

Machinery & Steel Structures Business Operation

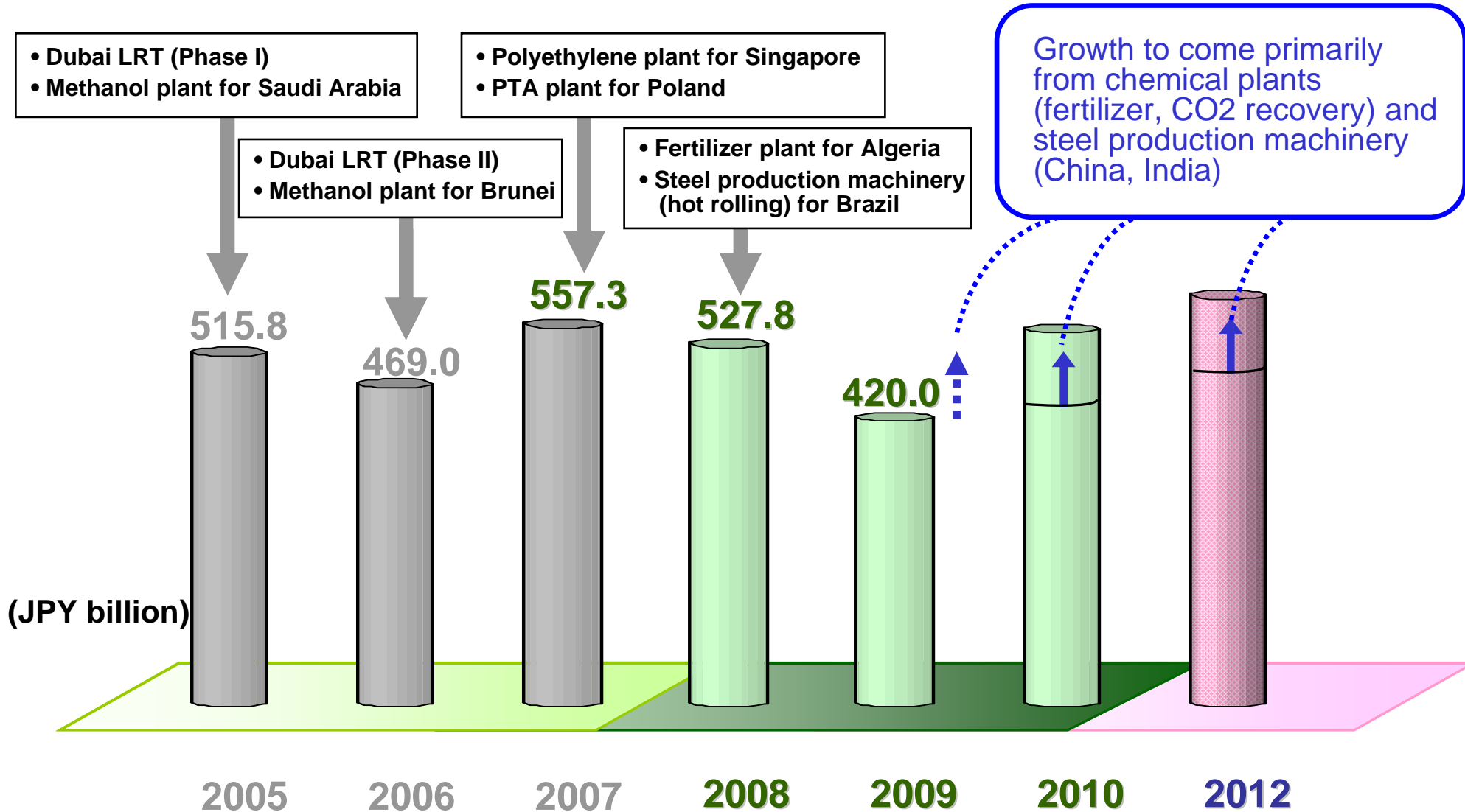
June 3, 2009

 **MITSUBISHI HEAVY INDUSTRIES, LTD.**

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- 1. Business Situation**
- 2. FY2008 Earnings & FY2009 Outlook**
- 3. Special Measures for FY2009**
- 4. Medium/Long-term Strategies**
- 5. Strategies for Each Business**
- 6. Initiatives toward New Businesses**
- 7. Summary**

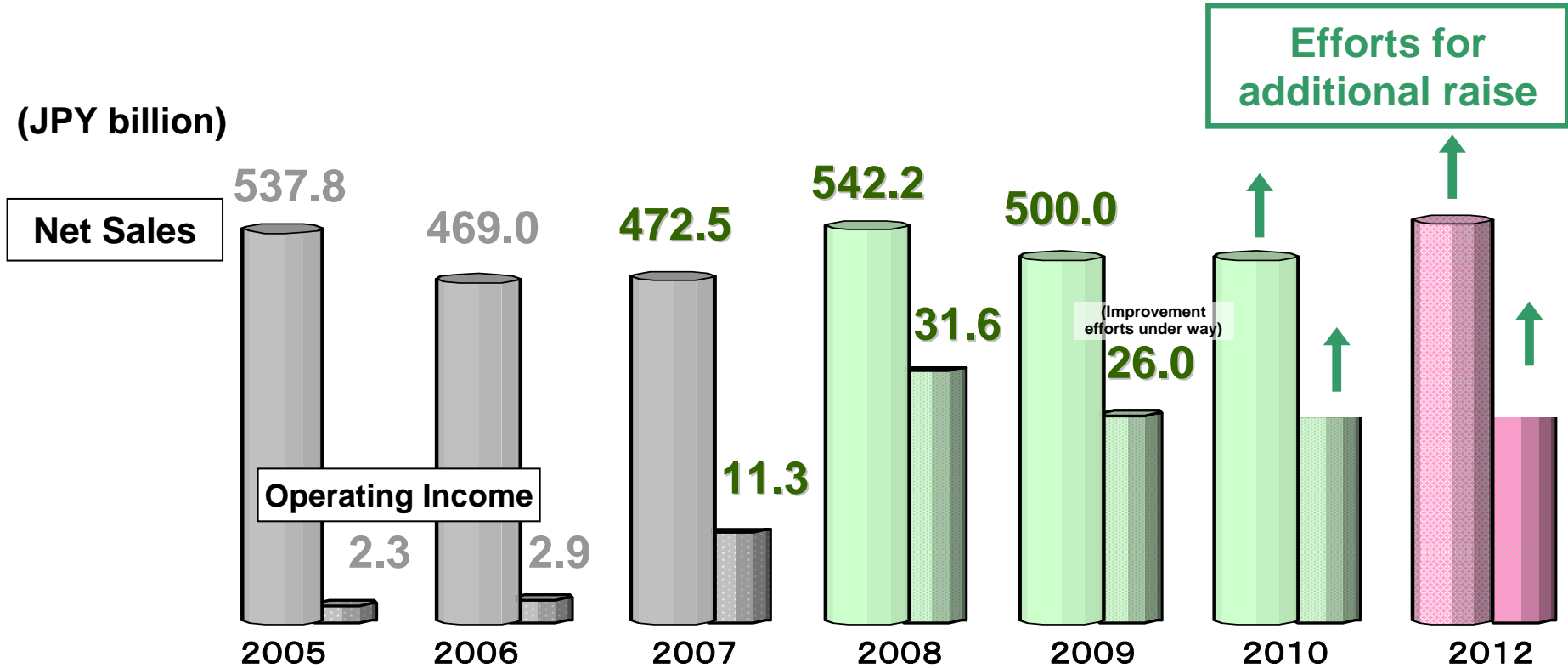
1. Business Situation (1) Orders Received (consolidated)



