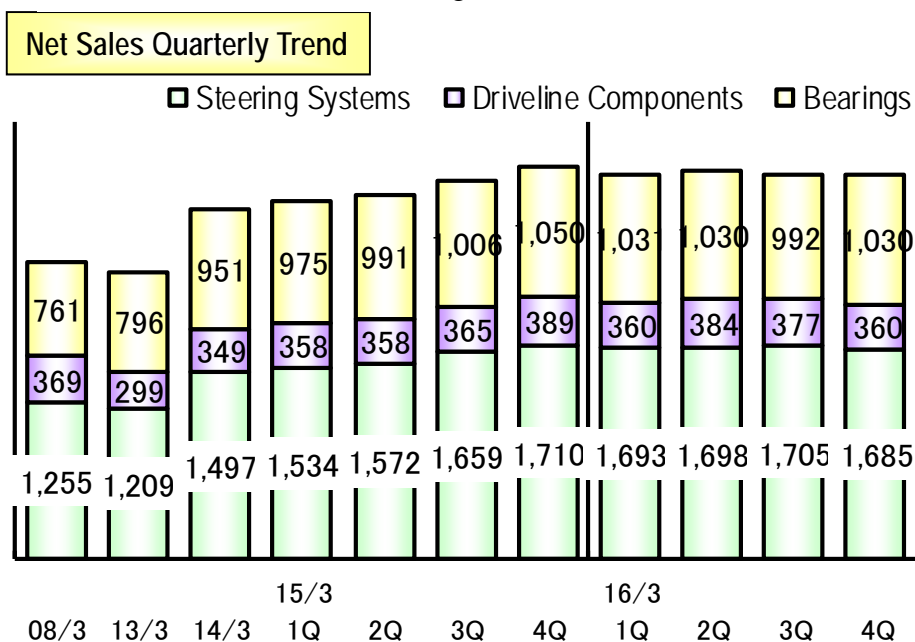
\*2&3 Quarterly Average as well as following pages.

# (Reference) Financial Results by Product (Mechanical Components)

Mechanical Components		FY 2014	FY 2015	Increase/ Decrease	Increase/ Decrease (%)
Steering Systems	Net Sales	6,477	6,783	+ 305	+ 4.7%
Driveline Components	Net Sales	1,472	1,482	+ 9	+ 0.7%
Bearings	Net Sales	4,026	4,085	+ 58	+ 1.5%
[ Total ]	Net Sales	11,977	12,351	+ 374	+ 3.1%
	Operating Income	631	712	+ 81	+ 12.9%
	Operating Income (%)	5.3%	5.8%		

(100 million yen)

Before offset between segments





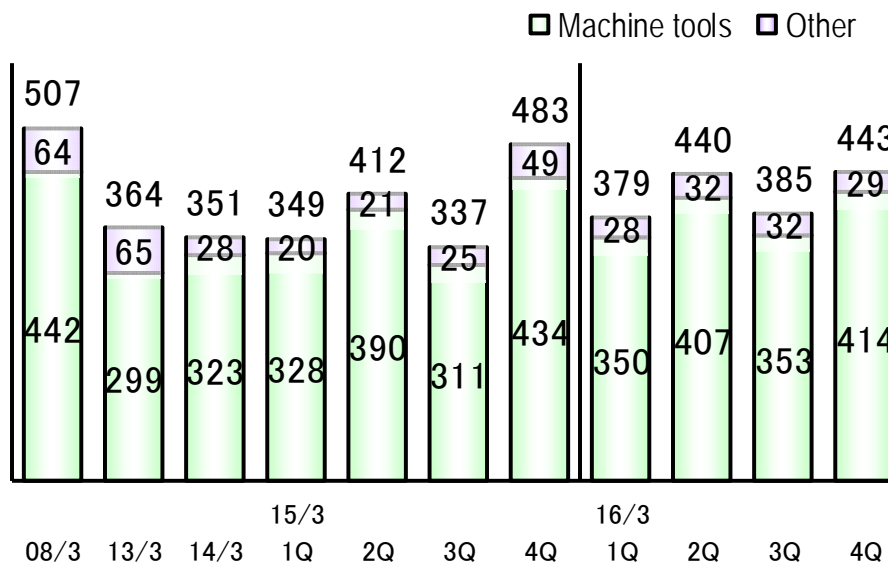
# (Reference) Financial Results by Product (Machine Tools & Other)

