

**The Mitsubishi Chemical Holdings Group  
Mid-term Management Plan**

**APTSIS 10**

*The Mid-term Management Plan 2010*



**May 13, 2008**

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**Mitsubishi Chemical Holdings Corporation**

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.

# Mitsubishi Chemical Holdings Group Motto

# APTSIS

*Mitsubishi Chemical Holdings Group Member will,  
Under a mission to contribute to our Group,  
Strive to provide safety and comfort, be environmentally  
conscious, and improve human health  
To win further trust worldwide.*

Apt:  
【Adjective】 Appropriate  
-sis:  
【Suffix】 From Greek, indicates that something is  
a behavior, process, status, condition, etc.

## **A**gility

*Be alert, act quickly*

## **P**rinciple

*Sharing theories, principles  
and ideals*

## **T**ransparency

*Transparency, accountability and  
compliance*

## **S**ense of Survival

*A sense of being on the verge, a sense of crisis*

## **I**nternationalization

*Enhancing our performance within the global market*

## **S**afety, Security & Sustainability

*Ensuring safety in manufacturing, trust in quality,  
information security and environmental consciousness*

# Agenda

- Review of the former mid-term management plan, *KAKUSHIN Plan: Phase 2 (FY2005-2007)*
  
- The new mid-term management plan, *APTSIS 10 (FY2008-2010)*  
 “Growing, Innovating, and Leaping Ahead”
  1. What we aspire to be in 2025, and should be in 2015
  2. Basic strategies of *APTSIS 10*
  3. Increase shareholder value
  
- Increasing corporate value sustainably laying the foundation for the “Institute for KAITEKI Biosphere” (tentative)

FY2005-2007: April 1, 2005 – March 31, 2008

FY2008-2010: April 1, 2008 – March 31, 2011

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**Review of  
the Former Mid-term Management Plan  
*KAKUSHIN Plan: Phase 2*  
(FY2005-2007)**

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# Basic Strategies and Results

## Steady achievement of management reforms

### Core Strategies

**Portfolio Management with Emphasis on Sustainable Growth**

- Focus on selected businesses and allocate strategic resources for further growth
- R&D investment to create new values and to develop proprietary technologies

**Integration of Group Strengths**

- Maximize group synergy
- Prepare for further alliances

**Pursuit of Further Growth and Improvement of Financial Condition**

- Achieve both growth and balance sheet management
- Improve financial condition

### Strategic Initiatives

- ✓ Establish holding company structure (Mitsubishi Chemical Holdings Corporation) (Oct. 2005)
- ✓ Merger of Mitsubishi Pharma Corporation and Tanabe Seiyaku Co., Ltd. (Oct. 2007)
- ✓ Make Mitsubishi Plastics, Inc. a wholly-owned subsidiary and consolidation of functional products businesses (Apr. 2008)
- ✓ Identify R&D focus areas

Numerical Targets of Phase 2 FY2007 (Plan)	FY2007 Actual Results
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Operating Income	≥¥140 billion	¥ 125 billion**
✓ ROA *1	≥ 5.5 %	8.5 %
✓ D/E Ratio *2	≤ 1.5	0.99

\*\*Operating income target was not achieved due to worsening in business conditions for the terephthalic acid, the Kashima fire, and delays in establishing and developing the performance products market.

※1 ROA = Net income before tax / Average of total assets at beginning and end of fiscal year

※2 D/E ratio = Total debt / Shareholders' equity

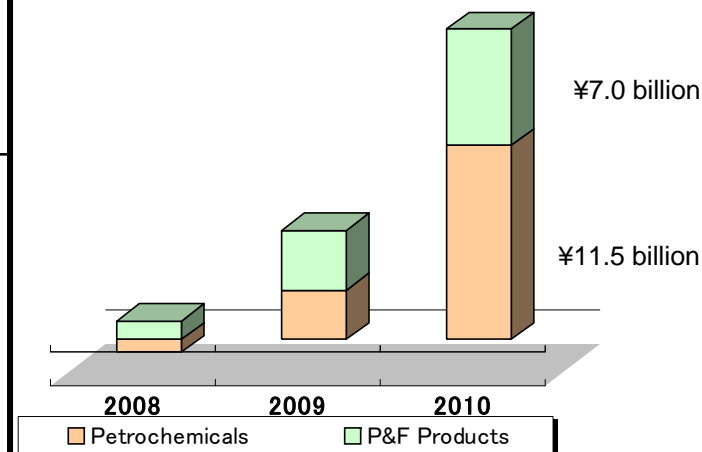
# Major Investments

**Investments will bear fruit over the next three years**

Investment (CAPEX and Investments & Loans): ¥ 430 billion/3 yrs.

Segments (Tot. Inv.)	Major Investments	FY2010 Operating Income (Plan)
<b>Petrochemicals</b> [Including carbon-related products] <b>(¥190.0 billion)</b>  Large Investment <b>¥133.0 billion</b>	Capacity expansion •PTMG (China) •Polycarbonate (Kurosaki/China) •Polypropylene (Kashima) •New PP compounds (China/Thailand/India) •Performance polymers facil. expansion (US) etc. (Terephthalic acid facil. Expansion (India *)) Diversity of feedstocks • Ethylene, etc. (Mizushima)	<b>¥11.5 billion*</b>
<b>Performance and Functional Products</b> <b>(¥149.0 billion; including ¥34.5 billion for MPI TOB)</b>  Large Investment <b>¥29.0 billion</b>	Business expansion • Smart Disk (US) acquisition  Capacity expansion •Chemical toner (Yokkaichi) •New and additional OPC facil. (Singapore/Odawara) •Color resist (Kurosaki, Korea JV) •BPDA (Kurosaki) •Polyester film (Shiga) •Synthetic silica (Kurosaki), etc.	<b>¥7.0 billion</b>
<b>Health Care</b> <b>(¥41.0 billion)</b>		

**Earnings expected from major investments**



\* Not including 2nd PTA investment in India.

# Remaining Tasks

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**Overall**

- Enhancement of frontline capabilities (accidents and compliance)
- Overseas business expansion
- Acceleration of new business development

**Petrochemicals**

- Stable profitability
- Strategic restructuring of terephthalic acid business
- Measures to address the 2008-2010 issue

**Performance and Functional Products**

- Product and business lifecycle management (growth strategy)
- Creation of next generation's growth businesses (innovation strategy)
- Early realization of New Mitsubishi Plastics integration benefits

**Health Care**

- Early realization of Mitsubishi Tanabe Pharma merger benefits
- Acceleration of overseas business development
- Early resolution of the hepatitis C problem



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**Overview of  
the New Mid-term Management Plan**

***APTSIS 10***  
**(FY2008-2010)**

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# **APTSIS 10**

**What We Aspire to Be in 2025,  
and Should Be in 2015**

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# Business Environment towards 2025

## “Climate Change and Natural Resources”

- Global warming/climate change
- Depletion of metal and other resources
- Pollution and shortages of water resources

**Companies that do not make positive contributions in terms of resource usage and environmental protection will not survive.**

## “Health Care”

- Declining birth rate (especially in Japan) & aging population
- Rising medical needs
- Pension funds crisis

**The era of “mega pharma” is giving way to a new business model.**

## “Economy & Markets”

- Rapid Growth of BRICs (mainly China and India) and other economies
- Weakening of US hegemony and rise of coexistence of civilizations with differing values and ways of life
- Focus shifting from market economy principles to discipline, public benefit, and environmental consciousness

**All business sectors are undergoing major restructurings on an international scale.**

## Aspiration for 2025

**The Mitsubishi Chemical Holdings Group will be a global leading company based on “Good Chemistry\*\*”**

### Three decision criteria for corporate activities

**Sustainability**

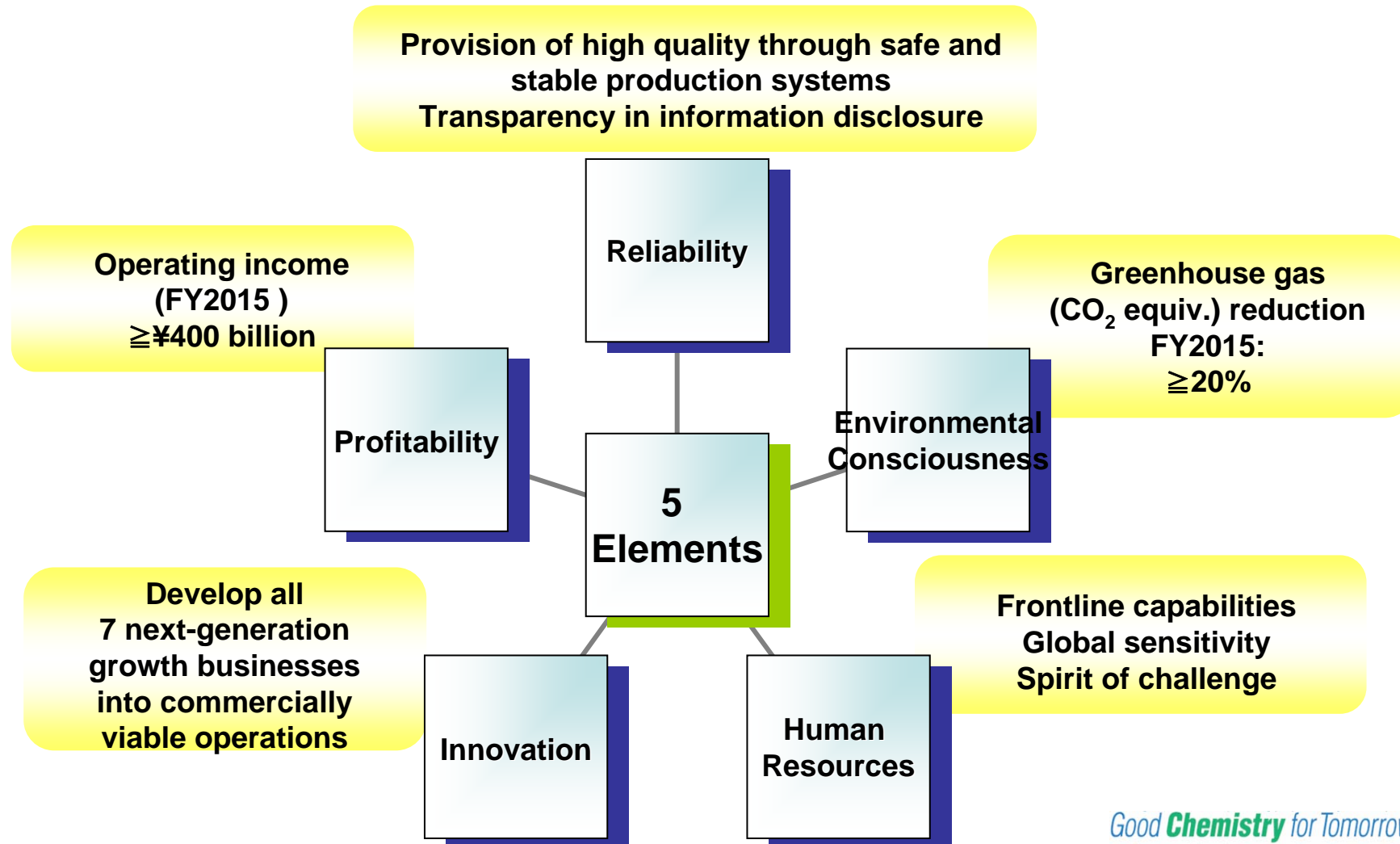
**Health**

**Comfort**

\*\*“Good Chemistry for Tomorrow” expresses Mitsubishi Chemical Holdings Corporation’s approach which we will continue to correspond to the needs of industry and society, creating better relationships among people, society and our planet.

# What We Should be in 2015

## Five requirements for a global leading company

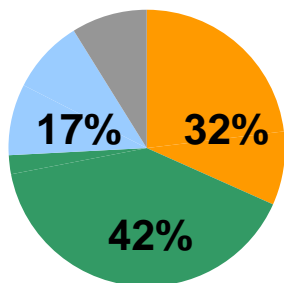


# Profit Structure in 2015

**Shift to high-performance products and high value-added businesses**

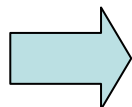
**Operating Income**

**¥125 billion**

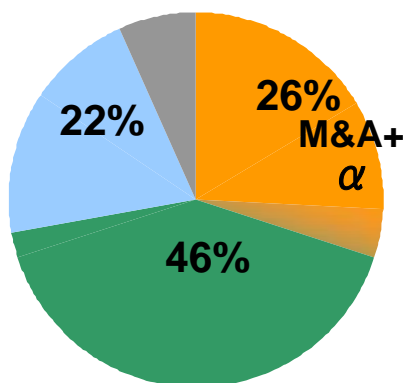


**FY2007**

Net Sales ¥2.9 trillion

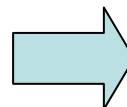


**≥¥190 billion**

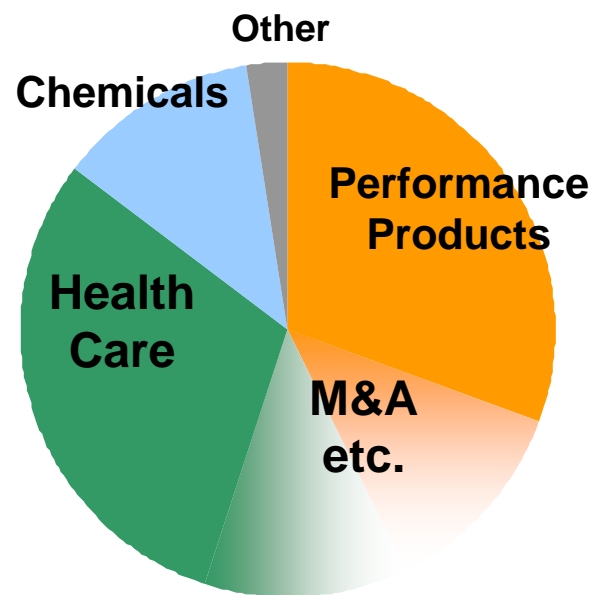


**FY2010**

¥3.7 trillion



**≥¥400 billion**



**FY2015**

≥ ¥4.0 trillion

# **APTSIS 10**

## **Basic Strategies and Measures**

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# Management Benchmarks

## Key numerical targets for FY2010

<b>Operating Income</b>	<b>≥ ¥190 billion</b> (Including ¥20 billion contingencies)
<b>ROA</b> (EBIT/Total assets)	<b>≥ 6%</b>
<b>Contribution to reduce CO<sub>2</sub> emission</b>	<b>20% reduction *</b> * Unit energy consumption







## Other targets

<b>ROE</b>	<b>≥ 8%</b>
<b>EBITDA</b>	<b>≥ ¥350 billion</b>

Since emphasis is being placed on growth, the D/E ratio (financial stability measure) has not been established as a key indicator.



