



DAICEL REPORT 2024

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Message from the President and CEO



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Small Meeting with Outside Directors

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. 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 for Financial and Non-Financial Information

DAICEL REPORT 2024 (Integrated Report)



Management's approach, vision for the future, strategy and initiatives are compiled and disclosed in a consistent format. 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.

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



Related Web Content

■ Sustainability Website

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

More detailed and comprehensive information about sustainability is sorted and presented under the items of Environment (E), Society (S), and Governance (G).

Sustainability Report

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

Information on “Sustainability Website” as of the end of August every year is available in PDF format in the Archives.

ESG Data

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

Only the detailed data regarding our sustainability initiatives is aggregated and presented.

Corporate Governance Report

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

■ Investor Relations Information Website

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

Contains financial information such as Financial Results and Financial Result Presentation Materials mainly for the reference of investors, shareholders and many other stakeholders.

Securities Report (Japanese only)

<https://www.daicel.com/ir/annualreport.html>

At a glance

<https://www.daicel.com/en/ir/glance.html>

Presents the overview, history and strengths of the Daicel Group in a simple format.

■ Corporate Website

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

Long-Term Vision

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

Mid-Term Management Strategy

Businesses & Products

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

Daicel Corporation Official Channel (YouTube)

On our official YouTube channel, we showcase the Daicel Group's appeal from a variety of angles, including commercial videos, videos of experiments conducted by our researchers, and testimonials from our co-creation partners.

<https://www.youtube.com/channel/UCi-akVwAvVbSvAYC4Ei6BQw>



■ Entities within the Scope of Reporting

The Daicel Group consists of Daicel Corporation and 75 Group companies. The following terminologies are used in this report.

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

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

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

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

Disclaimer and Caution with Respect to Forward-Looking Statements

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.

■ Reporting Period

FY2024/3 (April 1, 2023 through March 31, 2024)

* Includes some content outside the reporting period

■ Guidelines Used for Reference

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

● Basic Philosophy

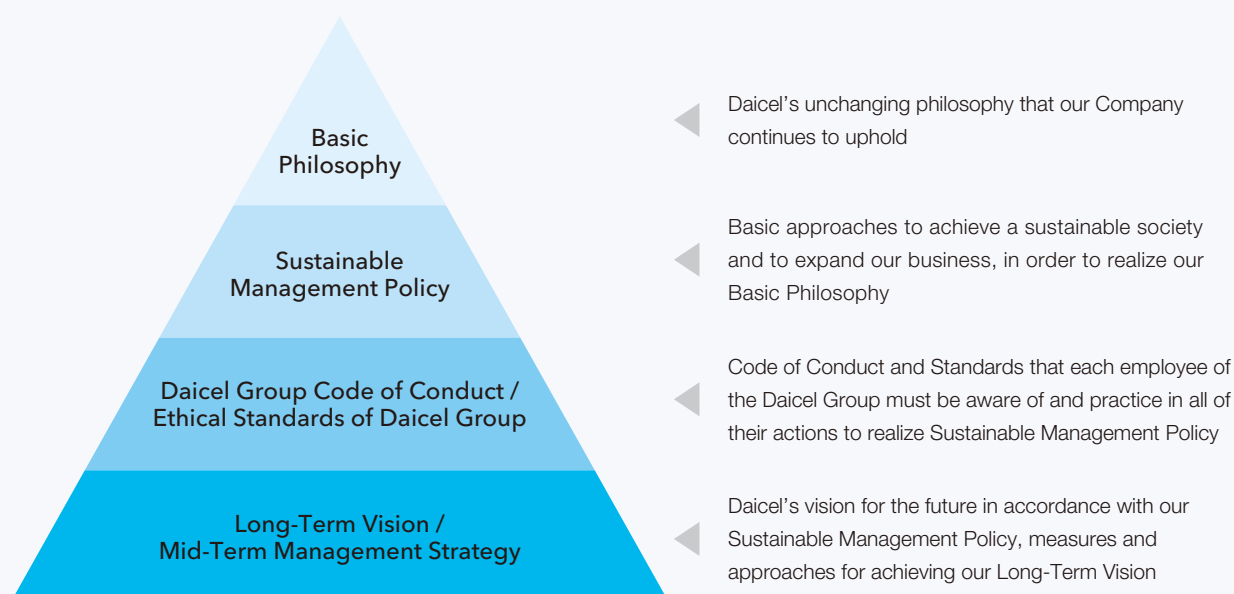
The company making lives better by co-creating value

Sustainable Value Together

In 1919, Dainippon Celluloid Co., Ltd. (the predecessor to today's Daicel Corporation) was established as a joint venture of eight Japanese celluloid companies. This restructuring of the industry eliminated the problem of poor quality caused by excessive competition in the celluloid industry and overharvesting of camphor (indiscriminate felling of camphor trees), a raw material. In addition to enriching people's lives through our products, we have also contributed to improving added value throughout the supply chain by properly managing raw material resources, stabilizing production and quality, and nurturing processing companies ever since the establishment of the Company.

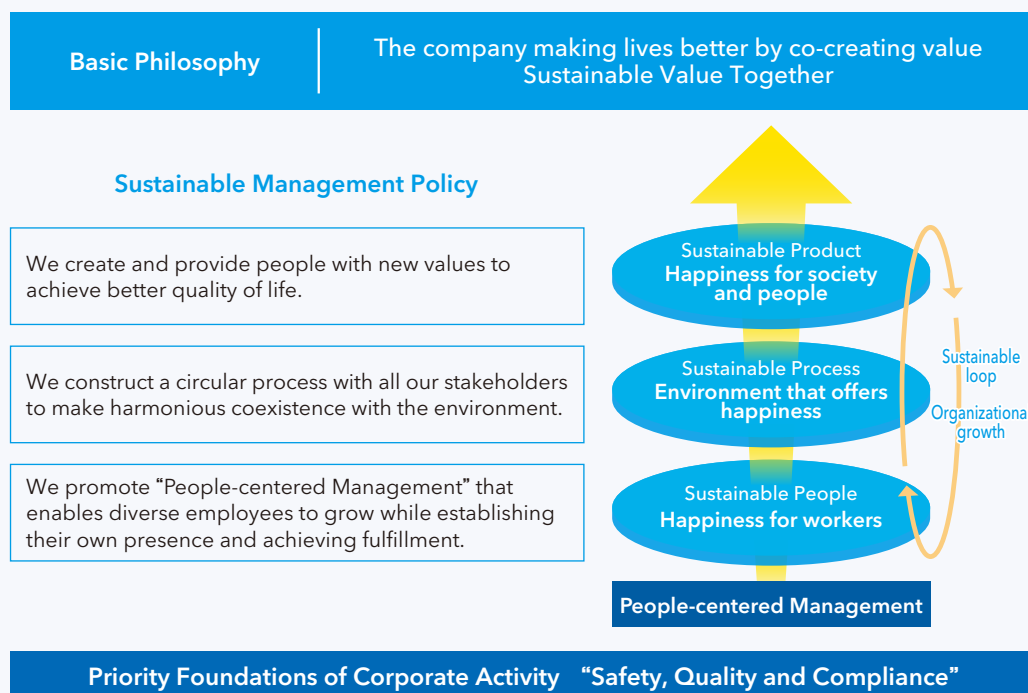
While Daicel's business and organization have significantly changed since its founding over a hundred years ago, the spirit of bringing happiness to people has remained unchanged since then. We will work with our customers and partners to contribute to the creation of a sustainable society.

● Corporate Philosophy



● Sustainable Management Policy

Upon a priority 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.



● Daicel Group Code of Conduct

1. We conduct ourselves with strong moral and ethical standards.
2. We treat others with dignity and respect.
3. Though we have independent thoughts and actions, we collaborate to achieve optimal result as necessary.
4. We create a "future of promise" for all by embracing new perspectives, adopting a mindset of change, and embracing the spirit of challenge.
5. We proactively engage with individuals beyond our organization, fostering new benefits by promoting open partnerships with diverse companies and entities.
6. We recognize that safety, quality, and compliance are the pillars of the manufacturing industry. Therefore, we prioritize them in our daily operations, continually striving to meet the expectations and earn the trust of our customers and society.

DAICEL GROUP'S STRENGTHS

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Message from the President and CEO



Y. Ogawa

Yoshimi Ogawa
President and CEO, Daicel Corporation

Aiming to Align Ecology and Economy, and Building Organically Connected Value Chains

**With an eye on the creation of a circular society and sustainable growth,
we will expand the scope of value co-creation from the Daicel Group to our partners.**

■ Turning Point for Bold Reforms

Daicel is currently implementing its Mid-Term Management Strategy "Accelerate 2025," and FY2024/3 was the turning point for the reforms we have advanced up to now. Looking back on our business performance, we achieved increased sales and profits, posting record net sales and EBITDA, despite a longer-than-expected stagnation in electronic materials.

Under the current Mid-Term Management Strategy, we have made a major shift from conventional targets focusing on the growth of sales and profits to management with an emphasis on speed and flexibility in response to sudden changes in society, enhanced agility with a transformation to asset-light, and awareness on the profit ratio and capital efficiency. A succession of speedy and bold reforms thus far—including our response to the COVID-19 pandemic at the very beginning of the Mid-Term Management Strategy period, withdrawal from the defense industry, consolidation of production bases in the Safety Business, acquisition of Polyplastics Co., Ltd. (hereinafter "Polyplastics") as a wholly owned subsidiary, narrowing down of research themes, and the first major human resource system reforms in two decades—has exerted pressure on a large number of employees, even causing strains in the organization. Nevertheless, we recognize that we cannot change the Company without going that far, so we have deliberately chosen a line that tests our limits. Our good business performance in FY2024/3, partly boosted by the tailwind of the weak yen, is the result of company-wide reforms, and I am grateful for the hard work of our employees.

On the other hand, when considering these measures and

reforms as well as on-site efforts to tackle them, I, as a chief executive officer, also believe they should result in better figures and that the Company's true strength is much greater. Hence, we must more steadily draw out those results throughout the second half of the Mid-Term Management Strategy period.

■ Prospects for the Second Half of the Mid-Term Management Strategy Period

Up to now, we have implemented corporate culture reforms, such as a transformation to market-oriented organizational and business structures, selection and concentration of the business through portfolio management, transformation to asset-light, and drastic review of existing joint ventures. In addition, as we have passed the halfway mark of the current Mid-Term Management Strategy, we started the operation of the raw material plant for acetic acid, a large-scale investment project, in FY2024/3, and also a plant for increased production in the Engineering Plastics Business, a growth investment, is scheduled to go online in FY2025/3.

With regard to our current financial position, we are approaching the targets set forth in the Mid-Term Management Strategy. Our projections suggest that net sales, operating income, and EBITDA will hit record highs in FY2025/3, and EBITDA is expected to exceed 100 billion yen one year earlier than anticipated in the Mid-Term Management Strategy. However, most of this recent business growth stems from the growth of existing businesses. Our unique existing businesses and product lineup are some of our strengths; nevertheless, Daicel will become a more exciting manufacturer only by

creating new businesses and products, and not just relying on existing businesses that serve as the base for its profitability. Although many of our products have long life cycles, mature businesses will eventually decline someday. In this environment, if new business ventures emerge, and our employees succeed in overcoming the birth pains and get those businesses on track, they will gain solid confidence. The sense of fulfillment from finally creating or completing something despite any hardships will be engraved as the Company's new DNA, which in turn will serve as a catalyst for the next generation of new businesses—unless we become a company with such DNA, we will not be able to provide value in a sustainable manner. A major aim of ours is the creation of new businesses, which was also the case for the restructuring of our R&D organization in April 2024. By dividing our R&D themes into short-term and medium- to long-term ones and swiftly connecting the former to commercialization and profitability, we will nurture an environment where our employees can gain experience and confidence and more ambitiously tackle their next development projects.

■ Pages 26-27: Mid-Term Management Strategy

■ Pages 28-31: Financial Strategy

■ Vertical Integration M&A

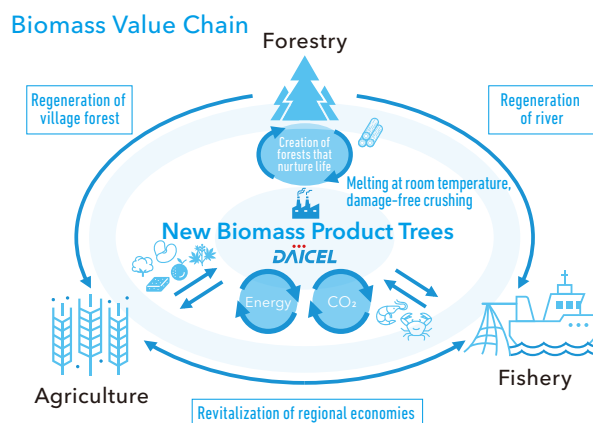
M&A is also an important strategy for sustainable growth. It provides opportunities to incorporate external knowledge and ideas we lack and to stimulate R&D activities. I believe that vertical integration M&A suits the current situation of the Company. For example, integration with companies upstream or downstream in the supply chain will definitely generate synergistic effects. In OP-II* of the current Mid-Term Management Strategy, we acquired all the shares held by our joint venture partner and made Polyplastics a wholly owned subsidiary in 2020. Some argued at the time that this was an overvalued acquisition, but I made my decision prioritizing speed. I believe that the acquisition has already sufficiently shown positive results. In this M&A, both Polyplastics and Daicel incorporate each other's differing corporate cultures and respective strong points, and the two companies are united to enhance the Group's strength. As both had previous contact with each other as Group companies for some time, in a way, it felt like we welcomed Polyplastics into a compatible organization. Going forward, we will endeavor to conduct M&As with

impacts significant enough to provide greater impetus within the Company.

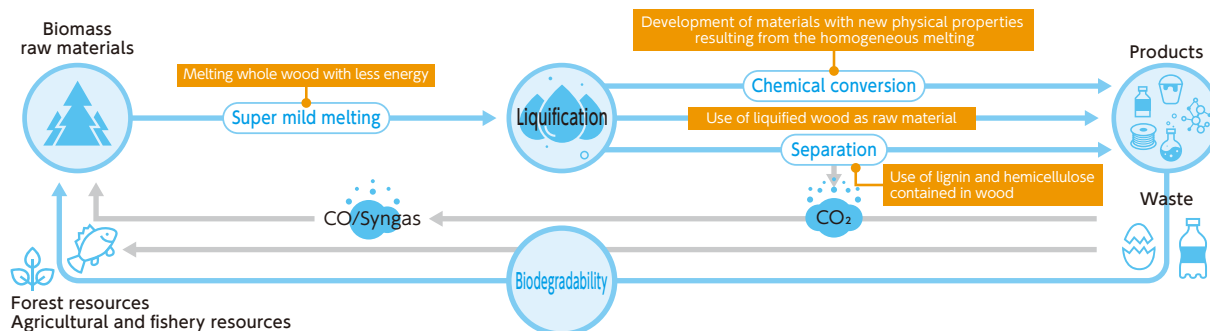
■ Technological Innovations That Help Align Ecology and Economy

The direction of our research and technical development activities, which lead to the creation of new businesses, vividly illustrates the ideal company we are aiming for in the medium to long term. We are oriented toward providing value while striking a balance between ecology and economy that is not only environment- or nature-friendly but also economically viable, and we are promoting technological innovation to this end. Examples of this include our "Biomass Value Chain Concept," "Ultra Solar-reduction with Nanodiamonds," and "microfluidic device plant." The Biomass Value Chain Concept aims to achieve the circulation of forests, which cover 70% of Japan's land area, as a renewable resource with New Biomass Product Trees at the core, using a technology jointly developed with universities for gently melting wood. We are advancing research toward real world implementation under industry-academia collaboration, centered on Kanazawa University's Biomass Green Innovation Center, which started full-scale operations in April 2023.

Ultra Solar-reduction with Nanodiamonds is a technology that reduces CO₂ into CO and recycles it using only sunlight, which contributes to carbon neutrality and carbon negativity. In collaboration with Kanazawa University, we are making strides toward implementing it at our Aboshi Plant. Microfluidic devices are a technology that



New Biomass Product Trees





produces the target substance under ideal chemical reaction conditions in channels on a glass substrate, the size of a business card. They will eliminate the need for refining processes, which consume approximately 80% of the energy in conventional plants. We aim to implement it in the resist polymer manufacturing plant at the Arai Plant from the end of FY2025/3 and throughout FY2026/3.

Technological innovations like this cannot be achieved with the efforts of the Company alone. In order to achieve our major goal of contributing to circular creation while aligning ecology and economy, value co-creation with like-minded partners is essential. As the alignment of ecology and economy is not limited to research and technical development, we will establish the Virtual Value Chain Control Center (VCC) and aspire to realize the overall optimization of production across the supply chain.