(100 million yen)

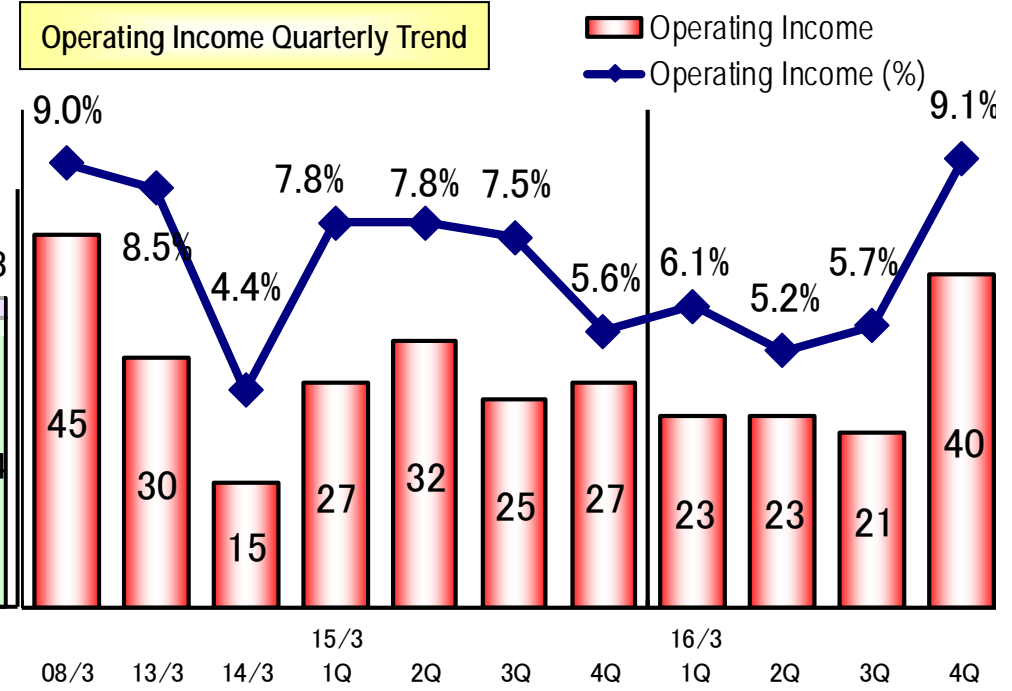
Machine Tools/Other		FY 2014	FY 2015	Increase/ Decrease	Increase/ Decrease (%)
Machine tools	Net Sales	1,464	1,525	+60	+4.2%
Other	Net Sales	117	122	+4	+4.0%
[ Total ]	Net Sales	1,582	1,648	+65	+4.1%
	Operating Income	112	108	△3	△3.2%
	Operating Income	7.1%	6.6%		

\* "Deletion" is omitted.

