The forward-looking statements are based largely on information available as of the date hereof, and are subject to risks and uncertainties which may be beyond Company control. Actual results could differ largely, due to numerous factors, including but not limited to the following: Group companies execute businesses in many different fields, such as information and electronics, performance products, polymers and processed products, pharmaceuticals, carbon and inorganic products, and petrochemicals, and these business results are subjected to influences of world demands, exchange rates, price and procurement volume of crude oil and naphtha, trends in market prices, speed in technology innovation, National Health Insurance price revision, product liabilities, lawsuits, laws, and regulations.
List of Abbreviations

MCHC: Mitsubishi Chemical Holdings Corporation
MCC: Mitsubishi Chemical Corporation
MTPC: Mitsubishi Tanabe Pharma Corporation
MPI: Mitsubishi Plastics, Inc.
MRC: Mitsubishi Rayon Co., Ltd.
LSII: Life Science Institute, Inc.
TNSC: Taiyo Nippon Sanso Corporation

APIC: API Corporation
BARDA: Biomedical Advanced Research and Development Authority
CRK: Chuo Rika Kogyo Corporation
HLC: Healthy Life Compass Corporation
LSIM: LSI Medience Corporation
NEDO: New Energy and Industrial Technology Development Organization
NIMS: National Institute for Materials Science
NSCI: The Nippon Synthetic Chemical Industry Co., Ltd.
QKK: Qualicaps Co., Ltd.

ALS: Amyotrophic lateral sclerosis
BPA: Bisphenol-A
CAE: Computer aided engineering
CD: Crohn’s disease
CIDP: Chronic inflammatory demyelinating polyradiculoneuropathy
DPC: Diphenyl carbonate
EO: Ethylene oxide
EV: Electric vehicle
EVOH: Ethylene vinyl alcohol
FPD: Flat panel display
GaN: Gallium nitride
HEV: Electric vehicle
Hib: Haemophilus influenza type b
ICT: Information and communication technology
LiB: Lithium-ion battery
MMA: Methyl methacrylate
MOCVD: Metal organic chemical vapor deposition
MOS: Management of Sustainability
MOT: Management of Technology
MS: Multiple sclerosis
OLED: Organic light emitting diode
OPV: Organic photovoltaic

PC: Polycarbonate
PE: Polyethylene
PCM: Prepreg compression molding
PHEV: Plug-in hybrid electric vehicle
PHL: Phenol
PMMA: Polymethyl methacrylate
PP: Polypropylene
PS: Psoriasis
PTA: Terephthalic acid
PVC: Polyvinyl chloride
PVOH: Polyvinyl alcohol
RTM: Resin transfer molding
SAP: Super absorbent polymer
SBU: Strategic business unit
SM: Styrene monomer
SMC: Sheet molding compound
UTT: Utility
VLP: Virus-like particles
ZEB: Zero energy building

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. Group Overview and Performance Review
2. Progress in Principal Businesses (Comparison with Step 2)
   2-1. Performance Products
   2-2. Health Care
   2-3. Industrial Materials
   2-4. Summary
3. Challenges of Formulating the Next Medium-term Management Plan
1-1. Group Overview

**MCHC***

- Performance Products
- Health Care
- Industrial Materials

*Listed company
**Net sales, employees (as of March 31, 2014)

Net sales (consolidated): Approx. ¥4 trillion
Overseas sales ratio: Approx. 40%
Employees (consolidated): Approx. 70,000
Overseas employees: Approx. 23,000
(Figures for fiscal 2014 were calculated as the simple summation of TNSC results with those of the Group.)

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**The KAITEKI Institute, Inc.**
Apr. 2009 —

**Mitsubishi Chemical Holdings America, Inc.**
Nov. 2010 —

**Mitsubishi Chemical Holdings (Beijing) Co., Ltd.**
Nov. 2011 —

**Mitsubishi Chemical Holdings Europe GmbH**
Nov. 2012 —

**Mitsubishi Chemical Holdings Corporate Staff, Inc.**
Apr. 2013 —

**MCHC R&D Synergy Center, Inc.**
Apr. 2014 —

---

Oct. 2013: Strengthening capital and business alliance (ownership ratio: 27%)
Sep. 30, 2014: Commenced TOB
Nov. 12, 2014: Completed payment
Thereafter, TNSC became a consolidated subsidiary (with 50.6% MCHC ownership)
1-3. Financial Results and Fiscal 2014 Outlook

- Consolidated TNSC in 3Q fiscal 2014 through TOB
- Forecasting major increase in income in fiscal 2014 (+145% Y-o-Y) because of this and other factors

Net sales and operating income for fiscal years 2008 to 2014 are shown, with forecasts for FY2014.

