



# **Results for the Six Months Ended September 30, 2011 Management Overview**

**October 31, 2011**

**Kazuaki Kama, President and Chief Executive Officer**

**IHI Corporation**

## Management Overview

- Review of Six Months Ended September 30, 2011
- Earnings Outlook for Fiscal Year Ending March 31, 2012
- Immediate Business Challenges
- Numerical Targets for Group Management Policies 2010

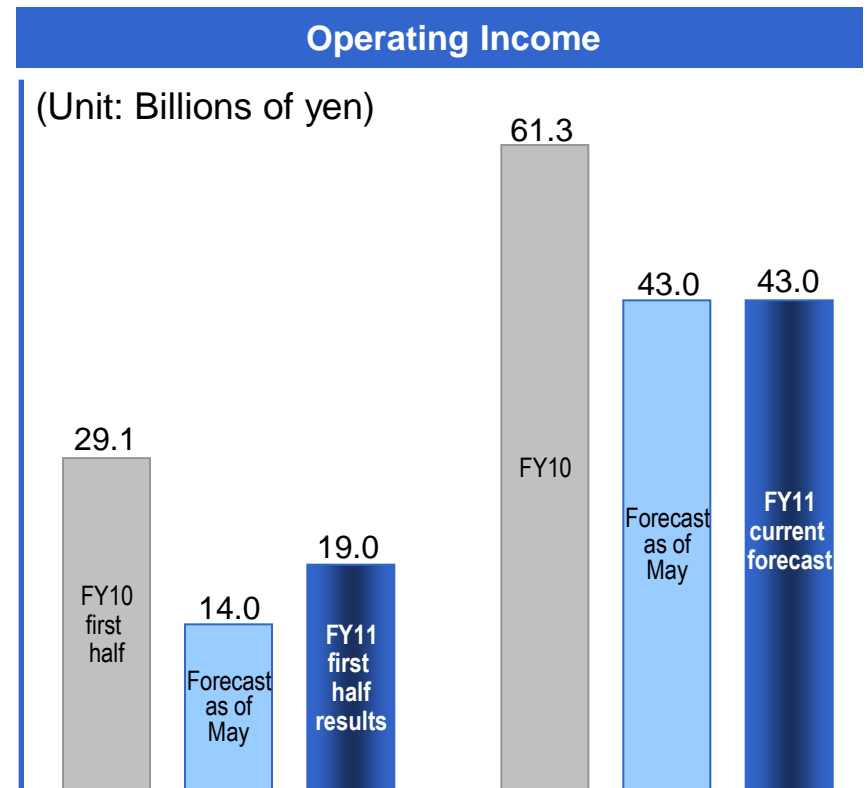
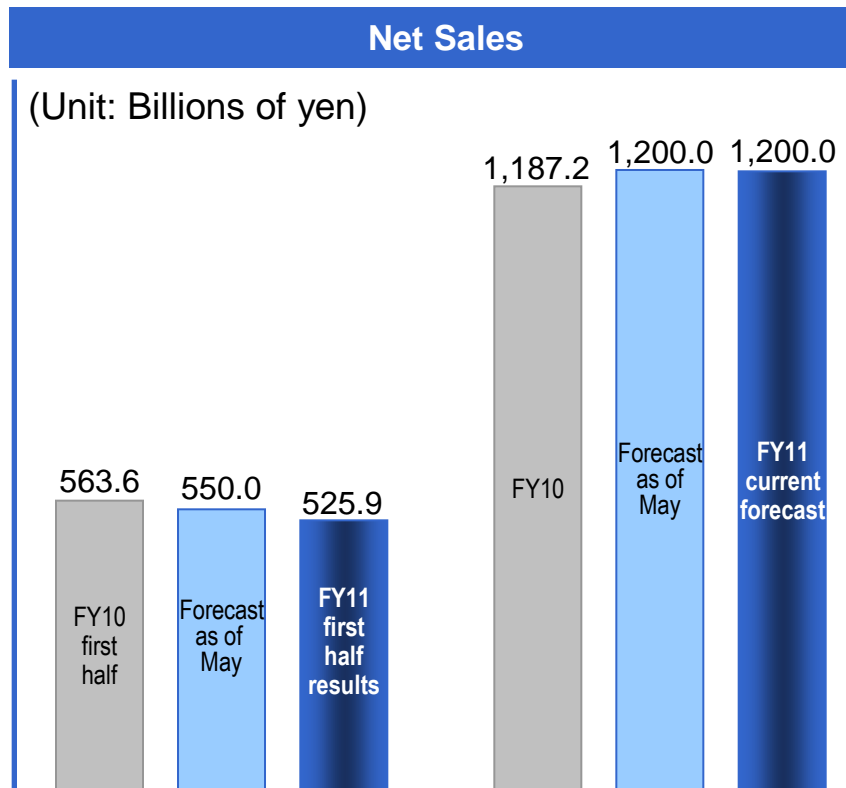
## Progress of Group Management Policies 2010

- Details of Progress in “Paradigm Shifts”
- Action for Restoration and Reconstruction Following Great East Japan Earthquake
- Energy & Resources Operations
- Ships & Offshore Facilities Operations
- Social Infrastructure Operations
- Logistics Systems & Industrial Machinery Operations
- Rotating Equipment & Mass-Production Machinery Operations
- Aero Engine & Space Operations
- Other Operations

## Management Overview

## ■ Steady progress in second year of Group Management Policies 2010

- In first half of year, net sales was lower than planned, and profit was higher than planned
- Full-year net sales and operating income forecasts remain unchanged (assumed foreign exchange rate: ¥80/US\$)



## ■ Analysis of change in operating income in six months ended September 30, 2011 (compared to forecast as of May)

### ➤ Change in construction project profitability

(Including early restoration following earthquake)

- Rotating Equipment & Mass-Production Machinery Operations
- Aero Engine & Space Operations

### ➤ Change in foreign exchange rate

(Plan: ¥85/US\$, Average: ¥79.9/US\$)

- Energy & Resources Operations
- Ships & Offshore Facilities Operations
- Aero Engine & Space Operations

### ➤ Change in SG&A

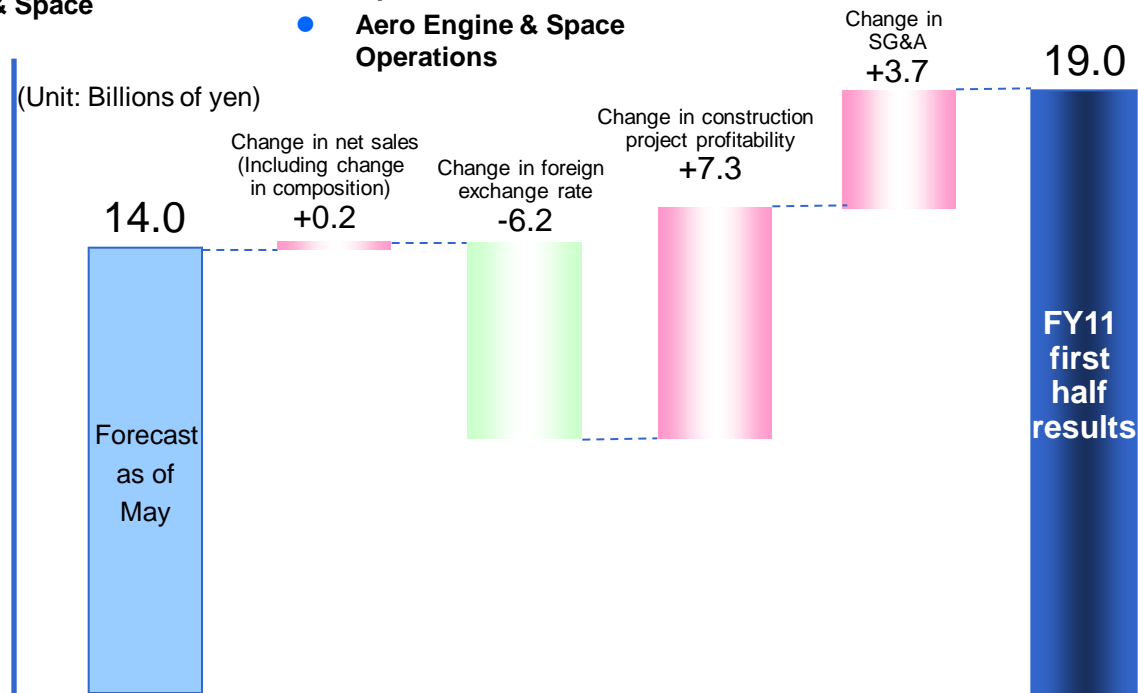
(Slippage in timing)