Net Sales Quarterly Trend



Operating Income Quarterly Trend

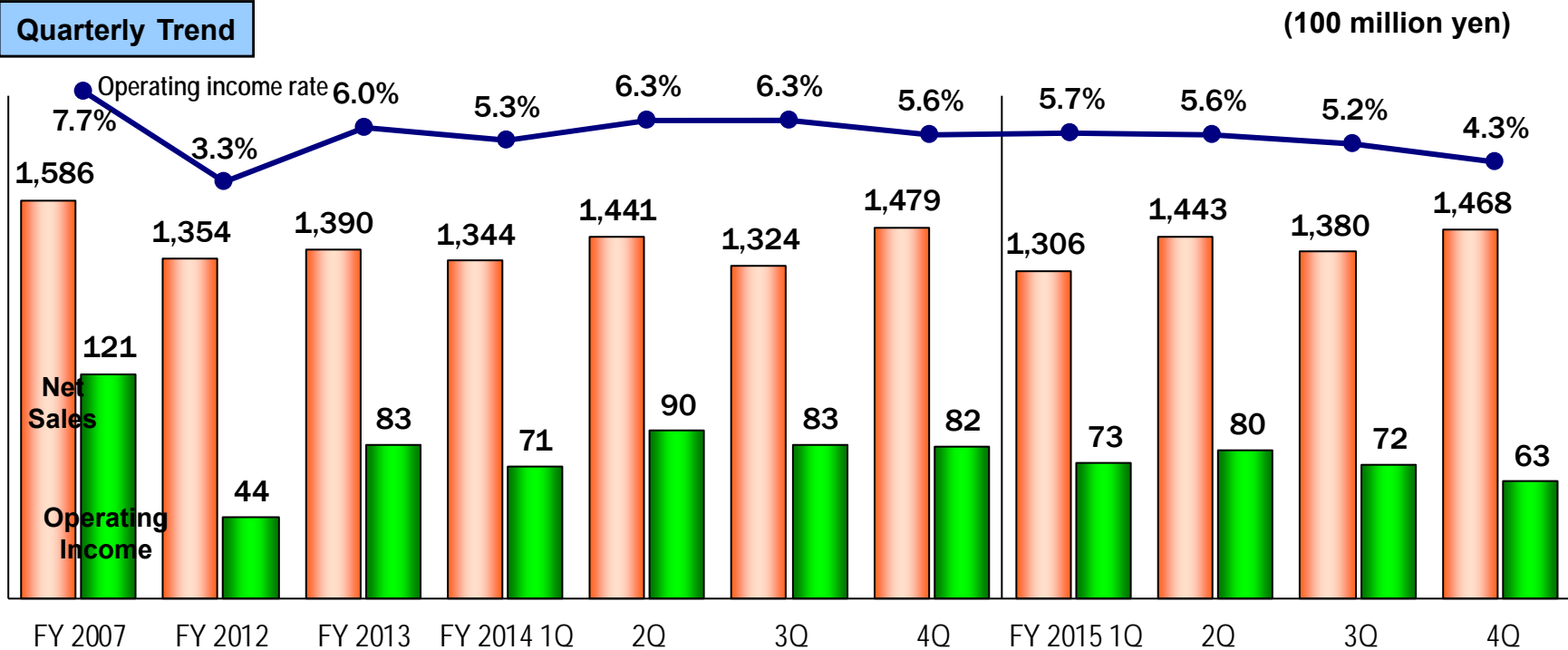


# (Reference) Financial Results by Region (Japan)

(100 million yen)

Japan	FY 2014	FY 2015	Increase/ Decrease	Increase/ Decrease (%)
Net Sales	5,590	5,598	+7	0.1%
Operating Income	328	289	△38	△11.8%
Operating Income (%)	5.9%	5.2%		

