# 2012 Medium-Term Business Plan (2012-2014)

May, 2012 Hideaki Omiya, President



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- Financial Targets by Domain
- Financial Targets by Segment
- Resource Planning



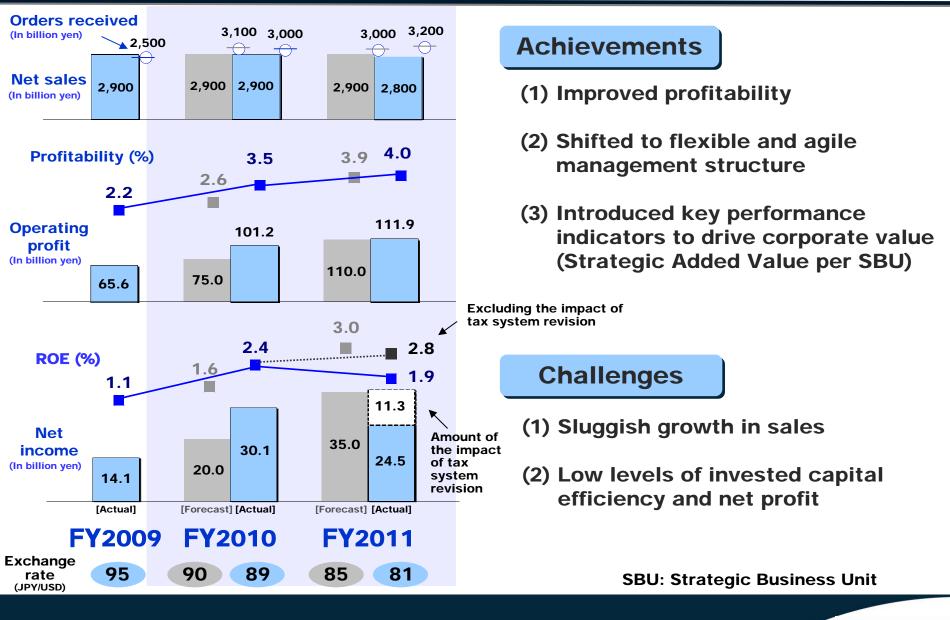
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## I. Review of 2010 Mid Term Business Plan

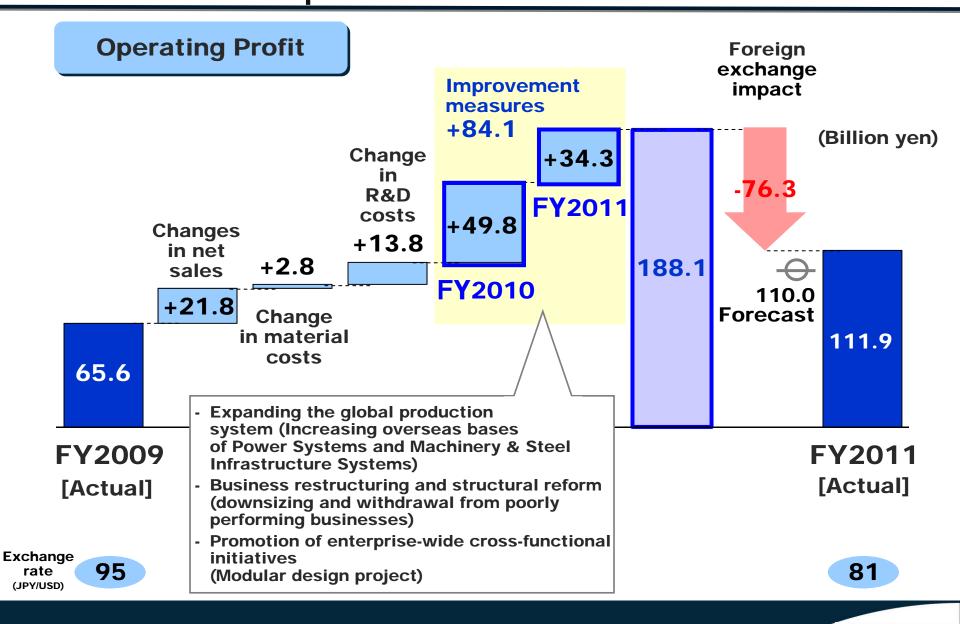


### Steady progress against 2010 Plan, with challenges clearly <sub>3</sub> identified



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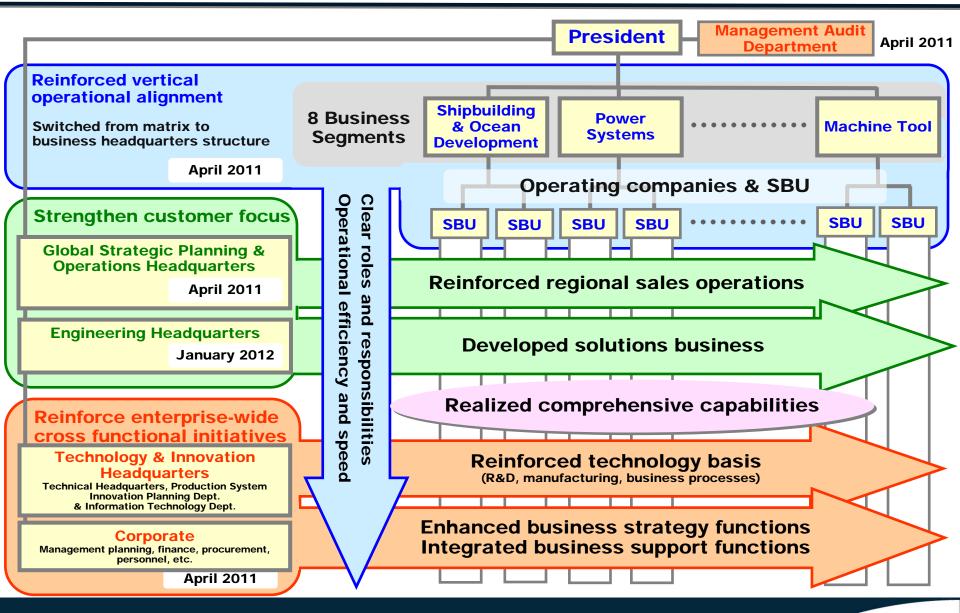
## Achievement (1): Improved profitability to overcome FX pressures



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#### Achievement (2): Shifted to flexible and agile management 5 structure



Achievement (3): Introduced key performance indicators to 6 drive corporate value

2010 Business Plan

ROE as key performance indicator

-- Emphasis on invested capital efficiency --

Introduced "strategic business evaluations"

Evaluate SBU with

Strategic Added Value (SAV)

Portfolio management to maximize corporate value with limited resources

- Reconfigured 64 SBUs' business and financial profiles
- Decision criteria to strategically choose and focus

SAV: Strategic Added Value (valuation metrics combining business viability and efficiency)

## II. 2012 Mid Term Business Plan



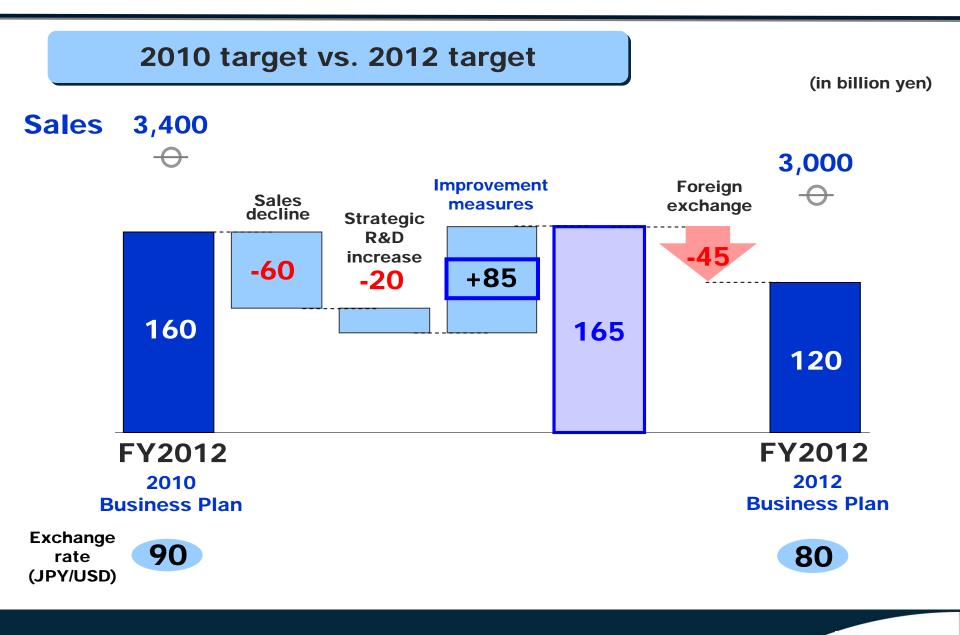
(Billion yen)

			2012 Business Plan		
	FY2010 Actual	FY2011 Actual	FY2012 Forecast	FY2014 Target	
Orders received	2,995.4	3,188.8	3,400.0	4,000.0	
(Shares of overseas sales)	(44%)	(43%)	(58%)	(64%)	
Sales	2,903.7	2,820.9	3,000.0	3,700.0	
Operating profit	101.2	111.9	120.0	250.0	
(Ordinary income)	(68.1)	(86.1)	(80.0)	(210.0)	
Net income	30.1	24.5	40.0	130.0	
ROE	2.4%	1.9%	3.1%	8.9%	

