June 9, 2014

Yoshimitsu Kobayashi
President & Chief Executive Officer
Mitsubishi Chemical Holdings Corporation
The forward-looking statements are based largely on information available as of the date hereof, and are subject to risks and uncertainties which may be beyond Company control. Actual results could differ largely, due to numerous factors, including but not limited to the following: Group companies execute businesses in many different fields, such as 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

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCHC</td>
<td>Mitsubishi Chemical Holdings Corporation</td>
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<tr>
<td>MCC</td>
<td>Mitsubishi Chemical Corporation</td>
</tr>
<tr>
<td>MTPC</td>
<td>Mitsubishi Tanabe Pharma Corporation</td>
</tr>
<tr>
<td>MPI</td>
<td>Mitsubishi Plastics, Inc.</td>
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<tr>
<td>MRC</td>
<td>Mitsubishi Rayon Co., Ltd.</td>
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<tr>
<td>LSII</td>
<td>Life Science Institute, Inc.</td>
</tr>
<tr>
<td>TNSC</td>
<td>Taiyo Nippon Sanso Corporation</td>
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<tr>
<td>APIC</td>
<td>API Corporation</td>
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<tr>
<td>HLC</td>
<td>Healthy Life Compass Corporation</td>
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<tr>
<td>JPP</td>
<td>Japan Polychem Corporation</td>
</tr>
<tr>
<td>LICC</td>
<td>Lucite International (China) Chemical Industry Co., Ltd.</td>
</tr>
<tr>
<td>LSIM</td>
<td>LSI Medience Corporation</td>
</tr>
<tr>
<td>MCPI</td>
<td>MCC PTA India Corp. Private Limited</td>
</tr>
<tr>
<td>METI</td>
<td>Ministry of Economy, Trade and Industry</td>
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<tr>
<td>MHLW</td>
<td>Ministry of Health, Labour and Welfare</td>
</tr>
<tr>
<td>NICE</td>
<td>National Institute for Health and Clinical Excellence</td>
</tr>
<tr>
<td>NKC</td>
<td>Nippon Kasei Chemical Company Limited</td>
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<tr>
<td>NSCI</td>
<td>The Nippon Synthetic Chemical Industry Co., Ltd.</td>
</tr>
<tr>
<td>NNE</td>
<td>Nishi Nippon Ethylene LLC</td>
</tr>
<tr>
<td>PTT</td>
<td>PTT Public Company Limited</td>
</tr>
<tr>
<td>QKK</td>
<td>Qualicaps Co., Ltd.</td>
</tr>
<tr>
<td>SABIC</td>
<td>Saudi Basic Industries Corporation</td>
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<tr>
<td>CRO</td>
<td>Contract research organization</td>
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<tr>
<td>CTS</td>
<td>Compound technology services</td>
</tr>
<tr>
<td>DPP IV</td>
<td>Dipeptidyl Peptidase IV</td>
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<tr>
<td>EOG</td>
<td>Ethylene oxide and glycol</td>
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<tr>
<td>EVOH</td>
<td>Ethylene vinyl alcohol</td>
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<tr>
<td>GaN</td>
<td>Gallium nitride</td>
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<tr>
<td>HDPE</td>
<td>High density polyethylene</td>
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<tr>
<td>ICT</td>
<td>Information and communication technology</td>
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<tr>
<td>LCM</td>
<td>Life cycle management</td>
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<tr>
<td>LLDPE</td>
<td>Linear low-density polyethylene</td>
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<tr>
<td>LNG</td>
<td>Liquefied natural gas</td>
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<tr>
<td>MAA</td>
<td>Methacryl acid</td>
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<tr>
<td>MMA</td>
<td>Methyl methacrylate</td>
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<tr>
<td>MOCDV</td>
<td>Metal Organic Chemical Vapor Deposition</td>
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<tr>
<td>MOS</td>
<td>Management of Sustainability</td>
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<tr>
<td>MOT</td>
<td>Management of Technology</td>
</tr>
<tr>
<td>NCF</td>
<td>Non-crimp fabric</td>
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<td>OLED</td>
<td>Organic light emitting diode</td>
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<tr>
<td>OPV</td>
<td>Organic photovoltaic</td>
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<tr>
<td>PBS</td>
<td>Polybutylene succinate</td>
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<td>PC</td>
<td>Polycarbonate</td>
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<tr>
<td>PCM</td>
<td>Prepreg compression molding</td>
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<tr>
<td>PE</td>
<td>Polyethylene</td>
</tr>
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<td>PHL</td>
<td>Phenol</td>
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<td>PMI</td>
<td>Post merger integration</td>
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<td>PMMA</td>
<td>Polymethyl methacrylate</td>
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<tr>
<td>PP</td>
<td>Polypropylene</td>
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<tr>
<td>PVC</td>
<td>Polyvinyl chloride</td>
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<tr>
<td>PVOH</td>
<td>Polyvinyl alcohol</td>
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</tbody>
</table>

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

1. Business Environment Awareness and Management Challenges

2. Progressing toward Improved Performance
   2.1 APTSIS 15 Step 2 Plan and Performance
   2.2 Progress Situation by Each Growth Model Category

3. Life Science Institute, Inc. (LSII)

4. Strengthening of Capital Alliance with Taiyo Nippon Sanso Corporation (TNSC)

5. KAITEKI Management
Today’s Agenda

1. Business Environment Awareness and Management Challenges

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5. KAITEKI Management
1. Operating Environment for Japan-based Companies

- Competitive conditions for Japan-based companies are gradually improving, but global competition is becoming increasingly intense.

- "Three arrows" of Abenomics
  (Bold monetary policy ⇒ Correction of excessive yen appreciation)

- Global Markets
  - Heavy commitment for emissions reductions under COP 21 (end of 2015, Paris)
  - Competition for resources

- Japanese companies
  - Foreign exchange
  - Various regulations
  - Trade policy
  - Tax system
  - Raw material costs
  - Electric power costs
  - Reduction in GHGs
  - Labor laws

- Globalization
  - Sustainability

- High corporate income taxes
- Nuclear power plant issue
- TPP・FTA/EPA

- Mitsubishi Chemical Holdings
1. Structural Changes in the Chemical Industry

- Structural changes in the chemical industry
  - Shale revolution, emergence of coal chemistry in China
  - Excessive capital investments and supply-demand imbalance in China
  - Advance with sustainability and health-centered management
- Evolution of manufacturing architecture
  - Modularization, digitization, commoditization, Internet of Things (IoT)

Global ethylene production capacity growth

Global terephthalic acid production capacity changes

Source: "Global Supply and Demand Trends for Petrochemical Products" compiled by METI (Apr. 30, 2013)
1. Trends in Domestic and Overseas Performance

- Overseas business is growing in terms of sales, but its profitability has declined sharply.

