

Automotive Systems Business Strategy

Hitachi IR Day 2011

June 16, 2011

Kunihiko Ohnuma

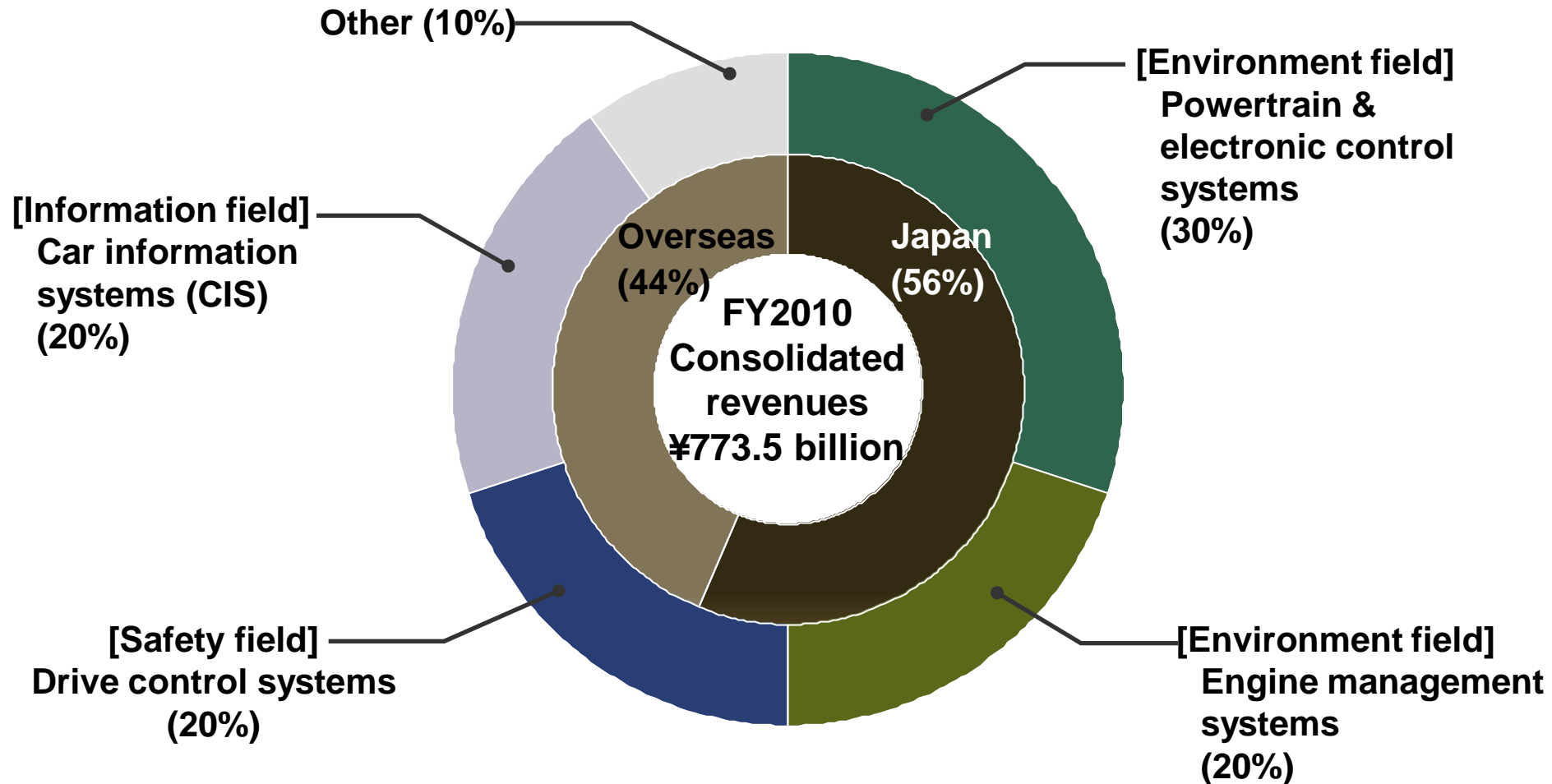
President & CEO

Hitachi Automotive Systems, Ltd.

Automotive Systems Business Strategy

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- 1. Business Overview**
2. Global Growth Strategy
3. Conclusion

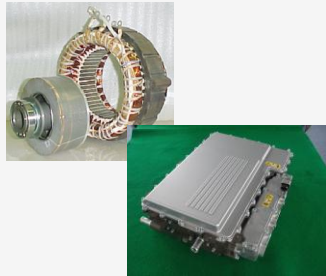


Harness cutting-edge technologies in the auto-related environment, safety and information fields. Accelerate the global business development.

Environment field

Powertrain & electronic control systems

<Electromechanical>



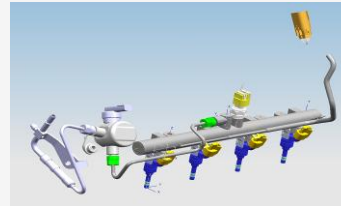
• Hybrid systems



• Lithium ion batteries
(Hitachi Vehicle Energy, Ltd.)

Engine management systems

<Fuel economy improvement>



• Engine management systems



• Variable valve systems



• Engine equipment

Drive control systems

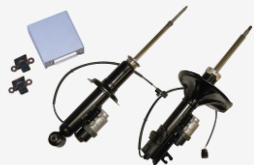
<Driving support>



• Stereo camera



• Power steering systems



• Suspension systems



• Electrically-driven intelligent brake

Safety field

Car information systems (CIS)

<Comfort and convenience>



• ICT* solution services for electric vehicles (EV) Solution services



• Car Navigation Systems (Clarion)



• In-vehicle terminals for commercial vehicles

Information field



• Oil damper for railway



• Vibration-proof damper for housing

Other

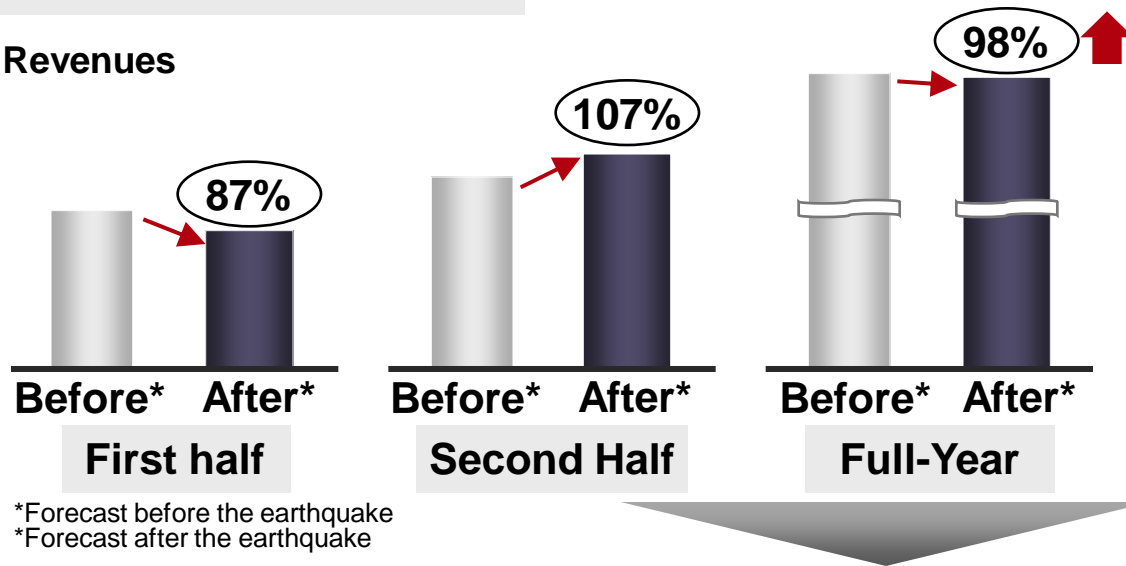
*ICT: Information and Communication Technology

