

# **Social Infrastructure & Industrial Systems Business Strategy**

**Industrial & Social Infrastructure Systems Company  
Hitachi Plant Technologies, Ltd.  
Hitachi Industrial Equipment Systems Co., Ltd.**

**June 9, 2010**

**Gaku Suzuki**

**Vice President and Executive Officer**

**President & CEO,**

**Industrial & Social Infrastructure Systems Company**

**Hitachi, Ltd.**

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Hitachi Plant Technologies, Ltd.

Hitachi Industrial Equipment Systems Co., Ltd.

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### **1. Business Overview**

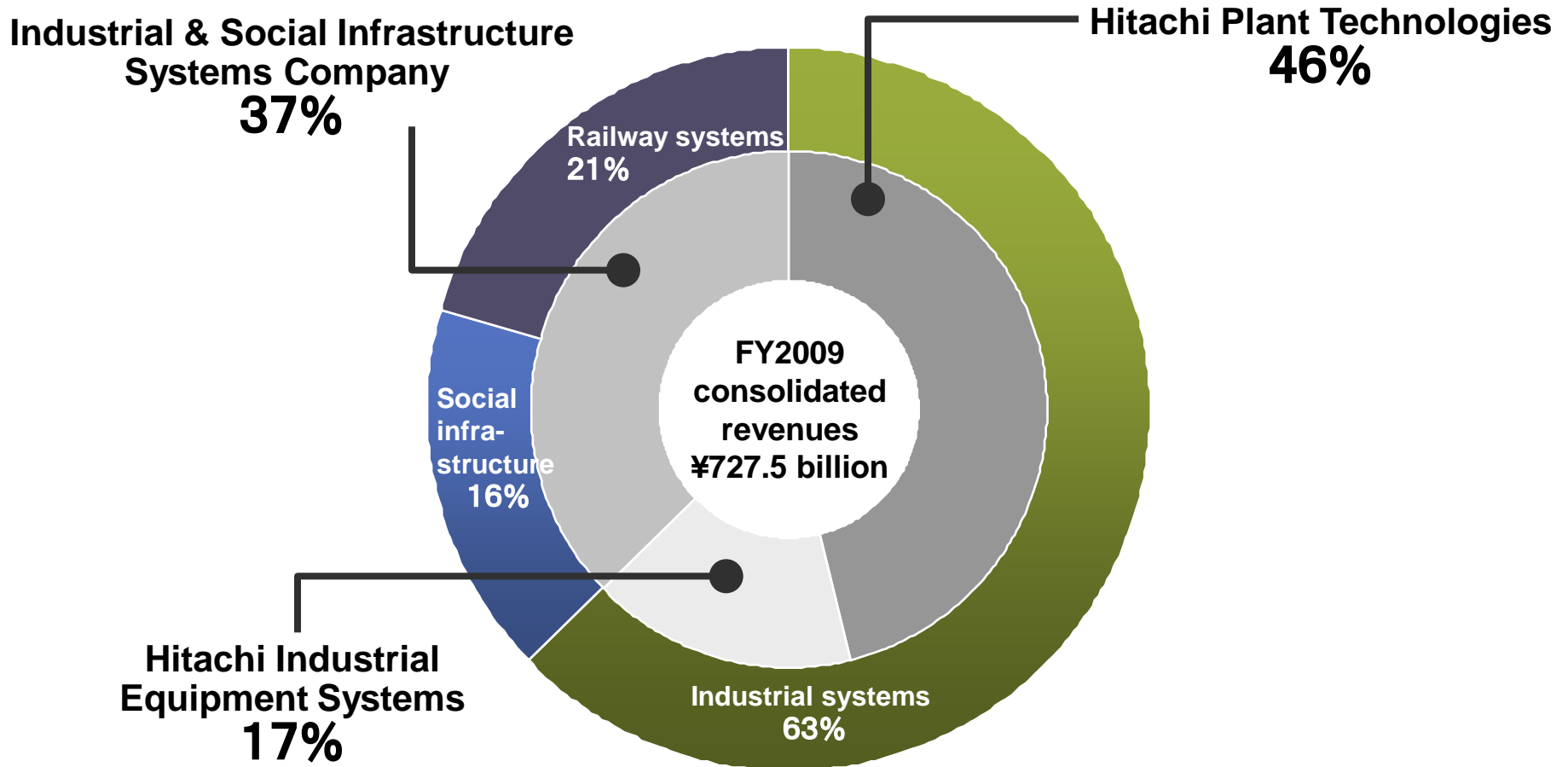
### 2. Market Trends

### 3. Business Policy and Growth Strategy

### 4. Business Performance Trends and Targets

### 5. Conclusion

# 1-1. Business Overview(1) Revenues by sector



Innovate by fusing IT and technologies supporting social infrastructure and industrial systems

[Integrated management with April 1, 2010 conversion of Hitachi Plant Technologies into a wholly owned subsidiary]

# 1-2. Business Overview(2) Major products

## Industrial & Social Infrastructure Systems Company

### Railway Systems



- Rolling stock systems
- Transport management & control systems



- Transport management & control systems\* (Business support systems)

\*Belongs to Information & Telecommunication Systems segment



### Social Infrastructure



- Water and sewage control system and electrical component control system
- Road control system

### Industrial Systems



- Steel plant control system
- Factory facility control system



- Production control systems
- Industrial-use PCs



Programmable controllers



Web controllers

Power monitoring systems



Permanent magnet motors



High efficiency motors



Variable speed controlled screw compressors



Ink-jet printers



Inverter-driven water supply pumps



Inverters  
Inverter-driven hoists



Amorphous transformers



Power distribution system

Production line equipment

Utility equipment



▪ Water treatment systems



▪ Compressors



▪ Chemicals and pharmaceutical plants



▪ Pumps



▪ LCD manufacturing equipment



▪ Air-conditioning systems



▪ Construction of various plants

### Industrial Systems

### Social Infrastructure

### Industrial Systems

Hitachi Industrial Equipment Systems Co., Ltd.

