
Automotive Systems Business Strategy

Hitachi IR Day 2016

June 1, 2016

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Hitachi Automotive Systems, Ltd.

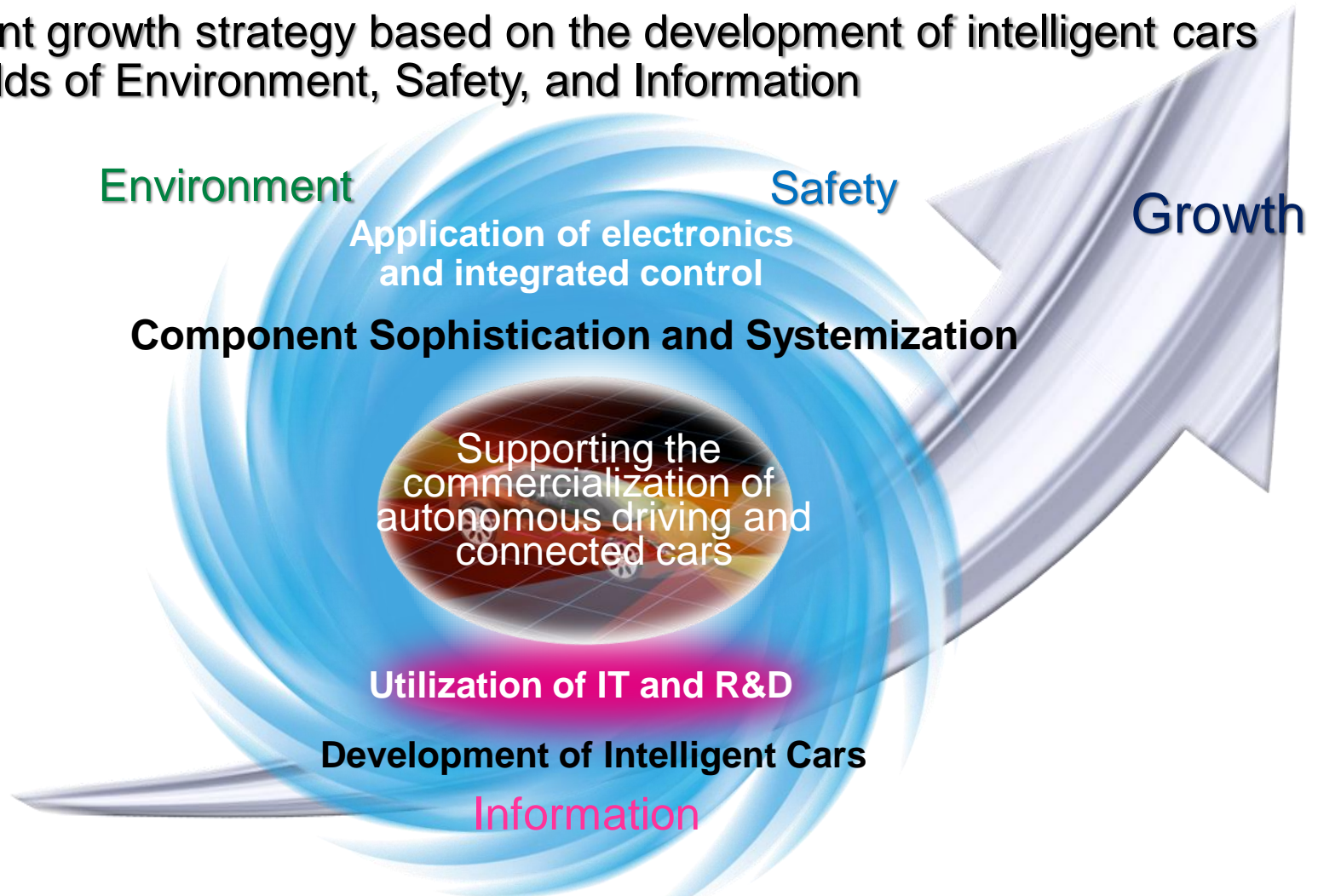
Automotive Systems Business Strategy

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- 1. Business Overview**
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1-1. Business Concept

Implement growth strategy based on the development of intelligent cars in the fields of Environment, Safety, and Information



Accelerate the growth of the Automotive Systems Business through cooperation between Hitachi Group companies

1-2. Business Structure

Aiming to expand the systems business by establishing the “Safety & Information Systems Division” in FY2016

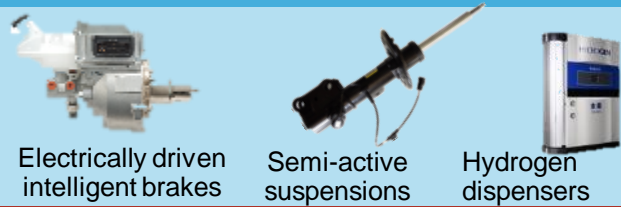
Integrate Hitachi’s broad range of technologies to develop and propose advanced safety driving systems.

- Autonomous driving systems
- Automatic parking systems
- Over the Air (OTA) software updates platform, etc.



FY2015 Business Structure

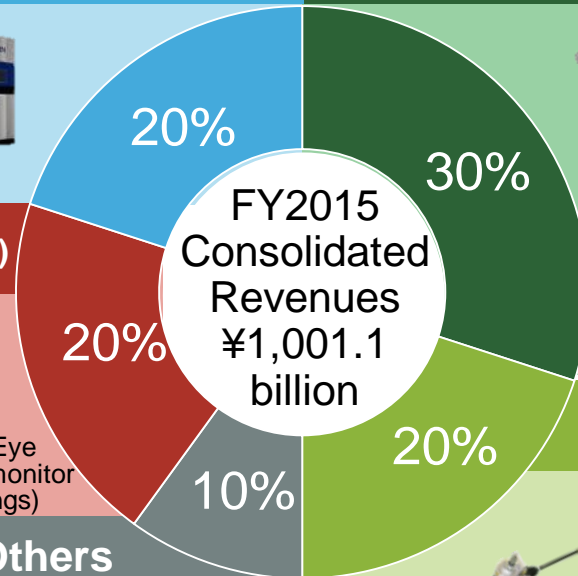
Drive Control Systems Div.



Powertrain & Electronic Control Systems Div.



Car Information Systems (Clarion)



Aftermarket Division/Others



Engine & Chassis Div.



1-3. Summary of FY2015 Mid-term Management Plan **HITACHI** Inspire the Next

	FY2015 Result	Previous Forecast*1	Difference	(Reference) 2015 Mid-Term Management Plan Initial Target*2
Revenues	1,001.1 billion yen	1,000 billion yen	+1.1 billion yen	1,000 billion yen
Adjusted Operating Income Ratio	6.2%	6.8%	(0.6)%	6.8%
EBIT Ratio	5.4%	7.0%	(1.6)%	7.0%

Summary

Revenues Achieved initial target under the 2015 Mid-term Management Plan, in line with the previous forecast.

