2019-2021 Medium-term Management Plan

April 25, 2019
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Contents

1. Review of 2018 Medium-term Management Plan
2. 2021 Medium-term Management Plan
Contribute to society through the development of epoch-making superior technologies and products

"Pioneering Spirit", "Sincerity", "Harmony"

With a pioneering spirit to explore uncharted areas, we develop innovative solutions beyond the boundaries of chemistry, delivering “wonders” that exceed the expectations of customers and society.

Working On Wonders Delivering “wonders”
10-Year Strategy

10-Year Strategy : Vision for 2025

A company that is an active innovator going beyond the boundaries of chemistry, and based on advanced Functional Materials, operates globally in an extensive variety of businesses, which encompass, among others, devices, systems, and services.

Target operating income of 14% or more as an innovation provider that can prevail over the competition globally.

Practice business management that emphasizes ESG (environmental, social, governance) to contribute to society and continue to grow sustainably as a company.
Review of Basic Policies of 2018 Medium-term Management Plan

2018 Medium-term Management Plan

Strengthen global business

- Cultivate top share business by changing method of competition
- Accelerate commercialization through open innovation

Strengthen management base

- Build global management infrastructure
- Establish cost structure as a global business leader
**2018 Medium-term Management Plan: Results**

### Business results achieved

<table>
<thead>
<tr>
<th>Proportion of overseas sales (%)</th>
<th>58</th>
<th>63</th>
<th>64</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjusted operating income (%)</td>
<td>9.6</td>
<td>8.5</td>
<td>7.1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sales revenue (billion yen)</th>
<th>FY2016</th>
<th>FY2017</th>
<th>FY2018</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>554.1</td>
<td>669.2</td>
<td>681.0</td>
</tr>
</tbody>
</table>

### 2018 Medium-term Management Plan

<table>
<thead>
<tr>
<th>Targets</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales revenue CAGR7~8% (FY2015→2018)</td>
<td>CAGR7.6%</td>
</tr>
<tr>
<td>Adjusted operating income ratio*1</td>
<td>11%</td>
</tr>
<tr>
<td>ROIC *2</td>
<td>15%</td>
</tr>
<tr>
<td>ROE</td>
<td>12%</td>
</tr>
<tr>
<td>CO₂ emissions *3</td>
<td>96%</td>
</tr>
<tr>
<td>Proportion of female managers *4</td>
<td>12%</td>
</tr>
</tbody>
</table>

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*1 Ratio based on sales revenue minus cost of sales and SGA expenses
*2 Ratio of adjusted operating income after tax to working capital and fixed assets
*3 Per unit of sales revenue compared to FY2014 results (for major domestic plants inc. Group companies)
*4 Non-consolidated, under age of 45
2018 Medium-term Management Plan: Outcomes

Expanded & strengthened strategic businesses globally: 7.6% sales growth rate

- **Implemented and progressed niche and cluster strategy**
  - Market share of semiconductor packaging materials: Approx. 30% → approx. 40%; Shin-Kawasaki Open Laboratory set up
  - Launched nano-ceria CMP slurry business (market share approx. 50%→60%); expanded production capacity

- **Achieved commercialization through open innovation**
  - Launched QD (quantum dot) film business; increased sales

- **Achieved dynamic growth through M&A**
  - Launched new businesses in thermal management materials, diagnostic medicines, and regenerative medicine
  - Built global business base for energy storage devices (US, Europe & ASEAN)

Strengthened Our Management Base

- Established transparency for global management information (HR & financial)
- Strengthened internal controls at regional headquarters in US & China regions
- Reduced CO₂ emissions; reinforced promotion of career opportunities for women
### 2018 Medium-term Management Plan: Main Issues

<table>
<thead>
<tr>
<th>Discovery of inappropriate product testing &amp; missed targets for both operating margin &amp; ROIC</th>
</tr>
</thead>
</table>

**Responses to external environment**

- **Delay in abandoning emphasis on smartphone business**
  - Market development & commercialization targeting new demand such as 5G, EV, industrial applications, etc.