# Assumptions

Variables		Assumptions
Economic conditions		World economic downturn
Naphtha price		¥68,000/kl
Forex		¥105/\$
Intensifying competition in advanced materials		Establishment of 7 next-generation growth businesses
Drug price revision in Japan		Every other year
2008-2010 petrochemical issue		Production increases, particularly in the Middle East, will cause excess supply

# Business Portfolio

**Categorized by profitability, market superiority, and market attractiveness**

◆ Performance Products    ◆ Health Care    ◆ Chemical Products

**Next-Generation Growth Businesses (Innovation Strategy)**

7 Next-Generation Growth Businesses

- ◆ Solid-state lighting
- ◆ Li-ion battery materials for HEVs
- ◆ Next-generation displays
- ◆ Chemical components for automobiles
- ◆ Bio-based polymers
- ◆ Organic photovoltaics modules
- ◆ Personalized medicine

**Existing Growth Businesses (Growth Strategy)**

- ◆ Electronics Applications  
Recording media, imaging, semiconductor-related materials and services, high performance polyester film, electronic device components
- ◆ Designed Materials  
Food ingredients, carbon fiber composites, alumina fibers, performance packaging film
- ◆ Health Care  
Pharmaceuticals
- ◆ Chemicals  
C4 chemicals, high performance graphite
- ◆ Polymers  
Polycarbonate and bisphenol-A, polypropylene, performance polymers

Ratio  
67%

FY2007  
Op. Income Ratio

**Businesses to be Restructured**

- ◆ Terephthalic acid and others

**Stable Businesses**

- ◆ Blast furnace coke
- ◆ Olefins and aromatics
- ◆ Performance chemicals, etc.

## Basic Strategy

**Concept : “Growing, Innovating, and Leaping Ahead”**

**Growing**

**Growth  
Strategy**

**Shift to high-performance products  
and high value-added businesses**

**Efficient product/business life cycle management**

**Innovating**

**Innovation  
Strategy**

**Nature and accelerate  
7 next-generation growth businesses**

**Leaping  
Ahead**

**Strategic investment for alliances and M&A**

# Achieving Growth Strategies

**Shift to high-performance products and high value-added businesses**  
**Efficient product and business lifecycle management**

## ◆ Performance Products

- Maintain and further expand existing global businesses
- Expand in only 1 and/or No.1 niche businesses in growing markets

## ◆ Health Care

- Early realization of MTPC\* merger benefits
- Steady progress in key development projects at MTPC\*
- Development of business infrastructure to be a global research-driven pharmaceutical company

## ◆ Chemicals

- Shift to high performance products
- Realizing results of investments executed in *KAKUSHIN Plan: Phase 2*

\* Mitsubishi Tanabe Pharmaceutical Corporation

# Resource Investment

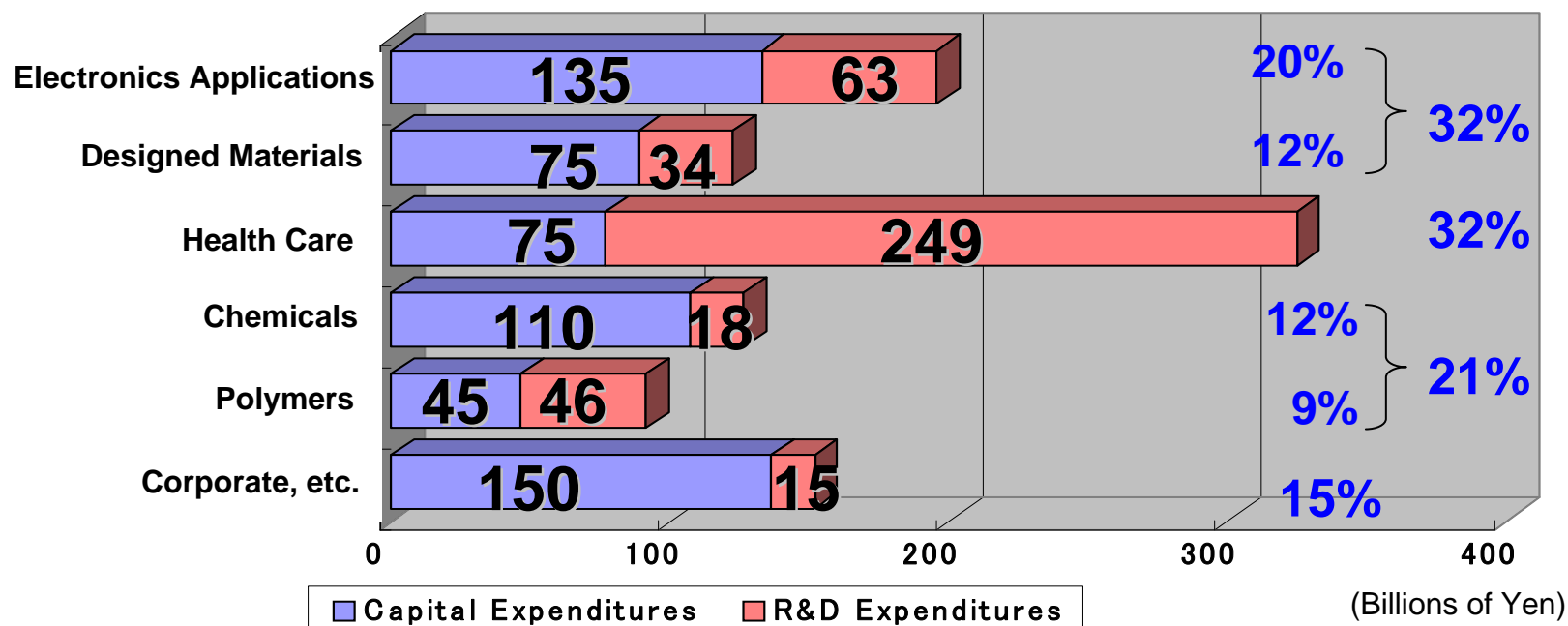
**Active investment will be pursued to realize  
“Growth and Innovation”**

**CAPEX and investments & loans: ¥590 billion/3 yrs.**

(Compared to KAKUSHIN Plan: Phase 2: 1.4x)

**R&D expenditures: ¥425 billion/3 yrs.**

(Compared to KAKUSHIN Plan: Phase 2: 1.4x)



**Notes:** Investment figures are based on decision based.

R&D expenditures for 7 next-generation growth businesses are included in each segment.

# Leaping Ahead

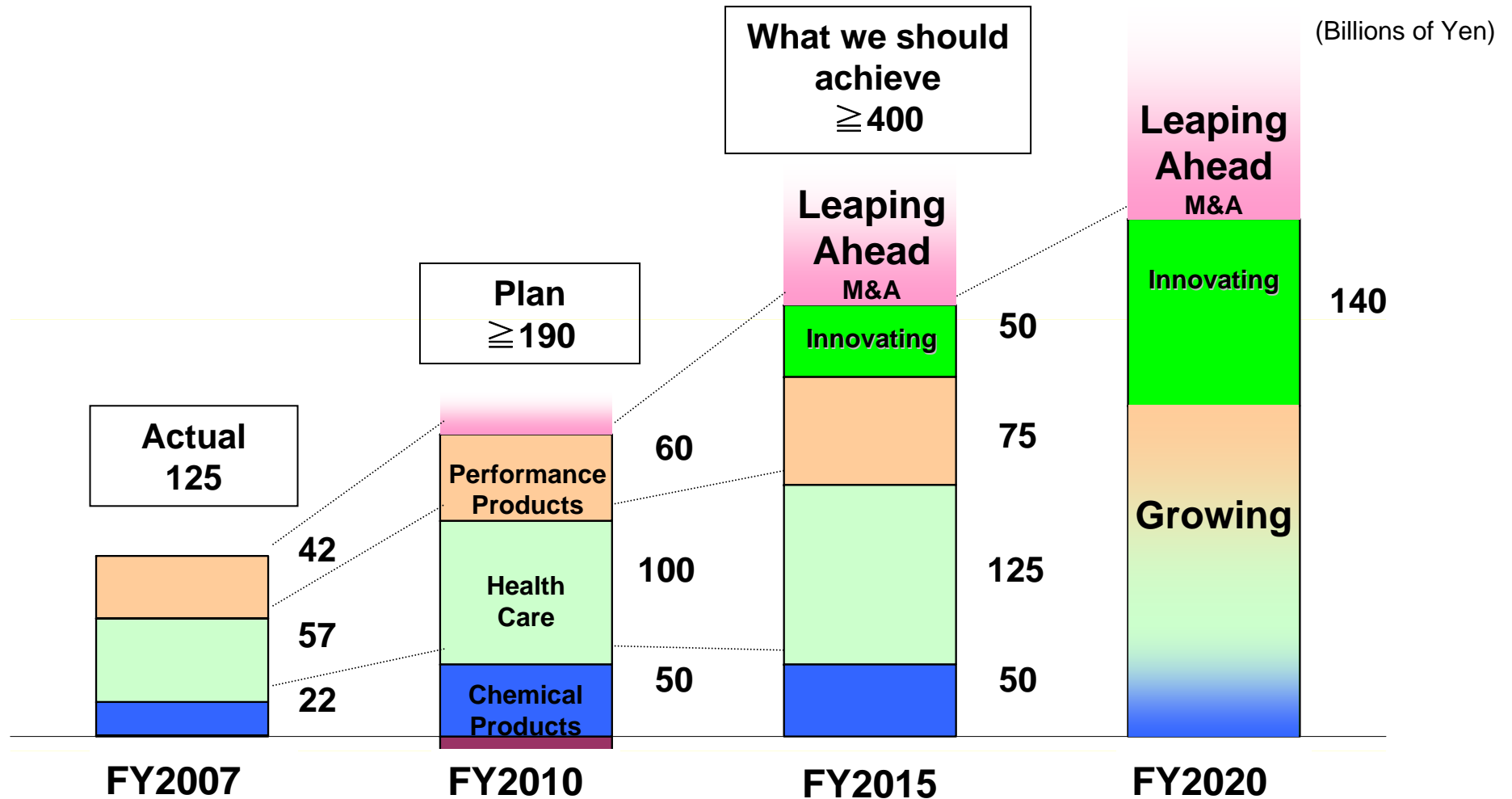
**To strive for active business expansion, resources will be strategically invested in alliances and M&A**  
**Available funds: ¥250 billion (FY2008-2010)**

**Allocation to :**

- ◆ Existing growth businesses
- ◆ Performance products business (including devices)
- ◆ Global development

# 2015 and Beyond (Operating Income)

## Growing, Innovating and Leaping Ahead



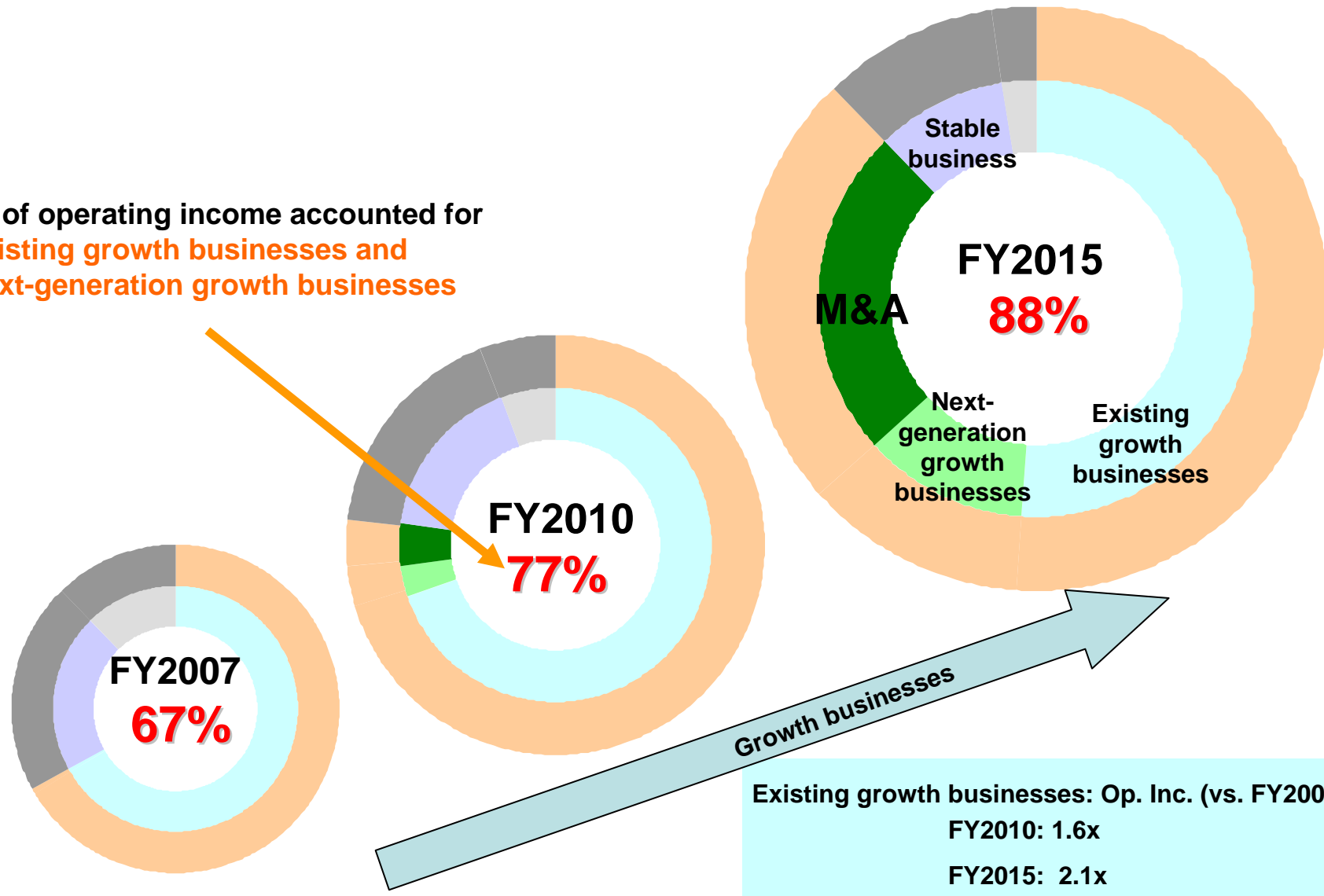
Net Sales ¥2.9 trillion

¥3.7 trillion

≥¥4.0 trillion

# Portfolio Earnings Structures

% of operating income accounted for  
Existing growth businesses and  
Next-generation growth businesses



