APTSIS

THE KAITEKI COMPANY

APTSIS 15

Step 2 (FY2013-FY2015)

Presentation to Investors

December 12, 2013

Yoshimitsu Kobayashi
President & Chief Executive Officer

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, and petrochemicals, and these business results are subjected to influences of world demands, exchange rates, price and procurement volume of crude oil and naphtha, trends in market prices, speed in technology innovation, National Health Insurance price revision, product liabilities, lawsuits, laws, and regulations.

List of Abbreviations

MCHC: Mitsubishi Chemical Holdings Corporation
MCC: Mitsubishi Chemical Corporation
MTPC: Mitsubishi Tanabe Pharma Corporation
MPI: Mitsubishi Plastics, Inc.
MRC: Mitsubishi Rayon Co., Ltd.

APIC: API Corporation
BIKEN: The Research Foundation for Microbial Diseases of Osaka University
CRK: Chuo Rika Kogyo Corporation
HLC: Healthy Life Compass Corporation
JXE: JX Nippon Oil & Energy Corporation
MCCI: PT. Mitsubishi Chemical Indonesia
MCPI: MCC PTA India Corp. Private Limited
MCM: Mitsubishi Chemical Medience Corporation
MEC: Mitsubishi Chemical Engineering Corporation
MFE: Mitsubishi Polyester Film GmbH
MKF: Mitsubishi Kagaku Foods Corporation
MRCPS: MRC Polysaccaride Co., Ltd.
MRCFAC: Mitsubishi Rayon Carbon Fiber and Composites, Inc.
MRC-SGL: MRC-SGL Precursor Co., Ltd.
NKC: Nippon Kasei Chemical Company Limited
NNE: Nishi Nippon Ethylene LLC
NRC: Nippon Rensui Co., Ltd.
NSCI: The Nippon Synthetic Chemical Industry Co., Ltd.
PTT: PTT Public Company Limited
Qualicaps: Qualicaps Co., Ltd.
TNSC: Taiyo Nippon Sanso Corporation

ACH: Acetone cyanohydrin
AN: Acrylonitrile
API: Active pharmaceutical ingredient
BTcB: Butene to crude butadiene
BZ: Benzene
C&RI: Cracker and refinery
CF: Carbon fiber
CFRP: Carbon fiber reinforced plastic
CFRTP: Carbon fiber reinforced thermoplastic
CVF: Converting film
DTP: Dominant technology for propylene
EC: Ethylene carbonate
EG: Ethylene glycol
EO: Ethylene oxide
EV: Electric vehicle
EVOH: Ethylene vinyl alcohol
FPD: Flat panel display
GaN: Gallium nitride
HDPE: High density polyethylene
HMPC: Hydroxypropyl methylcellulose
HS-FCC: High severity fluid catalytic cracking
HVPE: Hydride vapor phase epitaxy
KPI: Key performance indicator
LCD: Liquid crystal display
LCM: Life cycle management
LIB: Lithium-ion battery
LLDPE: Linear low-density polyethylene
MBR: Membrane bioreactor
MEG: Mono ethylene glycol
MAA: Methacryl acid
MMA: Methyl methacrylate

MOS: Management of Sustainability
MOT: Management of Technology
MS: Multiple sclerosis
NCF: Non-crimp fabric
NVF: N-vinyle formamide
OLED: Organic light emitting diode
OPV: Organic photovoltaic
PBS: Polybutylene succinate
PC: Polycarbonate
PCM: Prepreg compression molding
PE: Polyethylene
PET: Polyethylene terephthalate
PHEV: Plug-in hybrid electric vehicle
PHL: Phenol
PMMA: Polymethylmethacrylate
PO: Polyolefin
PP: Polypropylene
PTA: Purified terephthalic acid
PVC: Polyvinyl chloride
PVOH: Polyvinyl alcohol
PX: Paraxylene
SBU: Strategic business unit
SCATT: *Super critical acidic ammonia technology*
SMC: Sheet molding compound
ZLD: Zero liquid discharge

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

Today's Agenda

MCHC: Yoshimitsu Kobayashi

1. Performance Review
- 1-1. Business Environment
- 1-2. Outlook for FY2013
- 1-3. Portfolio Transformation

2. Progress in *Step 2*
- 2-1. Verification of Progress by Each Growth Model
- 2-2. New Healthcare Company
- 2-3. Taiyo Nippon Sanso Corporation

3. *KAITEKI* Management
- 3-1. Progress in *KAITEKI* Management
- 3-2. Quantification of *KAITEKI* Management

4. MCC: Hiroaki Ishizuka
- 4-1. Progress in Business Restructuring
- 4-2. Progress in Growth Driver Businesses
- 4-3. Progress in Generating Synergies

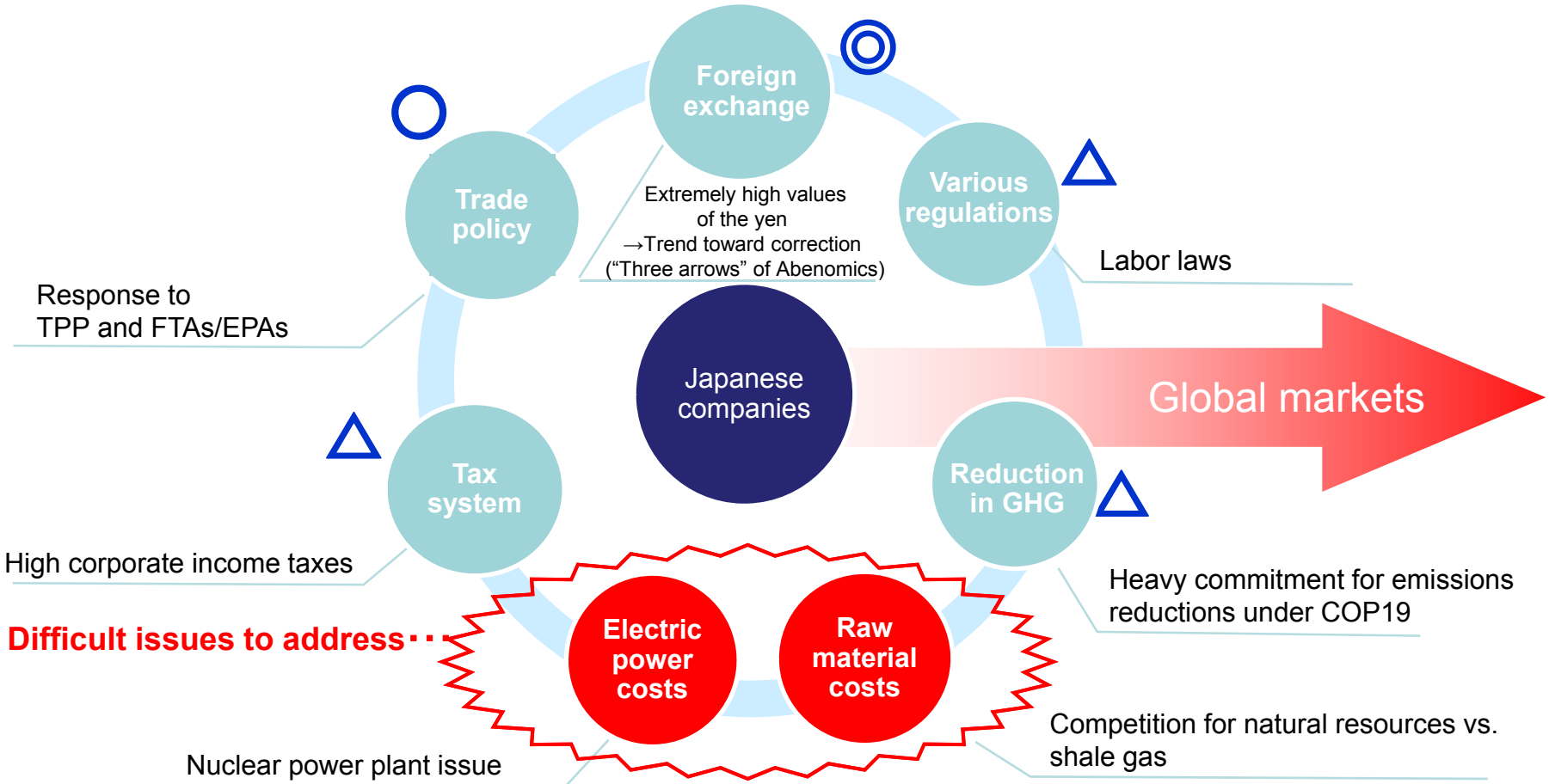
5. MTPC: Michihiro Tsuchiya
- 5-1. Progress in Pharmaceutical Business
- 5-2. Progress in Generating Synergies

6. MPI: Takumi Ubagai
- 6-1. Restructuring and Growth Strategy
- 6-2. Progress in Generating Synergies

7. MRC: Hitoshi Ochi
- 7-1. Business Development of MMA
- 7-2. Progress in Growth Driver Businesses
- 7-3. Progress in Generating Synergies

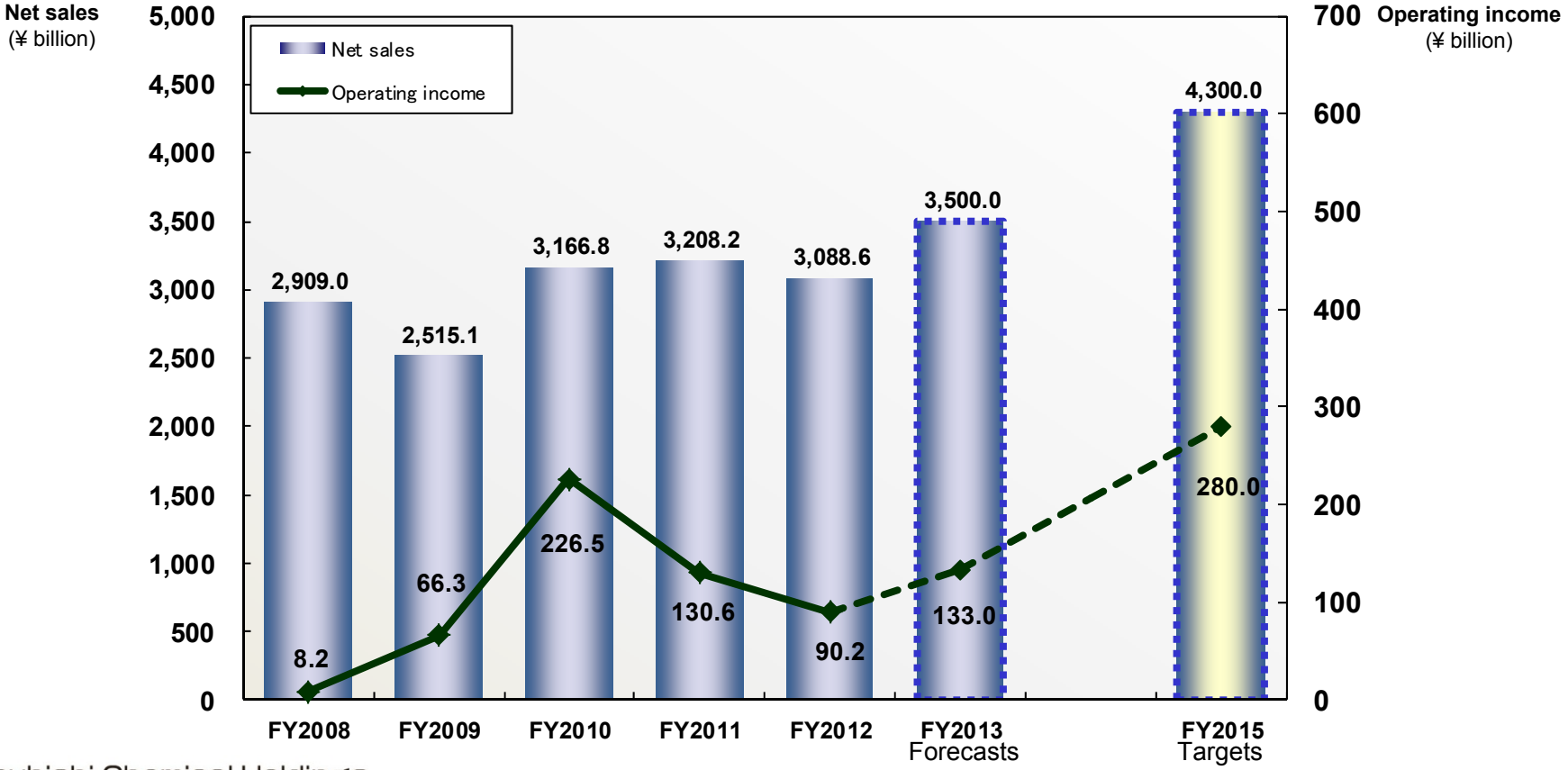
1-1. Operating Environment for Japanese Companies

■ Competitive conditions, compared with global competitors, are gradually improving and becoming less disadvantageous.



1-2. Financial Results and Outlook for FY2013

- In addition to increasing production and sales as well as cutting costs, the positive effects of the weakening yen contributed, leading to an increase in income over the previous fiscal year.
- Improvement in earnings projected in the 4Q; steady implementation of various measures



Influences by fiscal term change in overseas Group companies are included in FY2013. (Operating income: +8.8 billion)

1-2. Operating Income by Segment: Actual Results for FY2012 and Outlook for FY2013

- Designed Materials segment shows increase in income from PVOH/EVOH and others
- Polymers segment shows increase in income due to positive results from cost reductions and other measures
- Health Care segment shows decline in income due to decreased sales in ethical pharmaceuticals

Operating income (loss) (¥ billion)

Domains	Segments	FY2012 Actual results	FY2013 Forecasts	Change	Comments
Performance Products	Electronics Applications	(5.1)	(3.5)	1.6	• Printing supplies reported increase in income and the margin of loss in GaN diminished • Conditions for OLED and recording media were difficult.
	Designed Materials	22.5	49.5	27.0	• Performance of PVOH/EVOH, carbon fiber and composite materials, performance chemicals, fibers, and certain other products was strong.
Health Care	Health Care	74.9	72.5	(2.4)	• Pharmaceuticals experience a decline along with movement toward replacement of ethical pharmaceuticals with generics. • Results of pharmaceutical formulation materials (Qualicaps business) were newly included in the scope of consolidation.
Industrial Materials	Chemicals	(0.2)	5.5	5.7	• Margin of losses in PTA diminished, and income from EOG and ethanol increased.
	Polymers	0.1	12.0	11.9	• Income from MMA/PMMA rose, but was relatively weak and below FY2013 planned levels. • Sales and operating income from polyolefins, PHL/PC chains increased because of adjustments in market prices and the positive effects of the weakening of the yen.
	Others	6.5	5.0	(1.5)	
	Corporate	(8.5)	(8.0)	0.5	
	Total	**90.2**	**133.0**	**42.8**	

1-2. Actual Results of FY2010 vs. Outlook for FY2015

- In the Performance Products domain, steady expansion anticipated for the Designed Materials segment
- Achieve sustained growth for the Health Care domain on expansion of new and priority products
- Considering the external business environment, sharp decline anticipated for the Industrial Materials domain compared to FY2010

Operating income (loss) (¥ billion)

Domains	Segments	FY2010 Actual results	FY2015 Forecasts	Change	Comments
Performance Products	Electronics Applications	1.0	5.0	4.0	
	Designed Materials	36.5	80.0	43.5	• Gains in performance chemicals, PVOH/EVOH, and others
Health Care	Health Care	85.1	110.0	24.9	• Gain in ethical pharmaceuticals
Industrial Materials	Chemicals	53.0	25.0	(28.0)	• Sharp decline expected for PTA
	Polymers	55.0	35.0	(20.0)	• Sharp decline expected for MMA/PMMA • Declines in polyolefin, phenol, and polycarbonate chains
	Others	4.5	10.0	5.5	
	Corporate	(8.6)	(5.0)	3.6	
	Subtotal	**226.5**	**260.0**	**33.5**	
	Leaping ahead (M&A)	–	20.0	20.0	
	Total	**226.5**	**280.0**	**53.5**	

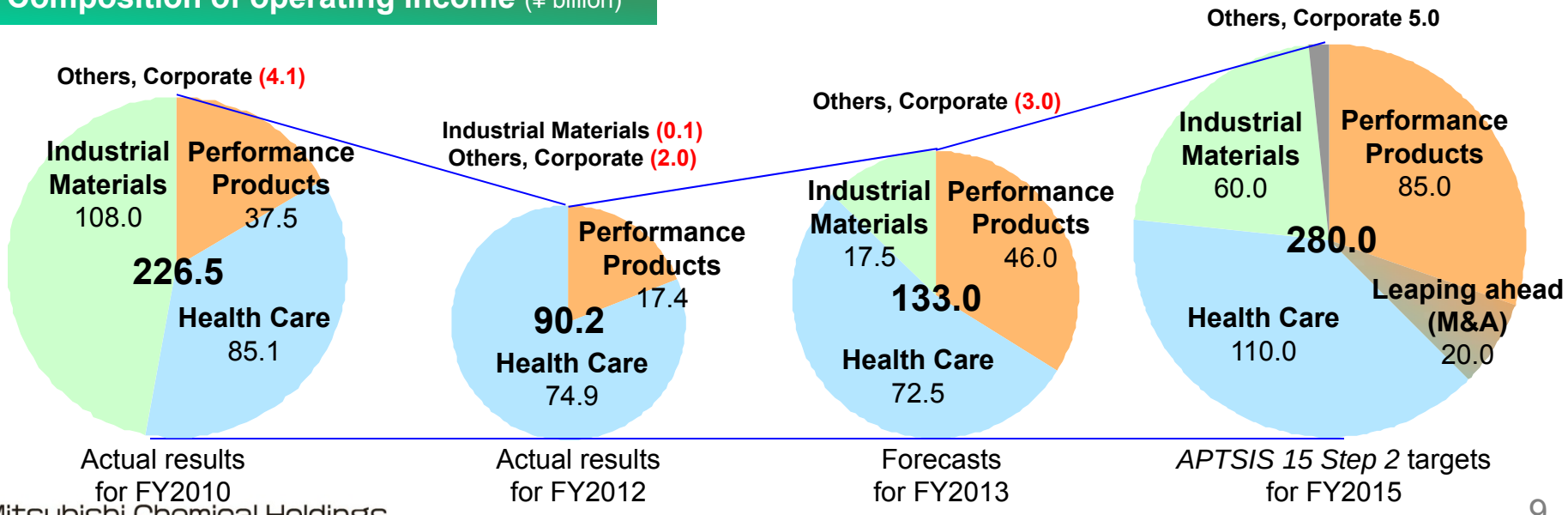
1-2. Actual Results in FY2012, Forecasts for FY2013, and *APTSIS 15 Step 2* Plans

■ Attain targets of the *Step 2* plan via thoroughgoing implementation of business management through the business portfolio management and growth models

		Actual results for FY2010	Actual results for FY2012	Forecasts for FY2013	*APTSIS 15 Stet 2* targets for FY2015
Assumptions:	Exchange rate	¥87.0/$1	¥83.3/$1	¥98.3/$1	¥90.0/$1
	Naphtha price	¥47,500/kl	¥57,500/kl	¥65,925/kl	¥65,000/kl
Net sales		¥3.2 trillion	¥3.1 trillion	¥3.5 trillion	¥4.3 trillion
Operating income		¥226.5 billion	¥90.2 billion	¥133.0 billion	¥280.0 billion (¥260.0 billion*)

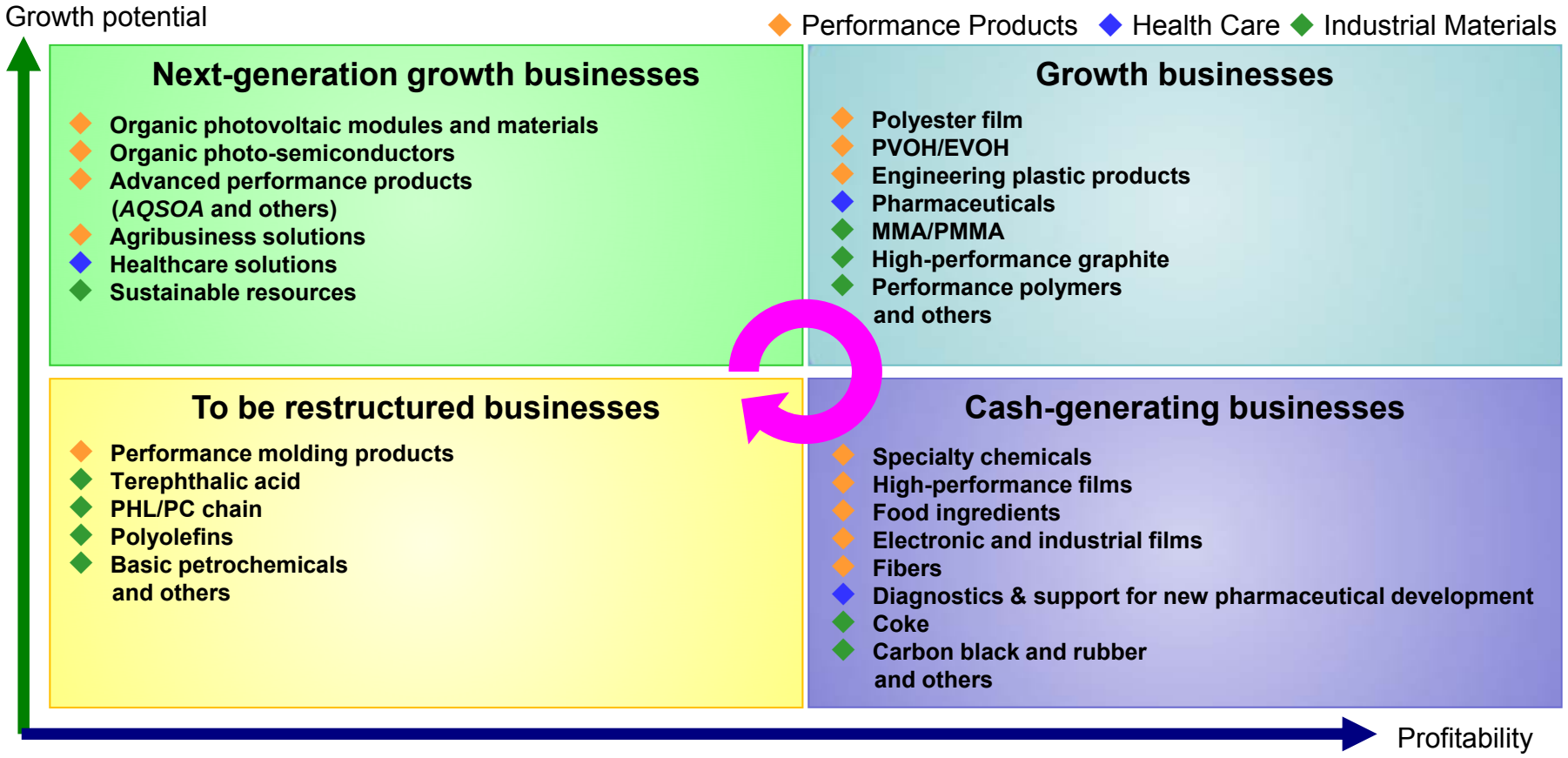
*Excluding "leaping ahead" (M&A)

