

APTSIS



Sustainability

The Mitsubishi Chemical Holdings Group
Medium-term Management Plan

APTSIS 15

Step 2 (FY2013-FY2015)

Presentation to Investors

March 5, 2013

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President & Chief Executive Officer



Health



Comfort

Good *Chemistry* for Tomorrow
Creating better relationships among people, society, and our planet.

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 information and electronics, performance products, polymers and processed products, pharmaceuticals, carbon and inorganic products, petrochemicals, 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.

List of Abbreviations

MCHC: Mitsubishi Chemical Holdings Corporation	1,4-BD: 1,4-butandiol
MCC: Mitsubishi Chemical Corporation	AN: Acrylonitrile
MTPC: Mitsubishi Tanabe Pharma Corporation	BTX: Benzene, toluene, xylene
MPI: Mitsubishi Plastics, Inc.	CFRP: Carbon fiber reinforced plastics
MRC: Mitsubishi Rayon Co., Ltd.	CFRTP: Carbon fiber reinforced thermoplastics
NSCI: The Nippon Synthetic Chemical Industry Co., Ltd.	EVOH: Ethylene vinyl alcohol
MCRC: Mitsubishi Chemical Group Technology and Science Research Center, Inc.	FPD: Flat panel display
MCM: Mitsubishi Chemical Medience Corporation	GaN: Gallium nitride
MEC: Mitsubishi Chemical Engineering Corporation	HDPE: High density polyethylene
MKF: Mitsubishi Kagaku Foods Corporation	LCD: Liquid crystal display
NKC: Nippon Kasei Chemical Company Limited	LLDPE: Linear low-density polyethylene
CRK: Chuo Rika Kogyo Corporation	MBR: Membrane bioreactor
APIC: API Corporation	MEG: Mono ethylene glycol
MCCI: PT. Mitsubishi Chemical Indonesia	MMA: Methyl methacrylate
MCPI: MCC PTA India Corp. Private Limited	MOS: Management of SUSTAINABILITY
	NVF: N-vinyle formamide
	OLED: Organic light emitting diode
	OPV: Organic photovoltaic
	PC: Polycarbonate
	PE: Polyethylene
	PHL: Phenol
	PMMA: Polymethylmethacrylate
	PP: Polypropylene
	PTA: Purified terephthalic acid
FY2011: April 1, 2011 – March 31, 2012	
FY2012: April 1, 2012 – March 31, 2013	
FY2013: April 1, 2013 – March 31, 2014	
FY2014: April 1, 2014 – March 31, 2015	
FY2015: April 1, 2015 – March 31, 2016	

Note:

Product names, brand names, and service names used in this presentation material are denoted in italics and are trademarks or registered trademarks of the MCHC Group in Japan and/or overseas. Other product names, brand names, and service names may also be protected.

Agenda

1. **APTSIS 15 Step 1 Results and Objectives of Step 2**
2. **Examination of the Business Growth Model and Strategy**
3. **Common Strategies of the MCHC Group**
 - 3-1 Resource Allocation
 - 3-2 Leaping Ahead
 - 3-3 Structural Reforms
 - 3-4 Synergy: Synergy Units
 - 3-5 Synergy: Common Corporate Functions
4. **Basic Business Strategies**
 - 4-1 Performance Products
 - 4-2 Health Care
 - 4-3 Industrial Materials
5. **Topics**
 - 5-1 Shale Gas Related Strategy
 - 5-2 Healthcare Solutions
6. **Regional Strategies**
7. **KAITEKI Management**

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5. Topics

5-1 Shale Gas Related Strategy

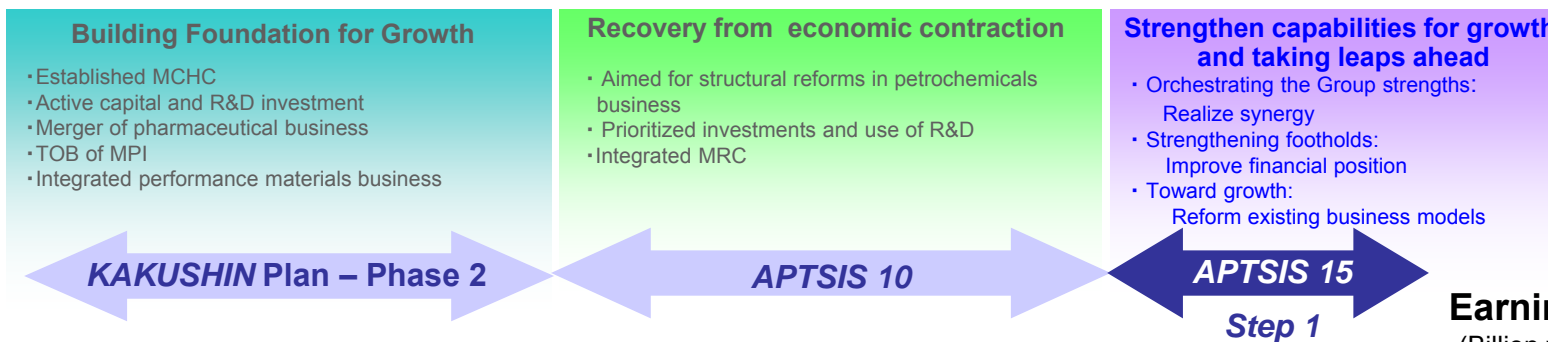
5-2 Healthcare Solutions

6. Regional Strategies

7. **KAITEKI** Management

APTSIS 15 Step 1: Operating Results

Major deterioration in profitability because of the effects of changes in the industrial structure, the appreciation of the yen, shrinkage in spreads on petrochemicals, and other factors.

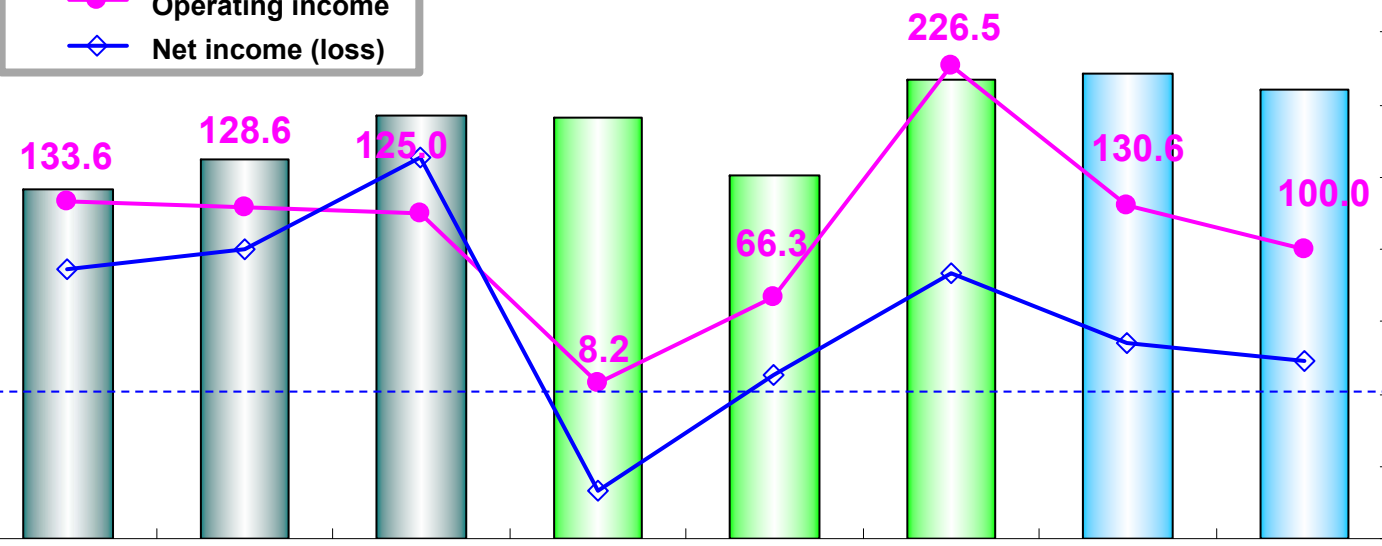


Net sales
(Billion yen)

4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0



FY2005 FY2006 FY2007 FY2008 FY2009 FY2010 FY2011 FY2012
 (Forecasts)



Earnings
(Billion yen)

300
250
200
150
100
50
0
(50)
(100)

APTSIS 15 Step 1: Operating Income by Segment

The outlook for the current fiscal year is that all segments, with the exception of Health Care, will be substantially below the original targets for FY2012 that were released at the time of the announcement of APTSIS 15.

Original targets released at the time of the APTSIS 15 announcement vs. Forecast for FY2012

(Billion yen)




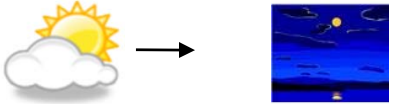


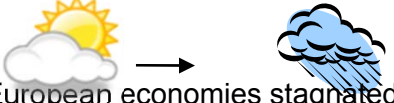


Segments	Original targets for FY2012 *	Forecast for FY2012	Change
Electronics Applications	12	(4)	(16)
Designed Materials	54	24	(30)
Health Care	79	77	(2)
Chemicals	35	2	(33)
Polymers	48	1	(47)
Others	7	7.5	0.5
Corporate	(5)	(7.5)	(2.5)
	230	100	(130)

Forecast for composition of operating income in FY2012:
Performance Products: 20%, Health Care: 77%, Industrial Materials: 3%

* Figures released at the time of APTSIS 15 announcement

Summary of Current Conditions

A major gap has emerged between the outlook for FY2012 and APTSIS 15.

	External environment Forecast → Actual	Internal situation (Company's efforts) Attainment of plan objectives	Results	Final comment
Materials (PTA, Polyolefins, PHL/PC chain, etc.)	 <ul style="list-style-type: none"> Market stagnant due to economic downturn Newly emerging countries, including PRC, have overinvested, upsetting the balance between supply and demand 	 <ul style="list-style-type: none"> Cost-cutting proceeding as scheduled 		Profitability deteriorated accompanying worsening of the environment. Cannot make for this through own initiatives alone.
Green energy (Lithium-ion battery materials, LED-related, Carbon fiber and composite materials, etc.)	 <ul style="list-style-type: none"> Delay in market takeoff Overinvestment has upset the balance between supply and demand <p>Before the dawn</p>	 <ul style="list-style-type: none"> Have not attained technological superiority Downstream development not achieved in certain areas 		The timing of the market take-off was misread, and as a result of overinvestment in the industry as a whole, profitability declined.
FPD-related (OPL film, PET film, PMMA light guide panel, etc.)	 <ul style="list-style-type: none"> European economies stagnated, PRC's growth slowed Market shrank because of changing needs (Sharp decline in PMMA sheets for light guide panels) 	 <ul style="list-style-type: none"> In respond to be the slowing of market growth, we have slowed down our investment plans and made cost-cuts as scheduled 		As growth in the market slows, sales of OPL film are holding firm because of our Company's efforts, On the other hand , conditions in sheets for light guide panels are tough.

Strategies

Grow, Innovate, and Leap Ahead by orchestrating the Group strengths

Strengthening fundamentals	Generate synergies, improve financial position, and reform business structure
Growth Strategy	<ul style="list-style-type: none">• Accelerate transformation to deliver high-performance products and high-value-added businesses• Expand green businesses• Develop new medicines to fulfill unmet medical needs• Operate globally <p>Deliver <i>KAITEKI</i> solutions by pursuing Sustainability, Health, and Comfort</p>
Innovation Strategy	Build new businesses for the future
Leaping Ahead (M&A)	Invest strategically in alliances and acquisitions

Viewpoints for Reconsideration (Synergy + Transformation)

- The basic strategy will not change, but the objectives and methods for management will be reconsidered.
- We have emphasized improvement through our Company's efforts and have reset objectives for FY2015 that we can attain.

(Viewpoint)

- Reset objectives that can be attained by FY2015, taking account of the economic downturn and delays in new businesses

(Methods for Management)

- In addition to business portfolio management by segment used thus far, we conducted analyses based on sensitivity to economic fluctuations and made a reconsideration for greater reliability during periods of economic stagnation.

APTSIS 15 Step 2: Assumptions of the Plan

The only changes from the assumptions of *Step 1* are the foreign currency rates and the naphtha price.

Variables	Assumptions
Global economy	Emerging countries driving growth; advanced nations only expanding slowly
Naphtha price	¥65,000/kl (during <i>Step 2</i>)
FOREX	¥90/US\$ (during <i>Step 2</i>)
Intensifying competition in environment & energy businesses	Prioritize in the areas in which we can display our leadership
Medical environment	Biennial drug price revisions and expansion of generics to reduce medical expenditure
Petrochemicals Supply/demand balance	Excess supply, as facilities expanded abroad particularly in the Middle East and PRC, entering in Japanese market

Operating Income by Segment in FY2015

As a result of the resetting of objectives and strategies, the operating income target for FY2015 is ¥280 billion.

(Billion yen)

Domains	Segments	Original targets	Revised targets	Change
Performance Products	Electronics Applications	30	5	(25)
	Designed Materials	100	80	(20)
Health Care	Health Care	120	110	(10)
Industrial Materials	Chemicals	35	25	(10)
	Polymers	70	35	(35)
Others		10	10	0
Corporate		(5)	(5)	0
Subtotal		360	260	(100)
Contingency		(30)		30
Subtotal including Contingency		330	260	(70)
Operating Income by Leaping Ahead (M&A)		70	20	(50)
Grand Total		400	280	(120)

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Reconsideration of Business Management Method

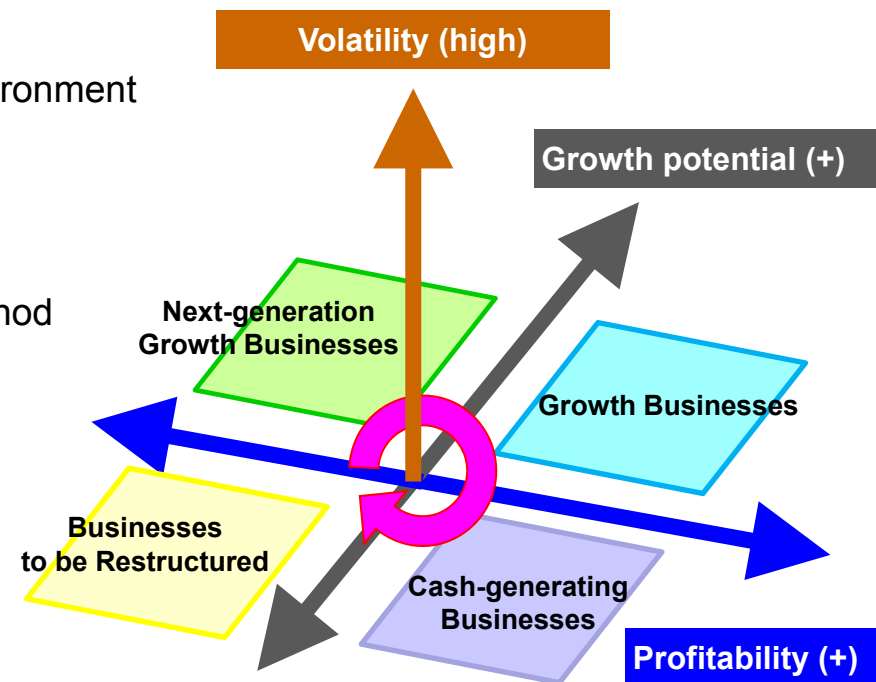
As business forecasting has become more difficult, we have decided to introduce a new axis (representing volatility) with the aim of managing our businesses more reliably.

➤ **Problems with current business portfolio management**

- is useful in making judgments about the stage of business development, but it does not reflect the volatility of businesses and, therefore, is inadequate when the business environment undergoes major change

➤ **How we will reconsider it**

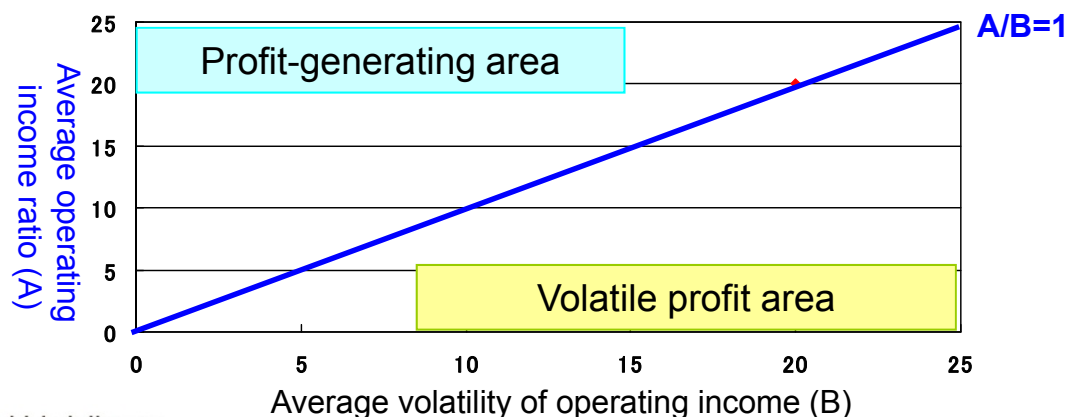
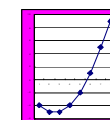
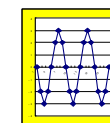
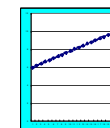
- In addition to the two-axis portfolio management method used thus far, which took account of growth potential and profitability, a third axis measuring earnings volatility has been added



Defining the Type of Growth Model

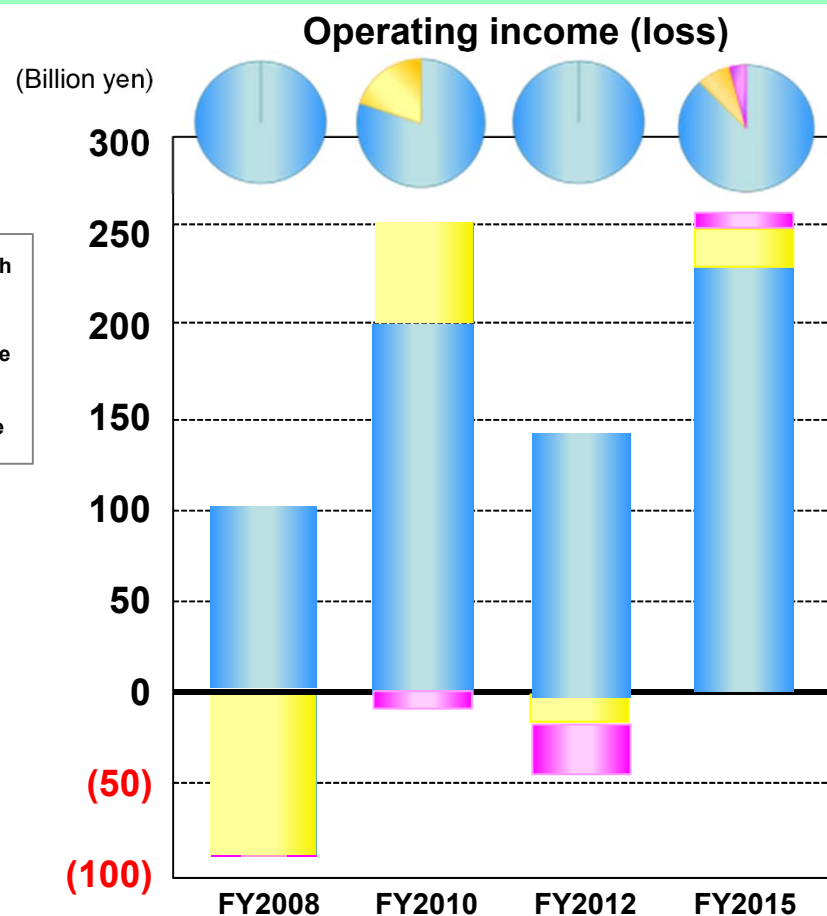
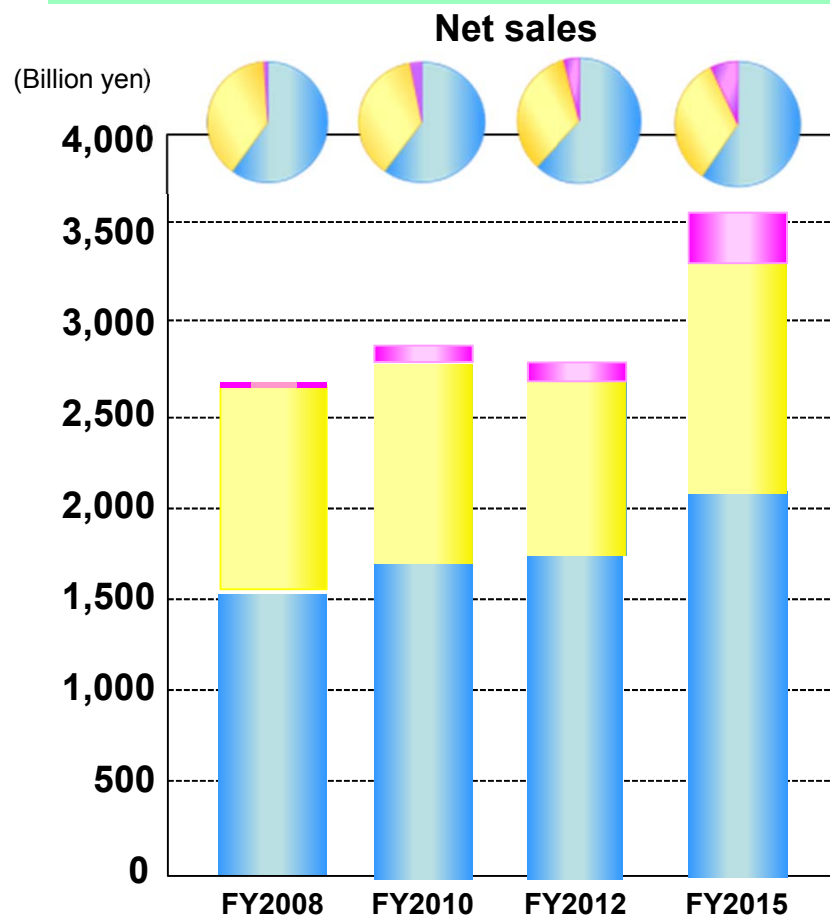
While referring to the volatility in operating income over the past 10 years, we compared this data with the forecast for performance through FY2015, and then classified our businesses into the following three types. This classification is what we refer to as our growth model.