Adjusted Operating Income, EBIT Ratio

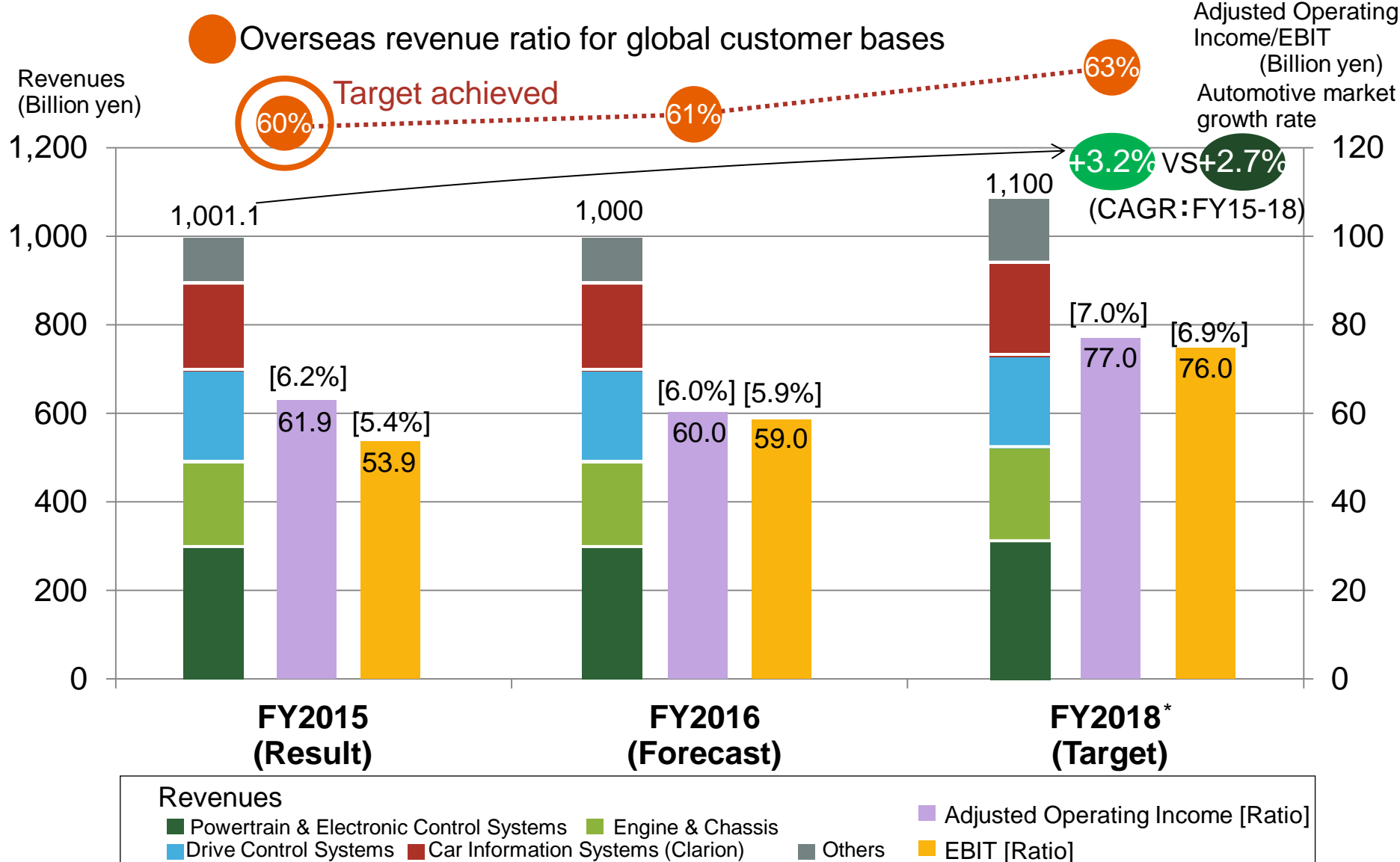
Lower than previously forecast, reflecting decreased sales of products with a high profit margin due to the slowdown of the Chinese market.

Improvement Measures for 2018 Mid-term Management Plan

- 1 Promote autonomous management by strengthening the functions of overseas regional headquarters
=> Respond to changing market conditions
- 2 Strengthen core business and expand mainstay business especially electronically controlled products
=> High profit structure

*1 As of June 11, 2015 *2 As of June 13, 2013 Figures after restatement based on IFRS
EBIT: Earnings before Interests and Taxes

1-4. Business Performance Trends



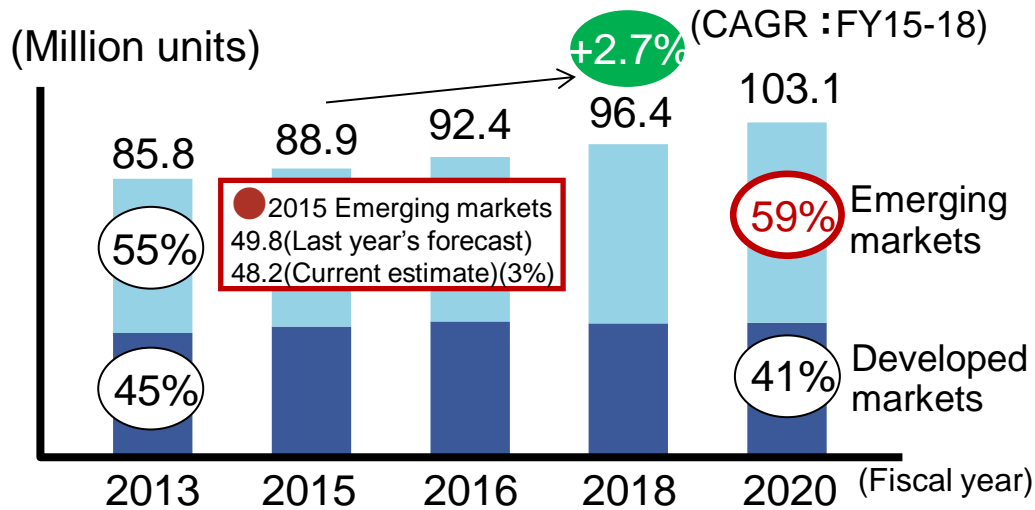
* Previous forecasts (as of June 11, 2015) Revenues: ¥1,200 billions, Adjusted operating income: ¥88 billions, EBIT: ¥ 90 billions
CAGR: Compound Annual Growth Rate

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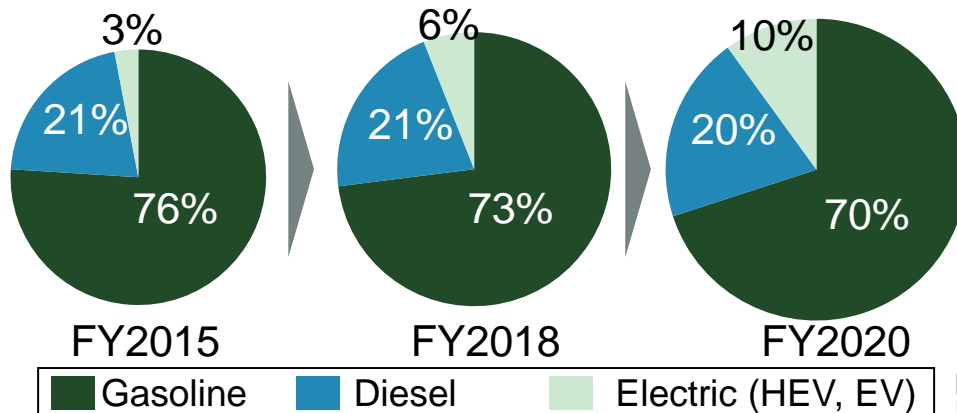
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Changes in Production Volume by Region



- In FY2015, factors such as the slower growth of the Chinese market put the brakes on emerging markets.
- CAGR will be +2.7% heading toward FY2018.
=> Hitachi's growth rate will be +3.2%, exceeding the automotive market growth rate.
- In FY2020, production will exceed 100 million units, and the growth of emerging markets will drive global growth, accounting for almost 60% of total production.

