

# Mitsubishi Chemical Holdings Group Investors Meeting



**Sustainability**



**Health**



**Comfort**

June 1, 2010

**Yoshimitsu Kobayashi**  
**President & Chief Executive Officer**  
**Mitsubishi Chemical Holdings Corporation**

# Agenda

**APTSIS**

## ■ Progress of **APTSIS 10** (FY2008-FY2010)

### Basic Concept:

“Respond quickly to economic downturn by restructuring to accelerate innovation and leap ahead”

### ■ Overall Summary

### ■ Business Restructuring

### ■ Organic Growth Strategy

Example of Growth Business: FPD-related business

### ■ Innovation Strategy

Examples of New Businesses: LiB materials for HEVs, White LEDs, Sustainable resources

### ■ M&A Strategy

### ■ Synergies among Operating Companies

## ■ Overview of Basic Policy of Next Medium-term Management Plan, **APTSIS 15**

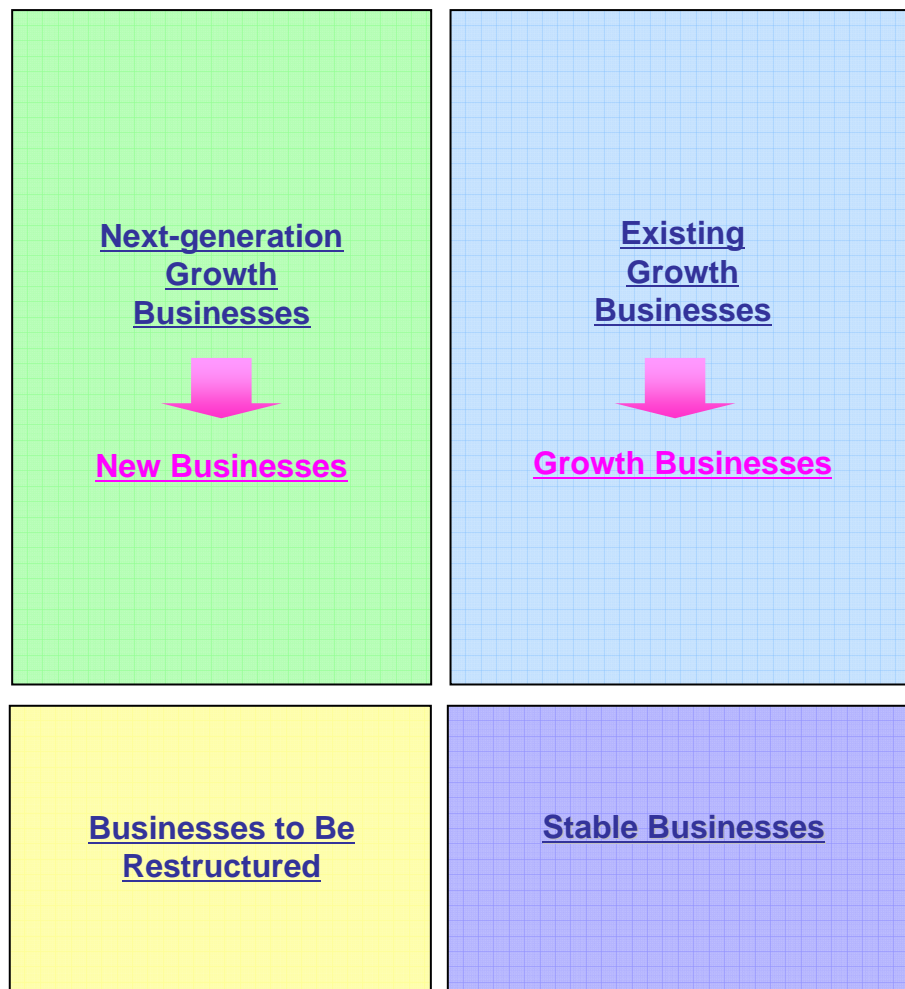
### ■ What We Aspire to Be in 2025

### ■ Introduction of **KAITEKI** Indices

### ■ Basic Policy of **APTSIS 15**

# Change in Portfolio Terminology

## Business Portfolio



In *APTSIS 10*, businesses are categorized and named as shown. However, under our next medium-term management plan, we are renaming the existing growth businesses and the next-generation growth businesses as growth businesses and the new businesses, respectively. For explanations in today’s presentation, we will use the revised terminology following this change.

### List of Abbreviations

- MCHC:** Mitsubishi Chemical Holdings Corporation
- MCC:** Mitsubishi Chemical Corporation
- MTPC:** Mitsubishi Tanabe Pharma Corporation
- MPI:** Mitsubishi Plastics, Inc.
- MRC:** Mitsubishi Rayon Co., Ltd.
- NSCI:** The Nippon Synthetic Chemical Industry Co., Ltd.

# Change in APTSIS 10 Basic Strategy

Basic strategy was changed in response to the unprecedented global economic downturn that has continued since autumn 2008

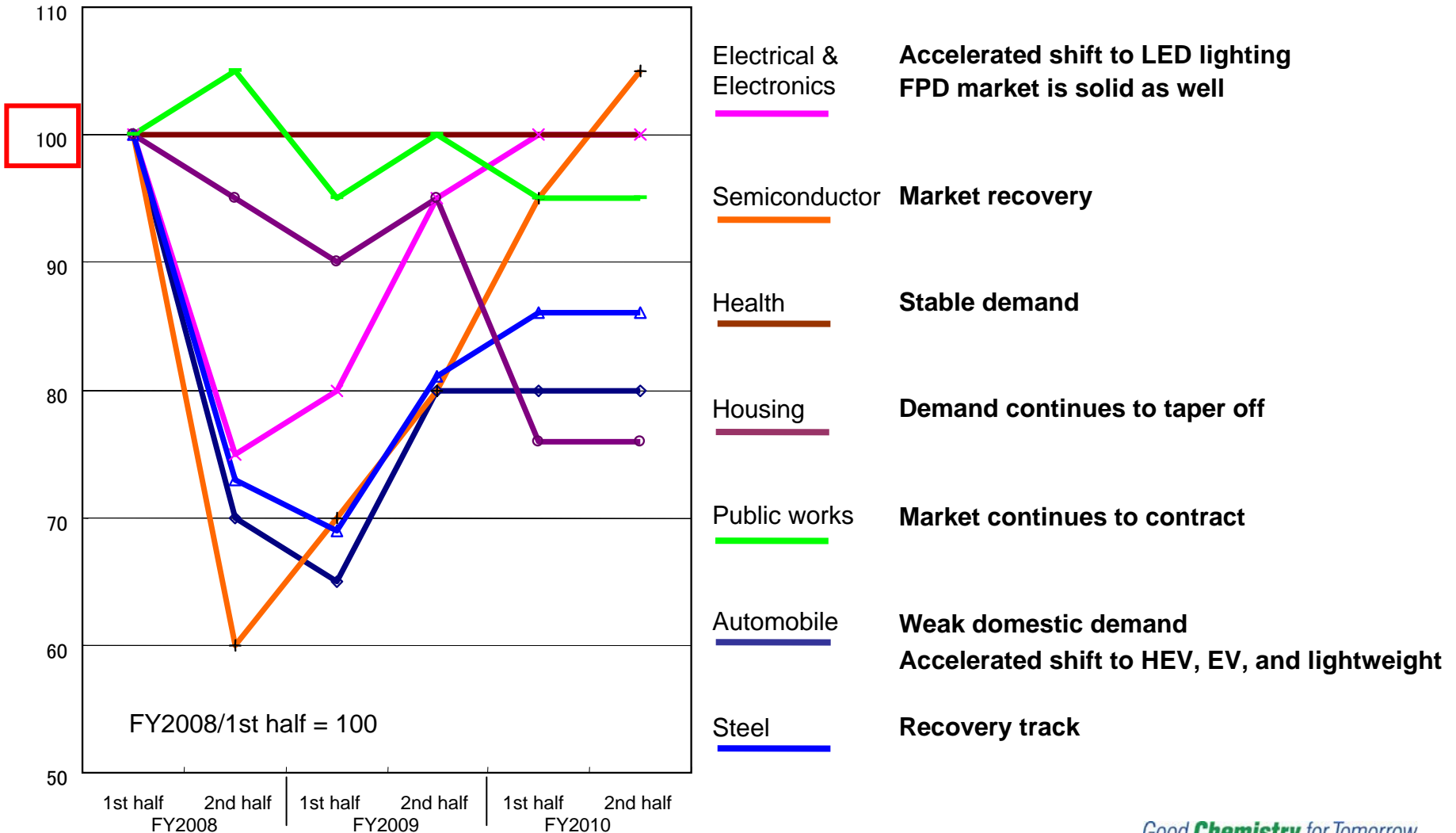
## Original (May 2008)

