



Machinery, Equipment & Infrastructure Business Plan

Executive Vice President, President and CEO,
Machinery, Equipment & Infrastructure

Kazuaki KIMURA

6.8.2015

MITSUBISHI HEAVY INDUSTRIES, LTD.

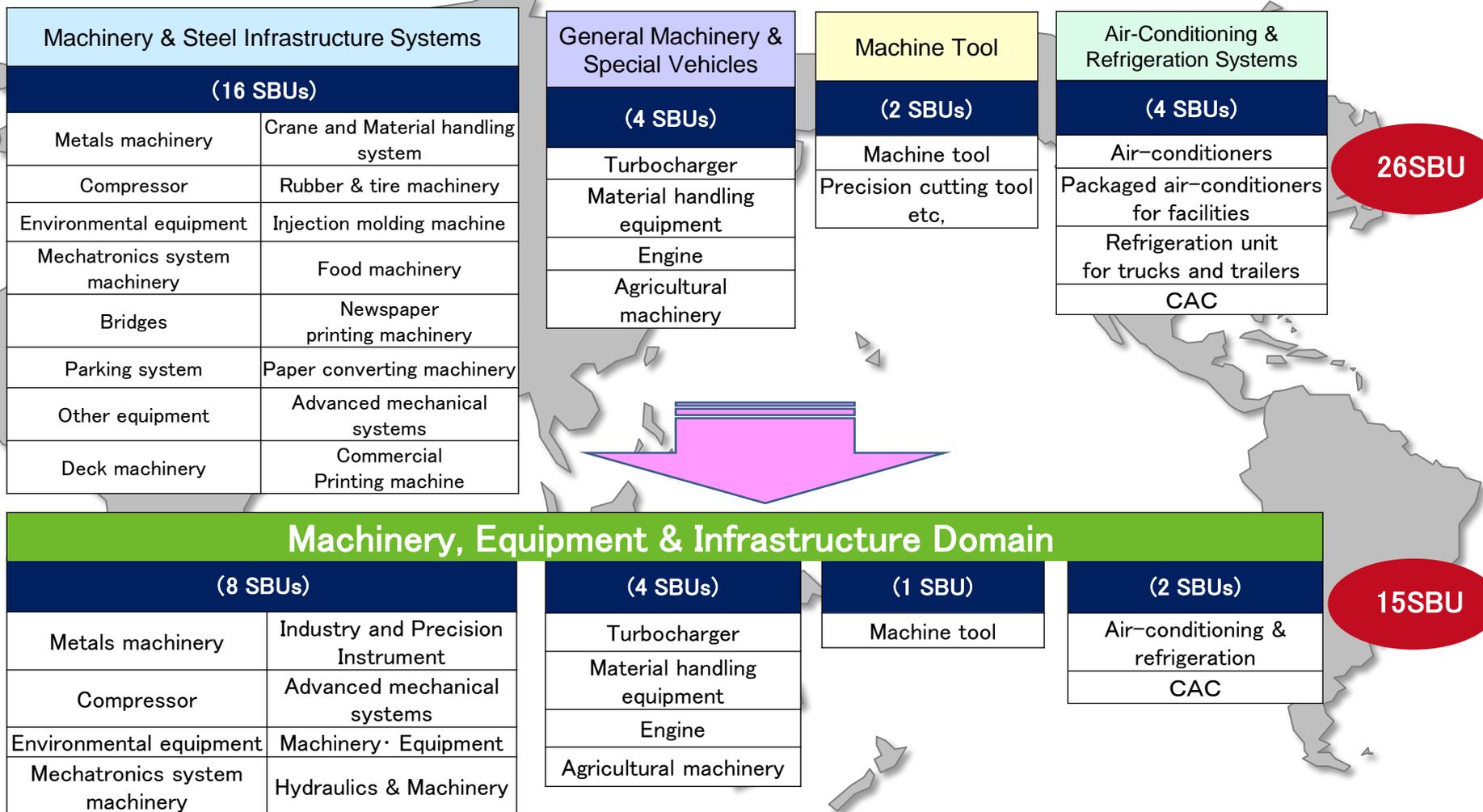
1. Business Overview
2. Review of 2012 Medium-Term Business Plan
3. 2015 Medium-Term Business Plan
4. Domain Policy
5. Business Strategies
6. Summary

1. Business Overview

1-1. Domain Launch and Restructuring of SBUs

Strategic restructuring of product mix

1. With domain's launch in April 2014, 4 business headquarters were integrated
2. 26 SBUs were consolidated into 15, generating synergies



1-2. Organizational Chart



Kazuaki Kimura
 Chief officer
 Member of the Board,
 Executive Vice President,
 President and CEO
 Machinery, Equipment &
 Infrastructure

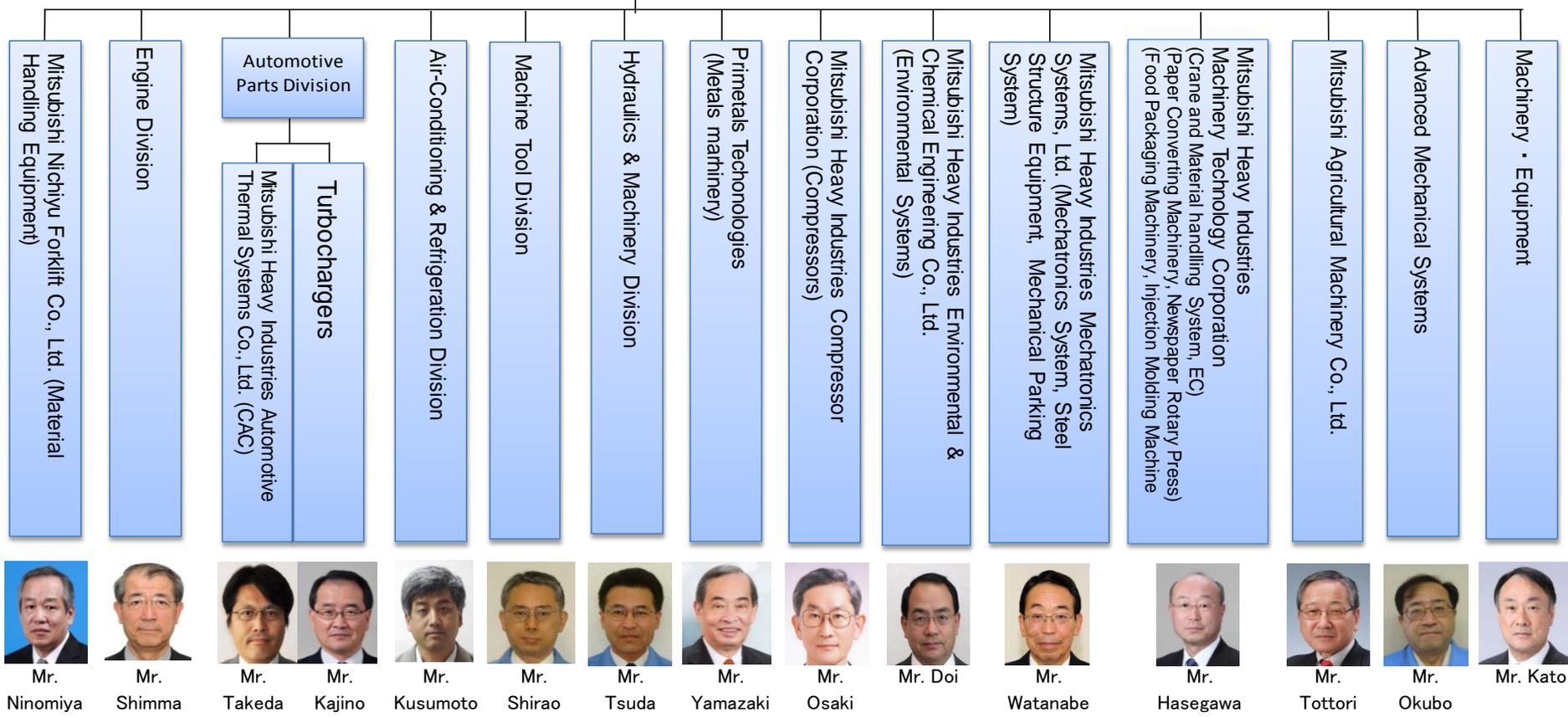
Machinery, Equipment & Infrastructure

- Business Strategy Division
- Quality Management Division
- Production Management Division
- Procurement Department

