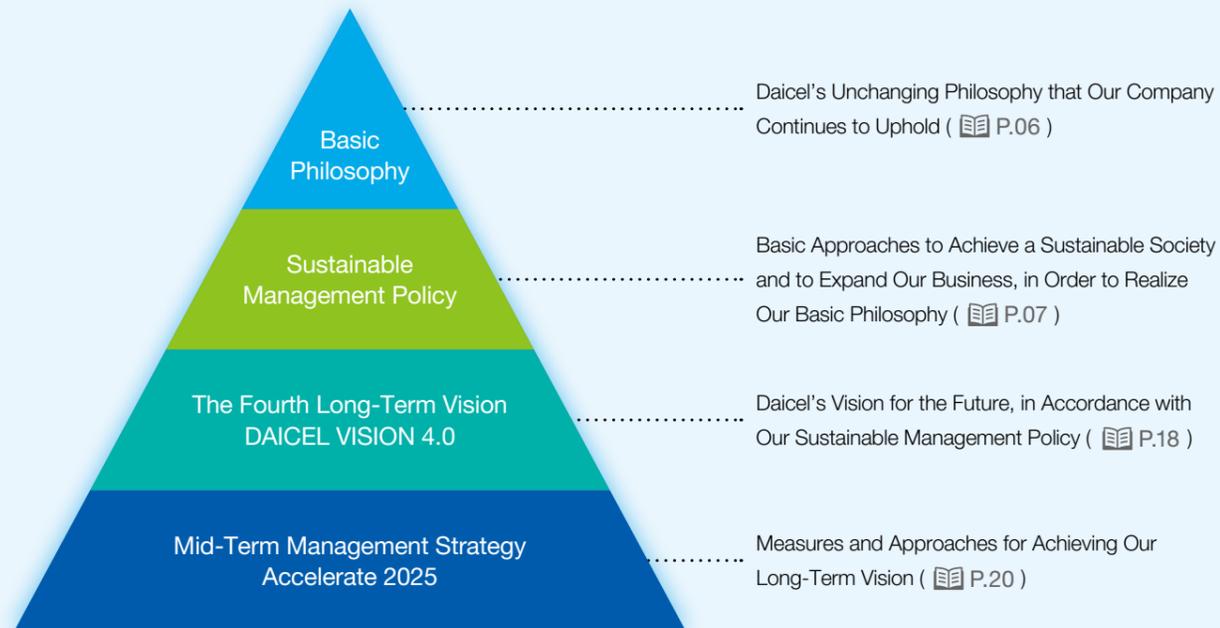




DAICEL

DAICEL  
Report  
2022

Management Policy



Editorial Policy

The Daicel Group aspires to realize its Basic Philosophy of becoming "the company making lives better by co-creating value," and it continues to conduct its businesses with a view to both improving social sustainability and enhancing medium- to long-term corporate value. Aimed at providing our shareholders, investors, and many other stakeholders with a better understanding of the Daicel Group and a tool for communication, this report is a concise consolidation of financial and non-financial information that is highly relevant to our medium- to long-term value creation story.

Points to Note about the Daicel Report 2022

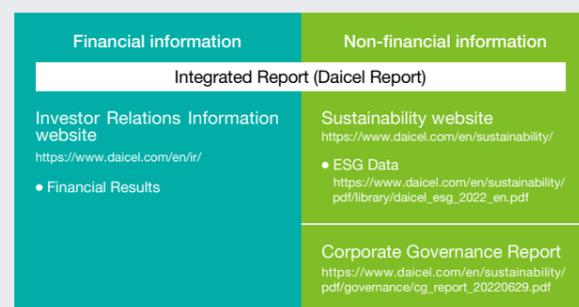
- Management's mindset, vision for the future, strategies, and initiatives are reported in an integrated manner.
- In order to provide a simple account of how we create value, we will discuss sustainability and materiality by incorporating items that are deeply connected to our Long-term Vision and Mid-Term Management Strategy.

More detailed and comprehensive information about our overall progress in materiality and sustainability is disclosed on Daicel's website under the heading of "Sustainability."

Detailed financial information is disclosed on our website under "Investor Relations."

In editing our reports and website, we have taken care to disclose information in ways that are easy to read, easy to understand, and forthcoming.

Disclosure Structure



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Entities within the Scope of Reporting

The reporting organization is based on the Daicel Group, and other cases are noted in the text.

- Daicel/We/Our: Daicel Corporation
- Group companies: Subsidiaries of Daicel Corporation
- Daicel Group/The Group: Daicel Corporation and its subsidiaries

The scope of the Group companies for reporting varies depending on the content of the initiatives. Refer to the following websites for more details.

<https://www.daicel.com/en/sustainability/other/boundary.html>

<https://www.daicel.com/en/sustainability/other/responsible.html>

Reporting Period

FY2022/3 (April 2021 to March 2022)

Guidelines Used for Reference

- International Integrated Reporting Framework, International Integrated Reporting Council
- Guidance for Integrated Corporate Disclosure and Company-Investor Dialogues for Collaborative Value Creation, Ministry of Economy, Trade and Industry (METI)
- The GRI Sustainability Reporting Standards 2016/2018/2019/2020, GRI

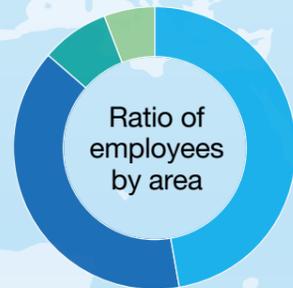
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As the sole purpose of this report is the provision of information to readers, in no way does the Company intend to solicit readers to take a certain action through this publication. Although the Company compiled this report based on information available to it and deemed trustworthy at the time of its issuance, the content of the report inherently includes a number of risks and uncertainties. Accordingly, Daicel provides no guarantee to the accuracy or integrity of information therein. When readers intend to use any part of information contained in this report, they are advised to use their own discretion.

Daicel shall bear no responsibility whatsoever to readers about damage, loss or other negative outcomes attributable to their investment decisions that relied on forecasts, numerical targets and other forward-looking statements featured in this report.

# At a Glance

We support the worldwide *monozukuri* manufacturing through the power of chemistry. (As of March 31, 2022)



- Japan: 5,259 (47.4%)
- Asia: 4,333 (39.0%)
- North America and Latin America: 887 (8.0%)
- Europe: 625 (5.6%)



- Male: 8,121 (73.1%)
- Female: 2,983 (26.9%)

Rating for our ESG initiatives (As of August, 2022)



FTSE4Good



FTSE Blossom Japan Index



FTSE Blossom Japan Sector Relative Index



S&P/JPX Carbon Efficient Index



2022 健康経営優良法人 Health and productivity ホワイト500

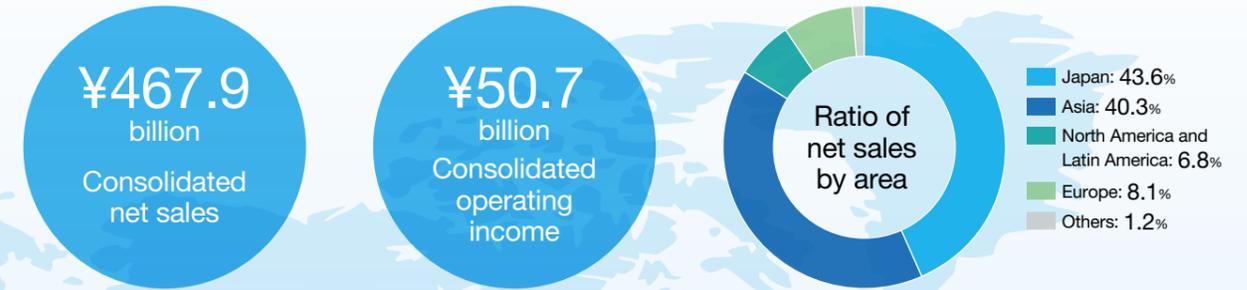


2022 ecovadis Sustainability Rating



"Eruboshi" Three-Star Certification

\* FTSE Russell (the trading name of FTSE International Limited and Frank Russell Company) confirms that Daicel Corporation has been independently assessed according to the FTSE4Good criteria, and has satisfied the requirements to become a constituent of the FTSE4Good Index Series. Created by the global index provider FTSE Russell, the FTSE4Good Index Series is designed to measure the performance of companies demonstrating strong Environmental, Social and Governance (ESG) practices. The FTSE4Good indices are used by a wide variety of market participants to create and assess responsible investment funds and other products.  
 \* FTSE Russell (the trading name of FTSE International Limited and Frank Russell Company) confirms that Daicel Corporation has been independently assessed according to the FTSE Blossom Japan Index criteria, and has satisfied the requirements to become a constituent of the FTSE Blossom Japan Index Series. Created by the global index provider FTSE Russell, the FTSE Blossom Japan Index Series is designed to measure the performance of Japanese companies demonstrating strong Environmental, Social and Governance (ESG) practices. The FTSE Blossom Japan indices are used by a wide variety of market participants to create and assess responsible investment funds and other products.  
 \* FTSE Russell (the trading name of FTSE International Limited and Frank Russell Company) confirms that Daicel Corporation has been independently assessed according to the FTSE Blossom Japan Sector Relative Index criteria, and has satisfied the requirements to become a constituent of the FTSE Blossom Japan Sector Relative Index Series. The FTSE Blossom Japan Sector Relative Index is used by a wide variety of market participants to create and assess responsible investment funds and other products.  
 \* The inclusion of Daicel Corporation in any MSCI index, and the use of MSCI logos, trademarks, service marks or index names herein, do not constitute a sponsorship, endorsement or promotion of Daicel Corporation by MSCI or any of its affiliates. The MSCI indexes are the exclusive property of MSCI. MSCI and the MSCI index names and logos are trademarks or service marks of MSCI or its affiliates.



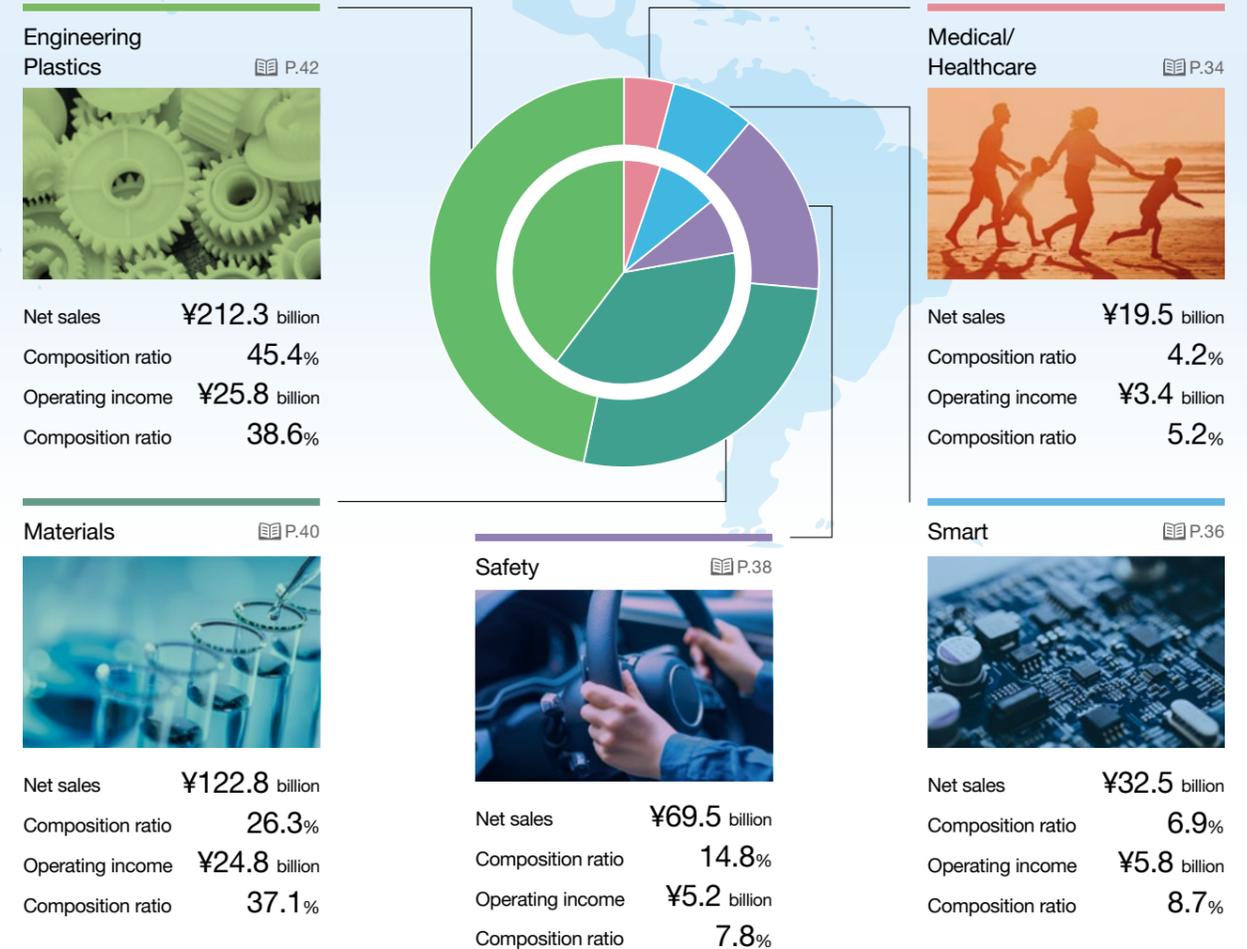
Maintaining stable rating based on our robust financial foundation

Japan Credit Rating Agency, Ltd.: (As of August, 2022)

A+

## Sales and Operating Income by Segment

(The outer figures on the graph represent sales; the inner figures represent operating income)



\* The figures for other segments are not included in the pie charts above. P.32 for the Business Overview

## Basic Philosophy

# The company making lives better by co-creating value

### Sustainable Value Together

In the 1900s, Japan began producing raw materials for celluloid, which was applied to a broad range of household items that improved the quality of people's lives. However, the special procurement boom caused by World War I led to a proliferation of domestic celluloid manufacturers and intense competition, resulting in a decline in quality from the mass production of inferior products and the indiscriminate felling of camphor trees.

Eight leading manufacturers concerned about the situation sought to restructure the industry by merging to form Dainippon Celluloid Co., Ltd., the predecessor of today's Daicel Corporation.

This merger made it possible to manage raw material resources, stabilize production and quality, and nurture processing companies in the downstream industry, thereby laying the foundation for a manufacturer boasting the top share of global celluloid shipments.

Furthermore, research for fireproofing celluloid, which was conducted alongside the merger, laid the foundation for developing a chemical industry in Japan that generates diverse materials.

While Daicel's business and organization have significantly changed since its founding a hundred years ago, the spirit of applying the power of chemistry to improve daily life has remained unchanged.

Just as the eight celluloid companies joined hands to enrich society, Daicel will work with customers and partners to develop a sustainable society.

Moreover, we will continue to change the future for the better through the power of chemistry by remaining true to our aspirations as a company that make lives better by co-creating value.

Photograph: compression process at the Aboshi Plant

## Sustainable Management Policy

Upon a firm foundation of safety, quality and compliance, the Daicel Group will realize our basic philosophy by both contributing to the establishment of a sustainable society and pursuing business growth with integrity, tireless efforts and self-transformation.

We create and provide people with new values to achieve better quality of life.

We construct a circular process with all our stakeholders to make harmonious coexistence with the environment.

We promote "human-centered management" that enables diverse employees to grow while establishing their own presence and achieving fulfillment.

# Value Creation, Past and Present

Ever since its founding in 1919, Daicel has been achieving growth by meeting the needs of society as it changes over time and developing and providing products that contribute to sustainability. Let us take a look back at the course of over 100 years of value creation as Daicel has challenged itself to achieve the ideal of *monozukuri* manufacturing.

## 1919-

Celluloid

Enrichment of daily life

As a pioneer in the field of plastics, we played an integral role in the development of the Japanese chemical industry.



Cellulose acetate

Securing safety

1938 Commercialized cellulose acetate, offering a solution to flammability concerns associated with cellulose nitrate.



Development of Our Celluloid Business and Creation of a New Organic Chemicals Business



Daicel was founded in 1919 through the merger of eight celluloid companies. From the beginning Daicel worked to make celluloid less inflammable and ended up developing acetate plastic. After establishing the Arai Plant in 1935, we then in 1938, laid the foundations for our cellulose and organic chemicals businesses by setting up a system for consistent production of the raw material cellulose acetate from acetic acid.

## the 1950s

Tri-Acetate Cellulose (TAC)

Fireproofing films for movies and photography and adding advanced properties

1953 We began producing TAC and after 2000, this business grew significantly as the material came to be used for optical film.



Full-Scale Production in Our Cellulose Business and Starting Our Pyrotechnic Devices Business



Production of acetate plastic went into full operation at our Aboshi Plant in 1950, and in 1953, joint research with Fuji Photo Film Co., Ltd.\* led to the beginning of production of TAC, and in 1958 our Sakai Plant began production of acetate toe, which is used in cigarette filters, rounding out our cellulose business. Since cellulose nitrate is a raw material for pyrotechnics, our pyrotechnic business developed, and we established the Harima Plant in 1954.

\*Now known as Fujifilm Corporation

## the 1960s

Polyacetal (POM)

Taking on the challenge of Metal Replacement

1964 Daicel began manufacturing engineering plastics, which serve as metal substitutes in automobiles and other products. Their use has contributed to the development of lightweight components and contributed to a reduction in the environmental load.



Entry into the Petrochemical Business



During the 1960s, Daicel participated in Japan's first petrochemical complex and began its petrochemical business with the construction of the Ohtake Plant. In the synthetic resins business, in addition to manufacturing AS resin and ABS resin, Daicel entered into a joint venture with the U.S. company Polyplastics, Co. Ltd.\* and went into the engineering plastics business.

\*Polyplastics, Co. Ltd. became a wholly owned subsidiary of Daicel in FY2021/3.

## the 1980s

Acetic acid using the methanol carbonylation process

Realignment of the acetic acid sector

1980 Introduced the methanol carbonylation process to produce acetic acid, our core material, which led to the realignment of the acetic acid sector.



Strengthening the Foundations of Our Acetic Acid Business

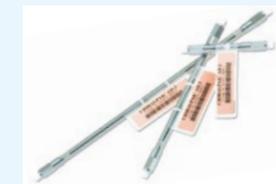


In order to deal with a structural slump and to strengthen our main businesses, we went into the methanol carbonylation business, which was the cutting-edge technology at the time, as part of an effort to switch to raw materials that do not depend on petroleum. Participating in the C1 Chemistry Project\*, we played a role in reorganizing the acetic acid industry. \*C1 Chemistry was a national project which aimed to break away from over-reliance on oil during the 1970s energy crisis.

Chiral columns

Provision of safe medicine

1982 Started producing chiral columns, which are used to separate substances that may otherwise cause adverse side effects.



Automobile airbag inflators

Provision of safety and security

1988 Started supplying the key component for automobile airbag systems that protect passengers in the event of a collision.



Proactive Expansion of Our Businesses Overseas



During the 1980s, we established local subsidiaries in Europe, the United States, and Asia. In 1988, we established a subsidiary for manufacturing inflators for automobile air bags. In 1990, we set up a manufacturing base for optical isomer separation in the United States, and in 1992, we began manufacturing acetate toe at a joint venture company in China.

## 2000 and beyond

Autonomous Production System

Improvements in productivity

2000 Daicel Production Innovation Established.

2020 Daicel made use of artificial intelligence to develop the Autonomous Production System, a more evolved version of Daicel Production Innovation.



Expansion of the Inflator and TAC Businesses and Lateral Development of Daicel Production Innovation



We have expanded our inflator business and established bases for that purpose in six countries around the world. We have also expanded our display business by taking TAC, originally a raw material for movie and other films, and using it for manufacturing optical film. In the area of technology, we are opening the Daicel Production Innovation system that we established at the Aboshi Plant and gradually extending it to the entire company and accelerating our process innovations. In 2017, we opened Innovation Park as a center for research and development and concentration of production technology.

## FY2022/3 Mid-Term Management Strategy

### Launch of "Accelerate 2025"

Uncovering new needs, starting new businesses in order to co-create value with our customers and business partners, and constructing new biomass product trees with environmentally-friendly new technology, we will contribute to construction of a circular society with Daicel's unique efforts and determinations.

Marine biodegradable cellulose acetate

Solution for marine plastic

We have noticeably improved marine biodegradability of naturally derived and biodegradable cellulose acetate, and we are continuing to develop other environmentally-friendly products.



Product Deployment with One Time Energy™

Pioneering new uses through reinterpretation of the functions of existing technology

We are taking the technologies that we have developed safely, accurately, and instantaneously by generating a single burst of optimal energy and adapting them to uses in industries such as health care and automobiles.

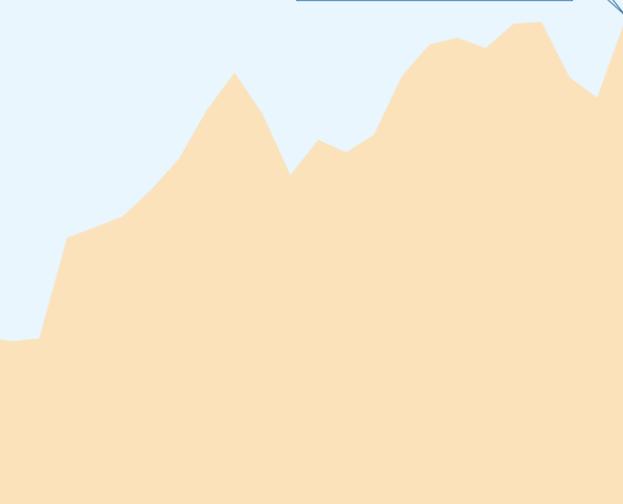


Actranza™ lab



Pyro-fuse

FY2022/3: Consolidated net sales  
**¥467.9 billion**



## Message from the President and CEO



*Y. Ogawa*

Yoshimi Ogawa  
President and CEO,  
Daicel Corporation

## With “technology for melting wood” we will contribute to building a circular society where ecology and economy are aligned

Since its foundation more than 100 years ago, when the term “SDGs” or “sustainable” had not yet been used with today’s meaning, Daicel has been committed to an essentially similar concept. As a pioneer in biomass chemistry that has always handled wood resources, we are contributing to building a circular society with partners that share our aspirations.

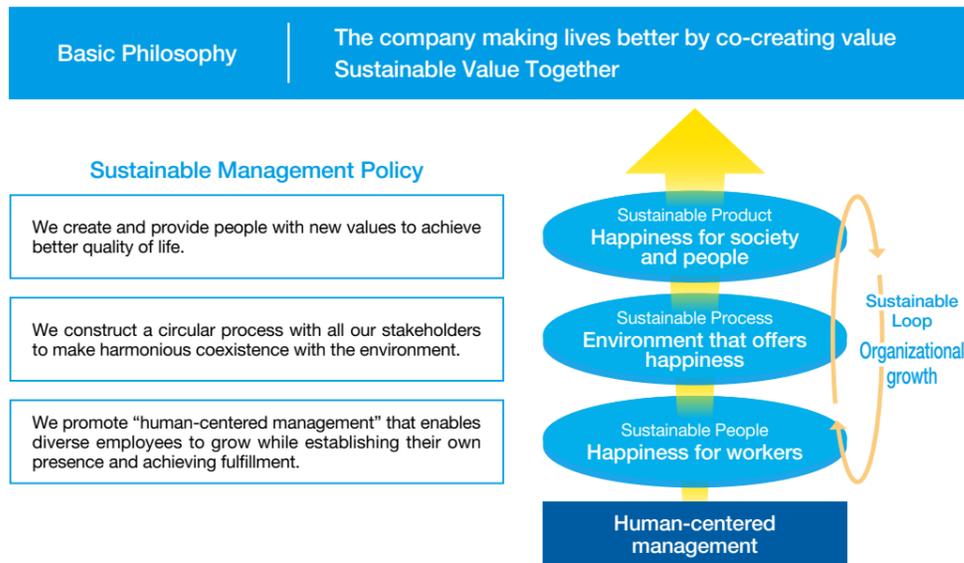
### After securing a foothold, major transformations have begun

FY2022/3 was the first year of our “Accelerate 2025” Mid-Term Management Strategy, in which we embarked toward major changes. We, as a group, have made a good start by changing our organizational structure to a customer-in approach, retreating from unprofitable products, relocating and consolidating production sites, and making other major changes in the way we work and our work content. Consequently, our FY2022/3 results showed a year-to-year increase in both sales and profit, thanks to record-high sales and profits achieved by Polyplastics Co., Ltd. (Polyplastics), which became our wholly owned subsidiary in FY2021/3 as well as to cost reductions and sales expansions in existing businesses. Numerically we have returned to pre-pandemic levels, and we are making steady progress, as evidenced by the improvement in our management indicators.

One of the highlights of FY2022/3 was Daicel Group’s Business Contest (DAICON ㊦ P.23), which was planned and carried out by our younger employees. DAICON aims at providing an opportunity for employees to present their ideas openly to management and hone their power to produce something out of nothing. This is important since the ability to create a new business model is essential for developing new technologies and products into a business. The theme of the first contest was to identify

internal issues, following our culture of uncovering problems based on a CAPD cycle, rather than a PDCA cycle. Some members of management expressed their concern that employees might hesitate to point out negative aspects of the Company in front of management. However, I thought that even if it did not work, we could change our minds and try again. As a result, 51 teams participated and we were able to listen to voices from the frontline, including home truths, and discuss them with outside directors. I also see signs that a major transformation is progressing well as shown by changes in the awareness and behaviors of employees. For example, younger employees now inform me directly of the suggestions that come out of study sessions they hold of their own initiative.

In the face of these uncertain circumstances, due in part to the COVID-19 pandemic and the situation in Ukraine, I believe it is important not to shrink back when we think, make decisions, and take appropriate risks that will lead to our growth. We will continue our efforts to transform ourselves together with the approximately 11,000 employees of our Group working all over the world.



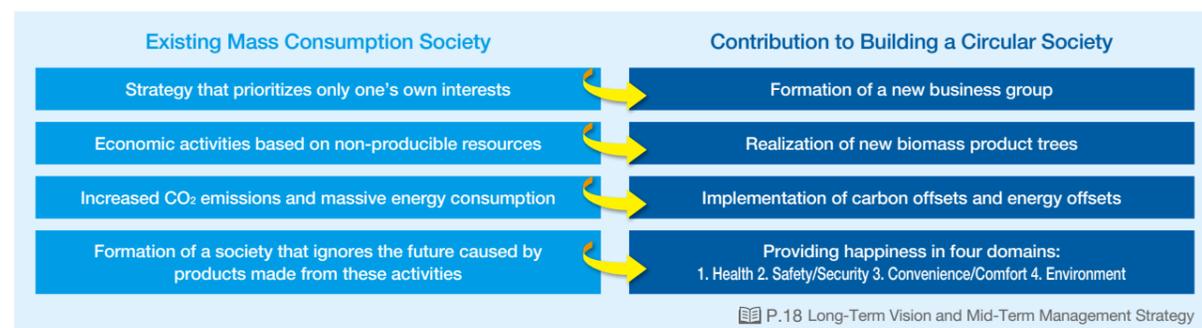
**Daicel's abiding spirit since its foundation**

In FY2020/3 we established the Sustainability Management Policy. As a materials manufacturer, we believe it is not enough for Daicel to contribute to society by simply making good products; the manufacturing process itself must be sustainable. Products made by people (employees) with a sense of fulfillment will bring happiness to everyone and society as a whole. Moreover, the products should be made through a process both people and environmentally-friendly. We are convinced this will create a sense of pride and confidence among workers and create new value. By achieving Sustainable Products, Sustainable Processes, and Sustainable People, we will create a sustainable society and further the growth of our Group. Thus, our Fourth Long-Term Vision and Mid-Term Management Strategy set a goal to make Daicel's unique

contribution to building a circular society, replacing the existing mass-consumption society.

Daicel's spirit of sustainability for the entire society has been consistent since its foundation in 1919. In those days, the special procurement boom caused by the First World War led to a proliferation of celluloid manufactures in Japan, resulting in excessive competition in the industry and overcutting of camphor trees, the raw material for celluloid. Concerned about that situation, eight leading manufacturers merged to reorganize the industry, giving birth to Daicel. Since its inception, we have been committed to the proper management of raw material resources as well as to the promotion of new materials for the world by supporting processors and creating markets together. Our interest has always been not only in our own profits, but also in coexistence and co-prosperity with all our stakeholders, including the natural environment,

**Social shift to a circular society proposed in our Long-Term Vision and Mid-Term Management Strategy**



through a win-win relationship in manufacturing. Even before the terms "SDGs" and "sustainable" gained their current definition, Daicel has long embraced this spirit.