Composition of operating income (¥ billion)



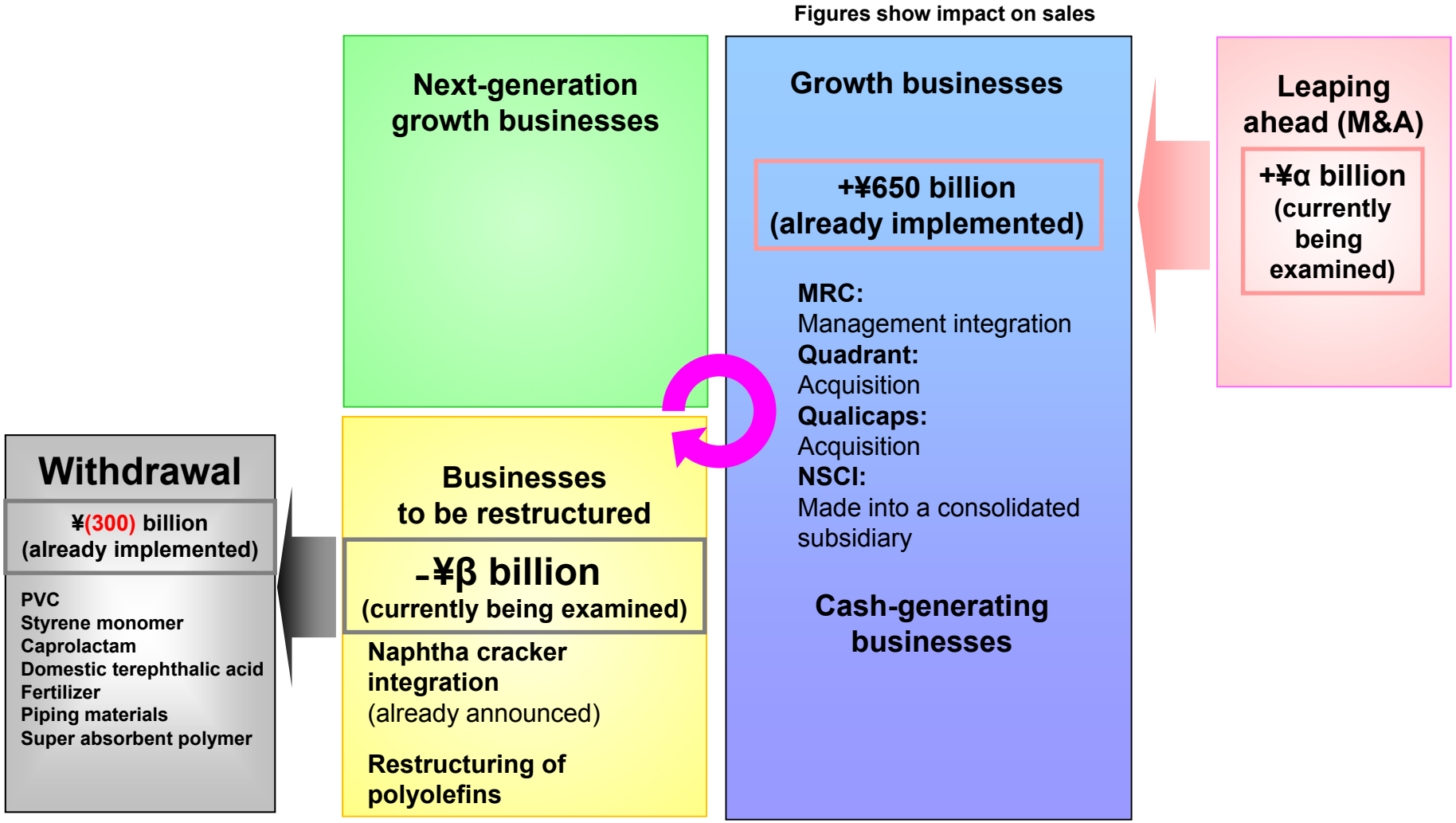
1-3. Portfolio Transformation

- Using four-quadrant model in business portfolio management
- Nurture and expand next-generation growth businesses and growth businesses, manage business restructuring and withdrawal

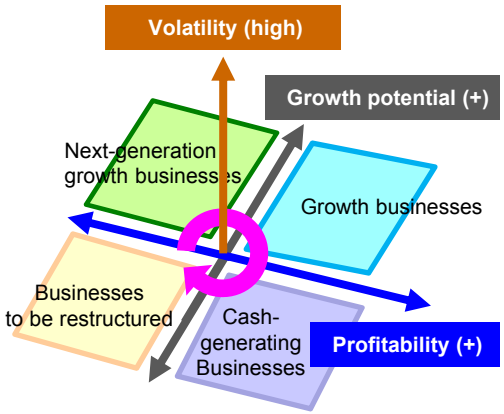


1-3. Portfolio Transformation

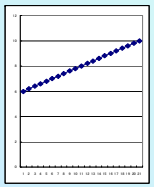
■ Transforming the business structure based on a four-quadrant model



2-1. Verification of Progress by Each Growth Model: Growth Model Categories



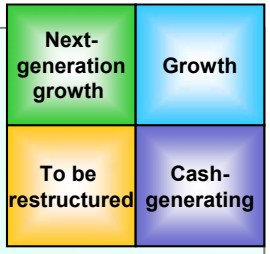
Stable businesses



- Polyester film *1
- PVOH/EVOH
- Engineering plastic product
- Pharmaceuticals
- MMA/PMMA
- High-performance graphite
- Performance polymers
- Specialty chemicals
- High-performance films
- Food ingredients
- Diagnostics & support for new pharmaceutical development and others

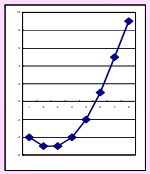
(30 SBUs in total)

*1 Name newly given to OPL film and others



Business portfolio until March 2013

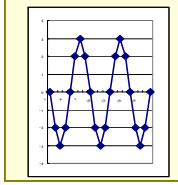
Growth driver businesses



- 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 and others

(14 SBUs in total)

Volatile businesses



- Performance molding products
- Terephthalic acid
- PHL/PC chain
- Polyolefins
- Basic petrochemicals
- Carbon black and rubber
- Electronic and industrial films
- Fibers and others

(19 SBUs in total)

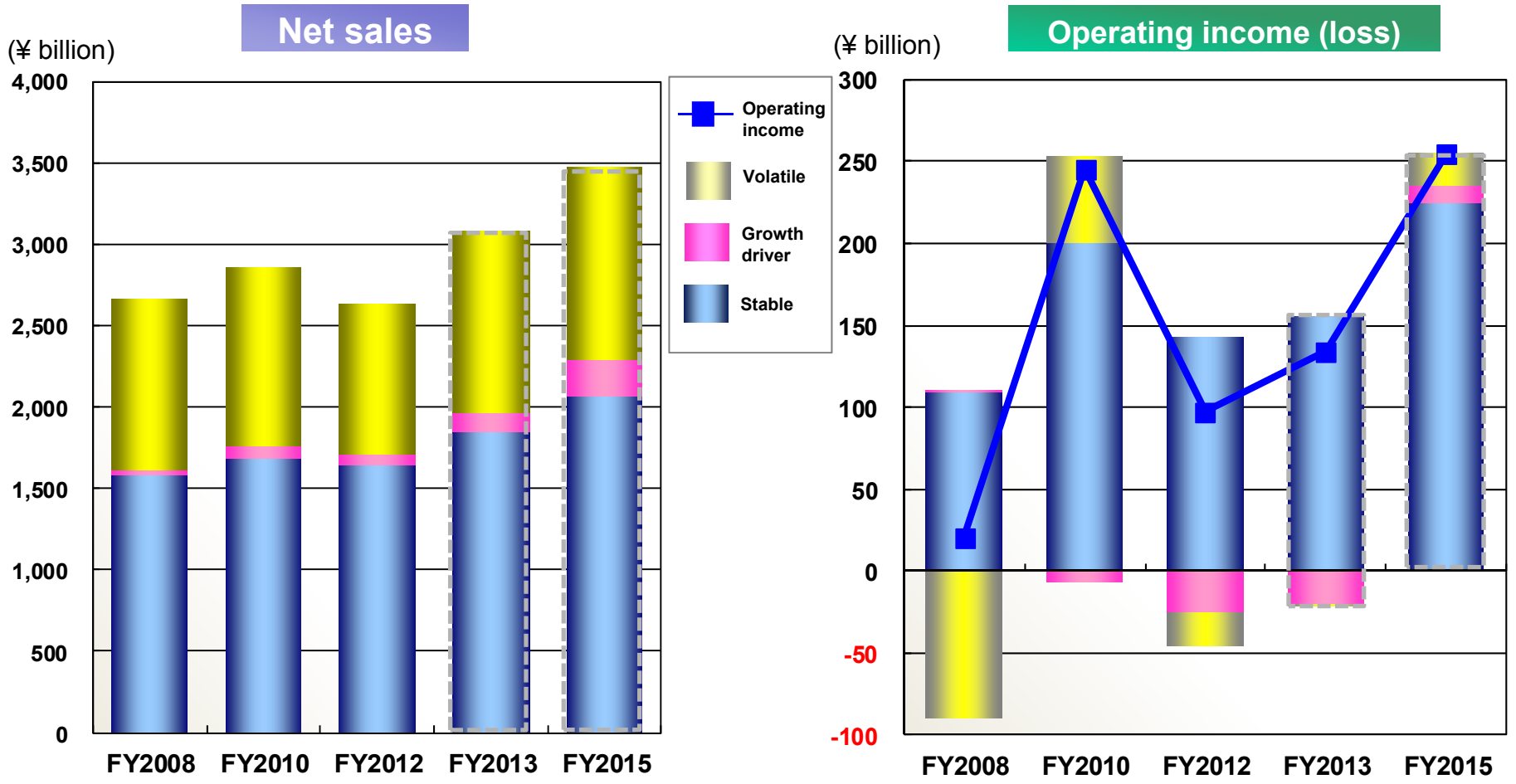
Stable businesses: Businesses with an average operating income margin for FY2000-FY2011 greater than the average of the variations in that margin, in addition, businesses that remain profitable and generate stable earnings

Growth driver businesses: Businesses among the volatile businesses expected to generate revenue increases in FY2012-FY2015, such as next-generation growth businesses

Volatile businesses: Businesses with an average operating income margin for FY2000-FY2011 less than the variations in that margin

2-1. Trends in Performance by Growth Models

■ Performance in FY2013 is forecast to exceed FY2012 under all growth models



Note: Total of stable, growth driver and volatile businesses excluding shared costs and corporate expenses

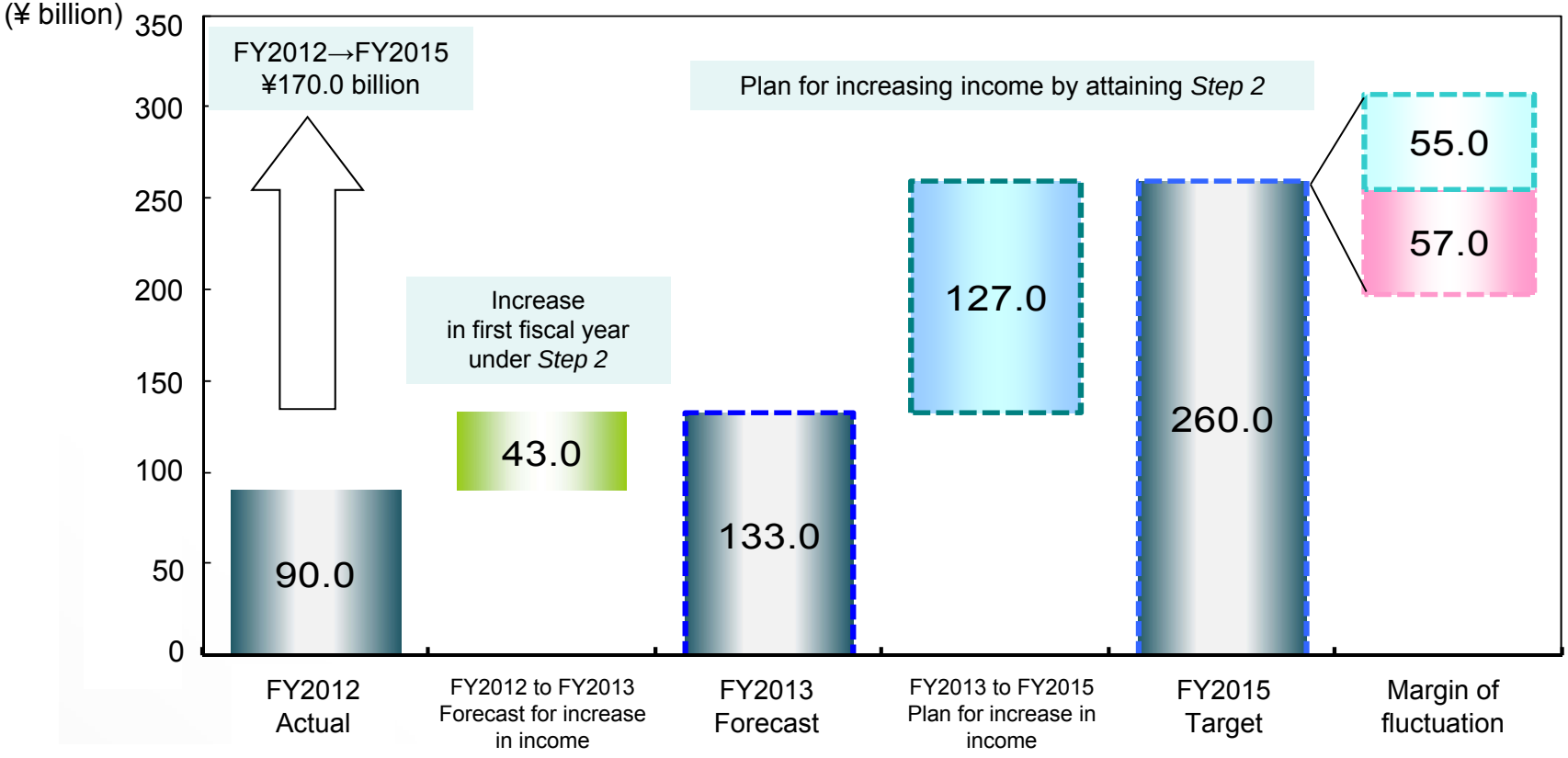
2-1. Overall Summary

■ Aiming to reach the numerical targets of *APTSIS 15 Step 2* for FY2015

- Stable businesses: Despite a tough business environment, aim to achieve FY2015 targets
- Growth driver businesses: Full-scale entry into these businesses was slow, and a downturn is assumed in FY2015
- Volatile businesses: Projected upward turn through cost-cutting and autonomous efforts

Operating income

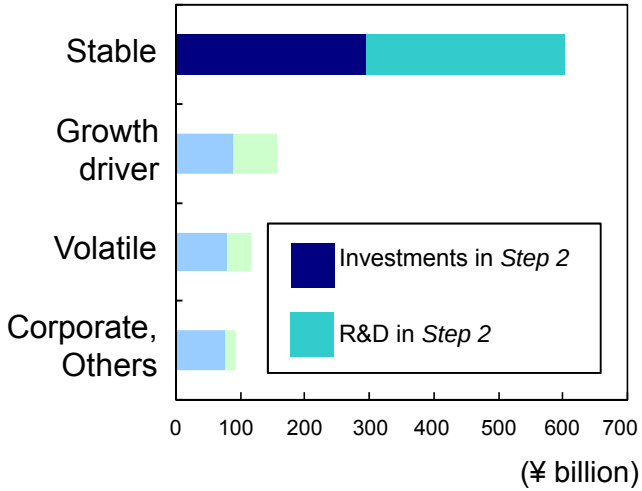
***APTSIS15 Step 2*: FY2013-FY2015**



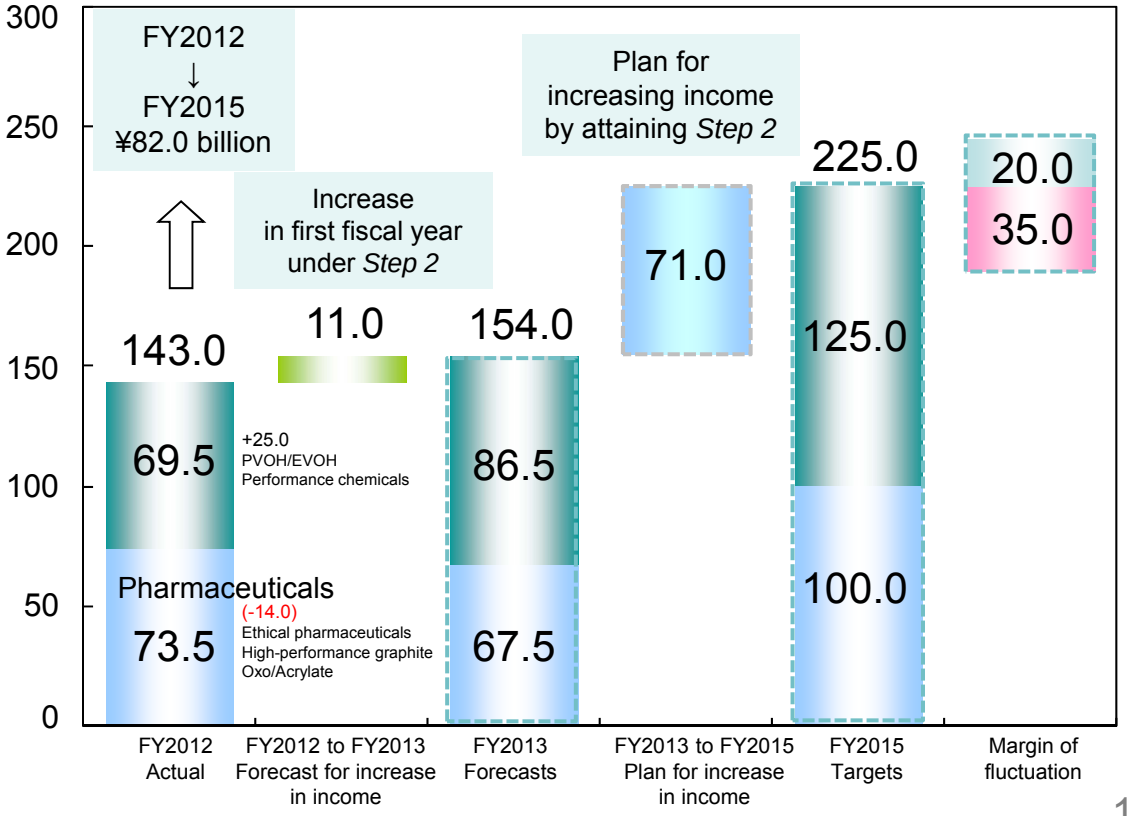
2-1. Progress in Stable Businesses

■ Operating income target for FY2015: Aim for ¥225.0 billion
Basic strategies:
- Increase sales by strengthening current competitive superiority
- Improve profit margins through upgrades in the product mix, increases in production capacity, and further development of overseas markets

Capital investments and investments and loans by growth model under *APTSIS 15 Step 2*



Operating income (loss) (¥ billion)



2-1. Outlook for Stable Businesses

- Pharmaceuticals, MMA/PMMA struggling
- Aiming to beat targets for polyester film, PVOH/EVOH, performance polymers, etc.