- Businesses where continued profit can be expected (**Stable businesses**)
 - Businesses where the average operating income ratio exceeds average volatility of operating income in the past
- Businesses with large fluctuations in profitability (**Volatile businesses**)
 - Businesses where the average operating income ratio is lower than average volatility of operating income in the past
- Businesses that accelerate growth (**Growth driver businesses**)
 - Businesses, among volatile businesses, where we will increase sales growth



Performance Results and Plans by Type of Growth Model

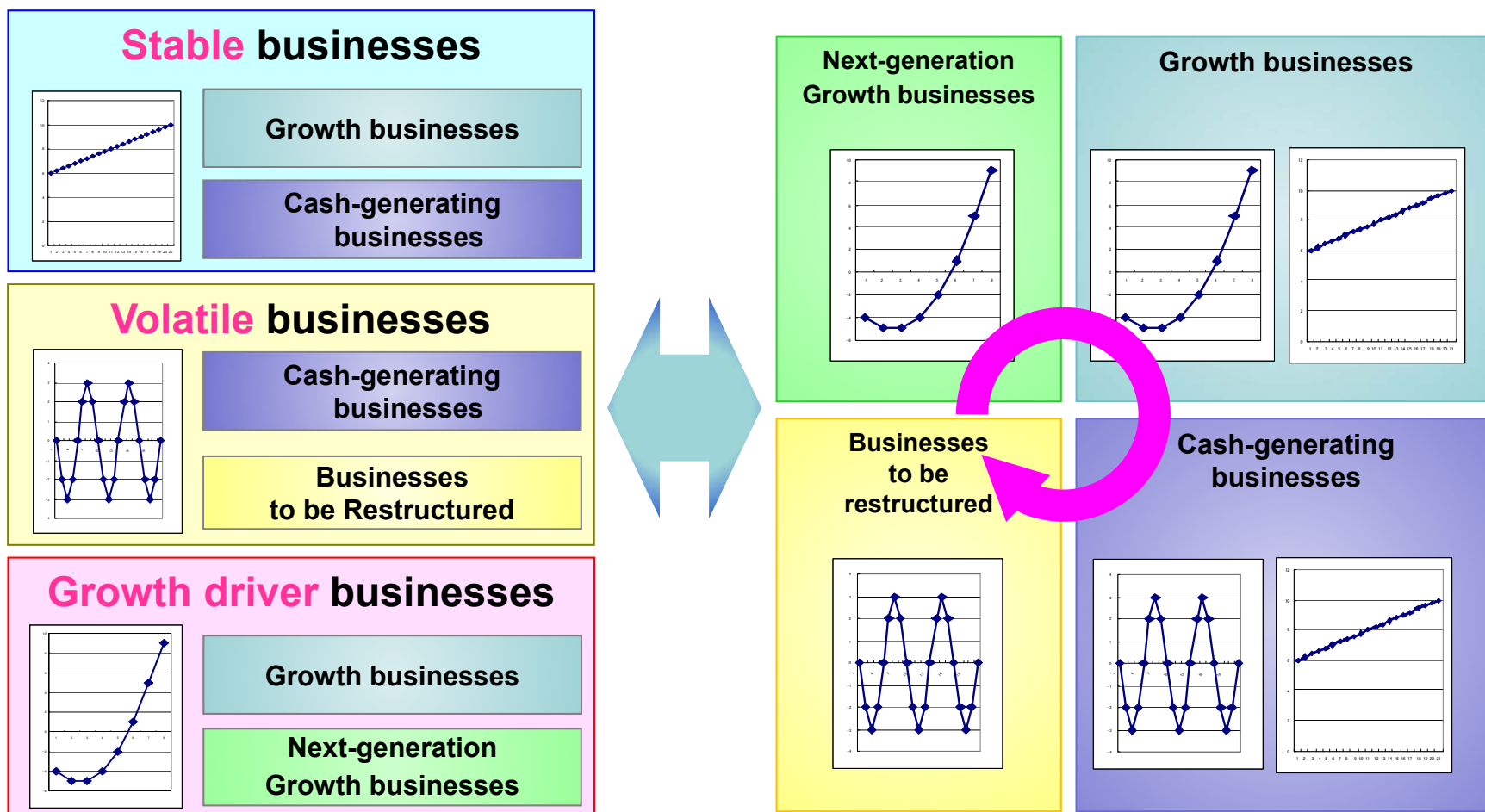
For each growth model, we will enhance stability, restrain volatility, and accelerate promotion of growth drivers as we implement our strategies in line with these policies to attain the objectives for FY2015.



Note: Sum total of major strategic business units (SBUs)

Relationships between Current Business Portfolio Management and the Types of Growth Models

Current business portfolio management shows the stage of business development and the growth models reflect the nature of the businesses. We use both in tandem in managing our businesses.



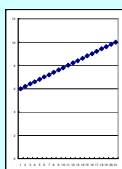
New Business Portfolio (Growth Model)

In all businesses, we reconsidered current business portfolio management and classified them by type of growth model.

Next-generation growth	Growth
To be restructured	Cash-generating

Current portfolio management

Stable businesses

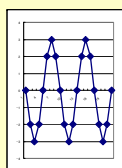


- ◆ Polyester film*1
- ◆ OPL film and others*1
- ◆ Engineering plastic products*2
- ◆ Pharmaceuticals
- ◆ MMA/PMMA
- ◆ High performance graphite
- ◆ Performance polymers
- ◆ Specialty chemicals
- ◆ High performance films
- ◆ Food ingredients
- ◆ Diagnostics & support for new pharmaceutical development
- ◆ Coke and others

*1 Flat panel display (FPD) related materials were reclassified by type of material

*2 Name newly given to high-performance molding products

Volatile businesses



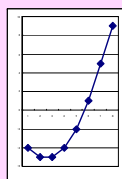
- ◆ Performance molding products
- ◆ PTA
- ◆ PHL/PC chain*3
- ◆ Polyolefines*4
- ◆ Basic petrochemicals*5
- ◆ Carbon black and rubber
- ◆ Electronic and industrial films
- ◆ Fibers and others

*3 Name newly given to PHL/BPA/PC

*4 PP/PP compound and PE were reclassified

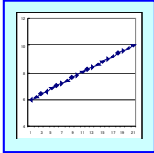
*5 Name newly given to naphtha crackers

Growth driver businesses



- ◆ Carbon fiber and composite materials
- ◆ White LED lighting and materials
- ◆ Lithium-ion battery materials
- ◆ Water treatment systems and services
- ◆ Organic photovoltaic modules and materials
- ◆ Organic photo-semiconductors
- ◆ Advanced performance products (AQSOA and others)
- ◆ Agribusiness solutions
- ◆ Healthcare solutions
- ◆ Sustainable resources

*6 Name newly given to Performance composite materials



Stable Businesses: Key Points of Strategy and Implementation

APTSIS

These are business domains where growth is expected and, in addition, profitability can be increased through thorough efforts to improve efficiency. We will also increase the depth of earnings.

Stable businesses:

Set operating income target for FY2015 of ¥225 billion

- Businesses where we can expect continued profitability
- **Basic policies: Work aggressively to maintain and expand income**
 - Increase sales through maintaining and expanding the competitive superiority we have now
 - Achieve growth in sales through improvement of product mix, expansion of production capacity, and development of overseas business, etc.

Performance Products:

Polyester film
Specialty chemicals
OPL film, etc.

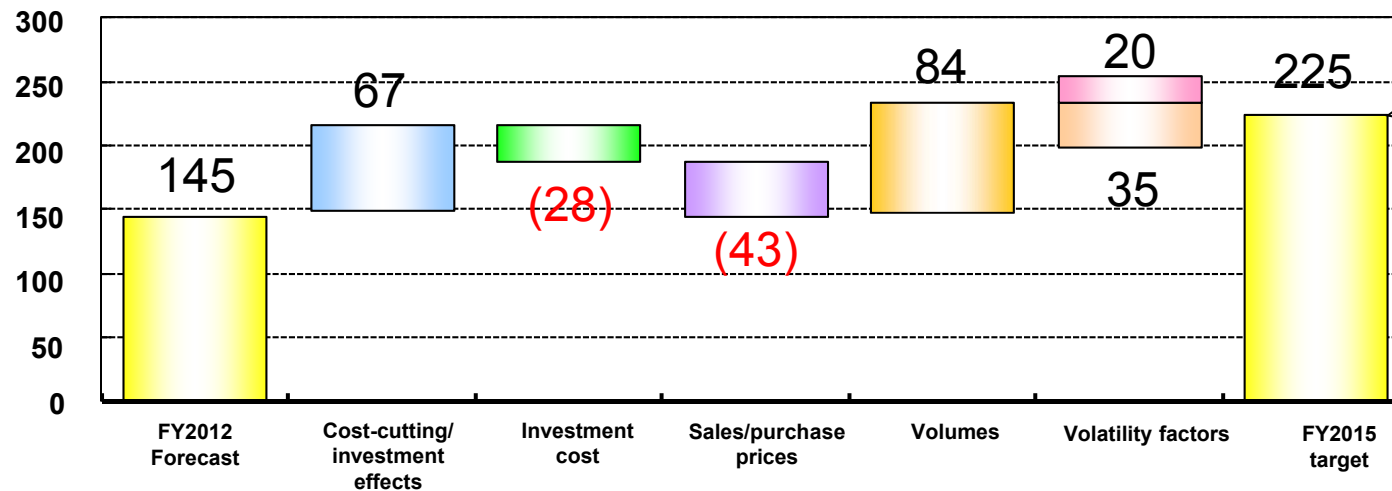
Health Care:

Pharmaceuticals, etc.

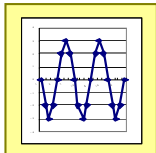
Industrial Materials:

MMA/PMMA
Coke
High performance graphite, etc.

(Billion yen)



Adopt goal assuming the upper level of the volatility factors



Key Points of Strategy and Implementation

We will not rely on market recovery, and we will make thoroughgoing efforts to cut costs, strengthen our financial position, move back into the black, and secure profitability.

Volatile businesses:

Set operating income target for FY2015 of ¥20 billion

- Businesses where major fluctuations because of external factors are expected to be unavoidable
- **Basic policies: Restrain range of fluctuations and stabilize**
 - Strengthen basic capabilities by thorough cost cutting (Decommission No. 1 naphtha cracker and expand and fully operate No. 2 naphtha cracker at the Kashima Plant of MCC, etc.)
 - Increase ability to absorb fluctuations in spreads through expanded introduction of price formulas
 - Take various initiative, including business portfolio reforms

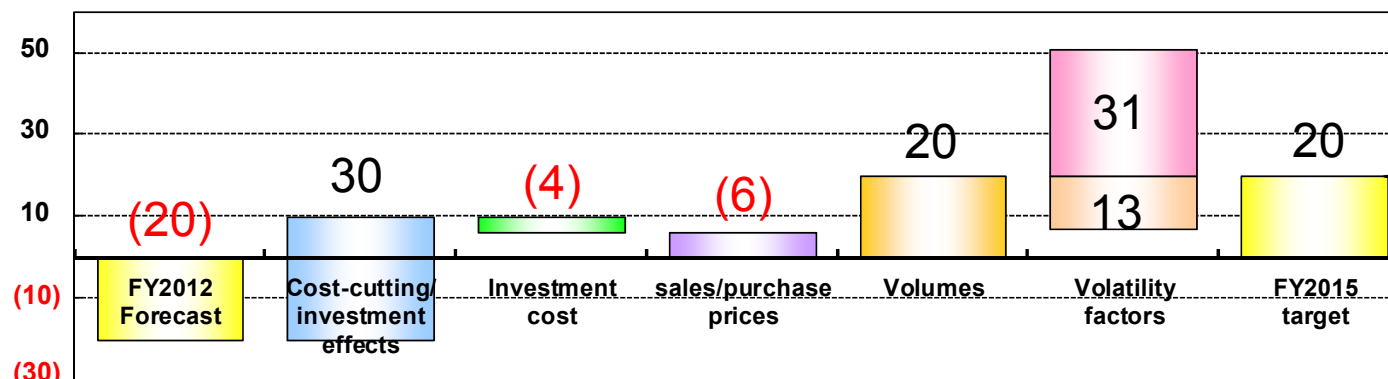
Performance Products:

Performance molding products, etc.

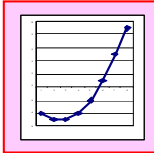
Industrial Materials:

Basic petrochemicals
PHL/PC chain
Polyolefines
PTA, etc.

(Billion yen)



Adopt goal using the lower level of the volatility factors



Growth Driver Businesses: Key Points of Strategy and Implementation

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After carefully confirming the necessary input of resources, work to expand sales through new product launches and entering new product fields and aim for operating income of ¥10 billion in FY2015.

Growth driver businesses:

Set operating income target for FY2015 of ¥10 billion

- Businesses where we will promote high growth in line with market expansion
- Basic policies: Make these businesses autonomous, going concerns as quickly as possible
 - Make selective inputs of resources
 - Generate results from R&D faster, accelerate development and launching of new products
 - Develop and expand sales in new fields

Performance Products:

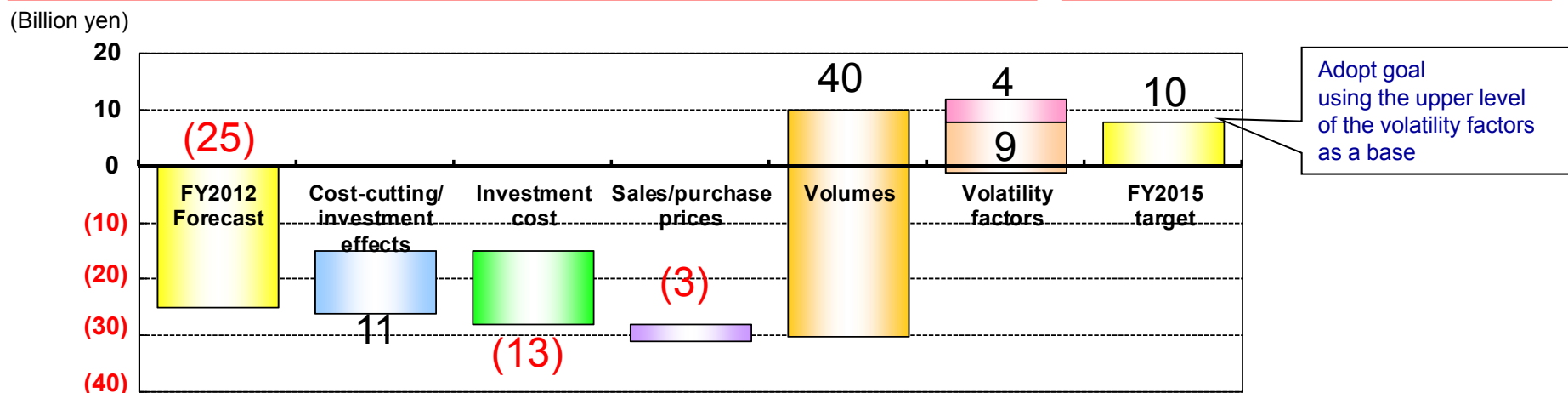
Carbon fiber and composite materials
White LED lighting and materials
Lithium-ion batter materials
Water treatment systems and services
Organic photovoltaic modules and materials, etc.

Health Care:

Healthcare solutions

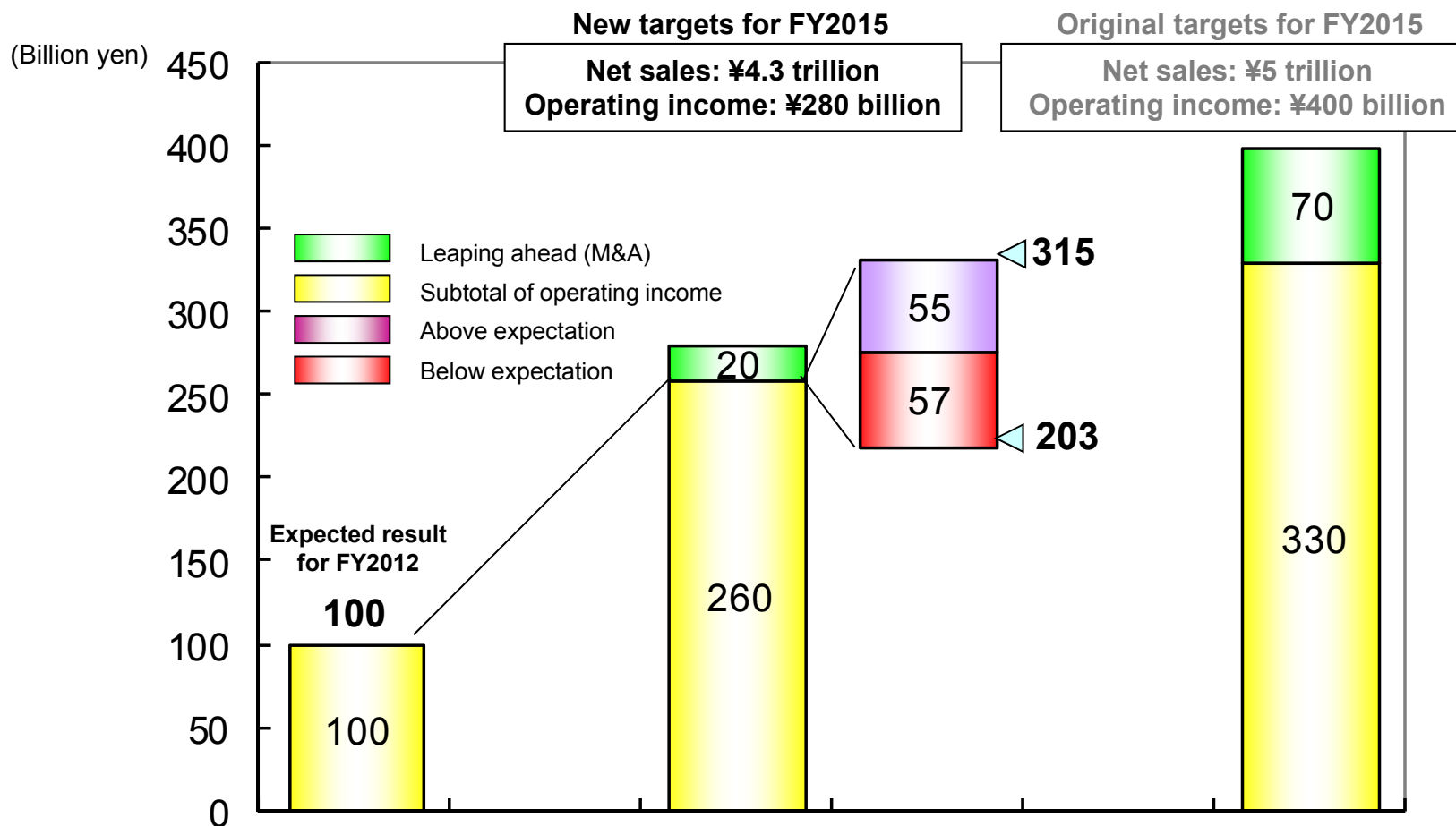
Industrial Materials:

Sustainable resources



New Targets and Original Targets

Some margin of overshooting or undershooting of FY2015 objectives is assumed because of the impact of economic fluctuations, but we will aim for improving performance through various measures.