1-3 Recovery after the Great East Japan Earthquake

Entire Hitachi Group worked as one to restore production facilities rapidly, through cooperation among Hitachi bases and support from business partners. Production restarted on March 25.

Overview for FY2011

Revenues



- Results for the first half of FY2011 are expected to fall below initial targets due to cuts in production by domestic customers in the wake of the earthquake
- Aim to make up for this shortfall in the second half as demand recovers and post on-target results for the year as a whole

3 Key pillars for recovery in FY2011

1 Reorganize production system
(Countermeasures for restrictions in power supply over the summer months)

2 Expedite and secure procurement of materials

3 Bring forward operation start at new facilities
Bring forward facility maintenance schedules

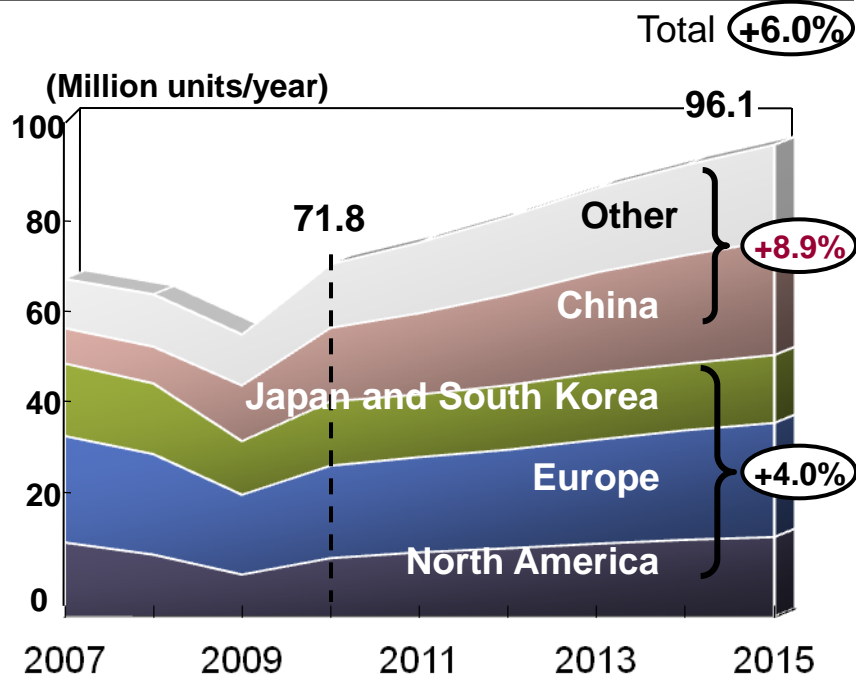
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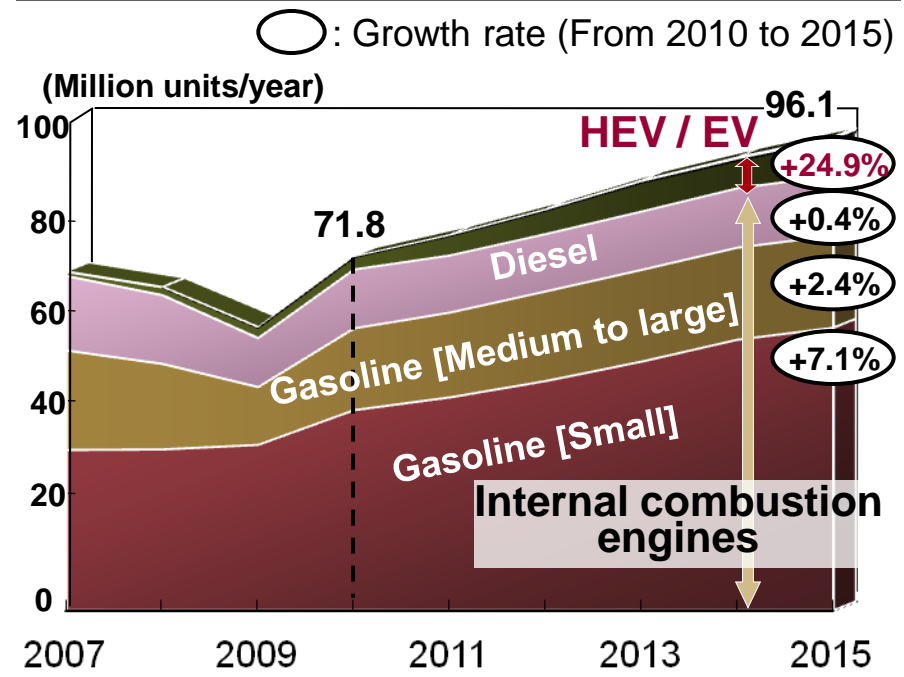
2-1 Market Environment (1)

Global Automobile Production Forecast by Region



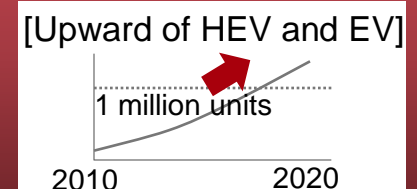
Performance steady in industrialized nations while growth continues apace in emerging nations

Global Automobile Production Forecast by Motive Power Type



Internal combustion continues to account for over 90%

Sharp growth in HEV and EV



(Source: Data compiled in-house from data provided by IHS Automotive and Nomura Research Institute, Ltd.)