Hitachi Plant Technologies, Ltd.

# 1-3. Noteworthy Business Features

## Expansive, high-value-added key component groups

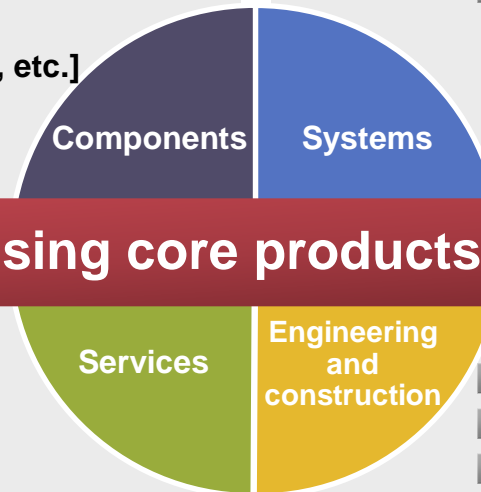
- Water treatment equipment, industrial machinery  
[Pumps, compressors, ink-jet printers, etc.]
- Industrial-use components  
[Inverters, motors, PLCs\*, etc.]
- Substations
- Railways  
[Rolling stock, main circuit/main motor, etc.]

\*Programmable Logic Controller

## Fusion of highly reliable control systems and IT

- Energy control and management systems  
[FEMS\*, HVAC control system for energy saving]
- Monitoring and control systems  
[Plant, sewage, manufacturing process, steel, signaling/train control systems, etc.]
- Simulation technologies  
[Forecasting, evaluation, analysis]

\*Factory Energy Management System



**Provide total solutions fusing core products and systems as well as IT**

- Water supply and sewage operation business
- Comprehensive maintenance and management
- Measurement and diagnostics business
- Remote monitoring and energy-saving services
- Train maintenance (Overseas)

Full support through to operation, maintenance and management

- Water recycling and reuse systems
- Air-conditioning systems and clean rooms
- Chemical plants (Process license)
- Project management capabilities
- Global construction capabilities
- Proprietary techniques  
(Sophisticated modularization construction techniques, etc.)

Proud EPC\* track record

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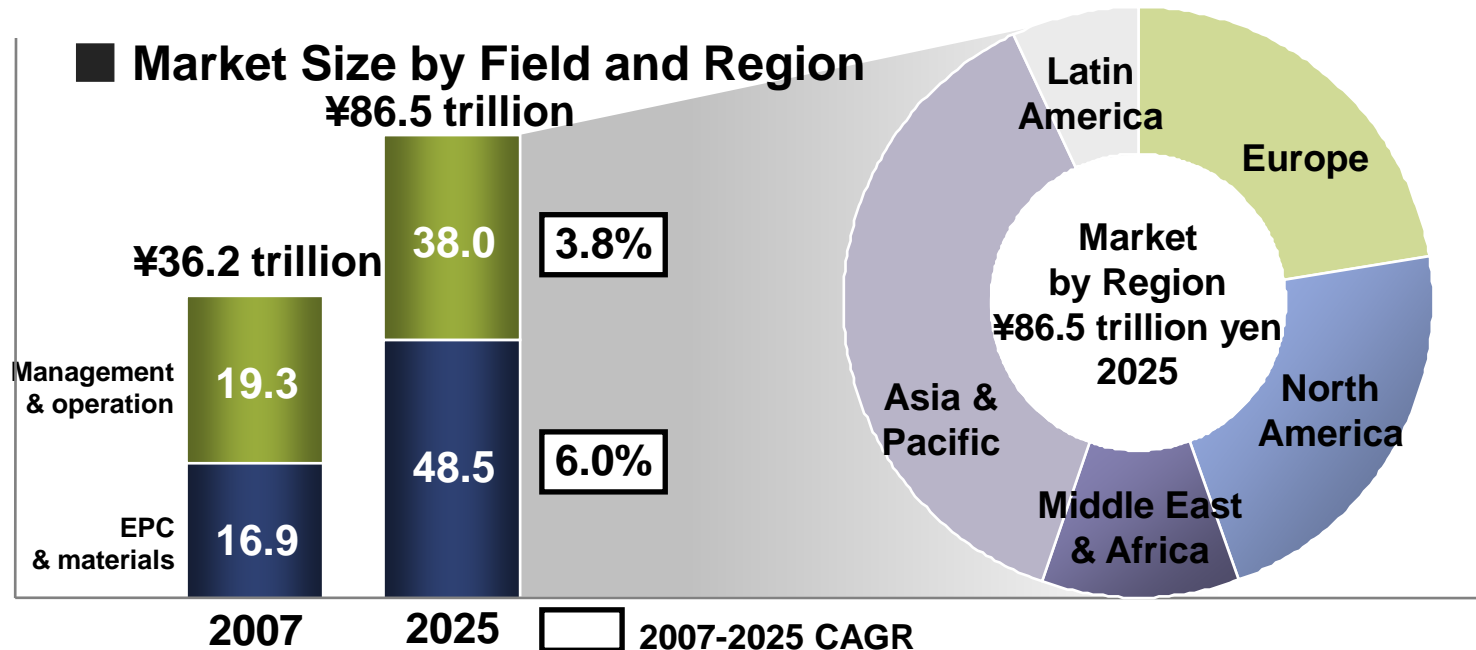
5. Conclusion

