

General Machinery & Special Vehicles Business Operation

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1. Business Outline

Intelligent Technology for Vehicles & Energies
– Contributing to social infrastructure development and the environment/energy sectors

Main Products

 **Turbochargers**





For diesel vehicles For gasoline vehicles

 **Forklift Trucks**
(Material Handling Equipment)



Internal combustion trucks Electric trucks

 **Engines** (for industry, for power generation, for ships)



MEIKI
(Light-weight)
1 to 10 kW

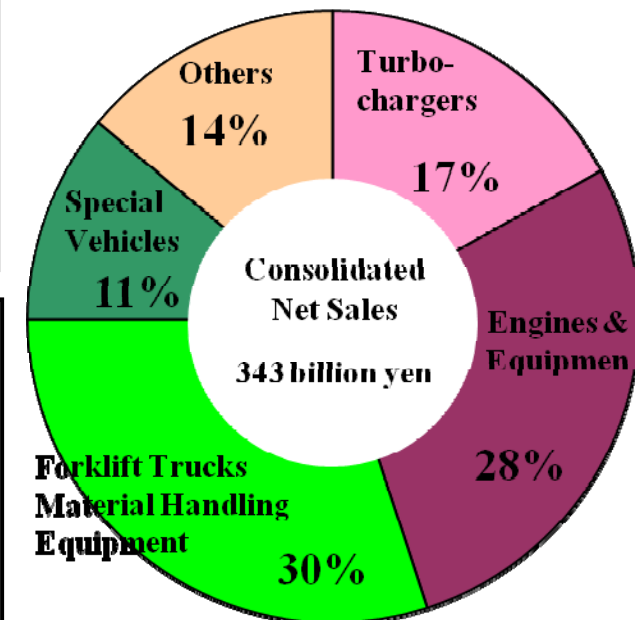
Diesel engines
~3,800 kW

 **Special Vehicles**



Type 10 tank
(Experimental vehicle)