Main SBUs	Major policies	Prospect of achieving *Step 2*
Pharmaceuticals	・Nurture development of new pharmaceuticals and priority products ・Expand licensed-out products (royalty revenues)	
MMA/PMMA	[MMA monomers] ・Steadily meet growth in demand by expanding production capacity [Acrylic sheets, molding materials] ・Expand sales for general applications, rolling stock, and construction material applications	
Polyester film	・Establish local production bases to tap into growing demand in China	
PVOH/EVOH	・Bolster earnings capability by flexibly adapting to market trends	
Performance polymers	・Expand business foundation through M&A ・Augment globally leading products in growing automobile field	

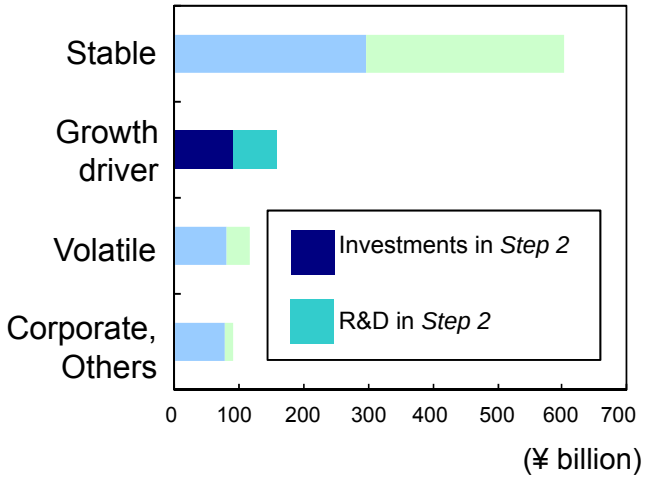
2-1. Progress in Growth Driver Businesses

■ Operating income expected to fall short of FY2015 target of ¥10 billion

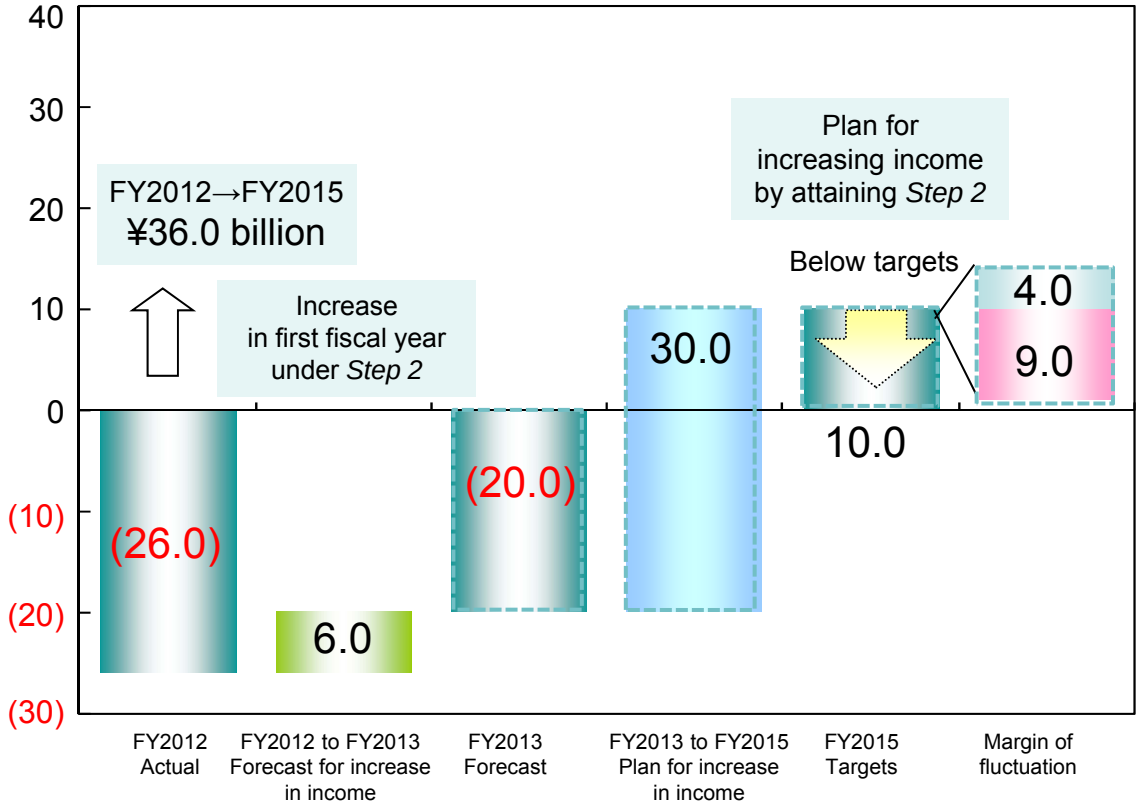
Basic strategies:

- Selection of areas for investment of resources
- Advance R&D results to accelerate development and marketing of new products
- Develop new fields and expand sales

Capital investments and investments and loans by growth model under *APTSIS 15 Step 2*



Operating income (loss) (¥ billion)



2-1. Outlook for Growth Driver Businesses

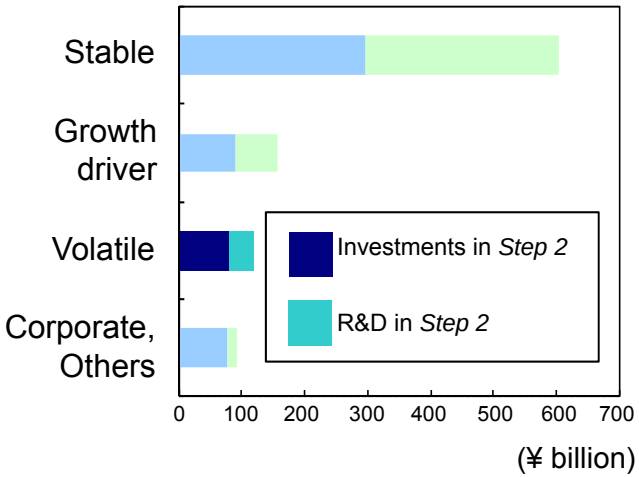
- Growth driver businesses underperforming against targets overall
- Aim to launch electronics applications as quickly as possible
- Committed to achieving targets for carbon fiber and composite materials

Main SBUs	Major policies	Prospect of achieving *Step 2*
Electronics applications	[GaN substrates] ・Win new customers ・Launch large substrates [OLED lighting/OPV] ・Accelerate market development with partners ・Establish coating process for OLED/OPV production technologies	
Carbon fiber and composite materials	・Concentrate business development on growth fields (industrial applications, automobiles) ・Achieve sweeping cost reductions through restructuring ・Strengthen intermediate materials business through M&A and business alliances	
Water treatment systems and services	[*Cleansui*] ・Strengthen overseas business and review domestic marketing to improve awareness [Water environment] ・Increase share of domestic market ・Promote alliances with ASEAN partner engineering companies	
Lithium-ion battery materials	・Strengthen development for non-automotive applications ・Thoroughly reduce costs by right-sizing production structure, etc.	

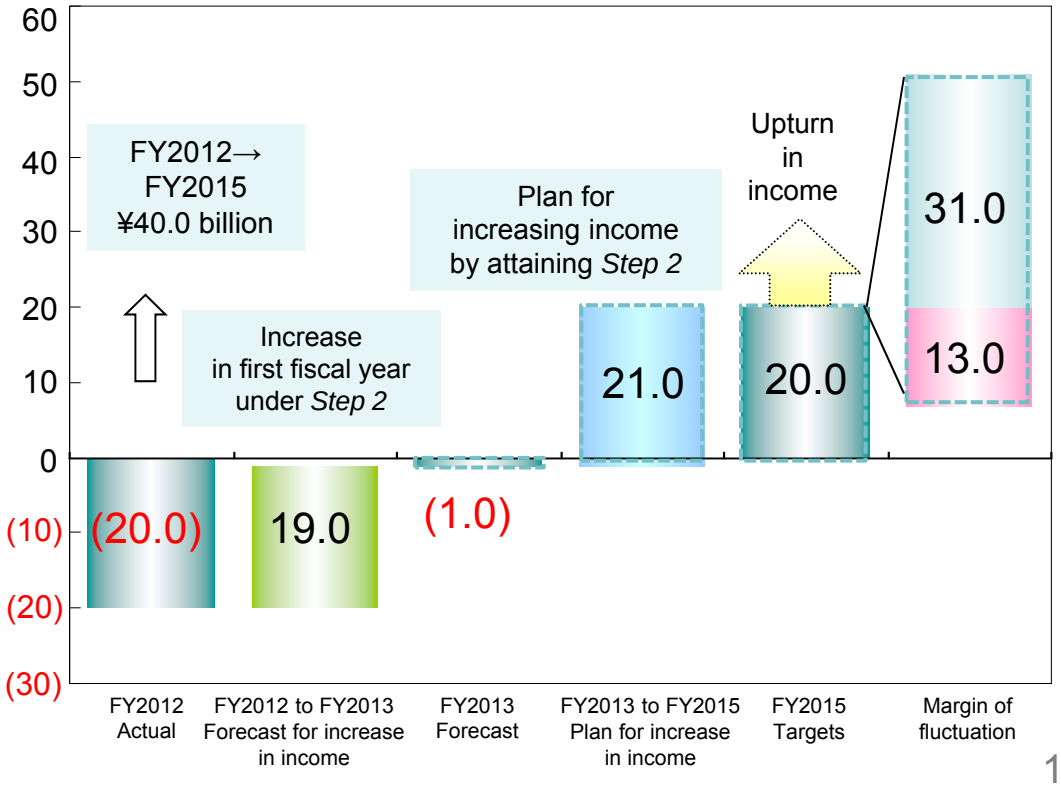
2-1. Progress in Volatile Businesses

- Projected upturn in profitability against the operating income target of ¥20.0 billion in FY2015
- Basic strategies:
  - Strengthen income bases through rationalization (Decommission No. 1 naphtha cracker and expand and fully operate No. 2 naphtha cracker at the Kashima Plant of MCC, etc.)
  - Lessen impact of factors resulting in volatility in income through sales activities
  - Structural reforms, including portfolio reforms

Capital investments and investments and loans by growth model under *APTSIS 15 Step 2*



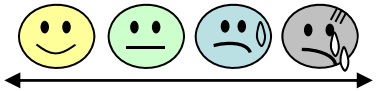
Operating income (loss) (¥ billion)



2-1. Outlook for Volatile Businesses

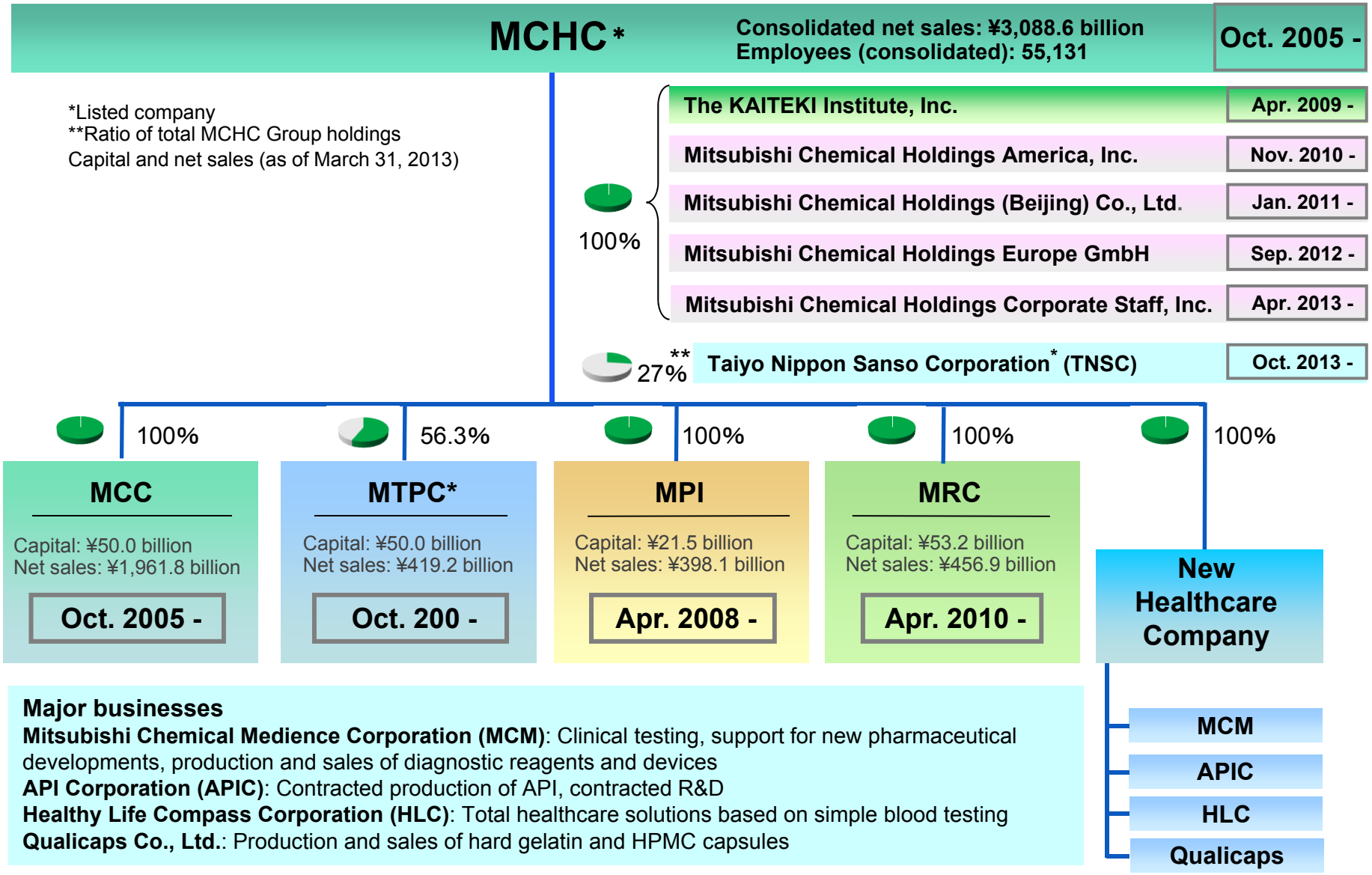
- Create earnings structure resilient to external conditions by further reducing costs
- Expecting outperformance against targets in FY2015

Main SBUs	Major Policies	Prospect of achieving *Step 2*
Basic petrochemicals	・Restructuring of naphtha crackers (Close No. 1 and fully utilize capacity at No. 2 at the Kashima Plant, MCC Secure facility integration at the Mizushima Plant, MCC) ・Cost reductions ・Alliance with oil refinery	
Polyolefins	・Increase sales ratio of strategic products and high-performance products ・Optimize production structure by streamlining production lines	
PHL/PC chain	・Thoroughly reduce costs (rationalize logistics, improve output levels, etc.) ・Establish non-phosgene PC technology ・Strengthen earnings capabilities via higher-performance PC	
Terephthalic acid	・Thoroughly reduce costs (MCCI: Shift to electricity purchases, MCPI: Shift to coal thermal power generation, etc.) ・Reduce reliance on Chinese market ・Consider introduction of safeguards/anti-dumping provisions	



2-2. New Healthcare Company: Projected Establishment of a New Healthcare Company

THE KAITEKI COMPANY



Major businesses

Mitsubishi Chemical Medience Corporation (MCM): Clinical testing, support for new pharmaceutical developments, production and sales of diagnostic reagents and devices

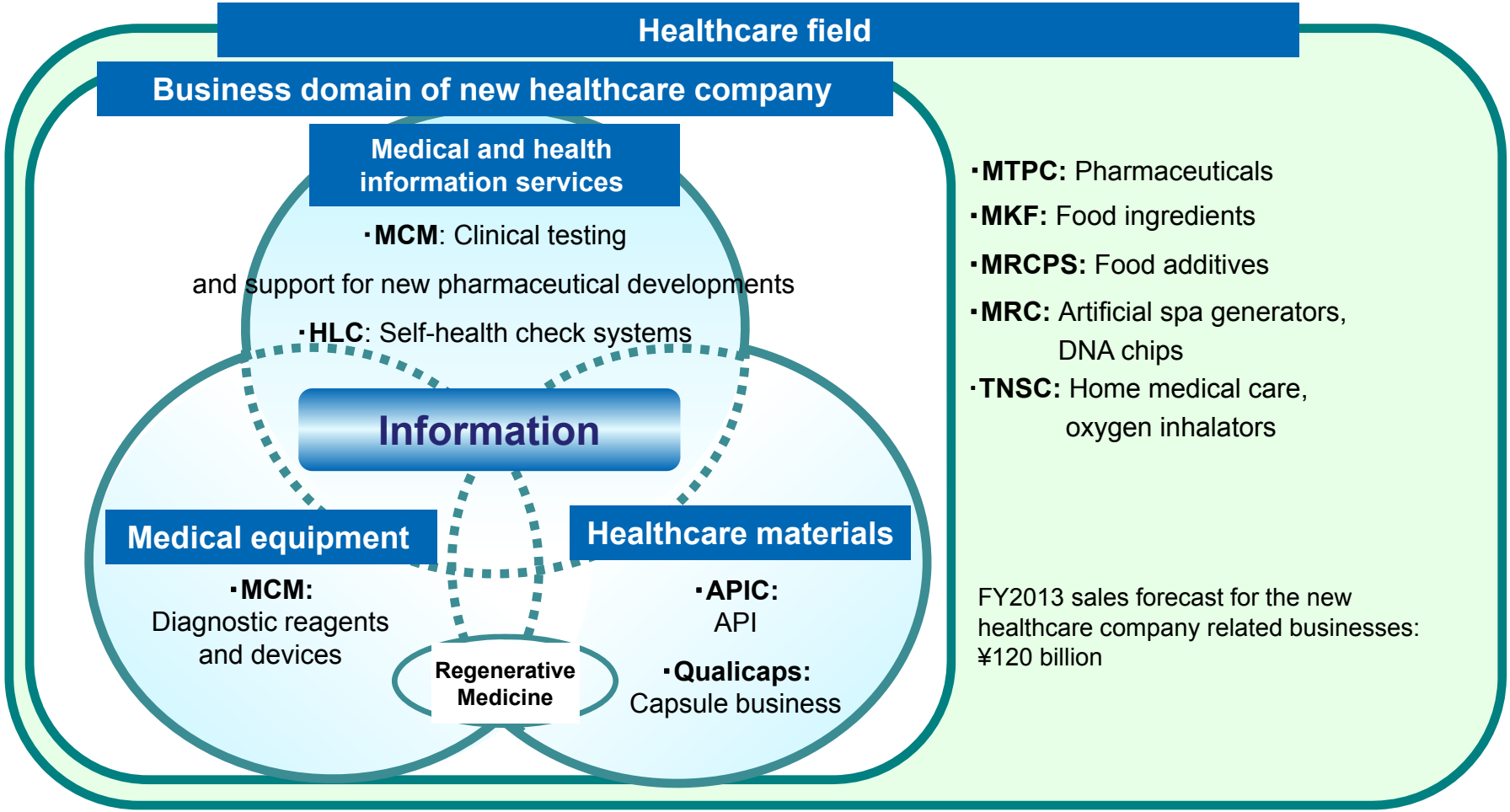
API Corporation (APIC): Contracted production of API, contracted R&D

Healthy Life Compass Corporation (HLC): Total healthcare solutions based on simple blood testing

Qualicaps Co., Ltd.: Production and sales of hard gelatin and HPMC capsules

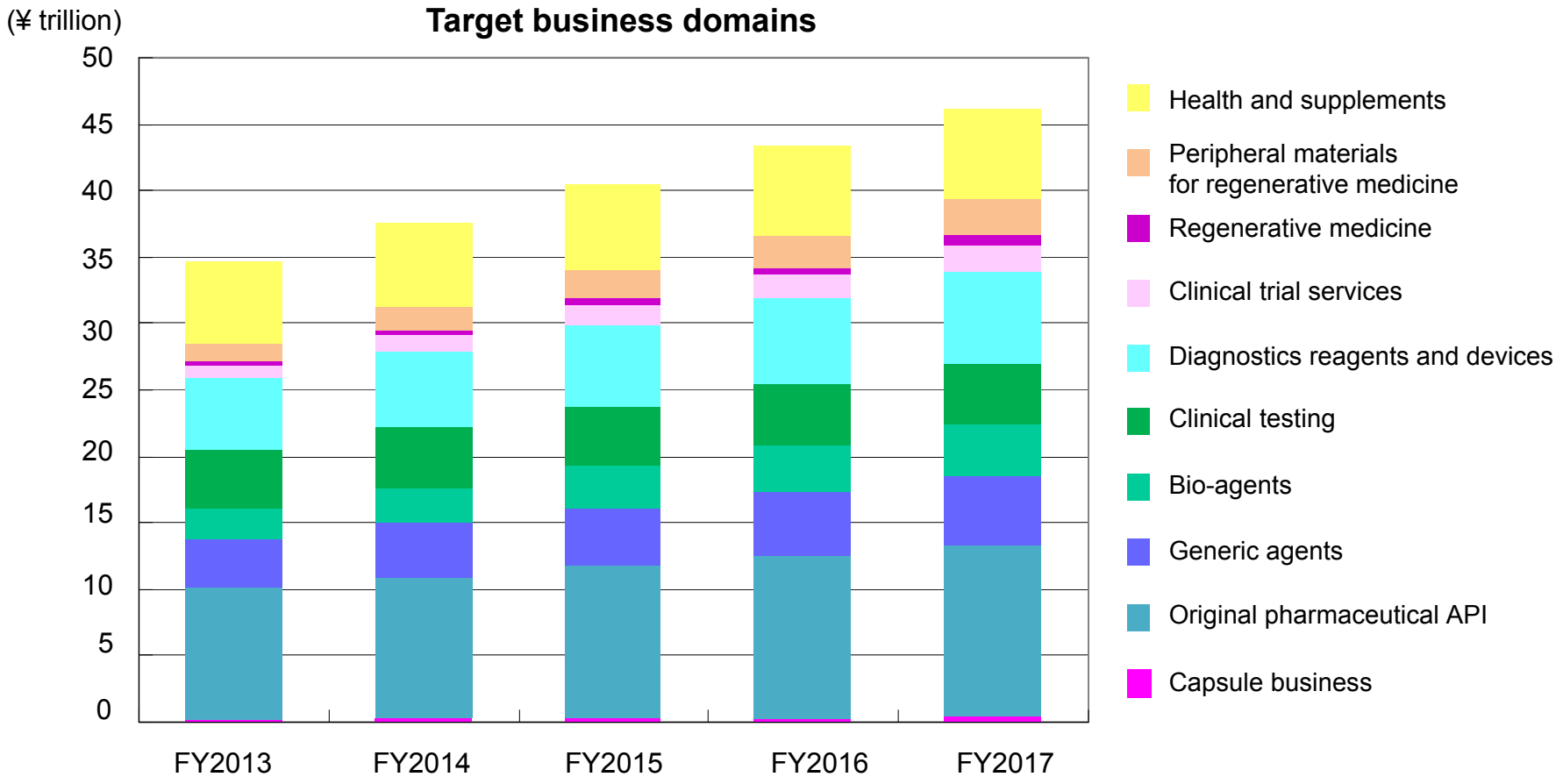
2-2. Vision for New Healthcare Company

- Provide healthcare solutions in aim to create a *KAITEKI* society
- Aim for early growth and strengthening of business base in order to build into the fifth core operating company



2-2. New Healthcare Company: Business Domains

- Aim for annual growth of more than 5% in target business domains across global markets
- Aim to develop a unique business model centered on medical information



Sources: Worldwide Medical Market Forecasts to 2018,
Active Pharmaceutical Ingredients (API) Global Market to 2017, etc.

