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# Rail Systems Business Strategy

Hitachi IR Day 2014

June 12, 2014

**Alistair Dormer**

**Hitachi Rail Global CEO of Hitachi, Ltd.  
and Executive Chairman and CEO,  
Hitachi Rail Europe Ltd.**

## Hitachi Rail Systems moved HQ & strategy function to London as of 1<sup>st</sup> April, 2014

### Who am I ?



Alistair Dormer  
Hitachi Rail Global CEO

Alistair Dormer, Hitachi Rail Global CEO

- |           |   |
|-----------|---|
| 2003      | Joined Hitachi as Business Development Director, Rail<br>- led team to secure Class 395 |
| 2005 - 14 | Managing Director/CEO Hitachi Rail Europe<br>- led team to secure IEP contract          |
| 2014      | Hitachi Rail Global CEO   |

- u Accelerate Globalisation of Hitachi's rail business
  - n Expand international sales operations using international networks with local know how
  - n Develop international partnerships and business models for business expansion
- u Further development of relationship with Japanese customers/government
  - n As a "Global Player" with globally competitive technology and products, further contribute to the Japanese society

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## Full lineup of rail systems products and services

FY2013

Revenues : **168.2 billion yen**  
(Overseas revenue ratio: 35% raising to 53% (FY2015))

Operating income ratio: **4.5%**

EBIT\* ratio: **3.9 %**

Employees : **2,890**

### Transport management & control systems 39%

#### Signalling/traffic management systems

##### Signalling/train control systems



##### Traffic management systems/power management systems



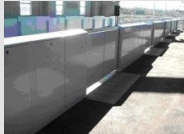
##### Computerised interlocking



##### Power supply systems



##### Platform gates



### Rolling stock systems 61%

#### Rolling stock/maintenance

##### High-speed trains



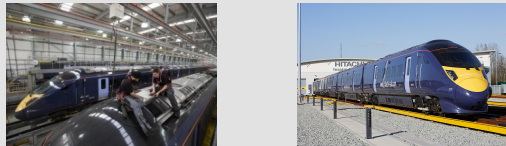
##### Commuter trains



##### Monorails



##### Maintenance




#### Electrical components

##### Main circuit/main motor



##### Air conditioning/air-moving systems



 Top share in Japan

\* EBIT: Earnings before interest and taxes

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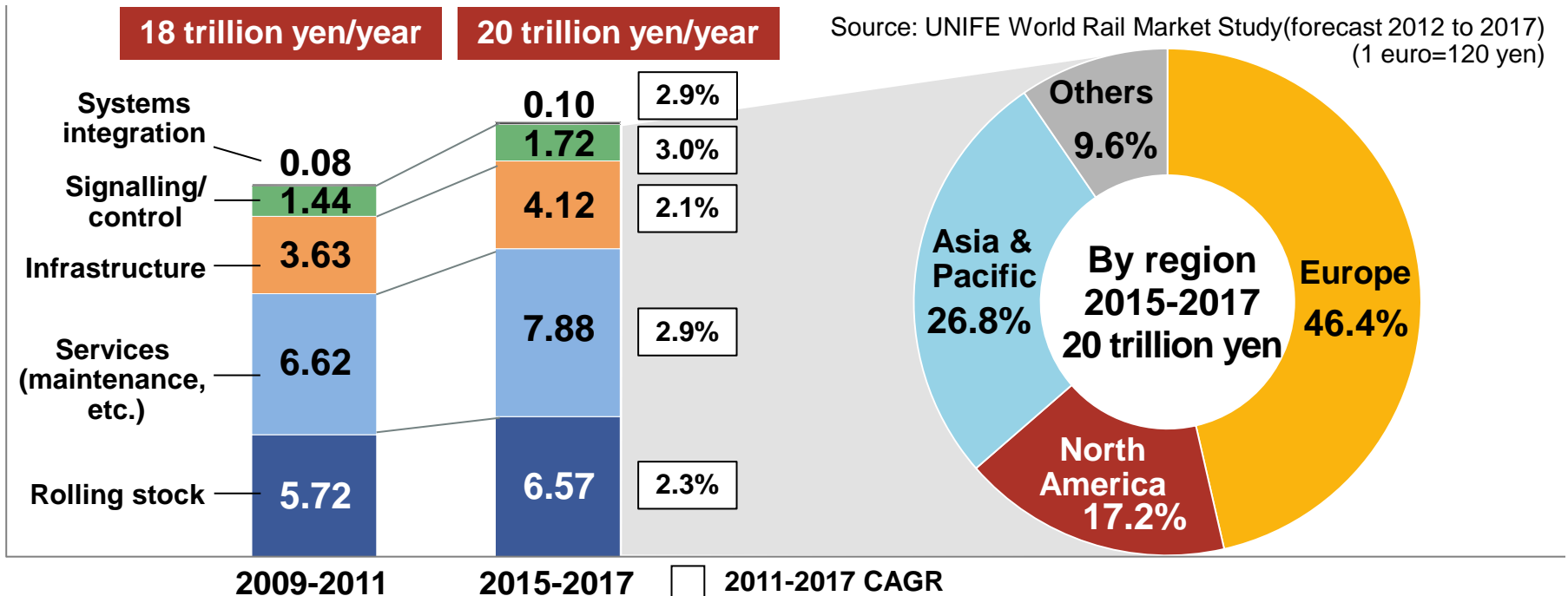
# 2-1. Targeting a growing global market