 **Pages 44-45: Technological Innovation toward Carbon Neutrality**

■ Evolution of DAICEL Production Innovation

The Company established “DAICEL Production Innovation” in 2000, to which AI was subsequently incorporated, leading to its evolved version, the “Autonomous Production System,” in 2020. This manufacturing system is one of the Company’s major strengths. DAICEL Production Innovation is an ever-evolving system. As the next step, we will build on this and set up the VCC as a measure to improve added value across the supply chain. The VCC is an integrated management base that regards the supply chain, consisting of multiple manufacturers, as one virtual corporate entity. Linking the

supply chain via DAICEL Production Innovation makes it possible to visualize information across companies and derive optimal solutions in the chain. Specifically, we have learned that it will lead to a reduction in energy consumption, excess inventory, and production and logistics costs, in addition to improved production efficiency and product quality. The Company has already linked together the production information at both the Aboshi Plant in Hyogo Prefecture and the Ohtake Plant in Hiroshima Prefecture in real time and realized a virtual factory that controls production plans according to the balance of energy as if they were a single virtual plant. We plan to expand the scope to the supply chain by establishing the VCC and to equip the center with various functions.

We have been steadily making preparations for a shift to a new kind of manufacturing that harnesses DAICEL Production Innovation to improve added value across the supply chain in our OP-III*. We already finished designing the content to be introduced in the VCC, and we are checking for any effects through trials at each base. The VCC will be established adjacent to the Integrated Production Center at the Aboshi Plant. What comes to mind first is the optimization of the acetyl chain, and we will incorporate the Aboshi Plant, Ohtake Plant, and production bases of other companies into a single virtual corporate entity. We will then monitor safety and quality in the entity and operate it such that it presents optimal solutions across a wide range of areas, such as production planning, logistics, regular maintenance and repairs, and labor.

 **Pages 38-39: Next-Generation Manufacturing and Human Resource Development in the Chemical Industry**

* Mid-Term Management Strategy is divided into three operations (OP) that expand the scope of co-creation from Daicel alone to the Daicel Group to partners. Page 24: Long-Term Vision “DAICEL VISION 4.0”

While the Mid-Term Management Strategy only covers five years, it does not exist in a vacuum. It builds on what our predecessors accumulated and left behind throughout our more than 100 years of history. Our employees are the ones who will pass down and develop the history of the Daicel Group. Whether we can create a future of promise falls on the shoulders of our current employees. While AI use and DX are important, we cannot create such a future without the power of people.

■ Our Philosophy That Has Lasted Since Our Foundation

Daicel's Basic Philosophy is "the company making lives better by co-creating value." Based on this philosophy, the Company's current Long-Term Vision describes our initiatives to realize earth- and people-friendly manufacturing. Without being confined to the limits of the company framework, we plan to become a new business group by pursuing value chains. Such ideas have been continuously fostered by the Company. Since our foundation, we have had the idea of co-existing with forests and of creating value through working collaboratively across the

supply chain. Before the foundation of Dainippon Celluloid Co., Ltd. (the predecessor to today's Daicel Corporation) in 1919, there were too many celluloid manufacturers and processing plants. This led to a shortage of camphor, a raw material used in plasticizers, and the excessive felling of camphor trees in Taiwan. Concerned by the situation, our first president, Mokichi Morita, preached nature conservation through the managed felling of trees and improved international competitiveness through quality stability, leading to the foundation of the Company through a merger of eight celluloid manufacturers. From early on after our foundation, we conducted management with an emphasis on creating value while striking a balance along the supply chain. In particular, the Company pays attention to nurturing and supporting sales agencies and processing companies and has conducted the "maintenance of orderly marketing" several times.

In light of our ideas since our foundation, the creation of a circular society through the Biomass Value Chain is a very Daicel-esque idea. Actually, even looking at the percentages of raw materials purchased, I believe that the Company would be positioned closest to biomass among the materials industries. Our main raw materials are methanol and wood-derived pulp, while



raw materials derived from crude oil account just for around 20%. The fact that the Company has such an origin is the very reason why I would like to make Daicel more of a leader in the fields of sustainability and Sustainable Development Goals (SDGs). Our unwavering direction is to contribute to the creation of a circular society while striving to align ecology and economy, and our mission is to advance technological innovation to this end.

■ Return to Humanity

Since the 1990s, the Company has improved productivity by digitalizing (DX) production and office work using the IT available at the time. With the establishment of the WVCC in sight, it is now increasingly necessary to promote DX, including AI use. As such, we will create a corporate culture that actively incorporates AI. Nevertheless, the Company's pillar of "People-Centered Management" remains unchanged. I believe that we need a return to humanity to prevent DX efforts from weakening ties between people. DX and humanity are not intrinsically incompatible with each other. We have made designs in the systemization phase of DAICEL Production Innovation in a way that maintains humanity. Rather than digitalizing everything, leaving decision-making to humans will help both people and systems to function well.

No matter how much we promote AI use and DX, humans have creative capabilities that go beyond these tools. Forging ahead with DX and covering tasks traditionally done by humans will leave room for people to think about their next steps, allowing them to do more creative work.

■ Exciting Company That Creates a Future of Promise

Drawing on my past experience, I know that people do not change that easily. In that regard, if people change even a little, that change is significant. What managers can do to have employees change themselves on their own is raise awareness and give inspiration by changing the environment. Since assuming the post of President and CEO in 2019, I have implemented various reforms including organizational changes. In a way, these reforms are measures to have employees realize and think about "what they want to do and what they need to do." I am increasingly sensing that our employees have actually changed, and more and more people outside the Company tell me that Daicel is exciting and that Daicel has changed. For me, an exciting company is the best.

The driving force behind an exciting company lies in having each and every employee think about and act on "what they want to do." For instance, development themes and the creation of related systems are not things that should be bestowed by the

Company; rather, employees should think about and act on "what they want to do." I believe that is the ideal approach. The reason we adopted broad task force structures for our R&D organization is that we wanted to encourage employees to think and act by themselves within those general frameworks. I hear that some projects have fairly intense discussions, but those involved keep them secret and tell me nothing about them. However, I find no problem with that. They should take approaches that they think are exciting.

I expect that in the near future, there will be a technological discontinuity; in other words, technologies will emerge that are not extensions of existing ones. Companies that spearhead the next generation of technologies at that time are sure to survive. There is nothing more exciting than promoting technological innovation and creating a future of promise. The Company is working on a large number of revolutionary technologies with an eye on the future, while implementing the Long-Term Vision and Mid-Term Management Strategy. "Ultra Solar-reduction with Nanodiamonds" and the "microfluidic device plant" mentioned above are good examples. Regarding these R&D themes, we have already narrowed down our targets in terms of which processes will be implemented in which plants. By the end of FY2026/3, the final year of the Mid-Term Management Strategy, we will complete as many themes as possible and connect them to commercialization and profitability. There are also long-term themes, and a typical example is the "Biomass Value Chain Concept." We will continue to tackle these long-term themes, too, as stepping stones to lead the next generation of technologies. Moreover, with the establishment of the WVCC, DAICEL Production Innovation, which is one of our strengths, will enter a stage of improving added value across the supply chain.

These technological innovations can already generate good results for a single company, but if we share them within the supply chain, we can expect even greater results. After all, our founding philosophy of co-existence and co-prosperity is important. While working in unison with many people to share knowledge, the Company is in the middle of creating a future of promise through value co-creation.

At a Glance

We support the worldwide monozukuri manufacturing through the power of chemistry. (As of March 31, 2024)



Medical / Healthcare

► Page 50

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

Smart

► Page 52

We provide new solutions to the electronic materials market that makes life more enjoyable and fosters technical innovation.

Safety

► Page 54

We provide safety and security to a wide range of industries with One Time Energy® technology developed through our airbag inflator business, which boasts a high global market share.

Materials

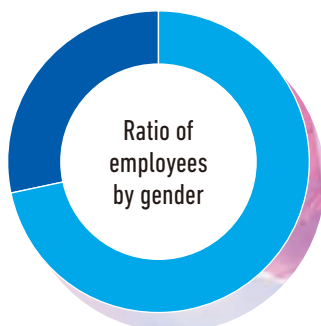
► Page 56

We provide value to a wide range of industries on the strength of our diverse product lineup centered on the acetyl chain.

Engineering Plastics

► Page 58

We provide high-function, high-value-added solutions to a wide range of industries with our technological capabilities cultivated over the years as a pioneer in engineering plastics.



Male: 7,986 (71.7%)
Female: 3,148 (28.3%)

558.1 billion yen
Consolidated net sales

62.4 billion yen
Consolidated operating income

96.1 billion yen
EBITDA

FY2024/3 results*

World market leader



Chiral columns

Chromatographic columns for separation of optical isomers. Contributing to the provision of safe medicine by separating active pharmaceutical components



BELLOCEA®

(spherical cellulose acetate for cosmetics)

Its marine biodegradability is expected to contribute to solving the marine plastic waste problem in the cosmetics industry

Net sales
13.9 billion yen
Composition ratio
2.5%

World market leader



Cycloaliphatic epoxies

The world's only manufacturing process that contains no impurities and no chlorine, so it is widely used in electrical materials applications where reliability and durability are required. It is also attracting a great deal of attention for EV applications



Solvent for electronic materials

High purity, low metal solvent production and quality control system with a proven track record in semiconductor process applications

Net sales
33.8 billion yen
Composition ratio
6.1%

Japanese market leader



Automobile airbag inflators

Supplying the key component for automobile airbag systems that protect passengers in the event of a collision



Pyro-Fuse

Supporting safe daily living by expanding One Time Energy® technology (developed in the course of producing inflators) to industrial applications other than automobiles

Net sales
95.6 billion yen
Composition ratio
17.1%

Japanese market leader



Acetic acid

The only manufacturer of acetic acid in Japan. Acetic acid is an environment-friendly ingredient for plastic products, providing solutions as an environment-friendly material

World market leader



Cellulose acetate for LCD optical films (TAC)

Utilizing its superior optical characteristics, transparency, and smoothness, it is used as a protection film for LCDs

Net sales
182.2 billion yen
Composition ratio
32.7%

World market leader



Polyacetal (POM)

Used in a wide range of applications such as automobiles, electronics and electrics, and industrial equipment, contributing to the development of the major industries of each era



Liquid crystal polymer (LCP)

Used in many ultra-compact precision connectors for the latest IT devices, such as tablets and smartphones, which are becoming smaller and smaller, and support public infrastructure

Net sales
226.8 billion yen
Composition ratio
40.7%

* Figures for other segments are not included in net sales and composition ratio. FY2024/3 sales reflect the change in segmentation of TAC (Smart to Materials) and Cycloaliphatic epoxies and Caprolactone Derivatives (Materials to Smart) due to organizational changes effective April 1, 2024.

History of Daicel Group

Value Creation, Past and Present

Ever since its founding in 1919, Daicel has achieved 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-

The Birth of the Cellulose Business and a New Organic Chemicals Business

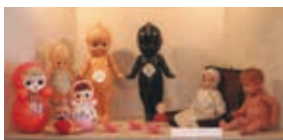


Daicel was founded in 1919 through the merger of eight celluloid companies. From the beginning, Daicel tried to make celluloid nonflammable and ended up developing acetate plastic made mainly from cellulose acetate. After establishing the Arai Plant in 1935, we then, in 1938, laid the foundations for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

Celluloid

Contributing to the development of the chemical industry

1919 Daicel was founded through the merger of eight celluloid companies. As a pioneer in the field of plastics, we contributed to the development of the Japanese chemical industry.



Cellulose acetate

Taking on the challenge of nonflammability

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



1950s

Full-Scale Production in Our Cellulose Business



We rounded out our cellulose business in the 1950s. Production of cellulose acetate went into full operation at our Aboshi Plant in 1950. In 1953, this plant started the production of triacetyl cellulose (TAC), which contributes to fireproofing films for movies and photography and adding advanced properties to these films. Then, in 1958, our Sakai Plant began production of acetate tow for cigarette filters.

Triacetyl 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.



1960s

Entry into the Petrochemical Business



During the 1960s, Daicel participated in one of Japan's first petrochemical complexes and began its petrochemical business in Hiroshima Prefecture's Otake City. With the rise of petrochemistry, new plastics saw an era of rapid growth. In the synthetic resins business, in addition to manufacturing AS resin and ABS resin, Daicel entered into a joint venture with a U.S. company to establish Polyplastics Co., Ltd. in 1964 and went into the Engineering Plastics business.

Polyacetal (POM)

Taking on the challenge of metal replacement

1964 Daicel began manufacturing engineering plastics, which serve as metal substitutes in various components. Their use has contributed to the development of lightweight components.



1980s

Reorganization of the Acetic Acid Industry



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. At that time, we started working on the concept of entrusted/entrusting manufacturing at cost-competitive plants with higher reaction efficiencies and called on existing joint manufacturers to launch joint projects. By completing manufacturing facilities for acetic acid using the methanol carbonylation process, we participated in the C1 Chemistry Project* and played a pivotal 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.

Acetic acid using the methanol carbonylation process

Introducing new manufacturing methods

1980 Daicel introduced the world's third acetic acid plant that uses the methanol carbonylation process in Aboshi.



2000s

2020 and beyond

Proactive Expansion of
New Businesses

Daicel decided to make a full-scale entry into the automobile airbag inflator business in the 1980s and completed Japan's first inflator mass-production facility at our Harima Plant in 1988. In addition, the 1980s saw the launch of our chiral column business, and we started the sale of chiral columns having optical isomer separation functions in 1982. We established a separation and refinement center at our Aboshi Plant in 1986 and launched separation services for the separation of pharmaceutical intermediates and active pharmaceutical ingredients. In 1990, we founded Chiral Technologies, Inc. in the U.S.

Automobile airbag inflators

Provision of safety
and security

1988 We commercialized inflators, core components for automobile airbag systems that protect passengers in the event of a collision.

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

We have expanded our inflator business began in North America in 2000 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.

DAICEL Production Innovation

Improvements in
productivity

2000 We established DAICEL Production Innovation at our Aboshi Plant.

Mid-Term Management Strategy
“Accelerate 2025”

By expanding the scope of value co-creation to include Daicel itself and our Group companies as well as our clients and customers connected in the supply chain, we aim to provide greater value to society beyond what a single company can realize and are steadily pushing ahead with the implementation of the strategy.

Toward expanding the scope of
value co-creation

2020 We developed the Autonomous Production System, the evolved version of DAICEL Production Innovation using AI, jointly developed with the University of Tokyo. We seek to expand the system not only within the Group, but also across the supply chain, in order to achieve its overall optimization.

Drastically reviewing existing
JVs (joint ventures)

2020 We made Polyplastics Co., Ltd. a wholly owned subsidiary. By doing so, we have expanded Polyplastics' options for growth strategies and further enhanced the corporate value of the Daicel Group by maximizing group synergies.

Toward building the Biomass Value Chain

2023 Kanazawa University's Biomass Green Innovation Center started full-scale operations. We pursue the establishment of technologies to transform Japan's rich forest resources as well as byproducts and waste from primary industries into new biomass materials with value through next-generation chemical transformation processes.



Fully entering the medical industry

2023 We founded Daicel Medical Ltd. and are working to obtain approval of medical equipment for jet injectors developed by applying the technologies we cultivated in the development of inflators.



Photo: Actranza® lab. for experimental animal studies

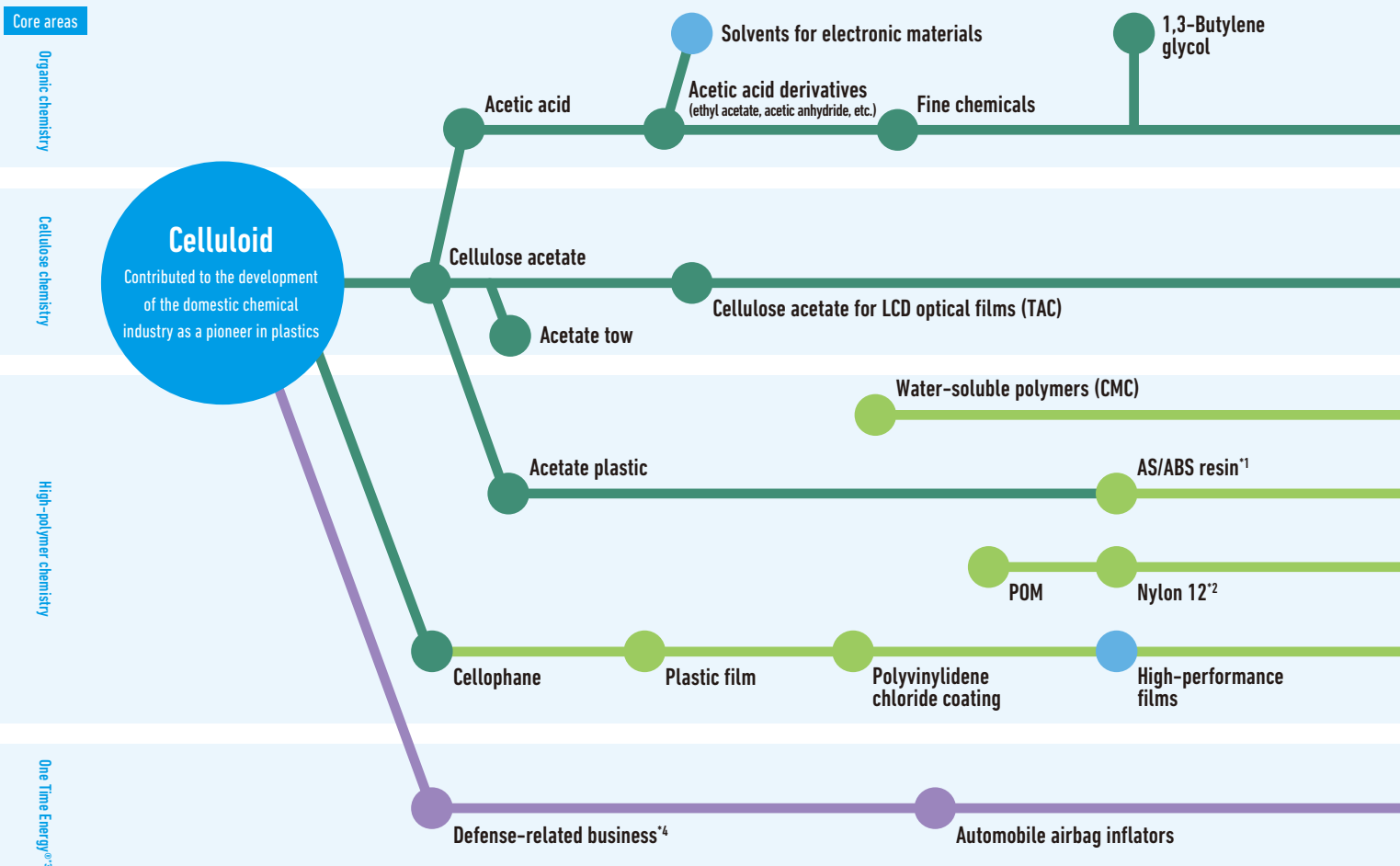
<https://www.daicel.com/en/business/new-solution/actranza/>

Our Strengths in Terms of Product and Technology Lineage

We will introduce the connections from the early days of the Company to the development of our current products and technologies, as well as the strengths of our Group that we have developed over the years.