Notes:
- Includes effects of adopting uniform date for account closings in fiscal 2013: Net sales: ¥151.9 billion; Operating income: ¥3.9 billion
- Includes effects of consolidating TNSC in fiscal 2014: Net sales: ¥275.0 billion; Operating income: ¥17.5 billion
### 1-4. Operating Income by Segment: Fiscal 2013 Actual Results vs. Fiscal 2014 Forecasts

#### Domains
- **Designed Materials**: Conditions firm
- **Health Care**: Conditions firm for pharmaceuticals and healthcare solutions
- **Polymers**: Outlook for major increase in income in MMA/PMMA

<table>
<thead>
<tr>
<th>Domains</th>
<th>Segments</th>
<th>FY2013 actual results</th>
<th>FY2014 forecasts*</th>
<th>Change</th>
<th>Accumulated through 3Q**</th>
<th>Target attainment ratio</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Performance Products</strong></td>
<td>Electronics Applications</td>
<td>(5.5)</td>
<td>(2.0)</td>
<td>+3.5</td>
<td>(2.3)</td>
<td>—</td>
<td>• Consolidation of TNSC (Chemicals) [3Q fiscal 2014]</td>
</tr>
<tr>
<td></td>
<td>Designed Materials</td>
<td>46.5</td>
<td>55.5</td>
<td>+9.0</td>
<td>41.7</td>
<td>75.1%</td>
<td>• Outlook for inventory valuation loss* for naphtha and paraxylene in Chemicals and marginal gain* for polyolefin in Polymers [3Q and 4Q fiscal 2014]</td>
</tr>
<tr>
<td><strong>Health Care</strong></td>
<td>Health Care</td>
<td>68.3</td>
<td>70.0</td>
<td>+1.7</td>
<td>70.7</td>
<td>101%</td>
<td>• Outlook for increase in income in Designed Materials, Health Care, and Polymers</td>
</tr>
<tr>
<td><strong>Industrial Materials</strong></td>
<td>Chemicals</td>
<td>0.7</td>
<td>17.5</td>
<td>+16.8</td>
<td>2.2</td>
<td>12.6%</td>
<td>*Overall impact: (Approx. ¥18.0 billion)</td>
</tr>
<tr>
<td></td>
<td>Polymers</td>
<td>2.3</td>
<td>20.5</td>
<td>+18.2</td>
<td>13.7</td>
<td>66.8%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>5.7</td>
<td>6.5</td>
<td>+0.8</td>
<td>3.3</td>
<td>50.8%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Corporate</td>
<td>(7.5)</td>
<td>(8.0)</td>
<td>(0.5)</td>
<td>(5.0)</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td>110.5</td>
<td>160.0</td>
<td>+49.5</td>
<td>124.3</td>
<td>77.7%</td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**
- Includes effects of adopting uniform date for account closings in fiscal 2013: Net sales: ¥151.9 billion; Operating income: ¥3.9 billion
- Includes effects of consolidating TNSC in fiscal 2014: Net sales: ¥275.0 billion; Operating income: ¥17.5 billion

*Overall impact: (Approx. ¥18.0 billion)

*Figures announced Nov. 27, 2014
**Figures announced Feb. 4, 2015
2-1. Performance Products: Progress

- Increase income by accelerating development of growth fields

**Performance Products**

- Lithium-ion battery materials
- Organic synthesis (NSCI)
- Polyester film
- Engineering plastics
- Carbon fiber and composite materials, etc.

**Operating income (¥ billion)**

- FY2012 Actual: 17.4
- FY2013 Actual: 41.0
- FY2014 Forecasts: 53.5
  *Accumulated through 3Q: 39.4***
- FY2015 Step 2 Plan: 85.0

*Figure announced Nov. 27, 2014
**Figure announced Feb. 4, 2015
2-1-1. Electronics Applications: Principal Businesses

■ Organic photovoltaics (OPVs)
  • Developed film-type OPV. Currently undergoing verification tests at the Sendai City Science Museum. (From Jun. 2014)
  • Developed external wall units with Taisei Construction for use in ZEB. Verification tests for practical use are under way. (From May 2014)
  • Customers are evaluating OPV modules. (Market launch scheduled for the first half of fiscal 2015)
  → Verification tests are being implemented as “Guidance and Technical Development Project for the Practical Application of Organic Photovoltaics” supported by NEDO.