Goals for FY2015

Aim for sustained increase in corporate value and reset objectives that can be attained with the following indicators as a guide

	APTSIS 15 Original targets for FY2015	APTSIS 15 Step 2 Revised targets for FY2015	
Economic Indexes	Operating income	¥400 billion	¥280 billion
	Growth & innovation strategies	¥330 billion	¥260 billion
	Leaping ahead (M&A)	¥70 billion	¥20 billion
	ROA (income before income taxes)	≥8%	≥7%
	Net D/E ratio	1.0	0.8*
	Net D/E ratio (including minority interests in consolidated subsidiaries)		0.5*
	Overseas sales ratio	≥45%	≥45%
CAPEX, Investment and loan	CAPEX, Investment and loan	¥1,000 billion*	¥840 billion*

*Excluding “Leaping ahead (M&A)”

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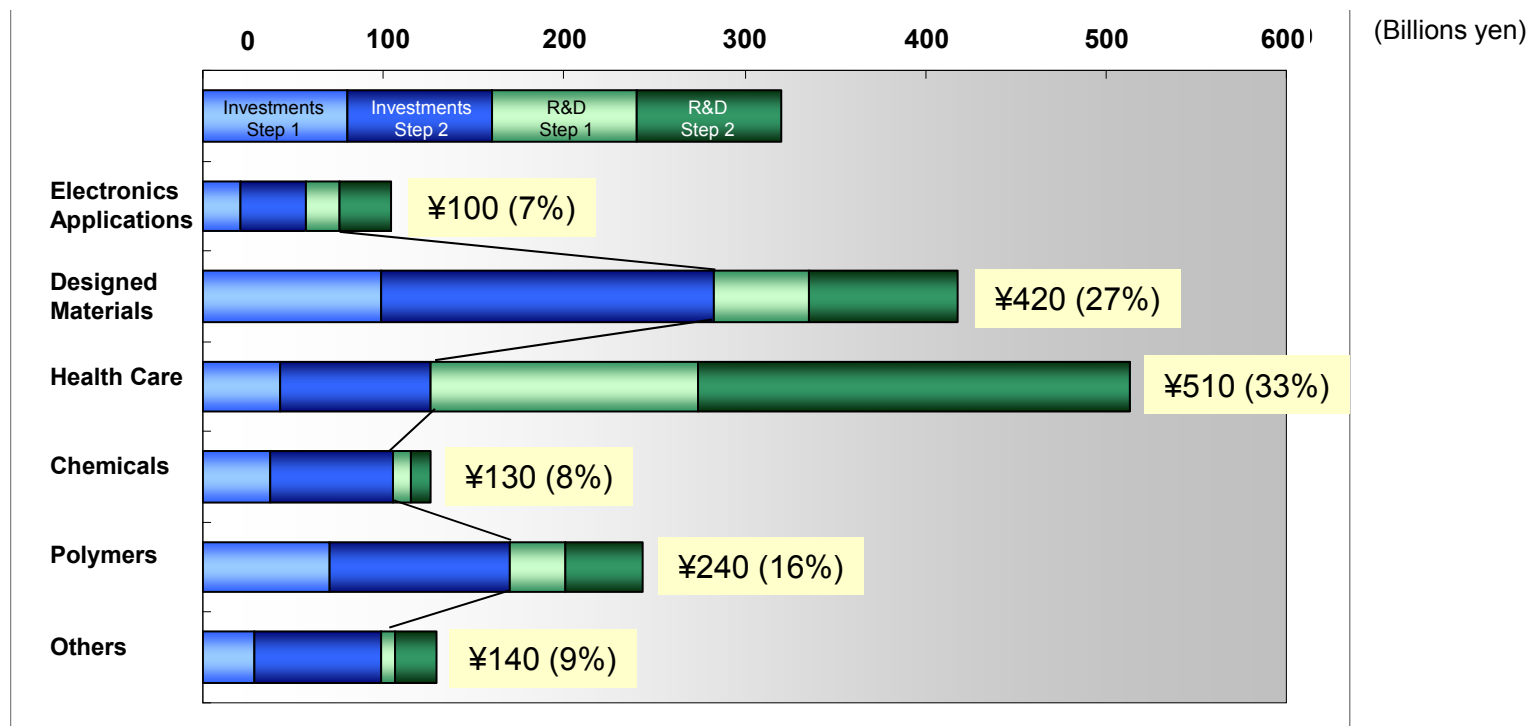
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Investments and R&D Expenditures

Implement resource allocation based on the strict principle of selectivity and focus

	Original five-year plan	Revised five-year plan	Expected results of Step 1	(Billion yen) Step 2
Investments* (Cash flow basis)	1,000 (940)	840 (790)	300 (290)	540 (500)
R&D expenditures	750	700	270	430

*On a decision-made basis, and exclude "leaping ahead (M&A)"



“Leaping Ahead” Strategy

**Aim to expand prioritized businesses,
Invest resources strategically in alliance and M&A**

<Resource investment approach>

- **Strengthen and expand stable and growth driver businesses**
- **Accelerate global development**
- **Businesses for focus: performance products and health care**

◆ Principal alliances and M&A deals during Step 1

<p>Performance Products</p>	<p>OPL film and others: Acquired majority share interest in NSCI Carbon fiber and composite materials: Acquired TK Industries GmbH, Challenge Co., Ltd. and concluded a merger agreement with Aldila, Inc.</p>
<p>Health Care</p>	<p>Pharmaceutical formulation materials: Acquired Qualicaps Co., Ltd. Pharmaceuticals: Concluded sales tie-up with Daiichi Sankyo Co., Ltd. in the domestic diabetes treatment field (<i>Tenelia</i>)</p>
<p>Industrial Materials</p>	<p>MMA/PMMA: Concluded joint venture agreement with SABIC High performance graphite: Established joint venture with Posco Chemtech Co., Ltd.</p>

Business Structural Reforms

- Aim to strengthen position for dealing with changes in the business environment (such as declines in demand and excess supply) through further structural reforms
- Continue to implement realignment in the domestic petrochemicals business, where we have already taken aggressive measures

◆ Principal business structural reforms during Step 1

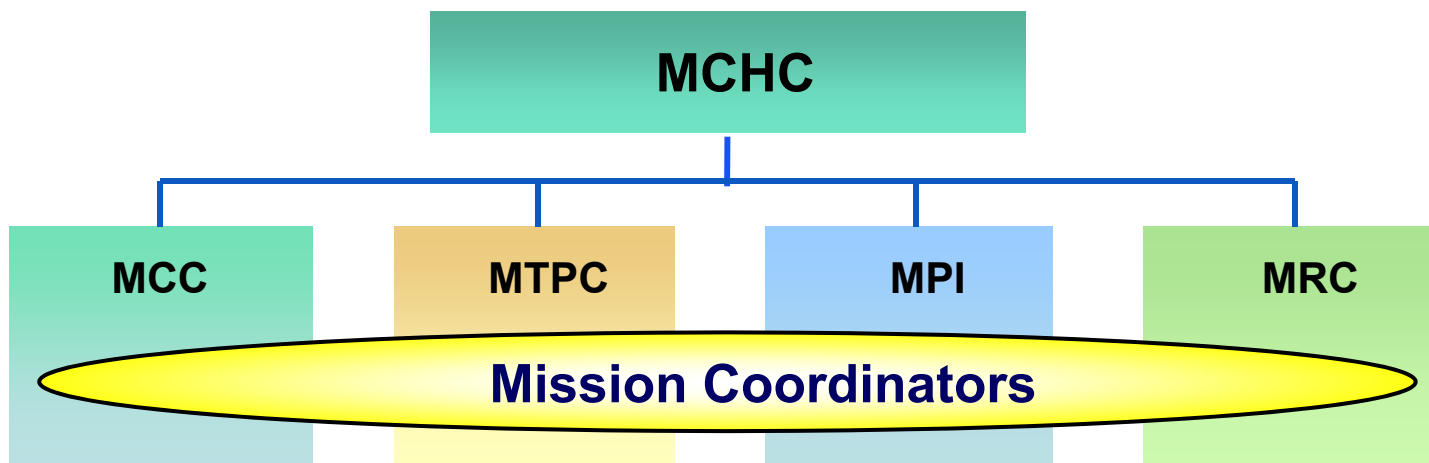
Performance Products	<p>Environment and materials: Sold pipe material business to Sekisui Chemical Co., Ltd.</p> <p>Performance molding products: Exited this business in Europe</p>
Health Care	<ul style="list-style-type: none"> • Integrated the plasma derivative operations into the Japan Blood Products Organization • Transferred the fine chemical business to APIC and Taisho Technos Co., Ltd. • Dissolved capital ties with Choseido Pharmaceutical Co., Ltd.
Industrial Materials	<p>Basic petrochemicals:</p> <ul style="list-style-type: none"> • Decided to decommission No. 1 naphtha cracker and expand and fully operate No. 2 naphtha cracker at the Kashima Plant of MCC • Naphtha cracker downsized at the Mizushima Plant of MCC, and formed alliance with Asahi Kasei Corporation in aromatics related business <p>C4 chemicals: Shut down No. 2 line of 1,4-BD</p> <p>PP: Shut down one line each at the Kashima Plant of MCC and the Goi Plant of JPP.</p> <p style="padding-left: 40px;">Decided to shut down a line at the Kawasaki Plant of JPP</p> <p>PE: Decided to shut down of a line at the Kawasaki Plant of JPP</p>

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Group Synergy: Progress

- Appointed Mission Coordinators (April 1, 2012)
- Reaching a position where we can see concrete results



Formulate group-wide strategic plans for business areas where rapid synergies can be achieved. Guide and advise on those business operations.

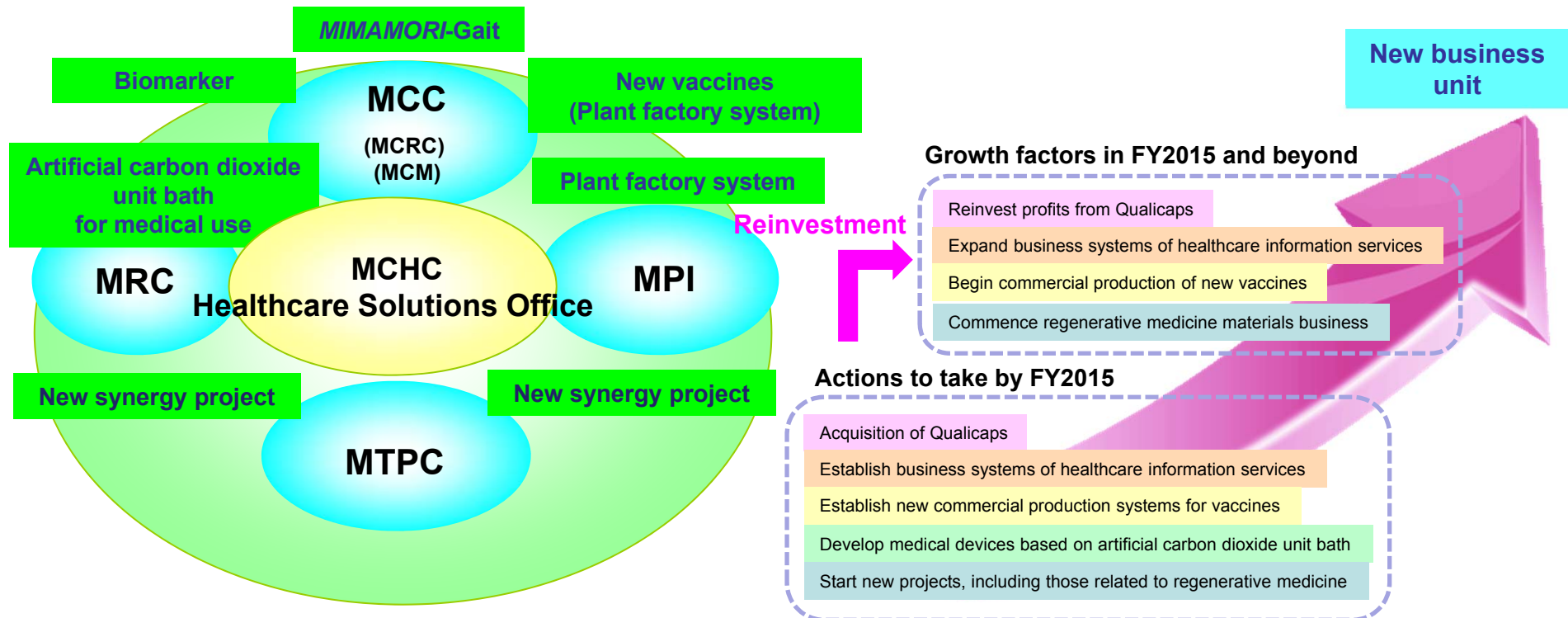
- Healthcare solutions
- Water treatment systems and services
- Specialty chemicals
- Polymer processing and information and electronics
- Carbon fiber and composite materials

Synergy Units: Healthcare Solutions

Offer a diversity of solutions from sick care to healthcare, not limited to pharmaceuticals, by drawing on Group synergies

Offer healthcare solutions that leverage the MCHC Group synergies

Business roadmap in healthcare solutions



Polymer Processing/Information and Electronics

Realize synergies among material development technologies and polymer processing technologies to accelerate development of new functions

Offer solutions based on development of high performance products

LED lighting materials
Printed electronics, OPVs, OLED materials and others

Phosphor composite

High heat-resistance transparent films

Super high gas barrier films

MCC & MRC
(Material development technologies)

MPI
(Plastic processing technologies)

- Transfer Yuka Denshi Co., Ltd.*, a MCC Group company, to MPI and strengthen molded products business
- Launch mold forms for test pieces generally used for a mortar compressive strength test that use PBS** as a raw material.
- Developing applications for films and sheets formed from bio-engineering plastic, *DURABIO*
- Developing remote phosphor LED lighting materials using phosphor composite

MCC

MPI

*As of April 1, 2013

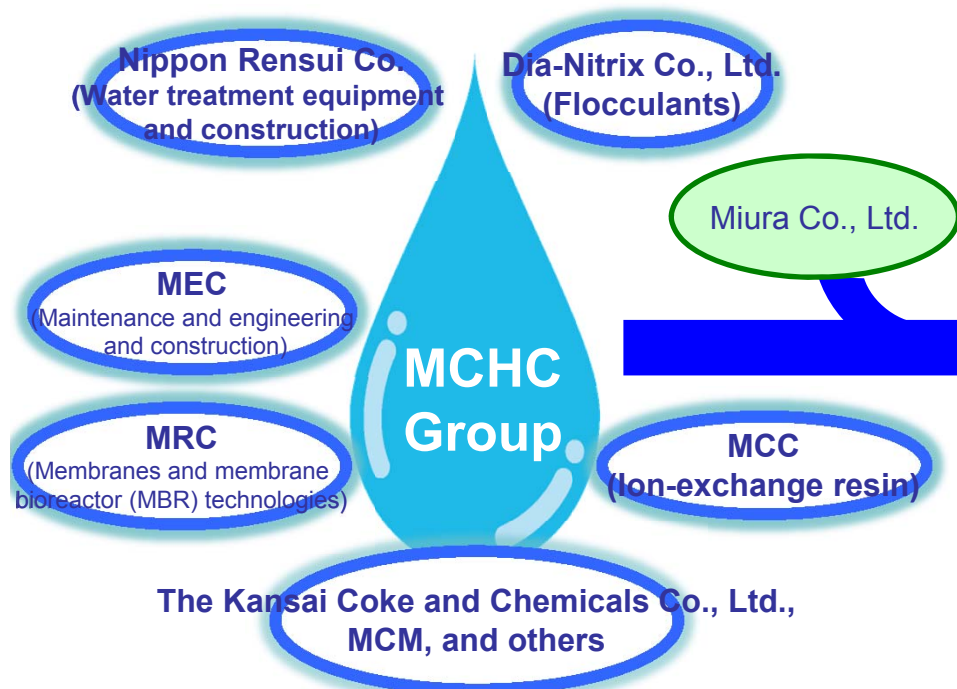
**PBS: Polybutylene succinate

Synergy Units: Water Treatment System and Services

APTSIS

Accelerate development of businesses related to offering solution packages and create new water treatment businesses

Integrate MCHC Group water treatment technologies to provide full packaged “water solutions”



[January 2013]

- Form project team that will take the lead in creating new water treatment businesses (*water recycling, O&M, water sales, etc.*)
- With the fields of chemicals, food products, and drugs as targets, first create businesses in Japan

[March 2013]

- Miura Co., Ltd., a leading domestic manufacturer of small once-through boilers, will participate in the project team
- Aim for early commercial start-up by combining MCHC Group’s strengths in membranes/MBR, flocculants, etc. with Miura’s strengths (maintenance systems, water analysis technology, etc.)

[FY2015]

- We will establish businesses in Japan, then expand the scope of business to include countries overseas (PRC, ASEAN countries, etc.)

