

**THE KAITEKI COMPANY**

# Medium-Term Management Plan

## *APTSIS* 20

December 9, 2015

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 Mitsubishi Chemical Holdings



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, industrial gases 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.  
LSII: Life Science Institute, Inc.  
TNSC: Taiyo Nippon Sanso Corporation

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NSCI: The Nippon Synthetic Chemical Industry Co., Ltd.  
QKK: Qualicaps Co., Ltd.

API: Active pharmaceutical ingredients and intermediates  
BPA: Bisphenol A  
DPC: Diphenyl carbonate  
EO: Ethylene oxide  
EV: Electric vehicle  
EVOH: Ethylene vinyl alcohol  
ESS: Emergency signal system  
FPD: Flat panel display  
GaN: Gallium nitride  
HEV: Electric vehicle  
ICT: Information and communication technology  
IER: Ion-exchange resin  
MAA: Methacrylic acid  
MBR: Membrane bio reactor  
MF: Microfiltration  
MMA: Methyl methacrylate  
MOS: Management of Sustainability  
MOT: Management of Technology  
OLED: Organic light emitting diode  
OPV: Organic photovoltaic

PC: Polycarbonate  
PET: Polyethylene terephthalate  
PBT: Polybutylene terephthalate  
PMMA: Polymethyl methacrylate  
PP: Polypropylene  
PTA: Terephthalic acid  
PVOH: Polyvinyl alcohol  
VCM: Vinyl chloride monomers

FY2015: April 1, 2015 – March 31, 2016

**Note:**

Product names, brand names, service names, and technology 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.

# Today's Agenda

## ***APTSIS 15* Review**

## ***APTSIS 20* Policies and Targets**

- Basic Policies
- Numerical Targets
- ROE Management
- Resource Allocation
- Shareholder Returns

## **Principal Measures**

- Integration of Three Chemical Operating Companies
- Portfolio Management
- Next-Generation Businesses
- Global Development

## **MCHC Group Business Strategies**

- Performance Products
- Industrial Materials
- Health Care

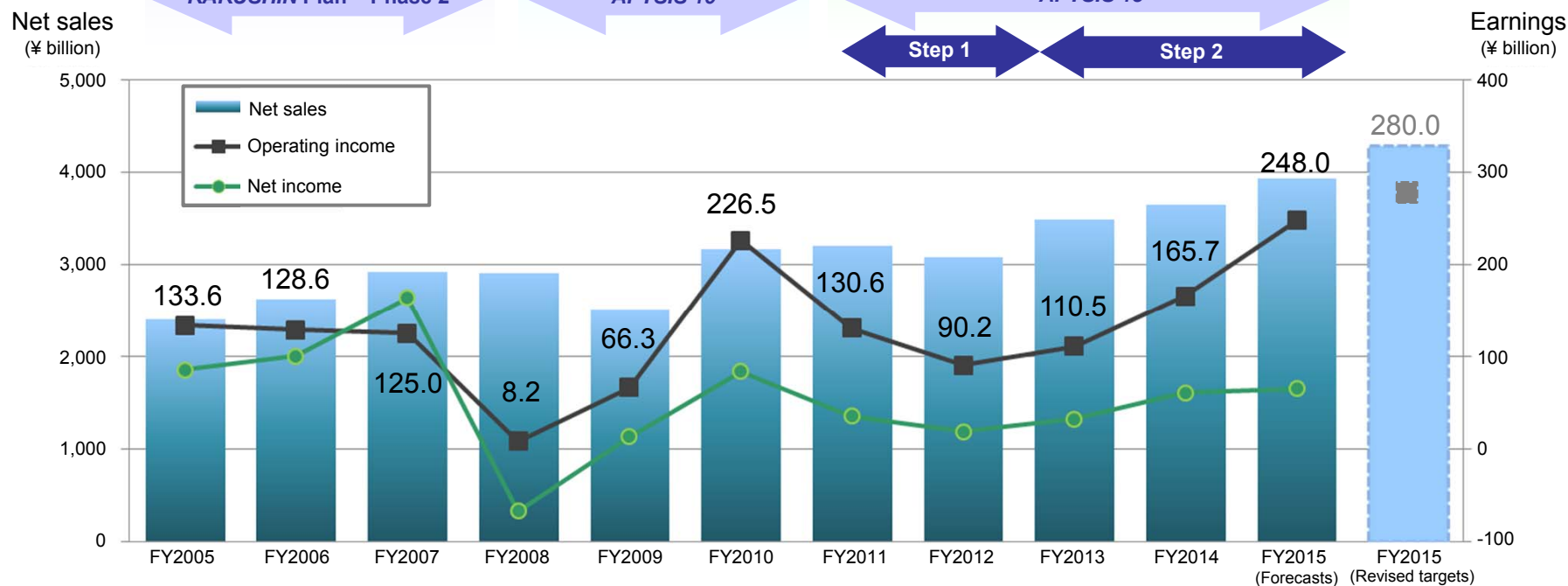
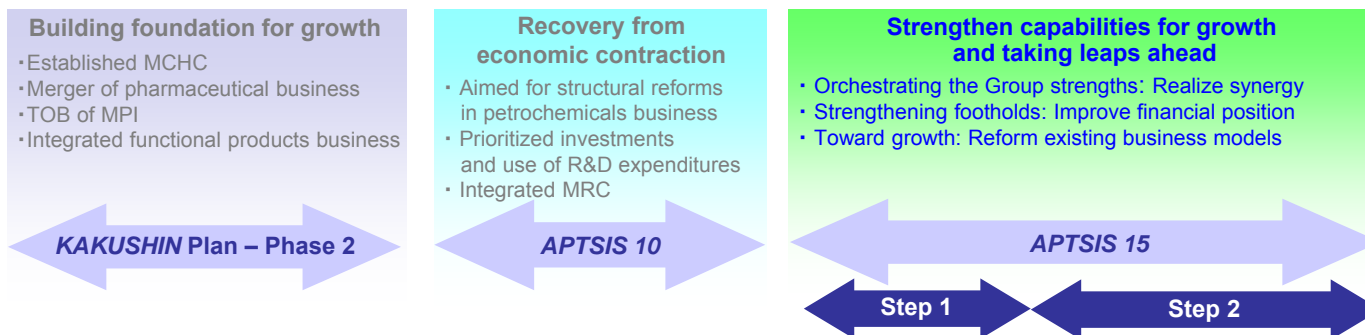
## **Toward Enhancing *KAITEKI* Value**

- Materiality Assessment
- MOS
- MOT



# Operating Results

■ Anticipating an all-time record for operating income in fiscal 2015 and achievement of almost 90% of targets



ROA (Income before income taxes) (%)	3.9	2.6	3.4	4.2	4.5	7.0
ROE (%)	4.6	2.3	3.7	6.4	6.5	—
Net D/E ratio	1.22	1.15	1.11	1.25	1.1	0.8*

\*Excluding leaping ahead (M&A)

# Achievements of Principal Measures

■ Implement measures to reform business structure and for growth, promote business portfolio reforms

	Step 1 (FY2011-FY2012)	Step 2 (FY2013-FY15)
<b>MCHC</b>		<ul style="list-style-type: none"> <li>• Conversion of TNSC to a consolidated subsidiary (TOB)</li> <li>• Transfer to a company with a nominating committee, etc.</li> </ul>
<b>Performance Products</b>	<ul style="list-style-type: none"> <li>• Sale of piping business to Sekisui Chemical Co., Ltd.</li> <li>• M&amp;A in carbon fiber and composite materials (Aldila, Inc., etc.)</li> <li>• Establishment of a JV manufacturing company of MF membrane for MBR</li> <li>• Transfer of SAP business</li> </ul>	<ul style="list-style-type: none"> <li>• Establishment of a new line for <i>Soanol</i> (NSCI)</li> <li>• Expansion of production facility for optical PVOH film , <i>OPL film</i> (NSCI)</li> <li>• Making Quadrant AG a wholly owned subsidiary</li> <li>• Overseas development of polyester film (Suzhou, Wuxi)</li> <li>• Construction of a new line for <i>Alpollic</i> in Germany</li> <li>• Increased capacity of alumina fiber</li> <li>• Establishment of a JV manufacturing company for ion-exchange resin in Korea</li> <li>• Acquisition of Wethje Holding GmbH to strengthen carbon fiber and composite material business</li> <li>• Consolidation of carbon fiber businesses to MRC</li> </ul>
<b>Health Care</b>	<ul style="list-style-type: none"> <li>• Acquisition of QKK</li> </ul>	<ul style="list-style-type: none"> <li>• Establishment of LSII</li> <li>• Starting self-health check services, <i>Jibun Karada Club</i></li> <li>• Acquisition of Medicago Inc.</li> <li>• Reorganization of MTPC domestic production sites</li> </ul>
<b>Industrial Materials</b>	<ul style="list-style-type: none"> <li>• Downsizing of Mizushima naphtha cracker and alliance in aromatics</li> <li>• Shift to high-performance products in derivatives (EO, PE, PP)</li> <li>• Reorganization of petrochemical complex in Kashima (VCM restructuring; Optimizing electric facilities at Kashima-Kita Power)</li> <li>• Establishment of a JV agreement with SABIC (MMA, PMMA)</li> </ul>	<ul style="list-style-type: none"> <li>• Shift to one naphtha cracker unit operation in Kashima</li> <li>• Unification of naphtha crackers in Mizushima (scheduled for April 2016)</li> <li>• Acquisition of Comtrex, LLC and CTS (performance polymers)</li> <li>• Consolidation of polyolefin production facilities</li> <li>• PBS business development in Thailand</li> </ul>



## Differences from Targets in Step 2

(¥ billion)

Business domains	Operating income for FY2015 (Revised forecasts*)	Operating income for FY2015 (Targets in Step 2**)	Difference	Comments
Performance Products	68.5	85.0	(16.5)	<ul style="list-style-type: none"> <li>Decrease in income due delay in securing stable earnings from next-generation growth businesses</li> </ul>
Health Care	90.5	110.0	(19.5)	<ul style="list-style-type: none"> <li>Reduced revenue from long-term listed pharmaceuticals due to measures to promote use of generics</li> <li>Reduced revenue due to fiercer competition in healthcare businesses</li> </ul>
Industrial Materials <small>[Including leaping ahead (M&amp;A)]</small>	92.0	80.0	12.0	<ul style="list-style-type: none"> <li>Increase in income due to TNSC consolidation +420</li> <li>Stagnation in PTA and North American MMA businesses</li> </ul>
Others	(3.0)	5.0	(8.0)	_____
Total	248.0	280.0	(32.0)	_____

	Total in APTSIS 15 (Forecasts***)	Total in APTSIS 15 (Revised targets)	Difference
Capital expenditure, Investment and loans	1,260.0	1,240.0	20.0
R&D expenditure	680.0	700.0	(20.0)

\* Value publicly announced November 5, 2015

\*\* Value publicly announced March 5, 2013

\*\*\* As at December 2015

# Overview of APTSIS15

	Items achieved	Remaining issues to be addressed
<b>Growth</b>	<ul style="list-style-type: none"> <li>➤ Strengthening and expanding scale of business foundations through business portfolio reforms</li> <li>➤ Expansion of overseas business through M&amp;A and capital expenditure</li> </ul>	<ul style="list-style-type: none"> <li>➤ Improve growth capability and profitability of existing businesses</li> <li>➤ Increasing profitability of overseas businesses</li> <li>➤ Making new energy businesses competitive sooner</li> <li>➤ Acceleration of Group synergies</li> </ul>
<b>Efficiency</b>	<ul style="list-style-type: none"> <li>➤ Reform structure of petrochemicals business</li> </ul>	<ul style="list-style-type: none"> <li>➤ Promoting optimized business operations, cost reductions</li> <li>➤ Implementing fundamental measures for unprofitable businesses and low-profit businesses</li> </ul>
<b>Strengthening Foundations</b>	<ul style="list-style-type: none"> <li>➤ Enhancement of corporate governance system</li> <li>➤ Introduction of management of MOS axis into management method</li> </ul>	<ul style="list-style-type: none"> <li>➤ Improvement of global management systems</li> <li>➤ Strengthening of financial position</li> </ul>



# Today's Agenda

*APTSIS 15* Review

## **APTSIS 20** Policies and Targets

Basic Policies  
Numerical Targets  
ROE Management  
Resource Allocation  
Shareholder Returns

## Principal Measures

Integration of Three Chemical Operating Companies  
Portfolio Management  
Next-Generation Businesses  
Global Development

## MCHC Group Business Strategies

Performance Products  
Industrial Materials  
Health Care

## Toward Enhancing *KAITEKI* Value

Materiality Assessment  
MOS  
MOT



# Environmental Recognition

## Society / Economy / Market

- Increasing aging global population
- Diversification of market economy (Japan, U.S., Europe, China, Russia, etc.)
- Advancing globalization and expansion of regional economic zones:  
Development of emerging countries' economies led by Asia
- Acceleration of technological innovation and emergence of data-driven economy and increasing ICT in industry (big data, IoT, Internet of everything, Industry 4.0)
- Increase in importance of CSR in business management
- Regeneration of chemical industry in the U.S. and expansion of coal chemical industry in China
- Utilization of hydrogen
- Post 3.11 energy policy review (Japan)
- Olympic/Paralympic games, earthquake restoration (Japan)