- **Inadequate price adjustment in response to higher materials prices**
  - Revise contracts to reflect changes in materials markets, esp. for energy storage devices

**Management issues**

- **Loss of trust due to inappropriate product testing**
- **Insufficient transformation of business structure**
  - Act decisively to realign business portfolio
- **Failure to achieve development up to launch of new fields & products**
  - Focus development in fields where Hitachi Chemical can use its strength in material technologies
- **Deterioration in asset efficiency & returns on assets**
  - Improve PMI & ROIC-based management for companies acquired via M&A
Contents

1. Review of 2018 Medium-term Management Plan
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Basic Policies of 2021 Medium-term Management Plan

Stage to improve quality of management and business

2021 Medium-term Management Plan

Strengthen governance at the global level

- Rebuild compliance systems
- Strengthen group governance

Establish a high-profit base

- Expansion of de facto, top share business
- Accelerated creation of new businesses and products
- New challenge to rebuild globally-advanced cost structure
Strengthen governance at the global level

Stop repeated compliance issues and earn the trust of society and customers

Rebuild compliance structures

- Steadily implement measures to prevent recurrence of inappropriate product testing
- Reduce compliance risk by decreasing no. of companies
- Continuously enhance employees’ education and communication with employees particularly by managers

Strengthen group governance

- Intra-regional audit structures developed in US and China to undertake independent risk management
- Build frameworks in ASEAN & Europe regions
Operating Environment Outlook

Concentrate management resources on existing semiconductor, smartphone, and automotive parts businesses as well as on 5G, EV, new batteries, and medical fields

Growth rate of major industries

<table>
<thead>
<tr>
<th>Sector</th>
<th>Unit</th>
<th>'18</th>
<th>'21</th>
<th>CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telecommunications</td>
<td>Semiconductor silicon wafers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MS (million square inches)</td>
<td>12,445</td>
<td>13,778</td>
<td>3%</td>
</tr>
<tr>
<td></td>
<td>Smartphones</td>
<td>2,109</td>
<td>2,250</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td>5G communication base stations</td>
<td></td>
<td></td>
<td>202%</td>
</tr>
<tr>
<td>Automobiles</td>
<td>Automobiles (engines)</td>
<td>8,746</td>
<td>9,268</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td>Automobiles (EV)</td>
<td>607</td>
<td>1,970</td>
<td>48%</td>
</tr>
<tr>
<td>Secondary batteries</td>
<td>Lithium ion batteries</td>
<td>2.8</td>
<td>4.0</td>
<td>13%</td>
</tr>
<tr>
<td></td>
<td>Other secondary batteries</td>
<td>4.0</td>
<td>5.0</td>
<td>7%</td>
</tr>
<tr>
<td>Regenerative medicine</td>
<td>CDMO</td>
<td>529</td>
<td>805</td>
<td>15%</td>
</tr>
</tbody>
</table>

*Market size: Estimated by Hitachi Chemical based on forecasts from an external research agency.

Social trends

Changes in market structure
AI, digitalization, autonomous driving

Providing exactly what is needed when it is needed

Realization of Society 5.0
Global movement to create a sustainable society

Accelerate the promotion of the SDGs
Enhance De Facto, Top Share Business

Provide proprietary solutions and make them the de facto standards, based on our technology platform comprising material, process & evaluation technologies

<table>
<thead>
<tr>
<th>Category</th>
<th>Candidate Product</th>
<th>Market Demand</th>
<th>Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clusters</td>
<td>Packaging materials</td>
<td>Speed up package design &amp; evaluation</td>
<td><strong>JOINT</strong>(^1) to propose <strong>one-stop solution</strong> for advanced packaging</td>
</tr>
<tr>
<td>CASE(^2)</td>
<td>Respond to new demand for connectivity, automated driving &amp; Evs</td>
<td><strong>Provide solutions</strong> combining material/process differentiation, analysis/design technologies &amp; modularization</td>
<td></td>
</tr>
<tr>
<td>Niche</td>
<td>CMP</td>
<td>Enhance total performance in terms of functionality &amp; the polishing process</td>
<td>Provide technical services using material technologies in each market, implementing services with speed</td>
</tr>
<tr>
<td>QD film (quantum dots)</td>
<td>Achieve both higher-definition displays and lower environmental loads</td>
<td>Pursue “collaborative creation” with QD manufacturers to enhance optical properties &amp; reduce cadmium content as soon as possible</td>
<td></td>
</tr>
<tr>
<td>ACF</td>
<td>Respond to increasing miniaturization of high-definition display components</td>
<td>Bolster technical services utilizing the Integration Lab in Suzhou, China</td>
<td></td>
</tr>
</tbody>
</table>

\(^1\) JOINT (Jisso Open Innovation Network of Tops): Consortium providing comprehensive solutions for semiconductor packaging

\(^2\) CASE:Connected, Autonomous, Shared, Electric
Business Policies: Information and communications

Provision of materials-based solutions that cannot be copied by the competition and establishment of a strong brand in the field of packaging