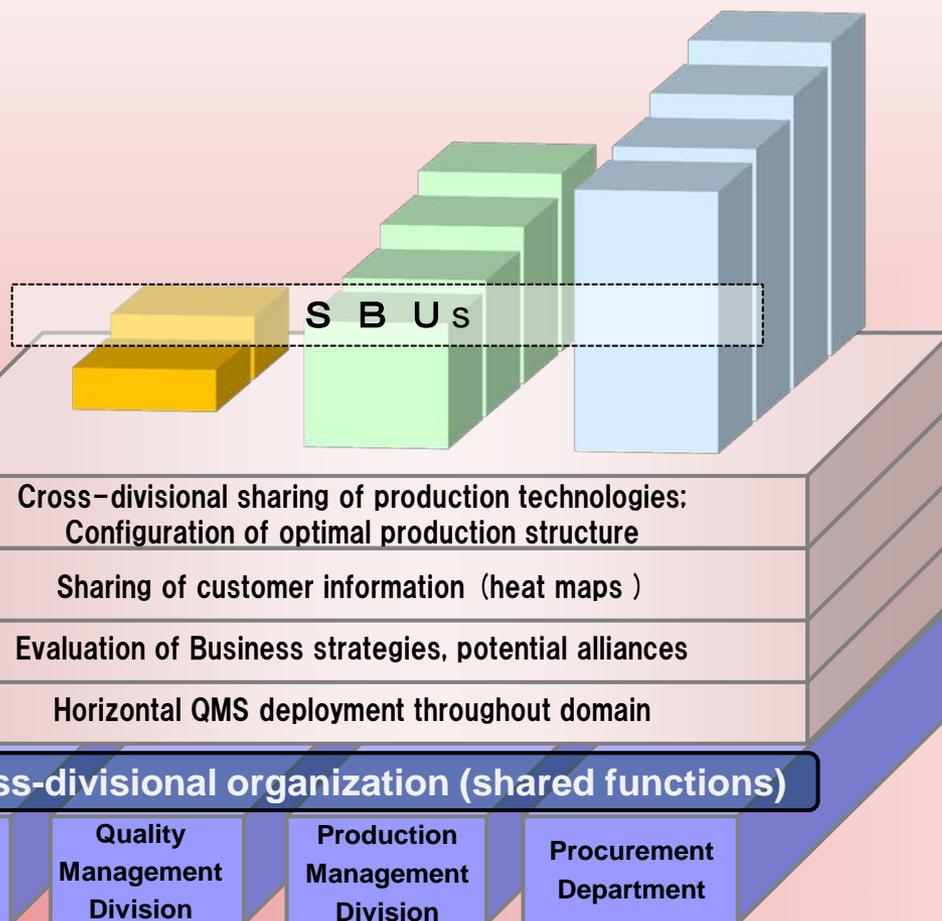
Vice President, Machinery, Equipment & Infrastructure,
 Senior General Manager



Mamoru Hasegawa Kiyoshi Okazoe Takashi Mikogami Hiroki Kato



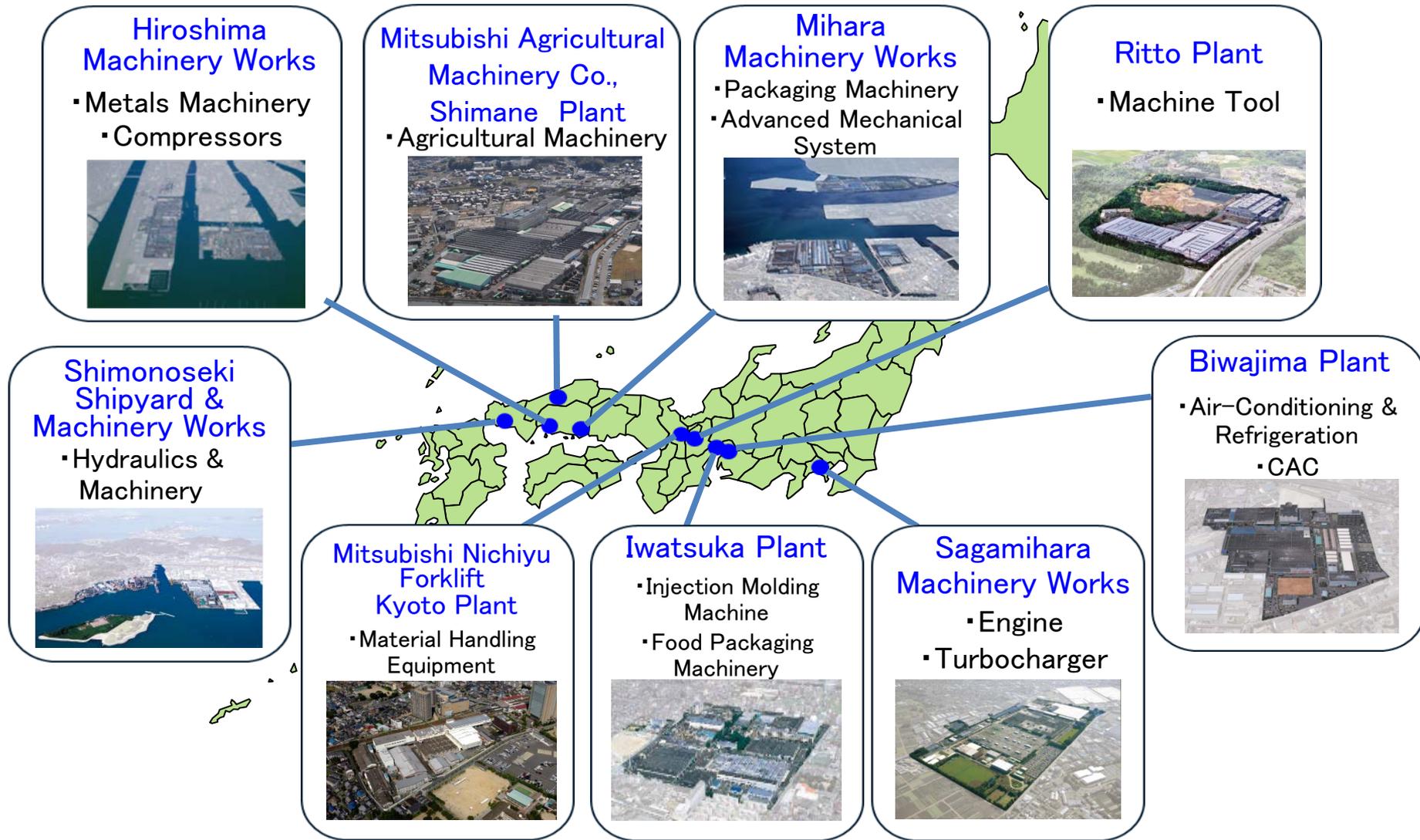
Business strengthening through the initiatives by cross-divisional organization



- ◇ Seeking growth and strengthening of overall SBUs by building up business foundation with cross-divisional (4divisions) structure (shared functions)
- ◇ Expand scale and earnings growth of the businesses applying optimal management methods in line with each SBU's characteristic