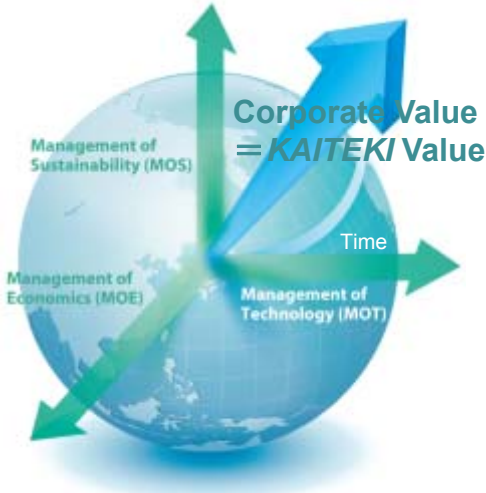
## Health / Medicine

- Increase in medical costs and strengthening of medical economic evaluation
- Change of the disease structure with the super aging of Japan's population
- Promotion of ICT introduction (medical information, healthcare information, IoT, etc.)
- Development of regenerative medicine and precision medicine

## Global Environment / Resources

- Increase in climate change
- Pollution and insufficiency of water resources
- Destruction of ecosystem
- Fluctuation of natural and fossil resource markets
- Shale revolution

# Medium-Term Management Plan, *APTSIS 20*: Outline



Period: FY2016 – FY2020

**Vision**  
**Realization of**  
***KAITEKI***

**Decision criteria**  
**for corporate activities**  
**Sustainability**  
**Health**  
**Comfort**

**What We Aspire to Be in 2020**  
**By increasing profitability, pursuing innovation, and contributing to sustainability,**  
**MCHC will establish the foundation to become THE KAITEKI COMPANY**  
**being recognized on a truly global level**

# Basic Policy

**Aiming to remain a high growth/high profit-model company through businesses in the performance products, industrial materials, and health care domains**

## Growth

- Enhancement of sustainable growth and profitability through portfolio management
- Improvement of profitability of overseas businesses
- Making new energy businesses competitive sooner
- Promotion of generating synergies in the MCHC Group
- Enhancement of competitiveness by the integration of three chemical operating companies

## Efficiency

- Realization of high-productivity corporate structure
- Implementation of fundamental measures for unprofitable businesses and low-profit businesses

## Strengthening Foundations

- Thorough safety/compliance measures
- Improvement of global management systems
- Strengthening of financial position

## Numerical Targets for FY2020

- Attain ROE of more than 10% to improve capital efficiency

	IFRS base	JGAAP (Reference)
	<b>Core operating income</b>	<b>¥380.0 billion</b>
Operating income		¥340.0 billion
<b>ROS (Core operating income)</b>	<b>8%</b>	
ROS (Operating income)		7%
<b>Net income attributable to Shareholders of the parent</b>	<b>¥180.0 billion</b>	¥150.0 billion
<b>ROE</b>	<b>12%</b>	11%
<b>Net D/E ratio</b>	<b>0.8</b>	

**Financial Index (MOE)**

**Prerequisites**

Crude oil/naphtha	FY2016-FY2017 Brent crude oil US\$50/bbl FY2018-FY2020 Brent crude oil US\$70/bbl	Domestic-standard naphtha: ¥38,000/kl Domestic-standard naphtha ¥52,000/kl
Exchange rates	¥120/US\$, ¥140/€	

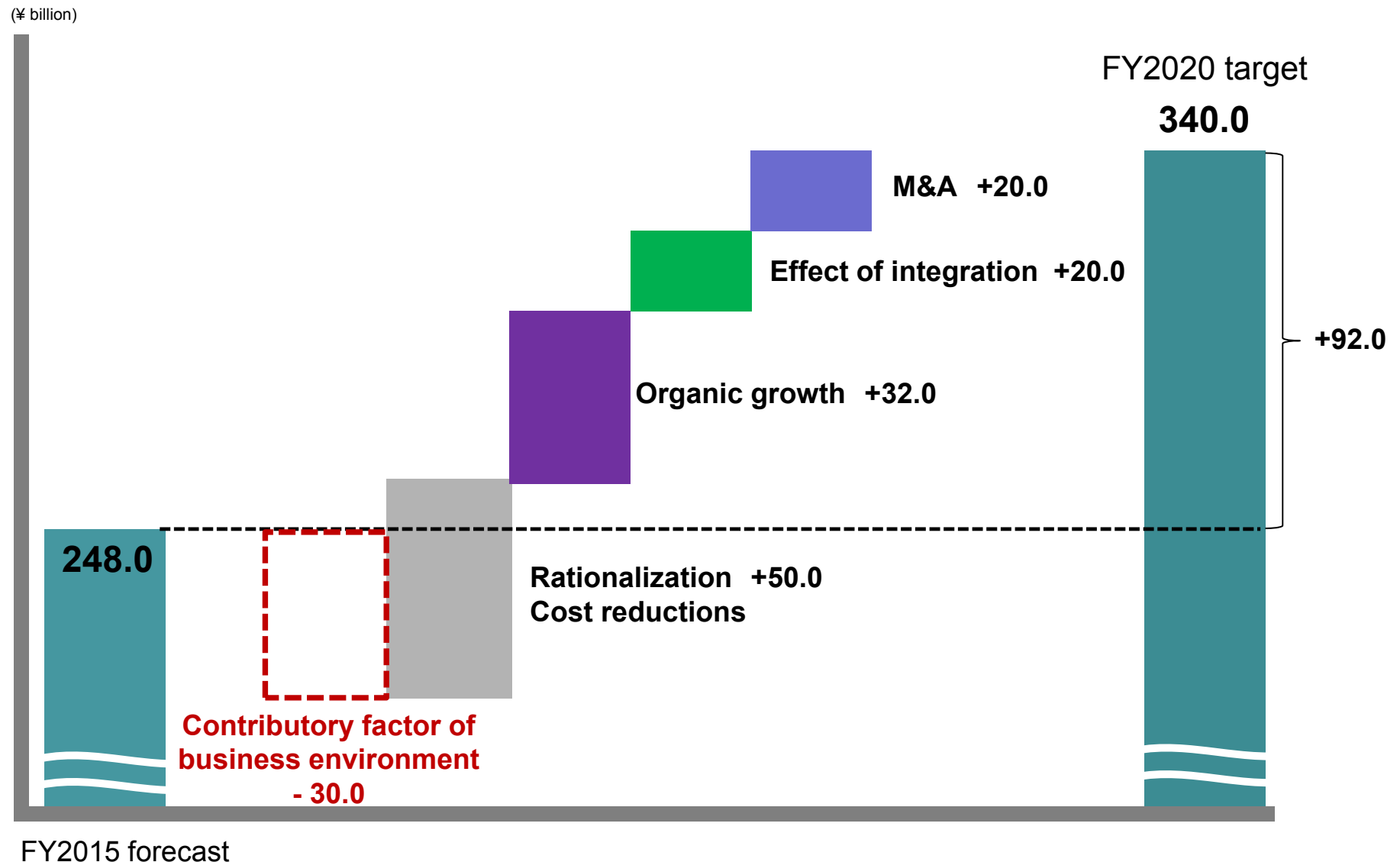
Core operating income:

- Gains/losses incurred by staged gain/loss introduced in accordance with transition to IFRS
- Ordinary income excluding gains/losses incurred by non-recurring factors

Breakdown of differences (core operating income vs. operating income):

- Amortization of goodwill ¥26.0 billion, difference in the scope of consolidation +¥13.0 billion

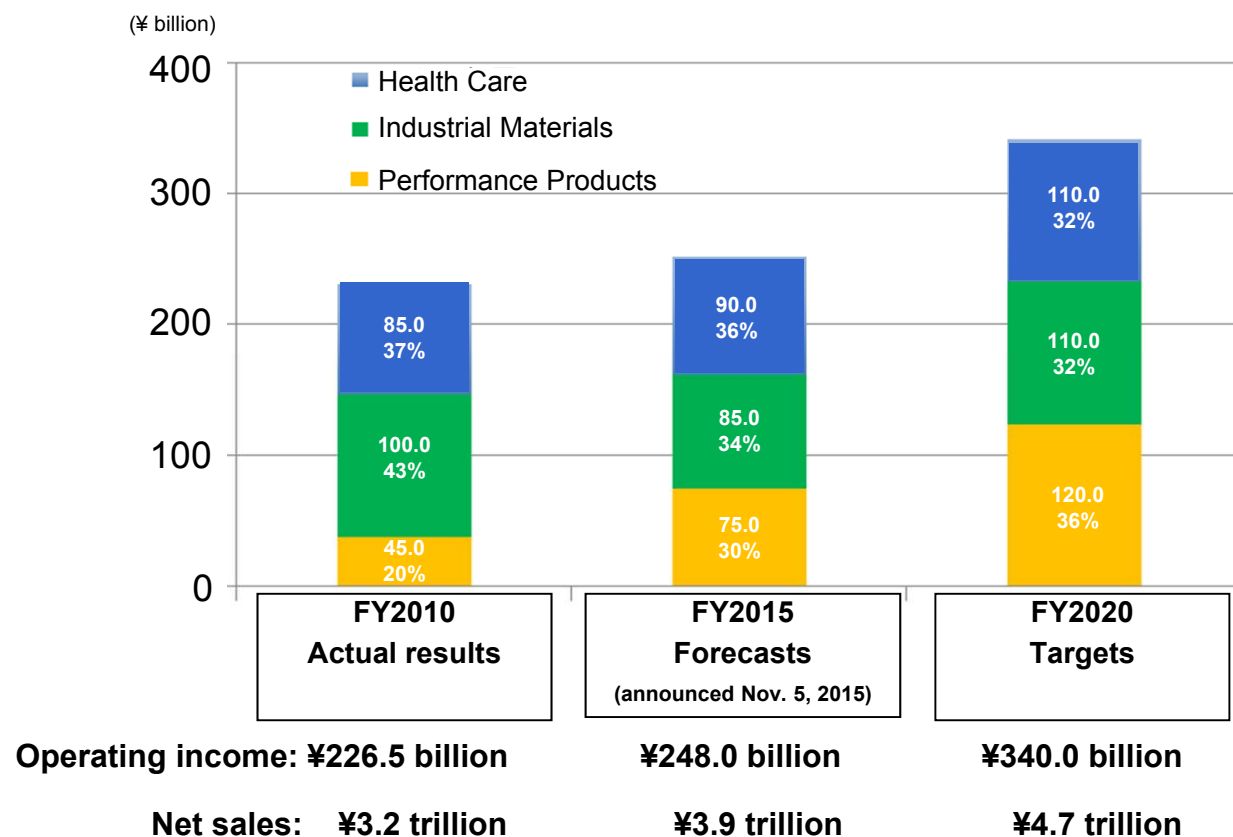
# Analysis of Contributory Factors THE KAITEKI COMPANY in Increased Operating Income (FY2015→FY2020) [JGAAP]