ROIC	1.5%	1.5%	2.1%	6.5%
D/E Ratio	1.0	0.9	0.8	0.7
Interest-bearing debt	1,325.6	1,157.1	1,100.0	1,000.0
Dividend per share	4 JPY	6 JPY	6 JPY	10 JPY



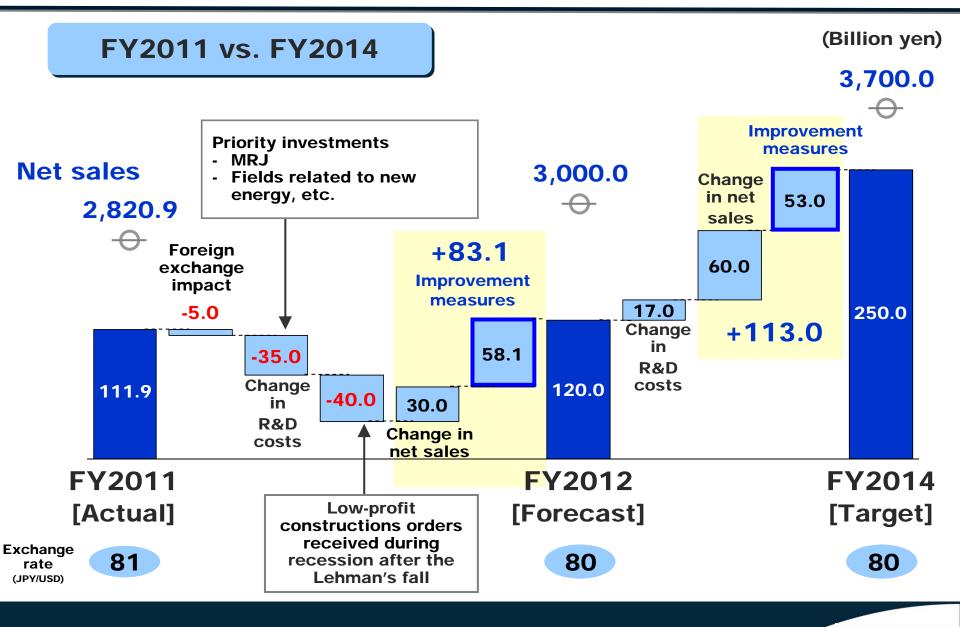
## **Analysis of Operating Profit Changes (FY2012)**



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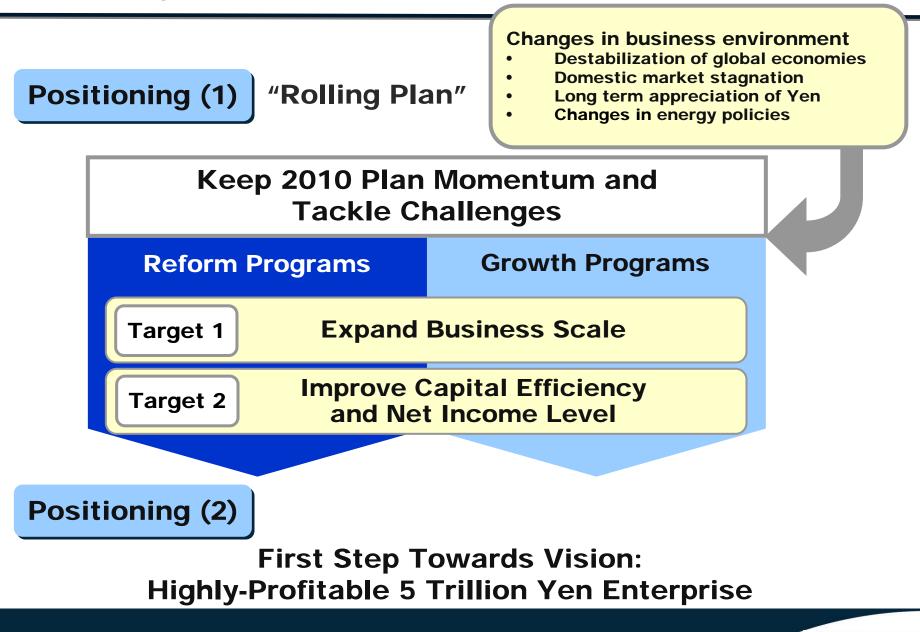
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## **Analysis of Operating Profit Changes**

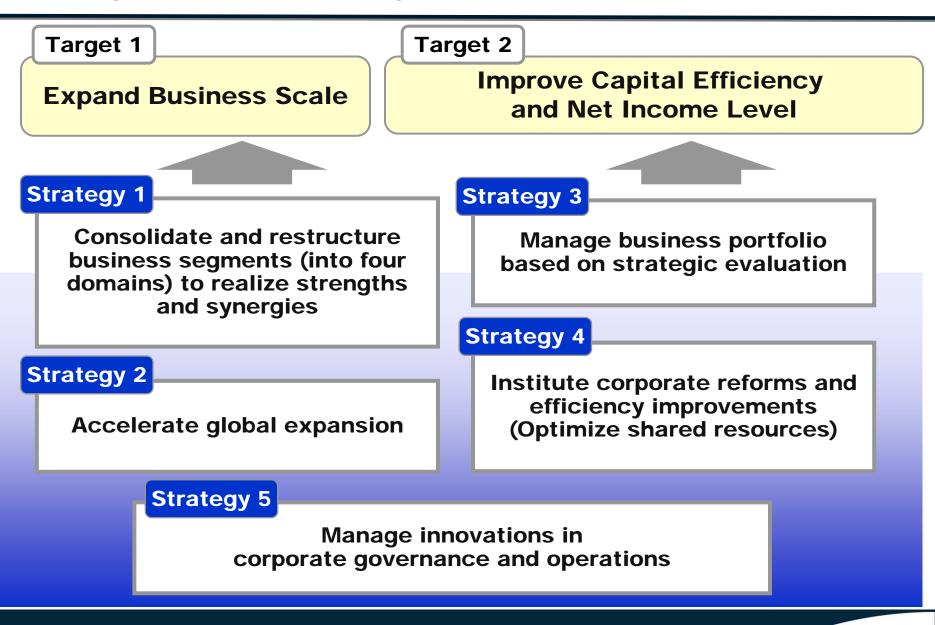


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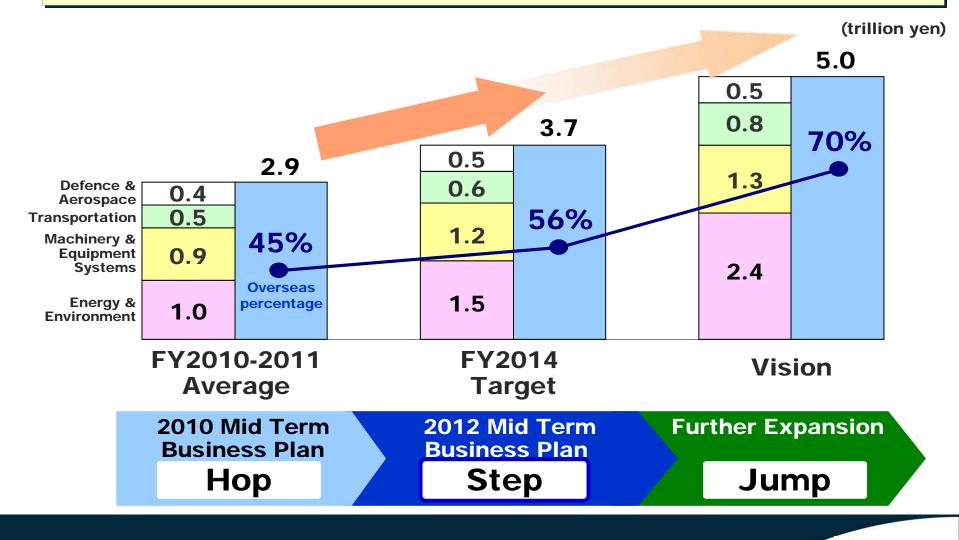


### **Strategies to Achieve Targets**



## Target 1 Expand Business Scale

Achieve 5 trillion yen sales through consolidation of business segments into four domains and global expansion



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#### Four domains aligned to customers and markets

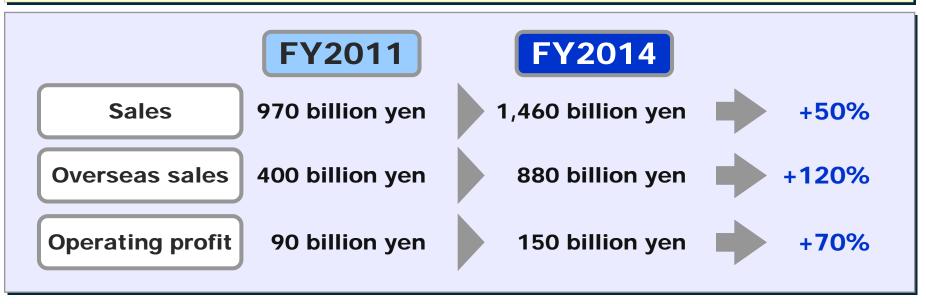
	Customers/ Markets	Segment					
Business domain		Shipbuilding & Ocean Development	Power Systems	Machinery & Steel Infrastructure Systems	Aerospace Systems	General Machinery & Special Vehicles	Others (Air- Conditioning/ Machine Tool)
Energy & Environment	<ul> <li>Power companies</li> <li>Gas companies</li> <li>Resource companies (oil, chemicals, steel)</li> </ul>		• GTCC • Large-scale thermal power plants • Nuclear power plants	• Environmental plants • Chemical plants			
Machinery, Equipment Systems	<ul> <li>Core industries (steel, etc.)</li> <li>Automotive industry</li> <li>Logistics, etc.</li> </ul>		• Stationary engines	<ul> <li>Compressors</li> <li>Metals machinery</li> <li>Crane &amp; material handling systems</li> </ul>		<ul> <li>Turbo- chargers</li> <li>Forklift trucks</li> <li>Engines</li> </ul>	<ul> <li>Air- conditioning equipment</li> <li>Machine tools</li> </ul>
Transportation	<ul> <li>Airlines (air)</li> <li>Shipping companies (sea)</li> <li>Railways (land), etc.</li> </ul>	• Commercial Ships		• Transportation system	• Commercial aircraft		
Defense & Aerospace	<ul> <li>Ministry of Defense (land, sea, air)</li> <li>JAXA</li> </ul>	• Destroyers & submarines for the Ministry of Defense			Defense aircraft     Missiles     Space Systems	• Special vehicles	



## **Business Strategy by Domain**



## Consolidating energy and environmental businesses and internal EPC units



Accelerate energy and environment business growth by concentrating resources

(GTCC, IGCC, Large scale coal-fired thermal power plants, etc.)