Changes in Powertrain Ratios



- Heading toward FY2020, the share of electric vehicles such as HEV and EV will expand to almost 10%.
- Gasoline vehicles will still have a 70% share.

Source: IHS Automotive survey data

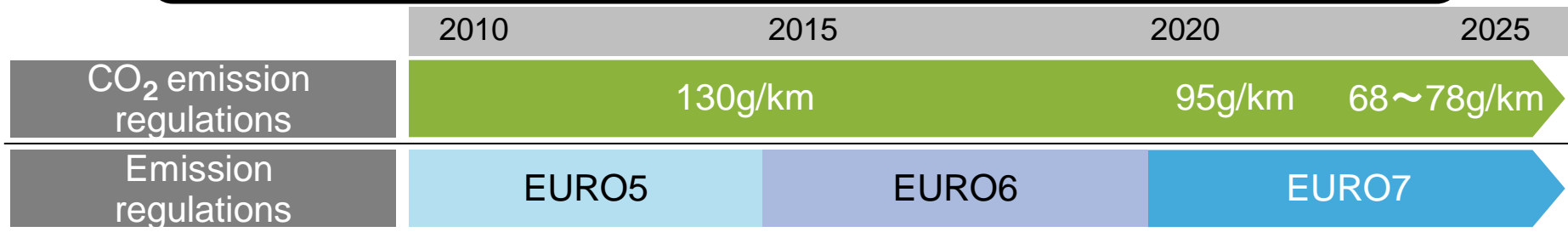
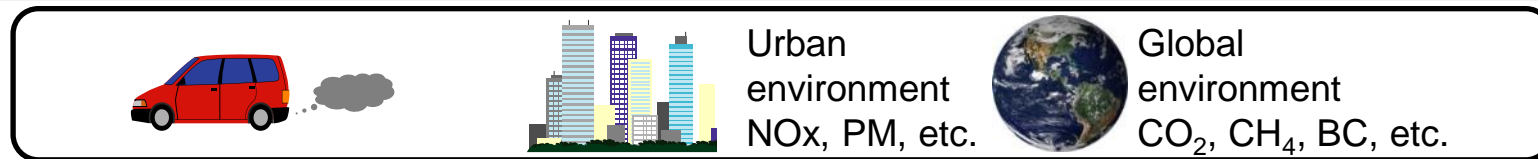
HEV: Hybrid Electric Vehicles
EV: Electric Vehicles

2-2. Trends in Environmental and Safety Regulations HITACHI Inspire the Next

[Environmental Field]

Environmental regulations are becoming tighter globally, in both developed and emerging markets

- Pressure to meet regulatory requirements both in terms of the global environment (global warming countermeasures) and the urban environment (prevention of damage to health) is increasing.

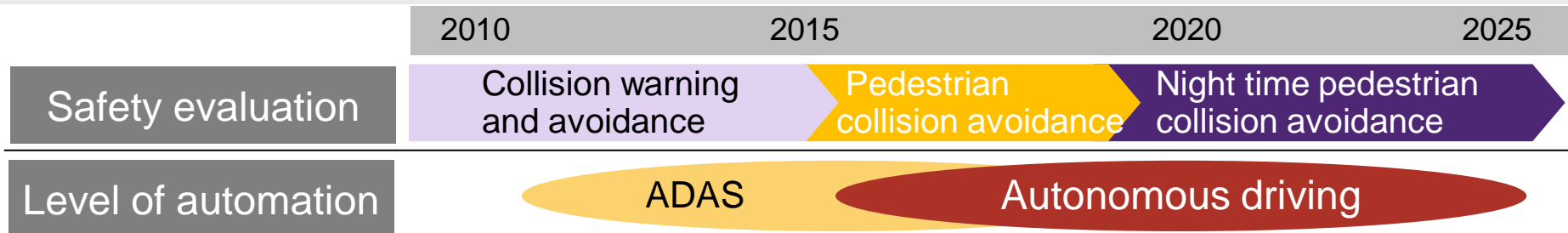


NO_x: Nitrogen Oxide. PM: Particulate Matter
CO₂: Carbon Dioxide, CH₄: Methane, BC: Black Carbon

[Information & Safety Field]

Preparations are underway for the spread of connected cars and ADAS/AD

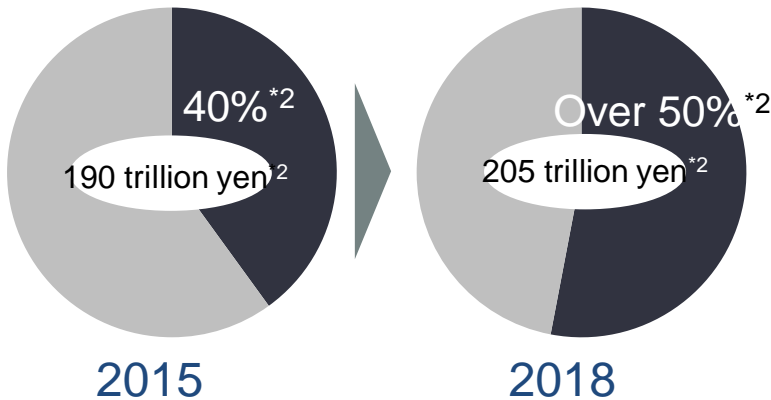
- Technological development in the information and safety field aimed at the realization of autonomous driving is accelerating.