*Operating income

*Overseas royalty income is included within figures for domestic performance.
1. Factors Placing Downward Pressure on Revenue

**Overseas**

- Regarding terephthalic acid, PHL/PC chain, China-centered global excess production capacity (supply-demand imbalance) causing considerable deterioration of profitability.
- Regarding MMA chain, delayed launch of expanded North American plant capacity causing opportunity losses and increased costs.

**Domestic**

- Regarding pharmaceuticals, growing market shares of generics reducing revenue from long-listed products.
- A portion of growth driver businesses have suffered from delayed market launches.
1. Management Issues Requiring Emphasis

- Implementation of portfolio transformation
  1. Transform TNSC into a consolidated subsidiary
  2. Expand the business of LSII
  3. Generate further synergies

- Strengthening profitability of growth businesses
  1. Expanding and strengthening revenue base of MMA business
  2. Accelerating development of business in performance products (carbon fiber, alumina fiber, etc.)

- Promotion of structural reforms
  1. Restructure and rebuild petrochemical-related businesses
  2. Implement fundamental countermeasures regarding terephthalic acid, PHL/PC chain businesses
Today’s Agenda

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5. KAITEKI Management
Managing and operating businesses through a combination of the four-quadrant model (management based on product life cycles and business growth potential and profit potential) and the growth model (management based on the variability of profit structures)

### Growth model

#### Stable businesses
- High-performance graphite
- Performance polymers
- Specialty chemicals
- High-performance films
- Food ingredients
- Diagnostics & support for new pharmaceutical development
- Coke and others

#### Growth driver businesses
- Organic photovoltaic modules and materials
- Organic photo-semiconductors
- Advanced performance products (AQSOA and others)
- Agribusiness solutions
- Sustainable resources and others

#### Volatile businesses
- Carbon black and rubber
- Electronic and industrial films
- Fibers and others

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**Four-quadrant model in business portfolio management**

- **Growth potential (+)**
- **Profitability (+)**
- **Volutility (high)**

**Businesses to be restructured**

**Next-generation growth businesses**

**Cash-generating businesses**

**Business Life Cycle Management**

**THE KAITEKI COMPANY**

### Portfolio Transformation

#### Transforming the business structure based on the four-quadrant model

<table>
<thead>
<tr>
<th>Withdrawal</th>
<th>Next-generation growth businesses</th>
<th>Growth businesses</th>
<th>Leaping ahead</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact on sales (¥300 billion)</td>
<td></td>
<td>Impact on sales +¥800 billion</td>
<td>TNSC</td>
</tr>
<tr>
<td>Nylon chain (May 2010)</td>
<td></td>
<td>NSCI (Dec. 2012: Acquisition of majority shareholding)</td>
<td></td>
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<tr>
<td>Domestic terephthalic acid (Dec. 2010)</td>
<td></td>
<td>QKK (Mar. 2013: Acquisition)</td>
<td></td>
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<tr>
<td>PVC chain (Mar. 2011)</td>
<td></td>
<td>Quadrant AG (Mar. 2013: Acquisition)</td>
<td></td>
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<tr>
<td>SM chain (Mar. 2011)</td>
<td></td>
<td>(Currently being examined) Naphtha cracker integration Polyolefins Terephthalic acid</td>
<td></td>
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<tr>
<td>Piping materials (Mar. 2011)</td>
<td></td>
<td>Cash-generating businesses</td>
<td></td>
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<tr>
<td>SAP (Mar. 2013)</td>
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</tbody>
</table>

### Changes in operating income (¥ billion)

- Operating income of four companies (MRC, NSCI, QKK, Quadrant) that joined the MCHC Group owing to the “leaping ahead” (M&A) strategy
- Operating income excluding the above four companies

<table>
<thead>
<tr>
<th>Year</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales Impact</td>
<td>+¥800 billion</td>
<td></td>
<td></td>
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<tr>
<td>Withdrawal Impact</td>
<td></td>
<td>¥300 billion</td>
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<td>Fertilizer (Dec. 2009)</td>
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<td></td>
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<tr>
<td>Nylon chain (May 2010)</td>
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<tr>
<td>Domestic terephthalic acid (Dec. 2010)</td>
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<td>PVC chain (Mar. 2011)</td>
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<td>SM chain (Mar. 2011)</td>
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<td>Piping materials (Mar. 2011)</td>
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<tr>
<td>SAP (Mar. 2013)</td>
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<tr>
<td>Impact on sales (¥300 billion)</td>
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<tr>
<td>Withdrawal (Dec. 2009)</td>
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</tr>
<tr>
<td>Next-generation growth businesses (Currently being examined) Naphtha cracker integration Polyolefins Terephthalic acid</td>
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<td></td>
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<tr>
<td>Growth businesses</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>MRC (Mar. 2010: Management integration)</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>NSCI (Dec. 2012: Acquisition of majority shareholding)</td>
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<td></td>
</tr>
<tr>
<td>QKK (Mar. 2013: Acquisition)</td>
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</tr>
<tr>
<td>Quadrant AG (Mar. 2013: Made into a wholly owned subsidiary)</td>
<td></td>
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</tr>
</tbody>
</table>

### Business to be restructured

- Naphtha cracker integration
- Polyolefins
- Terephthalic acid

### Next-generation growth businesses

- TNSC
- To become a consolidated subsidiary in 4Q, FY2014
In FY2013, higher sales and cost reductions, along with yen depreciation, led to year-on-year growth in sales and profitability.

In FY2014, plans call for the implementation of still further profitability-enhancement measures to enable an additional increase in profitability.

