
Automotive Systems Business Strategy

Hitachi IR Day 2014

June 12, 2014

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Hitachi Automotive Systems, Ltd.

Automotive Systems Business Strategy

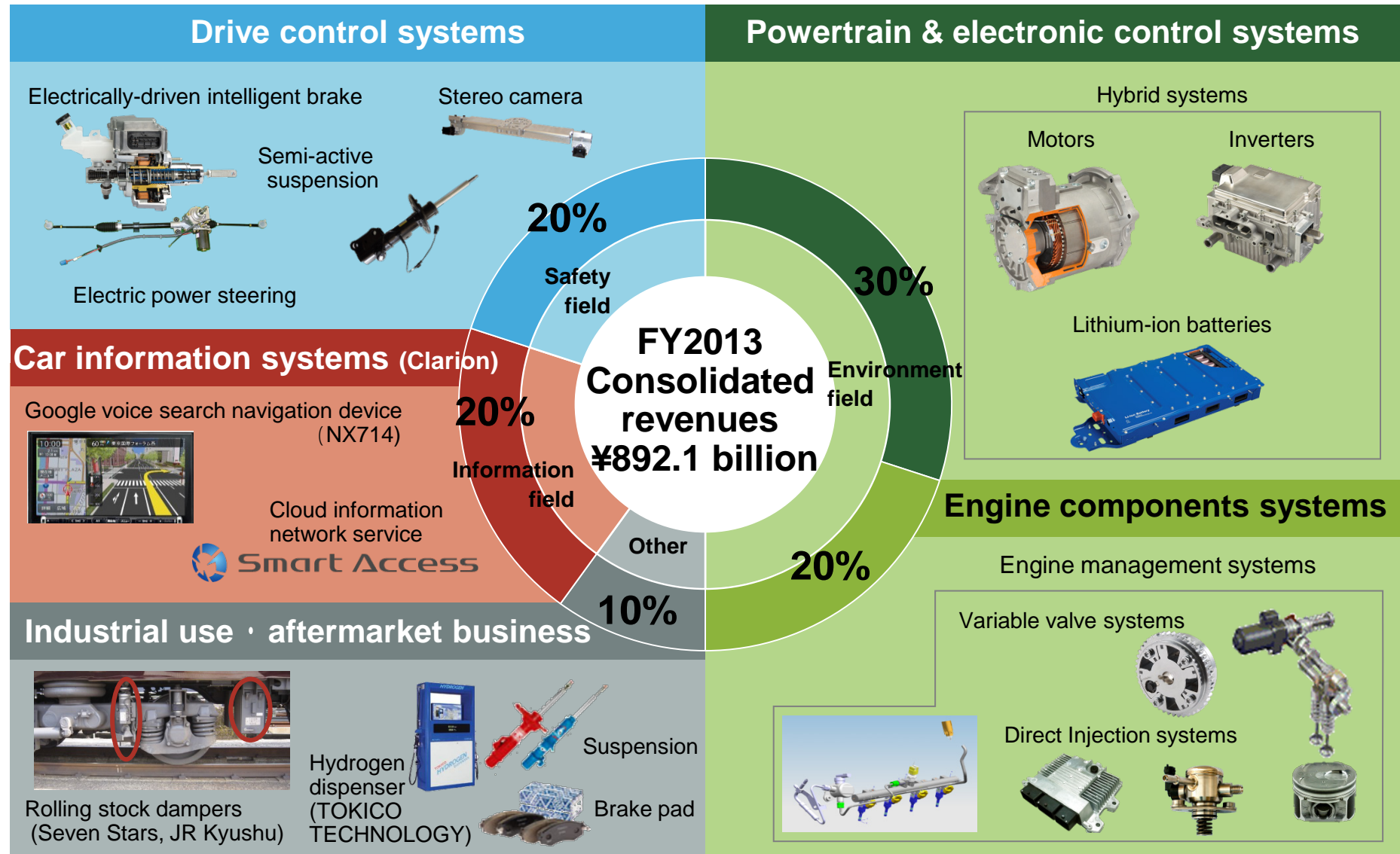
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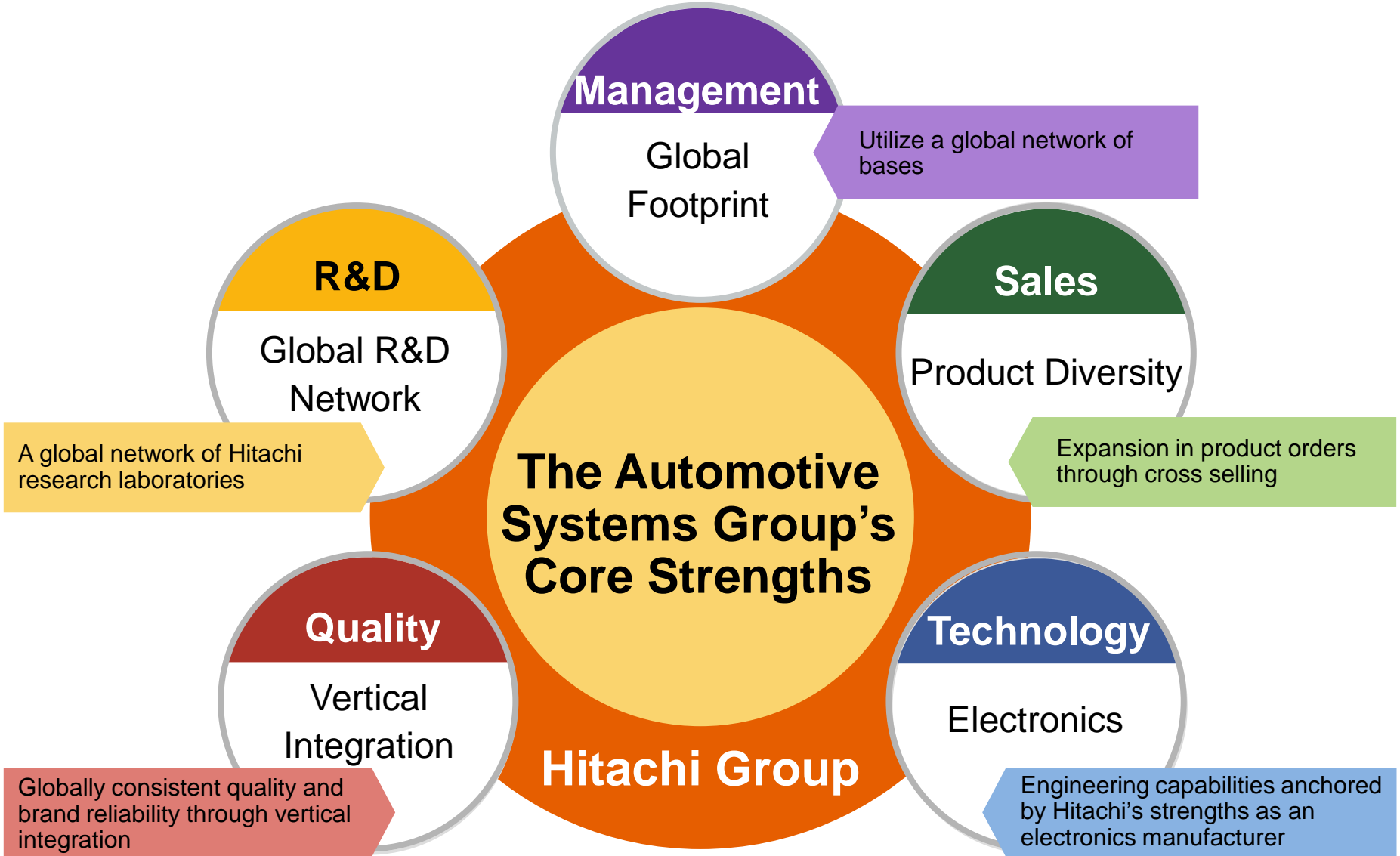