**Daicel's unique contribution to building a circular society**

Daicel is a pioneer in naturally derived chemical products that has always handled wood resources. Moreover, when we participated in a national project named C1 Chemistry, which aimed to break away from over-reliance on oil during the 1970s energy crisis, we were the first to synthesize non-petroleum-based organic compounds from one-carbon compounds such as carbon monoxide and methanol. Currently, methanol-based products account for 50% of our sales of chemicals. We are proud to be a chemical company capable of switching to biomass products by converting raw materials into bio methanol.

In order to give rise to Daicel's unique contribution to building a circular society, our Mid-Term Management Strategy has the goal of the formation of new biomass product trees.

**The key to transforming society is our technology for melting wood**

Cellulose, which represents one of Daicel's strengths, is a naturally derived biomass material. However, the process of separating cellulose from pulp consumes an enormous amount of energy, which creates a challenge. Solving this problem by creating an innovative production method is our mission.

The key to realizing new biomass product trees is a technology for melting wood. The reason why petroleum resin is preferred over wood-derived celluloid is that liquid petroleum is more soluble and produces a variety of reactants more easily than solid wood. Moreover, the manufacturing process that uses hard-to-melt wood as raw material is energy-intensive. In order to move away from over-reliance on oil and generate a circular society, we must create a technology for melting wood while reducing energy load and costs. We are conducting joint research with Kanazawa University and Kyoto University to develop a technology that melts wood using less energy. Once this method is established, new biomass product groups will be created in a wide range of fields. This will make it possible for biomass products to replace or complement petrochemical products.

Beyond that, we propose the Biomass Value Chain concept, which uses our technology for melting wood to make efficient use of wood, revive the forestry industry, restore Japan's original natural vegetation or deciduous broadleaf forests on the sites where trees have been logged, reduce the risk of landslides through the forest's water retention capacity, and allow the decaying leaves to circulate nutrients to river basins and the ocean. This concept is aimed at producing a sustainable ecosystem and society for Japan, where forests still now cover approximately 70% of its land.

Furthermore, by melting down and recycling wastes generated in agriculture and fisheries, we will be able to build a new sustainable industrial ecosystem in which primary and secondary industries work together. Once we can dissolve various biomass materials, we would like to create and publish complete data on solvent formulation and solubility to develop a new environmental business model. We believe that this will stimulate the emergence of diverse biomass products worldwide, and thus help all society be less dependent on petroleum.

To fulfill this concept, in April 2022, we formed a new internal organization that strengthens collaboration between industry, academia, and government. This fall, we plan to open a new research institute at Kanazawa University through our financial contribution. Located at a highly public national university, the institute is expected to be used for joint research between various companies and research institutions.



### Seeking technological innovation through the application of technology for melting wood

The microfluidic device plant, which applies our melting technology to a chemical plant, is a manufacturing method that fundamentally overturns the concept of the chemical industry. Previously it has been considered heavy, bulky and energy intensive. To realize this, we have completed a pilot plant through joint research with the University of Tokyo and National Tsing Hua University in Taiwan. The combination of our technology for melting wood, along with the chemical plant unit operations developed through DAICEL Production Innovation, enables the precise mixing, reaction, and purification in ultra-fine channels drawn on a glass chip as small as a business card. By increasing the number of glass chips, we can create an extremely compact, lean, environmentally-friendly and innovative chemical plant with an annual production capacity over several tons. Our final goal is to achieve sustainable manufacturing that produces only the quantities a customer needs and only when they require it in their factory. We plan to implement the microfluidic system in our plants in Japan during FY2025/3 (P. 26).

To achieve carbon neutrality, we need to become carbon negative by converting CO<sub>2</sub> into chemical raw materials through reduction reactions. We are conducting joint research with Kanazawa University on the possibility of enhancing the effectiveness of this technology by combining diamond synthesis and electrochemical technologies. It is certainly possible to protect the ecology and grow the economy at the same time. Otherwise, the sustainability of corporations and society would never be achieved. With confidence and pride in process innovation, which is our forte, we will fully demonstrate our presence as a chemical company.



### Accelerating growth by co-creating value chain

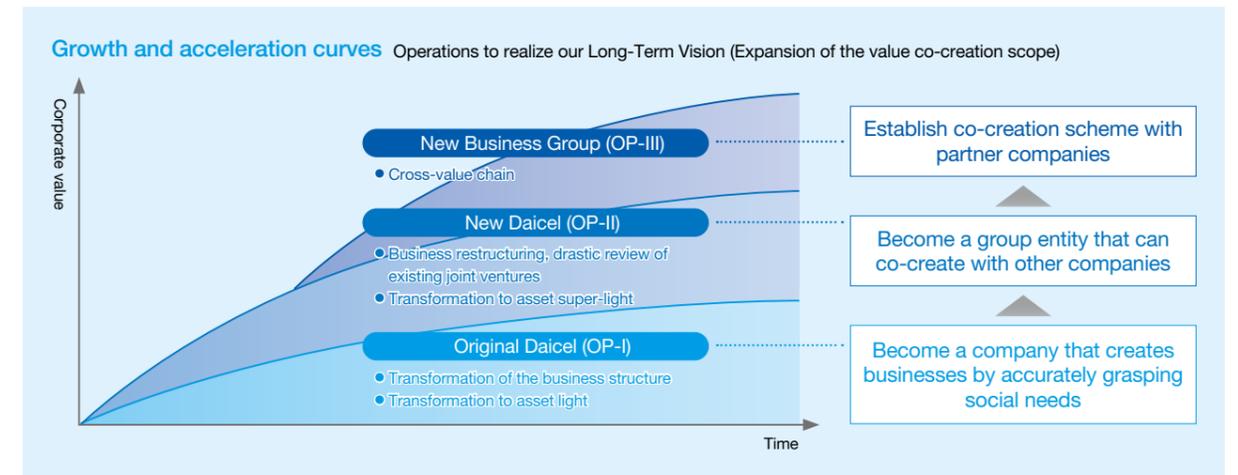
In my early 30s, I was involved in the production of organic synthetic products at the Ohtake Plant. Since we are a BtoB intermediate material manufacturer, we cannot reach the final product without connecting a considerable number of supply chains. While it was difficult to get a sense of whether we were creating valuable products for our customers, it was a great pleasure for me when a customer at that time told me, "We have created such and such a final product. From there, not only our developers but also our manufacturing engineers and factory operators began to visit our customers, and this also led to a real sense of manufacturing and achievement for us.

This experience made me want to form more of a win-win relationship between us and our suppliers who engage in previous and subsequent manufacturing processes. One of the reasons for creating the DAICEL Production Innovation was to remove the barriers between different departments and different plants that remained in Daicel at the time, and to share information in order to create an environment that enabled us to mobilize all available resources. After the internal reform, the next step is to collaborate with suppliers and business partners in previous and subsequent processes. By expanding this effort further throughout the supply chain, we will be able to form a more beneficial value chain that links everyone from the raw material providers to end customers.

Although we are a medium-sized chemical company, we have unique technologies and unique talent. In order to make the best use of these resources to contribute more to society and demonstrate the significance of our existence, it is essential for us to actively disclose information, visit our customers, and add value to our supply chain. Each of our measures to contribute to building a circular society is significant in scale and cannot be accomplished by us alone. Co-creation with customers, as well as our supply chain, universities, research institutes, government agencies, and industry peers is indispensable. Our Long-Term Vision seeks to create greater value by transcending the conventional concept of company and forming a value co-creation entity with partners who share our aspirations.

### Our current initiatives to create a bright future

Our Mid-Term Management Strategy targets 500 billion-yen sales by FY2026/3, but we are considering revising



this upward because achievement of this goal is already in our sight. Despite external factors, many investment projects for the mid-term strategic period are in the pipeline. We will not misjudge the timing to invest.

In FY2023/3, we will continue to implement a thoroughly asset-light strategy by identifying appropriate inventories and investment amounts, while at the same time, we will reduce costs rigorously, regarding Material business as our foundation business as the demand for chemicals is steady. In the Safety business, we are proceeding with structural reforms such as relocation and consolidation of production sites and integration of product models, while building a new base in the growing market of India. In the Smart business, we are developing functional films with newly acquired coating technology, and plastic lenses for sensing, which are expected to grow rapidly. We are also investing to increase production of electric solvents and resist materials to meet strong demand. In the Medical/Healthcare business, we will strengthen our global development and sales capabilities with the aim of operating a new plant for our core products, as well as transforming the life science field into an SBU. A series of investments to increase production are underway in the Engineering Plastics business, which continues to be in full production. We will boost profitability by maximizing the advantages of the acquisition of Polyplastics as our wholly owned subsidiary in FY2021/3.

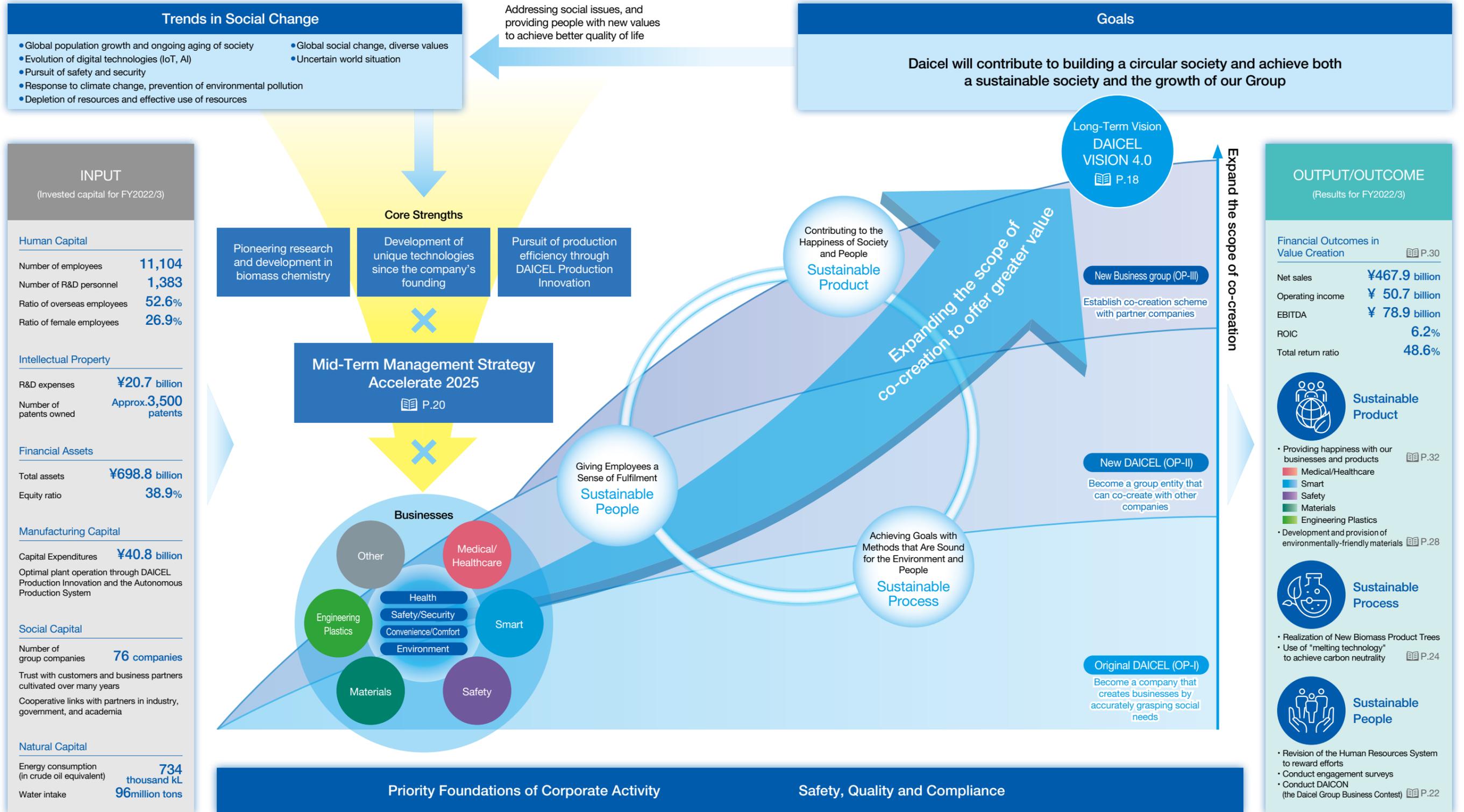
### Human-centered management

We believe that the value of a company's existence is to promote the happiness of everyone involved in every area

of our business, including products, the manufacturing process, and working people. Thus, our sustainable management policy is also based on human-centered management. It is people (employees) who fulfill our Long-Term Vision and Mid-Term Management Strategy and uphold our sustainable growth. We are striving to be a group of professionals who are self-reliant amid a diverse range of career options. This fiscal year we reviewed our personnel system and changed it to a multiple-track job grade system. The previous single-track grading system was based on equality in theory, but in reality, it screened employees and divided them into different tracks in some cases. We cannot say that this valued people in the way they deserved. We must become a company where employees proactively think what they want, act, and achieve fulfillment. By respecting the freedom of each employee and delegating authority to them, we strive to be an autonomous and self-driven organization that can respond to the market and customers quickly and flexibly. For this purpose, we have prepared as many career options as possible for employees to make the most of themselves, such as permission to have a side job and offer a job posting system, in addition to the multi-track career planning. I believe that a professional is a person who makes their own choices and fulfills the responsibility that comes with it. An organization that attracts such professionals is more interesting for the workers and stronger as a company. Through our working style that respects diversity and encourages each employee to take on challenges with vigor, we will contribute to the realization of a sustainable society.

# Value Creation Process

Under its basic philosophy and priority foundations of corporate activity (safety, quality, and compliance), the Daicel Group will continue to contribute to the happiness of people and society by expanding the scope of value co-creation based on its Sustainable Management Policy.



# Long-Term Vision and Mid-Term Management Strategy

## Realizing a Sustainable Society While Achieving Sustainable Business Expansion

In FY2021/3, the Daicel Group formulated the Long-Term Vision “DAICEL VISION 4.0” and the Mid-Term Management Strategy “Accelerate 2025,” which is based on the Long-Term Vision.

As defined in the Sustainable Management Policy, our fundamental idea is to provide value greater than a single company can offer to society. We will realize this idea through the co-creation entity consisting of Daicel Corporation, the Daicel Group companies, and our suppliers and customers in the supply chain.

This special feature introduces the overview and details of the Long-Term Vision and the Mid-Term Management Strategy.



### Goals of the Long-Term Vision

While realizing sustainability of our products, manufacturing processes, and working people, we are committed to promote happiness of everyone involved in every area of our business, and building a circular society by delivering value that is in demand of society and people.

**▶ Formation of a New Business Group (Value Co-Creation Entity)**  
We will expand the value co-creation scope from Daicel Corporation (non-consolidated) to the Daicel Group (consolidated) and then include our partner companies as well. Beyond the boundaries of departments and companies, industries, academia, and governments, we will share the same aspirations and strive to create value together.

**▶ Provision of Happiness in Four Domains**  
Our competitive advantage in these domains allows us to respond to the social trends and increasing needs. By leveraging our unique materials and technologies we have cultivated since the founding, we will continue to create and deliver new value.

Domains	Health	Safety/Security	Convenience/Comfort	Environment
Market Focus	<ul style="list-style-type: none"> <li>Cosmetics</li> <li>Health Food</li> <li>Medical Care</li> </ul>	<ul style="list-style-type: none"> <li>Mobility</li> <li>Industry</li> </ul>	<ul style="list-style-type: none"> <li>Display</li> <li>IC/Semiconductor</li> <li>Sensing</li> </ul>	<ul style="list-style-type: none"> <li>Water Treatment</li> <li>Biodegradable Resin</li> </ul>

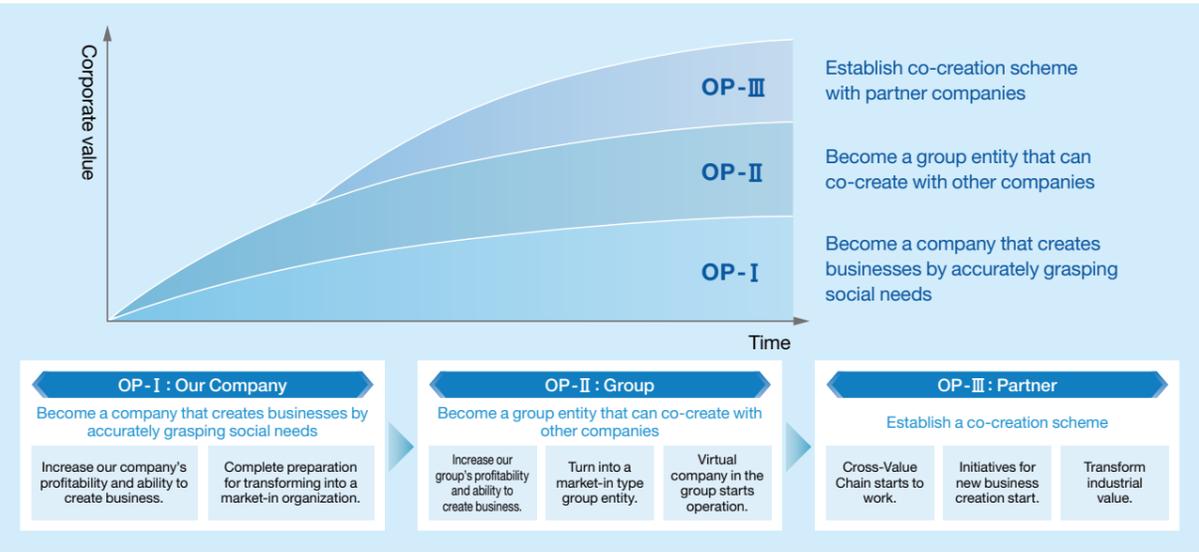
**▶ Realization of New Biomass Product Trees**  
We are developing the technology for melting wood at room temperature and under normal pressure conditions. By utilizing dormant forest resources in Japan as a renewable resource, we will create new product trees where both products and manufacturing processes are environmentally-friendly.

**▶ Implementation of Carbon Offsets and Energy Offsets**  
We will conserve energy through production process innovation. Also, we continue to develop technologies that enable reuse and efficient utilization of emitted carbon while maximizing our competitive advantage in manufacturing as we improve productivity, reduce costs, and minimize environmental load.

Contributing to Building a Circular Society

### Path to Achieving the Long-Term Vision

We will expand the value co-creation scope to achieve our Long-Term Vision. The vision defines our path in three operation (OP) units comprising Daicel Corporation (non-consolidated), the Daicel Group (consolidated), and our partner companies.



### Main Initiatives Outlined in the Mid-Term Management Strategy

In our Mid-Term Management Strategy, we categorize concrete initiatives for each OP described in the Long-Term Vision by the “Company-wide strategy,” “Business strategy,” and “Functional strategy.” We will increase our profitability and ability to create business while implementing these measures in each operation and expanding the value co-creation scope.

<b>Company-wide strategy</b>	<ul style="list-style-type: none"> <li>Business selection and concentration through portfolio management</li> <li>Raise management efficiency by comprehensively reducing assets and costs (asset light strategy)</li> </ul>
<b>Business strategy</b>	<ul style="list-style-type: none"> <li>Explore social needs and latent customer demand to develop new businesses and applications through organizational restructuring</li> <li>Create autonomous self-propelled organizations by delegating authority to quickly and flexibly take actions to meet the needs of their immediate markets and customers</li> <li>Realize the Cross-Value Chain by seeking business collaborations and M&amp;A across supply chains both vertically and horizontally</li> </ul>
<b>Functional strategy</b>	<ul style="list-style-type: none"> <li><b>Business creation strategy:</b> strengthen exploration of social needs through independent R (research) and D (development) and proactive use of intellectual property</li> <li><b>Production strategy:</b> engage in a thorough effort to reduce costs and boost productivity</li> <li><b>DX strategy:</b> realize virtual companies by constructing a digital architecture</li> <li><b>Personnel strategy:</b> enable diverse human resources to shine, and provide a personnel system that rewards effort</li> </ul>

**Accelerate 2025 Management Goals**  
 ROIC above 10%, EBITA over 100-billion-yen, Operating Income at our highest level  
 Priority Target ROE ≥ ROIC ≥ ROA > WACC

Notes: ROE: Return On Equity; ROIC: Return On Invested Capital; ROA: Return On Assets; WACC: Weighted Average Cost of Capital

# Overview and Progress of Accelerate 2025 Mid-Term Management Strategy

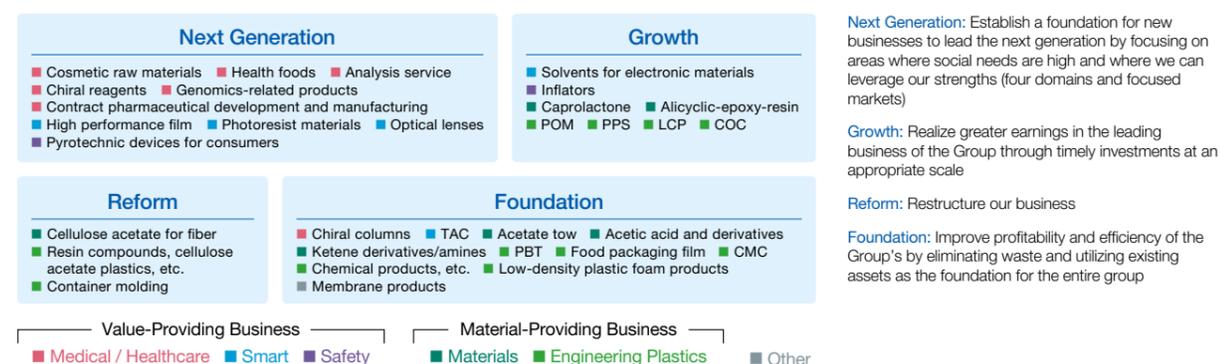
As defined in the Mid-Term Management Strategy consisting of company-wide, business, and function, we will expand the value co-creation scope while enhancing the Daicel Group's profitability and business creation ability.

## Portfolio Management

The Daicel Group integrates a diverse array of businesses into 32 businesses and manages its portfolio in the "next generation," "growth," "foundation," and "reform" categories.

Our businesses are categorized by industrial growth, competitive environment, sales growth, operating profit, and business characteristics. We perform a tilted allocation of management resources in line with the portfolio and regularly evaluate the results in terms of ROIC and sales growth rate.

We actively invest in "next generation" and "growth" businesses where market is expanding. During FY2022/3, we increased investments in the production of engineering plastics. In April 2022, we announced an acquisition of the business that would benefit us from gaining know-how and knowledge of new coating technologies. To strengthen our selection and concentration strategy, we withdrew from the defense sector and discontinued the OPS business and some of the chemical products.



## Establishment of New Organizations to Promote Mid-Term Management Strategy

Daicel established new organizations to accelerate the value co-creation to build a circular society, as defined in the Long-Term Vision.

<b>Biomass Innovation Center</b>	Daicel established the Biomass Innovation Center as an executive organization to facilitate the co-creation project across the boundaries of industry, academia, and governments. This organization leads and oversees the efforts to realize new biomass product trees and a biomass value chain. <a href="#">P.24-27</a>
<b>Advanced Materials &amp; Packaging Institute</b>	This institute develops inorganic and organic composite materials used for future power devices that will be in greater demand as we adopt the next generation communication standards (6G). Conventionally, our research center focused on fundamental research seeking to find the needs of customers, but today, we need to allocate our resources to the applied research and development tailored to their needs as well.
<b>Life Sciences Business Division</b>	Before launching the SBU dedicated to life science businesses, the Daicel established this new organization to integrate the operation of its medical-related business segments. This organization seeks to create synergies in operations of the Group's medical-related services by leveraging the customer base of chiral columns while pursuing research and development in the gene therapy field where Daicel's products and technologies have a competitive advantage. <a href="#">P.34-35</a>
<b>Assessment Headquarters</b>	Daicel also established the Assessment Headquarters to enhance the assessment flow associated with new projects and plan changes. As an organization to lead the successful achievement of large-scale projects planned in the Mid-Term Management Strategy, they conduct risk assessments covering a broad range and promote quick and accurate decision-making.

## Synergy Effect by Making Polyplastics a Wholly Owned Subsidiary

In October 2020, Daicel turned Polyplastics, Co. Ltd., a leading engineering plastics company that had been jointly established with a U.S. company, into a wholly owned subsidiary. This will provide us with greater freedom in developing global markets while expanding our growth strategy, such as the development and adoption of new merchandise as well as investments in boosting capacity. As a result, we expect a synergy effect of 20 billion yen in EBITDA by FY2026/3.

### 1 Acceleration of global operations

#### Invest in boosting production to capture future demand

**Project** Planning to build new plants of polyacetal (POM) and liquid crystal polymer (LCP) in China and Taiwan to meet the increasing demand for electric vehicles and electronic devices like smartphones ( [P.31](#) The investment plan details)

#### Expand sales to the U.S. and European markets

**Project** Established a new facility in Germany to manufacture cyclic olefin copolymer (COC) products used for packaging materials

**Project** Established the Technical Solution Center (TSC) in Germany during FY2022/3  
Accelerating timely solution of problems and development of new applications, having the globally located six TSCs as the base point  
Strengthening our presence in the European market seeking to adopt electric vehicles and minimize environmental load with the TSC in Germany leading the operation

### 2 Realization of cost-cutting synergy

#### Accelerate DAICEL Production Innovation

**Project** Introducing the DAICEL Production Innovation at Polyplastics Fuji Plant  
Promoting innovative energy conservation of the entire plant while adopting sophisticated production methods

#### Efficiently manage indirect departments

**Project** Conducting a large-scale investment project to increase production of Polyplastics through integrated operation of Polyplastics' and Daicel's engineering center

**Project** Personnel rotation in the Raw Material Purchasing Division

#### Reduction of costs and GHG\* emission by electricity wheeling

**Project** Implementing electricity wheeling between the Daicel Ohtake Plant and the Polyplastics Fuji Plant  
Contributing to a cost reduction of 400 million yen for the entire group

\*GHG: Greenhouse gases

### 3 Maximization of Group synergy

#### Integrated management of the Daicel Group's resin businesses

**Project** Established the Performance Materials Headquarters in FY2021/3 to manage the group-wide resin businesses

**Project** Transferred the share of Daicel Evonik stock from Daicel Corporation to Polyplastics, and changed name of Daicel-Evonik Ltd. to Polyplastics-Evonik Corporation

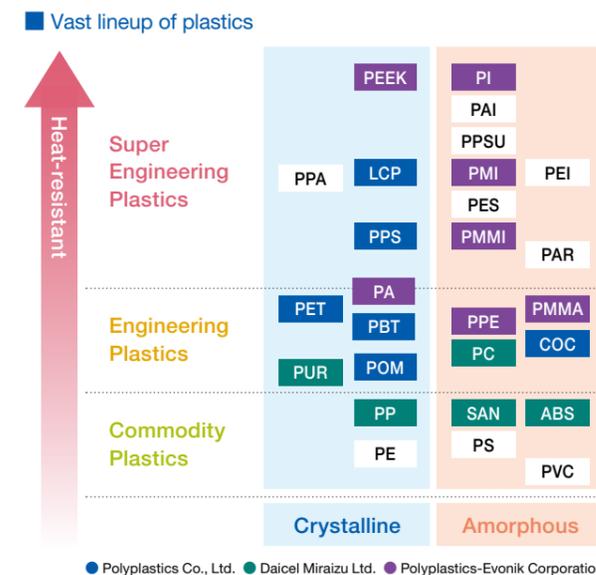
**Project** Providing joint marketing project and technical solutions by leveraging Daicel's and Polyplastics' knowledge and technologies

**Project** Enhanced product lineup

#### Mutually utilize R&D resources

**Project** Launching research and development on engineering plastics with new performance, created through consistent molecular design from the monomers, (e.g., combining Daicel's monomer development technology with Polyplastics' polymerization technology)

( [P.42-43](#) Engineering Plastics Business)



Feature: Mid-Term Management Strategy ||| Sustainable People

# Daicel's Human-centered Management ~Giving Employees a Sense of Fulfilment~

Each employee contains within himself or herself the driving force to bring about Daicel's future as laid out in the company's Long-Term Vision and Mid-Term Management Strategy. The Daicel Group will pursue Human-Centered Management to become a company that grows while providing a sense of worth and fulfillment to its diverse employees.