Figures for FY2013 include ¥151.9 billion in sales and ¥3.9 billion in operating income attributable to the impact of measures to unify the fiscal accounting periods of Group companies.
Operating Income by Segment: THE KAITEKI COMPANY

2-1. **Actual Results for FY2013 vs. Outlook for FY2014**

- Designed Materials segment shows robust performance
- Health Care segment shows pharmaceuticals profit roughly unchanged from previous year and growth in LSII profit
- Polymers segment shows outlook for enhanced performance in MMA/PMMA and polyolefins

<table>
<thead>
<tr>
<th>Domains</th>
<th>Segments</th>
<th>Actual results for FY2012</th>
<th>Actual results for FY2013</th>
<th>Forecasts for FY2014</th>
<th>Change (FY2014 vs. FY2013)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance Products</td>
<td>Electronics Applications</td>
<td>(5.1)</td>
<td>(5.5)</td>
<td>(3.0)</td>
<td>+2.5</td>
<td>• Robust performance in phosphors and display materials</td>
</tr>
<tr>
<td></td>
<td>Designed Materials</td>
<td>22.5</td>
<td>46.5</td>
<td>50.0</td>
<td>+3.5</td>
<td>• Robust performance in food ingredients, fibers and other products.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Increased profit in polyester film, alumina fiber, and certain other products. (+10: impact of segment definition change)</td>
</tr>
<tr>
<td>Health Care</td>
<td>Health Care</td>
<td>74.9</td>
<td>68.3</td>
<td>70.0</td>
<td>+1.7</td>
<td>• Pharmaceuticals profit roughly unchanged from previous year</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Increased profit from LSII (QKK, LSIM)</td>
</tr>
<tr>
<td>Industrial Materials</td>
<td>Chemicals</td>
<td>(0.2)</td>
<td>0.7</td>
<td>4.0</td>
<td>+3.3</td>
<td>• Margin of losses in terephthalic acid diminished</td>
</tr>
<tr>
<td></td>
<td>Polymers</td>
<td>0.1</td>
<td>2.3</td>
<td>19.0</td>
<td>+16.7</td>
<td>• Capacity expansion of U.S. Beaumont plant contributes to MMA/PMMA profit growth</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>6.5</td>
<td>5.7</td>
<td>4.0</td>
<td>(1.7)</td>
<td>• Income from EOG and ethanol increased</td>
</tr>
<tr>
<td>Corporate</td>
<td></td>
<td>(8.5)</td>
<td>(7.5)</td>
<td>(8.0)</td>
<td>(0.5)</td>
<td>• Increased profit recorded for polyolefins</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>90.2</td>
<td>110.5</td>
<td>136.0</td>
<td>+25.5</td>
<td></td>
</tr>
</tbody>
</table>

**Operating income (loss) (¥ billion)**

*New depreciation method introduced from FY2013*
## 2-1. **APTSIS 15 Step 2: Plan and Actual Results**

<table>
<thead>
<tr>
<th>Key indices:</th>
<th>Actual results for FY2012</th>
<th>Actual results for FY2013</th>
<th>Forecasts for FY2014</th>
<th>APTSIS 15 Step 2 Targets for FY2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exchange rate</td>
<td>¥83.3/$1</td>
<td>¥100.5/$1</td>
<td>¥102.0/$1</td>
<td>¥90.0/$1</td>
</tr>
<tr>
<td>Naphtha price</td>
<td>¥57,500/kl</td>
<td>¥67,300/kl</td>
<td>¥70,000/kl</td>
<td>¥65,000/kl</td>
</tr>
<tr>
<td>Net sales</td>
<td>¥3.1 trillion</td>
<td>¥3.5 trillion</td>
<td>¥3.5 trillion</td>
<td>¥4.3 trillion</td>
</tr>
<tr>
<td>Operating income</td>
<td>¥90.2 billion</td>
<td>¥110.5 billion</td>
<td>¥136.0 billion</td>
<td>¥260.0 billion [¥280.0 billion*]</td>
</tr>
</tbody>
</table>

### Composition of operating income (loss) (¥ billion)

- **Performance Products**
  - Actual results for FY2012: ¥17.4
  - Actual results for FY2013: ¥41.0
  - Forecasts for FY2014: ¥47.0
  - APTSIS 15 Step 2 Targets for FY2015: ¥85.0

- **Industrial Materials**
  - Actual results for FY2012: ¥23.0
  - Actual results for FY2013: ¥47.0
  - Forecasts for FY2014: ¥60.0
  - APTSIS 15 Step 2 Targets for FY2015: ¥260.0

- **Others, Corporate**
  - Actual results for FY2012: ¥74.9
  - Actual results for FY2013: ¥68.3
  - Forecasts for FY2014: ¥70.0
  - APTSIS 15 Step 2 Targets for FY2015: ¥110.0

*Including “leaping ahead” (M&A)
2-1. Preparing for FY2015

Ensuring implementation of all important measures for addressing management issues meriting emphasis, and endeavoring to ensure attainment of FY2015 targets

Operating income (¥ billion)

APTSIS 15 Step 2: FY2013 - FY2015

Excluding “leaping ahead” (M&A)
### 2-1. Current Degree of Attainment Regarding FY2015 Targets

- Continue launching requisite measures going forward for each element of the four-quadrant/growth model

<table>
<thead>
<tr>
<th></th>
<th>Stable businesses</th>
<th>Growth driver businesses</th>
<th>Volatile businesses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Next-generation growth businesses</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>Growth businesses</strong></td>
<td>Pharmaceuticals struggling</td>
<td>Existing business growth</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>LSII development</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Leaping ahead (M&amp;A)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>strategies</td>
<td></td>
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<tr>
<td><strong>Cash-generating businesses</strong></td>
<td>Robust performance</td>
<td></td>
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<tr>
<td><strong>Businesses to be restructured</strong></td>
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</tbody>
</table>

- Concerted efforts to expedite business launches
- Expedite profitability attainment
- Generally robust performance
- Still further structural reforms
2-2. Stable Businesses: Progress

- FY2015 operating income target of ¥225.0 billion
  
  Current:
  - High hurdles for attainment of stable businesses targets
  
  Outlook:
  - Profitability increase owing to implementation of measures for improving MMA/PMMA performance
  - Robust performance in such stable businesses as performance polymers and PVOH/EVOH (NSCI)

**Operating income (¥ billion)**

- FY2012 Actual: ¥143.0 billion
- FY2013 Actual: ¥138.0 billion
- FY2014 Forecast: ¥155.0 billion
- FY2015 Step 2 Plan: ¥225.0 billion

- Margin of fluctuation: ¥70.0 billion
### 2-2. Stable Businesses: Major Policies and Progress