2-3. Taiyo Nippon Sanso Corporation: Strengthening Alliance with TNSC

■ Increased ownership of Taiyo Nippon Sanso Corporation (TNSC) and concluded a capital and operating alliance contract

● **Company background and relationships with the MCHC Group**

Nippon Sanso Corporation (Established in 1910)

Toyo Sanso Co., Ltd. (Established in 1918)

Taiyo Sanso Corporation (Established in 1946)

Taiyo Toyo Sanso Co., Ltd. (Merged in Apr. 1995)

TNSC (Merged in Oct. 2004)

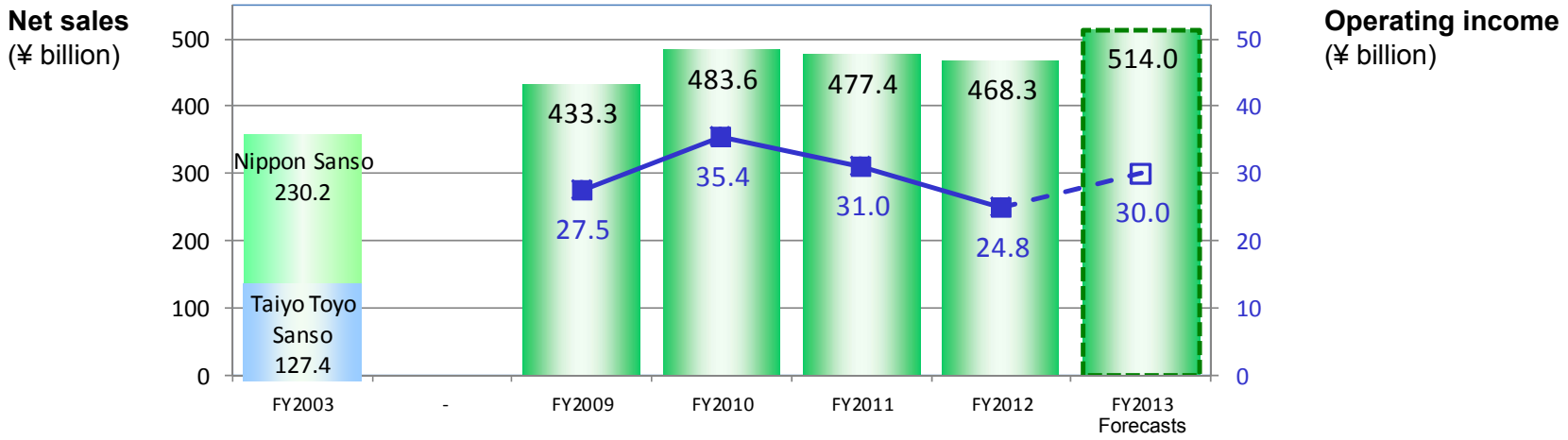
Ratio of capital holdings of the MCHC Group

1995/4	2000/9	2004/9
20.4%	26.7%	36.2%

2004/10	2009/9
10.1%	15.1%

2013/10
27.0%

● **Trends in financial results**



2-3. Synergies Expected with TNSC

■ Expecting synergies in the industrial gas, electronics, medical care, and other areas

● **Expected synergies**

Area	By product/operation	Summary of expected results
Industrial gas	Separate gas	● Will consider installation of atmospheric gas separation equipment at new overseas business base of the MCHC Group. TNSC will supply gas on site and provide liquefied gases to user companies in the area
	Carbon gas, hydrogen, Engineering	● Expand supply sources and collaborate with MCHC Group business bases in Japan and overseas
Electronics	Gaseous materials for semiconductor manufacturing and manufacturing equipment	● Will consider possibilities of alliances in next-generation growth businesses of the MCHC Group ● Joint development of mass production technology for GaN substrates used in white LEDs
Medical care	Artificial spa generators	● Considering collaboration between MCHC Group's spa generator manufacturing equipment business and the medical business of TNSC
	Medical-use gases	● Considering possibilities for use of MCHC Group's carbon fiber in carbon gas container vessels ● Considering cooperation in pharmaceutical development and collaboration using the medical institution networks of our two companies

TNSC's medical-related businesses

Medical-use gases

Oxygen and nitrogen supply equipment

Home medical care

Oxygen supply systems

Cryopreservation containers and systems

Cell banking systems

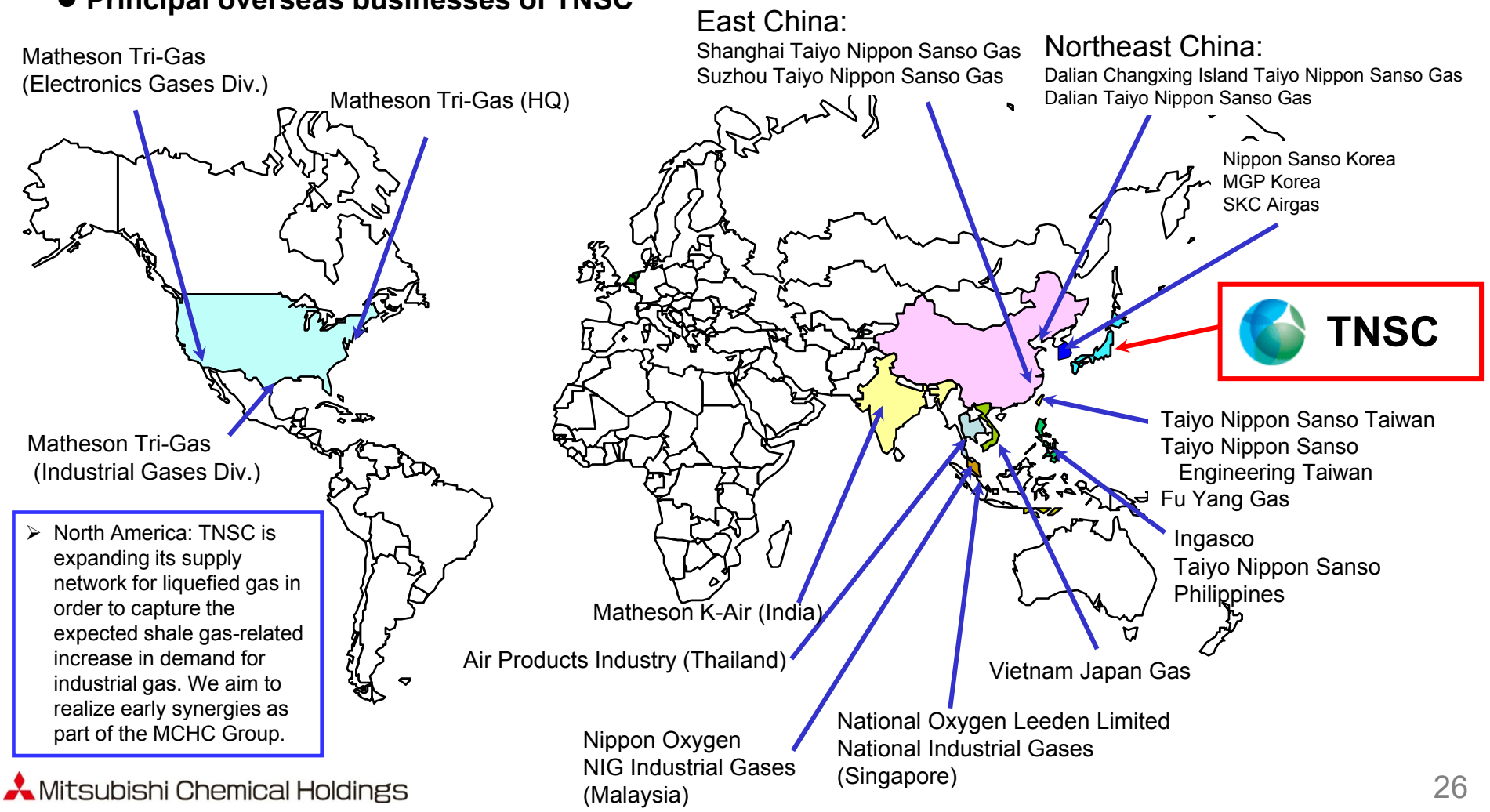
Stable isotopes

^{18}O separation plants

2-3. TNSC Global Operation

■ Aggressive development of overseas business activities
- Have gas production plants in about 60 locations worldwide

● **Principal overseas businesses of TNSC**



- North America: TNSC is expanding its supply network for liquefied gas in order to capture the expected shale gas-related increase in demand for industrial gas. We aim to realize early synergies as part of the MCHC Group.

3-1. Progress in *KAITEKI* Management

- Publication of *KAITEKI* Report (integrated report) (Aug. 2013)
- Branding of THE KAITEKI COMPANY (Nov. 2013)

[*KAITEKI* Report]

Main section:
- Message from the President
- Business review
- MOT
- MOS
- Financial data
- Financial results*

*English version only

MOS in-depth section:
- Detailed report on ESG (environment, society, and governance)

[Corporate Brand]

THE KAITEKI COMPANY

Expresses our commitment as a company to take the initiative in realizing *KAITEKI*

As a company engaged in diverse value creation, "THE KAITEKI COMPANY" symbolizes the approach the MCHC Group takes to corporate activities in harmony with the sustainable development of people, society and the earth.

Our initiative in realizing *KAITEKI* was introduced in the following:

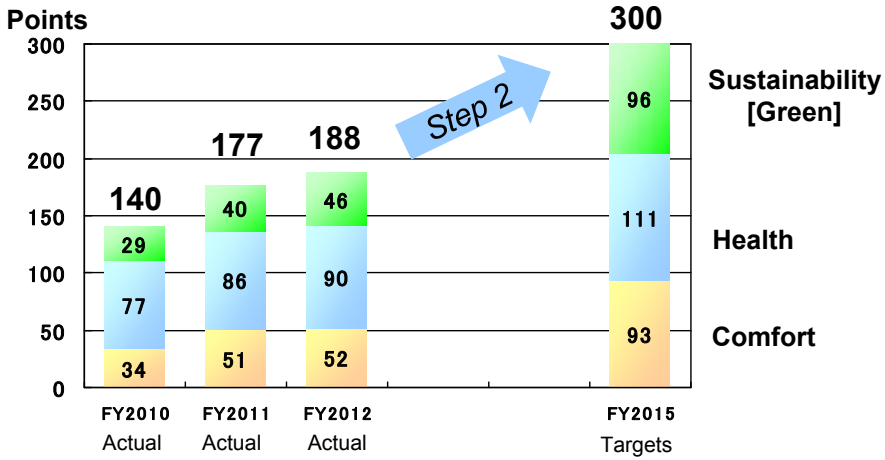
- "The 17th corporate white paper - Toward realizing sustainable management" compiled by Keizai Doyukai (Japan Association of Corporate Executives) [Apr. 2013]
- "Report on Desirable Market Economy System" Expert Committee on Desirable Market Economy System, Council on Economic and Fiscal Policy [Nov. 2013]

(Available only in Japanese)

3-2. Quantification of *KAITEKI* Management

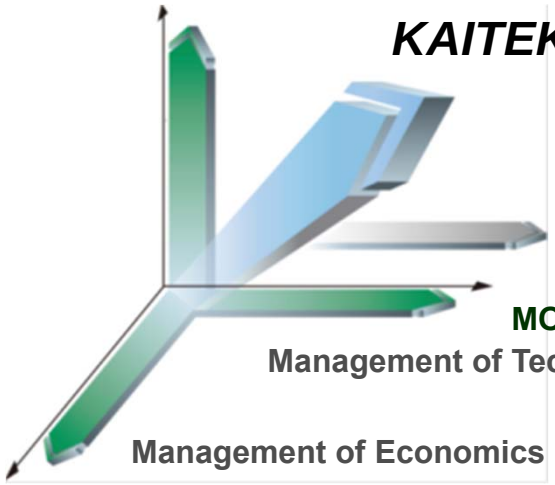
- MOS Indexes: started using to evaluate performance
- MOT Indexes: started using from FY2013

[MOS Indexes]
Steady progress toward targets



Management of Sustainability

MOS



[MOT Indexes] Determine point allocation per business

R&D Index	R-1	Quality of research site, based on such factors as researchers' credentials	100 points
	R-2	Research progress compared with what was planned	
	R-3	Completion rate of technologies compared with what was planned	
IP Index	I-1	Application rate for strategic patents compared with what was planned (including overseas)	
	I-2	Acquisition rate of IP rights compared with what was planned (including overseas, acquisition rate)	
	I-3	Contribution to business results of cross-licensing	
Market Index	M-1	Technological progress compared with customer demand	
	M-2	Analysis of technological capabilities of competitors	
	M-3	Contribution to business results of technologies	

3-2. Quantification of *KAITEKI* Management (Third-Party Analysis)

■ Received high score of 205 points out of 250 points for environmental rating from Development Bank of Japan Inc.

Special award for environmental rating
from Development Bank of Japan
(Nov. 26, 2013)

[Evaluation points]

1. Company has created a system for promoting development and sales based on the quantitative assessment of contributions to sustainability throughout life cycles, which is expressed as the MOS Indexes and managed in conjunction with financial targets.

2. Company uses its own benchmarks in efforts to minimize the environmental impact of business activities, and voluntarily participates in the formulation of industry guidelines.

3. Company discloses combination of financial and non-financial information via the publication of the *KAITEKI* Report while incorporating the MOS Indexes as a KPI.

From left:
Masanori Yanagi, Deputy President, Development Bank of Japan
Miho Hanafusa, Group Manager, *KAITEKI* Group, Corporate Strategy Office, MCHC
Shotaro Yoshimura, Representative Director, Member of the Board, Deputy Chief Executive Officer, MCHC

Today's Agenda

MCHC: Yoshimitsu Kobayashi

1. Performance Review
   - 1-1. Business Environment
   - 1-2. Outlook for FY2013
   - 1-3. Portfolio Transformation
2. Progress in *Step 2*
   - 2-1. Verification of Progress by Each Growth Model
   - 2-2. New Healthcare Company
   - 2-3. Taiyo Nippon Sanso Corporation
3. *KAITEKI* Management
   - 3-1. Progress in *KAITEKI* Management
   - 3-2. Quantification of *KAITEKI* Management

4. MCC: Hiroaki Ishizuka
   - **4-1. Progress in Business Restructuring**
   - **4-2. Progress in Growth Driver Businesses**
   - **4-3. Progress in Generating Synergies**
5. MTPC: Michihiro Tsuchiya
   - 5-1. Progress in Pharmaceutical Business
   - 5-2. Progress in Generating Synergies
6. MPI: Takumi Ubagai
   - 6-1. Restructuring and Growth Strategy
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4-1. Progress in Business Restructuring
Basic Petrochemicals Business Structural Reforms and Future Prospects

■ Promoting reforms to establish a stable profit structure

1. Reinforce the basic petrochemicals business

Cracker (Kashima Plant) : Close No.1 and fully utilize capacity at No. 2 (Jul. 2014)
(Mizushima Plant): Secure facility integration and full operations at NNE (scheduled for spring 2016)
Refinery partnership: Generate integrated application of both HS-FCC (JX Nippon Oil & Energy Corporation (JXE)) and BTcB (MCC)

2. Shift to high-performance products and optimize derivatives

EO (Kashima Plant): Develop an EO center and expand EC capacity
PE: Enhance Metallocene-based PE and the high-performance PE business
PE/PP: Shift to high-performance products and streamline manufacturing facilities

3. Promote cooperative relationships

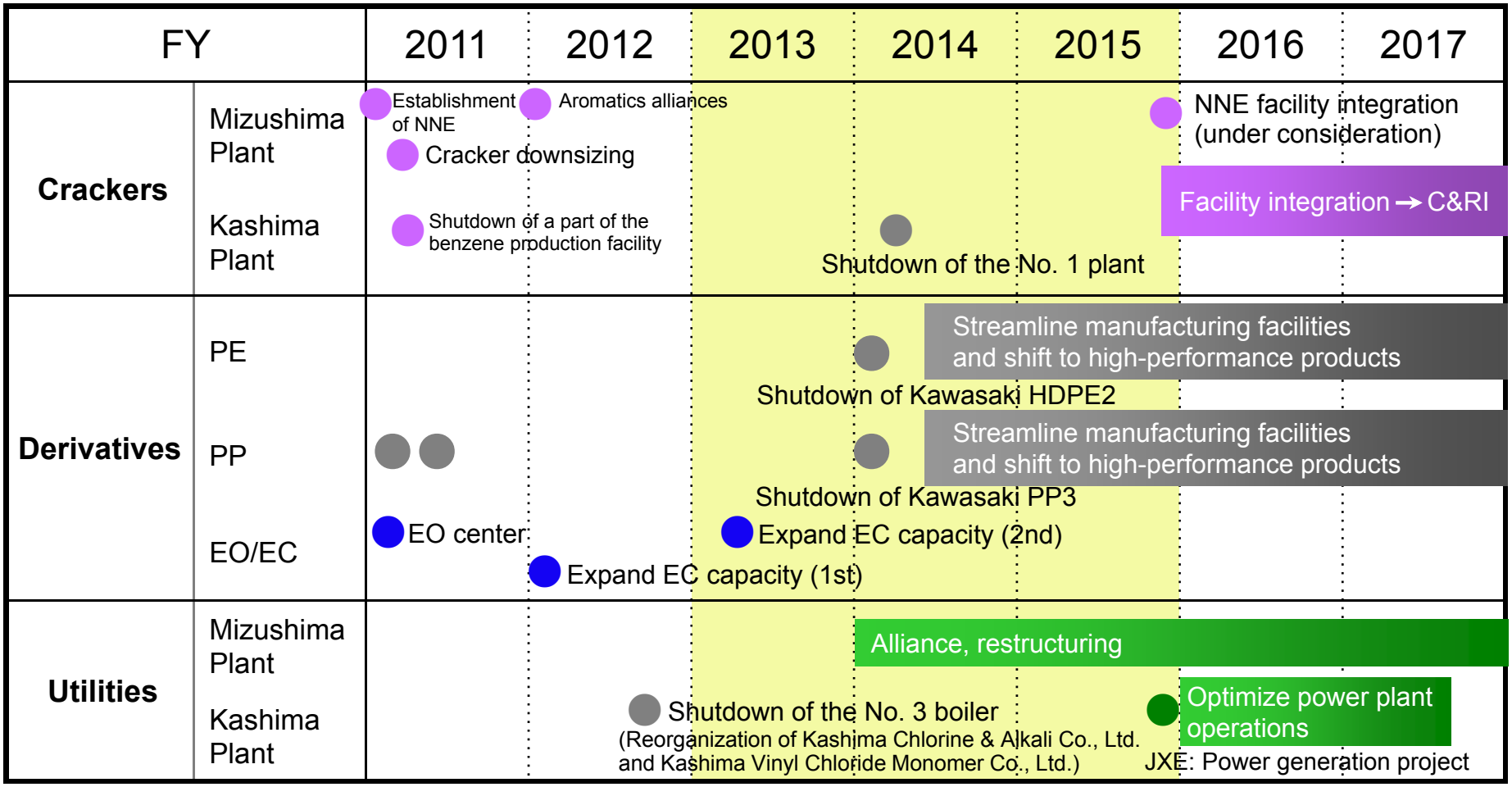
Utilities (Kashima Plant): Optimize power plant operations by the end of FY2015
(related to the JXE power generation project)

4. Develop new technologies

(Mizushima Plant): 1-Hexene, DTP, BTcB

4-1. Road Map for Structural Reforms of the Basic Petrochemicals Business

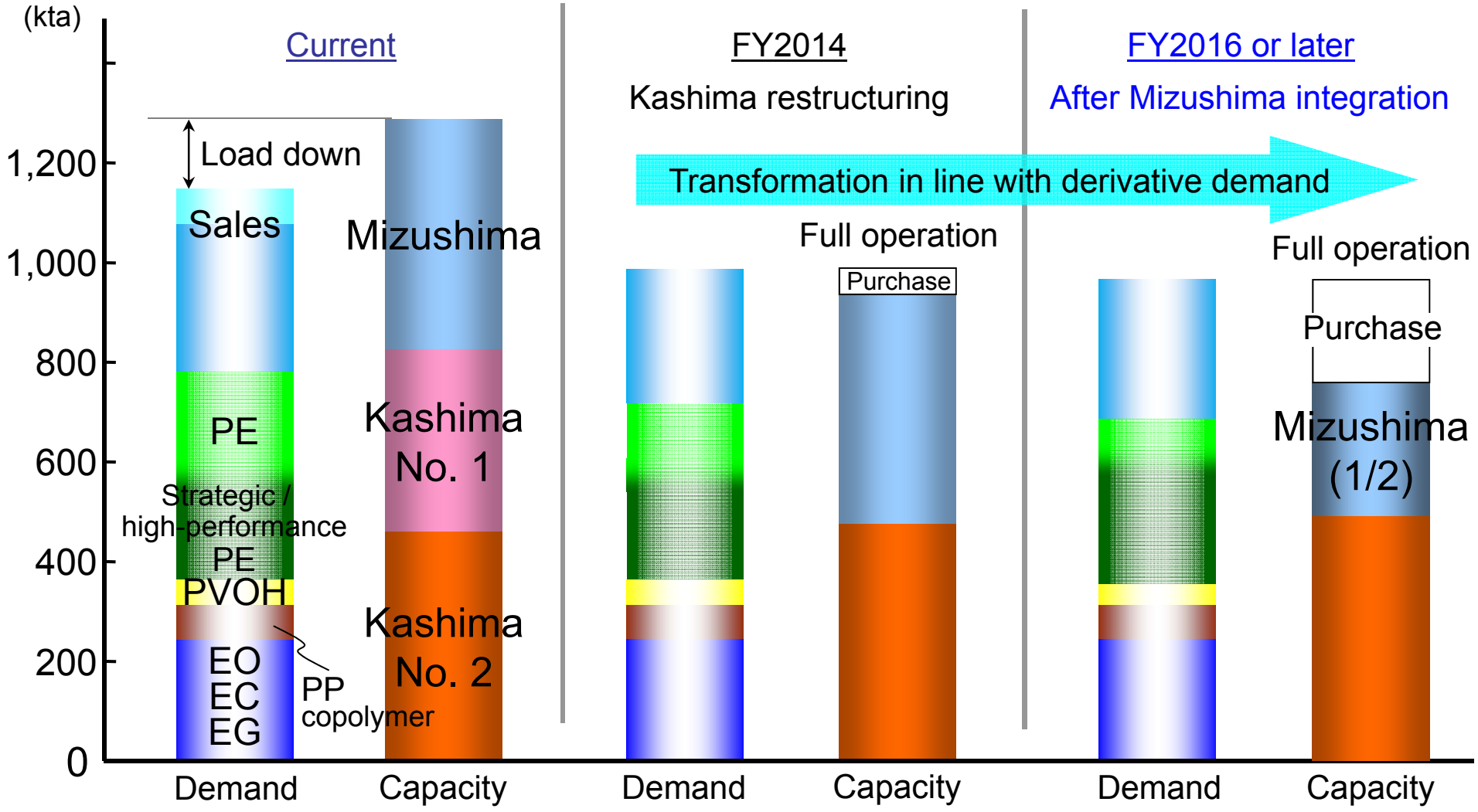
■ Structural reforms of derivatives and utilities following cracker reform