## Market Trends in Japan

- Maturity of equipment market, decrease of investment on construction
- Increase of update demand as facilities become superannuated

## Global Market Trends

- High growth rate in management and operation, as well as EPC
- Asia and Middle East becoming largest markets in the world

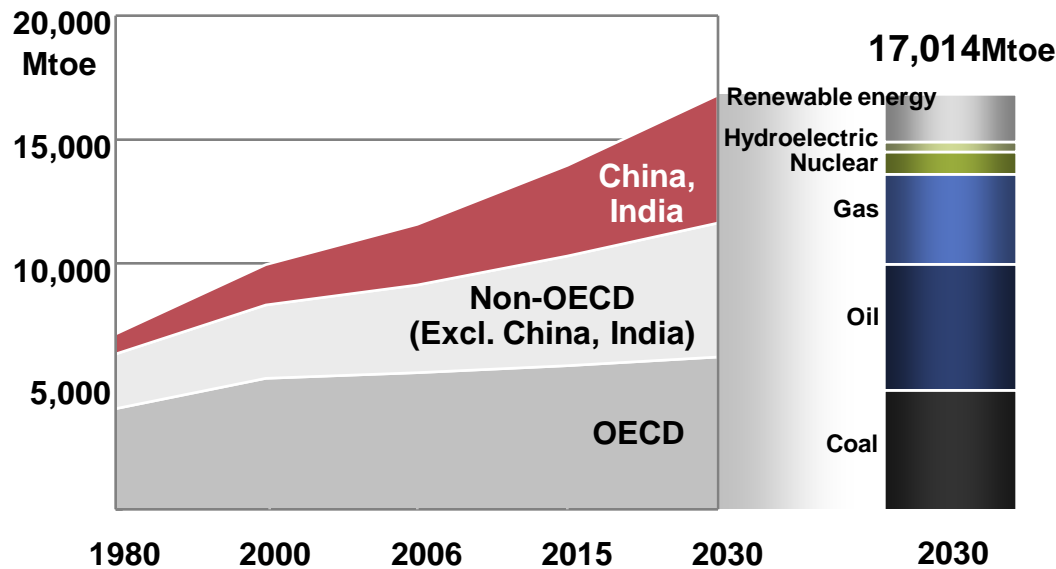


\*Source for by-market information: Global Water Market 2008, Ministry of Economy, Trade and Industry calculations; by-region information: prepared based on the same materials

Increasing energy demand centered on emerging economies → pressing need to improve energy efficiency

- China and India account for most of the rise in global energy demand
- This is spurring the oil and gas markets to find supply sources (un-developed and un-discovered markets)
- Conversion from resource countries to product export countries (Iron ore → steel products)

## Primary Energy Demand



## Projected Steel Field Capex in Emerging Economies

(USM \$)	Capital Expenditures (Nominal)		CAGR %/year (2009-2015)
	2009	2015	
China	48,164	119,975	16.4
India	5,841	14,231	16.0
Brazil	6,721	9,123	5.2

\*Mtoe: 1 million tons of oil equivalent, source: Energy Demand—IEA World Energy Outlook 2008  
Steel capex—Prepared by Hitachi Research Institute based on Global Insight database