■ Organic photo-semiconductors (OLEDs)
  • Realizing improvements in color rendering properties and useful lifetimes
  • Based on their excellence in reproducing skin colors and their thinness, were adopted, combined with mirrors, for use in makeup washstands.

■ Gallium nitride (GaN) substrates
  • In the market for LED lamps using GaN substrates, expansion is taking place mainly in units for use in automobiles and units to replace halogen lamps.
  • To help customers increase production efficiency, currently moving forward with large substrate sizes (from 2 inches to 4 inches)
  • Research is currently under way under tie-up with Nobel laureate Prof. Shuji Nakamura of the University of California, Santa Barbara. (Since 2001)
  *SORAA, Inc.: Venture business established by Prof. Nakamura and other co-founders

■ LED materials
  • In South Korea, took measures against infringement of the legitimacy of our patent (co-owned with NIMS) for red phosphor, and the legitimacy of our patent was confirmed. In addition, a similar patent infringement litigation is also in progress in China.
  • Concluded a cross-licensing agreement for red phosphor with Nichia Corporation
2-1-2. Lithium-ion Battery Materials

Business expansion to the field that requires high quality, especially in automotive applications

Although the start-up of usage in automobiles has been slower than expected, annual growth of 50% on a volume basis is expected for lithium-ion battery materials.

MCC’s lithium-ion battery materials provide a good balance of the special features required in automobile applications, and adoption is expanding in major EV and PHEV models.

Along with the expansion in demand, sales in volume terms are increasing. As a result of this and cost reductions, we are expecting operating losses to decline substantially, and reaching breakeven is expected at an early date.

Electrolytes:
Have secured strong position through additive technology. Will maintain a high market share in applications for automobiles

Anode materials:
Beginning to be adopted by major automobile models, because of the strengths of natural graphite. Sales in volume terms are expanding gradually.

Separators:
Have completed the development stage of heat-resistant separators for automobile use, and will launch sales in fiscal 2015

Trends in volume of LiBs sold to the world automobile industry (GWh/y)

<table>
<thead>
<tr>
<th>HEVs</th>
<th>PHEVs</th>
<th>EVs</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.6</td>
<td>0.2</td>
<td>10.5</td>
</tr>
<tr>
<td>6.8</td>
<td>2.4</td>
<td>14.9</td>
</tr>
<tr>
<td>10</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

Estimates by MCC
2-1-3. Organic Synthesis (NSCI)

- Aggressive expansion in core businesses. Continuing initiatives to accelerate development of third major business

  - **OPL film, Optical PVOH film**
    - A new production line for wide films (line No. 6) at the Kumamoto Plant went into commercial operation.
      (Nov. 2014)

  - **Soarnol, EVOH copolymer**
    - A new production line under construction at Noltex, LLC in U.S.A.
      (Scheduled operation in 1Q fiscal 2015)

  - **Hi-Selon, Water soluble PVOH film**
    - Expecting higher demand for individual packaging of liquid detergents, transfer printing, and other applications.
      Will build a new production facility at the Kumamoto Plant
      (Scheduled operation in 4Q fiscal 2015)

  - **Pressure sensitive adhesive and functional coating resin**
    - **COPONYL** (acrylic copolymer):
      - Expecting increases in demand for electronic and optical materials.
      - Will add a new facility at the Ogaki Plant
      (Scheduled operation in 1Q fiscal 2016)

      - Integrated emulsion manufacturing division into CRK.
        Relaunched as a new company, Japan Coating Resin Co., Ltd.
        (Oct. 2014)
2-1-4. Polyester Film

- North America: Conditions firm in industrial uses; Europe: Focusing on high-value-added medical applications.