- All segments

### ➤ Change in net sales

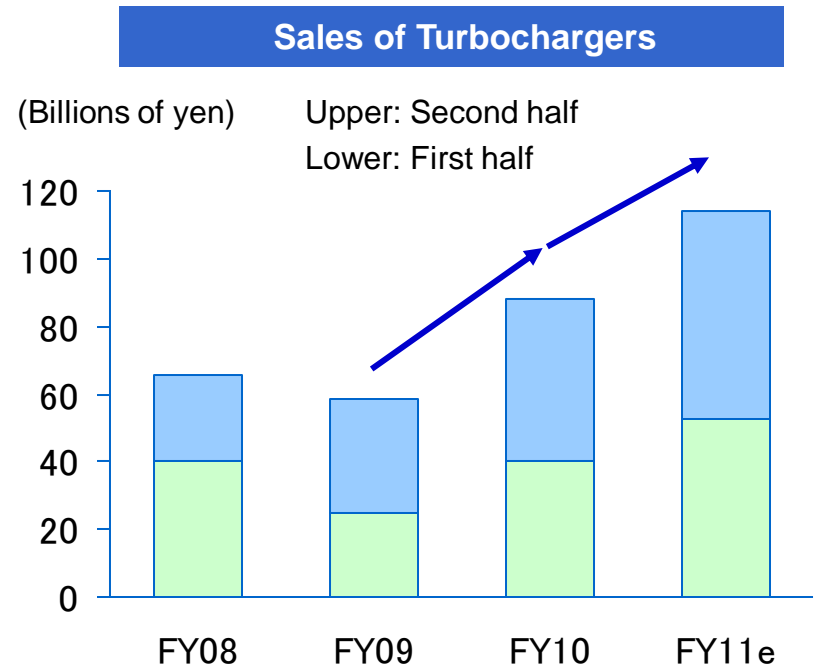
(Including change in composition)

- Rotating Equipment & Mass-Production Machinery Operations
- Aero Engine & Space Operations



## ■ Increase in net sales of turbochargers

- Restored to full production earlier than expected in immediate aftermath of earthquake disaster
- Increase of 30% year on year mainly for gasoline engines
- ❖ Although IHI has suffered no direct damage from the floods in Thailand, it is currently examining their impact



## ■ Improvement in construction project profitability of aero engines

- Increase in work on components
- Slippage in timing of delivery of new engines
- Disaster-damaged Soma Works recovered earlier than expected and introduced increase in production

## ■ Analysis of expected change in operating income in fiscal year ending March 31, 2012 (compared to forecast as of May)

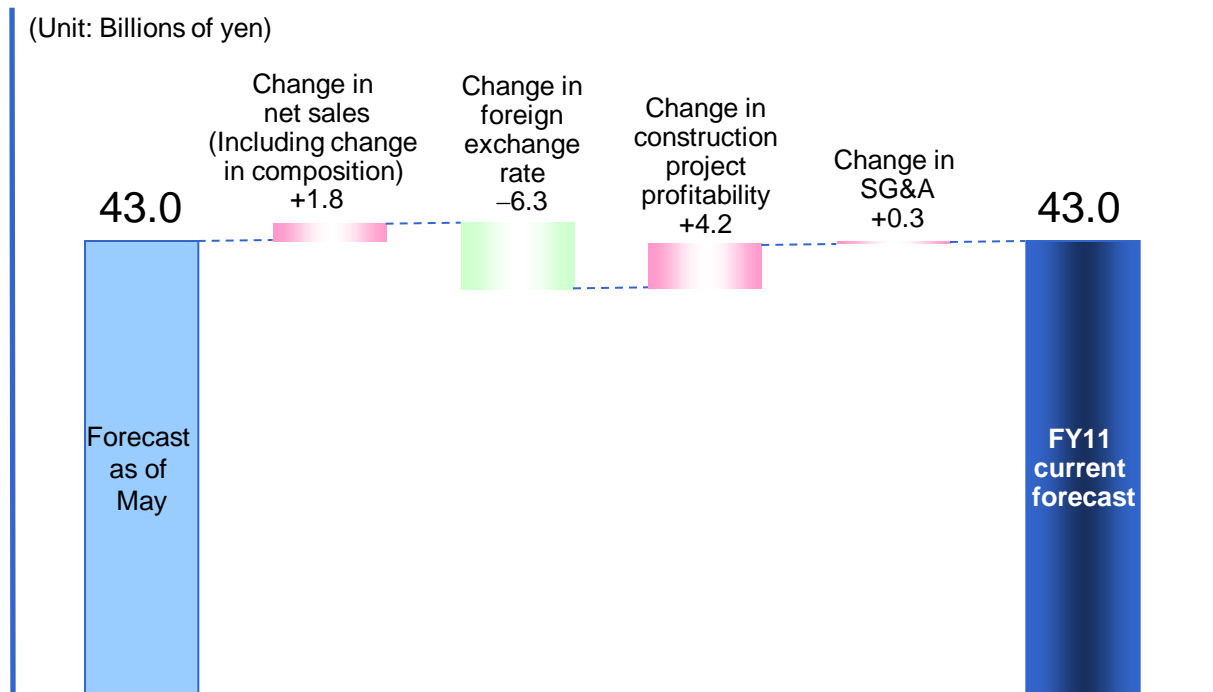
### ➤ Change from forecast as of May

#### ● Positive

- Factors increasing first half operating income (change in construction project profitability)
- Work on restoration and reconstruction following Great East Japan Earthquake

#### ● Negative, uncertain

- Worsening of environment for orders due to global economic stagnation
- Appreciation of yen
- Uncertainty about nuclear power plant operations



## ■ Securing order volumes

### ➤ Activities in focus markets

- Overseas infrastructure orders with public and private partners  
(Order for construction of Izmit Bay Bridge in Turkey in September 2011)
- Strengthening of orders through expansion of regional supervising offices overseas  
(Establishment of supervising company in China, full-scale operation of overseas subsidiary in Brazil)

### ➤ Energy-related

- In Japan, for restoration and reconstruction following the earthquake disaster, respond to customer requests regarding thermal power plants, nuclear power plants, in-house power generation, emergency power, etc.
- Overseas, strengthening of capabilities to handle new projects and maintenance in Southeast Asia by utilizing engineering subsidiary (JEL)

### ➤ Ship-related

- Receipt of orders for environmentally friendly ships (e-Future)
- Expansion of engineering operations overseas  
(Discovery of partner shipyards and promotion of their development)
- By strengthening cooperation with associates in Japan and overseas, work to achieve further expansion of global support system and promote life cycle support business for ships
- Strategically following the plan of and co-working with the Japan Ministry of Defense and the Japan Coast Guard



Image showing expected appearance of completed Izmit Bay Bridge



Helicopter-carrying destroyer "Ise"



## ■ Countermeasures against yen appreciation

### ➤ Promotion of shifting costs into dollars

#### ● Expansion of overseas production

- For turbochargers, investment exceeding 10 billion yen is planned in Europe and China in the Group Management Policies 2010.

At present, investment is proceeding as planned.

The remaining investment is scheduled for implementation as planned.