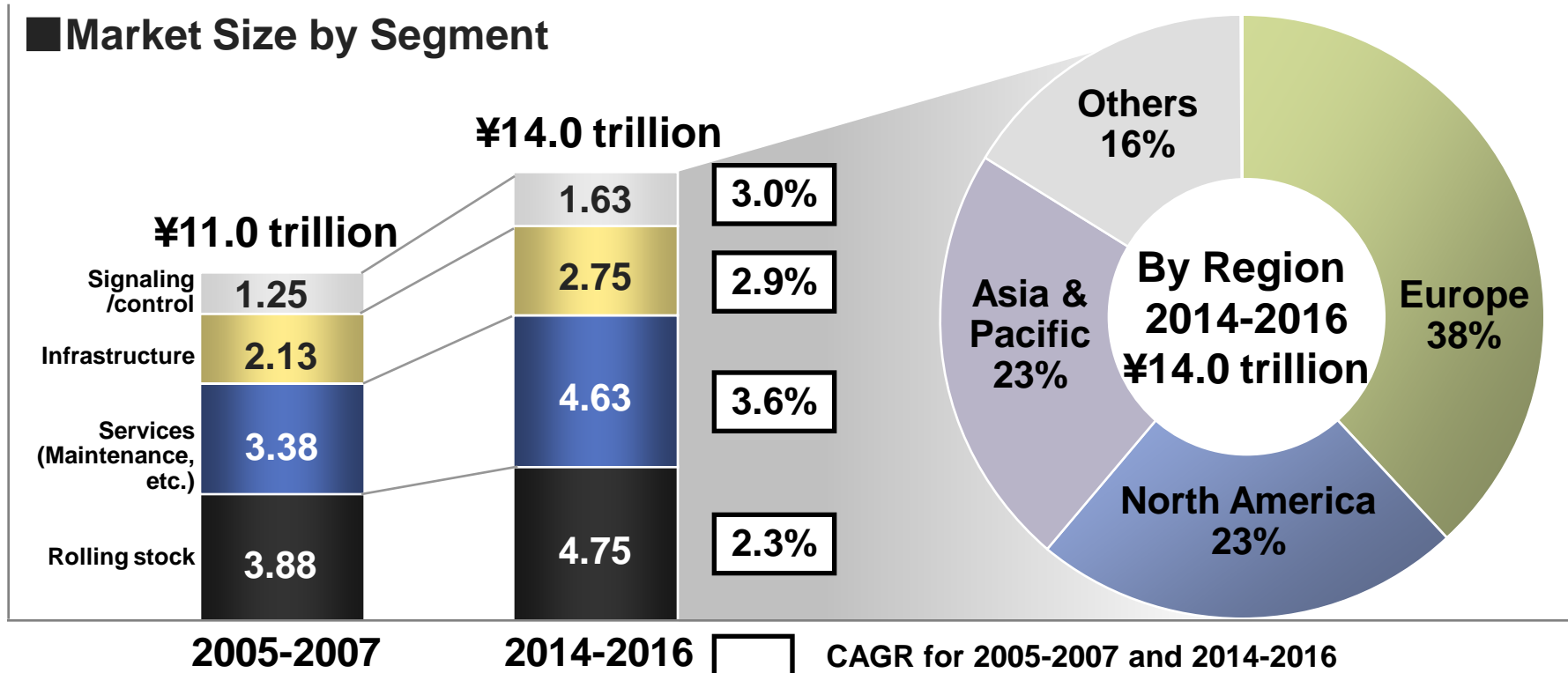


# 2-3. Market Trends(3) Railway Systems Business

**2005-2007 ¥11.0 trillion ⇒ 2014-2016 ¥14.0 trillion (CAGR: 2.6%)**

- High growth in service and signaling/control
- Huge market in Europe
- Increased investments in railway infrastructure in emerging market

## ■ Market Size by Segment



Source: Market size prepared based on UNIFE 08 report; growth rate represents CAGR from 2007 to 2016

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Innovate by fusing IT and technologies supporting social infrastructure and industrial systems

<b>Social infrastructure</b>	Full-scale entry into global markets by expanding the Hitachi Group's water business	<ul style="list-style-type: none"><li>Expand service businesses in Japan</li><li>Enter overseas water business in earnest</li></ul>
<b>Industrial systems</b>	Expansion of solutions business to address global needs	<ul style="list-style-type: none"><li>Expand highly efficient, environmentally friendly components and systems businesses</li></ul>
<b>Railway systems</b>	Accelerate globalization with technologies developed in Japan	<ul style="list-style-type: none"><li>Sustainable growth in Japan</li><li>Expand overseas businesses: High-speed trains, emerging market</li></ul>

## FY2009 Results

- Revenues: ¥727.5 billion
- Overseas revenue ratio: 22%

## FY2015 Targets

- Revenues: ¥1,150.0 billion
- Overseas revenue ratio: Over 40%

# 3-2. Business Strategy and Growth Strategy(1)

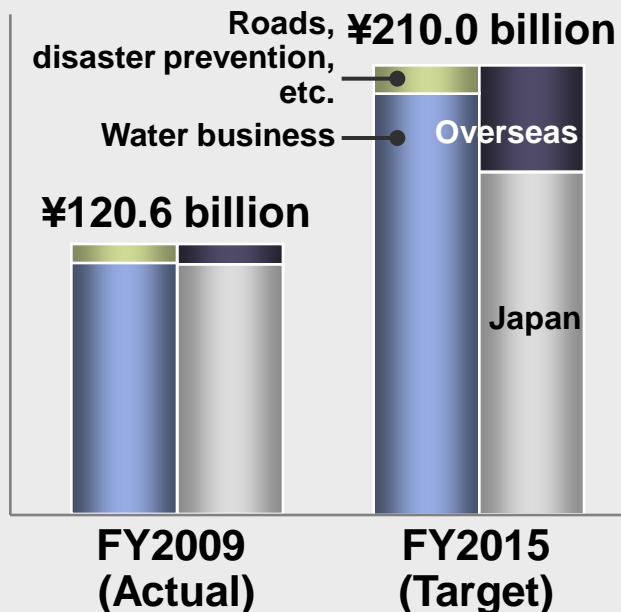
## [1]Social Infrastructure Systems Business

### Full-scale entry into global markets by expanding the Hitachi Group's water business

Strategy unification: Established Water Environment Solutions Division (in Hitachi, Ltd. in June 2010)

#### Revenue Target

- Revenues: ¥210.0 billion
- Overseas revenue ratio: Over 30%
- Operating income ratio: 6%



#### Business Expansion Measures

- Develop services business in Japan
    - Strengthen product competitiveness
      - Strengthen equipment renewal
    - Expand O&M\* comprehensive contracts
  - Enter overseas water business in earnest
    - Provide solutions to improve the water environment in emerging economies
    - Expand business by entering water business operation and management domain
      - Use experience in Maldives
    - Provision of total solutions fusing water treatment systems and IT
      - “Intelligent water systems”
    - Greater cooperation with central and local governments
      - Utilize government finances and operation and management know-how
- \*: Operation & Maintenance

### Develop the water business globally as a “Japanese water major”

#### ■ Total solutions provision

- Water supply and sewage field (EPC, business operation and management) [Volume zone]
- Reuse water, sea water desalination, industrial-use water and wastewater fields (EPC, operation and management) [Growth zone]
- Regional water infrastructure construction (Hitachi’s proposed concept: “Intelligent water systems”)
- Cultivate new area (Oil & Gas wastewater treatment and ballast water treatment, etc.)