<table>
<thead>
<tr>
<th>Main SBUs</th>
<th>Major policies</th>
<th>Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pharmaceuticals</strong></td>
<td>• Nurturing development of new pharmaceuticals and priority products</td>
<td>• Erosion of long-listed product sales by generics proceeding more rapidly than anticipated</td>
</tr>
<tr>
<td></td>
<td>• Expand licensed-out products (royalty revenues)</td>
<td>• Increase in royalties from <em>Gilenya</em> and <em>INVOKANA</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Revision of financial results forecasts for FY2015 (¥35 billion downward adjustment)</td>
</tr>
<tr>
<td><strong>MMA/PMMA</strong></td>
<td><strong>[MMA monomers]</strong></td>
<td>• U.S. Beaumont plant: Increase production capacity</td>
</tr>
<tr>
<td></td>
<td>• Steadily meet growth in demand by expanding production capacity</td>
<td>MMA: Restarted production in Nov. 2013</td>
</tr>
<tr>
<td></td>
<td><strong>[Acrylic sheets, molding materials]</strong></td>
<td>MAA: Scheduled to start production in Jun. 2014</td>
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<tr>
<td></td>
<td>• Expand sales for general applications, rolling stock, and construction material applications</td>
<td>Thailand: Began operating new MAA facility in Feb. 2014</td>
</tr>
<tr>
<td><strong>Polyester film</strong></td>
<td>• Establish local production bases to tap into growing demand in China</td>
<td>• China: Begin full-scale operations of Suzhou plant during 2014</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Construction of new processing line proceeding on schedule (production to be started in 1Q of 2015)</td>
</tr>
<tr>
<td><strong>ALPOLIC</strong></td>
<td><strong>Aluminum fiber</strong></td>
<td>• Begin operating German production base (scheduled for Sept. 2014)</td>
</tr>
<tr>
<td></td>
<td>• Accelerating global development</td>
<td>• Increasing demand for automotive applications</td>
</tr>
<tr>
<td></td>
<td>• Strengthening/expanding high-value-added products</td>
<td></td>
</tr>
<tr>
<td><strong>PVOH/EVOH</strong></td>
<td>• Bolster earnings capability by flexibly adapting to market trends</td>
<td>• Constructing a new extra-wide production facility for <em>OPL</em> (optical PVOH) film (No. 6 facility)</td>
</tr>
<tr>
<td><strong>Performance Polymers</strong></td>
<td>• Expand business foundation through M&amp;A</td>
<td>• Implementing PMI with objective of maximizing development of synergies with acquired businesses (CTS, etc.)</td>
</tr>
</tbody>
</table>
2-2. Pharmaceuticals

- Growth in sales of key products and expansion of royalty income
- Implementing investments and business/structural reforms designed to promote future growth

- **Expansion of royalty income**
  - *Gilenya*: FY2013 royalty income of ¥32.2 billion (up 64.8% from the previous FY)
  - *INVOKANA*: Rapid growth in U.S. market

- **Growth in sales of Remicade and Simponi**
  - Exceeded ¥100 billion on a drug price basis
  - Continue using LCM-centered product-value-maximization methods to increase sales

- **Growth strategy in diabetes field**
  - Approaching sales-expansion period for *Tenelia* (DPP IV inhibitor)
  - Launching *Canaglu* (SGLT2 inhibitor) in the Japanese market

- **Strengthening vaccine business**
  - Positioned as the fourth core therapeutic area
  - Converted Medicago, Inc. into a subsidiary as part of plans for global business expansion

- **Promoting business/structural reforms**
  - Promoting structural reform project
  - Restructuring domestic production base network
2-2. Pharmaceuticals

Factors including decreasing sales of long-listed products and the impact of reimbursement price revisions are causing the operating environment for domestic pharmaceutical business to deteriorate rapidly.

FY2015 performance target revision by MTPC

<table>
<thead>
<tr>
<th>Original plan</th>
<th>Revised plan</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Net sales:</strong> ¥500.0 billion; <strong>Operating income:</strong> ¥100.0 billion</td>
<td><strong>Net sales:</strong> ¥410.0 billion; <strong>Operating income:</strong> ¥65.0 billion</td>
</tr>
</tbody>
</table>

**Mainly positive factors**
- Increase in royalty income (Gilenya, INVOKANA)
- Growth in sales of such mainstay products as Remicade and Simponi
- Launch and growing sales of new products
- Reduction of expenses (progress in business structure reforms, etc.)

**Mainly negative factors**
- Decreasing sales of long-listed products (market penetration of generic drugs)
- Sluggish sales of Telavic (side effects, launch of competing products)
- Delay in development of generic drug and overseas business

22

Mitsubishi Chemical Holdings
2-2. Business Development of MMA/PMMA

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 in the U.S.
  - Purchase/resale of other manufacturers’ products
  - External purchase of main raw materials
  - Delay in start of production of MAA

Key measures toward FY2015

- Establish optimized global operations
  - Establish optimized operation systems for Asia by Aug. 2014 and for U.S. and Europe by Dec. 2014
  - Launch Middle-East Alpha project in Jun. 2014
  - Considering U.S. project

- Increase the rate of return and rationalization
  - U.S. (Beaumont Plant):
    - MMA: Commenced production [Nov. 2013]
    - Completed the full production system (capacity: 156 kt/y) [Jan. 2014]
    - MAA: Commence production (capacity: 23 kt/y) [Scheduled for Jun. 2014]
  - Thailand (A new MAA facility):
    - Commenced production (capacity: 8 kt/y) [Feb. 2014]
  - China (Shanghai Plant):
    - Expand and rationalize facilities (capacity: 82 kt/y) [Scheduled for Jan. - Mar. 2015]
  - Singapore: Improve energy efficiency by 15% [Scheduled for Jan. - Mar. 2016]
  - Progressive introduction of new catalysts [from FY2015]

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
2-2. MMA Middle East and U.S. Projects

- The Middle East project will create a strategic base for supplying growing emerging country markets in Eastern Europe, India, the Middle East, Africa, etc., and will further strengthen MRC's global top position regarding MMA chain business.
- Create the world’s largest MMA production capability using a new ethylene production method (Alpha method) using gas-based raw materials that offers an overwhelming cost advantage.

[Middle East project]
Currently at final stages of establishing a joint venture and placing construction orders, after obtaining foreign capital investment authorization.

- The Saudi Methacrylates Company (SAMAC)
  - 50/50 joint venture with Saudi Basic Industries Corporation (SABIC)
  - Production capacity: MMA (monomer) 250 kt/y
    PMMA (molding material) 40 kt/y
  - Scheduled for completion: FY2016

[U.S. project]
Currently under consideration regarding construction of an Alpha-method MMA plant in the U.S. Gulf of Mexico coastal region.