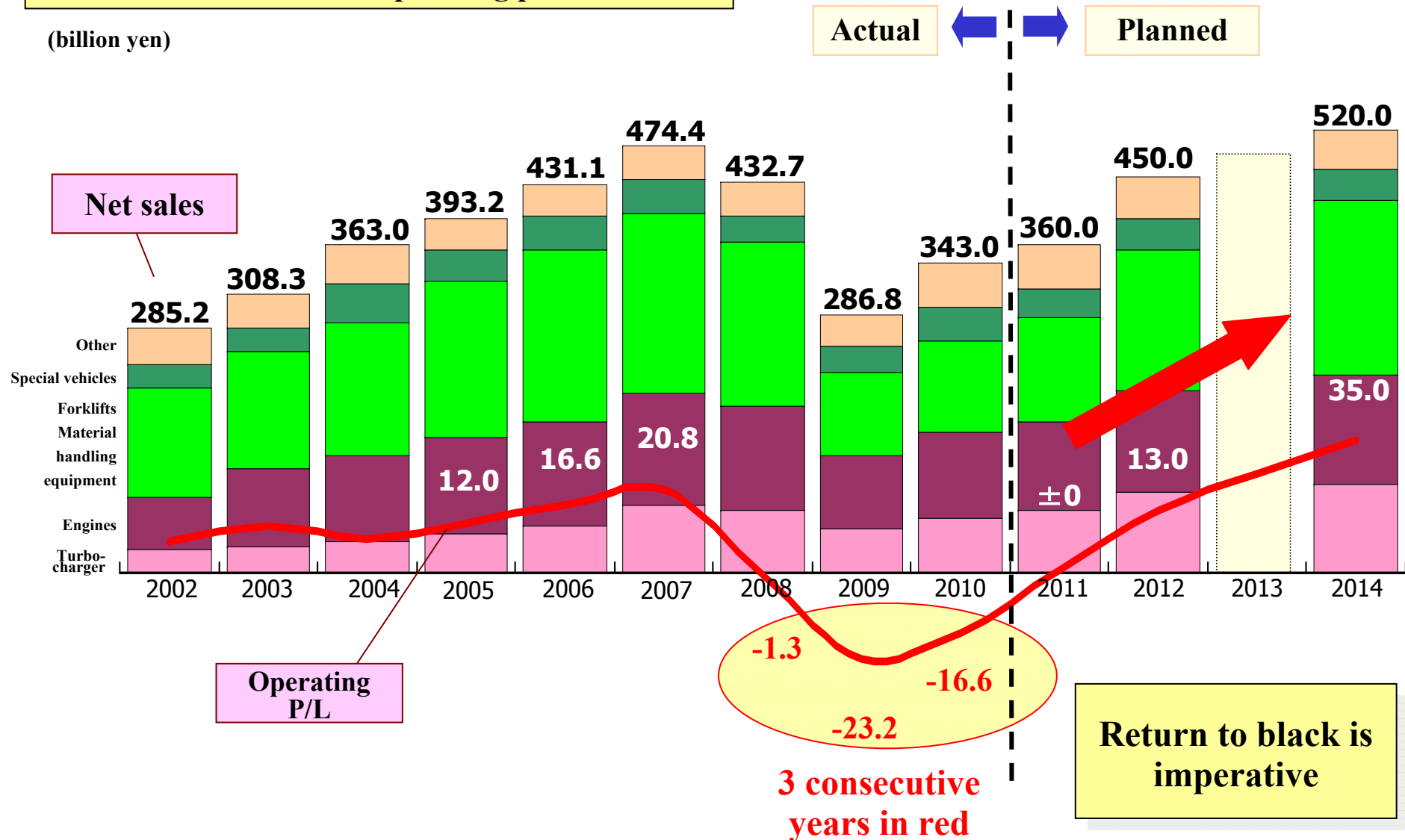
Breakdown of sales for FY2010



1. Business Outline - Business Standing -

Consolidated net sales • Operating profit/loss

(billion yen)



2-(1) Revival Plan for General Machinery & Special Vehicles Business Operation

1. Business Model Turnaround

Business structure reforms

1. Thoroughly investigate customer needs
2. Top in the world for performance and quality
3. Global network
(Production/ service)

2. Business Revival

Corporate culture reforms

1. Sense of urgency
2. Customer viewpoint
3. Speed



Tactics for RE-BIRTH 11

2-(2) Business Model Turnaround

Thoroughly investigate customer needs

- Product planning that sells well
- Narrow down to strong-selling product lines

Top in the world for performance and quality

- Speed up development
- Swift response to switch to electric (lithium-ion batteries)

Global network (Production/ service)

- Accelerate and intensify shift to overseas production
- Enhance functionality at overseas plants
- Full-fledged entry into service business



Reform the business structure to turn around the business model!

2-(3) Reasons for Business Slump

Defeating the Big Company Syndrome

Sense of
crisis

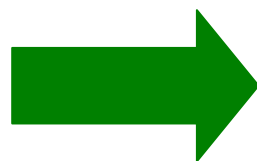
- Lack pursuit of profit
- No ability to get things done

Customer
viewpoint

- Product development for own satisfaction
(Unconvincing pursuit of customer values)
- No direct communication with customers

Speed

- Spending time on internal adjustments
(No delegation of authority)
- Development is slow

