
Automotive Systems Business Strategy

Hitachi IR Day 2015

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Chairman & CEO

Hitachi Automotive Systems, Ltd.

Automotive Systems Business Strategy

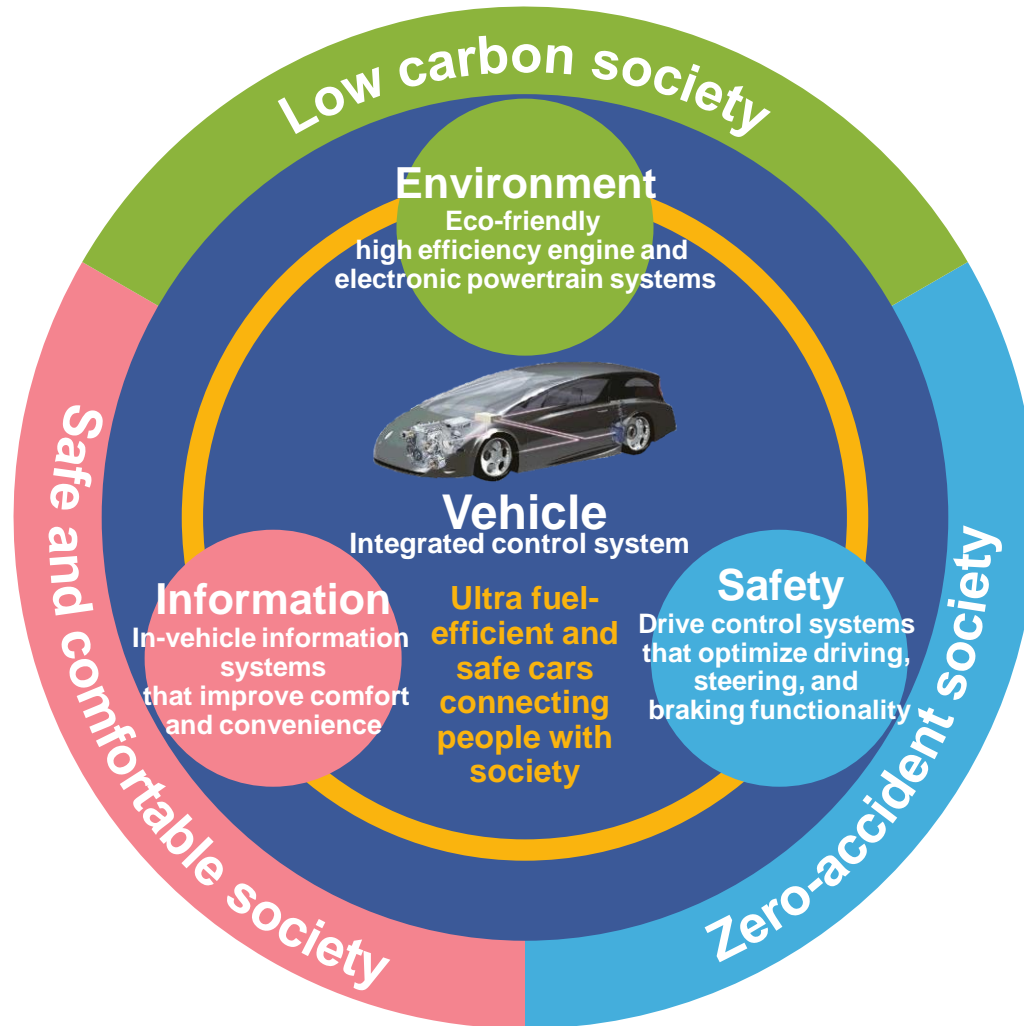
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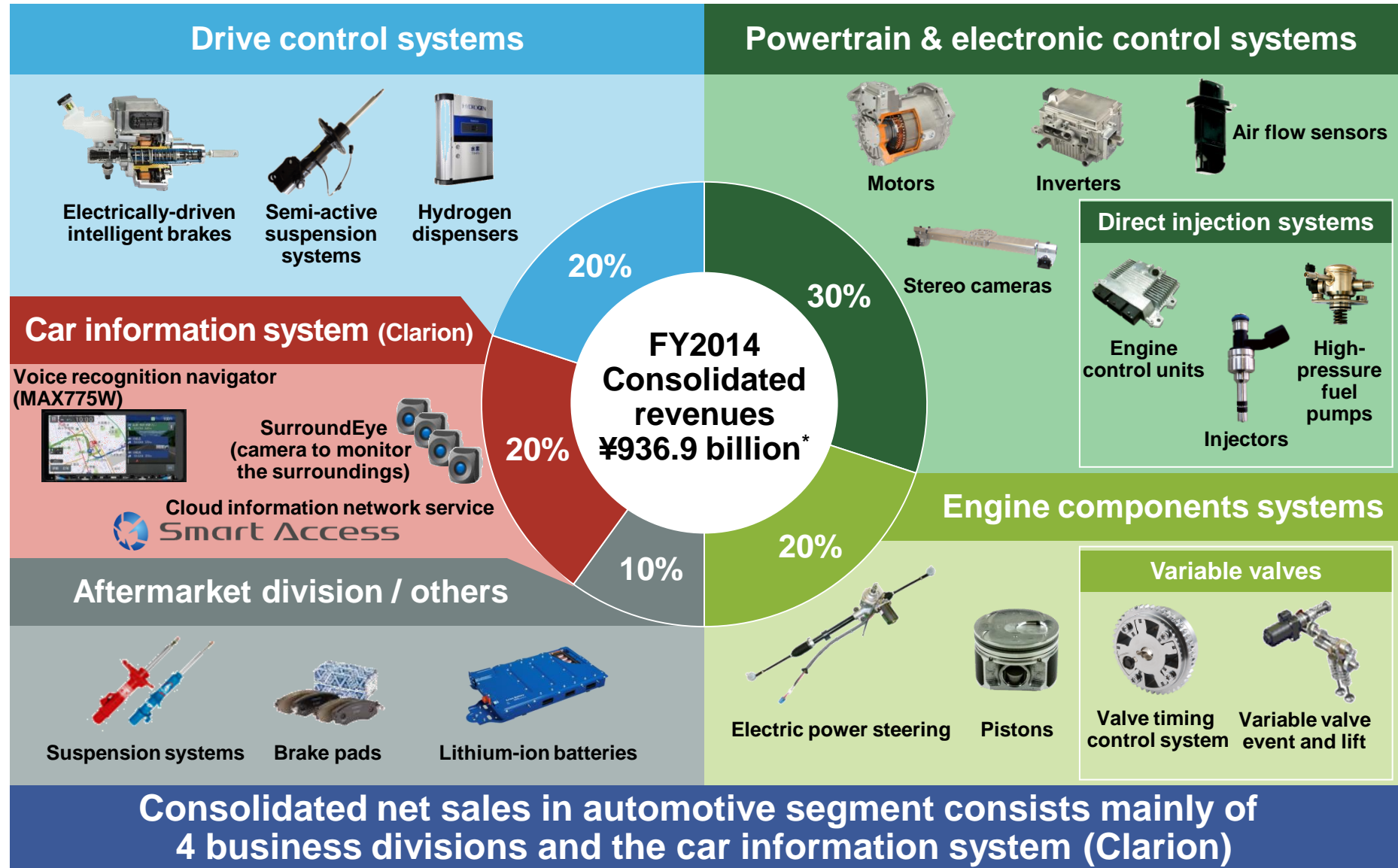
3. Growth Strategy

4. Summary



Aiming to further develop vehicle mobility technologies in the fields of environment, safety, and information to create value for society

1-2. Business Structure



Consolidated net sales in automotive segment consists mainly of 4 business divisions and the car information system (Clarion)