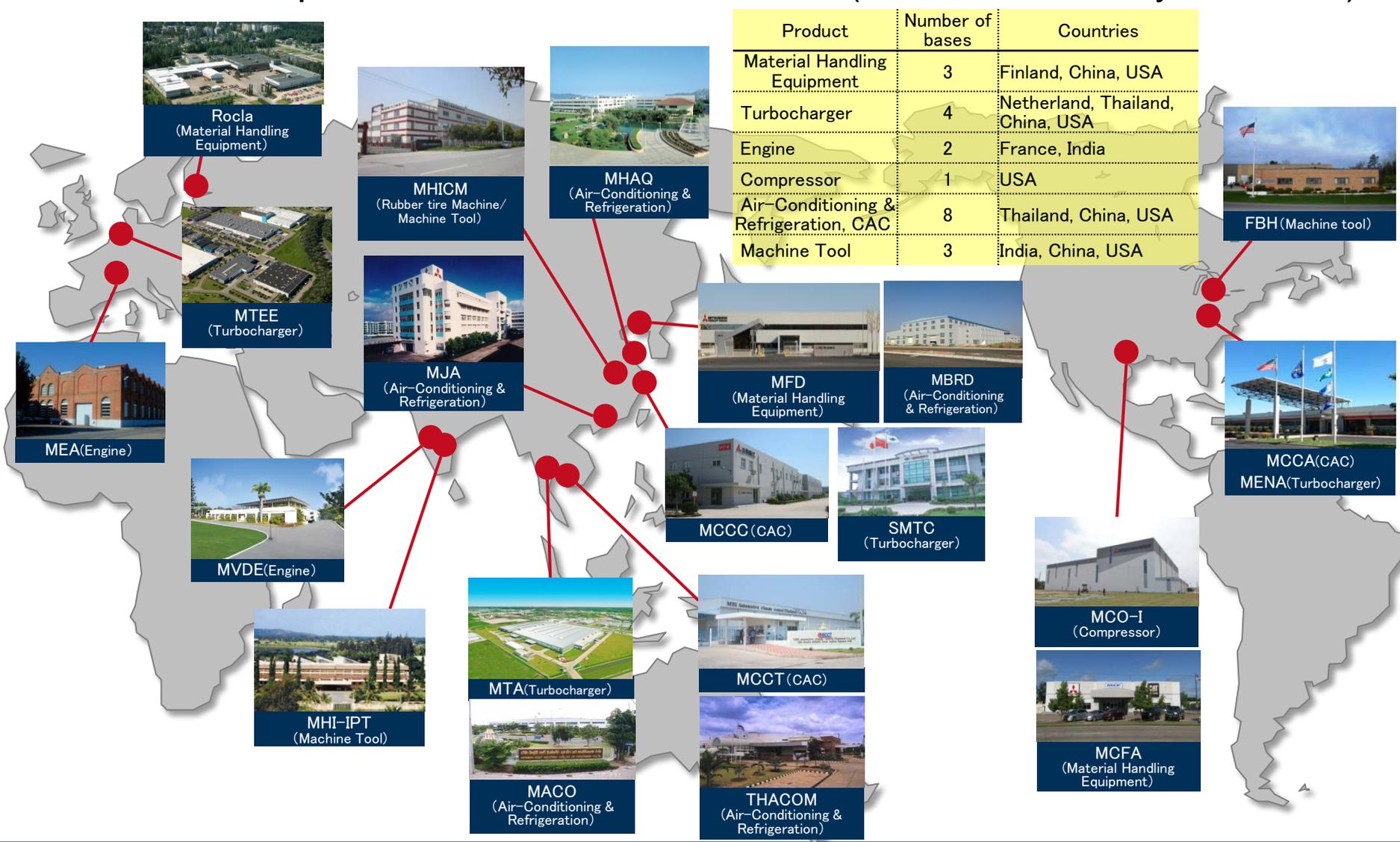
1-3. Major SBUs Domestic Production Bases

◆ Business developments at domestic bases



1-3. Major SBUs Overseas Production Bases

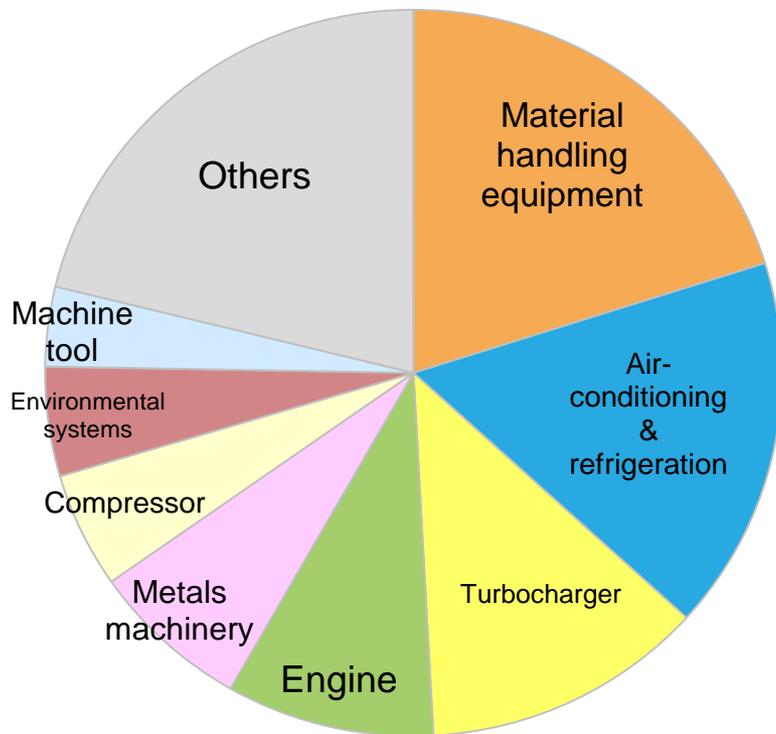
◆ Global developments at 21 worldwide bases (Metals machinery excluded)



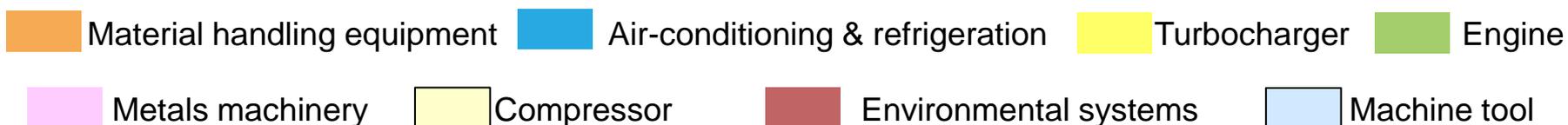
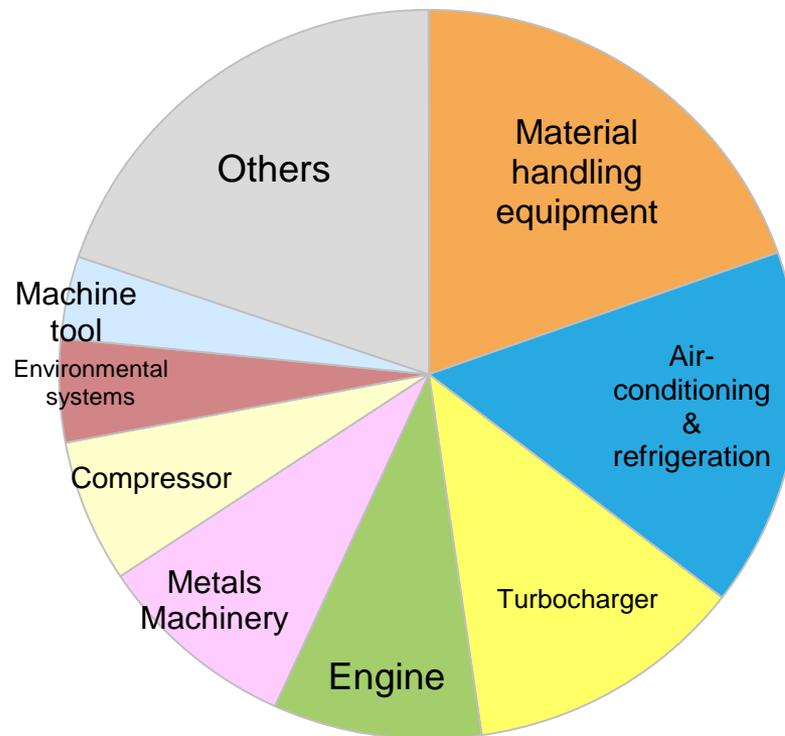
1-4. Orders received / Net Sales by SBU

Forklift trucks, air-conditioning & refrigeration, and turbochargers account for roughly half of domain's business scale.

Orders received(FY2014)



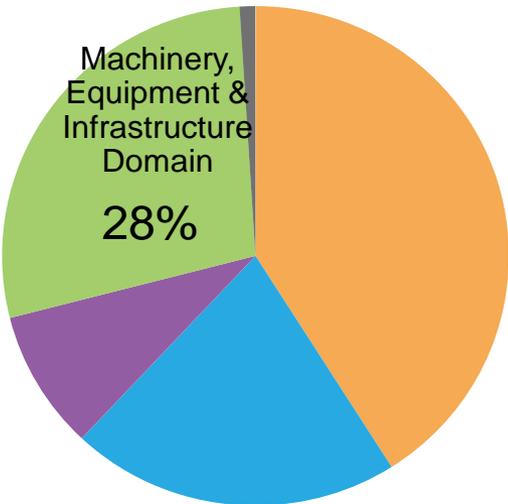
Net sales(FY2014)



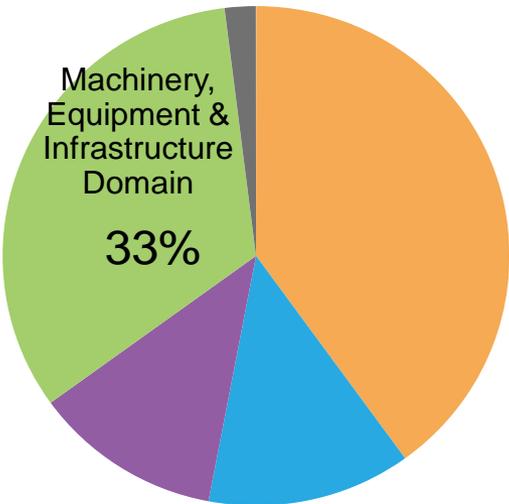
Ratio of orders received, net sales and operating income in FY2014