# Earnings Structure for FY2020

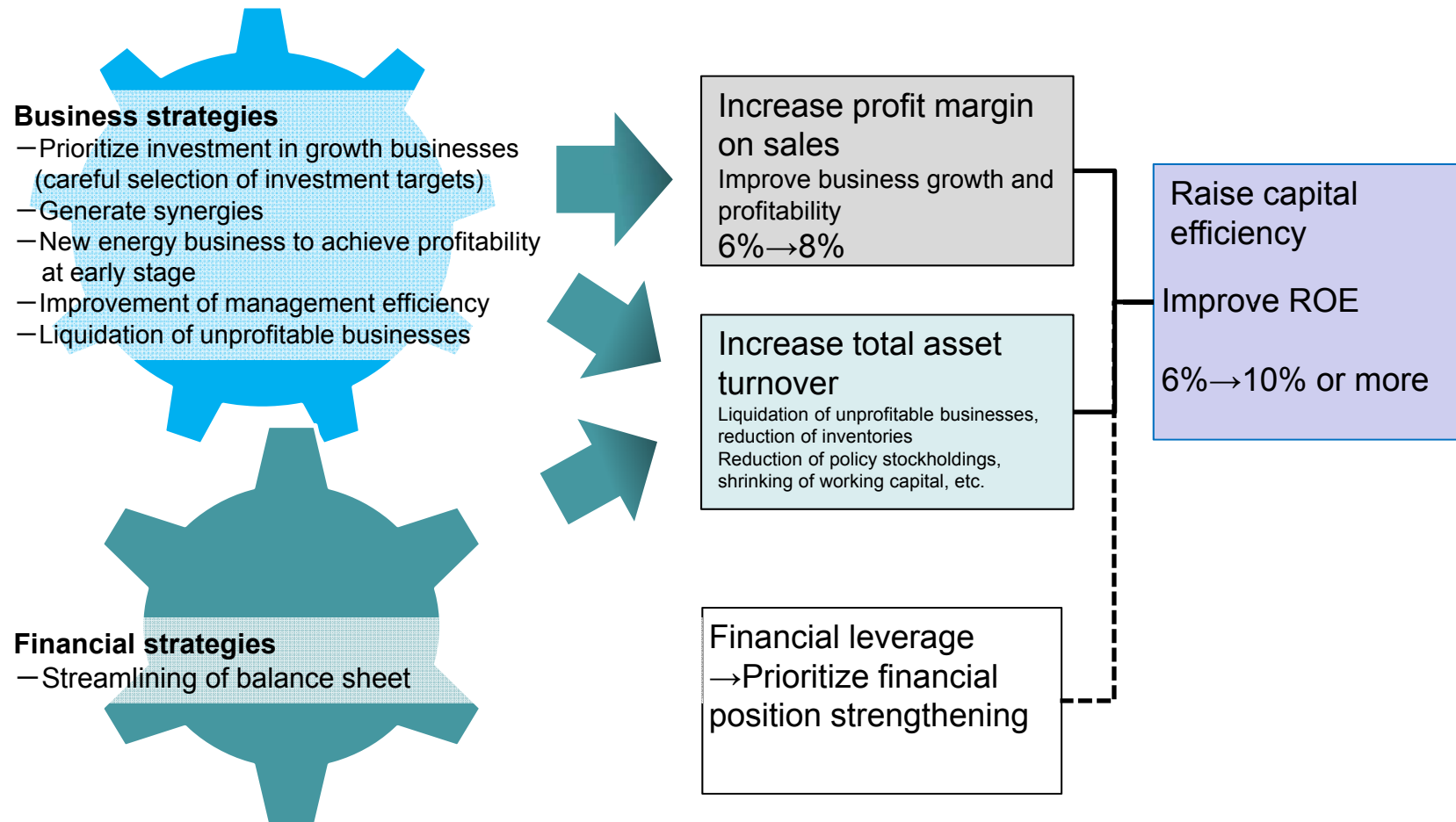
■ Plan balanced development and enhanced earnings from the three business domains of performance products, industrial materials, and health care



Note: In fiscal 2020, changing the classification of part of the polymers business from industrial materials to performance products (Figures for FY2010 and FY2015 were modified to approximate estimates.)

# Concept for ROE Management

- Aiming for sustainable improvement in corporate value, implement ROE management underpinned by business and financial strategies



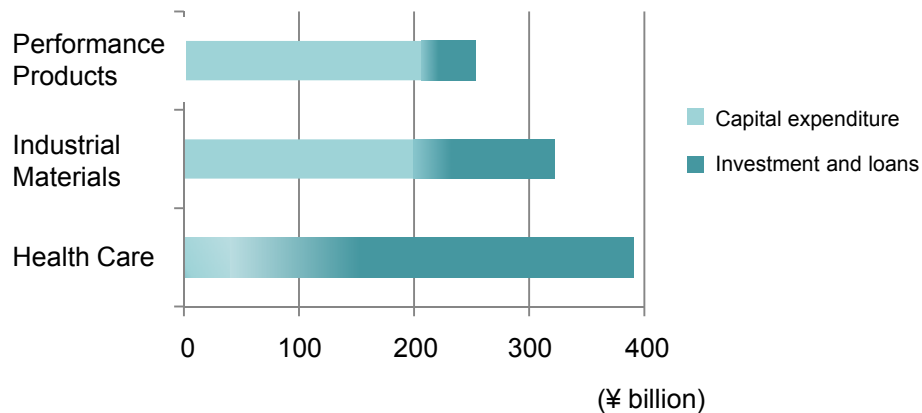
# Resource Allocation Policy

- Allocate ¥1.0 trillion in investment for growth and inject ¥700.0 billion in R&D investment

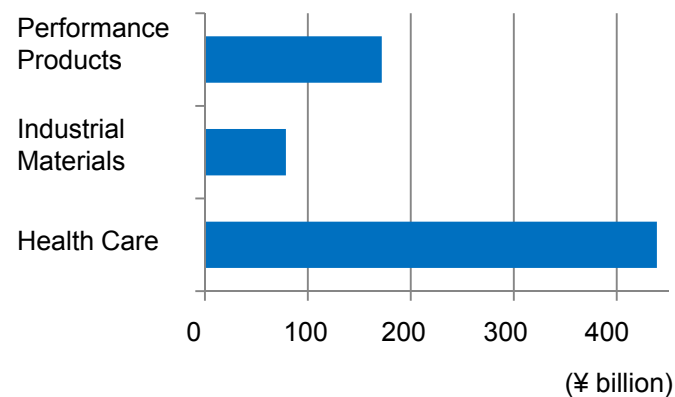
## Resource allocation

Capital expenditure	¥1.0 trillion	(of which capital expenditure for growth: ¥500.0 billion*)
Strategic investment (M&A, etc.)	¥500.0 billion**	
R&D investment	¥700.0 billion	

**Investment for growth: ¥1.0 trillion**  
 (Capital expenditure: ¥500.0 billion\*,  
 Strategic investment: ¥500.0 billion\*\*)



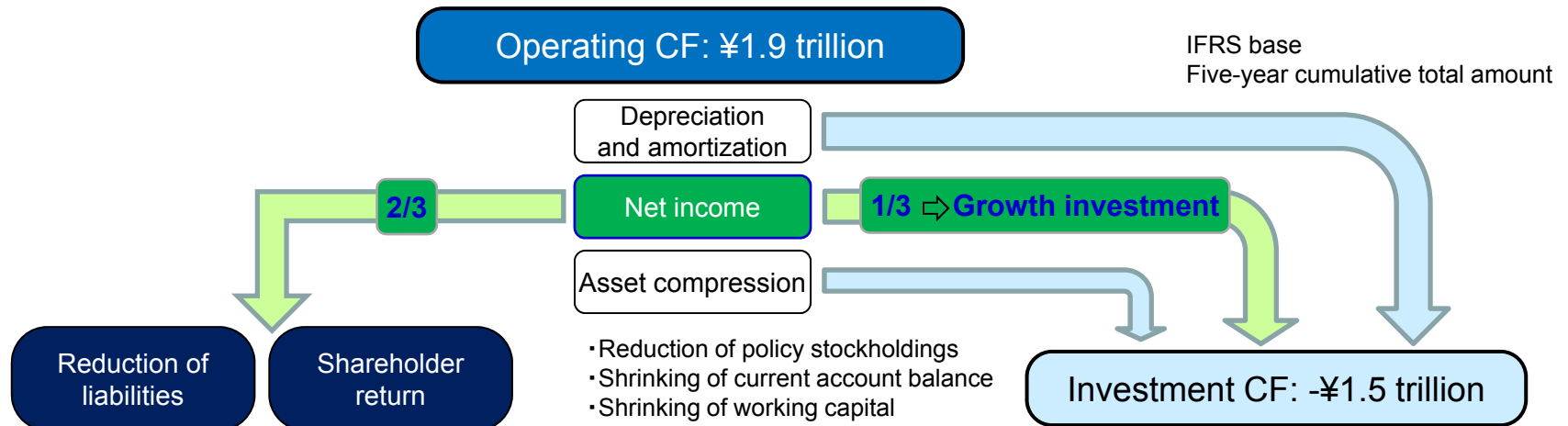
**R&D investment: ¥700.0 billion**



# Financial Strategy

- While maintaining an appropriate balance between “investment for growth,” “enhancement of shareholder return,” and “strengthening of the financial position,” work to improve corporate value
- Investment ceiling is deemed to be the amount derived from adding “asset efficiency” to the sum of “depreciation and amortization” and “1/3 of net income”
- Reduce interest-bearing debt, improve capital adequacy ratio

## Cash Flow Cumulative Five-Year Total



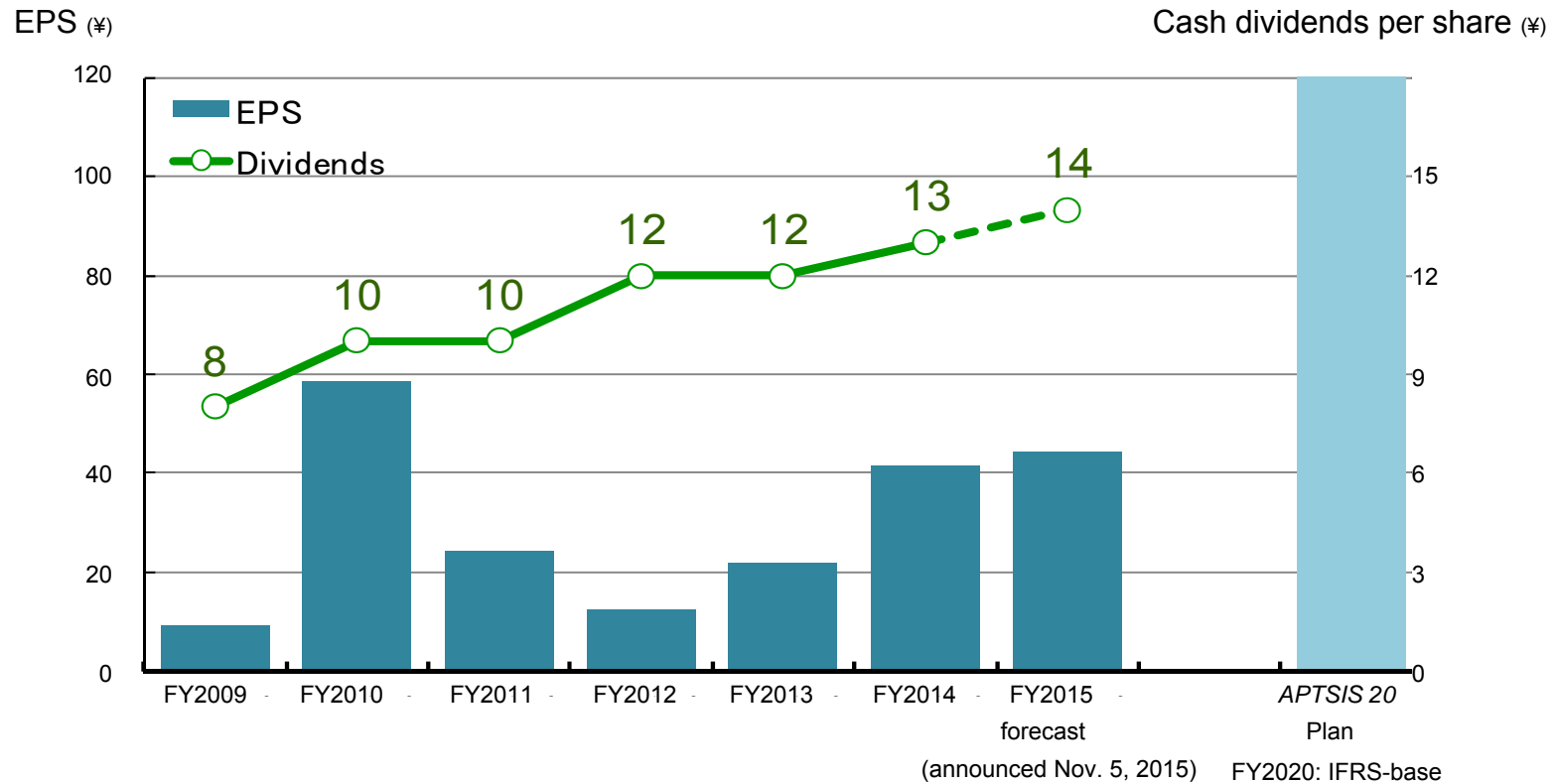
## Financial Targets

	Status	FY2020
Net interest-bearing debt	¥1.2 trillion	¥1.1 trillion
Shareholders' equity ratio	24%	30%
Net D/E ratio	1.2 times	0.8 times

# Shareholder Returns

## Basic Policy on Shareholder Returns

- Aiming for improvement in shareholder value by enhancing corporate value
- Our dividend policy takes into consideration a balance between improvements in investment for business growth and in financial position
  - We shall regard 30% as our consolidated dividend payout ratio benchmark, taking the medium-term profit level into account.
  - Aiming for making stable payment of dividends



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## Principal Measures

- Integration of Three Chemical Operating Companies
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- Global Development

## MCHC Group Business Strategies

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- Health Care

## Toward Enhancing *KAITEKI* Value

- Materiality Assessment
- MOS ② MOS (Management of Sustainability)
- MOT ③ MOT (Management of Technology)





# Integration of Three Chemical Operating Companies

- MCHC has decided to integrate its three chemical operating companies—MCC, MPI, and MRC—into one company by absorption-type merger with MRC as the surviving entity on April 1, 2017.