: New measures : Plant shutdown

4-1. Structural Reforms in Ethylene Capacity

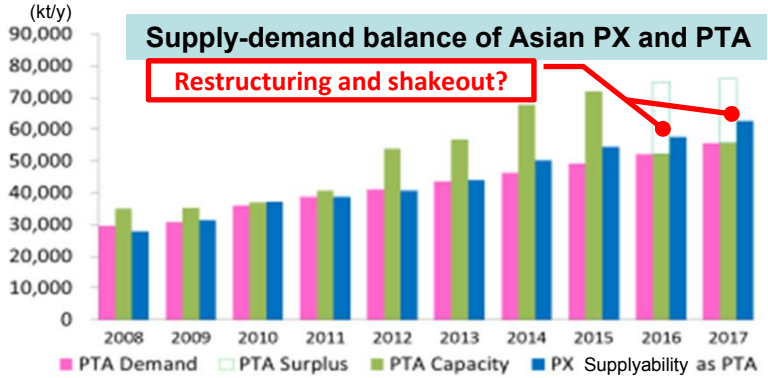
■ Start of an optimized ethylene production structure from FY2014



4-1. Terephthalic Acid and PHL/PC Chain

Terephthalic acid

- Accomplish regional pricing
- Promote thorough cost reduction programs
- Reduce PX premium price



Business environment

- Market has been set below the break-even point for a long time due to PTA overcapacity in China
- Deterioration of profit continues

Strategic policy

・India	・Accomplish regional pricing with antidumping on top of custom duties
	・Confirmed 100% operations at the No. 2 plant
	・Thorough cost reduction by securing 100% operations at the No. 2 plant, reduction in acetic acid unit consumption, purchase of electricity from the grid and conversion of heating fuel (fuel oil → coal)
・Indonesia	・Keeping regional pricing by introducing a floor price
	・Cost reduction by purchasing electricity from the grid and through extended intervals between shutdown maintenance
・Korea	・Restructuring due to the sharp decline in exports to China (downsizing)
・China	・Thorough cost reduction

PHL/PC chain

- Promoting thorough cost reduction programs

Business environment

- Ongoing weak market conditions in both PHL and PC

Strategic policy

- Thorough cost reduction (cutting logistics costs, improvement of unit consumption, etc.)
- Establish a non-phosgene PC process technology
- Shift to a profitable structure with high-performance PC products

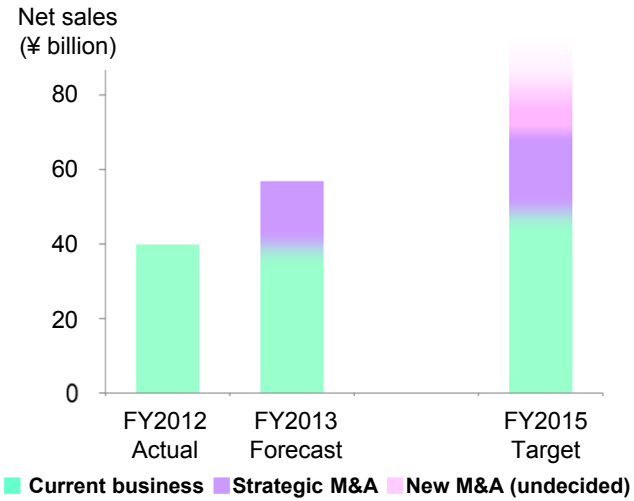
4-1. Performance Polymers

- Expand global top products
- Strengthen and expand the portfolio by adding new markets, new applications, and new technologies through R&D and M&A

[New markets]

Strengthen business platforms through M&A

[Business growth]



[New applications]

For solar panel films and cables

[New technologies]

For automobile applications

FORZEAS

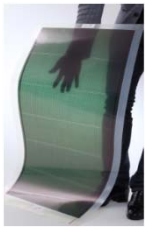
Bio-based and biodegradable polymers

4-2. Progress in Growth Driver Businesses: Electronics Applications

■ Step up from the development stage to the customer evaluation stage

■ Organic photovoltaics (OPVs)

- Started trial production of OPV cells and modules for smart building (Aug. 2013)
- Started distribution of OPV samples (Oct. 2013)
- Started field testing of OPV with Takenaka Corporation (Nov. 2013)

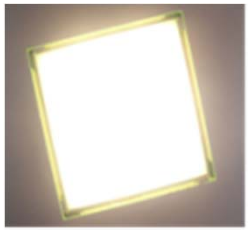


OPV sample (Light-through type)

OPV field test (Takenaka)

■ Organic photo-semiconductors (OLEDs)

- Established a sales JV (MC Pioneer OLED Lighting Corporation: MPOL) with PIONEER (Jun. 2013)
- Started distribution of samples for a new type of OLED lighting through MPOL (Sep. 2013)



OLED sample (New type)

Example (Roppongi Hills)

■ Gallium nitride (GaN) substrates

- Expanded sales for 2-inch C-plane wafers
- Started distribution of samples for 4-inch C-plane (HVPE), and 2-inch M-plane (*SCAAT*) wafers (Jul. 2013)

HVPE: Hydride vapor phase epitaxy
SCATT: Super critical acidic ammonia technology

GaN substrates (2-inch/4-inch)

LED lighting (Halogen bulb type)

Growth driver businesses

THE KAITEKI COMPANY

4-2. Agribusiness Solutions (Closed-type Plant Factory System)

■ Started hydroponic closed-type plant factory system sales

MCC

Hydroponic system

LED lighting

MRC

Water treatment system

■ Accumulating hydroponic cultivation technologies

Hydroponics technologies

- Controlling temperature, humidity, light, CO_2
- Isolating from the outside
- Preventing contamination
- Controlling water purification
- Controlling nutrients/Sterilization
- Multiple rack system
- Space-saving/Efficient location

■ High-quality control

Advantages

- Shorter growing period
- High productivity
- Stable production

■ Expanded closed-type plant factory system sales

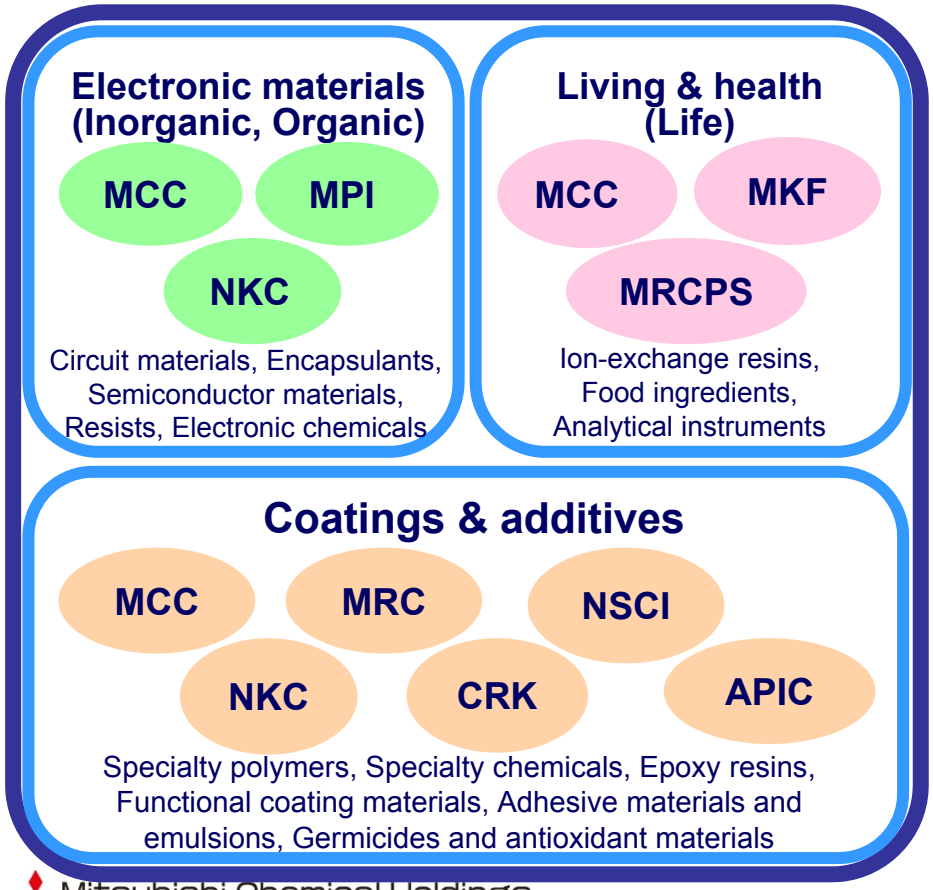
【Sales results】

・FY2012 Mir Upakovki CJSC (Russia)
Vegetable Marketing Organization (Hong Kong)
Tsudakoma General Service (Japan)
・FY2013 Orders received from 2 customers (Japan)

4-3. Progress in Generating Synergies: Specialty Chemicals

■ Promoting measures to strengthen three major fields of the business portfolio

+ Expand the scale of each business
+ Build a broad lineup of product groups
+ Move from “dispersal” to “orchestrating the Group strengths”



Progress

Orchestrating the Group strengths

+Collaborating in new acrylic emulsion products
[CRK and MRC, Apr. 2013]

+Starting collaboration for overseas marketing in the field of coatings & additives [Sep. 2013]
[Net sales: FY2012 (¥2 billion) → FY2015 target (¥4 billion)]

Strengthening of each business

+Establishing a manufacturing JV with Korea Samyang Corporation
[Separating Materials Dept., MCC, signing: Jul. 2013]

+Strengthening the competitiveness of the nitric acid business
[Integration with Kurosaki Plant, NKC by Oct. 2014]

Reforming the structure

+Transferring analysis business of Mitsubishi Chemical Analytech Co., Ltd. to MC Evolve Technologies Corporation [Oct. 2013]

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5-1. Progress in Pharmaceutical Business: Changes in the Pharmaceutical Business Operating Environment

- More pressure to cut medical expenses due to an increase in social welfare costs
  - ✓ Progress of political strategies for cutting ethical pharmaceutical costs
    - ✓ Encouraging use of generics
    - ✓ NHI drug price reduction

- Changes in the competitive environment
  - ✓ More challenging R&D (costlier, lack of new seeds, lowering success rate, and other factors)
  - ✓ From a primary care to a specialty market
  - ✓ Shift to Health Technology Assessment (HTA)
  - ✓ Expectations toward such new technologies as research and the practical use of regenerative medicine
  - ✓ Progress in such individualized medicine as companion diagnostics agents and others

5-1. Countermeasures against Changes in the Operating Environment

1. Acceleration of the post-marketing development of new and priority products
   - Post-marketing development by focusing on priority products, including *Remicade*, and such new products as *Simponi* and *Lexapro*

2. Strengthening of R&D pipelines that address unmet medical needs
   - Accelerating the acquisition of new pipelines
   - Taking up the challenges in vaccine and other businesses

3. More massive operations through structural and operational reforms
   - Transfer of plasma fractionation and fine chemical operations
   - Optimization of domestic production sites
   - Promoting the “Reform Project”
     Organizational restructuring and optimizing head counts and operations

4. Reinforcement of the generic business
   - Adding high-potential products and strategic alliances

5-1. Measures/Ethical Pharmaceutical Business

1. Increasing profits through the post-marketing development of new and priority products and royalty income from licensing-out products under a more challenging operating environment

   Domestic

   - Accelerating the post-marketing development of new and priority products
     - Priority products such as *Remicade* (for auto-immune diseases)
     - New products such as *Simponi* (for auto-immune diseases)

       and *Lexapro* (for depression)
     - Co-marketing *Tenelia* and TA-7284 with Daiichi Sankyo Co., Ltd.

   Overseas

   - *Gilenya* for multiple sclerosis (MS): Became a blockbuster in two years after its launch; royalty income has been growing as a breadwinner of operations
   - Expectations toward TA-7284/canagliflozin (for type 2 diabetes mellitus)

2. Strengthening pipelines to realize future growth while accelerating the development of existing pipelines

3. Reinforcement of the vaccine business globally

5-1. Outline of Domestic Ethical Pharmaceutical Business Strategies

■ Accelerating the post-marketing development of new products and maintaining sales of long-listed products

■ Promoting LCM
- ➢ Acquiring evidences
- ➢ Adding indications and preparations

■ Reinforcement of sales activities through collaboration with third parties

■ Restructuring of sales operations

Maximum allocation of operational resources

■ Strategic alliances

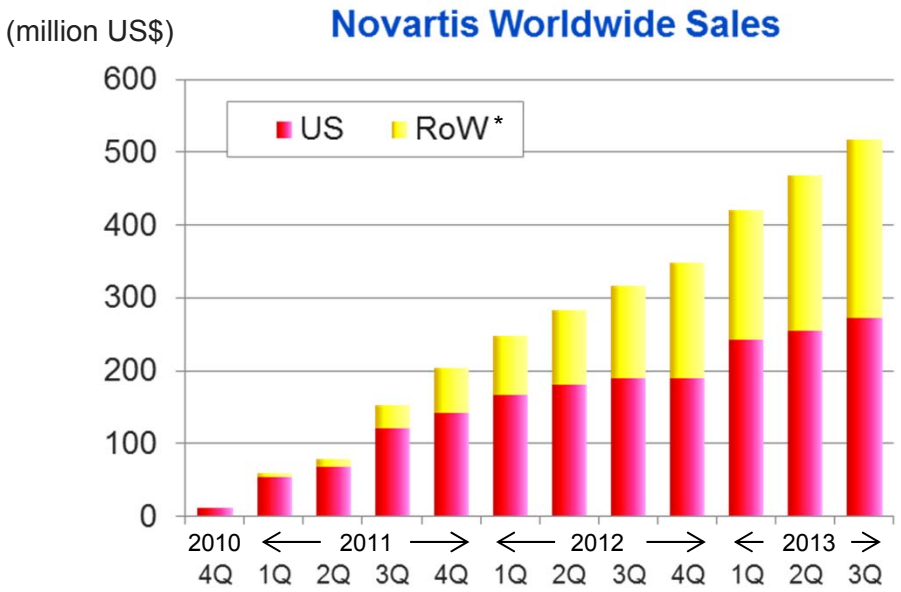
■ Non-MR promotion

■ Differentiation strategies

5-1. Growth of *Gilenya*

■ *Gilenya* for MS became a blockbuster in two years after its launch
Royalty income has been growing as a breadwinner of operations

- Discovered by MTPC and licensed to Novartis for the overseas market
- Approved in more than 75 countries, and used to treat more than 78,500 patients in clinical trials and a post-marketing setting
- Novartis 2012 worldwide sales: about $1.2 billion
- Novartis Q1-3 2013 (Jan. – Sep. 2013) worldwide sales: $1.4 billion



Source: Novartis financial results announcement

*Rest of world

5-1. Expectations toward TA-7284/Canagliflozin

- The licensee (Janssen Pharmaceuticals, Inc.) obtained approval in the U.S. in Mar. 2013; launched in Apr. 2013; takeaways were sufficiently strong
- The licensee obtained approval in Europe in Nov. 2013
- Approval and launch expected in Japan in the short term

- U.S.: Approved in Mar. 2013
  - First-in-class
  - Trade name: *INVOKANA*
  - No. 1 branded therapy prescribed by U.S. endocrinologists when adding or switching non-insulin type 2 diabetes medications
- EU: Approved in Nov. 2013
- Japan: Filed in May 2013

Stable businesses

5-1. Pipeline Status (New Pharmaceuticals, Additional Indications)

THE KAITEKI COMPANY

As of Oct. 30, 2013

Phase 1

- MP-513 (U.S.)
  Type 2 diabetes mellitus
- MT-1303 (Japan)
  Multiple sclerosis
- MT-1303 (EU)
  IBD
- MP-124 (U.S., Canada)
  Acute ischemic stroke
- MP-157 (Europe)
  Hypertension
- GB-1057 (U.S.)
  Stabilizing agent
- MP-424 (Korea)
  Chronic hepatitis C
- *Cholebine* (Japan)
  Hyperphosphatemia

Phase 2

- MT-1303 (Europe)
  Multiple sclerosis
- MT-1303 (Europe)
  Psoriasis
- MT-9938 (U.S., Canada)
  Refractory pruritus
- MP-513 (Europe)
  Type 2 diabetes mellitus
- MT-3995
  (Europe, Japan)
  Diabetic nephropathy
- MT-4666 (Japan)
  Dementia of Alzheimer's type
- *Cholebine* (Japan)
  Type 2 diabetes mellitus

Phase 3

- MP-214 (Japan)
  Schizophrenia
- *Remicade* (Japan)
  Refractory Kawasaki disease
  Behcet's disease with special lesions
  Pediatric Crohn's disease
  Pediatric ulcerative colitis
  Psoriasis: increased dose
- *Imusera* (Multinational study)
  CIDP[*1]
- *BindRen* (Europe)
  Pediatric hyperphosphatemia
- *Radicut* (Japan)
  ALS
- *Talion* (Japan)
  Pediatric allergic rhinitis
  Pediatric atopic dermatitis
- *Telavic* (Japan)
  Chronic hepatitis C [genotype 2]
  Chronic hepatitis C [combination with Pegasys]
  Chronic hepatitis C [combination with Feron]

- - - Discontinued - - -

- MP-146 (U.S., Europe)
  Chronic kidney disease

Filed

- TA-7284 (Japan)
  Type 2 diabetes mellitus
- MP-424 (Taiwan)
  Chronic hepatitis C
- *Tenelia* (Japan)
  Type 2 diabetes mellitus, additional combination

Approved, Launch (After May 2013)

- *Maintate* (Japan)
  Tachycardiac atrial fibrillation

Major license-out (post Phase 3)

Approved, Launch

- TA-1790 (Europe)
  Erectile dysfunction

Filed

- TA-7284 (Europe)[*2]
  Type 2 diabetes mellitus
- TA-7284 Met IR FDC (Europe)
  Type 2 diabetes mellitus
- MP-513 (Korea)
  Type 2 diabetes mellitus

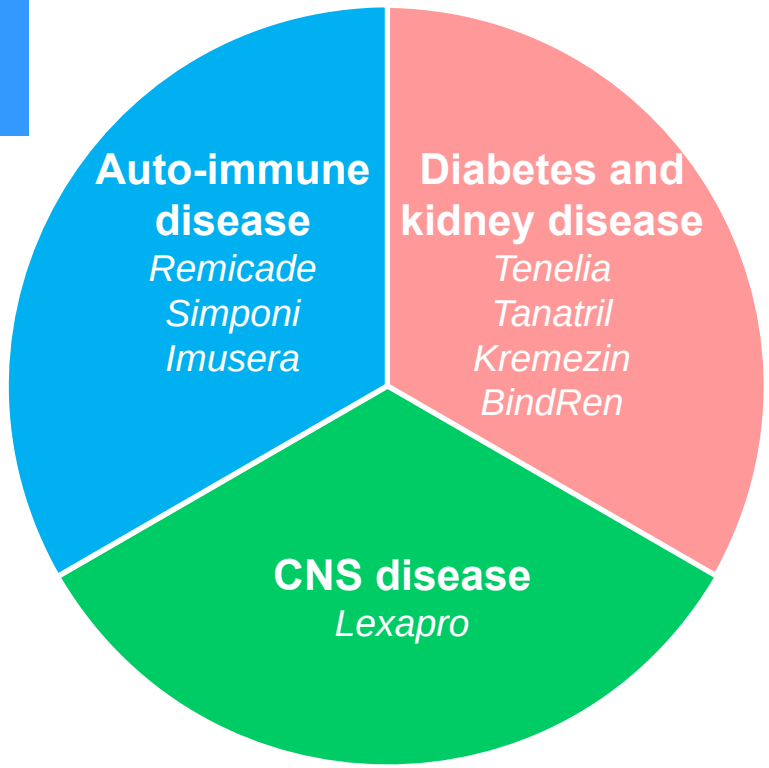
Disease area
- : Auto-immune disease
- : Diabetes and kidney disease
- : CNS disease
- : Other

[*1]: Multinational study, co-developed with Novartis Pharma in Japan, licensed to Novartis overseas
[*2]: Approved in Nov. 2013

5-1. Three Priority Disease Areas

■ Identifying the three priority disease areas of auto-immune disease, diabetes, and kidney disease, and CNS disease for new products creation

MT-1303
MS/Europe: P2, Japan: P1
Psoriasis/Europe: P2
IBD/Europe: P1



TA-7284
Type 2 diabetes mellitus/
U.S.: approved and launched
Europe: approved
Japan: filed

MT-3995
Diabetic nephropathy/
Europe: P2, Japan: P2

MT-9938
Refractory pruritus/U.S.: P2

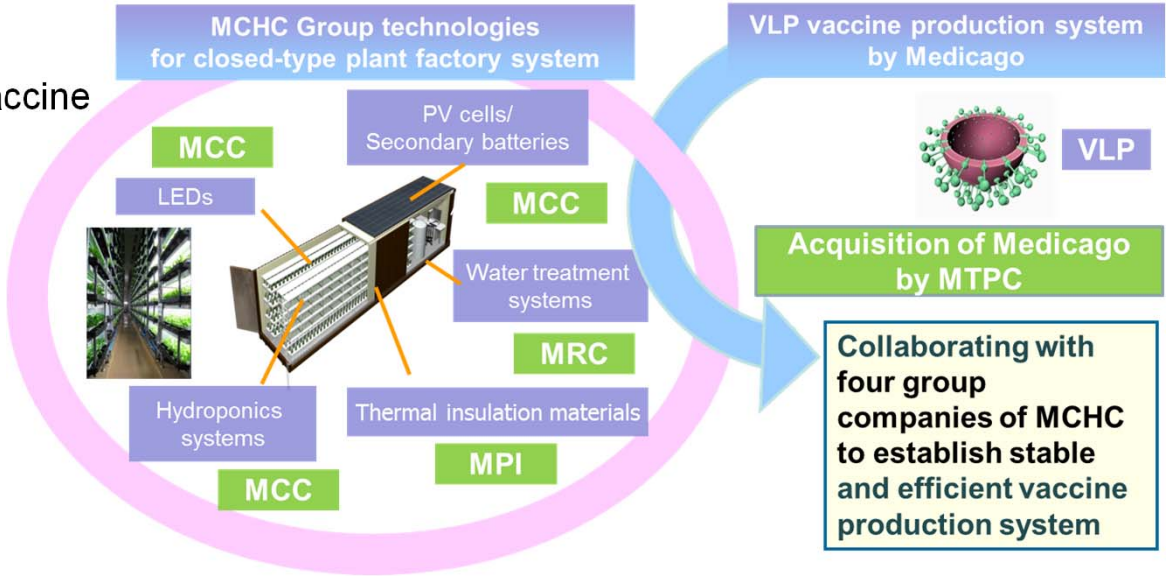
MP-214 Schizophrenia/Japan: P2b/3
MT-4666 Alzheimer-type dementia/Japan: P2

5-1. Strengthening of Vaccine Business

■ Reinforcement of domestic vaccine business franchise based on relationship with BIKEN as well as strengthening vaccine business in Japan and overseas with newly obtained vaccines and technologies through acquisition of Medicago, Inc.