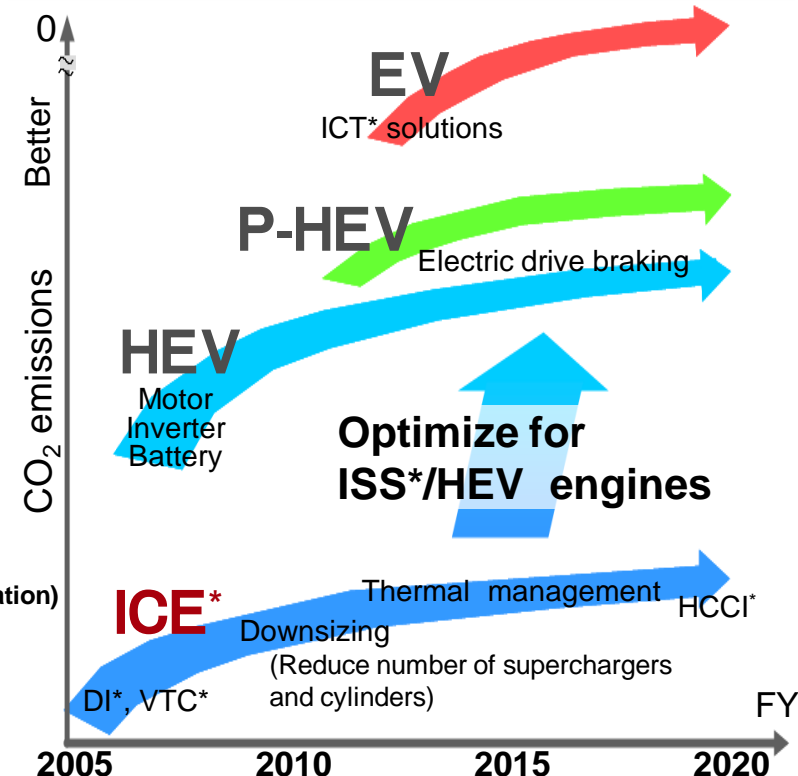
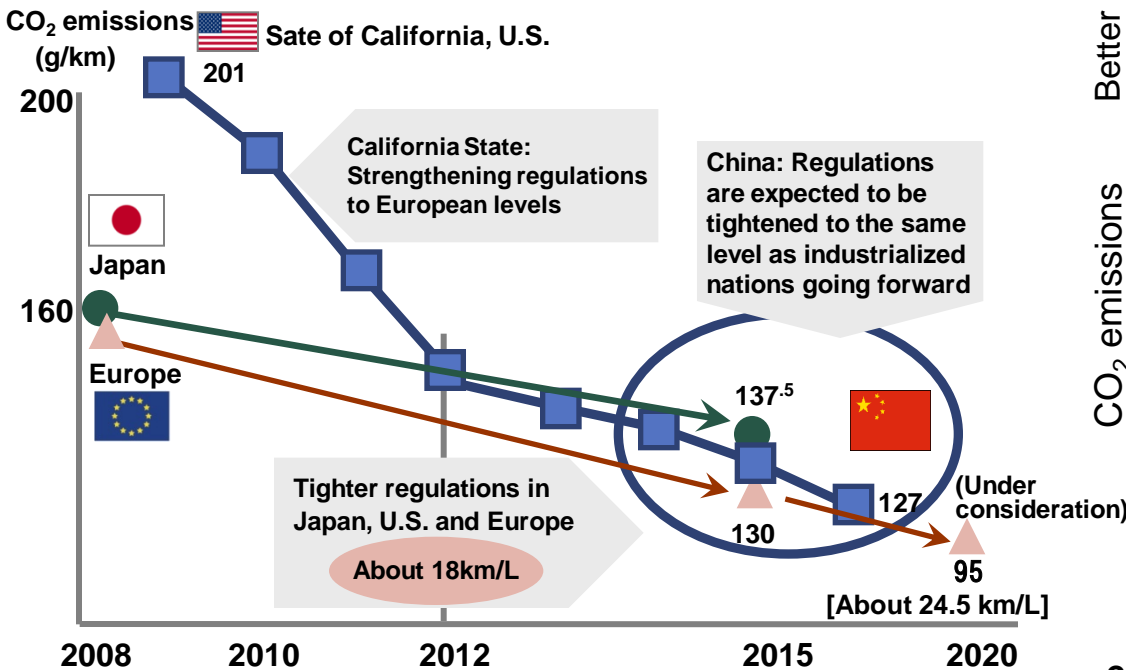
2-1 Market Environment (2)

Regulatory trends in environment field

- Strengthening fuel efficiency (CO₂ emissions) and emissions regulations
- Even in emerging markets, regulations are expected to be tightened to the same level as industrialized nations going forward

Roadmap for environmental technologies

- Increase efficiency of internal combustion engines and develop electric drive technology for HEV and EV

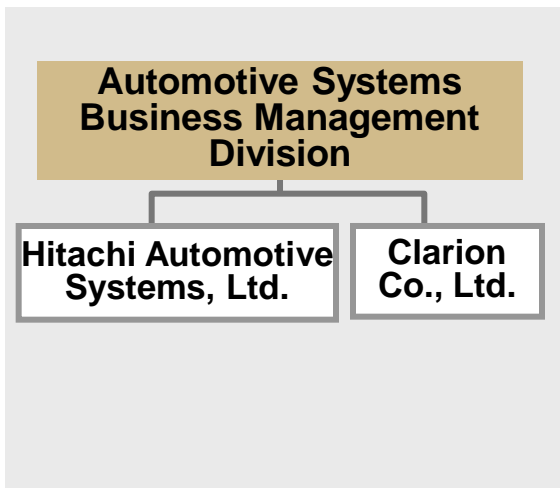


(Source: Nikkei BP materials) *ICE: Internal Combustion Engine *ISS: Idling Stop System *HCCI: Homogeneous Charge Compression Ignition
*ICT: Information and Communication Technology *DI: Direct Injection *VTC: Valve Timing Control

New segment created in FY2011 to include Battery Systems Company

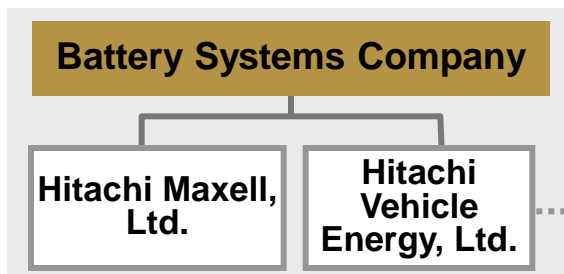
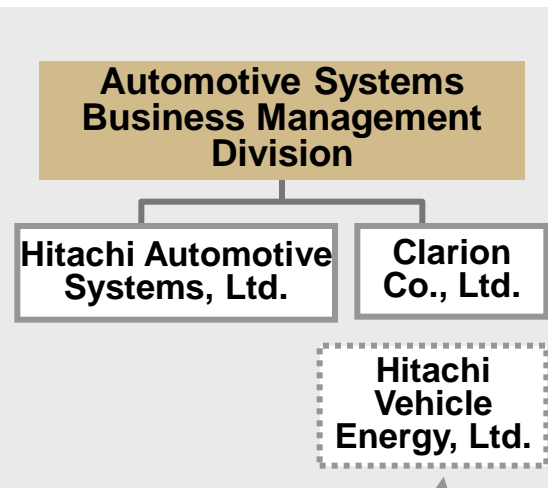
Strengthen technologies in all areas relating to battery products from materials to control technology particularly for automotives, and aim for greater growth and development through integrated management of the business as a whole