Synergy Units: Carbon Fiber and Composite Materials

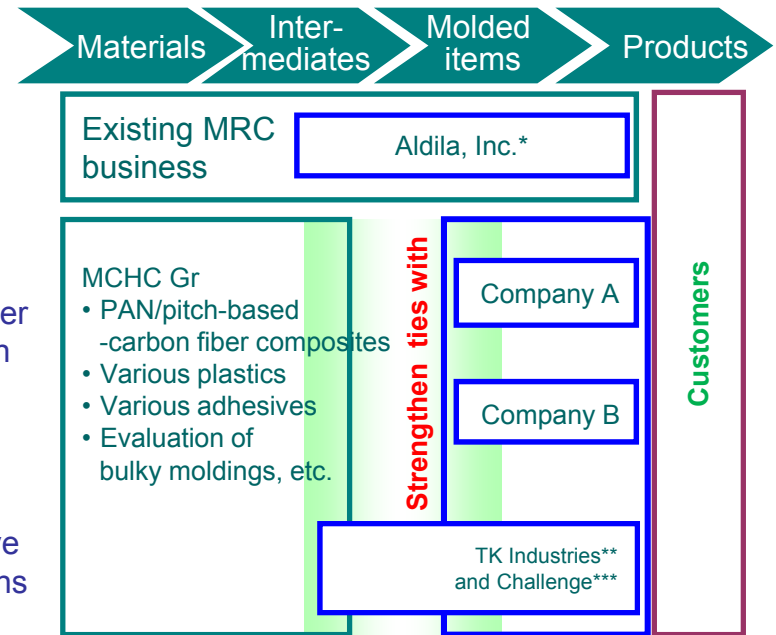
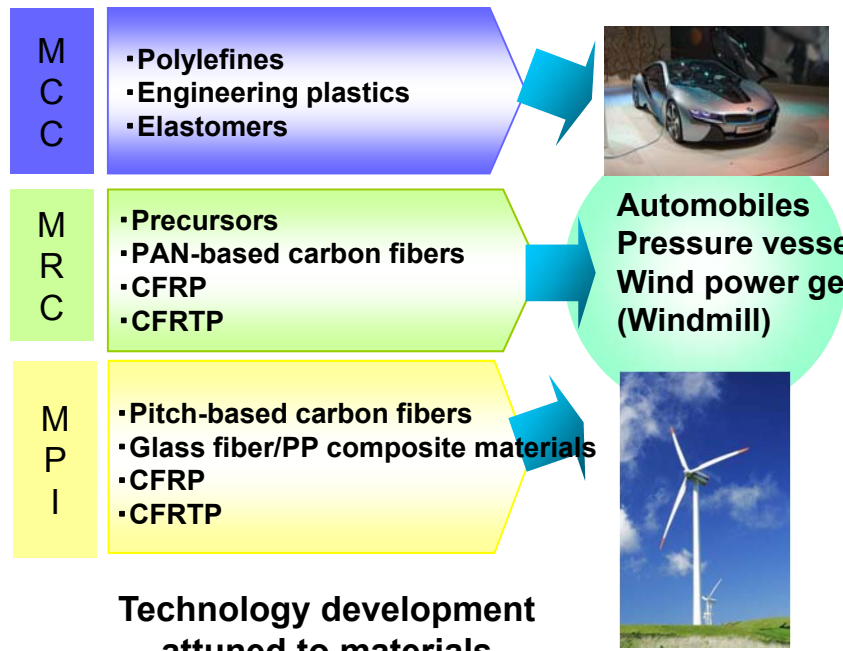
Establishing value chains with competitive superiority in targeted industries

Carbon fibers contribute to making *KAITEKI* a reality in the environmental and new energy fields

Cross-company team goes into action

Carbon fiber composite materials project established in the MCHC Group (September 2012)

Combining our material technologies (PAN-/pitch-based, etc.) and commencing development of applications in target industries that build on existing marketing channels



*Concluded a merger agreement in December 2012
 **Acquisition completed in October 2012
 ***Acquisition completed in November 2012

Synergy Units: Specialty Chemicals

APTSIS

**Beginning to strengthen the business portfolio
by distinguishing three major fields:
coating & additives, electronic materials, and living and health.**

Expand scale and build a broad lineup of product groups, move from “dispersal” to “orchestrating the Group strengths”

Electronic materials
(Inorganic and organic)

MCC

MPI

Circuit materials, semiconductor materials, sealants, resists, EL chemicals

Living and health
(Life)

MCC

MKF

MRC

Ion-exchange resins, food ingredients, analytical instruments

Coating & Additives

NSCI

NKC

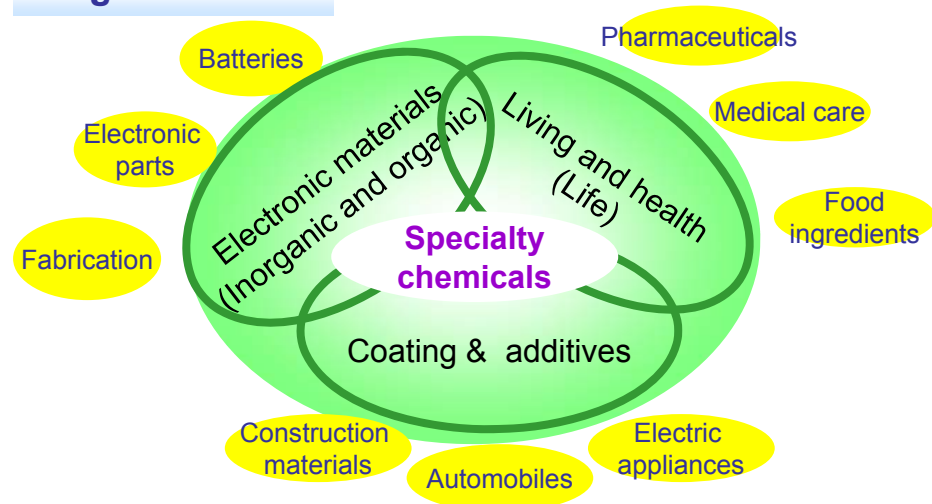
CRK

MCC

APIC

Specialty polymers, chemicals, epoxy resins, functional coating materials, adhesive materials and various types of emulsions, germicides and antioxidant materials

Target Domains



Progress

- Actively continuing to consider business synergies in the coating & additive field to cross over business boundaries
- Acquired majority share interest in NSCI and strengthening ties with MCC (December 2012)
- Beginning to realize synergies in life through integrating MRC Polysaccharide Co., Ltd. into the Food Ingredients Dept. of MCC (April 2013)
- Starting to strengthen the business portfolio through leaping ahead (M&A).

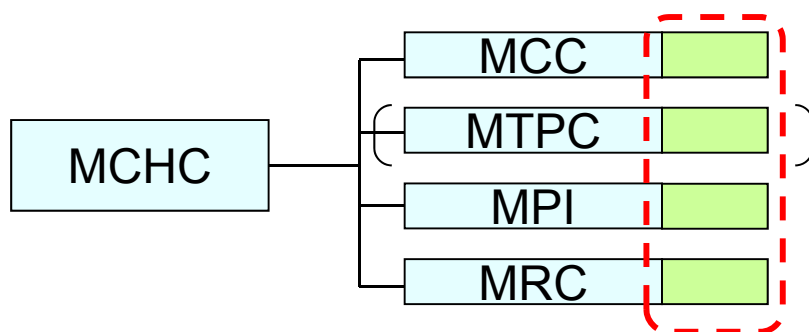
Agenda

1. **APTSIS 15 Step 1 Results and Objectives of Step 2**
2. **Examination of the Business Growth Model and Strategy**
3. **Common Strategies of the MCHC Group**
 - 3-1 Resource Allocation
 - 3-2 Leaping Ahead
 - 3-3 Structural Reforms
 - 3-4 Synergy: Synergy Units
 - 3-5 Synergy: Common Corporate Functions
4. **Basic Business Strategies**
 - 4-1 Performance Products
 - 4-2 Health Care
 - 4-3 Industrial Materials
5. **Topics**
 - 5-1 Shale Gas Related Strategy
 - 5-2 Healthcare Solutions
6. **Regional Strategies**
7. **KAITEKI Management**

Group Synergy: Progress

Establishing Shared Services Company (SSC) to attain the goal of “Synergy to Grow”

- Moving ahead with the integration of common corporate functions in core operating companies
 - (1) To enhance sophistication of functions
 - (2) And increase efficiency



Transfer departments with the same service functions from core operating companies to SSC

Shared services company (SSC):

Mitsubishi Chemical Holdings Corporate Staff, Inc.

To be established April 1, 2013

<Schedule for Integration>

*Financing and administrative functions
(Completed June 1, 2012)

*Legal functions
(Scheduled for April 1, 2013)

*Accounting functions
(Scheduled for June 1, 2013)

*Human resource management functions
(Scheduled for April 1, 2014)

Realizing Synergies:

APTSIS

Objectives and Accomplishments (Step 1/Step 2)

Objectives of Step 1 have largely been attained, Step 2 takes account of the contributions of synergy units, and the initial plan has been revised upward by ¥6 billion.

(Billion yen)

		Principal synergies for consideration	Step 1 targets	Step 1 expected results	Step 2 targets
R&D Cost and	Purchasing	➤ Equipment (materials) procurement functions: Centralize purchasing function	6	6.7	22
	Logistics	➤ Integrate logistic networks and consolidate locations within the Group			
	IT	➤ Integrate infrastructural systems to enhance efficiency and rationalize by standardizing applications			
	R&D	➤ Exercise more synergies among technologies and more effective use of technology platforms ➤ Optimize human resources allocation and infrastructure			
Businesses	Healthcare solutions	➤ Offer a diversity of solutions from sick-care to healthcare, not limited to pharmaceuticals, by drawing on Group synergies	5	3.7	16
	Polymer processing/ Information and electronics	➤ Offer solutions based on development of high-performance products such as LED lighting materials, printed electronics, OPV, OLED materials, and others			
	Water treatment systems/services	➤ Accelerate development of businesses related to offering solution packages and create new water treatment businesses			
	Specialty chemicals	➤ Beginning to strengthen the business portfolio by distinguishing three major fields: coating & additives, electronic materials, and living and health.			
	Carbon fiber and composite materials	➤ Strengthen intermediate materials and molding products and establishing value chains with competitive superiority in targeted fields (industries, automobiles, and golf)			
	Others	➤ Effective use of sales channel and business units within the Group e.g. electrolyte production on the premises of at Lucite in the UK & the US			
Total			11	10.4	38

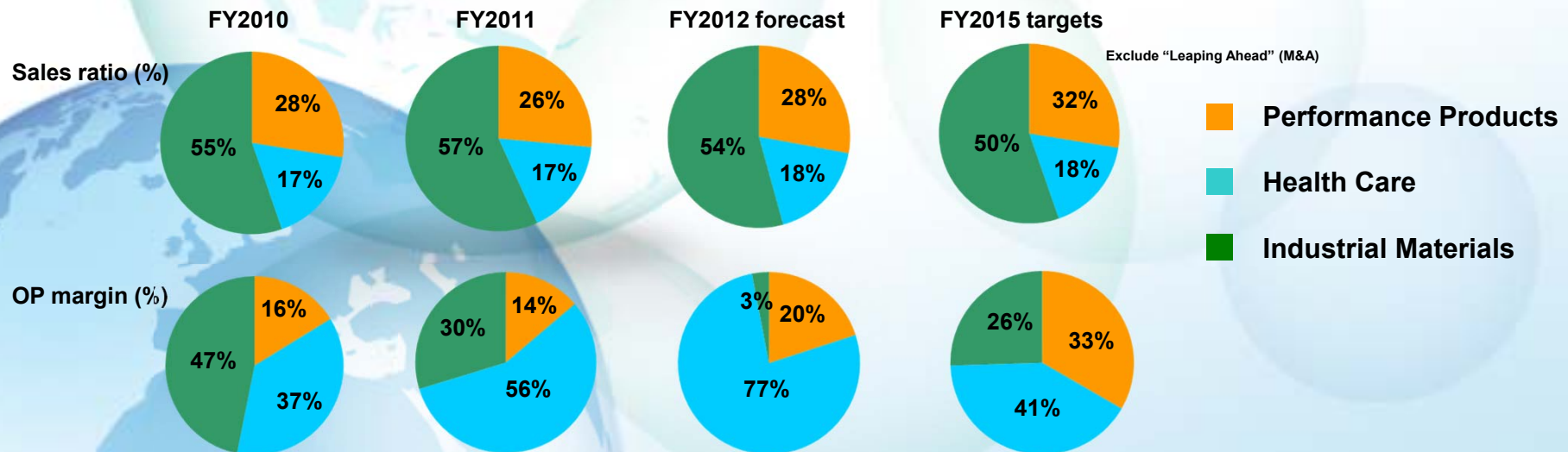
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4-1 Performance Products

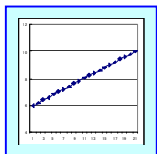
4-2 Health Care

4-3 Industrial Materials



Performance Products: Strategies

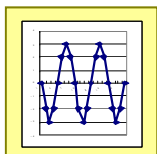
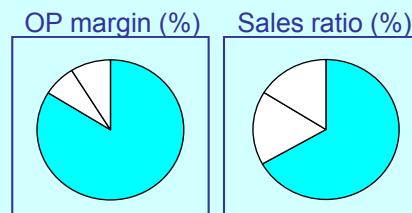
Accelerate launch of green businesses, pursue further value-addition, and reach out to global markets



■ Stable businesses

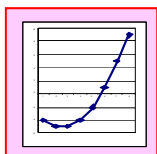
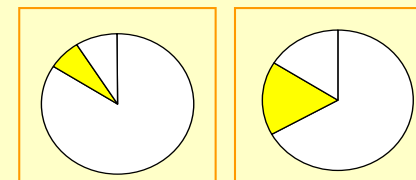
- Expand high-performance and high-value-added businesses
 - Specialty chemicals
 - OPL film and others
 - Engineering plastics
- Accelerate global expansion
 - Polyester film

FY2015



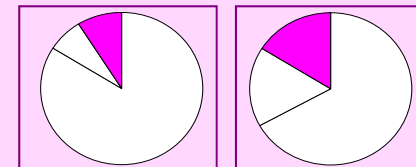
■ Volatile businesses

- Strengthen competitiveness through cost cutting
 - Creation of necessary functions



■ Growth driver businesses

- Nurture and develop next-generation growth businesses with an eye to the future
 - Organic photovoltaic modules and materials
 - Organic photo semiconductors
 - Advanced performance products (AQSOA)
 - Carbon fiber and composite materials
- Expand green businesses
 - White LED lighting and materials
 - Lithium-ion battery materials



Stable Businesses: Polyester Film

- Begin to manufacture in PRC, and expand sales in its market, where the outlook is for growth (PRC plant to go into operation during the second quarter of FY2013)
- Also, focus on sale of non-FPD items and improve the product mix

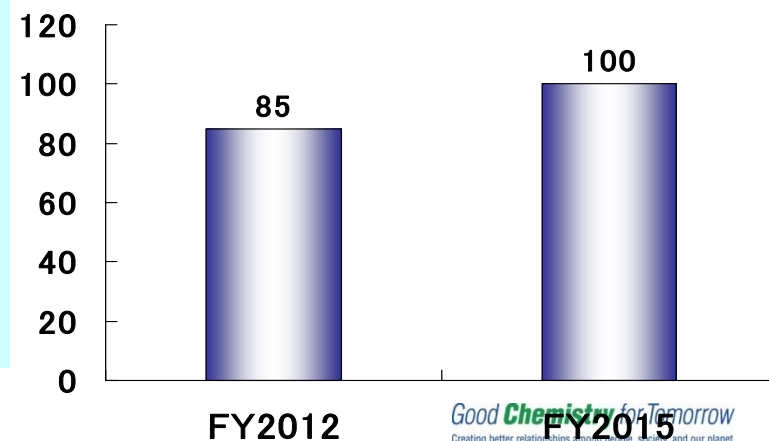
<View of the business environment>

- Slow to little expansion in sales volume because of the slower growth in the flat panel TV market
- PRC is the main area for market expansion in the FPD field
- Downward pressure on prices is strong in the FPD field. Prices will continue to decline and profit ratios will worsen.

<Basic strategies>

- Establish the No. 1 position in PRC in the FPD-use polyester film market
- Reconsider the timing for the commencement of the operation for the No. 2 production facility in PRC, taking into account market trends
- Make further cuts in fixed costs in Japan
- Focus sales activities on film applications in non-FPD items, such as touch panels and solar batteries

Sales goal (Billion yen)



Growth Driver Businesses: Carbon Fiber and Composite Materials

- Pursue coordinated business expansion in precursors, carbon fibers, intermediate materials, and molded products
- Establish a competitively superior value chain in target industries

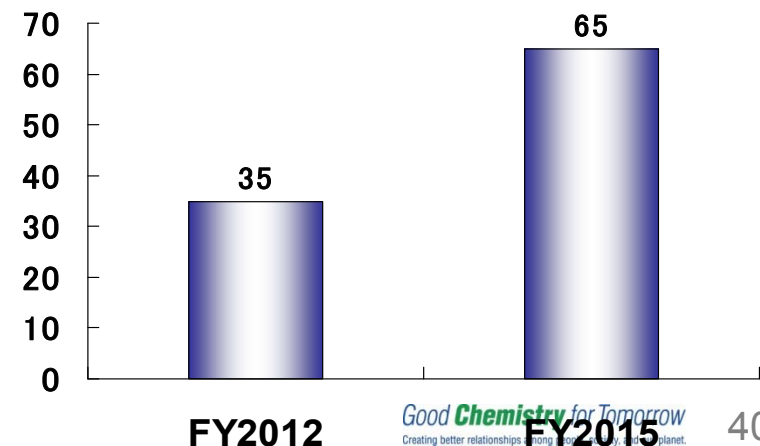
<View of the business environment>

- Deterioration in profitability due to major decrease in prices accompanying the worsening of the supply/demand balance
- World demand forecast for the carbon fiber market:
Will rise from 40,000 tons in 2012 to 65,000 tons in 2015.
- Profitability will be determined by cost competitiveness and value added in intermediate materials and molded parts businesses

<Basic strategies>

- Strengthen intermediate materials business through M&A and business alliances and establish a sustainable earnings structure through by creating a competitively superior value chain
- Focus business development on growth fields (uses in industries, automobiles)
- Achieve drastic cost reduction through cost structure reforms

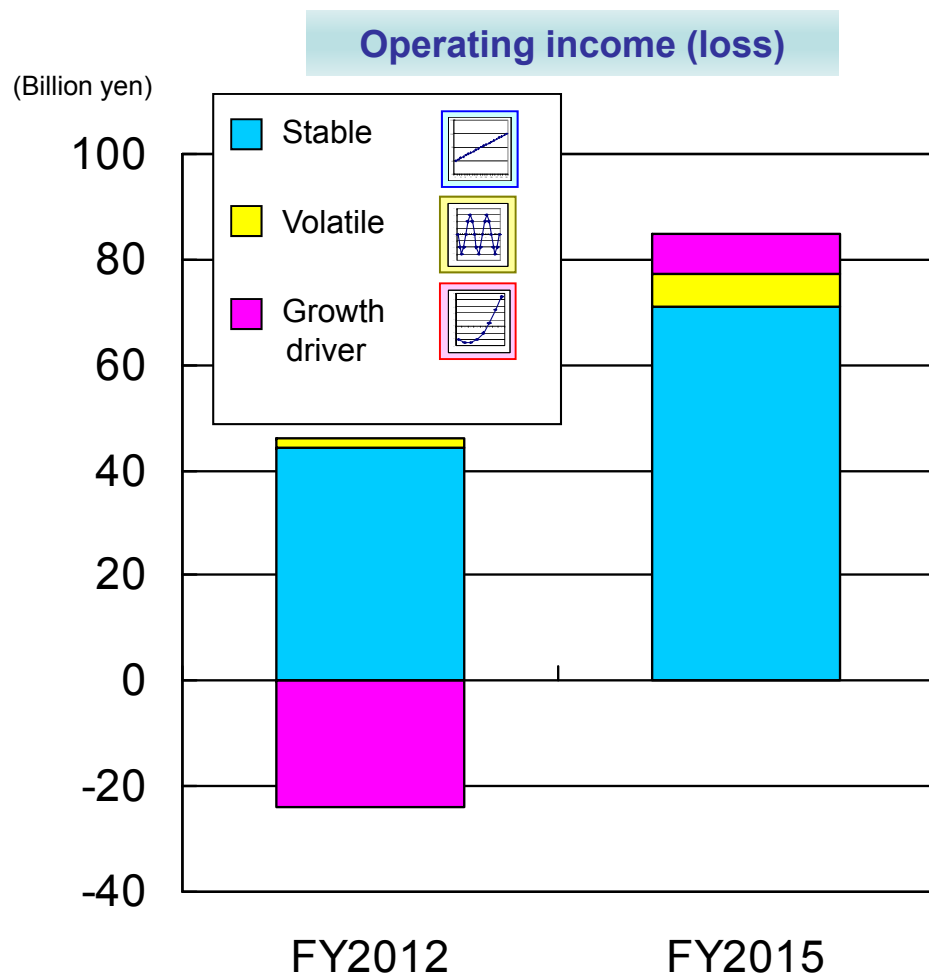
Sales goal (Billion yen)



Performance Products: APTSIS

Operating Income and Resource Allocation Plan

Allocate resources appropriately to continue expansion of stable businesses and get operations started in growth driver businesses



Resource allocation plans

(Billion yen)

<i>APTSIS 15 Step 1</i>	FY2011-2012	Average/year
	Forecast	
Investments	120	60
R&D	70	35



(Billion yen)

<i>APTSIS 15 Step 2</i>	FY2013-2015	Average/year
Investments	220	73
R&D	110	37

Performance Products: Stable Business Strategy

Expand high-performance and high-value-added businesses

Designed Materials

Specialty chemicals

(Billion yen)
 Forecast FY2012 → FY2015
 Net sales 75 → 110

- With a high-margin product portfolio as a base, including hard coats for LCDs and adhesives for smartphones and tablet computers, etc., expand business in Asian growth markets
- Strengthen solvent coating materials by expanding business locations in Asia
- Develop construction materials, food packaging, and O/W emulsion businesses in Asia

Engineering plastics

(Billion yen)
 Forecast FY2012 → FY2015
 Net sales 60 → 80

- In super engineering plastic products, continue to focus on developing high heat-resistant products and maintain a leading position
- Structure a tripolar production system in Europe, North America, and Asia, adding in the Hiratsuka Plant in Japan, and, after business development in Europe and North America, also accelerate business development in PRC and elsewhere in Asia

OPL film and others

(Billion yen)
 Forecast FY2012 → FY2015
 Net sales 95 → 130

- OPL business: Although growth in the LCD panel market will weaken, demand will expand. Work to win new users/customers and increase market share. Implement capital investments to increase capacity.
- *Soarnol* business: Expand aggressively to meet rising demand in the food packaging field in Europe, North America, and the emerging countries. Implement capital investments aimed at stabilizing supply.