When each of our employees, who are our driving force, pursues and experiences their own sense of fulfillment at work, they contribute to the company's competitiveness. We are implementing various measures under our Mid-Term Management Strategy, which calls for a work style reform and transformation into an autonomous and self-driven organization (Figure 1). The Daicel Group seeks to ensure the happiness of its employees to enhance the company's competitiveness and realize a sustainable society.

## Revision of the Human Resources System that Rewards Efforts ~Toward a system that values human resource development~

Daicel revised its human resources systems for managers in April 2021 and for non-managers in April 2022. The revision aims to encourage our employees to take on challenges and fully reward them for the process and results of their work. We are creating a system and environment where employees can perceive how much they have grown through conversation with their superiors, and where their achievements are rewarded.

[WEB Support for Human Resource Development/Revision of the Human Resources System](https://www.daicel.com/en/sustainability/social/hrd.html)  
<https://www.daicel.com/en/sustainability/social/hrd.html>

### Major System Changes

#### Course-specific job grade systems

The previous single-track job grade system was divided into two courses, Creator Course and Expert Course, clarifying the roles expected for each course. With this multiple-track job grade system, our employees have more agency over career choices.

##### Creator Course

- Employees will exercise creativity with a broad perspective in various fields, and take on the challenge of innovation independently.
- They are expected to grow into managerial positions and management talent.
- They are required to grow in a short period with demanding advancement requirements.

##### Expert Course

- Employees will acquire skills, know-how, and knowledge in a specific work area, pursue improvement of operational efficiency and quality, and support *monozukuri* manufacturing, our business foundation, directly and indirectly.
- They are required to grow steadily, taking time to be proficient.

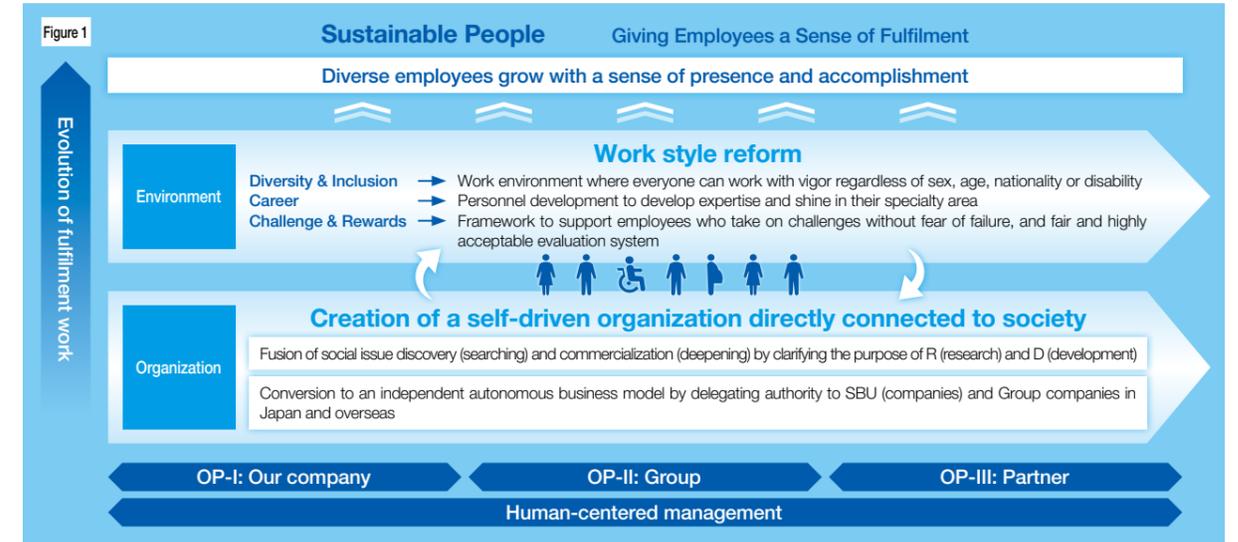
#### Performance appraisal

The previous performance appraisal (twice a year) and behavioral evaluation (once a year) were replaced by an annual, three-level comprehensive evaluation that emphasizes conversation between the employees and their superiors. In addition, the award system was revised so that department managers could timely evaluate their subordinates' short-term achievements under their authority. Now we have a simpler performance appraisal and a well-balanced award system.

## Administration of Employee Engagement Survey ~Creating an environment where employees can feel fulfilled through their work~

To build a corporate structure that enables employees to feel fulfilled, it is necessary to ascertain what they think about working for the Daicel Group and to steadily follow up on issues identified for each country, region, and position. The Group has been administering an Employee Engagement Survey to its employees since FY2022/3. Based on the results, each workplace and department will formulate Action Plans for FY2023/3 to create an environment where each employee can understand and accept the direction that the company is taking and exercise their will and capabilities to the fullest as they strive to achieve its goals.

[WEB Foster a corporate culture that meets employee needs/Communication with Employees](https://www.daicel.com/en/sustainability/social/wlb.html)  
<https://www.daicel.com/en/sustainability/social/wlb.html>



## DAICON Project

To meet changing market needs, it is crucial to develop new technologies and products into a business. New business models are required. As a step to creating such a new business model, we held Daicel Group's Business Contest (DAICON). The contest was initially conceived by the president and was planned and carried out by employees. The theme for the first year was "Dig to the bottom to find the true cause of an issue." This corresponds to the C (check) of Daicel's unique CAPD cycle. The 51 teams of participating employees delved into the true causes of issues and presented them before management.

This is just one example of our group employees' activities. They are taking on daily challenges to make Daicel an Issue-Identifying Company that meets the needs of customers and society by connecting, talking with, and enhancing each other.

### VOICE



DAICON project member

**Ippei Horimoto (right)**  
Manager, Office of the President

We went through a series of trials and errors for the first event, but with the support of management, we embraced the spirit of challenge, "Let's not be afraid of failure and take the first step" to plan the contest. Although we ensured that anyone who identified an issue could appeal to management without the approval of their supervisor, we were worried that there would be few proposals as there had been no precedent. Despite such fears, 51 teams entered the competition with enthusiasm. On the event days, they candidly reported issues. All board members, including outside directors, worked with the presenters for two days to uncover the true issues. One of the presentations led to the establishment of an organization. Everyone can voice their opinions, and their superiors and others around them are ready to listen and respond to them. This culture is the strength of Daicel. Through DAICON, we will make a company where employees can encourage each other proactively. At the same time, we will develop DAICON into a business model contest to combine various ideas and create a new value chain.

Participant

**Kenji Mochida (Left)**  
Manager, Resist material group, IC/Semiconductor BU, Smart SBU

I decided to participate in the contest, thinking it would be an excellent opportunity to introduce myself, as it was held shortly after joining the company mid-career. Few companies offer employees opportunities to communicate their opinions and suggestions directly to the entire management team. I am truly indebted to the DAICON project members for their schedule coordination. During the presentation, I felt positively heard. Many questions asked after the presentation were specific, such as, "How much budget do you need to carry out your suggestion?" I sensed the management team's earnest desire to foster new businesses. I also felt other teams' presentations were strongly appealing. I believe there are still many ideas waiting in the wings at Daicel. Because creating new businesses is not easy, it is essential for each employee to promptly propose, carry out, and verify their ideas over and over again.

Feature: Mid-Term Management Strategy ||| Sustainable Process

# Building Future Manufacturing with “Melting Technology” and DAICEL Production Innovation

We believe that a chemical company must not only make products that benefit people and society, but also ensure that its manufacturing process is friendly to people, society, and the environment.

The chemical industry is generally viewed as an energy-intensive industry that operates heavy, oversized plants. However, we have set “contribution to building a circular society” as the goal in our Long-Term Vision and aim to achieve carbon neutrality by FY2051/3. We will introduce our challenges to establish a sustainable process with DAICEL Production Innovation which is our core strength.

## Stabilizing Production Through DAICEL Production Innovation Contributes to Saving More Energy

The chemical industry’s manufacturing process is invisible because substances travel through pipes and tanks. The operators in the control room rely on information from many sensors, such as pressure and temperature sensors. They also depend on the know-how they have gained from their own experiences to interpret the situation, determine the plant operation, and respond to abnormalities. Daicel used to be one of the companies with these characteristics of chemical plants, but faced with the pressing need for a generational shift and passing on the plant operation technology from generation to generation in the 1990s. To address this challenge, we established DAICEL Production Innovation in 2000 at our Aboshi Plant. By visualizing the approximately 8.4 million pieces of operation-related know-how in the minds of skilled operators and incorporating the decision-making flow into an operation support system, we have created a system that enables anyone to utilize the wisdom of plant operation and perform high-quality work. Consequently, we were able to eliminate waste thoroughly. Our Aboshi Plant has tripled personnel productivity and reduced total cost by 20%. We are applying this approach to our process-based plants in Japan and trying to spread it outside the Group.

If a problem at the production site interferes with operation, production efficiency is reduced, and steam and electric energy used to power the plant is wasted. DAICEL Production Innovation has achieved a high-quality decision-making process in plant operation that stabilizes production. This leads to energy-efficient and even a more cost-competitive plant operation.



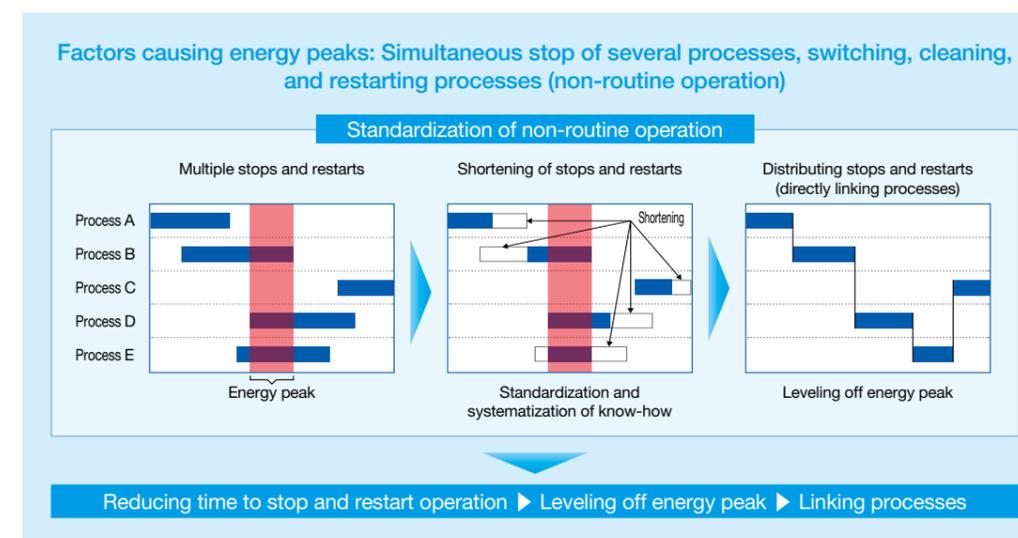
Control room of the Integrated Production Center (IPC), at the Aboshi Plant, Hyogo Prefecture

## Pursuit of Overall Optimization in Terms of Energy

Our chemical plants are primarily powered by steam and electricity. For example, the boiler facilities burn coal and waste tires to generate steam, serving as a plant’s heat source. That steam rotates a turbine to generate electricity. Thus, both steam energy and electrical energy are supplied to the plant. The demand for steam and electricity differs from one product to another in a chemical plant that manufactures various products. Moreover, energy demand fluctuates greatly due not only to changes in production volume in response to sales plans but also to non-routine operations such as stopping and restarting machines for switching products and maintenance. To properly supply the required amount of energy considering these factors, first, it is necessary to visualize information on the energy supply side. Then, the supply-demand balance between the

equipment that provides energy and the machines that use it must be matched or synchronized. Furthermore, it is required to synchronize a machine for one process with another for the subsequent process. This is done even between different plants, due to a correlation between plants. For example, one product can serve as a raw material for another product. The basis for this synchronization is the DAICEL Production Innovation’s centralized information management across departments within a plant.

This centralized information management allows us to regard the entire plant, including the energy plant, as a single manufacturing facility that can be operated from a single integrated controlling center. This also visualizes the product’s output volume and the required amount of energy. Through optimizing the supply balance of steam and electricity, heat recovery and heat utilization in consideration of the plant’s heat balance, and controlling peaks in energy use (or leveling, see Figure below), we can operate plants optimally in terms of energy. Furthermore, by expanding the optimum range of energy use, we have realized a virtual factory that connects the operation of two geographically separated plants, the Aboshi Plant in Hyogo Prefecture and the Ohtake Plant in Hiroshima Prefecture, as if they were a single plant. We consolidate information from both plants in a unified manner to formulate optimal production plans based on their respective production requirements and thus operate the plants in a way that optimizes the total energy supply and demand.



## Further Expansion of the Range of Optimization

Furthermore, in FY2021/3, we developed the Autonomous Production System, an evolved version of the DAICEL Production Innovation using AI, to expand the range of optimization. This system consists of two applications. One is the Plant Capability Maximizer (PCM), which further improves productivity, and the other is the Advanced Prediction System (APS), which further stabilizes production. The system has achieved leaner and more energy-efficient operation than ever before. Additionally, by using AI it has made it easier to introduce DAICEL Production Innovation through dramatically streamlining the visualization of veteran operator’s know-how, which is indispensable to the introduction. It allows us to optimize energy use throughout our supply chain by expanding the range of optimization through synchronization within Daicel’s plants and the Daicel Group, as well as with other companies in our supply chain, as if they were one single entity.

### Plant Capability Maximizer (PCM)

Based on historical operating data, this application predicts safety, quality, production volume, and cost in real time and selects optimal operating conditions to achieve the maximum effect of conflicting indices. The evolution of AI technology has enabled complex calculations to find the optimal operation, which pursues even higher quality while balancing cost and energy, something that could not be systematized when we developed DAICEL Production Innovation about 20 years ago. This reduces the workload on each operator, allowing them to concentrate on more sophisticated decision-making tasks.

### Advanced Prediction System (APS)

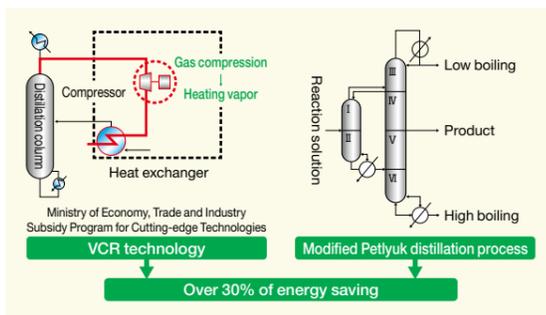
This application detects and predicts abnormalities in processes and facilities that may negatively impact safety, quality, production volume, and cost. Afterward, the system modifies operating conditions. It also identifies and eliminates the causes to prevent the occurrence of abnormalities. This allows operators to fully engage in preventing abnormalities rather than handling them after their occurrence, improving the quality of their work.

Feature: Mid-Term Management Strategy ||| Sustainable Process

Application to Process Innovation

From a different viewpoint, the operators' skills visualized during the introduction of the DAICEL Production Innovation are points to be improved which cannot be covered by equipment design and rely on human know-how. We identified approximately 8.4 million pieces of operation-related know-how at the Aboshi Plant. Our basic approach for process innovation is identifying such points for improvement in the equipment and working to solve them by enhancing process technologies.

It is said that, generally, the chemical industry consumes approximately 40% of energy in the recovery process. The recovery process is the process of removing impurities resulting from the process of manufacturing the target product and recovering the solvent by refining it through distillation. While this process uses high-temperature thermal energy, it also generates a large amount of low-temperature exhaust heat, which is wasted without being reused. Therefore, the key to energy saving is developing technology to efficiently utilize and recover low-temperature exhaust heat energy, although it is considered difficult. We set up an innovative energy-saving project to undertake process innovation and adopted modified Petlyuk distillation process<sup>\*1</sup> and vapor recompression (VRC) technology<sup>\*2</sup>. Implementing these technologies enables to utilize and recover low-temperature exhaust heat and reduce over 30% of the energy required for the recovery process.



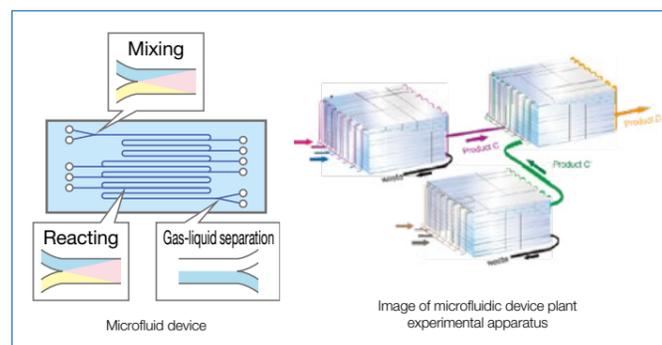
\*1 Petlyuk distillation is widely recognized as an energy-saving technology and has been put into practical application as a dividing-wall column (DWC). Usually, it takes a considerable capital investment to introduce a DWC as it requires the construction of a new dedicated facility, but we have developed an applicable new process technology by improving the Petlyuk and remodeling an existing distillation column.  
 \*2 Vapor recompression (VRC) technology compresses the exhaust heat from low-temperature vapor and turns it into high-temperature vapor to recover heat. We are the first in the world to introduce VRC technology, which is used for heat recovery of water vapor, into the recovery process of organic solvents.

Trying Out Microfluidic Devices That Do Not Require a Recovery Process

Each chemical reaction requires optimal temperature and optimal concentration. A recovery process is necessary in a chemical plant because it seeks to increase production efficiency by reacting a large number of substances at once in a huge reactor, resulting in uneven temperature and concentration in the reactor and generating impurities (unreacted substances and by-products). The new manufacturing process, which we have been researching and developing in an industry-academia collaboration with the University of Tokyo, National Tsing Hua University in Taiwan, and IMT Taiwan Co., Ltd., is a revolutionary technology that aims to eliminate the separation and recovery process that takes large amounts of energy. The microfluidic device plant enables substances to react evenly at the molecular level under homogeneous temperature and concentration conditions in ultrafine channels of several hundred micrometers on a glass substrate. Since this generates no impurities, the recovery process itself is unnecessary. The key to the practical application of this microfluidic device plant is melting technology. The drawback of ultrafine channels is that they are easily jammed with substances. To solve this problem, we are currently researching and developing technology for melting wood at room temperature in collaboration with Kanazawa University and Kyoto University. We believe that this technology is not only useful for wood but also for petrochemical products.

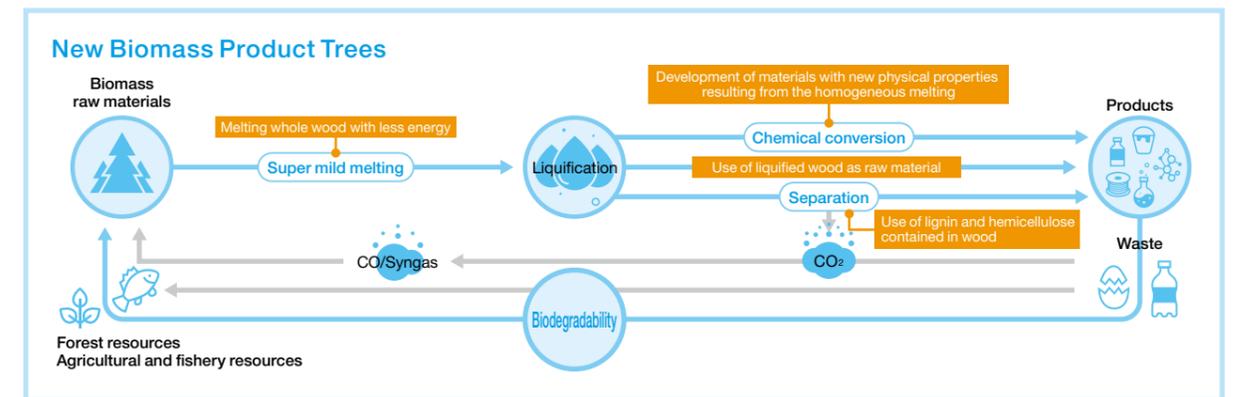
Main Features of Microfluidic Devices

- Chemical processes such as mixing, reacting, and refining substances are performed in channels of several hundred micrometers on a substrate.
- Production in approximately 40 different combinations is possible by modularizing unit operations of chemical plants classified by DAICEL Production Innovation.
- More than tens of tons of materials can be produced yearly by parallelizing over 10,000 glass substrates, using the same manufacturing process established in the research area.
- The elimination of temperature and concentration irregularities in reactants enables the application of materials informatics simulation technology, enabling reactions to occur as expected and reducing development time.
- Plants can be newly built or expanded simply by increasing the number of substrates, thus saving customer evaluation for scaling up.



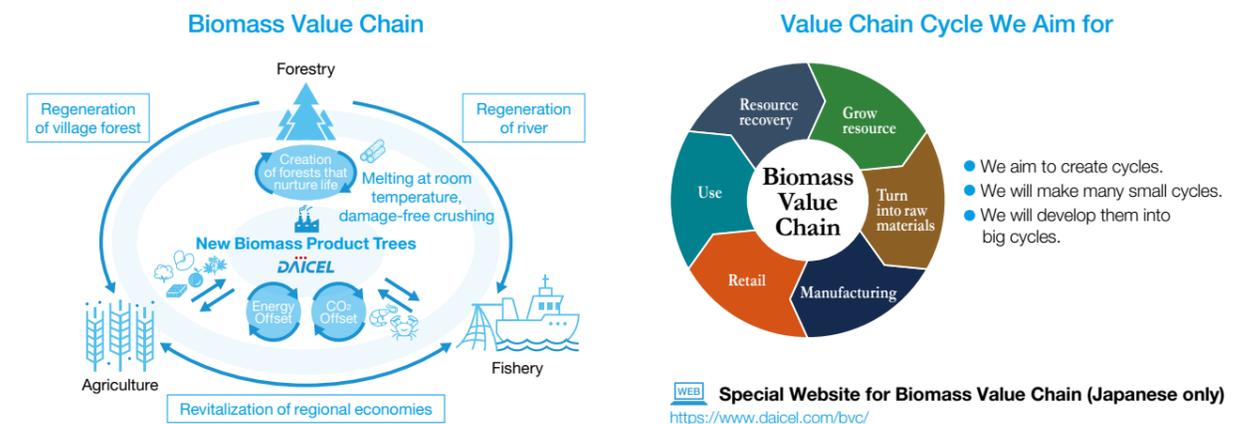
Creating New Biomass Product Trees with Melting Technology

We are working to establish a technology for melting natural polymers such as wood under mild conditions at ordinary temperatures and pressures, although such polymers are said to be difficult to melt. Cellulose acetate, our main product, is a biomass material made mainly from wood-derived cellulose. It is attracting attention as an environmentally-friendly material because it is biodegradable. However, the problem is that the product is energy-intensive as it requires many manufacturing processes due to the cellulose's difficulty in melting. Our said technology can melt a whole tree under mild conditions and significantly reduce the amount of energy required for the cellulose acetate production process. Thus, this manufacturing process curbs CO<sub>2</sub> emissions but still releases some CO<sub>2</sub> into the atmosphere. To reduce such CO<sub>2</sub>, we are working on developing technology to reduce CO<sub>2</sub> into CO and recycle it as a raw material using the diamond technology that Kanazawa University and we have been jointly researching.



Establishment of the Biomass Innovation Center

Establishing melting technology in our new biomass product trees will reduce energy consumption in terms of process and lead to the development of products made from cellulose and other biomass materials. By developing fine cellulose with new functions, extracting previously unused reactive substances (lignin and hemicellulose) from wood, and using them as starting materials, we will create a new product line and produce materials that complement and replace petrochemical products (P.29). We are working to realize a Biomass Value Chain concept centered on new biomass product trees. This concept aims to build a new circular society by effectively utilizing Japan's abundant forest resources and creating a chain of value co-creation with the local primary industries. To accelerate this initiative, we established an implementing organization, Biomass Innovation Center in April 2022. We alone cannot realize the cycle of making materials from forest resources and agricultural and fishery wastes, using them as raw materials to make products, and then returning the consumed products to the resources. The Biomass Innovation Center's mission is to create this cycle, as well as to gain co-creating partners in industry, academia, and government, and to work on the early establishment of a new biomass product trees. By creating and expanding a cycle that utilizes local resources, we will build a society not dependent on fossil fuels and realize carbon neutrality.



Feature: Mid-Term Management Strategy ||| Sustainable Product

# Eco-friendly Contribution to People's Daily Life with Cellulose Acetate, which is Derived from Natural Raw Materials and Returns to the Nature

Recently, there has been a rapidly growing need to switch to renewable biomass raw materials to break away from over-reliance on oil. The demand for biodegradable plastic materials has also been increasing rapidly. The Daicel Group manufactures petrochemically derived and naturally derived plastics to provide to a wide range of industries. In engineering plastics and other petrochemical-based plastics, we are working to extend the service life and weight of parts, contribute to higher recycling rates, and switch to biomass raw materials, based on the idea of making correct and effective use of finite petroleum resources. Moreover, we have been producing cellulose acetate, a biodegradable plastic made from natural raw materials, since our founding. Let us introduce cellulose acetate, which has been gaining attention as new valuable environmentally-friendly material due to the change in social needs.

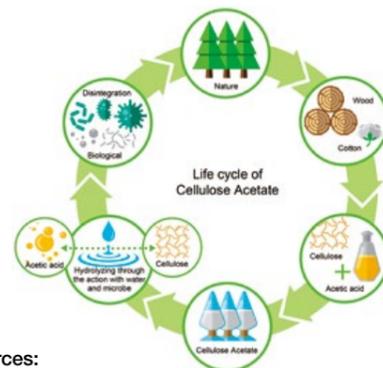
## Characteristics of Cellulose Acetate and Daicel's Development System with Group Synergies

Cellulose acetate, one of our main products, is a naturally derived material made from cellulose, which is obtained from non-edible plants such as wood, cotton, and acetic acid, the main ingredient in vinegar. After consumption, it is ultimately biodegraded into water and carbon dioxide and recycled as resources to grow new forests. In addition to being such an eco-friendly material, it has the same moldability as petroleum-based resins and other various characteristics.

Currently, cellulose acetate's primary applications include filters to remove hazardous substances, polarizing protection film for LCD displays, acetate fiber, and a wide range of plastic moldings. Furthermore, it is attracting attention as an excellent material that is biodegradable in the environment, such as compost soil, and the ocean.

### Characteristics of Cellulose Acetate

- Recyclable material made from non-edible natural raw materials that returns to nature
- High moldability like ordinary petroleum-based plastics
- Adequately hydrophilic
- Resistant to weather (UV) and chemicals
- Can be processed into films with high transparency
- Antibacterial against E. coli, Staphylococcus aureus, etc.



### Comparison of biodegradability of major biodegradable resins in different environments

Environmental condition	Compost	Soil	Seawater
Cellulose acetate	○	○	○
Poly(lactic acid) (PLA)*	○	×	×
Bio-based polybutylene succinate (PBS)	○	○	△

\*Plastic comprising mainly polylactic acid

### Prepared from the following sources:

- WEB ["Garbage In: The Problem of Marine Plastics," WWF Japan](https://www.wwf.or.jp/activities/basicinfo/3776.html) (Japanese site)
- WEB ["Issues and future prospects of biodegradable plastics," Mitsubishi Research Institute, Inc.](https://www.mri.co.jp/knowledge/column/20190408.html) (Japanese site)
- WEB ["Misconceptions regarding PLA as a biodegradable plastic," Nature3D](http://nature3d.net/explanation/pla_notreally.html) (Japanese site)

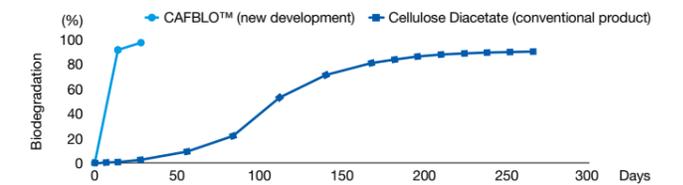
The growing need for environmentally-friendly materials has accelerated the development of biomass materials in the industry. Our strengths in this field are our expertise in manufacturing naturally derived products, which we have cultivated since the company's inception, our mass production facilities with a stable supply capacity, and our proven track record of adoption by our customers. Moreover, as a group-wide project, we have established an integral development system that covers Daicel's polymer design of cellulose acetate, Daicel Miraizu's compound design (combination with new plasticizers and additives), and Polyplastics' molding support with flow analysis. We plan to grow this business to a scale of 40 billion yen by FY2031/3 by providing solutions that meet customer needs.