FY2009



FY2010

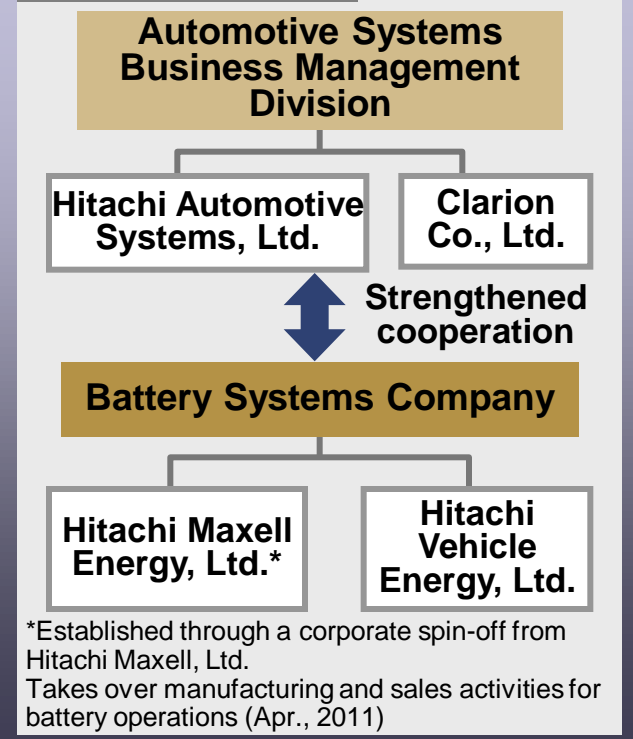
[Integration of vehicle battery businesses]



FY2011

[Integrated management of battery businesses]

New segment



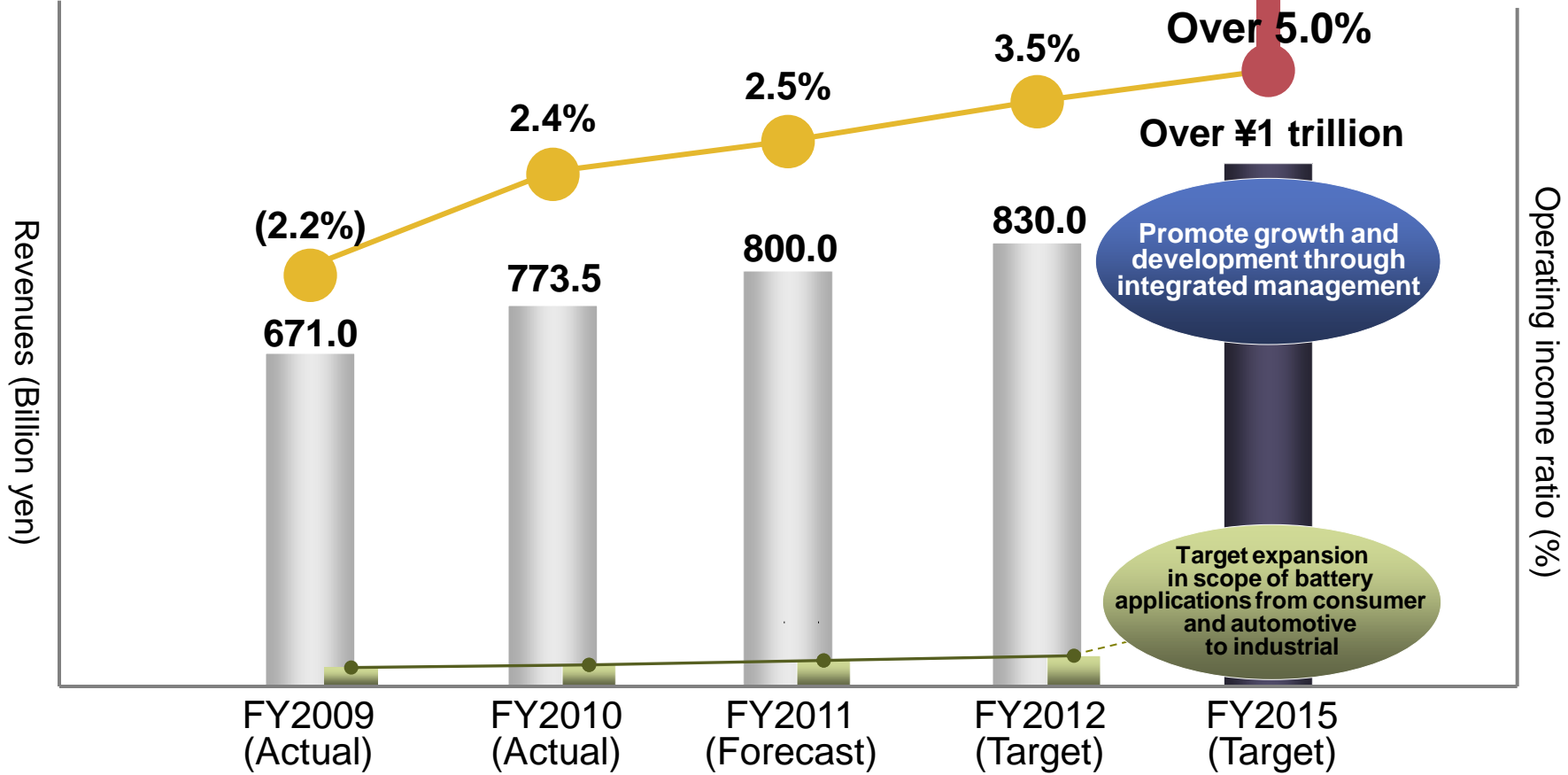
*Established through a corporate spin-off from Hitachi Maxell, Ltd.
Takes over manufacturing and sales activities for battery operations (Apr., 2011)

2-3 Business Targets up to FY2015

FY2015 targets: revenues: over ¥1 trillion, operating income ratio: over 5.0%

■ Automotive Systems segment

■ Battery Systems Company
(Figure of 2009 and 2010 are restated based on new organization in 2011)



Become a global supplier driving the automotive systems related market

Reinforcing with
the three “G”s



1

Double revenues of “Global customers” and “Emerging nations”

2

**Increase share of e-product market
(electronics and electromechanical products)**

E-product composition ratio (compared with FY2010)