- For compressors, investment is planned for bolstering of production in China.
- Target for FY12: 50% increase in net sales by overseas consolidated subsidiaries (compared to FY09).

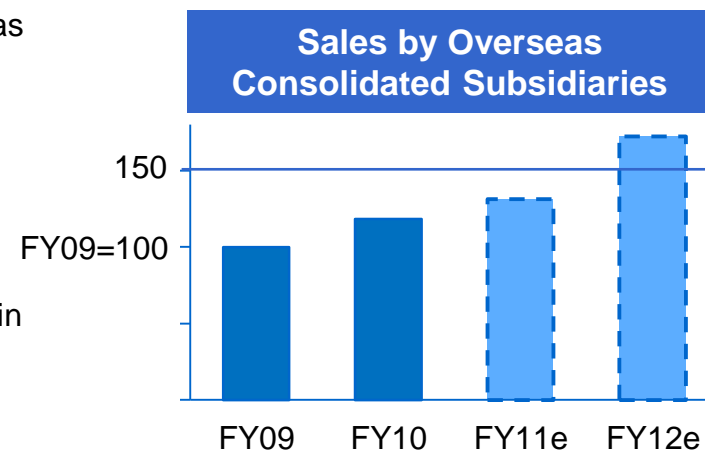
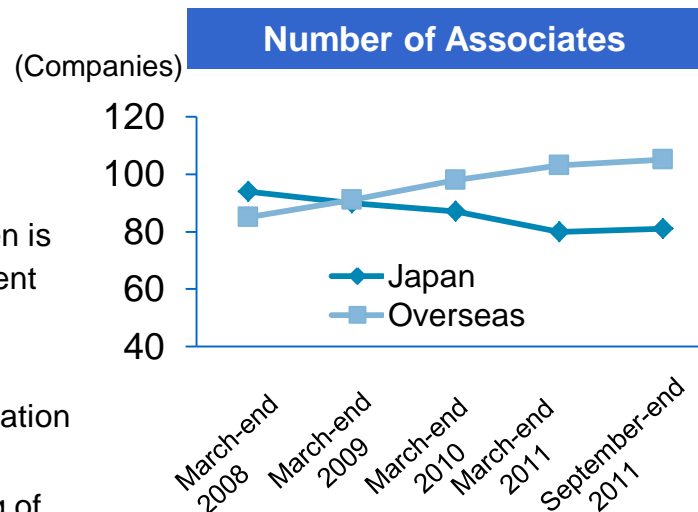
Making satisfactory progress.

#### ● Acceleration in expansion of global procurement

- Strengthening of procurement capability of Singapore office
- Dalian (put in place in July 2011), Bangkok (to be put in place in February 2012)

### ➤ Promotion of marrying receivables and payables in foreign currencies

- Introduction of global CMS
- Implementation of foreign currency denominated borrowings



## ■ Vision for nuclear power plant operations

- Difficult to expect market to expand within time frame similar to that before the earthquake, but no change is foreseen to the worldwide major trend towards demand for nuclear power
  - Favorable progress with AP1000™ for the US
  - Planning to respond to projects in emerging countries as well
- Immediate action
  - Handling the Fukushima Daiichi Nuclear Power Plant disaster and implementation of related construction (i.e. manufacture of “SARRY” contaminated water treatment system, proposals on new construction for earthquake resistance and tsunami countermeasures, etc.)
  - Completion of new works for manufacture of steam generators for PWRs (Completed in September 2011)



New works for manufacture of steam generators for PWRs  
(in the Headquarters Representative Office, Yokohama)

# Numerical Targets for Group Management Policies 2010 (Net Sales, Operating Income)

- Numerical targets for the fiscal year ending March 2013 (net sales, operating income) continue initial targets

- In light of external changes, numerical targets by segment continue to be reviewed.

(Unit: Billions of yen)

	Net Sales				Operating Income			
	FY10	FY11e		FY12e	FY10	FY11e		FY12e
		As of May	Current			As of May	Current	
Energy & Resources	306.4	300.0	300.0	380.0	22.4	10.0	8.0	22.0
Ships & Offshore Facilities	189.9	180.0	180.0	150.0	10.9	10.0	8.0	7.0
Social Infrastructure	122.4	120.0	110.0	130.0	11.9	9.0	9.0	9.0
Logistics Systems & Industrial Machinery	141.9	150.0	150.0	210.0	2.9	3.0	3.0	9.0
Rotating Equipment & Mass-Production Machinery	140.3	160.0	160.0	170.0	9.4	10.0	12.0	11.0
Aero Engine & Space	273.7	280.0	290.0	320.0	5.8	3.0	5.0	13.0
Others	114.3	110.0	110.0	140.0	2.1	3.0	3.0	4.0
Adjustment	-101.9	-100.0	-100.0	-100.0	-4.3	-5.0	-5.0	-5.0
Total	1,187.2 (Initial: 1,180.0)	1,200.0	1,200.0	1,400.0	61.3 (Initial: 35.0)	43.0	43.0	70.0

\* FY12e: Announced on May 7, 2010 (assumed exchange rate: ¥90/US\$).

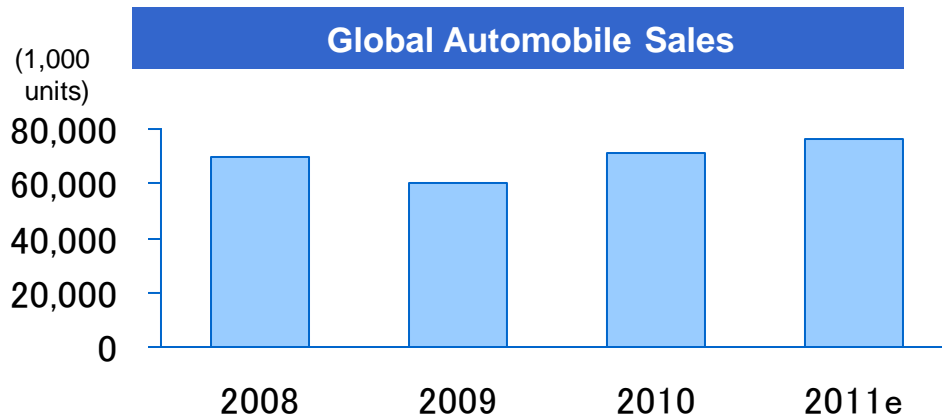
\* The assumed exchange rate for FY11e as of May 2011 was ¥85/US\$.

\* The assumed exchange rate for FY11e in the current forecast is ¥80/US\$.

\* The total of the figures by segment for FY10 is different to the figure in the row for the total due to rounding.