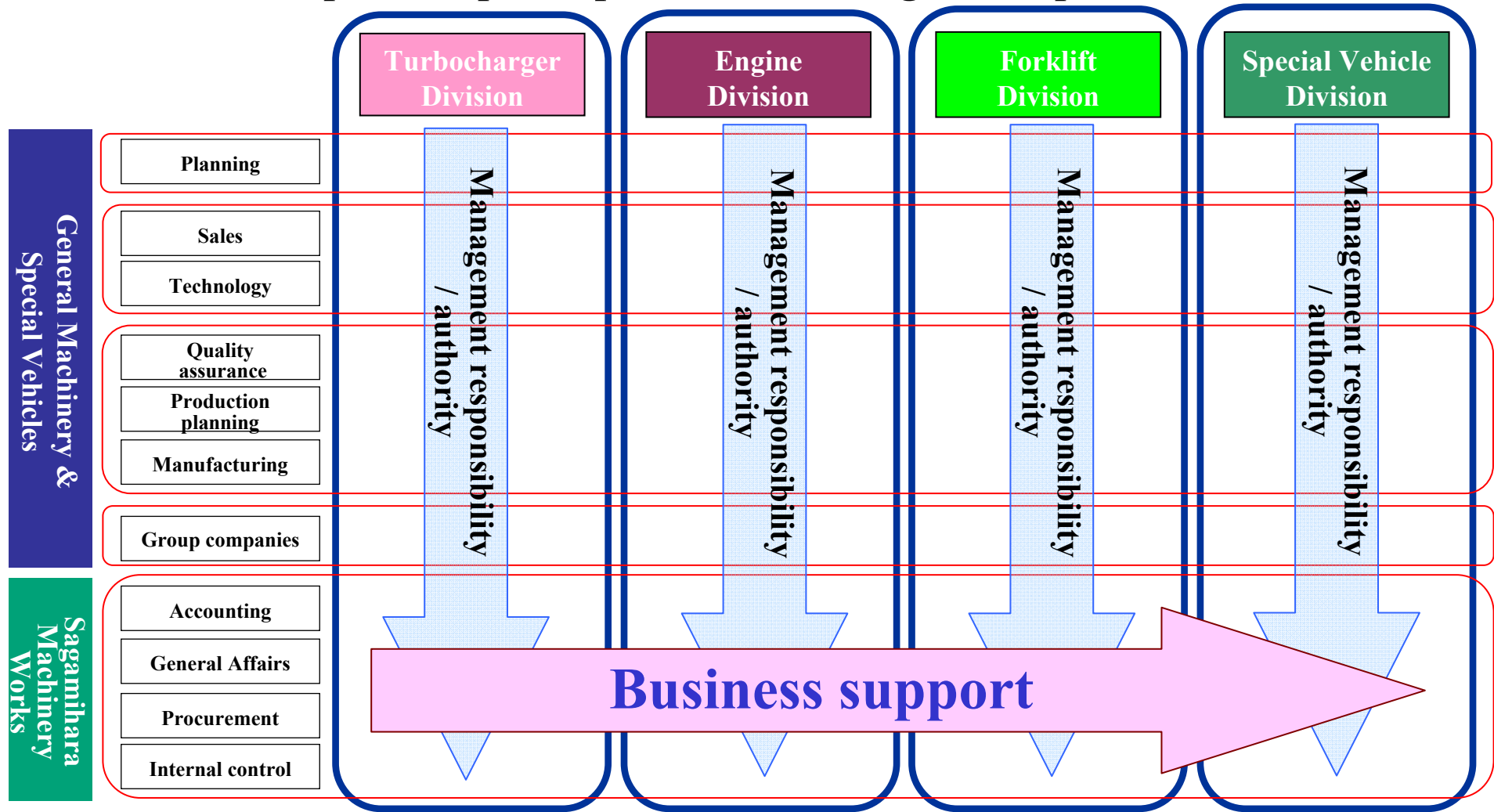


**Business revival through corporate
culture reforms!**

2-(4) Organizational Reform

(Companywide business operation restructure)

Shift to 4-division system as of April 1, 2011. Centralize management responsibility and authority for each business Division including Group Companies; speed up decision-making and implementation



2-(5) Turbocharger Division

Policy

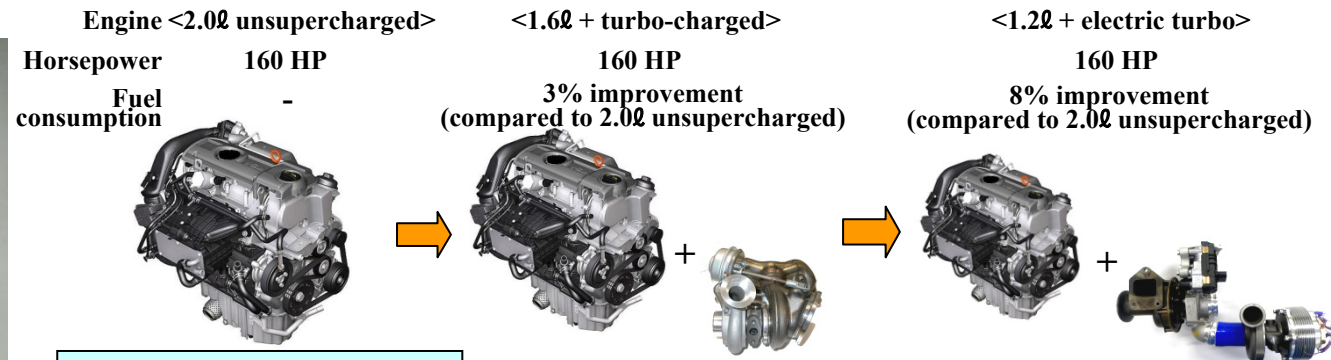
Armed with performance and quality recognized worldwide, aim for top market share (by FY2016)