Product and Technology Lineage

Since its foundation, Daicel has developed a wide range of products and technologies based on four technological fields: “cellulose chemistry” as its starting point, “organic chemistry” that established the acetyl chain, “high-polymer chemistry” cultivated through the development of various resins, and “pyrotechnics technology” that evolved into One Time Energy®. Based on these core technologies, the Group has developed its current business areas and is moving forward to contribute to the creation of a circular society.



^{*1} The business related to ABS resin and various polymer alloys was transferred to Novacel Co., Ltd. which was established on July 1, 2024. ^{*2} Products of Polyplastics-Evonik Corporation

Strengths of Daicel Group

Strength 1 Pioneer in Biomass Chemistry

Since our founding in 1919, we have always been involved in biomass chemistry, the production of chemicals from plant-derived raw materials. The Company's celluloid business, our founding business, is based on cotton and wood pulp, and camphor from camphor trees is used as a plasticizer. Cellulose acetate, for which flammability has been overcome, is still one of our main products. After the oil shock of the 1970s, we were among the first to switch to raw materials that were not rely on petroleum in a national project called C1 Chemistry, which aimed to eliminate the dependence on petroleum. Today, plant-derived chemistry is attracting renewed attention in order to ensure the sustainability of society, including the global environment. Daicel creates products based on renewable resources that contribute to the enrichment of people's lives and the earth.

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

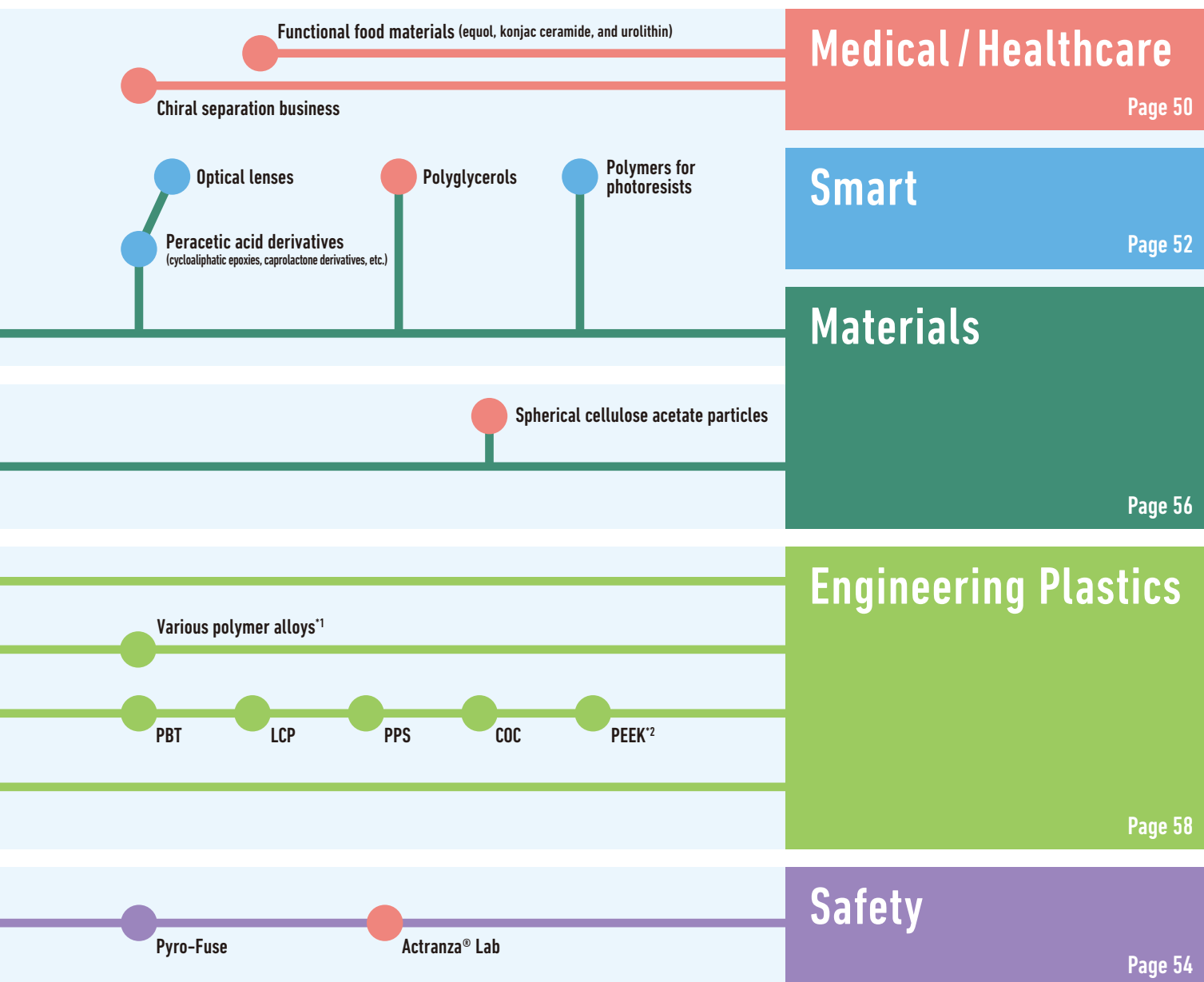
Strength 2 Unique Technology Cultivated Since the Company's Founding

1. Acetyl Chain

We are the only acetic acid manufacturer in Japan and have built a series of distinctive acetyl chains that produce acetyl chemicals, cellulose acetate, and other acetic acid derivatives, giving our business a strong global position.

2. Cellulose

Utilizing the knowledge of handling natural materials and property control technology that we have accumulated over many years, we are developing highly functional products in a wide range of fields, centered on cellulose acetate, such as acetate fiber, filter materials, liquid crystal panel film materials, and cosmetic materials.



^{*3} The pyrotechnic technology developed in the course of producing inflators is defined as One Time Energy®, which produces optimal energy safely, reliably, instantaneously, and only once. ^{*4} Withdrawn from the business

3. Engineering Plastics

As a specialized manufacturer of engineering plastics, we maintain a broad product lineup centered on Polyplastics Co., Ltd., and have gained a large global market share by providing solutions to our customers, drawing out the best features of these products.

4. One Time Energy®

The pyrotechnics business developed because cellulose nitrate, the raw material for celluloid, can be used as an explosives raw materials. We have expanded this technology, which began in the defense-related business, to civilian products and are currently contributing to the safety of people's lives by applying it to a wide range of fields, including automobile airbag inflators, Pyro-Fuse, and drug delivery devices.

Strength 3 DAICEL Production Innovation

DAICEL Production Innovation supports the manufacturing foundation we have as a chemical manufacturer. By visualizing the approximately 8.4 million pieces of plant operation know-how possessed by skilled operators and incorporating them into the operation support system, production efficiency has been improved by a factor of three.^{*5} Furthermore, in 2020, we developed the Autonomous Production System, an evolution of this system using AI. In addition to safety and quality, the system contributes to the reduction of CO₂ emissions by optimizing energy use, and prevents problems by predicting equipment irregularities in advance in pursuit of the ultimate in production efficiency.

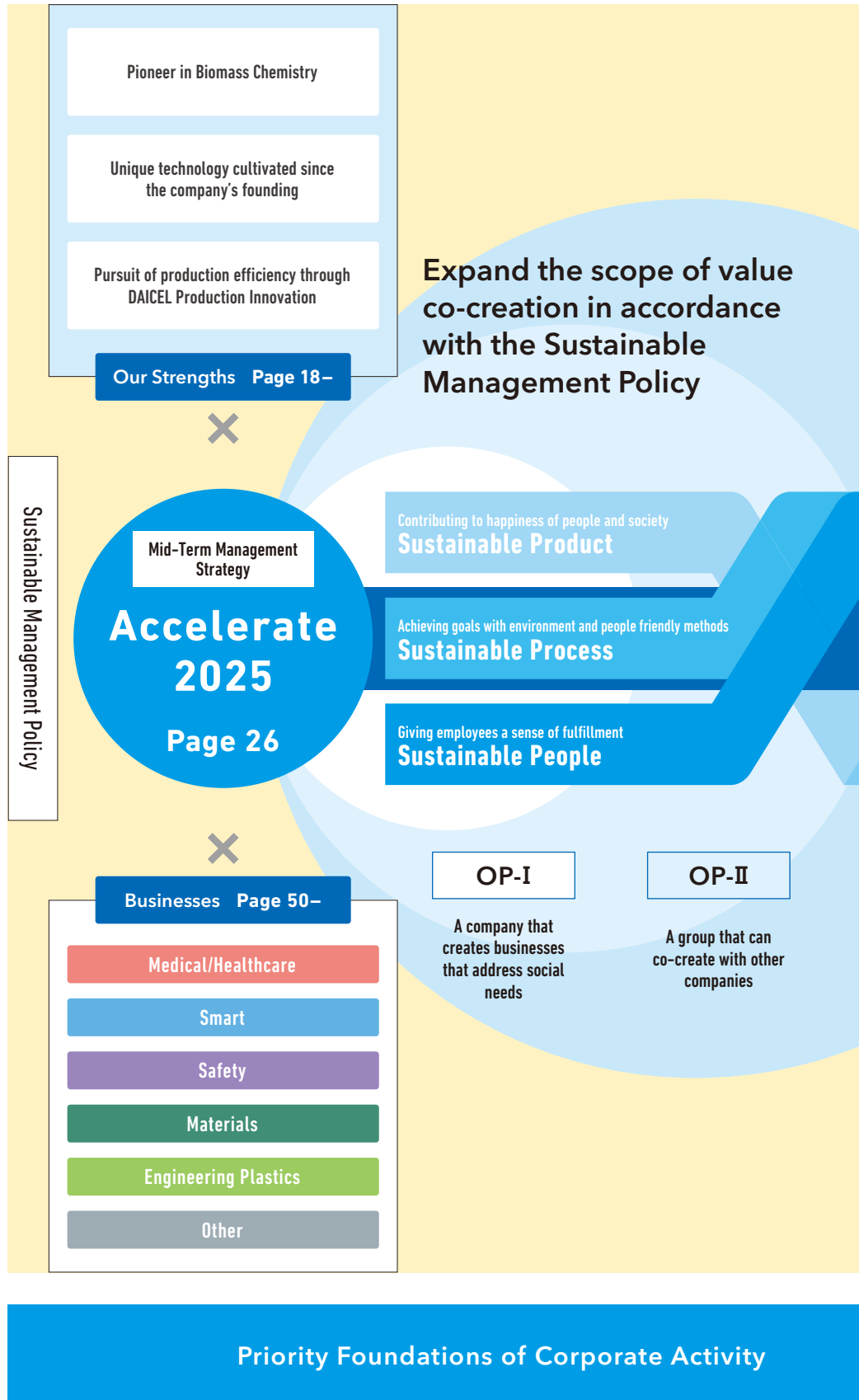
^{*5} Results at Daicel's Aboshi Plant

<https://www.daicel.com/en/daicel-production-innovation/>

Value Creation Process

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

INPUT	
(Invested capital for FY2024/3)	
Human capital	
Number of employees	11,134
Number of R&D Personnel	1,290
Ratio of overseas employees	52.1%
Ratio of female employees	28.3%
Intellectual property	
R&D expenses	23.4 billion yen
Number of patents owned	Approx. 5,400
Number of trademarks owned	Approx. 2,000
Financial assets	
Total assets	839.2 billion yen
Equity ratio	42.8%
Manufacturing capital	
Capital expenditures	77.5 billion yen
Optimal plant operation with DAICEL Production Innovation, and the Autonomous Production System	
Social capital	
Number of group companies	75 companies
- Trust with customers and business partners cultivated over many years - Cooperative links with partners in industry, government, and academia	
Natural capital	
Energy consumption (in crude oil equivalent)	789 thousand kL
Water intake	97 million tonnes



Basic Philosophy

The company making lives better by co-creating value

Sustainable Value Together

Page 04

Long-Term Vision

DAICEL VISION 4.0

and Beyond

Daicel will contribute to
building a circular society
and achieve both a
sustainable society and the
growth of our Group

OP-Ⅲ

Establishment of a
co-creation scheme
with partners

Safety, Quality, and Compliance

OUTPUT/ OUTCOME

(FY2024/3 results)

Financial Outcome in Value Creation

Net sales	558.1 billion yen
Operating income	62.4 billion yen
EBITDA	96.1 billion yen
ROIC	6.3%
Total return ratio	52.0%

Sustainable Product

● Providing Happiness Through Our Business and Products

Medical/Healthcare	Page 50
Smart	Page 52
Safety	Page 54
Materials	Page 56
Engineering Plastics	Page 58

● Stories of Co-Creation with Our Customers TGD Project: Increasing the Competitiveness of the Safety Business

Page 34

Sustainable Process

● Daicel Group's Challenge to Achieve Carbon Neutrality

Page 42

Sustainable People

● Next-Generation Manufacturing and Human Resource Development in the Chemical Industry

Page 38

VISION AND MATERIALITY

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- 34 **Feature 1** Stories of Co-Creation with Our Customers
TGD Project: Increasing the Competitiveness of the Safety Business
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Long-Term Vision “DAICEL VISION 4.0”

Realizing a Sustainable Society While Achieving Sustainable Business Expansion

The Daicel Group has formulated its Long-Term Vision “DAICEL VISION 4.0” and its Mid-Term Management Strategy “Accelerate 2025” based on this vision, and is taking steps toward its realization.

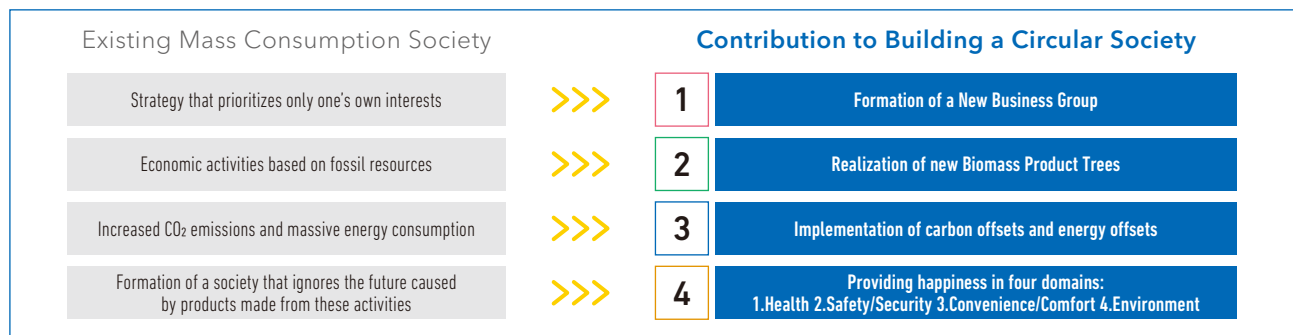
On this page, we will introduce the four structural transformations that the Group hopes to achieve in order to “contribute to building a circular society,” as stated in our Long-Term Vision.