## ■ Growth factors of Rotating Equipment & Mass-Production Machinery Operations

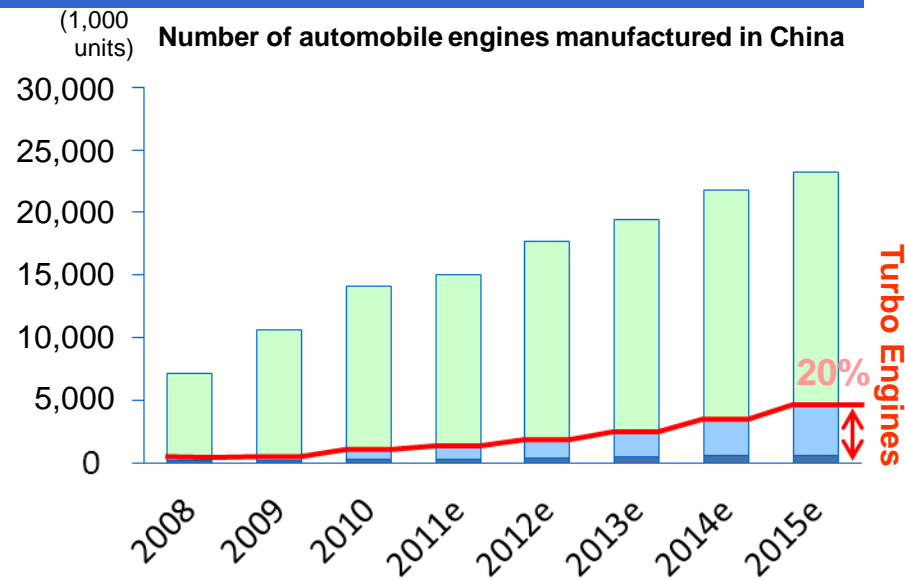
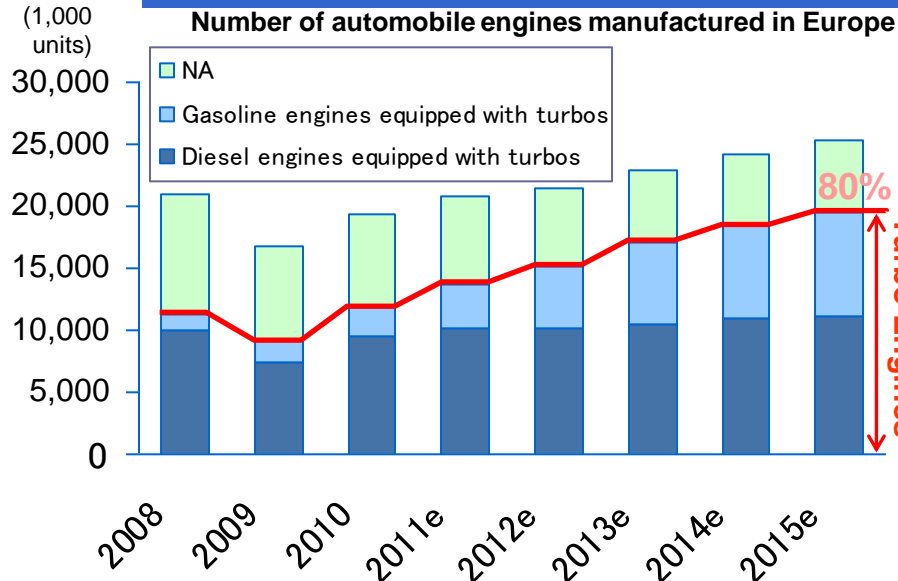
### ➤ Strong growth trend in turbochargers



### Factors in Expansion of Turbocharger Market

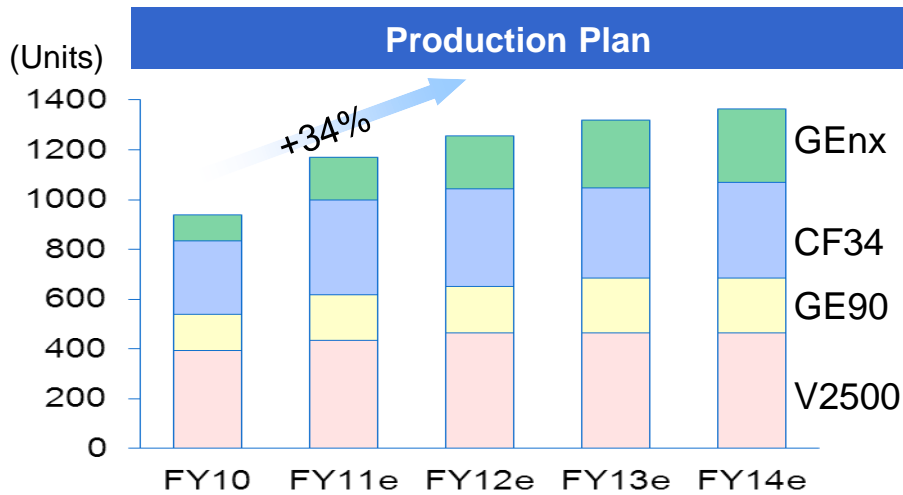
- Trend of strict fuel efficiency requirements
- Downsizing of engines, equipping gasoline engines with turbochargers in full sway
- Expansion of markets in China and other emerging countries

### Progress in Ratio of Turbo Engines to All Automobile Engines (Excluding Commercial Cars)

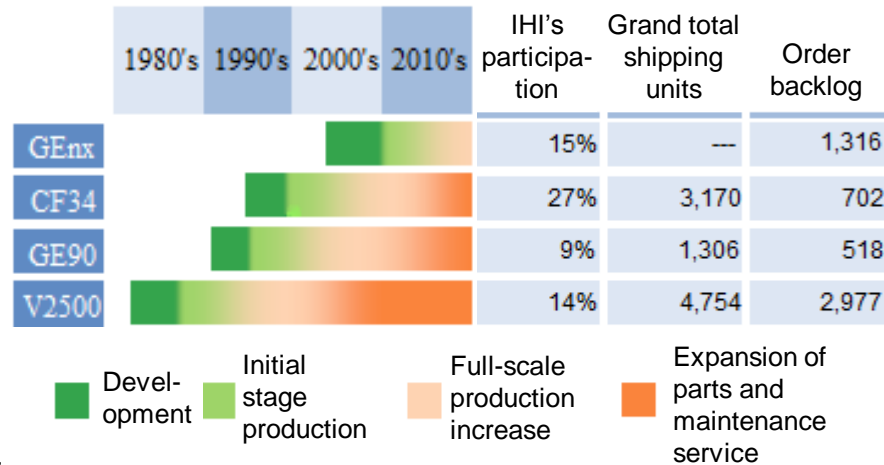


## Environment surrounding Aero Engine & Space Operations

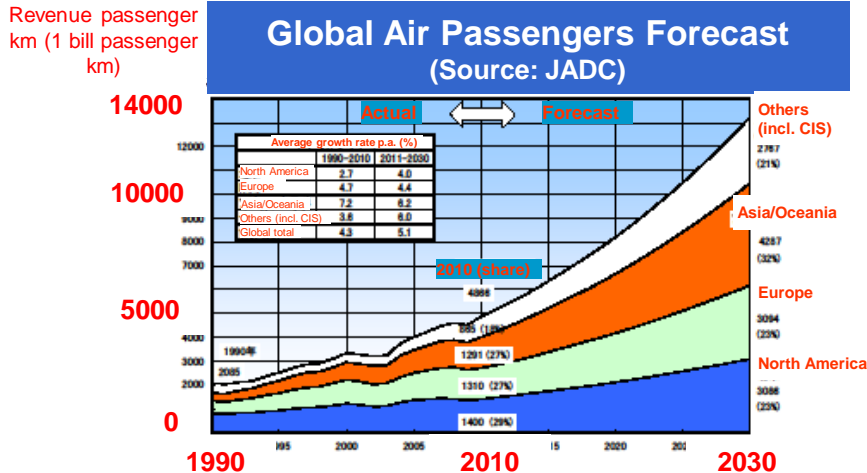
### Firm demand for civil aero engines in which IHI is involved



### Development and Shipping of Engines in Which IHI Is Involved



### Growth potential of air service industry



- Large-scale production of best-selling engines, from small sizes to large sizes

- Global air passenger volume will grow at average 5.1% in next 20 years
- Jet planes (now 17,700 in operation) will increase 2.1 times to 37,900 in 20 years

## ■ Environment surrounding Energy & Resources Operations

- Rise in needs for natural gas
- Increase in power demand in emerging countries
- Increase in demand for in-house power generating equipment for emergency
- Rise in expectations of renewable energy