## Overall rail market: 20 trillion yen/year with stable growth

- n Firm Japanese market, highly competitive
- n Expansion of UK renewal market; EMUs, ETCS, CBTC, traffic management
- n Chinese market is recovering
- n Strong potential demand of metro (turnkey) in emerging countries (procurement processes still immature)

EMU: Electric Multiple Unit  
 ETCS: European Train Control System  
 CBTC: Communication Based Train Control

### Market Size by Segment



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# 3-1. IEP – Building a long term UK base

**On schedule to deliver 1<sup>st</sup> train set in 2015 with preparation of launch maintenance and local production**

## Project Overview

- | Customer : UK Department for Transport
- | No. of rolling stocks : Total 866 cars with 27.5 years' maintenance
- | Delivery : 2017 - 2019
- | Procurement method : PPP (Public Private Partnership)



## Project Schedule

Fiscal Year	2012	2013	2014	2015	2016	2017	2018	2019
Great Western Main Line								
Prototype	Design and production			Test run in UK				
Mass product			Design	Production			Product acceptance	
		<b>We are here</b>						
East Coast Main Line								
Prototype		Design and production			Test run in UK			
Mass product				Design	Production		Product acceptance	
Production Site		Construction		Preparation	Production			



Newton Aycliffe, UK production site: Under construction



Newton Aycliffe, image of the completion



IEP front mask mock-up



Car body: Under production at Kasado works

IEP: Intercity Express Programme



# 3-2. Entering new markets

## “Urban Railway Line 1” in Ho Chi Minh City, Vietnam: Project office launched in August 2013 and design process is on going

### Project Overview (1<sup>st</sup> urban transport in Vietnam)

- | Customer : Management Authority for Urban Railways of the People’s Committee of Ho Chi Minh City
  - | Line length : 19.7km (underground and elevated line)
  - | Contract scope : Prime contractor - E & M package
    - n 17 train sets (total of 51 cars)
    - n Signalling and telecommunication system
    - n Power supply system
    - n Depot facilities, etc.
- 5 years maintenance following the start of commercial operations



Ho Chi Minh City Line 1 (Image)

### Project Schedule

Fiscal Year	2013	2014	2015	2016	2017	2018	2019
E&M package	Design		Production	Delivery of 1st train set			
				Installation/Test	Integration		
	We are here					Start commercial operation	
						Maintenance (5 years)	

# 3-3. Monorail is a key growth sector

## Daegu Urban Railway Line 3 Monorail System (Korea): Train set delivery completed and now test run for commercial operation

### Project Overview

- | Line Length : 24 km (Elevated double track)
- | Number of Stations : 30 Stations
- | Car Depot : 2 Places
- | Contract Scope : Monorail cars (84 cars), track switch and signalling system