Mitsubishi Polyester Film GmbH (Germany)
Mitsubishi Polyester Film, Inc. (North America)
MPI (Shiga, Japan)
Mitsubishi Polyester Film Suzhou Co., Ltd.
Mitsubishi Plastics Converting Film Wuxi Co., Ltd.
PT. MC PET FILM (Indonesia)

Trends in FPD-related sales and ratio of sales to China in total sales

*Relative figures with FY2011 as the base of 100

Trends in touch panel related sales

*Relative figures with FY2011 as the base of 100
2-1-5. Engineering Plastics (Quadrant Group)

- Sales for transportation equipment and in the life science fields are favorable.
- Going forward, aggressive development in Americas, Europe, and the rest of Asia

### Areas

<table>
<thead>
<tr>
<th>Areas</th>
<th>Product types</th>
<th>Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation</td>
<td>Sheet material for lining</td>
<td>Lining for pallets</td>
</tr>
<tr>
<td></td>
<td>Glass mat reinforced thermoplastic</td>
<td>Underbody covers</td>
</tr>
<tr>
<td></td>
<td>Casting nylon</td>
<td>Gears, rollers</td>
</tr>
<tr>
<td>Life science</td>
<td>Ultrahigh molecular weight polyethylene</td>
<td>Artificial joints</td>
</tr>
<tr>
<td>Others</td>
<td>Advanced engineering plastic</td>
<td>Components for medical equipment</td>
</tr>
<tr>
<td></td>
<td>Advanced engineering plastic</td>
<td>Retainer rings</td>
</tr>
</tbody>
</table>

### Trends in sales*

- | FY2012 | FY2013 | FY2014 | FY2015 |
- | 0      | 50     | 100    | 150    |

*Relative figures with FY2012 as the base of 100

---

[Map of Europe and Asia showing distribution of sites and countries]

[Bar chart showing trends in sales for different years]

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Performance Products

THE KAITEKI COMPANY

Mitsubishi Chemical Holdings
2-1-6. Carbon Fiber and Composite Materials

- Integration of the carbon fiber businesses in MPI and MRC: Targeting a ¥100 billion business in fiscal 2020
- Using our hybrid PAN-based and pitch-based carbon fibers together with our molding technologies (SMC, PCM, RTM, etc.), we are aiming to improve performance characteristics and lower weight. Will establish competitively superior position for industrial uses (automobiles, etc.)

**Business integration into MRC (Apr. 1, 2015)**

**MRC**
- Precursors
- PAN-based carbon fibers
- Molding technology for automotive components (prepreg, SMC, PCM, RTM, etc.)
- Intermediates

**MPI**
- Pitch-based carbon fibers
- Carbon fiber composite materials
- Molding technology for machine components (Sheet, winding)

**MCC**
- Polyolefins
- Epoxy resins, modified resins
- Non-destructive diagnostic technology
- Fundamental technology (CAE, recycling)

**Sales (¥ billion)**

- FY2014
- FY2017
- FY2020

- Intermediates and composites for automobiles (hybrid)
- PAN- and pitch-based carbon fibers
2-2. Health Care: Progress

- Inroads of generics into our long-term listed pharmaceuticals for healthcare usage have been more than expected.
  - Will secure earnings expanding royalties from out-licensing of technology and implementation of structural reforms
- In healthcare solutions, we will focus on creating new growth businesses.

Businesses in Health Care

- **MTPC**
- **LSII Group**
  - **QKK**
    - (Capsules, pharmaceutical formulation materials, etc.)
  - **APIC**
    - (Active pharmaceutical intermediates)
  - **LSIM**
    - (Clinical testing, support for pharmaceutical development, etc.)
  - **HLC**
    - (Health self-check services, etc.)

Operating income (¥ billion)

- **FY2012 Actual**: 74.9
- **FY2013 Actual**: 68.3
- **FY2014 Forecast**: 70.0*
- **FY2015 Step 2 Plan**: 110.0

*Figure announced Nov. 27, 2014
**Figure announced Feb. 4, 2015
**2-2-1. Pharmaceuticals**

### Trends in net sales and operating income

<table>
<thead>
<tr>
<th>Year</th>
<th>Net sales (¥ billion)</th>
<th>Operating income (¥ billion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2010</td>
<td>409.5</td>
<td>76.6</td>
</tr>
<tr>
<td>FY2011</td>
<td>407.2</td>
<td>69.0</td>
</tr>
<tr>
<td>FY2012</td>
<td>419.2</td>
<td>69.0</td>
</tr>
<tr>
<td>FY2013</td>
<td>412.7</td>
<td>59.1</td>
</tr>
<tr>
<td>FY2014</td>
<td>406.0</td>
<td>60.0</td>
</tr>
<tr>
<td>FY2015</td>
<td>410.0</td>
<td>65.0</td>
</tr>
</tbody>
</table>