## Solutions with Cellulose Acetate as an Environmentally-friendly Material

- ▶ **Social need:** Contribution to solving the problem of plastic waste in the ocean and soil.
- ▶ **Our solution:** "CAFBL0™" which dramatically improves the biodegradability of cellulose acetate in the ocean

Using cellulose acetate production technology we have cultivated over many years, we have developed "CAFBL0™," by controlling its substitution degree and polymerization degree. This maintains the quality of conventional cellulose acetate but has a much higher degradation speed in seawater. CAFBL0™ has obtained "OK biodegradable MARINE" certification from TÜV AUSTRIA Belgium. We plan to start its mass production in FY2024/3. As this material is powdery and can be mixed with solvents and paints, it is in the spotlight as an alternative to agricultural fertilizer coatings that would otherwise dissolve into the soil.

Marine biodegradability of conventional cellulose acetate vs CAFBL0™



- ▶ **Social need:** Meeting global demand for biodegradable plastics
- ▶ **Our solution:** CELEBLEN EC with high environmental characteristics, moldability, and transparency

CELEBLEN EC is a pelletized molding material made by blending cellulose acetate with a non-phthalate plasticizer. In addition to being a naturally derived, highly biodegradable, and heat resistant material, it has higher transparency than other biomass plastics. Amid growing interest in biomass materials in Japan, triggered by the enforcement of the Plastic Resource Circulation Act in April 2022, we have developed a food contact grade for this material. This is used as straw material by a major coffee chain. As we already have mass production facilities, we will develop and expand sales of high-volume, one-way cutlery and other products. To break into the market of packing containers and trays, which are the main application of environmentally-friendly plastics, we need to provide materials and formulations suitable for various molding methods. In the future, we will establish formulations of materials ideal for sheet molding and vacuum molding to replace PS in food trays and lunchbox containers, taking advantage of CELEBLEN EC's heat resistance and transparency. In addition, we will acquire new areas of business by expanding into inflation molding and blow molding, and increase this business to several thousand tons by FY2026/3 and 10,000 tons by FY2031/3.

**Existing Fields**

Eyeglass frames, etc.

Injection molding

**New Fields**

To enter the market for packaging containers and trays, it is necessary to provide materials and formulations suitable for various molding methods (processing suitability and productivity).

Injection molding

Extrusion molding

Sheet molding and vacuum molding

Blow molding

Inflation molding

## Creating Environmentally-friendly Materials with Sustainable Manufacturing Processes

We have been researching and developing a technology for melting wood to extract cellulose, the raw material of cellulose acetate, under more moderate conditions. With this technology, we are working to save energy in the existing manufacturing process and create cellulose acetate products with new functions and new biomass product trees. We will continue to pursue the potential of materials and contribute to the happiness of society and people through our products.

### ▶ Expanding the lineup of new fine cellulose and derivatives

By melting wood under mild conditions, we have achieved precise chemical modification of cellulose, which was impossible before. As cellulose acetate has new functions, we and Kanazawa University have been developing metal adsorbents that can selectively adsorb and efficiently recover target substances such as precious and rare metals. The market size of rare metal recovery is estimated to be about 1 trillion yen, and that of soil arsenic removal systems is about 100 billion yen. We are conducting a marketing study to provide solutions to meet future social needs.

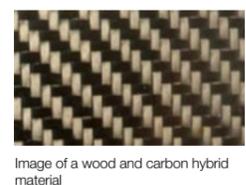


### ▶ Creating new product groups by extracting reactive substances contained in wood without altering them

Apart from cellulose, wood contains substances such as lignin and hemicellulose. Melting wood under mild conditions enables us to extract these substances without altering them. We are working to create new biomass product groups using them as starting materials.

### Examples of new biomass product groups

- Synthesizing highly value-added chemicals from high-quality lignin as a starting material
- New hybrid materials composed of wood and inorganic materials such as metal and glass
- New hybrid materials consisting of wood and synthetic polymers



# Financial Strategy

The Daicel Group will strengthen its cash-generating capability and generate ¥470 billion in distributable cash flows during the period covered by the Mid-Term Management Strategy (FY2022/3 to FY2026/3), which will be allocated to growth investments, shareholder return, and debt repayment. We will also further improve our corporate value by maximizing asset efficiency and stepping up our portfolio management.

## FY2022/3 Review

In FY2022/3, demand saw a recovery from the pandemic in a wide array of industries, resulting in a significant rebound for the Group's sales volume. Although raw fuel, logistics, and other cost increases presented headwinds, revenues and profits increased while both ROIC and EBITDA surpassed the previous fiscal year's levels due to proactive efforts to expand sales by taking advantage of good sales opportunities, as well as to adjusting prices and reducing costs. These indicators are on track to outperform mid-term management strategy targets, while profitability and cash-generating capability are steadily rising.

On the other hand, free cash flows amounted to -¥3.5 billion due to factors such as an increase in working capital attributable to inventory assets, as well as aggressive capital investment expenditures. The increase in inventory assets owes mainly to rising raw fuel prices, as well as to a strategic inventory buildup aimed at coping with global logistics disruptions and raw material shortages. Inventory buildup is almost complete as of March 31, 2022. To reduce inventory, we will accelerate digitization such as deploying the Autonomous Production System that we have developed to all Group companies. By utilizing this AI-equipped system, we will be able to predict appropriate inventory with high accuracy and reduce inventory. The interest-bearing debt balance also increased as a result of short-term borrowings associated with a rise in working capital in FY2022/3. We plan to maintain the level of the balance of interest-bearing debt at the end of FY2022/3 until FY2024/3, when capital expenditure is expected to peak. After that, we will discharge liabilities while recovering our investment.

## Progress Concerning Growth Investment and Asset Efficiency

In FY2021/3, we acquired 100% ownership of Polyplastics Co., Ltd. and accelerated growth strategy initiatives through speedy decision-making. In FY2022/3, we have made the decision to build a new LCP plant in Taiwan. In addition, we have made the decision to bring forward a plan to build a new POM plant in response to growing demand from China as well as to invest in a backup plant in response to a request to relocate from Nantong (China) to comply with the Yangtze River Protection Law. Our current capital expenditure plan reflects the effects of rising construction costs and exchange rate fluctuations. The investment amount therefore exceeds the plan devised at the time of mid-term management strategy formulation. Meanwhile, we will boost our cash-generating capability by being quick to capture growth market demand in our "next generation" and "growth" businesses\*1, and we will achieve an EBITDA beyond the target set in our mid-term management strategy. At the same time, we will make efforts to boost profitability and enhance asset efficiency through business structure reforms such as consolidating business sites for our Safety Business and discontinuing unprofitable businesses.

In accordance with the mid-term management strategy, we are now working to strengthen our cash-generating capability and conduct business structure reforms. However, the business environment is currently much different than what it was at the time of mid-term management strategy formulation, prompting us to reevaluate the mid-term management strategy. We will continue working to maximize asset efficiency as we strengthen cash-generating capability, while also boosting corporate value.

\*1 The Daicel Group practices portfolio management with the following business categories: "next generation," "growth," "foundation," and "reform." (Please see P.20 for the Portfolio Management)

### Investment Plan for the Next Generation and Growth Businesses\*2

Category	Business	Segment	Details	Operation start date	Capacity
Next Generation	Cosmetic raw materials (1,3-butylene glycol)	Medical/Healthcare	New plant at Aboshi Plant	FY2023/3	Same capacity as existing plant
	High-performance films	Smart	Increase capacity at Kameoka Plant	FY2026/3	
	Polymers for photoresists	Smart	Increase capacity at Arai Plant (Microfluidic devices will be deployed)	FY2025/3	
	Wafer-level lenses	Smart	Increase capacity at Harima Plant	FY2024/3	
Growth	Solvents for electronic devices	Smart	Increase capacity at Ohtake Plant	FY2024/3	
	Inflators	Safety	New plant in India	FY2024/3	
	Alicyclic-epoxy-resin	Materials	Capacity increase or new plant	Under consideration	
	LCP	Engineering Plastics	New plant in Taiwan	FY2025/3	5,000 tons/year
			Expand the new plant in Taiwan	Under consideration	5,000 tons/year
	COC		New plant in Germany	FY2025/3	20,000 tons/year
			New plant in China (Phase 1)	FY2025/3	90,000 tons/year
	POM		New plant in China (Phase 2)	FY2026/3	60,000 tons/year (existing plant: -60,000 tons/year)

\*2 Plan as of May 2022

### FY2022/3 Results and Mid-Term Management Strategy

	FY2021/3 Results	FY2022/3 Results	FY2026/3 Mid-Term Management Strategy*1
Net sales	393.6	467.9	500.0
Operating income	31.7	50.7	70.0
EBITDA	59.1	78.9	116.0
ROIC (%)	4.1	6.2	10.0
ROE (%)	6.6	12.3	18.0
ROA (%)	3.2	4.7	8.0

\*1 Published in February 2021. We had estimated the cost of capital (Weighted Average Cost of Capital; "WACC") at around 6% in FY2026/3, the final fiscal year of the Mid-Term Management Strategy

### Cash Flows

	FY2021/3 Results	FY2022/3 Results
Cash flows from operating activities	57.9	43.0
Cash flows from investing activities	(34.2)	(46.5)
Free cash flows	23.6	(3.5)
Cash flows from financing activities	(17.1)	(5.5)

### Balance Sheets

March 31, 2021				March 31, 2022			
Assets		Liabilities		Assets		Liabilities	
Current assets	312.5	Liabilities	395.4	Current assets	360.2	Liabilities	419.3
Including inventory assets	108.7	Including interest-bearing debt	270.9	Including inventory assets	142.0	Including interest-bearing debt	283.6
Fixed assets	327.9	Net assets	245.0	Fixed assets	338.6	Net assets	279.5
	640.4		640.4		698.8		698.8

### Capital Expenditure Plan

	FY2022/3 Results/Plans	FY2023/3 Plans	FY2024/3 Plans	FY2025/3 Plans	FY2026/3 Plans
Plans*2	40.8	72.0	94.6	48.5	32.9
Mid-Term Management Strategy	55.0	45.0	52.0	32.0	26.0

\*2 Results are shown for FY2022/3. Planned values as of May 2022 are shown for FY2023/3 and beyond

Notes: ROIC: Return On Invested Capital; EBITDA: Earnings Before Interest Taxes Depreciation and Amortization; ROE: Return On Equity; ROA: Return On Assets

## Shareholder Return

The current mid-term management strategy calls for a minimum current cash dividend per share of ¥32 and for achieving a total return ratio of at least 40% as consideration for dividend payment and flexible acquisition of treasury stock. In FY2022/3 cash-generating capability as reflected in the EBITDA exceeded the forecast in the mid-term management, and we allocated the cash to growth investments and shareholder return. For FY2022/3, we increased the annual dividend from 32 yen to 34 yen for a 2 yen per share increase. We expect to increase the annual dividend a further 2 yen per share to ¥36 per share in FY2023/3, and will consider further returns toward achieving our target total return ratio of 40%. Along with consistently enhancing corporate value by improving capital efficiency and ensuring a strong financial footing, we will return profits to our shareholders.

	FY2015/3 Results	FY2016/3 Results	FY2017/3 Results	FY2018/3 Results	FY2019/3 Results	FY2020/3 Results	FY2021/3 Results	FY2022/3 Results	FY2023/3 Forecasts
Cash dividends (yen/share)	21	26	30	32	32	34*	32	34	36
Total return ratio (%)	23.6	32.5	33.3	56.6	67.2	577.3	91.1	48.6	-
Dividend payout ratio (%)	23.6	22.6	24.1	29.7	30.4	219.5	49.1	32.6	28.8

\*Including commemorative dividend of 2 yen

# Business Overview

FY2022/3 Results (Consolidated)	
Net sales	Operating income
Total: <b>¥467.9 billion</b>	Total: <b>¥50.7 billion</b>
↑ <b>18.9%</b> year-on-year	↑ <b>59.8%</b> year-on-year

Note: Consolidated operating income is calculated by subtracting a corporate expense of ¥16.0 billion

Main business	Value provided	Main products and services	FY2022/3 results	
 <p><b>Medical / Healthcare</b> → P.34</p>	<b>Cosmetics</b> Contribute to improving quality of life (QOL) for people through the development and sale of high-quality cosmetic raw materials and naturally derived cosmetic raw materials	1,3-Butylene glycol (1,3-BG), polyglycerin	<b>Net sales</b> <b>¥19.5 billion</b> Composition ratio <b>4.2%</b>	<b>Operating income</b> <b>¥3.4 billion</b> Composition ratio <b>5.2%</b>
	<b>Health Food</b> Support healthy lifestyles with unique health foods and supplements created using natural materials made possible by via material extraction and bio conversion technologies	Equal, konjac ceramide, and urolithin		
	<b>Life Sciences</b> Contribute to pharmaceutical development and production and propose new drug delivery systems that utilize chiral columns and needle-free drug delivery devices	Chiral columns, chiral separation services under consignment, chiral reagents, and analysis services		
 <p><b>Smart</b> → P.36</p>	<b>Display</b> Provide high-performance films for a wide array of applications, including raw materials for optical films, displays for devices ranging from PCs to vehicles, and advanced televisions	Tri-acetate cellulose (TAC) for optical films, and high-performance films	<b>Net sales</b> <b>¥32.5 billion</b> Composition ratio <b>6.9%</b>	<b>Operating income</b> <b>¥5.8 billion</b> Composition ratio <b>8.7%</b>
	<b>ICs/Semiconductors</b> Provide photoresist materials and solvents for electronic materials used in the manufacturing processes for increasingly sophisticated semiconductors and electronic devices aimed at bringing about a smart society	Photoresist materials and solvents for electronic materials		
	<b>Sensing</b> Satisfy needs in the growing sensors market with such products as wafer-level lenses made from highly heat-resistant resins, as well as thin, bendable, low-power-consumption organic semiconductors	Optical lenses, printed electronic materials, and organic semiconductors		
 <p><b>Safety</b> → P.38</p>	<b>Mobility</b> Contribute to vehicle passenger and pedestrian safety by providing automobile airbag inflators (gas generation devices) that reliably inflate air bags in milliseconds	Automobile airbag inflators	<b>Net sales</b> <b>¥69.5 billion</b> Composition ratio <b>14.8%</b>	<b>Operating income</b> <b>¥5.2 billion</b> Composition ratio <b>7.8%</b>
	<b>Industry</b> Contribute to better everyday safety with technology such as One Time Energy™ and DAISI™ developed in the course of producing inflators	Pyro-fuse and gas generators for seat belt pretensioners (PGG)		
 <p><b>Materials</b> → P.40</p>	<b>Acetyl</b> Provide a variety of materials that include acetic acid and acetic acid derivative chemicals, as well as cellulose acetate made from cellulose and acetic acid derived from wood and raw cotton	Acetic acid, acetic acid derivatives (ethyl acetate, acetic etc.), cellulose acetate, and acetate tow	<b>Net sales</b> <b>¥122.8 billion</b> Composition ratio <b>26.3%</b>	<b>Operating income</b> <b>¥24.8 billion</b> Composition ratio <b>37.1%</b>
	<b>Chemical</b> Produce a wide variety of chemical products using internationally unique reaction technologies based on organic synthesis technologies we have cultivated over the years	Alicyclic epoxy, caprolactone derivatives, alkylamines, and ketene derivatives		
 <p><b>Engineering Plastics</b> → P.42</p>	<b>Polyplastics</b> Contribute to reducing vehicle weight and enhancing electronic device performance with Polyplastics' engineering plastics, which feature specialized functions such as mechanical strength and heat resistance	Polyacetal (POM), polybutylene terephthalate (PBT), polyphenylene sulfide (PPS), liquid crystal polymer (LCP), and cyclic olefin copolymer (COC)	<b>Net sales</b> <b>¥212.3 billion</b> Composition ratio <b>45.4%</b>	<b>Operating income</b> <b>¥25.8 billion</b> Composition ratio <b>38.6%</b>
	<b>Daicel Miraizu</b> Provide AS and ABS resins and plastics compounds with wide-ranging applications that span daily items to automobiles, as well as barrier films and other commercial use products	AS resin, ABS resin, various polymer alloys, plastic compounds, water-soluble polymers, and barrier films for packaging		
 <p><b>Other</b></p>	<b>Membrane products, and other business</b> Contribute to water treatment in diverse fields with products such as pure water production devices for artificial dialysis for the medical field, sewerage usage systems for emergency response, and ultrafine bubble diffusers, which are attracting attention in the sewerage and wastewater treatment industries	Reverse osmosis membrane and ultrafiltration membrane products, water treatment systems, etc.	<b>Net sales</b> <b>¥11.4 billion</b> Composition ratio <b>2.4%</b>	<b>Operating income</b> <b>¥1.8 billion</b> Composition ratio <b>2.6%</b>

- Introduction
- Value Creation Story
- Our Goals and Mid-Term Management Strategy
- Businesses and Growth Strategies
- Foundation Supporting Sustainable Management
- Financial / Corporate Information



Medical/  
Healthcare

We provide a society that values quality of life with solutions relating to safe, high-quality healthcare material and pharmaceutical development.

Daicel's Strengths

<p><b>【 Cosmetics 】</b> Highly-regarded odorless 1,3-BG</p>	<p>We stably produce odorless 1,3-BG (a moisturizing ingredient used in cosmetics), which is highly regarded in the growing Asian market, at two facilities—the Ohtake Plant and Aboshi Plant*.</p> <p><small>*The 1,3-BG Plant at the Aboshi Plant will start operation in FY2023/3</small></p>
<p><b>【 Health Food 】</b> Proprietary anaerobic fermentation technology</p>	<p>We utilize a proprietary anaerobic fermentation technology*, and manufacture on an industrial scale intestinal metabolites that cannot be produced by the body in some people.</p> <p><small>*A technology for fermenting in an oxygen-free environment</small></p>
<p><b>【 Life Sciences 】</b> A leading company in optical isomer separation technologies</p>	<p>We are a leading company in optical isomer separation solutions trusted by pharmaceutical companies and researchers around the world. Leveraging the strengths of chiral columns* and separation technologies could enable business in the biotechnology industry (drug discovery support, etc.), as well.</p> <p><small>*Products representing technologies for separating components considered to cause additional side effects from components that are effective as medicines</small></p>

Our Business Environment

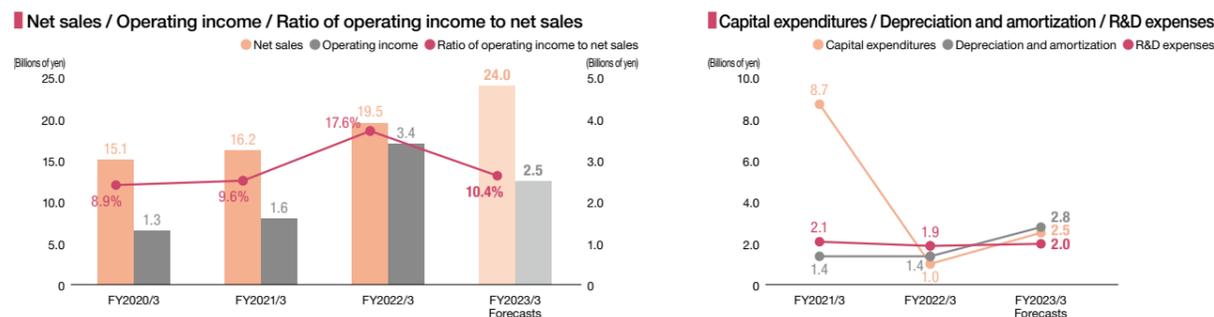
Opportunities

- Growth in Asia's cosmetics market, where 1,3-BG (odorless grade) is highly regarded
- High-performance health foods market growth spurred by rising health consciousness
- Accelerating pharmaceutical and vaccine development prompted by COVID-19

Risks

- Replacement of synthetic 1,3-BG with naturally derived 1,3-BG as demand grows for sustainable materials
- Hollowing out of Japan's pharmaceutical and medical equipment industries as a result of a shift of pharmaceutical and medical equipment-related operations to emerging nations and a shift of R&D and clinical trial operations to overseas locations

Business Highlights



Note: As we began reviewing our method of allocating corporate expenses from FY2023/3, figures for FY2023/3 reflect those changes

Growth Strategies

We will strengthen our ability to consistently supply product by expanding our production of raw materials for cosmetic products to multiple sites, while expanding our lineup of intestinal metabolite products in the health food ingredients business. In the life sciences domain, we will also advance our market-oriented businesses by enhancing synergy between businesses using global sales channels that we have developed over the years in the chiral separation business.

【 Cosmetics 】

- Expanding market share for existing products, especially 1,3-BG

In addition to cultivating new applications, we will expand market share by ensuring stable supply from two production sites while taking full advantage of our world-leading quality.

- Expanding our lineup of sustainable materials

Market demand is growing for naturally derived and biodegradable raw materials. Daicel is therefore developing BELLOCEA®\* (a texture enhancer for cosmetics), a product that conforms with ECHA's (European Chemicals Agency) standards for marine biodegradability, as part of efforts to expand its lineup of sustainable materials.

\*Spherical fine particles derived from cellulose (a natural plant fiber) and acetic acid, the main component of vinegar

【 Health Food 】

- Implementation of materials and services focusing on intestinal flora

While the primary means of promoting good gut health nowadays involves stimulating intestinal bacteria to produce intestinal metabolites that boost health, Daicel provides intestinal metabolites in a form that can be absorbed into the body directly. This allows for the absorption of intestinal metabolites that the human body cannot produce on its own, bringing positive effects in a highly efficient manner. In FY2022/3, along with increasing production of equol, an intestinal metabolite, and launching a urolithin product, we made efforts to boost awareness of and proliferate the product through the joint development of urolithin testing kits. As we develop new intestinal metabolites, we will continue to promote a greater awareness of these products in order to grow the market.

- Conduct research into konjac ceramide as a means to prevent dementia

In FY2022/3, in human intervention tests conducted with Hokkaido University and Hokkaido Information University, we discovered the ability of konjac ceramide to mitigate the buildup of cerebral amyloid beta peptides. We will continue to tackle social problems with further human intervention tests involving konjac ceramide and brain functionality research.

【 Life Sciences 】

- Commercialization and clinical application of Actranza™

As a means to enhance our life sciences-related business, in April 2022 we carried out a consolidation of the Daicel Group's medical-related businesses and established the Life Sciences Business Division, which formulates and implements business and R&D strategies. Daicel will utilize its chiral column business infrastructure around the world to launch the Actranza™ lab and develop clinical applications for devices powered by this technology. At the same time, we will plan our entry into the downstream market for utilizing engineering plastics and other Daicel materials (medical equipment and pharmaceutical manufacturing services), with the goal of achieving a synergistic effect with our Actranza™ lab.

- Provide new solutions to the medium-sized molecule pharmaceuticals and biologics discovery fields

Daicel has distinctive pharmaceutical and medical equipment technologies, including Actranza™ and separation and refinement technologies. Through coordination and joint development with pharmaceutical and medical device companies, we will come up with solutions for the medium-sized molecule pharmaceuticals and biologics discovery fields, which show promise for considerable future growth. We will look to provide the world with solutions by speeding up our development of fillers for analysis and refinement, and by seeking out business opportunities in the field of new drug delivery systems, which includes formulation materials and drug delivery devices.

TOPICS

Taking the Actranza™ lab\*, a drug delivery device for laboratory use, to the next stage

Daicel provides its Actranza™ lab technology, a new drug delivery device, for use in the development of next generation DNA vaccines for cancer and infectious diseases by Netherlands-based biotechnology company Immunetune. In pharmacological tests conducted by Daicel that involve the use of model animals, we have found that the Actranza™ lab provides better immunogenicity when compared to standard needle-based drug delivery. Based on these results, we will continue to jointly engage in evaluation with Immunetune toward using Actranza™ lab for both clinical and nonclinical testing of next generation DNA vaccines. At our Harima Plant and Innovation Park, Actranza™ lab has received international ISO 13485:2016 certification, a quality management system standard for medical devices. Going forward, we will be launching this drug delivery device for animal testing and working to further enhance quality control after having received ISO certification.



\*Actranza™ lab: A needle-free drug delivery device that runs on combustion energy. It creates a high-speed stream of fluid that instantaneously perforates the skin and distributes medicine throughout intradermal tissue, making it capable of delivering substances into cells

Smart

We provide new solutions to the electronic materials market to make life more enjoyable and foster technical innovation.

Daicel's Strengths

Providing market-oriented solutions to satisfy customer and market needs	We provide the electronics market with a diversity of solutions and value, from resources to module parts, through a broad range of technologies that include materials compound, coating, printing, and plastic molding technologies.
<b>【 Display 】</b> Meet customer needs with meticulous function design and multiproduct, variable-quantity production	With regard to high-performance films and tri-acetate cellulose (TAC) for optical films, we engage in material design and prescribed function design to meet customer needs, while enhancing cost competitiveness and achieving distinctive product characteristics for display materials through a mass production system capable of multiproduct, variable-quantity production.
<b>【 IC/Semiconductor 】</b> Ensure stable production and satisfy increasingly sophisticated needs	We maintain stable supply capability that allows for continuously meeting the high-quality needs of the semiconductor industry. Based on trusting relationships built through these endeavors, we develop technologies through close contact with customers, and answer new and more sophisticated needs.
<b>【 Sensing 】</b> Ability to develop products according to future societal needs	We bring technical capabilities to a cutting-edge level in promising product markets that include printed electronics and heat resistant, compact, high-performance plastic lenses for sensing.

Our Business Environment

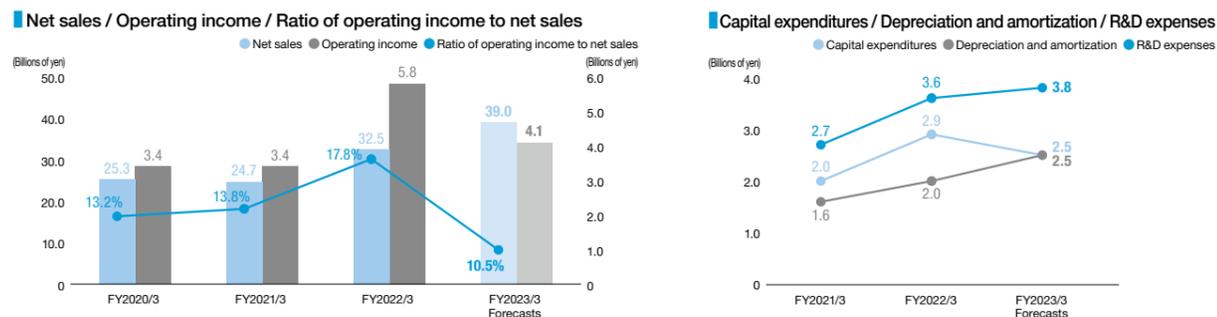
Opportunities

- Growth in the semiconductor market due to the full-scale arrival of the 5G, IoT, and AI era
- Diversification of display methods in the display market (e.g., EL panel, micro LED, in addition to LCD)
- Creation of new markets and technologies in the electronics industry, including the meta-verse and self-driving technologies

Risks

- In the semiconductor materials markets, restrictions on viable semiconductor markets due to U.S.–China trade frictions as well as declining prices caused by greater foreign product prominence
- Declining sales owing to semiconductor supply chain fragmentation caused by conflicts, COVID-19, etc.
- A contraction of Japanese markets as customers move their development and production sites overseas

Business Highlights



Note: As we began reviewing our method of allocating corporate expenses from FY2023/3, figures for FY2023/3 reflect those changes

Growth Strategies

In our portfolio management, we aim to significantly increase profitability by positioning TAC as a business foundation and solvents for electronic materials as a growth business. At the same time, we will make all necessary investments by positioning as next generation businesses products such as high-performance films and photoresist materials, and will make necessary investments while leveraging our technological strengths. Through these efforts, we will meet the great needs of society as we grow our business.

【 Display 】

- Further strengthen business foundation profitability by expanding our share of the market for TAC for optical films  
We are the global market share leader for TAC used in optical films for LCD displays. We have few competitors in this market, and although competition is intensifying, we have a geographical advantage in that most customers are based in Asia. We aim to further reduce costs, provide the quality that customers need, and ultimately expand our market share through multi-product, variable-quality raw material selection and a formulation and production structure unique to Daicel.
- Expanding the high-performance films business and foster next generation businesses  
Daicel has made use of proprietary materials and unique technologies that leverage our materials development and function design capabilities to sell high-performance films such as hard-coat films for electronic parts and optical films for displays. Along with utilizing our existing technologies, we will acquire new coating technologies and expertise through transfers of business and will strengthen our capacity to develop and supply high-performance film products. Through these efforts, we will expand the high-performance films business even as we foster next generation businesses that include businesses in the fields of electronic parts and life sciences.