## Objectives

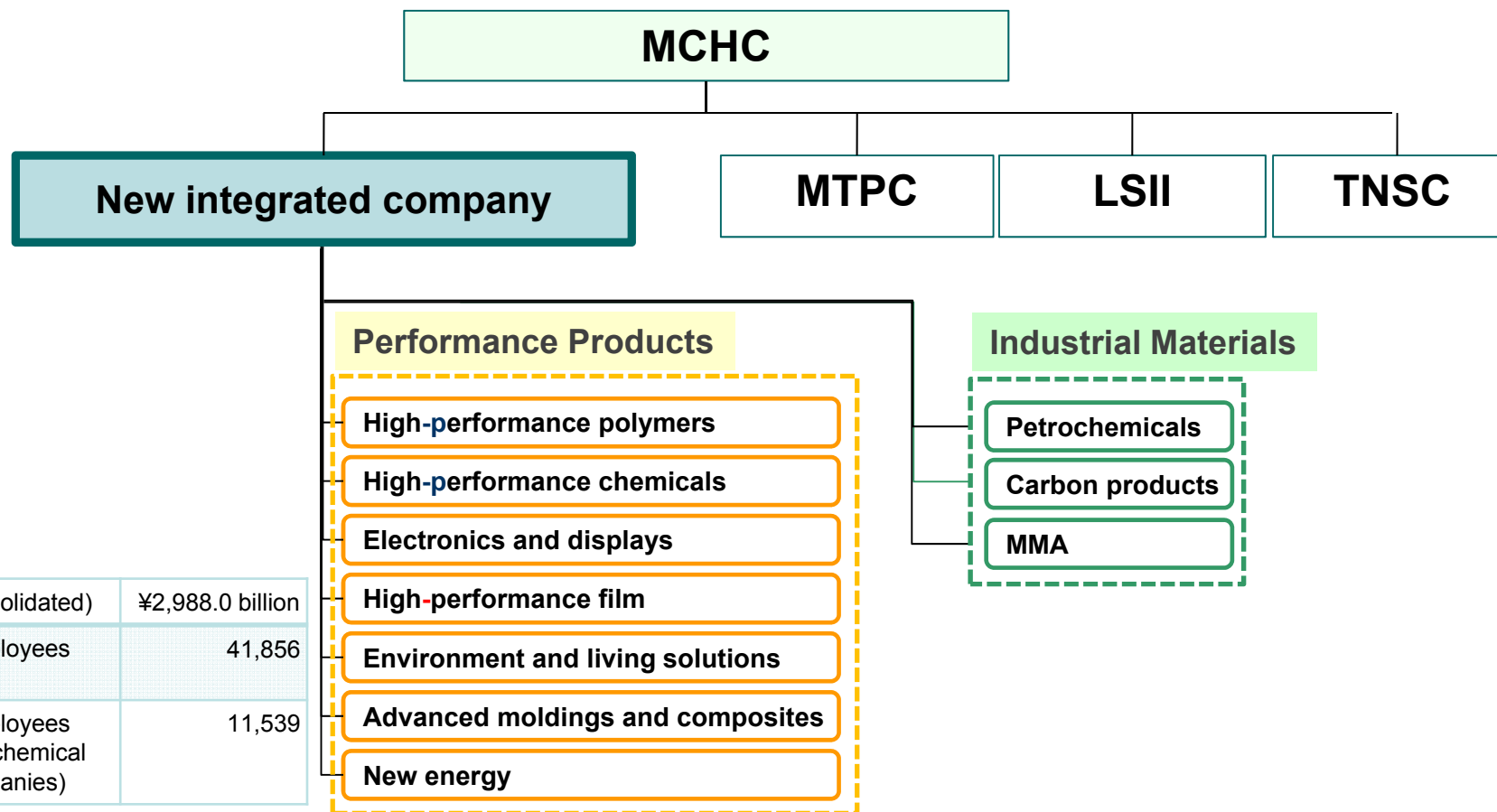
- Building of a framework to be able to take full advantage of the three companies' business resources (including personnel, technologies, and information, etc.)
- In addition to clarifying the direction of each business, rebuilding their business portfolios
- Strengthening of cost-competitiveness by improvement in productivity

## Measures

- **Acceleration of portfolio transformation**
  1. Concentrate business resources on businesses with high growth potential and businesses capable of establishing competitive advantages
  2. Implementing fundamental measures for unprofitable businesses and low-profit businesses
- **Implementation of Growth Strategies (“Growth”)**
  1. Drawing on synergies generated within the Group and implementation of M&A, enhancing the competitiveness of existing businesses
  2. Making new energy businesses competitive sooner
- **Advancement of Globalization (“Moving beyond Japan-centric management”)**
  1. Expanding business presence in markets of high growth potential, such as Asia
  2. Upgrading of global operations framework

# Outline of New Integrated Company

- As a holding company system, MCHC to manage the Group
- At the integrated company, business operations to be conducted by 10 business units, and bring about the maximization of the synergies generated within the units, promote the growth of businesses, and work to expand profits

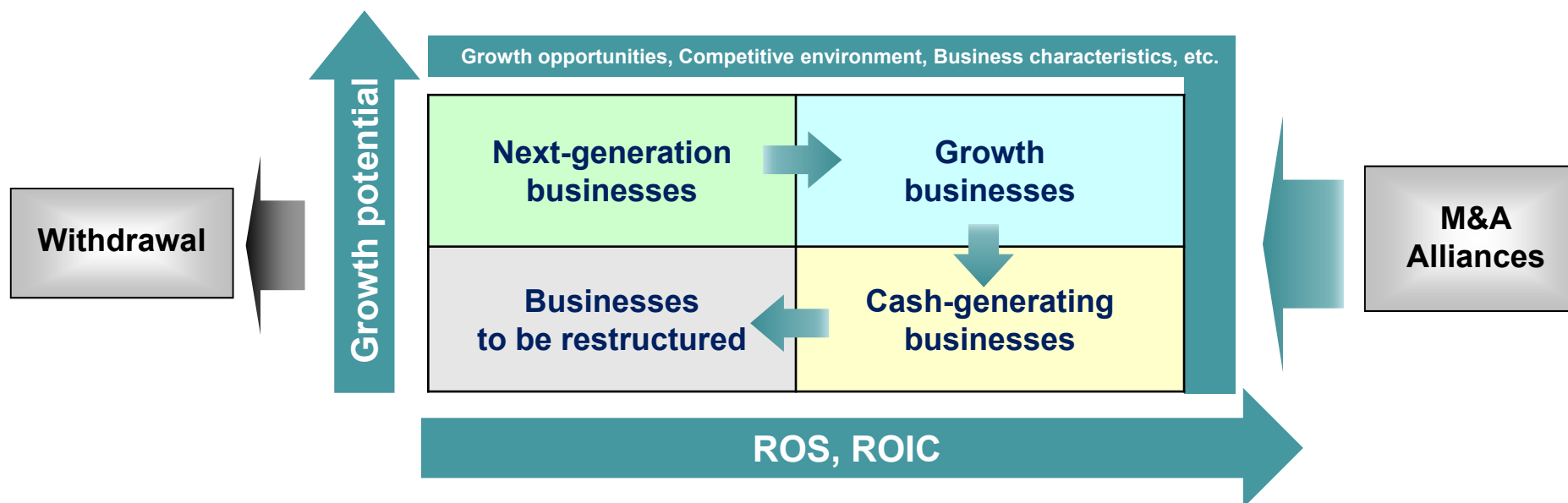


(FY2014)

Net sales (consolidated)	¥2,988.0 billion
Number of employees (consolidated)	41,856
Number of employees (Total of three chemical operating companies)	11,539

# Business Portfolio Management

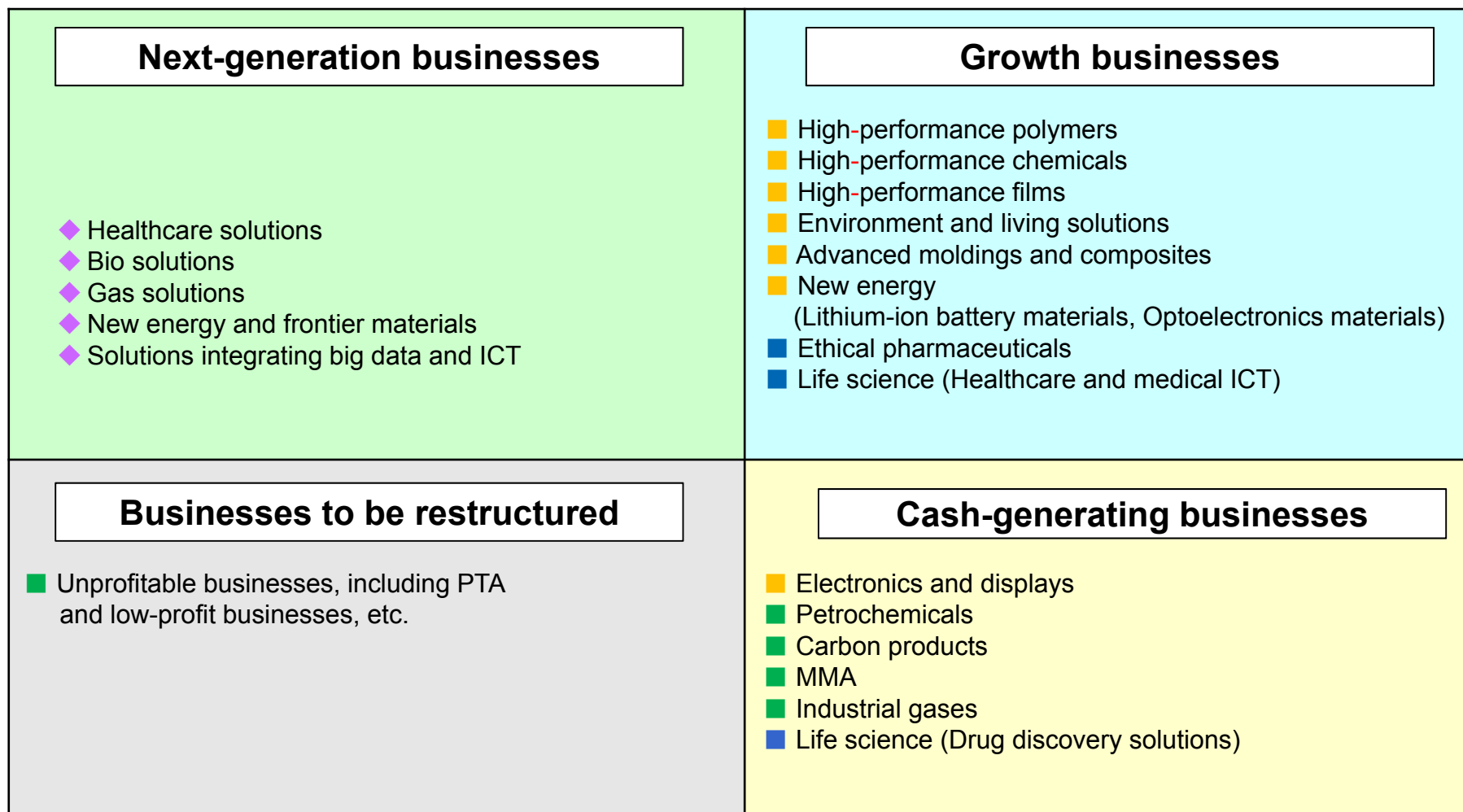
- Targeting the formation of high-growth, high-profit entities, implement thorough business portfolio management
- Based on evaluations of growth (sales growth ratio), return on sales (ROS), and return on invested capital (ROIC), give consideration to and position/rank contributory factors, such as growth opportunities, competitive environment, and business characteristics



# Business Portfolio (FY2017—)

■ Business portfolio in the Group will be composed of 13 business units and 5 next-generation business themes.