Evolve into a highly reliable global supplier in the environment and safety fields by making automobiles smarter through advanced electronics and electronic drive and control technologies

1-2. Business Structure



1-3. The Automotive Systems Group's Five Core Strengths



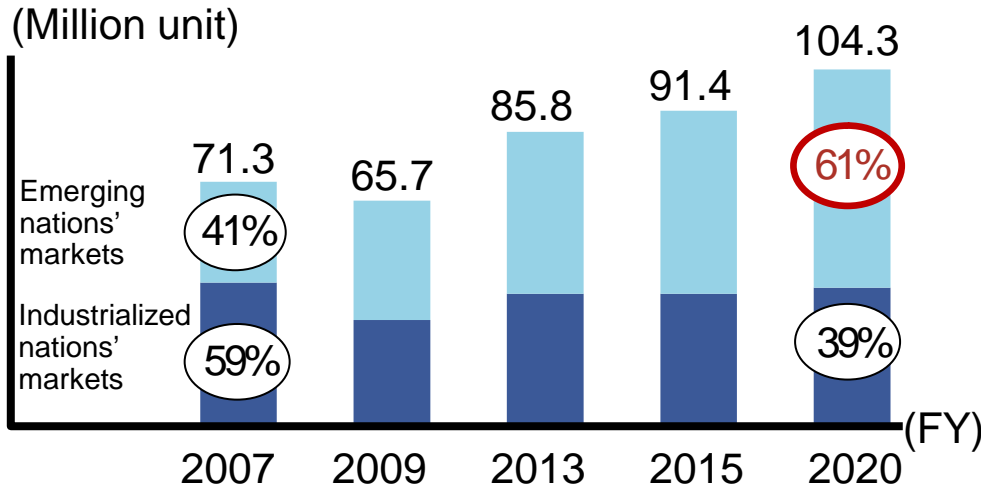
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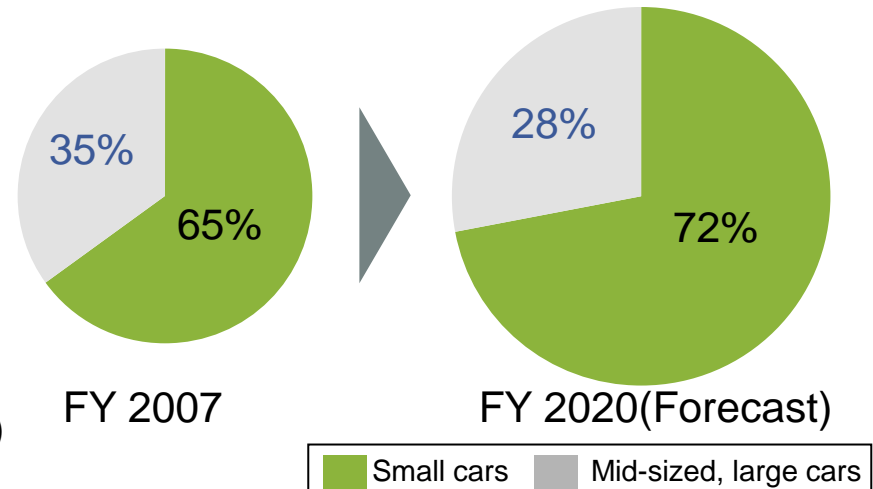
2-1. Global Auto Market Trends