• Drive new business development with Engineering Headquarters at core (Large-scale infrastructure projects, Smart communities)

GTCC: Gas Turbine Combined Cycle, IGCC: Integrated coal Gasification Combined Cycle

## Gas Turbine Combined Cycle (GTCC)

Over 210 billion yen in overseas markets, mainly in North America and Asia

Introduce new technologies and products into markets

- Strong order intake for J-Series gas turbines with world leading thermal efficiency performance (from Kansai Electric Power and South Korean companies)
- Develop next-generation 1700-deg.C-class gas turbine
- Validation tests for a GTCC-SOFC triple combined system SOFC: Solid Oxide Fuel Cell

#### **Boost overseas plant capacity**

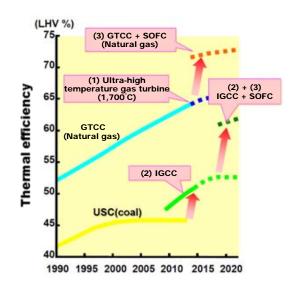
Increase gas turbine production capacity in Georgia, USA

#### **Expand Diamond Network**

- Reinforce engineering and procurement in addition to service functions at regional bases
- Build strong customer relationships in the Americas, Europe and Asia
- Global information sharing



J-series gas turbine



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Large-Scale Coal-Fired Thermal Power Energy & Environment (3) -**Plants & Renewable Energy** 

Large-Scale Coal-Fired Thermal Power Plants (Clean Coal Technology)

Enhance competitiveness and increase scale of conventional coal-fired thermal power business

 Establish global production and procurement network via L&T joint venture (India), etc

#### Continue to develop clean coal technology

- Develop 700-deg.C-class advanced ultra super critical power generation technology
- Accelerate commercialization of IGCC with world-leading efficiency

 Large offshore wind turbines with hydraulic drive train (Validation test off Fukushima and

Concentrated Solar Power Generation System

Large capacity, high output lithium ion

 Validate CCS technology (500 t/day) **CCS: Carbon Capture and Storage** 

**Renewable Energy** 

**Develop next generation products** 

in North Sea near U.K.)

with Hot Air Turbine

secondary batteries





A container-type large-capacity power generation system equipped with lithium ion batteries

Offshore wind turbine power facilities (artist rendering)

## Clean Goal Power R&D Lab.

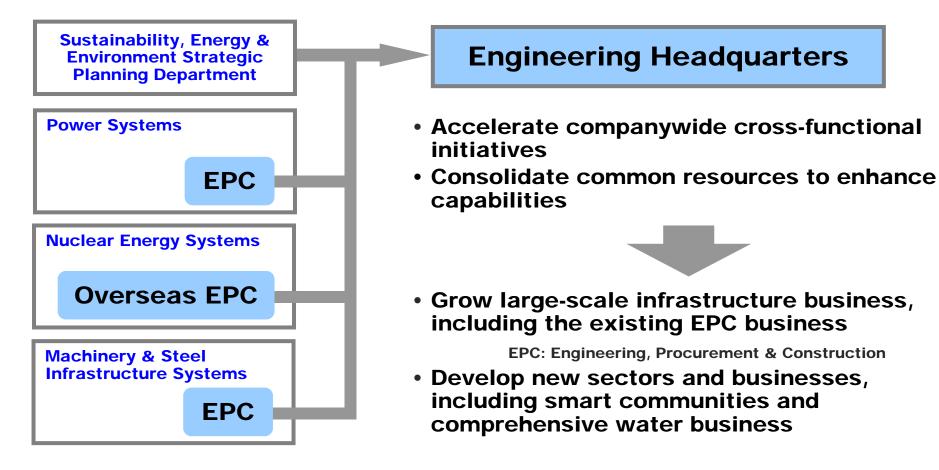
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(Nakoso IGCC)

+40 billion yen **Overseas** (esp. Asia)

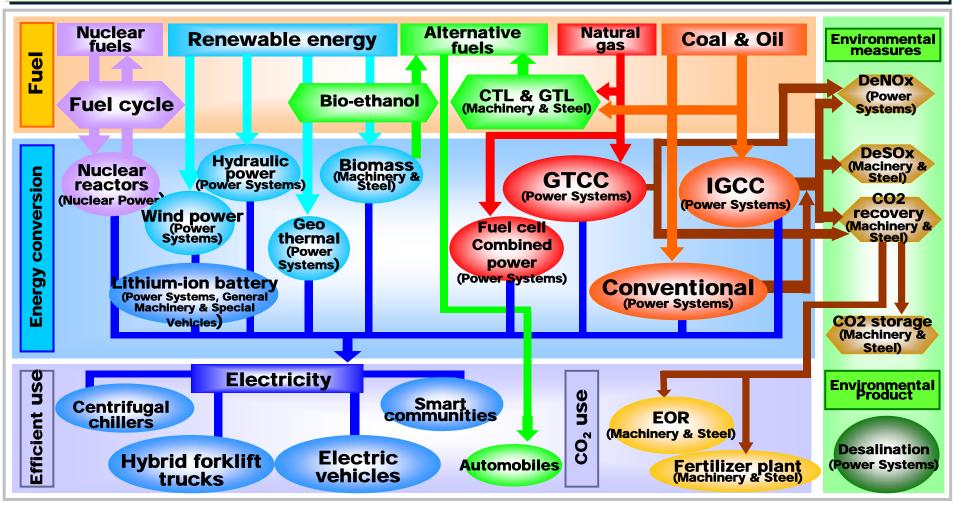


## Establishing globally-recognized engineering group with world-leading EPC capabilities



## **Energy & Environment (5) – A Broad Array of Products**

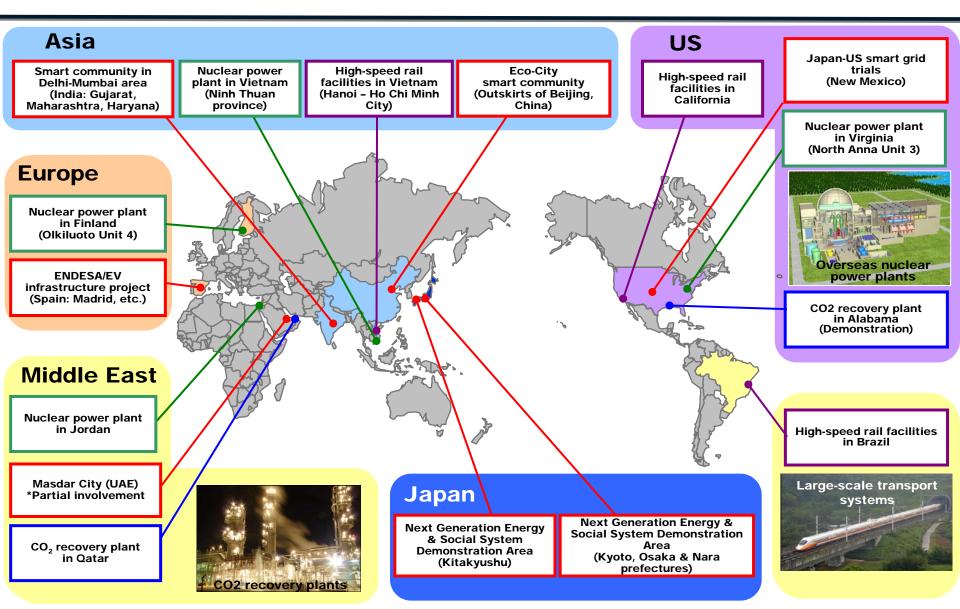
Serve customer needs with strengths based on diverse energy and environment products



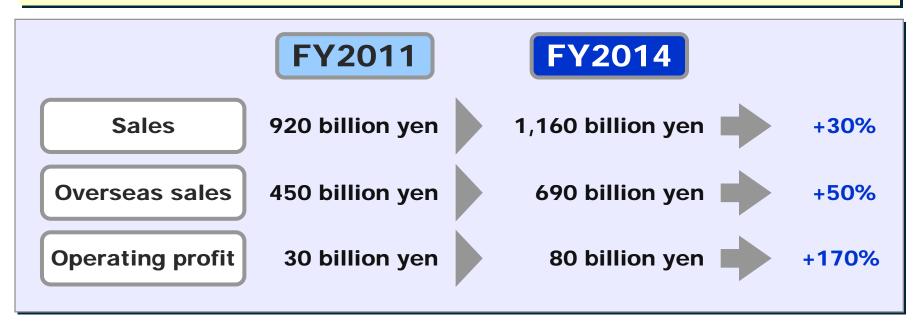
CTL: Coal to Liquid, GTL: Gas to Liquid, GTCC: Gas Turbine Combined Cycle, IGCC: Integrated Coal Gasification Combined Cycle, EOR: Enhanced Oil Recovery

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## **Energy & Environment (6) – New Sectors & Businesses**



Integrating businesses for core industries (steel, automotive, etc.)