## Revised (June 2009)

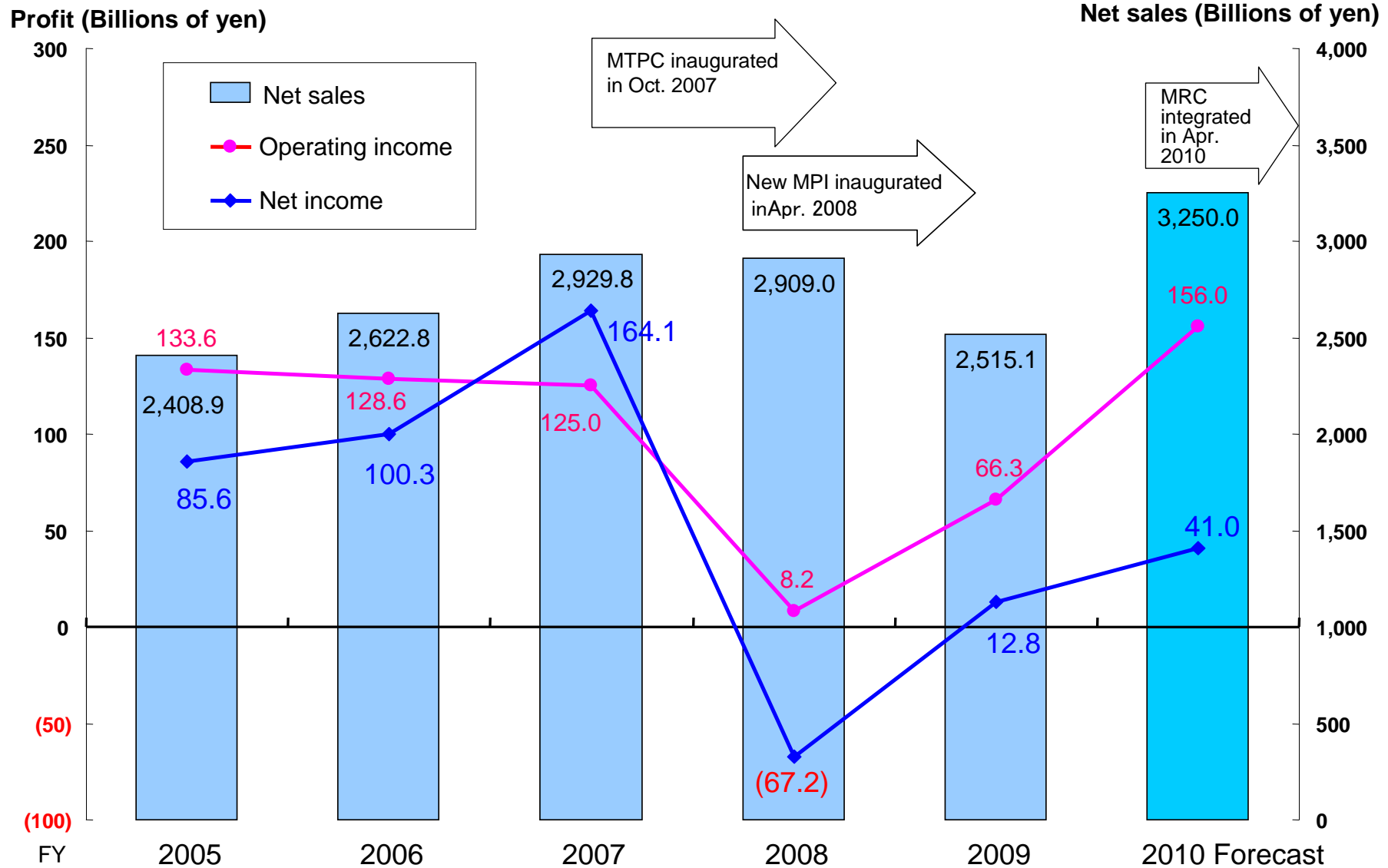
<p>Concept</p>	<p>Growing, innovating, and leaping ahead</p>	<p>Respond to severe economic downturn by restructuring to <b>accelerate innovation and leap ahead</b></p>	
<p>Organic Growth</p>	<p>Shift to high-performance products and high value-added businesses Execute efficient product/business life cycle management</p>	<p><b>Restructuring</b> Focus on growth businesses Reduce capital expenditure</p>	<p><b>Organic growth</b></p>
<p>Innovation</p>	<p>Nurture and accelerate seven next-generation growth businesses</p>	<p><b>Innovation</b> Accelerate the focused new businesses • White LEDs • LiB materials for HEVs</p>	
<p>M&amp;A</p>	<p>Strategic investment for alliances and M&amp;A</p>	<p><b>Earliest possible realization</b> • QUADRANT • NSCI • Taiyo Nippon Sanso • MRC</p>	<p><b>M&amp;A</b></p>

# Business Environment Outlook

On a recovery track in general, although rate differs by industry



# Consolidated P/L



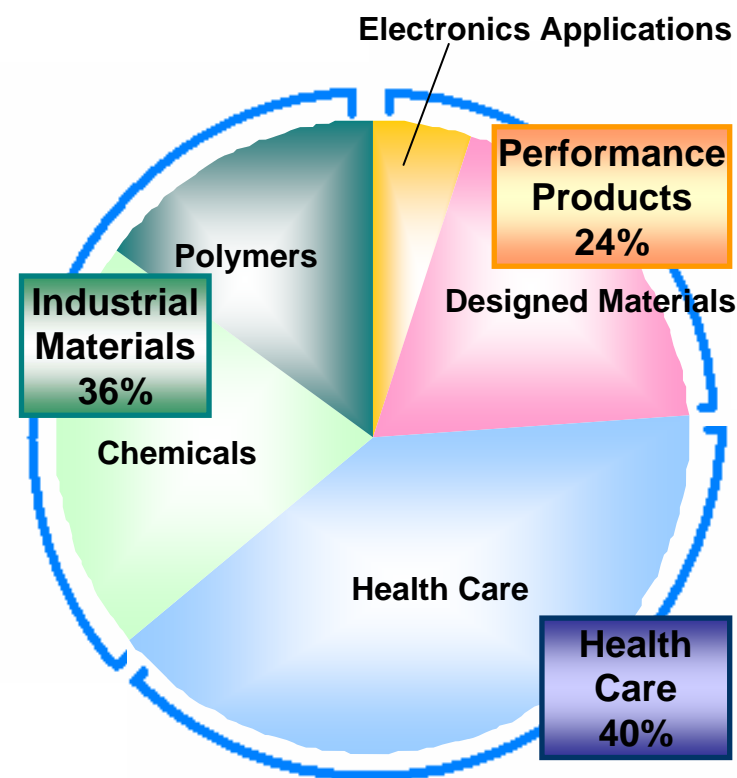
# Consolidated Operating Income by Segment

## FY2010 Forecast vs. APTSIS 10 Final Year Targets

(Billions of yen)

	FY2010 forecast	APTSIS 10 final year targets	Change
Electronics Applications	5.0 [17.0]	39.0	(34.0)
Designed Materials	33.0 [26.0]	22.0	11.0
Health Care	64.0	100.0	(36.0)
Chemicals	34.0	29.0	5.0
Polymers	23.0	21.0	2.0
Other	3.0	16.0	(13.0)
Corporate	(6.0) [(11.0)]	(17.0)	11.0
Contingency	—	(20.0)	—
	156.0	190.0	(34.0)

## Composition of Operating Income for FY2010 Forecast



Impact of a review of some business segments and strategic R&D expenses that were charged directly to business segments from Corporate  
 Electronics Applications: -¥12.0 billion  
 Designed Materials: +¥7.0billion

Note: Regarding FY2010 forecast, figures in parentheses are recombined to express figures for segments when APTSIS 10 was formulated.  
 Mitsubishi Chemical Holdings Corporation

# Business Restructuring Progress (1)

Steady withdrawal from unprofitable businesses  
and continuing focus on restructuring to strengthen businesses

		Withdrawal/Restructuring		APTSIS 10			
				2008	2009	2010	2011
MCC	Petro-chemicals	SM/Derivatives	Decision on Yuka Seraya liquidation (SM)	Sep.			
			Stock sales of Techno Polymer (ABS resins)		Mar.		
			Stock sales of PS Japan (PS)		Oct.		
			Shutdown of SM production facility (Kashima)				Mar.
		PVC/VCM	Shutdown of PVC production facility (Mizushima)	May			
			Shutdown of production facilities for PVC (Yokkaichi), chlor-alkali/VCM (Mizushima)				Mar.
		Caprolactam/ Nylon	Shutdown of cyclohexane production facility (Mizushima)			Mar.	
			Shutdown of production facilities for caprolactam, anone, and ammonium sulfate			Mar.	
			Divestiture of nylon business (Kurosaki)			May	
		Surfactants	Shutdown of AO/HA production facilities		Apr.		
			Withdrawal from glycol ether business			Dec.	
		PTA	<a href="#">Creation of global structure</a>		Jun.		
	Shutdown of paraxylene production facility (Mizushima)				May		
	Shutdown of PTA production facility (Matsuyama)				Dec.		
	Performance Products	<a href="#">Phosphors</a>	<a href="#">Merger with Kasei Optonix</a>		Apr.		
		<a href="#">Epoxy resins</a>	<a href="#">Merger with Japan Epoxy Resins</a>			Apr.	
		Fertilizers	Establishment of a JV with Chisso-Asahi Fertilizer		Oct.		
		Activated carbon	Stock sales of Calgon Mitsubishi Chemical				Mar.
Inorganic chemicals		Shutdown of sulfuric acid production facility			Nov.		

Blue text: restructuring for strengthening business operations



# Business Restructuring Progress (2)

		Restructuring		APTSIS 10			
				2008	2009	2010	2011
MTPC	Pharmaceuticals	Generic drugs	Tanabe Seiyaku Hanbai and Chosei Yakuhin merged		Apr.		
		Production companies	Production companies consolidated to form Mitsubishi Tanabe Pharma Factory	Oct.			
		Service support companies	Welfide Service integrated into Tanabe Total Service		Apr.		
		Business bases	Headquarters (Osaka), research centers, and logistics sites integrated respectively		Oct.		
MPI	Industry & Life Infrastructure		Sales sites consolidated (17→9 sites)	Dec. →			
		Pipe materials	Production sites consolidated (Phase 1: 7→5 sites)		Mar.		
			Production sites to be consolidated (Phase 2: 5→4 sites)			Sep.	
		Agricultural materials	Agricultural materials business integrated into MKV Dream		Jul.		

Blue text: restructuring for strengthening business operations

## Business Restructuring Progress (3)

### Continuous fixed cost reduction and accelerated structural reform

#### Comprehensive fixed cost reduction: ¥32.0 billion in FY2010

➤ **Reduced fundamental cost through structural reform**

**MCC: Fixed cost reduction project**

¥25.0 billion (FY2009)

→ ¥13.0 billion incorporated into plan

- Streamline corporate functions
- Optimize plant infrastructure giving consideration to withdrawal from businesses

**MTPC: R&D expenditure and fixed cost reduction**

→ ¥16.0 billion incorporated into plan

**MPI: Cost reduction activities to strengthen business foundation**

→ ¥3.0 billion incorporated into plan

#### Medium- to long-term measures

- **Production sites** → Fundamental reform in line with growth businesses and new businesses
- **Research centers** → Build an optimal structure for maximizing synergy toward the accelerating of innovation strategies
- **Overseas bases** → Build overseas regional strategies that respond to globalization

# Business Restructuring Progress (4)

## Unified naphtha cracker operations in Mizushima

### JV established to unify MCC and Asahi Kasei Chemicals naphtha cracker operations

#### Objectives

- Downsizing naphtha cracker facilities of both companies  
(MCC: After shutdown of VCM production facility, build optimum production system meeting ethylene demand of 380kt/year)
- Consolidation into single naphtha cracker—timed to correspond with further decrease in ethylene demand (carried out in accordance with demand trends)

#### Basic framework

- Facilities to be consolidated
  - Naphtha crackers and accompanying facilities of both companies
- Scope of operation
  - Sales of basic petrochemicals and utilities to MCC and Asahi Kasei Chemicals
  - Joint procurement of naphtha feedstock and fractions in shortfall such as C3
  - Rationalization of basic petrochemicals operations, formulation, and implementation of concrete measures to heighten efficiency

#### Schedule

- Start-up of the JV: April 2011
- Downsizing naphtha cracker facilities of both companies:  
To be carried out by spring 2012 (MCC: To be executed at time of regular maintenance in May 2011)
- Consolidation into single naphtha cracker: To be carried out in accordance with demand trends

# Business Restructuring Summary

## Acceleration of restructuring and fixed cost reduction

Restructuring		
MCC	Petrochemicals	SM/Derivatives PVC/VCM Caprolactam/Nylon Surfactants PTA
	Performance Products	Phosphors Epoxy resins Fertilizers Activated carbon Inorganic chemicals
MTPC	Pharmaceuticals	Production companies consolidated Service support companies consolidated Business bases consolidated
MPI	Industry & Life Infrastructure	Pipe materials Agricultural materials

Blue text: restructuring for strengthening business operations

Fixed Cost reduction	
MCC	Fixed cost reduction project
MTPC	R&D expenditure and fixed cost reduction
MPI	Cost reduction activities to strengthen business foundation