■ Performance Products ■ Industrial Materials ■ Health Care ◆ Next-Generation Business Themes



## Next-Generation Businesses

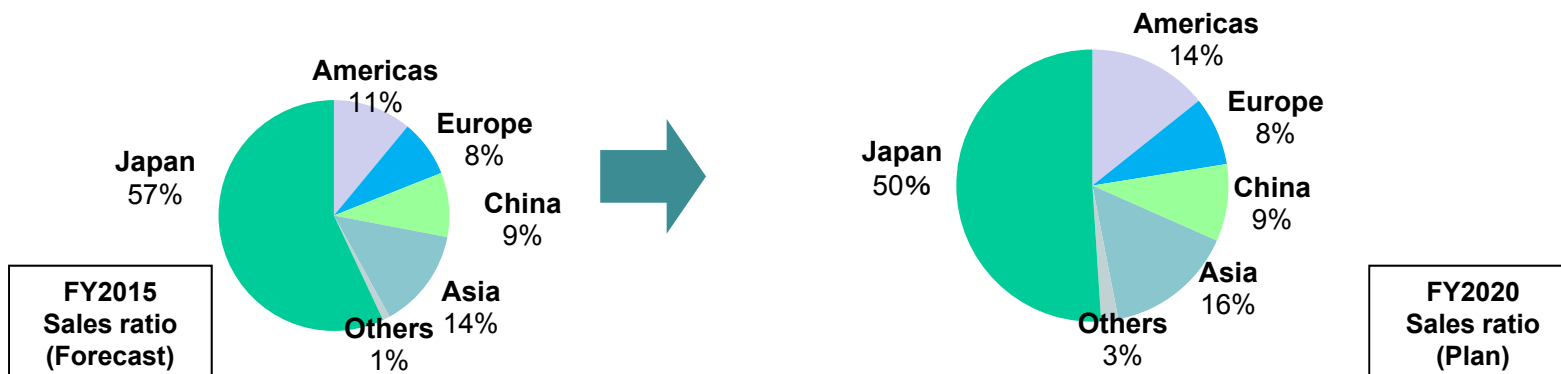
- Select five items that take into account business strategies of each operating company and Group strengths
- Positioning of incubation businesses instrumental to growth in 2020 - 2025
- Fully utilizing the Group's abundant resources, promote business development using *OSB* (Open Shared Business) framework

Next-generation businesses	Research areas
<b>Healthcare solutions</b>	<ul style="list-style-type: none"> <li>• Regenerative medicine</li> <li>• Diagnostic support systems</li> <li>• Plant-derived vaccines</li> </ul>
<b>Bio solutions</b>	<ul style="list-style-type: none"> <li>• Functional vegetables and growth factors, using plant factories</li> <li>• Plant-derived monomers and polymers</li> <li>• Effective usage of enterobacterium</li> </ul>
<b>Gas solutions</b>	<ul style="list-style-type: none"> <li>• CO<sub>2</sub> enriched water system</li> <li>• Cryopreservation-related technologies</li> <li>• Hydrogen stations</li> <li>• Medical applications of gases</li> <li>• Stable isotope pharmaceuticals</li> <li>• Gas/liquid separation materials</li> </ul>
<b>New energy and frontier materials</b>	<ul style="list-style-type: none"> <li>• Organic photovoltaic materials</li> <li>• Silicon-related materials</li> </ul>
<b>Solutions integrating big data and ICT</b>	<ul style="list-style-type: none"> <li>• Proactive utilization of big data/ICT for all activities ranging from manufacturing, R&amp;D to businesses and services</li> </ul>

# Global Development

- Increase overseas sales ratio from 43% to 50%
- Enhance business support functions of each region, promote collaboration among business units

<b>Asia Pacific</b>	<ul style="list-style-type: none"> <li>• Rising nations in Asia to be centers of global economy</li> <li>• Continuous population growth</li> <li>• Expansion as promising markets</li> </ul>	➔	<p><b>Bring together Group's comprehensive capabilities and expand business in ASEAN and Indian markets where demand is growing</b></p> <p><b>Performance Products:</b> Development of growth fields, such as automobiles, packaging, medical, and environment and living</p> <p><b>Industrial Materials:</b> Proactive business development focusing on MMA and industrial gases</p>
<b>China</b>	<ul style="list-style-type: none"> <li>• Slowing growth rate and growing presence in global economy</li> </ul>	➔	<p><b>In the huge, growing Chinese market, bring together Group's comprehensive capabilities and expand business</b></p> <p><b>Performance Products:</b> Development of growth fields, such as automobiles, information and electronics, and environment and living</p> <p><b>Industrial Materials:</b> Proactive business development focusing on MMA</p>
<b>Europe and Americas</b>	<ul style="list-style-type: none"> <li>• Stable growth in the U.S., maintaining leading position in global economy</li> </ul>	➔	<p><b>Proactive development in high-profit fields</b></p> <p><b>Performance Products:</b> Development in leading-edge fields, such as medical, aircraft parts, automobile-related products</p> <p><b>Health Care:</b> Strengthen pharmaceutical business foundation in the U.S., expand pharmaceutical formulation materials-related business</p>





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# Performance Products: Policy and Earnings Targets

## ■ Policy

Accelerate growth by generating synergies, and supply high-performance products/solutions globally to growth markets

## ■ Key strategies

### ➢ Expand high-performance, high-value-added products business and solutions business

- High performance engineering plastics (Quadrant)
- Organic synthesis (NSCI)
- Food ingredients (MFC)

### ➢ Accelerate global development

- Performance polymers
- Carbon fiber composite materials
- Polyester film
- High-performance films
- High-performance engineering plastics

### ➢ Strengthen innovation by integration of three chemical operating companies

- Specialty intermediates
- Aqua and separator solutions
- Advanced agricultural business (plant factory systems, etc.)

### ➢ Achieve profitability of new energy businesses at an early stage

- Lithium-ion battery materials
- Optoelectronics materials

High-performance polymers

Environment and living solutions

High-Performance Chemicals

Advanced moldings and composites

Electronics and displays

New energy

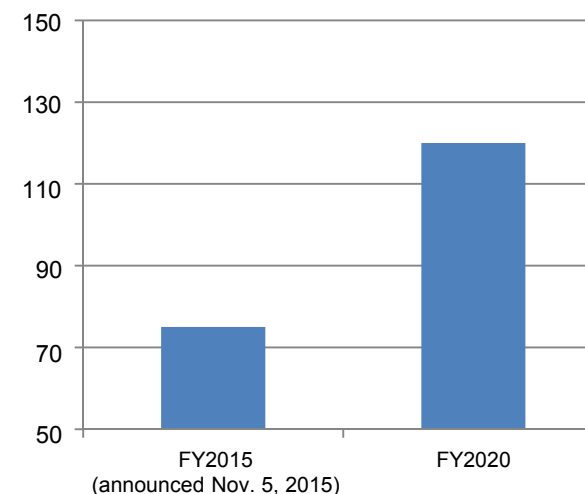
High-performance films

*APTSIS 20* FY2016-FY2020

• Investments ¥390.0 billion






• R&D ¥170.0 billion

(¥ billion) Operating income target







(Numerical values are based on JGAAP.)

# Performance Products: High-Performance Polymers

<b>High Performance Polymers</b>	Major products	Performance polymers, Phenol and polycarbonate, PET/PBT, Sustainable polymers
Portfolio classification: <b>Growth</b> 	Basic strategy	<ul style="list-style-type: none"> <li>■ Promoting high-performance, high value-added, and sustainability, while working to improve efficiency in our overall polymer businesses, we will advance global development and aim to expand in terms of scale and earnings.</li> </ul>
Net sales target (¥ billion) FY2015      FY2020 <b>210.0 → 270.0</b>	Action plans	<ul style="list-style-type: none"> <li>➢ Performance Polymers             <ul style="list-style-type: none"> <li>• Expansion of world-leading products in growth applications (automobiles, medical, food, etc.)</li> <li>• Active investment in emerging and advanced countries through enterprising M&amp;A implementation</li> <li>• Expansion of global market share (Net sales: increase of 50%)</li> </ul> </li> </ul>
  		<div data-bbox="1317 539 1989 678" style="border: 1px solid black; padding: 5px;">           11 bases (FY2011)→13 bases (FY2012)→22 bases (FY2013)            →23 bases in 14 countries (FY2015)            → Further new expansion of overseas sites (– FY2020)         </div>  <ul style="list-style-type: none"> <li>➢ Phenol and polycarbonate             <ul style="list-style-type: none"> <li>Ensure stable earnings through phenol/BPA cost reductions, promote sales and extended range of applications for resin compounds that utilize competitive melting method PC</li> <li>• Kashima: Promote thorough phenol/BPA plant cost reductions</li> <li>• Kurosaki: Promote thorough BPA/PC plant cost reductions and accelerate sales expansion of high-performance PC that utilizes specialty bisphenol</li> <li>• China: Promote cost reductions; improve profitability by strengthening sales and introduction of high-value-added grades</li> <li>• Realize non-carbon oxychloride-method DPC* *Diphenyl carbonate</li> </ul> </li> <li>➢ Sustainable polymers             <ul style="list-style-type: none"> <li>• ISP: Leverage superior functions such as optical properties and anti-scratch, focus on high-value-added fields</li> <li>• PBS: Focus on application development in Japan and overseas, and secure profitability at an early stage</li> </ul> </li> </ul>

# Performance Products: High-Performance Chemicals


<b>High Performance Chemicals</b>	Major products	Specialty chemicals, Epoxy resins, Food ingredients
Portfolio classification: <b>Growth</b> 	Basic strategy	<ul style="list-style-type: none"> <li>■ Regarding our business and technology platforms as robust through business integration, we will strengthen the provision of solutions for and seamless response to the market.</li> </ul>
Net sales target (¥ billion): FY2015      FY2020 <b>180.0 → 230.0</b>	Action plans	<ul style="list-style-type: none"> <li>➤ <b>Specialty intermediates</b>            By integrating R&amp;D and sales capabilities, enhance product development and sales capabilities, while working to expand business. Contribute to new capability development in film business and advanced moldings and compounds by developing high-performance materials           <ul style="list-style-type: none"> <li>• Expansion of coating business for paint solvent of automobiles and ships based on capacity increase in Thailand and Indonesia</li> <li>• Acceleration of development for environment-friendly emulsion-based coating materials</li> <li>• Promotion of development of new materials for automobile and electronics through integration of each company's technology on UV curing resins</li> <li>• Development of new plastic modifier (<i>Metablen</i>) for use in engineering plastics field (automotive/electric and electronic applications)</li> <li>• Development of growth/new industrial material areas, such as semiconductors, 3D printers, functional inorganic materials</li> </ul> </li> <li>➤ <b>Food ingredients</b> <ul style="list-style-type: none"> <li>• Business expansion following acquisition of Eisai Food &amp; Chemical Co., Ltd. (EFC) (Net sales increase: 1.5 times)</li> <li>• Broadening of business through synergies with the health care domain</li> </ul> </li> </ul>
 		<div data-bbox="1491 1110 2016 1182" style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">         MCC food ingredients businesses development in the growth field through acquisition of EFC       </div>  <div data-bbox="1585 1382 1955 1458" style="margin-top: 10px;"> <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: blue; margin-right: 5px;"></span> Health food, OTC, etc.</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: purple; margin-right: 5px;"></span> Food (home-meal replacement)</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: lightgray; margin-right: 5px;"></span> Food (sugar ester, etc.)</li> </ul> </div>

# Performance Products: Electronics and Displays

THE KAITEKI COMPANY






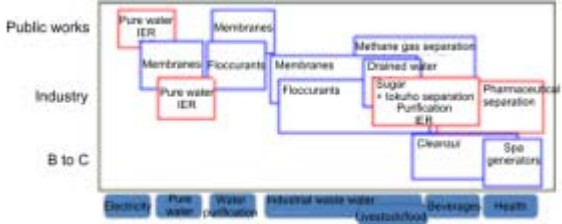
<b>Electronics and Display</b>	Major products	Polyester film, Optical films, Resists, OLEDs
Portfolio classification: <b>Cash-generating</b> 	Basic strategy	<ul style="list-style-type: none"> <li>■ Establish a strong position in the East Asian market through synergies between optical film-related business and information and electronics-related business</li> <li>■ Provide solutions that are key to advanced combined technologies for materials, components, parts, and services</li> </ul>
Net sales target (¥ billion) FY2015      FY2020 <b>240.0 → 250.0</b>	Action plans	<ul style="list-style-type: none"> <li>➢ Consolidate/integrate management of each FPD-related business, provide differentiated products in sync with market needs by strengthening marketing and enhancing sales information</li> </ul>
		<ul style="list-style-type: none"> <li>➢ By offering total solutions, steadily address incorporation of market in China, which will become the world's largest panel-producing country, and secure 30% share of polyester film for FPDs in FY2020</li> <li>➢ Develop new products, such as high-performance, pressure-sensitive adhesive film for use on touch panels</li> <li>➢ Business expansion by constructing a new line for optical PVOH film, <i>OPL film</i></li> <li>➢ Expand sales of distinctive resist materials to China and other countries</li> </ul>

# Performance Products: High-Performance Films


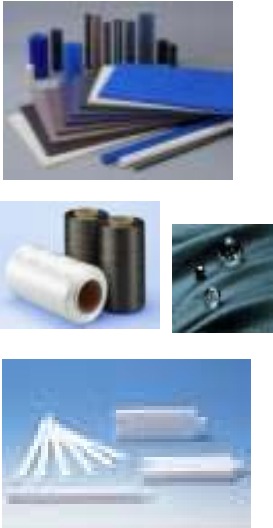
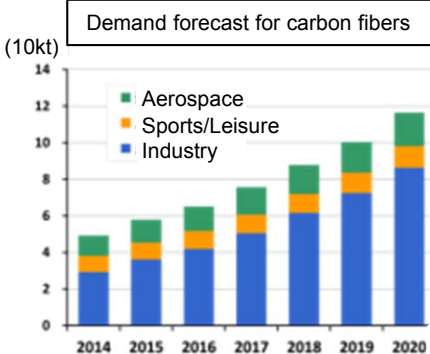
<b>High-Performance Films</b>	Major products	Food packaging, Industrial films, Medical-use films																
Portfolio classification: <b>Growth</b> 	Basic strategy	<ul style="list-style-type: none"> <li>At same time as strengthening product development capabilities through synergies and ensuring competitive advantage, leverage Group's overseas networks and accelerate business globalization</li> </ul>																
Net sales target (¥ billion) FY2015      FY2020 <b>180.0 → 200.0</b>	Action plans	<ul style="list-style-type: none"> <li>Solidifying our position as market leader, increase ratio of overseas sales to 35% in FY2020</li> <li>Expand production in growth markets centered on ASEAN region (Multi-layered food packaging film, <i>Diamiron</i>, Moisture transmission film for hygiene materials, <i>KTF</i>, etc.)</li> <li>In polyester film, strengthen existing European production line based on new North American production line and expand specialty field</li> <li>Mass produce barrier film, demand for which is burgeoning</li> <li>As a synergistic effect, cultivate medical applications as the third pillar, following food product and engineering applications</li> </ul>	<p>Proportion accounted for by middle-income group (people) in the Asia/Pacific Ocean region and in world as a whole*</p>  <table border="1"> <caption>Regional consumption (Population)</caption> <thead> <tr> <th>Year</th> <th>Population (million)</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>2030 (forecast)</td> <td>3,278</td> <td>66%</td> </tr> <tr> <td>2020 (forecast)</td> <td>1,780</td> <td>54%</td> </tr> <tr> <td>2010</td> <td>2,094</td> <td>-</td> </tr> <tr> <td>2009</td> <td>525</td> <td>-</td> </tr> </tbody> </table> <p>*Source: OECD Development Centre (2010) The Emerging Middle Class in Developing Countries</p>	Year	Population (million)	Percentage	2030 (forecast)	3,278	66%	2020 (forecast)	1,780	54%	2010	2,094	-	2009	525	-
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