Note: The figure for 2007 is adjusted by excluding the extraordinary loss of ¥ 8.2 billion related to the Kashima accident.



# ***APTSIS 10***

## **Performance Products**

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# Performance Products

**Profit maximization through strengthening of ties among technology clusters, and value chain management**

## **Growth Strategy 1:**

Maintain and expand businesses  
by efficient product-business lifecycle management

## **Growth Strategy 2:**

Expand only 1 and/or No.1 niche businesses

## **Innovation Strategy:**

Create next-generation growth businesses,  
in part by expansion into device markets

**DEVICES**

**ADVANCED  
PRODUCTS**

**SPECIALTY  
CHEMICALS**

# Growth Strategy (1)

## Maintain and further expand in existing global businesses

### Electronics Applications

#### Recording Media

No.1  
global market share  
in optical recording media

- Maintain and expand the optical disc business by leading the world markets for dye-based DVD's and Blu-ray discs
- Accelerate entry into the market for non-optical recording media (Portable HDD and Flash Memory) by taking advantage of the "Verbatim" brand name (The World's Top CD and DVD recordable brand)

#### Imaging

No.1  
global market Share  
for component Supplier

- Develop business globally by introducing new product such as chemical toner and strengthening sales channels
- Maintain and expand competitive advantage in the area of digital printing

#### High-Performance Polyester Film

No.1 global market  
share in optical PET film

- Maintain and expand technical and quality superiority in the market for FPD film
- Expand business area by developing new applications (Photovoltaic components, high performance process film)

## Growth Strategy (2)

Expand in only 1. and/or No.1 niche businesses in growing market

### Electronics Applications

#### Semiconductor-related materials and services

- Gain new markets by working closely with customers who have adopted new processes (electronic chemicals/wafer recycling)
- Maintain No.1 global share. Steady production enhancement (synthetic silica)

#### Electronic device components

- Expand sales in the East Asian market
- Expand housing and material applications for thin cell phones

### Designed Materials

#### Alumina fibers Pitch-based carbon fiber composites

- Maintain global No.1 share by complying to environmental regulations
- Expand global No.1 share by broadening applications

#### Food ingredients

- Expand business by leveraging emulsifier know how and to develop business in China

#### High performance packaging films

- Expand high barrier film market share
- Develop new applications (photovoltaic components, etc.)



# Innovation Strategy

**Generate next-generation growth businesses  
by delivering materials and devices for future global markets**

## Solid-state lighting Next-generation displays

- Apply strengths in materials know how to effect rapid entry into device markets and expand profitability (also consider alliances)

## Lithium-ion battery materials for HEVs

## Chemical components\* for automobiles

- Accelerate all four major component businesses by working closely with customers and assuring safety and fuel efficiency
- Business and technology development for light weight automobiles by CFRP composites, plastic glazing and exterior sheet

## Organic photovoltaic modules

## Bio-based polymers\*

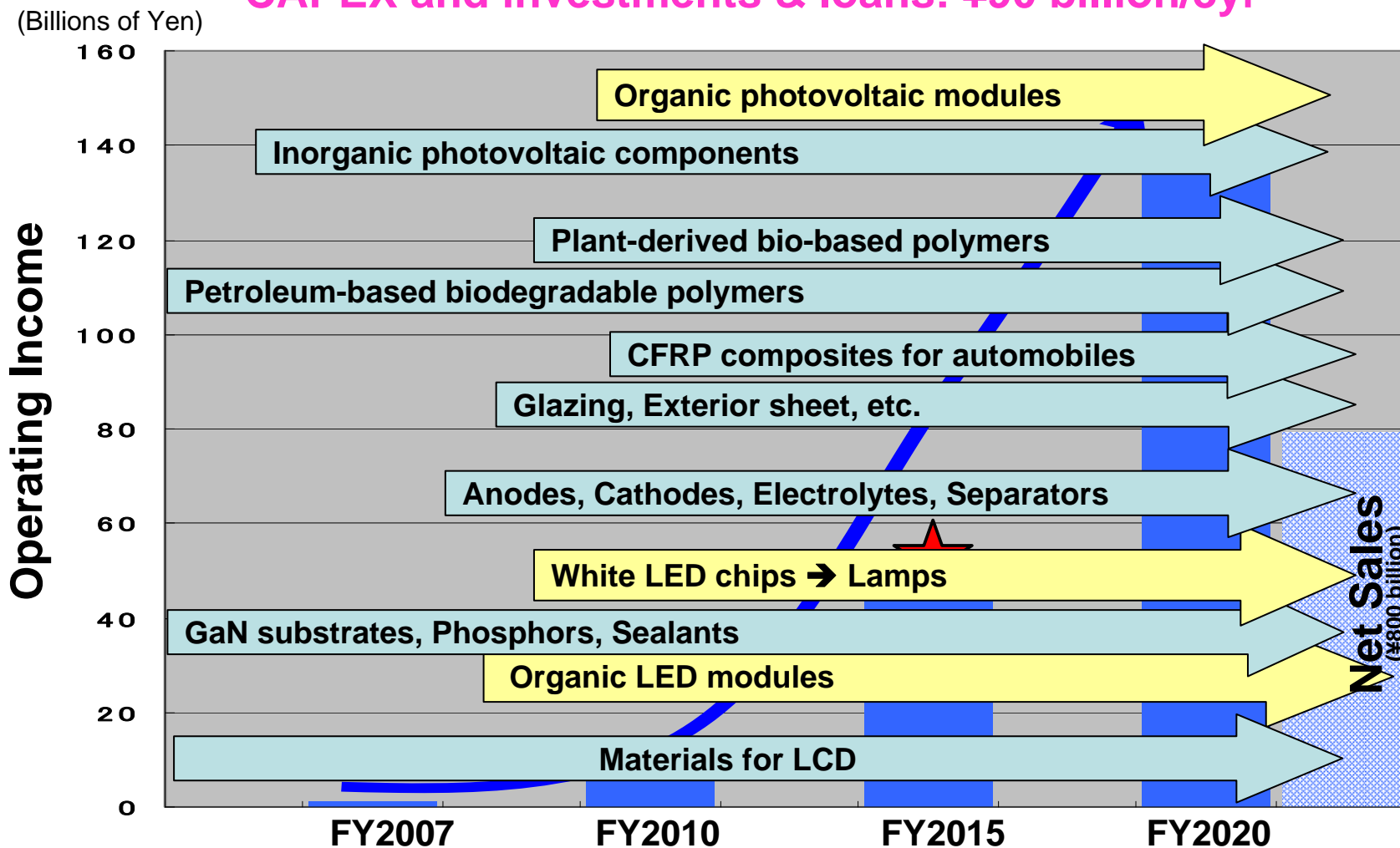
- Expand the existing non-organic photovoltaic material business.
- Establish business infrastructure and enter the market with organic photovoltaic prototype beginning in 2010
- Commercialization of "GS Pla" with plant-derived monomer

\* Part of Chemicals business domain's Innovation Strategy as well, see P 43

# Focused Investments for Innovation Strategy

R&D expenditure: ¥40 billion/3yr

CAPEX and investments & loans: ¥90 billion/3yr

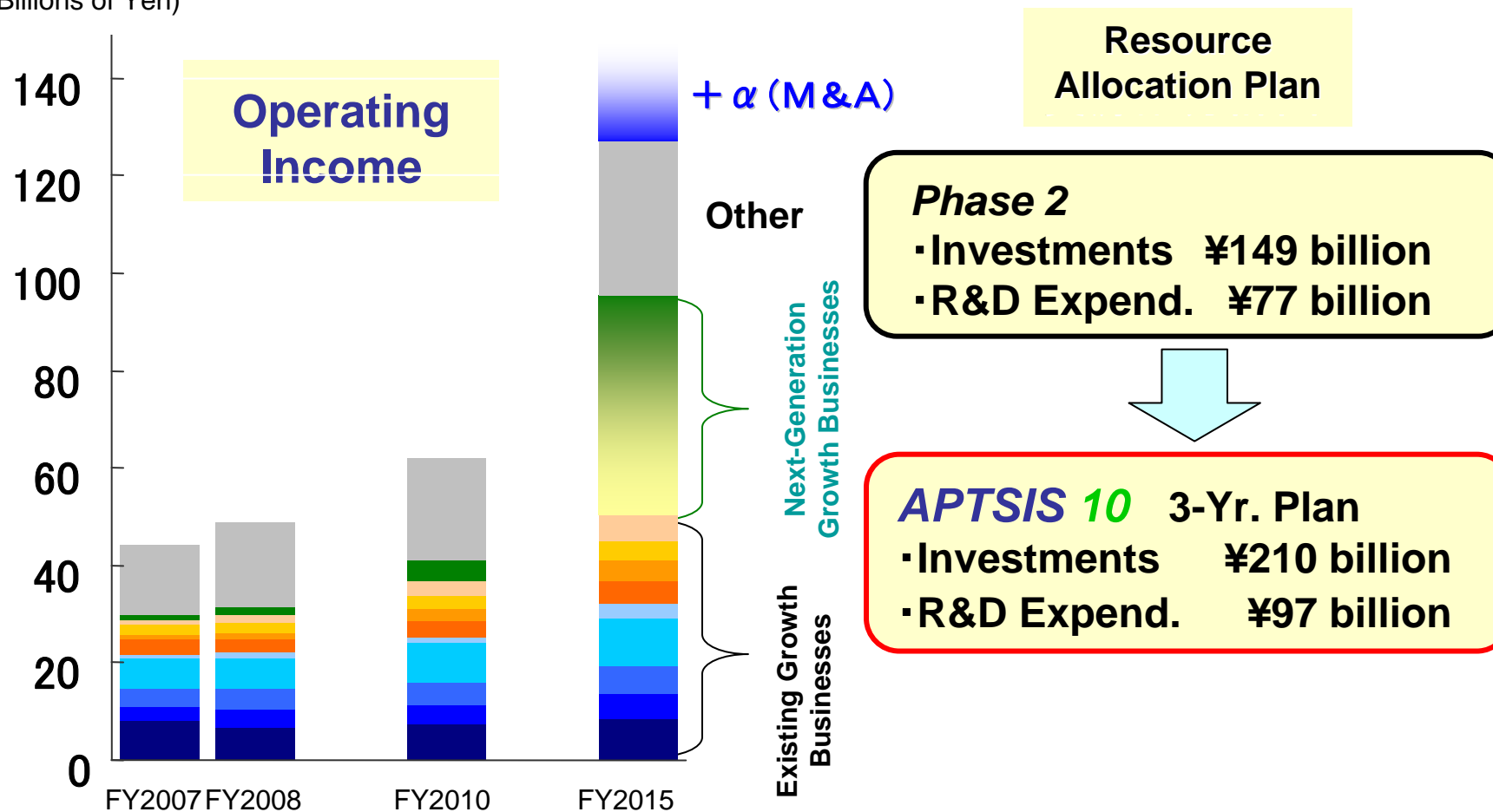


# Operating Income and Resource Allocations

## 2015 Operating Income Expansion Objectives

- Materials, Processing, Devices -

(Billions of Yen)





# **APTSIS 10**

## **Health Care**

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# Health Care

## Strengthen business foundation for a global research-driven pharmaceutical company as a core of our health care business

### Growth strategy

- Early realization of MTPC\* merger benefits
- Steady progress in key development projects at MTPC\*
- Development of business infrastructure to be a global research-driven pharmaceutical company