**Withdrawal from unprofitable businesses (FY2007-FY2009)**

**Net sales:**  
¥300.0 billion

**Operating income:**  
-¥15.0 billion

**Accumulated extraordinary loss:**  
-¥16.0 billion

**Fixed cost reduction (FY2010)**  
¥32.0 billion

# Capital Expenditure, Investment and Others

Response to severe economic downturn →  
Reduction of investment through focused selection

## Reduction in capital expenditure, investment and others

	Three-year plan for FY2008-FY2010		(Billions of yen)	
	Initial plan	Current	Reduction	
Capital expenditure, Investment and others	<b>590.0</b>	<b>335.0</b>	<b>(255.0)</b>	<b>(43%)</b>
Capital expenditure	495.0	275.0	(220.0)	(44%)
Performance Products	140.0	92.0	(48.0)	(34%)
Health Care	65.0	58.0	(7.0)	(11%)
Industrial Materials	140.0	80.0	(60.0)	(43%)
Corporate and others	150.0	45.0	(105.0)	(70%)
Investment and others (Ordinary)	95.0	60.0	(35.0)	(37%)
		Actual result 15.0 Plan 45.0		

# Major Capital Expenditure Progress

Steady implementation of growth and innovation strategies

Major capital expenditure **FY2005-FY2007** (KAKUSHIN Plan: Phase II) **¥158.0 billion**  
**FY2008-FY2010** (APTSIS 10) **¥71.0 billion**

(Billions of yen)

Business domain (Large-scale capital expenditure)	Major capital expenditure (Actual results and plans)			Contribution to net sales in FY2010
<b>Performance Products</b> Phase II: <b>22.0</b> <i>APTSIS 10: 32.0</i>	MAF production capacity increased BPDA production capacity increased Mass-production facility for cathode material for LiB built <i>Optical PET film production facility expanded</i> <i>OPL film for polarizing film production facility expanded</i> <i>Move overseas development of LiB materials for HEVs</i> <i>Increase production capacity of white LEDs</i>	Sakaide Kurosaki Mizushima	FY2005 FY2006 FY2007 <i>FY2008</i> <i>FY2010</i> Plan Plan	<b>30.0</b>
<b>Health Care</b> Phase II: <b>12.0</b> <i>APTSIS 10: 15.0</i>	New Medicinal Chemistry building constructed	Yokohama	FY2009	<b>--</b>
<b>Industrial Materials</b> Phase II: <b>124.0</b> <i>APTSIS 10: 24.0</i>	Polycarbonate production facility expanded No. 2 plant of terephthalic acid constructed Polypropylene production facility expanded PTMG production capacity increased EO Center infrastructure reorganized Iso-sorbite polycarbonate pilot plant built	Kurosaki India Kashima China Kashima Kurosaki	FY2005 FY2005 FY2006 FY2007 FY2008 FY2008	<b>100.0</b>

## Growth Business Example: FPD-related Component Materials

Aggressively promote FPD-related component materials business in China and Asia

	FY2009 Results	FY2015 Targets
Sales	¥77.4 billion	¥170.0 billion
Profit	¥16.5 billion	¥ 35.0 billion

### Reinforce core material supply capability

Respond to very weak demand for LCD panel core component materials by reinforcing production and sales bases

Rapid rise in investment for large panels in China

- Chinese-state enterprises (BOE, TCL, IVO, etc.)
- Korean enterprises (SEG, LGD)
- Taiwanese enterprises (AUO, CMI, etc.)

		Expansion completed/ Expansion in progress		Future plans
		Capacity of new facility	Operation timing	
Polyester film	MPI	15,000 tons	Feb. 2010	Expand existing production lines and set up new production bases
OPL film	NSCI	15 million m <sup>2</sup>	1Q 2012	Increase capacity for OPL films
Acrylic sheet	MRC	20,000 tons	2012-2013	Increase capacity for light guide panel sheets
Color resist	MCC	Production system for expansion to be established		Production system for expansion, new production bases, and sales bases to be established

### Leverage Group synergies for expansion

Share development information of core component materials within the Group and promote business innovation

# Innovation Strategy Progress

Nurture and accelerate seven new businesses

Control R&D expenditures through selection and concentration

R&D expenditures (FY2008-FY2010) **¥425.0 billion → ¥392.0 billion (-¥33.0 billion, -8%)**

Initial plan	June 2009	Current
¥425.0 billion	→ ¥407.0 billion	→ ¥392.0 billion

- **White LEDs** Today's topic
- **LiB materials for HEVs** Today's topic
- **Organic photovoltaic modules** Conversion efficiency: achieved 7.4% (Mar. 2010)
- **Organic photo semiconductor** Business alliance with Pioneer (Launch target: 2011)
- **Sustainable resources** Today's topic
- **Chemical components for automobiles** Initiate group-wide cross-sectional teams to accelerate development
- **Personalized medicine** Development of new cancer marker, stroke marker underway

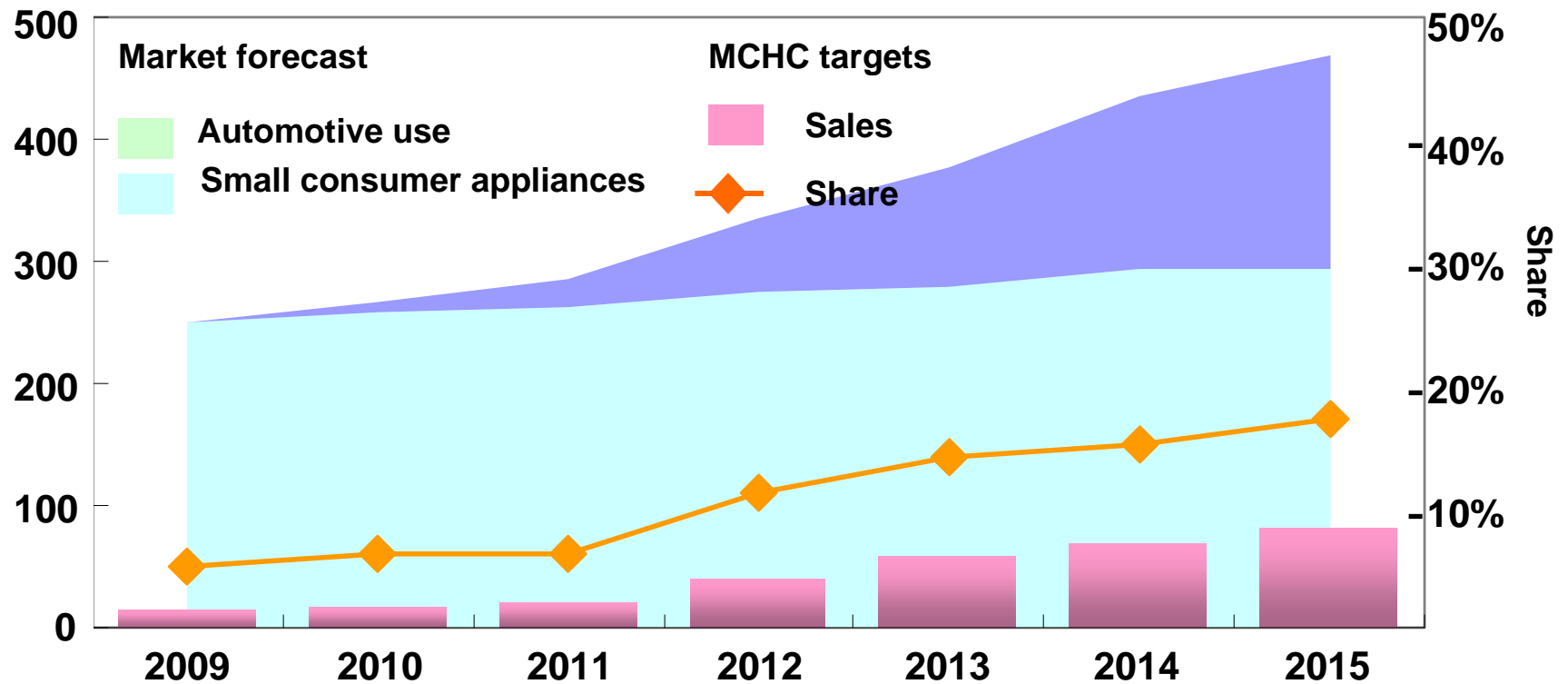


# LiB Materials: Market and Sales/Share Targets

Expand sales/share in line with growth of HEV/EV applications

## Four key LiB materials: Market forecast and MCHC sales/share targets

(Billions of yen)



(MCC estimate 2010)

# LiB Materials: Business Outlook

Emphasize thorough quality management and cost reduction, and secure stable worldwide supply capability to increase share

Four key LiB materials



Battery prototype and analysis



Battery safety evaluation and analysis

	Features and competitive advantages	Share (%) 2009 → 2015
<b>Electrolyte</b>	<ul style="list-style-type: none"> <li>•Optimal formula and additive patent</li> <li>•Synergy with other materials</li> </ul>	<b>25 → 40</b>
<b>Anode</b>	<ul style="list-style-type: none"> <li>•Spherical graphite technology</li> <li>•Enhanced features through surface treatment technology</li> </ul>	<b>20 → 35</b>
<b>Cathode</b>	<ul style="list-style-type: none"> <li>•Less cobalt cathode</li> <li>•Enhanced output/durability through unique particle design</li> </ul>	<b>&lt;5 → 10</b>
<b>Separator</b>	<ul style="list-style-type: none"> <li>•Enhanced output, lifecycle, and conservation property through dry process, 3-dimensional pore structure</li> </ul>	<b>&lt;5 → 10</b>

# LiB Materials: Investment Plans

Increase and strengthen global production capabilities through continuing capital expenditure

	Current Capacity	Planned Investment by 2015 (Billions of yen)	Target Capacity	Production Site
<b>Electrolyte</b>	8,500 tons/year	<b>Total ¥30.0 billion</b>	50,000 tons/year	domestic and overseas
<b>Anode</b>	3,000 tons/year		35,000 tons/year	domestic and overseas
<b>Cathode</b>	600 tons/year		15,000 tons/year	domestic
<b>Separator</b>	12 million m <sup>2</sup> /year		72 million m <sup>2</sup> /year	domestic

**Topics**

**Expected sales: ¥80.0 billion (FY2015)**

■ **Raw materials for anodes:**

JV establishment with China's QINGDAO GR-TAIDA CARBON (May 2010)