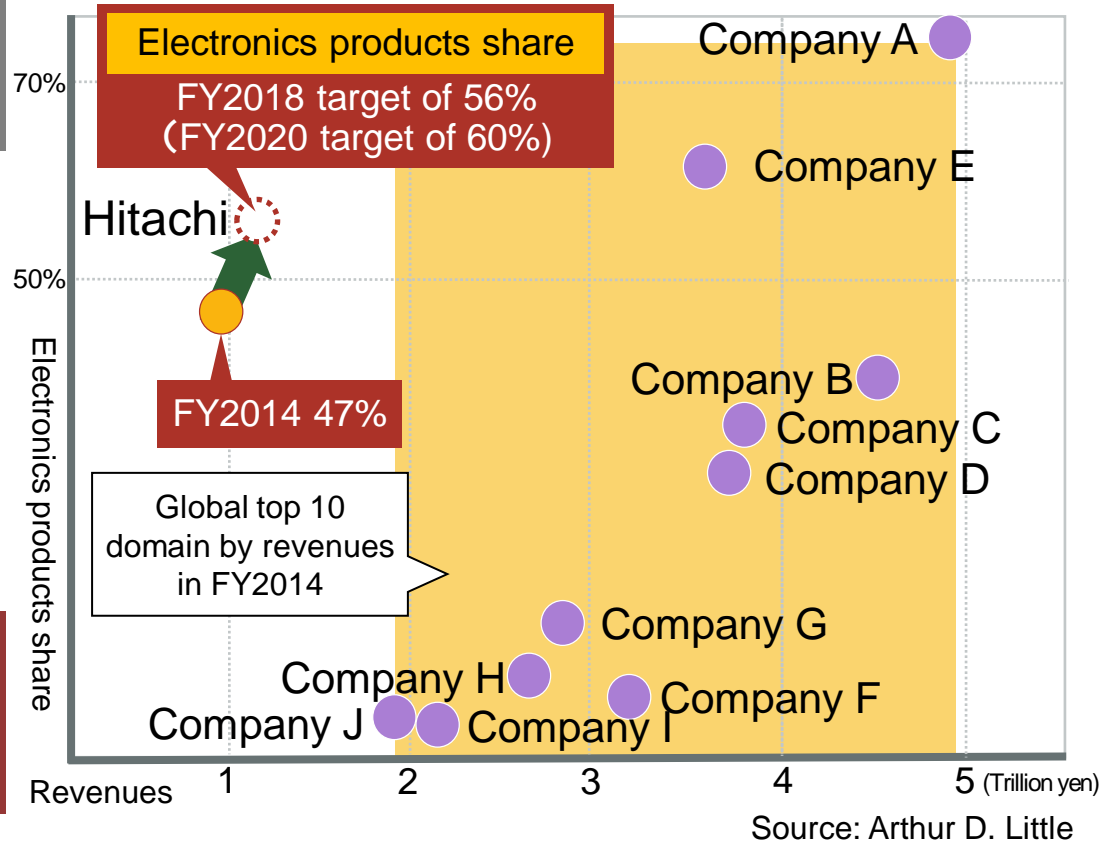
2-3. Global Position Analysis

Top 10 global parts suppliers by revenue Electronics products*1 share (FY2014 result)

Change in electronics products share of vehicle components market (in yen terms)



The share of electronics products will be growing for electronically controlled and electrically driven products for eco-friendly cars and more sophisticated autonomous driving features => 40% increase (in yen terms)



Increase potential for business expansion in the medium and long term by increasing electronics products*1 share to world-leading level

*1 Electronics products: Electronically controlled and electric drive products such as electronically controlled units and hybrid systems

*2 Calculated by Hitachi based on FOURIN Global Automotive Parts Yearbook 2015, and FISCO report.

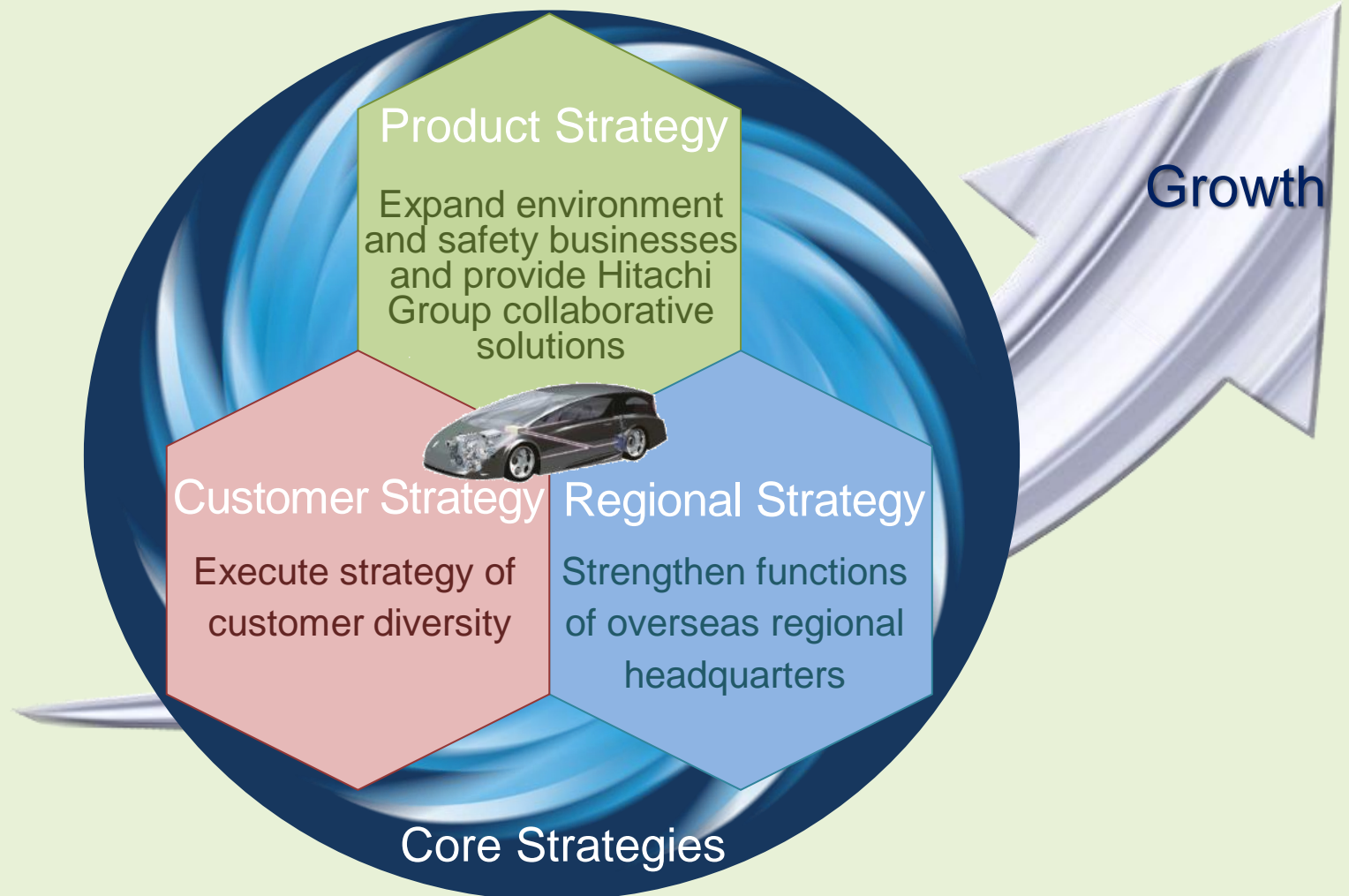
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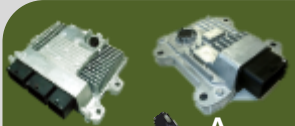


3-1. Growth Strategy

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



3-2. [Product Strategy] Securing Fundamental Business HITACHI Inspire the Next

Securing mainstay products which account for a large share of revenues to ensure achievement of the 2018 Mid-Term Management Plan

Div.	Field	Mainstay products	Share of Division revenues ^{*3}	Business promotion measures	Revenue growth 2015 ▶ 2018 ^{*3}
PT Div.*1	Environment	ECU·ATCU	 Approx. 40%	Expand compact standard ECU models for light vehicles	+ 35%
		Ignition coils		Expand sales globally through optimal production strategy	
EN Div.*2	Environment	Variable valves	 Approx. 50%	Expand sales of highly functional VTC	+ 30%
		Steering		Step up activities to expand sales to global customers	
Drive Control Systems Div.	Safety	Suspension systems	 Approx. 80%	Promote global sales expansion	+ 10%
		Brakes		Expand sales of four wheel brake calipers for compact cars	

^{*3} Total of the mainstay products shown.