1. Business Situation (2) Net Sales & Operating Income

(consolidated)

(JPY billion)



Efforts for additional raise

(Improvement efforts under way)










Business structure reforms

★Lehman shock (⇒ Rapid shrinking of market)



Special measures

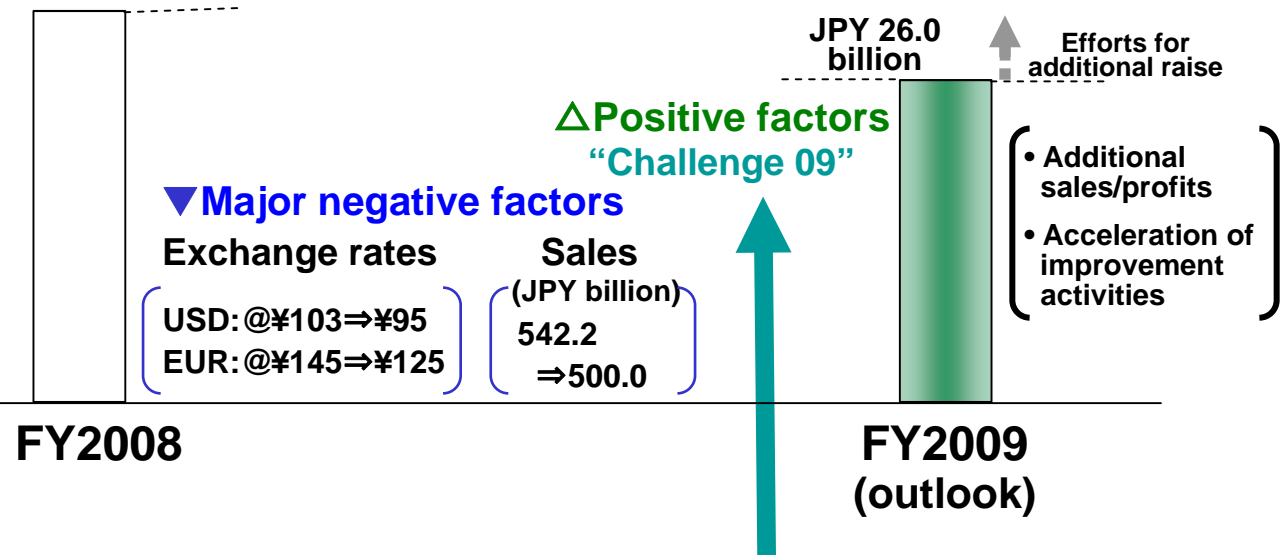
2. FY2008 Earnings & FY2009 Outlook (consolidated)

	FY2008 (actual)	FY2009 (“Challenge 09”)
Orders Received	<p>JPY billion</p> <p>527.8</p>  <ul style="list-style-type: none"> • Fertilizer plant for Algeria (Algeria Oman Fertilizer Co.) • Steel production (hot rolling) plant for Brazil (Usiminas) 	<p>JPY billion</p> <p>420.0</p>  <ul style="list-style-type: none"> • Expectation of additional orders for chemical plants and steel production machine in the 2H
Net Sales	<p>JPY billion</p> <p>542.2</p>  <ul style="list-style-type: none"> • Transportation system (Dubai LRT) • Chemical plant (methanol plant for Brunei) • Steel production machinery (hot rolling facility for India, Taiwan etc) 	<p>JPY billion</p> <p>500.0</p>  <ul style="list-style-type: none"> (Sales probability: near 80%) • Efforts for additional raise: ⇒ After service and small-scale constructions
Operating Profits	<p>JPY billion</p> <p>31.6</p>  <ul style="list-style-type: none"> • Improved profitability through strengthening of order-entry and construction management • Increased profits from group companies 	<p>JPY billion</p> <p>26.0</p>  <p>  See next page </p>

3. Special Measures for FY2009

Profitability improvement

JPY 31.6 billion
(Operating profits)



Securing sales/orders

- Additional sales in FY2009
 - After-sale services (spare parts, etc.)
 - Short-term small-scale construction (renovation)
- Securing sales in FY2010 and beyond
 - : Focus on areas with near-term demand
 - Infrastructure investments in line with fiscal policy
 - Investments in industrial infrastructure of emerging markets
 - Food security (population increase, economic development)
 - : Increased competitiveness (cost, sales, services)

- Complete management of construction work at hand
- Standardization/sharing innovation (MD Project)
- Product reliability innovations (overall strengthening of quality control system)
- Supply chain innovations (joint purchasing, strengthening ties with overseas partners)
- Comprehensive cost reduction program