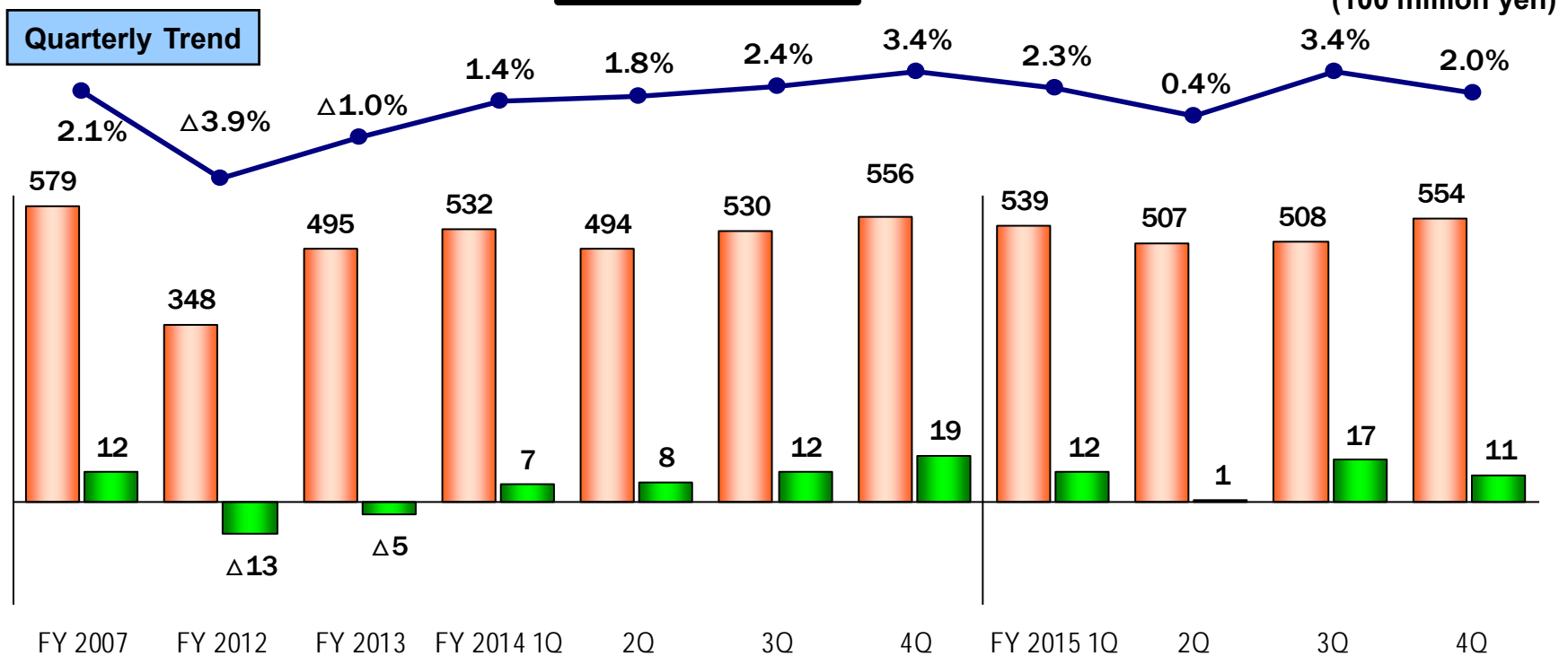
Quarterly Trend



# (Reference) Financial Result by Region (Europe)

(100 million yen)

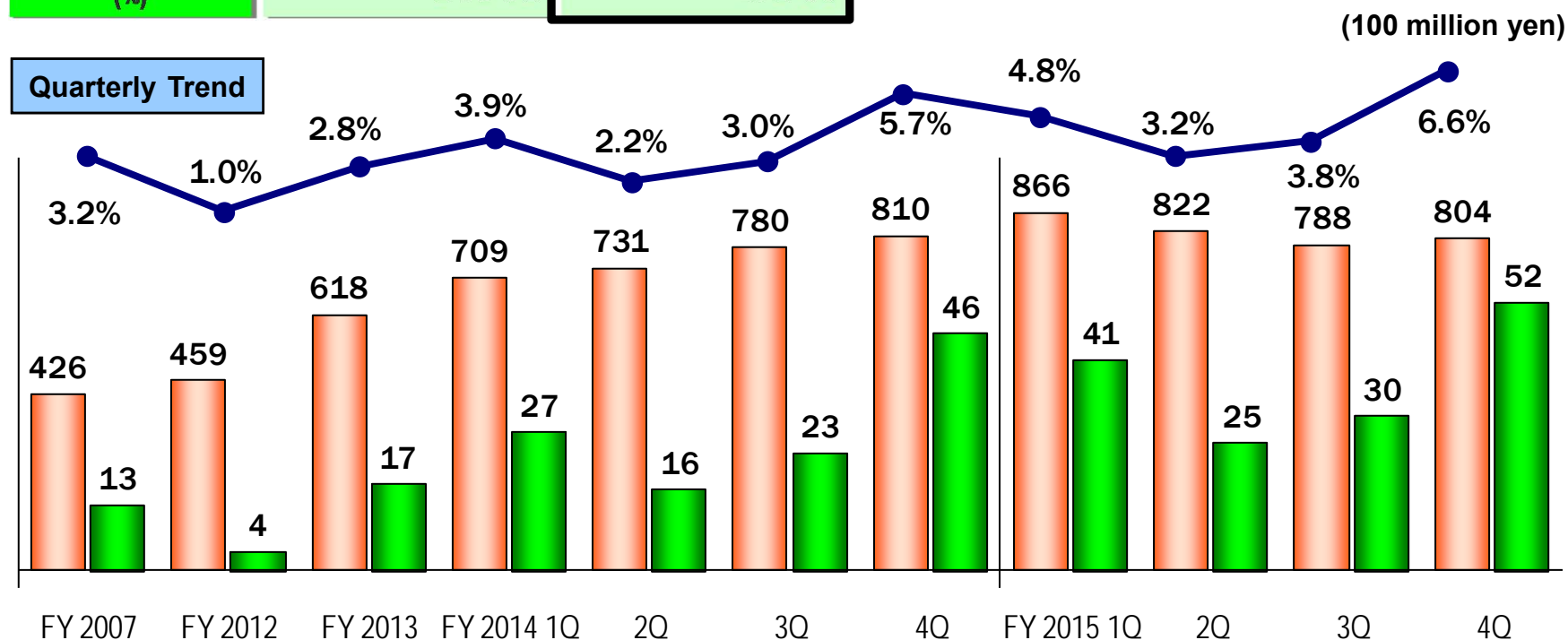
Europe	FY 2014	FY 2015	Increase/Decrease	Increase/Decrease (%)
Net Sales	2,114	2,110	△4	△0.2%
Operating Income	48	42	△5	△12.3%
Operating Income	2.3%	2.0%		