* US GAAP
DI : Direct Injection

1-3. FY2015 Mid-term Management Plan Progress

	FY2013 (US GAAP)	FY2014		FY2015 (Forecast)		Year over year (US GAAP)
		(US GAAP)	(IFRS) ^{*1}	(US GAAP)	(IFRS)	
Revenues	892.1 billion yen	936.9 billion yen	936.9 billion yen	1 trillion yen	1 trillion yen	+63.1 billion yen
EBIT ratio (Operating income ratio ^{*2})	0.6% (5.3%)	3.7% (6.0%)	3.7% (5.1%)	7.0% (7.0%)	7.0% (6.8%)	+3.3% (+1.0%)
Overseas revenue ratio for global customer bases ^{*3}	53%	56%	56%	60%	60%	+4%

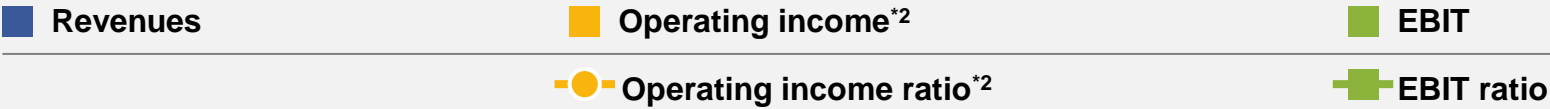
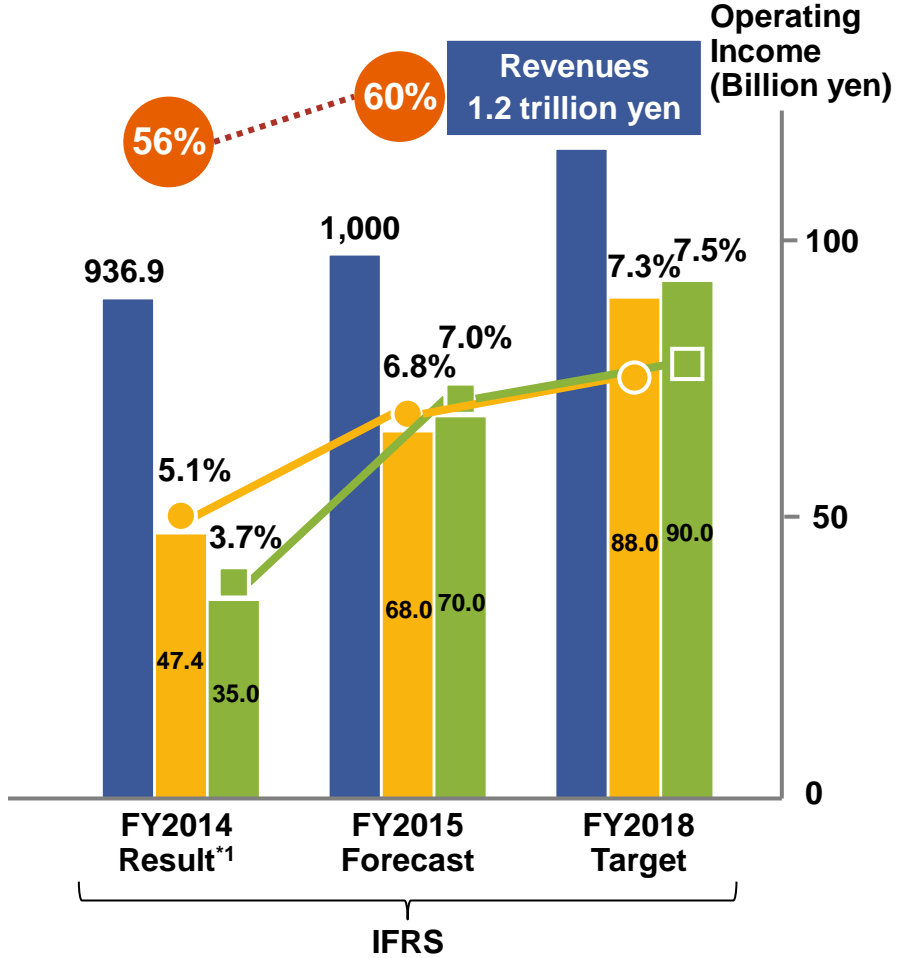
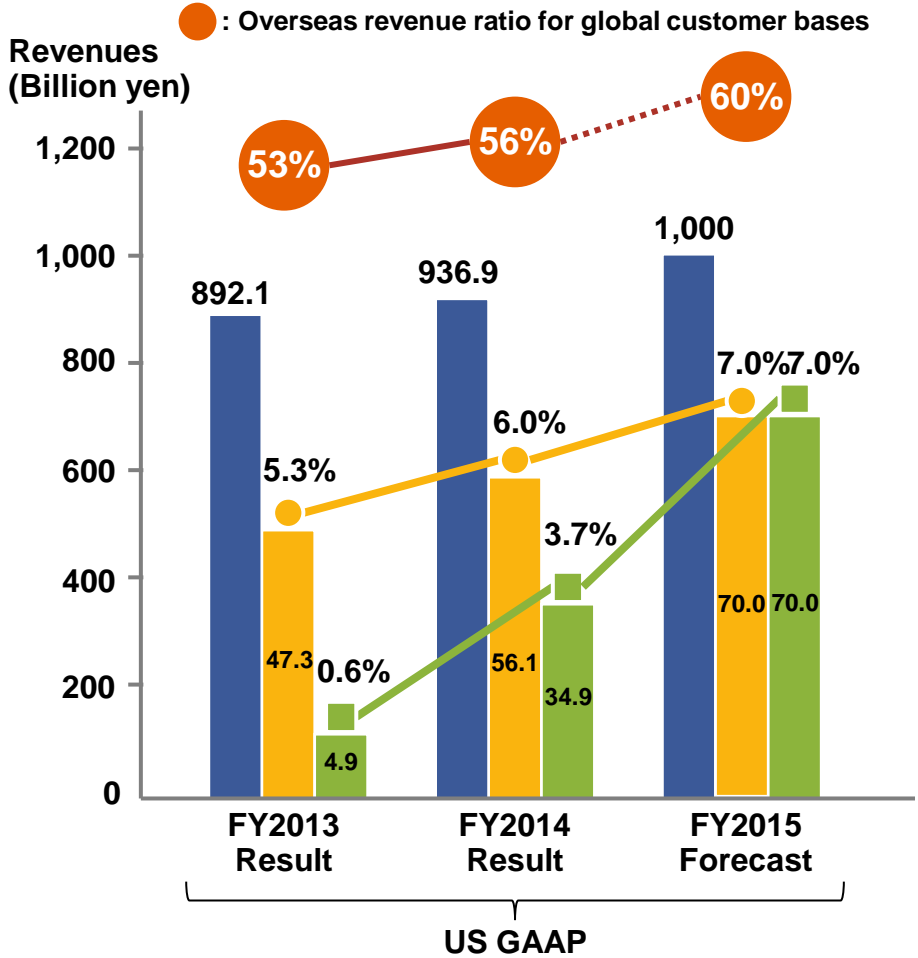
For FY2015, Automotive Systems segment aims for revenues of ¥1 trillion and EBIT ratio of 7%

*1 Unaudited

*2 "Operating income ratio" is presented as "Adjusted operating income ratio" in IFRS (an "Adjusted Operating Income" presented as revenues less cost of sales as well as selling, general and administrative expenses)