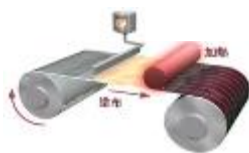


# Performance Products : Environment and Living Solutions

<p><b>Environment and Living Solutions</b></p>	<p>Major businesses and products</p>	<p>Aqua solutions, Ion-exchange resins, Agricultural business, Infrastructure solutions</p>
<p>Portfolio classification: <b>Growth</b></p> 	<p>Basic strategy</p>	<p>■ In addition to contributing to the realization of a sustainable society through the provision of solutions in the environmental and living solutions fields, proactively face challenges in new businesses, strengthen profitability, and bring about sustainable growth</p>
<p>Net sales target (¥ billion) FY2015      FY2020 <b>120.0 → 165.0</b></p>	<p>Action plans</p>	<p>➢ Aqua and separator solutions</p> <ul style="list-style-type: none"> <li>• Aim for net sales (in 2020) of ¥100.0 billion by reorganizing businesses—such as ion-exchange resins, membranes, flocculants, and engineering—and providing comprehensive solutions, from components to systems</li> </ul> <p><u>Water treatment and services</u> Reorganize and transform water treatment-related businesses to solution-oriented businesses</p> <p><u>Separation and purification</u> Enhance functions of separation and purification center, expand into new fields (in Japan) Expand business by system sale of design, procurement, and assembly (outside Japan)</p> <p><u>Cleansui</u> Accelerate overseas development through strengthening of brand strategy (focus on Chinese market → European and U.S. market development) Nurture and enhance medical businesses centered on medical-use water facilities</p>
   		<div data-bbox="875 1134 1449 1217" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p>Aqua and separator solutions business areas and existing products</p> </div> <div data-bbox="1458 1062 2018 1286" style="margin: 10px auto;">  </div> <p>➢ Agricultural business</p> <ul style="list-style-type: none"> <li>• Integrate fully artificial light-type plant factory and advanced hybrid greenhouse, and provide advanced agricultural business including functional vegetables, applications in field of regenerative medicine (growth factor), advanced agricultural business, etc.</li> </ul>

# Performance Products: Advanced Moldings and Composites

<p><b>Advanced Moldings and Composites</b></p>	<p>Major products</p>	<p>Engineering plastics, Carbon fiber and composite materials, Alumina fibers, Functional moldings and composites, Injection molding products, fiber and textile</p>																																								
<p>Portfolio classification: <b>Growth</b></p> 	<p>Basic strategy</p>	<p>■ Following integration of all types of molding businesses, target energy and large-scale industrial applications (automobiles, aircraft, structures of buildings), streamline businesses, and strengthen market penetration capabilities</p>																																								
<p>Net sales target (¥ billion) FY2015      FY2020 <b>300.0 → 380.0</b></p>	<p>Action plans</p>	<p>➤ High-performance engineering plastics (Quadrant) • M&amp;A in aircraft and medical fields, realize sales growth compared with present time of more than 20% in FY2020 by business expansion in developing countries</p> <p>➤ Carbon fiber and composite materials Aim for net sales of ¥100 billion (in 2020) • Leverage Quadrant's sales channels/sites to strengthen sales and develop products in European automotive market • Plan for extension (10→18kt/y) in response to dramatic surge in demand centered on industrial applications     • Otake: Debottleneck and facility expansion (2017, 2019)     • U.S.: Facility expansion by one production line (2016)     • U.S. and Europe: New facilities in new locations • Gain top position in automotive field for environmental response, in which rapid growth is anticipated     • Installation of SMC equipment to support major German automotive manufacturer (2016, inside Wethje)</p> <p>➤ Alumina fibers • Strengthening of de facto strategies by enterprising investment • Take lead in next-generation environmental technologies through automotive emission applications</p>																																								
		 <table border="1"> <caption>Demand forecast for carbon fibers (10kt)</caption> <thead> <tr> <th>Year</th> <th>Industry</th> <th>Sports/Leisure</th> <th>Aerospace</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>2014</td> <td>3.0</td> <td>1.0</td> <td>1.5</td> <td>5.5</td> </tr> <tr> <td>2015</td> <td>3.5</td> <td>1.0</td> <td>1.5</td> <td>6.0</td> </tr> <tr> <td>2016</td> <td>4.0</td> <td>1.0</td> <td>1.5</td> <td>6.5</td> </tr> <tr> <td>2017</td> <td>5.0</td> <td>1.0</td> <td>1.5</td> <td>7.5</td> </tr> <tr> <td>2018</td> <td>6.0</td> <td>1.0</td> <td>1.5</td> <td>8.5</td> </tr> <tr> <td>2019</td> <td>7.0</td> <td>1.0</td> <td>1.5</td> <td>9.5</td> </tr> <tr> <td>2020</td> <td>8.0</td> <td>1.0</td> <td>1.5</td> <td>10.5</td> </tr> </tbody> </table>	Year	Industry	Sports/Leisure	Aerospace	Total	2014	3.0	1.0	1.5	5.5	2015	3.5	1.0	1.5	6.0	2016	4.0	1.0	1.5	6.5	2017	5.0	1.0	1.5	7.5	2018	6.0	1.0	1.5	8.5	2019	7.0	1.0	1.5	9.5	2020	8.0	1.0	1.5	10.5
Year	Industry	Sports/Leisure	Aerospace	Total																																						
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2019	7.0	1.0	1.5	9.5																																						
2020	8.0	1.0	1.5	10.5																																						

# Performance Products: New Energy

<p><b>New Energy</b></p>	<p>Major products</p>	<p>Lithium-ion battery materials, Optoelectronics materials, OPV</p>
<p>Portfolio classification: <b>Next-generation</b></p>  <p><b>Growth</b></p> 	<p>Basic strategy</p>	<ul style="list-style-type: none"> <li>■ Promote early commercialization and profitability of new energy-related businesses that contribute to the realization of sustainable society, work to nurture businesses responsible for the next generation</li> </ul>
<p>Net sales target (¥ billion)</p> <p>FY2015      FY2020</p> <p><b>35.0 → 70.0</b></p>	<p>Action plans</p>	<ul style="list-style-type: none"> <li>➢ Lithium-ion battery materials           <ul style="list-style-type: none"> <li>• Targeting large-scale (xEV, ESS, etc.) and compact, high-end applications, develop high-performance materials, secure current shares of market (electrolytes 40%, anode materials 20%)</li> </ul> </li> <li>➢ Optoelectronics materials           <ul style="list-style-type: none"> <li>• Phosphors               <ul style="list-style-type: none"> <li>Secure profitability by the development and mass production of new, narrow-band phosphor and acceleration of Chinese development of general-purpose products</li> </ul> </li> <li>• GaN               <ul style="list-style-type: none"> <li>Achieve stable profitability from fiscal 2017 by four-inch C-plane cost reductions and improved productivity, establishing four-inch M-plane mass production technologies, and improving quality of automotive/special lighting products</li> </ul> </li> </ul> </li> <li>➢ OPV           <ul style="list-style-type: none"> <li>• Further improve energy conversion efficiency and durability of see-through OPV (window film-type) products, establish business base under the close collaborative ties with 3M Japan Limited</li> </ul> </li> </ul>
  		<p>OPV layer structure and production image</p>   

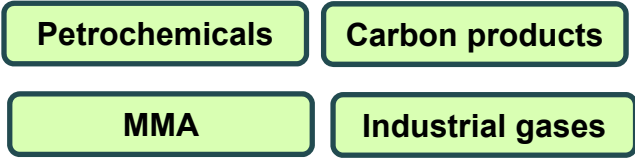
# Industrial Materials: Policies and Earnings Targets

■ Policies

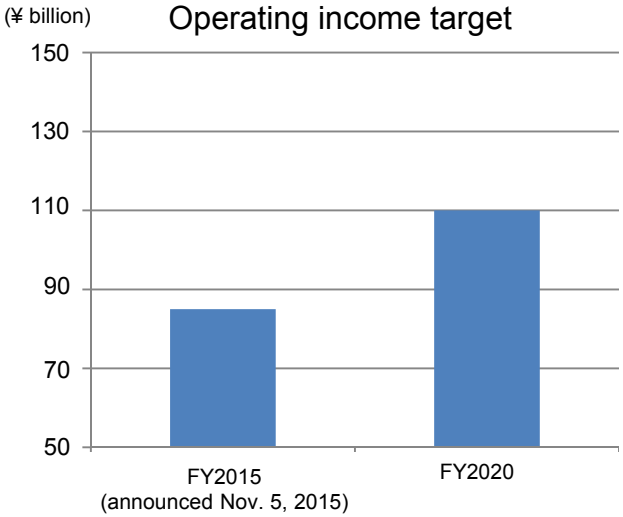
- Stabilization of earnings by strengthening of cost-competitiveness
- Acceleration of growth and strengthening of presence in the global market

■ Key strategies

- Strengthening of cost-competitiveness
  - Basic petrochemicals and derivatives
  - Coke
  - MMA
- Acceleration of global development
  - MMA
  - Industrial gases
  - PP compounds
- Business rebuilding
  - PTA





APTSIS 20 FY2016-FY2020	
• Investments	¥580.0 billion
• R&D	¥80.0 billion





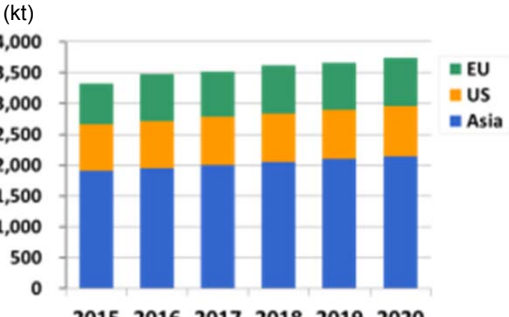
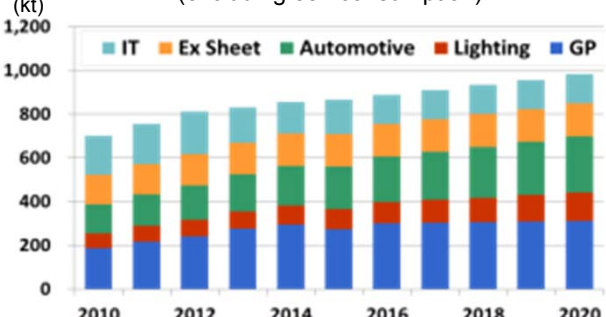


(Numerical values are based on JGAAP.)