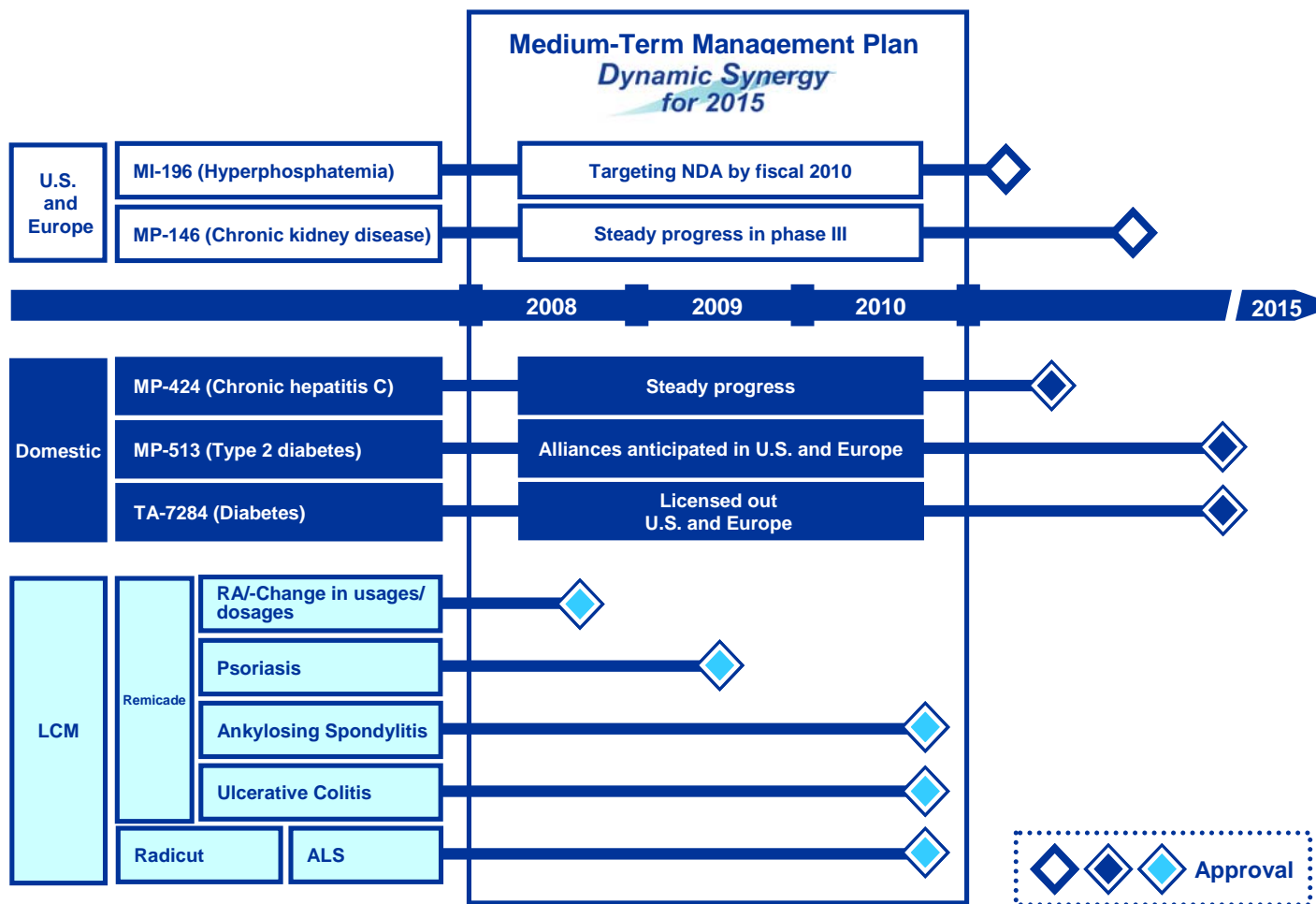
### Innovation strategy

Progress in our roadmap toward personalized medicine through synergies of the MCHC Group.

\*Mitsubishi Tanabe Pharma Corporation

# Growth Strategy

## Steady progress in key development projects at MTPC\*



\*Mitsubishi Tanabe Pharma Corporation

## Growth Strategy (2)

Development of business infrastructure  
to be a global research-driven pharmaceutical company

Prepare in-house sales system in the U.S. and  
Europe for MCI-196 and MP-146

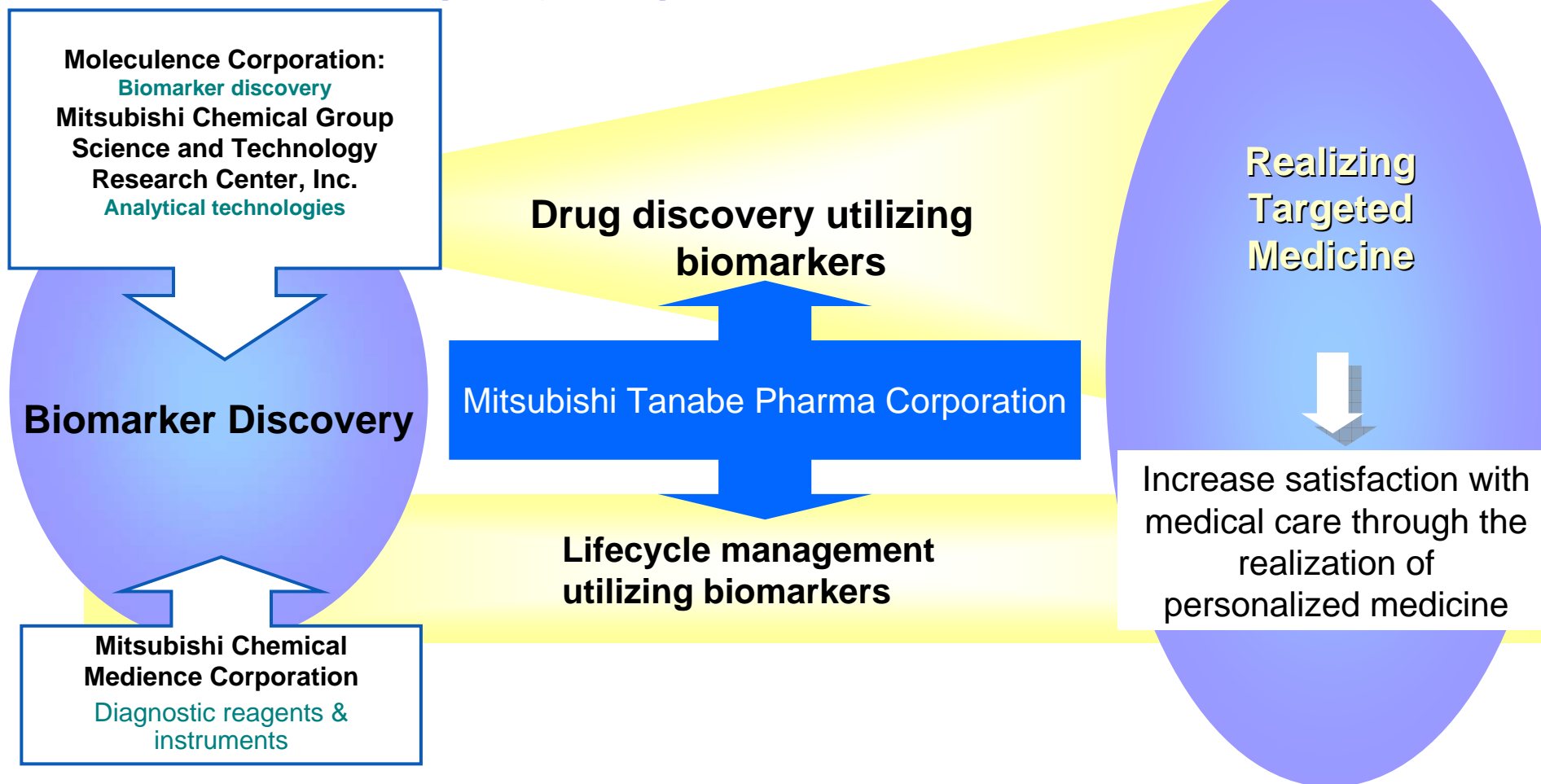
Targeting initial in-house  
sales  
in the U.S.,  
start to establish sales  
foundation

Start pre-marketing activities  
for nephrologists and  
dialysis specialists,  
which will be  
the target of promotions

Targeting concurrent sales  
in Europe as well,  
establish sales foundation  
(Use existing Agatroban  
sales foundation)

# Innovation Strategy

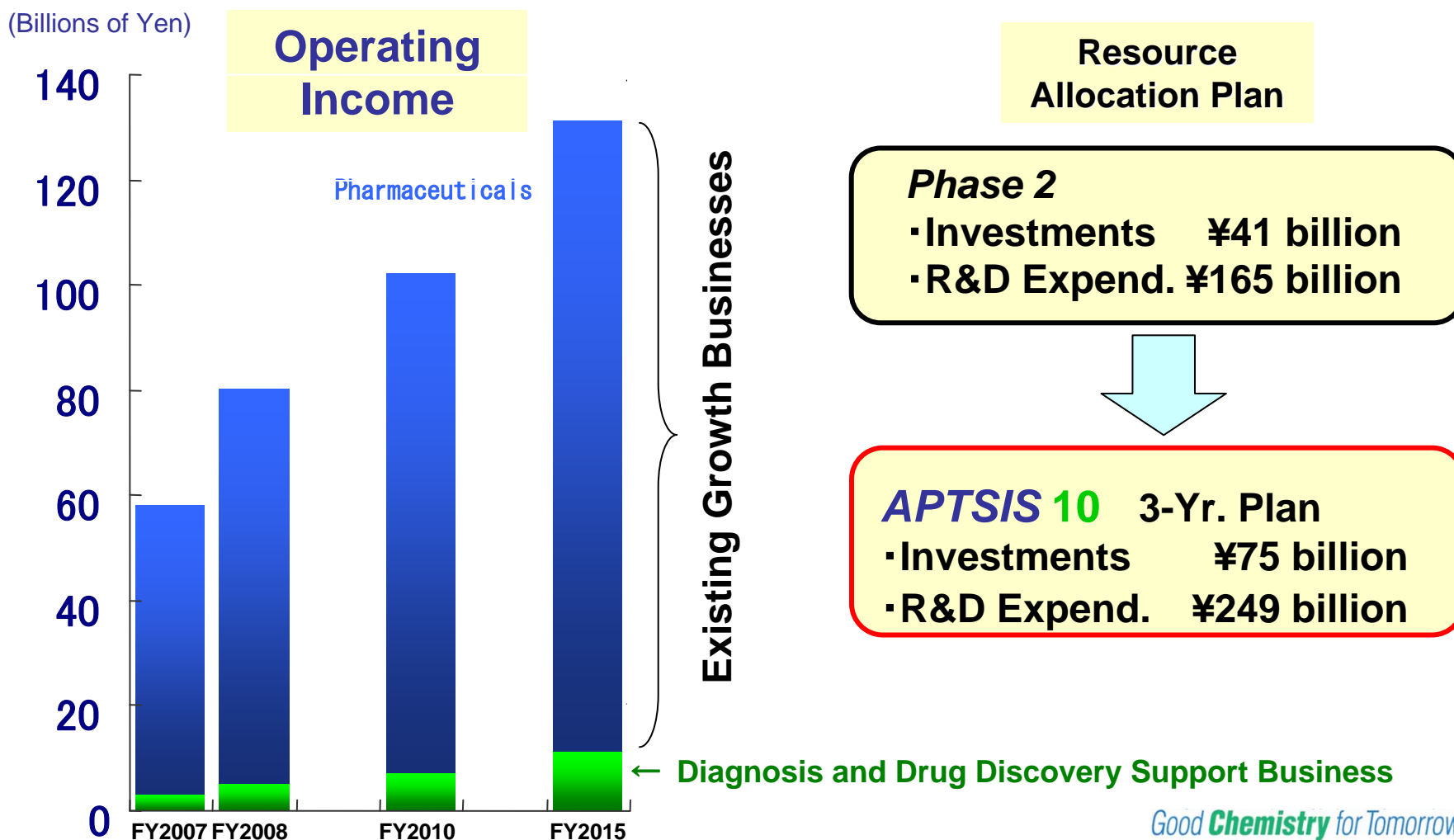
**Progress in our roadmap toward personalized medicine through synergies of the MCHC Group**



# Operating Income and Resource Allocation

## 2015 Operating Income Expansion Objectives

- Acceleration of New Drug Development and Overseas Business Development -



# ***APTSIS*** 10

## **Chemicals**

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# Chemicals

## Shift to high-performance products

(Corresponding to 2008-2010 issue)

### Growth Strategy 1:

Shift to high-performance products

High performance graphite, C4 chemicals,  
Polycarbonate-Bisphenol-A, Polypropylene,  
High performance polymer

### Growth Strategy 2:

Realizing results of investments executed in *KAKUSHIN Plan: Phase 2*

### Innovation Strategy

Create new environmentally-friendly material

### Stable Businesses

### Businesses to be Restructured



# Growth Strategy (1)

## Shift to high-performance products

High performance graphite, C4 chemicals, Polycarbonate, Bisphenol-A, Polypropylene, High performance resins