Goals of the Long-Term Vision

We believe that in order to achieve both a sustainable society and the growth of the Daicel Group in line with the Sustainable Management Policy, it is necessary to change the social structure that has taken mass production and mass consumption for granted.

Therefore, our Long-Term Vision is to contribute to the creation of a circular society through these challenges, while leveraging the strengths of our Group and working with partners that share our aspirations.

Social shift to realize a circular society as stated in our Long-Term Vision and Mid-Term Management Strategy



1 Formation of a New Business Group



In order to change the social structure, it is essential to form a group (New Business Group) that can co-create new value for society and the environment. From a manufacturing perspective, we are just one of the processes that lead to our customers' end products. The supply chain is made up of a number of interconnected processes. By combining the strengths of the various companies, it is possible to create more efficient manufacturing than a single company could do by trial and error, and to create better products and more environment-friendly manufacturing methods. Our goal is for the supply chain to evolve into a unified value chain with the strength of co-creation to provide greater value to society. In addition to vertical partnerships connected by supply chains, diverse connections through horizontal business partnerships such as those among companies in the same industry are called cross-value chains, and the path to forming such a New Business Group is divided into three operations (OP below) that expand the scope of co-creation from Daicel alone to the Daicel Group to partners.

Page 34: Stories of Co-Creation with Our Customers

Growth & Acceleration Strategy

【Operations for goal achievement】

Operation-I (OP-I) Original Daicel

Areas including domains to focus on in addition to current businesses

- Transformation of business structure (Selection and concentration of the business → Shifting to value providing type of organization)
- Transformation to asset-light
- Structural reforms to accelerate OP-III growth

Operation-II (OP-II) New Daicel

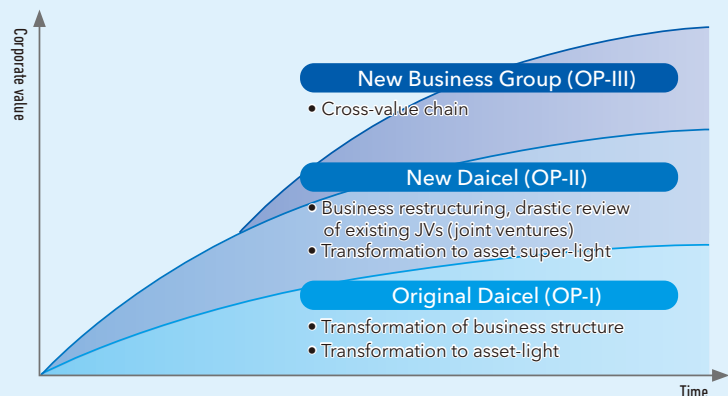
Peripheral areas of existing business to be expanded through M&A or collaboration

- Business restructuring, drastic review of existing JVs
- Transformation to asset super-light
- A company creating high added value that can aim at OP-III

Operation-III (OP-III) New Business Group

Cross-value chain that brings a vertical integration type of supply chain along with horizontal integration

- Building the No. 1 supply chain through diverse connections, without sticking to M&As



2 Realization of New Biomass Product Trees



Cellulose acetate, which has been our forte, is an environment-friendly biomass material, but its production process requires a large amount of energy. To address this issue, we have created a technique to extract cellulose from wood under environment-friendly conditions by utilizing “technology for melting wood” and to produce cellulose acetate from cellulose that does not react easily, using less energy, through joint research with universities. In addition to cellulose, it is now possible to extract reactive substances such as hemicellulose and lignin contained in wood, which have not been utilized in the past. We are taking on the challenge of creating a new product tree that is environment-friendly in both products and manufacturing processes, leveraging the Group's existing businesses and insights from throughout the years.

We are working on real world implementation of this technology as one means of changing from a society that massively consumes finite fossil fuels to one that recycles the forests that cover approximately 70% of Japan's land as renewable resources.

Page 18: Strengths of Daicel Group “Pioneer in Biomass Chemistry” Biomass Value Chain Concept (Japanese only) <https://www.daicel.com/bvc/>

3 Implementation of Carbon Offsets and Energy Offsets



The chemical industry, which operates heavy and bulky plants, is generally considered an “energy-intensive industry.” The Daicel Group believes that in addition to creating products that benefit people and society, the manufacturing process must also be friendly to people and the earth. We are working to achieve carbon and energy offsetting through energy conservation based on DAICEL Production Innovation, as well as through innovations in manufacturing processes and new technologies that enable the reuse and effective utilization of carbon emissions.

Pages 42-47: Daicel Group's Challenge to Achieve Carbon Neutrality, Information Disclosure in Line with TCFD Recommendations

4 Providing Happiness in Four Domains



In response to rising social trends and needs, the Daicel Group has defined four focus areas that it offers from the angle of leveraging the Group's strengths to help solve social issues. By maximizing the unique materials and technologies we have cultivated since our founding, and by successively combining our strengths with those of our partner companies, we will provide products and services that continue to bring happiness to people.

Page 18: Strengths of Daicel Group “Unique Technology Cultivated Since the Company's Founding”

Health

Medical supplies

- DDSs*/Medical device (Actranza®)
- Medical devices/packaging materials (engineering plastics)

Vital sensor

- Nanodiamonds

Functional food materials based on intestinal metabolites

- Equol
- Urolithin

Environment

Environmentally conscious solution business

Green chemicals

- Review of existing in-house chemical chains
- Spherical cellulose acetate particles BELLOCEA®
- Fine cellulose
- New cellulose derivatives

Safety/Security

Support for EV vehicles

- Mass production of Pyro-Fuse
- Sales expansion of inflators and Pyro-Fuse to China, Europe and the U.S.

Integration with sensing technology through business-to-business collaboration

- Participate into safety equipment in everyday life
- Equipment to prevent injury by detecting a fall

Convenience/Comfort

Development and deployment of new functions through improved processing technology

- Film technology
- Coating technology

Inorganic/organic composite electronic materials

Materials for electronic devices

- Organic semiconductors, silver nano ink
- Optical lens, etc.

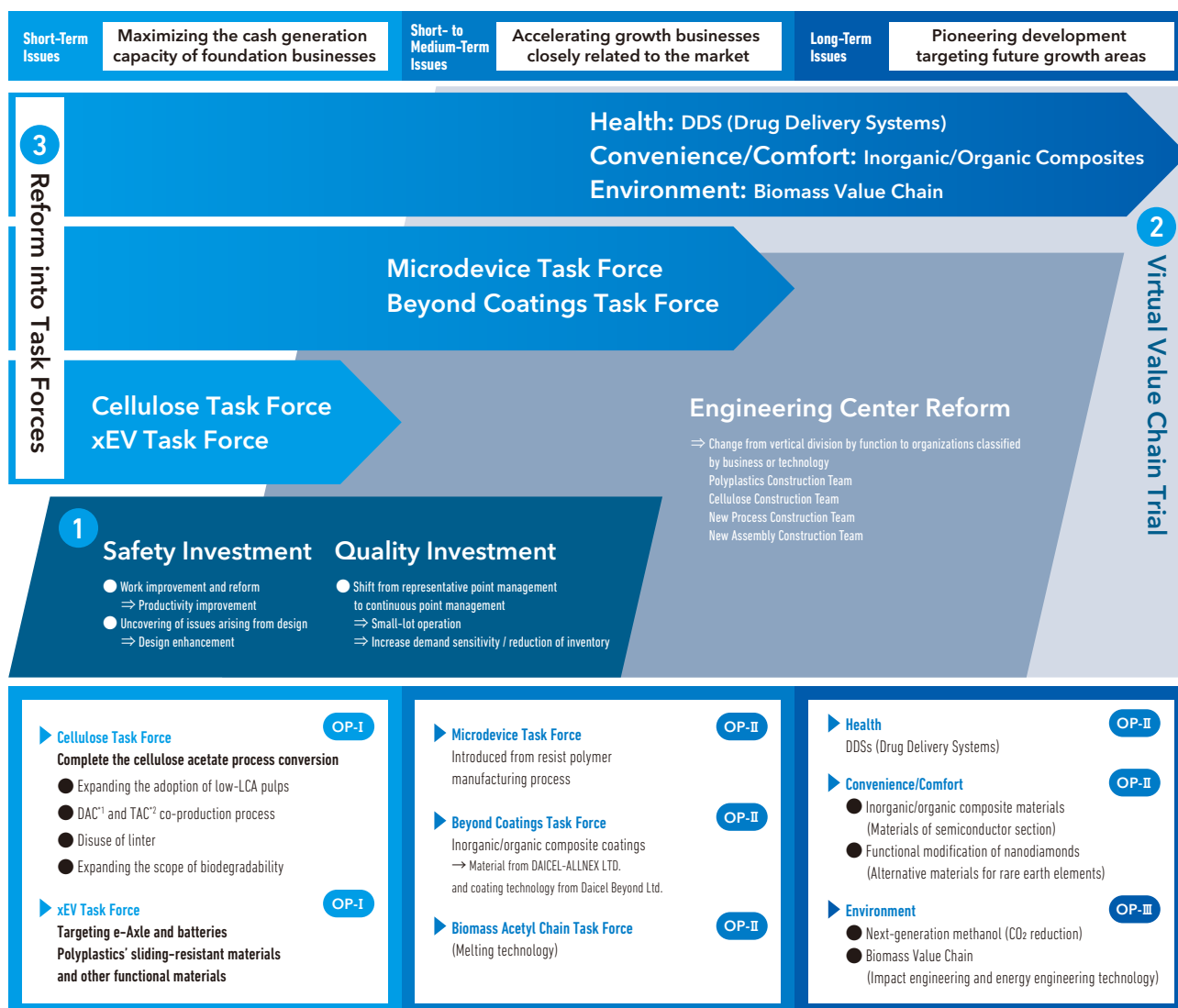
* DDSs: Drug delivery systems

Mid-Term Management Strategy

Key Points to Be Strengthened by the Mid-Term Management Strategy toward Our Vision

Our Group is working on the steady implementation of each measure outlined in our Mid-Term Management Strategy to improve the Daicel Group's profitability and business creation capabilities while expanding the scope of value co-creation. One example is Polyplastics Co., Ltd. (hereinafter "Polyplastics"), which became a wholly owned subsidiary in FY2021/3. Since then, its sales have steadily increased and it has successfully built up its manufacturing capabilities.

In further promoting its Mid-Term Management Strategy, the Group has identified the following three points for future reinforcement, while making swift investment decisions and changing its measures in response to the situation.



*1 DAC: diacetyl cellulose *2 TAC: triacetyl cellulose

1

Continue to Strengthen the Foundations of Manufacturing Such As Safety, Quality, and Compliance

We have conventionally held "safety, quality, and compliance" as priority foundations of corporate activity, but in FY2023/3, inappropriate actions related to third-party certification for the products of our Group company were discovered. In response to this, we are working on initiatives to prevent recurrence, such as organizational reforms to further strengthen safety, quality, and compliance as priority foundations. Since the majority of serious problems at factories are recurrences of past problems, in order to prevent implemented measures from being forgotten, we have issued a small booklet containing incidents and directives for their rectification over the past 50 years and instructed all employees to carry it with them at all times. Through organizational reform, the implementation and auditing functions for manufacturing were separated. We have established the Safety and

Quality Assurance Headquarters to promote safety, quality, and compliance company-wide, encapsulating the Safety & Environment Control Department and Quality Assurance Department, which are engaged in steady efforts at each factory, and the Assessment Headquarters to verify whether risk assumptions and countermeasures are effectively put into practice and to verify that mechanisms and systems are being constantly reviewed. We will steadily incorporate improvement measures identified through a system of constantly verifying initiatives into permanent measures, such as capital investment.

2

Establish the WVCC, a Safe and Optimal Manufacturing Center Adjacent to the Integrated Production Center at the Aboshi Plant

The Daicel Group is working to transform Daicel's manufacturing from a stand-alone initiative into a new kind of manufacturing that improves added value across the supply chain. As a stepping stone, we will establish the Virtual Value Chain Control Center (WVCC), which will promote safe and optimal manufacturing, adjacent to the Integrated Production Center at the Aboshi Plant. The WVCC will propose new kinds of manufacturing that not only monitor safety and quality introduced in the previous paragraph but also enable optimal management of areas such as production planning, logistics, regular maintenance and repairs, and personnel placement. These proposals consist of content that we have considered in our Mid-Term Management Strategy up to now. The WVCC will first conduct operations that recognize our Aboshi Plant, Ohtake Plant, and production bases of other companies connected via our supply chain as a single virtual corporate entity in order to optimize the acetyl chain. Through the WVCC, we will expand the scope of value co-creation beyond the Group to our partner companies.

 For the details of WVCC, please refer to page 38.

3

Promote the Creation of Task Forces to Accelerate the Establishment of New Businesses

In order to establish a strong base for profitability, each research theme will be divided into "short-term themes" that raise the top line and strive for the early profitization of new businesses and "medium- to long-term themes" that will become our new base for profitability through the development of innovative, common, foundational technologies by classifying them into new core technologies, transforming our current system into a new system where human resources are effectively invested.

For the short-term themes, we will focus on cellulose and xEV^{*1} and switch our traditional concurrent project structure to a full-time task force structure as a shift toward an early-stage, decision-oriented structure, aiming for the thorough improvement of profitability for foundation businesses and early profitization of new businesses. For cellulose, we will introduce technologies for the two-step crushing of raw pulp and dope filtration in the manufacturing process of cellulose acetate—our main product—and use raw materials that are cost-competitive and sustainable to enhance product competitiveness and optimize inventories. For xEV, we will work with Polyplastics to achieve tangible results with Polyplastics' products and Pyro-Fuse from the Safety Business, setting LiB^{*2} and e-Axle^{*3} as target applications.

For the medium- to long-term themes, we will establish task forces specializing in the establishment of bases for profitability, created by combining our existing proprietary technologies with innovative ones to be newly acquired, to develop future growth areas. These task forces will work on the melting technology that melts microfluidic device plants and wood, which are key components for building the Biomass Value Chain; CO₂ reduction, which is a technology necessary to realize carbon negativity; and the creation of next-generation methanol from CO obtained from CO₂ reduction. We aim to implement microfluidic devices with an initial focus on resist polymers between the end of FY2025/3 and FY2026/3. The establishment of this technology will enable revolutionary energy conservation and labor savings, as well as the alignment of both ecology and economy. We believe that these technologies are capable of contributing to the reduction of GHG emissions not only for our Group but also for other companies, and that they have the potential to become driving forces behind new industrial structures going forward.

In addition, the Engineering Center, which previously had a vertically divided structure, will be reorganized from a structure divided into specialized areas to self-sufficient construction teams responsible for the entire construction process of production facilities from the initial planning to the final facility establishment, having task forces organized by theme to speed up the establishment of production facilities. Each of the construction teams will be considered to be an in-house engineering company and mutually improve each other's technical capabilities. By having each team undertake construction work in which it is most proficient, we will ensure the commercialization of projects within set deadlines and strengthen our engineering technologies.

The Group is committed to the effective use of its limited human resources and the early-stage establishment of new businesses and products, and it will aim to improve its profitability and business creation capabilities.

*1 xEV: electric vehicle

*2 LiB: lithium-ion battery

*3 e-Axle: a traction unit for EVs that integrates a motor, inverter, and reduction drive to achieve a light weight, high performance, and space savings

We aim to maximize capital efficiency and sustainably increase corporate value by practicing balance sheet control and reviewing cash allocation flexibly.

Yoichi Nemoto

Managing Executive Officer
Deputy General Manager, Corporate Support Headquarters
Division Manager, FP&C Group, Corporate Support Headquarters



Support Active Investments in Growth by Improving Cash Generation Capabilities and Building a Sound Financial Base

We updated our current Mid-Term Management Strategy, "Accelerate 2025," in May 2023, but there is no change in principle to our policy of using the cash generated by maximizing the profits of the Materials Business, one of our foundation businesses, to invest in the growth of our Engineering Plastics Business and Safety Business, our growth businesses, as well as to invest in next-generation fields and R&D that will contribute to the expansion of the top line going forward.

In accordance with this policy, although in FY2024/3 our business was affected by a slump in electronic materials-related markets, EBITDA increased by a little over 20% compared to the previous fiscal year, owing to factors including the expansion of the supply capacity and price corrections for acetate tow in the Materials Business as well as the increase in sales volume in the Safety Business and the impact of exchange rates. We are using this as a source of funds to actively invest in overseas growth and R&D.

In FY2025/3, the acetic acid raw material (carbon monoxide) production plant will go into full operation and depreciation will increase significantly, but EBITDA will reach a record high of 107.5 billion yen, thanks to the effect of increased production overseas in the Engineering Plastics Business and the realization of business structure reforms in the Safety Business.