■ **Anodes:**

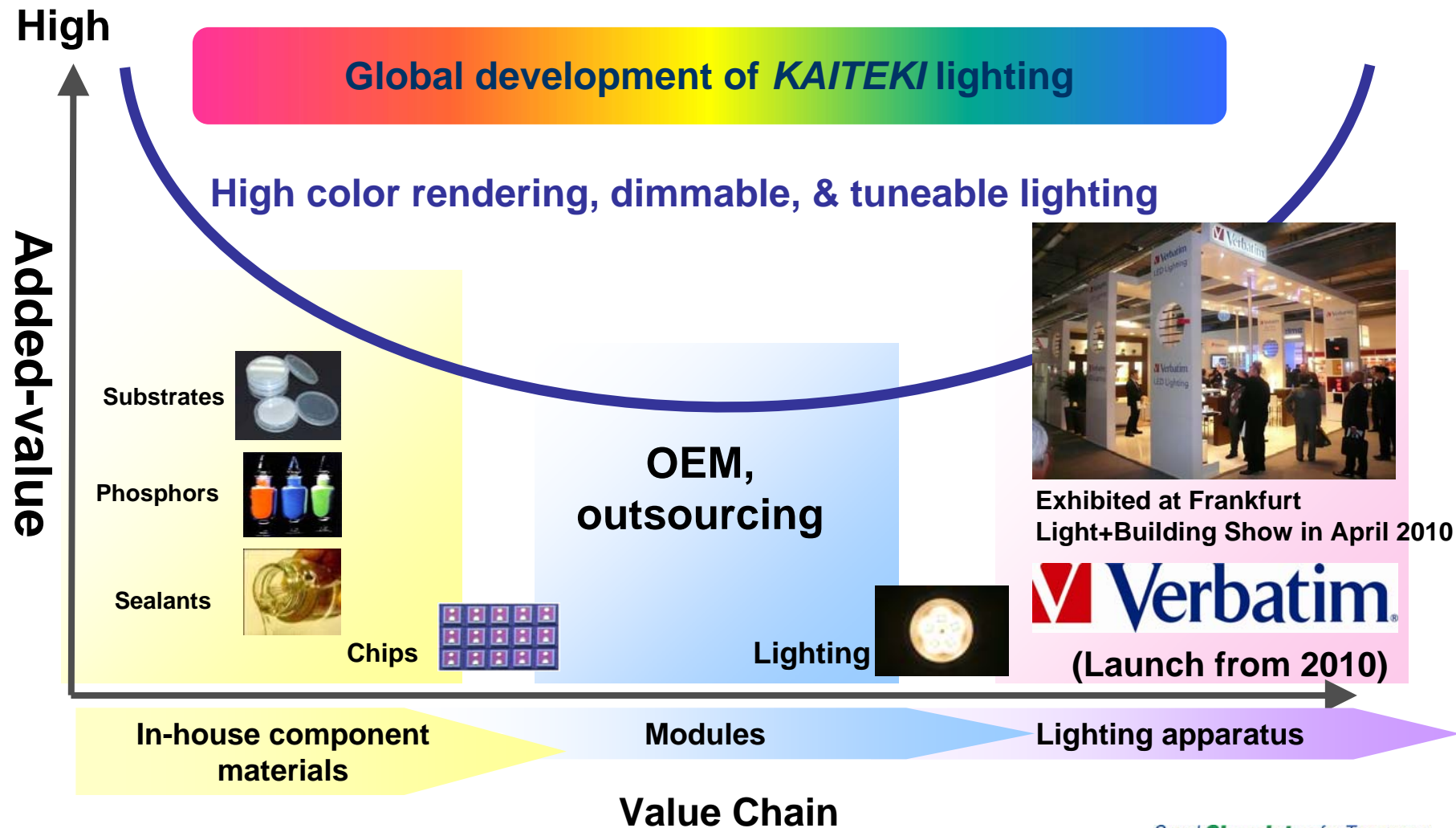
Production facility expansion (Sakaide) [December 2010] → + 2,000 tons

■ **Cathodes:**

Production facility expansion (Mizushima) [October 2010] → + 1,600 tons

# White LEDs: Business Outlook

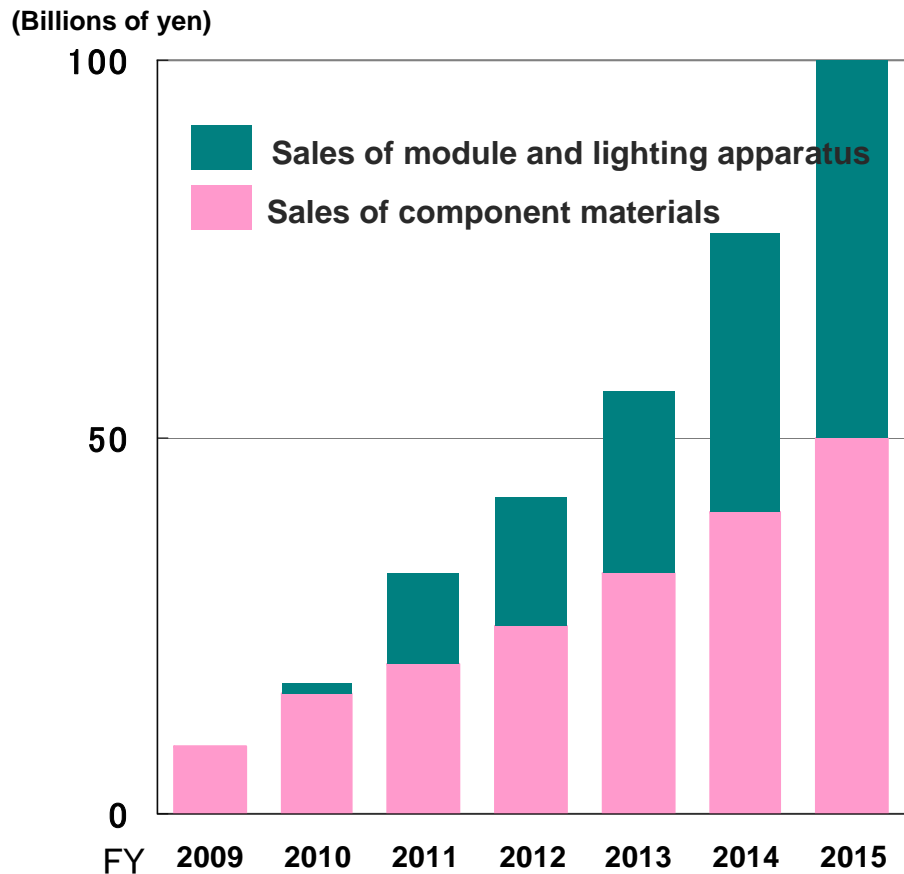
Utilize technological superiority and Verbatim's sales network to establish a highly profitable business model



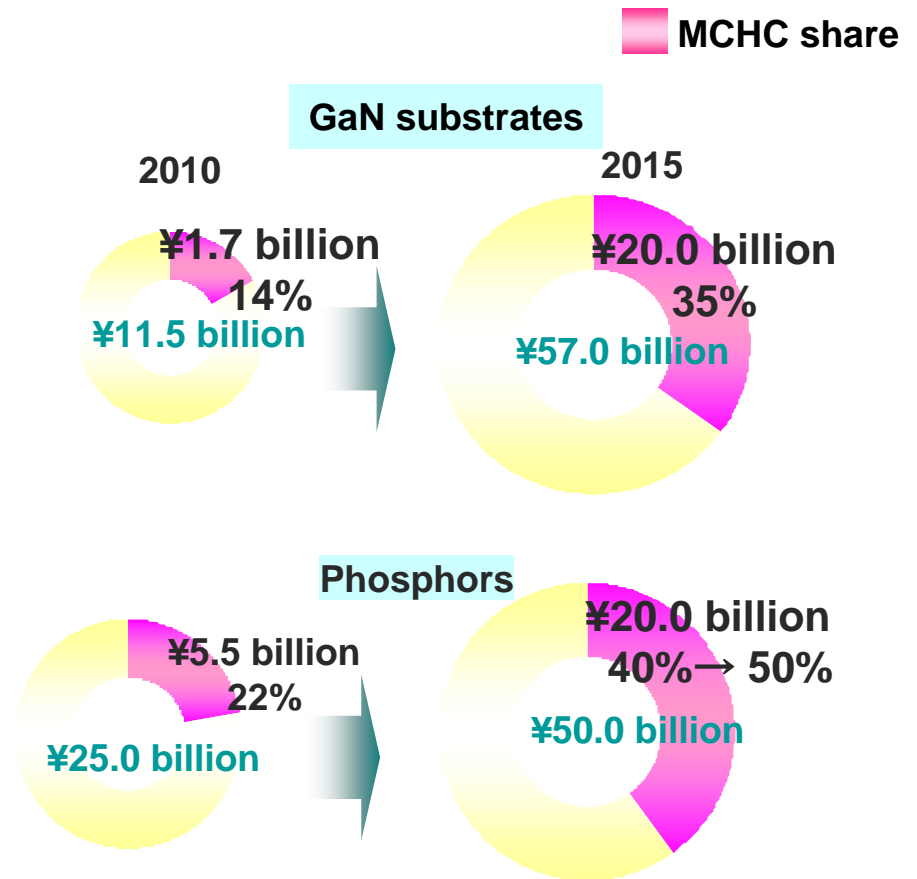
# White LEDs: Market and Sales/Share Targets

Aim to achieve combined sales of ¥100.0 billion for component materials, modules, and lighting apparatus and increase shares for GaN substrates and phosphors in 2015