Acquisition of Medicago

- Acquisition of platform technology of plant-derived VLP vaccine production
- Examine utilizing a closed-type plant factory system with technologies from four core operating companies of the MCHC Group
- Expansion of pipeline
  - Quadrivalent seasonal influenza vaccine
  - Pandemic influenza vaccine
  - New vaccine candidates such as rotavirus, etc.



VLP: Virus-like particle

Strengthening of the collaboration with BIKEN

- Promotion and co-development of BIKEN products (Japan and overseas)

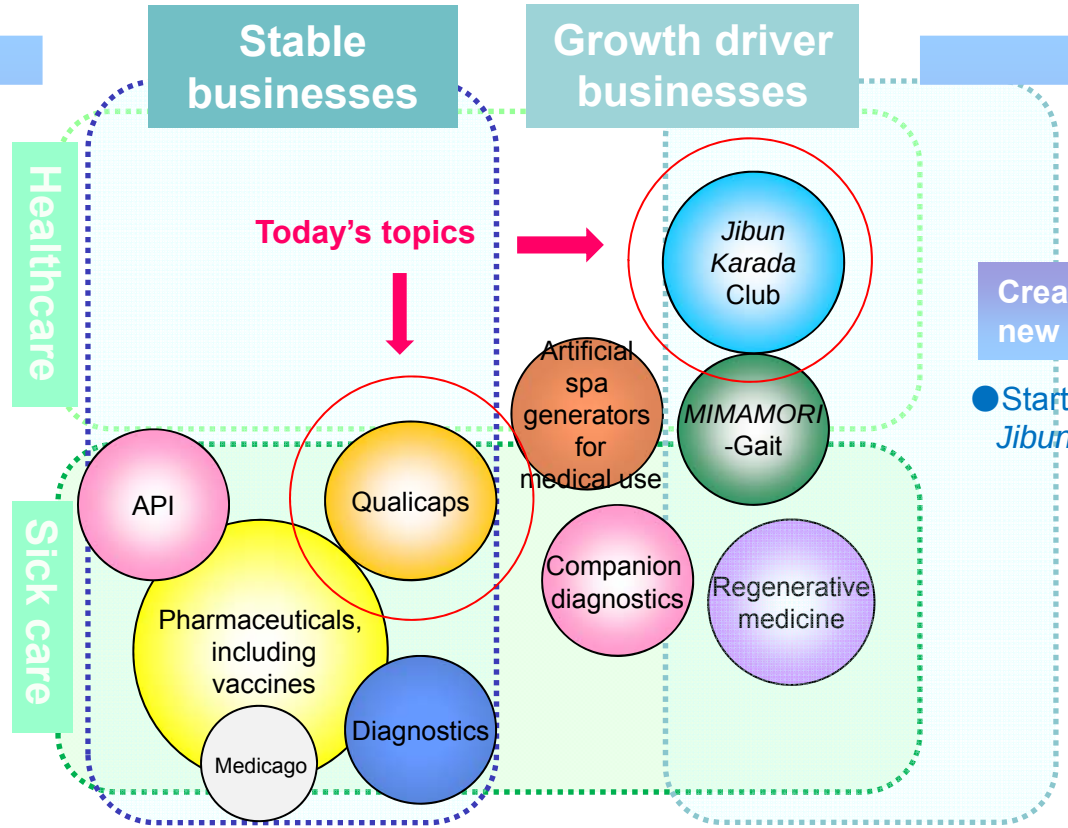
5-2. Progress in Generating Synergies: Healthcare Solutions Strategy

■ Taking up the challenge to create new businesses and strengthen basic profitable businesses to deliver a variety of solutions from sick care and healthcare to address unmet needs

MCHC Group

Strengthening the earnings base
⇔ Strengthening pharmaceutical related businesses

- Strengthening the earnings base by acquiring Qualicaps
- Acquiring new technologies and enhancing the vaccine business by joining Medicago to MCHC



Creation of new businesses

- Starting the business of *Jibun Karada* Club

5-2. Affiliation of Qualicaps

■ Contributions to the enhancement of the earning base for the healthcare business with Qualicaps's steady profit-making business
■ Aiming for further growth through the orchestration of MCHC Group companies

Qualicaps®

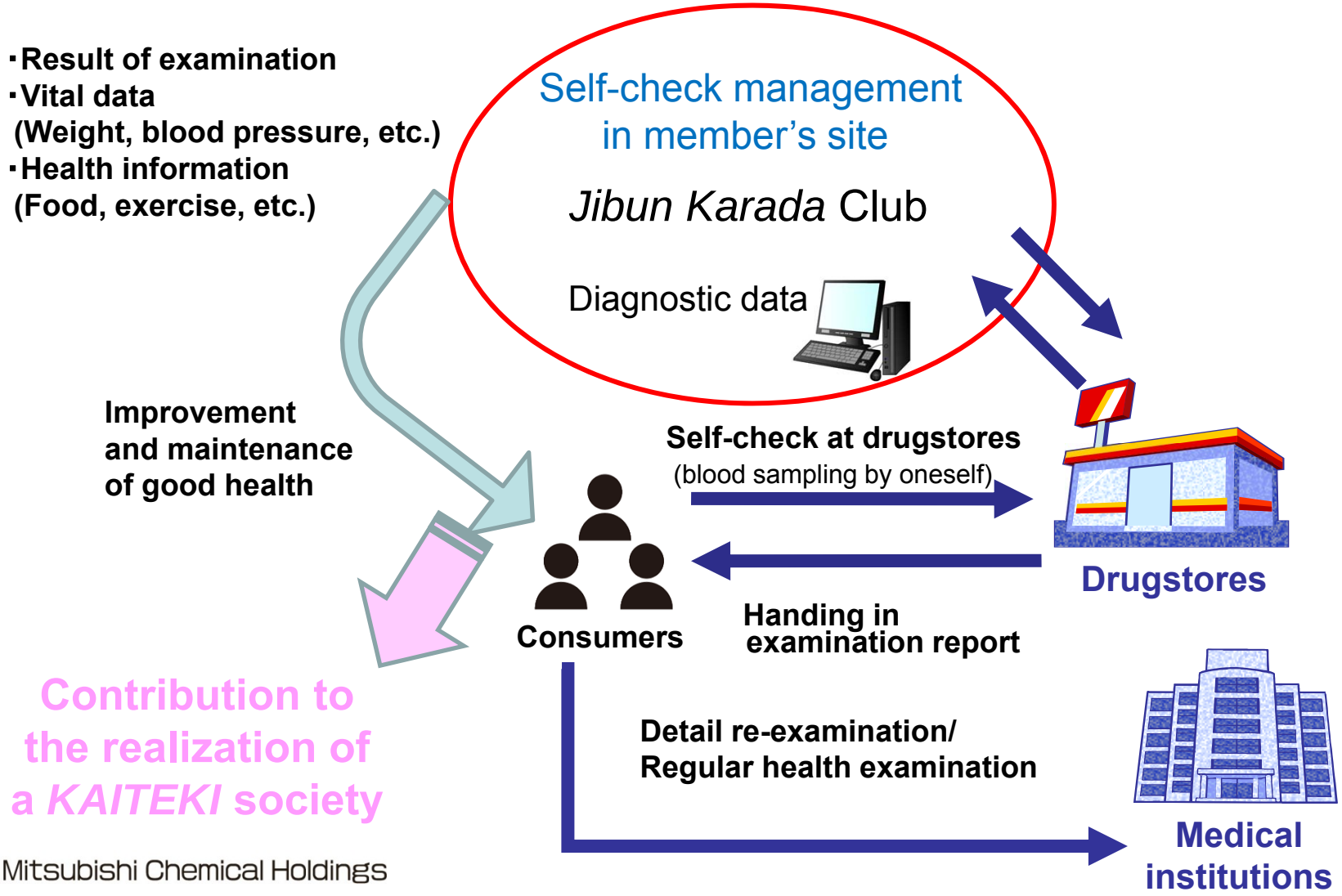
Pharmaceutical Capsules
Health & Nutrition Capsules
(Cellulose, Gelatin)

- Maintaining steady profit with a high market share of pharmaceutical hard capsules composed of plant-derived cellulose while expanding the pharmaceutical process equipment business

- Developing more-competitive products by utilizing the technologies of MCHC Group companies

5-2. Outline of *Jibun Karada* Club

■Self-check at neighboring or familiar drugstores to support good health



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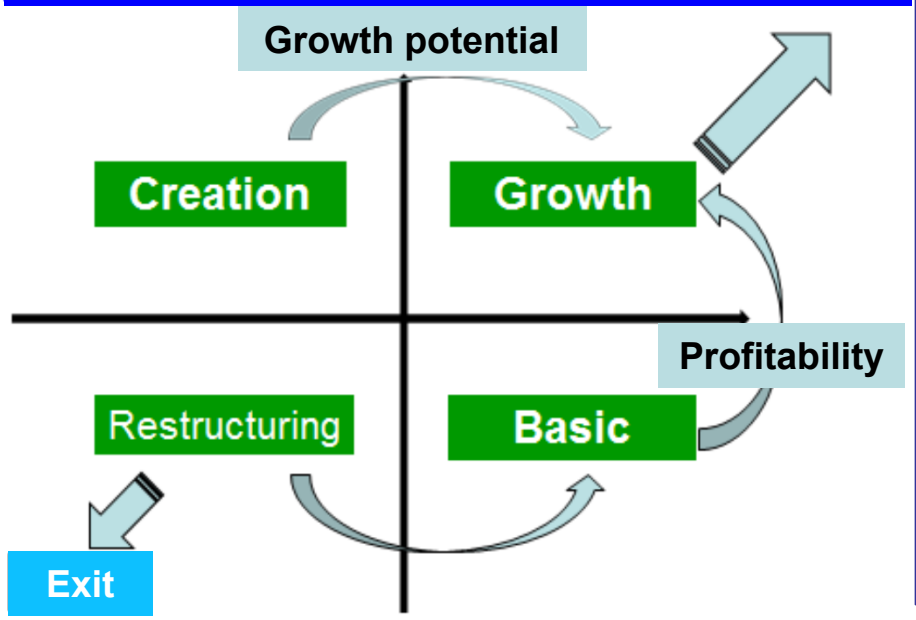
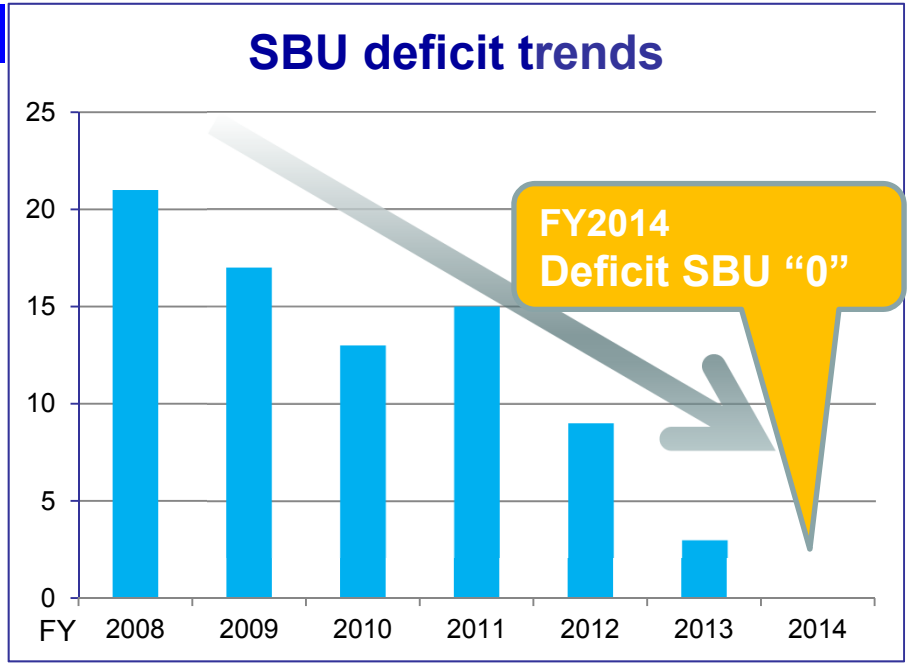
6-1. Restructuring and Growth Strategy: Restructuring

■ Results of restructuring and reduction of deficit business → Groundwork

MPI *APTSIS 15*・Plus Portfolio





(Excluding new business)

■ Restructuring
- ➢ Transfer pipe business
- ➢ Withdraw from light metal extrusion
- ➢ Reinforce springboard for business:
  - Withdraw from businesses that should not be continued
  - Improve the break-even point on a large scale

6-1. Growth Strategy

■Design balanced business expansion

FY2015 Sales Revenue by Product Field

Industrial | Information/Electronics | Packaging | Civil/Construction | Medical Packaging | Agricultural Materials

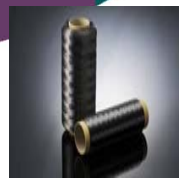


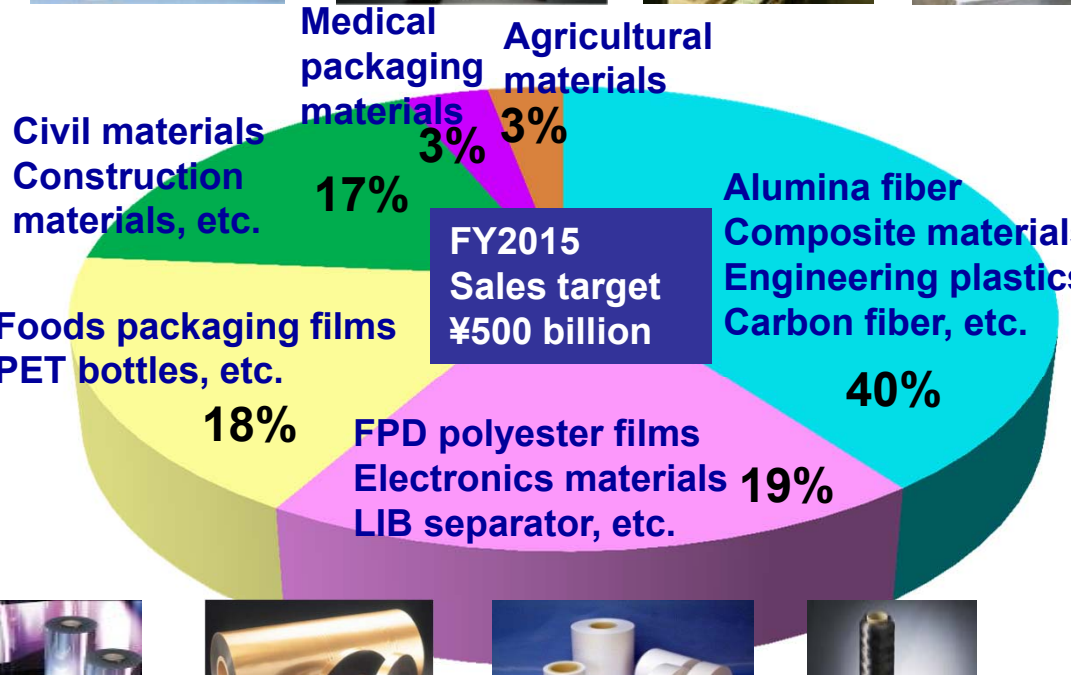








6-1. New Capital Investments (since Apr. 2013)

■ FY2015 contribution to total sales about ¥ 50 billion (includes past investments)

Operations commenced	Project	FY2015 sales contribution
May 2013	Quadrant to become a wholly-owned subsidiary (Shareholding 50% →100%)	—
Jun. 2013	Expansion of functional films at J-Film Narita Plant (Chiba)	¥0.8 billion
Jul. 2013	New optical polyester film plant at Suzhou (Jiangsu, China)	¥6.4 billion
Aug. 2013	New agricultural PO film plant at Wuxi (Jiangsu, China)	¥1.7 billion
Nov. 2013	New high gas barrier PET bottles plant at Hiratsuka Plant (Kanagawa)	¥1.0 billion
Jun. 2014	New aluminum and metal composite material (*ALPOLIC*) plant at MFE (Wiesbaden, Germany)	¥3.0 billion
Oct. 2014	Expansion of high-performance multi-layer film (*DIAMIRON*) at Azai Plant (Shiga)	¥0.8 billion
Apr. 2015	New PET film converting facility at Wuxi (Jiansu, China)	¥2.1 billion

6-1. *DIAMIRON*

■ Expansion of new applications where the material design of food barrier film is used

Core technology

- Co-extruded multi-layer
- Oxygen barrier design
- Interlayer adhesion material design

Application performance

- Deep drawing packaging for food & medical applications
- Infusion bag
- Pillow packing

E.g. deployment to healthcare

Solution to the medical malpractice problem

High-performance awareness of the infusion bag

- **Gas barrier**
- **Non-adsorption**

E.g. deployment to food applications

Prevention from contamination in the food production process

(Easy opening of pillow packing)

- **Simplification of work**
- **Safety**
- **Sanitation**

6-1. Polyester Film

- Build PET film converting facility in Wuxi, China
- Work with PET film facility in Suzhou for production of base film & conversion

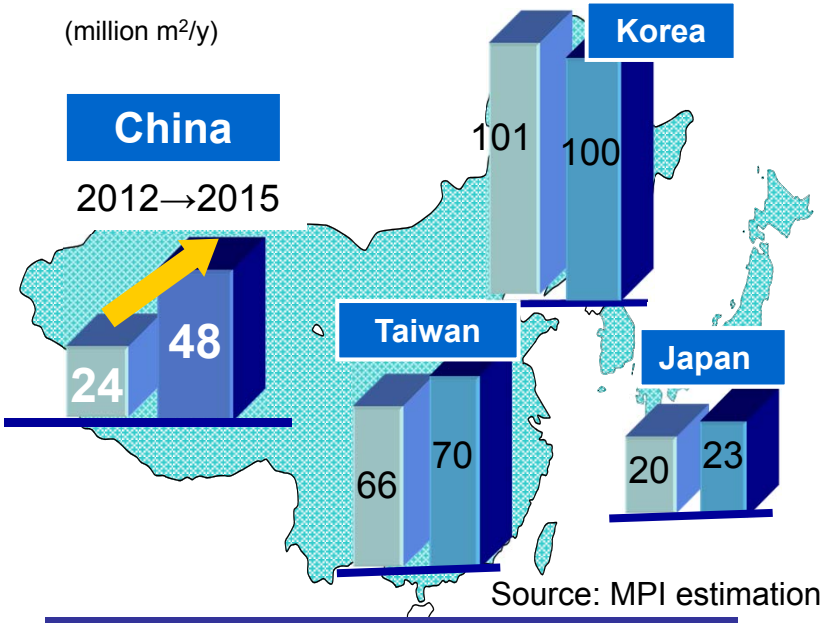
Investment overview

Name: Mitsubishi Plastics Converting Film Wuxi Co., Ltd.
Location: Wuxi, Jiangsu, China
Start of production: Apr. 2015 (target)
Capital: ¥1.2 billion
Capacity: 4,800t/y

*Production started in Aug. 2013 (Suzhou)