Global Automobile Production Volumes by Region



Markets of emerging nations will expand to more than 60% of global automobile production by FY2020

Ratio by vehicle segments



The small car segment will grow to account for 70% of all vehicles by FY2020

Source: Data compiled in-house from data provided by IHS Automotive

Trends in environmental field

- Stricter fuel efficiency (CO₂, NO_x, etc.) and emissions regulations worldwide
- Progressive development of ultra fuel-efficient engine technology and electric drive vehicles

Trends in safety field

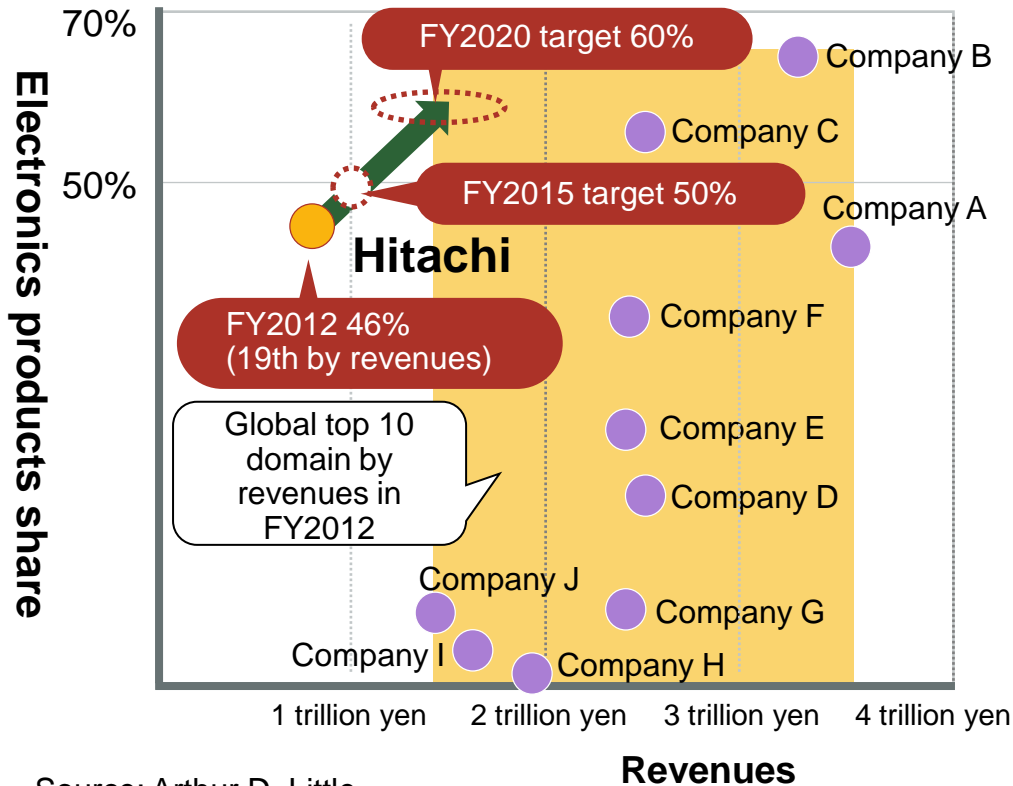
- Automatic braking systems to be added to safety evaluation standards (EU: from 2014)
- Rear monitoring camera to be installed in all vehicles (U.S.: from 2018)
- Automakers to accelerate development and take concrete steps to commercialize automatic driving in 2020 and beyond

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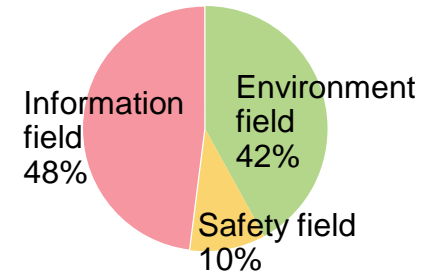
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Electronics products* share of top 10 global parts suppliers by revenue in FY2012



Source: Arthur D. Little

Breakdown of electronics products



Global expansion of electronics products

Secured a high degree of reliability in the environment and safety fields based on our extensive expertise in quality and technology developed over many years

Developed the world's first engine controller in 1979
Started full-scale mass production

Built production systems in the world's five key regions

Strengthened development in Japan, the U.S. and China

Enhance growth potential by increasing electronics products* share to world-leading level

*Electronics products: Electronic control and electric drive products such as electronic control units, hybrid systems, etc.