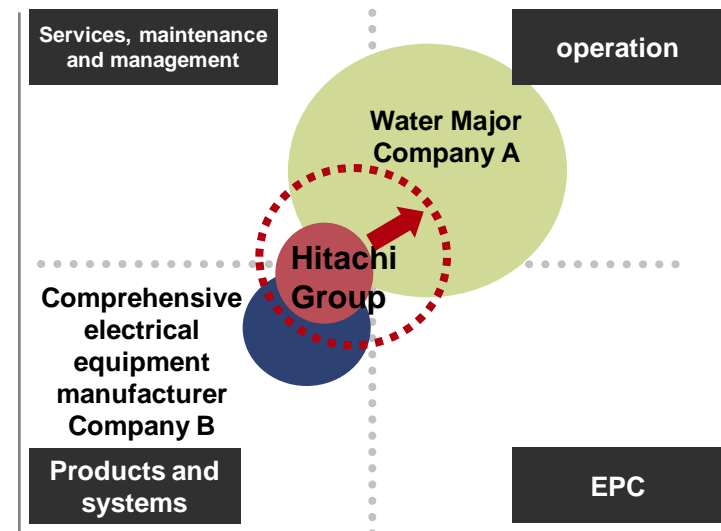
#### ■ Hitachi Group strengths

- Advanced water circulation systems (Membrane processing, microorganism treatment, pumps, etc.)
- Advanced information systems (Monitoring, control, simulation, etc.)

#### ■ Regions targeted for sales expansion

- Middle East, Southeast Asia, China, India, South America

#### Hitachi Group’s Vision



# 3-4. Business Strategy and Growth Strategy(1)

## [3]Social Infrastructure Systems Business

### Recent Highlights



**Installed Pegasus\* system  
in sewage water treatment plants in Malaysia**

\*Integrated immobilization nitrogen removal process. Pegasus is a registered trademark of Hitachi Plant Technologies, Ltd. And Japan Sewage Works Agency in Japan.



**Supplied wastewater recycling system  
to the UAE.**



**Acquired a Singapore-based reverse  
osmosis system manufacturer.**



**Involvement in the operation of a water and  
sewage company in the Republic of Maldives.**



**Joined the Global Water Recycling and  
Reuse System Association, Japan,  
as a member of the board of directors.**



**Developed and commercialized  
a ballast water\* purification system.**

\*Used as ballast for stabilizing hull balance, ballast water usually contains plankton, bacteria, mud, and sand specific to the port from which it was drawn.



**Supplied a large water pump  
for irrigation to Egypt.**



**Micro hydroelectric power generation  
using air-conditioning cooling water and  
power grid control**

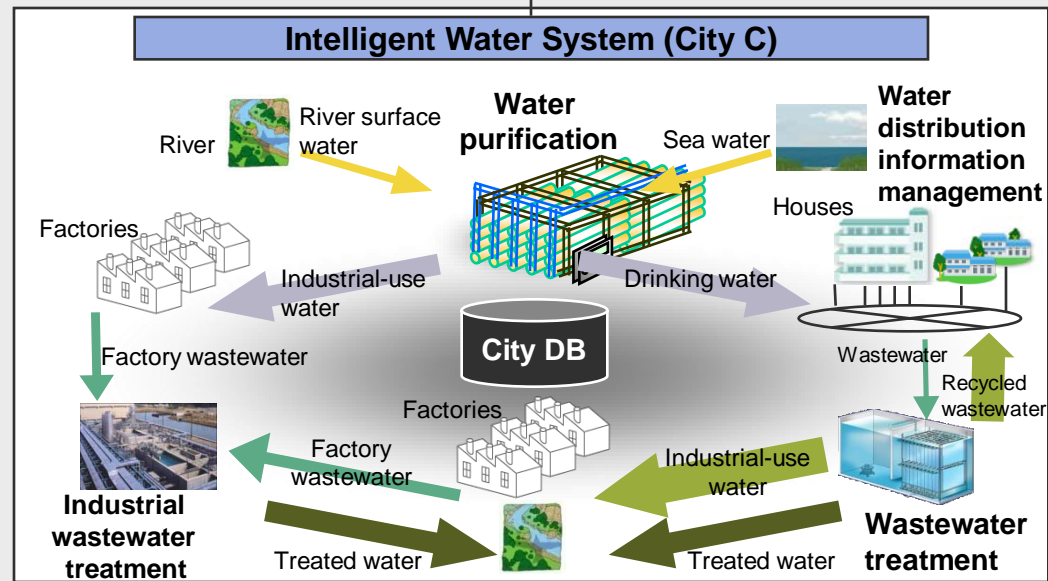
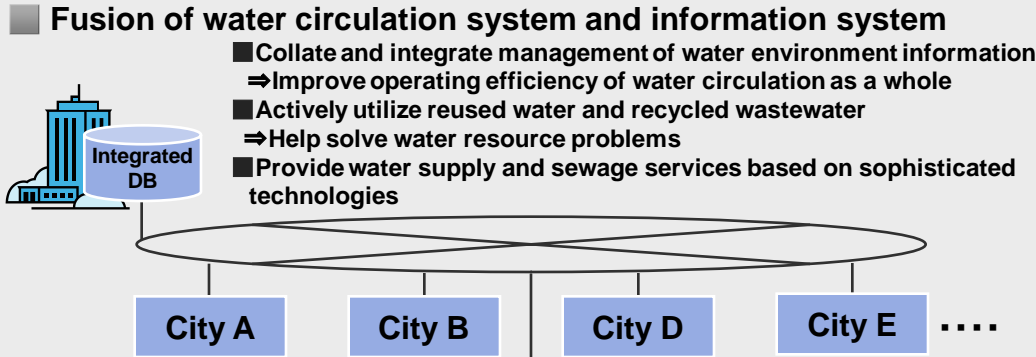