- Capture emerging markets with fast-growing core industries
- Operate organization with flexibility and agility (reorganization into operating companies, M&A, alliances)

## Machinery, Equipment & Systems (2) – World-Class Products<sup>23</sup>



#### Compressors

- Expand gas sector with foothold in oil and gas majors
- Build global operating structure and strengthen alliances to become "world's top three"



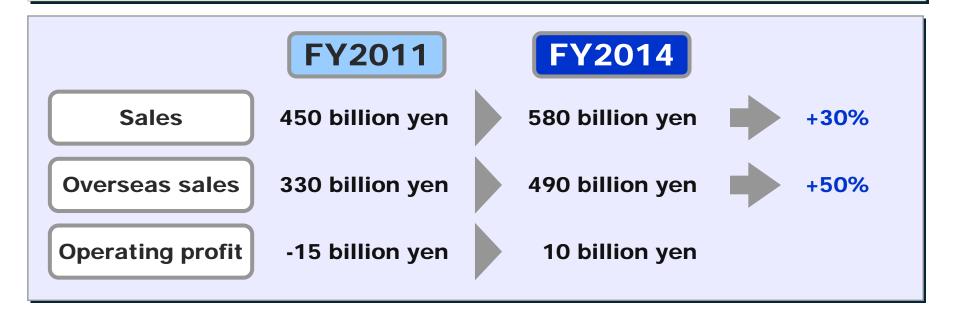
#### Machine tools

- Aim world leadership in niche markets (gear machine tools and large sized machine tools)
- Increase sales and production in China, India
- Alliances
  - Acquire Federal Broach (machine tool manufacturer)



## Transportation (1)

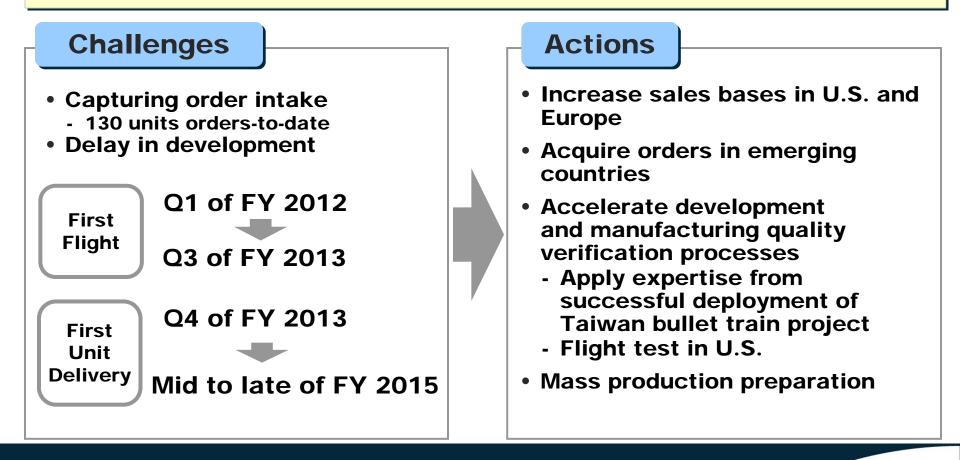
Integrating land, sea and air transportation businesses



- Achieving high safety level, meeting stringent regulations
- Optimize common business models
- Optimize mass production base

- Long term growth of civil aircraft market
- Ability to overcome high entry barriers (technology, capital)
- Once entered, limited competition





## Improve profitability through manufacturing innovations

### **Reform in Japan**

- Invest resources in high value-add products
  - Automated B787 production (cooperation with Machine Tool Division)



Automatic boring machine

- Production flow reorganization
  - Process integration from components to assembly

#### Accelerate overseas expansion

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 Shift to overseas cost base (to counter FX fluctuations) and global SCM

#### **Overseas Production**

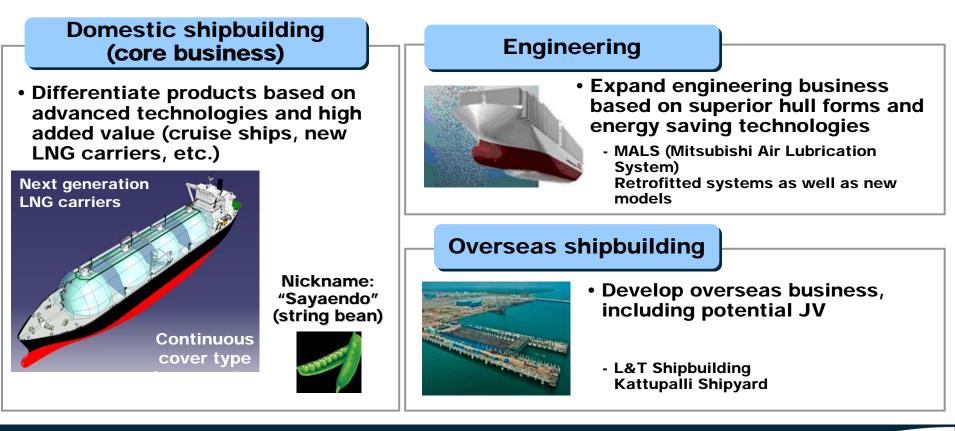
- Assembly bases (in Vietnam and Canada)
- Component plant (in Vietnam)

#### **Overseas Procurement**

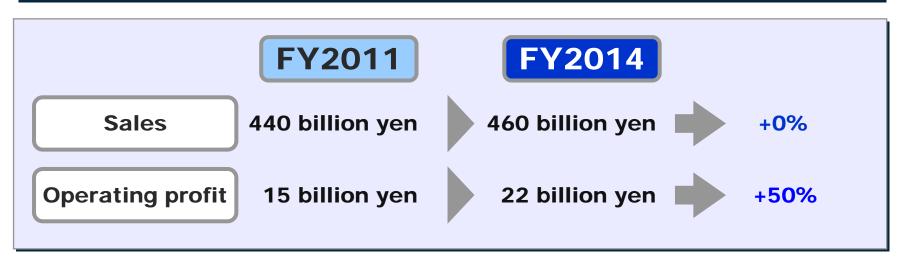
- Diversify procurement, from U.S. to Europe and Russia
- Expand procurement from Asia

**Establish three-pronged business structure** 

Build engineering and overseas shipbuilding businesses in addition to domestic shipbuilding differentiated with advanced technology, high value-add



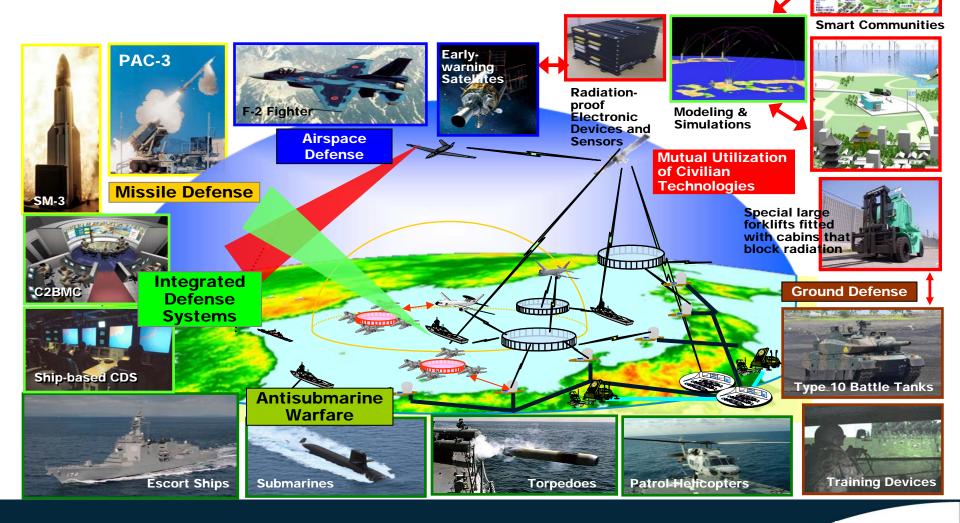
## Integrating ground, marine, and air defense and aerospace businesses



- Support joint operations of GSDF, MSDF and ASDF (System of Systems)
- Maintain and strengthen defense business foundation (Respond to relaxation of arms export principles)
- Cross applications of defense, aerospace technologies and civilian technologies

## **Defense & Aerospace (2) Integrated Defense Systems**

- Propose integrated defense systems by coordinating businesses for ground, marine and air defenses
- Provide various products to efficiently support joint operating framework of JSDF
- Mutual application of aerospace, defense technologies and civilian technologies