◆ Domain account for about one-third of the MHI group in terms of orders received, net sales and operating income

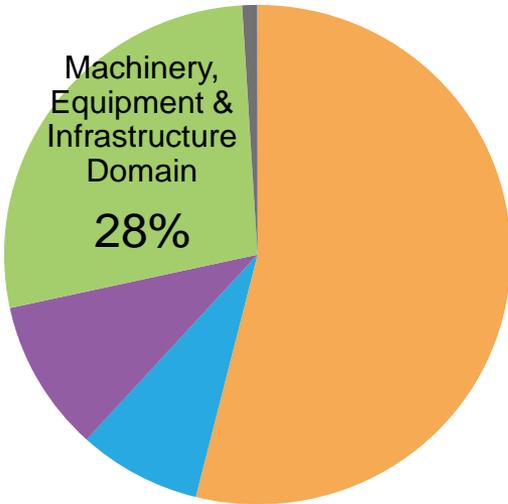
Orders received



Net sales



Operating income



2. Review of

2012 Medium-Term Business Plan

◆ In FY2014, the year the domain was launched, orders received, net sales and operating income all grew significantly.

(in billion yen)

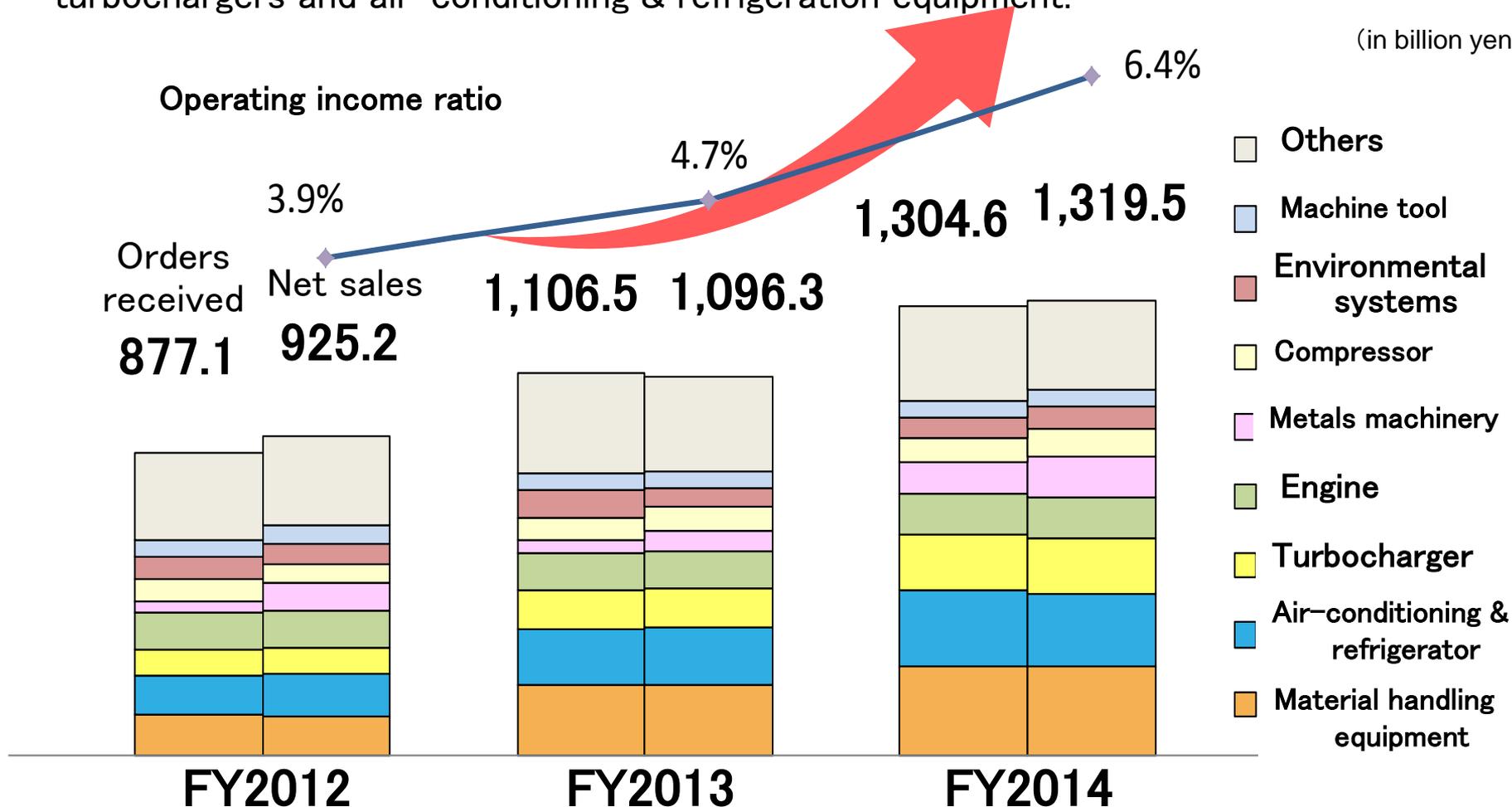
	2012		2013		2014	
	Target	Actual	Target	Actual	Target	Actual
Orders received	970.0	877.1	1,100.0	1,106.5	1,250.0	1,304.6
Net sales	1,000.0	925.2	1,050.0	1,096.3	1,250.0	1,319.5
Operating income	40.0	36.5	50.0	51.6	78.0	84.1
Operating income ratio	4.0%	3.9%	4.8%	4.7%	6.2%	6.4%

※ Areas shaded in yellow indicate results above target.

2-2. 2012 Business Plan : Sales Trends of Major Business Areas

◆ In FY2014 orders received and net sales both increased 40% compared to FY2012, largely owing to the business integration promoted in metals machinery and material handling equipment businesses and to the overseas sales expansion of turbochargers and air-conditioning & refrigeration equipment.

(in billion yen)



2-3. Review of 2012 Business Plan

Achievements of 2012 Business Plan

- ◆ Integrated 4 business headquarters and reduced numbers of SBUs as a result of the shift to domain system
 - Optimal business operation attributable to synergies generated with individual strength of each SBU.
- ◆ Acceleration of global developments
 - Expanded overseas sales of turbochargers and air-conditioning & refrigeration equipment
- ◆ Increased domain earnings through a variety of Cross-SBU initiatives in the following areas:
 - Manufacturing: Encouraging of sharing production technologies, configuration of optimal production structure (integration of die-casting factories, etc.)
 - Sales: Developing of new business opportunities, sharing customer information
 - Quality: Carrying out of quality control thoroughly, deploying horizontal QMS throughout the domain

FY2014 Business targets achieved

Operating income ratio in FY2013: 4.7% ⇒ Increased to 6.4% in FY2014

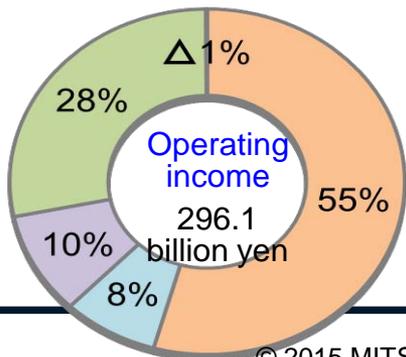
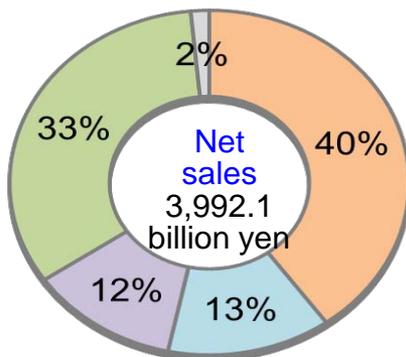
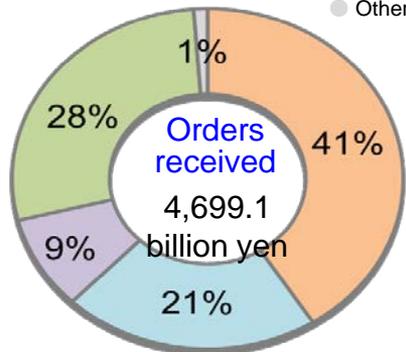
3. 2015 Medium-Term Business Plan