- Expand open lab strategies ⇒ Create one-stop solutions for packaging materials (50% share)
- Promote open innovation by JOINT; establish cutting-edge packaging technologies
- Uncover latent demand in the 5G communications infrastructure & EV markets; provide solutions
- Implement strategies to secure competitive advantage using IP
Business Policies: Mobility

Global provision of essential products for all mobility using material technologies

- Strengthen proposal capability targeting weight reduction, EVs & thermal management; respond to new demand for CASE/xEV
- Increase European bases; expand North American Big 3 & Chinese xEV operations
- Review production bases; use MI* to enhance development efficiency

*MI : Material Informatics

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Business Policies: Energy

Use individual characteristics of global bases to shake up the product mix & build a shared foundation of manufacturing capability

- Build shared foundation of manufacturing capability; create M&A synergies by accelerating PMI
- Increase advanced, high-value-added environmental products
- Capture demand in the integrated monitoring solutions field; develop a business model for monitoring & maintenance services
Create integrated synergy with operating companies acquired through M&A and develop future base for businesses

• Acquisition of business base for diagnostic agents in Europe
  Development and launch of new POCT* products
  Expand and develop overseas sales network

• Consolidate profitability of Japan-US-European global businesses for regenerative medicine
  Establishment of systems for global coordination in manufacturing, sales, and development
  Improvement of profitability through introduction of automation and mass cultivation technologies

• Creation of life science-related materials business
  Incubation of the development of technologies for culture mediums and consumables

*POCT : Point Of Care Testing
### Expansion of new businesses and products in fields where strengths can be leveraged

<table>
<thead>
<tr>
<th>Key areas</th>
<th>Policy</th>
<th>Market scale (billion yen) @2025</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Next-generation communication infrastructure</strong></td>
<td>Development of new materials and solution-oriented business models for 5G/IoT devices</td>
<td>Low dielectric material IoT materials 120 100</td>
</tr>
<tr>
<td><strong>Next-generation mobility</strong></td>
<td>Proposals for the development of new materials and usable technologies to support electric, lightweight and connected vehicles</td>
<td>motorized/lightweight Sensors 2,330 3,000</td>
</tr>
<tr>
<td><strong>Environment Energy</strong></td>
<td>Propose solutions using materials for new energy and environmental issues</td>
<td>New energy Environment 70 90</td>
</tr>
<tr>
<td><strong>Life science</strong></td>
<td>Support regenerative medicine and other clinical research by supplying highly functional, high-value-added single-use products</td>
<td>Consumables for regenerative medicine 600</td>
</tr>
</tbody>
</table>
Accelerate the Creation of New Businesses and Products

Change target from fields where insight is lacked to fields where strengths can be leveraged

2018 Medium-term Plan

<table>
<thead>
<tr>
<th>New</th>
<th>Market penetration</th>
<th>Existing</th>
<th>Product</th>
<th>New</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Diversification</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2021 Medium-term Plan

<table>
<thead>
<tr>
<th>New</th>
<th>Market penetration</th>
<th>Existing</th>
<th>Product</th>
<th>New</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Diversification</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Key areas for new products and businesses

- Classify responsibilities and authority of and step up coordination between business divisions and research divisions
- Use information from US venture capital companies to expedite results from the use of open innovation in projects following on from QD film
New Challenge to Rebuild Globally-advanced Cost Structure

Reinforce business structure in terms of both stock & flow by realigning business & customer portfolios, etc.
- Improve adjusted operating income ratio by 3% & ROIC by 5%

Business Portfolio Realignment
Implement prompt remedial measures inc. sale or withdrawal for low-profit businesses with operating income margins under 5%

Review of Individual Contract Terms
Improve customer portfolio through portfolio analysis of individual customers’ sales amounts & profit levels
(targeting approx. 3% on sales basis)

Reforms of indirect operations (10% cost reduction)
Decrease in no. of companies (25% cost reduction)
Investment Plan for Growth

Focus investment in information & communications field; asset sales provide main source of M&A funding
Basic shareholder returns policy: Aim for approx. 30% payout ratio

Cumulative operating cash flow
Operating cash flow margin

[9.1%]
159.5 billion yen

[10.5%]
220.0 billion yen

Investment

179.3 billion yen

170.0 billion yen

Capex
135.0 billion yen

155.0 billion yen

Results for FY2016–2018

Planned for FY2019–2021

M&A, etc.
10%

Life Sciences, etc.
10%

Env. & Energy
30%

Mobility
50%

Info. & Comms.
38%

Focus investment in information & communications field; asset sales provide main source of M&A funding
Basic shareholder returns policy: Aim for approx. 30% payout ratio