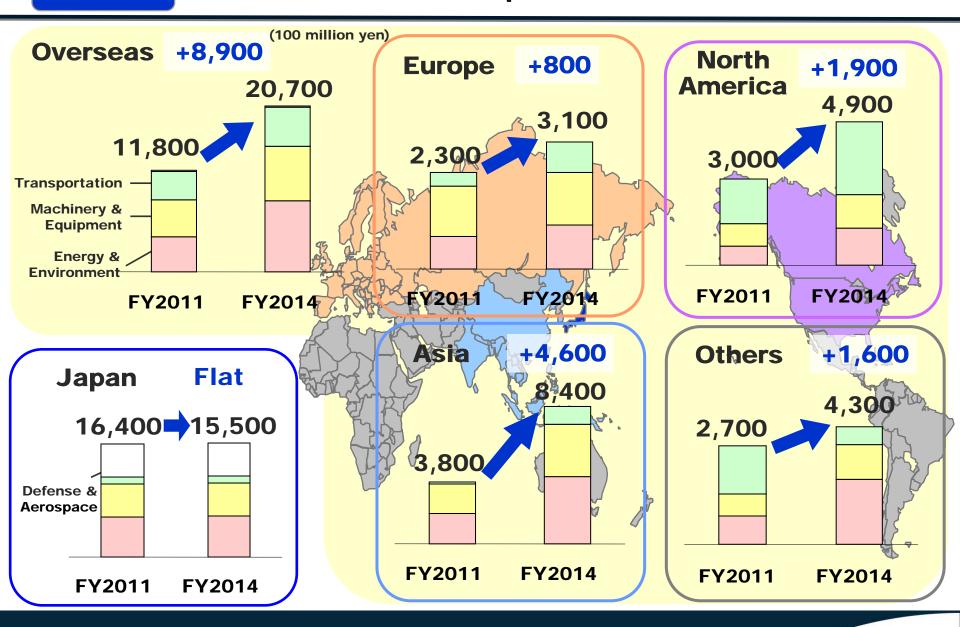


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Strategy 2

**Accelerate Global Expansion** 



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## Define Strategic Regions, Enhance Operating Structures (1) <sup>31</sup>



#### India

- Upgrade and expand MHI India corporate service functions
- Explore growth opportunities through alliances with leading Indian corporate groups

#### **ASEAN / Oceania**

- Establish [MHI-AP (Asia Pacific)] as regional headquarters in Singapore
  - Manage corporate strategy and functions across countries
  - Originate local strategies and business plans

## Market entry opportunities through local alliances

#### China: Major automobile manufacturers

- Propose MHI's diversified capabilities in automotive businesses, engage in comprehensive technology relationship
- China: Dongfang Turbine Co., Ltd.
- Collaborate with customer to provide high quality, high reliability services at leading-edge base of MHI's energy business in China India: L&T
- Launch operations, improve productivity at LMB & LMTG (JV for boilers and turbines)
- Develop shipbuilding engineering business through technology licensing
- Joint development of clean coal technology in Indian market (joint study)

LMB: L&T-MHI Boilers LMTG: L&T-MHI Turbine Generators

#### India: TATA Group

- Comprehensive alliance
   including engineering support
- Commercialize smart community FS

FS: Feasibility Study





## **Enhance Competitiveness in Strategic Regions**



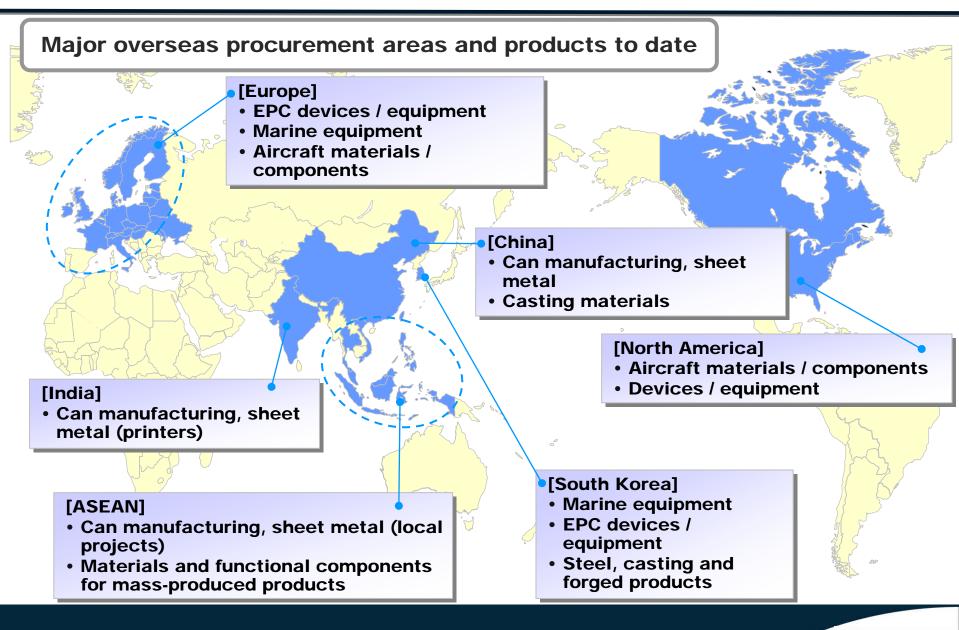
#### Enhanced value add in high-end products

Product Concept:(1) Clean(2) High efficiency(3) Optimized lifecycle costs

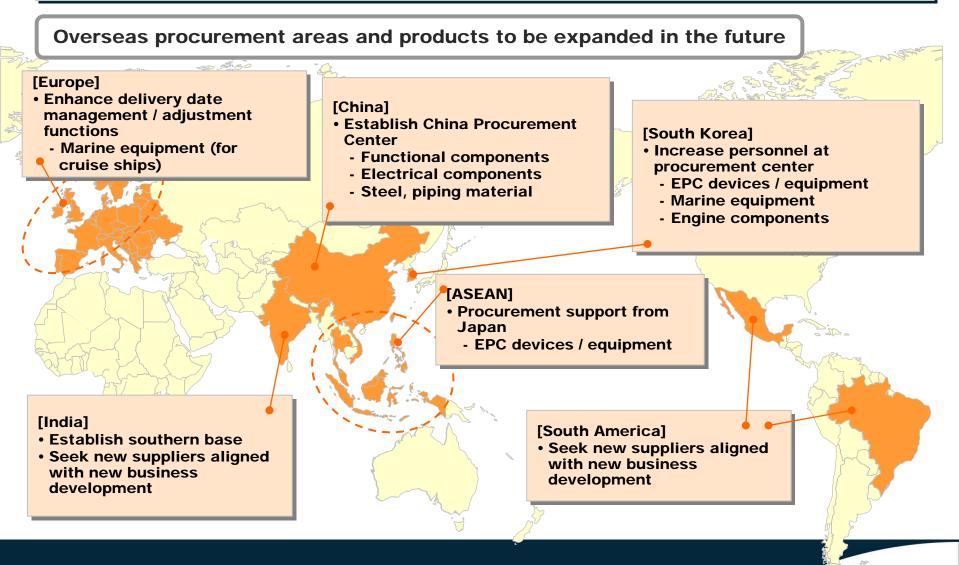


- Define procurement strategies by region and product
- Expand use of overseas standard products, coordinating with Technology & Innovation Headquarters
- Develop centralized database on partner information
- Strengthen cross-business integrated procurement

## **Expand Overseas Procurement (2)**



#### Expand overseas procurement mainly in emerging countries



Transplant domestic manufacturing technologies and expertise to overseas bases to enhance "manufacturing capabilities" tailored to local needs

- Establish repeat-type made-to-order manufacturing system in Japan and transplant to overseas
- Develop overseas export bases to neighboring countries