4. Medium/Long-term Strategies

(1) Business Domains & Formats

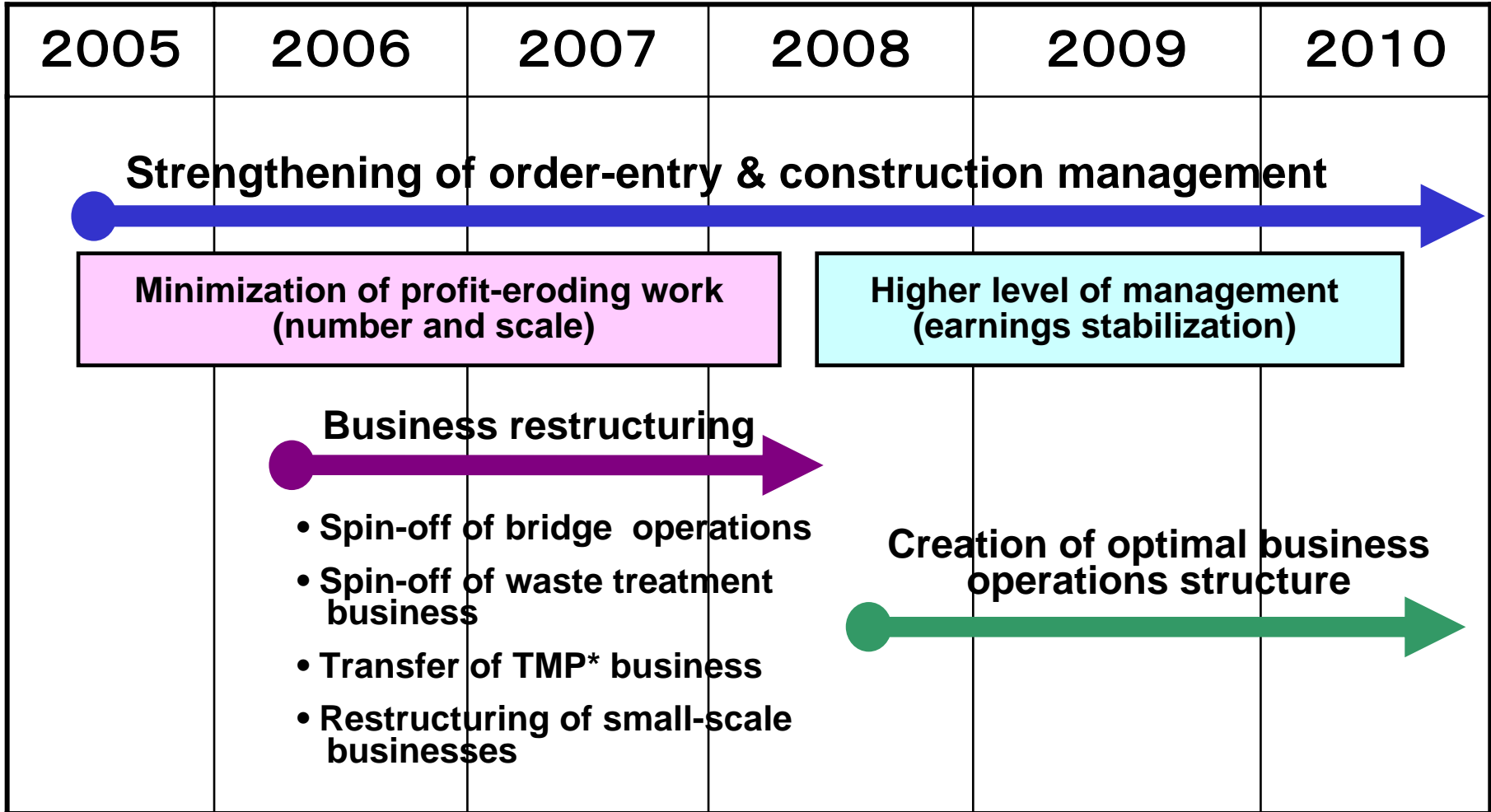
() = global share ranking (N) = next-generation product

Business Domain	Environment & Chemical Plants	Transportation Systems & Advanced Equipment	Machinery			Steel structures, etc.
			Steelmaking machinery	Compressors	Others	
	EPC	EPC, machinery & vehicle manufacture, O&M	Manufacture (+EPC)	Manufacture	Manufacture	Manufacture, etc.
Industry/distribution	 Fertilizer plants (2~3) Methanol plants (2~3)	 ITS (Singapore/Electronic Road Pricing) Automotive servo motors	 Cold rolling (1) Hot rolling (1) Plating equipment Plating (4~5) Pickling (2~3)	 Compressors All types (5~6) Ethylene (1~2)	 Rubber tire machinery All types (5~6) Curing press(1) Material handling equipment	 Smokestacks Bridges
	EPC: Engineering, procurement & construction O&M: Operation & maintenance					
Social infrastructure, welfare, etc.		 100% low-floor LRVs	 Accelerators		 Medical equipment (N)	 Integrated parking system
Environmental protection	 Desulfurization plants (2~3) Waste treatment system Carbon capture & Storage (CCS)	 APM High-speed railways	 Continuous casting/hot rolling integrated plants		 Organic ELs (N)	
				 CO2 compressors Pipeline compressors	 Electrostatic precipitators	
Energy (fuels)	 EOR EOR: Enhanced oil recovery Alternative fuels					