Execute three strategies with an eye on 2020

1 Customer Strategy

2 Regional Strategy

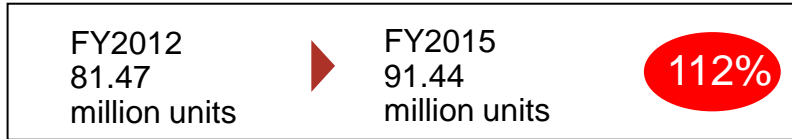
3 Product Strategy

**Create new products and technologies and
become No.1 in MONOZUKURI (manufacturing)
capabilities in the world**

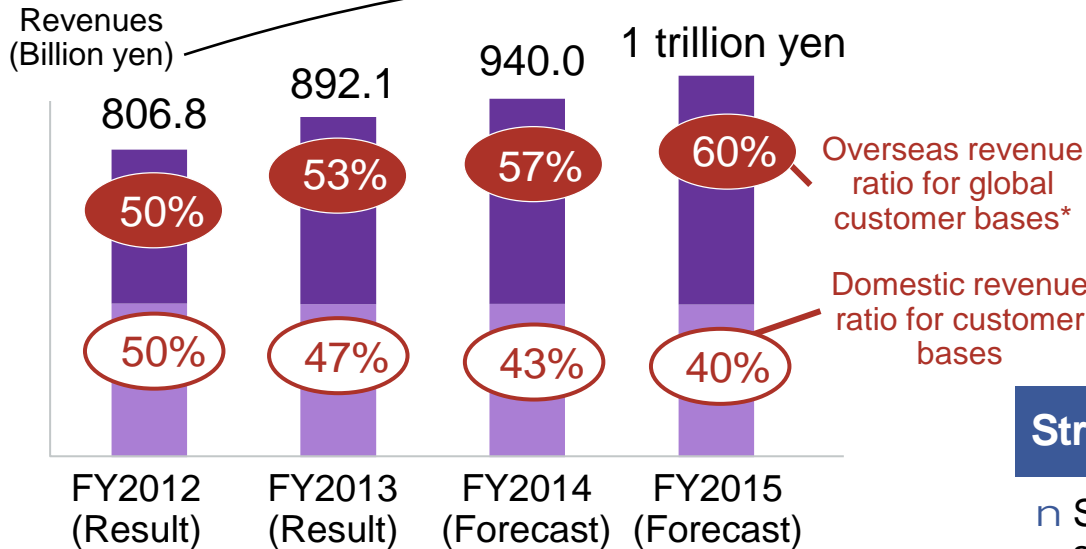
3-3. Customer Strategy (1) Expand Business Faster Than the Market Growth Rate

Market growth rate < Sales growth rate

[Global auto production forecast]



[Revenue target]



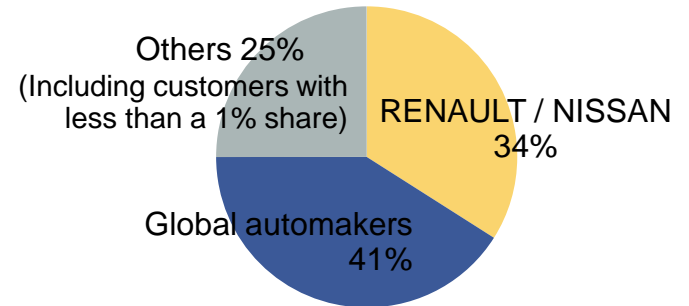
* Customer bases that install automotive components in finished vehicles. This is different from overseas revenues in the consolidated accounts. Excluding exchange rate differences

GAM: Global Account Manager
GAT: Global Account Team

Strengthen account strategy through GAM/GAT

- Expand product orders by strengthening cross selling
- Strengthen sales structure in 4 key overseas regions

Customer composition (FY2013/Result)



Strengthen systems proposal capabilities

- Strengthen response to customers' module strategy
- Propose new technology using demo cars
- Ensure consistent global quality assurance

3-4. Customer Strategy (2) Globalization and Business Expansion Through Cross-selling

Double revenues from Ford(FY2008 FY2012)

Air-flow sensor



Valve timing control



Water pump



Balancer



Shock absorber



Brake master cylinder



...Currently proposing

Hybrid systems

Stereo camera

Telematics control unit (Clarion)

Electric power steering (belt type)