**Ozone micro-bubble  
wastewater reclamation system**  
Demonstration system  
at Ikenokawa Sewage Treatment Plant

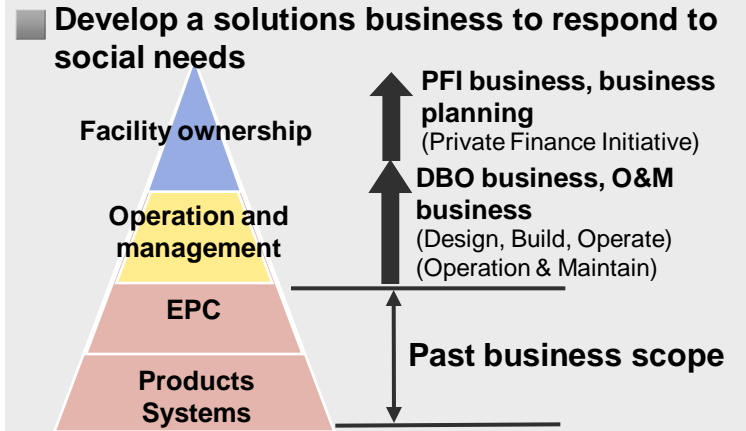


### Key Business: "Intelligent Water Systems"

#### Hitachi's Proposed New Water Circulation System



#### From Equipment and EPC to Business Operations



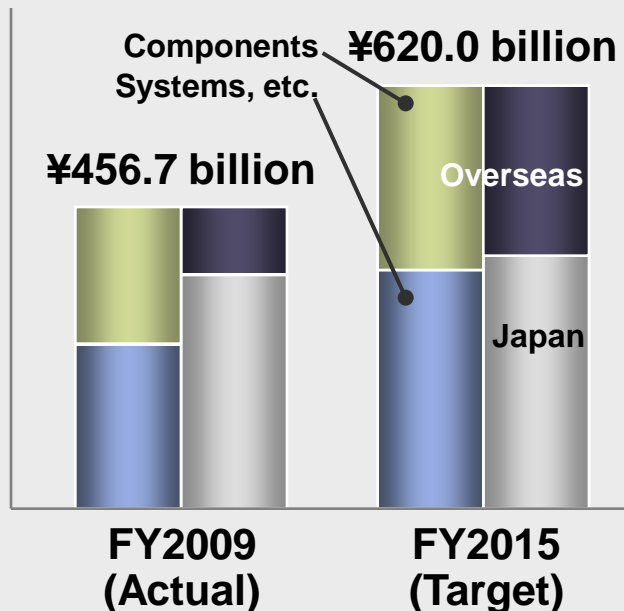
#### Key Technologies

- Sophisticated water treatment facilities**
    - Sea water desalination facilities
    - Advanced wastewater treatment facilities (MBR\*, etc.)
  - Pump facilities**
    - Inverter-driven energy-saving control
  - IT for efficient system integration**
    - Monitoring control system
    - Simulator technologies
    - Information management system (Asset management, automated meter reading, water fee calculation, information disclosure)
    - Sensing technologies
- \*Hitachi Membrane Bioreactor

### Expansion of solutions business to address global needs

#### Revenue Target

- Revenues: ¥620.0 billion
- Overseas revenue ratio: Over 35%
- Operating income ratio: 5%



#### Business Expansion Measures

- Expand highly efficient, environmentally friendly components and systems businesses
  - Eco factory solutions
    - Drive systems
    - Energy-saving systems (FEMS)
    - Energy-saving data center air-conditioning systems
  - Oil & Gas
    - Accelerate entry into electric motor-driven LNG plants market for small and medium-sized gas fields\* leveraging Papua New Guinea feasibility study results
    - Expand sales of process compressors (Strengthen service system)
  - Electric control systems for steel plants
    - Expand orders in emerging economies by strengthening local engineering capabilities: China, India, etc.

\*0.5 million to 2.0 million tons/year class



### Use the Group's collective strengths to provide energy-saving solutions globally

#### ■ Provide solutions that respond to global needs

##### ■ Eco factory solutions

##### ■ Oil & Gas: Display collective strengths

Information and control systems + Plant facilities + Process equipment  
+ Operation and maintenance

##### ■ Electric control systems for steel plants: Continuous and greater cooperation with Mitsubishi-Hitachi Metals Machinery, Inc.

#### ■ Hitachi Group strengths

##### ■ Highly efficient key components, High share in control systems

Amorphous transformers, inverters, motors, compressors, steel cold rolling facilities  
(Top global share\*)

##### ■ Fusion With IT

Drive system control and analysis, energy-saving diagnosis,  
operational status monitoring

##### ■ Large-scale plant EPC know-how

\*Hitachi estimate FY2009

#### ■ Regions targeted for sales expansion

##### ■ China, Southeast Asia, India, Middle East, South America, Australia

# 3-8. Business Strategy and Growth Strategy(2)

## [3]Industrial Systems Business

### Recent Highlights



Delivery of process compressors for oil and gas plant in Saudi Arabia.



Data center energy-saving air-conditioning system



Supplied air-conditioning equipment for the world's tallest building in the UAE.



Developed dry air conditioning system for lithium batteries.