3-1. 2015 Business Plan of MHI group

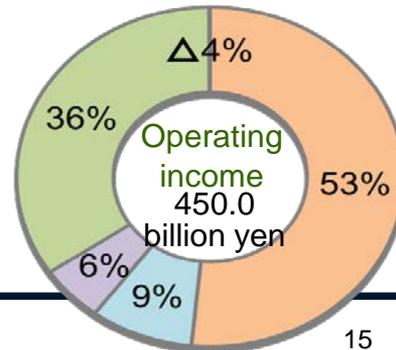
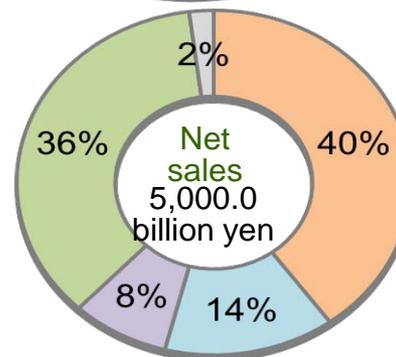
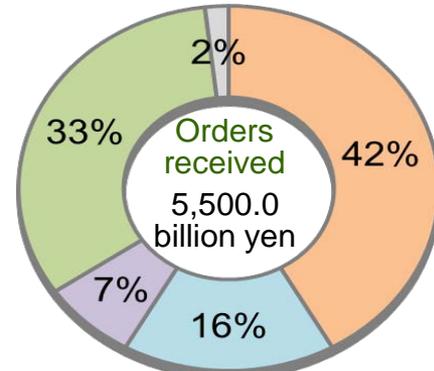
- Energy & Environment
- Commercial Aviation & Transportation Systems
- Integrated Defense & Space Systems
- Machinery, Equipment & Infrastructure
- Others

FY2014

FY2017



Domain	Main measures and fluctuating factors	Orders/ Net sales	Operating income
Energy & Environment	• Expanded synergies at MHPS	○	○
	• Overall expansion of servicing business	○	○
	• Distributed power sources, oil & gas, etc.	○	-
Commercial Aviation & Transportation Systems	• Expansion of Boeing-related business	○	○
	• MRJ (contribution to net sales starting FY2017)	○	△
	• Strengthening of land transportation systems	-	○
	• Reform of commercial ship business	-	○
Integrated Defense & Space Systems	• Demand to hold steady through FY2017; preparations for expansion of business in equipment, etc.	-	-
Machinery, Equipment & Infrastructure	• Synergies at Primetals (Metals machinery business)	○	○
	• Strengthening of compressors, turbochargers, etc.	○	○
	• Accelerated business restructuring (including M&A's)	○	○



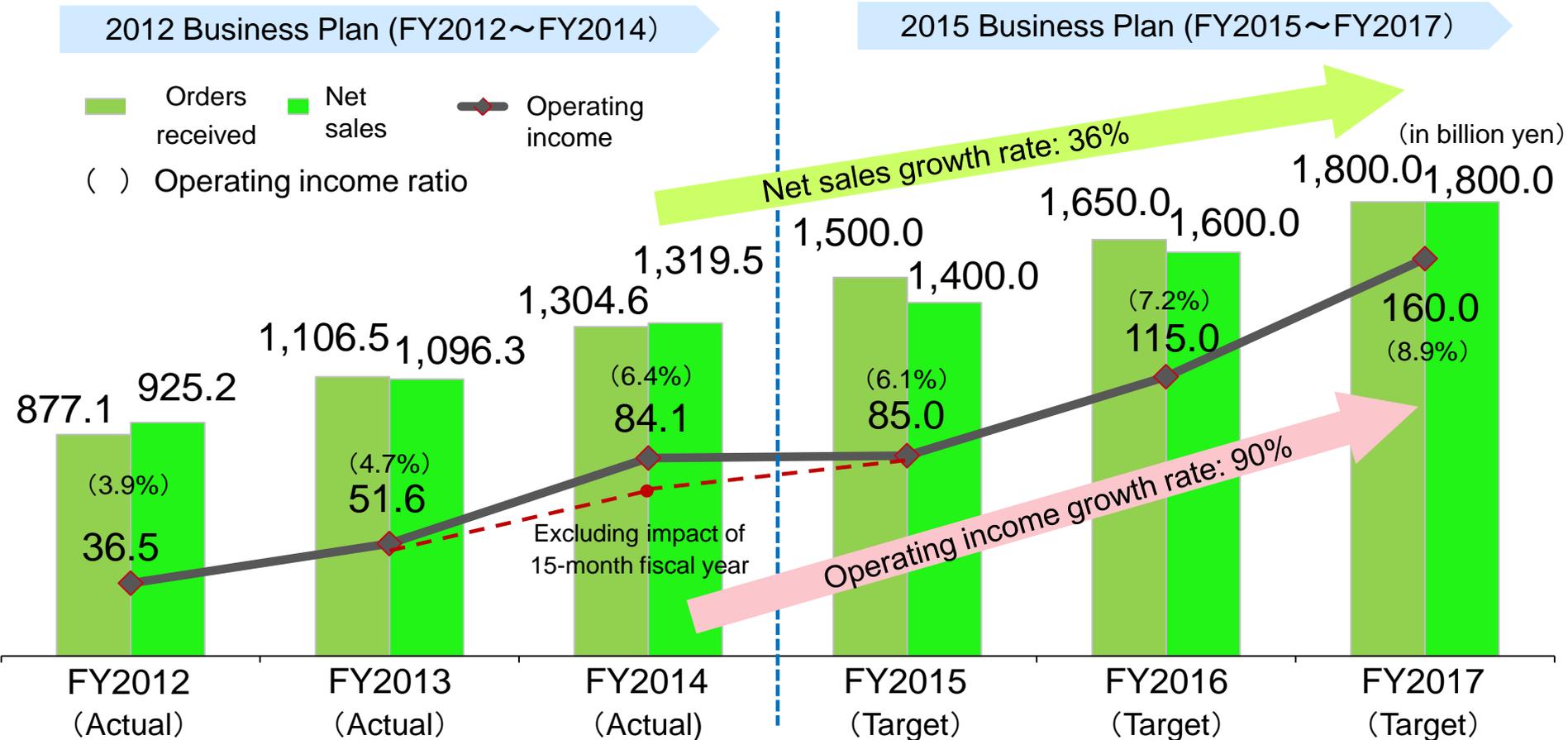
3-2. 2015 Business Plan of MHI Group : Growth Strategy

Business Domain	Strategies	Main Measures
 Energy & Environment	<ul style="list-style-type: none"> Simultaneously pursue short-term earnings and mid/long-term growth, with business expansion and profitability at the core (swift response to moves made by mega competitors) Promote long-term continuation policy for nuclear power business 	<ul style="list-style-type: none"> Enter markets for high-performance models (large-scale GT); enhance lineups Strengthen servicing business (employ ICT and big data; invest human resources) Expand networks of domestic and overseas manufacturing bases Expand business in distributed power generation systems (joint development with Machinery, Equipment & Infrastructure domain) Full-scale entry in oil & gas upstream business (keeping collaborations and M&A's in view)
 Commercial Aviation & Transportation Systems	<ul style="list-style-type: none"> Improve profitability of commercial airplane products Advance MRJ development and improve airframe value Undertake bold conversions in commercial and cruise ship businesses Expand business in land transportation systems 	<ul style="list-style-type: none"> Promote increased production in businesses for Boeing and develop next-generation production processes Steadily carry forward the MRJ's development and develop a high-volume manufacturing base Develop a new infrastructure export model based on domain synergies Develop new business model for cruise ship business Strengthen ability to promote business in large-scale overseas projects (Doha, etc.)
 Integrated Defense & Space Systems	<ul style="list-style-type: none"> Undertake sustained strengthening of existing businesses and prepare for next expansion step (initiatives to promote overseas business and conversion to commercial market needs) 	<ul style="list-style-type: none"> Undertake concentrated strengthening of integrated defense systems (land, sea, air) Newly launch a state-of-the-art technology business department and promote the following: <ul style="list-style-type: none"> Development of new overseas businesses through tieups with overseas partners Development consumer demand-based businesses applying dual-use technologies
 Machinery, Equipment & Infrastructure	<ul style="list-style-type: none"> Along with the Energy & Environment domain, pursue achievable and immediately effective measures from the perspective of supporting the MHI Group's scale and earnings 	<ul style="list-style-type: none"> Promote and accelerate PMI in metals machinery and forklift trucks Expand compressor business in the field of oil & gas Establish a global business structure for turbochargers Further accelerate business restructuring (including M&A's)