Revenues 45% → more than 65%, operating income 50% → more than 80%

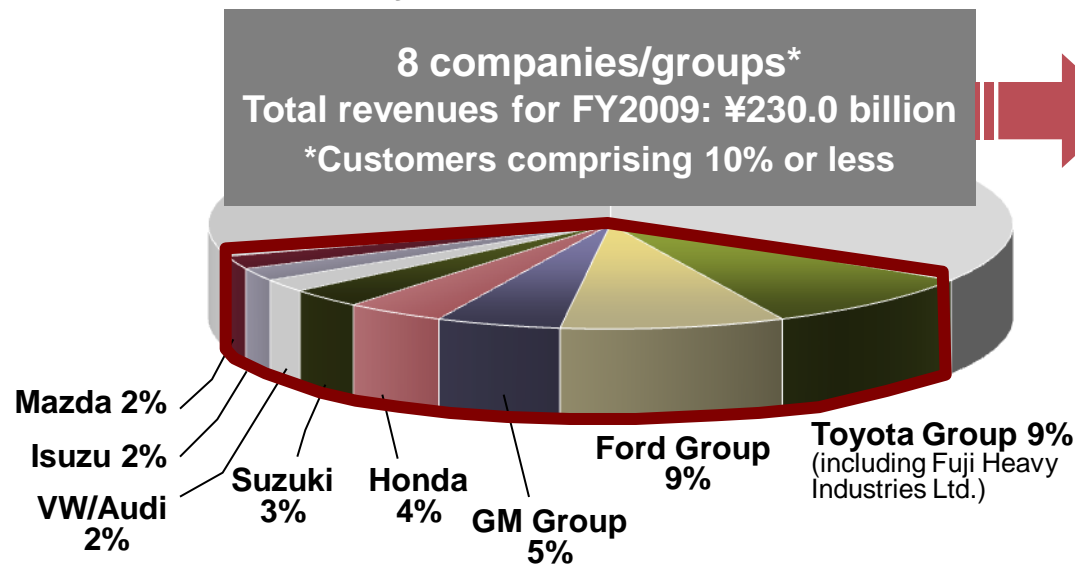
3

**Accelerate local production for local consumption,
and speed up management decision-making**

(From April 2011 onwards)

Example of global customer strategy targets (FY2015 revenues)

Customer Base Composition by Revenue (FY2009)



FY2015 (Target)

¥230 billion (36%) → ¥460 billion (46%)

Double revenues
Increase revenue share to 10%

Introduce, reorganize and entrench GAM / GAT system
GAM: Global Account Manager
GAT: Global Account Team

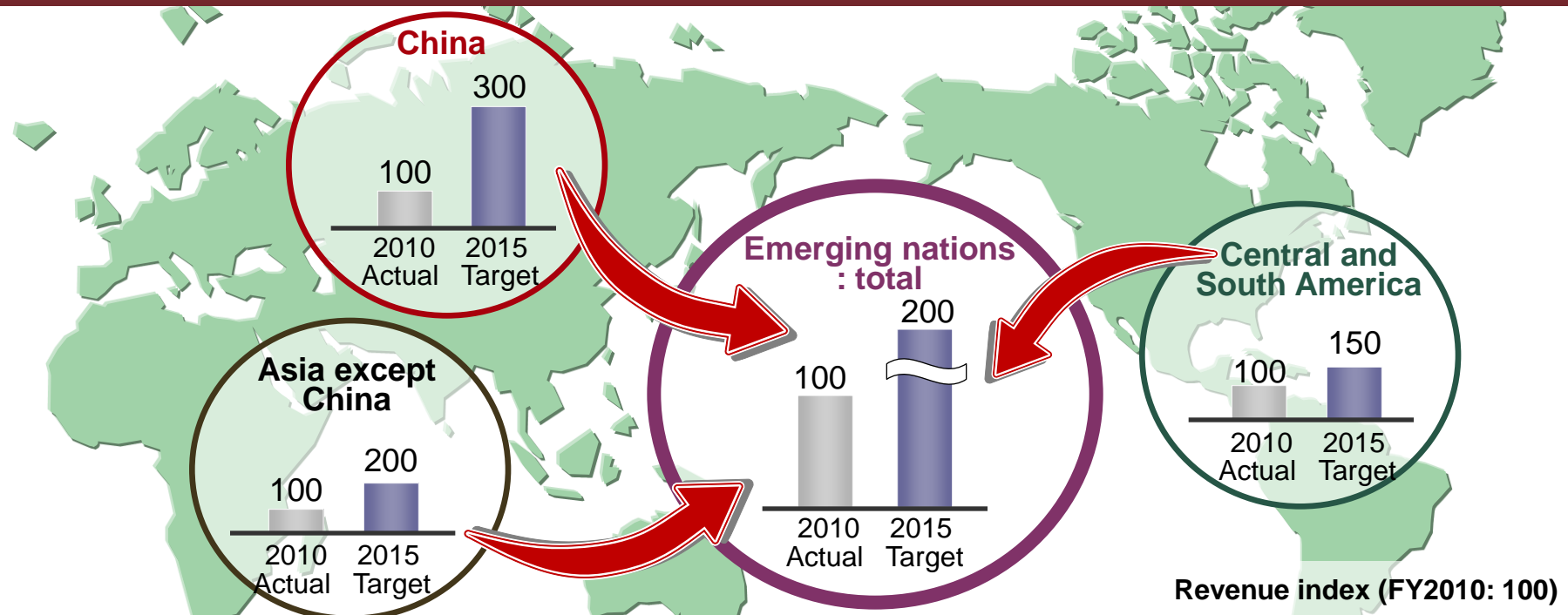
Reconfigure global customer strategy and reinforce global customer support

Propose new products and technologies (core technologies)

- HEV and EV system products
- High-efficiency engine systems, etc.

2-5 Global Sales Strategy (2)

- Double the revenues in emerging nations by FY2015 (compared to FY2010)
- Increase Overseas Revenue Ratio for Global Customer Bases* from 49% (FY2010) to over 60% (FY2015)



Overseas Revenue Ratio for Global Customer Bases* (Billion yen/year)

FY2010 (Actual)	FY2011 (Total)	FY2012 (Total)	FY2015 (Total)
376.9 (49%)	420 (53%)	420 (51%)	600 (60%)

Excluding exchange rate differences

*These are combined ratio with figures of automotive systems that are equipped with vehicles at customer's base and figures of mobile batteries's overseas revenues.

■ Implement measures to expand business in emerging nations

China

- 1** Develop compliance initiatives for Chinese environmental regulations (EURO5/CAFE*) and expedite development of locally-based operations
Direct injection systems, VTC*, injectors, pistons, etc.
- 2** Expand business targeting independent Chinese automobile manufacturers
Expand sales through a locally-accelerated management covering R&D, production and sales

Asia except China

- 1** Reinforce business foundation in Thailand and expand business into ASEAN markets
Promote locally-led operations in Thailand (ECU* production), develop Indonesia and Malaysia markets
- 2** Build business foundation to cultivate the market in India
Reinforce R&D for small- and medium-sized car products (e.g.: ECU*, etc.)