Won bioplastic manufacturing process license and equipment order in China



Conversion of compressor drive of existing steam turbine drive to motor-drive in petrochemical plant



Hitachi Motor 100th Anniversary Sold high efficiency motors with carbon offsets



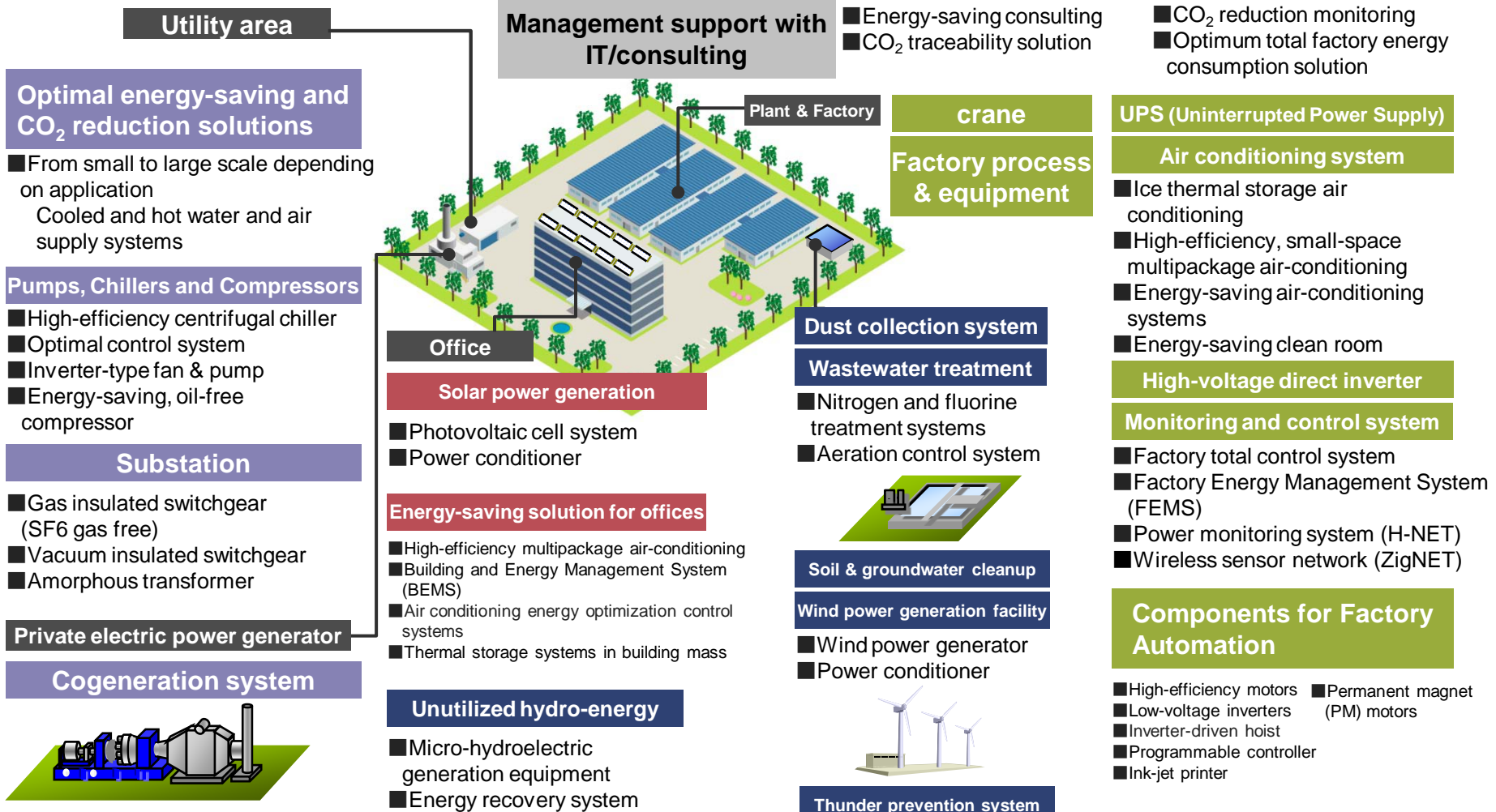
Developed and delivered hot rolling mill control system for Dongbu Steel Co., Ltd., South Korea



Model Project for Energy Saving and Utilization of Waste Heat/Pressure through Electrical Systems in Yunnan Province, China

### Key business: Eco factory solution

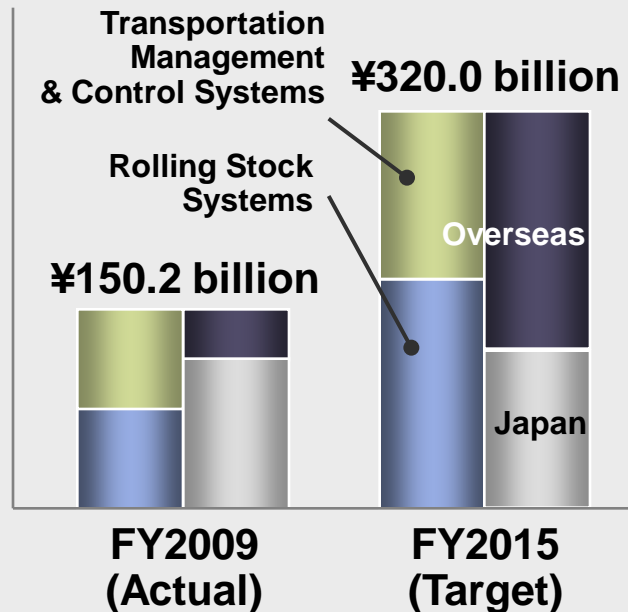
Wide-ranging solutions from consulting to products, systems and services help reduce CO<sub>2</sub>