The Saudi Methacrylates Company (SAMAC)
- 50/50 joint venture with Saudi Basic Industries Corporation (SABIC)
- Production capacity: MMA (monomer) 250 kt/y
  PMMA (molding material) 40 kt/y
- Scheduled for completion: FY2016
2-2. **ALPOLIC and Alumina Fiber (MAFTEC)**

- **ALPOLIC**: Expanding global market development as the top brand of aluminum composite panels
- **Alumina fiber**: Leveraging heat-insulation properties, heat resistance, and flexibility to contribute to the purification of automobile exhaust gases and improvement of high-temperature furnace energy conservation performance

**Net Sales of ALPOLIC**

- German manufacturing base (in Wiesbaden) will soon begin operating
- Expanding global business via five marketing units and three manufacturing bases

**Net Sales of MAFTEC**

- High-temperature furnaces and de facto standard material for automotive exhaust systems
- Thermal insulation performance and stability at up to 1,600°C, shipment volume reaching record high levels
- Responding to growing demand by progressively expanding production capacity
2-2. Growth Driver Businesses: Progress

- FY2015 operating income target of ¥10 billion
  
  **Current:**
  - Attaining the target will be difficult owing to delays of a portion of business launches
  
  **Outlook:**
  - Fail to attain target for lithium-ion battery materials, etc.
  - Expect to achieve earnings recovery for carbon fiber and composite materials

---

**Operating income (¥ billion)**

- FY2012 Actual: (26.0)
- FY2013 Actual: (19.0)
- FY2014 Forecast: (13.0)
- FY2015 Step 2 Plan: 10.0
- Margin of fluctuation: 4.0

FY2014 → FY2015: +23.0
## 2-2. Growth Driver Businesses: Major Policies and Progress

<table>
<thead>
<tr>
<th>Main SBUs</th>
<th>Major policies</th>
<th>Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Electronics applications</strong></td>
<td>[GaN substrates]</td>
<td>[GaN substrates]</td>
</tr>
<tr>
<td></td>
<td>• Win new customers</td>
<td>• Currently being evaluated by customers and expected to be certified at meeting customer requirements</td>
</tr>
<tr>
<td></td>
<td>• Launch large substrates</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[OLED lighting, OPVs]</td>
<td>[OLED lighting, OPVs]</td>
</tr>
<tr>
<td></td>
<td>• Accelerate market development with partners</td>
<td>• Began demonstration testing of see-through-film OPVs</td>
</tr>
<tr>
<td></td>
<td>• Establish production technologies for OLED modules with the wet coating process and OPVs</td>
<td>• Began production of OLED modules with the wet coating process (Mar. 2014)</td>
</tr>
<tr>
<td><strong>Carbon fiber and composite materials</strong></td>
<td>• Concentrate business development on growth fields (industrial applications, automobiles)</td>
<td>• Began supplying new major customers in fields of wind turbines and pressure vessels</td>
</tr>
<tr>
<td></td>
<td>• Achieve sweeping cost reductions through restructuring</td>
<td>• Increasing precursor production owing to positive evaluation of orders for environment-friendly BMW i3/i8 vehicles</td>
</tr>
<tr>
<td></td>
<td>• Strengthen intermediate materials business through M&amp;A and business alliances</td>
<td>• Expanding sales for use as an intermediate material for sports goods as well as sales of processed products</td>
</tr>
<tr>
<td><strong>Water treatment systems and services</strong></td>
<td>[Cleansui]</td>
<td>[Cleansui]</td>
</tr>
<tr>
<td></td>
<td>• Strengthen overseas business and review domestic marketing to improve awareness</td>
<td>• Introduction of new models has increased market share 5 percentage points</td>
</tr>
<tr>
<td></td>
<td>• Expanding overseas businesses</td>
<td>• Sales in China up 80%</td>
</tr>
<tr>
<td></td>
<td>[Water treatment]</td>
<td>[Water treatment]</td>
</tr>
<tr>
<td></td>
<td>• Increase share of domestic market</td>
<td>• Expanding in such fields as petrochemicals, pig farming, coal wastewater</td>
</tr>
<tr>
<td></td>
<td>• Promote alliances with ASEAN partner engineering companies</td>
<td>• Consolidation of Welthy Corp. from 4Q of FY2013 contributing to revenue</td>
</tr>
<tr>
<td><strong>Lithium-ion battery materials</strong></td>
<td>• Strengthen development for non-automotive applications</td>
<td>Implementing measures to reduce raw materials costs, improve production yields, etc.</td>
</tr>
<tr>
<td></td>
<td>• Thoroughly reduce costs by right-sizing production structure, etc.</td>
<td></td>
</tr>
<tr>
<td><strong>Sustainable resources</strong></td>
<td>• Commercializing Thai-based PBS joint venture</td>
<td>Planning to construct 20kt-capacity PBS plant (FY2015)</td>
</tr>
<tr>
<td></td>
<td>• Accelerating marketing of isosorbide polymer DURABIO</td>
<td></td>
</tr>
</tbody>
</table>
2-2. Carbon Fiber and Composite Materials

- Proactively developing industrial applications to generate revenue and realize growth in business scale

[FY2013 Summary]
- Demand for industrial applications expected to rapidly expand
  - Full-scale expansion of aircraft-related demand
  - Pressure vessel-related demand beginning to rise
  - Wind power-related demand recovering
  - BMW i3 mass production vehicle incorporating carbon fiber
- Robust demand for sports-related applications, price recovery progressing

[Main measures to be implemented prior to fiscal 2015]
- Proactive development of industrial-application products for which rapid demand growth is anticipated
  - Additional production facilities for carbon fibers and yarn (precursor)
  - Promoting marketing of distinctive intermediate materials - PCM, SMC, NCF, towpreg, etc.
  - Expanding value chains related to automobiles, pressure vessels, and wind power
- Pursue global No. 1 position regarding sports applications

Demand Forecast for Carbon Fiber (Industrial application)

- BMW i3
Sustainable Resources

PBS: 20 kt/y plant under construction in Thailand scheduled to begin operating in 2015 (Jul. – Sept.)

- Established joint venture PTT MCC Biochem Company Limited in cooperation with PTT Public Company Limited of Thailand to commercialize PBS business as a pioneering move toward realizing PTT’s biochemistry complex concept.
- MCC is providing technology licenses, exclusive patents, and market development measures to support the world’s first business producing PBS from plant-derived materials.

- The plant construction is advancing on schedule
  Location: Map Ta Phut, Rayong, Thailand (within Asia Industrial Estate)
  Capacity: 20 kt/y
  Technology: Licensed from MCC

- Besides conventional biodegradation applications (packaging, automotive interiors, etc.), new applications are being developed to utilize compatibility with natural fiber.