# Industrial Materials: Petrochemicals






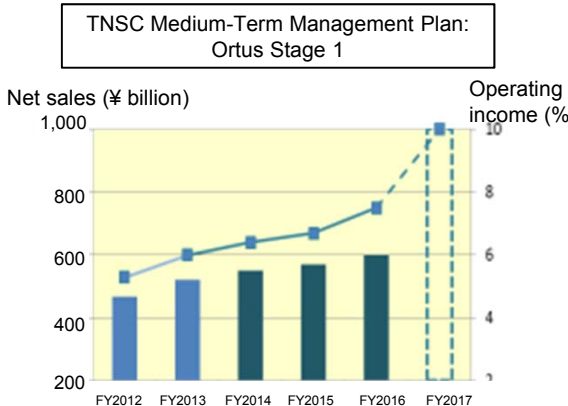
<b>Petrochemicals</b>	Major products	Basic petrochemicals and derivatives, Polyolefins, PTA
Portfolio classification: <b>Cash-generating</b> 	Basic strategy	<ul style="list-style-type: none"> <li>Work to maximize profit in entire petrochemical businesses by optimizing petrochemical chain as well as maintaining and strengthening of cost-competitiveness</li> </ul>
Net sales target (¥ billion) FY2015    FY2020 <b>970.0 → 1,000.0</b>	Action plans	<ul style="list-style-type: none"> <li>Basic petrochemicals             <ul style="list-style-type: none"> <li>Implement cracker structural reforms by unification of naphtha crackers in Mizushima in 2016</li> <li>Build supply system appropriate for scale of domestic demand, improve to long-term stable profit business structure</li> <li>Realization of cost reductions by promotion of utility business reforms</li> </ul> </li> </ul>
		<div data-bbox="965 735 1666 1129" data-label="Figure"> </div> <ul style="list-style-type: none"> <li>Polyolefins             <ul style="list-style-type: none"> <li>Cost reductions that promote rationalization of production</li> <li>Shift to high-performance products, increase proportion of high-value-added products</li> <li>Active overseas development of PP compound business</li> </ul> </li> <li>Derivatives             <ul style="list-style-type: none"> <li>Maintain competitiveness capabilities against imported products with high water's edge competitiveness</li> </ul> </li> <li>Implementation of drastic measures in terephthalic acid business</li> </ul> <div data-bbox="1621 1145 1962 1297" data-label="Text"> <p>Polyolefins:              Proportion of high-value-added products              FY2015    FY2020              PP : 45% → 55%              PE : 50% → 60%</p> </div>

# Industrial Materials: MMA

<b>MMA</b>	Major products	<b>MMA, PMMA</b>
Portfolio classification: <b>Cash-generating</b> 	Basic strategy	<ul style="list-style-type: none"> <li>■ As the world's No. 1 supplier, augment capacity and implement production system optimization to maintain overwhelming competitive advantage</li> </ul>
Net sales target (¥ billion) FY2015      FY2020 <b>370.0 → 425.0</b>	Action plans	<ul style="list-style-type: none"> <li>➢ Enhance competitiveness             <ul style="list-style-type: none"> <li>• “Jump start” of new Saudi JV planned for full operation in 2017 (MMA/PMMA)</li> <li>• Promotion of Alpha-3 project in the U.S. (MMA)</li> <li>• Ensure competitiveness and stable, high ROS by production system optimization</li> <li>• Optimization of process mix by S&amp;B (ACH process → C2 process) / MMA</li> <li>• Base optimization by S&amp;B (China → Thailand) by 2017 (MAA/BMA)</li> </ul> </li> <li>➢ Improve efficiency             <ul style="list-style-type: none"> <li>• Introduction of new, high-efficiency catalyst to C4 process by 2018 / MMA</li> <li>• Relocation of Asia/ASEAN/Europe bases (MRC/Lucite) / PMMA</li> </ul> </li> <li>➢ New development             <ul style="list-style-type: none"> <li>• Development of new fields and creation of new applications by expansion of high-performance product lineup (PMMA)</li> <li>• Establishment of strategic supply bases in emerging countries in Middle East, Eastern Europe, and Africa (MMA/PMMA)</li> </ul> </li> </ul>
  		<div data-bbox="714 1075 1180 1110" style="border: 1px solid black; padding: 2px; margin-bottom: 10px;"> <b>MMA Demand Trends by Region</b> </div>  <div data-bbox="1458 1070 1868 1126" style="margin-bottom: 10px;"> <b>PMMA Demand Trends by Application (excluding self-consumption)</b> </div> 



# Industrial Materials: Carbon Products / Industrial Gases

<b>Carbon products</b>	Major products	<b>Coke, High-performance graphite, Carbon black and synthetic rubber</b>																						
Portfolio classification: <b>Cash-generating</b> 	Basic strategy	<ul style="list-style-type: none"> <li>■ Strengthening competitiveness in coke, high-performance graphite, and carbon black and synthetic rubber, and ensuring stable earnings</li> </ul>																						
Net sales target (¥ billion) FY2015      FY2020 <b>215.0 → 245.0</b> 	Action plans	<ul style="list-style-type: none"> <li>➢ Coke                             <ul style="list-style-type: none"> <li>• Repairing coke oven batteries in planned manner, maintain sales to overseas steelmakers</li> </ul> </li> <li>➢ High-performance graphite, carbon black                             <ul style="list-style-type: none"> <li>• Promote development/sales expansion of high-performance products</li> </ul> </li> </ul>																						
<b>Industrial gases</b>	Major products	<b>Industrial gases</b>																						
Portfolio classification: <b>Cash-generating</b> 	Basic strategy	<ul style="list-style-type: none"> <li>■ With extensive experience and proprietary technological development, we provide a stable supply of industrial gas that underpins our foundation of diverse industrial fields.</li> <li>■ Contributing to society by providing products and systems with originality and systems in the energy, medicals and environmental fields, which are promising growth markets</li> </ul>																						
 	Action plans	<ul style="list-style-type: none"> <li>➢ Promote greater streamlining and optimizing to maintain a stable revenue base in Japan</li> <li>➢ Promote M&amp;A on global scale and strategically invest management resources in overseas markets and steadily take in growth opportunities (Overseas sales ratio: 50% or more in FY2022)</li> <li>➢ Create new business that will be the core of the next generation by seizing the opportunities created by the global energy shift</li> </ul>	<div style="border: 1px solid black; padding: 5px; text-align: center;">TNSC Medium-Term Management Plan: Ortus Stage 1</div>  <table border="1"> <caption>TNSC Medium-Term Management Plan: Ortus Stage 1</caption> <thead> <tr> <th>Fiscal Year</th> <th>Net sales (¥ billion)</th> <th>Operating income (%)</th> </tr> </thead> <tbody> <tr> <td>FY2012</td> <td>~500</td> <td>~5.0</td> </tr> <tr> <td>FY2013</td> <td>~550</td> <td>~6.0</td> </tr> <tr> <td>FY2014</td> <td>~580</td> <td>~6.5</td> </tr> <tr> <td>FY2015</td> <td>~580</td> <td>~7.0</td> </tr> <tr> <td>FY2016</td> <td>~600</td> <td>~8.0</td> </tr> <tr> <td>FY2017</td> <td>~600</td> <td>~10.0</td> </tr> </tbody> </table>	Fiscal Year	Net sales (¥ billion)	Operating income (%)	FY2012	~500	~5.0	FY2013	~550	~6.0	FY2014	~580	~6.5	FY2015	~580	~7.0	FY2016	~600	~8.0	FY2017	~600	~10.0
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# Health Care: Policy and Earnings Targets

■ Policy

- Aim at worldwide growth in ethical drug business
- Establish and expand the healthcare and medical business utilizing ICT and regenerative medicine business

■ Key strategies

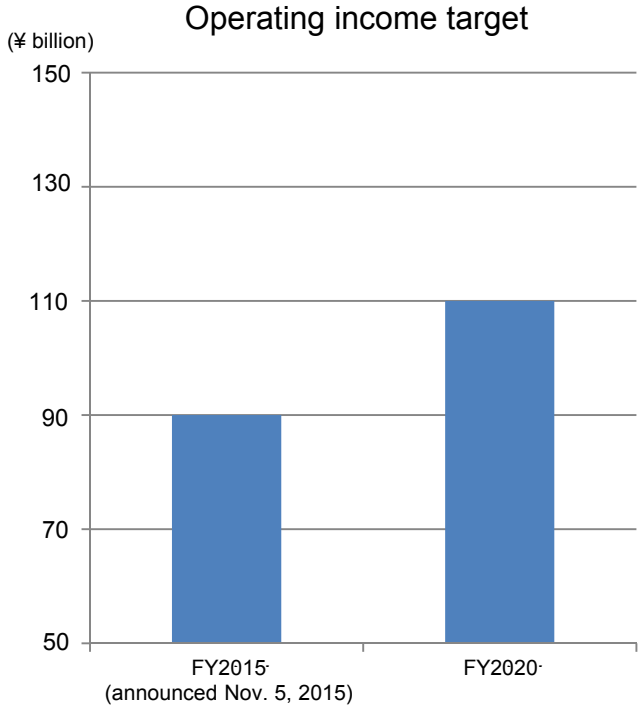
- Promote overseas business mainly in the U.S.
- Strengthen new drug creation abilities
  - Transformation for R&D processes
  - Open innovation
- Maximize product potential in new drugs and priority products by strengthening value development and sales
- Expand the healthcare and medical business utilizing ICT
- Promote the regenerative medicine business
  - Obtaining early approval of regenerative medicine products (Muse cells/Clio)
- Enhance business productivity

Ethical drugs

Life science



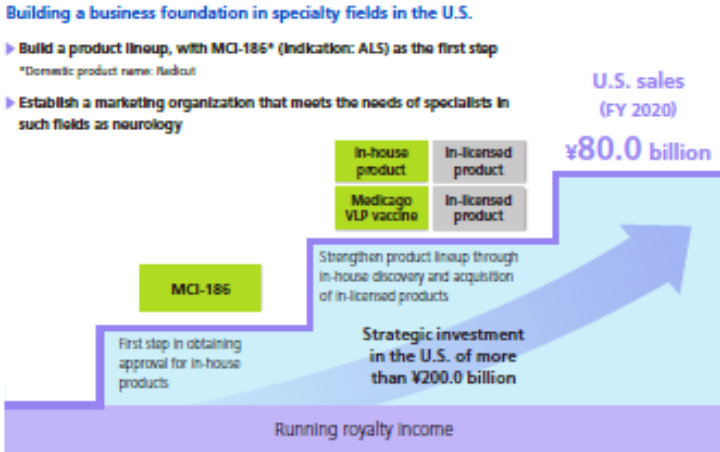
*APTSIS 20* FY2016-FY2020

- Investments ¥460.0 billion
- R&D ¥440.0 billion



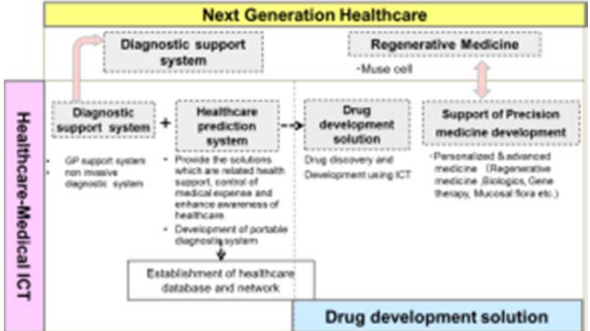


(Numerical values are based on JGAAP.)

# Health Care: Ethical Pharmaceuticals

<b>Ethical pharmaceuticals</b>	Major products	<b>Ethical pharmaceuticals</b>
Portfolio classification: <b>Growth</b> 	Basic strategy	<ul style="list-style-type: none"> <li>■ In addition to enhance the R&amp;D pipeline by utilizing in-house new drug creation abilities and open innovation, seek the maximization of new drugs and priority products in domestic sales and the development of overseas businesses mainly in the U.S.</li> </ul>
Net sales target (¥ billion) FY2015      FY2020 <b>410.0 → 500.0</b>	Action plans	<ul style="list-style-type: none"> <li>➢ Invest ¥400 billion in R&amp;D and create new drugs that can be deployed worldwide</li> <li>➢ Amid increasingly severe market environment such as reevaluation of the NHI drug price system and the penetration of measures to promote the use of generic drugs, achieve domestic sales of ¥300 billion (new drugs and priority products sales ratio of 75%) by strengthening value development and sales especially in new drugs and priority products</li> <li>➢ In the U.S., establish a sustainable growth platform by establishing business platform with strategic investment of ¥200 billion or more including M&amp;A and building a product lineup with open shared business</li> </ul>
		<p><b>Building a business foundation in specialty fields in the U.S.</b></p> <ul style="list-style-type: none"> <li>▶ Build a product lineup, with MCI-186* (Indication: ALS) as the first step  <small>*Domestic product name: fladocin</small></li> <li>▶ Establish a marketing organization that meets the needs of specialists in such fields as neurology</li> </ul> 

# Health Care: Life Science

<b>Life Science</b>	Major products and services	Clinical testing, Diagnostic reagents and instruments, Capsules and machinery, API, Non-clinical and clinical studies, Regenerative medicine, Medical checkups, Self-health check service: <i>Jibun Karada Club</i>
Portfolio Classification <b>Growth</b> 	Basic strategy	<ul style="list-style-type: none"> <li>Transform to business organization that meets social needs and profitability targets by expanding the healthcare and medical business utilizing ICT and by establishing a regenerative medicine business through preempting changes in the healthcare environment.</li> </ul>
Net sales target (¥ billion) FY2015      FY2020 <b>130.0 → 250.0</b>	Action plans	<ul style="list-style-type: none"> <li>Healthcare and medical ICT             <ul style="list-style-type: none"> <li>Expand the healthcare-medical business that utilizes ICT (health prediction support, diagnostic support, etc.) by viewing the progress of the use of digital information as a business opportunity</li> <li>Expand the healthcare support business which combines medical checkups and <i>Jibun Karada Club</i></li> <li>Improve added value in the clinical testing and diagnostic reagents and instruments businesses by utilizing open shared business</li> </ul> </li> <li>Next-generation healthcare             <ul style="list-style-type: none"> <li>Obtain early approval of regenerative medicine products that use Muse cells (Clio, Inc.) in 2019</li> <li>Develop and commercialize new healthcare technologies (non-invasive diagnosis system, etc.)</li> </ul> </li> <li>Drug discovery solutions             <ul style="list-style-type: none"> <li>Improve profitability and expand business by global spread in the capsule business</li> <li>Improve profits of API business by promoting structural reforms</li> </ul> </li> </ul>
		