Semi-active suspension



Taurus



Explorer



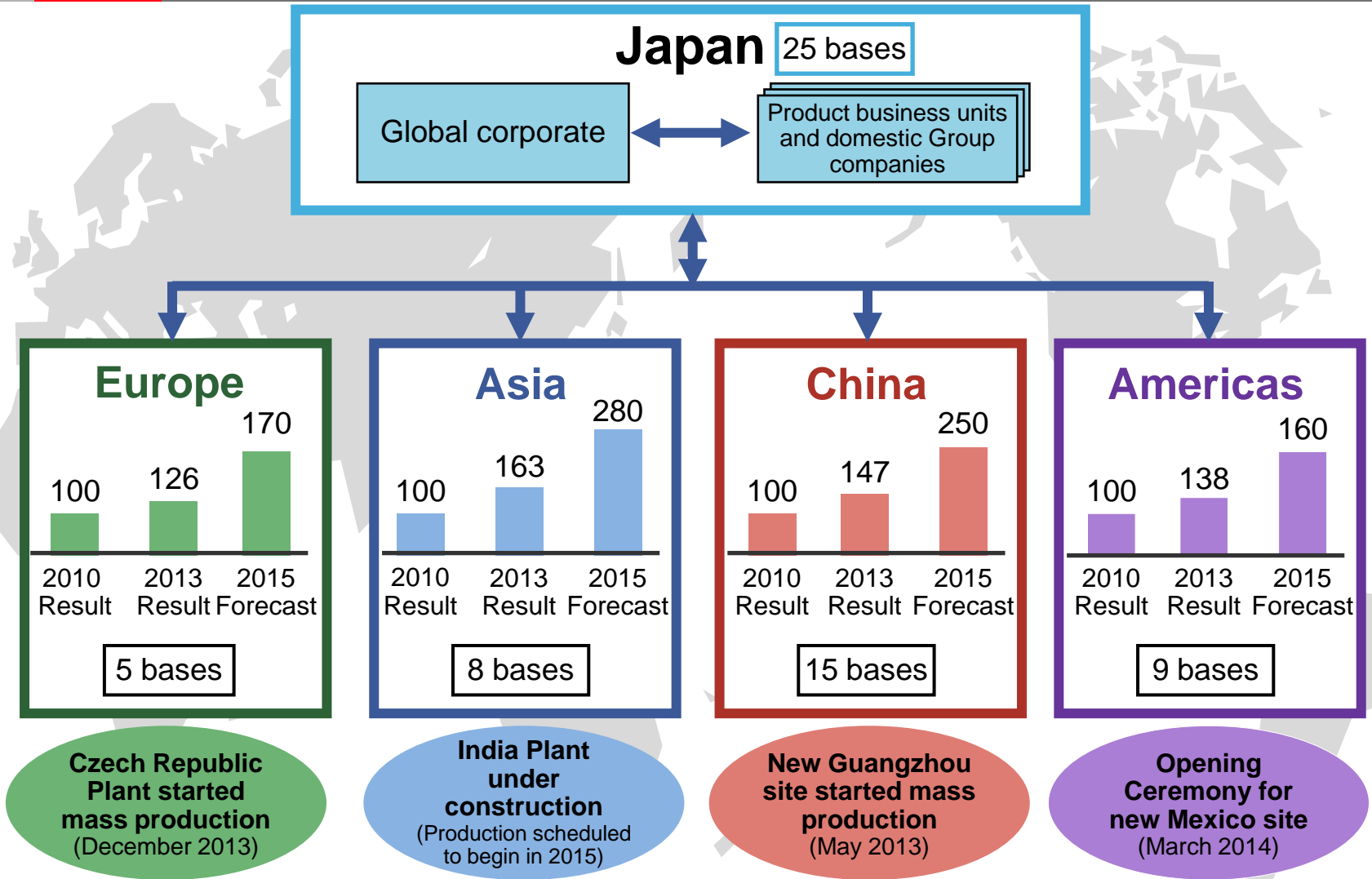
Lincoln Navigator



Commodities and current products

Advanced technologies and newly adopted products

3-5. Regional Strategy(1) A Global Footprint Aimed at Local Production for Local Consumption



Number of manufacturing bases: as of March 2014

*Revenue index (FY2010: 100) The indexes inside the graphs are FY base

Americas

n Priority initiatives

Full-scale expansion of business in Mexico

- Expand production in Mexico and strengthen synergies across the Americas



New plant in Mexico (Querétaro)



Expand internal production in the Americas

- Customers commend vertical integration (product orders triple from FY2011 → FY2013)

Joint development together with Hitachi America, Ltd.

- Strengthen experimental development in North America

New business investment

- FY2013 - FY2015 total: 45.0 billion yen

China

n Priority initiatives

Enhance sales system

Present → FY2015

- Sales personnel 50 → 75 people (mainly local staff)
- Sales bases 4 → 6 locations

Bolster procurement functions

- Pure local procurement ratio 35 → 50%

Strengthen local development capabilities

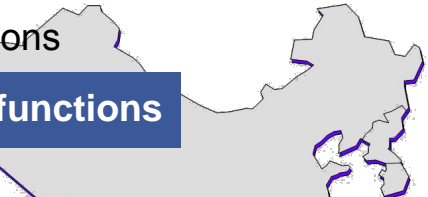
- Design personnel 90 → 210

[Launch the new Guangzhou site]

- Integrated execution from development and design to manufacturing
- Top-level technology development, highly efficient production