Shift to plant-derived raw materials to be accompanied by rebranding from 2015

GS Pla™
(Petrochemicals-based materials)

BiO PBS™
(Plant-derived materials)
2-2. Volatile Businesses: Progress

- FY2015 operating income target of ¥20 billion
  - Current: Aiming to somewhat exceed planned target through structural reforms centered on cost-reduction measures
  - Outlook: Profitability enhancement in basic petrochemicals and polyolefins through structural reform measures, including facility consolidation measures, etc.
  - Come up with fundamental countermeasures regarding terephthalic acid

Operating income (¥ billion)

<table>
<thead>
<tr>
<th>Year</th>
<th>Actual</th>
<th>Forecast</th>
<th>Step 2 Plan</th>
<th>Margin of fluctuation</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2012</td>
<td>(20.0)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FY2013</td>
<td>(10.0)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FY2014</td>
<td></td>
<td>(3.0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FY2015</td>
<td>20.0</td>
<td></td>
<td>31.0</td>
<td>13.0</td>
</tr>
<tr>
<td>Growth</td>
<td></td>
<td></td>
<td>+23.0</td>
<td></td>
</tr>
</tbody>
</table>
### 2-2. Volatile Businesses: Major Policies and Progress

<table>
<thead>
<tr>
<th>Main SBUs</th>
<th>Major policies</th>
<th>Progress</th>
</tr>
</thead>
</table>
| **Basic petrochemicals** | • Restructuring of naphtha crackers and optimized operation at the Kashima Plant and the Mizushima Plant  
• Cost reductions  
• Alliance with oil refinery | • Consolidating naphtha crackers at single cracker unit at the Kashima Plant (Jul. 2014)  
• Consolidate Nishi Nippon Ethylene naphtha crackers at single cracker unit (scheduled for Apr. 2016) |
| **Polyolefins** | • Increase sales ratio of strategic products and high-performance products  
• Optimize production structure by streamlining production lines | • Integrated PP compounds business within JPP (Feb. 2014)  
• Halt operation of Kawasaki No. 1 PP facility (scheduled for Apr. 2014)  
• Halt operation of Kawasaki No. 1 PE facility (HDPE) (Apr. 2014)  
• Halt operation of Kashima No. 1 PE facility (LLDPE) (scheduled for Mar. 2015) |
| **Terephthalic acid** | • Thoroughly reduce costs  
(MCPI: Shift to electricity purchases, Shift to coal thermal power generation for boilers, etc.)  
• Reduce reliance on Chinese market  
• Consider introduction of safeguards and anti-dumping provisions | • Progressing toward goal of connection with grid power for all MCPI facilities (to be completed by FY2014 year-end) |
| **PHL/PC chain** | • Thoroughly reduce costs (rationalize logistics, improve output levels, etc.)  
• Establish non-phosgene PC technology  
• Strengthen earnings capabilities via higher-performance PC | • Implementing thorough cost-reduction measures  
(improving phenolic acid decomposition processes to increase production efficiency, conserve resources/energy, and lower fixed costs) |
2-2. Terephthalic Acid and PHL/PC Chain

**Terephthalic acid**
- Leveraging a combination of improved marketing conditions and cost-reduction measures, including downsizing moves, to improve profitability by a large margin at each site

**Business environment**
China’s large margin of excess capacity is continuing to depress the market, and exports to China are down sharply.

**Important measures**
- **India:** Increased capacity utilization at the No. 2 plant reached 97% (May 2014). We are expecting to reduce costs by purchasing electricity from the grid (by end of 2014) and converting to coal fuel (fuel oil → coal; by end of 2015)
- **India:** Aiming to realize profitability by establishing regional pricing (plus supplemental charges corresponding to Chinese shipping cost differences and custom duties)
- **Indonesia:** Realize profitability through regional pricing achieved by introducing a floor price system
- **Korea:** Operational optimization (downsizing) measures to greatly reduce losses
  - Expand domestic market share through domestic industry restructuring within Korea and minimize exports
- **China:** Respond to slack domestic market conditions stemming from considerable excess supply capacity through structural adjustment measures, including the possibility of recruiting new partners

**PHL/PC chain**
- Promote thorough cost reductions and advance with reforms designed to build a stable profit structure

**Business environment**
Continued slack market conditions for PHL, bisphenol-A, and PC

**Important measures**
- Thorough cost reductions and measures to ensure stable/safe plant operations
- Improve profitability through measures to expand domestic sales
- Improve profitability by offering high-performance PC products
- Complete packaging of non-phosgene PC technology and advance toward concrete licensing arrangements
Today’s Agenda

1. Business Environment Awareness and Management Challenges

2. Progressing toward Improved Performance
   2.1 APTSIS 15 Step 2 Plan and Performance
   2.2 Progress Situation by Each Growth Model Category

3. Life Science Institute, Inc. (LSII)

4. Strengthening of Capital Alliance with Taiyo Nippon Sanso Corporation (TNSC)

5. KAITEKI Management
Establishment of LSII

- Consolidation of healthcare-related businesses designed to provide solid foundation for business expansion

**LSII Group companies**

**LSI Medience**

LSI Medience Corporation (LSIM)
Clinical testing, Pharmaceutical development support, Diagnostic reagents and instruments

**API Corporation**

API Corporation (APIC)
Active pharmaceutical ingredients and intermediates

**Qualicaps**

Qualicaps Co., Ltd. (QKK)
Capsules for pharmaceuticals and health and nutrition, Pharmaceutical equipment

**Healthy Life Compass Corporation**

Healthy Life Compass Corporation (HLC)
Self-health check
3. Operating Environment for Business in the Healthcare Field

■ Environment being propelled by trends of healthcare operations efficiency-boosting and IT utilization

1. Countermeasures regarding rise in national healthcare costs owing to demographic aging and growing incidence of lifestyle-related diseases

2. Government promotion of measures to increase healthcare efficiency and utilize IT
   1) NICE-based system introduction to evaluate pharmaceuticals from dual perspectives of efficacy and cost economy
   2) My number system introduction to upgrade information management systems

<table>
<thead>
<tr>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumption tax rate hike</td>
<td>Consumption tax rate hike</td>
<td>NICE introduction</td>
<td>Price revision</td>
<td></td>
</tr>
<tr>
<td>Price revision</td>
<td>Price revision</td>
<td>My number system introduction</td>
<td>Price revision</td>
<td></td>
</tr>
</tbody>
</table>

Turning point
Strengthening and Expanding Healthcare-related Businesses

3.