【 IC/Semiconductor 】

- Building technology, equipment, production, and quality control structures for enhancing semiconductor functions and quality  
With regard to our solvents for electronic materials and polymers for photoresists, we are responding to increasing demand for semiconductors while enhancing production and providing solutions to address a variety of challenges and meet a diversity of needs through a market-oriented approach. Regarding our polymers for photoresists, we are implementing a production system to achieve supply chain stability, while in our production process we are working to achieve production of microfluidic devices, a revolutionary technology. Through these means, we aim to enhance polymer performance, quality, and production efficiency.

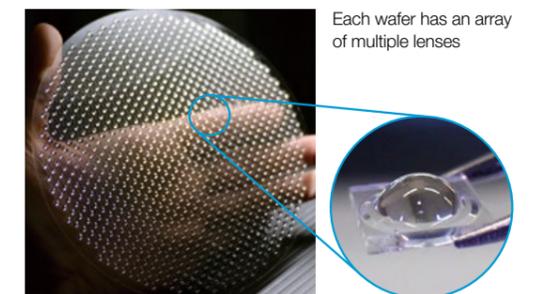
【 Sensing 】

- Developing a market where our internationally unprecedented technologies will provide us with advantages  
Our highly heat-resistant, compact, and high-performance wafer-level lenses for sensing are seeing success as the world's first such all-plastic products to be marketed. Daicel excels in developing and supplying products starting with raw material procurement all the way through lens forming, and we will expand the market and retain unrivaled market share by further developing our mass production structure and reducing costs according to the pace of market growth and the nature of inquiries from customers, which are steadily rising.

TOPICS

Expanding business in the world's first all-plastic wafer-level lenses through a combination of materials and molding technologies

Wafer-level lenses are small lenses used in sensing applications that include biometric authentication (via eyes, faces, etc.), and objective distance measurement, which are used in technologies such as smart phones, smart homes, self-driving, AR/VR, and factory automation. Daicel launched its first wafer-level lens, and the world's first all-plastic lens, in 2017. Compared to traditional glass lenses, our all-plastic lenses have greater design flexibility, allowing for a clear image and making them easy to mass-produce. Meanwhile, by pairing molding technologies with technologies for designing plastic compounds using alicyclic epoxy, an area in which we excel, we are boosting our suppliers' production efficiency by significantly improving the heat resistance of lenses, allowing them to be used in automated assembly processes for devices in high temperature environments. These efforts have been highly regarded and have led to a gradual rise in sales volume. To keep pace with this robust demand, we will be reinforcing our mass production facilities. Lenses for sensing are a growth market in the electronics field. Leveraging our technological dominance in this area, we will also be expanding our market share in advanced applications that include autonomous driving and devices for the metaverse.



Each wafer has an array of multiple lenses

Introduction

Value Creation Story

Our Goals and Mid-Term Management Strategy

Businesses and Growth Strategies

Foundation Supporting Sustainable Management

Financial / Corporate Information

Safety

We provide society with innovative safety and security solutions that have been made possible by One Time Energy™ expertise cultivated in the vehicle safety field.

Daicel's Strengths

Inflator technologies accumulated over the years	After launching an inflator for vehicle airbags in 1988, we commenced fully integrated production beginning with gas generant and have won people's trust and contributed to their safety ever since.
Toyota Production System meets DAICEL Production Innovation	For excellent quality and productivity, we applied the Toyota Production System to our production system, which is based on the DAICEL Production Innovation methodology.
Image Analysis System	We use an image analysis system developed together with Hitachi, Ltd. to realize product quality assurance by "all point management," instead of "representative management." Through adept quality control, we build strong trust-based relationships with customers.
Technical Centers in major markets around the world	We have Technical Centers in our major markets of Japan, China, the United States and Europe, through which we can rapidly respond to customer needs and supply high-quality products.

Our Business Environment

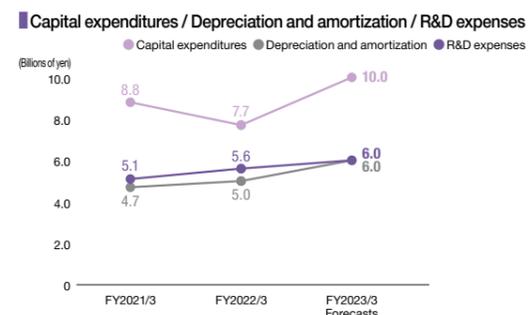
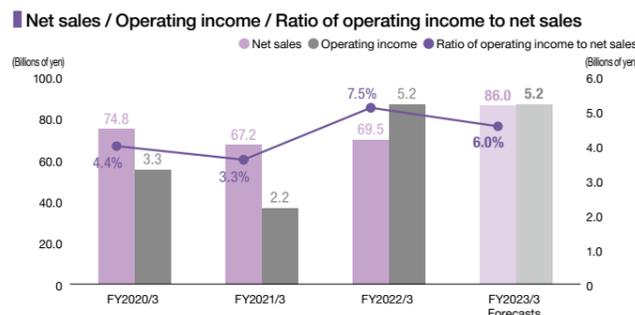
Opportunities

- Global recovery and growth of automobile production
- Stricter automotive safety standards in emerging countries
- Advancement and proliferation of technologies such as electric vehicles and renewable energy aimed at achieving carbon neutrality

Risks

- Rising raw material and logistics costs
- Automotive supply chain disruptions due to semiconductor and other product shortages
- Changing function and performance needs as self-driving and other active safety technologies evolve

Business Highlights



Note: As we began reviewing our method of allocating corporate expenses from FY2023/3, figures for FY2023/3 reflect those changes

Growth Strategies

Having classified our mobility business inflators as a "growth business" in our business portfolio, we are aiming to boost earnings by capturing growing airbag demand, expanding our capacities, and strengthening our cost competitiveness. Furthermore, with One Time Energy™ DAISI™, a safety system that activates instantly and that we developed the technology for in our inflator business, we are also focusing on non-airbag business. One Time Energy™ DAISI™ is expected to see greater demand as a safety system for use in products such as electric vehicles, which are anticipated to see significant growth, and we will be stepping up our marketing for the product as a next generation business.

[ Mobility ]

Expanding market share

Global vehicle sales are expected to recover from negative factors such as COVID-19 and the semiconductor shortage. There is expected to be even greater sales growth in developing countries that show signs of future personal income growth, and airbag markets in these countries are likely to see significant growth as vehicle safety performance improves. Driver side airbags and passenger side airbags have been mandatory in India since July 2019 and January 2022, respectively. Furthermore, it is expected that the installation of airbags will increase due to a tightening of regulation in the future. To fully capture growing demand in developing countries, we are working to develop high-quality, cost-competitive inflators and expand sales of these products in collaboration with module manufacturers, one part of which will be our construction of a new production facility in India in FY2024/3 to expand our supply capacity. By ascertaining and swiftly meeting local customers' needs at our Technical Centers in the United States and Europe and China, we will expand sales on a global scale with the goal of achieving a 25% global market share by FY2026/3 (Market share in FY2021/3 was estimated by Daicel to be 20%).

Strengthen cost-competitiveness

We are striving to reduce costs by bringing our DAICEL Production Innovation approach, which we developed in our process manufacturing operations, to our assembly and processing-oriented production operations, as well, which include inflator production. Both in Japan and overseas, Daicel performs comprehensive cost analyses to eliminate waste through in-depth visualizations of operations that include checking cost structures by examining each and every payment slip. In our product development, we utilize our supplier knowledge as a raw material manufacturer from the initial stage of development to achieve both high quality and strong competitiveness. We are also consolidating our product lineup in collaboration with module manufacturers. By FY2026/3, we will reduce 144 products across 30 categories into 85 products across 10 categories, boosting productivity and reducing inventory and procurement management costs. For our production lines, we are making efforts to save manpower by automating operations and reduce construction costs by 50% through standardization, self-manufacturing, and utilization of vacant manufacturing facilities such as EOP (End of Production) lines. We are also consolidating our production regions in China and Thailand. By steadily carrying out these business structure reforms, we will strengthen our cost competitiveness.

[ Industry ]

Creating new businesses

The "DAISI™" brand is one that we created by redefining the technologies we developed in our inflator business as One Time Energy™—technologies that safely, reliably, and instantaneously generate a single burst of optimal energy. Pyro-fuses that use this technology can safely and instantaneously interrupt high voltages and currents, and are drawing attention for their use in electric vehicles as well as renewable energy storage and transmission systems, the markets for which are growing as the world moves towards carbon neutrality. They are also expected to find use in safety systems, including those for robots, which are becoming increasingly sophisticated as AI and automation technologies advance. Among these applications, electric vehicles are supported by government policy in many countries. More than 30% of all vehicles globally will be electric by 2025 and more than 50% will be electric by 2030 (Daicel estimate), a considerable growth rate. Along with continuing to promote the DAISI™ brand, we will step up our marketing efforts in primarily the United States and Europe, where vehicles are already being made with pyro-fuses, as we work to grow this business.



The DAISI™ brand site  
<https://www.daicel.com/safety/daisi/en/>



Pyro-Fuse

TOPICS

Establishment of an inflator production site in rapidly-growing India

India's automobile market is expected to see considerable growth alongside its economy. We expect the country's airbag market to experience even greater growth than the automobile market as the country imposes more stringent automobile safety regulations. In October 2018, we established a sales company in India that has since been doing marketing for our inflators. With the goal of achieving aim 40% market share in India by 2030, we are also currently building a production facility in the country that will begin commercial operations in FY2024/3.

## Materials

We support manufacturing in a wide range of industries on the strength of our diverse product lineup and unique manufacturing methods.

### Daicel's Strengths

Optimal plant operation through DAICEL Production Innovation	We make use of our Autonomous Production System, which has led to the evolution of DAICEL Production Innovation. This enables us to achieve energy efficiency, reduced GHG (greenhouse gas) emissions, and stable supply, while increasing our cost competitiveness.
Technical support that draws upon our technological capabilities	Daicel provides global technical support for our customers' needs, drawing upon our technology for processing and controlling the physical properties of the natural material cellulose and our expertise in molecular design of organic synthetic products and compounding techniques.
<b>【 Acetyl 】</b> Establishing an acetyl chain as Japan's only manufacturer of acetic acid	In addition to manufacturing and selling acetic acid and its derivatives, we have established a cyclical manufacturing system that collects acetic acid generated as a byproduct by our customers and the Group's plants, refines it, and reuses it. We maintain a strong acetyl chain in our domestic operations.
<b>【 Chemical 】</b> Achieving the world's largest market share for alicyclic epoxy through our unique manufacturing methods	We Produce high quality alicyclic epoxy using our unique and distinctive manufacturing process.

### Our Business Environment

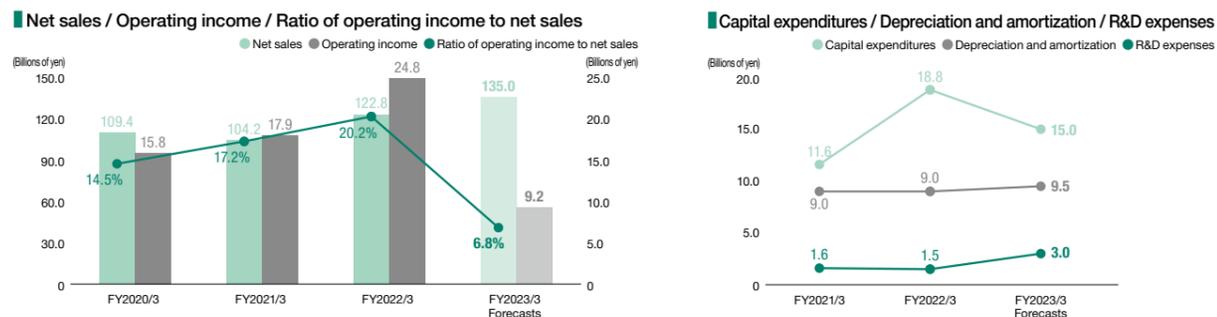
#### Opportunities

- Recovery in demand for products accompanying the resumption of economic activities
- Growing expectations for a biomass material and marine biodegradable material
- Growth in the worldwide market for electronic materials, especially in Asia
- More widespread use of electric vehicles

#### Risks

- Rising logistics costs
- Reduced demand from existing applications for acetate tow

### Business Highlights



Note: As we began reviewing our method of allocating corporate expenses from FY2023/3, figures for FY2023/3 reflect those changes

### Growth Strategies

We have classified our main materials businesses as "foundation business" in our portfolio management system. In our Mid-Term Management Strategy, this business will reduce costs through measures such as process innovation and asset light in existing businesses, thoroughly promote energy conservation, and increase production and expand sales of high value-added and competitive products (alicyclic epoxy). Through these efforts, this business will improve profitability and support the Group's overall investments in next generation and growth businesses.

#### 【 Acetyl 】

##### ● Improved biodegradability leads to greater sales of cellulose acetate

With increasing needs for environmentally-friendly plastics materials, the market for biodegradable resins is expected to reach an average annual growth rate of 10%. Our cellulose acetate features both the environmental characteristics of a plant-based bioplastic and moldability equal to that of conventional plastics. In addition to our molecular design and compounding technologies and our technology for controlling the physical properties of natural materials, we make use of another strength, plants capable of mass production of materials that our customers have already adopted. We are continuing to improve biodegradability further and to develop food-safe grades of plastics. We will continue to develop new markets, starting with one-way applications such as cutlery, and expand sales by meeting the strong demand for biodegradable plastics from our global customers.

(P.28 Sustainable Product)

##### ● Enhancing competitiveness by replacing raw materials for acetate tow while maintaining quality

As a foundation business of the Daicel Group, our acetate tow business generates a steady cash flow and supports investment that drive growth and next generation businesses. In order to increase the competitiveness of the product and the profitability of the business, we are working to replace part of the raw materials (pulp) that we have been importing from overseas with low-LCA products produced in Japan. In the wood bleaching and dissolution stages of the pulp manufacturing process, low-LCA pulp requires less energy consumption than conventional pulp. In addition to matching our customers' needs for environmental products, this low-LCA pulp leads to energy savings and reduced costs. Taking advantage of the physical property control and processing technologies that we have developed since the founding of the company and our global technical services based in Japan, Singapore, and Germany, we satisfy both the ecological and economic needs of our customers by working with them to resolve quality issues.

#### 【 Chemical 】

##### ● Strengthen proposals on materials and functions of products with high added value and increased production of alicyclic epoxy

When manufactured using peracetic acid, alicyclic epoxy contains few impurities, and since no chlorine is used in the manufacturing process, it has been widely adopted for use in electrical materials that require reliable quality and durability. While maintaining our market share in UV coatings, additives, and other general-purpose uses, we are aiming to make use of our strengths as a manufacturer of quality products by expanding our share of the rapidly growing markets for electrical and electronic materials and the mobility market, including electrical and exterior components for electric vehicles. In order to realize that objective, we will maintain the strengths that stem from our non-chlorine manufacturing process while using new manufacturing methods that aim for improved quality. We will establish new production sites overseas to increase our capacity and make provisions for business continuity plans. In the area of technology, we have assigned approximately 50 technical experts throughout our chemical businesses in Japan, China, the United States, and Germany and are constructing global technical support systems. By making effective use of the formulation designs, compounds and analysis techniques that we have accumulated over the years, we will be strengthening our ability to propose materials and functions that are closely aligned with the needs of our customers and of each market.

##### ● Developing grades for new uses of caprolactone derivatives

Caprolactone derivatives are used in automotive paints, exterior components (Thermoplastic Polyurethane), battery heat-dissipating adhesives and cushioning materials in the mobility field, taking advantage of their heat resistance, wear resistance, low viscosity and other characteristics. Recently, paint protection film has been attracting attention, as increasing numbers of car owners in the United States and Europe and China have taken to covering their entire vehicles in film, causing a rapid rise in demand. There are many requests for high processability and long-term durability to prevent discoloration due to UV. We are working proactively with our customers to develop grades suitable for these purposes.

### TOPICS

#### Contributing to the safety of electric vehicles with using the unique and distinctive manufacturing method

Electric vehicles are gaining wider acceptance as a means of reducing CO<sub>2</sub> emissions, and it is said that by 2030, 50% of all cars sold in the world will be electric vehicles. Now Daicel's alicyclic epoxy is being talked about as an insulation material for the motors of electric vehicles.

The insulator serves to cut off unrequired current to the motor, which is subjected to high voltage. Unlike other methods for manufacturing alicyclic epoxy, Daicel's method does not involve chlorine, which can lead to corrosion and causes cracks in the insulator. Our products can precisely meet the functions required of next generation electronic component materials, such as low viscosity, excellent processability, high heat resistance, high insulation, and electrical properties. By making use of the power of unique materials, we can contribute to the safety of electric vehicles.

Electric vehicle motor (image)



## Engineering Plastics

**We supply high-performance, high added value engineering plastics for automobiles and electronic devices.**

### Daicel's Strengths

The Daicel Group's synergy broadens the range of our solutions	With a wide-ranging line-up of engineering plastics handled by Polyplastics, Daicel Miraizu, and Polyplastics Evonik, the Daicel Group is providing optimal solutions.
<b>【 Polyplastics 】</b> Expansion of technical solutions system in major regions	Our Technical Solutions Centers in the major regions of Japan, China, Taiwan, Thailand, the United States, and Germany are linked together. This makes them able to provide uniform solutions worldwide for everything from material formulation and design to support for molding and processing.
<b>【 Polyplastics 】</b> Ability to develop new applications by offering solutions	For over half a century, this group of experts in engineering plastics has been coming together to develop applications that meet the needs of society and of the major industries as they change with the times (e.g. the electronics and automobile industries).
<b>【 Daicel Miraizu 】</b> Detailed proposals to meet customers' needs	Proposals from Daicel Miraizu combine flexible selection of base resins and compounding technology to meet customers' individual needs.

### Our Business Environment

#### Opportunities

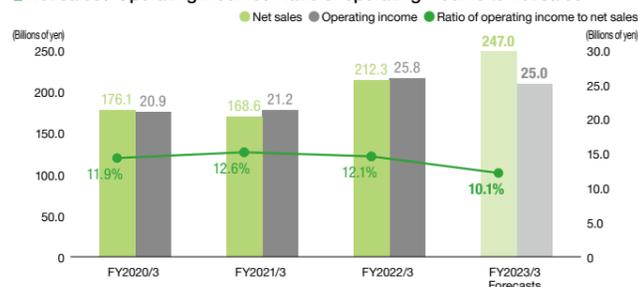
- Global recovery and growth of automobile production
- Greater diffusion of electric vehicles and self-driving technology
- Change in infrastructure, terminals, and services based on next generation communications
- Growing interest in a circular economy

#### Risks

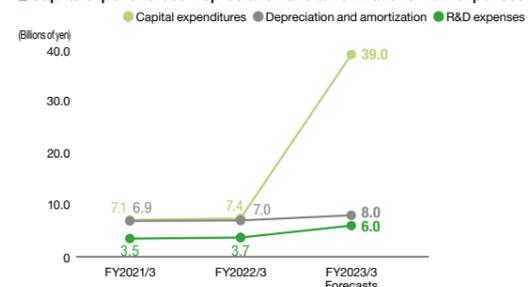
- Supply risk due to sudden recovery of economic activity (obtaining inventory, logistical disruption)
- Supply chain disruption

### Business Highlights

#### Net sales / Operating income / Ratio of operating income to net sales



#### Capital expenditures / Depreciation and amortization / R&D expenses



Note: As we began reviewing our method of allocating corporate expenses from FY2023/3, figures for FY2023/3 reflect those changes

### Growth Strategies

In our portfolio management system, the major engineering plastics businesses are positioned as "growth businesses." As a way of dealing with heavy demand, we have been taking maximum advantage of Polyplastics becoming a wholly owned subsidiary in FY2021/3 by making appropriate and immediate investment plans. Moreover, the Daicel Group is aiming to create synergy among Polyplastics, Daicel Miraizu, and Polyplastics Evonik, the companies that deal in engineering plastics.\*

\*In order to exercise this synergy in the Daicel Group to the greatest possible extent, we have established the Performance Materials Headquarters, which covers all resin-related businesses. We are enhancing our horizontal functions by reassessing our compound resin business portfolio and creating a more complete product line-up. The Performance Materials Division is made up of Polyplastics, Daicel Miraizu, and Polyplastics Evonik.

#### 【 Polyplastics 】

##### ● Increasing supply capacity

Since becoming a wholly owned subsidiary of Daicel, Polyplastics has been gradually investing in increased production in order to respond to future demand. From FY2025/3, we plan to increase capacity through COC (de-bottlenecking existing facilities and adding new facilities) and increased installation of LCP and POM.

##### ● Creating an environmentally-sound plastics market

In order to promote a reduction in the utilization of single-use plastics, which are a major cause of the marine plastic waste problem, we are making effective use of our company's COC as a material for plastic bottle labels, thereby contributing toward enhanced recycling efficiency. In FY2022/3, we completed the expansion of production capacity at our Oberhausen Plant in Germany, and we are proceeding with efforts to achieve further sales growth, so that we can contribute toward the realization of the circular economy. In regard to the development of new applications with all of our customers, as a company that specializes in engineering plastics, we are experts at the effective utilization of the world's limited petrochemical resources, and going forward we will continue to provide our customers and society as a whole with optimal solutions.

##### ● Business transfer and share transfer

With the aim of growing our business and creating synergy, in FY2022/3 our PLASTRON®LFT, long-fiber-reinforced thermoplastics, business was transferred from Daicel Miraizu to Polyplastics. In addition, shares in the former Daicel-Evonik\* were transferred to Polyplastics.

\*The company name was changed from Daicel-Evonik to Polyplastics-Evonik from April 2022.

#### 【 Daicel Miraizu 】

##### ● Developing products from the perspectives of the "environment," "safety and security," and "comfort"

In our resin business, we are working to develop applications that deal with the rapid spread of electric vehicles (EV) and to find practical uses for recycled compound resins, demanded by customers in the office automation industry, among others. In the area of EV, we are capable of a wide variety of responses to customers with different prioritized needs for the lithium-ion batteries housing that meet requirements for small, lighter, more flame resistant on-board components. We propose products that meet customer needs with careful consideration because we offer many choices of base resins.

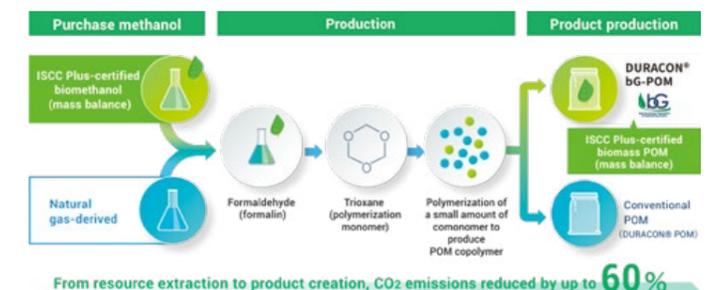
### TOPICS

#### Starting production of DURACON®bG-POM utilizing biomass

Aware of increasing needs for materials that contribute to a reduction in CO<sub>2</sub> emissions during a product's entire life cycle, Polyplastics has been offering products that are smaller, lighter, and have a longer life in order to contribute to solutions for customers' issues. In FY2022/3, these trends received an extra push with the start of production of DURACON®bG-POM (hereafter "bG-POM") which has biomass as its raw material.

The raw material for conventional POM is mainly methanol, which is manufactured from natural gas, but bG-POM has received ISCC Plus\* Certification and is made using methanol manufactured from biomass raw materials. When biomass is used to manufacture methanol, CO<sub>2</sub> emissions are lower than the same process using natural gas. In fact, with bG-POM, total CO<sub>2</sub> emissions, from the acquisition of the natural resources to the final product, are up to 60% lower than with the conventional process. The quality of both types of POM is equivalent. Using biomass as the raw material has a further advantage in that it will lead to sustainable product supplies in the future. The entire company is working together to develop materials that contribute to a carbon neutral world and a circular society and to offer solutions for more advanced issues.

\*ISCC: International Sustainability and Carbon Certification



# Sustainability Management

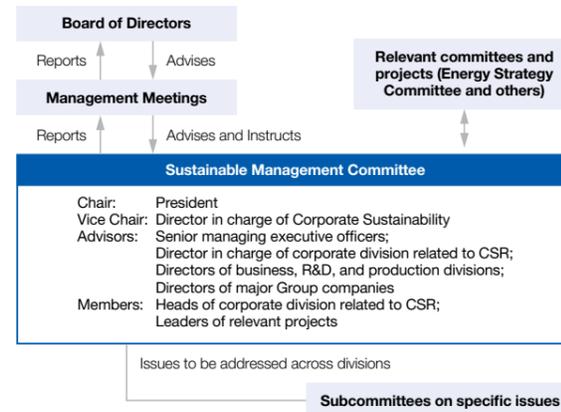
The Daicel Group's business activities are guided on a day-to-day basis by its basic philosophy of making people's lives better by co-creating value. Today, as public values are changing significantly in terms of realizing a sustainable society, the Group has sought to articulate its basic management approach by laying out the Sustainable Management Policy. Under this policy, we will prioritize safety, quality, and compliance as the most important foundation and seek to achieve a sustainable society and the Group's business expansion with integrity, tireless efforts, and self-transformation.

P.07 Sustainable Management Policy

## Sustainable Management System

In FY2021/3 the Daicel Group established the Sustainable Management Committee, chaired by the president and mainly comprising the heads of CSR-related divisions. The committee met three times in FY2022/3, mainly to discuss the selection of materiality items and consider KPIs, as well as to address human rights matters and climate change issues. We will continue to take steps to resolve sustainability-related issues and take our initiatives to the next level.

Diagram of the Sustainable Management System



## Initiatives to Achieve Sustainable Procurement

The Procurement Subcommittee comprises individuals charged with supervising procurement from the Raw Materials Purchasing Division, Corporate Sustainability, SBUs, and major Group companies and meets periodically to engage in discussions encompassing the entire Group. The subcommittee met nine times in FY2021/3-FY2022/3 and is working to achieve sustainable procurement.

In FY2022/3, we used the results of the FY2021/3 SAQ\* to conduct listening sessions with 73 of the 189 companies that we deemed to be in need of improvement. We identified 161 issues and instituted efforts to bring about improvements. In particular, we prioritized support for the formulation of basic purchasing policies for suppliers that did not have them, and we will continue to do so in stages.

<https://www.daicel.com/en/sustainability/social/supply-chain.html>

Companies targeted for SAQ	796 companies (accounts for over 85% of total procurement)
Number of responses	671 companies (response rate: 84%)
Number of suppliers deemed in need of improvement support	189 companies
Number of listening sessions (companies) conducted in FY2022/3	73 companies

\*SAQ is an acronym for self-assessment questionnaire. To assess the sustainability initiatives of suppliers, the Daicel Group periodically conducts an SAQ that we created based on Global Compact Network Japan's SAQ. In providing assessment and offering feedback for their response, we seek to raise awareness among suppliers and reduce environmental and social risks.

# Response to Climate Change

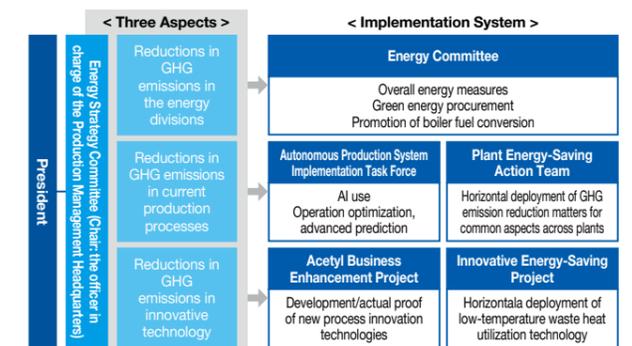
To achieve carbon neutrality\*1 by FY2051/3, the Daicel Group has set medium- to long-term goals of reducing GHG emissions by 50%\*2 by FY2031/3 and by 37%\*2 by FY2026/3. We will strive to significantly reduce GHG emissions by optimizing production processes with our Autonomous Production System based on "DAICEL Production Innovation," the introduction of clean energy, and the development of innovative technology. We also aim to decarbonize the entire value chain by building a Biomass Value Chain that realizes a lasting industrial ecosystem through collaboration between primary and secondary industries.