# Integrate overseas production bases into global procurement network

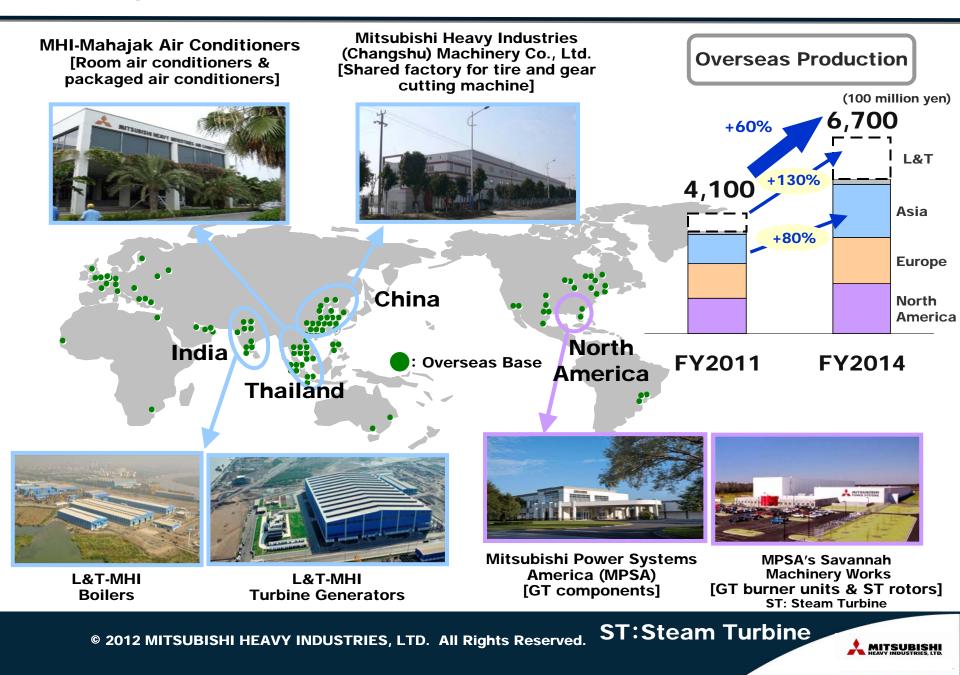
#### **Examples (Power Systems)**

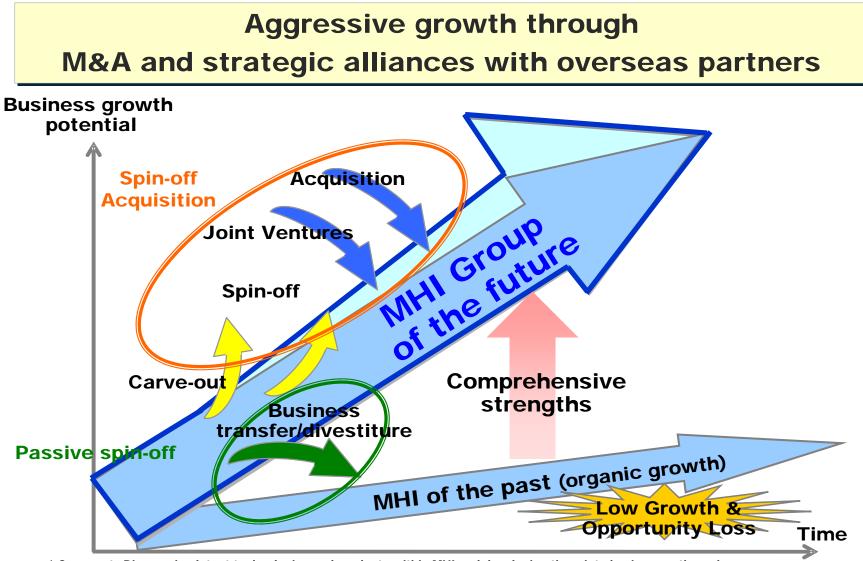
• US-based MPSA (gas turbines) and India-based L&T JV (boilers, steam turbines) positioned as strategic production bases based on domestic plants

MSPA: Mitsubishi Power Systems America

- Production processes built up at Nagasaki Shipyard & Machinery Works and Takasago Machinery Works deployed overseas
- Framework for training and human resource development of national staff and key personnel developed (Establishment of local training centers, Japan training program, etc.)

### **Strengthen Overseas Production Bases (2)**





\* Carve-out: Discovering latent technologies and products within MHI and developing them into businesses through third-party investment and participation in management decisions

# Expand M&A and Alliances (2)



#### **Energy & Environment**

- Started full-scale production in Jan 2011
  - Received orders for more than 10 boilers and 10 turbines, worth over USD 3 billion



Turbine Plant

**Boiler Plant** 



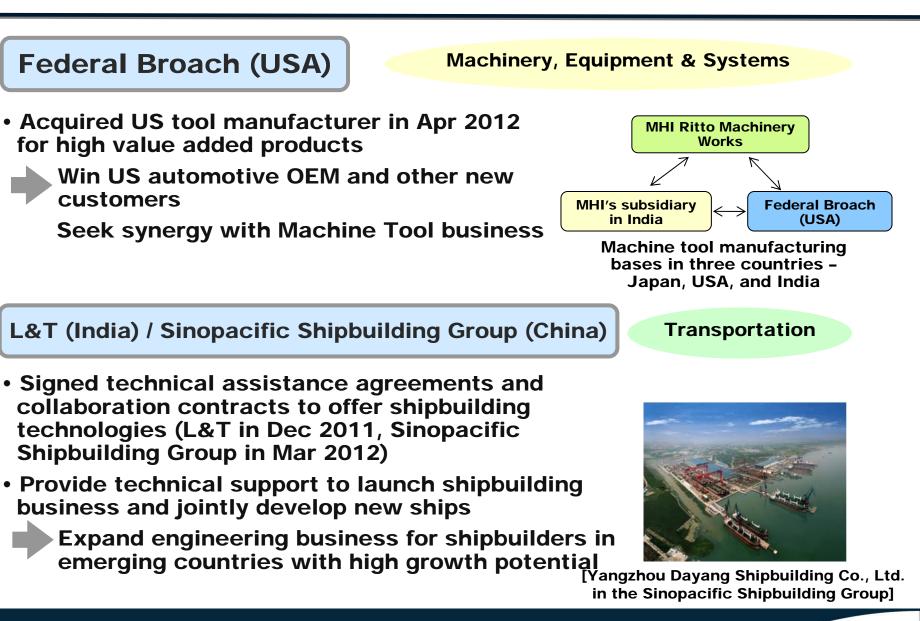
Offshore wind turbine power facilities (artist rendering)



# Artemis (UK)

- Acquired UK venture firm in Nov 2010 to obtain its unique hydraulic technologies
- Announced world's first offshore wind power generation system with hydraulic drive train in Nov 2011
  - Participate in UK ROUND 3 Project (Business size: 32GW) and Offshore Fukushima floating type offshore wind turbine experimental study project

# Expand M&A and Alliances (3)



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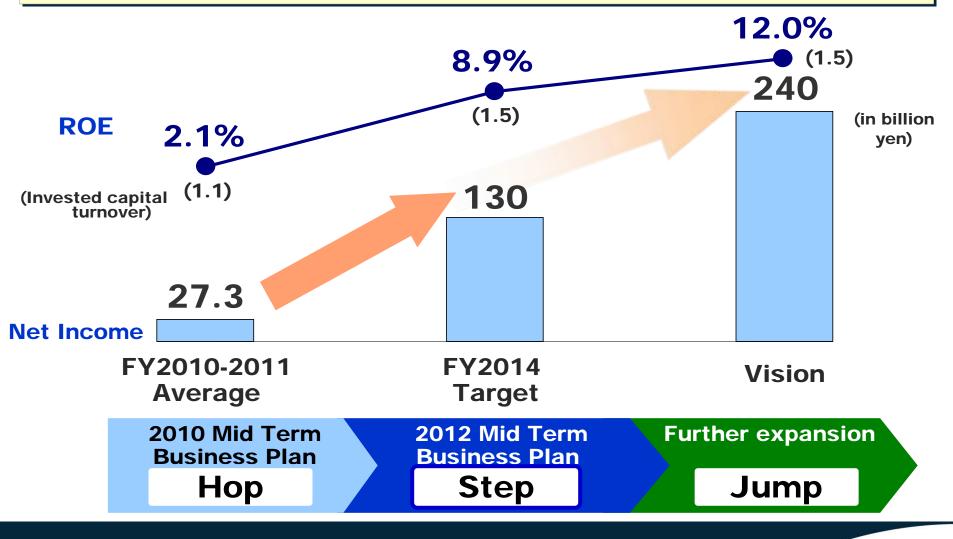
- Systematic development of global human resources, including national staff
- Early development of mid-career and younger employees based on global human resources development roadmap
- Enhancement and expansion of educational programs for employees at domestic and overseas group companies

#### **Corporate Reforms to Strengthen Global Support**

• Strengthen global personnel through restructuring and consolidation of group companies, business streamlining

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Significant improvement through portfolio management based on strategic business evaluation



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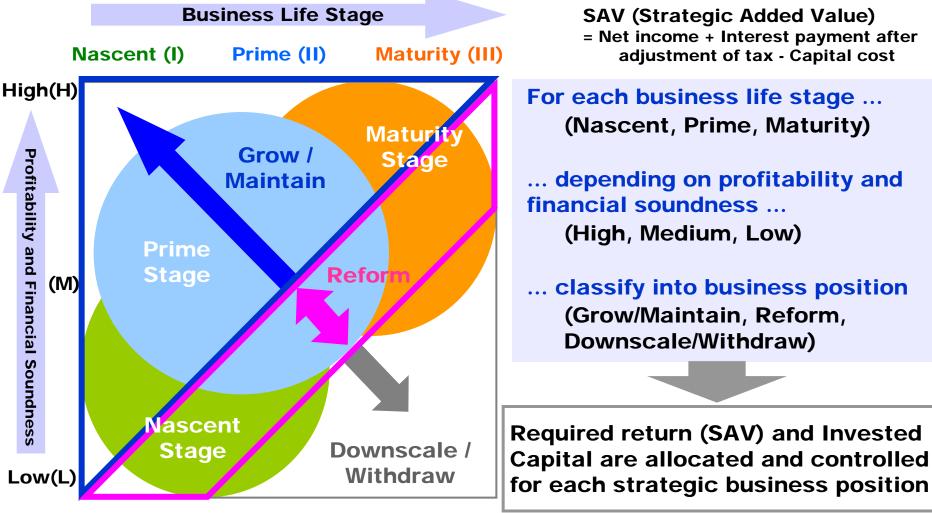
Target 2