3-3. 2015 Business Plan of Domain : Numerical Target

【Business expansion during the 2015 Business Plan】

- Shifting to a highly profitable business of 1.8 trillion yen enhancing globalization & business restructuring by M&A/alliances



4. Domain Policy

Create top businesses in global niche markets

I . Expand scale and earnings in growing businesses

- Turbochargers:
Establish 10-million-unit production system
- Compressors:
Capture North American oil and gas markets

II . Accelerate PMI of the established joint ventures

- Metals machinery:
Accelerate PMI through collaboration between
Primetals Technologies Ltd. and domain
- Material handling equipment
Harvest synergies from integration with Nichiyu

III . Restructure and integrate small/medium-scale businesses

- For small/medium-scale businesses that face difficulty achieving sustained growth independently, promote business expansion/revitalization and strengthening of earning capacity applying optimal means suited to each business's traits

Cross-divisional sharing of
production technologies;
configuration of optimal
production structure

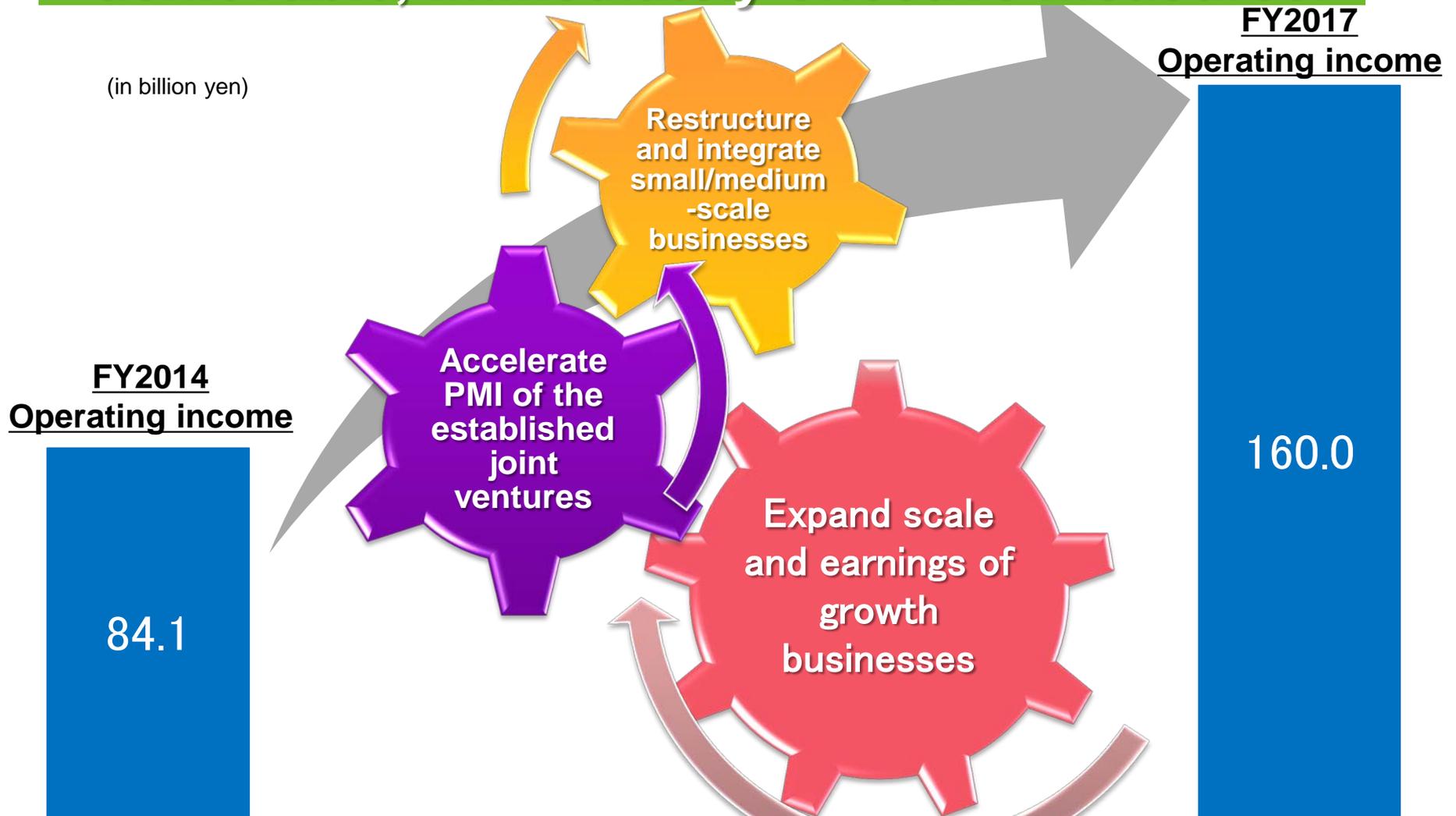
Sharing of customer
information

Horizontal QMS
deployment
throughout domain

Cross-divisional function sharing throughout domain

4-1. Basic Policies of 2015 Business Plan: Strengthening of Earning Capacity

Improve earning capacity through achievable, immediately effective measures.



4-1. Basic Policies of 2015 Business Plan: Measures for Expanding Growth Businesses

Details in following pages

Category	SBU	Measures
Global business expansion	Turbo-charger	<ul style="list-style-type: none"> Secure top global share in automotive market (establish 10-million-unit production structure). Expand sales in growing Chinese and North American markets; achieve global sales/production network. Expand into truck market and develop electric products, to achieve further business expansion.
	Compressor	<ul style="list-style-type: none"> Capture the North American oil and gas markets. Secure top share in ethylene and fertilizer markets. Strengthen earning capacity through expansion of service business and incorporation of peripheral equipment.
Business expansion through global M&A's	Material handling equipment	<ul style="list-style-type: none"> Harvest synergies from integration with Nichiyu. Expand business scale and profits through implementation of growth strategies.
	Metals machinery	<ul style="list-style-type: none"> Joint effort between Primetals and domain to accelerate PMI (Achieve global M&A model).
New domestic business initiatives and overseas business expansion	Environmental equipment	<ul style="list-style-type: none"> Further strengthen domestic business (solutions business, etc.). Expand new business areas (overseas PPP, wood biomass, etc.).
Development of new businesses and new markets through cross-domain sharing, etc.	Engine	<ul style="list-style-type: none"> Expand business scale in distributed power systems market. Expand existing engine business and OEM operations.
	Air-conditioning & refrigeration	<ul style="list-style-type: none"> Expand thermal solutions business. Participate in total energy solutions business.

**【 Turbochargers:
U.S. plant opening ceremony】**



**【Compressors:
Completion of U.S. plant】**



**【Environmental equipment:
Singapore waste treatment plant】**



5. Business Strategies

Create top businesses in global niche markets

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Sharing of customer information

Horizontal QMS deployment throughout domain

Cross-divisional function sharing throughout domain

5-1. Expand scale and earnings of growth businesses

① Turbocharger

Business environment

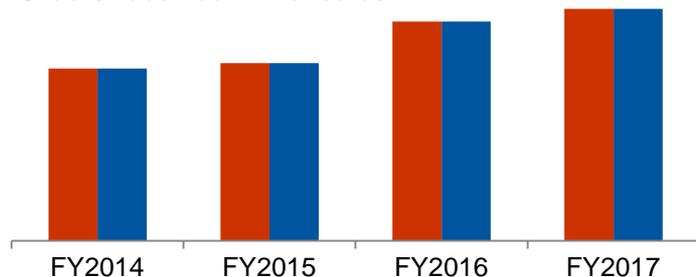
- Sustained growth is expected in demand for turbochargers in passenger cars.
- Whereas the traditional focus has been on turbochargers for diesel-powered vehicles, going forward demand for use in gasoline-powered vehicles is expected to grow at annualized 10%.
- Chinese and North American markets for turbochargers for gasoline-powered vehicles are expected to grow significantly.

Basic management policies

- ◆ Establish 10-million-unit production structure by 2016. (Secure top share in global market for passenger cars.)
- ◆ Achieve sales expansion in the growing Chinese and North American markets and a global production structure with plants located near customers.
- ◆ Accelerate development of new models, and pursue differentiation through enhanced customer support.

Orders received / Net sales

■ Orders received ■ Net sales



Business strategies

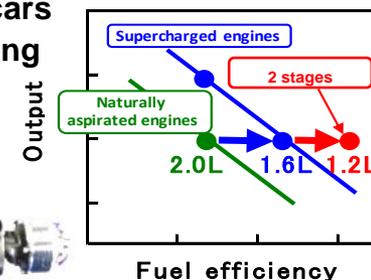
◆ Expand sales for use in passenger cars and develop new products for entering into the truck field.