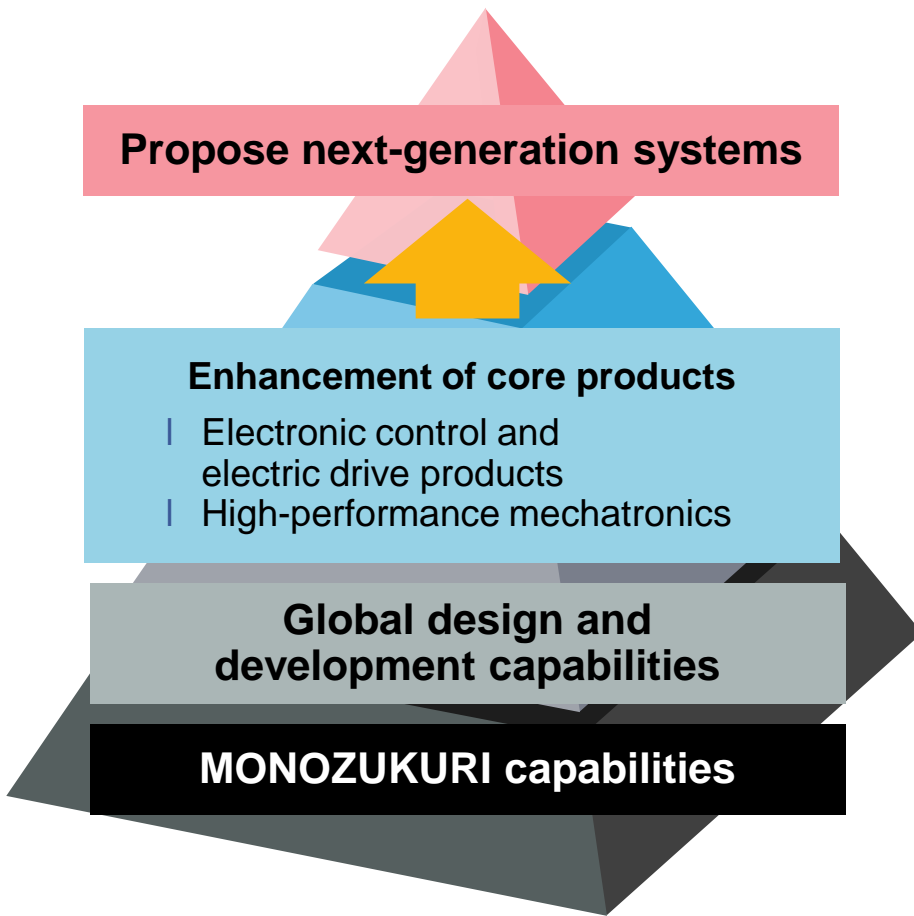
New business investment

- FY2013 - FY2015 total: 30.0 billion yen

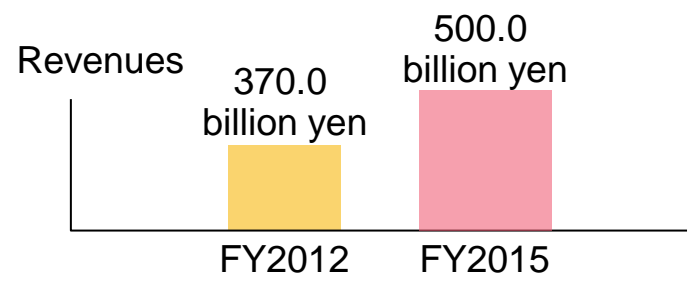


New Guangzhou site (Zengcheng)

Propose next-generation systems by enhancing core products



Contribution to make automobiles smarter
 [Expand electronic control and electric drive products]



Environment	Drive stabilization
<p>Ultra fuel efficient system</p> <p>Direct injection engine</p> <p>Electric drive system</p> <p>HEV/EV</p>	<p>Safety support systems</p> <p>Cameras, sensors</p> <p>Drive stabilization systems</p> <p>Electrically-driven intelligent brake</p>

3-8. Product Strategy(2) Expand Business Through Innovative, High Value-Added Products

Engine Innovation

World's top share

World's leading

| Air-flow sensor
World's top share, track record of 200 million units supplied

| Variable valve systems **Revenues 1.6 times***

VEL: Achieves both fuel efficiency and clean exhaust performance through best-in-class high power output and quick response (Reduces startup exhaust by 50%)



Innovation in electronic control and electric drive products

World's leading

World's first

| Inverters
World's leading high power output density (35kW/L) using double-sided cooling modules

| Electrically-driven intelligent brake

World's first product to achieve highly energy efficient regenerative braking through an electric brake booster



Innovation in safety control

World's leading

World's first

World's first

| Semi-active suspension
Achieves even greater ride comfort with world-class 10-fold variability

| Stereo camera **Revenues 2.3 times***
Commercialized the world's first driving support system using a stereo camera

| SurroundEye system
Commercialized a camera system designed to assist with parking based on the world's first top-down view of vehicles; expand use to automatic driving

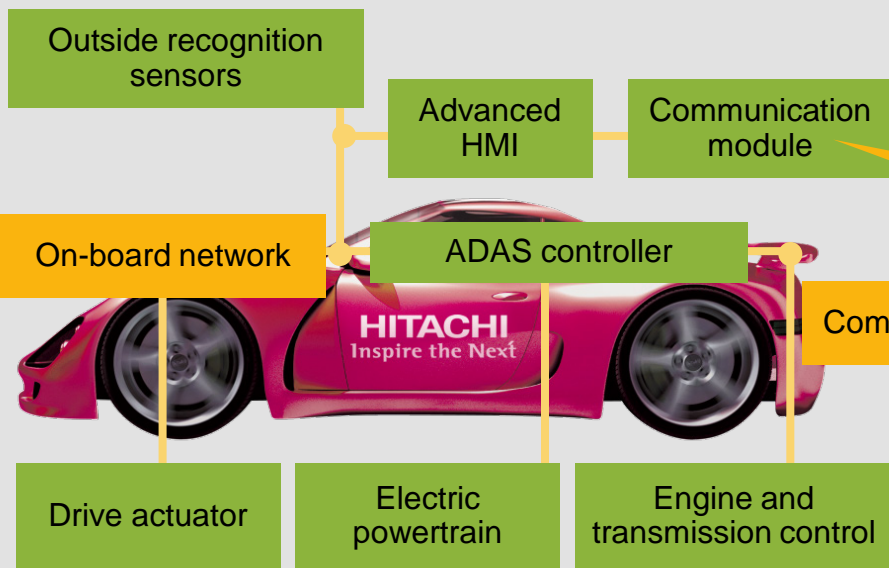


VEL: Variable Valve Event and Lift Control System

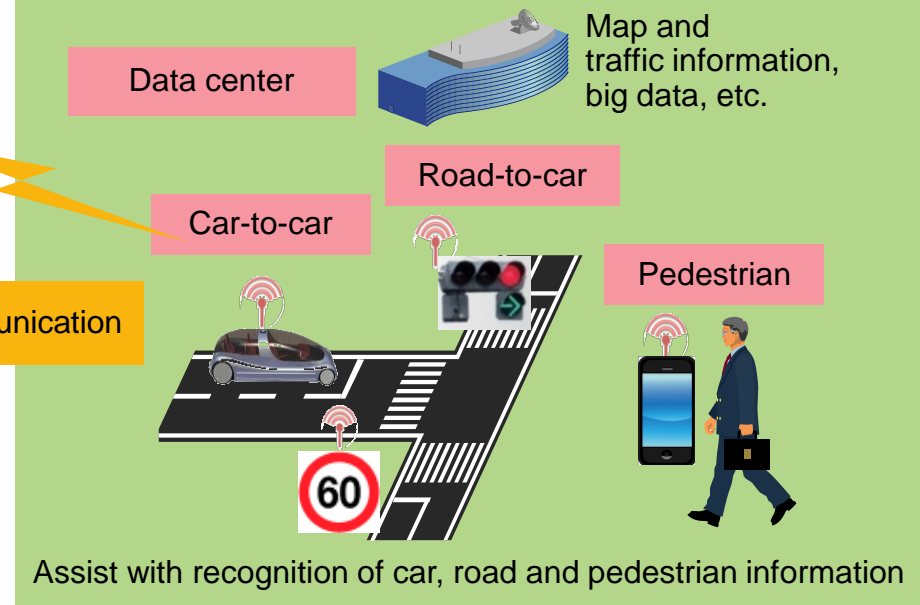
* Revenue growth from FY2012 to FY2015

Achieve automatic driving through the smart ADAS* and Hitachi's IT synergy

Evolution of automobiles: Smart ADAS



Fuse Hitachi's IT and infrastructure



Automatic driving (2020 and beyond)