	FY2023/3 results	FY2024/3 results	FY2025/3 forecasts*
Net sales	538.0 billion yen	558.1 billion yen	610.0 billion yen
Operating income	47.5 billion yen	62.4 billion yen	65.0 billion yen
Ratio of operating income to net sales	8.8%	11.2%	10.7%
Net income attributable to owners of the parent	40.7 billion yen	55.8 billion yen	58.0 billion yen

* As of May 9, 2024

	FY2023/3 results	FY2024/3 results	FY2025/3 forecasts*
ROE	14.3%	17.1%	15.6%
ROIC	5.3%	6.3%	6.4%
ROA	5.6%	7.0%	7.0%
EBITDA	79.1 billion yen	96.1 billion yen	107.5 billion yen

While the ability to generate cash as represented by EBITDA is the source of the Group's sustainable growth, it is also important to build a strong financial structure to secure external financing when needed, and we are constantly checking our balance sheet to ensure it is in good shape.

While ensuring financial stability, we aim to build a lean and robust balance sheet with high asset efficiency and are promoting measures to generate cash from the balance sheet across the Group, such as by controlling liquidity on hand mainly for cash and deposits, reducing working capital using CCC as a benchmark, and systematically reducing cross-shareholdings.

Flexibly Review Cash Allocation Based on Simulation of Future Balance Sheet

In our Mid-Term Management Strategy "Accelerate 2025," we have set targets for the management indicators of ROE, ROIC, and ROA under the asset-light principle. All of these are expressed in terms of the relationship between assets and returns (profits), and while maximizing returns remains our first priority, the indicators also represent our intention to control the balance sheet from the perspective of capital efficiency.

While there are some factors such as exchange rate fluctuations that are beyond our control, business assets such as working capital including inventories and manufacturing facilities can be handled by business divisions, plants, and Group companies. The introduction of ROIC as a key management indicator also conveys our message of focusing on business assets at the field level in addition to items on profit and loss statements such as net sales and profit.

I realize that there is a steady change in the awareness of manageable business assets throughout the Company. Taking inventory as an example, the promotion of inventory reduction initiatives by the SCM Headquarters and production sites, the shortening of preparation periods by reviewing quality control methods, and the reduction of inventory lead time for pulp, a key raw material, by changing production methods are some of the items that have emerged as drivers for inventory improvement in the short- to medium-term. These measures will certainly lead to an improvement in ROIC and all other management indicators.

The corporate divisions are also strengthening balance sheet control from Group and global perspectives. As just one example, we are promoting capital efficiency improvement through balance sheet optimization for individual Group companies by encouraging them to actively return dividends to us, based on a comprehensive view of the financial position of each Group company in Japan and overseas and a review of their retained earnings and liquidity on hand.

We will aim to sustainably increase corporate value by constantly simulating the impact of these actions by the Group and changes in business strategies due to changes in the business environment on the balance sheet and management indicators, and by repeating the management cycle of confirming the latest results and flexibly reviewing cash allocations. We believe that regularly disclosing and explaining the results of cash allocation reviews to investors are important also from the viewpoint that they get a better understanding of the Group's financial strategies and policies.

As of the update of the Mid-Term Management Strategy in May 2023

Cash-in (Cumulative total for 3 years beginning FY2024/3)

Operating CF	287.6 billion yen
Cash	End of FY2023/3 93.5 billion yen Sale of cross-shareholdings 38.9 billion yen
Debt financing	0.0 billion yen (or more)

Total amount available
for distribution
420.0
billion yen
(or more)

Cash-out (Cumulative total for 3 years beginning FY2024/3)

Growth investments	190.0 billion yen (or more)
Shareholder returns	85.0 billion yen (or less)
Debt repayment	85.0 billion yen (or less)
Cash	60.0 billion yen

As of May 2024

Cash-in (Cumulative total for 3 years beginning FY2024/3)

Operating CF	300.0 billion yen
Cash	End of FY2023/3 93.5 billion yen Sale of cross-shareholdings 40.5 billion yen
Debt financing	0.0 billion yen (or more)

Total amount available
for distribution
434.0
billion yen
(or more)

Cash-out (Cumulative total for 3 years beginning FY2024/3)

Growth investments	190.0 billion yen (or more)
Shareholder returns	94.0 billion yen (or less)
Debt repayment	90.0 billion yen (or less)
Cash	60.0 billion yen

Commencement of Information Disclosure Comparing Key Management Indicators Related to Capital Profitability with Cost of Capital

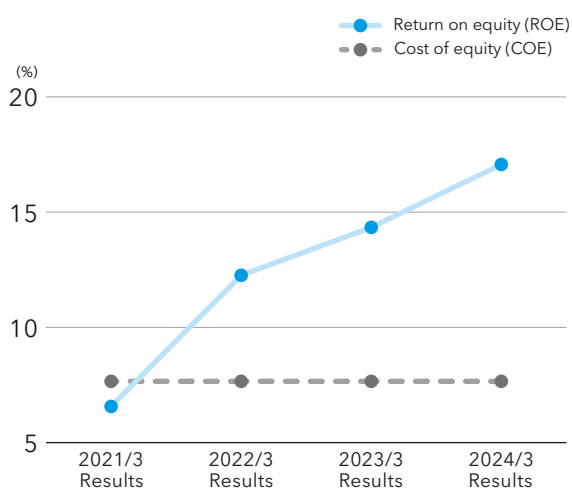
As mentioned above, ROE, ROIC, and ROA are considered to be key management indicators in the Group's Mid-Term Management Strategy. We disclosed our anticipated cost of capital for each indicator in our May 2024 Financial Result Presentation Materials.

To increase corporate value, it is important that each indicator of capital profitability exceeds the cost of capital. The Company's cost of equity (COE) is currently estimated to be in the mid-7% range, while the weighted average cost of capital (WACC) is in the mid-4% range. The corresponding capital profitability indicators—ROE, ROIC, and ROA—all exceed their cost of capital, ensuring margins.

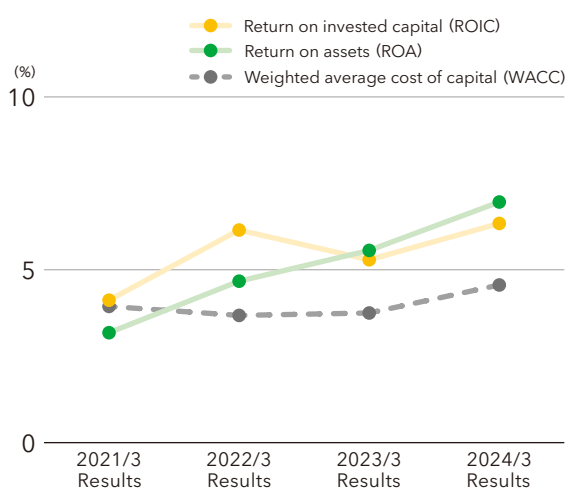
Such monitoring is conducted on a regular basis, and within the Company, reporting has begun even among the Board of Directors. The Board of Directors pointed out the importance of maintaining control based on the business portfolio and the stage of the business, as well as the importance of looking at them from multiple angles in conjunction with other indicators, particularly with regard to the relationship between ROIC and WACC. Taking this into account, we will set appropriate targets and manage progress for each business, aiming to further strengthen our foundation businesses and expand our next-generation and growth businesses.

The trends in each capital profitability indicator are shown in the graphs. For ROIC, we will break it down into its constituent elements, clarify the statuses of the profit ratio (the numerator) and the asset turnover ratio (the denominator) to form a so-called ROIC tree, and delve even further to break down the issues at the field level. Some initiatives, such as the inventory reduction initiatives mentioned above, are already being promoted at the field level, and we will work to further unleash the ingenuity and creativity of every employee to improve the profit and asset turnover ratios.

Trends of ROE and COE



Trends of ROIC, ROA, and WACC



Daicel will focus on improving management indicators related to capital profitability to sustainably increase corporate value.

Positive Impact on Various Stock Indices Can Be Expected Due to PR for Our Growth Strategies, Increases in EPS, and Measures to Deliver Attractive Shareholder Returns

As a company listed on the stock market, we are naturally aware of our own stock price. Our PBR is about 1.1 times as of the end of March 2024, which is not high. When PBR is broken down into ROE and PER, the low PER is noticeable, with a PER of about 7 times compared to an ROE of 17%.

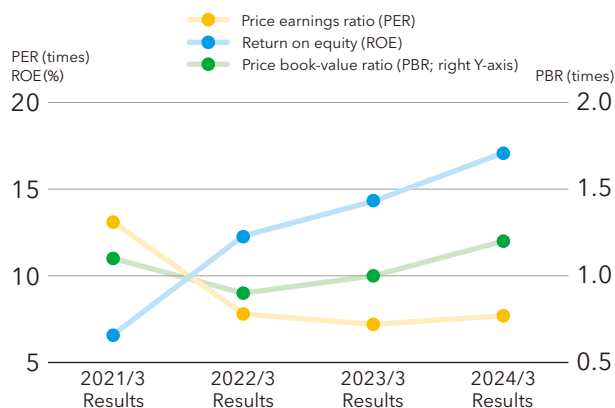
Although there is no direct measure we can take for PER, which is known as the equity premium, I believe that our actions to raise expectations in the capital market for the Company's future prospects and shareholder returns will lead to an increase in the PER. Such measures include improving the dissemination of IR information, communicating our Group's growth strategy in an easy-to-understand manner while effectively using future quantitative information to deepen understanding, flexibly reviewing our cash allocations, and setting a balanced return policy to ensure stable and progressive dividends and the flexible acquisition of treasury shares. We will actively create opportunities for two-way communication with our shareholders and investors, and through more in-depth dialogue, we hope to increase the PER and improve shareholder value.

We added a target of a "dividend on equity (DOE) ratio of 4% or more" to our existing shareholder return policy of a "total return ratio of 40% or more" in FY2025/3. Daicel had originally set an annual dividend target of 32 yen per share or more, but in recent years its dividends have exceeded this. We believe that the recent change in our policy to include DOE will clearly convey our approach to dividends, which is to pay stable and progressive dividends. For FY2025/3, we plan to pay an annual dividend of 55 yen per share and an increase of 5 yen from the previous fiscal year, in line with the newly introduced DOE target.

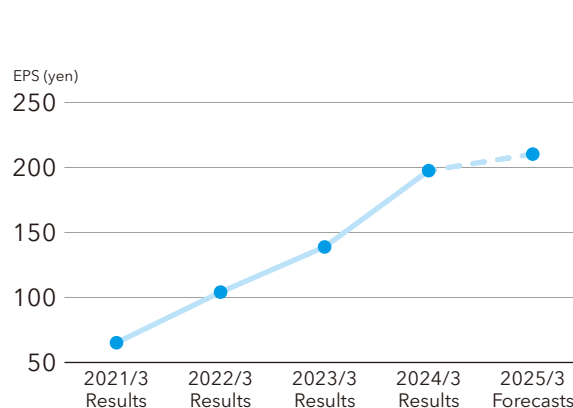
In view of the impact on the overall stock price, we believe it is equally important to sustainably increase earnings per share (EPS) and have set an EPS target as well. We will further increase profits by ensuring the implementation of business growth strategies and increase EPS through such measures as equity control by flexibly acquiring treasury shares.

Daicel is committed to accelerating the implementation of growth strategies, steadily promoting financial strategies to support them, and sustainably increasing corporate value.

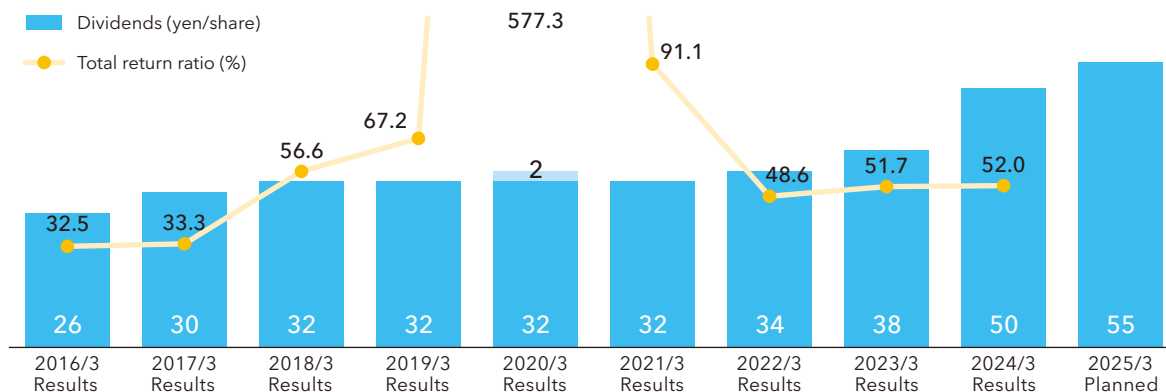
Trends in stock price indicators



Trends in Earnings per Share (EPS)



Trends in shareholder returns



Sustainability Management and Materiality

Based on our “Sustainable Management Policy,” we will focus on “safety, quality, and compliance” as the priority foundations of our business. Through integrity, tireless efforts, and self-transformation, we will achieve both the realization of a sustainable society and the expansion of the Group’s business.  Page 05: Sustainable Management Policy

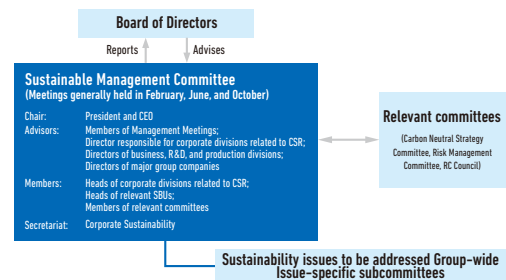
Sustainable Management System

The Daicel Group established the Sustainable Management Committee (typically meets three times a year), chaired by the President and CEO, to discuss and manage key sustainability issues (materiality) at the management level. In addition, in each issue-specific subcommittees established for each theme related to sustainability, such as LCA and supply chains, the responsible officer is involved as the person in charge, working to strengthen initiatives and further enhance information disclosure.

The regular progress evaluation of KPIs by the Sustainable Management Committee ensures implementation of the CAPD* cycle. In addition, the Board of Directors will receive regular reports from the Sustainable Management Committee concerning the status of the KPIs related to materiality in order to supervise the promotion of sustainability at the Daicel Group.

In FY2024/3, the Sustainable Management Committee met three times, mainly discussing the response to climate change, the certification system for contribution to build a circular society, initiatives to reduce GHG emissions, and the calculation of the Carbon Footprint of Products (CFP), with the details reported to the Board of Directors.

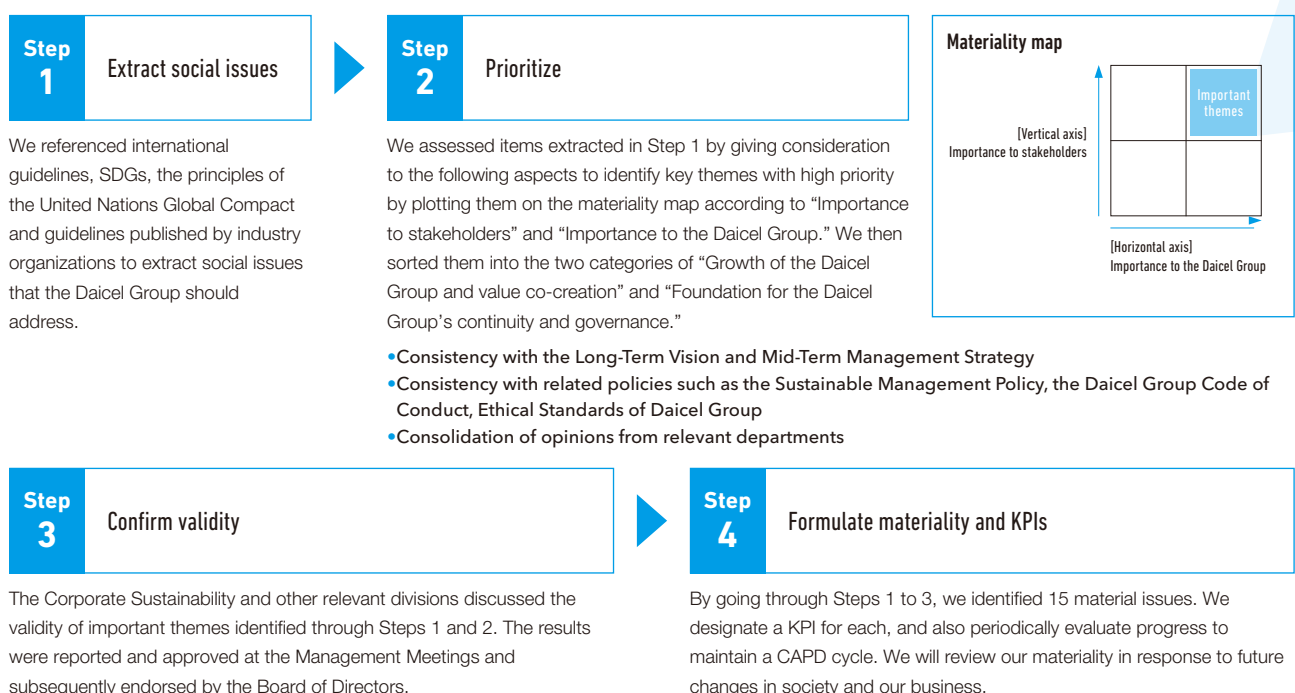
Diagram of the Sustainable Management System



Background and Approach to Materiality Identification

In FY2021/3, the Daicel Group has identified materiality as a key issue for achieving its Long-Term Vision and Mid-Term Management Strategy. Based on the three perspectives of products, manufacturing processes, and people in the Sustainable Management Policy, we identified how the Daicel Group can contribute to solving social issues represented by the SDGs by leveraging its strengths, while also addressing the priority foundations of safety, quality, and compliance, which are the prerequisites for such solutions.