Monorail cars in siding

### Project Schedule

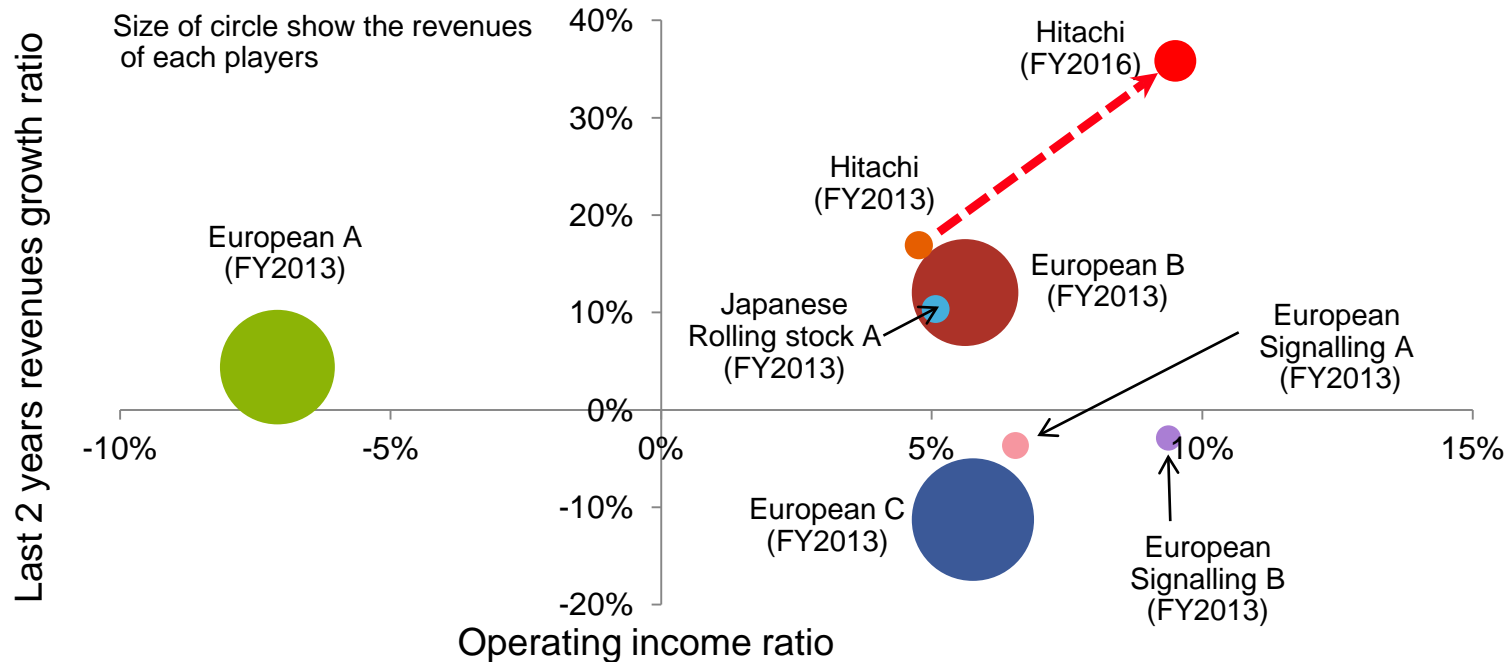
Fiscal Year	2008	2009	2010	2011	2012	2013	2014	2015
Rolling Stock	Design			Production				Commissioning/Tests
Signalling	Design			Production		Commissioning/Tests		
System				Commercial Operation (Planned)				Inspection/Trial Run