Porsche Panamera

550 HP V8- 4.8ℓ gasoline engine



Downsize engines to improve fuel consumption effect



Market Environment

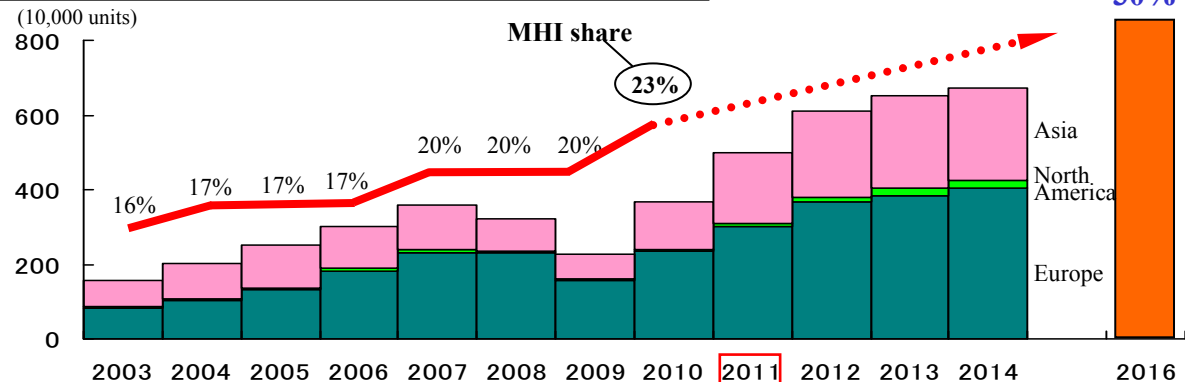
For diesel engines: Demand is rising in Europe with stronger emission controls and orientation toward low fuel consumption
 For gasoline engines: Installation rates are increasing with rise in environmental awareness in Japan, North America, Asia

BMW X1, X3 / 1, 3, 5 series

240 HP L4- 2.0ℓ gasoline engine



Sales volume / share trend (Passenger vehicles)



2-(5) Turbocharger Division

Development / Orders strategy

Europe: Expand market share

- Customer-oriented support: Increase permanent engineers
- Swift response to application design
Use Group companies in India, Philippines
- Reinforce test & inspection facilities at European facilities (*MEE)

*MEE: MHI Equipment Europe (Netherlands)