- **Strengthening existing businesses and promoting greater intra-Group collaboration while also seeking to create and promote new growth businesses**

  - **Strengthening existing businesses**
    - LSIM: Expediting drafting of plans for base network restructuring
      - Strategic investment in IT environment
      - Human resource responses
    - APIC: Rebuilding commissioned operations
      - Global expansion
      - Base network restructuring
    - QKK: Expanding U.S. operations
      - Promoting cellulose capsule product sales
      - Promoting capsule manufacturing equipment sales
    - HLC: Building new business model
      - Collaborating with local governments

  - **Realizing synergies through concerted LSII and MCHC collaboration**
    - Development and marketing synergies generated by leveraging Group company networks

  - **Creating and promoting new growth businesses (profit sources)**
    - Health and medical ICT
    - Support for pharmaceutical development and manufacturing
    - Advanced medication
3. Business Development through Concerted Collaboration

- Arrange concerted collaboration within the MCHC Group as well as alliances with external entities to build a business structure able to generate high levels of added value

**Businesses**

- **Health and medical ICT**
  - Diagnostics, Health checkups, Diagnostic reagents and instruments, MIMAMORI-Gait™

- **Support for pharmaceutical development and manufacturing**
  - Clinical tests, Non-clinical tests

- **Advanced medication**
  - Telemedicine, Home medical care, Personalized Medicine, Advanced diagnostic instruments

**LSIM**
- Diagnostics, Health checkups, Diagnostic reagents and instruments, MIMAMORI-Gait™

**APIC**
- Active pharmaceutical ingredients and intermediates

**QKK**
- Capsules for pharmaceuticals and health and nutrition, Pharmaceutical equipment

**HLC**
- Self-health check

**MCHC Group**
- Seamless support for pharmaceutical development and manufacturing
- Health information services
- Regenerative medicine, Telemedicine, Home medical care
- MTPC Pharmaceuticals
- MPI Films for pharmaceuticals
- MRC Artificial spa generators DNA chips
- TNSC Home medical care
- MCC Plant factory system using artificial light (Vaccine)
3. Health and Medical ICT

- Integrated information associated with self-health check, health checkups, diagnostics, etc. to contribute to increased healthcare efficiency and create new businesses (contribution to the lowering of healthcare costs)

**Integration of information**

- **Health checkups (LSIM)**
  - Companies (Health insurance societies), Local governments
  - Increase efficiency through data utilization

- **Diagnostics (LSIM)**
  - Business alliance with Nikon Corporation, Collaboration with academia

- **Self-health check (HLC)**
  - Data-based health plan, Preparing for implementation

**Health information**
- Medical care records
- Medication records
- Receipts

**Lifestyle information**

**Information from new technologies**
- Early inspection technology
- Day-to-day sensing
- Genetic testing

**Elimination of gray zones by METI and MHLW, Full-scale promotion of self-health checks**

**Partners**
- Yomiuri Advertising Inc.
- Fujitsu Limited
- Drugstores
- Local governments
Support for Pharmaceutical Development and Manufacturing

- LSII consolidates drug discovery and pharmaceutical support operations and interlinks related functions and information so that it can provide seamless support for pharmaceutical development and manufacturing and contribute to increased efficiency.

Integration of Information:
- Toxicity, efficacy, etc.
- Safety, pharmacokinetics, formulation information, etc.
- Safety, efficacy, etc.
- Post-marketing surveillance
- Non-clinical studies
- Clinical trials Phase I
- Clinical trials Phase II, III
- Product launches

Alliances:
- CROs, formulation companies, etc.

Customers (domestic and overseas):
- Pharmaceutical companies, drug discovery venture firms, etc.
- Diagnostics companies

LSIM: Non-clinical studies
LSIM: Clinical trials
APIC: Active pharmaceutical ingredients and intermediates
QKK: Capsule manufacturing
3. Advanced Medication

- Collaboration among MCHC Group units and alliances with outside organizations to promote the commercialization of next-generation medical care businesses

- Regenerative medicine
  - Commercialization of regenerative medicine
  - Consolidating technologies and know-how from inside and outside the Group
    - LSII, MTPC, TNSC
    - Academia, companies from outside the Group

- Home medical care
  - Home medical equipment (TNSC)
  - Medical and health services based on health and lifestyle information

- Telemedicine
  - Remote image-based diagnosis LSIM (Dia Medical Net, Inc.)
  - Medical and health services based on health and lifestyle information
Today’s Agenda

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   2.2 Progress Situation by Each Growth Model Category

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4. Strengthening of Capital Alliance with
   Taiyo Nippon Sanso Corporation (TNSC)

5. *KAITEKI* Management
4. Significance of Integration with TNSC

Integration of highly compatible chemicals and gases businesses

- Horizontal merger
- Vertical merger

Gases (TNSC)

Industrial gases
- Oxygen
- Nitrogen
- Argon
- Carbon dioxide
- Helium
- Hydrogen
- Acetylene, etc.

Chemicals (MCHC)

- Electronics
- Energy
- Healthcare
4. Organizational Structure of the MCHC Group

- TNSC is scheduled to become the Group’s 6th operating company.

**MCHC***

*Listed company
- Capital, net sales, and employees (as of March 31, 2014)
- Figures for Life Science Institute are based on post-reclassification figures.

**Consolidated results for FY2013**
Net sales: ¥3,498.8 billion
Operating income: ¥110.5 billion
Employees: 56,031

**MCC**
Capital: ¥50 billion
Net sales: ¥2,159.7 billion
**MTPC***
Capital: ¥50 billion
Net sales: ¥412.7 billion
**MPI**
Capital: ¥21.5 billion
Net sales: ¥442.7 billion
**MRC**
Capital: ¥53.2 billion
Net sales: ¥606.2 billion
**LSII**
Capital: 3.0 billion
Net sales: ¥121.0 billion
**TNSC***
Capital: ¥37.3 billion
Net sales: ¥522.7 billion
Employees: 12,955

**TNSC is scheduled to become the Group’s 6th operating company.**
4. Post-Consolidation Business Portfolio

- Incorporate ¥500 billion-scale gas businesses as stable and growth businesses

### Net sales by segment

**MCHC**
- FY2013
- Consolidated performance
  - ¥3.5 trillion

**TNSC**
- FY2013
- Consolidated performance
  - ¥0.5 trillion

**Sum of MCHC and TNSC Figures**
- Approx. ¥4 trillion

### Operating income by segment

**MCHC**
- FY2013
- Consolidated performance
  - ¥110.5 billion

**TNSC**
- FY2013
- Consolidated performance
  - ¥31.5 billion

**Sum of MCHC and TNSC Figures**
- ¥142.0 billion

*Note: A portion of segment definitions are scheduled to be revised from FY2015*
4. TNSC: Medium-term Business Plan

- Aiming to attain FY2016 targets of “¥600 billion in net sales, operating income ratio of 7.5%, ROCE of 8% or above, and overseas sales ratio of 40% or above”

New Medium-term Business Plan, “Ortus Stage 1”

<table>
<thead>
<tr>
<th></th>
<th>FY2012</th>
<th>FY2013</th>
<th>FY2014</th>
<th>FY2015</th>
<th>FY2016</th>
<th>FY2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net sales (¥ billion)</td>
<td>468.3</td>
<td>522.7</td>
<td>550.0</td>
<td>570.0</td>
<td>600.0</td>
<td>1,000.0</td>
</tr>
<tr>
<td>Operating income</td>
<td>24.8</td>
<td>31.4</td>
<td>35.0</td>
<td>38.0</td>
<td>45.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Operating margin ratio</td>
<td>5.3%</td>
<td>6.0%</td>
<td>6.4%</td>
<td>6.7%</td>
<td>7.5%</td>
<td>10.0%</td>
</tr>
<tr>
<td>Overseas sales ratio</td>
<td>28%</td>
<td>31%</td>
<td>34%</td>
<td>36%</td>
<td>40%</td>
<td>≥50%</td>
</tr>
<tr>
<td>ROCE</td>
<td>5.5%</td>
<td>6.2%</td>
<td>6.4%</td>
<td>7.0%</td>
<td>8.0%</td>
<td>10.0%</td>
</tr>
</tbody>
</table>

Ortus: “Birth, Beginning” in Latin
In industrial gas- and energy-related operations, considering the use of MCHC Group bases to expand its one-stop provision of services, primarily in overseas markets. Placing particular emphasis on the North America, India, and Southeast Asia regions.