**We are here** (indicated by a red arrow pointing to the start of the 2014 column)



Operation centre

## Hitachi's Target Position



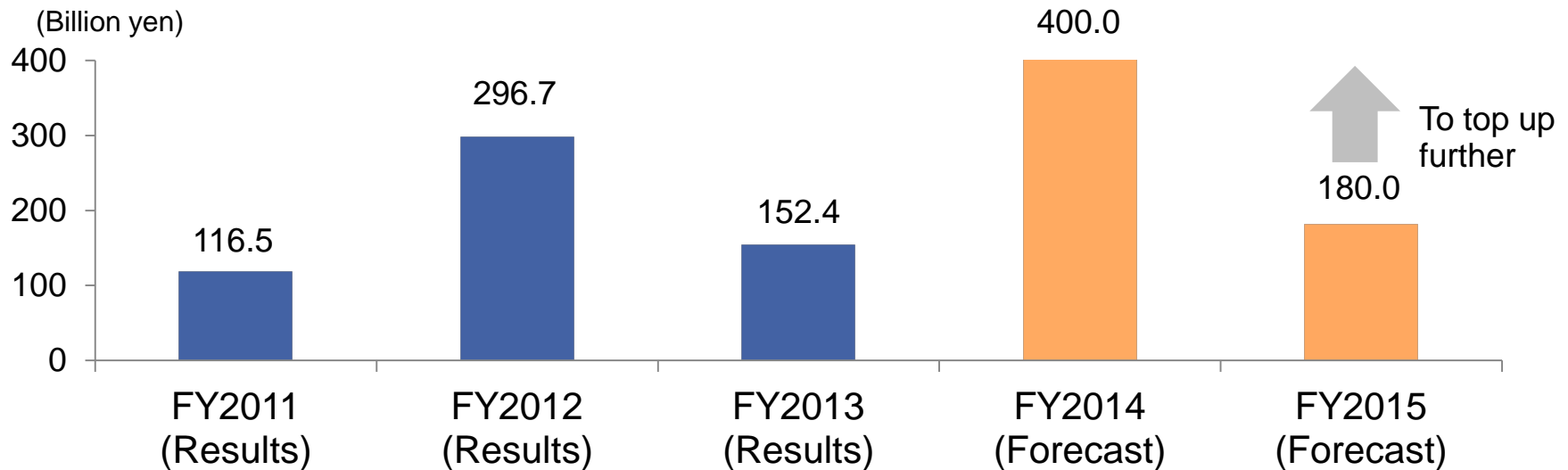
## Competitors' dynamism

- u Trend of Industrial re-organisation
  - l Rail conglomerate in Europe anticipating consolidation
- u European rolling stock manufacturers growing stably
- u Chinese rolling stock manufacturers entering emerging markets

# 3-5. Well placed to challenge for growth

## 2.7 trillion yen backlog are secured Challenges are expanding profile in emerging countries

- Backlog: approx. 2.7 trillion yen from 3 core market
  - UK (IEP trains and maintenance), Japan and China
- Historical order intake (excluding maintenance contracts in UK)



- Need next steps for further growth and globalisation
  - Challenges are expanding profile in emerging countries

# 3-6. Active in the whole value chain

## Hitachi to be a global total solution provider Cover full lineup of products and service in rail system's value chain

Value Chain	Component (Traction/ signalling)	Assembly (Rolling stock)	System (Turnkey Project)	Service (Maintenance/ lease)	Operation
Achievement	<ul style="list-style-type: none"> <li>Component</li> <li>Obtained certification of ETCS/CBTC signalling solution</li> <li>Started next generation inverters development</li> </ul>	<ul style="list-style-type: none"> <li>Assembly</li> <li>Started UK factory construction</li> </ul>	<ul style="list-style-type: none"> <li>System</li> <li>Launch Ho Chi Minh Project Office</li> </ul>	<ul style="list-style-type: none"> <li>Service</li> <li>Secured IEP maintenance contract</li> <li>Started Depots construction for IEP</li> </ul>	
Next steps	<ul style="list-style-type: none"> <li>Further cost reduction</li> <li>Productionise world-class 'marketable' products</li> <li>Strengthen engineering resources</li> </ul>	<ul style="list-style-type: none"> <li>Develop global standard rolling stock</li> <li>Launch UK manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>Entry to emerging countries</li> <li>System integration capabilities</li> <li>Secure orders for monorail</li> </ul>	<ul style="list-style-type: none"> <li>Leverage IEP maintenance model to future projects</li> </ul>	



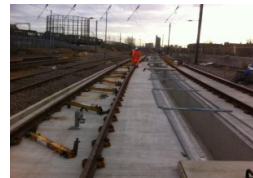
ETCS on-board unit  
SiC: Silicon carbide



SiC traction inverter



Newton Aycliffe, UK production site: Under construction



IEP depot under construction



Class 395 maintenance team

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## Rail Systems Business Growth Strategy

### Global

- Implementing new global organisation
- Expand existing bases further (Japan, UK, and China)
- Actively develop market presence/localisation (India, Brazil, and Southeast Asia)

### Transformation

- Reshape business portfolio
  - Expand services businesses
  - Increase sales of signalling/traffic management systems
  - Expand the turnkey business
- Expand and enhance product portfolio
  - Global A-train, global signalling systems, next-generation inverters