### ■ High performance graphite

Expand sales in graphite electrodes and melting pot

### ■ Polycarbonate (incl. compounds)

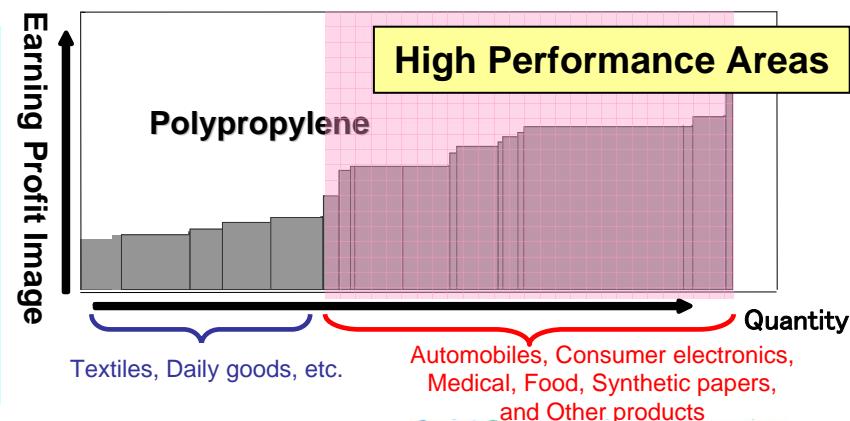
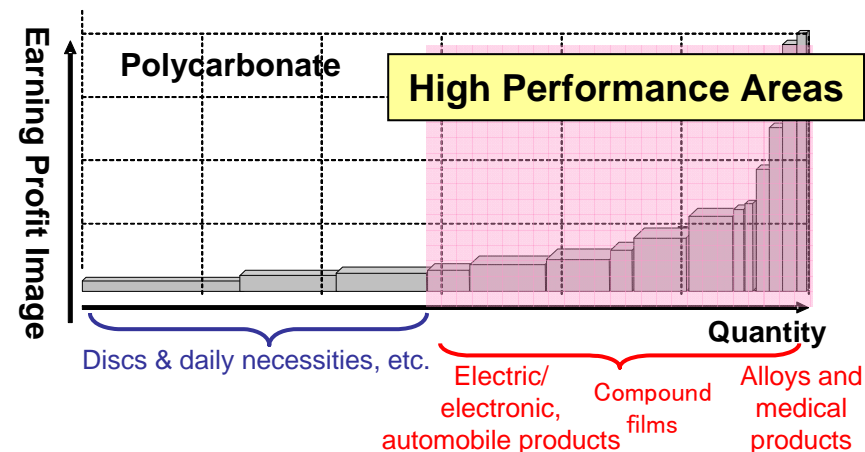
Expand automobile, electric/electronic and other high performance area

	FY2007	FY2010	FY2015
High-performance Product ratio	27%	→ 30%	→ 33%

### ■ Polypropylene

Expand automobile, food, medical and other high-performance area

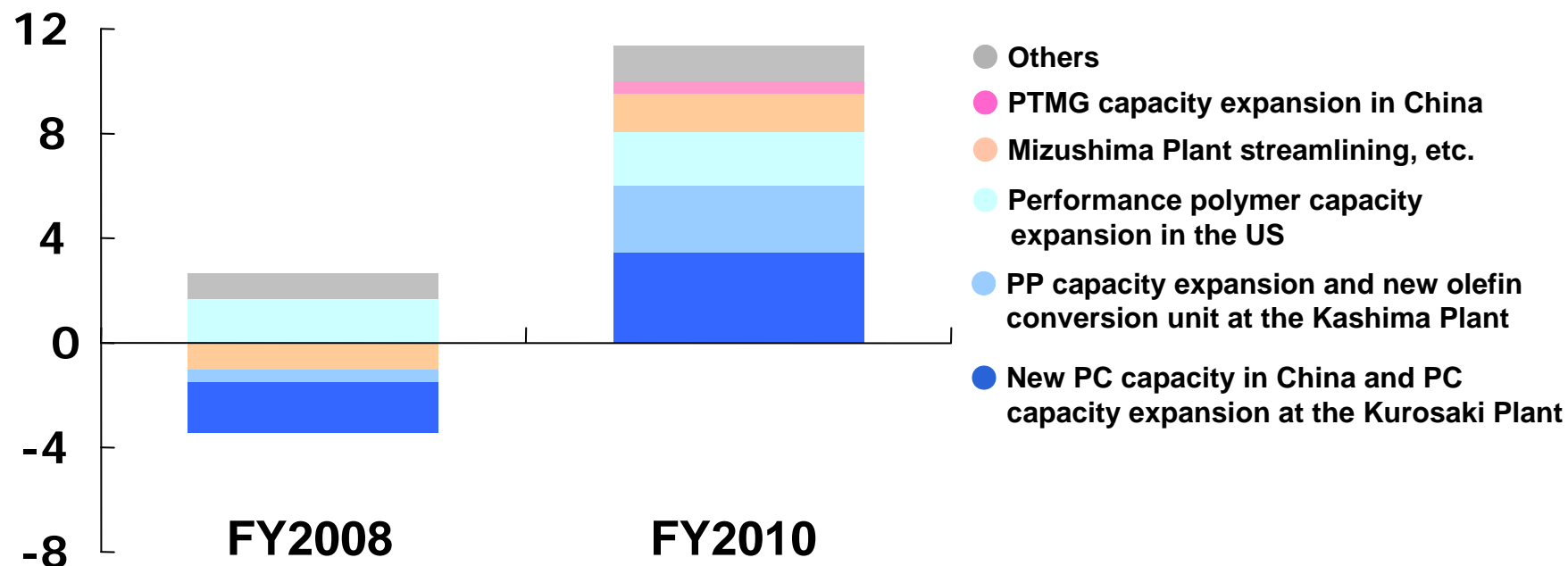
	FY2007	FY2010	FY2015
High-performance Product ratio	36%	→ 50%	→ 65%



## Growth Strategy (2)

### Realizing results of investments executed in *KAKUSHIN Plan: Phase 2*

(Billions of Yen)



## Innovation strategy

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### Create new environmentally-friendly materials

#### Chemical components for automobile

Business and technology development for light weight automobiles by CFRP composites, plastic glazing, and plastic exterior body panels

#### Bio-based polymers

Commercialization of “GS Pla” with plant-derived monomer  
Process technology and business development of isosorbide polymers

# Stable Businesses and Business to be Restructured

## Stable Businesses

### Blast furnace coke

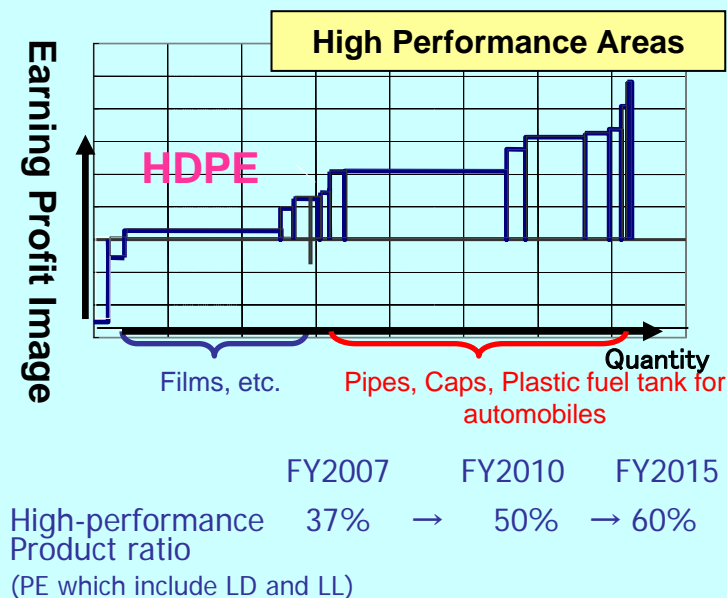
Maintain stable profit by investing and meeting environmental requirements and stable production

### Petrochemicals-related

Shift polyethylene to a higher profitable applications (e.g. HDPE)

Select and focus chemical derivatives (asset-light)

Reform chemical complex by alliances and collaboration, to strengthen its competitiveness by focusing on core derivatives



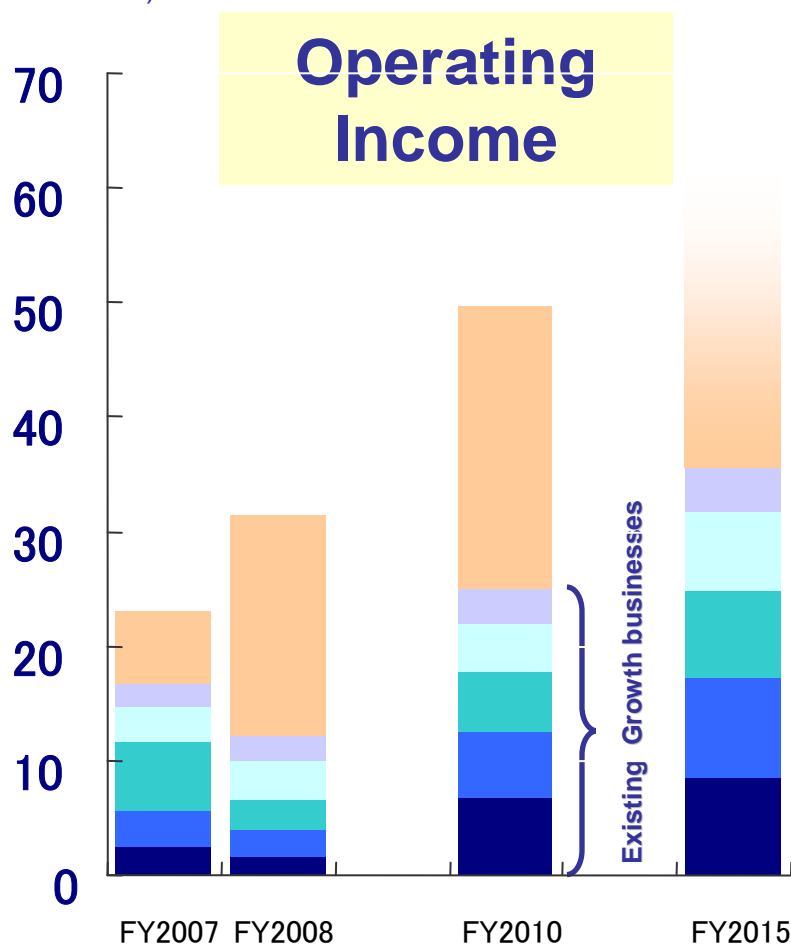
## Businesses to be Restructured

Business restructuring of terephthalic acid by alliances, collaboration, and reorganization

# Operating Income and Resource Allocation

## Shift to high-performance products

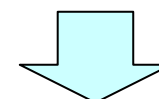
(Billions of Yen)



### Resource Allocation Plan

#### Phase 2

- Investments ¥190 billion
- R&D Expend. ¥39 billion



#### APTSIS 10 3-Yr. Plan

- Investments ¥155 billion
- R&D Expend. ¥64 billion

# Operating Income by Segments

(Billions of Yen)

Business Domains	Segments	FY2007 Actual	FY2008 Forecast	FY2010 Plan
Performance Products		41.9	47.0	61.0
	Electronics Applications	31.9	33.0	39.0
	Designed Materials	10.0	14.0	22.0
Health Care		57.2	81.0	100.0
	Health Care (MTPC)	-	75.0	95.0
	Health Care (Other)	-	6.0	5.0
Chemicals		22.2	34.0	50.0
	Chemicals	10.5	24.0	29.0
	Polymers	11.7	10.0	21.0
Others		13.6	12.0	16.0
Corporate		▲ 9.9	▲ 16.0	▲ 17.0
Subtotal		125.0	158.0	210.0
Contingencies		-	-	▲ 20.0
Total		125.0	158.0	190.0
Net Sales		2,929.8	3,340.0	3,660.0

# **APTSIS 10**

## **Overseas Businesses**

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# Overseas Business Expansion

**Overseas Sales Proportion:  
from 27% (FY2007), to 30% (FY2010 target)**

## Strengthen Global Sales Channels

- Optical disc, OPC & toner sales expansion
- Construction of global drug sales and pharmacovigilance system

## Utilize Global Manufacturing Sites

- Expand sales of high-performance film using existing polyester film marketing channels
- 3 regional production site for polymer components

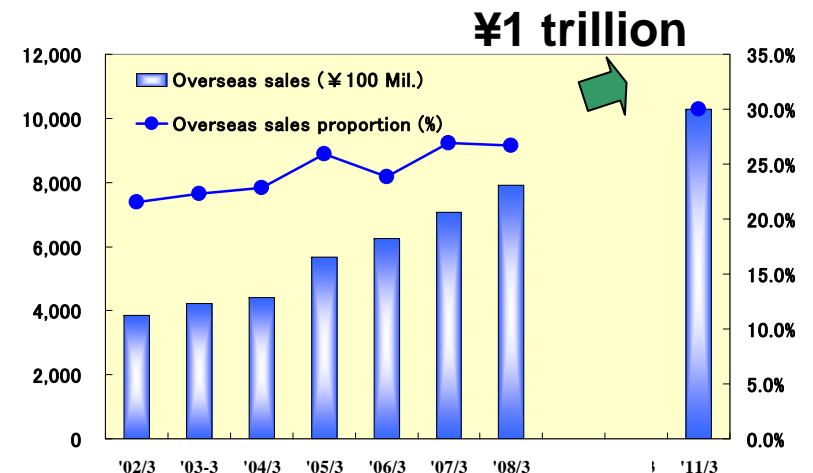
## Grasp Growing Asian Market

- Active grip of market trend and needs, using China and Indian as an information hubs
- C4 chemicals and polycarbonate sales expansion

## Expand Overseas Businesses with Customers

- Electronic chemicals, display materials, and alumina fiber, “MAFTEC”

(100 millions of Yen)





# **APTSIS 10**

**Increase Shareholder Value  
and Increasing Corporate Value Sustainably**

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# Increase Shareholder Value