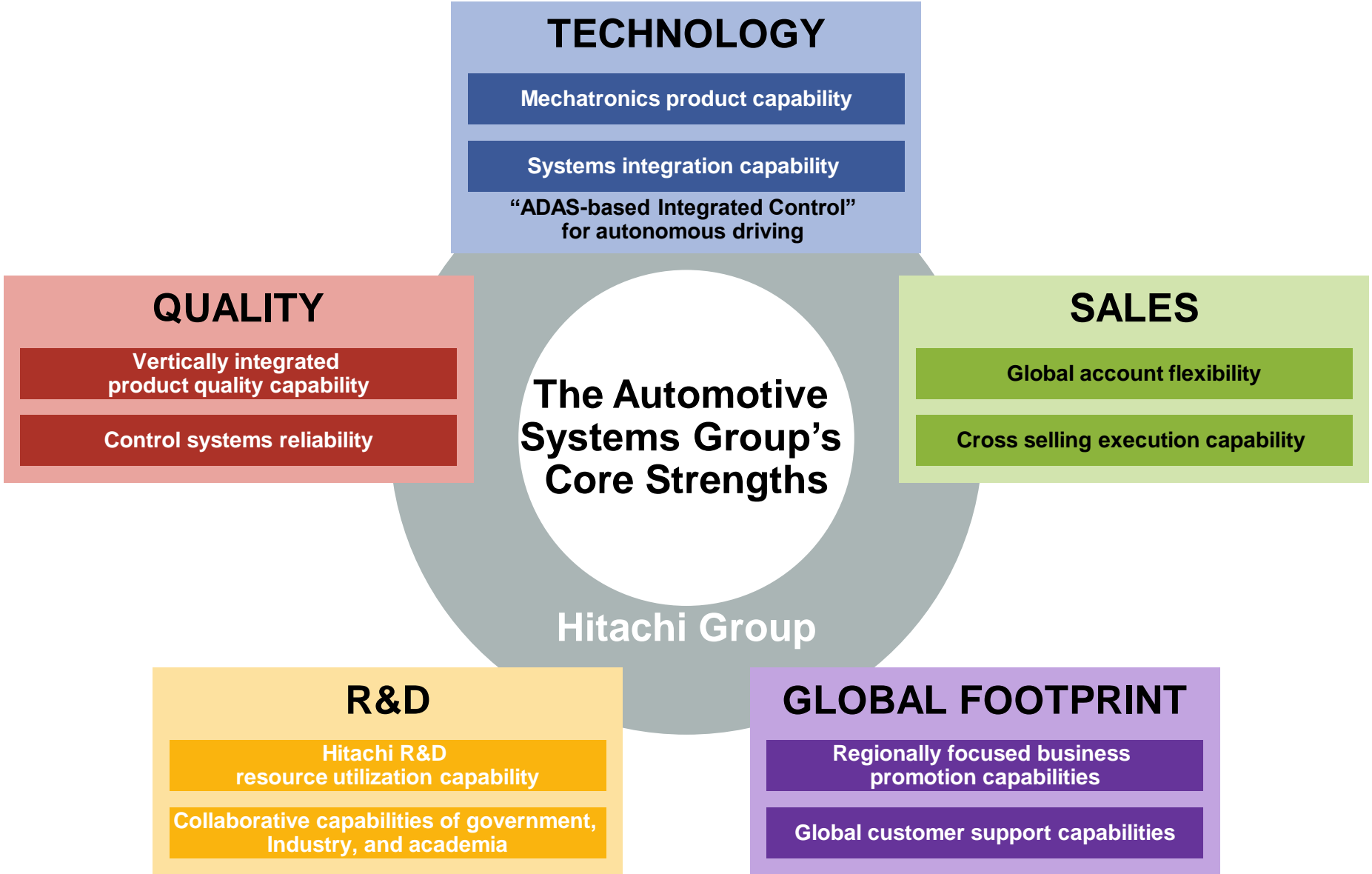
*3 Customer bases that install automotive components in finished vehicles. This is different from overseas revenues in the consolidated accounts.

1-4. Business Performance Trends and Target



*1 Unaudited
 *2 "Operating income (ratio)" is presented as "Adjusted operating income (ratio)" in IFRS (an "Adjusted Operating Income" presented as revenues less cost of sales as well as selling, general and administrative expenses)
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1-5. Hitachi Automotive Systems' Five Core Strategies