### Innovation

- Total rail solutions
  - Propose total rail systems by linking infrastructure control systems and IT systems
  - Rail energy management systems concept (GREEN)

GREEN: Green Rail Ecological Environment toward the Next generation

### Implementing Global Organisation to accelerate global growth

Hitachi Rail Systems to contribute broadly to global society with world-class rail technologies which has been developed with Japanese customers

- Implementing global management system to develop strategy with the best mixture of Japanese technology/quality and international network
- Increase local presence and customer relationship by regional operations

**Global CEO: Alistair Dormer**  
**Global COO: Kentaro Masai**

**Global Management Team (CSO, CFO, CHRO ...)**

<< Vigorously develop and advance global strategies >>

#### Hitachi Rail Global Operations



<<Quick decision making close to customers (market)>>



## Increasing market presence/localisation

### Europe

- n Global HQ established (2014)
- n Expand maintenance business throughout the U.K.
- n Establish rolling stock manufacturing base (2015)



### China

- n Established signalling / control system manufacturing base (2014)
- n Expand electrical component manufacturing bases (2015)



### India

- n Established Operation Centre (2013)

### Japan

- n Enhance the role as technology hub
- n Enhance relationship with Japanese customers



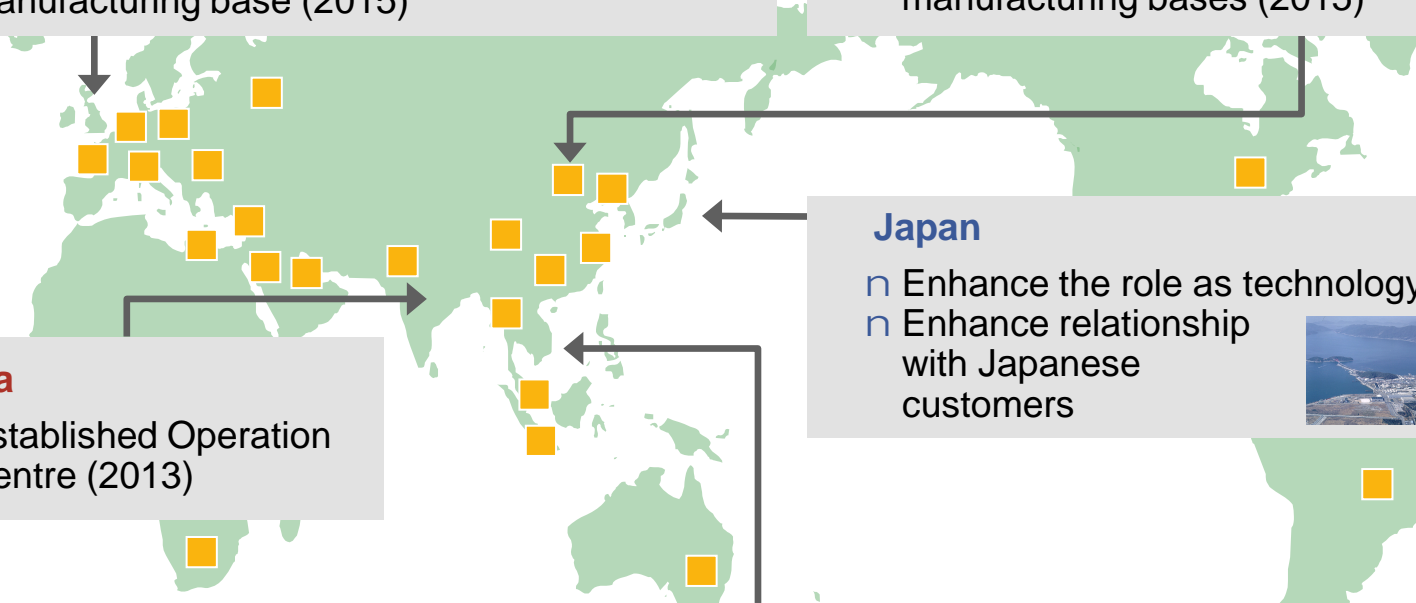
### Southeast Asia

- n Established new engineering centres in Ho Chi Minh City (2013)

### South America

- n Established planning organisation in Brazil (2013)

- Expand and enhance existing bases
- Project teams
- Sales offices



## Product Business: Develop world-class “marketable” products

### Global A-Train

- Optimally standardised product lineup for global market
  - AT100 (metro/ commuters)
  - AT200 (regional)
  - AT300 (high-speed)
  - AT400 (monorail)