*1 Powertrain & Electronic Control Systems Division *2 Engineering & Chassis Division
 ATCU: Automatic Transmission Control Unit, VTC: Valve Timing Control

3-3. [Product Strategy] Expanding Mainstay Business HITACHI Inspire the Next

Expand the electronically controlled and electrically driven products business and promote systemization in this high growth market

More efficient internal combustion engines, electrically driven products, enhanced safety performance

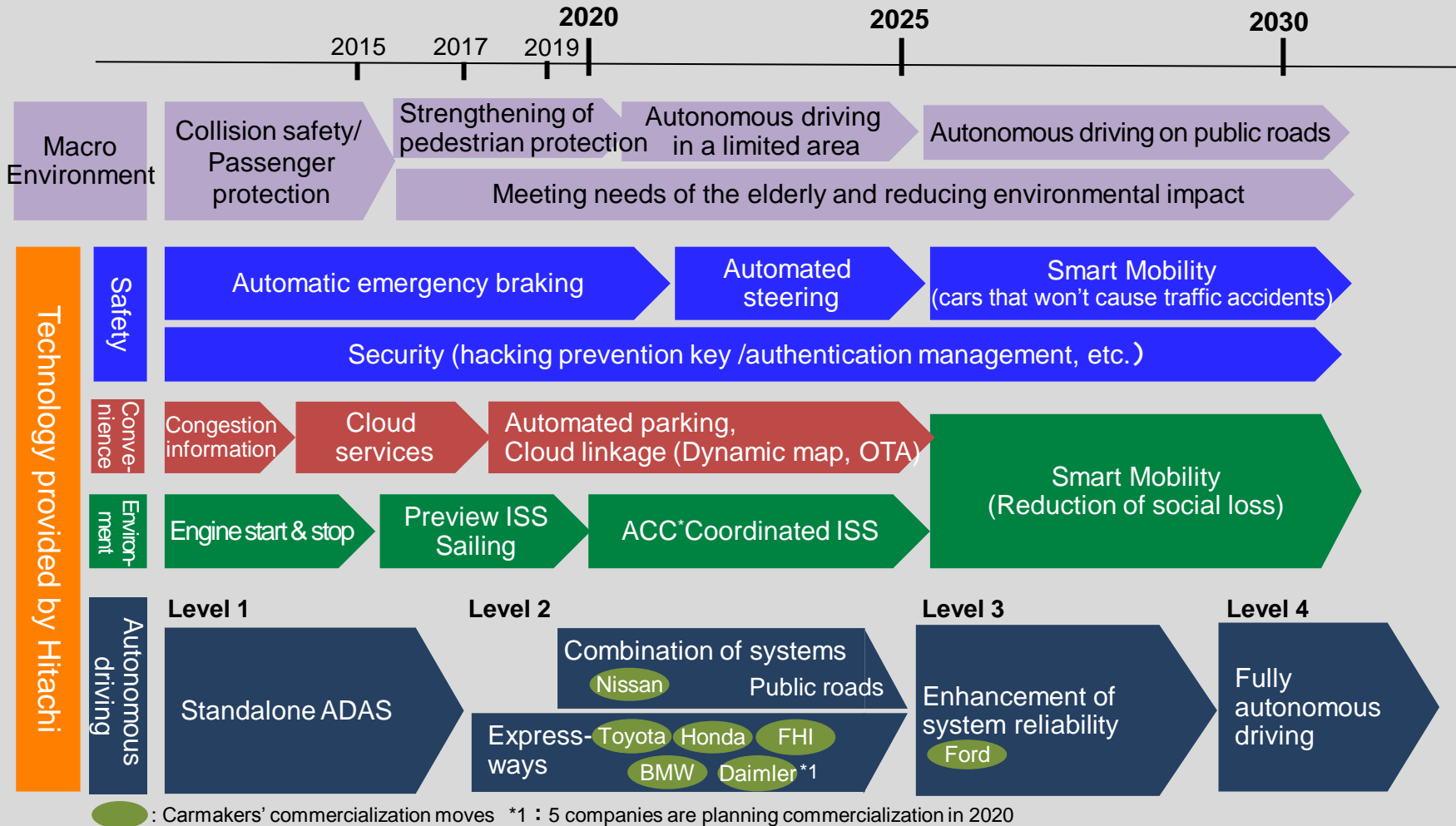
Div.	Products for sales expansion	Business expansion measures	Revenue expansion plan 2015 ▶ 2018	Systemization through vertical integration
PT Div.	Inverters	Expand global orders received as HEV system	+170%	
	Motors	Expand global orders received as HEV system	+190%	
	Stereo cameras	Expand adoption as an ADAS system	+20%	
EN Div.	Electric power steering	Expand sales of high-maneuverability and high performance EPS	+120%	
	Electronically controlled brakes	Expand sales of vacuum-less brake system	+100%	
	Electric VTC	Promote sales expansion of low-priced VTCs	+70%	
Drive Control Systems Div.	Electric brakes	Strengthen linkage of functions with electrically driven products	+40%	
	Electronically controlled suspension	Seek differentiation on performance and price	+20%	
Others	Lithium-ion batteries, controllers	Expand sales of high-output compact packs to the expanding 48V market	+40%	

EPS: Electric Power Steering

3-4. [Product Strategy] Achieve Growth Through Sophistication of the Integrated Control and Safety System

Accelerate system development to achieve early commercialization of autonomous driving

-- Aiming for 10% share of information and safety market, predicted to be worth over 3 trillion yen by 2020 --



● : Carmakers' commercialization moves *1 : 5 companies are planning commercialization in 2020

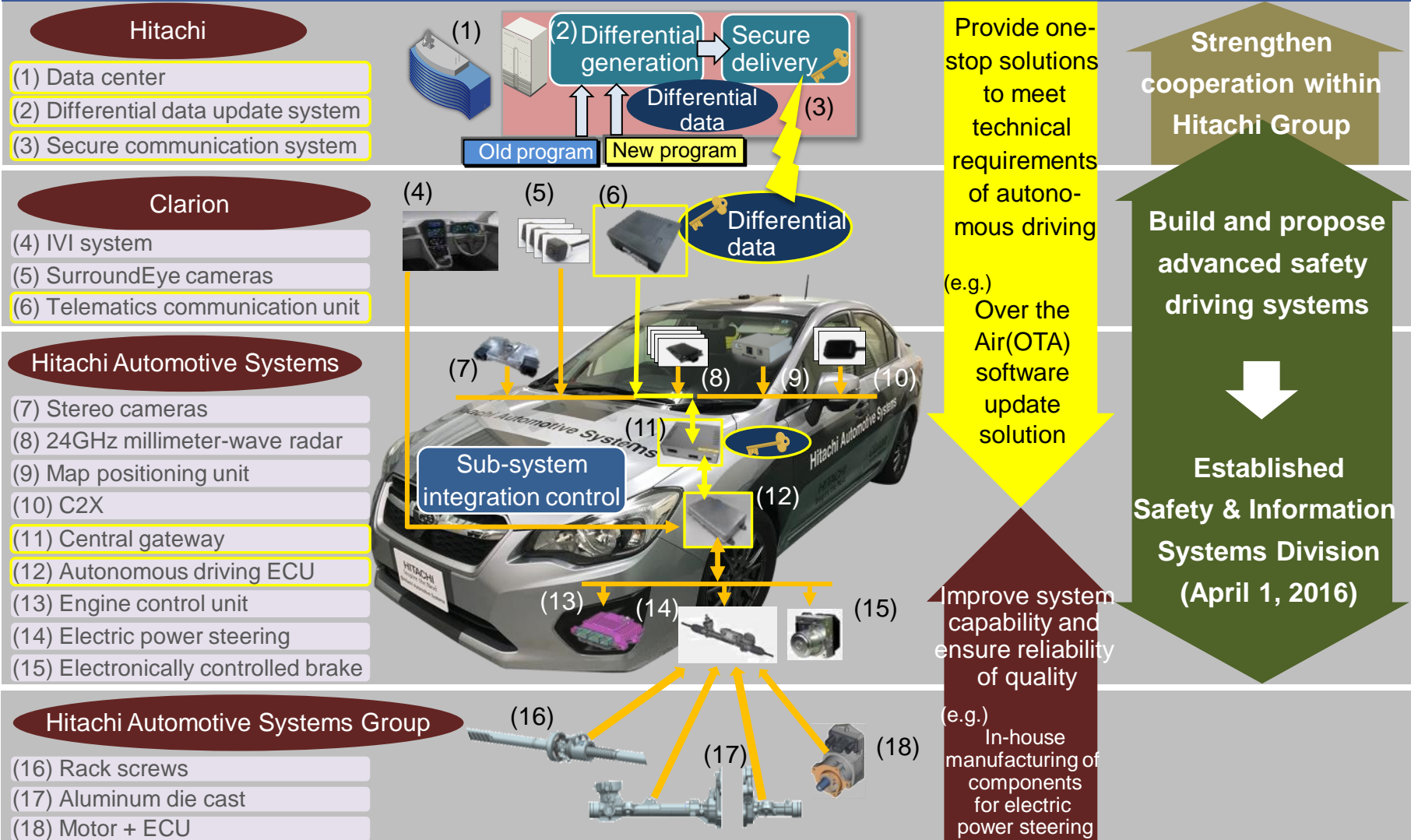
Source: Releases of each company and Patent Office's "Patent application technical trends survey"