China: Expand new orders

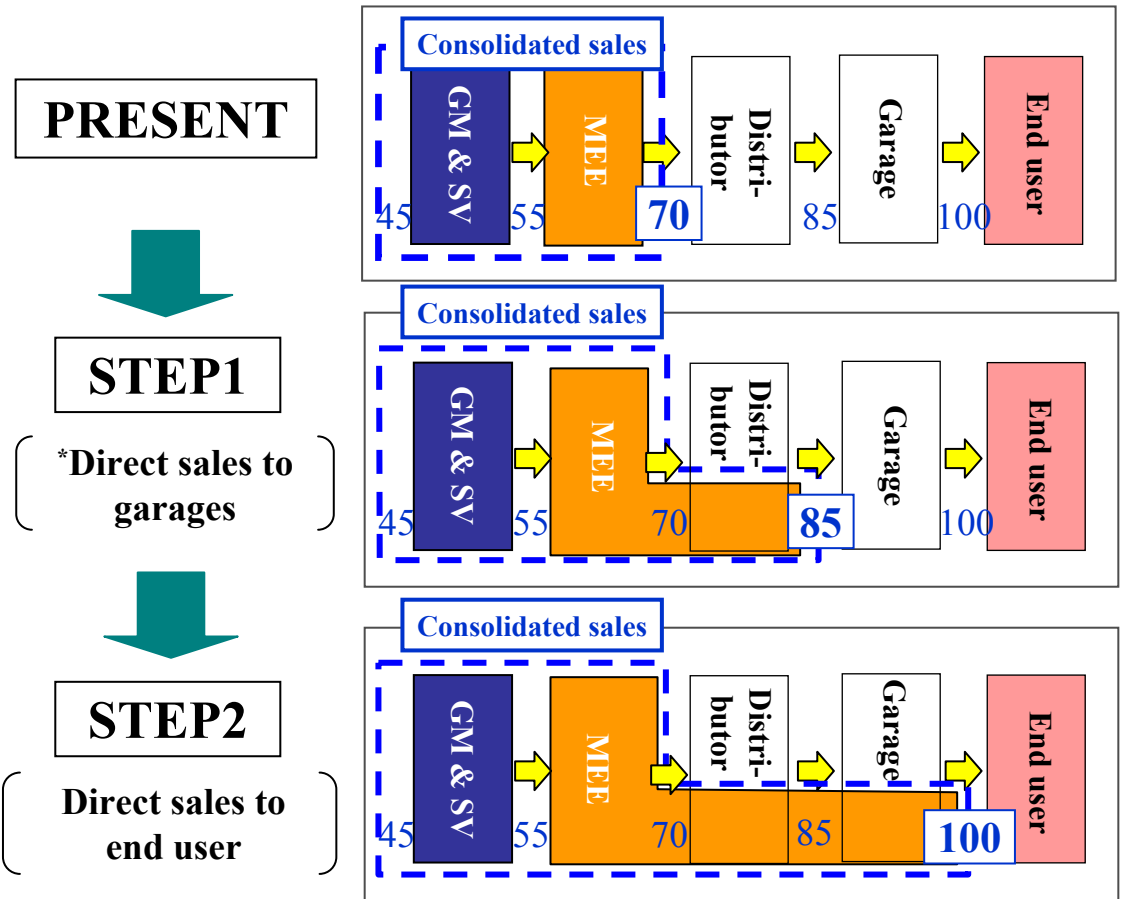
- Leverage partnership with China's largest automobile maker (Shanghai Automotive Industry Corporation)

N. America: Full-fledged entry into US market

- Consider local production tailored to customer demand

Capture service business

Increase profitability and make full-scale entry into the automotive after market



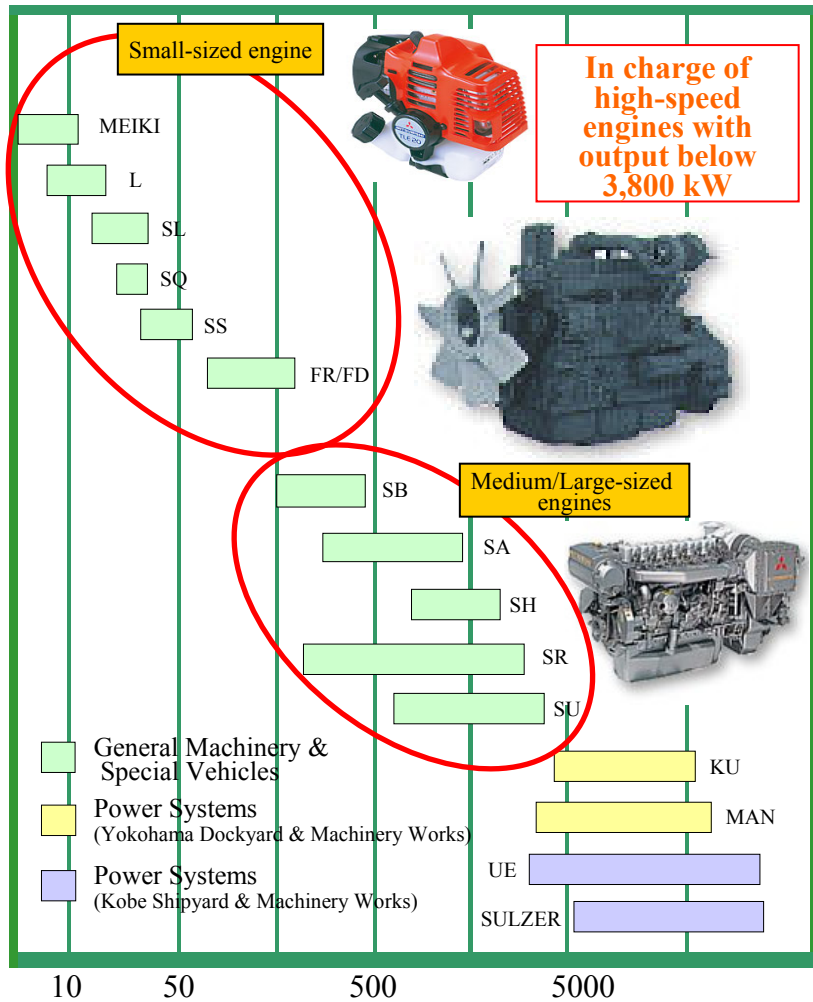
* Garage: Automotive service & remodel business

The figures indicate selling price when the user price is 100.