# (Reference) Financial Results by Region (North America)

(100 million yen)

North America	FY 2014	FY 2015	Increase/ Decrease	Increase/ Decrease (%)
Net Sales	3,031	3,281	+ 250	+ 8.3%
Operating Income	113	150	+ 36	+ 32.3%
Operating Income (%)	3.8%	4.6%		

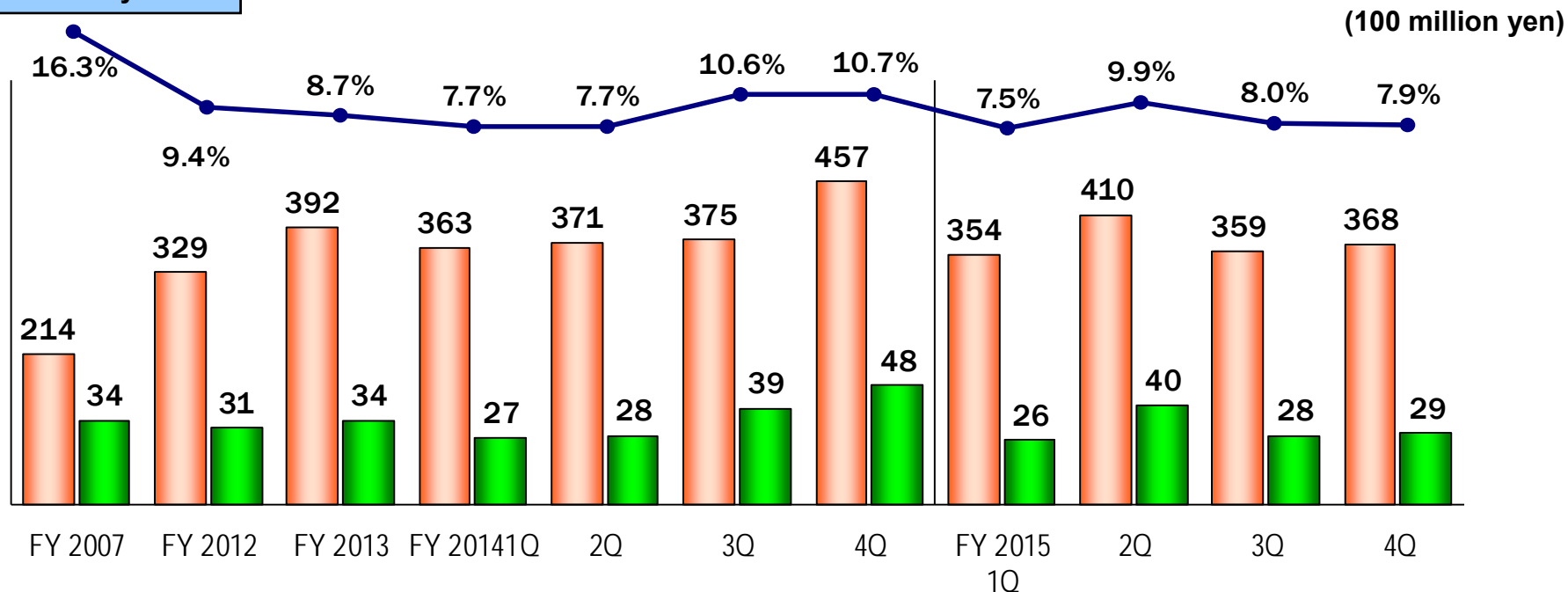


# (Reference) Financial Results by Region (Asia/Oceania)

(100 million yen)