- Develop variable-geometry turbochargers for gasoline engines.
- Develop new systems.

Turbocharger + Electric compressor



【 Downsizing 】



◆ Enhance cost competitiveness and better quality

- Develop and install the world's most automated production lines.
- Expand global procurement.

◆ Strategies for increasing orders (customer support)

- Strengthen European operation as "The second development center".
- Meet customers' demand for shorter engine development period.

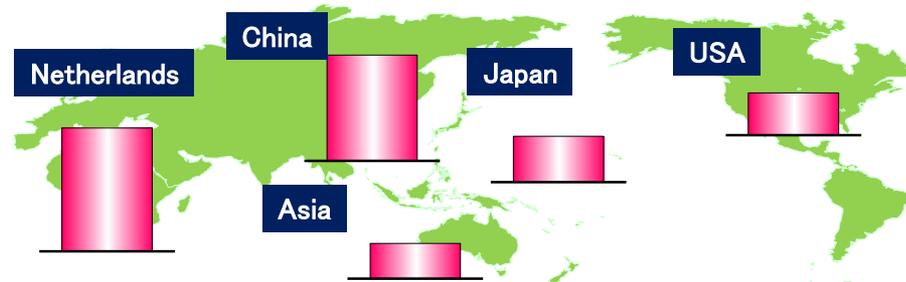
5-axis machining center



Sample turbocharger workshop (Europe)



◆ Establish global production system (10 million units by 2016)



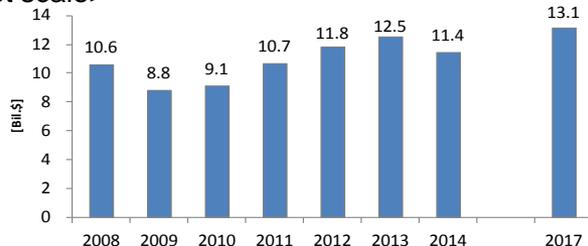
② Compressor

Business environment

Market scale / trend

Impact to come from oil prices and other factors, but expansion will continue over the long term

<Market scale>



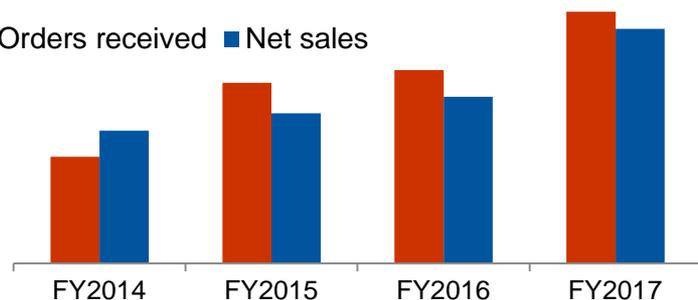
Basic management policies

◆ Secure significant business expansion and high profits, to successfully compete in global market

- Improve Japanese and U.S. production/service structures
- Expand service business ratio

Orders received / Net sales

■ Orders received ■ Net sales



Business strategies

- ◆ **Build up track record and expand market share in oil & gas**
 - Forge collaborative structures with major players liaising with Oil & Gas Business Development Dept.
- ◆ **Strengthen competitiveness and further increase market share in chemical plant business**
 - Maintain top market share in ethylene/fertilizer/methanol by strengthening competitiveness through application of world's shortest delivery method (30% reduction in lead time)
- ◆ **Strengthen sources of stable earnings through expansion of service business (net sales ratio: 40%)**
 - Expand North American renovation and service business by launching U.S. production base.

[Operations at U.S. production base launched in April 2015]



◆ Strengthen structures to achieve global growth

- Establish tri-polar (Japan/U.S./Europe) global business structure.
- Establish production bases in Brazil, Russia and Korea.
- Improve and enhance efficiency of business processes through introduction of global standards systems.

Create top businesses in global niche markets

I . Expand scale and earnings of growth businesses

- Turbochargers:
Achieve 10-million-unit production system
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II . Accelerate PMI of the established joint ventures

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- Material handling equipment:
Harvest synergies from integration with Nichiyu

III . Restructure and integrate small/medium-scale businesses

- For small/medium-scale businesses that face difficulty achieving sustained growth independently, promote business expansion, revitalization and strengthening of earnings capacity applying optimal means suited to each business's traits

Cross-divisional sharing of production technologies; configuration of optimal production systems

Sharing of customer information

Horizontal QMS deployment throughout domain

Cross-divisional function sharing throughout domain

5-2. Accelerate PMI of the established joint ventures

◆ Promote PMI/harvest synergies in Metals machinery and Material handling equipment

Metals machinery

- Development of worldwide business network through integration of respectively strong geographic regions
- Re-organization of domestic and overseas manufacturing bases
- Reduction and optimization of the costs of procurement and reserch & development
- Increase in EPC work

Prmetals Technologies, Limited opening ceremony



Material handling equipment

- Harvest synergies from business integration such as sharing of components, operational efficiency enhancement, etc.
- Expansion of business scale and profits through implementation of “growth strategies” such as expansion of warehousing and service businesses

New model of counterbalanced electric forklift trucks for Europe



5-2. Accelerate PMI of the established joint ventures

Metals machinery

Business environment

Market scale / trend

- Decline from approx. 3 trillion yen in FY2013 to approx. 2.4 trillion yen in FY2014

Market share, competitive status

- Estimated 10% market share in FY2013

Competitive superiority

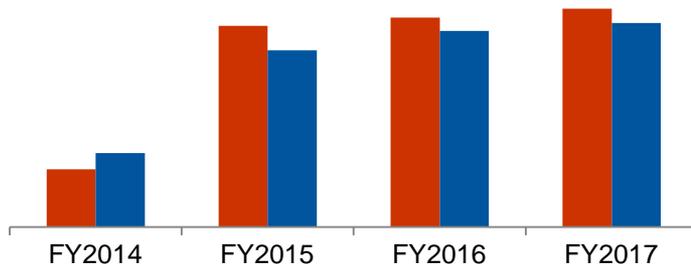
- Response capability to market needs through formation of full-lineup structure from upstream (blast furnace) to downstream (galvanizing equipment)
- Market presence availing of global business bases (24 countries)

Basic management policies

- ◆ Meet the ever-increasing needs and challenges of the customers by providing world-class technologies, lifecycle services, and equipment with superior-quality workmanship
- ◆ Accelerate integration synergies and secure position of the world leader in metallurgical plant solutions

Orders received / Net sales

■ Orders received ■ Net sales



Business strategies



◆ Strengthen corporate structure through promotion of PMI activities

Start up 6 task forces charged with the following tasks

- Review and boost efficiency of sales and marketing structures
- Optimize total company organization (flat, swift decision-making)
- Reap synergy effects (optimization of supply chain and R&D scope)
- Eliminate redundant products and technologies
- Create plans for achieving optimal operation of production bases
- Undertake cost structure analysis and strengthen competitiveness

◆ Secure orders availing of comprehensive capabilities

- For each project, conduct an analysis of other companies (technology/competitiveness) to make the proposal strategy
- Enhance maintenance and service business (expand orders for small/medium-scale renovation work and spare parts)
- Introduce and expand sales of former Siemens's upstream/non flat products into the Japanese market

◆ Promote development of new technologies (including environmental) matching customer needs

◆ Secure profitability through sound implementation of ordered projects

- Strengthen project management (enhance the entry management and the coordination among the local entities)
- Prevent reoccurrences of malfunction/complaints.