2-(6) Engine Division

Policy

Change into highly profitable structure with consistent selection and concentration



Market Environment

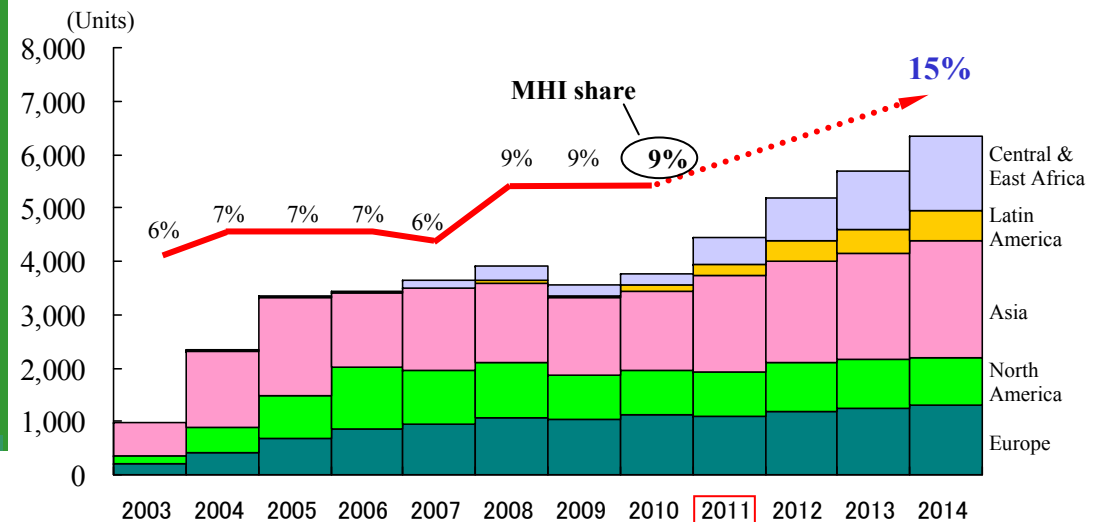
Small-sized engine

Promising orders for equipping construction machinery for China

Medium/ large-sized engines

Promising orders for generator sets because of power shortages due to economic development in China and Indonesia, and the Great East Japan Earthquake

Sales volume/Share trend (Medium/large-sized engines)



2-(6) Engine Division

Choices and focus

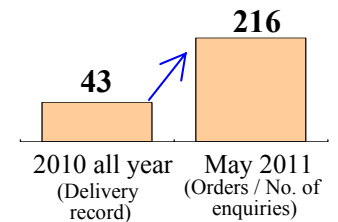
1. **Consolidate models**
(Aim to reduce by half)
<Narrow down to models with strong points>
 - From emergency use to daily use
 - From diesel to natural gas
2. **Expand service business**
 - Customer retention with long-term maintenance contracts
 - Expand service points (establish/acquire)
3. **Development**
 - Enhance development for the next step in emission regulations (Tier 4)
 - Development to achieve world's lowest fuel consumption

Responses to rolling blackouts and power shortages

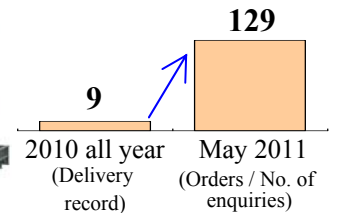
Gas cylinder generator
900 W



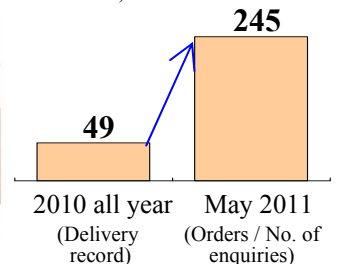
Portable diesel generator
16~700 kW



Gas engine cogeneration systems
210~1,000 kW



Diesel generators
~3,800 kW



2-(7) Forklift Division

Policy

Promote switch to electric, strengthen global collaborative structure and service business
Build solid structure globally