Performance Products: Stable Business Strategy

Accelerate global development

Designed Materials

Polyester film

(Billion yen)
 Forecast FY2012 → FY2015
 Net sales 85 → 100

- At present, growth in sales volume shows little expansion because of the slowdown in growth of FPD TVs.
- To respond to expanding demand in PRC, establish new manufacturing facility there and bring it fully on-stream in the second quarter of FY2013.
- Capture 40% share in the Chinese market for FPDs, which is a growth area, and secure the No. 1 position in the polyester film for FPDs market
- Reduce FPD ratio in domestic market and improve the product mix

Performance Products: Growth Driver Business Strategy

Nurturing and development of next-generation growth businesses with an eye to the future

Electronics Applications

Organic photovoltaic modules and materials

(Billion yen)
Forecast FY2015
Net sales 15

- In the Japanese market, where the systems and operating environment for solar batteries are being put into place, market thin PV modules to the construction industry (BIPV) and the automobile industry (AIPV)
- Develop the world's most-efficient OPV using our core technologies (organic synthesis, dyes, etc.) and increase competitiveness through reducing costs with the R2R production method
- Work to differentiate products by making use of materials of the MCHC Group (high-gas barrier film, etc.) and develop high-value-added PV products

Organic photo-semiconductors

(Billion yen)
Forecast FY2015
Net sales 3

- As existing lighting fixtures are replaced by next-generation lighting along with rising demand for energy saving, market organic and thin surface emitting lighting panels to commercial facilities and public buildings, etc.
- Develop and establish wet process that make use of our core technologies, and, as we work to increase cost-competitiveness, develop OLEDs that are as efficient as LEDs, working together with Pioneer Corporation

BIPV: Building Integrated Photovoltaic
 AIPV: Automotive Integrated Photovoltaic
 R2R: Roll to Roll

Performance Products: Growth Driver Business Strategy

Nurturing and development of next-generation growth businesses with an eye to the future

Designed Materials

Carbon fiber and composite materials

(Billion yen)
 Forecast FY2012 → FY2015
 Net sales 35 → 65

- Strengthen the intermediate materials business through M&A and business alliances, and, by structuring value chain with competitive superiority, establish a sustainable profit base
- Promote business development emphasizing growth fields (industrial uses, automobiles)
- Achieve drastic cost reductions through reforms in the cost structure

Advanced performance products (AQSOA)

(Billion yen)
 Forecast FY2015
 Net sales 7

- Position SCR catalyst uses as a core business and invest resources (Demand is expected to expand along with tightening of NOx restriction in 2014.)
- In adsorption products (heat pumps, desiccants), sales in the European market are stagnant because of delays in takeoff. Going forward, we will give maximum priority to increasing efficiency and allocating resources with selectivity and concentration.

SCR: Selective Catalytic Reduction

Performance Products: Growth Driver Business Strategy

Expansion of green business

Electronics Applications

White LED lighting and materials

		(Billion yen)
Forecast	FY2012	→ FY2015
Net sales	10	→ 50

- As LED lighting gets off to a quick start, market key materials (phosphors and GaN substrates) globally
- Expand the lineup of phosphors (main product: red phosphor), locate development, production, and sales functions overseas and increase market share substantially
- Establish the technology at an early date for the Super Critical Acidic Ammonia Technology method for GaN substrates, which are expected to offer high quality and low cost, and enter the market for high-powered LED uses
- Use materials (phosphors and GaN substrates) originally produced in-house to develop high color rendering and high efficiency LED lighting as well as expand the market globally focusing on the hospitality market

Designed Materials

Lithium-ion battery materials

		(Billion yen)
Forecast	FY2012	→ FY2015
Net sales	15	→ 50

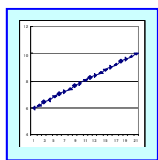
- The takeoff of the automobile market is slower than initially expected. In addition to expanding sales in this market, strengthen sales expansion efforts in the consumer market
- Make use of multiple production sites efficiently and consider alliances, etc., to strengthen competitiveness

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Health Care: Strategies

Realize sustainable growth in pharmaceutical businesses and deliver healthcare solutions.



Stable businesses

➢ Substantially increase product value through nurturing the development of priority products and new pharmaceuticals (LCM*, etc.). And expand the list of new products that respond to unmet medical needs and have received global approvals

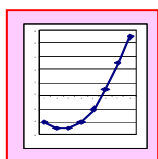
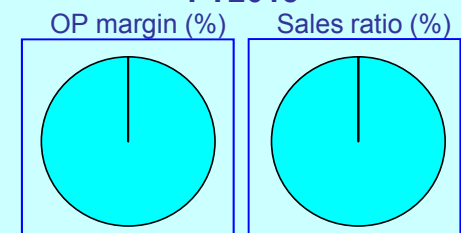
- Pharmaceuticals

➢ Stabilize earnings from stable businesses

- Diagnostics & support for new pharmaceutical development
- Pharmaceutical formulation materials (Qualicaps)

*Life cycle management

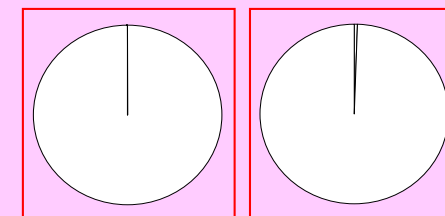
FY2015



Growth driver businesses

➢ Create new businesses through offering solutions to unmet medical needs in a broad range of healthcare fields

- Healthcare solutions

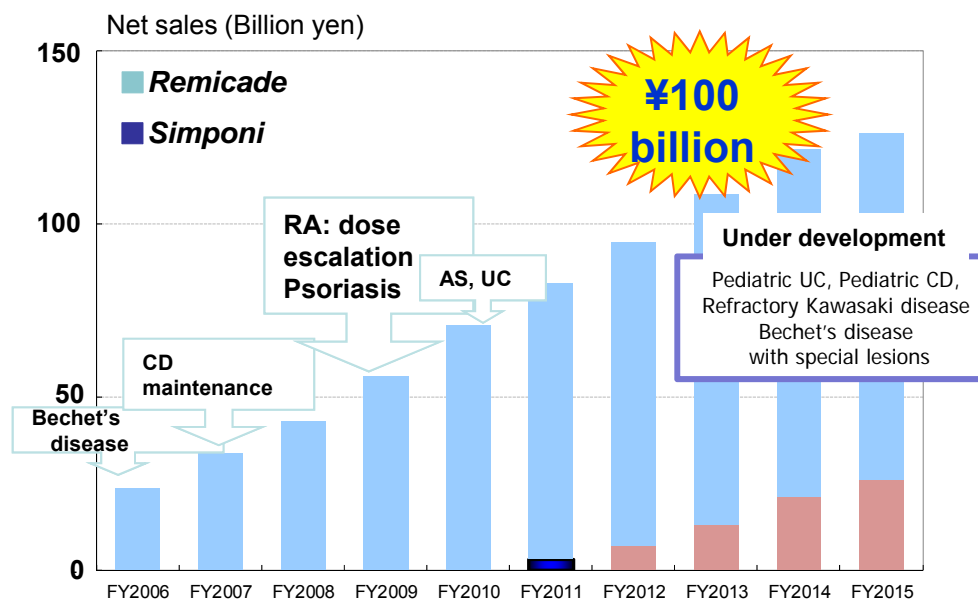
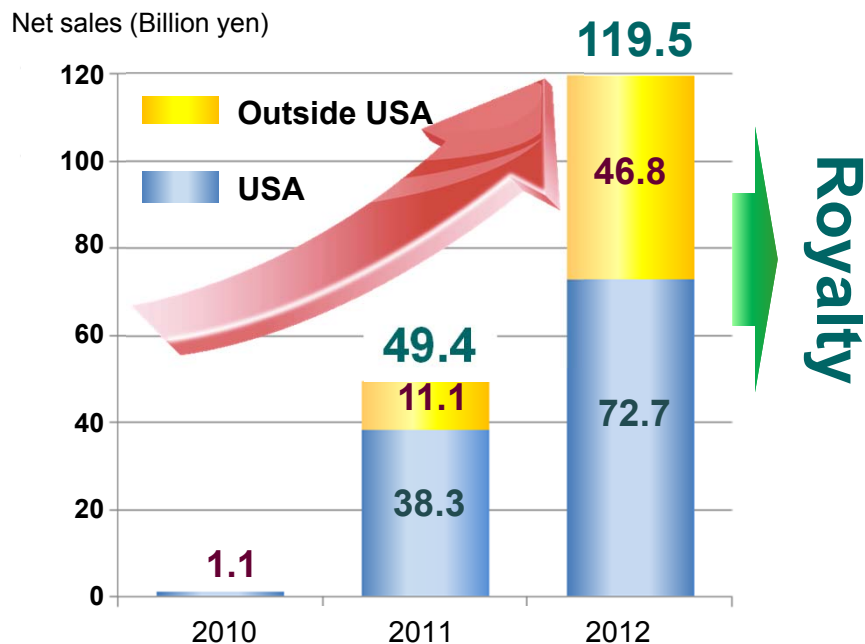


Stable Businesses: Pharmaceuticals

Gilenya/Imusera: Became a blockbuster product in the 2 years since its launch
Remicade/Simponi: Will reach sales of ¥100 billion* in 2013

*Domestic net sales: based on NHI drug prices

Gilenya/Imusera Global sales (Novartis)



Gilenya/Imusera

- World's first oral treatment originated in Japan for multiple sclerosis (MS) with a novel mode of action
- This drug has superior suppressant effects for recurrence, disease activity, and physical disability progression.
- Estimated patient population: Worldwide: 2.5 million (Including a large percentage of Caucasian women, especially in Northern Europe and North America); In Japan: 15,000.

Remicade/Simponi

- *Remicade*: Launched in 2002 (for the treatment of Crohn's disease, expanded use to treatment of rheumatoid arthritis in the joints (2003), and thereafter sales have grown steadily through implementation of a LCM strategy, including additional indications, etc.
- *Simponi*: Launched in 2011 as an agent for injection under the skin
- Will aim for substantially further growth based on significant accumulated information and the advantage of having these two agents

Stable Businesses: Pharmaceuticals

Looking to 2015, anticipating sustainable growth through product prioritization and new products

Looking to attain targets for FY2015

Royalty
(Gilenya, TA-7284)

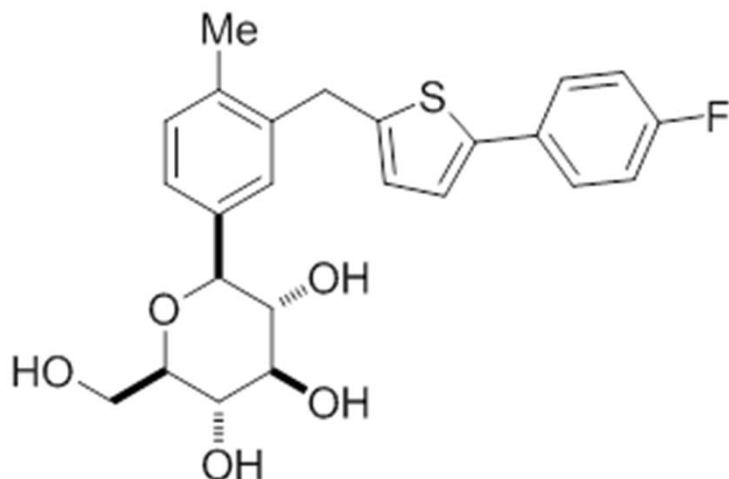
- Priority products: *Remicade* and others
- New products: *Simponi, Imusera, Telavic, Lexapro*
- Anti diabetes: MP-513 (DPP-4 inhibitor; *Tenelia*), TA-7284 (SGLT2 inhibitor)



Stable Business: Pharmaceuticals

TA-7284 (Canagliflozin: Therapeutic Agent for Type 2 Diabetes)

- First SGLT2 inhibitory drug in Japan
(New mechanism for excreting glucose directly in the urine)
- New Drug Applications were submitted in the U.S. and Europe
(Janssen Pharmaceuticals, Inc.)
- FDA Advisory Committee recommended approval of TA-7284
- P3 in Japan by MTPC (Scheduled to file in 2013)
- Aiming to develop into a blockbuster product globally

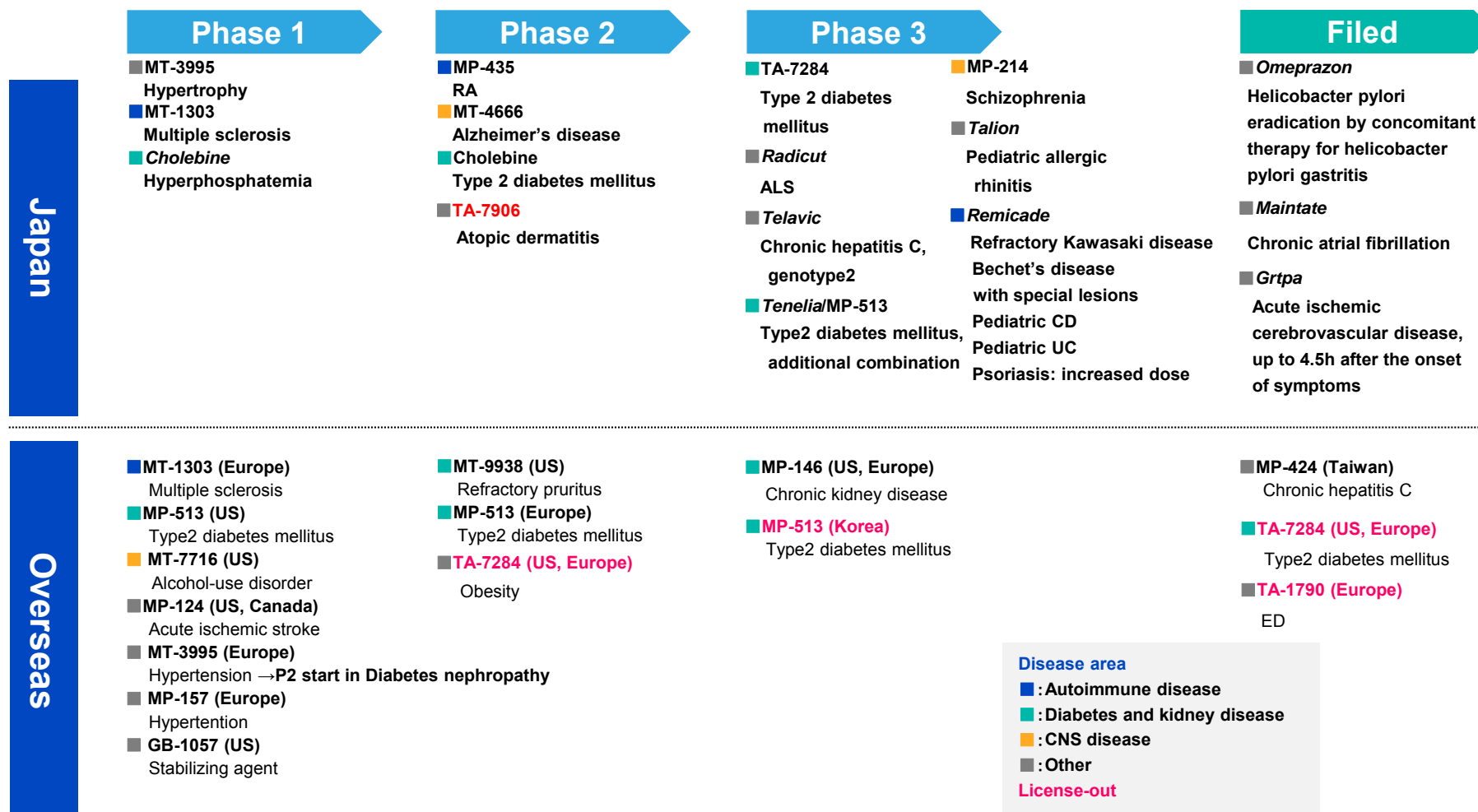


Characteristics

- Substantial accumulation of clinical data in Japan and overseas (more than 12,000 examples)
- Shows effectiveness, unrelated to the status of insulin
- Low risk of hypoglycemia
- Reduce patients' weight

Stable Business: Pharmaceuticals

Pipeline status: we plan to market these “inspiring new products” globally for the treatment of unmet medical needs.