Focus on energy (fuels) & environment areas

4. Medium/Long-term Strategies

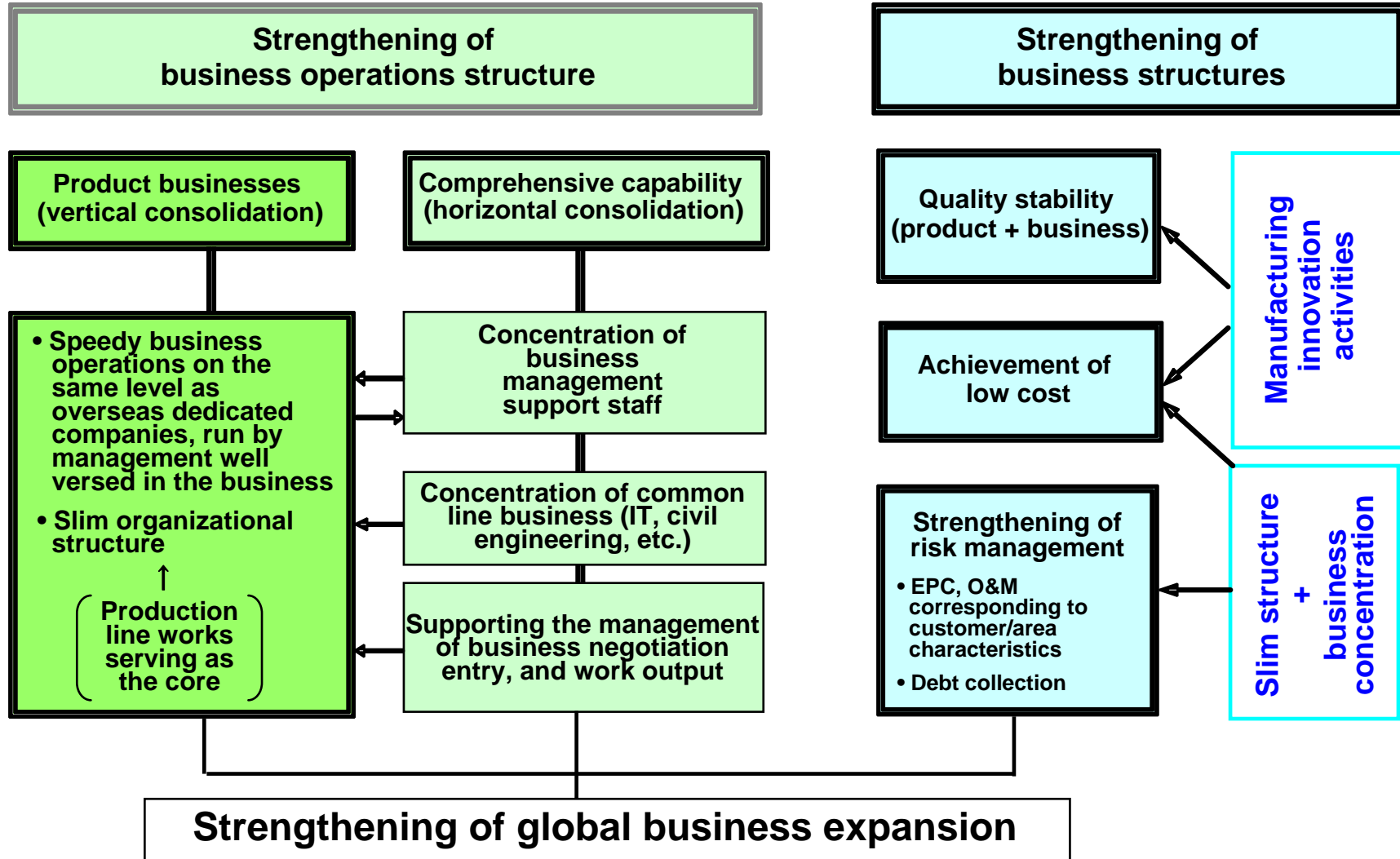
(2) Operational Structure Reform



* TMP : turbo molecular pump (transferred to Shimadzu Corporation)

4. Medium/Long-term Strategies

(3) Concept for Optimal Business Operations Structure



4. Medium/Long-term Strategies

(4) Overall Strategy for Machinery & Steel Structures Business

General assessment

- **Paring down the business into globally competitive, mature products, plus business in growing areas and next generation products; Securing overall business group stability through diversification.**
- **Maximized residual income in mature products business made possible by securing earnings in traditional markets (domestic, East Asian, etc.) and business expansion in the markets of the new economies, etc.**

Strategy

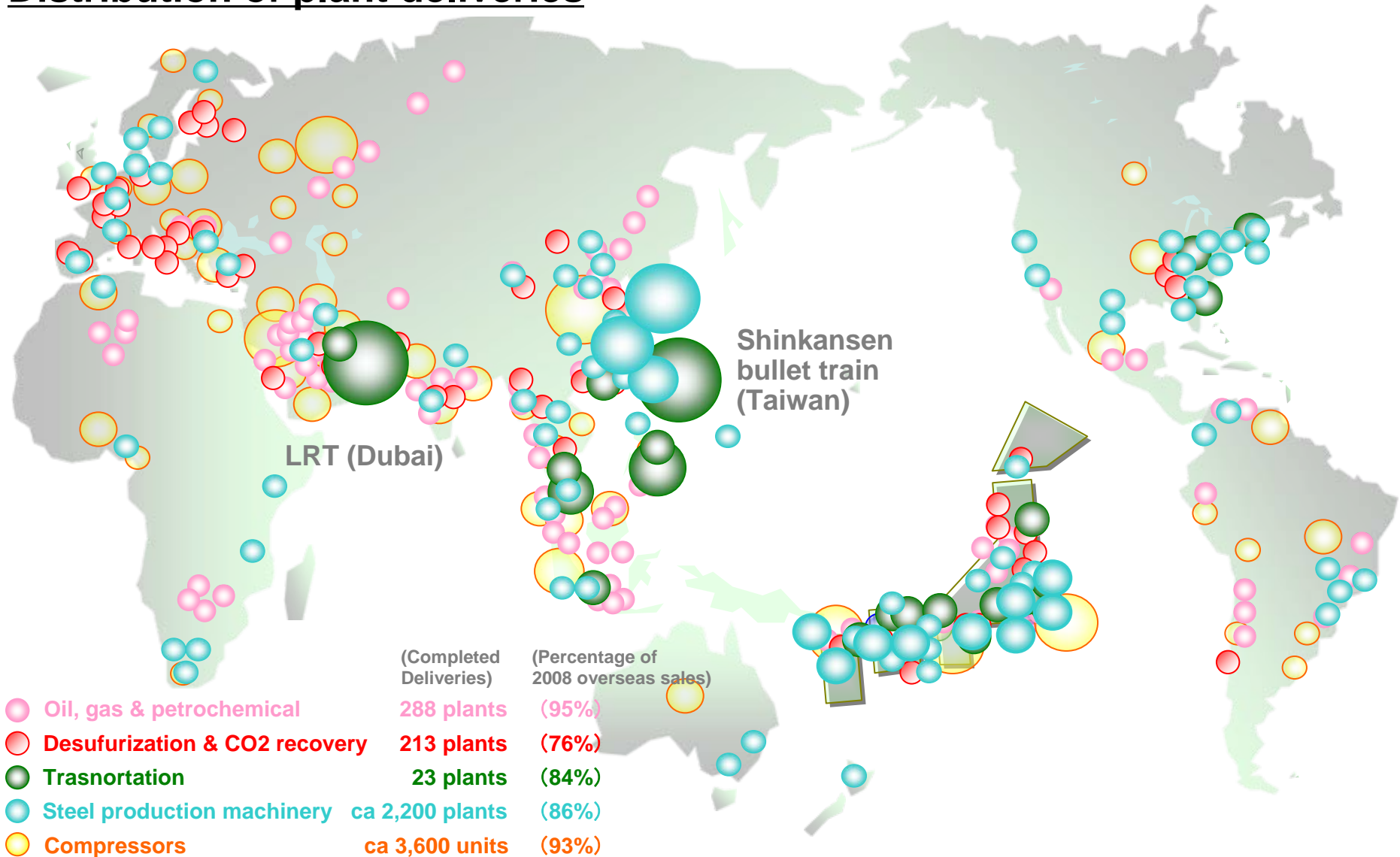
- **“Achievement and sustainment of high earnings” and “expansion of business scale” through the creation of the optimal business operating system***