ACC: Adaptive Cruise Control, ISS: Intelligent Start-Stop
FHI: Fuji Heavy Industries

3-5. [Product Strategy]

Achieve Growth Through Hitachi Group Collaborative Solutions

Provide high quality “one stop” solutions in the autonomous driving systems field



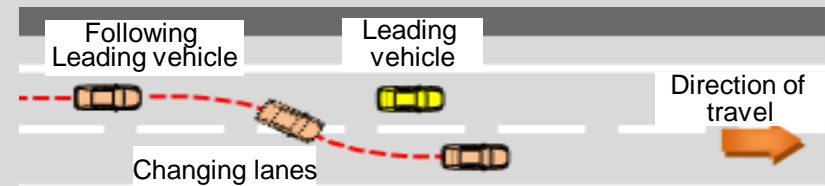
3-6. [Product Strategy] Conduct Public Road Demonstration Experiments Using Mass Produced Prototypes

Accelerate the commercialization of systems with high cost effectiveness and performance in order to popularize autonomous driving systems

Main system components (Expressway corresponding to level 2)		Hitachi Automotive Systems	Competitors
Recognition	Sensing technology	Cost competitiveness : ○ Stereo camera, monocular camera (4), Millimeter wave radar (4)	Cost competitiveness : △ Rider (Multiple), Monocular camera (several dozen), High precision GPS
Judgment	Autonomous driving ECU technology	Mass-produced prototypes:	Development stage: △
Control	Electronically controlled actuator	High speed reaction: ○	High speed reaction: △

Overview of demonstration experiment

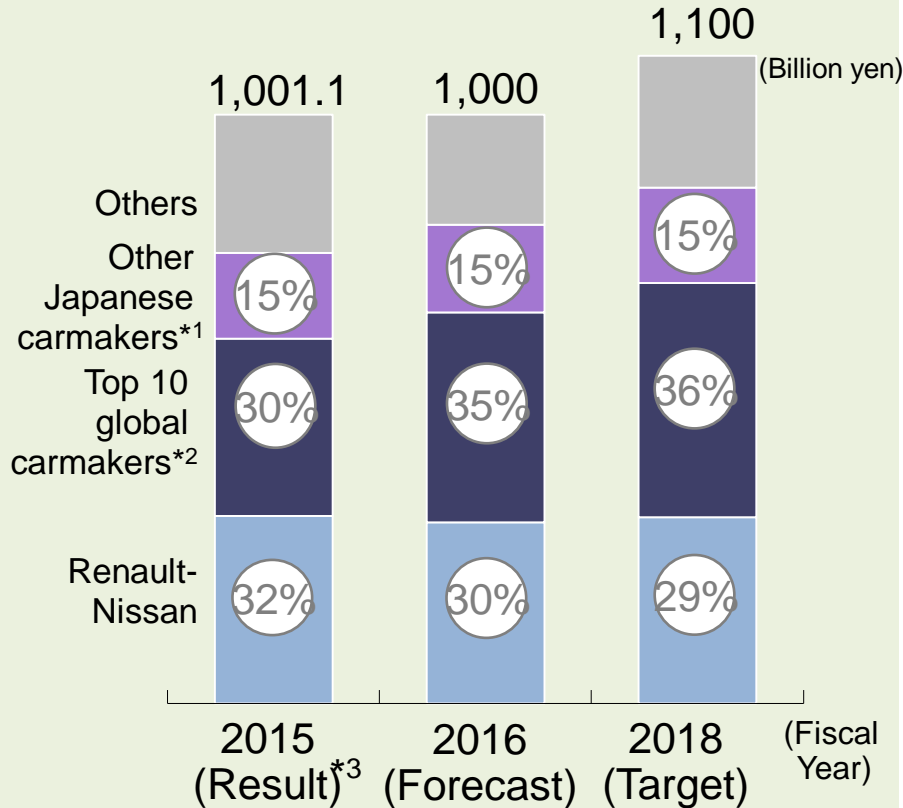
- [Place] Hitachinaka Road, Ibaraki Prefecture (Hitachinaka IC~Hitachi Seaside Park IC)
- [Dates] February 22 – 26, 2016
- [Details] Lane keeping, following leading vehicle and changing lanes through autonomous driving



3-7. [Customer Strategy]

Execute Strategy of Customer Diversity

Revenues composition



Expand accounts with revenues exceeding 100 billion yen

Strengths

- Leverage GAM and GAT operations and global footprint to support customers developing business worldwide.
- Increase number of global sales personnel to achieve cooperation between regions and anticipate customer needs (up 10%).

Strengthen capability to propose solutions that meet customer needs

- Propose a wide range of products and systems through cross-sales.
- Integrated control systems, security technologies, etc.

*1 Fuji Heavy Industries, Mazda Motor, Mitsubishi Motors, Daihatsu Motor and Commercial vehicles (Isuzu Motors, Mitsubishi Fuso Truck and Bus, Hino Motors, and UD Trucks)

*2 Toyota, Volkswagen/Audi, GM, Ford, Hyundai Motor, Honda, PSA, Peugeot Citroën, Suzuki, Fiat Chrysler (except Renault-Nissan)

*3 Customer ratios are actual estimates.