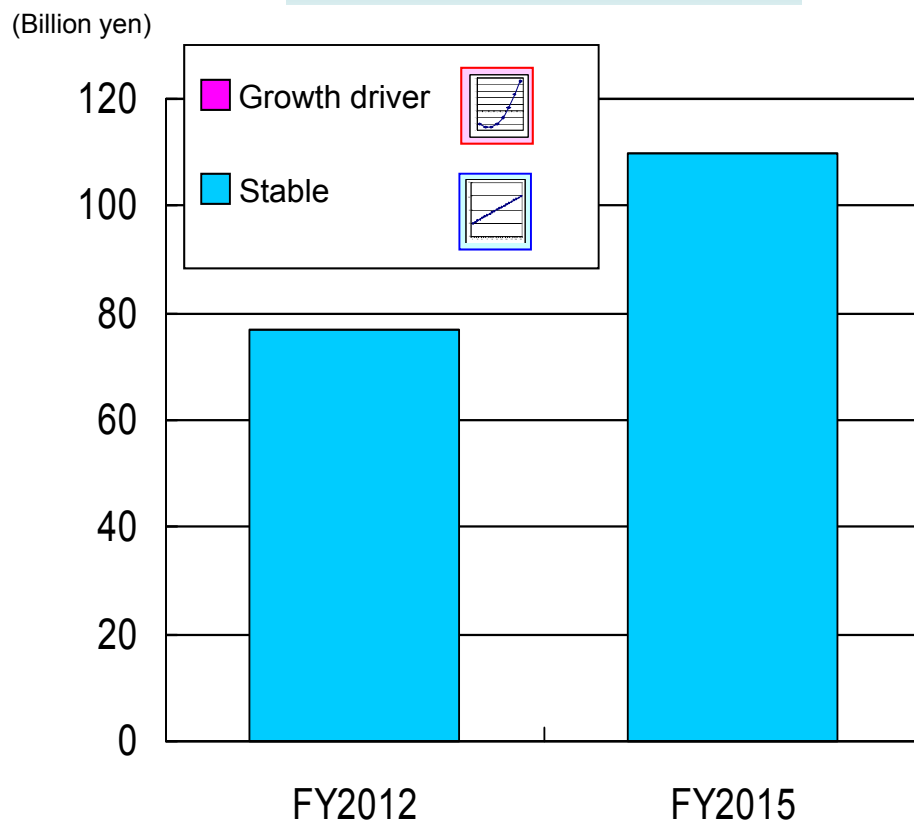


Health Care: APTSIS

Operating Income and Resource Allocation Plan

Achieve operating income of over ¥110 billion
by strengthening profit structure in the Health Care domain

Operating income



Resource allocation plans

(Billion yen)

APTSIS 15 Step 1	FY2011-2012 Forecast	Average/year
• Investments	40	20
• R&D	150	75



(Billion yen)

APTSIS 15 Step 2	FY2013-2015	Average/year
• Investments	80	27
• R&D	240	80

Health Care: Stable Businesses

- **Pharmaceuticals:** Substantially increase product value through nurturing the development of priority products and new pharmaceuticals (LCM*, etc.). And expand the list of new products that respond to unmet needs and have received global approvals.
- **Diagnostics and pharmaceutical ingredients/formulations:** In diagnostics, focus on clinical testing and clinical trials and switch to structural reform strategy in non-clinical areas. In pharmaceutical ingredients/formulations, work in concert in the Group, strengthen and expand the profit base.

*Life cycle management

Pharmaceuticals

Pharmaceuticals

		(Billion yen)
Forecast	FY2012	→ FY2015
Net sales	425	→ 500

- Develop *Gilenya/Imusera* into blockbuster drugs globally
- Launch a drug for diabetes treatment (TA7284) with a novel mode of action on schedule
- Expand sales of *Remicade/Simponi*
- Sustain growth, aiming for sales of ¥500 billion in FY2015

Diagnostics and pharmaceutical ingredients/formulations

Diagnostics and support for new pharmaceutical developments

		(Billion yen)
Forecast	FY2012	→ FY2015
Net sales	80	→ 90

- Clinical testing: Develop new customers and step up cost-cutting to increase profit
- Diagnostics: Expand sales of *PATHFAST* to world markets and promote cost-cutting
- Clinical trials: Ready international joint clinical trial system and expand orders through securing implementation labs overseas
- Non-clinical business: Make drastic reforms in business structure

Pharmaceutical formulation materials

		(Billion yen)
Forecast	FY2012	→ FY2015
Net sales	18	→ 25

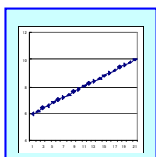
- Promote work in concert with other businesses of the MCHC Group: Combine the technology within the MCHC Group with the top-level manufacturing technology of Qualicaps to offer high-value-added solutions

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Industrial Materials: Strategies

Increase profitability by accelerating globalization, Shifting to high-performance products, and optimizing product chain



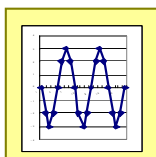
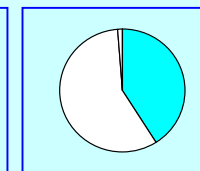
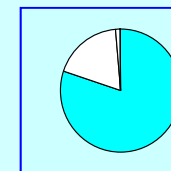
Stable businesses

- Expand global operation and shift to high-performance products
 - MMA/PMMA
 - Coke
- Expand high-performance, high-value-added businesses
 - Performance polymers

FY2015

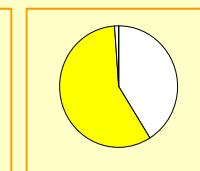
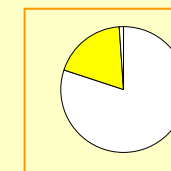
OP margin (%)

Sales ratio (%)

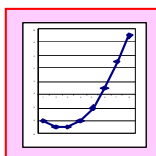


Volatile businesses

- Stabilize earnings and reinforce business structure
 - Thoroughgoing cost cutting and reduction in market dependence
 - PTA
 - Optimize production capacity, develop knowledge businesses and innovate processes
 - Basic petrochemicals
 - PHL/PC chain
 - Polyolefins
 - AN and its derivatives

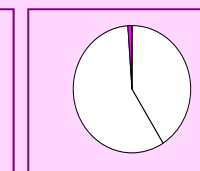
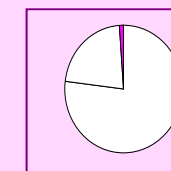


*Excluding basic petrochemicals



Growth driver businesses

- Deliver new materials that contribute to the environment and the “sustainable carbon society”
 - Sustainable resources



Stable Businesses: MMA/PMMA

To fully consolidate our position as the global No. 1 company, we must accelerate expansion in production capacity to meet the rise in demand and optimize locations.

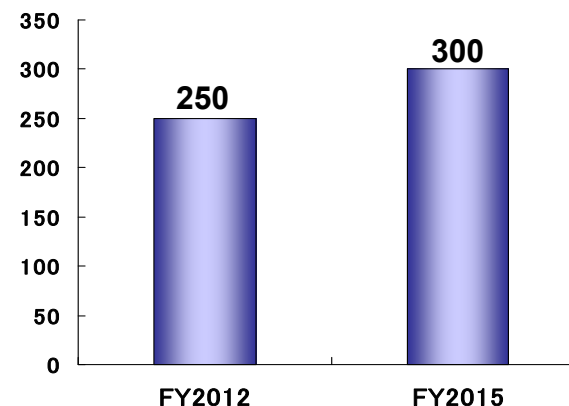
<View of the business environment>

- Amid the stagnation in the world economy, the loosening of the supply/demand balance for MMA monomers, and the drop in demand for sheets for light guide plates and mobile phones, profits have declined.
- The MMA monomer supply/demand balance will recover as demand recovers in the latter half of FY2013. On the other hand, supply will be restrained because of the low utilization rates of ethylene crackers and AN. Therefore, the market is expected to move from a well-balanced to a tight-balanced state.

<Basic strategies>

- In MMA monomer, further strengthen competitiveness as the No.1 global company
 - Develop emerging country and regional markets (India, Russia, Eastern Europe, and Brazil) as well as the Middle East and Africa
 - Bring the U.S. Beaumont's plant up to full capacity operation
 - Make steady progress on the α project in the Middle East
- In specialty resins and plastics (plastics sheeting, plastics molding materials), expand sales of general use and automobile/construction material uses

Sales goal (Billion yen)



Volatile Businesses: PTA

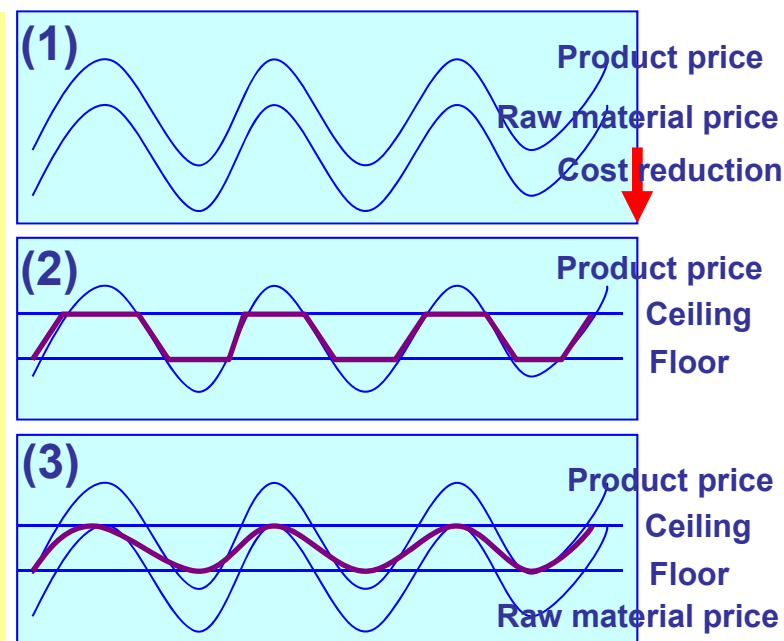
- Thoroughgoing cost reduction
- Reducing dependence on market conditions

<View of the business environment>

- Profitability has deteriorated seriously because of PTA oversupply in PRC, and manufacturers in Korea, Taiwan, and PRC are cutting production
- Spreads will range from US\$100 to \$115 per ton (PX ACP 100%)

<Basic strategies>

- Establish technological superiority and promote licensing
- Cost reduction:
 - MCCI: Shift to electricity purchases
 - MCPI: Shift to coal thermal power generation, etc.
- Reducing strong reliance on the Chinese market and putting more emphasis on other regions
 - (1) Formula for linking to raw material prices
 - (2) Floor/ceiling on market conditions
 - (3) (1)+(2)
- Consider introduction of safeguards/ anti-dumping provisions

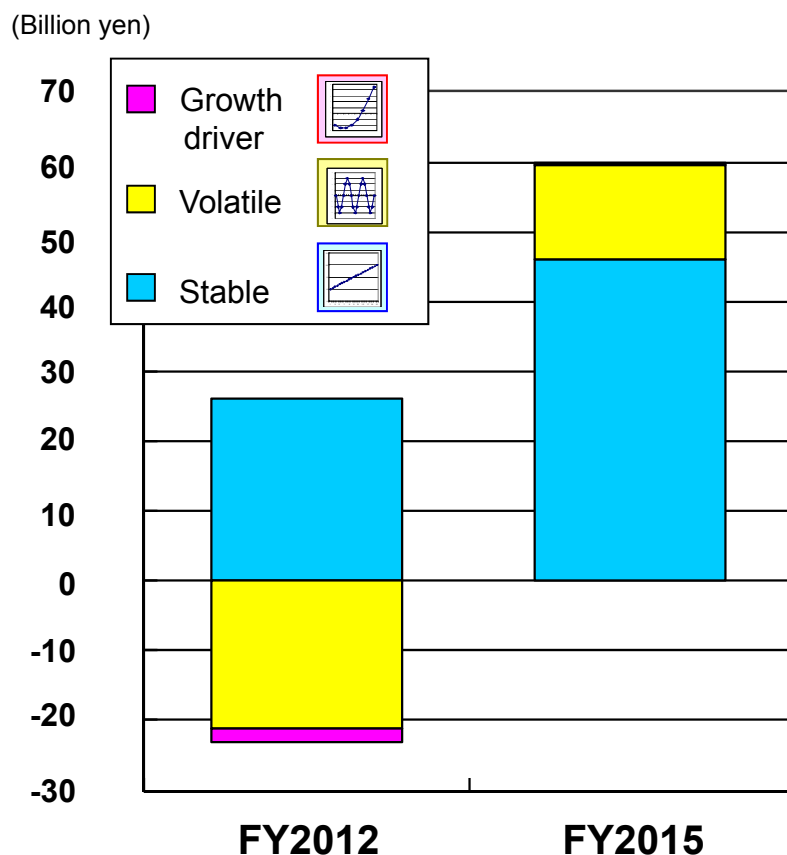


Industrial Materials: Operating Income and Resource Allocation Plan

APTSIS

- Capital investment and R&D expenditures have been reduced substantially in *Step 1*.
- The same holds true for *Step 2*, on a continuing basis.

Operating income



Resource allocation plans

(Billion yen)

<i>APTSIS 15 Step 1</i>	FY2011-2012 Forecast	Average/year
Investments	110	55
R&D	40	20



(Billion yen)

<i>APTSIS 15 Step 2</i>	FY2013-2015	Average/year
Investments	170	57
R&D	50	17

Industrial Materials: Stable Business Strategy

Accelerate globalization and shift to high performance

Chemicals

Coke

(Billion yen)
 Forecast FY2012 → FY2015
 Net sales 180 → 175

- Create a strong earnings structure and maintain core business operations for comprehensive coal chemistry
 - Provide stable supply to domestic and overseas manufacturers
 - Secure production, implement environmental policies
 - Continue research for overseas production bases

Polymers

Performance polymers

(Billion yen)
 Forecast FY2012 → FY2015
 Net sales 40 → 50

- Expand the growing automobile and packaging materials businesses
 - Industrialized country markets:
 - Acquired the U.S. Bellevue Plant (December 2012),
 - Decided to acquire an European plastics compound company (scheduled for mid-2013)
 - Emerging country markets:
 - Establish manufacturing base in Brazil (scheduled to begin operation in spring 2014)
- Group companies work in concert and develop new markets through new technologies, including compatibility agents, bio-compounds, etc.

Industrial Materials: Stable Business Strategy

Accelerate globalization and shift to high performance

Polymers

MMA/PMMA

(Billion yen)

Forecast FY2012 → FY2015

Net sales 250 → 300

- In the MMA monomer, further strengthen competitiveness as the No.1 global company
 - Develop emerging country markets (India, Russia, Eastern Europe, and Brazil) as well as the Middle East and Africa
 - Bring the U.S. Beaumont's plant up to full capacity operation
 - Make steady progress on the α project in the Middle East
- In specialty resins and plastics (plastics sheeting, plastics molding materials), expand sales of general use and automobile/construction material uses

Industrial Materials: Volatile Businesses Strategy

Implement profit stabilization and strengthen the financial position

Chemicals

PTA

(Billion yen)

Forecast FY2012 → FY2015

Net sales 250 → 300

- Establish technological superiority and promote licensing
- Cost reduction
 - MCCI: shift to electricity purchases
 - MCPI: shift to coal thermal power generation, etc.
- Reducing strong reliance on the Chinese market and putting more emphasis on other regions
 - (1) Formula for linking to raw material prices
 - (2) Floor/ceiling on market conditions
- Consider introduction of safeguards/anti-dumping provisions

Basic petrochemicals

- Structural reforms toward production systems suited to demand (Decommission No. 1 naphtha cracker and expand and fully operate No. 2 naphtha cracker at the Kashima Plant of MCC)
- Along with continued implementation of previous cost reduction measures, also implement responsive changes to value allocation of distillates to improve cost-competitiveness

AN and its derivatives

(Billion yen)

Forecast FY2012 → FY2015

Net sales 30 → 30

- Expand NVF-type polymer business and stabilize bio-catalyst business
- Assume that profitability in the AN business cannot be forecast from the viewpoint of volatility

Industrial Materials: Volatile Businesses Strategy

Implement profit stabilization and strengthen the financial position

Polymers

Polyolefins

PP

(Billion yen)
 Forecast **FY2012 → FY2015**
 Net sales **170 → 200**

- Plant capacity should be made appropriate to sales volumes. As announced previously, one line will be shut down in FY2014 and fixed costs will be reduced.
- To make production of high-performance, high-value-added products possible, implement reforms in existing equipment

PE

(Billion yen)
 Forecast **FY2012 → FY2015**
 Net sales **140 → 160**

- Establish a stable profitable position by optimizing the supply systems (As announced previously, one production line will be shut down in FY2014 and fixed costs will be reduced.)

PHL/PC chain

(Billion yen)
 Forecast **FY2012 → FY2015**
 Net sales **80 → 80**

- Firm growth is forecast for future demand, so pillars of future initiatives should be increasing competitiveness of domestic production bases by continuing thoroughgoing rationalization, improvement in earnings through rationalizing sales activities, and establishment of and scaling up non-phosgene technology

Industrial Materials: Growth Driver Business Strategy

Deliver new materials that contribute to the environment and the “sustainable carbon society”

Sustainable resources

(Billion yen)
Forecast FY2015
Net sales 10



DURABIO
 (Isosorbide polymer)

- Brought pilot plant (5kt) into operation in 2012 and implement construction improvements to increase capacity to 16kt in 2014. For raw materials, we will implement a strategy for joint work and cooperation with other companies, including possible investments, and secure raw materials.

PBS
 (Polybutylene succinate)

- To respond to the takeoff of demand, PTT MCC Biochem Company Limited in Thailand will construct a 20kt polymer plant. In addition, PTT MCC Biochem will secure competitive supplies of the raw material succinic acid through its tie-up with Mitsui & Co. Ltd., and BioAmber Inc. (Operation to commence in 2015)

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Developments that Have Surfaced APTSIS as a Result of the Shale Revolution in the United States

As a consequence of the practical application of low-cost extraction methods for shale gas, natural gas can be supplied inexpensively in large quantities. This has increased the competitiveness of the U.S. chemical industry substantially.

Production Volume of U.S. Shale Gas Increased about 20-fold from 2000 to 2012

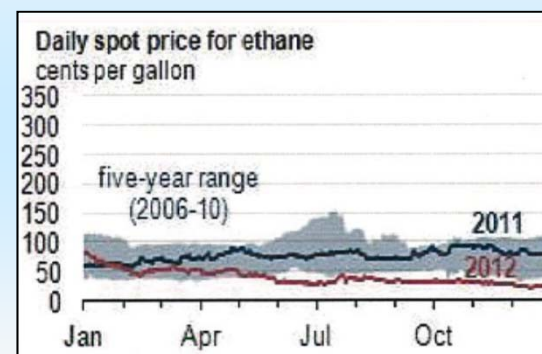
U.S. Natural Gas Prices Averaged US\$2.8/mmBTU in 2012

Natural Gas Prices in Nominal U.S. Dollars
(\$/mmBTU)

	2000	2010	2011	2012
Natural gas, Euro	3.9	8.3	10.5	11.5
Natural gas, U.S.	4.3	4.4	4.0	2.8
LNG, Japanese	4.7	10.8	14.7	16.7

Source: World Bank (January 2013)

U.S. Ethane Price in the Latter Half of 2012 Was at the Lowest Level in Seven Years



Source: U.S. EIA (January 2013)

U.S. chemical industry enjoys a superior position
in terms of energy and raw material costs

State of the U.S. Chemical Industry

- Increases in U.S. production capacity have been concentrated in ethane-based ethylene and ethylene derivatives.
- On the other hand, since shale gas contains almost no $C_4 \leq$ ingredients, C_4 (butadiene) and $C_6 - C_8$ (BTX) will be in short supply around the world.

Typical dry gas and wet natural gas composition (Unit: mol %)

C_2 (ethane) derived from shale gas, which is the raw material for ethylene is supplied in large quantities

	C2	C3	C4	C5	C6
Dry gas	1–10	≤ 5	≤ 2	≤ 1	<1
Natural wet gas	5–15	2–14	1–10	≤ 5	≤ 3

Source: Rojey, Jaffret (1997)

Plans for New Ethylene Plants and Restarts of Existing Plants (All plants are on an ethane feed basis)

Company	Production Capacity	Commencement of Operation
Exxon Mobil	1,500 kt/y	2016
Dow Chemical	1,500 kt/y	2017
Chevron Phillips	1,500 kt/y	2017
Shell	1,300 kt/y	2017
Formosa Plastics	800 kt/y	2017
Sasol	1,400 kt/y	2017+
Oxychem	550 kt/y	2017+
Braskem	1,000 kt/y	2017+
Indorama	1,300 kt/y	2018+
Restarts/capacity expansions	1,859 kt/y	2012–2016

Examples of Plans for Ethylene Derivatives

PE plants under construction	
Exxon Mobil	1,300 kt/y
PE plants being planned	
Chevron Phillips	1,000 kt/y
Shell	1,000 kt/y
Formosa Plastics	300 kt/y

Sources: Platts and others

If all planned facilities go into operation, U.S. ethylene capacity will increase 1.5 times from current levels.