Materiality Identification Process



* Instead of a Plan, Do, Check, and Act (PDCA) cycle, the most widely known approach to continuous improvement, the Daicel Group has adopted a CAPD improvement cycle to avoid the risk of overlooking crucial facts and realities that often lie hidden in the initial planning stage.

Materiality List

1. Materiality aimed at achieving growth of the Daicel Group and value co-creation

In terms of products, manufacturing processes, and people under the Sustainable Management Policy, we have clearly identified areas where we will leverage our strengths to proactively create value in solving social issues represented by the SDGs.

	Classification	Materiality		Relevant SDGs
Materiality aimed at achieving growth of the Daicel Group and value co-creation	Sustainable Product	Contribute to beauty and health 📖 Page 50	•Providing solutions for the pharmaceutical and medical markets •Providing sustainable cosmetic raw materials and health food	
		Contribute to the smart society 📖 Page 52	•Providing solvents for semiconductor processing and polymers for resists	
		Provide safety and security for society 📖 Page 54	•Providing products that ensure safety and security of mobility	
		Provide environment-friendly materials and technology 📖 Pages 50, 56, 58	•Providing materials and technology that reduce environmental impact such as environment-friendly plastics	
	Sustainable Process	Contribute to the development of a circular society 📖 Page 42	•Building Biomass Value Chain •Reuse of waste and CO ₂	
		Respond to climate change 📖 Page 42	•Reduction of GHG emissions through production innovation, energy innovation, and process innovation	
	Sustainable People	Promote diversity, equity and inclusion	•Work environment where everyone can work with vigor regardless of gender, age, nationality or disability	
		Support personal growth	•Personnel development for honing expertise •Framework to support employees who take on challenges •Building highly fair evaluation system	

2. Materiality related to the foundations of 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).

	Classification	Materiality		Relevant SDGs
Materiality related to the foundations of the Daicel Group's continuity and governance	Environment	Reduce environmental impact	•Promotion of waste reduction and recycling	   
	Social	Ensure process safety and disaster prevention, occupational health and safety	•Elimination of process incidents •Minimization of damages based on crisis assessments	
		Ensure chemical safety and enhance product quality	•Reinforced quality management to prevent recurrence of quality defects •Centralized management and sharing of chemical substance information	
		Respect human rights	•Establishment and implementation of human rights due diligence •Development of a framework for corrective and remedial action against human rights abuses, and employee education	  
		Foster a corporate culture that meets employee needs	•Shorter working hours and improvement in the annual paid leave acquisition ratio •Support for flexible work styles •Employee health promotion	
		Promote sustainable procurement	•Improved level of CSR across the supply chain	
	Governance	Strengthen foundation for Group governance and compliance  Pages 68, 74	•Reinforce corporate governance •Enforce thorough compliance •Strengthen risk management	

Materiality Monitoring

Along with established KPIs and targets, the progress of the identified materiality items is monitored through periodic evaluations by the Sustainable Management Committee and supervision by the Board of Directors.

List of KPIs and result https://www.daicel.com/en/sustainability/pdf/materiality_kpi_2024.pdf

Our sustainability website provides comprehensive disclosure of our sustainability efforts, including detailed information on materiality. <https://www.daicel.com/en/sustainability/>

Site Map * items in blue frame are also summarized in this report. The ★ mark indicates the materiality of our Group.

Sustainability Management Materiality

Responsible Care Activities Policy List



Environmental Report

Environmental Management

- ★ Response to Climate Change
- Information Disclosure in Line with TCFD Recommendations
- ★ Reduction and Recycling of Industrial Waste
- Emission Management of Chemical Substances
- Water Resource Preservation
- Environmental Management and Prevention of Air Pollution
- Preserving Biodiversity

Social Report

- ★ Respect for Human Rights
- Customer Satisfaction and Safety Assurance
- ★ Enhancing Product Quality
- ★ Chemical and Product Safety
- ★ Process Safety and Disaster Prevention
- Distribution Safety
- Creating Attractive Workplaces
- ★ Occupational Health and Safety
- Policy and Guidelines on Human Resources
- Initiatives to Help Employees Maintain Mental and Physical Health
- ★ Support for Human Resource Development
- ★ Promoting Diversity, Equity and Inclusion
- ★ Foster a Corporate Culture That Meets Employee Needs
- ★ Sustainable Procurement
- Contribution to Local Communities and Society

Governance

- ★ Corporate Governance
- ★ Corporate Compliance
- ★ Risk Management
- Information Security / Information Management
- Tax Policy
- List of Data Collection Boundaries**
- Scope of Reporting for Human Resources and Governance Data
- Scope of Data Calculation for Environmental and Occupational Safety Performance
- List of Declarations and Certifications**
- Environmental Management System Certification
- Quality Management System Certification
- ESG Data**
- GRI Standards Content Index
- Participation in Initiatives and External Recognition

Feature 1

Stories of Co-Creation with Our Customers TGD Project: Increasing the Competitiveness of the Safety Business

In December 2023, we started the operation of a new inflator production line at Daicel's Harima Plant. This line is a product of the "TGD Project" (TG for Toyoda Gosei Co., Ltd. and D for Daicel), under which the two companies engaged in co-creation from the equipment design stage toward the realization of line concepts such as improving production efficiency, reducing capital expenditures, and saving labor during operation. An interview was conducted with representatives from Toyoda Gosei Co., Ltd., a co-creation partner, and representatives from the Company regarding this project, which implements the spirit of value co-creation as stated in the Basic Philosophy.



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Airbag Production Engineering
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SS Business Headquarters
Toyoda Gosei Co., Ltd.

Keiji Fujiwara

Senior Manager
Process Development, Technical
Development & Research Center
Safety SBU
Daicel Corporation

Kenji Ookuma

Process Development, Technical
Development & Research Center
Safety SBU
Daicel Corporation

Toyoda Gosei Co., Ltd. (hereinafter "Toyoda Gosei")

A global supplier of automobile parts using high-polymer rubber and resin technologies. Since its foundation in 1949, Toyoda Gosei has provided a wide range of value to improve and enrich transportation and people's lives by manufacturing and selling products such as airbags and other safety systems; interiors and exteriors; fuel tanks, battery peripheral parts, and other functional components; and weatherstrips.

Daicel's Inflator Business

In 1988, Daicel launched its production of inflators, gas generation devices that inflate automobile airbags, and is contributing to the safety and security of people's lives. The business leverages the knowledge on pyrotechnics technology we accumulated since our foundation, and our strengths include technological capabilities enabling fully integrated production beginning with gas generants that dates back to the early days of commercialization and high reliability in terms of quality with a total of 1 billion units shipped.

Strategic Shift in Response to the Business Environment in the Background of the Project's Establishment

Mr. Sato (hereinafter titles omitted): Including top executives of both companies, Toyoda Gosei and Daicel have held a number of bilateral exchanges, following our capital alliance in 2017. Since joining Toyoda Gosei, I've basically been working on process technologies. Through these exchanges, it was decided that the process technology field would also be handled, so it served as a starting point for my relations with Daicel. Nevertheless, even if we label it as "co-creation," we searched for themes while repeatedly sharing information on what kinds of initiatives we could take.

Mr. Araki (hereinafter titles omitted): I'm engaged in the

establishment and improvement of production equipment for in-house inflators at Toyoda Gosei and in charge of technical fields such as equipment design, control, processing, and inspection automation. My first impression on the project was that I never heard of conducting co-creation like this before.

Sato: Process technologies constitute the core of competitiveness for companies, and they are not things to actively disclose. While we set "gathering the process technologies of both companies to co-create a competitive production line" as the goal of the project, it was a brand-new experience to see both companies openly sharing all their

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equipment and technologies to co-create new things.

Fujiwara: Ookuma and I are process technology engineers in Daicel's Safety Business. I joined the project as its promoter after the co-creation of a production line was decided. To Daicel, Toyoda Gosei is an important customer in terms of inflators. Disclosing everything about our process technologies naturally means details such as our cost structure and production know-how also get disclosed. At first, there were concerns that disclosing this information would hinder our business in the future.

Ookuma: Despite that, we were able to go beyond our respective positions as supplier and customer to tackle co-creation, because of our common understanding that "making airbag modules (end products) more competitive requires collaboration that transcends differences in the positions of both companies," in addition to the determination of top executives at both Daicel and Toyoda Gosei.

Sato: Airbag modules, including inflators, will not be sold unless they

are selected for use in manufacturing bids among automakers. While our competitors produce inflators in-house, Toyoda Gosei procures them from external sources due to a low in-house production rate of inflators. I feel that we are entering an era in which the respective efforts of module and inflator manufacturers alone cannot make prices low enough to win bids. To tackle such a situation, we worked on this project under the idea of "realizing competitive prices (target costs) through co-creation."

Fujiwara: This project served as an opportunity to push Daicel to change our thinking toward manufacturing. As a manufacturer specializing in inflators, we had to completely shift our approach. Rather than focus on perfecting equipment to fully meet our various customers' quality, performance, and price demands, we would instead decide a competitive price first and develop equipment that could be produced at that price.

Changing Our Differences into Strengths and Establishing New Methods

Sato: We started by looking over each other's manufacturing process to understand the differences in our design philosophies. Sharing what we noticed and cherry-picking good points from the differences between our companies—that is the concept for this line.

Araki: Daicel's equipment has high performance and, frankly speaking, looks magnificent. I think that this reflects both Daicel's needs as a manufacturer specializing in inflators to meet their various customers' demands and Daicel's high level of awareness in terms of quality. On the other hand, the inflator equipment at Toyoda Gosei has a simple design with low production costs, because its inflators are supplied only to our company and the type of product is thus clear. During facility visits and lectures on design philosophies, I was impressed by the abundant knowledge, experience, and production know-how accumulated by Daicel, which has handled inflators since the dawn of airbags.

Ookuma: After deepening our understanding of each other and at the stage in which new equipment was to be designed, Fujiwara and I were stationed at Toyoda Gosei's Miwa Technical Center on a long-term business trip to push the project along. We planned to first identify challenges to achieve target costs and items that would contribute to solving them and then establish the constituent technologies required; however, there were many issues to tackle as a team.

Sato: It was necessary to develop new methods to achieve our goals, and one of those methods was high-cycle production (increasing the production speed for one cycle of each process). A number of obstacles stood in the way of addressing these challenges, but Daicel's experience and past data meshed well with our experience in modifying and improving equipment, so we incorporated demo equipment into our processes, implemented new methods, and finally succeeded following countless trials and errors.

Araki: We are good at fiddling with and creating equipment, but we

had trouble unraveling the logic of why things happened the way they did. I believe this technology was established by adding in Daicel's knowledge and fusing together the strengths of our companies.

Fujiwara: We adopted totally new methods and technologies to solve each issue and even embraced revolutionary, ambitious ideas that were previously unthinkable. Moreover, in order to derive solutions in a short period of time, we proceeded by dividing our challenges into two types: one where both companies pooled their resources and another where each company individually took on tasks in their areas of expertise, considered them, and reported the results at the next meeting. This method could never have been achieved through a traditional customer-supplier relationship. We were able to co-create with a newfound, clear understanding of each other's strengths, so I feel like this is the greatest result we could have asked for.

Ookuma: To tell the truth, I had concerns when I heard that I would be stationed at Toyoda Gosei, a customer's company. Nevertheless, they were usually straightforward and considerate in a positive sense to



make things easier for us. Through spending both good and bad times in the same room together with people who have abundant knowledge and handle equipment in the same field, we gradually came to overcome the boundaries of our companies and have engineer-to-engineer dialogues. Even from my position as a supplier, I sometimes shared candid opinions like “Concerning the verification results for this part, isn’t the validity verification insufficient?” People at Toyoda Gosei were probably confused at first, but through a series of dialogues like that, I feel like we were able to share a “realization that we were

manufacturing together.”

Sato: Neither lies nor deception work in the establishment of technologies. If we get advice saying that more verification is needed and agree with that opinion, we conduct further verifications. There is no other way to achieve our goals.

Fujiwara: If I had applied the brakes, saying, “I should not say this to our customer,” these results would probably never have materialized. Because we share challenges, we had to have serious and in-depth discussions to make progress.

Introduction of Actual Equipment at Daicel’s Harima Plant

Araki: Project team members aligned the values of both companies in the project, but we also needed Daicel’s manufacturing and facilities management departments to understand our design philosophy to operate actual equipment at Daicel’s Harima Plant.

Fujiwara: All the more because there were major changes from existing equipment, it was necessary to share reasons for the changes and their advantages in order to align our course of direction toward the implementation stage. Mr. Araki also had direct talks with members at Daicel’s production site.

Araki: It was my first time talking with employees on the production side of a supplier. Against the backdrop of the history of manufacturing

thus far, I believe that courage is required to change things.

Fujiwara: In my opinion, there was a shift in the mindset within the Company, from making judgments on what we can and cannot do based on past experience to considering with our customers what changes we need to make to reach our goals.

Ookuma: In fact, a lot of unforeseen troubles occurred when we were verifying the prototypes. In some cases, discussions with relevant sections at Toyoda Gosei to address them resulted in improved productivity at Daicel due to changes in Toyoda Gosei’s modules. I feel that having access to a wider range of approaches to solve problems, namely, approaches spanning our two companies, is one of the major results of our co-creation.

Fujiwara: In the course of sharing our challenges, we realized that the points we had been focusing on were not that important from the perspective of our customers. Never in my life had I experienced a relationship that enables close coordination nor smooth discussions thanks to a thorough understanding of our equipment. This was a very big learning experience for Daicel, and we have successfully developed an attitude of exploring where the real needs of our customers lie through dialogues with them concerning other production lines. As a result, compared to existing equipment, we reduced capital expenditures by about 50%, saved labor equivalent to one worker, and shortened the production time per unit by two seconds. In addition to these results, we realized the optimization of quality inspections across the processes of both companies and implemented production equipment that maintains high quality and achieves target costs.



Fruits of Co-Creation and toward Enhanced Competitiveness Going Forward

Sato: Traditionally, performance demands for products flow downstream from upstream companies, in the order of automakers, airbag manufacturers, and inflator manufacturers. Nowadays, we receive more and more supplier-side proposals from Daicel. I believe

that developing competitive performance together is a style necessary for future business growth. Also, I feel that this co-creation project has allowed us to go beyond a basic customer-supplier relationship to build foundations for a relationship that will enable constructive dialogues with

TOYODA GOSEI X DAICEL

Daicel on our closely related module and inflator strategies, with an eye on the future. In addition, the opportunity to achieve something with people from another company's process technology department is invaluable in terms of developing personnel. I think that our company's participating members got inspiration as engineers, leading to their growth. In addition to developing our individual skills, we were able to build a network of engineers handling the same products, a valuable resource for getting advice and uplifting each other.

Fujiwara: While we learned from each other by mutually disclosing information and seeing each other's equipment, another major result was that our customer learned about our equipment. Our common understanding has made it remarkably easier to make requests and proposals and has reduced the man-hours spent doing inefficient

verifications caused by differences in mutual assumptions. This is of course a company-to-company co-creation project, but, personally, looking back, if the people in charge at Toyoda Gosei had not been Mr. Sato and Mr. Araki, I really think that we would not have achieved the same results.

Sato: That goes for both of us. We made a good team and were able to build relations with a sense of respect as engineers.

Araki: Since Daicel's business has a long history, it has accumulated a wealth of knowledge. When we consulted with them, they made incredibly thorough investigations before giving us explanations. As an engineer, I was inspired by the fact that I still have a long way to go, and I also wanted to be able to exchange opinions at a higher level. I think I found good advisors and fellow engineers to compete with.



Ceremony to mark the commencement of mass-production on a new line, involving executives and project members from both companies



New line implemented at Daicel's Harima Plant

Future Ambitions

Sato: It is said the automobile industry is currently in a time of great change, experienced once every 100 years. With the proliferation of electric vehicles and self-driving technologies, laws and regulations as well as assessments have become more rigorous, and there is an ever-increasing need for safety. Under these circumstances, we expect a major shift in the inflators that users will demand, in line with the emergence of new airbags and safety devices they require. I would like to expand our business through co-creation at a higher level, such as co-development of inflators and other airbag modules, with Daicel as a partner, from early stages of development.

Araki: We worked on cylinder-type inflators this time, but we would like to also co-create disk-type products. In terms of technical development, AI use in inspections garners global attention. Nevertheless, it is still common to conduct final inspections with one's eyes or through conventional image inspections. I would also like to establish the world's

first and the industry's first appearance-based inspection technology through joint technical development in the inspection field.