Strategy 3

Manage Business Portfolio based on Strategic Evaluation

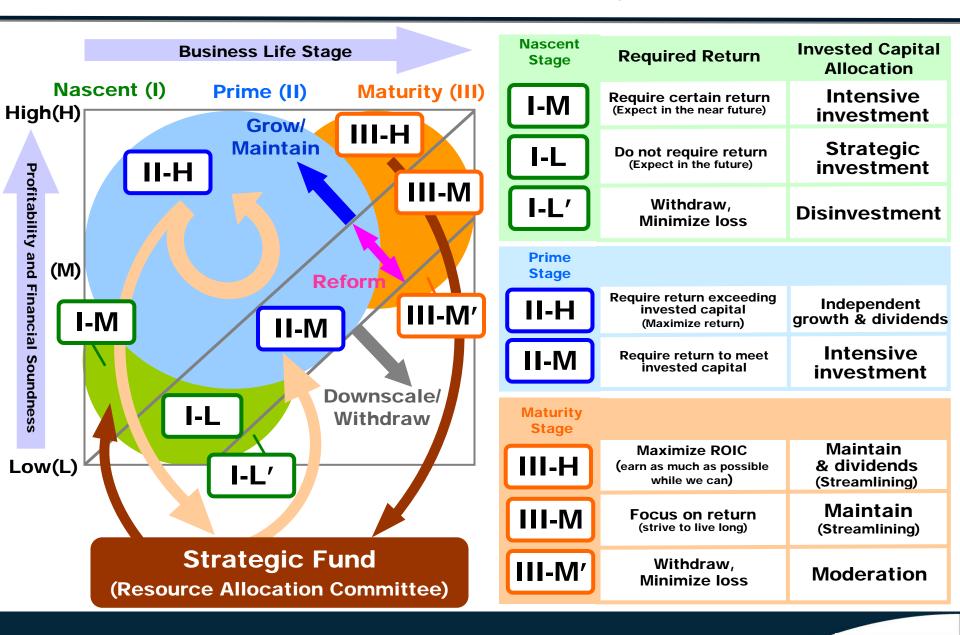
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Return requirement (SAV) and Invested Capital allocation based on strategic positioning of 64 SBUs



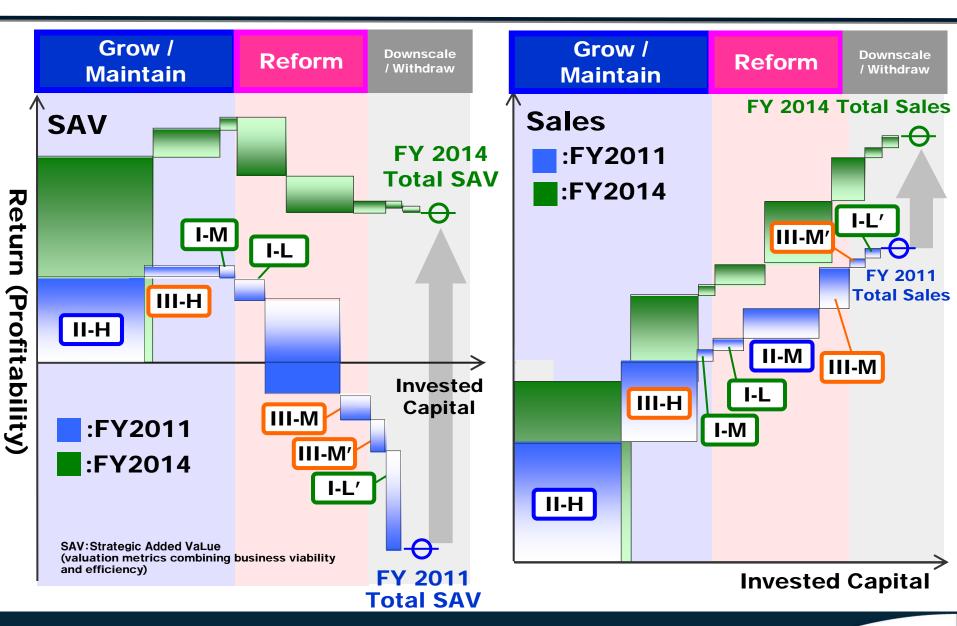
e : Business Stage

## Required Return and Invested Capital by Business Position <sup>45</sup>



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### **Invested Capital Allocation based on Business Position**



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# Sophisticate and streamline corporate organization and functions

- Reduce fixed costs to increase profits
- Deploy human resources to support global expansion by sophisticating and streamlining operations

#### **Reorganize group companies to consolidate corporate** functions

- Centrally manage all welfare facilities and real estate to cut costs
- Reduce group company expenses

### Reduce financing costs through global cash management

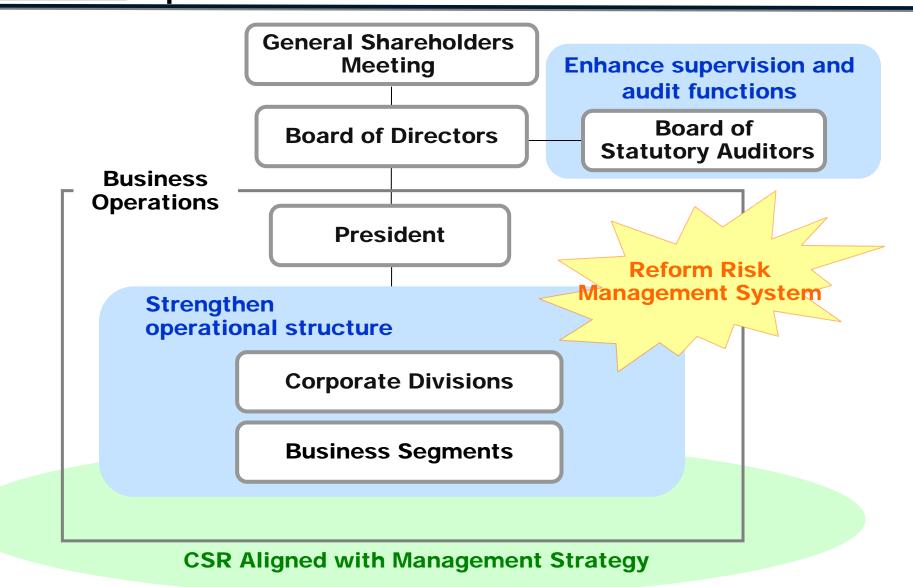
Set up financial subsidiaries in U.S., Europe, and Asia

### Make effective use of underutilized assets

 Compress and utilize assets with establishment of asset management company



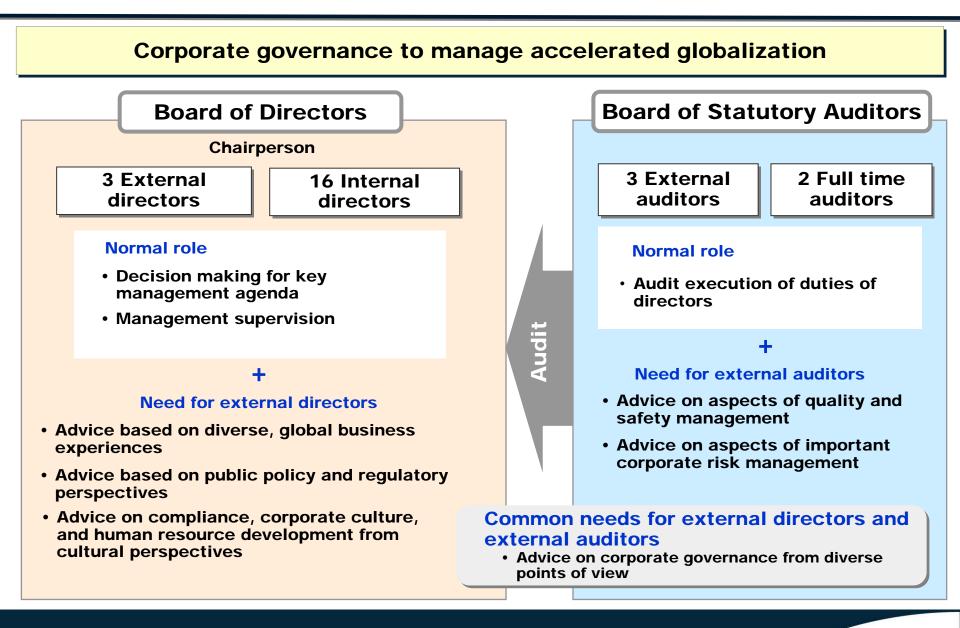
#### Manage Innovations in Corporate Governance and <sub>48</sub> Operations



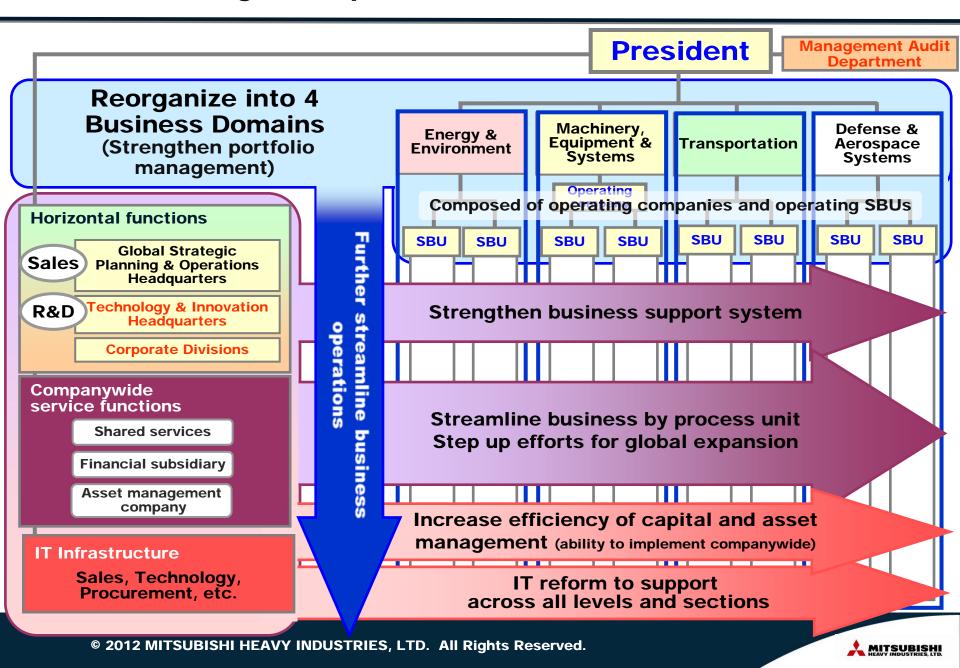
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Strategy 5