MCHC Strategy for Responding to the U.S Shale Revolution

Strategy 1:

Develop products that can be differentiated technologically, even among those in the ethylene derivatives business, in North America

- EVOH resin, which has ultra-high gas barrier properties

Announced in
December 2012

NSCI (Noltex, LLC): Houston, Texas
15,000 t/y increase in capacity to total capacity of 38,000 t/y
Commencement of plant operations planned for FY2014

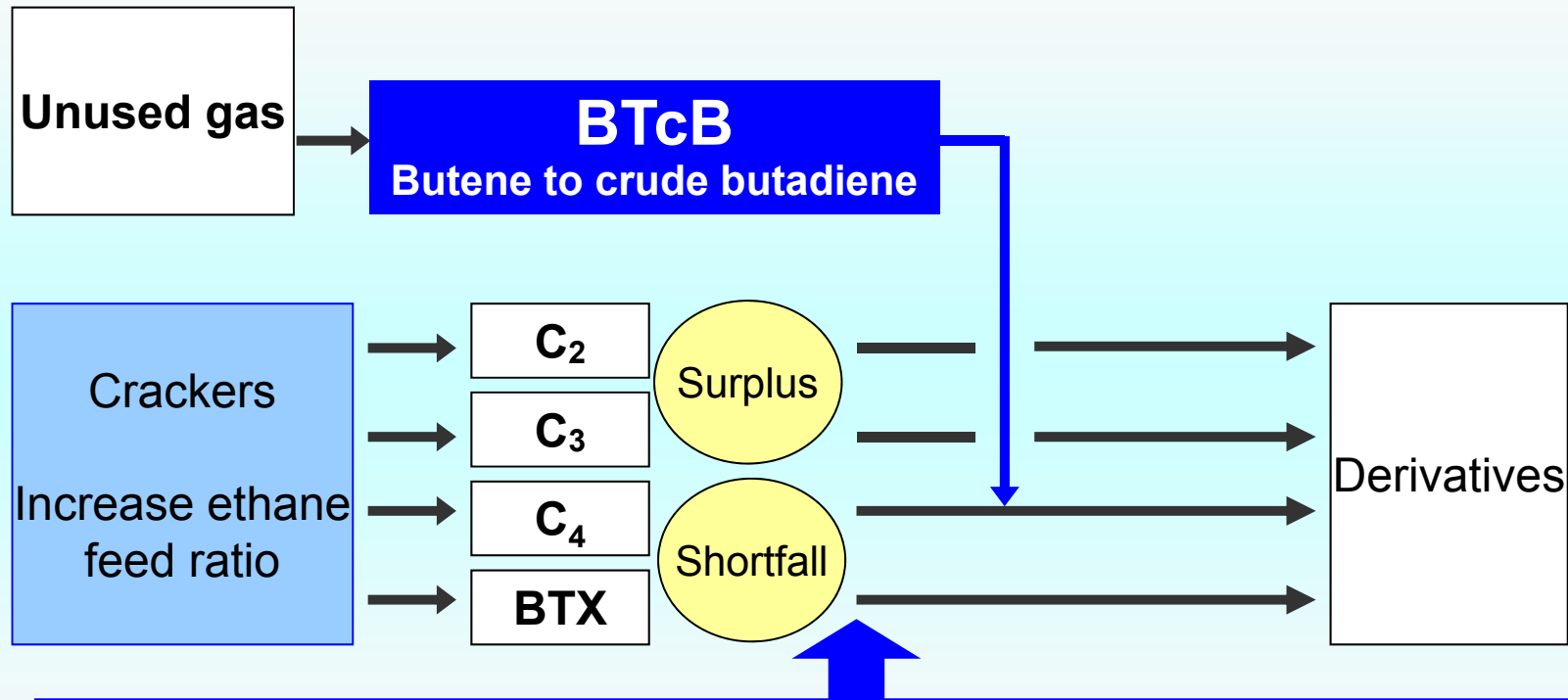
Building MMA/PMMA plants, that apply the Lucite International's alpha technology, under consideration

- Manufacturing using inexpensive energy and raw materials as a result of the shale revolution
- Supply products to North America, where growth will make a comeback

MCHC Strategy for Responding to the U.S Shale Revolution

Strategy 2: Promote commercialization of innovative technologies for C₄ production

Strategy 3: Secure stable supplies of aroma raw materials through realignments in Japan



Secure stable source of aromatic materials through tie-ups between MCC Kashima Plant and Kashima Aromatics Co., Ltd. and between MCC Mizushima Plant and the Mizushima industrial zone.

MCHC Strategy for Responding to the U.S Shale Revolution

Strategy 4: Taking account of the possibility of sharp increases in U.S. gas prices, continue to use existing petroleum resources in the Middle East

• SHARQ: Ethylene glycol and polyethylene

SPDC Ltd.*/SABIC: Joint venture established

MEG: 2,050 kt/y

LLDPE/HDPE: 1,550 kt/y

} Began first stage operation in 1987, implemented capacity expansion through fourth stage

*MCC ownership: 9.2%

• MRC Middle East α Project: MMA/PMMA

Announced in
May 2011

MRC/SABIC: Joint venture established

MMA: 250 kt/y/PMMA: 40 kt/y

Objective: Commencement of plant operations during FY2015

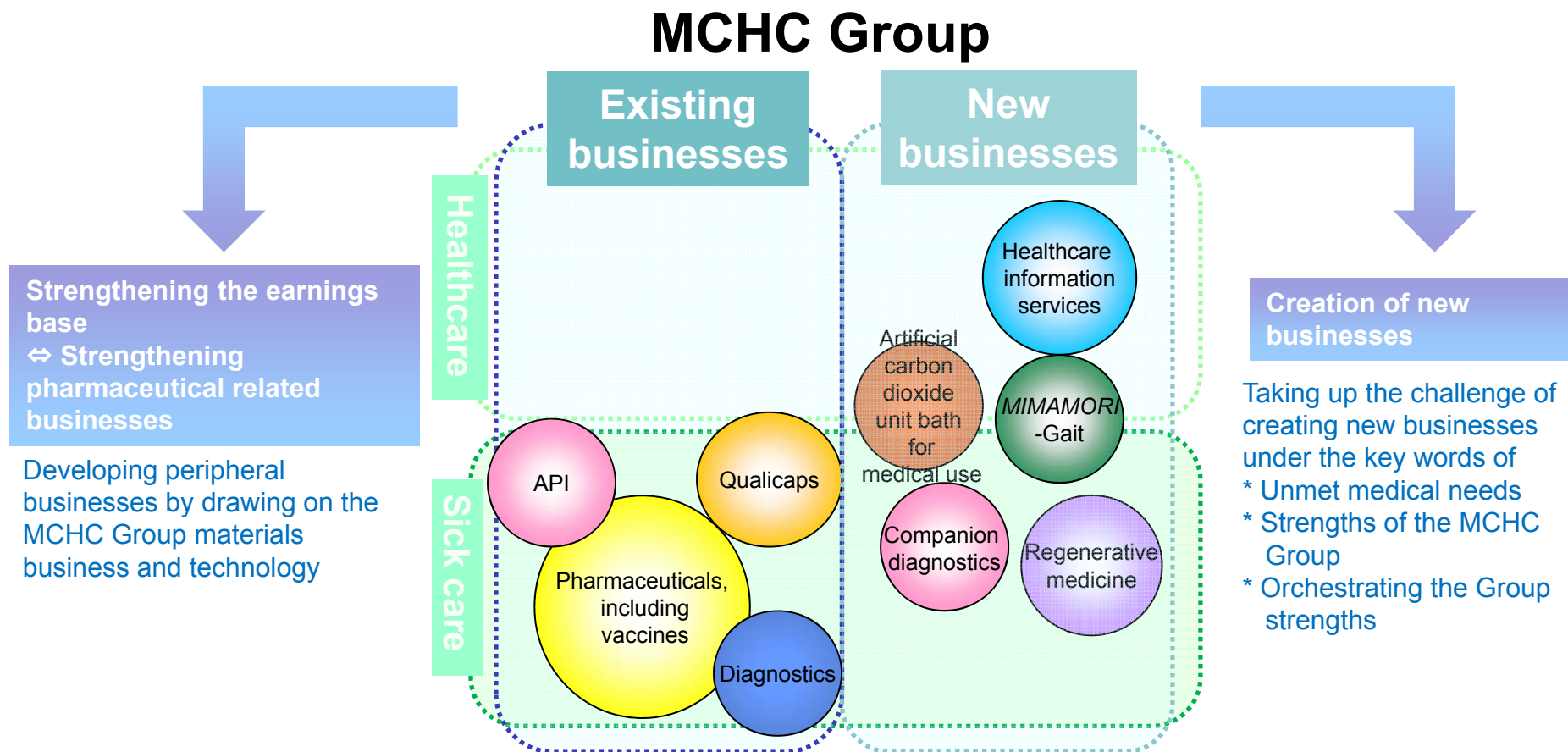
- Manufacture using raw materials from Saudi Arabian complex
- Supply products to emerging regions (Eastern Europe, Middle East, Africa) where rapid growth will continue

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Healthcare Solutions Strategy

In a broad range of domains, from sick care to healthcare, we are strengthening the earnings base of existing businesses and working to create new businesses by offering solutions for unmet medical needs.



Entering the Business of New Vaccine Production Systems

Drawing together MCHC Group comprehensive capabilities and technologies for enclosed plant factory system to enter the business of new vaccine production systems

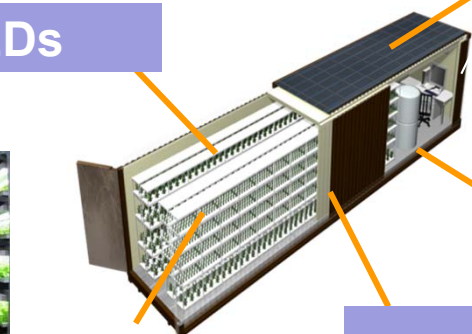
MCHC Group technologies for enclosed plant factory system

PV cells/
Secondary batteries

LEDs



Hydroponics systems

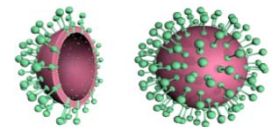


Water treatment systems

Thermal insulation materials



Introduction of viral gene to tobacco leaves



Medicago Inc.
VLP vaccines

Systems for stabler and more-efficient vaccine production

Technologies

For control of temperature, humidity, light, and CO₂

For equipment to isolate enclosures from the external environment by preventing entry of foreign matter and dispersal from the enclosure

For water purification, management of nourishing solutions, and germicides

For efficient equipment layouts that include multiple cultivation shelves and conserve space

Refinement technologies



Separation and refinement technologies used by high-performance polymers



Manufacturing

Shortening cultivation time

Increasing productivity (promoting growth)

Stable productivity

Business Measure: Acquisition of Qualicaps

Acquisition of Qualicaps will strengthen the MCHC Group earnings base in the Health Care domain other than pharmaceuticals.

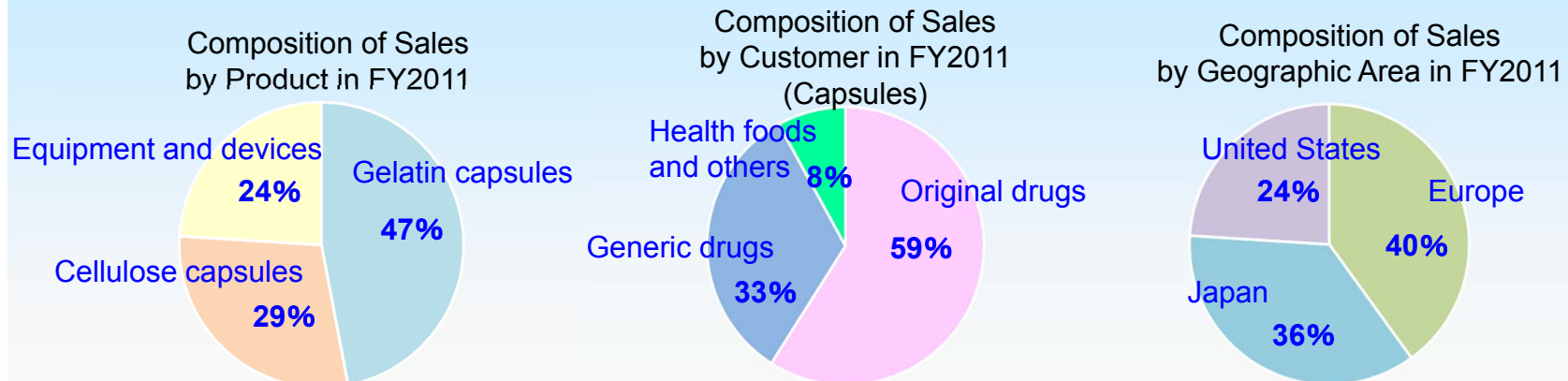
*Deal closed as of March 1, 2013.

Merits of the deal

Stable earnings power, strong competitiveness, and affinity with MCHC Group existing businesses

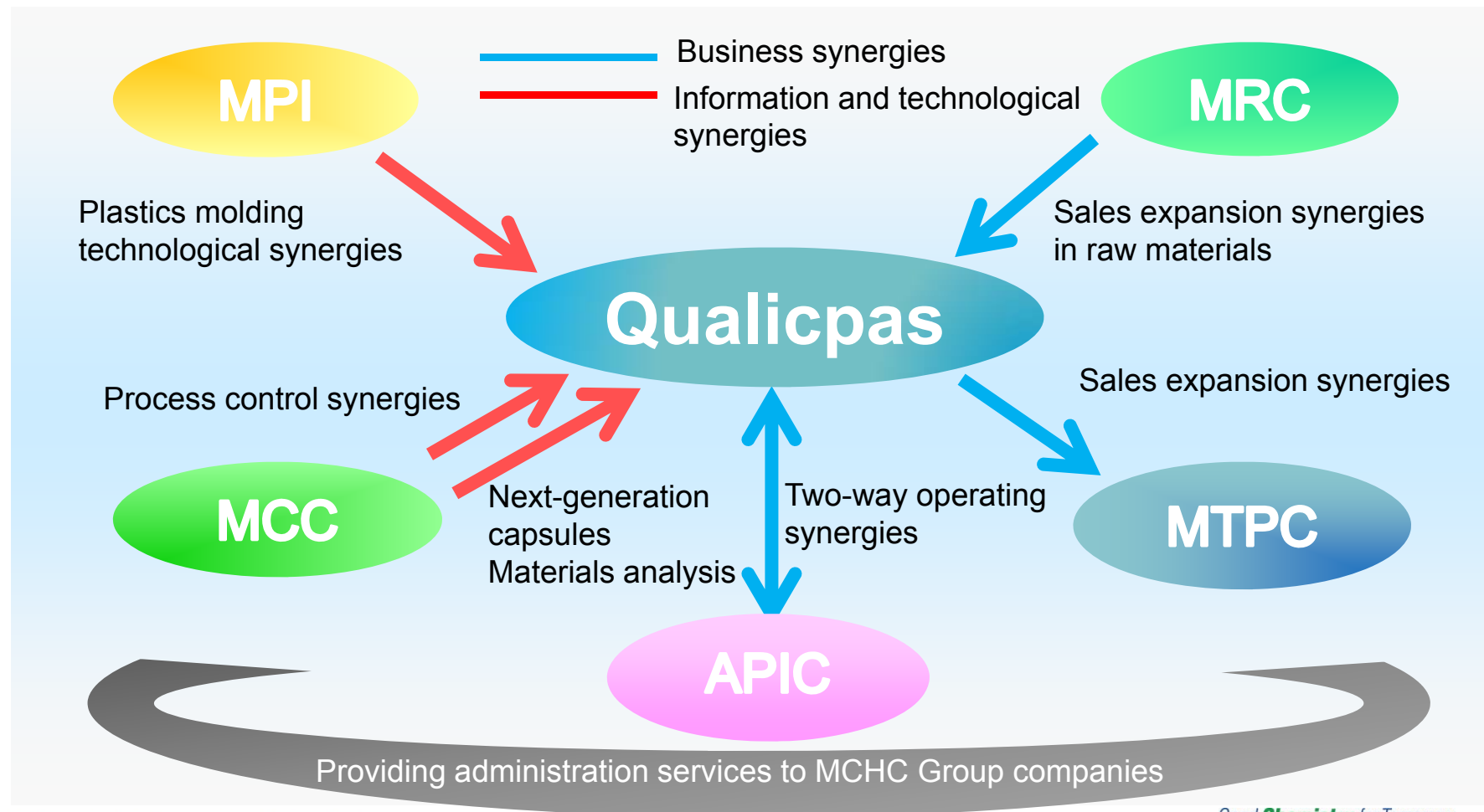


- Hard capsules for medical use: No. 2 in the world
- Cellulose capsules for medical use: No. 1 in the world
- Laser printers for pharmaceutical imprinting: No. 1 in the world
- Global network



Synergies of Qualicaps with MCHC Group Existing Businesses

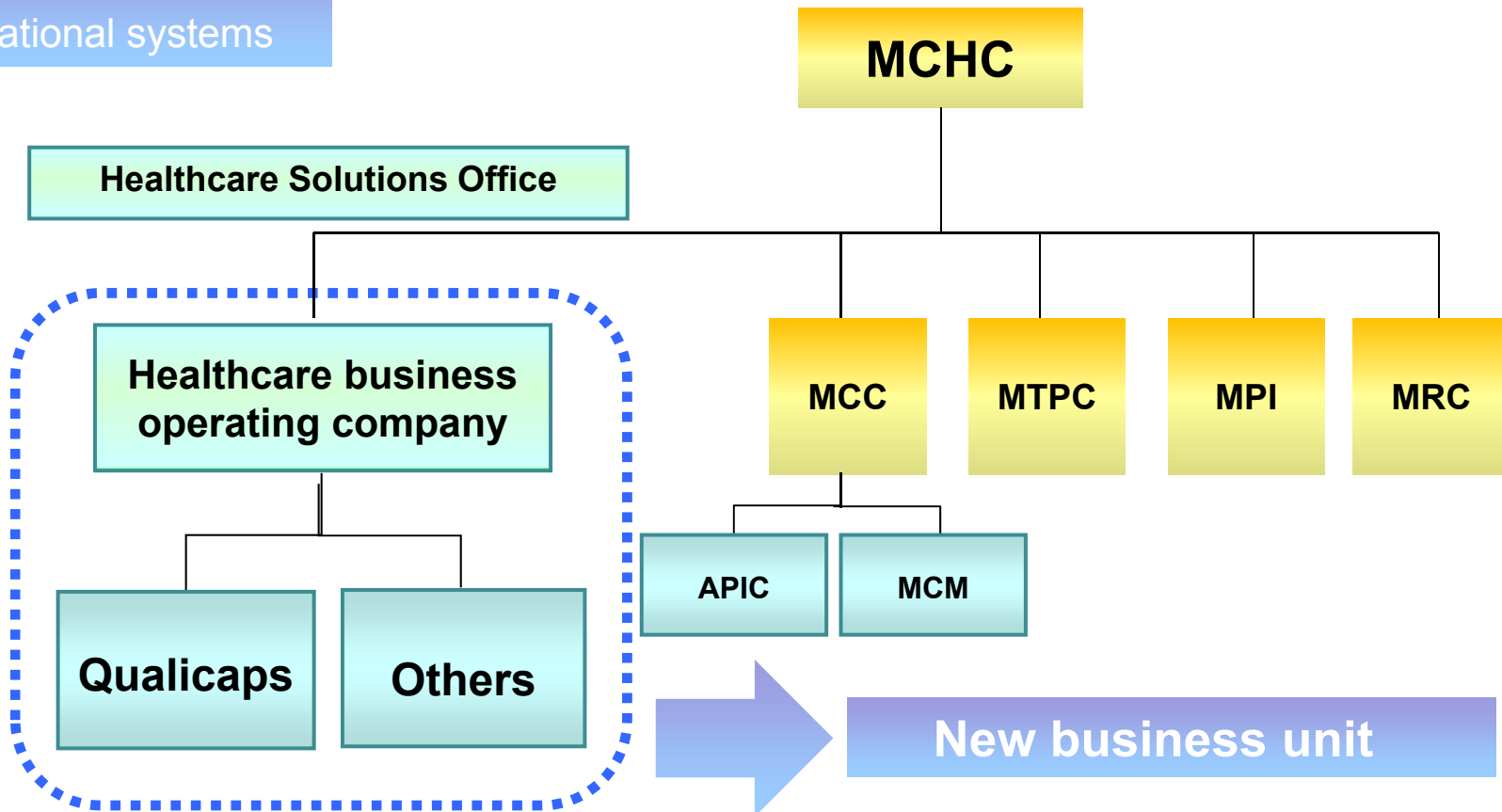
Realizing synergies among Qualicaps and MCHC Group companies will lead to further growth and it will become the Group's new business unit.