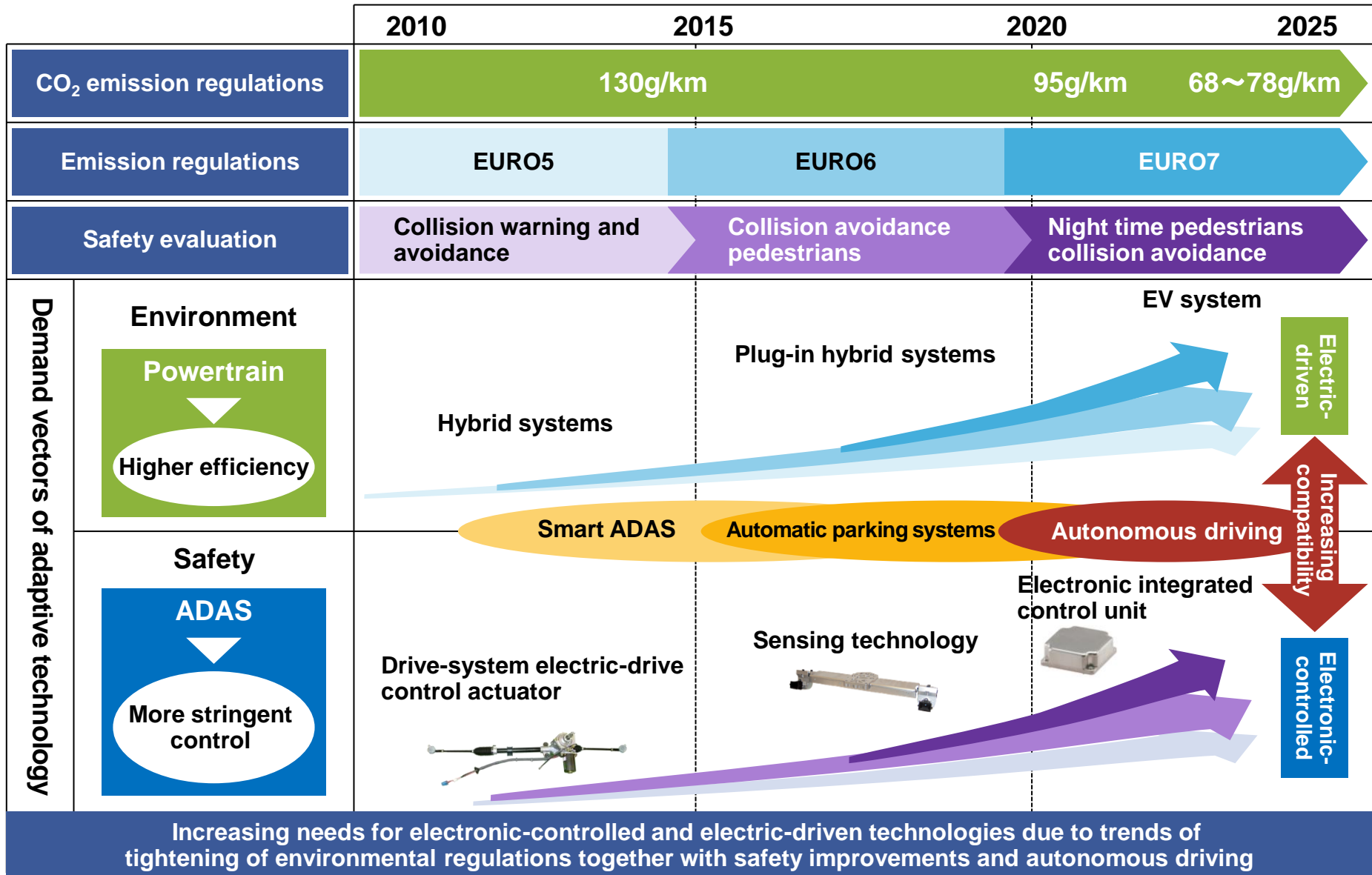


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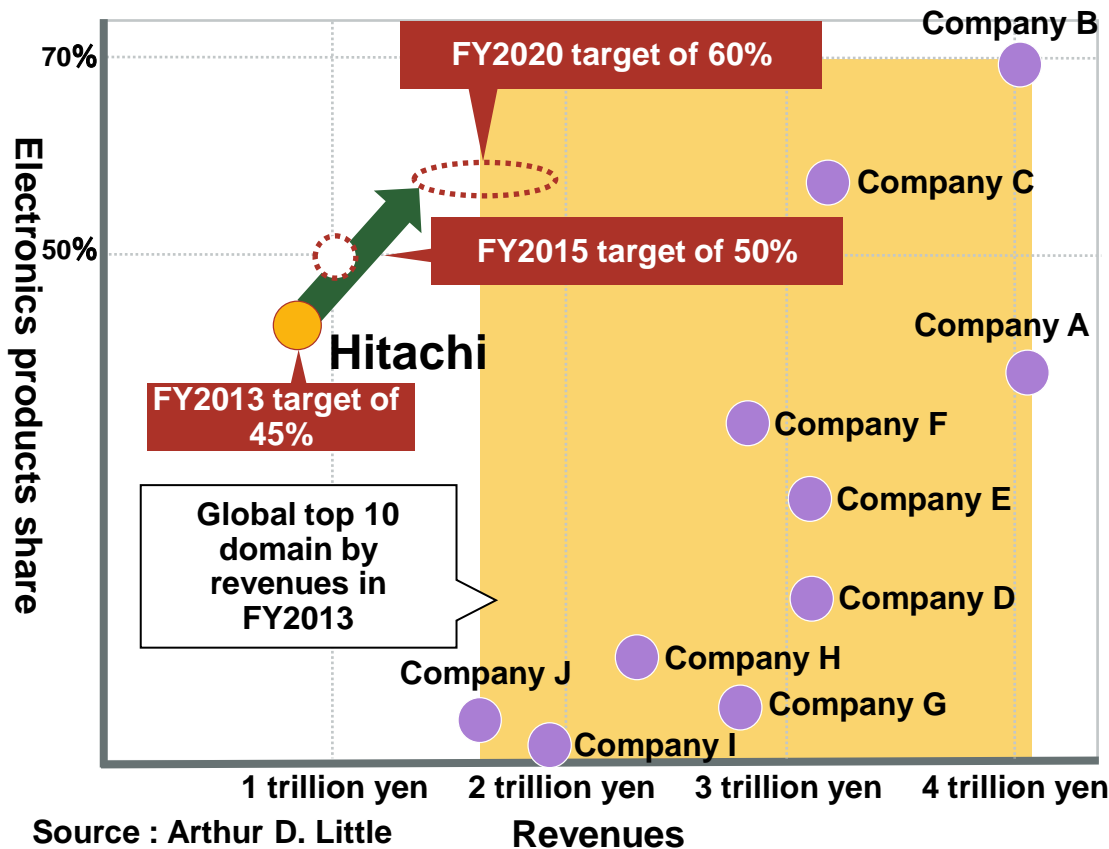
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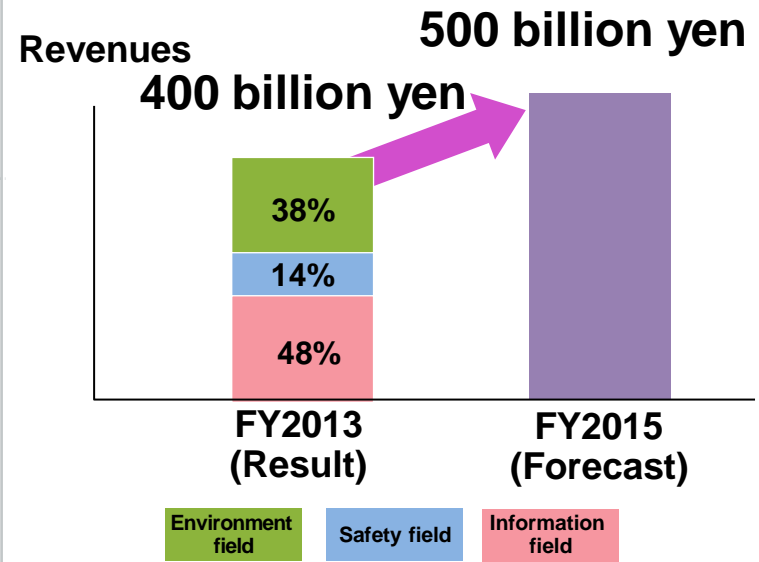
2-1. Technology Supporting Vehicle Control and Customer Needs



Top 10 global parts suppliers by revenues Electronics products*1 share (FY 2013 result)



Electronics products revenues*2



Strengthen product portfolio of electronic-controlled and electric-driven products with high market growth ratio

Achieve growth by increasing electronics products*1 share to world-leading level

*1 Electronics products: Electronic control and electric drive products such as electronic-controlled units and hybrid systems

*2 US GAAP

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Execute 3 core strategies to achieve a robust management foundation and firm growth

Environment field

Strive for high growth

(): Revenue target (FY2013(Result) ▶ FY2018(Target))

Lithium-ion batteries

7 times



Inverters

3 times



Safety field

High-function electric power steering

10 times

Electrically-driven intelligent brakes

Double

Semi-active suspension systems

Double



(): World share (FY2012(Result) → FY2014(Result))

Air flow sensors

Top share (40% → 40%)

Valve Timing Control

Share No. 2 (13% → 15%)

Ignition coils

Share No. 2 (12% → 13%)



Stereo cameras

Top share (72% → 75%)

Suspension systems

Share No. 3 (10% → 10%)









Propeller shafts

Share No. 4 (6% → 7%)