<Hybrid>



<Electric>

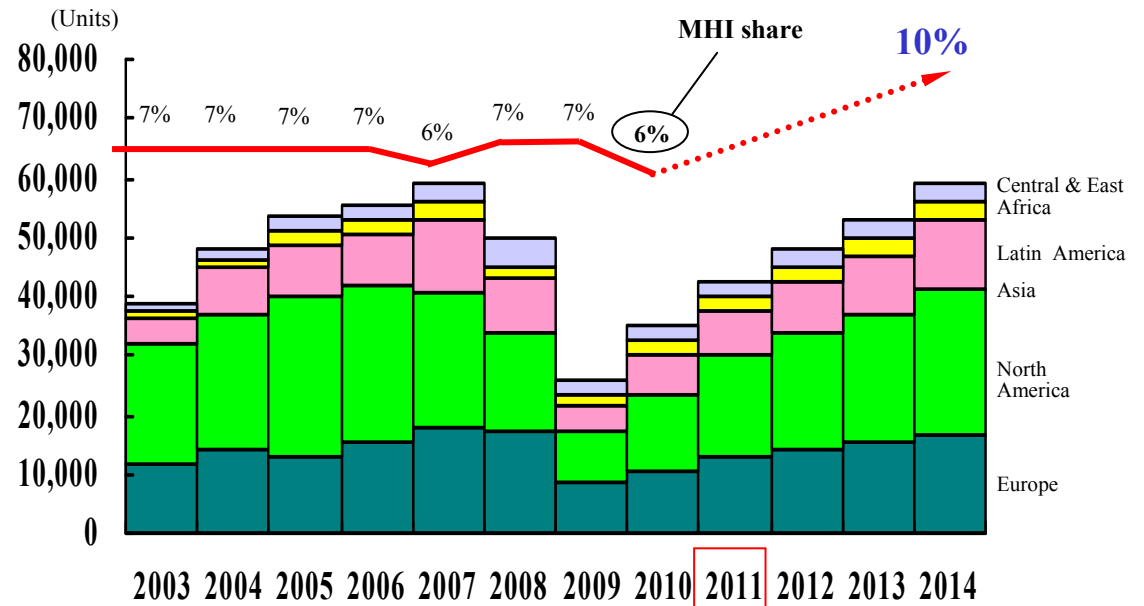


Market Environment

Internal combustion trucks: A major market shift from US and Europe to emerging countries

Electric trucks: In Europe where we have more than 50% of the market, demand will rise with the increase in volumes of commodity distribution in the future

Sales volume / Share trend



2-(7) Forklift Division

Reform business model

Switch to electric

- Install high-capacity MHI lithium-ion batteries
- Focus European business on *Rocla, a maker of indoor materials handling equipment



Global collaborative structure

- Expand product lineup
- Enhance cost competitiveness by sharing production with collaborating partners

Full-scale advance on service business

- Develop strengths of North American service business (*RPI) on a global scale
- Expand points of contact with customers by developing direct sales model



* RPI: Rapidparts Inc. (United States) ••• A company selling and servicing parts for forklifts
* Rocla (Finland) ••• A European manufacturer of indoor materials handling equipment acquired in 2008

2-(8) Special Vehicle Division

Policy

Expand business domain (develop disaster response vehicles in addition to defense vehicles)

Special vehicle lineup

Tanks



Motor graders



Mobile radiation shielded control rooms



Market Environment

1. Defense products

With national defense budgets under constraint, respond to diversifying defense needs

2. Motor graders

Demand in emerging markets is increasing with intensifying improvements to infrastructure

3. Special vehicles for disaster response

Supply radiation shielded control rooms in response to accident at Fukushima Daiichi nuclear plant