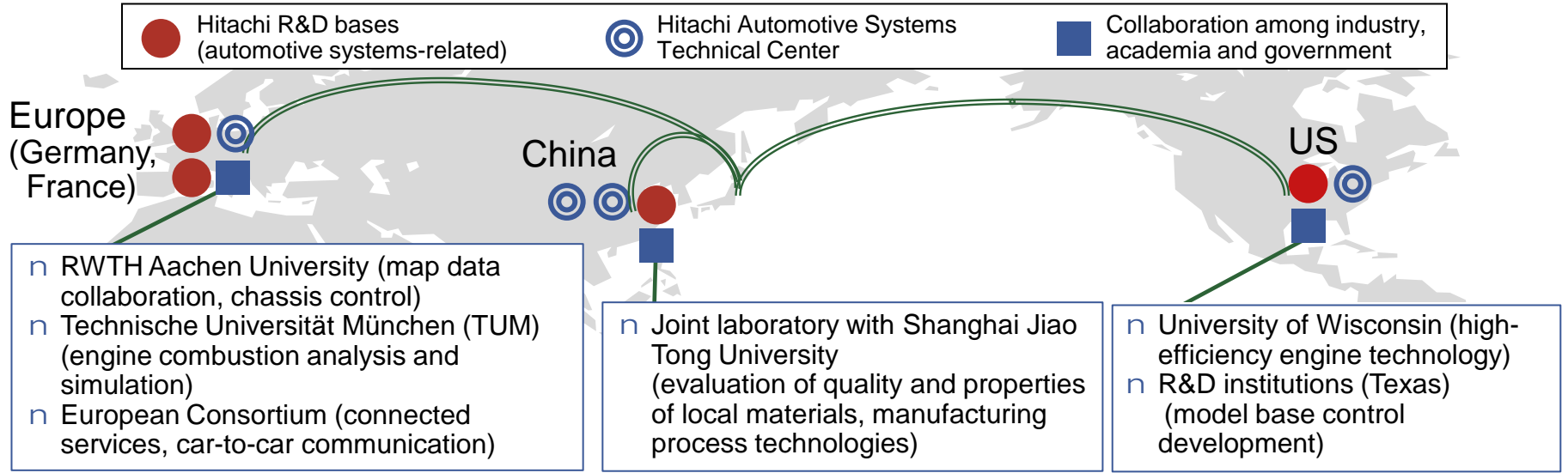


Benefits

Eliminate and alleviate traffic congestion	Reduce environmental impact	Improve driving comfort
Reduce traffic accidents	Assist transportation of seniors, etc.	Increase international competitiveness

ADAS: Advanced Driver Assistance System HMI: Human Machine Interface

Collaborate with overseas R&D bases and utilize open innovation



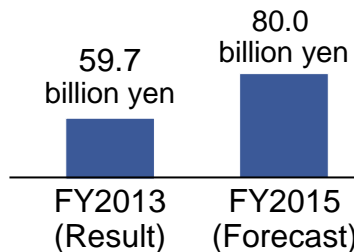
Enhance global R&D capabilities

Vigorously drive global R&D activities focusing on the core Engineering Development Division

Vertical integration

Execute activities ranging from materials, processing and assembly to combustion analysis and vehicle driving performance evaluation technologies

[R&D expenditure] **35%UP**



Accelerate regional development

Enhance technical centers in the three key regions of the U.S., Europe and China and conduct applied development

Bolster training of manufacturing personnel

Opened the Global Manufacturing Training Center (October 2012)

Execute the growth strategy with continuous innovation

Cost structure reforms

(1) Global quality reforms

- n Full-scale roll out of the global quality integrated management system
- n Foster the culture needed for highly reliable manufacturing (learning from mistakes)

(2) Global production reforms

- n Production and indirect material cost reforms (global production reform project, logistics reforms)
- n Develop concurrent engineering (improve development efficiency and reduce overall workload)

(3) Global procurement reforms

- n Strengthen procurement engineering (overseas VEC)
- n Use more pure local materials (step up efforts to find vendors in emerging countries)

VEC: Value Engineering for Customers

Business structure reforms

(1) Realign the battery business FY2015 target: double revenues (Vs. FY2012)

- n Integrate development division of Hitachi Vehicle Energy
- n Improve development efficiency for electric powertrains

(2) Bolster the aftersales business FY2015 target: increase revenues by 50% (Vs. FY2012)

- n Drive global business through the Aftermarket Division
 - | Dedicated production line
 - | Extensive product lineup
 - | Global sales channels

(3) Expand the industrial business FY2015 target: increase revenues by 15% (Vs. FY2012)

- n Established the new Industrial Product Design Division
 - | Instrumentation products
 - | Rolling stock dampers
 - | Seismic isolation dampers for buildings