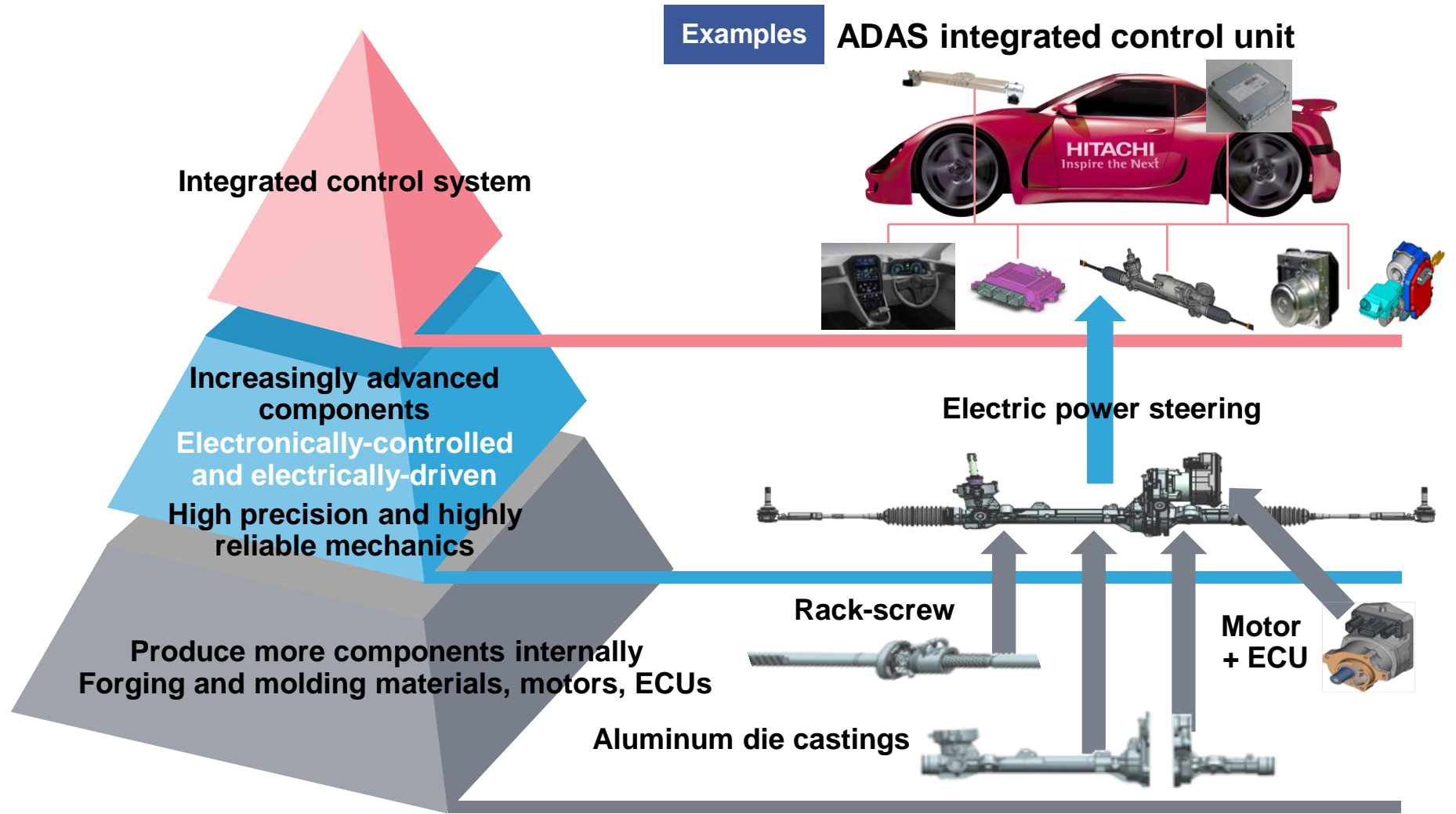


Maintain and expand high global share while striving for high growth with core products in the environment and safety fields.

3-3. Expand business through acceleration of implementation of innovations in electronically-controlled and electrically-driven technologies

	Stereo cameras	Electric power steering	Inverters	Lithium-ion batteries
Technological innovation strengthening	 <p><u>Expand the detection area by 40%</u></p> <p>High-definition color imaging Elements and a newly-developed built-in 3D image processing engine</p>	 <p><u>Achieve 50% increase in rack thrust</u></p> <p>High output and high-performance steering rack thrust up to 15 KN</p>	 <p><u>Achieve 40% smaller high-output inverters</u></p> <p>Maximum rating of 432 V/ 290 Arms</p>	 <p><u>Achieve improvement of 50% higher output density</u></p> <p>World's highest output density of 5,000W/kg</p>
Revenue target FY2013(Result) ▼ FY2018(Target)	6 times	10 times	3 times	7 times
Adoption examples	<p>Fuji Heavy Industries' LEVORG</p>  <p>FY2014 new advanced safety Performance "Five Star Award"</p>	<p>Ford, Explorer</p>  <p>High-output driving dynamics</p>	<p>Daimler, Mercedes-Benz S550 plug-in hybrid long</p>  <p>Runs 33km per charge on battery over alone</p>	<p>GM's 2016 Chevrolet Malibu Hybrid</p>  <p>Hybrid mode 20km/liter</p>

3-4. Vertical integration within the Group Improvement of system capabilities and insurance of quality reliability



Belt-powered high-function electric power steering, variable valve systems, electric brake systems, and HEV/EV systems' revenue increasing by 5 times (FY2012 ⇒ FY2020)

3-5. Examples of ADAS Business Promotion

Automatic parking systems centered on camera to monitor the surroundings, developed jointly by Hitachi Automotive Systems, Ltd. and Clarion Co., Ltd.

SurroundEye*
(camera to monitor the surroundings)



Planned to be commercialized in FY2018

※ Vehicle in photo has no connection with this system

Features

High-speed recognition of parking boundaries and parking spaces through camera-image processing

Real-time detection of stopped and moving objects

Identifying parking spaces and avoiding obstacles

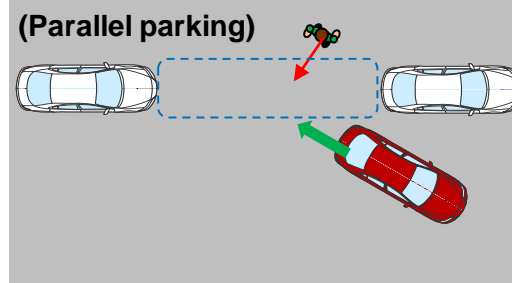
Smooth and rapid parking due to linkage of controller and actuator

Mass-media test-drive evaluation
(November 2014)

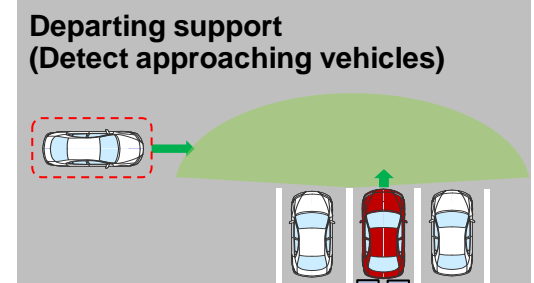
- “ At the 2014 International CES, we saw various makes of vehicles being parked automatically, and this looked like the car was controlled twice as fast.”
- “The savior of drivers who are bad at parallel parking.”



- Automatic parking through identification of parking boundaries and obstacles, and the navigable space
- Stop moving when curb is detected



- Identify the parking space and automatically perform parallel parking
- Stop the vehicle when the approach of a pedestrian is detected
- Departing support when pulling out



- When departing, the system alerts the driver of any approaching vehicles if they are detected by the camera

* SurroundEye is registered as a trademark by Clarion Co., Ltd.

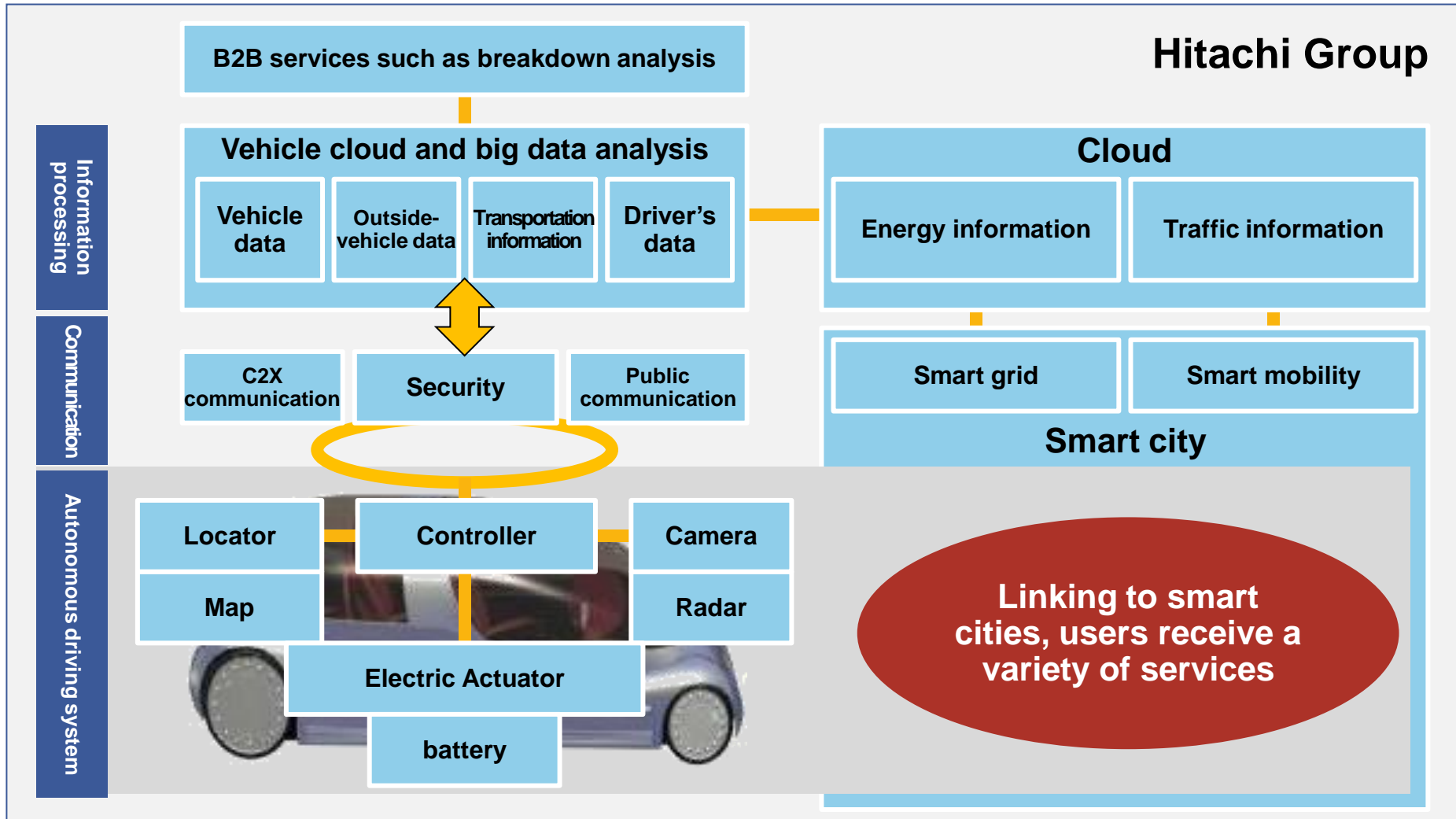
3-6. Technology That Links Vehicles, People, and Society (Clarion)