## Increase shareholder value by increasing corporate value

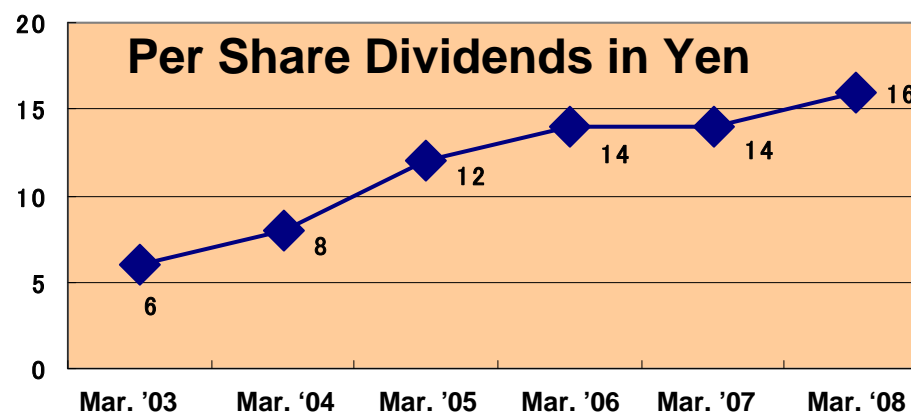
### Shareholder Returns

#### Dividends

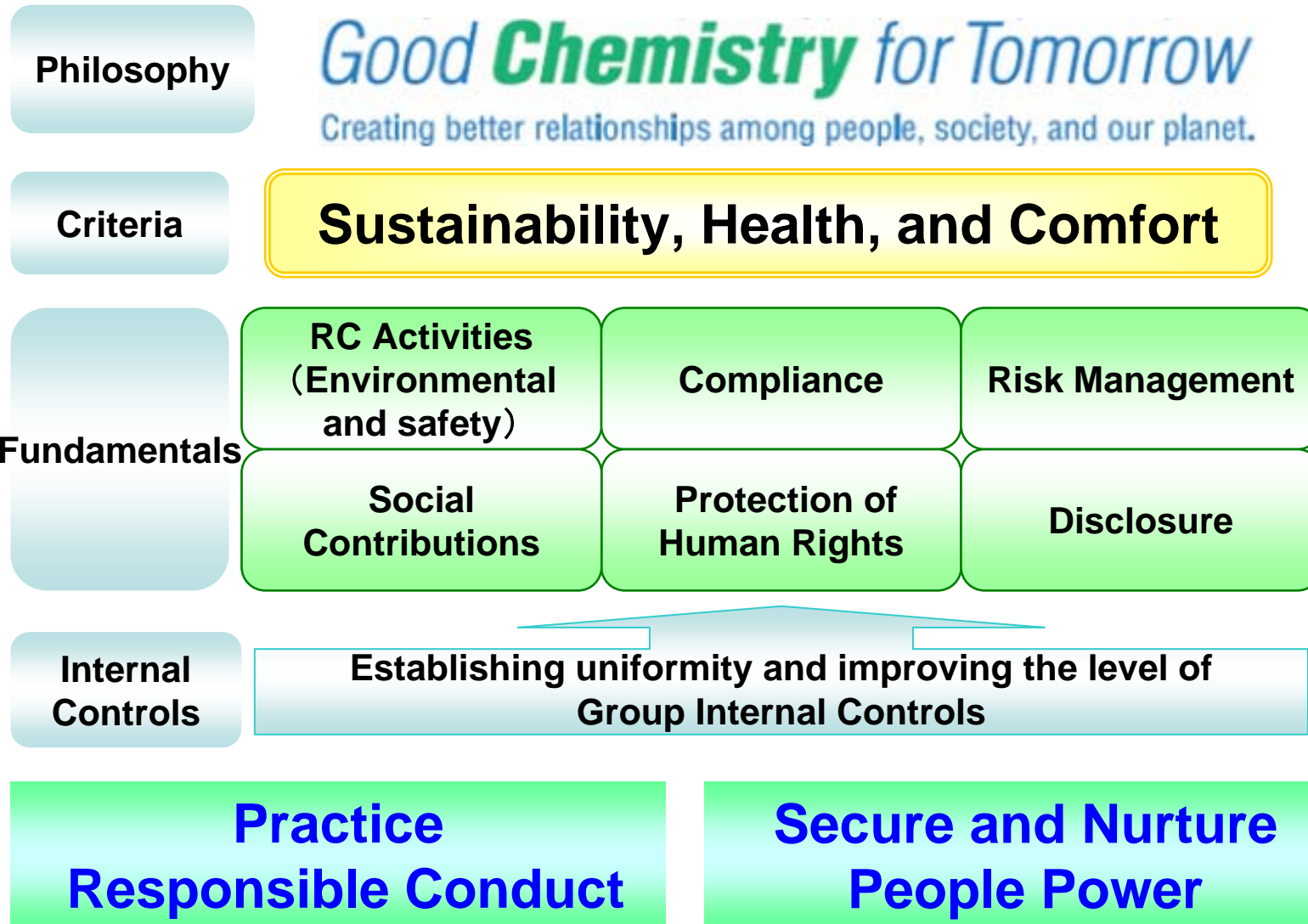
- Dividends will be paid to the extent possible based on the need for internal reserves and a consideration of consolidated results.
- The dividend payout ratio is intended, but not fixed at 30% or more of profits, but stability (maintenance or increase in dividends per share) of dividends will also be emphasized.

#### Treasury Stock Purchases

- Treasury stock purchases will be flexibly implemented based on overall considerations of factors like capital usage and share price.



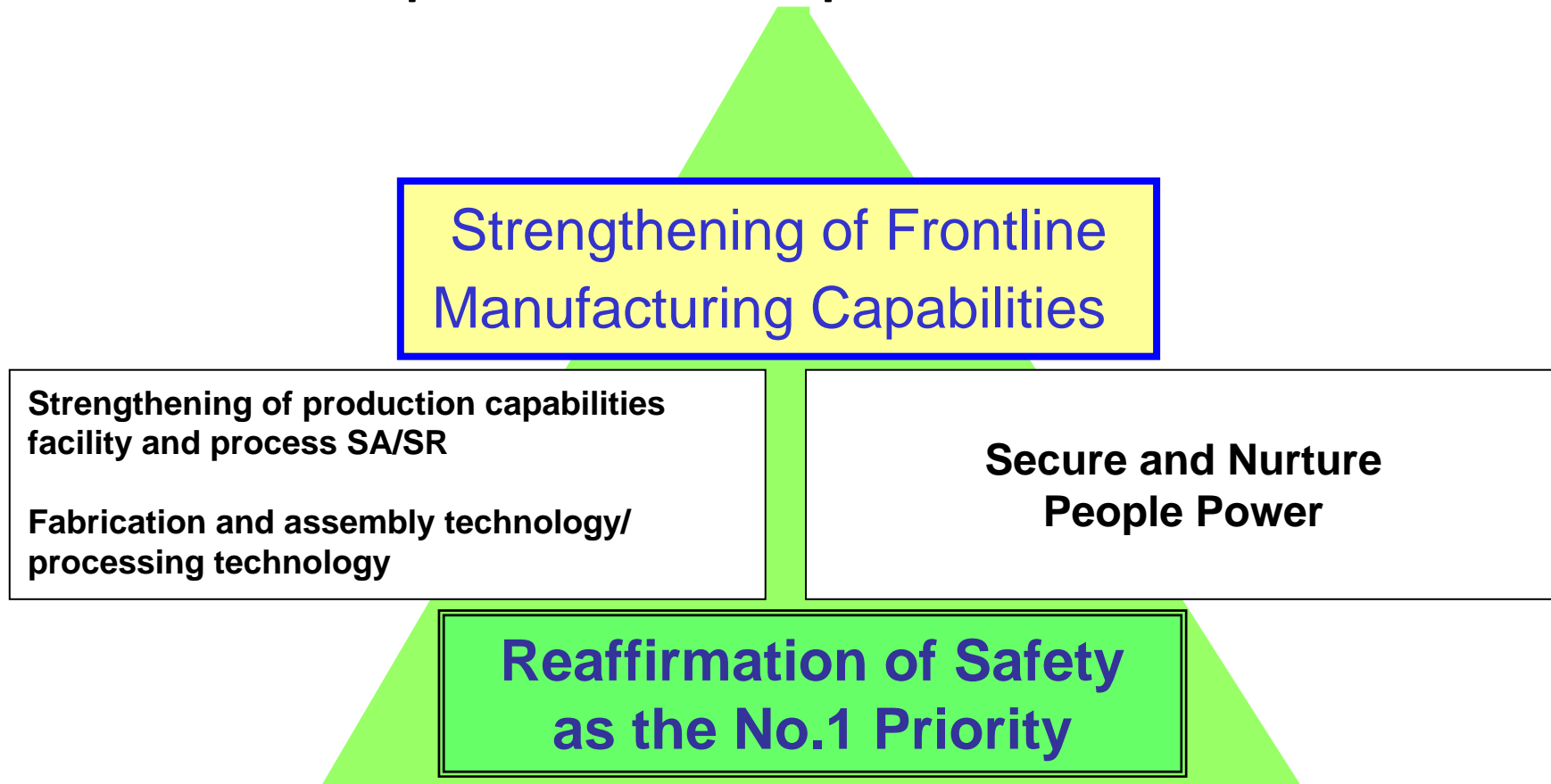
# Strengthen Corporate Foundation



# Trusted Manufacturing Production System

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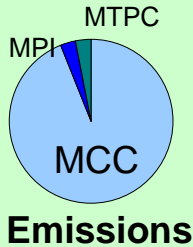
Each person is an irreplaceable individual



# Greenhouse Gas (CO<sub>2</sub> equivalency) Reduction Efforts

## MCHC Group Efforts Absolute Reduction

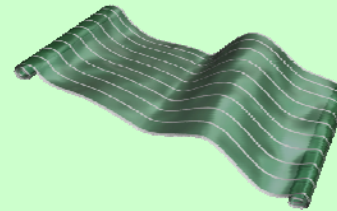
- Process efficiency maximization
- Cooperation among manufacturers
- Creation of innovative processes



## Contribute to society together with customers Greater reductions

### through social contributions

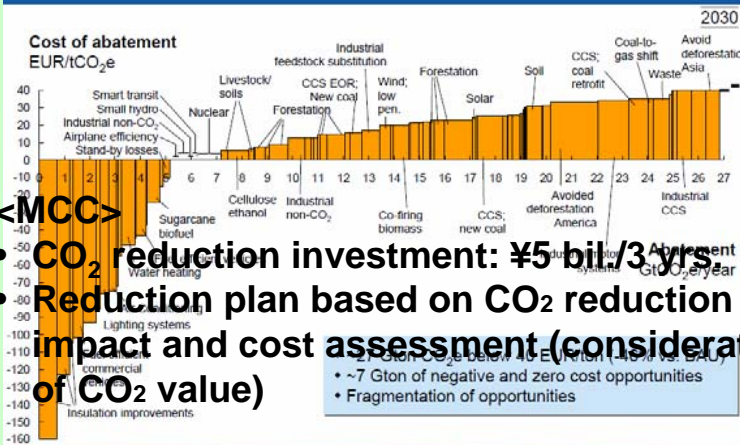
Widen perspective to include product life cycles, and maximize contributions to society



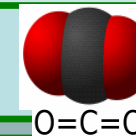
- Organic photovoltaic modules
- High-efficiency lighting
- Weight-reduced vehicles
- Bio-based polymers, etc.

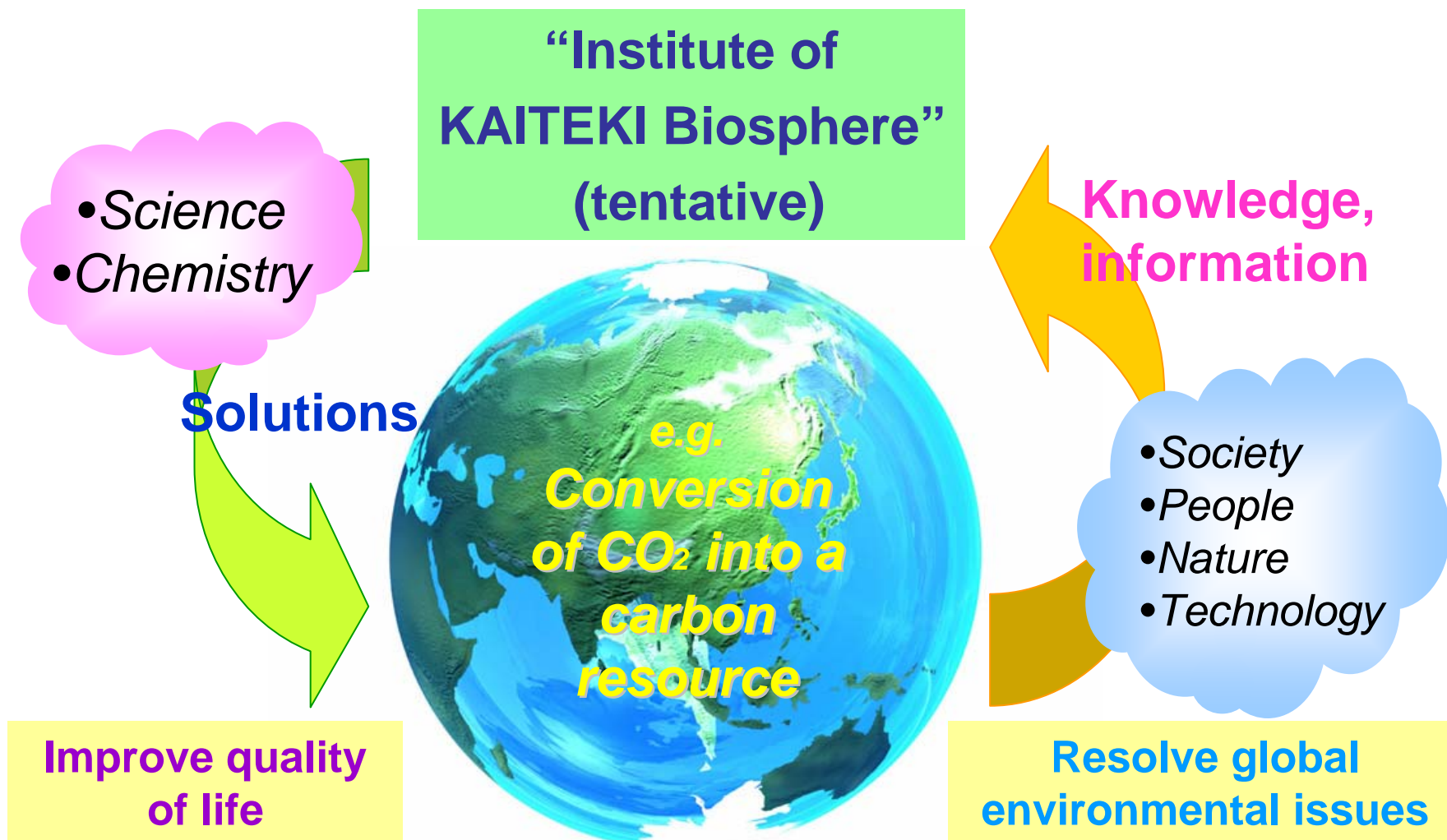
The MCHC Group is uniquely well-positioned to harmonize the ordinarily incompatible goals of delivering comfort and reducing global warming.