### Global Signalling System

- Develop products compliant with global (European) standards
- Successfully certificated for ETCS /CBTC of European Norms (ETCS2 Certified Nov. 2013, CBTC RAMS Certified Dec. 2013)

### Next-generation inverters

- Productionise SiC inverters for reducing power loss to contribute to greater energy savings



AT200 Cars (image)



Lower loss inverter control system

## Service Business: Expand maintenance business

- Expand maintenance business
- Expand rolling stock lease business
- Service business ratio: 25% of overseas sales (FY2020)
- 7 Hitachi depots in UK
- IEP rolling stock

Ashford Depots  
(Class 395 Cars)

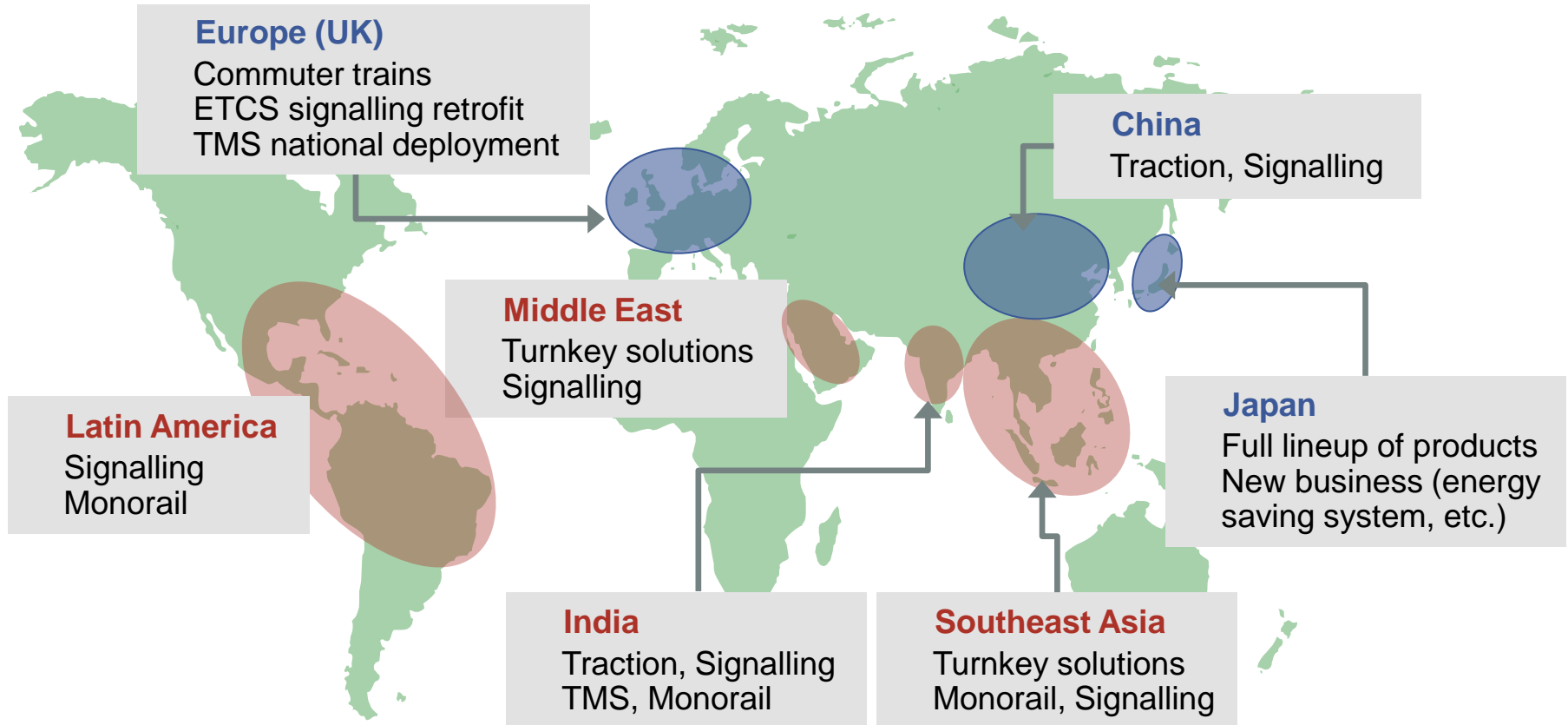


RAMS: Reliability, Availability, Maintainability and Safety

# 4-5. Growing the customer base

## Review/Develop regional strategy to accelerate global expansion

- n Newly established “International Business Development” function in London to review strategy to win new business leveraging UK intelligence (network)
- n Further develop existing core market (Japan, UK and China)