Clarion



Promote business by providing users with useful information and increased comfort, security, and convenience as a car information system provider

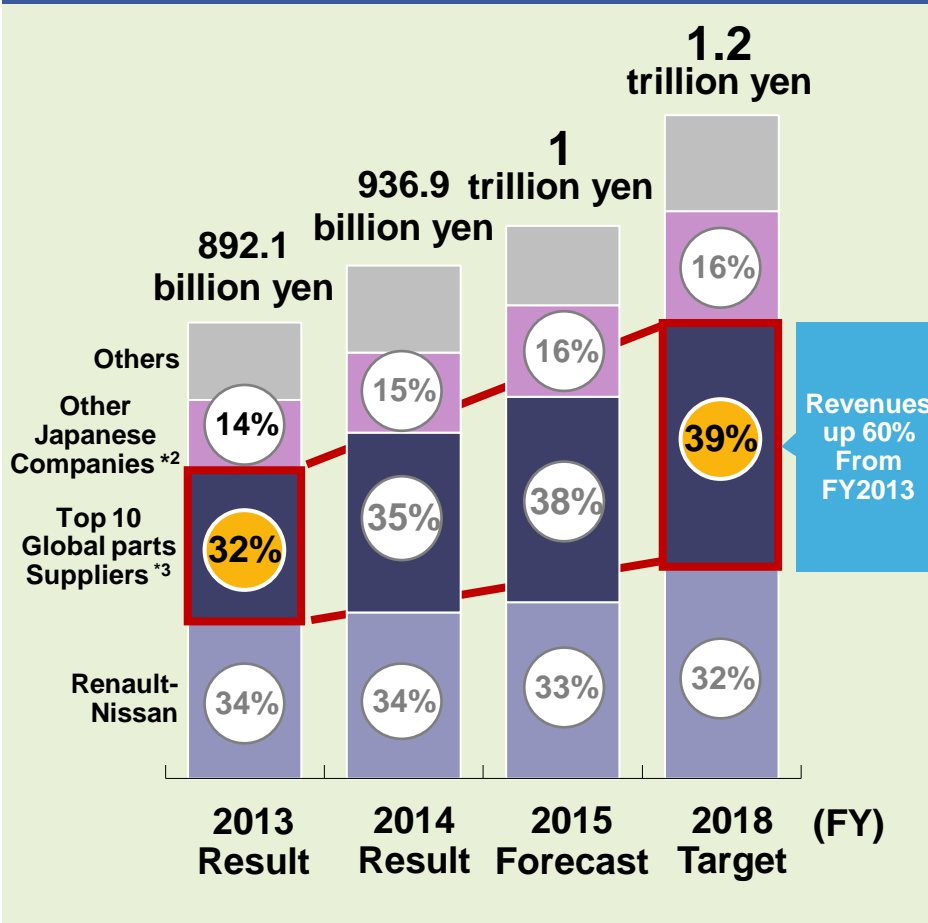
3-7. Strengthen Cooperation with the Hitachi Group



Connecting vehicles and society through secure communication, achieving autonomous driving will bring the user merits of high reliability and a variety of services

3-8. Execution of Customer Diversity Strategy

Revenues composition plan *1



Execution measures

1. Account expansion to exceed 10% share

Execute cross-sales by GAM and GAT

Leveraging global footprint to support customers developing business worldwide

Increase number of global sales personnel

Target up 10% in FY2020 (vs. FY2014)

2. Strengthen global sales technology

Strengthen issue-based solution-type proposal capabilities by new differentiated technology

Automatic parking, preview GVC, next-generation Stop&Start system, etc.

*1 FY2013-FY2014 performance under US GAAP; FY2015-2018 targets are IFRS

*2 Other Japanese companies: Fuji Heavy Industries, Mazda Motor, Mitsubishi Motors, Daihatsu Motor, Commercial vehicles (Isuzu Motors, Mitsubishi Fuso Truck and Bus, Hino Motors, and UD Trucks)

*3 Top 10 global parts suppliers: Toyota Motor, Volkswagen / Audi, GM, Ford, Hyundai Motor, Honda, PSA Peugeot Citroën, Suzuki, Fiat Chrysler (except Renault-Nissan)

GAM : Global Account Manager

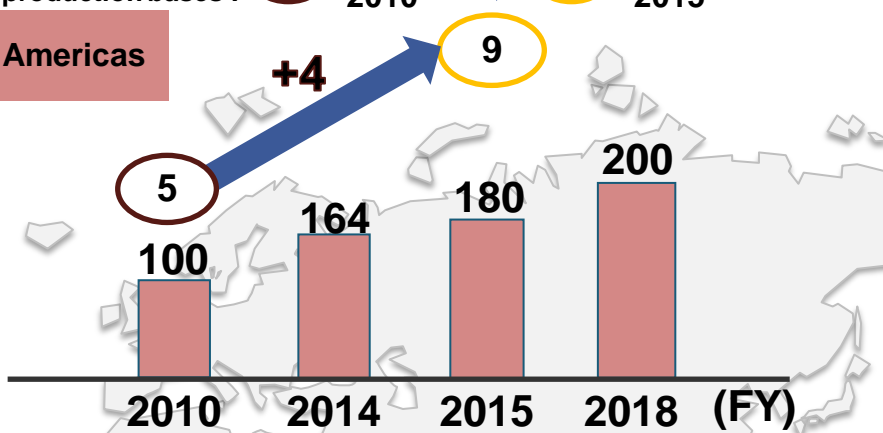
GAT : Global Account Team

GVC : G-Vectoring Control(In-vehicle operation control technology)