Global cost curve of GHG abatement opportunities beyond business as usual



**Ultimate Challenge:**  
CO<sub>2</sub> carbon resource conversion (artificial photosynthesis)





**Establishment targeted for April 2009**

# Summary

*Good **Chemistry** for Tomorrow*

Creating better relationships among people, society, and our planet.

**What we aspire to be  
in 2025**

**Global Leading  
Company Working to  
Achieve Sustainability  
Health  
Comfort**

**What we should be  
in 2015**

**FY2008-2010 strategy**

**APTSIS 10**

**2008**

**2010**

**2015**

**2025**

**“Institute of KAITEKI Biosphere” (tentative)**

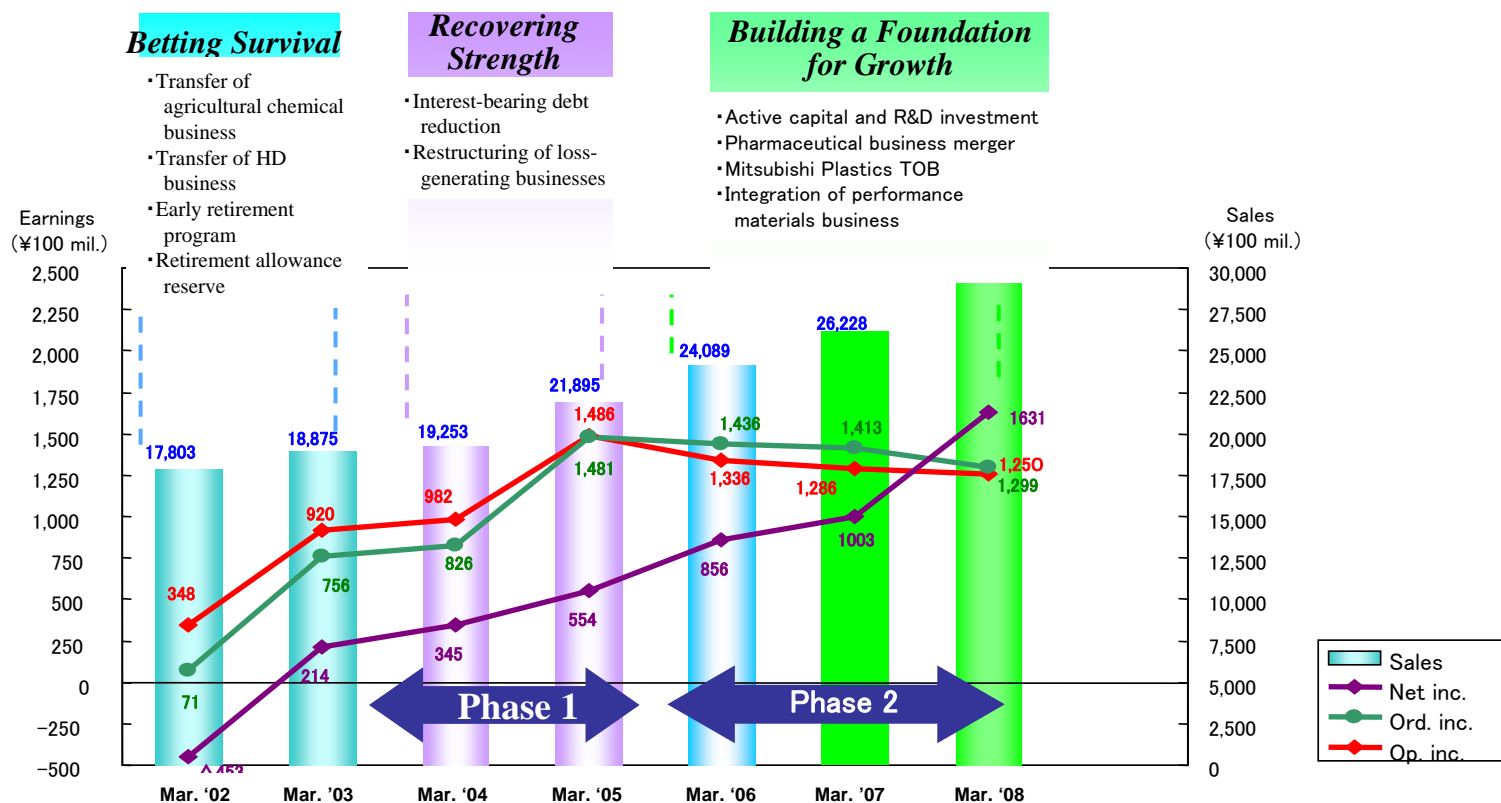


# Reference



# Positioning of *KAKUSHIN* Plan: Phases 1 & 2

## Fundamental financial strengthening and growth measures



Changing the makeup of the company

Strengthening Business

Strengthening Resource Investments

Phase2 Targets (As of Mar. '08)

Op. Inc. (¥100 mil.)	348	920	982	1,486	1,336	1,286	1,254
D/E ratio	3.07	2.75	2.19	1.59	0.98	1.04	0.99
ROA(%)	-2.6	2.0	3.4	5.3	5.6	6.2	8.6

1,400 or greater

1.5 or less

5.5 or greater

**Chemistry for Tomorrow**

Creating better relationships among people, society, and our planet.

## KAKUSHIN Plan : Phase 2 Business portfolio

(Launch/Decision in FY2005-7)

		Major matters		
		Petrochemicals	Performance Products	Health Care
Growth Strategy (Alliance etc)		Advanced Plastic Compounds (merger)	Mitsubishi Plastics TOB New Performance Materials company (Unification)	Tanabe Seiyaku Co.,Ltd. And MPC merger 3 healthcare business companies establishment MP Healthcare Venture Management Inc ZOEGENE Corp.
Expansion of Capacity or Increasing of Efficiency	Domestic	PP (Kashima plant) PC (Kurosaki plant) Ethylene (Mizushima plant) Polyethylene (Oita)	BD (Mizushima), Chemical toner (Yokkaichi) Materials & components for LCDs (Polyester films, carbon fibers, color resists, phosphors) Alumina fibers for automobile Li-ion battery material for automobile (Electrolytes: Yokkaichi, Anodes: Mizushima)	ULSO® approved additional indication OMEPRAZON® approved additional indication Medway® approval REMICADE® approved additional indication Hebsbulin ® -IH for intravenous PATHFAST® launch Tanabe Seiyaku Hanbai Co., Ltd. (ets.)
	Over Seas	PTA (India) PC, BPA (China) Performance polymer (US) PP compound (China, India and Thai) PTMG (China)	MCC India Verbatim MKT India PVT Ltd DVD DL (Singapore) OPC (US & Singapore)	Mitsubishi Pharma Deutschland GmbH Launch ARGATRA® Mitsubishi Pharma (Guangzhou) Co., Ltd establishment Mitsubishi Pharma Research and Development (Beijing) Co., Ltd. establishment PATHFAST® launch in US and Europe
Acquisition Integration		PP compounds MYTEX Japan Polyethylene consolidated subsidiary Japan Ethanol Co.Ltd	Japan Epoxy Resin co.,Ltd : 100% Food ingredients business SmartDisk portable HDD (US) Near UV LED (technology / equipment )	
Transfer		Dia-Nitrix Co.,Ltd: Minor affiliate of MCC HMT Polyethylene Co., Ltd		IC-Vec Ltd, Danaform, Inc.
Withdrawal		Soft Alkylbenzene, Yuka Seraya PVT Ltd (SM), Melamine Sasol Dia Acrylates (AA/AE)		Japan Genome Solutions, Inc.

# New Information Disclosure Scheme

## New segmentation as of FY2008

**Key Segment Change: Moved carbon products business from Performance Chemicals to Chemicals**

Former Segmentation	
Business domains	Segments

New Segmentation as of April 1, 2008	
Business domains	Segments

¥100 mil.

FY2007 Actual

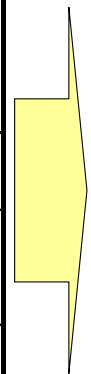
Petro-chemicals	Petrochemicals		92
Performance and Functional Products	Performance and Functional Products	Performance Products	361
		Functional Products	192
Health Care	Health Care		572
	Others		132
	Corporate		-99
<b>Total</b>			<b>1,250</b>

FY2007 Actual based on New Segments

Performance Products	Electronics Applications	319
	Designed Materials	100
Health Care	Health Care	572
Chemicals	Chemicals	105
	Polymers	117
	Others	136
	Corporate	-99
<b>Total</b>		<b>1,250</b>

# Change of Segmentation

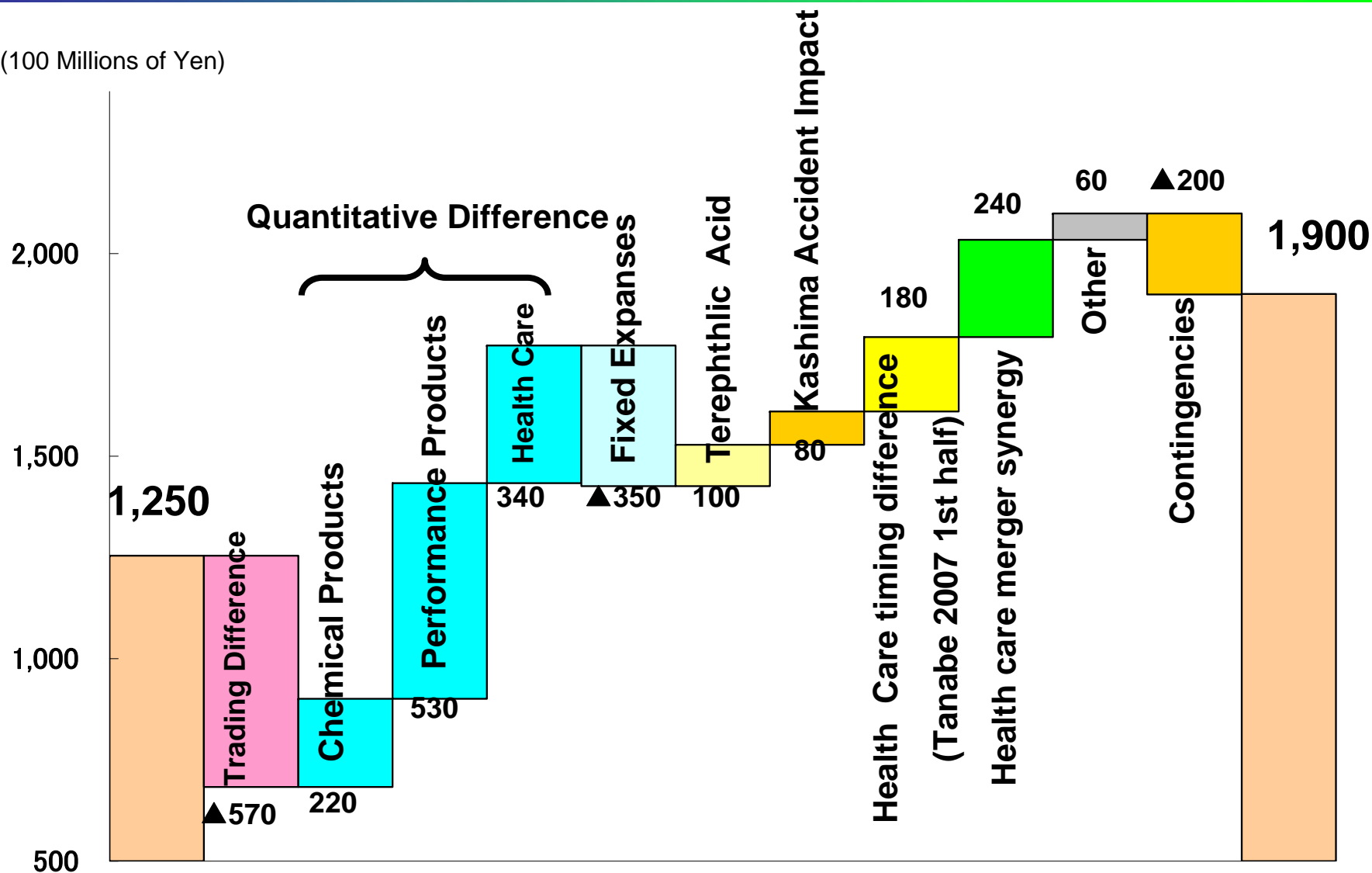
Former segmentation		
Business domains	Segments	Major products
Petrochemicals	Petrochemicals	Basic petrochemicals Chemical derivatives Synthetic fiber materials
		Neat resins and compounds
Performance and Functional Products	Performance and Functional Products	Carbon products Fertilizers
		Recording media Information and electronics-related materials
		Fine chemicals Organic intermediates Performance resins
	Functional Products	Polymer processing products and composites
Health Care	Health Care	Pharmaceuticals Diagnostic reagents and instruments Clinical testing
		Others
	Corporate	
		Engineering Logistics Real estate