Exclusive response system with special vehicles for disaster response

2-(8) Special Vehicle Division

Expand business domain to special vehicles for emergency response

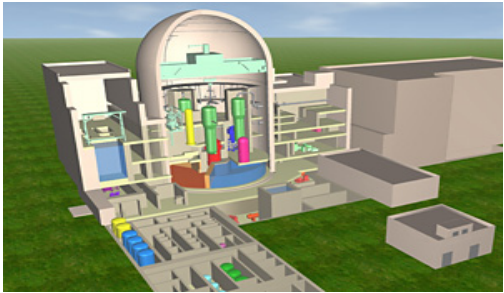
Apply special vehicles technologies

Apply nuclear technologies

In vehicle systems technologies



+



Technologies for special environments

Heavy plate welding technologies

Radiation shield technologies



Radiation shielded models



Forklift trucks



Hydraulic excavators



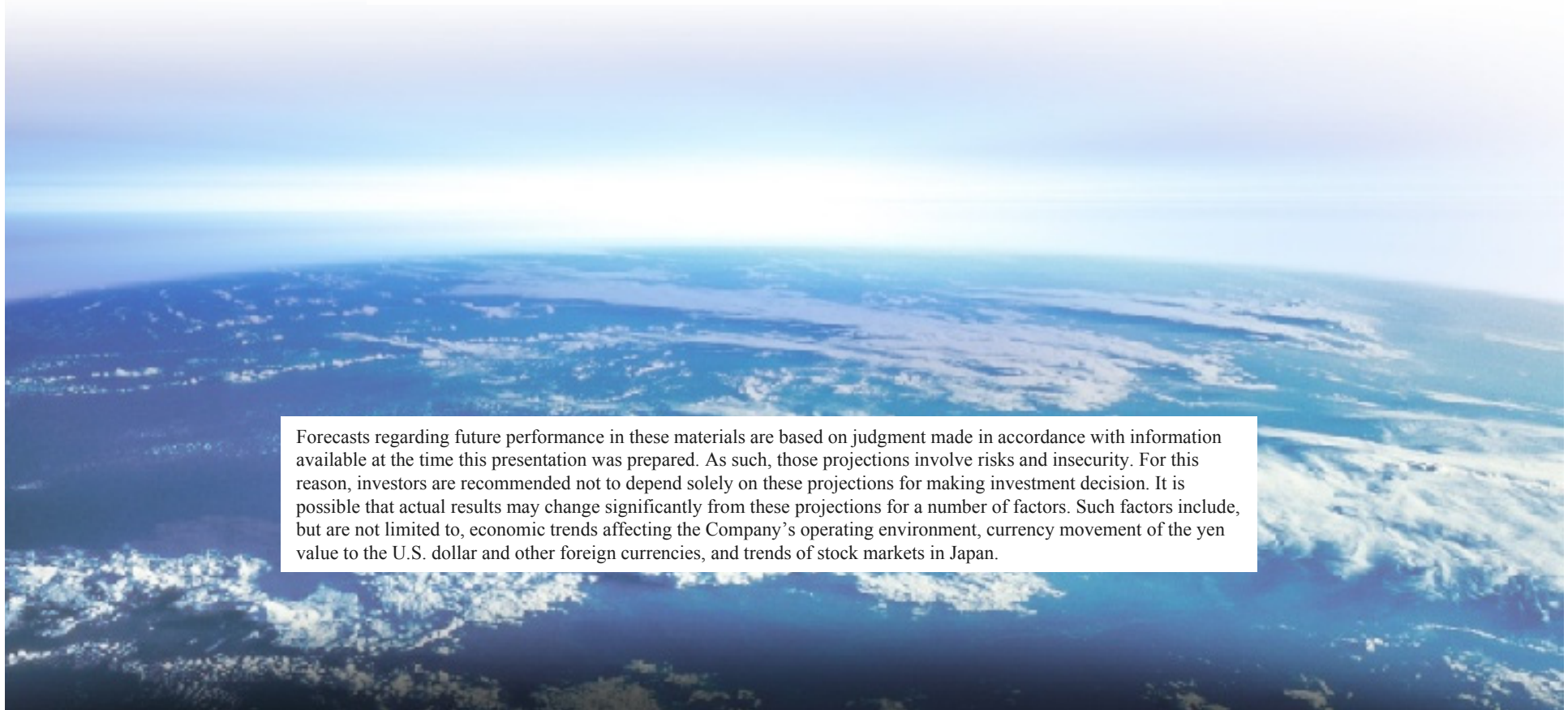
Containers for residential use

Implement tactics for RE-BIRTH 11

- Reform business structure to turn around the business model
- Business revival through reforms of corporate culture



Our Technologies, Your Tomorrow

A red arrow graphic pointing to the right, positioned below the tagline.A wide-angle aerial photograph of Earth from space, showing the curvature of the planet, blue oceans, and white clouds. The horizon is visible in the distance.

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