3-9. Expand Global Footprint

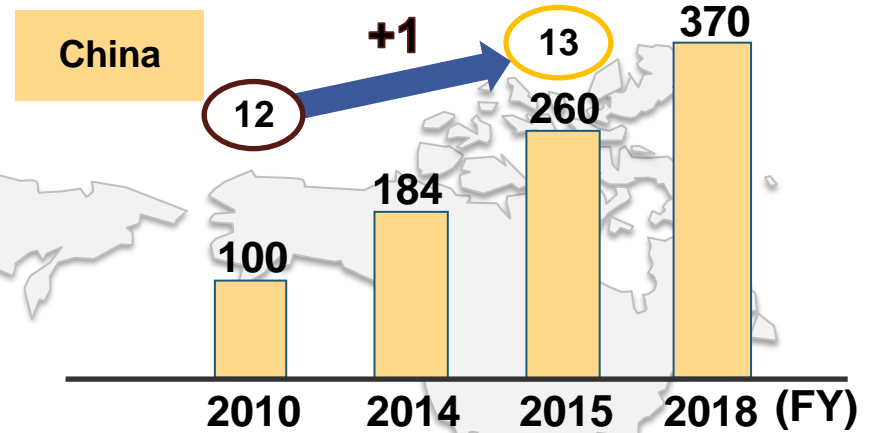
Number of production bases : ○ March 2010 ▲ March 2015

Americas



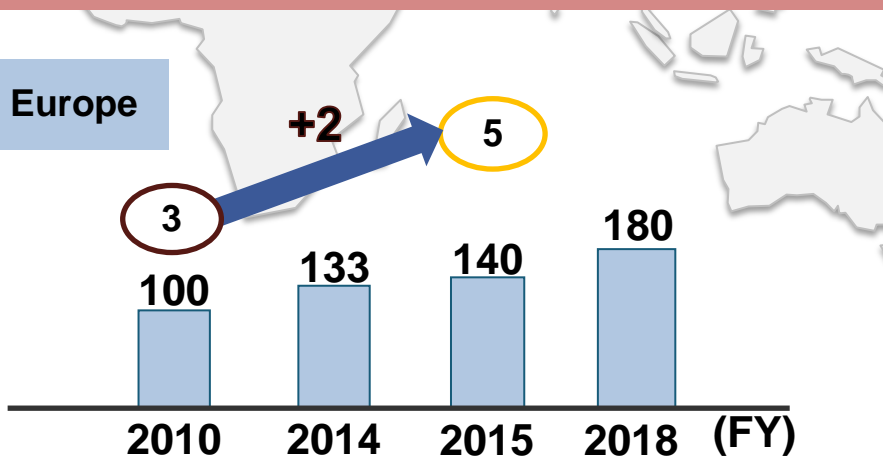
Leveraging synergies within U.S. and full-fledged start of Mexican business

China



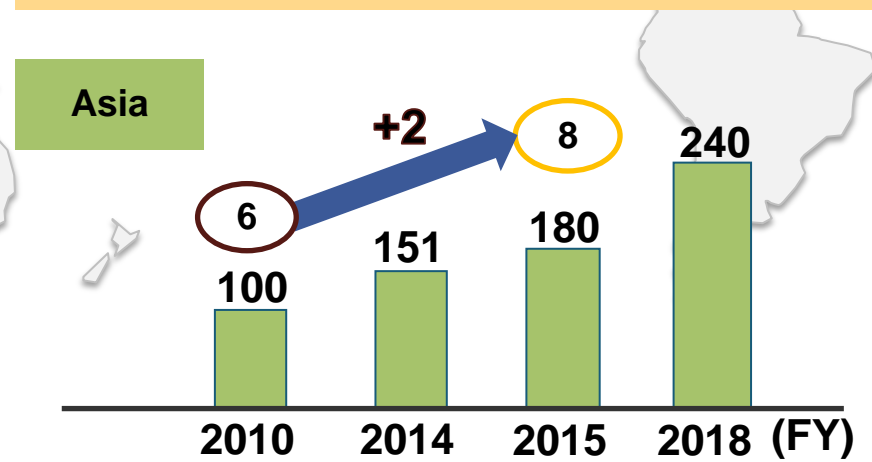
Strengthen regional integration and expand business centered on new Guangzhou base

Europe



Strategically approaching Headquarters of European Customers having high shares in emerging countries

Asia



Expanded revenues and earnings by tackling growth in ASEAN and Indian markets

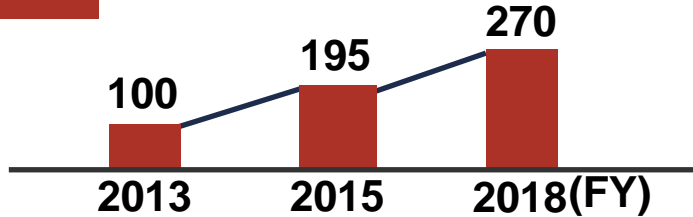
* Figures for each region indicate indices based on FY2010 revenues

3-10. Regional Strategy (Example of new base)

Mexico

Indicates indices based on FY2013 revenues

Revenues



1. Expand revenues by 2.7 times by FY2018
2. Begin manufacture of pistons and aluminum die castings from May 2015, and expand product lineup to 13 products by FY2018

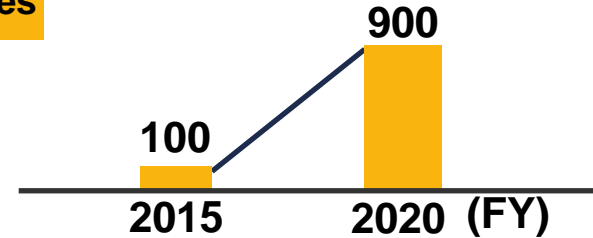


Plant in Mexico (Querétaro)

India

Indicates indices based on FY2015 revenues

Revenues



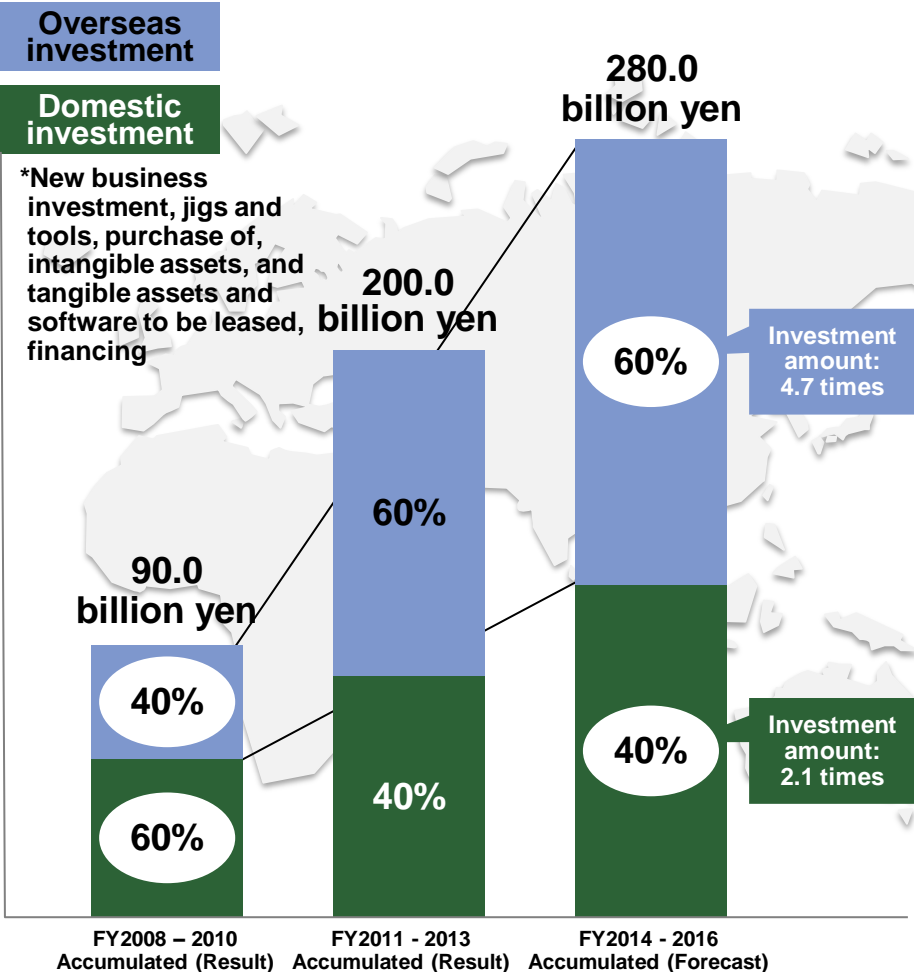
1. Expand revenues by 9 times by FY2020
2. Plan to start manufacture of VTCs and ignition coils from October 2015