*CAFE: Corporate Average Fuel Economy *VTC: Valve Timing Control *ECU: Engine Control Unit

2-5 Global Sales Strategy (4)

Example of measures to expand business in emerging nations – New business scheme in Mexico

**Central
And
South
America**

- 1 Start optimizing production across global facilities, including product supply to the Americas
- 2 Increase collaboration with Clarion Co., Ltd.

UNISIA MEXICANA



- 1 Supplies materials to the North and Central American markets
- 2 Manufactures mechanical products for the North and Central American markets
- 3 Supply base to reinforce the business in the South American market
- Cooperation with the newly established office in Brazil

United States

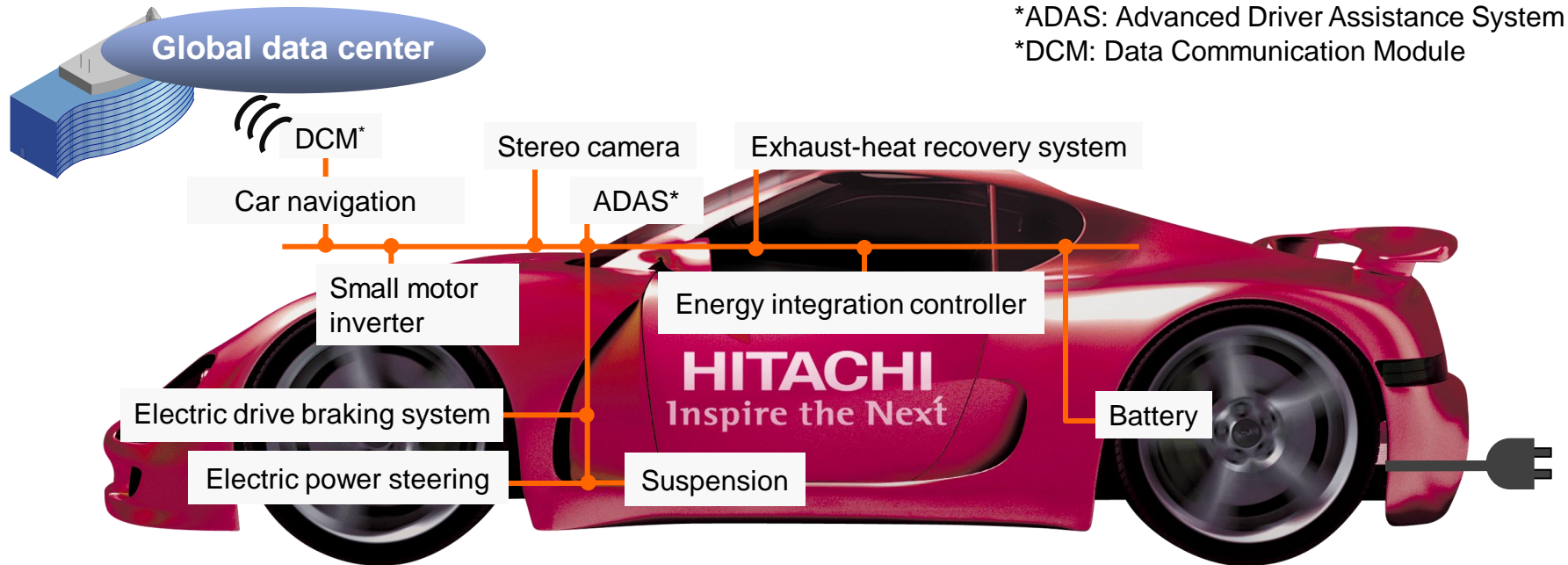
Mexico

Electronica Clarion



- 1 Manufactures navigation and audio integrated systems
- 2 Manufactures electronic products for the North and Central American markets

Promote in-house development of comprehensive control system for next-generation electric drive vehicles



Under the development of leading systems for both efficiency and energy-saving technology

[Example] System leveraging the information from stereo camera and car navigation, and cooperating with the electric drive brake system and battery to maximize regenerative energy

⇒FY2015 Targets: Increase maximum mileage by more than 30% compared to current EVs (Based on identical battery capacity)

Example [Environment field]: HEV systems (motors, inverters, lithium-ion batteries)

Drive adoption of electronic control and electromechanical systems with industry-leading distinctive Hitachi technologies, and systems development capabilities

Strengths

(1) Inverters:

Made smaller with high-efficiency cooling system
(by 1/3 compared with our current model)

(2) Motors:

Small, high-efficiency, high output, optimum design of magnetic circuits with analysis technology

(3) Lithium-ion batteries:

cumulative shipments in excess of 1.2 million cells , high quality and high reliability in all aspects from materials to control technology



Inverters



Motors



Battery packs

Powertrain & electronic control systems business: target revenues for FY2015 : ¥300 billion

Example [Environment field]: High-efficiency engine system (DI* system, VTC*)

Increase fuel efficiency for gasoline engines, by far the leading engine type, and develop global operations based on the principle of local production for local consumption

Strengths

- (1) Improved fuel efficiency, higher compression for injectors and high-pressure fuel pump
- (2) Reduced pump loss: VTC etc.
- (3) Reduced friction in pistons, valve lifters, etc.

Promote local production

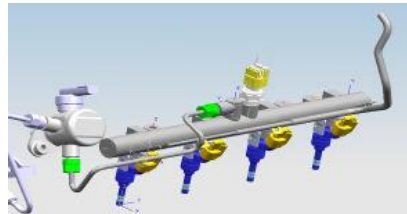
- High pressure fuel pumps: production in North America to start in FY2011
- VTC: production in China to start in FY2011

*DI: Direct Injection

*VTC: Valve Timing Control



High-pressure fuel pumps



DI* systems



Injectors



VTC*

*DI: Direct Injection *VTC: Valve Timing Control

Engine management systems business: target revenues for FY2015 : ¥200 billion

■ Example [Safety field]: Electrically-driven intelligent brake

Develop and mass produce new electric drive braking system

⇒ Accelerate the development as a series (compact version, low-cost version, version w/ brake booster, etc.) and increase sales globally

Strengths

- (1) Develop regenerative braking system that maximizes energy regeneration for EVs and HEVs without negative pressure
- (2) Improve vehicle fuel efficiency based on coordinated control of regenerative brakes

Mass production began in August 2010, installed on Nissan Fuga Hybrid and Nissan LEAF

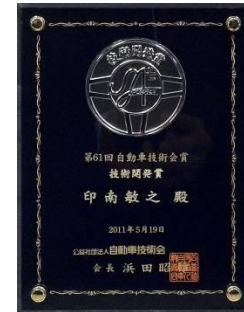
EV: Nissan LEAF



Image: Official Nissan website



Electrically-driven
Intelligent brake



Awarded “Technical R&D Award” by Society of Automotive Engineers of Japan, Inc.