**Sales target for component materials and lighting apparatus**



**Share target for component materials (2015)**



# White LEDs: Investment Plans

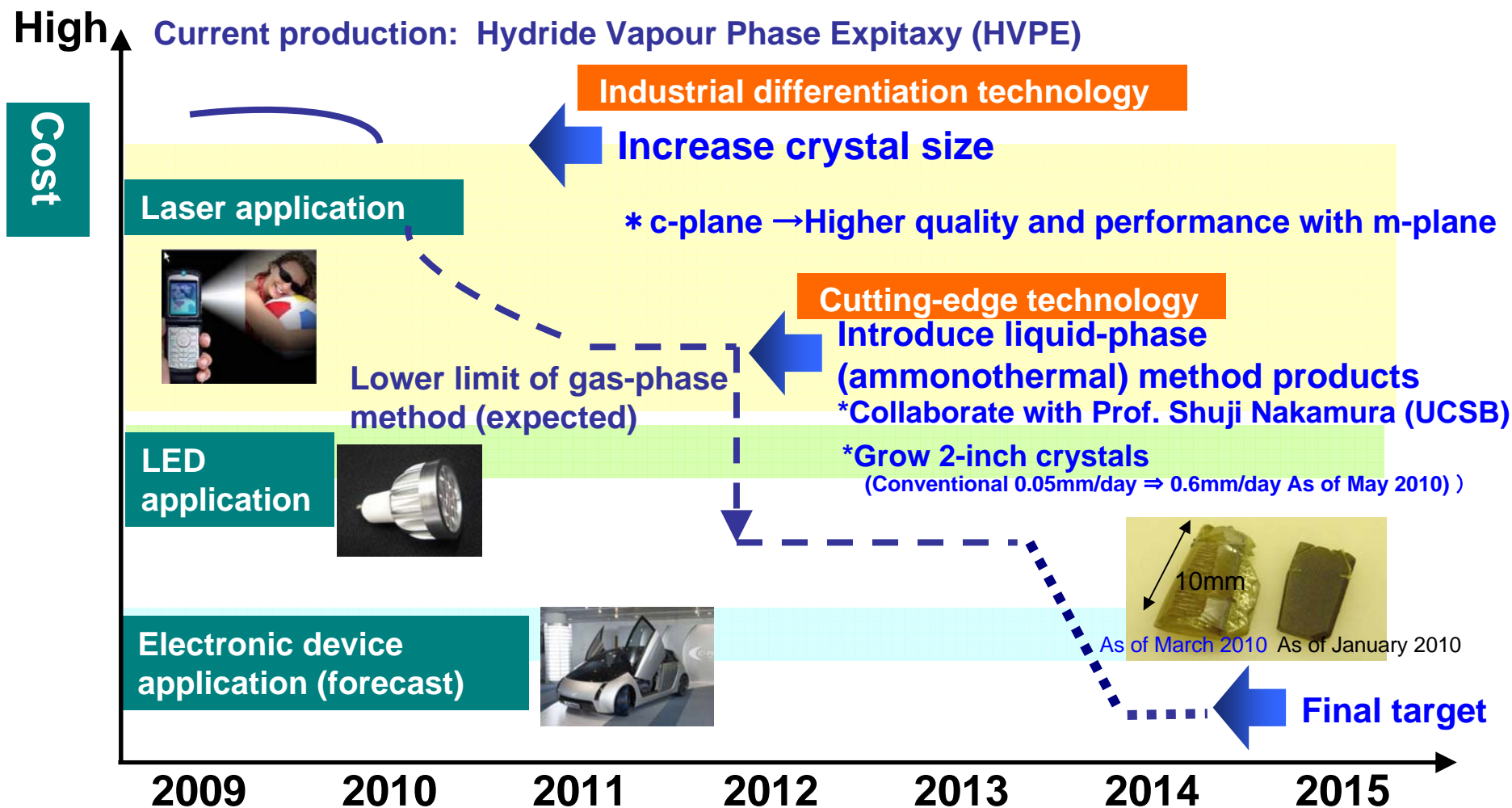
Proactive investment in highly competitive superior GaN substrates and phosphors

	Current status	Planned investments by 2015	Targets
<b>GaN substrates</b>	<ul style="list-style-type: none"> <li>Recorded sales for use in laser diodes</li> <li>Sales for use in lighting</li> <li>The leader in the differentiated technology (m-plane)</li> </ul>	¥15.0 billion	<ul style="list-style-type: none"> <li>Expand gas-phase method capabilities by FY2010 20-fold increase vs. FY2010</li> <li>Establish new liquid-phase method mass production facilities by FY2015 200-fold increase vs. FY2010</li> </ul>
<b>Phosphors</b>	<ul style="list-style-type: none"> <li>Exclusive sales for red phosphor</li> <li>Expanding sales for green and yellow phosphors</li> </ul>	¥7.0 billion	<ul style="list-style-type: none"> <li>Expand production capacity 6-fold increase vs. FY2010</li> </ul>

- **Module and lighting apparatus:** Supply on OEM basis
- **Chips:** Phase 1 – Expand own capabilities for nUV chips (100 million pieces/month)  
Phase 2 – Supply on OEM basis (1 billion pieces/month)
- **Strengthening of sales system:** Verbatim brand + M&A of sales companies

# White LEDs: Technology Development Roadmap

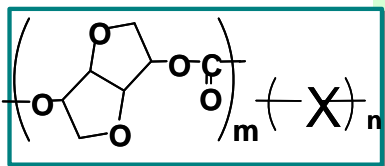
Achieve cost reductions for high-performance GaN substrates through technological innovation





## Bio-Engineering Plastic Market Development

### Bio-engineering plastic



- Biomass material (isosorbide polycarbonate)
  - Excellent transparency, light resistance and surface characteristics
  - Produced under the “melt process” developed in our PC business which is environmentally friendly and enables diverse applications
- 2010: Start operations at pilot plant (Sample output in August)
  - 2012: Plan to complete commercial-scale plant
  - 2015: Target production capacity of 20,000 tons



Pilot plant (Kurosaki)

### High-performance applications

- Glass substitute
- Optical material
- Chassis/housing
- Light-resistant material
- Layered transparent sheet

### Environmentally friendly

- Adheres to laws/regulations
- LCA value
- BPA free

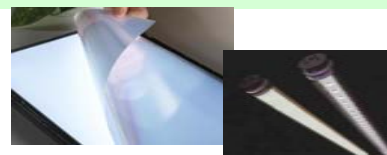
### Industrial material, automotive fields



### Electric, electronic fields



### Optical, energy fields

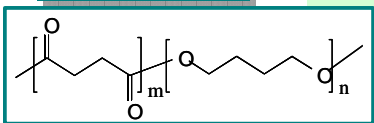


Images



# Sustainable Resources: GS Pla<sup>®</sup> Market Development

## GS Pla<sup>®</sup> (Polyester)



- Expand application by leveraging biodegradability characteristic
- Production technology amassed in polyester business (PET, PBT)

Currently producing at small-scale plant (Sales target in FY2010: 2,000 tons)

2013: Commence commercial plant operation

2015: Production capacity target: 20,000 tons

- R&D and practical application of biomass materials

2010: Study on collaboration with PTT Plc. (Thailand)

## Agricultural sector

Neat resin  
Starch compounds

Launched in April 2010



## Paper lamination

50% biomass products



Biodegradable test



Using GS Pla<sup>®</sup>



Using polyethylene

Cultivating applications for catering industry

## Grade development

Polymer alloy with other materials and biomass products

# Leap Ahead (M&A) Strategy Progress

Accelerate portfolio restructuring by forging ahead (M&A)  
 Net sales increase approx. ¥630.0 billion and operating income approx. ¥35.0 billion  
 (FY2010)

**Invest approx. ¥250.0 billion in M&A**

## Current Status of Strategic Investment

Company	Detail	Timing of implementation	Objective
QUADRANT	Became a consolidated subsidiary through TOB by AQUAMIT*	September 2009	Strengthen functional product business
NSCI	Became a consolidated subsidiary	September 2009	Strengthen specialty chemicals business
Taiyo Nippon Sanso	Became an equity-method affiliate	September 2009	Strengthen businesses related to performance product businesses
MRC	Became a consolidated subsidiary through TOB To be a wholly-owned subsidiary through share exchange	March 2010 Scheduled for October 2010	Expand corporate scale and growth businesses and accelerate global business development

\*Joint venture between group of founders of MPI and QUADRANT

## Current Status of Non-Strategic Investment

MCC: Acquisition of Freecom, capital and business alliance with Pioneer, investment in OPV business

MTPC: Investment in Cytochroma, capital and business alliance with Choseido Pharmaceutical

MCC: Investment in white LEDs, OPV business, and LiB materials for HEVs

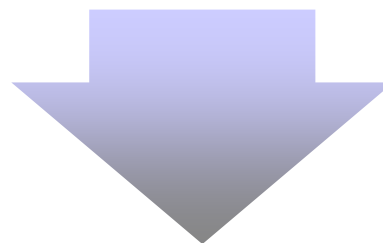
▶ **¥15.0 billion**

▶ **¥45.0 billion (plan)**  
 Good Chemistry for Tomorrow  
 Creating better relationships among people, society, and our planet.

# Synergy Summary

- Aim to achieve cost synergies of ¥3.0 billion and business operation synergies of ¥7.0 billion by FY2012
- Conduct examination for both companies to pursue synergies on a continuing basis with the aim of achieving further effects

Reference regarding announcement of management integration with MRC on November 19, 2009



## By FY2012, realize:

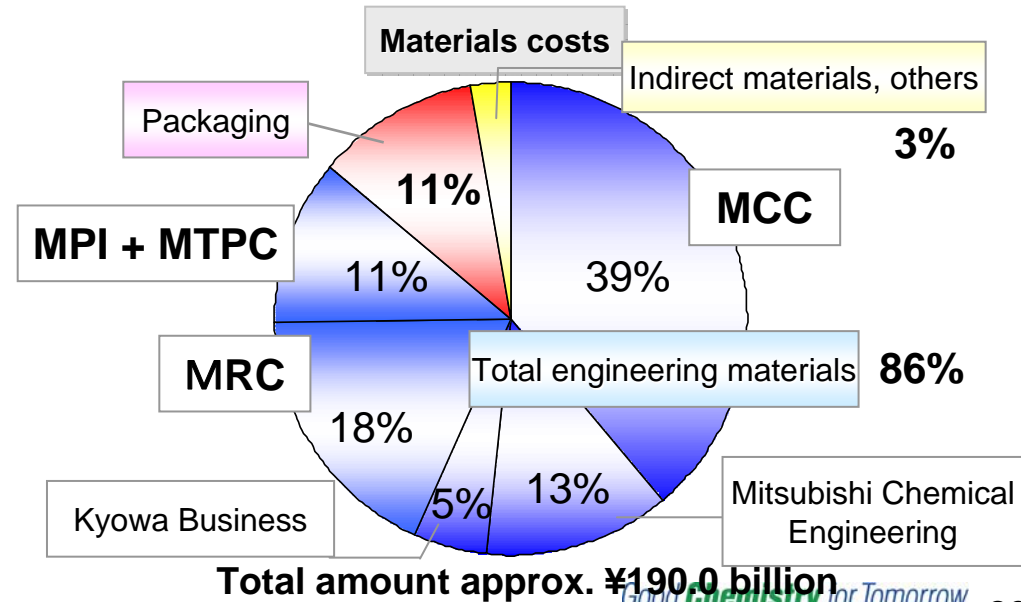
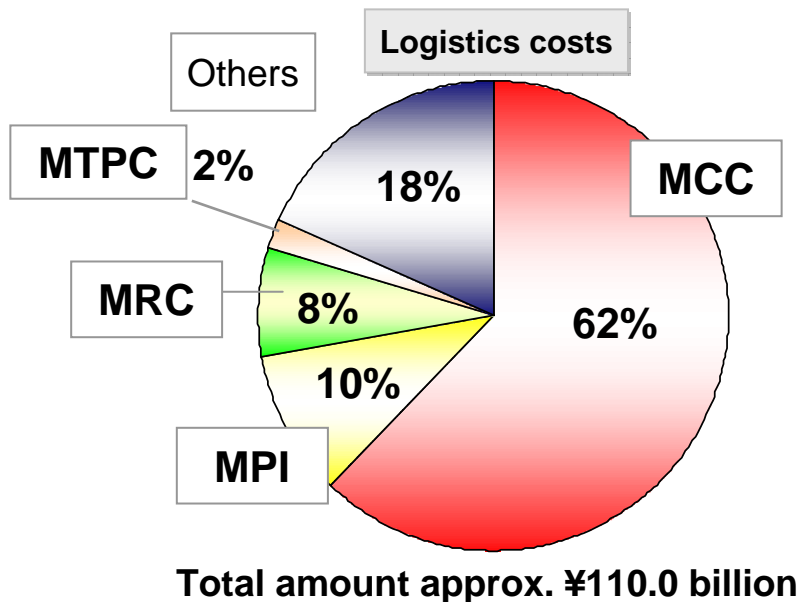
- **Cost synergies** → **¥3.0 billion or more**  
(Share infrastructure for logistics, procurement, and other areas)
- **Business synergies** → **¥7.0 billion or more**  
(Water treatment, carbon fibers, and specialty chemicals)
- **R&D synergies** → **+  $\alpha$**