# Today's Agenda

*APTSIS 15* Review

## *APTSIS 20* Policies and Targets

- Basic Policies
- Numerical Targets
- ROE Management
- Resource Allocation
- Shareholder Returns

## Principal Measures

- Integration of Three Chemical Operating Companies
- Portfolio Management
- Next-Generation Businesses
- Global Development

## MCHC Group Business Strategies

- Performance Products
- Industrial Materials
- Health Care

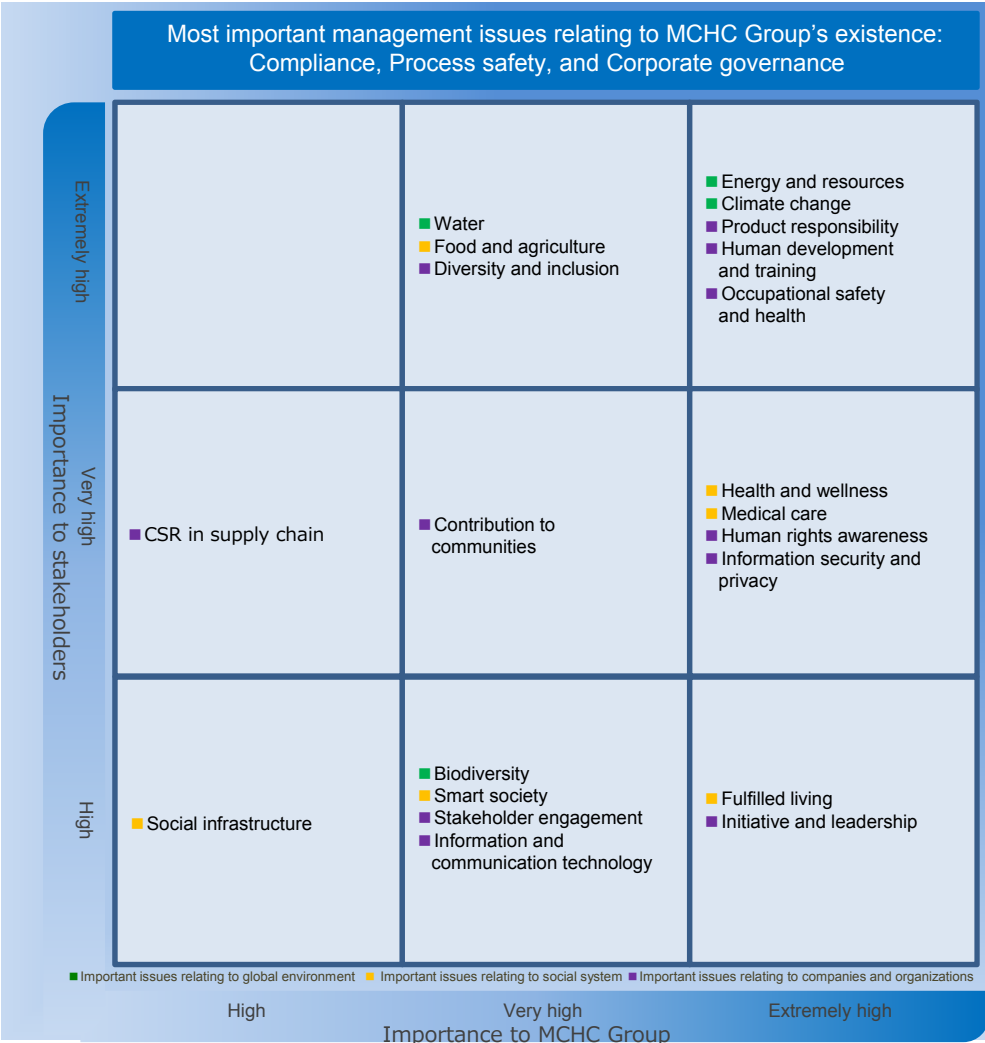
## Toward Enhancing *KAITEKI* Value

- Materiality Assessment
- MOS
- MOT



# Materiality Assessment

- Based on macro trends, identify as materiality priority issues that should be addressed
- Use materiality assessments as management strategy guidelines



**■ Important issues relating to global environment:**  
Management challenges to work on through MCHC Group's corporate activities, creation of innovation, and provision of products and services toward realization of global comfort

**■ Important issues relating to social system:**  
Management challenges to work on through MCHC Group's corporate activities, creation of innovation, and provision of products and services toward society with more comfort

**■ Important issues relating to companies and organizations:**  
Important management issues relating to the Group's governance and its relations with the society that the Group should cope with as a group of companies aiming to realize *KAITEKI*

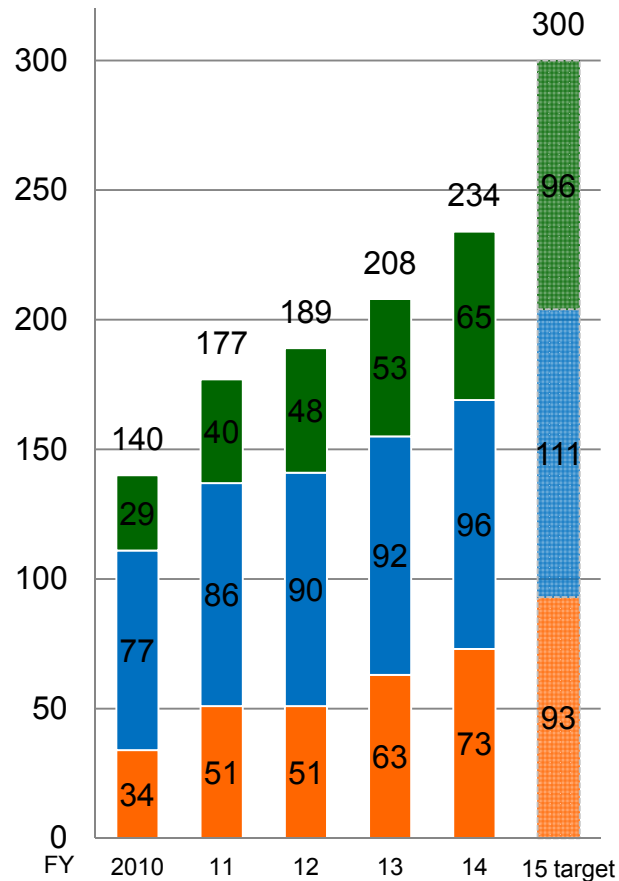
# Progress of Sustainability (MOS)

- Steady progress in sustainability improvements and entrenchment of virtuous cycle from improvements in external evaluations

Framework of MOS Indices

Target that must be achieved		Achieve zero occurrence of material accidents and compliance violations
Sustainability [Green] Index	S-1	Contribute to reducing environmental impact through products and services
	S-2	Take actions against depletion of natural resources and implement energy-saving initiatives
	S-3	Contribute to solving social and environmental issues through supply chain management
Health Index	H-1	Contribute to medical treatment
	H-2	Contribute to improvements of QOL
	H-3	Contribute to early detection and prevention of diseases
Comfort Index	C-1	Deliver products (development and manufacturing) for comfortable lifestyle
	C-2	Improve stakeholder satisfaction
	C-3	Earn recognition of corporate trust

Result of MOS indices



Evaluations by third parties





# APTSIS 20 MOS Indices

■ Increasing corporate value through the PDCA cycle of MOS indices related to materiality

Targets that must be achieved		Achieve zero occurrences of serious accidents and compliance violations		
S indices	S-1	Contribution to reducing global environmental burdens	S-1-1	Reduction of burdens on the atmospheric environment
			S-1-2	Reduction of burdens on the aqueous environment
			S-1-3	Reduction of burdens on the soil environment
	S-2	Efficient use of resources and energy	S-2-1	Promotion of energy-conservation activities
			S-2-2	Shift to resource-saving materials and renewable materials
			S-2-3	Promotion of the use of renewable energy
	S-3	Provision of products and services that contribute to the sustainability of the environment and resources	S-3-1	Provision of products and services that contribute to reducing greenhouse gas (GHG) emissions
			S-3-2	Provision of products and services that contribute to solving problems related to water resources
			S-3-3	Provision of products and services that contribute to solving food problems
H indices	H-1	Contribution to treatment of disease	H-1-1	Provision of medicines
			H-1-2	Provision of clinical testing services
	H-2	Contribution to disease prevention and early detection of disease	H-2-1	Provision of vaccines
			H-2-2	Provision of information on health management and medical checkups
	H-3	Provision of products and services that contribute to realizing healthy and hygienic lives	H-3-1	Provision of products for the wellness field
			H-3-2	Provision of products for the hygiene field
H-3-3	Provision of products for the medical field			
C indices	C-1	Efforts to become a company that is more trusted by society	C-1-1	Improvement of awareness for compliance
			C-1-2	Prevention of accidents and disasters
			C-1-3	Improvement of reliability of products and services and improvement of customer satisfaction
	C-2	Communication and cooperation with stakeholders	C-2-1	Promotion of communication with business partners
			C-2-2	Improvement of evaluation by stakeholders
			C-2-3	Development of a dynamic and cooperative organization that provides job satisfaction
	C-3	Contribution to creating a more comfortable society and a more comfortable life	C-3-1	Provision of products and services that contribute to creating a more comfortable society and a more comfortable life



## Direction of MOS and Numerical Targets

- Contribute enhancement of our corporate value with strengthening of collaboration between MOE and MOT, toward strengthening foundations as “THE KAITEKI COMPANY” being recognized on truly global level

### Basic Policies

1. Promote MOS with MOS indices as key to improve sustainability
2. Analysis and review of information within and outside company, and sharing of values
3. From sharing of “concepts” to sharing of “activities”

#### Non-financial indices excerpted (MOS)

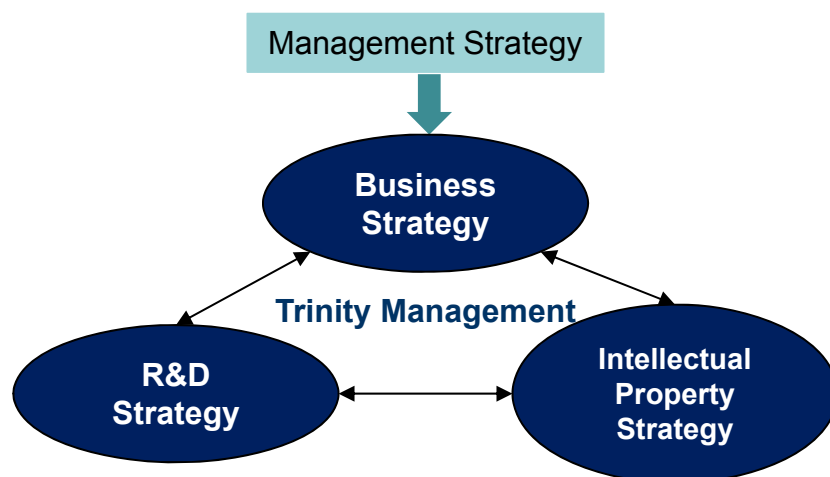
- Achieve zero occurrences of serious accidents and compliance violations (FY2016-FY2020)
  - Reduce 150 million tons CO<sub>2</sub> equivalent/year of GHG emissions by providing products and services that contribute to reducing GHG emissions
  - Reduce environmental burdens of manufacturing and improve from FY2010 level in terms of per-unit on:
    - \*the atmospheric environment by 20%
    - \*the aqueous environment by 25%
    - \*the soil environment by 15%
  - Through health management:
    - Increase the number of the provision of information on health management and medical checkups to 3.25 times to improve health of all in society
    - Improve the employee wellness index\*\*, with development of a dynamic and cooperative organization that provides job satisfaction by health and productivity management
- \*\* the employee wellness index: MCHC original indicator, designed by the ratio of long hour workers, annual paid leave illness in the course of employment , and etc.

## Direction of MOT

- We shall advance R&D by bringing together outstanding resources from Japan and overseas, and contribute to the realization of *KAITEKI* through innovation.

### Basic Policy

- Practicing the trinity management (Definition of MOT)



- Open Innovation  
Open Shared Business (OSB®)
- Synergy in the MCHC Group
- Utilization of IoT, AI, big data, etc.

### Example of MOT Indices

MOT Indices	Example in Detail
R&D Index	Elevated stage success ratio (development stage to launch stage)
Intellectual Property Index	Ratio of overseas patent applications (The percentage of the overseas applications occupied in the whole number of applications)
Market Index	New product ratio (the proportion of new products and services as a percentage of sales)

# Enhancement of Corporate Value through *KAITEKI* management

THE KAITEKI COMPANY

## Management of Sustainability (MOS)

Management aiming to improve sustainability

Contributing to the resolution of a variety of environmental and social issues through corporate activities that consider the future of people, society, and the Earth

## Management of Economics (MOE)

Management which focuses on capital efficiency

Pursuing profits by efficiently using various forms of capital, including human resources, assets and funds

## Management of Technology (MOT)

Management which strives to create innovations for society

Creating innovative products and services through the differentiation of technology that we possess