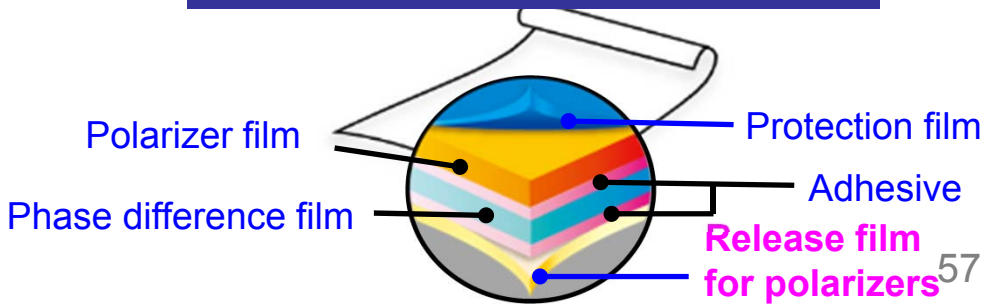
- Steady growth in silicone coating PET film for polarizers
- Building a production and supply system in China, where demand is growing more and more
- Keeping a high share (about 50%)

FPD panel market shift to China



Source: MPI estimation

Polarizer structure



6-1. New Demand Area

■ Start marketing in Southeast Asia based on a top-class track record in Japan

Improvement of purchasing power

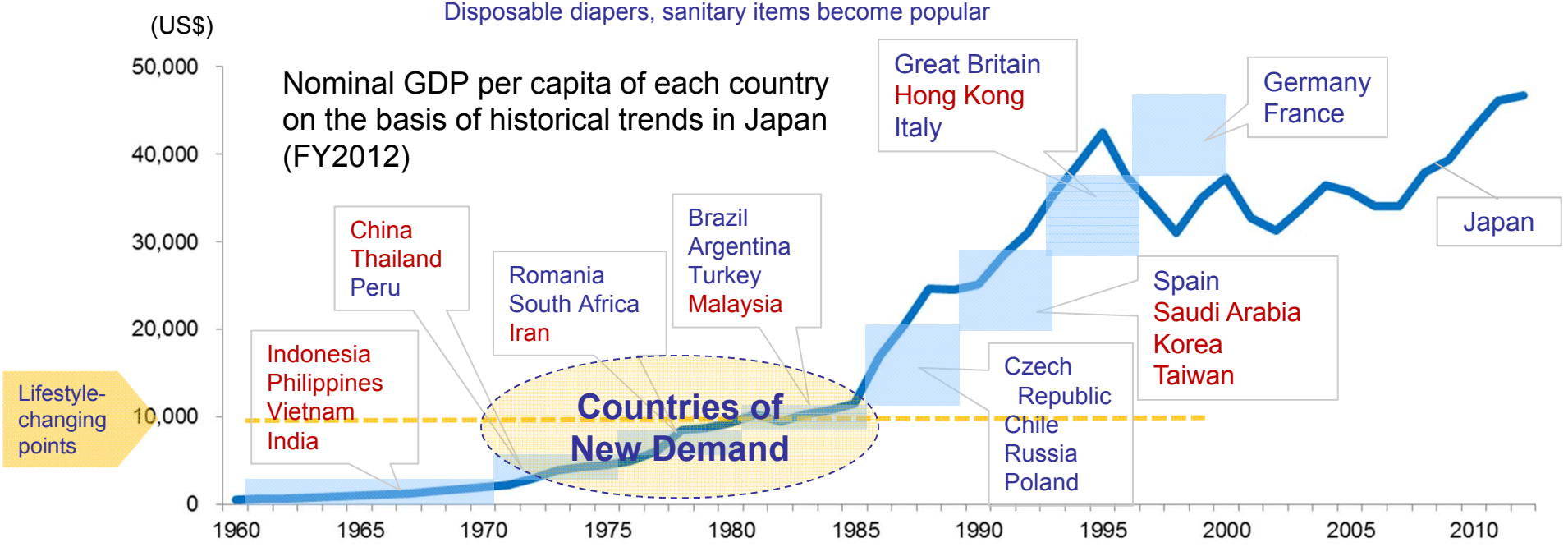
- Increase in workers' wages caused by GDP growth

Change of lifestyle

- Westernized & Japanese-style clothing, food and housing
- Safety & security of foods
  (Reduction of preservatives)
  Face-to-face selling ⇒ Retort & boiled ⇒Chilled
- Hygiene
  Disposable diapers, sanitary items become popular

Expand business opportunities

- Expansion of food packaging
  - *DIAMIRON* (Multilayer film)
  - *DIAWRAP* (Stretch film)
  - CVF (High barrier film)
- Expansion of hygiene films
  - Permeable film, Non-breathable film

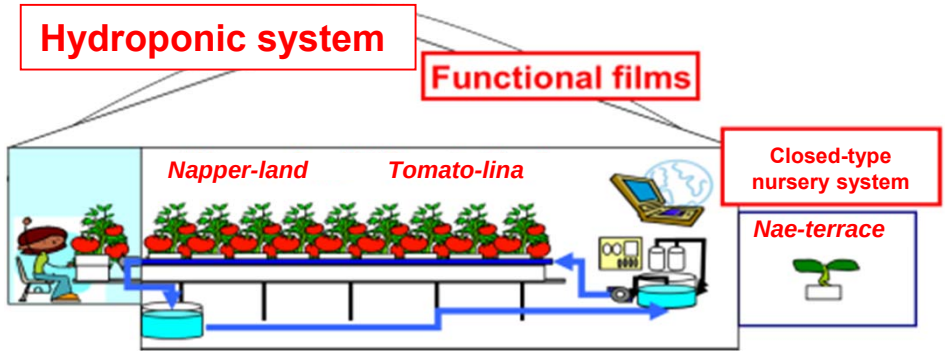


6-1. Agribusiness Solutions (Solar Plant Factory)

■ Mitsubishi Plastics Agri Dream Co., Ltd. to expand the plant factory business in China

Functional films/Hydroponic system

・Keep the environment and natural resources safe
・Prevent foods from contamination



Nov. 2011—
MPAD & China Corp. Started verification testing of the hydroponic system

・Production technology
・Adaptability to the market

Jan. 2013—
Production and sales of high-quality vegetables

・Business availability

Full-scale entry into China

Apr. 2014—
Hydroponic system business start

—FY2015
Sell 15 plant factories (target)

Our Chinese Partner

Suzhou China Corp. = Sales amount: ¥5 trillion

Marketing & Sales Channels

6-2. Progress in Generating Synergies: Polymer Processing and Information and Electronics

■ Offer solutions based on the development of high-performance products

LED lighting materials, optical films,
Printed electronics, OPVs, OLED materials,
and other products

High gas barrier films

Sustainable resources
Films and sheets

Phosphor composites

High heat resistance
Transparent films

Synergies through MCC's and MRC's materials and MPI's molding processing

MCC, MRC
(Material development technologies)

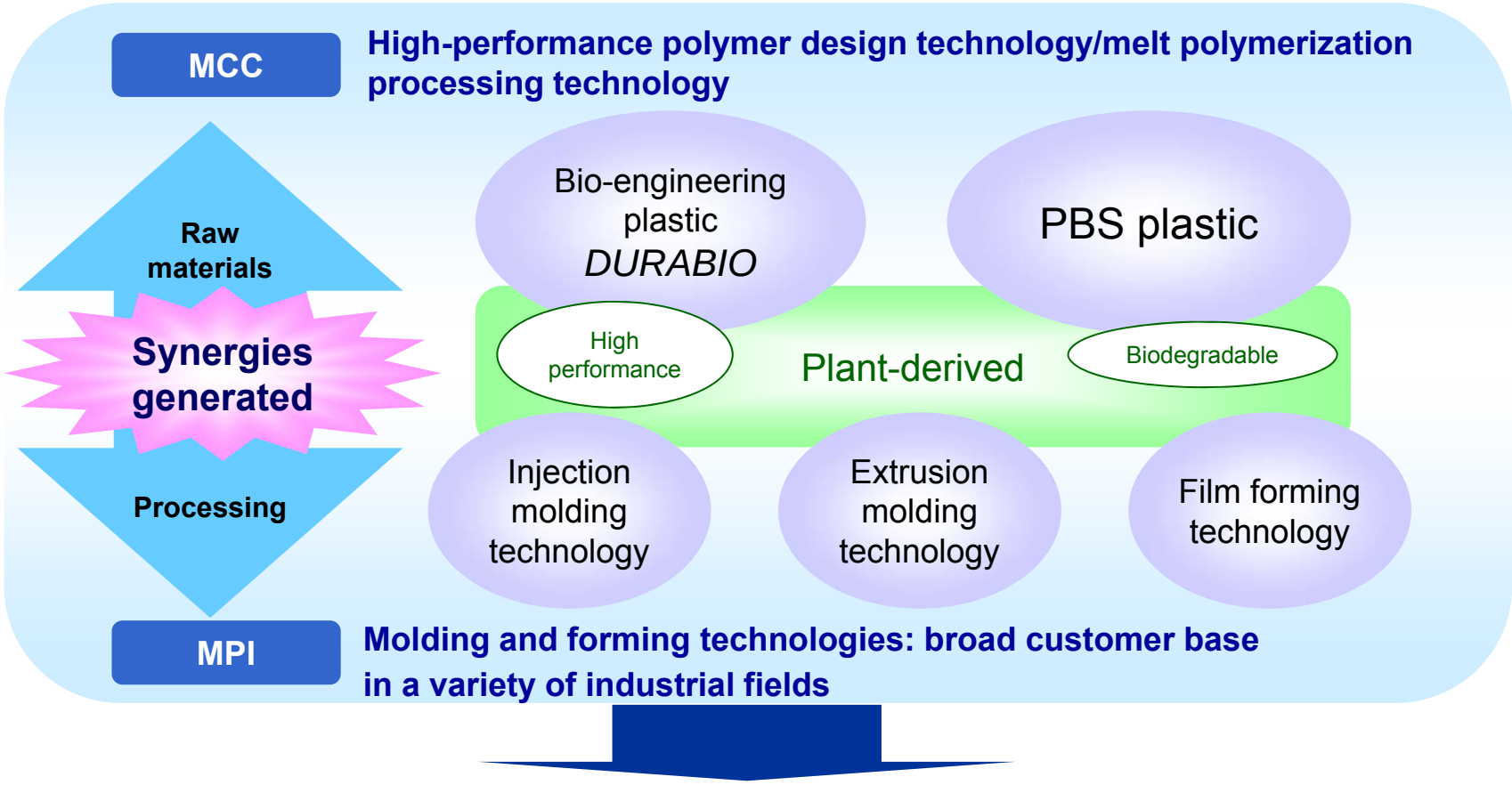
MPI
(Molding processing technologies)

Growth driver businesses

6-2. Polymer Processing and Information and Electronics

THE KAITEKI COMPANY

■ Generation of synergies in sustainable resource products business



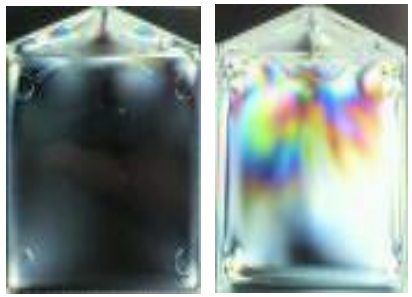
Provide solutions to customers by development of high-performance films, sheets, and molded products

6-2. Polymer Processing and Information and Electronics

■ Development of applications for *DURABIO* bio-engineering plastic, which has high transparency and excellent optical properties, weather durability, and scratch resistance

Optical films and sheets

- Responding to trend toward thinner and more-flexible products
  - Improve surface hardness
- Expecting more products to be made of plastic
  - Lighter weight desired
  - Prevents cracking as well



Low birefringence compared to PC

Transparent acoustic walls

- Growing environmental needs (for sound barriers, ensuring sunshine)
- Better views for passengers on expressways and high-speed railways
- Trials under way since Aug. 2013
- Plan to develop products integrated with OPV

Has not yellowed much in weather durability testing

6-2. Polymer Processing and Information and Electronics

■ Development of applications for biodegradable PBS plastic (*BioPBS*)

Biodegradable mulching films for agricultural use

- Mitsubishi Plastics Agri Dream Co., Ltd.
  Trade name: *CAELUCCI*
  Introduction of the plant-derived materials: Start from 2015
- Switch from polyethylene mulching films
  - Reduces labor (not necessary to strip off and collect)
  - Addresses environmental issues (film left behind after harvesting)

Development of other applications

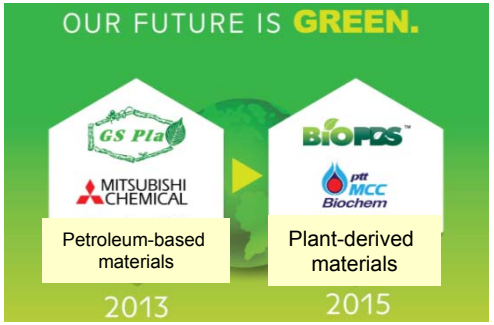
- Agricultural materials
  - Environmentally friendly products
- Consumer electronics and office equipment
  - Molded parts and materials (incombustible)
- Automobiles
  - Glass fiber infused materials

Business development for PBS plastic

- Transition from petroleum-based materials to plant-derived materials
- Establish a stable production and supply structure

PTTMCC Biochem Company Limited

(Joint venture established with PTT of Thailand in Mar. 2011)



Today's Agenda

MCHC: Yoshimitsu Kobayashi

1. Performance Review
   - 1-1. Business Environment
   - 1-2. Outlook for FY2013
   - 1-3. Portfolio Transformation
2. Progress in *Step 2*
   - 2-1. Verification of Progress by Each Growth Model
   - 2-2. New Healthcare Company
   - 2-3. Taiyo Nippon Sanso Corporation
3. *KAITEKI* Management
   - 3-1. Progress in *KAITEKI* Management
   - 3-2. Quantification of *KAITEKI* Management
4. MCC: Hiroaki Ishizuka
   - 4-1. Progress in Business Restructuring
   - 4-2. Progress in Growth Driver Businesses
   - 4-3. Progress in Generating Synergies
5. MTPC: Michihiro Tsuchiya
   - 5-1. Progress in Pharmaceutical Business
   - 5-2. Progress in Generating Synergies
6. MPI: Takumi Ubagai
   - 6-1. Restructuring and Growth Strategy
   - 6-2. Progress in Generating Synergies
7. MRC: Hitoshi Ochi
   - **7-1. Business Development of MMA**
   - **7-2. Progress in Growth Driver Businesses**
   - **7-3. Progress in Generating Synergies**

7-1. Business Development of MMA: Key Measures toward FY2015

■ Establish global operations and strengthen competitiveness

Overview of FY2013

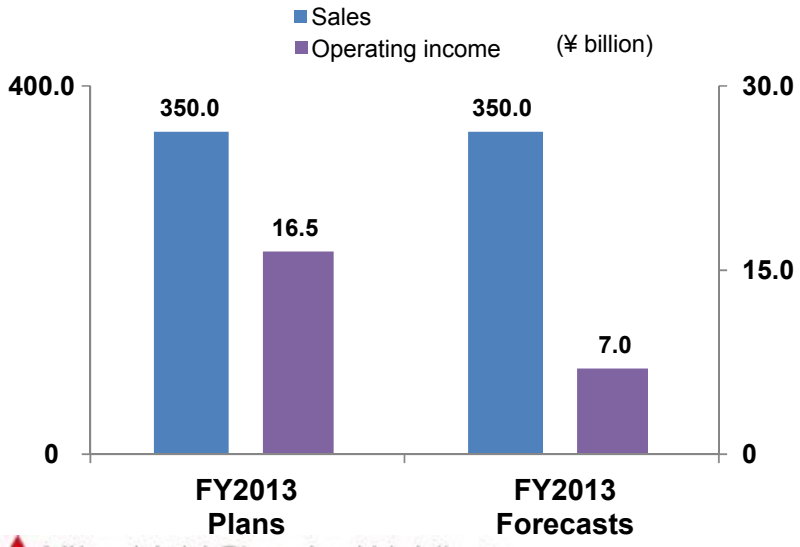
■ **Slowdown of the Chinese economy**
- ➢ Downturns in sales volume and price
- ➢ Price stagnation due to increased competition in other Asian markets

■ **Delay of the Beaumont plant**
- ➢ Purchase/resale of other manufacturers' products
- ➢ External purchase of main raw materials
- ➢ Delay in start of production of MAA

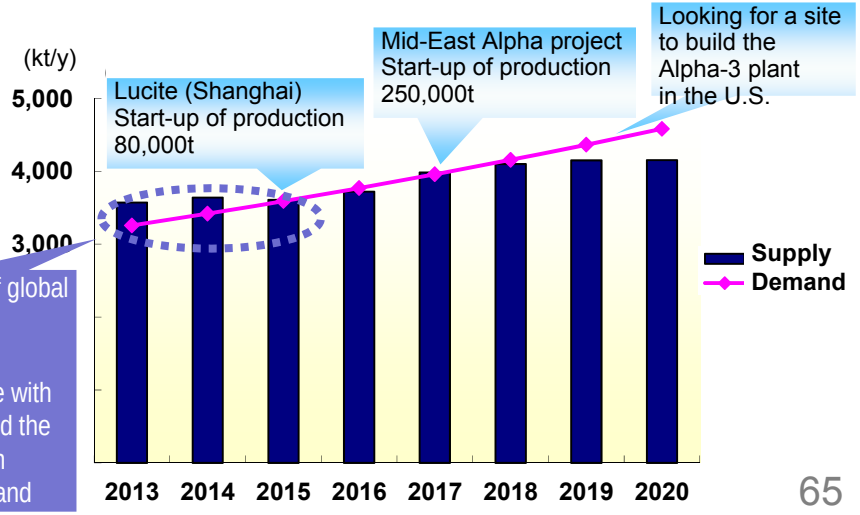
Key measures toward FY2015

■ **Establish global operations**
- ➢ Optimization and market leadership

■ **Increase the rate of return and rationalization**
- ➢ U.S. (Beaumont): Commence production
  - MMA: Start in Nov. 2013, full production in Jan. 2014
  - MAA: Start in Jun. 2014
- ➢ Thailand: Commence production at new MAA facility (Mar. 2014, 8,000t)
- ➢ Shanghai, China: Expand and rationalize facilities (80,000t)
- ➢ Singapore: Improve energy efficiency 15%



Supply-demand balance of MMA monomers

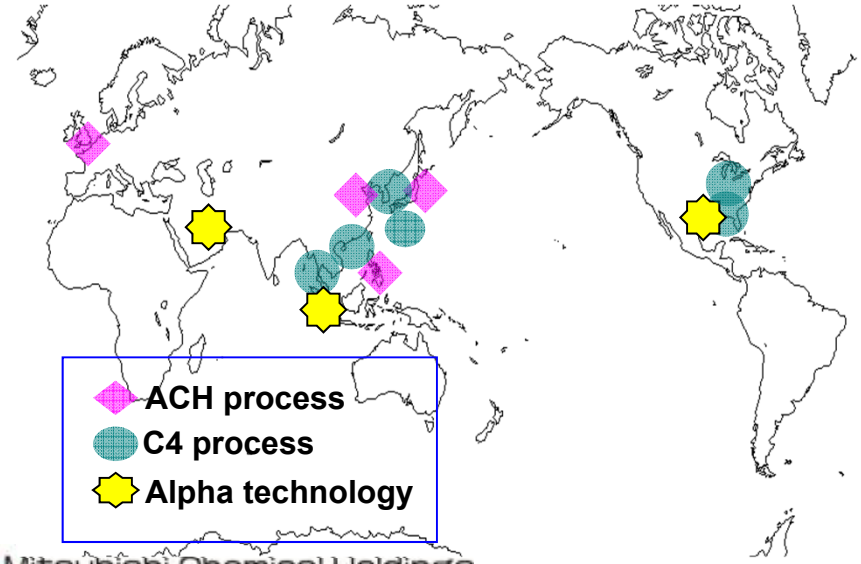


- Establishment of global operations
- Optimization of production in line with raw materials and the balance between supply and demand

7-1. Strategic Moves toward 2020

■ Strengthen our position as the global leader by optimizing the MMA production process

Process	Main raw material	Evaluation
ACH process	HCN (by-product of AN production)	Reduced competitiveness
C4 process	Derived from naphtha	Difficulty in procurement Increasing naphtha costs
New ethylene process (Alpha technology)	Based on low-cost gas	Increased cost competitiveness



U.S.
- Partly replace the ACH process with Alpha-3
- Expand into South America

EAME*
- FY2016: Commence operations at Mid-East Alpha-2
- Development across the entire regions including India and Africa

China
- Growth strategies focused on the supply and demand balance in the Chinese market
- Expansion of the ACH and C4 processes within the context of the AN market

Japan
- Respond to changes in the demand structure
- FY2015: A portion of C4 process MMA production → MAA production

EAME*: Europe/Africa/Middle East

7-2. Carbon Fiber and Composite Materials: Key Measures toward FY2015

■ Business expansion and increased revenues through active development of industrial applications

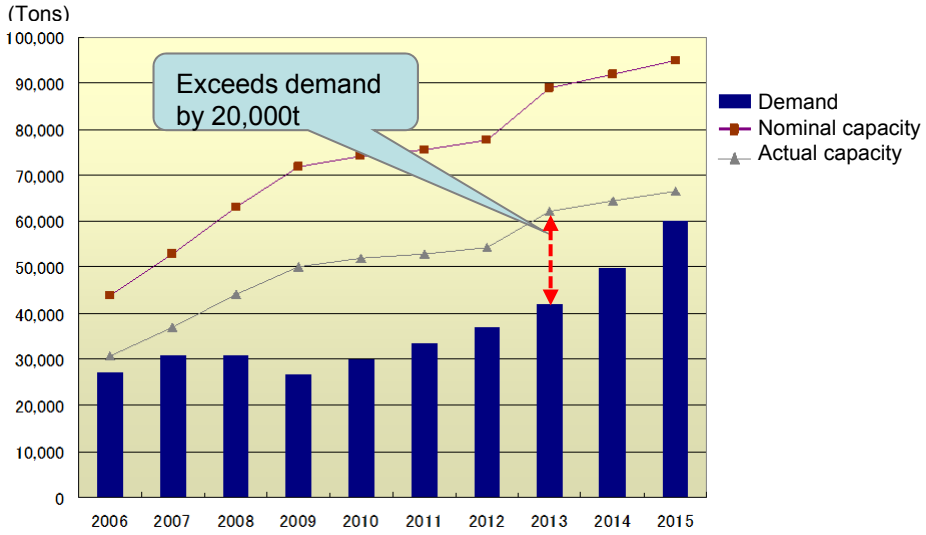
Overview of FY2013

- Sign of improvement in the balance between demand and supply for industrial applications
  - Expansion of demand for aircraft applications
  - Demand for pressure vessels
  - Recovery of demand for wind turbines
- Robust demand and recovery of prices in Asia for sports gear