# Cost Synergy Summary

Secure cost synergies worth ¥3.0 billion or more by FY2012 by sharing infrastructure, clarify potential synergies among operating companies, and start planning concrete measures

<Potential synergies from sharing infrastructure among operating companies>

Principal infrastructure	Areas examined for synergies
Logistics	Consolidate common bases and raise efficiency of transport operations
Procurement	Joint purchasing of engineering-related materials, packaging materials, indirect materials, and others
	Increase purchases of raw materials and products within the Group
Systems	Reduce costs by sharing information systems



# Business and R&D Synergies

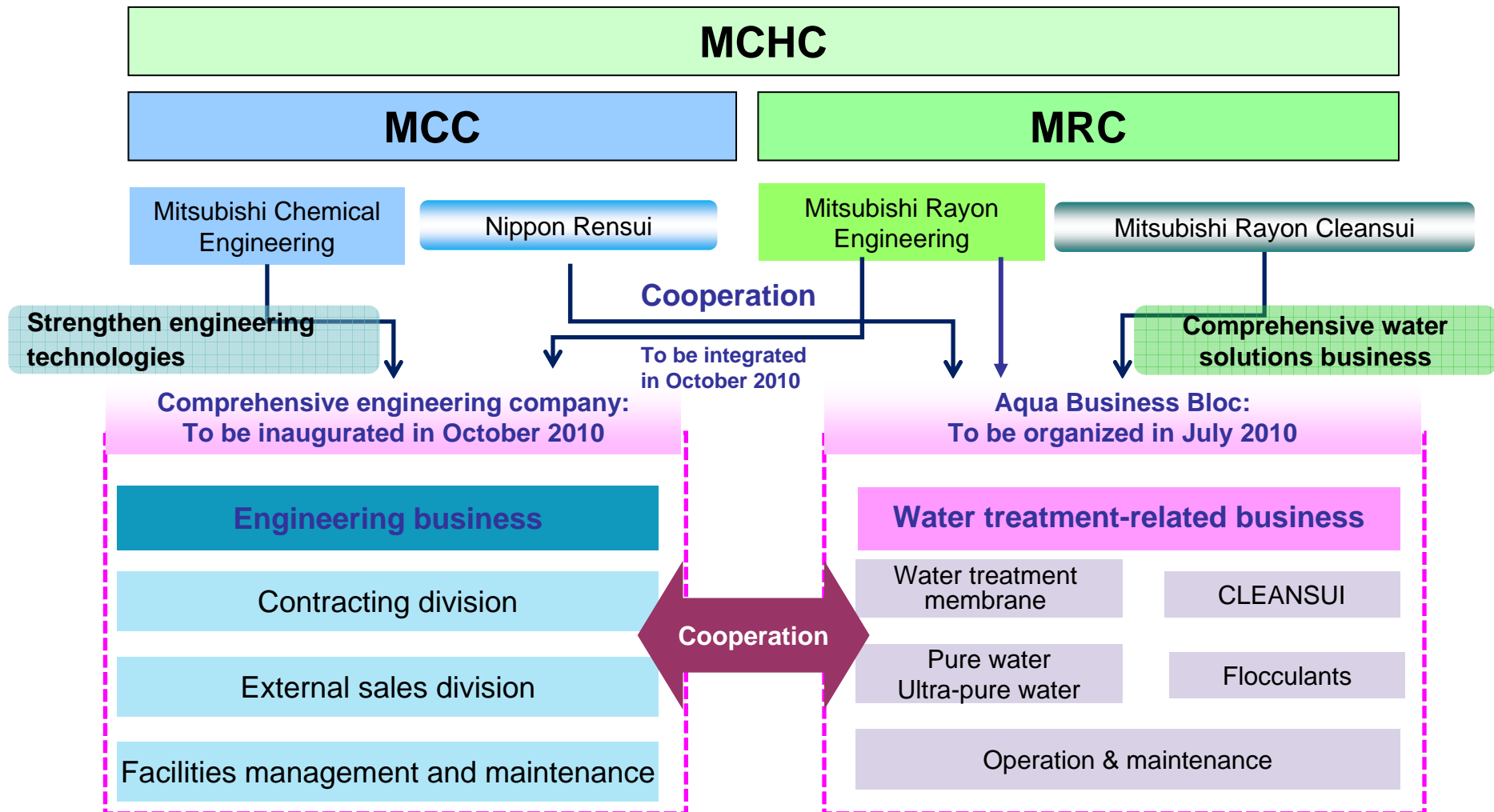
**Aim to secure ¥7.0 billion or more in cost reductions through business and R&D synergies in FY2012  
Clarify potential synergies among operating companies and start planning concrete measures**

Today's topics

Segment	Potential synergy areas	Study examples
Designed Materials	Specialty chemicals	<ul style="list-style-type: none"> <li>Collaborate in light curing resins and resin additives</li> <li>Collaborate in water-based emulsions (effective utilization of manufacturing, sales, and R&amp;D resources)</li> </ul>
	Businesses engaging in similar areas	<ul style="list-style-type: none"> <li>Collaborate in food ingredients and environmental analysis business</li> </ul>
	Display-related film field	<ul style="list-style-type: none"> <li>Collaborate in materials for FPD front plates</li> <li>Develop optical materials through the use of MRC's optical design technologies</li> </ul>
	Plastic sheet business	<ul style="list-style-type: none"> <li>Strengthen product lineup and sales routes</li> </ul>
Polymers	CF composites	<ul style="list-style-type: none"> <li>Collaborate in industrial applications, automotive fields (drive shafts, structural materials fields), and other fields</li> </ul>
Health Care	Water treatment membranes and equipment for medical care	<ul style="list-style-type: none"> <li>Utilize domestic and overseas sales bases</li> </ul>
Chemicals	R&D in industrial materials domain	<ul style="list-style-type: none"> <li>Improve productivity through catalyst improvements and enhanced process efficiency by utilizing technology platforms of MCC and MRC</li> </ul>
Polymers	Market competitiveness by utilizing mutual sales channels	<ul style="list-style-type: none"> <li>Develop the market for performance polymers and strengthen technology development</li> </ul>
Others	Water treatment and engineering businesses	<ul style="list-style-type: none"> <li>Strengthen water treatment business</li> <li>Raise business efficiency through engineering integration</li> </ul>

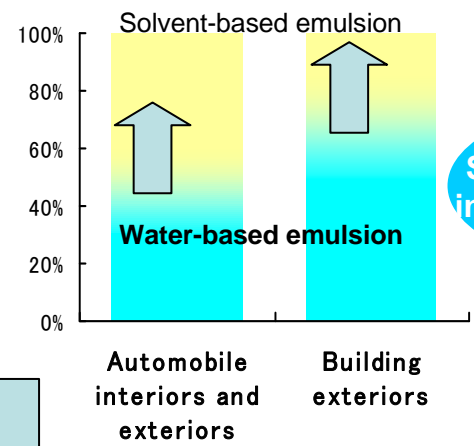
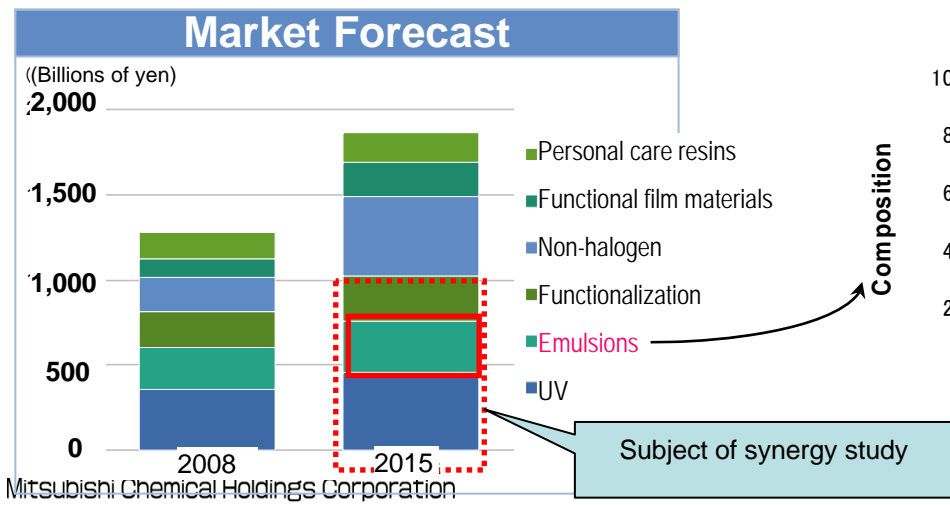
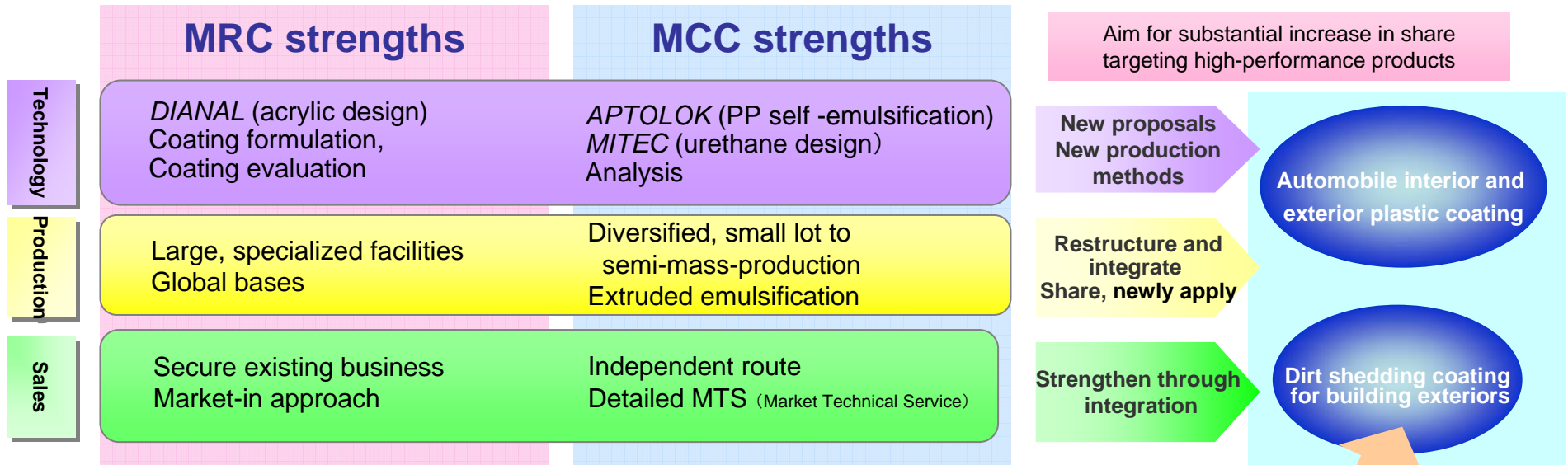
# Example of Business Synergies: Water Treatment and Engineering Businesses