### Synergies Stemming from Overseas Expansion

#### North America: Opportunities Stemming from the Shale Revolution

<table>
<thead>
<tr>
<th>MCHC</th>
<th>TNSC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expanding operations in products that can be technologically differentiated</td>
<td>Addressing opportunities stemming from the shale gas revolution</td>
</tr>
<tr>
<td>EVOH plant expansion (under construction)</td>
<td>Meeting on-site demand</td>
</tr>
<tr>
<td>Alpha process MMA plant construction (under consideration)</td>
<td>Meeting demand for gases associated with shale gas drilling</td>
</tr>
<tr>
<td>Expanding operations in markets related to automobiles, solar panels, etc.</td>
<td>Expanding business related to LNG satellites</td>
</tr>
</tbody>
</table>

#### Asia: Markets Sustaining Growth and Expansion

<table>
<thead>
<tr>
<th>MCHC</th>
<th>TNSC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meeting growing demand and strengthening competitive power</td>
<td>Meeting growing demand and strengthening competitive power</td>
</tr>
<tr>
<td>Strengthening marketing and supply systems for markets related to the automobile, packaging film, and environment/energy fields</td>
<td>Strengthening marketing and supply systems for markets related to the automobile, packaging film, and environment/energy fields</td>
</tr>
<tr>
<td>Meeting demand related to LNG</td>
<td>Meeting demand related to LNG</td>
</tr>
<tr>
<td>Addressing growing demand in Southeast Asia and India</td>
<td>Addressing growing demand in Southeast Asia and India</td>
</tr>
<tr>
<td>Demand for plants associated with LNG receiving terminals</td>
<td>Demand for plants associated with LNG receiving terminals</td>
</tr>
<tr>
<td>Liquefaction plants for natural gas satellites</td>
<td>Liquefaction plants for natural gas satellites</td>
</tr>
<tr>
<td>On-site hydrogen generation facilities</td>
<td>On-site hydrogen generation facilities</td>
</tr>
</tbody>
</table>

---

The Kaiteki Company
4. Business Synergies

- Aiming to realize business synergies that generate ¥5 billion in annual benefits in 2017

**Cost synergies**
- Both companies will share the use of each other’s business networks domestically and overseas.
- Sharing complementary capabilities and increasing efficiency in engineering, procurement, etc.
- Sharing business bases, and functions, etc. to more efficiently utilize management resources
Today’s Agenda

1. Business Environment Awareness and Management Challenges

2. Progressing toward Improved Performance
   2.1 APTSIS 15 Step 2 Plan and Performance
   2.2 Progress Situation by Each Growth Model Category

3. Life Science Institute, Inc.

4. Strengthening of Capital Alliance with Taiyo Nippon Sanso Corporation (TNSC)

5. KAITEKI Management
5. **KAITEKI Management**

- Aiming to realize KAITEKI through contributing to solving material managerial issues which should be addressed by the MCHC Group

**Materiality**

- Based on an understanding of stakeholders’ perspectives, we identify and prioritize material managerial issues to be addressed by the MCHC Group.

**Publication of the KAITEKI Report that integrates financial and nonfinancial information**
5. Materiality Matrix

- Identify material managerial issues that should be addressed using a process based on international guidelines

<table>
<thead>
<tr>
<th>Importance for stakeholders</th>
<th>Importance for the MCHC Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Extremely High</td>
</tr>
<tr>
<td>High</td>
<td>Very High</td>
</tr>
<tr>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Extrememely High</td>
<td></td>
</tr>
</tbody>
</table>

- Climate change
- Water solutions
- Food solutions
- Diversified employment
- Process safety and security
- Effective use of resources and energy
- Reduction of environmental impact
- Sound working environment
- Sustainable products and services
- Product quality and safety
- Creating new business through innovation
- Compliance
- Healthcare solutions
- Contribution to communities
- Economic development in the developing countries
- Communication with stakeholders
- Biodiversity conservation
- Accountability and Transparency
- Legal Compliance and Fairness, Equitability, and Integrity
- Valuing Stakeholders
- Environment and Safety
- Respecting Human Rights, Employment, and Labor
- Customer Satisfaction
- Science and Technology
- Community Involvement
5. **KAITEKI Management by Quantification**

- MOS Index: Steady progress toward targets
- MOT Index: Start of quantitative management of R&D progress
  (Implementation from FY2014)

### Progress of MOS Indexes

#### Objective to be achieved

<table>
<thead>
<tr>
<th>Sustainability [Green] Index</th>
<th>Achieve zero occurrence of material accidents and compliance violations</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-1</td>
<td>Contribute to reducing environmental impact through products and services</td>
</tr>
<tr>
<td>S-2</td>
<td>Take actions against the depletion of natural resources and implement energy-saving initiatives</td>
</tr>
<tr>
<td>S-3</td>
<td>Contribute to solving social and environmental issues through supply chain management</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Health Index</th>
<th>Contribute to medical treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>H-1</td>
<td>Contribute to improvements of QOL</td>
</tr>
<tr>
<td>H-2</td>
<td>Contribute to early detection and prevention of diseases</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Comfort Index</th>
<th>Contribute products (development and manufacturing) for comfortable lifestyle</th>
</tr>
</thead>
<tbody>
<tr>
<td>C-1</td>
<td>Improve stakeholder satisfaction</td>
</tr>
<tr>
<td>C-2</td>
<td>Earth recognition of corporate trust</td>
</tr>
</tbody>
</table>

**FY2010** | **FY2011** | **FY2012** | **FY2013** | **FY2015**
--- | --- | --- | --- | ---
140 | 177 | 189 | 209 | 300
**Expected results** | **Targets**
--- | ---
29 | 40 | 48 | 53 | 96
77 | 86 | 90 | 92 | 111
34 | 51 | 51 | 64 | 93