*Long-listed products, etc.* *Remicade* *New products (Japan)* *Operating income*

---

### Trends in royalties for pharmaceutical technologies

<table>
<thead>
<tr>
<th>Year</th>
<th>Royalties for pharmaceutical technologies</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2011</td>
<td>9.6</td>
</tr>
<tr>
<td>FY2012</td>
<td>22.7</td>
</tr>
<tr>
<td>FY2013</td>
<td>37.6</td>
</tr>
<tr>
<td>FY2014</td>
<td>53.6</td>
</tr>
</tbody>
</table>

*Gilenya* *Others* *Invokana (including from FY2013)*

---

*Simponi, Telavac, Tenelia, Canaglu, Lexapro, Imusera, Tetrabik*
## 2-2-1. Pharmaceuticals

### Steady advances in development and marketing of pharmaceuticals in priority disease domains

- Scheduled product launches during APTSIS 15 and pipeline products (Phase 2—)

<table>
<thead>
<tr>
<th>Domains</th>
<th>Phase 2</th>
<th>Phase 3</th>
<th>Filed</th>
<th>Launched</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto-immune disease</td>
<td>MT-1303 (MS, PS, CD)</td>
<td>FTY720 (CIDP)</td>
<td>Remicade (Behcet’s disease with special lesions)</td>
<td>Simponi (Rheumatoid arthritis) Imusera (Multiple sclerosis)</td>
</tr>
<tr>
<td>CNS disease</td>
<td>MP-214 (Schizophrenia)</td>
<td></td>
<td></td>
<td>Lexapro (Depression)</td>
</tr>
<tr>
<td>Diabetes and kidney disease</td>
<td>MT-4666 (Dementia of Alzheimer’s type)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vaccine*</td>
<td>MT-3995 (Diabetic nephropathy)</td>
<td>MT-2412 (Combination drug for Tenelia and Canaglu)</td>
<td>TA-7284 (Diabetic nephropathy)</td>
<td>In-house</td>
</tr>
<tr>
<td>Others</td>
<td>MT-2301 (Hib vaccine**)</td>
<td></td>
<td></td>
<td>License-in</td>
</tr>
<tr>
<td></td>
<td>MT-4580 (Secondary hyperparathyroidism)</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

**Medicago Inc., a subsidiary of MTPC, signed an agreement with the U.S. government organization (BARDA) related to development of an alternative method for producing antibodies to treat Ebola virus infections (Feb. 2015). Medicago is a biopharmaceutical company that uses MCC’s fully artificial light-type plant growing systems, etc., and specializes in R&D related to developing new vaccines with VLP technology.

Tetrabik (Combined vaccine for preventing four diseases: diphtheria, pertussis, Tetanus, and polio)

**Hib vaccine: Haemophilus influenza type b (Prevents meningitis due to Hib infection in infants)
2-2-2. Healthcare Solutions

Aiming for net sales of ¥300 billion and operating income of ¥30 billion in fiscal 2020, strengthen existing businesses, work in concert with other Group companies, and develop/promote new growth businesses through alliances and innovation
(Sales forecast for fiscal 2014: Approx. ¥130 billion)

Strengthen existing businesses

QKK
- Expand capsule business, new production lines under construction

APIC
- Strengthen manufacturing of API for use in generics

LSIM
- Expand sales of new testing kits, restructure systems for developing PATHFAST diagnostic equipment in U.S.A.

HLC
- Expand number of drugstores providing services for the self-health check service Jibun Karada Club by eliminating the grey zone (Looking to reach 1,000 drugstores in fiscal 2015)
- Promote initiatives to make use of ICT for next-generation healthcare services*
  *Effective disease prevention, health maintenance, life support services related to diseases, etc., and diverse forms of evidence-based healthcare services

Work in concert with other Group companies, conclude alliances, and innovate
- Realize synergies with the MCHC Group (development of new capsule materials, develop diagnostic reagents, etc.)
- Form alliances with academia (with Kyushu University and Tsinghua University (Beijing) in the clinical testing field)
- Form alliances with other companies (operating agreement with Nikon Corporation in the testing and diagnostic equipment fields)
- Promote alliances in the regenerative medicine field
2-3. Industrial Materials: Progress