Organize the Aqua Business Bloc at MRC in July 2010 and restructure and integrate water treatment businesses of MCC and MRC and engineering businesses in October 2010



# Example of Business Synergies: Specialty Chemicals

**Example of synergies in specialty chemicals:  
Gain market competitiveness in new water-based coating materials**

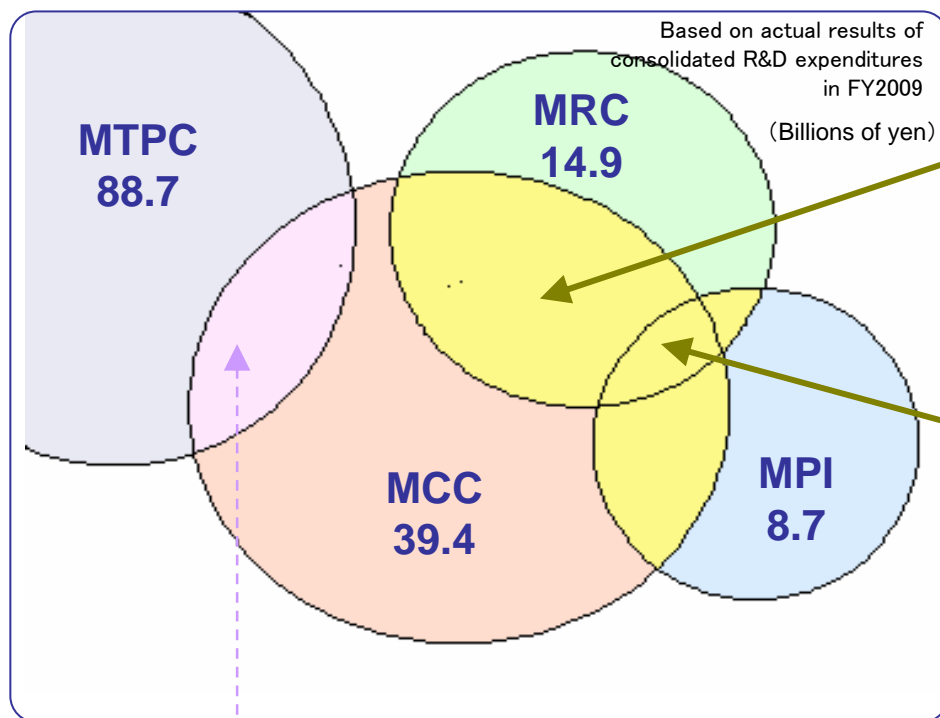


Substantial increase in water content ratio



# R&D Synergies

Make efficient use of management resources by integrating and consolidating overlapping/related themes while bringing together the strong fields in each company and dramatically raising technology levels



- **Specialty chemicals**  
⇒ Coating materials, emulsions, UV material, and others
- **Fundamental technologies**  
⇒ Catalyst technology, biotechnology, materials analysis, and production technology

- **Carbon fiber/composite materials**
- **Film sheets**
  - 1) Use acrylic materials  
⇒ Combine acrylic materials that have superior weather resistance
  - 2) Provide surface functions  
⇒ Precision forming, coating
- **Fundamental technologies**  
⇒ Molding processing, forming technologies, technologies for surface functionalization

- **Fields that fuse pharmaceuticals and diagnosis**
  - 1) R&D on biomarkers
  - 2) Development of cerebral infarction markers and cancer markers
  - 3) Fundamental technologies  
⇒ Proteomics/metabolomics, Health information technology



# New Medium-term Management Plan APTSIS 15: *APTSIS* Business Environment Leading up to 2025

## “Climate Change and Natural Resources”

- Concern about rising cost and depletion of fossil resources will grow
- Climate change will worsen
- Will see development of the utilization of CO<sub>2</sub> as a carbon resource
- Depletion will cause hoarding of natural resources and competition will intensify
- More contamination and greater shortage of water resources
- Ecosystems will be destroyed

**Chemical businesses that consume significant fossil resources will undergo a shakeout, and only those that contribute to renewable resources, energy, and the environment will prosper**

## “Health Care”

- Low birth rate and aging population in developed nations and China, etc., will lead to collapse of healthcare insurance systems
- Regenerative medicine and robotic equipment will be widely used as lifespan continues to expand
- Advanced diagnostic technology and information technology will bring about use of remote medical care and robotics in medicine
- The need for advanced personalized medicine will increase

**Health care will shift to personalized medicine because the traditional blockbuster sales model will disappear, etc.**

## “Economy & Markets”

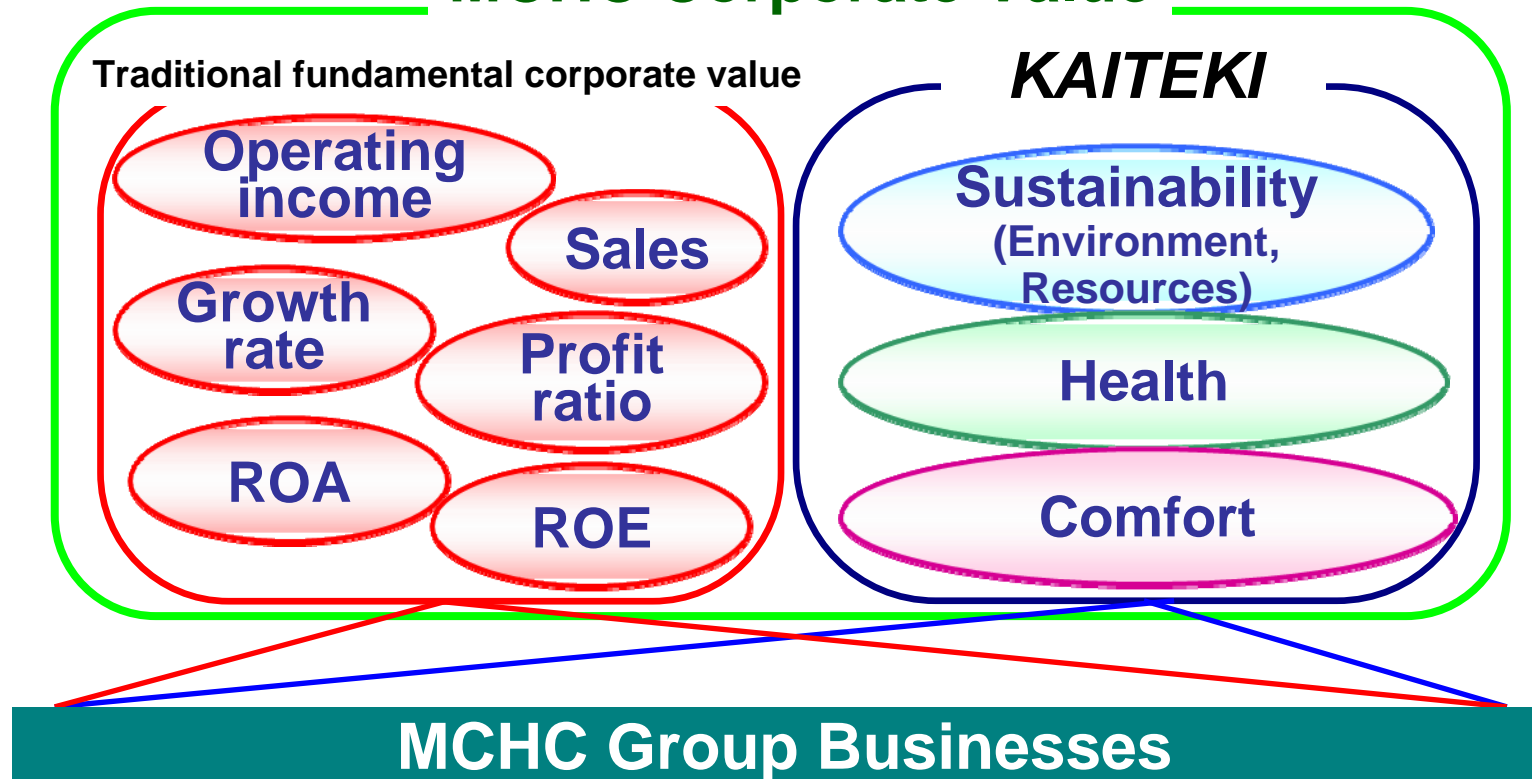
- Asia will become center of global economy (China and India)
  - Three key currencies will be U.S. dollar, Euro, and Yuan
- Market economy principles will shift to those driven by controls, regulations, and national interest
  - Competition among nations will divide the global economy into blocks
    - Combining industries will accelerate

**There will be a major global reorganization in each business domain, notably Asian companies, especially in China and India**