\*1 For Daicel Group Scope 1, 2 and 3 emissions  
 \*2 Reduction targets use FY2019/3 as the base year for Daicel Group Scope 1 and 2 emissions

## Promotion System for GHG Emission Reductions

To promote the Group-wide initiatives for saving energy and reducing GHG emissions, we established the Energy Strategy Committee, which reports directly to the president and CEO. The Energy Strategy Committee is chaired by the officer in charge of the Production Management Headquarters, with membership comprising the heads of our production, energy, and corporate departments in Japan. The committee is striving to construct a circular process that is in harmony with the global environment from the three aspects of reductions in GHG emissions in the energy divisions, reductions in GHG emissions in current production processes, and reductions in GHG emissions through innovative technology. We are also considering the institution of internal carbon pricing in order to propose and carry out appropriate investment plans to achieve our medium-term goals.

Structure of the Energy Strategy Committee



## FY2022/3 Results

The Daicel Group's GHG emissions for FY2022/3 increased by 11% year-on-year to 2,348 kt-CO<sub>2</sub> due to increased production volumes from a recovery in demand, even with energy-saving initiatives such as improving the tire-derived fuel ratio at the Ohtake Plant and improving steam and electricity usage rates.

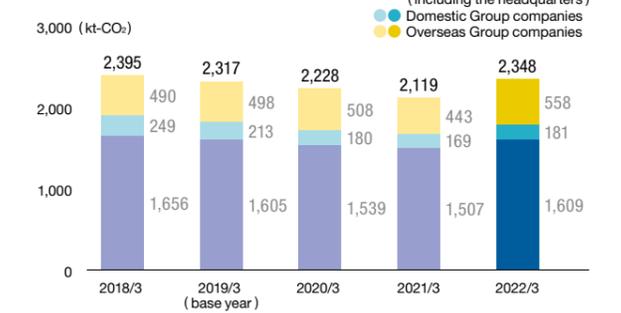
GHG Emissions by Scope (FY2022/3)

Categories	Emissions (kt-CO <sub>2</sub> )
Scope 1*1	1,654
Scope 2*1	693
Scope 3*2	1,335

\*1 Daicel Group  
 \*2 The scope of aggregation for each Scope 3 category is described in "Response to Climate Change" on the corporate website

<https://www.daicel.com/en/sustainability/environment/climate-change.html>

GHG emissions (Scope 1, 2)



## Response to TCFD Recommendations

The Group endorsed the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) in November 2021. In accordance with the TCFD recommendations, we will disclose information on the risks and opportunities related to climate change and their financial impact, as well as disclose our efforts to reduce GHG emissions and build a circular society.



# Identifying Key Sustainability Issues (Materiality)

The Daicel Group identified its materiality in FY2021/3 as key sustainability issues toward achieving the Accelerate 2025 Mid-Term Management Strategy. We will carry out the CAPD cycle according to this materiality and contribute to realizing a sustainable society in a uniquely Daicel way.

## Background and Approach to Identifying Our Materiality

The Daicel Group's materiality consists of two main categories.

For "materiality aimed at achieving growth of the Daicel Group and value co-creation," our aim is to leverage the strengths of the Group to address the SDGs and other social issues and actively create value in line with the "Product, Process, and People" concept in our Sustainable Management Policy.

For "materiality related to the foundation for the Daicel Group's continuity and governance," we established respective considerations of prime importance for value creation, including safety, quality, and compliance, for E (environment), S (society), and G (governance).

## Process of Identifying Materiality



**STEP 1 Extract social issues**  
We referenced international guidelines, SDGs, the principles of the United Nations Global Compact and guidelines published by industry organizations to extract social issues that the Daicel Group should address.

**STEP 2 Prioritize**  
We assessed items extracted in Step 1 by giving consideration to the following aspects to identify key themes with high priority by plotting them on the materiality map according to "Importance to stakeholders" and "Importance to the Daicel Group." We then sorted them into the two categories of "Growth of the Daicel Group and value co-creation" and "Foundation for the Daicel Group's continuity and governance."

**STEP 3 Confirm validity**  
The Corporate Sustainability and other relevant divisions discussed the validity of important themes identified through Steps 1 and 2. The results were reported and approved at the Management Meetings and subsequently endorsed by the Board of Directors.

**STEP 4 Formulate materiality and KPIs**  
By going through Steps 1 to 3, we identified 15 material issues. We designate a KPI for each, and also periodically evaluate progress to maintain a CAPD cycle. We will review our materiality in response to future changes in society and our business.

- Consistency between the Long-Term Vision and Mid-Term Management Strategy
- Consistency with related policies such as the Sustainable Management Policy, the Daicel Group Conduct Policy, and the Daicel Code of Conduct
- Consolidation of opinions from relevant departments

Angles	Classifications	Materiality	Main Initiatives in FY2022/3	Relevant SDGs	Related Pages
Materiality aimed at achieving growth of the Daicel Group and value co-creation	Sustainable Product	Contribute to beauty and health	<ul style="list-style-type: none"> <li>Through industry-academia collaboration, accelerated the development of naturally derived products, aiming to</li> <li>Succeed in the world's first industrial production of Urolithin A</li> <li>Established the Life Sciences Business Division to strengthen our medical products business using</li> <li>Provided a new drug delivery device for COVID-19 vaccine development</li> </ul>	enhance peoples' well-being proprietary technologies	 P.34 Medical / Healthcare
		Contribute to the smart society	<ul style="list-style-type: none"> <li>Accelerated the development of high-performance materials for semiconductors and other electronics applications, Information and Telecommunication Systems Infrastructure Enhancement Research and Development Project</li> <li>Established the Advanced Materials &amp; Packaging Institute and moved from the basic research phase to the</li> </ul>	and was chosen for leading research under the "Post 5G of NEDO development phase"	 P.36 Smart
		Provide safety and security for society	<ul style="list-style-type: none"> <li>Launched brands of new energy systems One Time Energy™ and DAISI™ and stepped up the development of electrification</li> <li>Improved gas generant combustibility and developed a new gas generant manufacturing process</li> </ul>	products to accommodate the shift towards automation and	 P.38 Safety
		Provide environmentally-friendly materials and technology	<ul style="list-style-type: none"> <li>Carried out a project for a new cellulose acetate business and advanced the environmentally-friendly</li> <li>Obtained "OK biodegradable MARINE" certification for CAFBLO™, a highly biodegradable cellulose acetate</li> <li>Obtained certification for COC as a recyclable high density polyethylene (Polyplastics USA)</li> </ul>	materials business	 P.28 Sustainable Product P.40 Materials P.42 Engineering Plastics
	Sustainable Process	Contribute to the development of a circular society	<ul style="list-style-type: none"> <li>Established the Biomass Innovation Center and strengthened our high-performance materials research and</li> <li>Carried out joint research with Kyoto University and Kanazawa University</li> <li>In October 2022, will open a facility at Kanazawa University to research biomass utilization and technologies</li> </ul>	development capabilities using biomass toward carbon neutral	 P.24 Sustainable Process
		Respond to climate change	<ul style="list-style-type: none"> <li>Scope 1 and 2 GHG emission reduction rates (compared to FY2019/3) FY2022/3 results: 1% Targets: FY2026/3 37% FY2031/3 50%</li> <li>The increase in GHG emissions caused by higher production volume prompted by a recovery of demand was usage of steam and electricity, putting emissions on par with FY2019/3</li> </ul>	FY2051/3 Achieve carbon neutrality (Scope 1, 2, 3) offset by energy-saving efforts that included increasing our	 P.45 Response to Climate Change Response to Climate Change <a href="https://www.daicel.com/en/sustainability/environment/climate-change.html">https://www.daicel.com/en/sustainability/environment/climate-change.html</a>
Sustainable People	Promote diversity and inclusion	<ul style="list-style-type: none"> <li>Ratio of women in management position*1 FY2022/3 results: 4.3% Target: FY2026/3 10% or above</li> <li>Ratio of persons with disabilities that have been with the company at least three years*1 (1 - persons with joining / total number of employed persons with disabilities) × 100 FY2022/3 results: 97.2%</li> <li>Held training and other internal events with the theme of "Design Your Own Career" as part of the "Wellbee"</li> <li>Published an action plan for the second phase (FY2022/3 to FY2026/3) of Japan's Act on Promotion of Women's</li> </ul>	disabilities that left the company in less than three years after Target: Keep at 95% or above diversity promotion project Participation and Advancement in the Workplace	 Promoting Diversity and Inclusion <a href="https://www.daicel.com/en/sustainability/social/diversity.html">https://www.daicel.com/en/sustainability/social/diversity.html</a>	
	Support personal growth	<ul style="list-style-type: none"> <li>Revised the human resources systems for managers in April 2021 and for non-managers in April 2022;</li> <li>Implemented the Career Challenge System to enable employees to challenge themselves in new ways toward</li> <li>Held age-specific career training aimed at helping employees in their early 50s lead fulfilling personal and professional</li> </ul>	employees now can choose their career more independently achieving a career plan of their own devising lives by enabling them to plan their own future careers	 P.22 Sustainable People Support for Human Resource Development <a href="https://www.daicel.com/en/sustainability/social/hrd.html">https://www.daicel.com/en/sustainability/social/hrd.html</a>	
Materiality related to the foundation for the Daicel Group's continuity and governance	Environment	Reduce environmental impact	<ul style="list-style-type: none"> <li>Industrial waste recycling rate*2 FY2022/3 results: 97.7% Target: FY2026/3 99% or above</li> </ul>		 Reduction and Recycling of Industrial Waste <a href="https://www.daicel.com/en/sustainability/environment/industrial-waste.html">https://www.daicel.com/en/sustainability/environment/industrial-waste.html</a>
		Ensure process safety and disaster prevention, occupational health and safety	<ul style="list-style-type: none"> <li>Serious occupational accidents*1 FY2022/3 results: 0 Target: Keep at 0</li> <li>Serious process safety incidents*1 FY2022/3 results: 0 Target: Keep at 0</li> <li>Held safety training based on past incidents (occupational accidents and process safety incidents)*1 FY2022/3 results: 100% Target: FY2026/3 Keep at 100%</li> </ul>		 Process Safety and Disaster Prevention <a href="https://www.daicel.com/en/sustainability/social/safety-security.html">https://www.daicel.com/en/sustainability/social/safety-security.html</a>
	Social	Ensure chemical safety and enhance product quality	<ul style="list-style-type: none"> <li>RC-related regulation audit rate*1 FY2022/3 results (1st year of 5-year plan): 21% Target: FY2026/3 100%</li> <li>Rate of initial response to customer complaints within 24 hours*1 FY2022/3 results: 63%</li> <li>Conducted General Operability Studies*4 for quality and usage rates, used online sensors and soft sensors for quality management system</li> </ul>	Target: FY2026/3 100% quality checking, and worked toward completing the integrated	 Chemical and Product Safety <a href="https://www.daicel.com/en/sustainability/social/chemical-safety.html">https://www.daicel.com/en/sustainability/social/chemical-safety.html</a> Enhancing Product Quality <a href="https://www.daicel.com/en/sustainability/social/quality.html">https://www.daicel.com/en/sustainability/social/quality.html</a>
		Respect human rights	<ul style="list-style-type: none"> <li>Implementation rate of Human rights due diligence for Daicel Group companies for FY2020/3 to FY2022/3: 64.9%</li> <li>Group companies overseas: conducted in 21/39 companies*3</li> <li>Proposed plan for conducting human rights due diligence for suppliers</li> </ul>	Group companies in Japan: conducted in 16/18 companies*3	 Respect for Human Rights <a href="https://www.daicel.com/en/sustainability/social/human-rights.html">https://www.daicel.com/en/sustainability/social/human-rights.html</a>
		Foster a corporate culture that meets employee needs	<ul style="list-style-type: none"> <li>Annual continuous paid leave acquisition rate*1 (a five-day holiday taken once per year) FY2022/3 results: Held a "Thanks Holiday" (employees take a five-day holiday) pilot for certain organizations</li> <li>Increased number of holidays for shift workers as an initiative to shorten working hours</li> <li>Established the Employee Wellness Promotion Center to improve health management throughout the Group</li> </ul>	Target: FY2026/3 100%	 Foster a Corporate Culture That Meets Employee Needs <a href="https://www.daicel.com/en/sustainability/social/wlb.html">https://www.daicel.com/en/sustainability/social/wlb.html</a>
	Governance	Promote sustainable procurement	<ul style="list-style-type: none"> <li>Sustainable procurement rate (the percentage of suppliers meeting Daicel's standards, based on the results of FY2022/3 results: 72% Target: FY2024/3 100%</li> <li>Held interviews with major suppliers on SAQ results, identified issues, and provided support for</li> </ul>	SAQs conducted for major Daicel Group suppliers) making improvements	 P.44 Initiatives to Achieve Sustainable Procurement Sustainable Procurement <a href="https://www.daicel.com/en/sustainability/social/supply-chain.html">https://www.daicel.com/en/sustainability/social/supply-chain.html</a>
Strengthen foundation for group governance and compliance		<ul style="list-style-type: none"> <li>To enhance effective management oversight functions, a third-party organization held discussions on conducting evaluations to be done in FY2023/3</li> <li>Rate at which legal checks are made and response measures taken for material matters requiring FY2022/3 results: 100% Target: Keep at 100%</li> <li>Issues reported to the Help Line FY2022/3 results: 50</li> <li>Percentage of employees who know how to use the Help Line system and can contact the Help Line when they who have taken Help Line reporting training) FY2022/3 results: 8.5% Target: FY2026/3 100%</li> </ul>	effective evaluations at the Board of Directors meeting: executive decision discover compliance violations*2 (= percentage of employees	 P.54 Corporate Governance P.58 Corporate Ethics (Compliance) P.59 Risk Management Corporate Governance <a href="https://www.daicel.com/en/sustainability/governance/">https://www.daicel.com/en/sustainability/governance/</a> Corporate Compliance <a href="https://www.daicel.com/en/sustainability/governance/compliance.html">https://www.daicel.com/en/sustainability/governance/compliance.html</a> Risk Management <a href="https://www.daicel.com/en/sustainability/governance/risk-management.html">https://www.daicel.com/en/sustainability/governance/risk-management.html</a>	

\*1 Daicel \*2 Daicel and Group companies in Japan \*3 Figures represent the number of candidate companies for human rights due diligence (as of March 2022)

\*4 Daicel's original method of standardizing plant operations

## Dialogue between Outside Directors

# The Power of Chemistry to Realize a Sustainable Society

The Mid-Term Management Strategy “Accelerate 2025” started in FY2022/3. Daicel accelerates its strategy to “contribute to the development of a circular society.” Two outside directors with different backgrounds discussed Daicel’s strengths, expectations for its further growth, and governance.



Outside Director, Member of the Nomination and Compensation Committee  
Counsellor, Asahi Kasei Corporation

**Toshio Asano**

Outside Director, Member of the Nomination and Compensation Committee  
Advisor, Nippon Life Insurance Company

**Takeshi Furuichi**

### Remain resolute in the decision to contribute to the development of a circular society

**Furuichi:** Daicel has included a great theme in its Long-Term Vision, “Contribute to the development of a circular society.” Few companies have a broad perspective to proudly set such a lofty goal. I think Daicel’s corporate culture is evident in its strong will and decisiveness to face head-on the establishment of a circular society. I also find it remarkable that it is implementing organizational reforms, co-creation with outside partners, and various strategies to achieve this goal.

**Asano:** As one of its measures, Daicel has elaborated the “Biomass Value Chain concept” to achieve carbon neutrality. I was impressed with the broad concept of a comprehensive cycle that covers not only forestry but also the agriculture and fishing industries. At the same time, aiming at its realization, Daicel has been steadily making efforts to innovate through scientific methods in cooperation with Kanazawa University and Kyoto University. This open innovation relies not only on the Company’s internal resources but also on proactive collaboration with external partners. I believe this shows that the concept is down to earth. Daicel is putting into practice its basic philosophy, “co-creating value.”

**Furuichi:** Japanese companies tend to stick to closed innovation and consider what they can do based on their own products. On the contrary, Daicel focuses on what society needs. Daicel is confident in co-creation with its partners and clearly explains how to cover its shortcomings. I can see this assures that its concept, or strategy, is down to earth, as you have said. The chemical industry uses reactions between different substances to create new value. Likewise, I hope Daicel works with more and more collaborators through open innovations to enable this to happen.

**Asano:** In addition, the Mid-Term Management Strategy is highly rational in that it clearly distinguishes business units to be expanded through active investment and ones to be reformed with the option of withdrawal in mind. Making such a clear distinction is usually hard for a manufacturer, but Daicel did it as a result of discussions involving top management, middle management, and even lower levels.

**Furuichi:** Presenting the portfolio categories with no ambiguity but with a clear message also helps investors. It also helps employees in each business unit, as the clear positioning of their business unit tells them in which

direction they should go and allows them to respond to, and prepare for, various possibilities. I thought it was an intelligent way to put forth a business strategy. Now the question is how to carry it out.

**Asano:** To expand the business in a competitive environment, it is necessary to make ambitious investments with a long-term vision. It also requires collective corporate strength, including research and development, and intellectual property. I see Daicel undertaking with full force and speed the initiatives outlined in its roadmap and the specific measures in each business unit, so I have very high expectations for the Company. I also appreciate the Company’s efforts over the past two years to withdraw from defense-related businesses and reconstruct its inflator business without wasting any time.

### An extraordinary chemical manufacturer with solid chemical and assembly capabilities

**Furuichi:** Another characteristic of Daicel is that, even when it withdraws from a business, it retains and utilizes the technologies it has developed in that business unit in some way or another. Pyrotechnics, initially a key technology of defense-related business, has been utilized as safety technology for airbags. And now, it leads to new products such as a pyro-fuse for electric vehicles, and Actranza™ lab., a needle-less injector. Daicel’s core technology has been successfully inherited and used to create the next generation of products. I expect that Daicel’s future open innovations will further expand its interaction with people outside the Company and generate new value using the technologies it has been cultivating.

**Asano:** I agree. I am in the same chemical industry, but even so, I do not consider Daicel an ordinary chemical manufacturer. I think the Company’s core strength is that it has established a globally strong position in producing a series of derivatives from acetic acid, such as acetyl chemicals and cellulose acetate. No other manufacturer in the Japanese chemical industry has such a distinctive chain. The fact that Daicel has had this chain for many years proves that it has been making each of its products to meet social demand. I believe that the accumulation of technologies is one of its strengths. Another strength is that Daicel is good at assembly, such as inflators. This impression became even firmer when I visited the plant. The inflator business cannot be operated only with pyrotechnics. I am sure that Daicel had a hard time

commercializing it, but today, it is a major global player in the inflator business. The core technology of Actranza™ lab. is also pyrotechnics, but I think it was Daicel's assembly technology that made the product possible.

**Furuichi:** Not only does Daicel develop materials and technologies as a chemical manufacturer, but it also creates devices for their use.

### Human-centered management that enables the employees and the Company to grow together

**Asano:** Chemical manufacturers, including Daicel, launch one new business after another, but most are downsized or discontinued within a few decades. Consequently, the chemical industry has a history of continuous restructuring. Therefore, chemical manufacturers cannot stay in business without truly valuing people. Daicel is committed to human-centered management. It does not lay off employees from a discontinued business, but rather seeks their agreement on moving to another business so that they can continue to play active parts in Daicel. This is only possible through its management that sincerely cherishes its people. In the chemical industry, companies highly



value persons who were in charge of, or involved in a discontinued business as they have faced various challenges. For this reason, Daicel's human-centered management is a critical stance. I would like the Company to follow it to the letter.

**Furuichi:** One may likely assume that chemical companies are centered around not humans but technology. Especially since Daicel has developed the DAICEL Production Innovation and the AI-based Autonomous Production System, people may understand these phrases superficially and literally and have the impression that machines are replacing humans. Some may feel it contradictory for such a company to claim that its management is human-centered. However, considering the background that you explained, it became clear to me that, after all, Daicel values people.

### Board meeting facilitates lively discussions

**Asano:** I would like to mention governance. At Daicel's board meetings, all attendees have frank discussions. I clearly perceive the management's initiative to draw out the opinions of us, outside directors. Furthermore, the number of outside directors, including women, is significant. I believe the effectiveness of the Board of Directors is high.

**Furuichi:** That is correct. I was told beforehand that Daicel has a good culture in which everyone in the Company engages in lively discussions. Once a decision is made, they are determined to carry it out. I can see that this culture is manifest also in the board meetings.

**Asano:** We hope that Daicel maintains such an excellent corporate culture, not only in the board meetings.

### Risk taking and risk control

**Asano:** The principal role of Daicel's Board of Directors is monitoring. Our role as outside directors is to see how management takes risks, invests in growth, and controls the risks within those investments. Daicel has adopted ROIC as a management indicator. ROIC results from the business decisions made and conducted in the past. Thus, it is important to sharpen management decisions to improve ROIC in three to five years. It is critical to make decisions and develop strategies today with an eye on three, five, and even ten years from now. Existing business

will shrink sooner or later, so it is always indispensable to take risks and create new business. From my perspective as a peer, Daicel is a sound risk taker that undertakes new business within the limits of controllable risks. The most recent example of its risk taking is the acquisition of Polyplastics Co., Ltd. as its wholly owned subsidiary. It was amazing that Daicel planned and accomplished such a significant investment promptly without missing the opportunity. The effects of this investment are already visible in the business results. I am looking forward to its future development.

**Furuichi:** Generally, Japanese companies step on the brakes too much, so I often suggest they take more risks. However, Daicel is taking risks confidently. I will keep a close eye on how each of its businesses is positioned in the overall portfolio, what kind of risk it will take and how much return it will target in five or ten years. Some risks are country risks, such as a Taiwan Contingency or a Nankai Trough earthquake. Management must consider the impact and whether the company's current capital will suffice. If such a risk is unbearable, they should increase capital slightly or drop higher-risk areas. They should examine the business portfolio in terms of whether they can protect the company in the event of an emergency. It would be too late to act after a contingency occurs. On the contrary, it will be an opportunity if the company is prepared.

**Asano:** I also believe it better to consider country risks, even though it is impossible to be fully prepared for them.

### Corporate value of chemical manufacturers

**Furuichi:** As I became an outside director of Daicel and became more familiar with its business, I began to wonder if the corporate value of BtoB companies, particularly that of all chemical manufacturers, is fully appreciated. For many people, chemistry is probably difficult to understand. Therefore, I find it necessary to make more effort to communicate its value to the world, in addition to numerical disclosure.

**Asano:** Although most of the products around us, including smartphones, use materials from chemical manufacturers, it is certainly not well known to ordinary people. I personally believe it is essential to explain it to the employees. In turn, they will tell their families about their company. Then their families will be interested in chemistry.



**Furuichi:** I agree. We also want students and children to be more curious about chemistry. Certainly, it is important for a chemical manufacturer to benefit society through its products. Still, it is also expected to do that by conveying the attraction and potential of chemistry to the next generation and raising them to be responsible for the future. Daicel has already started such activities. For example, it sends its chemical technicians to schools near plants to teach chemistry. I hope the Company expands these efforts further to develop chemistry-minded human resources with high aspirations to stop global warming.

**Asano:** I believe chemistry can significantly contribute to building a sustainable society. In recent years, there has been a growing interest in ESG and SDGs, especially in the financial industry. I sense that this is a favorable trend for the chemical industry. As long as this world is in search of invention, discovery, or innovation, the power of chemistry will always be required in that process.

# Directors, Audit & Supervisory Board Members, and

## Directors



### Yoshimi Ogawa

Representative Director, President and CEO, Member of the Nomination and Compensation Committee, Responsible for Research Center, Responsible for Advanced Materials & Packaging Institute, Responsible for Life Sciences Business Division, and Executive Consultant of Polyplastics Co., Ltd.

April 1983 Joined the Company  
 April 2002 Head of Business Process Innovation  
 June 2006 Executive Officer, Deputy Head of Aerospace & Defense Systems/Safety Systems Company  
 June 2009 Head of Production Technology  
 June 2011 Director  
 June 2013 Managing Executive Officer  
 June 2017 Senior Managing Executive Officer  
 June 2019 Representative Director, President and CEO (incumbent)



### Yasuhiro Sakaki

Director, Senior Managing Executive Officer, General Manager of Corporate Planning & Strategy Headquarters, Responsible for Safety SBU, and Healthcare SBU, Responsible for Raw Material Purchasing Center<sup>1</sup>, Responsible for Customer Center<sup>1</sup>

April 1984 Joined the Company  
 June 2012 Head of Organic Chemical Products Company  
 June 2014 Executive Officer  
 June 2016 Head of Aerospace & Defense Systems/Safety Systems Company  
 June 2017 Managing Executive Officer  
 June 2019 Senior Managing Executive Officer (incumbent)  
 June 2020 Executive Officer (incumbent)



### Kotaro Sugimoto

Representative Director, Senior Managing Executive Officer, Member of the Nomination and Compensation Committee, General Manager of Corporate Support Headquarters, Responsible for Corporate Compliance Program, and Responsible for Digital Strategy Division

April 1984 Joined the Company  
 June 2011 Head of Raw Material Purchasing Center  
 June 2014 Executive Officer, President of Daicel Logistics Service Co., Ltd.  
 June 2017 Managing Executive Officer  
 June 2019 Representative Director (incumbent)  
 June 2020 Senior Managing Executive Officer (incumbent)



### Akihisa Takabe

Director, Managing Executive Officer, General Manager of Assessment Headquarters, Responsible for Intellectual Property Center

April 1984 Joined the Company  
 June 2008 President of Daicel Safety Systems Inc.  
 April 2014 Head of Central Research Center  
 Head of Corporate Research Center of R&D Headquarters  
 February 2015 Deputy General Manager of R&D Headquarters  
 June 2015 Executive Officer  
 June 2019 Director (incumbent)  
 June 2020 Managing Executive Officer (incumbent)

## Standing Audit & Supervisory Board Members

**Shinji Fujita** **Hisanori Imanaka**

## Senior Managing Executive Officer

**Toshio Shiwaku**  
 General Manager of Performance Materials Headquarters, President and CEO of Polyplastics Co., Ltd.

## Outside Audit & Supervisory Board Members

### Junichi Mizuo<sup>\*2</sup>

Representative Director and Chairperson of the Japan Compliance & Governance Institute, Honorary Professor of Surugadai University; Ph.D. in Business Administration, Executive Director of Japan Society for Business Ethics

### Hideo Makuta<sup>\*2</sup>

Attorney at Law  
 Advisor of Nagashima Ohno & Tsunematsu

### Hisae Kitayama<sup>\*2</sup>

Certified Public Accountant  
 Representative of Kitayama Public Accounting Office

## Managing Executive Officers

### Naotaka Kawaguchi

General Manager, Production Management Headquarters  
 Responsible for Innovation and Business Development Headquarters  
 Responsible for Biomass Innovation Center  
 Responsible for *Monozukuri* Production Innovation Center  
 Responsible for Chain Production Company and Multiple Production Company

### Masamichi Mitsuuchi

Responsible for Engineering Center

### Takashi Miyamoto

Responsible for Material SBU  
 Head of Material SBU  
 Responsible for Smart SBU

# Executive Officers (as of June 22, 2022)



### Masafumi Nogimori<sup>\*2</sup>

Outside Director, Chairperson of the Nomination and Compensation Committee

April 2005 Executive Vice President and Representative Director of Astellas Pharma Inc.  
 June 2006 President & CEO and Representative Director of Astellas Pharma Inc.  
 June 2011 Chairperson and Representative Director of Astellas Pharma Inc.  
 June 2016 Retired from Chairperson and Representative Director of Astellas Pharma Inc.  
 June 2017 Director of Daicel Corporation (incumbent)



### Toshio Asano<sup>\*2</sup>

Outside Director, Member of the Nomination and Compensation Committee

April 2010 President & Representative Director, Presidential Executive Officer of Asahi Kasei Pharma Corporation  
 April 2014 Presidential Executive Officer of Asahi Kasei Corporation  
 June 2014 President & Representative Director and Presidential Executive Officer of Asahi Kasei Corporation  
 April 2016 Director and Standing Advisor of Asahi Kasei Corporation  
 June 2016 Standing Advisor of Asahi Kasei Corporation (incumbent)<sup>\*3</sup>  
 June 2019 Director of Daicel Corporation (incumbent)



### Teisuke Kitayama<sup>\*2</sup>

Outside Director, Member of the Nomination and Compensation Committee

June 2005 Director President (Representative Director) of Sumitomo Mitsui Financial Group, Inc., Chairperson of the Board (Representative Director) of Sumitomo Mitsui Banking Corporation  
 April 2017 Director of Sumitomo Mitsui Banking Corporation  
 June 2017 Advisor of Sumitomo Mitsui Banking Corporation  
 June 2018 Director of Daicel Corporation (incumbent)  
 October 2018 Honorary Advisor of Sumitomo Mitsui Banking Corporation (incumbent)



### Takeshi Furuichi<sup>\*2</sup>

Outside Director, Member of the Nomination and Compensation Committee

March 2010 Representative Director and Senior Managing Executive Officer of Nippon Life Insurance Company  
 March 2012 Representative Director and Executive Vice President of Nippon Life Insurance Company  
 July 2016 Representative Director and Vice Chairperson of Nippon Life Insurance Company (incumbent)<sup>\*4</sup>  
 June 2020 Director of Daicel Corporation (incumbent)



### Sonoko Hacchoji<sup>\*2</sup>

Outside Director, Member of the Nomination and Compensation Committee

November 1993 Vice President of IBJ International Plc., UK securities subsidiary of The Industrial Bank of Japan, Ltd. (currently Mizuho Bank, Ltd.)  
 March 2002 Executive Officer of IBJ Leasing Co., Ltd.  
 January 2006 Director of Yuki Management & Research Co., Ltd.  
 March 2011 Managing Director and Managing Executive Officer of FUJITA KANKO INC.  
 April 2017 Chief Strategy Officer and Special Advisor to the President of Tsuda University  
 June 2019 Director of Daicel Corporation (incumbent)  
 April 2020 Special Advisor to the President of Tsuda University



### Yuriya Komatsu<sup>\*2</sup>

Outside Director, Member of the Nomination and Compensation Committee

April 1988 Assistant Portfolio Manager of Credit Suisse Trust and Banking Co., Ltd.  
 April 1990 Senior Analyst of SPARX Asset Management Co., Ltd. (currently SPARX Group Co., Ltd.)  
 May 1996 Senior Research Analyst of The Dreyfus Corporation  
 December 1999 Vice President of Fiduciary Trust Company International  
 September 2000 Partner of INTELLESET, INC.  
 November 2004 Partner of Worldeye Capital Inc.  
 June 2006 Vice President of Olympus Capital Holdings Asia  
 July 2010 Managing Director of Daiwa Quantum Capital Limited  
 October 2014 Member of the Board of KADOKAWA DWANGO Corporation (currently KADOKAWA Corporation), Member of the Board of DWANGO Co., Ltd.  
 September 2021 Managing Director of IA Partners Inc. (incumbent)  
 June 2022 Director of Daicel Corporation (incumbent)

## Executive Officers

### Hitoshi Hayashi

Deputy General Manager, Assessment Headquarters  
 Division Manager, Assessment Promotion, Assessment Headquarters

### Masaaki Fujio

Division Manager, Responsible Care, Assessment Headquarters

### Akio Kojima

Head of Smart SBU

### Haruyoshi Tashika

Head of Chain Production Company  
 Plant General Manager of the Ohtake Plant of Chain Production Company

### Seiji Yamakado

President of Daicel Miraizu Ltd.,  
 Chairperson of Shanghai Daicel Polymers, Ltd.