- Consolidated TNSC in 3Q fiscal 2014
- Will promote structural reforms in petrochemical businesses and aim to reach targets

### Operating income (loss) (¥ billion)

- **Fiscal 2015 Outlook**
  - Performance of MMA, carbon, and performance polymers to remain firm
  - TNSC will be fully consolidated and contribute to income (Fiscal 2015 plan in “Ortus Stage 1”: operating income of ¥38 billion)
  - Expecting to eliminate inventory valuation loss in the naphtha and paraxylene businesses in fiscal 2014

*Figure announced Nov. 27, 2014. Includes effects of adopting uniform date for account closings in fiscal 2013: Net sales: ¥151.9 billion; Operating income: ¥3.9 billion.

**Figure announced Feb. 4, 2015. Includes effects of consolidating TNSC in fiscal 2014: Net sales: ¥275.0 billion; Operating income: ¥17.5 billion.

***Including Leaping ahead (M&A)
2-3-1. PHL/PC Chain

- Promote thorough-going cost-cutting and implement reforms aimed at creating a stable earnings structure
- Return to profitability at the operating income level in fiscal 2015

Business Environment
- Improve supply/demand balance for PHL, BPA, and PC

Priority Measures
- **Kashima**
  - Achieve improvements in plant safety and cost reductions (in fiscal 2014) through introducing technology from ILLA International*. Further cost cuts by lowering UTT and fixed costs, etc.
- **Kurosaki**
  - Continuing pursuit of thoroughgoing cost reductions (energy conservation, UTT, etc.).
  - Raise profitability by accelerating sales of high-performance PC making use of specialized bisphenol
- **China**
  - Implement cost reductions similar to those at the Kurosaki Plant.
  - Improve profitability through strengthening sales at MCC initiative and introducing high-value-added grades.
  - Considering production of non-phosgene DPC in house

*ILLA International Ltd. (Russia): Licensing company for phenol technology
**Sinopec Mitsubishi Chemical Polycarbonate (Beijing) Co., Ltd.: A 50-50 joint venture between MCC and Sinopec in China
2-3-2. Terephthalic Acid

Expected to show an operating profit in fiscal 2017 as a result of revisions in the price schedule at bases, improvement in the terms of trade for paraxylene, and implementation of cost reductions

Implemented policies to reduce inventory valuation risk when prices of raw materials decline

Business environment
- Market conditions continuing to stagnate because of large excess supply capacity in China

Priority measures
- India
  - Scheduled to reduce costs through electric power purchases from the grid (Mar. 2015) and converting to coal fuel (heavy oil → coal: end of 2015)
  - Aiming to return to profitability through changes in the domestic price schedules (including antidumping tax)
- Indonesia
  - Changes in domestic price schedules (maintaining PTA flooring)
- South Korea
  - Reduce losses substantially through optimizing production operations (including downsizing)
  - Increase domestic share as Korean competitor withdraws from the business
  - Linking domestic and overseas prices to paraxylene
- China
  - Structural reform with a view also to inviting new partners
  - Alliances in the energy field with corporations in the vicinity, considering changing fuel to be used
  - Continue to link domestic prices to paraxylene
2-3-3. Sustainable Resources: DURABIO

Making use of the special features of DURABIO and expanding number of automobile manufacturers adopting the material

- Together with Mazda Motor Corporation, MCC developed a new grade of DURABIO that can be used in automotive components without a coating step.
- Decision made to adopt for usage in an interior component for new model MX-5
  Scheduled to be used in exterior components for other Mazda production models
  (DURABIO: Bioengineering plastic, made principally from plant-derived isosorbide)

Balancing the range of properties necessary for automotive components at a high level

Collision resistance
Good appearance
Weather resistance (durable colors)
High surface hardness (resistance to scratches)
Heat resistance

New model MX-5
(Photo by Mazda Motor Corporation)

HUSTLER
(Photo by Suzuki Motor Corporation)
2-3-4. MMA・PMMA

- Establishing global operations and optimizing production taking account of raw materials and supply/demand
- Expansion strategy, increasing income ratios, and implementing rationalization

Expansion strategy
Thailand: New plant began MAA production (Feb. 2014)
U.S.A.: Began production at the Beaumont MAA plant (Jul. 2014)
China: Increased capacity and rationalized Shanghai MMA plant: 82,000 t/y (Jan. 2015)