### Menu of IHI Group

**Generation and Reformulation**

**Refinement, Transportation and Storage**

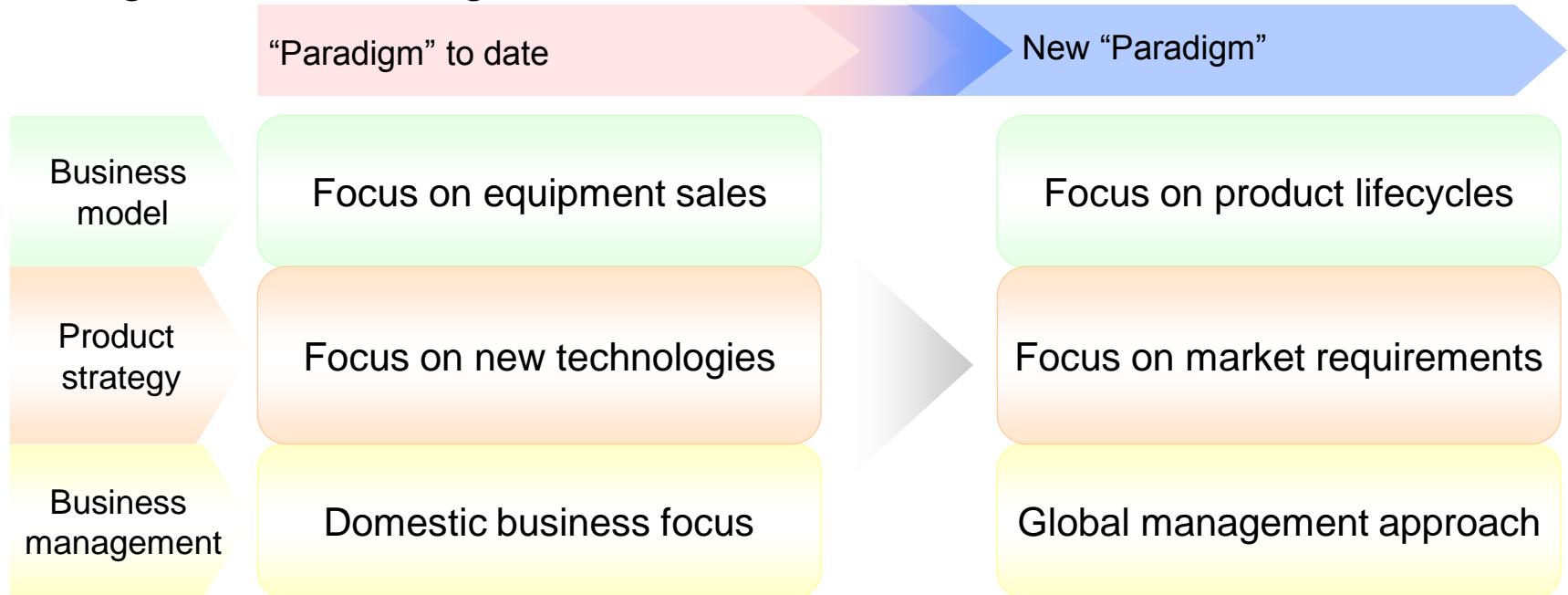
**Energy Conversion**

**Post-Processing**

<b>Existing energy fields</b>	<ul style="list-style-type: none"> <li>• Twin IHI gasifiers</li> <li>• GTL</li> </ul>	<ul style="list-style-type: none"> <li>• LNG terminal tanks</li> <li>• F-LNG</li> <li>• Small and medium-sized liquefaction plants</li> <li>• Environmentally friendly ships</li> <li>• Lithium-ion batteries</li> </ul>	<ul style="list-style-type: none"> <li>• Boilers</li> <li>• Gas turbines</li> <li>• Gas engines</li> <li>• Diesel engines</li> <li>• Nuclear power generation devices</li> </ul>	<ul style="list-style-type: none"> <li>• CCS</li> <li>• Oxyfuel combustion</li> <li>• Nuclear fuel cycle</li> </ul>
<b>Renewable energy field</b>	<ul style="list-style-type: none"> <li>• Biofuel from algae</li> <li>• Cellulosic bioethanol</li> </ul>		<ul style="list-style-type: none"> <li>• Biomass power generation</li> <li>• Offshore wind farms</li> <li>• Ocean current power generation</li> </ul>	

## Progress of Group Management Policies 2010

## ■ Progress of “Paradigm Shifts”



## ■ Measures to underpin establishment of path to growth

### Establishment of Investment Review Board

Put in place and begin operating “investment review board” to strengthen checking and monitoring of major investments

### Introduction of RiskMetrics

Establish and begin operating method for quantitatively determining risks of major inland projects

### Continuation of Project Management

Continuation and entrenchment of pre-order screening and post-order project management for major project orders

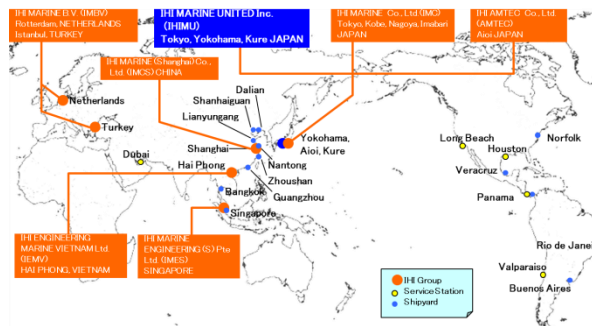


# Focus on Product Lifecycles – Detailed progress of “Paradigm Shifts” (1) **IHI**

	Implemented	Scheduled for implementation
Establishment of business bases & organizational reinforcement	<ul style="list-style-type: none"> <li>Strengthening of maintenance structure for gas turbines for power generation (established business bases in Australia and Thailand)</li> <li>Strengthening of capabilities in entire product lifecycle through integration of production, sales and services in the domestic general-purpose compressor component business</li> <li>Opening of a ship service base in Istanbul</li> </ul>	<ul style="list-style-type: none"> <li>Establishment of local subsidiary that provides heat treat furnace maintenance in Thailand</li> </ul>
Business expansion & new services	<ul style="list-style-type: none"> <li>Making proposals in accordance with Japan Ministry of Defense’s general acquisition reform, such as in spare components for jet engines</li> <li>Start of sales of new service for ship diesel engines, “LC-A (LifeCycle Administrator)”</li> </ul>	<ul style="list-style-type: none"> <li>Further expansion of ship engineering lifecycle business through cooperation between Istanbul, Singapore, Shanghai, Japan and Rotterdam bases and partner shipyards</li> <li>Strengthening of jet engine maintenance business in the US</li> </ul>



Monitoring of ship engines (from IHI website)



Global network of ships business (from IHI website)



Jet engine maintenance business (Mizuho Aero-Engine Works)

# Focus on Market Requirements – Detailed progress of “Paradigm Shifts” (2) **IHI**

	Implemented	Scheduled for implementation
Development of technology	<ul style="list-style-type: none"> <li>Full-scale development of environmentally friendly technology through establishment of coal combustion test facility (in Aioi) that is among the world’s largest</li> <li>Development of low environmental load type LNG fuel system using SPB tank for ships</li> </ul>	<ul style="list-style-type: none"> <li>Full-scale development of engine for advanced fighter planes</li> <li>Development of elemental technology for engine for next-generation civil aircraft</li> </ul>
New operations	<ul style="list-style-type: none"> <li>Completion of influenza vaccine production plant of UNIGEN, in which IHI has an equity stake (in Akita)</li> <li>Completion of pilot line for assembly of lithium-ion batteries (in Yokohama)</li> </ul>	<ul style="list-style-type: none"> <li>Full-scale operations following the establishment of R&amp;D LLC handling algae biofuel (August 2011)</li> <li>Full-scale deployment of twin IHI gasifier business (construction of Indonesia pilot plant)</li> </ul>
Expansion of operations	<ul style="list-style-type: none"> <li>Participation in development of engine for Airbus’ A320neo</li> </ul>	<ul style="list-style-type: none"> <li>Market release of turbo compressor that is among the world’s most efficient</li> <li>Market release of in-line heat treatment furnace</li> </ul>



Coal combustion test facility



Image of ship equipped with LNG fuel system



Airbus A320neo ©AIRBUS

© AIRBUS S.A.S. 2010 - COMPUTER RENDERING BY FIXION - GWLN&D

## Number of overseas associates

Americas: 27, Southeast/South Asia and Australia: 30,  
China and Taiwan: 22, Europe and Middle East: 26