Fujiwara: I had the chance to rediscover the essence of being a process technology engineer: clarifying process design goals, identifying challenges to achieve them, and developing technologies. I would like to change my way of working from creating products we are asked to make, to making proposals to our customers, even down to the design, on what kind of products would be easier to manufacture and more competitive.

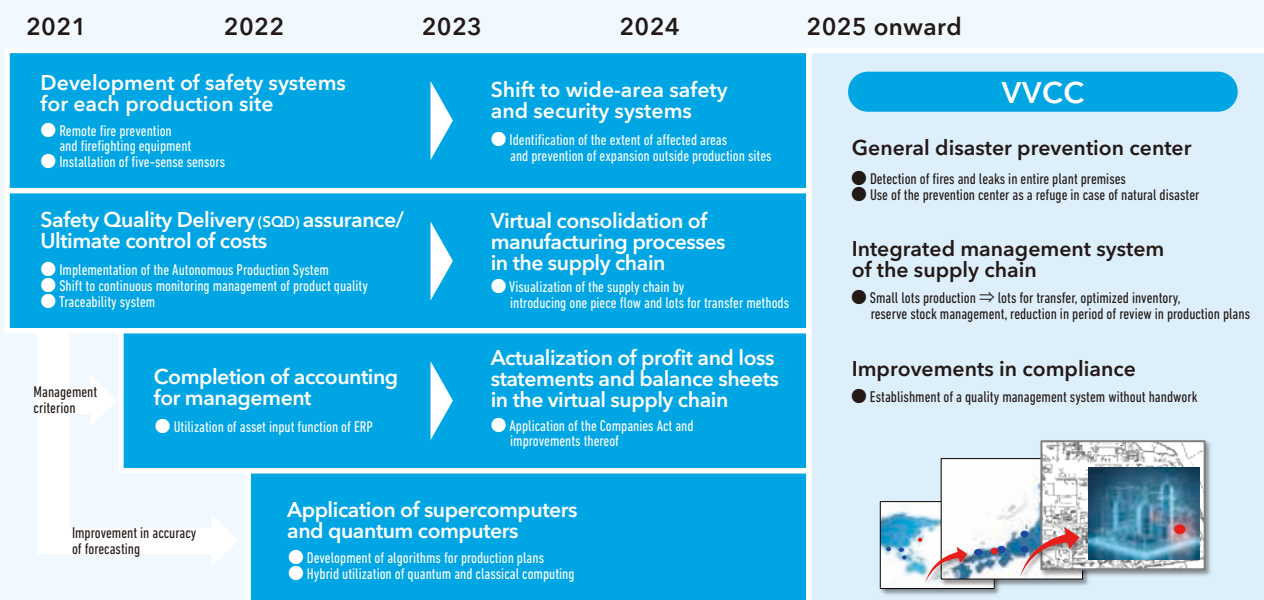
Ookuma: For the time being, we will continue to make steady improvements in collaboration with relevant departments, based on the stable operation of the line implemented this time. We also have a plan to expand this line to overseas production sites, so we would like to pursue manufacturing with deeper integration with our customers with this co-creative experience as a kind of common language.

Feature 2

Next-Generation Manufacturing and Human Resource Development in the Chemical Industry

Building a Value Chain with High Added Value under the World's First VVCC Concept

The Daicel Group sets forth contributions to the creation of a circular society in the Long-Term Vision and is pursuing a new kind of manufacturing. We are working on the implementation of an ultimate energy-saving plant through the combination of DAICEL Production Innovation and microfluidic devices as well as the utilization of Daicel's proprietary technology that turns CO₂ into a raw material using nanodiamond electrode. At the same time, we aim to create a virtual value chain: a new kind of manufacturing in which we deploy highly efficient manufacturing mechanisms that we have developed through DAICEL Production Innovation across the supply chain to reduce waste and loss as well as improve added value through collaborations with companies. The Company has completed a virtual plant that operates the Aboshi Plant in Hyogo Prefecture and the Ohtake Plant in Hiroshima Prefecture, which are geographically distant from each other, in an integrated manner, as if they were a single plant. As a next step, we announced a vision of newly establishing the Virtual Value Chain Control Center (VVCC), an integrated management base that regards the supply chain, consisting of multiple manufacturers, as one virtual corporate entity, at the Aboshi Plant. The VVCC is the world's first attempt at such a concept, and we believe that we can achieve it because Daicel is the world's first company to complete the integrated operation of a virtual plant, which serves as the foundation for the VVCC. This feature introduces an overview of the VVCC and initiatives to develop human resources to support next-generation manufacturing.



DAICEL Production Innovation and the Autonomous Production System: Foundations of the VVCC Concept

Established by the Company in 2000, DAICEL Production Innovation enabled us to realize stable production and high productivity while ensuring safety and quality.

In addition to the identification and thorough elimination of waste and loss through the overhaul of operations, operator load analysis, and cost structure analysis, we have clarified, standardized, and systemized the know-how of experienced operators, thereby enabling new operators to make decisions at the same level as their experienced counterparts. This covers not only routine operations, but also irregular operations, such as switches in production type, and suspensions of equipment due to maintenance, both of which tend to cause trouble and unexpected situations. Hence, it allows us to run plants with little waste or loss under any circumstances.

At chemical plants where multiple processes (manufacturing facilities) are connected through pipework in the same plant, pursuing optimization of individual processes could result in much waste or loss on a plant-wide basis. Therefore, the perspective of overall optimization is essential. The Company visualizes the status of each process in plants at the Integrated Production Center (IPC) in real time and conducts optimal operations on a plant-wide basis by formulating and implementing production plans from an overall perspective. In 2018, we expanded the optimization area to make the Aboshi and Ohtake Plants a virtual plant, aggregating information from both plants in a unified manner, formulating optimal production plans based on respective necessary production volumes, and running the plants while achieving overall optimization.

Under the Autonomous Production System, which was developed in 2020 and has advanced DAICEL Production Innovation, AI jointly developed with the University of Tokyo allows us to make the most of the know-how and skills of experienced operators, which were formerly utilized in a limited manner, thereby making it possible to significantly improve manufacturing competitiveness. The system processes complex and large calculations in a timely manner, which was

difficult with computer processing capabilities back in 2000, and calculates optimal operating conditions that can further save energy, resources, and costs while pursuing high quality. It also has a system to detect and predict signs of abnormalities in processes and facilities that would lead to the deterioration of safety, quality, production volume, and costs, modifying operating conditions and identifying the cause to prevent abnormalities.

 **DAICEL Production Innovation** <https://www.daicel.com/en/daicel-production-innovation/>

■ General Disaster Prevention Center

Safety is one of the priority foundations of corporate activity. The Company has organized a working group to conduct analyses and simulations from the perspectives of process safety and disaster prevention with regard to self-reactive substances that involve the risk of runaway reactions such as pyrolysis reactions and polymerization reactions at all the sites. At the same time, we have installed gas detection centers and remote fire prevention systems in case of emergency at plants where risks are a concern. In addition, we have set up remote monitoring cameras at each plant to establish a system that allows for monitoring entire plant areas. The WVCC will constantly monitor data collected from cameras and sensors at each site and, in case of emergency, conduct real-time simulations of damage estimates and play a command-and-control role over each organization. It will also serve as a refuge for local residents in case of natural disaster. The WVCC thus serves as a general disaster prevention center. The Company is also working on the practical application of five-sense sensors with a startup spun off from the University of Tokyo and others. They substitute visual, auditory, and other senses required for inspecting manufacturing facilities with mechanical devices, namely, sensors for remote operation. This will not just ensure the safety of workers on the site, but also develop an environment where those in their advanced age or with disabilities can work safely.

■ Integrated Management System of the Supply Chain

Continuous Monitoring Management of Product Quality

The mainstream method of quality assurance in the chemical industry is representative point management by sampling. However, this method poses a problem: should a quality defect occur, it would be difficult to determine whether or not there is an irregularity in the relevant lot and to narrow down the affected scope, so it could become a major problem in the chemical industry where each lot is large. The Company utilizes in-line sensors^{*1} and soft sensors^{*2} to transition to continuous monitoring management of products in the process and quality assurance of all products, so that our customers can have a greater sense of safety and security over quality.

This continuous monitoring management is also a big breakthrough for streamlining the flow of goods in the chemical industry. Lot size causes a major obstacle to the realization of the just-in-time concept in the Toyota Production System (TPS)—manufacturing (transporting) what you need when and as much as you need it—in the areas of production planning and logistics in the chemical industry. Lot size in the chemical industry is constrained by tank capacity at a plant or of tanker trucks and tankers. As they assume mass production and transportation of large quantities at a time, their capacity is inevitably large and structurally tends to cause waste from overproduction. Continuous monitoring management by the Company makes a shift to the lot-for-transfer method possible, by which we utilize various sensors and assign numbers to lots based on the request of our customer orders, rather than the management in tank capacity at a plant or logistics units. This reduces the size of lot units and prevents waste from overproduction, thereby realizing a reduction of inventories as well as more agile production and logistics plans.

*1 In-line sensors: Sensors that can be installed in pipes or tanks for direct measurements *2 Soft sensors: Sensors that use measurable values to calculate and predict difficult-to-measure values in real time

Deployment of the Autonomous Production System to the Production Plan and Logistics Domains

The Company seeks to realize highly efficient manufacturing and build a robust supply chain free from waste or loss mainly from overproduction by deploying the Autonomous Production System across the supply chain. We position the WVCC as an integrated supply chain management center that goes beyond the boundaries of companies and puts the flow of goods across the supply chain under uniform management. By expanding the Autonomous Production System not only into production support, but also into planning support for production and logistics, we will take a comprehensive view of the entire supply chain, promptly reflect changes in demand in the downstream process, prevent shortage of goods or overproduction, and use AI to formulate optimal production and logistics plans that realize cost minimization.

Profit and Loss Statements and Balance Sheets in the Virtual Supply Chain

Needless to say, it is important for manufacturers to produce goods at competitive prices. We will build a system to utilize accounting for management. This system will make real-time calculations of manufacturing costs and allow us to monitor assets invested in each process, thereby visualizing and pursuing returns on invested assets, such as ROIC. We will also aim to develop the foundations of accounting for management that would realize a new business group (a virtual value chain), by virtually consolidating the balance sheets and profit and loss statements of companies connected in the supply chain and making profits and asset efficiency across the chain visible. We will also aim to build a mechanism to visualize not only financial information but also non-financial information, such as GHG emissions, so that we can monitor the entire supply chain.

■ Improvements in Compliance

By shifting from representative point management by sampling to continuous point management utilizing sensors in quality assurance work, operations related to data acquisition and storage, which have traditionally been done by people, will be automated. By doing so, we can eliminate various risks arising from human intervention, including human errors. In addition, by alleviating the burden on workers, it helps to dispel a sense of busyness in on-site work and encourages them to spend more time on tasks that only humans can do.

Development of Human Resources Who Create Next-Generation Manufacturing

Over 20 years have passed since we established DAICEL Production Innovation, which dramatically increased productivity at chemical plants. We at Daicel are taking on the challenge of further developing manufacturing, by launching the “Autonomous Plant Project” mainly involving employees in their 30s and 40s. Technologies and mechanisms that serve as the core of the WVCC concept constitute some themes that have been under consideration and discussion in the project. Some of the items required to bring them into reality have already been put into practical use or are one step short of practical application in terms of deliberation, development, and investments. Fumihiro Miyoshi, Deputy General Manager, Production Management Headquarters and Head of Monozukuri Production Innovation Center, explains the overview of this project under which we are working on a wide range of themes toward the creation of next-generation manufacturing and the concept of human resource development through the project.



Fumihiro Miyoshi

Deputy General Manager, Production Management Headquarters
Head of Monozukuri Production Innovation Center

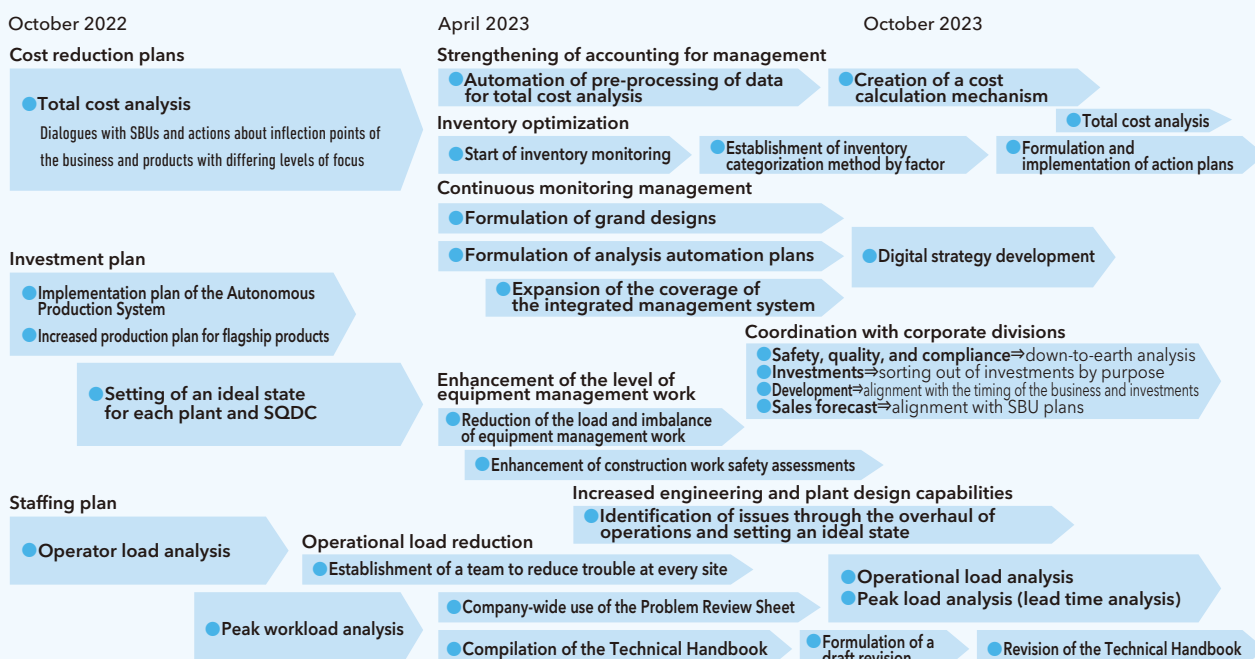


Could you tell us an overview of the “Autonomous Plant Project”?

The mission of this project launched in October 2022 is “to identify matters that should be discussed as company-wide issues from observations at each plant and horizontally deploy solutions at the plant” and “to foster senior plant employees who can autonomously run plants.” The project puts forward the vision of “autonomously growing with the comprehensive strength of the Daicel Group, rather than each Daicel plant growing on its own.” We hold training camps at the Nishiharima Training Center every month, and along with approximately 30 project members, key figures of each plant voluntarily participate in the camps. The Senior Managing

Executive Officer, General Manager of the Production Management Headquarters takes part in the camps, and the contents of discussions there will directly lead to company strategies and actions. This project originally kicked off with the purpose of enhancing collaboration among plants in implementing the Autonomous Production System developed in 2020 at each plant. Now it has gone beyond the Autonomous Production System, becoming a platform for discussing and acting regarding a wide variety of issues common to all plants (company-wide issues), including constituent elements of the WVCC concept.

Achievements of the Autonomous Plant Project





What do you value in human resource development through this project?

The objective of this project is that “all actions should lead to our own growth and the growth of the members.” Simply doing what your supervisors or colleagues tell you to do as they say will not lead to growth. I believe that people grow by accumulating experience with regard to tackling challenges on their own will and with a focus on results. Project members do not bring the hierarchy of their own organization into the project. We also value acting on one’s own initiative. Project members and training camp participants are guided by the principles of (1) voicing their opinions, (2) treating things as their own issues, and (3) acting on decisions made. As we put into action decisions made in this project without fail, we set up a forum for debates during the camp to hold thorough discussions before drawing conclusions. The training camp is not a place for social relations. Each participant joins the camp as the representative of each workplace and a candidate for a senior level employee of the plant in the future and works on the challenges of Daicel as a whole, rather than of each workplace. Each participant stimulates each other through their discussions and actions, further enhancing the level of activity. As members are tackling big challenges, they often hit a wall. Nevertheless, if members can confirm that the direction they are heading in is right, I advise them to divide up issues and start tackling what they can get on with right away. Taking action often results in new discoveries and breakthroughs in the solution of problems, and this in turn leads to results, a sense of achievement and confidence, and the motivation to take on more challenges.



What kind of human resources do you think will play a role in the creation of next-generation manufacturing?