Improving income ratios and rationalization
Singapore: Improvements in energy efficiency 15% (Scheduled for 4Q 2015)
Introduction of new catalyst (Beginning in 2015)

MMA Project in the Middle East
- Production capacity: MMA (250kty), PMMA (40kty)
- Create the world’s largest MA production capacity using a new ethylene production technology (Alpha technology) using gas-based raw materials that offer an overwhelming cost advantage
- Create a strategic base for supplying growing emerging country markets in Eastern Europe, India, the Middle East, Africa, etc.
- Completion: Scheduled for Apr. 2017
- Commercial operation: Scheduled for Jul. 2017

Note: Planning to make public announcement on U.S.A. project as soon as decisions are made
### 2-3-5. TNSC (1)

- Long-term vision to reach net sales of ¥1 trillion, operating income ratio of 10%, ROCE of 10% or more, and a ratio of overseas sales of 50% by fiscal 2022
- Going forward, will implement “Ortus Stage 1,” looking to preparation of APTSIS 20

<table>
<thead>
<tr>
<th>Measures</th>
<th>Ortus Stage 1: Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Structural reforms</strong></td>
<td>• Optimization of personnel and organizations</td>
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<td></td>
<td>⇒ Implementation of early retirement program at TNSC (Apr. 2014)</td>
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<tr>
<td><strong>Innovation</strong></td>
<td>• Hydrogen refueling stations, Water-18O (stable isotope), etc.*next page</td>
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<tr>
<td><strong>Global development</strong></td>
<td>• On-site project initiatives abroad</td>
</tr>
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<td>⇒ Received major on-site project order from South African company Sasol, in Louisiana, U.S.A. (Jan. 2015) Will supply gas via piping to ethane cracker project and to the surrounding region (Start-up: 2018)</td>
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<td></td>
<td>• Global development of subsidiaries</td>
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<td></td>
<td>⇒ Established company to manufacture thermos bottles in the Philippines (Sep. 2015)</td>
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<td><strong>M&amp;A</strong></td>
<td>• Acquired European thermos bottle manufacturer (Nov. 2014)</td>
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<td>• Acquired gas distributor in southern California (Feb. 2015)</td>
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<td></td>
<td>• Acquired gas business in Hawaii (Feb. 2015)</td>
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<td>⇒ (Deployment of business sites in 43 states out of the 50 states)</td>
</tr>
<tr>
<td><strong>Synergies with the MCHC Group</strong></td>
<td>• Industrial gases ⇒ Acting in concert to supply UTT</td>
</tr>
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<td>• Electronics ⇒ Joint activities in MOCVD devices and GaN substrates</td>
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<td>• Healthcare ⇒ Promote mutual use of the business network</td>
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<td>(artificial spa generators, medical-use gases, home medical care, etc.)</td>
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<tr>
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<td>• Concerted focus on R&amp;D within the MCHC Group</td>
</tr>
</tbody>
</table>
2-3-5. TNSC (2)

- Hydrogen refueling station business
  - As the hydrogen-based society comes closer to being a reality, TNSC strengthened its sales activities for Hydro Shuttle, which is a package-type hydrogen refueling station, originally launched in Aug. 2013.
  - As of Feb. 2015, orders for eight stations for commercial use have been placed. (fixed type: three; Hydro Shuttle: five)

- Water–\(^{18}\)O (stable isotope) business
  - Material for PET cancer diagnosis drug (5% to 10% annual growth);
    Expect applications to expand to brain and heart disease diagnosis
  - Build No. 3 plant in Shunan district, Yamaguchi (First shipments: Fall 2015)
2-4-1. Summary: APTSIS 15

Transforming the business structure base on the four-quadrant model

Withdrawal
- Impact on sales (¥310 billion)

Fertilizer (Dec. 2009)
Nylon chain (May 2010)
Domestic terephthalic acid (Dec. 2010)
PVC chain (Mar. 2011)
SM chain (Mar. 2011)
Piping materials (Mar. 2013)
SAP (Mar. 2013)

Restructuring
- Optimized polyolefin production (Apr. 2014)
- Shifted to one cracker unit operations at the Kashima Plant (Jul. 2015)

Next-generation growth businesses
- Organic photovoltaic modules and materials
- Organic photo-semiconductors
- Sustainable resources
- Agribusiness solutions
- Healthcare solutions and others