### Scheduled for implementation

- Expansion of production capability through further investment in manufacturing bases for turbochargers

### Implemented

- Receipt of order for construction of Izmit Bay Bridge in Turkey through public-private partnership

### Implemented

- Enhancement of global hiring of new graduates (15 persons in FY2009; 6 persons in FY2010; 8 persons in FY2011)

### Implemented

- Establishment of supervising company for China (in Shanghai)
- Start of operations of processing plant for small diesel engines established in China (in Changshu)

### Scheduled for implementation

- Expansion of sales of agricultural machinery to China, Korea, etc.
- Expansion of production capability at overseas manufacturing bases in compressor business

### Implemented

- Establishment of parking business subsidiary in Malaysia

### Scheduled for implementation

- Establishment of local subsidiary that provides heat treat furnace maintenance in Thailand
- Expansion of overseas EPC business for boilers and gas turbines through cooperation with overseas engineering subsidiary (JEL)
- Strengthening of global procurement capability through expansion of procurement personnel, particularly in Singapore, among other measures

### Implemented

- Start of full-scale operations of Brazilian subsidiary (Rio de Janeiro)



# Action for Restoration and Reconstruction Following Great East Japan Earthquake

## Action IHI Group has taken

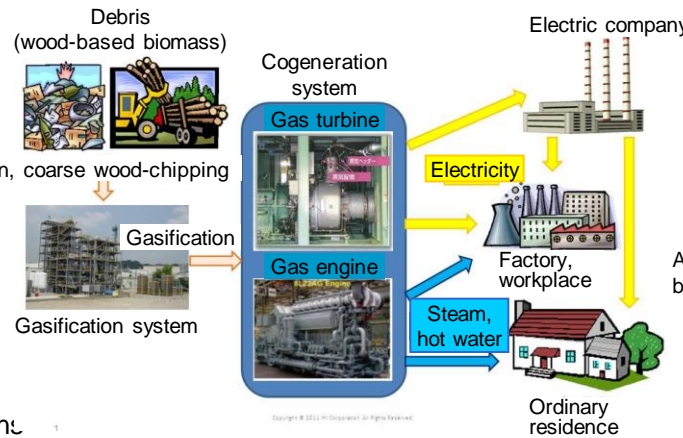
- Stabilization of Fukushima Daiichi Nuclear Power Plant  
Contribution to maintenance of cooling (manufacture of SARRY contaminated water treatment system, etc.)
- Response to electric power shortages  
Restoration of damaged thermal power plants and resumption of operations of suspended plants
- Restoration support for companies that suffered damage  
Restoration work on equipment delivered to customers
- Debris disposal response  
Donation of small construction machinery and free support for obtainment of machinery operating licenses
- Others  
Donation of emergency water purification apparatus and ozone air purifiers etc.

## IHI's proposals on restoration and reconstruction

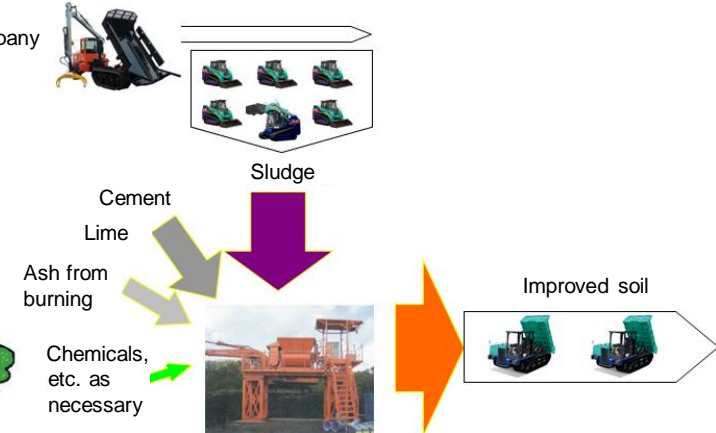
- Debris incineration and biomass gasification generation using wood-based fuel
- Tsunami sludge disposal using construction machinery and batcher plant
- Response to customer requests for in-house power generation, emergency power, etc.
- Development and manufacture of storage containers for low-level radioactive waste
- Tsunami countermeasures through coastal levees, movable bulwarks, and hybrid caissons
- Various proposals using floatation
  - Debris incineration plant
  - Offshore dock for shipbuilding industry
  - Restoration of facilities for marine products industry etc.



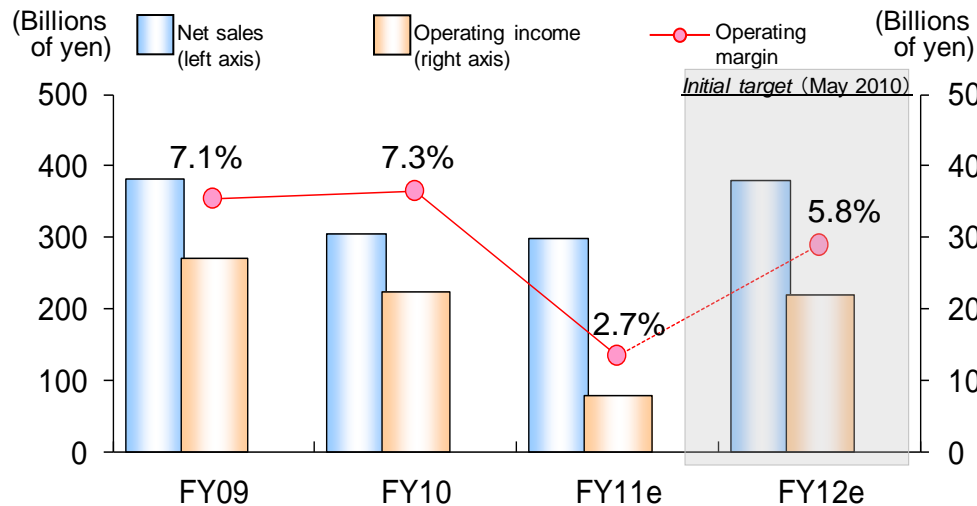
Restoration and resumption of operations of thermal power plants completed



Conceptual diagram of biomass power generation



Conceptual diagram of sludge disposal



## Basic strategy

- ✓ Provision of distinctive products and services
- ✓ Strengthening of profit base through expansion of product lifecycle business
- ✓ Steady execution of overseas projects
- ✓ Cultivation of new business in the energy field

## Receipt of order for LNG receiving terminal for Hainan Island, China

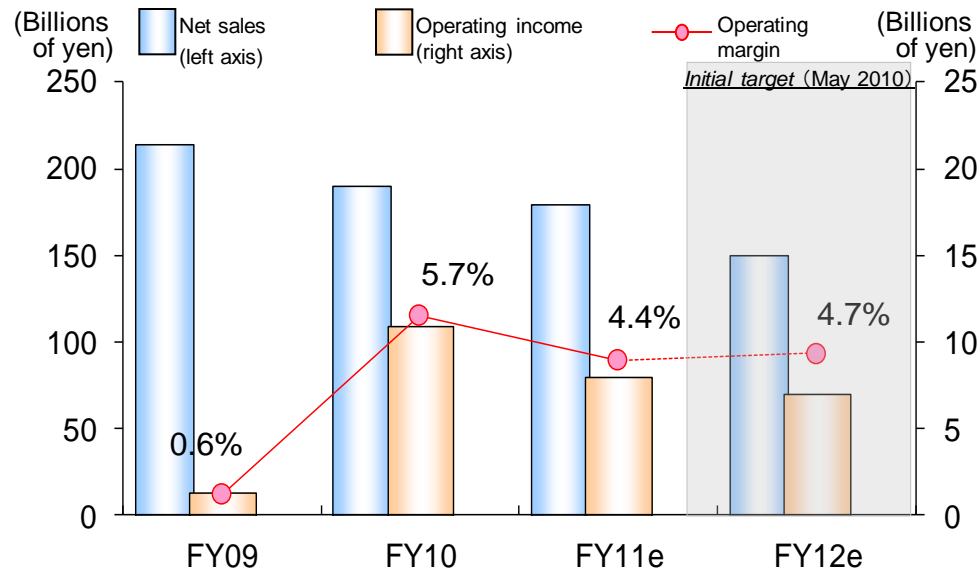
- Continue seeking orders for domestic and overseas LNG projects