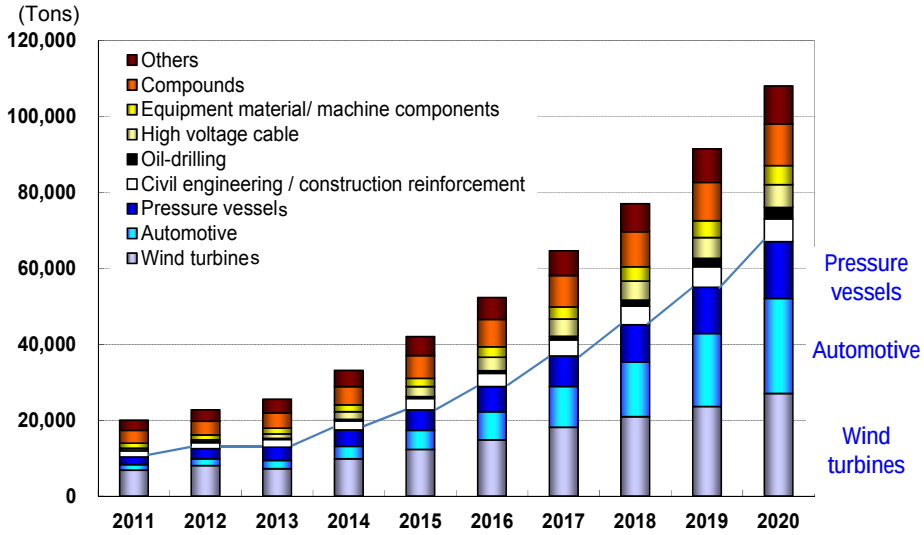
Key measures toward FY2015

- Cost reduction and correction of prices
- Active development of industrial applications with high growth potential
  - Marketing of original intermediate materials
    - PCM, SMC, NCF, towpreg, etc.
  - Establishment of a value chain for automotive, pressure vessel and wind turbine applications

Supply-demand balance for carbon fiber



Demand forecasts for carbon fiber (industrial-use)



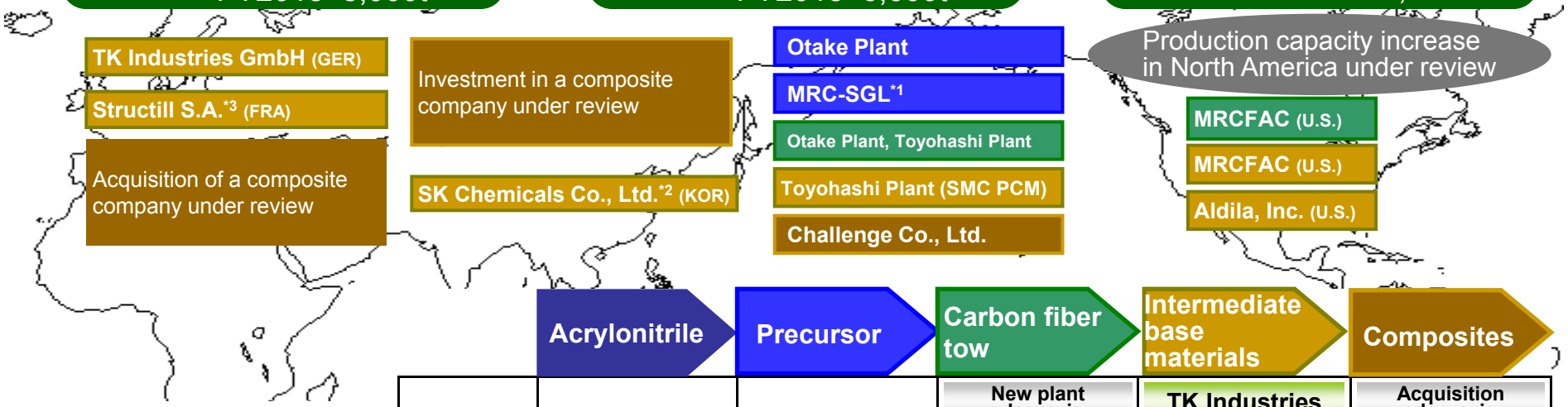
7-2. Development of Value Chains

■ Develop global value chains to expand industrial application businesses

Wind turbines
(mainly in Europe)
Demand FY2013 5,000t
FY2015 8,000t

Automotive
(mainly in Europe)
Demand FY2013 2,200t
FY2015 6,600t

Pressure vessels
(mainly in North America)
Demand FY2013 3,500t
FY2015 5,400t

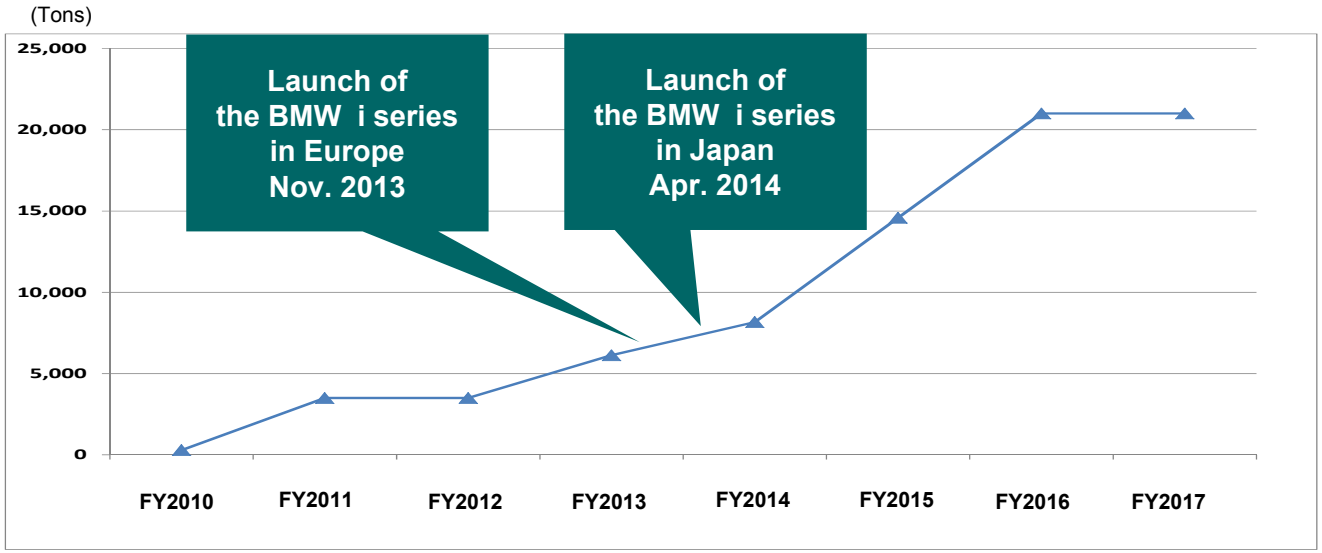


	Acrylonitrile	Precursor	Carbon fiber tow	Intermediate base materials	Composites
Europe			New plant under review	TK Industries Structill	Acquisition under review
Asia				SK Chemicals	Investment under review
Japan	Otake Plant Mizushima Plant	Otake Plant MRC - SGL Expansion under review	Toyohashi Plant		Challenge
North America		New plant under review	MRCFAC Expansion/new plant under review	Aldila	

*1 **MRC-SGL:**
Manufacture of CF precursors for BMW
Established in Apr. 2011 (MRC 66%)
*2 **Business alliance**
*3 **Investment**

7-2. Increase in Production Capacity of Carbon Fiber Precursors for BMW

■ Launch of the full-scale supply of carbon fiber raw materials for the mass production of the EV (i3) and PHEV luxury sports cars (i8) that realize sustainability



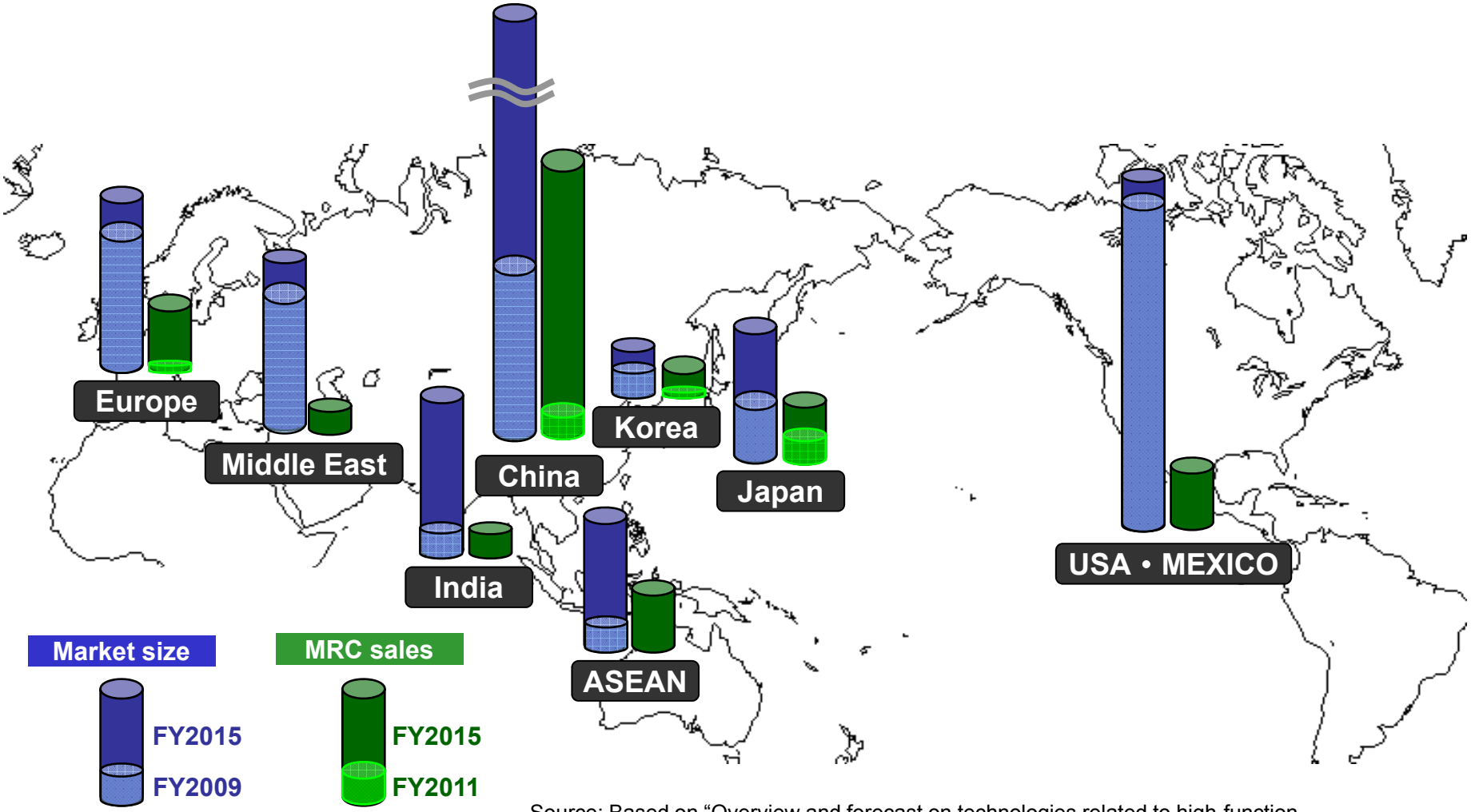
BMW i3 (EV)

BMW i8 (PHEV)

- Realized lighter weight by using CFRP in passenger cells
- Approx. 100kg of carbon fiber used per vehicle. Scraps of carbon fiber are recycled.
- Carbon fiber produced in the BMW/SGL joint-venture plant (Washington State, U.S.)

7-2. Water Treatment Systems and Services: MBR Market Forecast and Our Targets

- Expand business in growing overseas MBR markets and retain a 36% share; carry out activities across the entire water business



Source: Based on "Overview and forecast on technologies related to high-function separation membrane/filters, 2010", *Fuji Keizai* (May 2010)

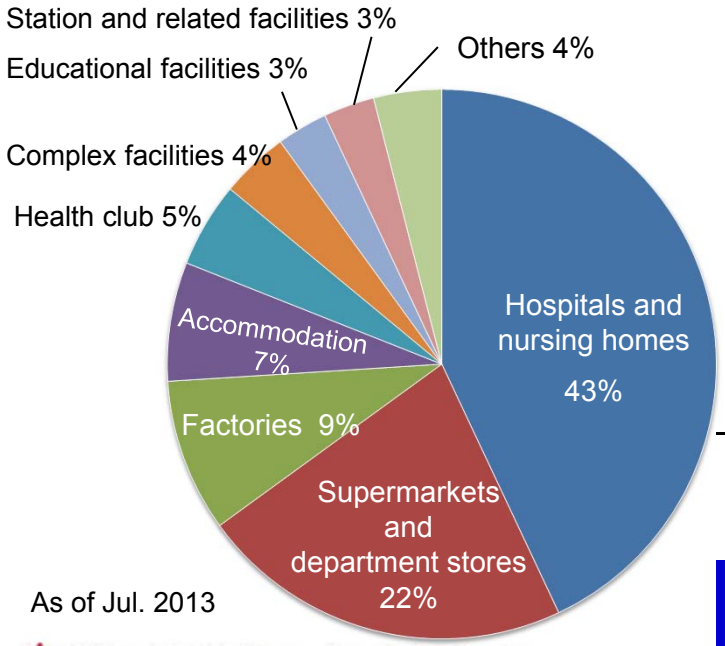
7-2. Expansion of Value Chains

■ Acquisition of Wellthy, the nation's No. 1 company in the potable water treatment of groundwater, to capture the growing demand for on-site water treatment systems (private water supply) as a disaster countermeasure

WELLTHY CORPORATION

- Over 50% of estimated share in potable water treatment of groundwater
- An installation track record of over 1,000 Groundwater Membrane Filtration systems in Japan
- Owns a water quality assessment center certified by the Minister of Health, Labour and Welfare, enabling swift official assessment

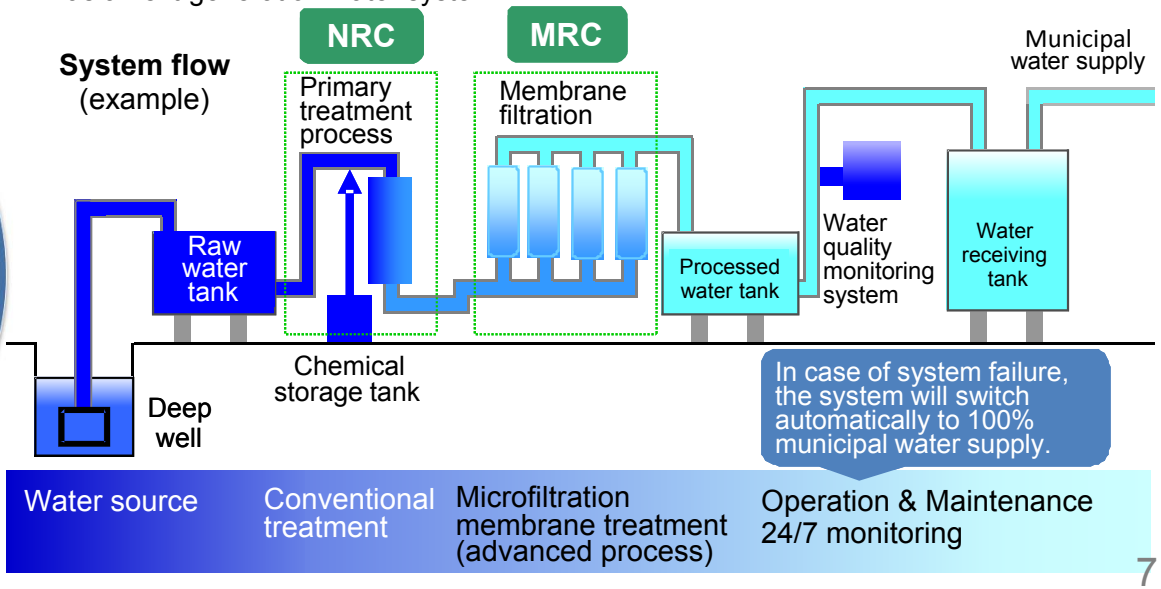
Groundwater Membrane Filtration System Installations



As of Jul. 2013

Groundwater Membrane Filtration System

A potable water system that converts groundwater to safe and reliable drinking water through advanced membrane filtration, whichi is being adopted as a next-generation water system



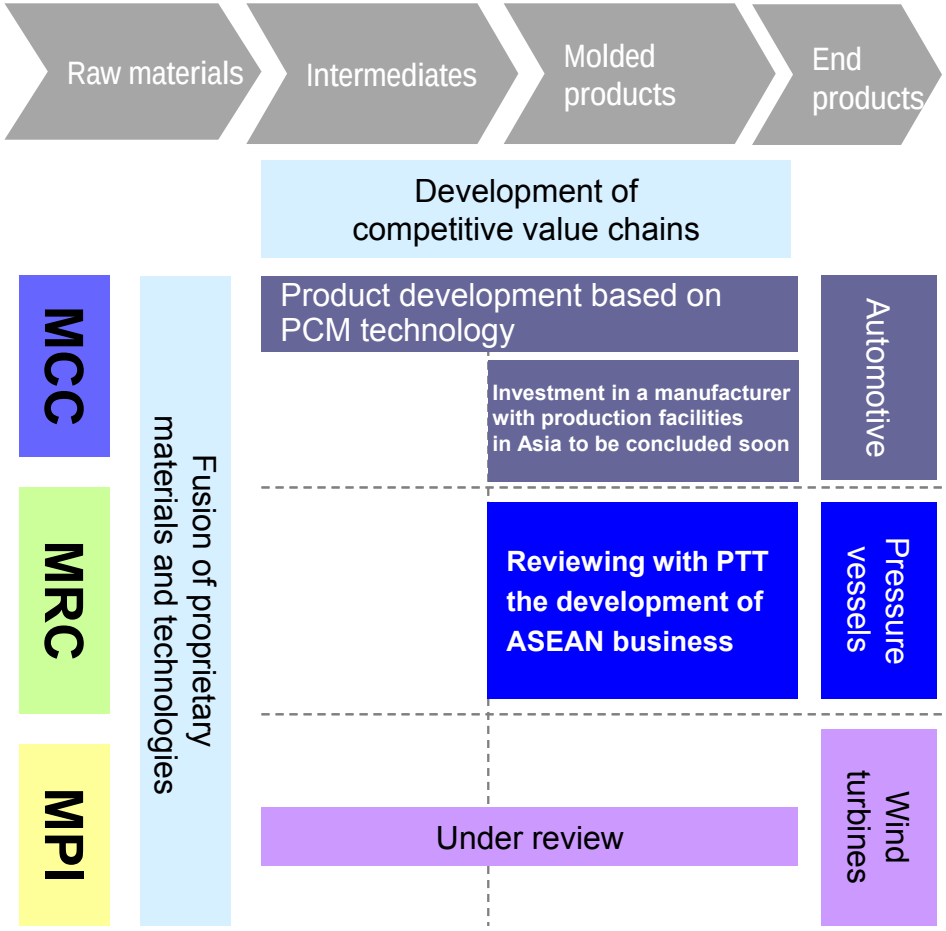
Growth driver businesses

7-3. Progress in Generating Synergies: Carbon Fiber and Composite Materials and Water Treatment Systems and Services

THE KAITEKI COMPANY

[Carbon fiber and composite materials]

■ Build competitive value chains in wind turbine, pressure vessel and automotive areas

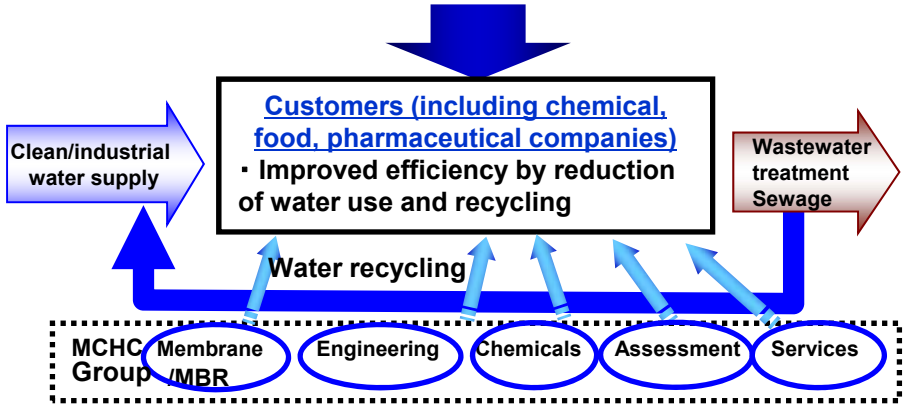


[Water treatment systems and services]

■ Combine water treatment technologies from across the MCHC Group and accelerate creation of a new water treatment business in collaboration with Miura Co., Ltd.

Proprietary technologies and advantages of the MCHC Group and Miura

- **MRC: Membrane, MBR technology, flocculants**
- **NRC: Water treatment equipment, construction**
- **MEC: Equipment engineering, construction**
- **MCC: Ion-exchange resins**
- **Kansai Coke and Chemicals Co., Ltd., MCM, etc.**
- **Miura: Small boilers, maintenance, remote control systems**



- Proposal and promotion of ZLD
- Promoting development of low-cost and small equipment packages