Develop new products and strengthen sales growth

Initiatives for improving free cash flows

Issues and Areas to Strengthen

Improve operating cash flows

Raise fund efficiency

Expand business in
China and Southeast Asia

Improve investment efficiency

Global production line reforms

Create the world's No.1
manufacturing technologies

Earnings Improvement Initiatives

- Bolster global TSCM and overseas business expansion (Raise inventory turnover)
- Enhance services and solutions businesses (aftersales and industrial)
- Reduce development man-hours through advances in simulation technology (Reduce by 50% from FY2012 → FY2015)

- Shorten lead times for product launches by expanding global standard automated production lines (currently applied to suspension lines)
- (Japan, U.S., China) Internalize production facilities through the use of global industrial equipment team (Internal production value increased 2.4 times from FY2012 → FY2015)

TSCM: Total Supply Chain Management

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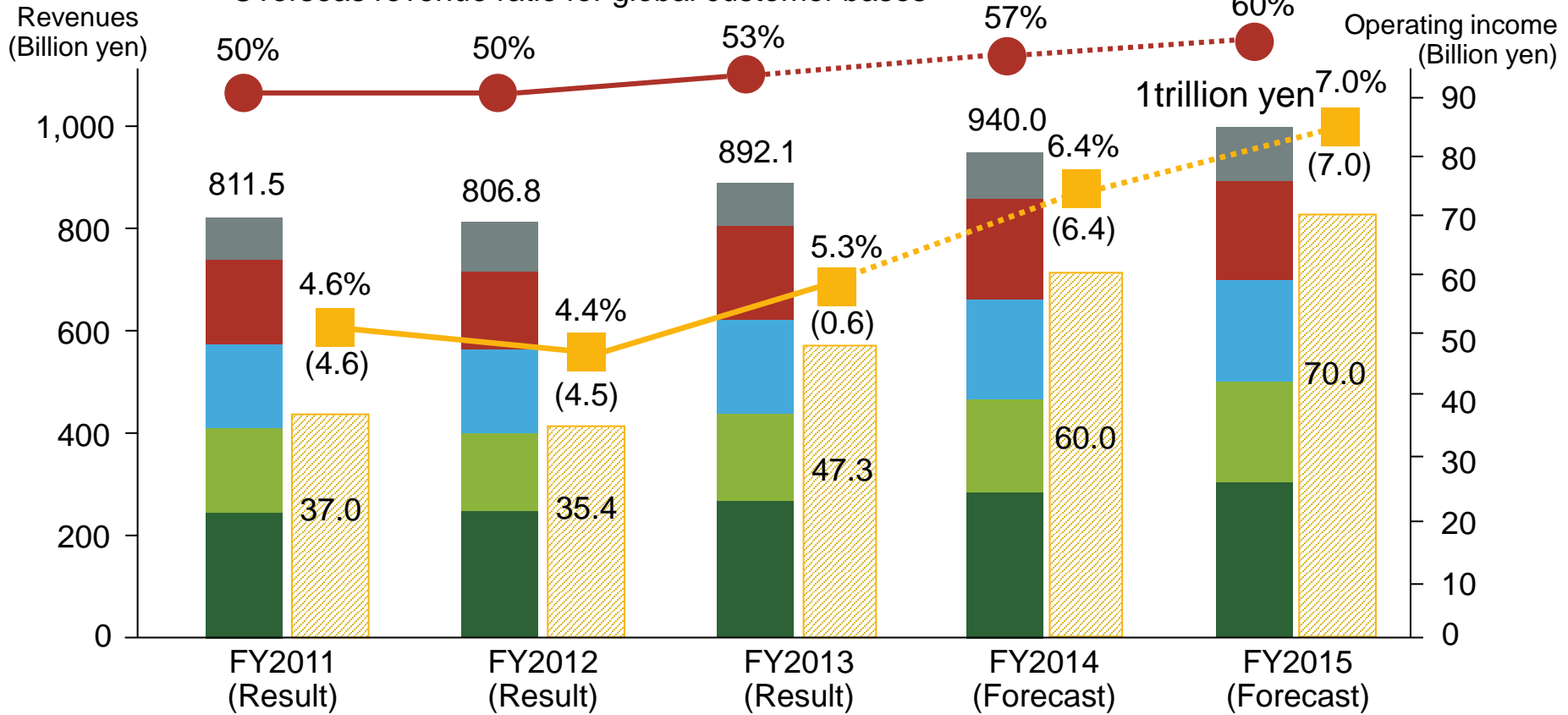
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4-1. Business Targets

FY2015 targets Revenues: 1 trillion yen, Operating income (EBIT) ratio: 7.0%

Overseas revenue ratio for global customer bases



- Powertrain & electronic control systems
- Engine components systems
- Drive control systems
- Car information systems
- Others
- Operating income
- Operating income ratio *below() : EBIT* ratio

* EBIT: Earnings before interest and taxes

FY2015 Targets

n Revenues: 1 trillion yen

(Overseas revenue ratio for global customer bases 60%)

n Operating income (EBIT) ratio 7.0%

n Gross margin (1.0 point improvement) (Vs. FY2012)

FY2013 result: 0.3 point improvement

n SG&A expense ratio (1.0 point improvement) (Vs. FY2012)

FY2013 result: 0.6 point improvement

**Evolve into a highly reliable global supplier in
electronics and electronic drive and control
technologies**

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- 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, particularly against the U.S. dollar and the euro;
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- uncertainty as to general market price levels for equity securities, declines in which may require Hitachi to write down equity securities that it holds;
- 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;
- rapid technological innovation;
- 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;
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