### Nobuhiko Ikeda

Head of Multiple Production Company,  
 Plant General Manager of the Harima Plant of Multiple Production Company

### Kazuya Kurosawa<sup>\*5</sup>

Representative Director and Vice-President Executive Officer of Polyplastics Co., Ltd.

### Kei Yamane

Head of Research Center

### Takaharu Takikawa

Head of Engineering Center

### Yoichi Nemoto

Deputy General Manager of Corporate Support Headquarters

### Seiji Sakano

General Manager, Life Sciences Business Division

### Masahiko Hirokawa

Deputy General Manager of Corporate Support Headquarters  
 Division Manager, Investor Relations & Corporate Communications, Corporate Support Headquarters

### Mitsuteru Mutsuda

Head of Innovation and Business Development Headquarters  
 Head of Biomass Innovation Center

### Ryohei Yamada

Head of Safety SBU  
 Chairperson of Daicel Safety Systems (Jiangsu) Co., Ltd.,  
 Chairperson of Daicel Safety Technologies (Jiangsu) Co., Ltd.,  
 Chairperson of Daicel Safety Systems Americas, Inc.

<sup>\*1</sup> On August 1, 2022, the SCM (Supply Chain Management) Headquarters was formed through an integration of the Raw Materials Purchasing Center and Customer Center.

Yasuhiro Sakaki was appointed General Manager of SCM Headquarters on the same date

<sup>\*2</sup> Independent Director

<sup>\*3</sup> On June 24, 2022, Toshio Asano resigned as Standing Advisor and was appointed Counsellor at Asahi Kasei Corporation

<sup>\*4</sup> On July 5, 2022, Takeshi Furuichi resigned as Representative Director and Vice Chairperson and was appointed Advisor at Nippon Life Insurance Company

<sup>\*5</sup> On July 1, 2022, Kazuya Kurosawa was appointed Deputy General Manager of Performance Materials Headquarters

# Corporate Governance

Strengthening corporate governance is an important management task that enables us to enhance corporate value and achieve our social mission and responsibilities as a listed company. Our management structure enables timely decision-making and implementation by clarifying the role of each organization. Moreover, by actively soliciting external opinions to improve management transparency and fairness, Daicel will strive to maintain the soundness of its corporate management.

## History of Strengthening Corporate Governance

	2000	2010	2020
Separation of supervisory from business execution functions	<ul style="list-style-type: none"> <li>1999 Introduced the Executive Officer System</li> <li>2000 Appointed Outside Directors</li> </ul>		<ul style="list-style-type: none"> <li>2015 Increased the ratio of Outside Directors to 50%</li> </ul>
Clarification of management responsibilities, Building a system that responds quickly to changes		<ul style="list-style-type: none"> <li>2003 Shortened the term of office for Directors from two years to one</li> </ul>	
Establishment of various committees	<ul style="list-style-type: none"> <li>2000 Established the Nomination and Compensation Committee</li> </ul>	<ul style="list-style-type: none"> <li>2006 Established the Information Disclosure Committee / the Risk Management Committee</li> <li>2010 Established the Internal Control Council</li> </ul>	
Effectiveness evaluation of the Board of Directors			<ul style="list-style-type: none"> <li>2016 Started to evaluate the effectiveness of the Board of Directors</li> <li>2020 Improved the method for evaluating the effectiveness of the Board of Directors</li> </ul>
Development of internal control systems		<ul style="list-style-type: none"> <li>2006 Established the Basic Policy for structuring Internal Control Systems</li> </ul>	<ul style="list-style-type: none"> <li>2022 Revised the Basic Policy for structuring Internal Control Systems</li> </ul>

## Corporate Governance Framework

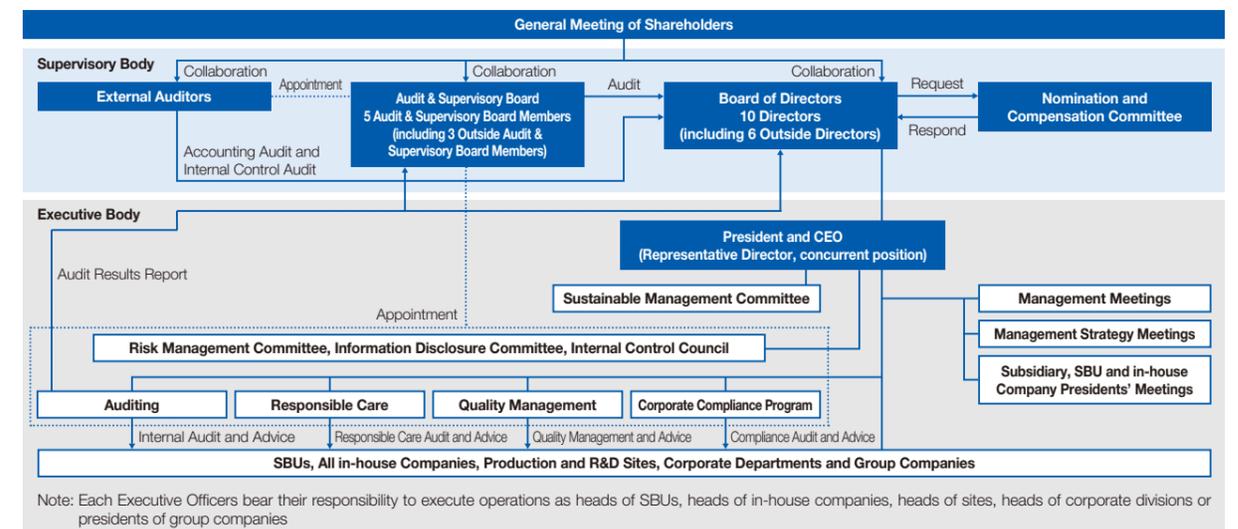
The Company has established a corporate framework under which its Board of Directors makes management decisions in an efficient manner and fulfills its supervisory functions, and its Audit & Supervisory Board accomplishes its auditing and supervisory functions. Such a framework has enabled us to keep reinforcing our corporate governance. Specifically, by welcoming Outside Directors and allowing them to provide opinions and advice based on their expertise, Daicel is working to ensure that the decisions made by its Board of Directors are appropriate and the execution of Director duties is effectively supervised. Moreover, we have adopted an Executive Officer System that has enabled us to clearly separate our decision-making, supervisory, and business execution functions. Such a clear division of roles has allowed us to bolster our business management structure and, consequently, corporate activities.

- [Corporate Governance Report \(June 29, 2022\)](https://www.daicel.com/en/sustainability/pdf/governance/cg_report_20220629.pdf)
- [Standards for Independence of Outside Directors and Outside Audit & Supervisory Board Members](https://www.daicel.com/en/sustainability/pdf/governance/Standards_for_Independence.pdf)

### Outline of the Corporate Governance Framework (as of June 22, 2022)

Item	Content
Type of organizational structure	Company with Audit & Supervisory Board
Chairperson of the Board of Directors	President and CEO
Number of Directors	10 (including 2 female directors)
Number of Outside Directors	6 (all 6 are independent directors)
Number of Audit & Supervisory Board Members	5 (including 1 female director)
Number of Outside Audit & Supervisory Board Members	3 (all 3 are independent Audit & Supervisory Board members)
Number of Executive Officers	22 (including 4 officers concurrently serving as directors)
Number of Board of Director meetings held in FY2022/3 (Average attendance rate of Outside Directors / Outside Audit & Supervisory Board Members)	15 (96.0%/95.6%)
Number of Audit & Supervisory Board meetings held in FY2022/3 (Average attendance rate of Outside Audit & Supervisory Board Members)	15 (95.6%)
Term of office for directors	1 year
Term of office for Audit & Supervisory Board Members	4 years
Average term in office for Directors	3.6 years
Average term in office for Audit & Supervisory Board Members	2.2 years
External Auditor	Deloitte Touche Tohmatsu LLC

### Corporate Governance Framework (as of June 22, 2022)



#### [ Board of Directors ]

The Company recognizes the role of the Board of Directors as being to establish a direction the company should aim for, formulate specific strategies toward that end, and supervising efforts to achieve those goals from an objective standpoint. Consisting of four Internal Directors and six Outside Directors, the Board of Directors makes decisions about important matters regarding corporate management and supervises the execution of business and business operations.

#### [ Audit & Supervisory Board ]

Consisting of five members, three of whom are Outside Directors, the Audit & Supervisory Board holds meeting to share information, deliberate on, and make decisions about important issues related to the Company's audits. It also regularly attends Board of Directors meetings and important internal meetings held by Standing Audit & Supervisory Board Members, and regularly meets with the Representative Director, Outside Directors, and External Auditors. In addition, it works to improve auditing effectiveness through such means as communicating with the Auditing Division, the organization for conducting internal reviews when needed.

#### [ Nomination and Compensation Committee ]

The Nomination and Compensation Committee issues reports in response to requests from the Chairperson of the Board of Directors or the Audit & Supervisory Board, with a focus on maintaining transparency, appropriateness, and objectivity with regard to decision-making processes for personnel affairs and compensation relating to personnel that include Directors and Executive Officers. The committee is chaired by an Outside Director and consists of six Outside Directors and two Representative Directors.

## Effectiveness Evaluation of the Board of Directors

The Company conducts an effectiveness evaluation of the Board of Directors to maintain and improve its performance through questionnaires and individual interviews to each board member and Audit & Supervisory Board Member. In view of the effectiveness evaluation of FY2021/3, in FY2022/3 we took steps to further enhance discussions at meetings of the Board of Directors. This includes enhancing reports on the content of discussions at Management Meetings and other meetings, along with departmental strategies and progress made, as well as spending time discussing management strategies.

### FY2022/3 Effectiveness Evaluation of the Board of Directors

Evaluation Process	Distributed questionnaires to all Directors and Audit & Supervisory Board Members; further explored questionnaire responses through individual interviews; the results compiled and analyzed by the administrative office were reported and discussed at a Board of Directors Meeting.
Overview of Evaluation Results	<p>The Board of Directors engaged in productive discussions with Outside Directors and actively offered their opinions, and we were able to confirm that the board is accomplishing its expected roles effectively. On the other hand, there were some issues that needed to be addressed to improve the board's effectiveness. Main issues pointed out:</p> <ol style="list-style-type: none"> <li>Board composition issues <ul style="list-style-type: none"> <li>Addressing diversity in the Board of Directors</li> </ul> </li> <li>Board deliberation issues <ul style="list-style-type: none"> <li>The ideal way for the Board of Directors to monitor progress on the execution of management strategies</li> </ul> </li> <li>Board operation issues <ul style="list-style-type: none"> <li>How to run Board of Directors meetings smoothly and efficiently in order to best use the time available for discussion</li> <li>Ways for enhancing the provision of useful information for making appropriate decisions (handling of technical terms and inhouse jargon, timing of delivering reference materials for board meetings)</li> </ul> </li> <li>Information required to be expanded on an improved <ul style="list-style-type: none"> <li>State of sustainability-related issues and initiatives</li> <li>Check need to revise business portfolio</li> </ul> </li> </ol>

## Structure of the Board of Directors and Board of Auditors

Reasons for Appointment of Directors and Audit & Supervisory Board Members (as of June 22, 2022)

	Name	Position	Term of Office	Business Execution	Reason for Appointment	Remarks
Directors	Yoshimi Ogawa	Representative Director President and CEO	11 years	●	Mr. Ogawa has demonstrated strong leadership in guiding the entire Group toward achieving higher corporate value as the president and CEO of the Company since June 2019. We determined that he was qualified to manage the Daicel Group and its global business given his track record and wealth of experience, achievements and insight related to the overall management of Daicel. Chairperson of Management Advisory Committee.	Chairperson of Board of Directors
	Kotaro Sugimoto	Representative Director	3 years	●	Mr. Sugimoto possesses a wealth of experience, achievements and insight related to the overall management of Daicel, fostered as the head of administrative departments, including finance and accounting as well as compliance. We determined that he was qualified to manage the Daicel Group and its global businesses.	
	Yasuhiro Sakaki	Director	2 years	●	Mr. Sakaki possesses a wealth of experience, achievements and insight related to the overall management of Daicel, fostered as head of the Pyrotechnic Devices Business and departments involved in promoting corporate strategy. We determined that he was qualified to manage the Daicel Group and its global businesses.	
	Akihisa Takabe	Director	3 years	●	Mr. Takabe possesses a wealth of experience, achievements and insight related to the planning and development of new products at the Daicel Group, fostered as head of R&D and new product development for broad areas including basic technology and product development. We determined that he was qualified to manage the Daicel Group and its global businesses.	
	Masafumi Nogimori	Outside Director	5 years		Mr. Nogimori possesses a wealth of insights and experience, fostered as a manager of a company that produces and sells medical products, and applies these in the management of Daicel.	Chairperson of the Nomination and Compensation Committee
	Teisuke Kitayama	Outside Director	4 years		Mr. Kitayama possesses a wealth of insights and experience, fostered as a manager of financial institutions, and applies these in the management of Daicel.	
	Sonoko Hacchoji	Outside Director	3 years		Ms. Hacchoji possesses a wealth of insights and experience, fostered as a member of a management team at financial institutions and a hotel management company, and applies these in the management of Daicel.	
	Toshio Asano	Outside Director	3 years		Mr. Asano possesses a wealth of insights and experience, fostered as a manager of companies that manufacture and sell chemical goods, and applies these in the management of Daicel.	
	Takeshi Furuichi	Outside Director	2 years		Mr. Furuichi possesses a wealth of insight and experience fostered as a manager of a financial institution, which we hope he will apply to the management of Daicel.	
	Yuriya Komatsu	Outside Director	—		Ms. Komatsu possesses a wealth of insights and experience, fostered as a manager of investment companies and communications companies in Japan and overseas, and applies these in the management of Daicel.	
Audit & Supervisory Board Members	Shinji Fujita	Standing Audit & Supervisory Board Member	3 years		Mr. Fujita has been in charge of Daicel's accounting department for many years. Given this track record, we determined that he was qualified to serve as an Audit & Supervisory member responsible for implementing audits based on a neutral and objective perspective to ensure sound management at Daicel.	Chairperson of the Audit & Supervisory Board
	Hisanori Imanaka	Standing Audit & Supervisory Board Member	2 years		Mr. Imanaka has been in charge of supervising management across departments as the head of Daicel's management planning and sustainable management. Given this track record, we determined that he was qualified to serve as an Audit & Supervisory Member responsible for implementing audits based on a neutral and objective perspective to ensure sound management at Daicel.	
	Junichi Mizuo	Outside Audit & Supervisory Board Member	4 years		Mr. Mizuo possesses highly specialized knowledge and experience as a scholar of CSR, corporate governance and business ethics. He has also served as an Outside Director and is experienced in practical business operations. For these and other reasons, the Company has determined that he is qualified for the post of Outside Audit & Supervisory Board Member.	
	Hideo Makuta	Outside Audit & Supervisory Board Member	2 years		Mr. Makuta possesses highly specialized knowledge and extensive insight as an attorney at law and has served as a prosecutor at the Supreme Prosecutors Office, a member of the Fair Trade Commission, and an outside officer of companies. Given this track record, the Company has determined that he is qualified for the post of outside Audit & Supervisory Board Member.	
	Hisae Kitayama	Outside Audit & Supervisory Board Member	—		Ms. Kitayama possesses highly specialized knowledge and extensive insight as a certified public accountant and has served as a partner at a major auditing firm and an executive for an association of certified public accountants. She also has experience with corporate affairs as an outside director. For these and other reasons, the Company has determined that she is qualified for the post of Outside Audit & Supervisory Board Member.	

Note: Directors were appointed on June 22, 2022, and Audit & Supervisory Board members were appointed as of the date of the General Meeting of Shareholders held in this fiscal year or the past fiscal years

Directors' and Auditors' Primary Areas of Knowledge and Experience (Skill Matrix)

	Name	Corporate Management	Global Management	Marketing and Business Planning	Technology and R&D	Finance and Accounting	Legal Affairs, Intellectual Property and Risk Management	ESG
Directors	Yoshimi Ogawa	●	●		●			●
	Kotaro Sugimoto	●	●			●	●	●
	Yasuhiro Sakaki	●	●	●			●	●
	Akihisa Takabe	●			●		●	●
	Masafumi Nogimori	Outside	●		●			●
	Teisuke Kitayama	Outside	●			●	●	●
	Sonoko Hacchoji	Outside	●	●	●		●	●
	Toshio Asano	Outside	●	●		●		●
	Takeshi Furuichi	Outside	●	●			●	●
	Yuriya Komatsu	Outside	●	●			●	●
Audit & Supervisory Board Members	Shinji Fujita	●				●	●	●
	Hisanori Imanaka	●	●					●
	Junichi Mizuo	Outside					●	●
	Hideo Makuta	Outside				●	●	●
	Hisae Kitayama	Outside				●	●	●

## Compensation for Directors and Audit & Supervisory Board Members

### Basic Policy

- Compensation of Directors and Audit & Supervisory Board Members shall be determined by Board of Directors' resolution for Directors, and Audit & Supervisory Board Members' discussion for Audit & Supervisory Board Members within the scope of the total amount of compensation, etc., approved by the General Meeting of Shareholders.
- Compensation of Directors shall consist of monthly compensation, performance-based bonuses, and stock compensation, which will generally be paid according at a 65:20:15 ratio. This rule does not apply to Outside Directors, who shall be paid only a monthly compensation. The compensation of Audit & Supervisory Board Members shall consist solely of monthly compensation.
- To ensure objectivity, transparency, and validity regarding compensation, the Board of Directors makes its decision following deliberations based on recommendations made by the Nomination and Compensation Committee.

### Basic Policy on Compensation

1 Monthly Compensation	In principle, the monthly compensation of Directors and Audit & Supervisory Board Members is a fixed amount paid in accordance with internal rules that are determined by the Directors' duties and job titles in business execution and as to whether or not the Audit & Supervisory Board Members are full-time. Regarding monthly compensation, the Company has revised the compensation to an appropriate and fair level reflective of its business performance, accomplishment of medium- and long-term business plans, and social situation, among other factors.
2 Performance-based Bonuses	Performance-based bonuses of directors are paid in accordance with the accomplishment of performance indicators designated by the Board of Directors. Currently, net sales and operating income are used as the indicators to emphasize business growth, market expansion, and improvements in the earning power of our core business. These indicators are given a 50-50 weighting, and the basic amount of the performance-based bonus is calculated by multiplying the rank-based amount with a payout rate that fluctuates between 0% and 200% depending on the level of accomplishment of the performance indicators.
3 Restricted Stock Compensation System	Daicel introduced Restricted Stock Compensation System to step up value-sharing with shareholders and motivate directors to contribute more to medium- to long-term improvement in corporate value. The stocks cannot be transferred for a period of 30 years, and the Board of Directors decides on an amount for each eligible individual, which is then divided by the stock price at a certain point to calculate the number of shares to be awarded.

Note: Daicel does not have a system for paying retirement benefits to officers

# Corporate Ethics (Compliance)

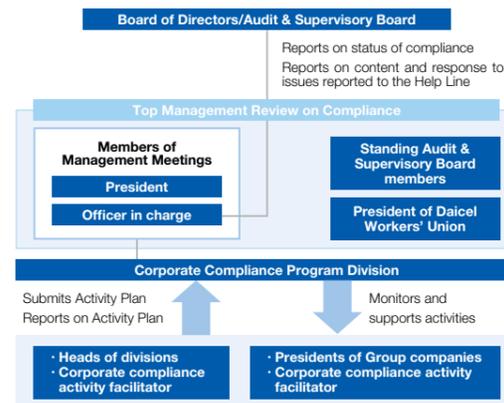
Corporate ethics (compliance) constitutes one of the foundations upon which we pursue sustainable management. The Daicel Group's corporate compliance activities are synonymous with practicing the Daicel Group Conduct Policy, which is based on our Basic Philosophy of being "the company making lives better by co-creating value," as well as each Group company's Code of Conduct, which have been established to embody the policy.

## Promotion System

The Company has established a Corporate Compliance Program Division under the responsibility of a Senior Managing Executive Officers, to promote its corporate compliance activities across the entire Group. The head of each Daicel division and Group company appoints a compliance activity facilitator to spearhead corporate compliance activities.

At meetings of the Top Management Review on Corporate Compliance, which are held at least once a year and are attended by the President, and other members of Management Meetings, Standing Audit & Supervisory Board Members, and the President of Daicel Workers' Union, activities of and important issues concerning each organization are discussed. The details of these meetings are reported to the Board of Directors. The Corporate Compliance Program Division holds meetings with each organization and facilitates communication to promote better corporate compliance activities. These meetings also serve incidentally as a type of internal audit. The division works not only to raise awareness of and support organizations' corporate compliance activities but also to swiftly identify and address business risks.

### Corporate Compliance Program Promotion System



## Education and Training Programs

At Daicel Group, we systematically provide corporate compliance training tailored to each position and role for new graduate recruits, recently promoted employees, managers, directors, presidents of Group companies, employees posted to outside of Japan Group companies, and others. Also, we set the Daicel Group Compliance Awareness Month, conduct e-learning regarding contents such as prevention of corruption and anti-competitive behavior, and conduct discussion based on case study of illegal acts.

## Compliance Help Line System (Internal Whistleblower System)

In line with the objectives of the Whistleblower Protection Act, the Company has set up the Compliance Help Line System, through which employees can report compliance-related issues and receive consultation if they are unable to do so using the regular reporting line. In addition to internal contact points, we have set external contact points which allows to report and consult through external institutions and also have made it possible for persons outside the Company to consult us on compliance issues via our corporate website. In order to familiarize all employees with how to use the system, the Company brings up the system in e-learning during the Daicel Group Compliance Awareness Month and rank-based training, in addition to regular awareness, while also providing reporting training using simulated scenarios. All progress with and results of responding to reports and questions that the internal whistleblowing hotline receives are regularly reported to the Board of Directors.

### Overview of Daicel Group Compliance Help Line System

Target users:	All employees, including at overseas companies (contract and temporary employees), individuals outside the Company (customers, suppliers, business partners, retired employees, members of the general public, and others)
Reporting content:	Matters that may be in violation of the Daicel Group Conduct Policy (Illegal acts, anti-competitive behavior, corruption, bribery, human rights violations, harassment, employment environment, environmental pollution, and other compliance violations)
Features:	Anyone can report anonymously. Matters concerning Group companies can be reported to the Daicel help line as well as to Group company help lines.

### Number of Reports and Consultations of Daicel Group which were reported to Corporate Compliance Program Division

	2020/3	2021/3	2022/3
Reports and consultations	51(39)	54(25)	50(11)
Including cases that significantly affected management	0(0)	0(0)	0(0)
Not applicable	0(0)	0(0)	0(0)

Note: Figures in brackets represent the numbers of reports and consultations received from Group companies outside Japan  
 Note: Reported cases including those which were not confirmed as fact

[WEB Daicel Group Conduct Policy](https://www.daicel.com/en/sustainability/governance/compliance/policy.html)  
<https://www.daicel.com/en/sustainability/governance/compliance/policy.html>

[WEB Daicel Code of Conduct](https://www.daicel.com/en/sustainability/governance/compliance/standard.html)  
<https://www.daicel.com/en/sustainability/governance/compliance/standard.html>

# Risk Management

The Daicel Group recognizes the vital role of risk management and adheres to its Risk Management Regulations so that it responds appropriately to the risks inherent in its corporate activities and minimizes the impact should any such risks materialize.

## Overview of Risk Management

In the Daicel Group, all departments and Group companies ("each organization") seek to improve risk management by carrying out the CAPD cycle\* as a part of their business operations. Each organization identifies risks that could have a major impact on their ability to achieve business targets (Check), considers and establishes countermeasures for preventing the risks from materializing and for minimizing damage in the event they materialize (Act, Plan), implements countermeasures (Do), reevaluates the risks after a certain period of time (Check), and reconsiders countermeasures based on the results (Act).

Daicel's Risk Management Committee, which is chaired by the officer in charge of the Corporate Compliance Program Division and comprising of the heads of each corporate support department as members, supervises and implements risk management measures. Each organization submits risk activity reports to the committee. During its regular meeting, the committee reviews the progress of risk-related measures based on these reports and an inventory of potential risks, and it provides advice and support as necessary. Risks requiring a Company-wide response are addressed by setting up projects and implementing other measures. Given the business environment and social circumstances surrounding the Daicel Group, some risks require closer scrutiny. These are designated as focus points, and each organization confirms and reviews their measures against these risks.

The committee reports on its discussions about focus points, progress on countermeasures addressing risks that could have major impact on management, focus points for the coming fiscal year, the status of Business Continuity Plans (BCP), and other key issues during the Management Meeting and Board of Directors' Meeting at the end of each fiscal year.

\*CAPD cycle: Daicel carries out the CAPD rather than the typical PDCA to avoid the risk of overlooking important crucial facts and realities that often lie hidden in the initial planning stage

## Strengthening Business Continuity Plans (BCP) Management

The Company formulates and manages BCP to minimize damage in the event of emergencies such as major disasters or a pandemic caused by a new virus as well as to maintain business operations or at least ensure the early resumption of business operations in the event of such contingencies. The BCPs are revised as necessary.

The Group includes all stages of a contingency within the scope of its BCP, from "Preparedness" (BCP I) to "Initial contingency response" (BCP II) and "Resumption of operations" (BCP III). We plan and prepare measures to limit any decline in performance associated with a disaster or incurred damage and to quickly resume business. The following measures were taken to strengthen our BCP in FY2022/3.