New segmentation as of April 1, 2008		
Major products	Segments	Business domains
Recording media Information and electronics-related materials + Polyester films + Semi-conductor	Electronics Applications	
Fine chemicals Organic intermediates Performance resins Polymer processing products and composites + Battery materials	Designed Materials	Performance Products
Pharmaceuticals Diagnostic reagents and instruments Clinical testing	Health Care	Health Care
Basic petrochemicals Chemical derivatives Synthetic fiber materials Carbon products Fertilizers	Chemicals	Chemicals
Neat resins and compounds	Polymers	
Engineering Logistics Real estate	Others	
	Corporate	

# Operating Income (FY2007 vs. FY2010)

(100 Millions of Yen)



# APTSIS 10 Major Capital Expenditures Candidates

Business Domains Segments		Major Capital Expenditures
Performance Products	Electronics Applications	Capacity expansion for GaN substrates for solid-state lighting
		Next-generation displays (OLED) production facility
		Capacity expansion for precision cleaning/wafer recycling, and capacity expansion for synthetic silica production
		Capacity expansion for high-performance polyester film production
	Designed Materials	Capacity expansion for HEV Li-ion battery electrolytes
		Capacity expansion for alumina fibers
Health Care		Capacity expansion for carbon fiber composites
		Testing facility for organic photovoltaic modules
Chemicals		Production facilities for active pharmaceutical ingredients and intermediates
Chemicals	Chemicals	1,4-BG-PTMG chain enhancement
	Polymers	Four production site for PP polymers
		Capacity expansion for performance polymers
		Prototype facility for non-phosgene process DPC
Corporate and others		Prototype facility for bio-based polymers
		New research facilities



# Recording Media DVDR

**Global Demand**

450 Million Units (Yr. 2007)

**Market Share**

24% (Global No.1)



**Advantage**

Global brand : VERBATIM  
R&D + Sales + Marketing  
Dye and Double Layer technology



**Growth Attributes**

1st in the Market  
High quality with stable global product supply

**Technology**

High speed recording with excellent hardware compatibility  
Main materials are made in-house

**Features**

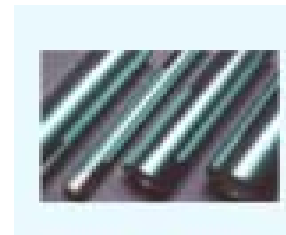
Global network sales channel



# Imaging: Organic Photo Conductor (OPC)

## Applications

Organic photo conductor for laser printers and copiers



## Global Demand

Annual growth rate of 5%

## Share

Approx. 20 % (Component supplier No.1)

## Advantage

Cutting edge technology enabled (High image quality, high speed, miniaturization)

Technological development that meets market demand

High cost performance

## Growth Attributes

Increasing demand by introducing color OPC

Strong sales channels

## Technology

Wide range of I/P with main materials are made in-house

## Features

Pioneer in OPC with technical expertise

Wide product range and steady product supply

# Precision Cleaning

## Domestic demand

¥10 Billion (Yearly growth rate of 5 - 10%)

## Share

Approx. 60% (JP, TW and KR) Global No.1

## Advantage

Detergency which surpass competitors  
Certified by semiconductor and equipment manufacturer

## Growth Attributes

Increasing 300mm wafer market

## Technology

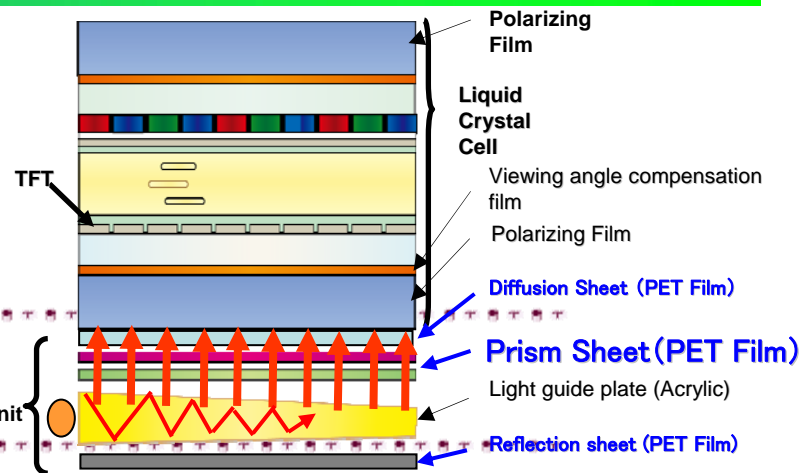
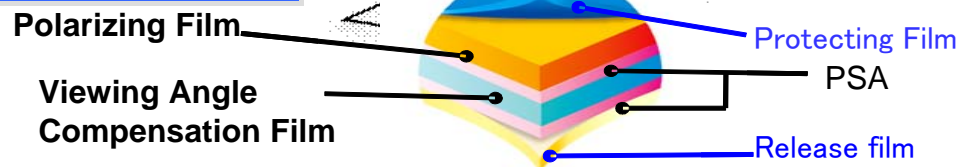
Precision cleaning technology which meets customer needs  
and technological innovation

## Features

Original cleaning technology of semiconductor process facilities

# Optical Polyester Film

## Applications



## Global Demand

Approx. 150K tons (Yr. 2007)

## Share

Approx. 30% (Global No.1)

## Advantage

Providing solution to customer which enhance strong customer relationship  
World class release technology for optical film

## Growth Attributes

Expanding large FPD market for PC and TV

## Technology

Technological development from material to film  
Custom based film specifications  
Strong R&D backbone

## Features

Clean film  
High quality film which meets customer needs

# Food Ingredients: Sugar Ester

## Applications

Food and Beverage ingredients

## Global Demand

Approx. ¥10 billion

## Share

Approx. 70% (Global No.1)

## Advantage

Various HLB products  
Only.1 emulsifier for beverages and supplements

## Growth Attributes

Industrial breakthrough in food processing technology  
East Asia's high demand in processed food and beverages


## Technology

Applied technology development based on interface science  
Corresponding to customer needs  
Accumulation of safety test data

## Features

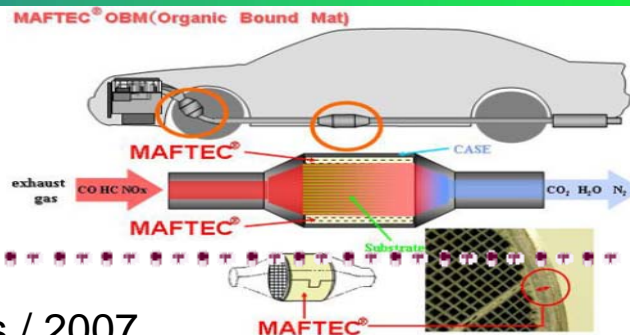
Edible emulsifiers that are made by sucrose and vegetable oil

# Carbon Fiber, “DIALEAD”

<b>Applications</b>	Robot Arm Industrial roll, wind energy blade CC brake	
<b>Production capacity</b>	1,000 tons / (2008)	
<b>Share</b>	Global share 70 - 80% (Pitch-based carbon fiber Global No.1)	
<b>Advantage</b>	Overwhelming capacity Global Marketing	
<b>Growth Attributes</b>	Segregation of PAN base CF & Pitch base CF Rapid increase in demand for FPD & Semiconductors Composite roll for Printing & Film Usage of Carbon fiber composite in automobile	
<b>Advantage</b>	Mass production, Composite, Analysis	
<b>Features</b>	Light weight, High stiffness, High thermal conductivity, Zero thermal expansion	

# Alumina Fiber-support Mat, "MAFTEC"

**Mounted section**



<b>Gasoline</b>	<b>Diesel</b>
NO → N <sub>2</sub>	NO <sub>x</sub> · PM
CO	reduction
CO <sub>2</sub>	
HC	
H <sub>2</sub> O	
↓	↓
Exhaust purification	Reduction in Environmental impact substance

**Global Demand**

Approx. 6,000 tons / 2007

**Share**

50% + (Alumina fiber-support mat: global No.1 )

**Advantage**

Global marketing  
20 yrs of expertise · Proposal of superior safety fiber

**Growth Attributes**

Reinforcement of emission control  
Catalytic oxidation of thin-wall carrier  
Regulation to mount DPF\* 100%

**Technology**

Unique needle punching methods

**Features**

Excellent thermal stability, resiliency and strength

\* DPF: Diesel Particulate Filter

# SiOx Vacuum Coated Plastic Film, "TECHBARRIER"

**Applications**

Electronics component,  
Medical / Industrial packaging  
material



Alternative for  
Metal and  
Glass  
↓  
Light & Thin

**WW Demand**

12,000 tons (Yr. 2007)

**Share**

Global share 40% (SiOx vacuum coated plastic film No.1)

**Advantage**

High Gas Barrier property  
Global Marketing

**Growth Attributes**

- 2005 : Food packaging = CAN, BOTTLE → flexible  
2006 - : Medical / Industrial = Alternative for Aluminum foil  
Future: Electronics component = High water vapor barrier  
2010 WW demand forecast: 13,200 tons

**Technology**

Densification and uniformity of SiOx vacuum coating

**Features**

Keeping high gas barrier property under high temperature and humidity

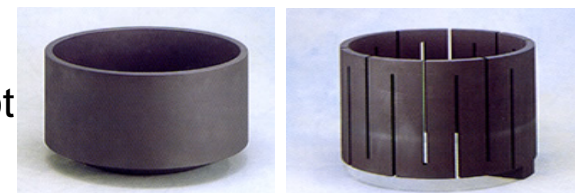


# High Performance Graphite



## Applications

Material (Needle cokes) making graphite electrode for an electric arc furnace mill,  
Special carbon products (Pitch coke) for melting pot to produce Si single crystal ingot



## Growth Attributes

Increasing demand on recycling steel from scrap metal  
Increasing demand on melting pot according to silicon wafer market growth

## Advantage

Stable supply of world top class quality, and further improvement  
Strong partnership with world class customers

## Technology

Break through technology which yielded consistence process from tar to high performance graphite

## Features

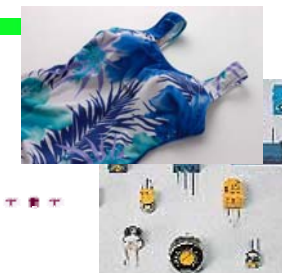
Thermal expansion coefficient of electrode by using our company's needle coke is world's smallest



# C4 Chemicals for Elastic Fibers and Engineering Plastics

**Applications**

PTMG: Elastic fiber (Spandex)  
 1,4-BG:E·Plastic (PBT), Urethane fields, Solvent /raw material for medical



**Share**

Commanding lead in Domestic market  
 Asia MKT share PTMG approx. 15% 1,4-BG approx. 25%  
 Plant to take 20 to 30% market share in ever-growing Asia MKT  
 → New plant under construction in China ( Up and running from Sep.2009)

**Advantage**

High cost performance (1,4-BG, PTMG)  
 Solution provider with organized technical service

**Growth Attributes**

PTMG: Comfort cloths·High performance needs  
 1,4-BG :Shifting toward high end plastic such as automobile and electronics materials

**Technology**

PTMG: Manufacturing process that yields waste less and low environmental impact '07: Green sustainable chemistry award  
 1,4-BG: Sole manufacturer using Butadiene base  
 '05:Japan Petroleum Institute Award for Technological Progress

**Features**

C4 chemicals final applications are cloths, automobile ,medical and IT  
 → High hope on market development

# Polycarbonate (PC)

## Applications

Optical film, Automobile application, E&E and Bottle  
(Impact resistance, electrical characteristic, dimensional stability , high transparency rate)

## Domestic Demand

Approx. 300K tons/Yr (Global demand : Approx 3 million tons/Yr)

## Share

Approx. 45% (Global: 12%)

## Advantage

Wide product range which meets market demand  
(Proprietary process technology , Polymer designed technology and compounding technology)  
Cost competitive

## Technology

Advance proprietary technology (Product chain: Phenol → BPA → PC)  
Mitsubishi Engineering Plastic Corporation's knowledge  
on material and compounding technological development

## Attributes

Environmental friendly melting method process  
Moldability, Cost efficient extrusion, Bottle grade

# Polypropylene (PP)

## Applications

Automobile, Food and Medical  
(High quality and performance PP)

## Domestic Demand

Approx. 2.9 million tons/ Yr.

## Share

Approx. 35%

## Advantage

Competitive advantage on technical and marketing ability  
Global expansion on PP for automobile

## Technology

Proprietary catalyst technology, Proprietary process technology, High Polymer design technology, Compounding technology

## Features

Can meet customers high expectations  
Early adoption of metallocene catalyst design have yielded new functional PP

# Performance Polymers

## Applications

High functional automobile (Interior·Airbag)  
Medical and Food packaging (Multilayer film)

## Sales

Total 100K tons/Yr. Oversea subsidiary TPE : USA  
PVC compound: Thai/China/Singapore

## Advantage

Optimum compound design which satisfies required specifications  
Product customization with customer (Customer Grade)  
Over 40 years of experience with customers (PVC)

## Technology

Polymer compound technology  
Polymer (Graft) technology  
PVC compound technology

## Features

MARKET IN approach are used for product development  
Wide product range ( Proposal of Mix and Match )  
TPE: Olefin, Styrene, Polyester, PVC  
Functionalized Polyolefin (Graphite)  
Soft and hard PVC compound