## Action for restoration and reconstruction following Great East Japan Earthquake

- Action for restoration and conversion of power-generating boilers in thermal power plants
- Handling of emergency construction work at Fukushima Daiichi Nuclear Power Plant. Manufacture of "SARRY", contaminated water treatment system
- Responding to inquiries due to increased demand for in-house power generation, emergency gas turbines, ship engines, and gas engines

## New plant completed to manufacture steam generators (SG) for pressurized water reactors (PWRs)

- Promote development of internationally competitive SG technology in pursuit of further improvements in safety and reliability



## Basic strategy

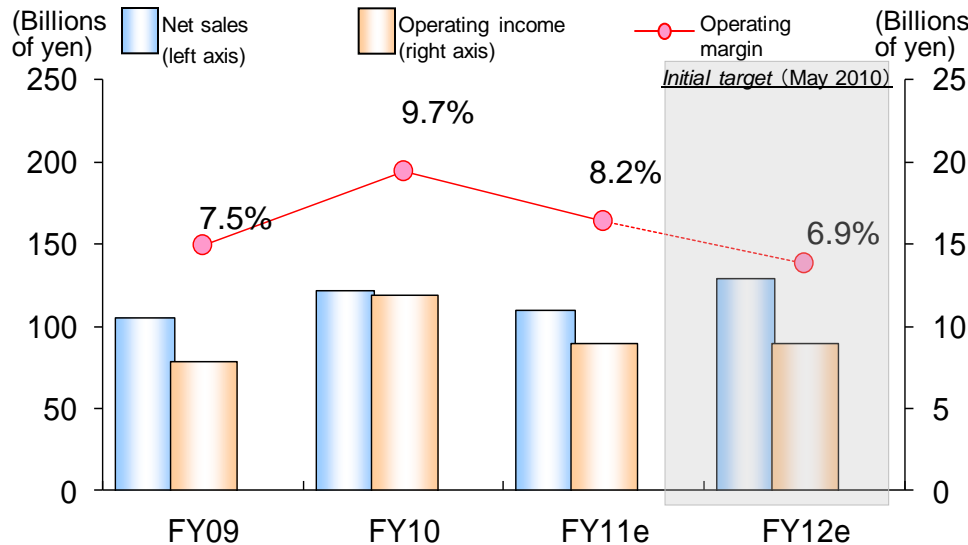
- ✓ Promotion of products strategy focused on market requirements
- ✓ Strengthening of engineering business
- ✓ Expansion of product lifecycle business

## Receipt of orders for environmentally friendly-type coal carrier ships

- Taking advantage of uniquely developed energy saving technology used in environmentally friendly “e-Future” ships, realization of fuel efficiency improvement of 15% or more compared with conventional ships
- Aiming for orders for variety of ship types, such as container ships, ferries and tankers through further sales activities building on current order performance

## Development of LNG fuel system for environmentally friendly ships using SPB tanks

- Development completed of large LNG fuel container ship using fuel tank with IHI’s SPB technology
- Satisfies Tier III level of NOx and SOx emissions regulations scheduled for enforcement by the IMO (International Maritime Organization) from 2016
- This will contribute to the enhancement of business using SPB tanks



## Basic strategy

- ✓ Making proactive advances into overseas markets using overseas business bases
- ✓ Securing orders through differentiation in technology, costs, and services
- ✓ Creation of stable profits and gradual sales expansion in urban development business

## Contract for construction of Izmit Bay Bridge in Turkey

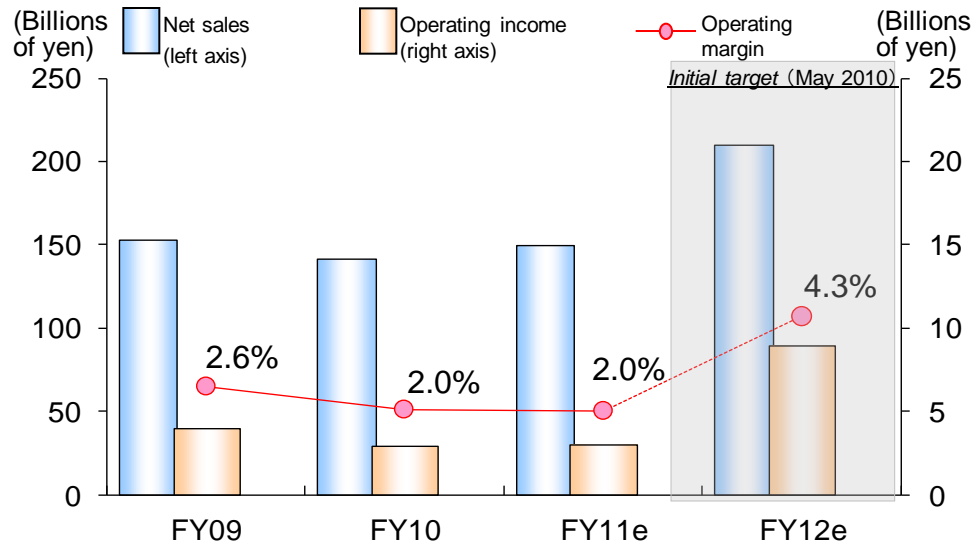
- The third construction order received in Turkey, following on from construction of Golden Horn Bridge and Second Bosphorus Bridge, as well as earthquake resistance strengthening work on 15 bridges in the country
- Achievement of orders through combination of public and private sectors as part of Japan's policy on promoting exports of infrastructure business

## Action for reconstruction following Great East Japan Earthquake

- Pressing ahead with action such as development of social infrastructure for reconstruction following the earthquake

## Putting into operation redevelopment plan for Zone No. 2 of Toyosu, Tokyo

- Started procedures for city planning of development of the area in front of the Toyosu Station, which is deemed as compilation of redevelopment of Toyosu area, Tokyo, jointly with other land owners (Koto City of Tokyo plans to enlarge existing culture center, and Tokyo Fire Department plans to rebuild the department building.)



## Basic strategy

- ✓ Strengthening of proposal-making capability for production solutions
- ✓ Capture demand in focus markets by strengthening overseas business bases and global network
- ✓ Market release of products in line with market requirements
- ✓ Acceleration of business selection and concentration

### Receipt of order for construction of new transit system for Hong Kong International Airport

- Order received for construction ranging across whole system, including extension work on railway, railroad cars, communications facilities, and signaling devices, for Hong Kong International Airport's new transit system, "Automated People Mover"