Preparedness (BCP I)	<ul style="list-style-type: none"> <li>Consider preventive measures in the form of reactive analyses and risk assessments for self-reactive substances, as well as follow-up measures in the form of crisis assessments*</li> <li>In preparation for material procurement risks, procure long lead-time components needed for the maintenance and early rehabilitation of proper inventory levels</li> </ul>
Initial contingency response (BCP II)	<ul style="list-style-type: none"> <li>Review disaster risks using regional hazard maps in the Plan for a Resilient Japan</li> <li>Consider the installation of remote monitoring cameras and remote firefighting equipment</li> <li>Enhance information sharing among sites as part of the companywide disaster preparedness system built in response to COVID-19</li> </ul>
Resumption of operations (BCP III)	<ul style="list-style-type: none"> <li>Prepare BCPs for each product</li> <li>Innovation Park, Tokyo headquarters, and Osaka headquarters conduct non-scenario-based companywide disaster response training</li> </ul>

\*An assessment of response measures to prevent further damage or secondary accidents in the event of an accident

The Company also provides the "Guidelines for formulating BCP" to explain the procedures for creating BCP for individual products or products family. The guidelines include plans and information required to maintain or resume business operations for products and production lines. Each business unit applies the guidelines to maintain business operations and ensure the early resumption of business in the event of a disaster or damage.

[WEB Risk Management](https://www.daicel.com/en/sustainability/governance/risk-management.html)  
<https://www.daicel.com/en/sustainability/governance/risk-management.html>

# Financial Information

## Consolidated Eleven-Year Summary

As of and for the years ended March 31

Millions of Yen

	FY2012/3	2013/3	2014/3	2015/3	2016/3	2017/3	2018/3	2019/3	2020/3	2021/3	2022/3
<b>Operating Results</b>											
Net sales	¥ 341,942	¥ 358,513	¥ 413,786	¥ 443,775	¥ 449,878	¥ 440,061	¥ 462,956	¥ 464,859	¥ 412,826	¥ 393,568	¥ 467,937
Operating income	20,426	26,196	37,912	51,303	64,349	64,306	58,932	51,171	29,644	31,723	50,697
Net income attributable to owners of the parent	11,827	15,372	22,843	31,252	40,313	43,198	37,062	35,301	4,978	19,713	31,254
<b>Financial Position</b>											
Net assets	¥ 234,711	¥ 262,899	¥ 295,805	¥ 356,177	¥ 368,720	¥ 399,429	¥ 413,541	¥ 423,243	¥ 392,583	¥ 245,000	¥ 279,544
Total assets	398,196	461,512	509,834	565,332	560,190	599,708	644,078	654,791	597,992	640,385	698,836
Interest-bearing debt	83,249	99,224	105,917	86,981	71,276	72,291	99,743	104,306	92,787	270,938	283,553
<b>Cash Flows</b>											
Cash flows from operating activities	¥ 34,000	¥ 44,480	¥ 44,777	¥ 57,412	¥ 65,419	¥ 86,168	¥ 66,888	¥ 58,523	¥ 57,193	¥ 57,869	¥ 42,993
Cash flows from investing activities	(9,190)	(35,312)	(34,984)	(30,283)	(31,407)	(34,722)	(33,189)	(41,095)	(45,864)	(34,220)	(46,528)
Cash flows from financing activities	(25,044)	5,737	(4,472)	(29,230)	(31,470)	(19,942)	(1,962)	(25,636)	(47,883)	(17,050)	(5,452)
Cash and cash equivalents, end of year	33,435	53,238	62,573	66,737	65,237	96,275	128,290	120,016	80,674	90,747	87,986
<b>Per Share Information</b>											
Basic net income per share (yen)	¥ 33.46	¥ 43.71	¥ 64.98	¥ 88.95	¥ 115.02	¥ 124.61	¥ 107.81	¥ 105.38	¥ 15.49	¥ 65.18	¥ 104.14
Net assets per share (yen)	618.94	685.11	764.51	922.71	966.36	1,067.63	1,136.32	1,198.77	1,166.56	789.34	919.88
Cash dividends per share (yen)	10.00	12.00	15.00	21.00	26.00	30.00	32.00	32.00	34.00	32.00	34.00
<b>Financial Indicators</b>											
EBITDA	¥ 49,275	¥ 51,620	¥ 63,005	¥ 76,937	¥ 90,320	¥ 95,143	¥ 91,889	¥ 82,221	¥ 59,765	¥ 59,128	¥ 78,893
Ratio of operating income to net sales (%)	6.0	7.3	9.2	11.6	14.3	14.6	12.7	11.0	7.2	8.1	10.8
ROIC (%)	4.3	5.2	6.6	8.0	9.5	9.1	7.7	6.1	3.8	4.1	6.2
ROE (%)	5.5	6.7	9.0	10.5	12.2	12.2	9.8	9.1	1.3	6.6	12.3
ROA (%)	2.9	3.6	4.7	5.8	7.2	7.4	6.0	5.5	0.8	3.2	4.7
Total asset turnover (times/year)	0.8	0.8	0.9	0.8	0.8	0.8	0.7	0.7	0.7	0.6	0.7
Equity ratio (%)	54.7	52.2	52.7	57.3	60.2	61.6	59.8	60.1	60.6	37.1	38.9
Dividend payout ratio (%)	29.9	27.5	23.1	23.6	22.6	24.1	29.7	30.4	219.5	49.1	32.6
Total return ratio (%)	45.2	27.5	23.1	23.6	32.5	33.3	56.6	67.2	577.3	91.1	48.6
<b>Others</b>											
Capital expenditures	¥ 18,740	¥ 27,217	¥ 25,617	¥ 30,629	¥ 40,256	¥ 39,528	¥ 30,819	¥ 44,694	¥ 47,568	¥ 39,555	¥ 40,840
Depreciation and amortization	28,316	24,026	23,669	23,409	23,914	29,031	31,720	30,044	29,002	25,830	26,948
Research and development expenses	12,730	12,875	13,360	14,031	15,306	16,806	18,843	20,749	21,295	19,540	20,741
Number of employees (at year-end)	8,149	9,233	9,700	10,173	10,709	11,556	12,309	12,319	11,606	11,142	11,104

Note: Amortization of goodwill is not included in depreciation and amortization

## Consolidated Balance Sheets

Daicel Corporation and Consolidated Subsidiaries  
March 31, 2022 and 2021

	Millions of Yen		Thousands of U.S. Dollars (Note 1)
	2021/3	2022/3	2022/3
<b>ASSETS</b>			
<b>CURRENT ASSETS:</b>			
Cash and cash equivalents (Note 20)	¥ 90,747	¥ 87,986	\$ 721,196
Securities (Notes 6 and 20)	709	2,398	19,655
Receivables (Note 20):			
Trade notes	3,906	4,544	37,245
Trade accounts	88,369	97,234	797,000
Unconsolidated subsidiaries and associated companies	3,526	5,132	42,065
Allowance for doubtful accounts	(31)	(32)	(262)
Inventories (Note 7)	108,659	142,002	1,163,950
Other current assets	16,637	20,980	171,967
Total current assets	312,524	360,247	2,952,844
<b>PROPERTY, PLANT AND EQUIPMENT (Notes 8 and 23):</b>			
Land	30,306	31,660	259,508
Buildings and structures	173,530	176,710	1,448,442
Machinery and equipment	600,575	605,545	4,963,483
Construction in progress	55,082	60,279	494,090
Total	859,496	874,195	7,165,532
Accumulated depreciation	(639,776)	(644,352)	(5,281,573)
Net property, plant and equipment	219,720	229,843	1,883,959
<b>INVESTMENTS AND OTHER ASSETS:</b>			
Investment securities (Notes 6 and 20)	71,562	68,951	565,172
Investments in and advances to unconsolidated subsidiaries and associated companies (Note 20)	12,001	13,960	114,426
Deferred tax assets (Note 14)	1,522	2,474	20,278
Retirement benefit asset (Note 11)	7,781	8,686	71,196
Other assets	15,272	14,672	120,262
Total investments and other assets	108,140	108,745	891,352
<b>TOTAL</b>	<b>¥ 640,385</b>	<b>¥ 698,836</b>	<b>\$ 5,728,163</b>

	Millions of Yen		Thousands of U.S. Dollars (Note 1)
	2021/3	2022/3	2022/3
<b>LIABILITIES AND EQUITY</b>			
<b>CURRENT LIABILITIES:</b>			
Short-term bank borrowings (Notes 9 and 20)	¥ 7,024	¥ 22,198	\$ 181,950
Current portion of long-term borrowings (Notes 9, 10, 20 and 22)	5,003	22,275	182,581
Payables (Notes 20 and 22):			
Trade notes	168	248	2,032
Trade accounts	48,164	60,475	495,696
Nontrade accounts	13,375	12,841	105,254
Construction	10,849	5,021	41,155
Unconsolidated subsidiaries and associated companies	1,420	1,464	12,000
Provision for environmental measures		14	114
Income taxes payable (Notes 14 and 20)	4,582	5,529	45,319
Other current liabilities	21,976	23,829	195,319
Total current liabilities	112,566	153,898	1,261,459
<b>LONG-TERM LIABILITIES:</b>			
Long-term borrowings (Notes 9, 10, 20 and 22)	255,572	236,029	1,934,663
Retirement benefit liability (Note 11)	8,003	6,713	55,024
Provision for environmental measures	195	125	1,024
Asset retirement obligations (Note 12)	1,268	1,255	10,286
Deferred tax liabilities (Note 14)	13,684	16,311	133,696
Other long-term liabilities	4,094	4,959	40,647
Total long-term liabilities	282,818	265,394	2,175,360
<b>COMMITMENTS AND CONTINGENT LIABILITIES (Notes 19, 21 and 25)</b>			
<b>EQUITY (Notes 13 and 28):</b>			
Share capital			
Common stock, authorized, 1,450,000,000 shares in 2022 and 2021; issued, 302,942,682 shares in 2022 and 2021	36,275	36,275	297,336
Capital surplus		14	114
Retained earnings	152,816	174,500	1,430,327
Treasury shares			
Treasury stock - at cost, 7,234,296 shares in 2022 and 1,609,633 shares in 2021	(1,446)	(6,090)	(49,918)
Accumulated other comprehensive income:			
Valuation difference on available-for-sale securities	36,884	36,813	301,745
Deferred gains or losses on hedges	(27)	27	221
Foreign currency translation adjustments	8,689	25,966	212,836
Remeasurements of defined benefit plans	4,660	4,509	36,959
Total	237,852	67,317	551,778
Non-controlling interests	7,148	7,526	61,688
Total equity	245,000	279,544	2,291,344
<b>TOTAL</b>	<b>¥ 640,385</b>	<b>¥ 698,836</b>	<b>\$ 5,728,163</b>

[WEB](#) Please see the notes to consolidated financial statements in Financial Section.

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## Consolidated Statements of Income

Daicel Corporation and Consolidated Subsidiaries  
Years Ended March 31, 2022 and 2021

	Millions of Yen		Thousands of U.S. Dollars (Note 1)
	2021/3	2022/3	2022/3
<b>NET SALES (Notes 15)</b>	¥ 393,568	¥ 467,937	\$ 3,835,549
<b>COST OF SALES (Notes 16 and 22)</b>	282,136	329,329	2,699,418
Gross profit	111,431	138,607	1,136,122
<b>SELLING, GENERAL AND ADMINISTRATIVE EXPENSES (Notes 16 and 17)</b>	79,708	87,910	720,573
Operating profit	31,723	50,697	415,549
<b>OTHER INCOME (EXPENSES):</b>			
Interest and dividend income	1,861	2,907	23,827
Gain on sales of investment securities	3,182	1,664	13,639
Share of profit of entities accounted for using equity method	1,785	1,950	15,983
Interest expense (Note 22)	(1,195)	(1,361)	(11,155)
Foreign exchange gain (loss)	53	1,685	13,811
Loss on retirement of non-current assets	(1,099)	(2,901)	(23,778)
Impairment loss (Note 24)	(3,786)	(9,985)	(81,844)
Other – net	516	1,624	13,311
Other income (expenses) – net	1,317	(4,414)	(36,180)
<b>PROFIT BEFORE INCOME TAXES</b>	33,040	46,283	379,368
<b>INCOME TAXES (Note 14):</b>			
Current	8,272	12,630	103,524
Deferred	2,333	1,598	13,098
Total income taxes	10,605	14,229	116,631
<b>NET PROFIT</b>	22,435	32,053	262,729
<b>NET PROFIT ATTRIBUTABLE TO NON-CONTROLLING INTERESTS</b>	2,722	799	6,549
<b>NET PROFIT ATTRIBUTABLE TO OWNERS OF THE PARENT</b>	¥ 19,713	¥ 31,254	\$ 256,180

	Yen		U.S. Dollars (Note 1)
	2021/3	2022/3	2022/3
<b>PER SHARE INFORMATION (Notes 2.t and 18):</b>			
Basic net profit	¥ 65.18	¥ 104.14	\$ 0.85
Cash dividends applicable to the year	34.00	32.00	0.26

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## Consolidated Statements of Comprehensive Income

Daicel Corporation and Consolidated Subsidiaries  
Years Ended March 31, 2022 and 2021

	Millions of Yen		Thousands of U.S. Dollars (Note 1)
	2021/3	2022/3	2022/3
<b>NET PROFIT</b>	¥ 22,435	¥ 32,053	\$ 262,729
<b>OTHER COMPREHENSIVE INCOME (LOSS) (Note 26):</b>			
Valuation difference on available-for-sale securities	10,357	(71)	(581)
Deferred gains or losses on hedges	46	55	450
Foreign currency translation adjustments	8,826	16,916	138,655
Remeasurements of defined benefit plans	2,693	(92)	(754)
Share of other comprehensive income (loss) of entities accounted for using equity method	854	1,039	8,516
Total other comprehensive income (loss)	22,779	17,847	146,286
<b>COMPREHENSIVE INCOME</b>	¥ 45,214	¥ 49,901	\$ 409,024
<b>TOTAL COMPREHENSIVE INCOME ATTRIBUTABLE TO:</b>			
Owners of the parent	¥ 42,055	¥ 48,364	\$ 396,426
Non-controlling interests	3,159	1,536	12,590

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## Consolidated Statements of Changes in Equity

Daicel Corporation and Consolidated Subsidiaries  
Years Ended March 31, 2022 and 2021

	Millions of Yen											
	Number of Shares of Common Stock Outstanding	Common Stock	Capital Surplus	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Income				Total	Non-controlling Interests	Total Equity
						Valuation Difference on Available-for-sale Securities	Deferred Gains or Losses on Hedges	Foreign Currency Translation Adjustments	Remeasurements of Defined Benefit Plans			
<b>BALANCE, APRIL 1, 2020</b>	310,781,761	¥ 36,275	¥ 31,692	¥ 271,762	¥ (5,050)	¥ 26,582	¥ (69)	¥ (656)	¥ 2,009	¥ 362,545	¥ 30,038	¥ 392,583
Net profit attributable to owners of the parent				19,713						19,713		19,713
Cash dividends, ¥34.00 per share				(10,415)						(10,415)		(10,415)
Restricted stock awards	232,604											
Repurchase of treasury stock	(9,681,271)				(8,286)					(8,286)		(8,286)
Disposal of treasury stock				(35)	209					173		173
Retirement of treasury stock				(11,681)	11,681							
Change in ownership interest of parent due to transactions with non-controlling interests			(31,692)	(116,527)						(148,220)	(19,110)	(167,330)
Net change in the year						10,301	42	9,346	2,651	22,341	(3,780)	18,561
<b>BALANCE, MARCH 31, 2021</b>	301,333,049	36,275		152,816	(1,446)	36,884	(27)	8,689	4,660	237,852	7,148	245,000
<b>ACCUMULATED EFFECT OF CHANGE IN ACCOUNTING PRINCIPLES</b>				(26)						(26)		(26)
<b>ADJUSTED BALANCE, MARCH 31, 2021</b>	301,333,049	36,275		152,789	(1,446)	36,884	(27)	8,689	4,660	237,826	7,148	244,974
Net profit attributable to owners of the parent				31,254						31,254		31,254
Cash dividends, ¥32.00 per share				(9,648)						(9,648)		(9,648)
Restricted stock awards	377,191		14		338					353		353
Repurchase of treasury stock	(6,001,854)				(4,983)					(4,983)		(4,983)
Retirement of treasury stock												
Initial inclusion of certain subsidiaries in consolidation			0	104						104	(150)	(45)
Net change in the year						(70)	55	17,276	(151)	17,109	528	17,638
<b>BALANCE, MARCH 31, 2022</b>	295,708,386	¥ 36,275	¥ 14	¥ 174,500	¥ (6,090)	¥ 36,813	¥ 27	¥ 25,966	¥ 4,509	¥ 272,017	¥ 7,526	¥ 279,544

	Thousands of U.S. Dollars (Note 1)											
	Common Stock	Capital Surplus	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Income				Total	Non-controlling Interests	Total Equity	
					Valuation Difference on Available-for-sale Securities	Deferred Gains or Losses on Hedges	Foreign Currency Translation Adjustments	Remeasurements of Defined Benefit Plans				
<b>BALANCE, MARCH 31, 2021</b>	\$ 297,336		\$ 1,252,590	\$ (11,852)	\$ 302,327	\$ (221)	\$ 71,221	\$ 38,196	\$ 1,949,606	\$ 58,590	\$ 2,008,196	
<b>ACCUMULATED EFFECT OF CHANGE IN ACCOUNTING PRINCIPLES</b>			(213)						(213)		(213)	
<b>ADJUSTED BALANCE, MARCH 31, 2021</b>	297,336		1,252,368	(11,852)	302,327	(221)	71,221	38,196	1,949,393	58,590	2,007,983	
Net profit attributable to owners of the parent			256,180						256,180		256,180	
Cash dividends, \$0.26 per share			(79,081)						(79,081)		(79,081)	
Restricted stock awards		\$ 114		2,770					2,883		2,883	
Repurchase of treasury stock				(40,844)					(40,844)		(40,844)	
Retirement of treasury stock												
Initial inclusion of certain subsidiaries in consolidation		0	852						852	(1,229)	(368)	
Net change in the year					(573)	450	141,606	(1,237)	140,237	4,327	144,573	
<b>BALANCE, MARCH 31, 2022</b>	\$ 297,336	\$ 114	\$ 1,430,327	\$ (49,918)	\$ 301,745	\$ 221	\$ 212,836	\$ 36,959	\$ 2,229,647	\$ 61,688	\$ 2,291,344	

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## Consolidated Statements of Cash Flows

Daicel Corporation and Consolidated Subsidiaries  
Years Ended March 31, 2022 and 2021

	Millions of Yen		Thousands of U.S. Dollars (Note 1)
	2021/3	2022/3	2022/3
	<b>OPERATING ACTIVITIES:</b>		
Profit before income taxes	¥ 33,040	¥ 46,283	\$ 379,368
Adjustments for:			
Income taxes paid	(9,976)	(13,558)	(111,131)
Income taxes refund	3,385	3,556	29,147
Depreciation	26,323	27,490	225,327
Impairment loss	3,786	9,985	81,844
Amortization of goodwill	1,081	705	5,778
Loss on retirement of non-current assets	1,099	2,901	23,778
Increase (decrease) in provision for environmental measures	(2,077)	(56)	(459)
Loss (gain) on sales of investment securities	(3,182)	(1,664)	(13,639)
Share of loss (profit) of entities accounted for using equity method	(1,785)	(1,950)	(15,983)
Changes in assets and liabilities:			
Decrease (increase) in trade receivable	(10,846)	(3,429)	(28,106)
Decrease (increase) in inventories	11,091	(27,480)	(225,245)
Increase (decrease) in trade payable	2,183	7,924	64,950
Other – net	3,745	(7,712)	(63,213)
Net cash provided by operating activities	57,869	42,993	352,401
<b>INVESTING ACTIVITIES:</b>			
Net decrease (increase) in time deposits	1	(55)	(450)
Capital expenditures	(36,790)	(47,471)	(389,106)
Purchase of investment securities	(916)	(165)	(1,352)
Purchase of shares of subsidiaries and associates		(329)	(2,696)
Proceeds from sales and redemption of investment securities	5,048	2,809	23,024
Proceeds from sales of property, plant and equipment	74	876	7,180
Loan advances	(18)	(400)	(3,278)
Collection of finance receivables	809	84	688
Other – net	(2,427)	(1,875)	(15,368)
Net cash used in investing activities	(34,220)	(46,528)	(381,377)
<b>FINANCING ACTIVITIES:</b>			
Net increase (decrease) in short-term borrowings	(238)	14,696	120,459
Proceeds from long-term borrowings	88,177	1,704	13,967
Repayments of long-term borrowings	(10,484)	(5,037)	(41,286)
Proceeds from issuance of bonds	99,542		
Dividends paid	(10,415)	(9,645)	(79,057)
Dividends paid to non-controlling interests	(6,940)	(1,008)	(8,262)
Purchase of treasury shares	(8,286)	(4,983)	(40,844)
Payments from changes in ownership interests in subsidiaries that do not result in change in scope of consolidation	(167,330)	(150)	(1,229)
Repayments of lease liabilities	(1,076)	(1,029)	(8,434)
Net cash used in financing activities	(17,050)	(5,452)	(44,688)
<b>EFFECT OF EXCHANGE RATE CHANGE ON CASH AND CASH EQUIVALENTS</b>	3,475	6,137	50,303
<b>NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS</b>	10,073	(2,850)	(23,360)
<b>CASH AND CASH EQUIVALENTS, BEGINNING OF YEAR</b>	80,674	90,747	743,827
<b>INCREASE IN CASH AND CASH EQUIVALENTS RESULTING FROM INCLUSION OF SUBSIDIARIES IN CONSOLIDATION</b>		89	729
<b>CASH AND CASH EQUIVALENTS, END OF YEAR</b>	¥ 90,747	¥ 87,986	\$ 721,196

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# Company Data (as of March 31, 2022)

## Corporate Overview

Corporate Name: Daicel Corporation  
 Establishment: September 8, 1919  
 Capital: ¥36,275,440,089  
 Number of employees: 11,104 (Consolidated);  
 2,553 (Non-consolidated)

## Status of Stock

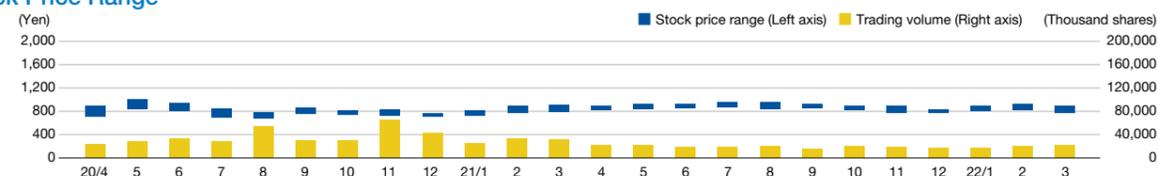
Common stock authorized: 1,450,000,000 shares  
 Issued: 302,942,682 shares  
 Listing: Tokyo Stock Exchange  
 Prime Market  
 (Transition in April 2022)  
 Stock code: 4202  
 Shareholder registry administrator:  
 Sumitomo Mitsui Trust Bank, Limited 1-4-1,  
 Marunouchi, Chiyoda-ku, Tokyo, Japan  
 Number of shareholders: 25,617  
 Accounting auditor: Deloitte Touche Tohmatsu LLC

## Principal Domestic Locations

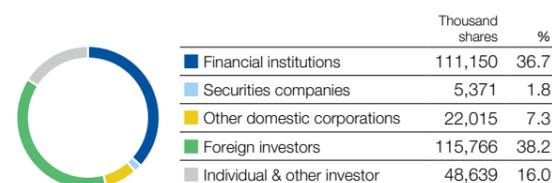
- Office**
- Osaka Head Office**  
Grand Front Osaka Tower-B, 3-1, Ofuka-cho, Kita-ku, Osaka 530-0011  
Tel: +81-6-7639-7171 Fax: +81-6-7639-7181
  - Tokyo Head Office**  
JR Shinagawa East Bldg., 2-18-1, Konan, Minato-ku, Tokyo 108-8230  
Tel: +81-3-6711-8111 Fax: +81-3-6711-8100
  - Nagoya Sales Office**  
JP Tower Nagoya, 1-1-1, Meieki, Nakamura-ku, Nagoya, Aichi 450-6325  
Tel: +81-52-582-8511 Fax: +81-52-582-7943
- Training Center**
- Operation Training Center (TRC)**  
14-1, Kouto 3-chome, Kamigori-cho, Akou-gun, Hyogo 678-1205
- Innovation Park**
- 1239, Shinzaika, Aboshi-ku, Himeji-shi, Hyogo 671-1283
- Plant**
- Himeji Production Sector/Aboshi Plant**  
1239, Shinzaika, Aboshi-ku, Himeji-shi, Hyogo 671-1281
  - Himeji Production Sector/Hirohata Plant**  
12, Fuji-cho, Hirohata-ku, Himeji-shi, Hyogo 671-1123
  - Harima Plant** 805, Umaba, Ibogawa-cho, Tatsuno-shi, Hyogo 671-1681
  - Arai Plant** 1-1, Shinko-cho, Myoko-shi, Niigata 944-8550
  - Ohtake Plant**  
1-4, Higashisakae 2-chome, Otake-shi, Hiroshima 739-0695
  - Kanzaki Plant** 12-1, Kanzaki-cho, Amagasaki-shi, Hyogo 661-0964

# Stock Information

## Stock Price Range



## Shareholder Composition (As of March 31, 2022)



## Top 10 Shareholders (As of March 31, 2022)

Shareholder	Thousand shares	Distribution of shares issued and outstanding (%)
The Master Trust Bank of Japan, Ltd. (Trust Account)	45,567	15.40
NORTHERN TRUST CO. (AVFC) RE SILCHESTER INTERNATIONAL INVESTORS INTERNATIONAL VALUE EQUITY TRUST	20,967	7.09
Nippon Life Insurance Company	17,402	5.88
Custody Bank of Japan, Ltd. (Trust Account)	15,093	5.10
NORTHERN TRUST CO. (AVFC) RE U.S. TAX EXEMPTED PENSION FUNDS	11,035	3.73
FUJIFILM Holdings Corporation	8,390	2.83
NORTHERN TRUST CO. (AVFC) SUB A/C NON TREATY	7,754	2.62
Sumitomo Mitsui Banking Corporation	7,096	2.39
MUFG Bank, Ltd.	6,503	2.19
BBH FOR UMB BK-152 105-PEAR TREE PFVF	6,314	2.13

\* Each rate of shareholding was calculated after deducting the number of treasury shares from the number of shares outstanding

# Independent Third Party Assurance Report



## Independent Assurance Statement

August 16, 2021

Mr. Yoshimi Ogawa  
 President and CEO  
 Daicel Corporation

### 1. Purpose

We, Sustainability Accounting Co., Ltd., have been engaged by Daicel Corporation (hereinafter "the Company") to provide limited assurance on greenhouse gas (GHG) emissions of the Company in FY2021/3, which are 1,469 thousand t-CO<sub>2e</sub> (Scope1), 38 thousand t-CO<sub>2e</sub> (Scope2 Market-Based) and 1,121 thousand t-CO<sub>2</sub> (Scope3 Categories 1,2,3,4,5,6 and 7). The purpose of this process is to express our conclusion on whether the GHG emissions were calculated in accordance with the Company's standards. The Company's management is responsible for calculating the GHG emissions. Our responsibility is to independently carry out a limited assurance engagement and to express our assurance conclusion.

### 2. Procedures Performed

We conducted our assurance engagement in accordance with International Standard on Assurance Engagement 3000 (ISAE 3000) and 3410 (ISAE3410). The key procedures we carried out included:

- Interviewing the Company's responsible personnel to understand the Company's standards
- Reviewing the Company's standards
- Performing cross-checks on a sample basis and performing a recalculation to determine whether the GHG emissions were calculated in accordance with the Company's standards.

### 3. Conclusion

Based on the procedures performed, nothing has come to our attention that causes us to believe that the GHG emissions have not been calculated in all material respects in accordance with the Company's standards.

We have no conflict of interest relationships with the Company.

Takashi Fukushima  
 Representative Director  
 Sustainability Accounting Co., Ltd.

Note: Third-party assurance for GHG emissions data for FY2022/3 is expected to be received during FY2023/3

## Thoughts on the Cover

The illustration on the cover is inspired by the image of a world where diverse atoms are connected and create diverse values, flying in and out of "outer space," a symbol of infinite possibilities and the providence of nature.

Daicel, which exists as an element within this world, is a company that seeks to create happiness for society and people by creating new reactions and fusions with like-minded partners, armed with the pride of having created naturally derived materials and innovative technologies that no one else can imitate.

We will continue to create an endless future that we can love with pride and technology as a chemical company.



## Daicel Corporation

### Inquiries:

Investor Relations & Corporate Communications

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Fax: +81-3-6711-8100

<https://www.daicel.com/en/>

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