Operating cash flow margin

[9.1%]
159.5 billion yen

[10.5%]
220.0 billion yen

Investment

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170.0 billion yen

Capex
135.0 billion yen

155.0 billion yen

Results for FY2016–2018

Planned for FY2019–2021

M&A, etc.
10%

Life Sciences, etc.
10%

Env. & Energy
30%

Mobility
50%

Info. & Comms.
38%
Sustainability Initiatives: Identification of Materiality

- Defined 10 material issues based on business strategy and ESG trends
- Set out measures and KPIs for each material issue
- Use initiatives to seek solutions to social issues (e.g., SDG issues)

Hitachi Chemical’s Material Issues (10 priority issues for sustainable growth)

- 01. Strengthening ability to discern true needs
- 02. Strengthening business designing ability to enhance business value-added
- 03. Strengthening technology platform
- 04. Improving productivity globally
- 05. Strengthening financial standing
- 06. Promoting diversity to strengthen corporate competitiveness
- 07. Strengthening group governance
- 08. Timely and appropriate communication with stakeholders
- 09. Implementation of social responsibility in the entire value chain
- 10. Pursuing businesses that offer solutions to environmental and social issues
### Sustainability Initiatives: Main Related SDGs

Contribute to the creation of sustainable societies as a member of the global community

#### SDGs to which our products and services contribute

- **GOOD HEALTH AND WELL-BEING**
- **AFFORDABLE AND CLEAN ENERGY**
- **INDUSTRY, INNOVATION AND INFRASTRUCTURE**

#### SDGs to which we contribute through ESG-oriented management

<table>
<thead>
<tr>
<th>Material Issues</th>
<th>Main Measures</th>
<th>Related SDGs</th>
</tr>
</thead>
<tbody>
<tr>
<td>06. Promoting diversity to strengthen corporate competitiveness</td>
<td>Promote diversity of decision makers, etc.</td>
<td>3</td>
</tr>
<tr>
<td>07. Strengthening group governance</td>
<td>Conduct training &amp; auditing to prevent inappropriate behavior, etc.</td>
<td>6</td>
</tr>
<tr>
<td>08. Timely and appropriate communication with stakeholders</td>
<td>Disclose ESG information online, etc.</td>
<td>12</td>
</tr>
<tr>
<td>09. Implementation of social responsibility in the entire value chain</td>
<td>Achieve low-carbon societies by reducing CO2 emissions, etc.</td>
<td>16</td>
</tr>
</tbody>
</table>
## Key KPIs for 2021 Plan: Adjusted operating income ratio & ROIC

<table>
<thead>
<tr>
<th></th>
<th>FY2018 Results</th>
<th>FY2021 Medium-term Management Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjusted operating income ratio *1</td>
<td>7.1%</td>
<td>Over 10%</td>
</tr>
<tr>
<td>ROIC *2</td>
<td>8.3%</td>
<td>Over 13%</td>
</tr>
<tr>
<td>CO₂ emission *3</td>
<td>14%</td>
<td>15%</td>
</tr>
<tr>
<td>Ratio of diversity in management *4</td>
<td>20%</td>
<td>30%</td>
</tr>
</tbody>
</table>

*1 Ratio based on sales revenue minus cost of sales and SGA expenses  
*2 Ratio of adjusted operating income after tax to working capital and fixed assets  
*3 Per unit of sales revenue compared to FY2010 results (for major domestic plants inc. Group companies)  
*4 Numerator: Total number of foreign nationals and woman in management within Hitachi Chemical Co., Ltd. and main group companies. Denominator: Total number of management personal within Hitachi Chemical Co., Ltd. and main group companies.
Appendix:
Progress in Measures for Preventing Recurrence of Inappropriate Product Testing
Progress in Addressing Customers Impacted by Inappropriate Testing

(figures in parentheses represent % of total)