# APTSIS 15: Introduction of KAITEKI Indices

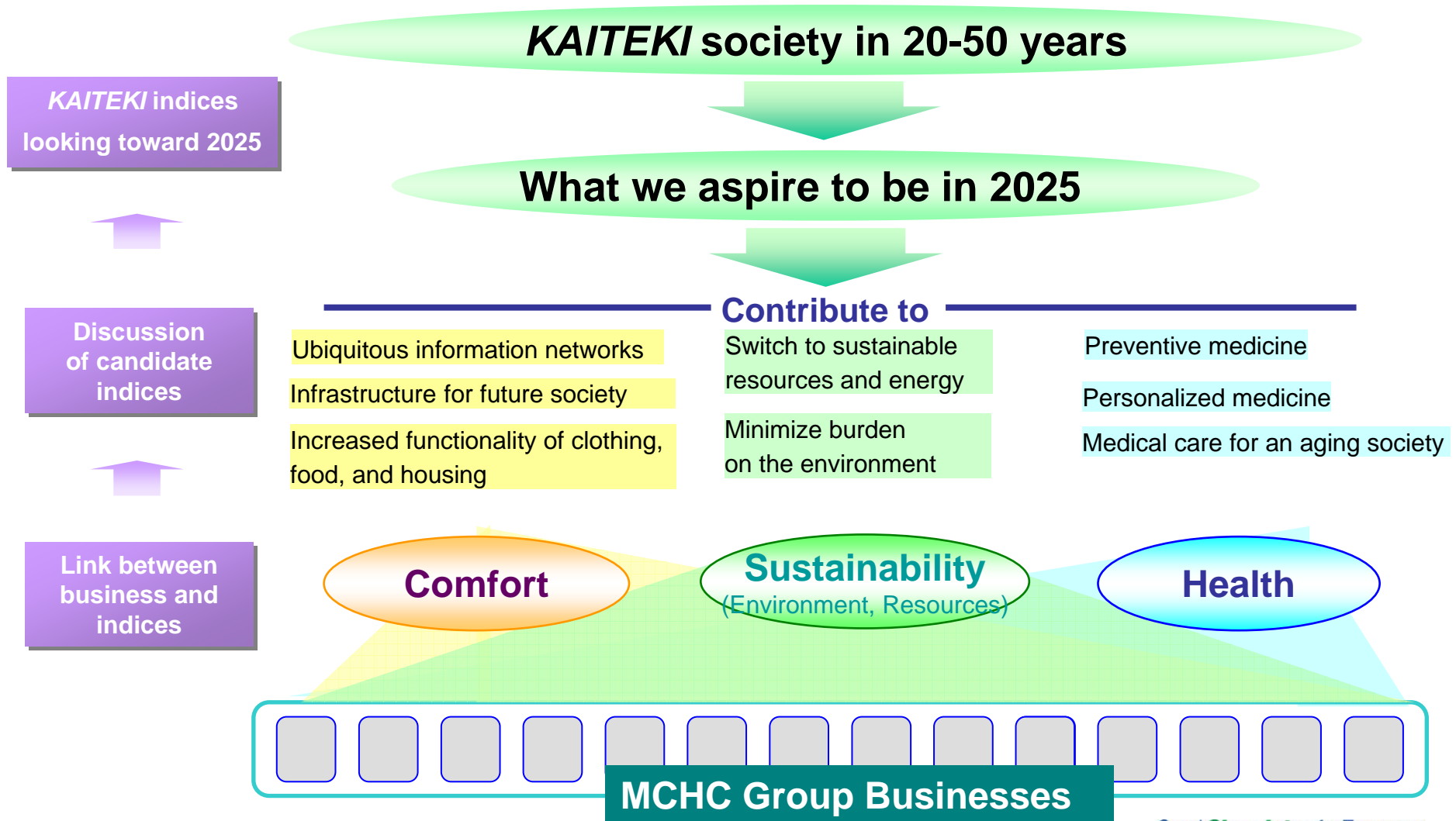
MCHC corporate value is the sum of traditional corporate value and KAITEKI value

## MCHC Corporate Value



# APTSIS 15: Formation of KAITEKI Indices

Clarify indices for a KAITEKI society and link with business



# APTSIS 15: Basic Policy

Name: **APTSIS 15**

Period: **Five years from FY2011 to FY2015**

Phase 1: FY2011 - FY2012

Phase 2: FY2013 - FY2015

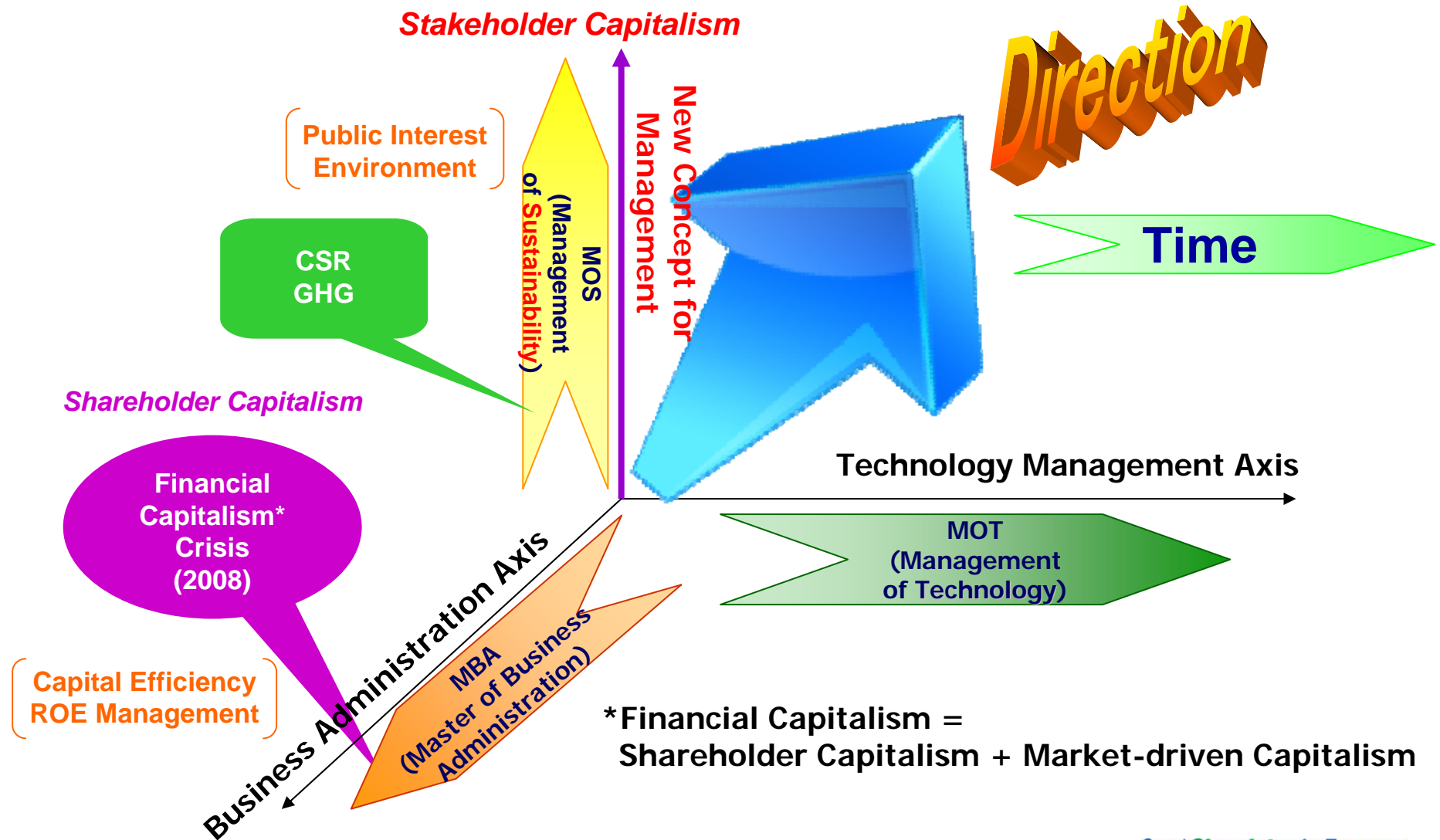
## What we aspire to be in 2015

- **MCHC corporate value**: Plan to announce numerical targets  
(Basic indices + *KAITEKI* indices)

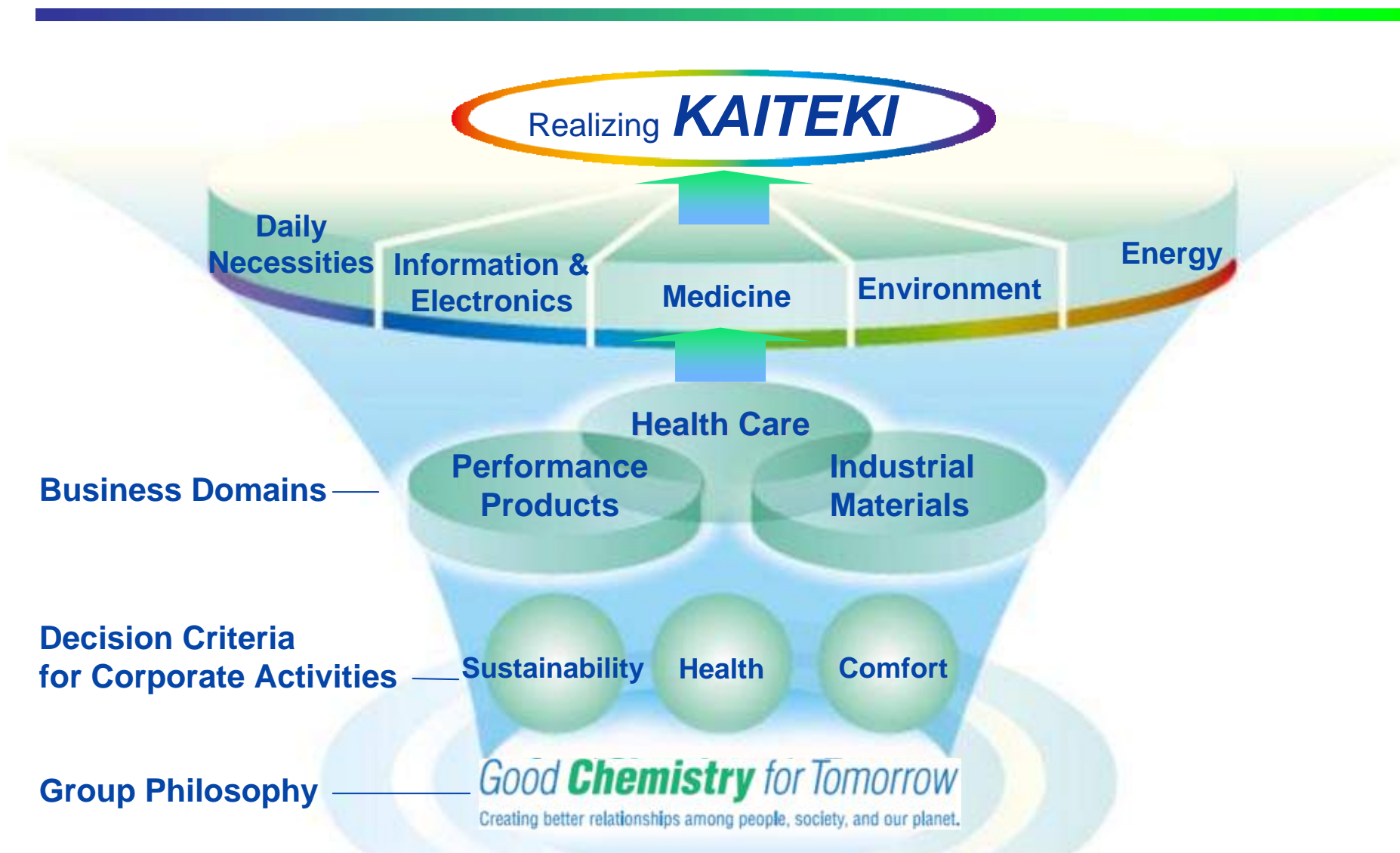
<b>Target</b>	● Net sales:	¥4.7 trillion
	● Operating income:	¥400.0 billion
	● Overseas sales ratio:	45% or higher

# Sustainable Development of Our Company and the World

## Proposal of "Management of Sustainability" (MOS Axis)



# Our Aspirations



**Announcement of APTSIS 15 planned on December 8, 2010**

The forward-looking statements are based largely on information available as of the date hereof, and are subject to risks and uncertainties which may be beyond company control. Actual results could differ largely, due to numerous factors, including but not limited to the following: Group companies execute businesses in many different fields, such as petrochemicals, carbon and inorganic products, information and electronics, pharmaceuticals, polymers and processed products, and these business results are subjected to influences of world demands, exchange rates, price and procurement volume of crude oil and naphtha, trend of market price, speed in technology innovation, National Health Insurance price revision, product liabilities, lawsuits, laws and regulations.