Asia/ Oceania	FY 2014	FY 2015	Increase/ Decrease	Increase/ Decrease (%)
Net Sales	1,568	1,493	△75	△4.8%
Operating Income	145	125	△20	△13.9%
Operating Income (%)	9.3%	8.4%		

Quarterly Trend

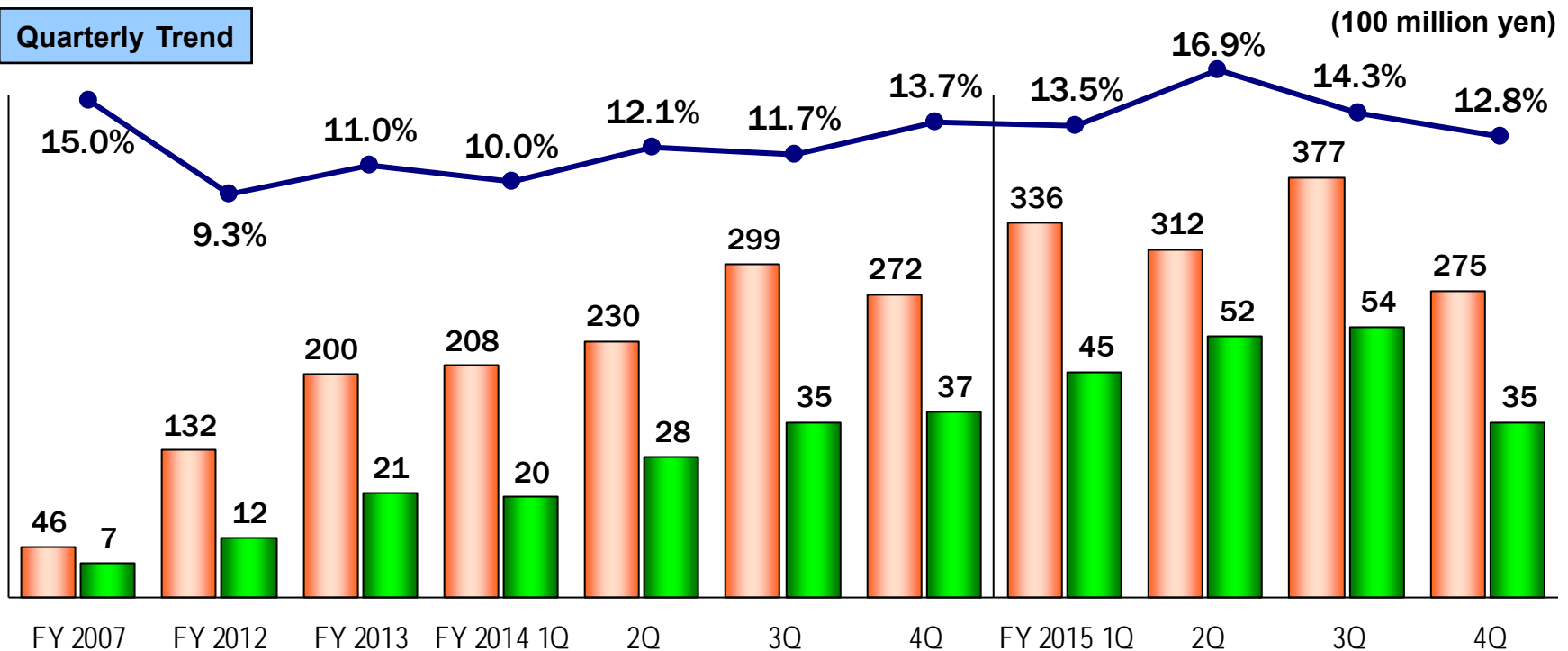


# (Reference) Financial Results by Region (China)

(100 million yen)

China	FY 2014	FY 2015	Increase/Decrease	Increase/Decrease (%)
Net Sales	1,011	1,302	+ 291	+ 28.8%
Operating Income	121	187	+ 66	+ 54.7%
Operating Income (%)	12.0%	14.4%		

Quarterly Trend



# (Reference) Financial Results by Region (South America/Other)

(100 million yen)

South America/ Other	FY 2014	FY 2015	Increase/ Decrease	Increase/ Decrease (%)
<b>Net Sales</b>	243	214	△29	△12.1%
<b>Operating</b>	△5	△7	△2	—
<b>Operating</b>	△2.4%	△3.7%		

### Quarterly Trend