Drive control systems business: target revenues for FY2015 : ¥200 billion

Example [Information field]: ICT* solution for EVs

Support EVs via global telematics centers
~ Strengthen collaboration with Clarion navigation system and DCM* ~

Strengths

- (1) EV drive support function**
Notify driver when recharging becomes necessary and give directions to the nearest recharging stand
- (2) Remote operation function (via data center)**
Air conditioning can be controlled using a mobile phone when vehicle power has been turned off
- (3) Vehicle status manager function (via data center)**
Transmits vehicle location, equipment status etc., to the data center, and generates probe traffic information

Car information systems (CIS) business: target revenues for FY2015 : ¥250 billion

*ICT: Information and Communication Technology
*DCM: Data Communication Module

Clarion Onboard system for Nissan Leaf

The diagram illustrates the Clarion Onboard system for the Nissan Leaf. It features a central 'EV Data Center' cloud icon connected to a 'DCM' (Data Communication Module) unit. A mobile phone is shown connected to the DCM. Below the DCM is a photograph of the vehicle's interior dashboard. To the right, several screenshots of the system's user interface are displayed, including:

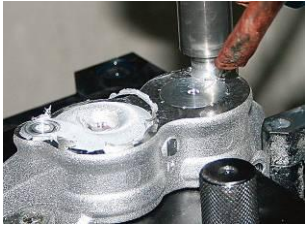
- 'Timer for air conditioner' screen showing settings for temperature and duration.
- 'Timer for recharging' screen showing charging schedule and status.
- 'Recharging stand information' screen showing a map and details of nearby charging stations.
- 'Electric power efficiency data and power consumption meter' screen showing energy usage statistics.

At the bottom right, a blue Nissan Leaf is shown. A bottom menu screen displays icons for navigation, charging spots, air conditioning, and other vehicle functions.

Developing methods to increase differentiation and efficiency in production

Develop production capabilities that surpass all others through improvements in differentiation methods and technologies

• Friction Stir Welding technology

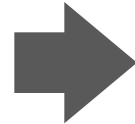


[Caliper for motorcycles]



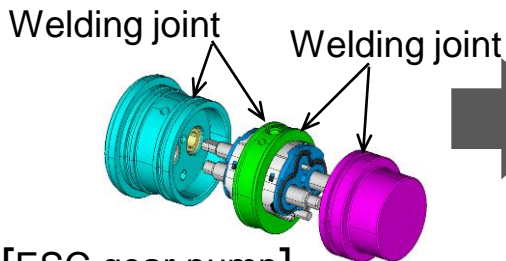
Calipers
HEV inverters

• Rectangular wire technology

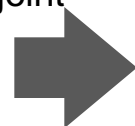


HEV motors

• High precision assembly/heat suppression

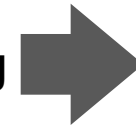


[ESC gear pump]



Brake booster
e-ACT*
+ ESC*, etc.

- New center for Forging and Molding Prototypes established



Lead time reduction by 1/3 for Die casting prototype

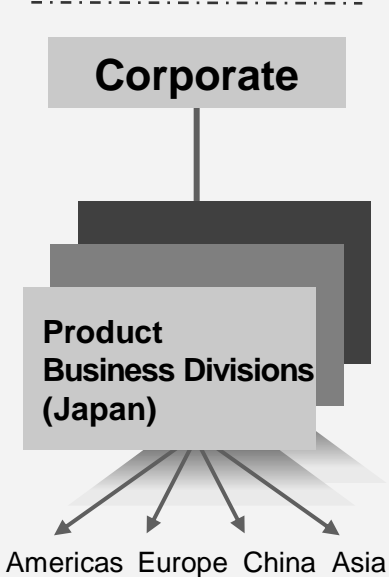
- Global introduction of remote maintenance facilities in FY2011

* e-ACT: electric drive braking system
* ESC: Electronic Stability Control

Start full operation of regional HQ systems based around 4 key overseas regions

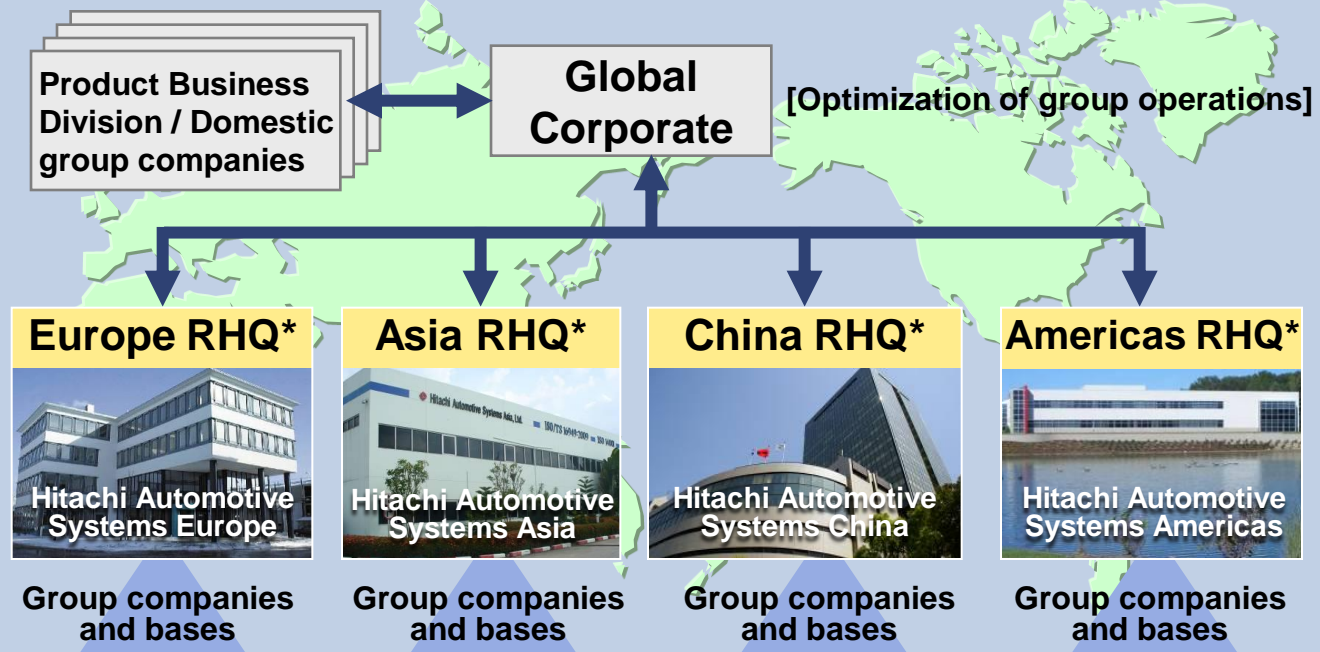
Previous framework

Management structure centered on business divisions in Japan



New framework

- Objectives**
- (1) Achieve speedy management by expediting decision-making
 - (2) Start operation of locally-led management, and local production for local consumption (conformed to the characteristics and needs of the home market)