## Hitachi Smart Transformation Project : Targeting 5% Cost reduction benefits (9 billion yen) over the period from FY2011 to FY2015

### Major Initiatives (Ongoing)

<b>Production costs</b>	<ul style="list-style-type: none"><li>n JIT i.e. Reduce lead time, enhance BOM &amp; 3D design</li><li>n Globally standardise design and products</li></ul>
<b>Direct materials costs</b>	<ul style="list-style-type: none"><li>n Enhance material cost control</li><li>n Increase Global Procurement (optimise global supply chain)</li></ul>
<b>Indirect costs</b>	<ul style="list-style-type: none"><li>n Introduce 3PL</li><li>n Centralise and standardise administrative works</li></ul>

### Major Initiatives to be strengthened

- u Further develop local manufacturing bases (UK, China and others)
- u Establish optimised global logistics
- u Enhance ERP

# 4-7. Delivering better cash performance

## Maximize cash flow to prepare next strategic investment

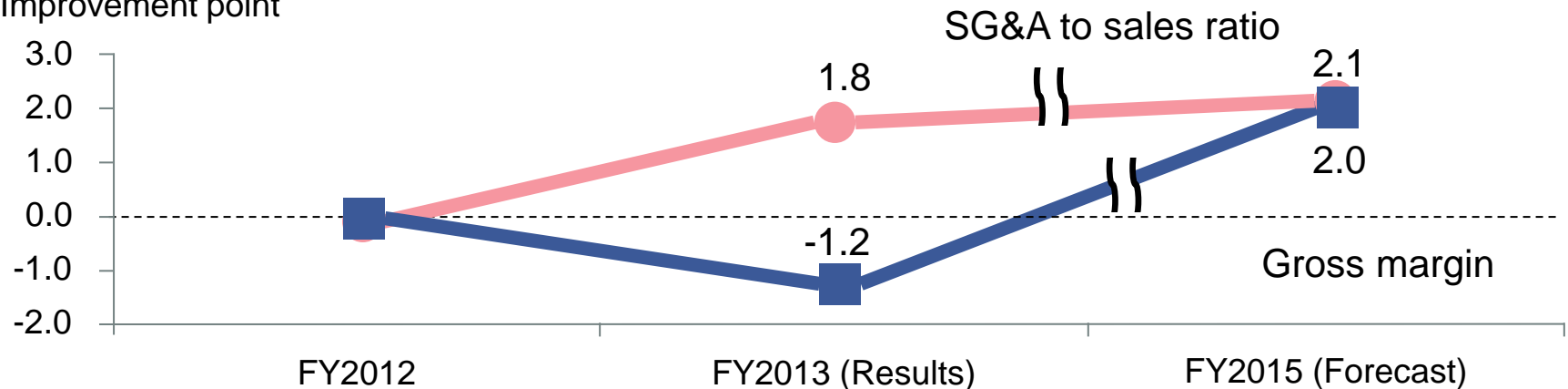
### Generate cash flow by;

- u Reduction of lead time
- u Vendor Managed Inventory (VMI)
- u Global supply chain management
- u Strategic investment with high return
- u Intensive post-investment monitoring

In conjunction with Hitachi Capital, Hitachi High-Technologies and Hitachi Transport System