## Accelerate globalization of technologies developed in Japan

### Target

- Revenues\*: ¥320.0 billion
- Overseas revenue ratio: Over 60%
- Operating income ratio: 8%



\*Excluding business support systems which belongs to Information & Telecommunication Systems segment (FY2015 Sales target : ¥ 30 billion )

### Business Expansion Measures

- Sustainable growth in Japan
  - Focus on new Shinkansen lines
  - Expand aluminum train sales to municipal and private railway companies
  - Expand hybrid traction system business
  - Expand business support systems business
  - Create new businesses by collaboration with customers
- Expand overseas businesses
  - Focus on high-speed train market
  - Expand electrical components business
  - Expand signaling/train control systems business
  - Expand monorail business

For details, refer to March 29, 2009 presentation "Strategies for Railway Systems Business"  
<http://www.hitachi.co.jp/IR/>

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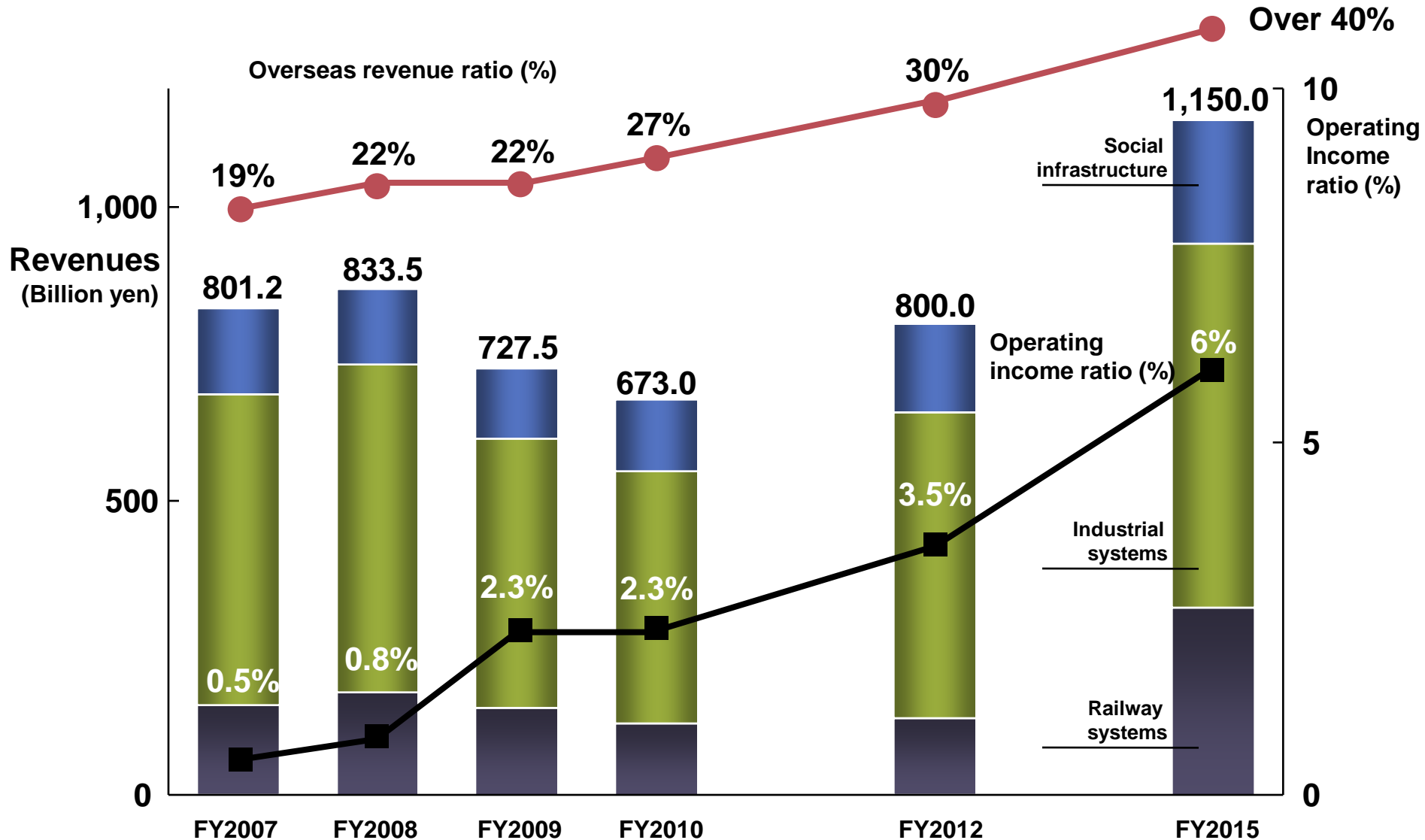
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# 4. Business Performance Trends and Targets



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### FY2015 Targets

- **Revenues: ¥1,150.0 billion**
- **Overseas revenue ratio: Over 40%**
- **Operating income ratio: 6%**

**Innovate by fusing IT and technologies supporting social infrastructure and industrial systems**



# 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 investments in Hitachi’s major markets, particularly Japan, Asia, the United States and Europe, as well as levels of demand in the major industrial sectors which Hitachi serves, including, without limitation, the information, electronics, automotive, construction and financial sectors;
- exchange rate fluctuations for 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 technology 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;
- 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;
- 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 socio-economic and political conditions and the regulatory and trade environment of Hitachi’s major markets, particularly Japan, Asia, the United States and Europe, including, without limitation, direct or indirect restrictions by other nations on imports, or 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 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 and that of its customers;
- uncertainty as to the accuracy of key assumptions Hitachi uses to value 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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Inspire the Next 