*RHQ: Regional HQ

Increase investment in electronic control and electric drive products and overseas bases to execute global strategy

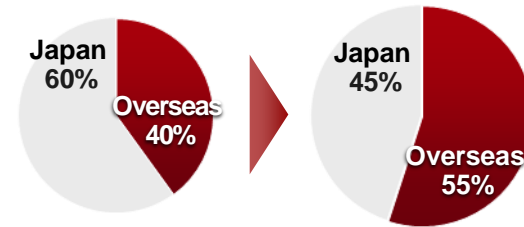
1 Global investment
70% increase in cumulative investment for the period FY2011 to 2013 (compared to FY2008 to FY2010)

2 Triple investment in electronic control and electric drive initiatives
(compared to cumulative total for the period FY2008 to FY2010)

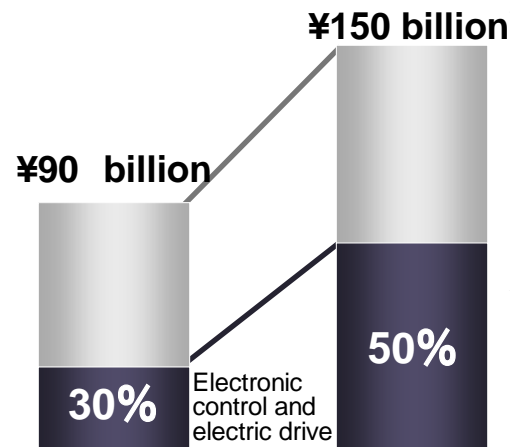
3 Increase the number of engineering personnel from 3,500 (FY2010) to 4,000 (FY2015)

4 Increase personnel at 4 key technical centers overseas from 200 (FY2010) to 400 (FY2015)

Composition of global investment and investment in electronic control and electric drive initiatives



Overseas investment 40% → 55%



Global investment 70% increase

**Investment in electronic control and electric drive products
Threefold increase**

FY2008 to FY2010 FY2011 to FY2013
(Actual - cumulative)(Plan - cumulative)

Strengthen global procurement capabilities

Promote measures to maintain procurement networks to ensure stable supply lines

1 Expand local and international procurement by accelerating “local production for local consumption”
Increase local procurement rate from 65% (FY2010) to 80% (FY2015)

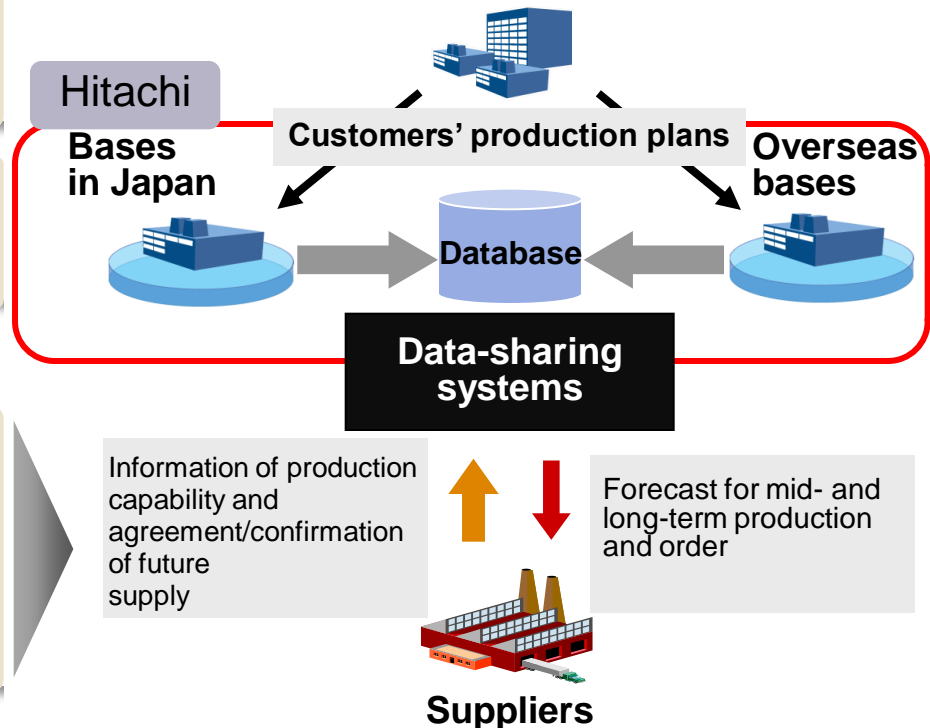
2 Reinforce VEC* and sourcing of development functions

*VEC:
Value Engineering for Customers, creating greater value for a lower cost

3 Establish global demand/supply system
Share information globally in real time to expedite responses

Information sharing for establishing a consistent supply chain of parts that require long production lead time

Customer (car manufacturers)



Strengthen global quality assurance initiatives

Achieve the standard of craftsmanship, high reliability and high quality that expected of Japanese products at all bases worldwide

1 Reinforce global quality assurance framework

- Reconfigure global quality assurance policies and related responsibilities (organization)

2 Assure the quality of newly introduced and locally sourced materials

- Bolster quality assurance evaluation framework, etc.

3 Introduce integrated management system for global quality assurance

- Improve the speed of response through real-time information sharing with suppliers and others (From July 2011 onwards)



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FY2015 Targets

- **Revenues: Over ¥1 trillion**
- **Overseas Revenue Ratio for Global Customer Bases* : Over 60%**
- **Operating income ratio: Over 5.0%**

Achieving the goals set out in this global growth strategy will increase our competitiveness on the world stage.

*These are combined ratio with figures of automotive systems that are equipped with vehicles at customer's base and figures of mobile batteries's overseas revenues.

Cautionary Statement

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

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

- economic conditions, including consumer spending and plant and equipment investment in Hitachi’s major markets, particularly Japan, Asia, the United States and Europe, as well as levels of demand in the major industrial sectors Hitachi serves, including, without limitation, the information, electronics, automotive, construction and financial sectors;
- exchange rate fluctuations of the yen and 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 in Japan, declines in which may require Hitachi to write down equity securities that it holds;
- the potential for significant losses on Hitachi’s investments in equity method affiliates;
- increased commoditization of information technology products and digital media-related products and intensifying price competition for such products, particularly in the Components & Devices and the Digital Media & Consumer Products segments;
- 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 and synthetic resins 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;
- 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 restructuring efforts to improve management efficiency by divesting or otherwise exiting underperforming businesses and to strengthen competitiveness and other 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;
- the possibility of incurring expenses resulting from any defects in products or services of Hitachi;
- the possibility of disruption of Hitachi’s operations in Japan by earthquakes, tsunamis or other natural disasters, including the possibility of continuing adverse effects on Hitachi’s operations as a result of the earthquake and tsunami that struck northeastern Japan on March 11, 2011;
- 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 Hitachi’s periodic filings with the U.S. Securities and Exchange Commission and in other materials published by Hitachi.

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