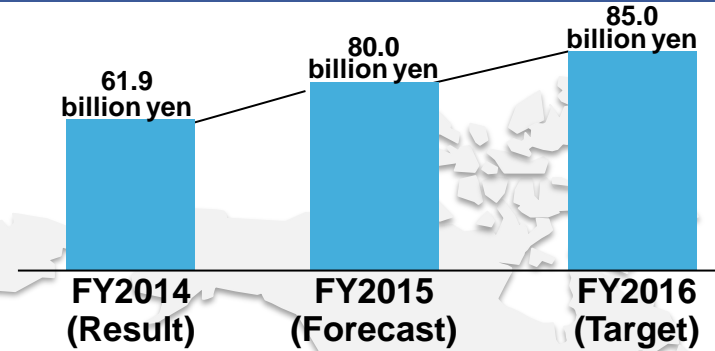
New Plant in India (Chennai)

Global investment and R&D

Global investment amounts* and domestic and overseas investment ratios



R&D expenditure



Collaboration with outside-company research institutions

Promotion of joint research in autonomous driving field, etc.

Kanagawa Institute of Technology

Theory construction on vehicle operation control technology

RWTH Aachen University

Linkage control with ACC of vehicle op control technology

Tokyo University of Agriculture and Technology

Keeping in lane control by stereo camera

Kyushu University

Prediction control by automatic operation model

Execute growth strategy through structural reform and continuous innovation

Promotion details

Cost structure reform

- Strengthen aftermarket business
Retail business revenues up 50% (FY2014 ▶ FY2018)
- Continue global production reforms
Apply standard automation line (7products, 15 bases)
Introduce low-cost production line for emerging countries (VTC)
- Based on Industrie 4.0 trends, expand the global quality guarantee management system (remote monitoring)
- Global procurement reform
 - Clarify procurement portfolio
 - Execute procurement engineering and guarantees of products procured

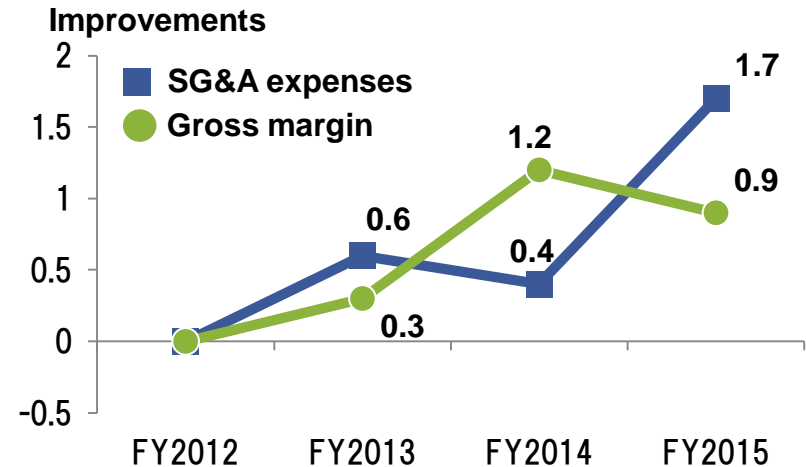
Cash generation

- Expand business globally
(Overseas revenue ratio for global customer bases: FY2012 50% ▶ FY2015 60%)
- Increase sales of electronics products
Up ¥100 billion (FY2013 ▶ FY2015)
- Strengthen industrial-use product business:
Revenues up 30% (FY2014 ▶ FY2018)
- Strengthen capital investment for internal production through industrial machinery bases in four overseas strategic regions.

Improve CCC (Manufacturing, services, etc.)*

	FY2012 (Result)	FY2013 (Result)	FY2014 (Result)	FY2015 (Forecast)
CCC	37.3 days	40.5 days	40.5 days	42.3 days

Improve gross margin and SG&A expenses*



CCC : Cash Conversion Cycle
* US GAAP

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FY2015 Targets

	US GAAP	IFRS
Revenues	1 trillion yen	1 trillion yen
Overseas revenue ratio for global customer bases	60.0%	60.0%
Operating income ratio	7.0%	6.8%
EBIT ratio	7.0%	7.0%
Benefits of Hitachi Smart Transformation Project (US GAAP)	<ul style="list-style-type: none"> ■ Gross margin: 0.9 point improvement (vs. FY2012) ■ SG&A expenses ratio: 1.7 point improvement (vs. FY2012) 	

Aiming to further develop mobility technologies to create value for society

* "Operating income ratio" is presented as "Adjusted operating income ratio" in IFRS (an "Adjusted Operating Income" presented as revenues less cost of sales as well as selling, general and administrative expenses)

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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;
- uncertainty as to Hitachi’s ability to access, or access on favorable terms, liquidity or long-term financing;
- uncertainty as to general market price levels for equity securities, declines in which may require Hitachi to write down equity securities that it holds;
- 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;
- fluctuations in the price of raw materials including, without limitation, petroleum and other materials, such as copper, steel, aluminum, synthetic resins, rare metals and rare-earth minerals, or shortages of materials, parts and components;
- fluctuations in product demand and industry capacity;
- uncertainty as to Hitachi’s ability to implement measures to reduce the potential negative impact of fluctuations in product demand, exchange rates and/or price of raw materials or shortages of materials, parts and components;
- increased commoditization of and intensifying price competition for products;
- uncertainty as to Hitachi’s ability to achieve the anticipated benefits of its strategy to strengthen its Social Innovation Business;
- uncertainty as to the success of acquisitions of other companies, joint ventures and strategic alliances and the possibility of incurring related expenses;
- uncertainty as to the success of restructuring efforts to improve management efficiency by divesting or otherwise exiting underperforming businesses and to strengthen competitiveness;
- uncertainty as to the success of cost reduction measures;
- general socioeconomic and political conditions and the regulatory and trade environment of countries where Hitachi conducts business, particularly Japan, Asia, the United States and Europe, including, without limitation, direct or indirect restrictions by other nations on imports and differences in commercial and business customs including, without limitation, contract terms and conditions and labor relations;
- uncertainty as to the success of alliances upon which Hitachi depends, some of which Hitachi may not control, with other corporations in the design and development of certain key products;
- uncertainty as to Hitachi’s access to, or ability to protect, certain intellectual property rights, particularly those related to electronics and data processing technologies;
- uncertainty as to the outcome of litigation, regulatory investigations and other legal proceedings of which the Company, its subsidiaries or its equity-method affiliates have become or may become parties;
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- the potential for significant losses on Hitachi’s investments in equity-method affiliates;
- the possibility of disruption of Hitachi’s operations by natural disasters such as earthquakes and tsunamis, the spread of infectious diseases, and geopolitical and social instability such as terrorism and conflict;
- uncertainty as to Hitachi’s ability to maintain the integrity of its information systems, as well as Hitachi’s ability to protect its confidential information or that of its customers;
- uncertainty as to the accuracy of key assumptions Hitachi uses to evaluate its significant employee benefit-related costs; and
- uncertainty as to Hitachi’s ability to attract and retain skilled personnel.

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

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