Create top businesses in global niche markets

I . Expand scale and earnings of growth businesses

- Turbochargers:
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II . Accelerate PMI of existing integrated companies

- Metals machinery:
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Primetals Technologies Ltd. and domain
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III . Restructure and integrate small/medium-scale businesses

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Cross-divisional sharing of
production technologies;
configuration of optimal
production systems

Sharing of customer
information

Horizontal QMS
deployment
throughout domain

Cross-divisional function sharing throughout domain

Business expansion/revitalization and strengthening of earning capacity of small/medium-scale businesses having difficulty achieving sustained growth independently

Measures

For profitable, non growth businesses

1. Expand through M&As/alliances so as to be mutually complementary and reinforce each business
2. Strengthen business structures and resources through business consolidation and/or creating business entities

For lower profitable businesses

3. Revitalize through M&A/alliances
In case of difficulty of above measure, reallocate resources to growth businesses through withdrawals from the businesses, etc

To make all SBUs profitable and expand the profit margin within the 2015 Medium Term Business Plan

Near-term business restructuring plans

1. Expand through M&As/alliances so as to be mutually complementary and reinforce each other's business

Businesses	Plans for implementation	Timing
Electrostatic precipitators	Integration with Hitachi Plant Construction, Ltd. and conversion to group company of MHPS(Mitsubishi Hitachi Power Systems)	10.01 2015
Tunnel excavation machinery	Integration with Japan Tunnel Systems Corporation	01.01 2016

2. Strengthen business structures and resources through business consolidation and creating business entities

Hydraulic machinery, accelerators, ITS	Restructuring/integration of small/medium-scale businesses and consolidation into MHI-MS (Mitsubishi Heavy Industries Mechatronics Systems, Ltd)	10.01 2015
Machine tool	Creation of new business entity with sales company	10.01 2015

3. Revitalize business through M&A/alliances

Bridges construction	Transfer of stocks to Miyaji Engineering Group, Inc.	04.01 2015
Material handling systems	Integration with Sumitomo Heavy Industries Material Handling Systems Co., Ltd.	10.01 2015
Agricultural machinery	Capital participation by Mahindra & Mahindra Ltd. of India	10.01 2015

5-3. Restructure and integrate small/medium-scale businesses

1. Expand through promoting M&As/alliances with other companies in the same business categories so as to be mutually complementary and reinforce each other

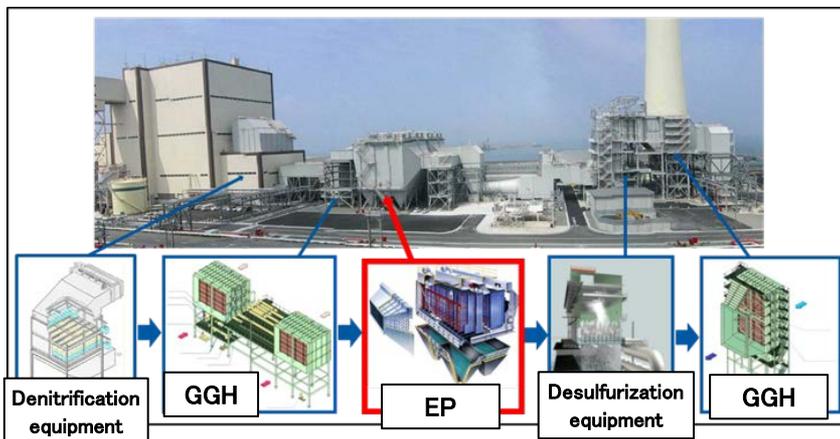
Electrostatic precipitators (EP) Integration with Hitachi Plant Construction, Ltd.

Aims

◆ Strengthen business by achieving full AQCS (air quality control system)

- Achieve full lineup by adding electrostatic precipitators to MHPS group's deNOx / deSOx equipment, gas-gas heaters, heat recovery systems
- Accelerate overseas expansion of electrostatic precipitators applying MHPS's overseas response capability, and boost competitiveness through consolidation in areas besides electric power

AQCS equipment configuration



Tunnel excavation machinery Integration with Japan Tunnel Systems corporation

Aims

◆ Attract domestic demand and accelerate overseas expansion

- Domestic market demand will shrink after the Tokyo Olympics, whereas overseas demand is expanding.
- In view of market trends, integration of MHI's shield tunneling machine business, which has outstanding technological capability and a track record on global scale, with JTSC, which has the top domestic market share, will be taken under consideration.
- Aim is to become a global leader in shield tunneling machines by combining areas of strength and mutually complementary technologies*

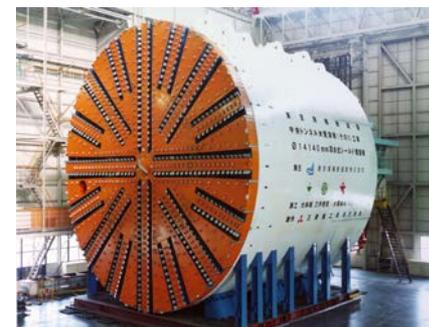
Ownership ratios

- JTSC 60%
- MHI 40%

(※)

- JTSC
Lineup from small/medium to large diameter machines
- MHI
Large-diameter machines, stone-cutting machines, bedrock excavators, technology enabling response to special usage conditions

Shield machine
(Tunnel excavation machinery)



2. Strengthen business structures and resources through promoting business consolidation and creating business operating entities

Hydraulic machinery, Accelerators , ITS *, consolidation into MHI-MS *

Aims

◆ **Synergy from combining products/technologies; flexible allocation of resources through achievement of numerous areas of business strength**

- Expand applications of hydraulic technology to testing/inspection equipment, culture/sports facilities, etc.
- Accelerate integration of mechatronics technologies and provide system products applying accelerators
- Enhance efficiency through integration of domestic ITS* installation and maintenance work
- Expand applications of ITS and ICT** to other products

Hydraulic motor



Testing equipment
(vibration-induced destruction testing system)



(*) ITS: intelligent transportation systems
(highway toll collection systems, traffic control systems, etc.)

ICT: information and communications technology

MHI-MS: steel structures, mechanical parking systems, testing equipment, culture/sports facilities, etc.

Machine tool, Creating business entity with sales company

Aims

◆ **Strengthen business structure to compete against specialized manufacturers**

- As market demand structure undergoes vast changes, specialized manufacturers are increasing their competitiveness through swift decision-making.
- To compete: Strengthen market response capability through conversion to a business entity
Enhance organizational flexibility by unifying production and marketing.
Achieve swift decision-making and clarify business responsibilities

Ritto Plant
(Headquarters of
New business entity)



Gear grinding machine



3. Revitalize business through M&A/alliances

Bridges Construction:

Transfer of stocks to Miyaji Engineering Group, Inc.

◆ Strengthen market response capability through integration of strong fields and synergies in sales and technology

- The market for bridges construction is expected to enter a recovery phase going forward.
- By transferring stocks to Miyaji Engineering Group, having a good sales record in steel bridges, earning capability will be strengthened through the accumulation and improvement of technological capabilities and management streamlining.



Crane and Material handling systems : Integration with SHI-MHS*

◆ Strengthen domestic market response capability through expanded product lineup and synergies

- Long-term market trend looks for maturation along with contraction of domestic industries.
- Improvement of product models and service lineups, integration of technological capabilities and knowhow, and optimal allocation of management resources
- In the future, growth capital will be invested overseas and into new products and businesses.

* Sumitomo Heavy Industries Material Handling Systems Co., Ltd.



Agricultural Machinery: Capital participation by Mahindra & Mahindra Ltd. of India

◆ Expand OEM supplies and expand business in global markets through procurement and technological synergies

- Strengthen response capability to domestic and overseas markets through building of efficient supply chain and achievement of low costs
- Improve Mahindra & Mahindra's lineup, expand Asian business through wider adoption of Japanese type farm equipment, and expand OEM supplies to global markets

Press conference announcing alliance

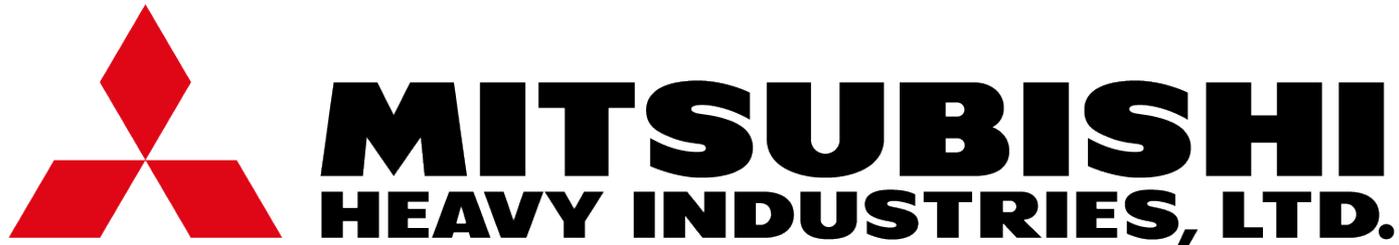


6. Summary

Business Initiatives of Machinery, Equipment & Infrastructure Domain

- **Expand scale and earnings of growth businesses**
- **Accelerate promotion of PMI at the established joint ventures**
- **Restructure and integrate small/medium-scale businesses**

Implementing effective and achievable measures to support the foundation of MHI group's growth in scale and earnings



Our Technologies, Your Tomorrow

A red arrow graphic pointing to the right, positioned below the main heading.

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.