*** A system promoting the strengthening of individual product businesses and global expansion while simultaneously offering the advantages of diversified operations (stability, broad technological response capability, information network)**

4. Medium/Long-term Strategies

(5) Global Business development - 1

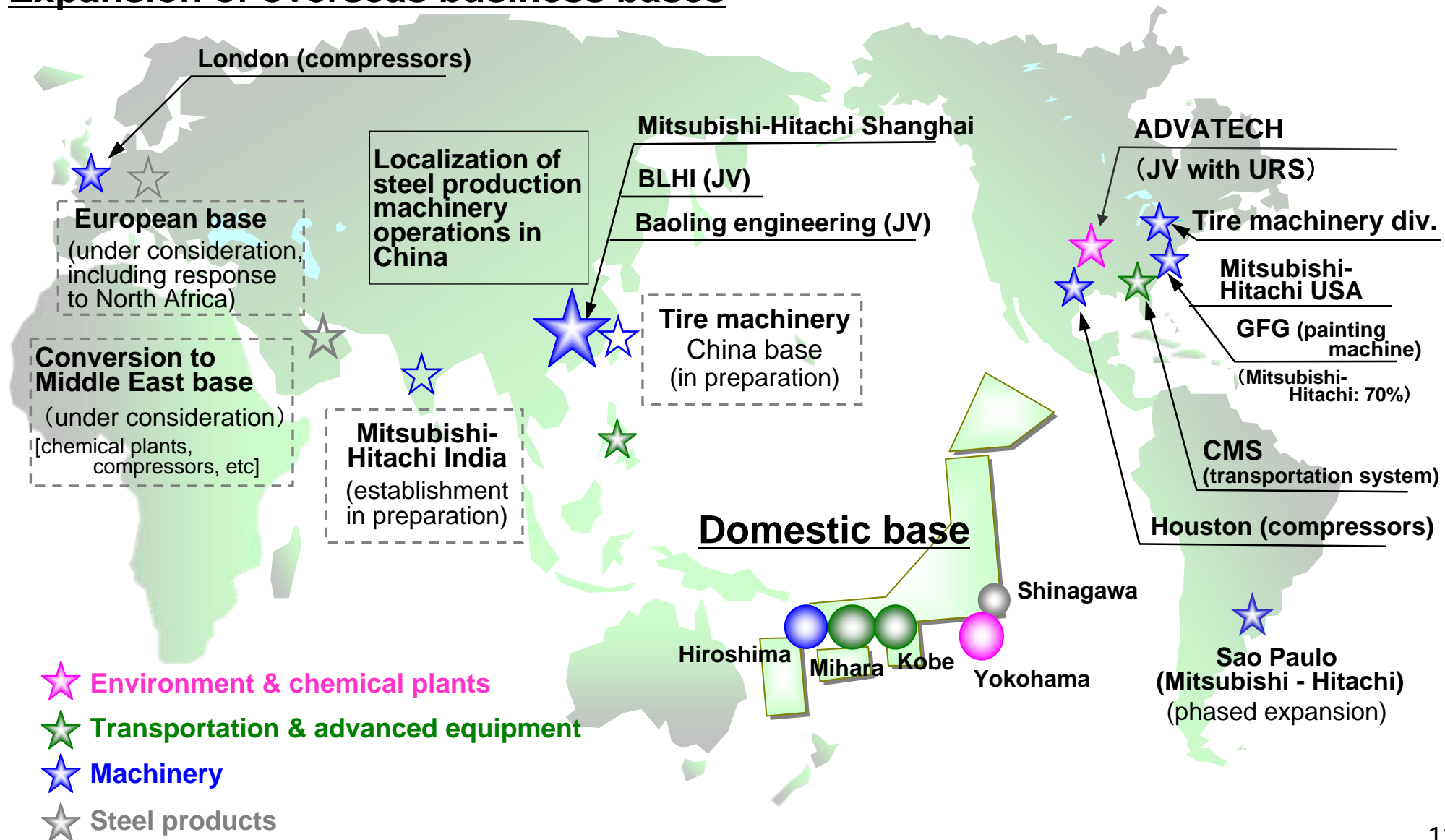
Distribution of plant deliveries



4. Medium/Long-term Strategies

(5) Global Business development - 2

Expansion of overseas business bases



5. Strategies for Each Business

(1) Environment & Chemical Plants - 1

[Strengthening of chemical plant business]

- **Focus on fertilizer plants**

(population increase ⇒ increased food production ⇒ efficient fertilizer production)



Plant scale enlargement = fewer accommodating EPC suppliers
(MHI, Uhde [Germany], Saipem [Italy])

- **Focus on methanol plants**

(development of emerging markets ⇒ increased demand as industrial material)
(potential as material for alternative fuels, etc.)

⇒ Collaboration with Mitsubishi Gas Chemical (process owner)



- **Achieving high added value in fertilizer plant business**

⇒ accumulation of operating/maintenance expertise (investment into Middle East plants)

- **Strengthening of competitiveness of methanol plant business**

⇒ further differentiation of syngas technologies

[Strengthening of environmental plant business]

Growth of air environment business

- **Flue-gas denitration/dust collection equipment**

⇒ business model suited to countries heavily reliant on coal-fired plants (North America, China, etc.)

⇒ technology differentiation (mercury response capability, etc.) + cost competitiveness (MD, etc.)

MD: Modular design

- **CO2 recovery/EOR**

⇒ expanded sales to fertilizer plants (increased urea production)

⇒ large-scale demonstration plants for coal-fired plants (to Southern Company [US], etc.)



Waste treatment and other small/medium-scale plant EPC business

- **Integration & strengthening of EPC oversight capability**
(effective use of human resources)