<table>
<thead>
<tr>
<th>Category</th>
<th>Total</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hitachi Chemical</td>
<td>2,329</td>
<td>1,876</td>
<td>448</td>
<td>4</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>(100%)</td>
<td>(81%)</td>
<td>(19%)</td>
<td>(0%)</td>
<td>(0%)</td>
<td>(0%)</td>
</tr>
<tr>
<td>Domestic Group companies</td>
<td>127</td>
<td>78</td>
<td>16</td>
<td>26</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>(100%)</td>
<td>(61%)</td>
<td>(13%)</td>
<td>(20%)</td>
<td>(0%)</td>
<td>(6%)</td>
</tr>
<tr>
<td>Overseas Group companies</td>
<td>131</td>
<td>30</td>
<td>25</td>
<td>51</td>
<td>9</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>(100%)</td>
<td>(23%)</td>
<td>(19%)</td>
<td>(39%)</td>
<td>(7%)</td>
<td>(12%)</td>
</tr>
<tr>
<td>Number of Companies</td>
<td>2,587</td>
<td>1,984</td>
<td>489</td>
<td>81</td>
<td>10</td>
<td>23</td>
</tr>
<tr>
<td>(Composition Ratio)</td>
<td>(100%)</td>
<td>(77%)</td>
<td>(19%)</td>
<td>(3%)</td>
<td>(0%)</td>
<td>(1%)</td>
</tr>
<tr>
<td>Ration of Consolidated Revenue</td>
<td>19.6%</td>
<td>11.7%</td>
<td>5.6%</td>
<td>1.5%</td>
<td>0.4%</td>
<td>0.4%</td>
</tr>
<tr>
<td>(Composition Ratio)</td>
<td>(100%)</td>
<td>(60%)</td>
<td>(29%)</td>
<td>(7%)</td>
<td>(2%)</td>
<td>(2%)</td>
</tr>
</tbody>
</table>

(Note)  
A: Performance confirmation complete  
B: Currently conducting performance testing. However, the customer has indicated that there are no foreseeable problems.  
C: Have informed the customer that the company believes there are no performance problems  
D: Have informed the customer that the company has supplied products under the scope of investigation  
E: Will inform the customer that the company has supplied products under the scope of investigation

Products Subject to Inappropriate Testing Other Than 30 Previously Disclosed  
(Group company products: Have completed internal confirmation that quality is not affected)

<table>
<thead>
<tr>
<th>Category</th>
<th>Product name</th>
<th>Category</th>
<th>Product name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resin material</td>
<td>Resin packing</td>
<td>Other functional materials</td>
<td>Resin coated sand</td>
</tr>
</tbody>
</table>

Results of Development Division Investigations: No issues found in investigations of Companywide development divisions
Creating a Fully Automated Product Testing System

**Aim:** Use automation to prevent manipulation of test data, written results, etc.

**Goals:** Complete automation by end of FY2020 at Hitachi Kasei operations offices & by end of FY2022 at Group companies (investment: 12–15 billion yen)

**Progress:**

**STEP 1** Results issuing system: design of procedures & system underway

**STEP 2** Enabling automated transmission from measuring instruments:
- Survey of current equipment & detailed investment estimate underway

**Plan for installation of system**

<table>
<thead>
<tr>
<th>Step</th>
<th>2018/4Q</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hitachi Kasei</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STEP 1 Results issuing system</td>
<td>Planning of project launch policy</td>
<td>Design of procedures/system</td>
<td>Installation &amp; operation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STEP 2 Automated transmission</td>
<td>Survey of current equipment</td>
<td>Estimate</td>
<td>System design</td>
<td>Installation &amp; operation</td>
<td></td>
</tr>
<tr>
<td>Group companies</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STEP 1 Results issuing system</td>
<td></td>
<td></td>
<td>Survey of current equipment, system design</td>
<td>Installation for selected products</td>
<td>Installation for all products</td>
</tr>
<tr>
<td>STEP 2 Automated transmission</td>
<td></td>
<td></td>
<td></td>
<td>Survey of current equipment &amp; operation</td>
<td></td>
</tr>
</tbody>
</table>

Note: The above schedule and estimated investment may change due to future circumstances.
Changing the Corporate Culture

Strengthen communication between senior management and employees through continuous messaging from management

Improve compliance training

<table>
<thead>
<tr>
<th>Details of Training Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Special Compliance Classes (New)</strong></td>
</tr>
<tr>
<td>Workshop-based training by job rank for all employees on preventing recurrence of inappropriate incidents</td>
</tr>
<tr>
<td><strong>Specialist Professional Training (New)</strong></td>
</tr>
<tr>
<td>Practice-oriented training to prevent recurrence targeting QA, sales, development &amp; manufacturing divisions (first line of defense)</td>
</tr>
<tr>
<td><strong>Regular Compliance Classes Taught by Lawyers (Continual)</strong></td>
</tr>
<tr>
<td>Compliance-related e-Learning (Continual)</td>
</tr>
</tbody>
</table>

Stricter enforcement of work regulations re. compliance violations
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