3-8. [Customer Strategy]

Example of Expansion of Business with Customer

Increase revenues in business with Ford through cross-sales
(FY2008⇒FY2018: Revenues increased 3 fold to exceed 100 billion yen)

Airflow sensors



Valve timing control



Water pumps



Balancers



Shock absorbers



Brake master cylinders



■ Won orders for electronically controlled and electronically driven products

- Motors, inverters, and battery cells for HEVs
- Semi-active suspension systems
- Electric power steering



■ Received Ford's "World Excellence Award" (May 2015)

- In recognition of business cooperation

Expansion in sales of advanced technologies and systems through anticipation of customer needs



Currently supplying products

Expansion of electronically-controlled products

Expanded sales of advanced technologies

3-9. [Regional Strategy]

Strengthen Regional Headquarters Functions

Reform global operations, strengthening foundations by shifting from quantity to quality

Spin off operations to form independent companies

Expand global footprint

Achieve group governance and autonomy of overseas regions (regional headquarters and overseas bases)

Aims

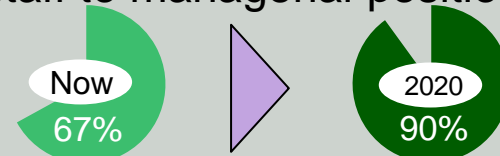
- (1) Globalize operations
- (2) Speed up decision-making
- (3) Separate business execution and supervisory functions



Reforms

- Hire global talent as presidents of regional headquarters (Americas, Europe, Asia)
- Adopt executive officer system
 - > Appoint presidents of regional headquarters as executive officers
- Outside directors (former executives of U.S. companies)
- Implement measures to develop and strengthen locally recruited managers (Accept in related departments in Japan for training in design, sales and production)
- Actively appoint local staff to managerial positions

<Ratio of local staff in managerial positions>

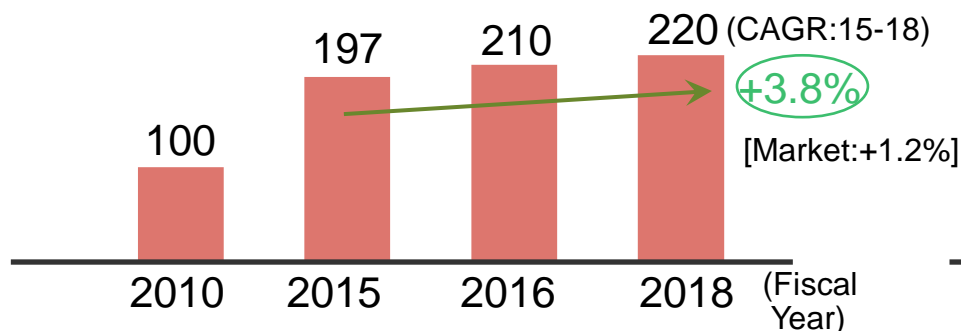


3-10. [Regional Strategy] Initiatives for Two Major Markets

Americas

Revenues

Indicates indices based on FY2010 revenues.
(Based on USD)



- Strengthen local technology centers to improve service for customers in the Americas.
- Strengthen intraregional control and governance through integration of Mexican subsidiaries .

Hitachi Automotive Systems Mexico, S.A. de C.V.
(Integrated 2 Mexican subsidiaries in October 2015)



Querétaro Plant



Lerma Plant No. 1



Lerma Plant No. 2

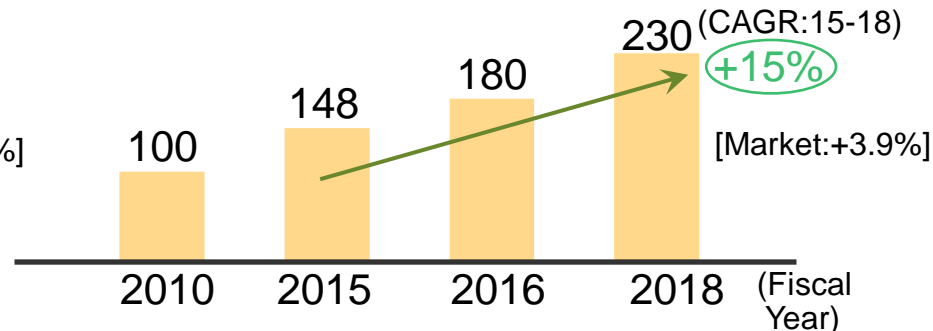


Lerma Plant No. 3

China

Revenues

Indicates indices based on FY2010 revenues.
(Based on CNY)



- Achieve growth outpacing overall market growth heading towards 2018.
- Establish 15th manufacturing company in China to meet the needs of auto makers that are expanding bases in inland China (April 2016).

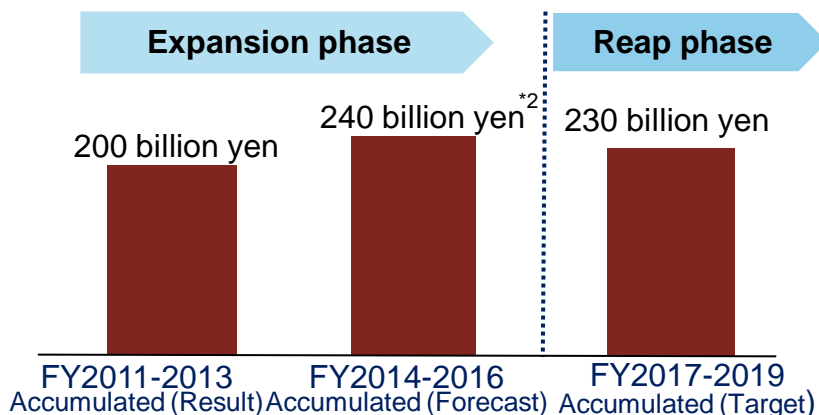
Hitachi Automotive Systems (Chongqing) Ltd.
(Scheduled to start mass production in 2018)



New company in Chongqing signing ceremony

Make transition from “expansion” phase to “reap phase” and strengthen development capability by generating cash

Global investment amounts ^{*1}

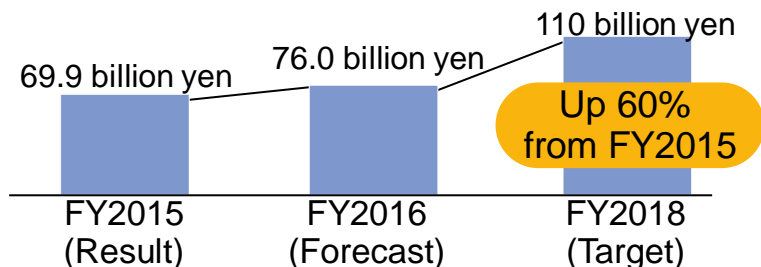


*1 New business investment, jigs and tools, purchase of intangible fixed assets and tangible assets and software to be leased, financing

*2 Previous forecast amount (as of June 11, 2015): 280 billion yen

Measures to strengthen global R&D

Strengthen technological development focusing on priority fields such as ADAS and autonomous driving



Established Silicon Valley office (April 2016)

- Strengthen the development of new products in the autonomous driving and connected car domain.

Strengthen software development

- Leverage R&D capability of the Hitachi Group.
- Establish automotive software division at Hitachi Group software companies.
- Employ around 200 software developers in China. (Clarion’s IVI, camera development, etc.)