## Improving margin and SG&A to sales ratio

Improvement point



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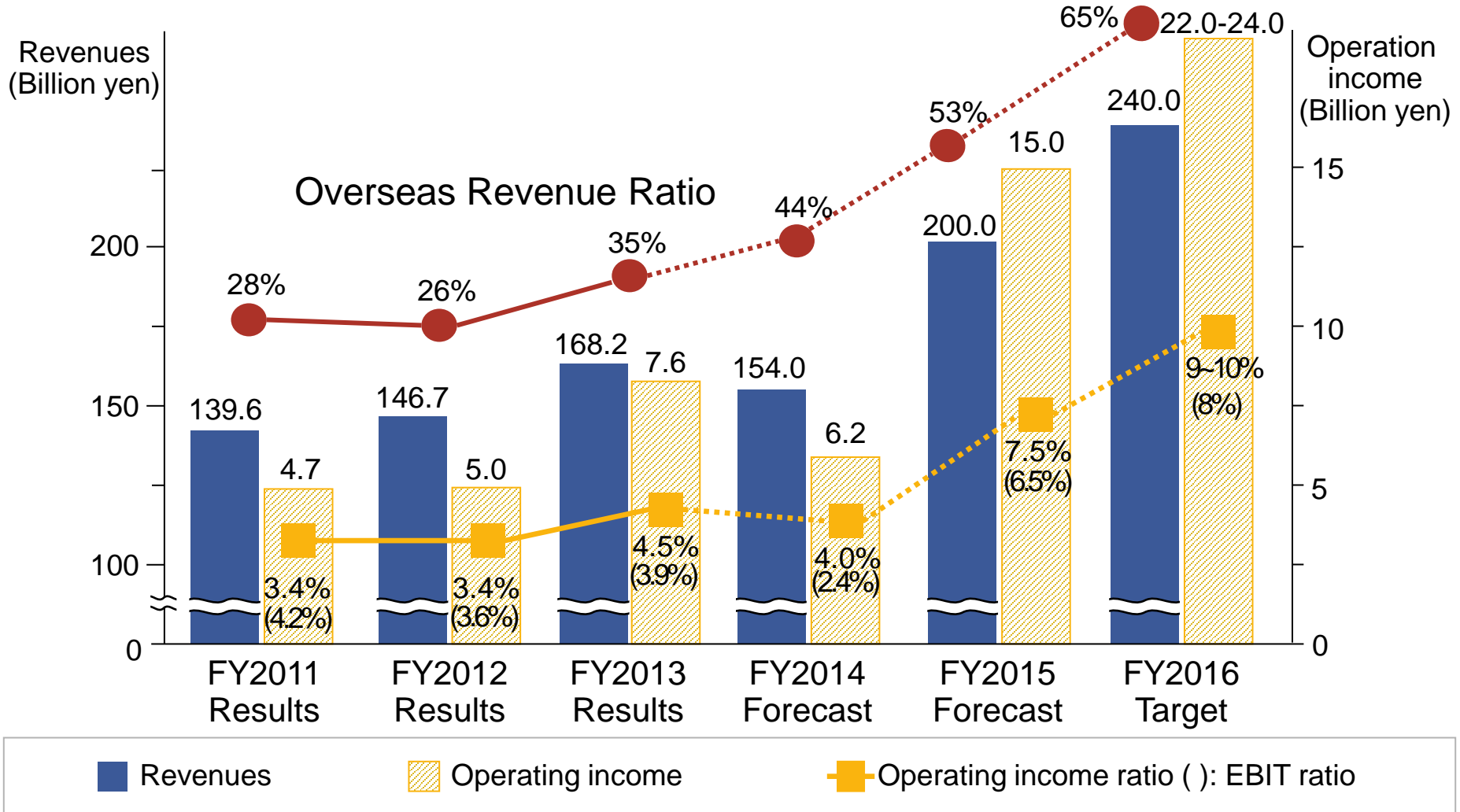
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# 5-1. Taking action to grow

We are on track to achieve target of FY2015



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<b>FY2015 Targets</b>		<b>Previous targets announced on June 13, 2013</b>
Revenues (Overseas revenue ratio)	200 billion yen (53%)	200 billion yen (53%)
Operating income ratio (EBIT ratio)	7.5% (6.5%)	6.5%
Gross margin improvement	2.0% (vs. FY2012)	1.0% (vs. FY2012)
SG&A to revenue ratio improvement	2.1% (vs. FY2012)	2.1% (vs. FY2012)

**n Accelerate globalisation with technologies developed in Japan**  
**n Promote Social Innovation Business**

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.

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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;
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- 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;
- uncertainty as to the success of cost reduction measures;
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- 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 potential for significant losses on Hitachi’s investments in equity method affiliates;
- the possibility of disruption of Hitachi’s operations by earthquakes, tsunamis or other natural disasters;
- 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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Inspire the Next 