#### **Further Strengthen Operational Structure**





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# **Promote CSR Aligned to Management Strategy**

#### Contribution to sustainability of global society through "manufacturing"

- Help solve social issues through products supporting social infrastructure
- Continue to assist in recovery, reconstruction of power generating systems in the aftermath of Eastern Japan Earthquake

#### **Corporate culture to meet** stakeholder expectations and trust

- Compliance efforts to ensure fair and honest corporate citizenship
- Social contribution activities including support for the next generation



#### **CSR Action Guidelines**

In order to ensure a secure future for the Earth, we will establish and maintain,

Close ties with the Earth

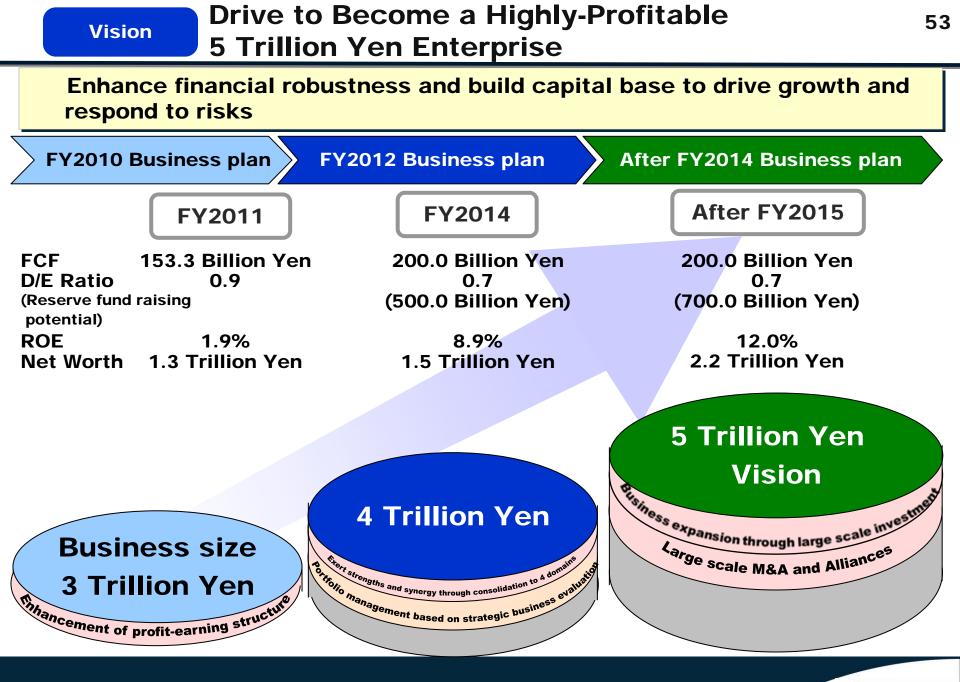
Safeguard an abundantly green Earth through environmental technologies and environmental awareness;

#### **Close ties with society**

Build a relationship of trust with society through proactive participation in society and trustworthy

Contribute to the cultivation of human resources who can shoulder responsibility in the next generation through technologies that can realize dreams.





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Our Technologies, Your Tomorrow

Forecasts regarding future performance in these materials are based on judgment made in accordance with information available at the time this presentation was prepared. As such, those projections involve risks and insecurity. For this reason, investors are recommended not to depend solely on these projections for making investment decision. It is possible that actual results may change significantly from these projections for a number of factors. Such factors include, but are not limited to, economic trends affecting the Company's operating environment, currency movement of the yen value to the U.S. dollar and other foreign currencies, and trends of stock markets in Japan. Also, the results projected here should not be construed in any way as being guaranteed by the company.

# **III. Supplementary Materials**



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(Billion yen)

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Domain	Orders Received			Net Sales			Operating Profit		
	FY2011	FY2012	FY2014	FY2011	FY2012	FY2014	FY2011	FY2012	FY2014
	Actual	Forecast	Target	Actual	Forecast	Target	Actual	Forecast	Target
Energy & Environment	1,290.0	1,350.0	1,740.0	970.0	1,130.0	1,460.0	90.0	80.0	150.0
Machinery, Equipment & Systems	970.0	1,030.0	1,240.0	920.0	1,000.0	1,160.0	30.0	40.0	80.0
Transportation	420.0	620.0	600.0	450.0	440.0	580.0	-15.0	-1.0	10.0
Defence & Aerospace	470.0	350.0	370.0	440.0	390.0	460.0	15.0	15.0	22.0
Others	80.0	80.0	80.0	80.0	80.0	80.0	10.0	8.0	10.0
Inter-group consolidation adjustments	-41.2	-30.0	-30.0	-39.1	-40.0	-40.0	-18.1	-22.0	-22.0
Total	3,188.8	3,400.0	4,000.0	2,820.9	3,000.0	3,700.0	111.9	120.0	250.0

• For the review of the method of calculation of operating profit and loss:

With the transfer to a new business operation system, company-wide R&D costs and certain headquarters administration costs, which have in the past been fully distributed over each segment will no longer be distributed over each segment from FY 2012

· Operating profit for FY 2011 in the table lists the figures based on the new calculation method

(Billion yen)

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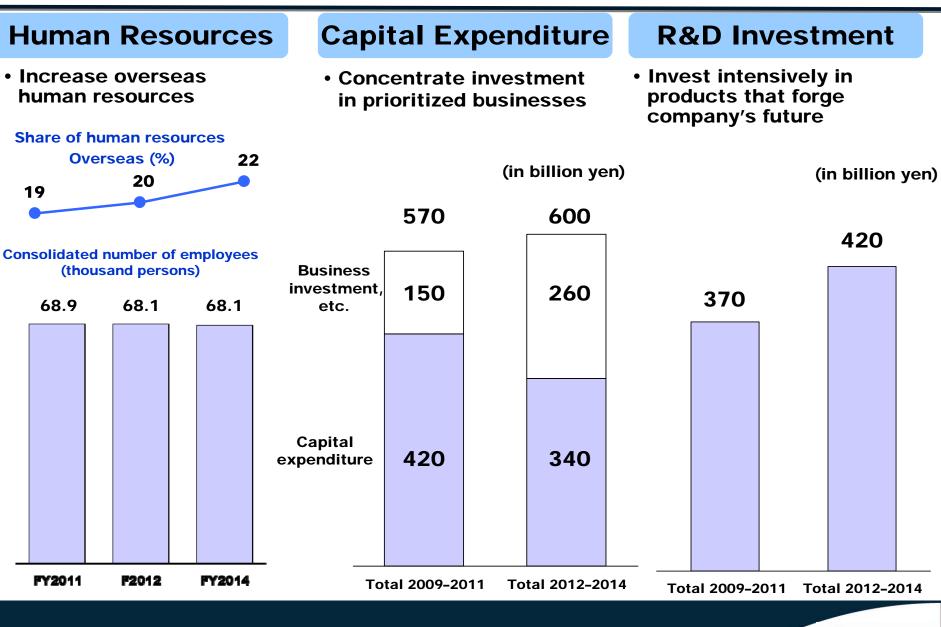
	Orders Received			Net Sales			Operating Profit		
Segment	FY2011	FY2012	FY2014	FY2011	FY2012	FY2014	FY2011	FY2012	FY2014
	Actual	Forecast	Target	Actual	Forecast	Target	Actual	Forecast	Target
Shipbuilding &									
Ocean	262.0	250.0	270.0	311.6	240.0	250.0	-3.8	3.0	8.0
Development									
Power Systems	1,235.2	1,230.0	1,420.0	955.3	1,100.0	1,320.0	92.3	75.0	143.0
Machinery &	508.2	700.0	1,020.0	428.8	530.0	760.0	25.3	33.0	54.0
<b>Steel Structures</b>	506.2	700.0	1,020.0	420.0	530.0	780.0	20.3	33.0	54.0
Aerospace	547.8	560.0	530.0	495.9	480.0	630.0	-5.3	4.0	14.0
GM & SV	386.0	390.0	430.0	381.7	390.0	430.0	5.1	10.0	26.0
Air-Con &	160.5	170.0	210.0	159.9	170.0	210.0	1.4	2.0	9.0
Refrigeration									
Machine Tool	53.8	50.0	70.0	51.1	50.0	60.0	4.0	4.0	8.0
Others	79.5	80.0	80.0	83.3	80.0	80.0	10.6	8.0	10.0
Inter-group									
consolidation	-44.5	-30.0	-30.0	-47.1	-40.0	-40.0	-17.8	-19.0	-22.0
adjustments									
Total	3,188.8	3,400.0	4,000.0	2,820.9	3,000.0	3,700.0	111.9	120.0	250.0

• For the review of the method of calculation of operating profit and loss:

With the transfer to a new business operation system, company-wide R&D costs and certain headquarters administration costs, which have in the past been fully distributed over each segment, will no longer be distributed over each segment from FY 2012

· Operating profit for FY 2011 in the table lists the figures based on the new calculation method

#### **Resource Planning**



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