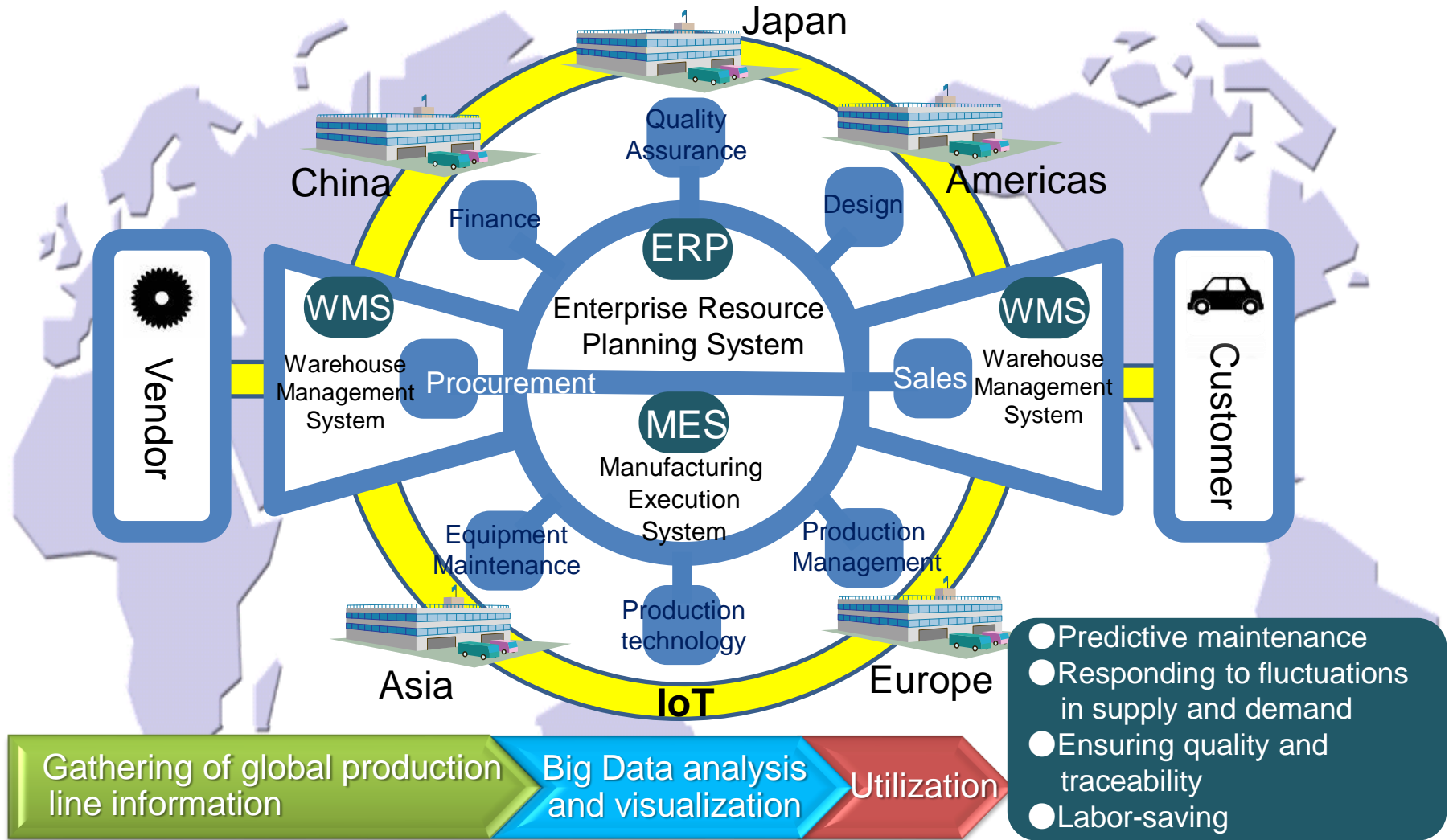
Utilize open innovation

- Strengthen industry-university-government collaboration in the safety & information field.

Key partners	Details of collaboration
Stanford University	Autonomous driving
University of Michigan	Autonomous driving, C2X
RWTH Aachen University	ADAS
Keio University	AD system architecture
Ibaraki University	Surrounding environment recognition technology

3-12. Harness the IoT to Strengthen Manufacturing

Promote high efficiency and high quality manufacturing by using the IoT to connect production lines in five key regions with customers and vendors



ERP: Enterprise Resource Planning, WMS: Warehouse Management System, MES: Manufacturing Execution System

Execute growth strategy through structural reform and continuous innovation

Promotion details

Cost structure reform

- Strengthen global quality assurance capability
 - Establishment of Suppliers Quality Management Department (April 2016)
 - Sophistication of quality assurance technologies
- Execute global operation reforms
 - Make regional headquarters independent and increase efficiency of operations
 - Continue Global Production Innovation
- Strengthen cost and investment management by product
 - Establishment of Cost Planning Department in each business division (April 2016)

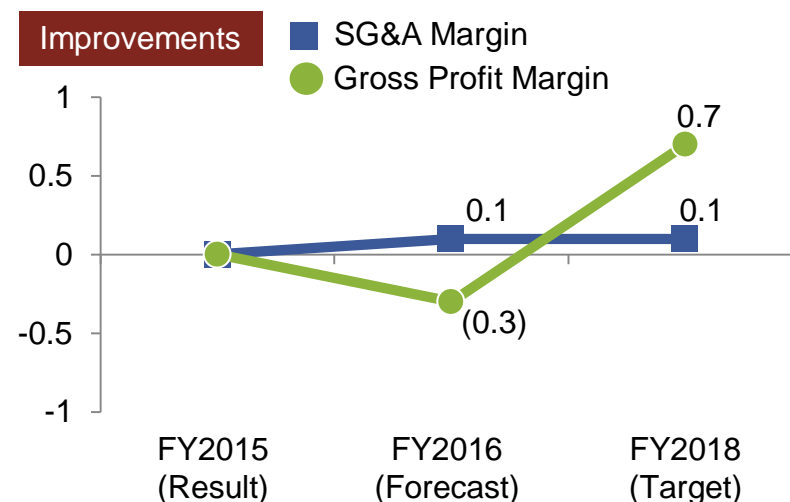
Cash generation

- Establish strategies in safety and information area
 - Establish a “Safety & Information Systems Div.”, focus resources on this field and increase cooperation with the Hitachi Group
- Strengthen electronically controlled and electrically driven products
 - Expand sales of electronically controlled and electrically driven products and subsystems
- Expand sales to global customers through cross-sales

Improve CCC, Operating CF and ROA

	FY2015 (Result)	FY2016 (Forecast)	FY2018 (Target)
CCC	42.1 days	40.8 days	40.6 days
Operating CF	89.4 billion yen	76.7 billion yen	105.0 billion yen
ROA	4.9%	4.3%	5.3%

Improvements in Gross Profit Margin and SG&A Margin



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FY2018 Targets

- Revenues 1.1 trillion yen (Increase of 10% compared to FY2015)
- Adjusted operating income [EBIT] ratio 7.0%[6.9%]
(Improvement of 0.8% [1.5%] compared to FY2015)
- ROA 5.3% (Improvement of 1.0% compared to FY2015)
- Operating CF [ratio] 105 billion yen [9.5%]
(Increase of 20.2 billion yen [1.0%] compared to FY2015)

Implement growth strategy based on the development of intelligent cars in the fields of Environment, Safety and Information

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 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;
- the possibility of cost fluctuations during the lifetime of, or cancellation of, long-term contracts for which Hitachi uses the percentage-of-completion method to recognize revenue from sales;
- credit conditions of Hitachi’s customers and suppliers;
- fluctuations in 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 associates and joint ventures have become or may become parties;
- the possibility of incurring expenses resulting from any defects in products or services of Hitachi;
- the potential for significant losses on Hitachi’s investments in equity-method associates and joint ventures;
- 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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