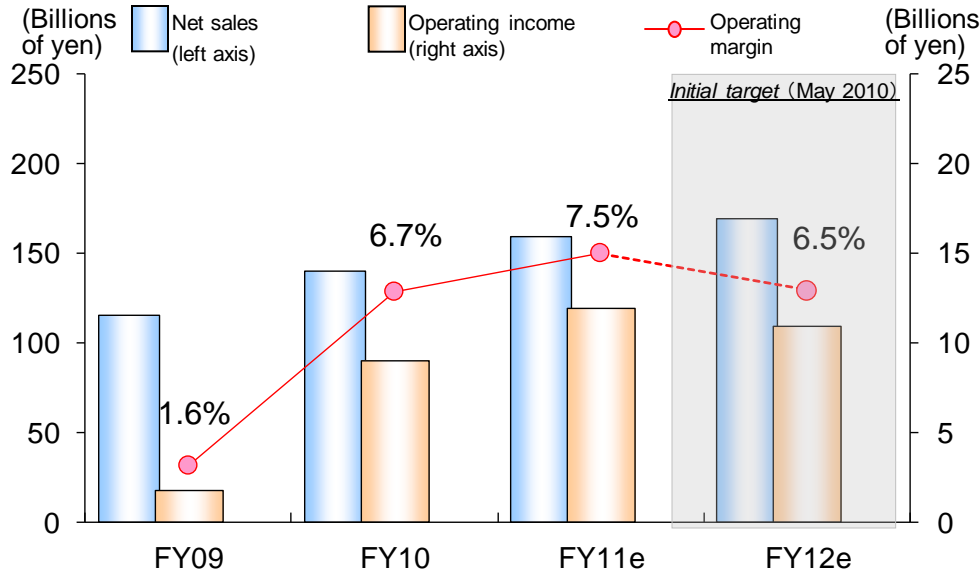
### Establishment of local subsidiary in Thailand for heat treatment furnaces maintenance

- Local subsidiary providing heat treat furnace maintenance scheduled for establishment in November 2011. Discussions on expanding to production bases
- Discussions on expanding use as maintenance and production base for other businesses moving into Southeast Asia in addition to heat treatment furnaces

### Establishment of local subsidiary in Malaysia for parking business

- Move into sales and after-sales service for parking in Malaysia, where automobile sales are steadily increasing
- Push ahead with further global development by making proactive advances into Southeast Asia, where continuous receipt of orders is expected





## Basic strategy

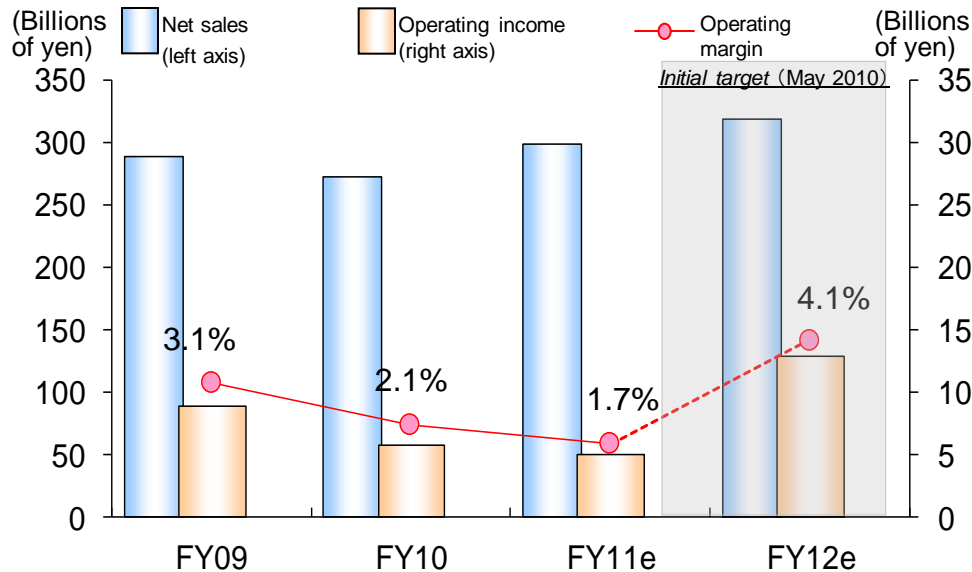
- ✓ Capture demand in focus markets by strengthening overseas business bases and global network
- ✓ Market release of products in line with market requirements

## Expansion of global production of turbochargers

- Strengthening of production bases in China to respond to the expansion of Chinese market
- Push ahead with establishment of global supply framework at production bases in Thailand that meets customers' needs

## Promotion of capital investment into key parts for general-purpose compressors

- Receipt of orders at Chinese JV IHI-Sullair going favorably
- Capital investment into production base for key parts decided for the purpose of global business expansion such as tie-up with Atlas Copco



## Basic strategy

- ✓ Improvement of profitability of existing types through expansion of after-sales service and strengthening of cost-cutting
- ✓ Strengthening of development of next-generation types that meet the market requirements

### Participation in development and production of PW1100G-JM engine for Airbus' A320neo

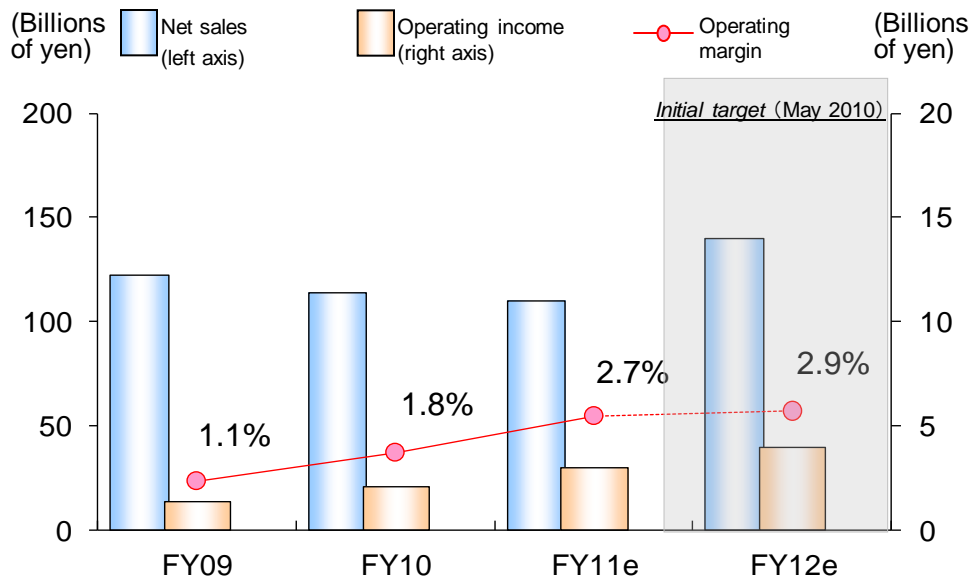
- Responsible for core components of fan modules, among others
- Commence delivery in FY2015. With 400 deliveries expected every year, it will become a new core product in continuation from V2500

### Soma Works production structure: from recovery to increase in production

- Achievement of full restoration of production facilities in mid-May, over two months ahead of initial expectations
- Currently taking action on plan for recovery from the earthquake disaster and requests from customers for increased production

### Making progress on development of LNG-propelled engine and Epsilon (next-generation small solid-fuel) rocket

- Making advances with research and development while also pressing ahead with proposal activities
- LNG-propelled engine proposal activities ongoing aiming at future application to orbital transfer engine, small rocket upper-stage engine, etc.



## Basic strategy

- ✓ Development of products in line with market requirements and sales expansion
- ✓ Sales expansion in emerging markets that are expected to grow

### Promotion of global development and environmental action for agricultural machinery and small motors, and construction machinery

- Commenced operations at plant established in Changshu, China. Supplying engine components for expanding Chinese market.
- Sales of agricultural operating machines performing steadily in China, and resumed sales in Thailand
- Opened sales office in Singapore for the purpose of expansion of crane sales in ASEAN countries and India
- Promoting Tier IV engine development

### Promotion of ship engine lifecycle business

- Opened business base in Singapore. Providing packaged maintenance services and engine parts
- Commenced provision of unified maintenance and operation service "LC-A (LifeCycle Administrator)" (automatic condition diagnosis, optimized operation, trouble shooting, and maintenance management)



Forward-looking figures shown in this material with respect to IHI's performance outlooks and other matters are based on management's assumptions and beliefs in light of the information currently available to it, and therefore contain risks and uncertainties. Consequently, you should not place undue reliance on these performance outlooks in making judgments. IHI cautions you that actual results could differ materially from those discussed in these performance outlooks due to a number of important factors. These important factors include political environments in areas in which IHI operates, general economic conditions, and the yen exchange rate including its rate against the US dollar.