Business Measure: Creating the Base for a New Business Unit

Form a new business unit, with healthcare solutions business as the core, and contribute to the *KAITEKI* management

General outline of organizational systems



Agenda

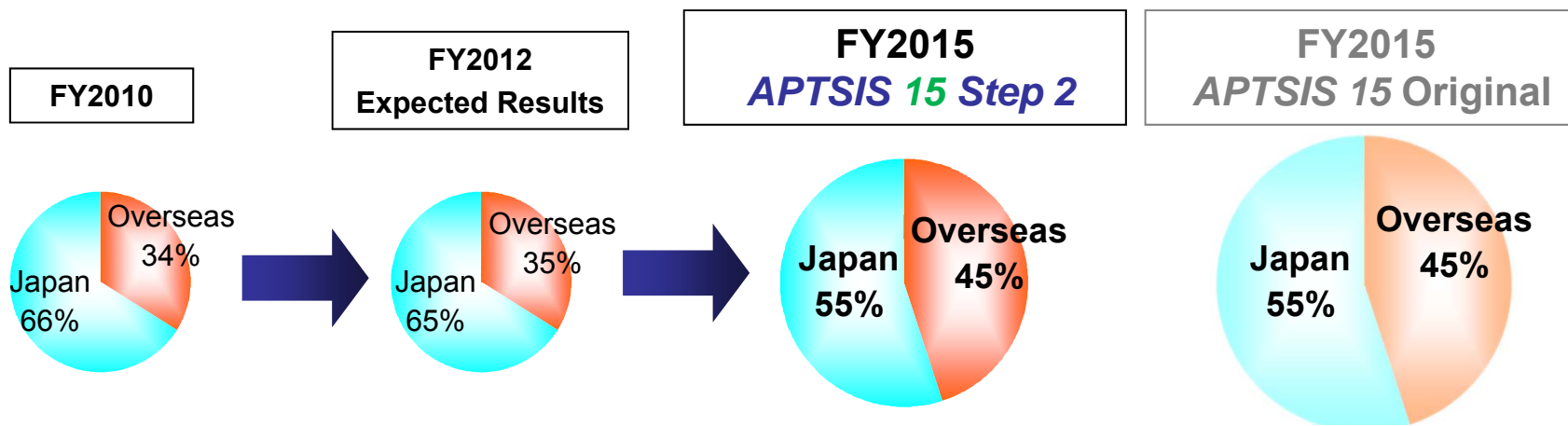
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Development of Overseas Operations (Regional Strategy)

- Strengthen governance and expand/enhance shared services by region
- The objective for the overseas sales percentage has not been changed, but the objective for the percentage of operating income from overseas has been revised downward taking account of stagnation in the world economy

- USA: MCHA (Mitsubishi Chemical Holdings America, Inc.) established (October 2010)
- PRC: MCHB (Mitsubishi Chemical Holdings (Beijing) Co., Ltd.) established (January 2011)
- EUR: MCHE (Mitsubishi Chemical Holdings Europe GmbH) established (September 2012)

Composition of Net Sales by Region



Net sales: ¥3.2 trillion
 Operating income: ¥226.5 billion
 (Overseas: ¥82.4 billion)
 OP margin*: 36%

Net sales: ¥3.1 trillion
 Operating income: ¥100.0 billion
 (Overseas: ¥40.0 billion)
 OP margin*: 40%

Net sales: ¥4.3 trillion
 Operating income: ¥280.0 billion
 (Overseas: ¥125.0 billion)
 OP margin*: 45%

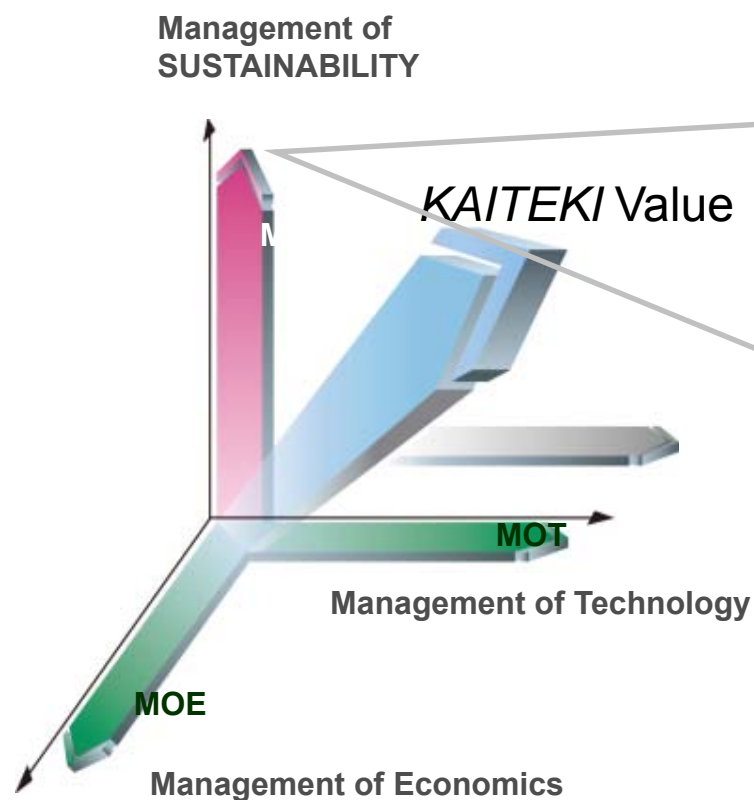
Net sales: ¥5.0 trillion
 Operating income: ¥400.0 billion
 (Overseas: ¥200.0 billion)
 OP margin*: 50%

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MOS Indexes

MOS Indexes have been prepared to quantify the contribution to creating a sustainable society

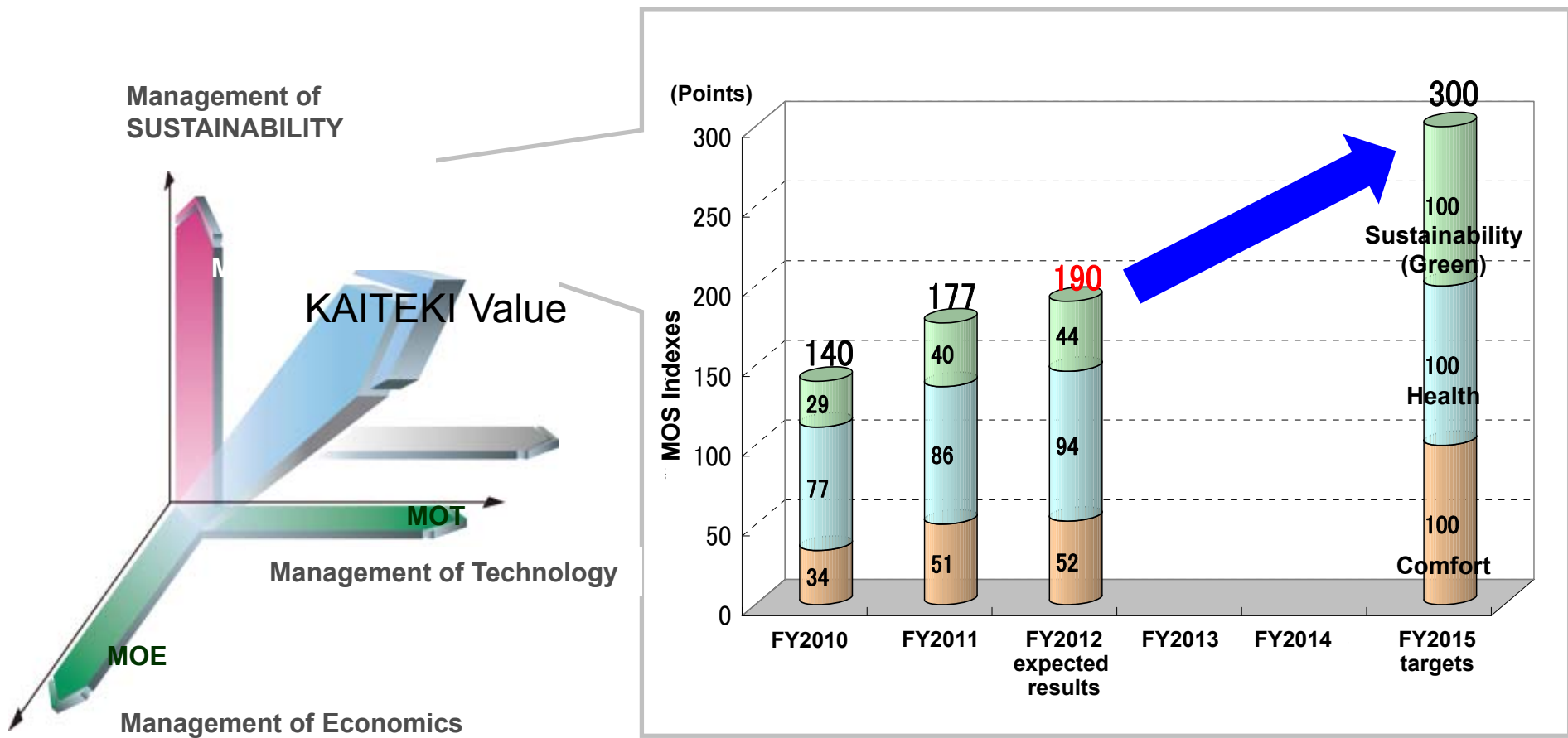


“Must Attain” Goals	Zero major accidents and zero major compliance violations		
Sustainability (Green)	S-1	Contribution to reduce environmental impact through products and services	100 pts
	S-2	Practice energy saving & reduction of depletion resources	
	S-3	Contribution to reduce environmental impact through supply chain management	
Health	H-1	Contribution to medical treatment	100 pts
	H-2	Contribution to improvements of QOL	
	H-3	Contribution to early detection and prevention of diseases	
Comfort	C-1	Deliver products (development and manufacturing) for comfortable lifestyle	100 pts
	C-2	Improve stakeholder satisfaction	
	C-3	Recognition of corporate trust	

Progress toward MOS Indexes (Expected Results for the MCHC Group)

APTSIS

The outlook is for the Group as a whole to show results above the previous year.



Expanding Scope of MOS Indexes and Reconsideration of Targets

We have expanded the scope of MOS Indexes and reviewed objectives for FY2015.

■ New MOS Indexes


(Targets)

S-2-4 Contribute to water problems through our products Provide 900 million tons of usable water

C-2-3 Improve customer satisfaction level Conduct questionnaire survey and obtain feedback

■ Items expected to be well above goals

(Original targets for FY2015) (Revised targets for FY2015)

H-1 Contribute to medical treatment
(Index for contribution to medical treatment) 30%  50%

H-2 Contribute to improvements of QOL
(Index for contribution to QOL improvements) 64%  70%

■ Items expected to be well below goals

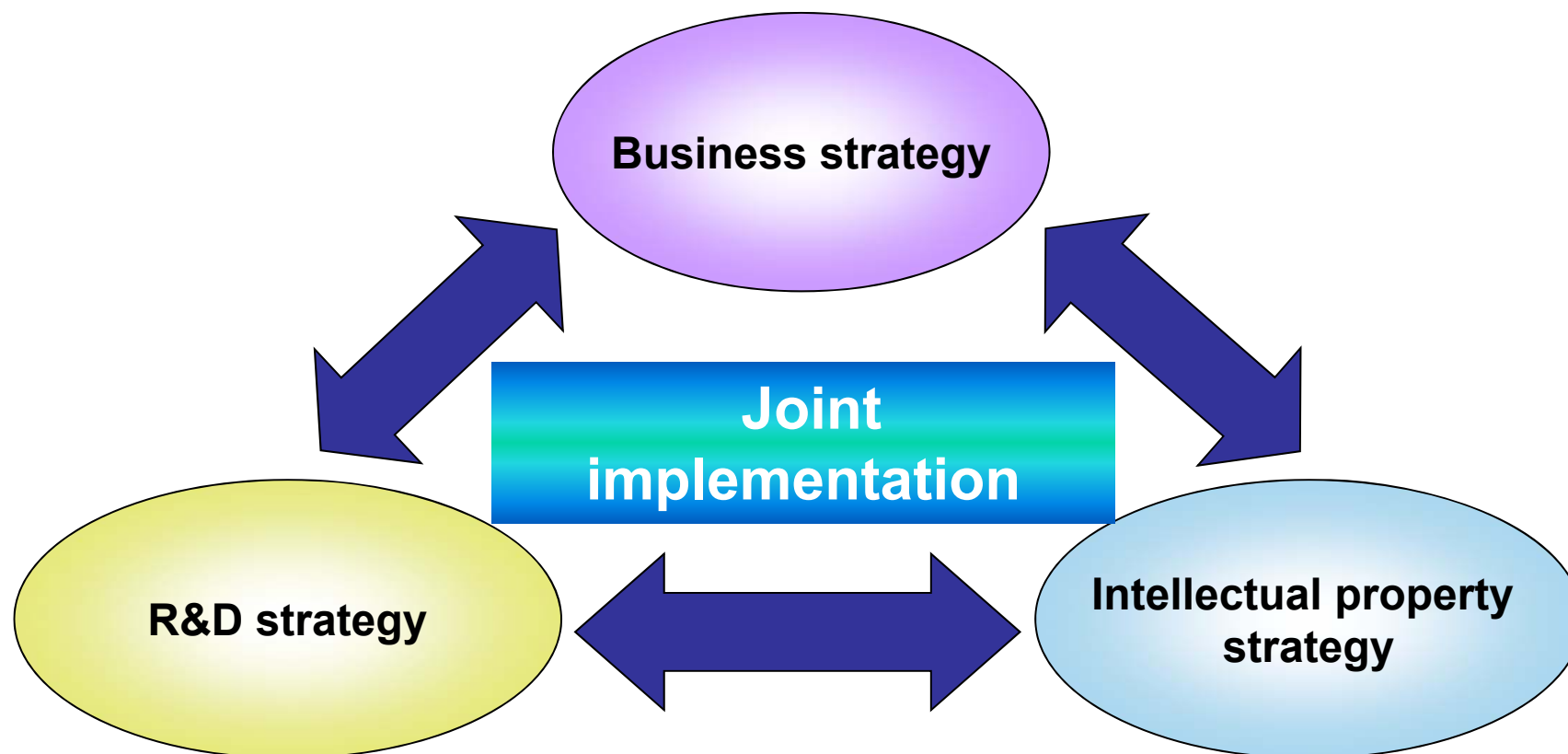
(Original targets for FY2015) (Revised targets for FY2015)

C-1-1 Increase sales of comfort-oriented products ¥600 billion  ¥400 billion

C-1-2 Increase new products ratio 35%  30%

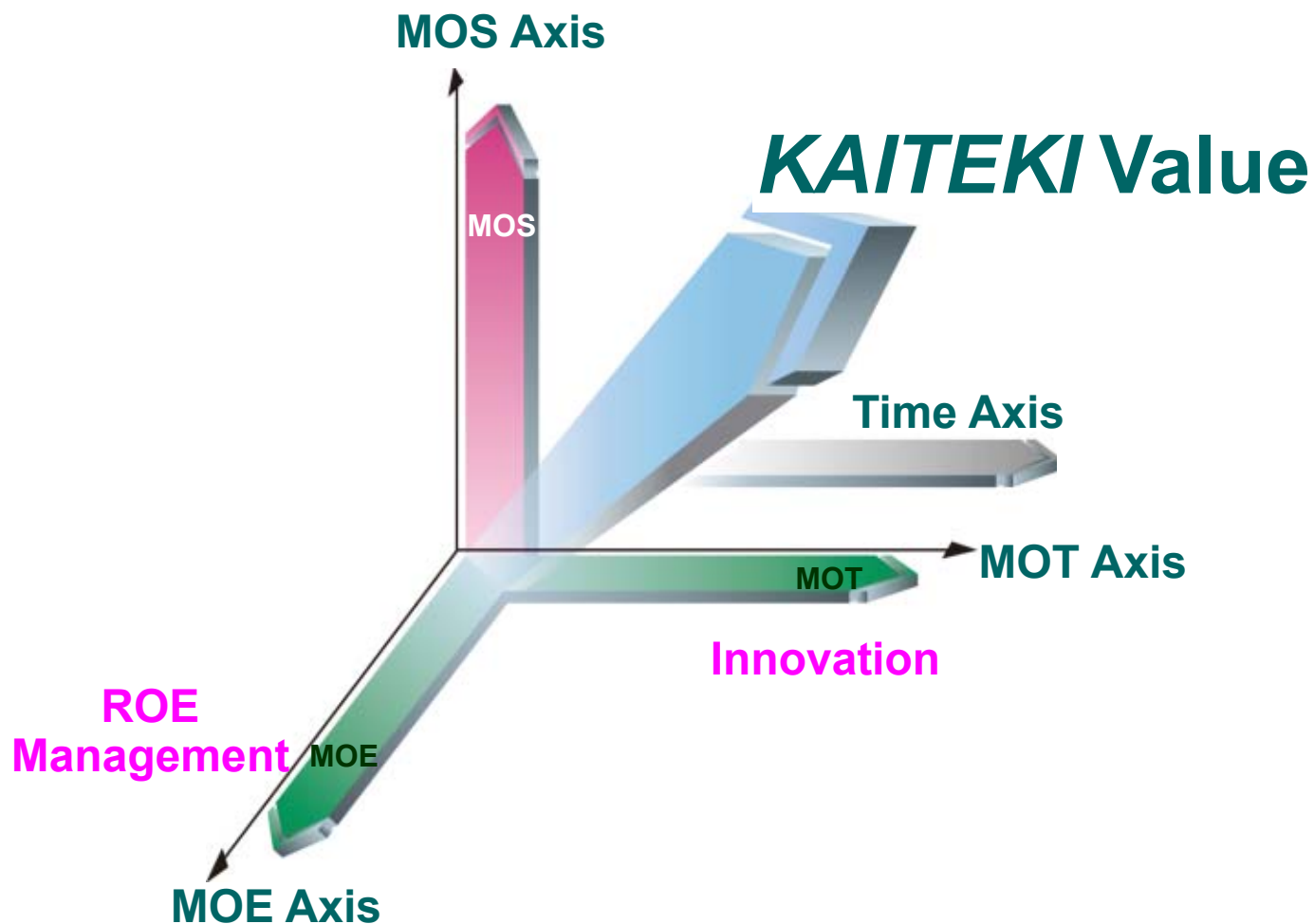
MCHC Management of Technology

Joint implementation of business strategy, R&D strategy, and intellectual property strategy



Toward Achieving APTSIS 15 Objectives

The MCHC Group is aiming to further increase its *KAITEKI* value.



Enhancing Shareholder Value

Basic Policy

Enhance shareholder value by improving corporate value

Shareholder Returns

- **Maintain sufficient internal reserves to fund business development while paying consolidated results-based dividends**
- **While targeting a medium-term payout ratio of at least 30%, we will also prioritize stable dividends (maintaining and increasing cash dividends per share)**

The KAITEKI Institute, Inc.: Focuses and Progress