Growth businesses
- GaN
- White LED lighting and materials
- LIB battery materials
- Organic synthesis
- Specialty chemicals
- Performance polymers
- Polyester fiber
- Alumina fiber
- Engineering plastic products
- Pharmaceuticals
- MMA/PMMA
- Carbon fiber and composite materials
- Water treatment systems and services and others

Businesses to be restructured
- Basic petrochemicals
- Terephthalic acid
- PHL/BPA/PC
- PE, PP and others

Cash-generating businesses
- Coke
- Diagnostics and support for new pharmaceutical development
- Food ingredients
- Electronic and industrial films
- Fibers and others

Naphtha cracker integration (Shifting to one cracker unit operations at the Mizushima Plant in 2016)
- Polyolefins
- Terephthalic acid

Leaping ahead
- Impact on sales +¥1,350 billion

MRC (Mar. 2010: Management integration)
NSCI (Dec. 2012: Acquisition of majority shareholding)
QKK (Mar. 2013: Acquisition)
Quadrant AG (May 2013: Made into a wholly owned subsidiary)
TNSC (Nov. 2014: Made into a consolidated subsidiary)
2-4-2. Summary: APTSIS 15 Step 2

- **Implementing a portfolio transformation**
  1. TNSC became consolidated subsidiary (Closing: Nov. 12, 2014; Contribution in 3Q through 4Q fiscal 2014)
  2. Establishment of LSII (Apr. 2014)
  3. Delays in commercialization of next-generation growth businesses

- **Promoting petrochemical structural reforms**
  1. Realign/structure petrochemical-related businesses
     - Transition to single cracker operation at full capacity (Kashima) and full-capacity operation (Mizushima)
     - Shift to high-performance products and optimize production in derivatives
     - Strengthen EO and PE, optimize PE and PP production
     - Kashima complex alliances (Optimize power plant operations)
  2. Implement drastic measures in the terephthalic acid, PHL/PC chain businesses

- **Strengthening Profitability of Growth Businesses**
  1. Strengthening and expanding profit base of MMA business
     - Implementation of Middle East project and U.S. project
  2. Accelerate development of performance products businesses ⇒ Integration of emulsion business, etc.
     - Various high-performance films, alumina fiber, etc.
  3. Generating synergies ⇒ Integrating the carbon fiber businesses of MRC and MPI (April 2015), etc.
2-4-3. Summary: Toward Fiscal 2015, Final Year of APTSIS 15

- Conditions firm for Performance Products. Hurdle to clear in Health Care under APTSIS 15 Step 2 is high. Industrial Materials is on a recovery trend.
- Steadily implementing measures to address major management issues and exerting utmost efforts to attain targets for fiscal 2015

Notes:
Includes effects of adopting uniform date for account closings in fiscal 2013: Net sales: ¥151.9 billion; Operating income: ¥3.9 billion
Includes effects of consolidating TNSC in fiscal 2014: Net sales: ¥275.0 billion; Operating income: ¥17.5 billion
Financial results forecasts for fiscal 2015 to be announced on May 13, 2015

*Figure announced Nov. 27, 2014
**Figure announced Feb. 4, 2015
What we aspire to be in 2020
By increasing profitability, pursuing innovation, and contributing to sustainability, MCHC will establish the base to be a global excellent company.

Next medium-term management plan: APTSIS 20
Period: Fiscal 2016 – Fiscal 2020
Announcement: Dec. 2015 (scheduled)
3. Basic Approach to Preparing *APTSIS 20*

- **Emphasis on increasing profitability and management speed**
  - ROE: Considering assumption of 10% target

- **Expansion in growth businesses: Aggressive allocation of resources to Performance Products and Health Care**
  - Strategy formulation for growth businesses from perspective of concerted efforts transcending existing SBUs
  - Strategic reformation in the Group R&D
  - Innovating productivity in growth businesses

- **Accelerate commercialization of businesses through reassessment of next-generation growth businesses and reviews of business strategies**

- **Further evolving holding company operating systems**
  - Transitioning to a Company with Committees with the aim of substantially strengthening corporate governance
    (Transition scheduled to follow approval by the general meeting of shareholders in late Jun. 2015)
  - Strengthening global operating systems and infrastructures

- **More use of MOS Indexes**
3. KAITEKI Management

- Increase KAITEKI value and work to expand shareholder value through putting MOE, MOT, and MOS into practice.