- **Increased competitiveness of core facilities and components**



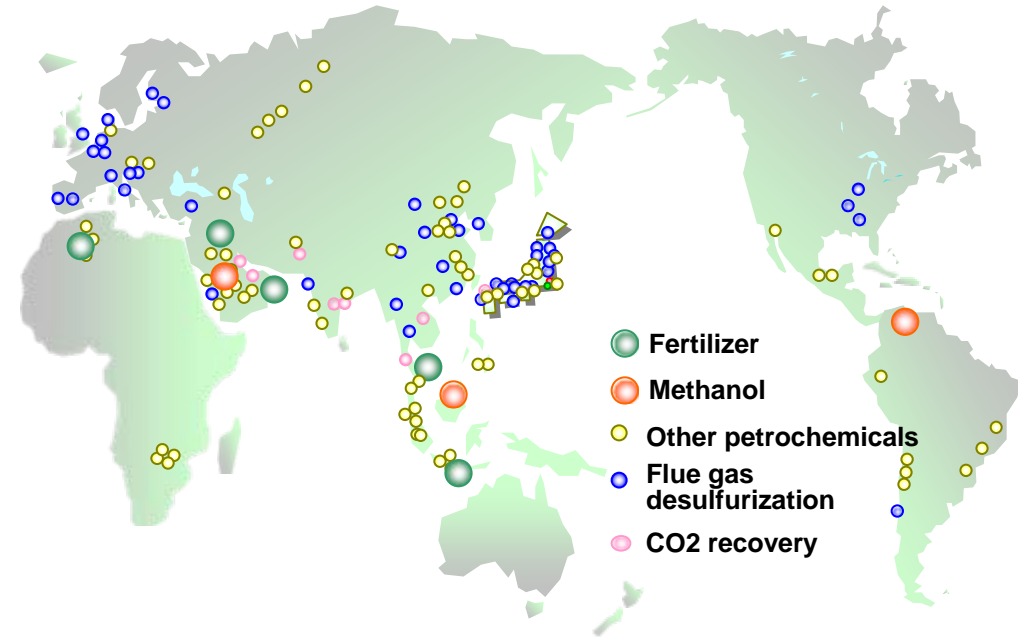
5. Strategies for Each Business

(1) Environment & Chemical Plants - 2

[Environmental/chemical plant business model]

Region	Business model	Type of contract, etc.
Domestic	Total plant provision by MHI + Consortium with reliable civil engineering firms	Total plant provision by MHI + Consortium with reliable civil engineering firms
Southeast Asia (excluding China)		
Middle East, Latin America, Africa		
Europe, Russia, Central Asia	Consortium (or subcontract)	EP + SV or EPCm
North America	JV (US construction/engineering companies)	Cost plus EPC, or EP + SV
China	Alliance	EP + SV

Distribution of plant deliveries



Fertilizer/ammonia plant



Methanol plant



Notes: EPC : Engineering Procurement Construction
 EPCm : Engineering Procurement Construction Management
 SV : Supervisor

5. Strategies for Each Business

(2) Transportation & Advanced Equipment -1

[Strengthening of transportation systems business]

Strengthening of base load products

• Air Brakes

⇒ Cost reduction and sales route expansion through shift to MD, equipment improvements, etc.

• Toll collection systems (ITS)

⇒ Acceleration of technology development

MD: Modular Design



Brakes



In-vehicle ETC units

Strengthening of small/medium-scale transportation systems (APM, LRT)

• Strengthening of EPC capability

⇒ Strengthening of response capability tuned to each market (MHI in Southeast Asia and Middle East; collaboration in North America)

⇒ Differentiation through capabilities in PM and track construction

• Strengthening of control system response capability

⇒ Increase MHI production portion by integrating transportation and toll system control technology and personnel (added value + higher quality)

Strengthening of O&M business expansion

• North America

⇒ Crystal Mover Services (CMS)

(Headquarters: Miami, with branches in Atlanta and Washington, DC.)

• Southeast Asia

⇒ Comprehensive servicing of plants delivered to Philippines and Singapore (local service companies already established)

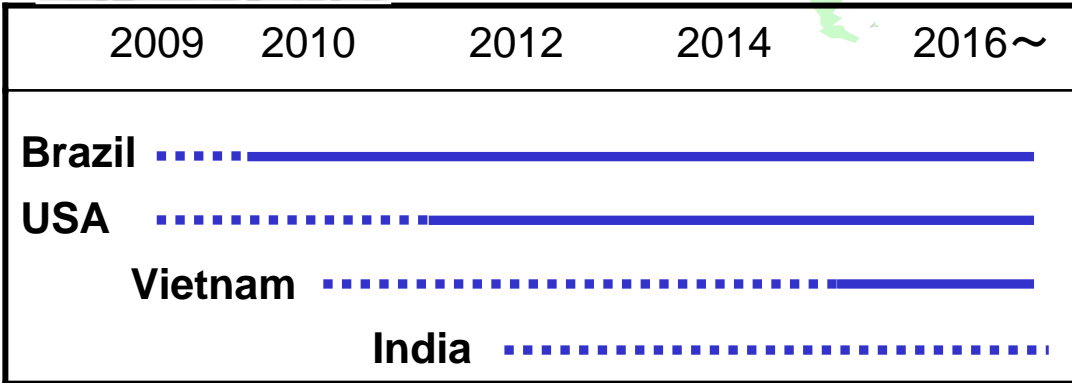
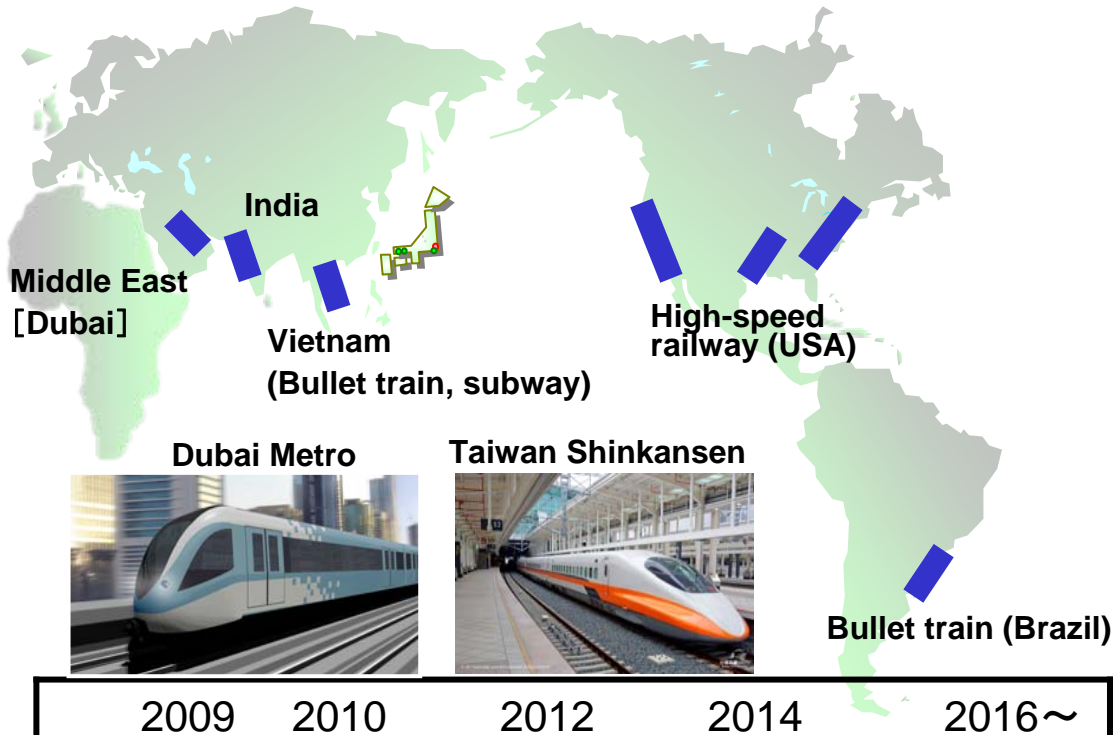


Achievement of
stable business profitability
+
catch-up to 2 leaders
(Bombardier, Siemens)

5. Strategies for Each Business

(2) Transportation & Advanced Equipment - 2

[Involvement in large-scale projects]



EPC response capability by country/region

- Middle East & Vietnam: mainly chemical plant
- India: chemical plant + steel making machinery
- Brazil: steel making machinery + chemical plant

Achievement of response capability no other company can offer

Strengthening and retaining response capability

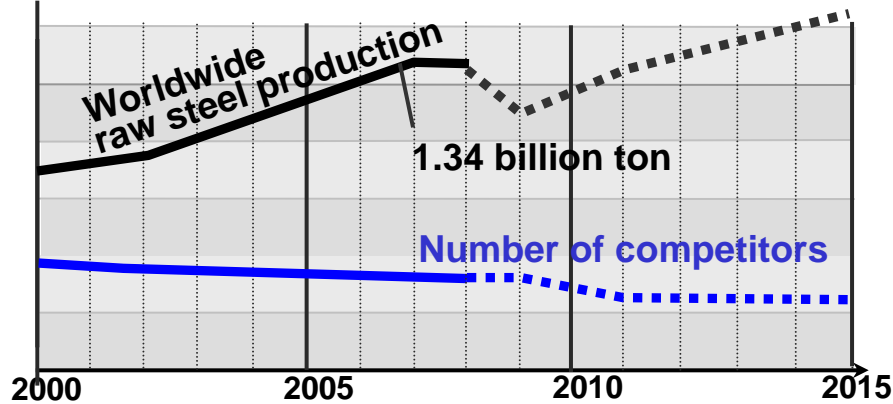
- **Effective retention of project management group**
⇒ Establishment of system to mobilize PM group in the case of emergency for environmental/chemical plants and steel production machinery
- **Civil engineering**
⇒ Concentration of personnel, IT promotion and level enhancement

5. Strategies for Each Business

(3) Machinery (steel production machinery)

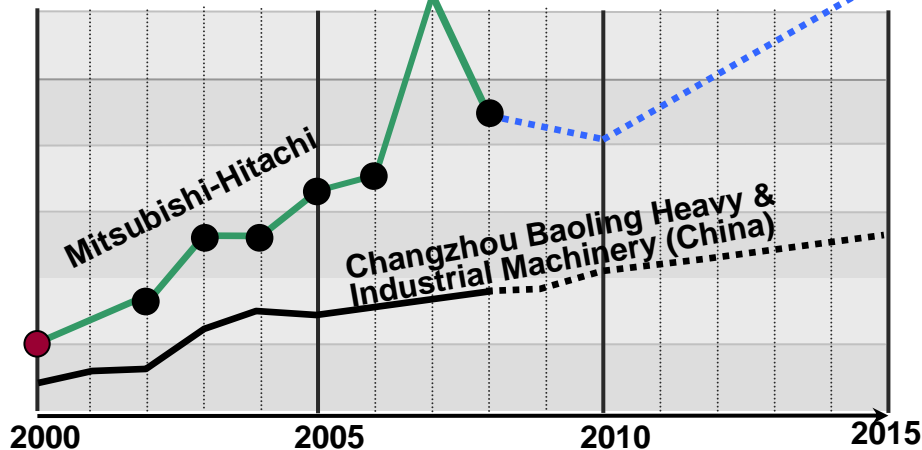
[Business status & medium/long-term strategy]

Worldwide raw steel production



Order receipts of MHI Group

(Mitsubishi-Hitachi Metals Machinery, etc.)



Strengthening response to countries newly generating steel demand

- **China** (currently 400-500 million t/y; approx. 4 times demand of Japan) (t/y = tons/year)
 - Promoting modernization (scrapping of superannuated equipment; shifts to large-scale production, high quality) and plant nationalization as national strategy
 - ⇒ Localization (Mitsubishi-Hitachi, Chinese subsidiary & Changzhou Baoling)
- **India** (currently 40-50 million t/y ⇒ future 200-300 million t/y)
 - Share encroachment of European competitors (based on Jindal/Tata track records)
 - Establishment of service base (in preparation toward 2010 launch)
- **Brazil** (currently 30 million t/y ⇒ future 100 million t/y)
 - Achieving high added value from iron ore resources (strengthening of steel mills)
 - Strengthening services to customers already taking deliveries: Usiminas, etc.

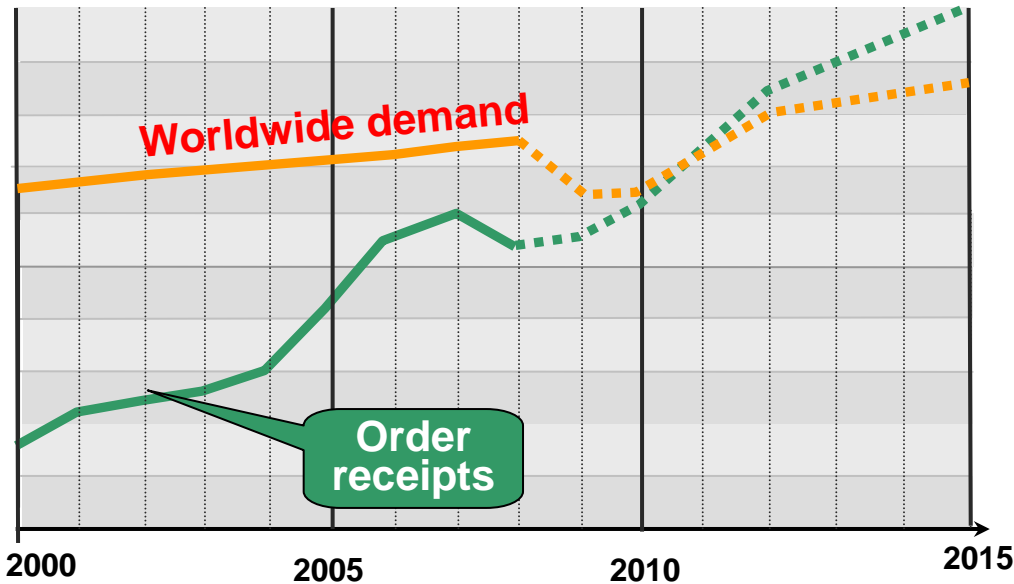
Response to Japan/Korea/Taiwan & Europe/North America

- Differentiation of energy-saving conversion technology
- Strengthening response to ultra-high-quality technology

5. Strategies for Each Business

(3) Machinery (Compressors)

Worldwide demand and order receipts



Global share: Aiming to enter Top 3

■ Maintain superiority in ethylene/fertilizer areas

- Strengthen response to weak euro (European competitors)
⇒ Cost reductions through shift to MD* and stronger SCM**

■ Share expansion in natural gas transport area

- Sales expansion of pipeline compressors
⇒ Focus on markets of Russia, Brazil
- Sales expansion in LNG area
⇒ Make inroads into refrigeration compressors for small/medium-scale LNG

■ Sales expansion in coal fuel, CO2 recovery/storage areas

- Expanded sales of air and CO2 compressors
⇒ Strengthening sales expansion activities to North American/European engineering firms
Strengthening of cost competitiveness (MD, SCM, etc.)

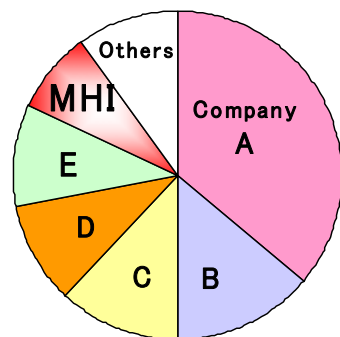
■ Response to specialized operation by European competitors

- Trimming of organization, acceleration of business activities (decisions), etc.

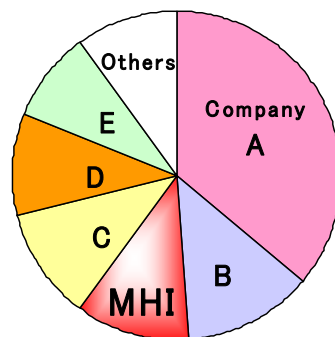
*MD: Modular design **SCM : Supply chain management

MHI's share

FY2006



FY2012 (target)



5. Strategies for Each Business

(4) Material Handling Machinery, Rubber Tire Machinery

[Material Handling Machinery]

- Maintain top share in iron & steel handling market
(large-scale ladle cranes + coiler handling systems)
- Strengthening of differentiating technologies
(fully automated port terminals, etc.)
- Achievement of high added value through this business area, including after-sale services
- Business diversification through alliances



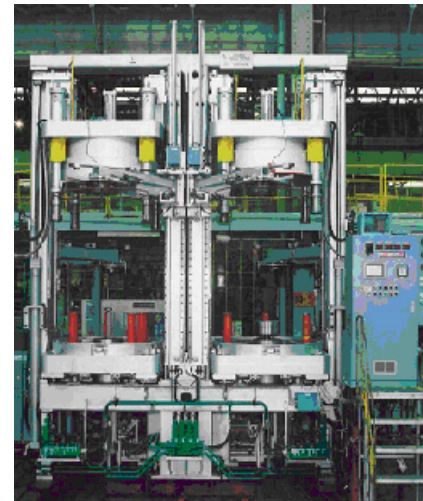
Ladle crane for steelmaking



Next generation quayside cranes

[Rubber Tire Machinery]

- Maintain top global share in curing press business
 - ⇒ Shifting from 3-pronged structure (Japan, North America, Europe) to the optimal business structure with China as the biggest market
 - ⇒ Strengthening of differentiating technologies (unpressurized vulcanization, etc.)



Curing press for bus and truck tires



Ultra large-size tire

5. Strategies for Each Business

(5) Material Handling Machinery, Rubber Tire Machinery

[Steel Structures]

Mitsubishi Heavy Industries Bridge & Steel Structures Engineering Co., Ltd.

- Strengthening of base in bridge operations
 - ⇒ Response to Greater Tokyo Area, where demand is firm (new Chiba factory)
 - ⇒ Strengthening of market response & cost competitiveness through alliances
- Focus on smokestack earthquake-resistance renovation work, etc.
- Strengthening of renovation and servicing of gas holders and tanks

Mitsubishi Heavy Industries Parking Co., Ltd.

- Response to decrease in new demand
 - ⇒ Renovation proposals, inspection and other services
- Medium/long-range business diversification



New plant



Smokestack for thermal power generation plant



Maintenance network

6. Initiatives toward New Businesses

[Organic ELs]

May 2008: Established Lumiotec Inc.

World's first company exclusively dedicated to organic ELs for lighting applications

MHI 51%; remainder owned by ROHM, Toppan Printing, etc.

- Shipments of panel samples to commence this autumn
- Targeting full-scale mass-production launch from FY2012, after confirming market and business viability

[Features]

- Brightness equivalent to fluorescent lighting
- Higher power efficiency than incandescent lighting
- Targeting 10,000-hr service life

World's highest performance level



Development to be accelerated through JV; target on securing a top position domestically and globally

Work by designer
Toshiyuki Kita first
shown in Milan this April

T. Kita
Toshiyuki KITA



[Medical equipment]

Full-scale sales launched in FY2008

⇒ 2 domestic deliveries completed, 1 overseas installation under way

- Design concept: integration of diagnosis and treatment
- Provision of accurate, fast, safe treatment
- Targeting sales expansion through differentiating technology

[Features]

- World's top-class radiation precision
- Easy positioning through linking of image-taking (diagnostic) function and radiation function
- Mechanical movements impose no burden on the patient



- Branding on strength of technological superiority
- Motion tracking function under development
- Higher profitability for the customer (hospitals) through realization of fast treatment

Winner of The Japan Society of Mechanical Engineers Medal and other awards



7. Summary

Short-term measures

- **Steady implementation of special measures**
(FY2009 profit enhancement)
- **Additional order receipts**
(secure profits and additional orders from FY2010)
- **Acceleration of business structure reforms**
(promotion of the above 2 items)

Medium/long-term strategies

- **Achievement of optimal business operation system**



- **Sustained achievement of high earnings**
- **Acceleration of global expansion**

(2010 Business Plan)

- **Plans for overall development following economic recovery**
- **Medium/long-range vision for each product business area**



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