I think that manufacturers are at a major turning point due to growing concerns over the sustainability of society and the increased use of AI. My opinion is that talent who can see this change as an opportunity and work positively toward it are required. I am also the leader of the Next Generation Production System Establishment Project, which resulted in the Autonomous Production System, and this system was a product of the idea of making full use of the 8.4 million pieces of know-how and skills of our seasoned operators identified in DAICEL Production Innovation combined with the power of AI. It goes without saying that the source of the competitiveness of manufacturers lies in the production site. Huge chemical plants are like complex, large living organisms with each production facility connected by pipes, and their state is constantly changing. The know-how of experienced operators has been accumulated through the process of controlling these chemical plants while ensuring safety and quality and pursuing low-cost operation. If we can use AI to reproduce all of this know-how, it may lead us to discover areas for improvement in operator methods, as well as ideas for potential improvement that we had not noticed before. And if these improvement actions lead to the accumulation of new pieces of know-how, then by having AI learn from them, AI will evolve even further, creating a cycle of growth between people and AI. During the development process of the Autonomous Production System, we experienced many failures, but we did not leave the failures as they were and continued to go through trial and error as a team until we achieved results. This has led us to the

present stage of implementing the system at each plant. The Company has unique and significant strengths in the industry, such as DAICEL Production Innovation, and a culture that supports people who take on challenges without fear of failure. We also have a large number of talent who not only follow the path laid out by their predecessors, but also use it as a foundation to take on more advanced challenges and carve out a future. The VCC concept that we have announced is one of the themes that we have been working on in our Autonomous Plant Project, and it is an approach that starts from the manufacturing we have developed through DAICEL Production Innovation, which is one of our strengths. By leveraging our strengths in manufacturing and collaborating across corporate boundaries, we will respond promptly to the market and go beyond manufacturing with reduced waste or loss to build a value chain that co-creates value. Going forward, we will continue to believe in our potential and pursue an ideal form of manufacturing that changes with the times, without being confined by conventional theories.

Feature 3

Daicel Group's Challenge to Achieve Carbon Neutrality

The chemical industry provides beneficial materials that also contribute to reduction of environmental impact; however, the manufacturing processes of these materials require a lot of energy. The Daicel Group has taken this challenge head-on and is working on creating highly effective solutions that will not only reduce the environmental impact of the manufacturing processes but will also help in achieving carbon neutrality.

In this page, we will introduce the Daicel Group's initiatives being implemented from three angles, reducing costs, improving productivity and enhancing competitiveness as a manufacturing company with a view toward achieving manufacturing that is economical as well as ecological, while at the same time reducing its environmental impact.

Medium- and Long-Term Reduction Targets for GHG Emissions

The Daicel Group has set a medium- and long-term reduction targets in line with the standard of SBT*1.5°C.

2050: Achieve carbon neutrality; Scope: 1, 2, 3 of the Daicel Group

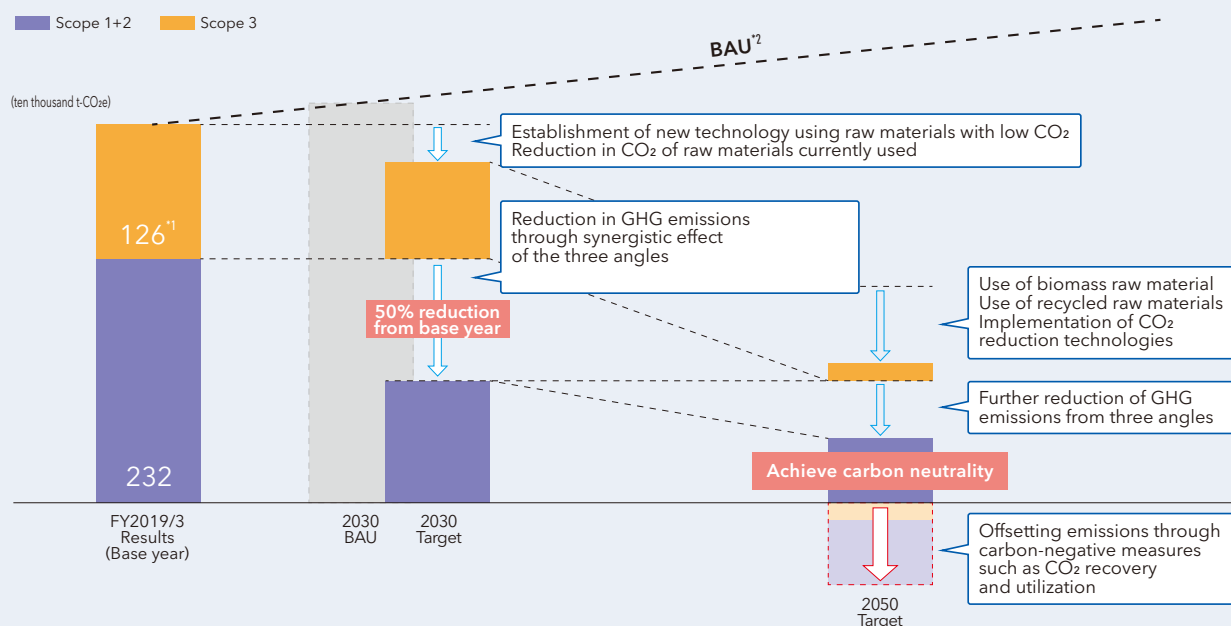
2030: 50% reduction in GHG emissions (compared to FY2019/3); Scope: 1, 2 of the Daicel Group

* Science Based Targets: Goal setting consistent with science

Approach and Roadmap for Achieving Carbon Neutrality

Over the years, the Daicel Group has been working toward reducing the use of energy and cutting down GHG emissions from three angles (See the next page for details). To achieve the medium and long-term reduction targets, we have employed three angles to identify the items that will contribute to reduction of GHG emissions. We have calculated the specific reductions and have begun creating a roadmap. Although the individual items and reductions are undisclosed, we will start with the most feasible items and move on to the implementation, taking into account the return on investment. Some of the reduction items include technologies and materials that are still under development. We expect to achieve our medium- and long-term targets by putting them to use steadily.

Roadmap



*1 Since the calculations for Scope 3 were started from FY2020/3, we have tentatively shown the results for FY2020/3. We are working on gradually expanding the categories and boundaries in Scope 3 calculations.

*2 Business as Usual: GHG emissions without additional measures

Reduction of GHG Emissions from Three Angles <https://www.daicel.com/en/sustainability/environment/climate-change.html#anc-5>

Angle 1

Reduction in GHG emissions in the current production processes

We collect data on factory operations (including the status of energy use such as heat balance) through DAICEL Production Innovation to visualize the wastage and loss in the use of energy in the current facilities and production method and eliminate these thoroughly. We also implement and deploy the "Autonomous Production System," an evolution of DAICEL Production Innovation with artificial intelligence (AI) logic to further reduce GHG emissions.

●DAICEL Production Innovation <https://www.daicel.com/en/daicel-production-innovation/>

●Autonomous Production System [Page 38](#)

Angle 2

Reduction in GHG emissions in innovative technology

In parallel with eliminating the wastage and loss of energy in the current production process as explained above, we implement innovative technology to significantly reduce energy use. This is achieved by changing the manufacturing method to reduce the distillation process, which consumes a large amount of energy, by reusing low-temperature exhaust heat, etc.

●Microfluidic Device Technology [Page 44](#)

●Modified Petlyuk Distillation Process

●Vapor Recompression Technology

POINT

The use of detailed data on factory operations visualized through DAICEL Production Innovation makes it possible to identify points for improvement, study innovative technologies, and simulate the effects of their introduction with a high level of accuracy.

Repetition of Angles 1 and 2

With the equipment and method employing the new technology implemented in [Angle 2](#), the wastage and loss in the use of energy of [Angle 1](#) are identified and reduced. We then repeat [Angle 1](#) and [Angle 2](#) by applying the innovative technologies implemented as per [Angle 2](#) to the newly identified points of improvement. We continue to improve the level of our efforts, while creating manufacturing processes that minimize the use of energy.

Angle 3

Reduction in GHG emissions in the energy supply divisions

It is a standard practice in chemical plants to design the capacity of energy supply facilities to be larger than that of energy-using facilities. Consequently, by minimizing energy use through [Angle 1](#) and [Angle 2](#), eliminating excess energy capacity in energy supply facilities, and downsizing them as much as possible, GHG emissions can be significantly decreased.

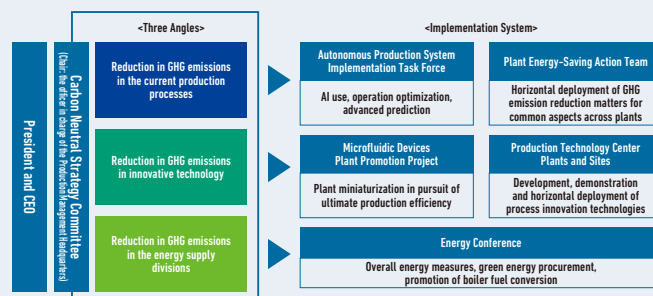
●Downsizing and optimal operation of boiler equipment depending on energy use

●Selecting energy source material in consideration of cost and GHG emissions

●Improving the tire derived fuel mixture ratio of boiler equipment

Our Promotion System for the Reduction of GHG Emissions

The Carbon Neutral Strategy Committee has been established under the direct control of the President and CEO to promote energy conservation and GHG emissions reduction in the Group. The Committee is chaired by the officer in charge of the Production Management Headquarters and members include representatives from production, energy supply, and other corporate divisions in Japan. It strives to construct a circular process that is in harmony with the global environment from the Three Angles. In addition, the introduction of internal carbon pricing has been considered in order to develop and execute appropriate investment plans which can achieve our medium- and long-term targets.



Technological Innovation toward Carbon Neutrality

We believe that technological breakthroughs are needed toward carbon neutrality and carbon-negative measures to achieve it. Here are two innovative technologies that the Group is developing with co-creation partners for implementation.

Energy Conservation through Microfluidic Device Technology

We are in the process of developing microfluidic device technology that enables ideal chemical reaction control and does not produce impurities (unreacted substances or byproducts), thereby eliminating the need for the separation and recovery process that takes large amounts of energy.

A microfluidic device enables chemical operations (such as mixing, reacting, and purifying) on a micro scale in channels of several hundred micrometers on a glass substrate the size of a business card. The narrowness of the ultrafine channels allows instantaneous mixing, has excellent heat removal capabilities, and minimizes variations in temperature and concentration distribution that could cause impurities to be generated. This enables substances to react evenly at the molecular level under homogenous temperature and concentration conditions. The separation and recovery process to remove impurities itself is unnecessary. This achieves a large amount of energy savings as well as a shortened manufacturing process and improved product quality. Additionally, by utilizing the standardization method of operational know-how through DAICEL Production Innovation, the manufacturing process of a chemical plant can be reduced to single operations, which cannot be broken down any further, and modularized. Combinations of approximately 30 different modules can be used for the production of a wide range of chemical products.

To realize this breakthrough process innovation, we aim to implement it in the resist polymer manufacturing plant at the Arai Plant between the end of FY2025/3 and FY2026/3. In parallel, R&D is underway for implementation in the manufacturing process of peracetic acid derivatives and other products at the Ohtake Plant. By establishing these microfluidic device technologies, we will be able to cover most of the unit operations required for chemical processes, and we will expand these technologies to manufacturing processes for a wide range of products in the future.

Features of Microfluidic Device Plant

1. Micro-miniaturization of production facility

Glass substrates the size of a business card are combined together to form a single unit.

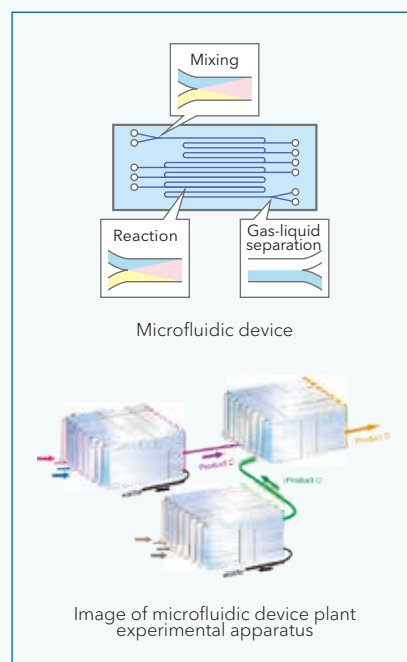
Combinations of glass substrate channel designs can be used for all kinds of chemical products and production volume can be increased by parallelizing one unit. Moreover, laboratory results can be reproduced for industrialization simply by increasing the number of glass substrates.

2. Energy saving

There is no unevenness in temperature and pressure in ultra-fine channels, allowing pinpoint and speedy generation of targeted reactions. Since wasteful reactions are unlikely to occur, the purity of the product is high and there is no need for post-processing to separate out the excess material. The technology to be adopted at the resist polymer manufacturing plant of Arai plant is expected to reduce both energy consumption and CO₂ emissions by more than 90%.

3. Liberalization of production facility

Since this technology allows building ultra-compact, energy-saving, low-cost facilities, it dramatically increases the flexibility of production sites. Locating production sites where raw materials are available facilitates local production for local consumption and greatly reduces transportation costs and energy.



Corporate Website "MICRO PLANT" <https://www.daicel.com/en/microfluidics/>

VOICE



Katsunori Konishi
Manager
Commercialization
Technology Development
Group, Engineering Center

A microfluidic device plant is a technology that, by its very nature, will lead to low energy consumption and revolutionize the energy-intensive chemical industry.

I have been stationed in Taiwan and have worked on the development of the technology with engineers from IMT TAIWAN, a partner company in the project. Discussions were also held with members from National Tsing Hua University in Taiwan, another partner, and all parties involved spared no effort to solve various issues. The technology differed from existing plant technologies in many respects and required repeated trial and error, but steady progress was made in the design, development, production, and verification of the plant.

We plan to implement a microfluidic device plant in the resist polymer manufacturing process between the end of FY2025/3 and FY2026/3. I would like to first ensure that this plan is completed and then contribute to having this new plant be adopted not only within the Daicel Group but also throughout the world.

Achievement of Carbon Negativity through the Use of Nanodiamonds

To achieve carbon negativity, the Group is working on the implementation of technology in which nanodiamonds are used to reduce CO₂ to CO, turning it into a raw material.

Ultra Solar-reduction

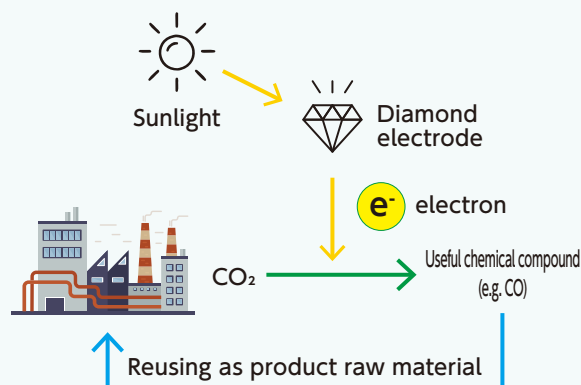
We have the technology to synthesize nanodiamonds with extremely high productivity by the detonation method. Working with Kanazawa University, we advanced applied development and succeeded in establishing a technology that decomposes CO₂ using only sunlight. The results of this research were acknowledged in December 2023 by Carbon, an international journal. We have named this technology Ultra Solar-reduction and are working on R&D for real world implementation.

CO₂ reduction technologies up to now have required large amounts of electricity to break down CO₂, and to produce that electricity, CO₂ was generated. However, with the Ultra Solar-reduction technology created through joint research between Daicel and Kanazawa University, CO₂ can be continuously decomposed into carbon monoxide and oxygen with high efficiency through solar irradiation. In addition, because diamonds are chemically stable, they do not deteriorate, and the reaction continues semi-permanently. We plan to reuse the carbon monoxide generated by this technology as a raw material for the Group's products. By implementing the Ultra Solar-reduction technology, we can establish a highly competitive cyclic structure.

Progress in Our Research toward Implementation

With the aim of implementing the technology at our Aboshi Plant in FY2031/3, we began laboratory verifications in April 2023 at the BGIC* established within Kanazawa University, and from this fiscal year, we have been working on technical development using equipment with a flow format more similar to that of actual equipment.

We are currently conducting joint research with Kanazawa University in three areas: improving the performance of diamond electrodes, which is key to increasing the reduction efficiency; optimizing the conditions for maximizing reduction reactions; and designing optimal equipment for implementation. Through this research, we have increased electrode performance to approximately 10 times that of conventional technologies. We are making steady progress in collaboration with Kanazawa University, having formulated a roadmap for implementation by 2030 and an action plan to achieve the target reduction efficiency by FY2026/3.



* BGIC: Biomass Green Innovation Center at Kanazawa University (kanazawa-u.ac.jp/en/)

Our corporate website "Nanodiamond Solutions" <https://www.daicel.com/en/nanodiamond/>

VOICE



Norio Tokuda

Professor (Specializing in Research)
Nanomaterials Research Institute
Kanazawa University

The Energy Saving Device Development Group of the Nanomaterials Research Institute at Kanazawa University conducts R&D activities from diamond wafers to device development in an integrated manner, aiming at the real world implementation of next-generation semiconductors using diamonds, the ultimate semiconductor material. From these activities, the idea for a new solid catalyst that takes advantage of diamond's unique property of "negative electron affinity" was born, and in FY2021/3, collaborative research with Daicel (interdisciplinary research combining chemistry and semiconductor engineering) started to embody this idea.

As a result, by combining Daicel's ultra-high concentration nitrogen-containing nanodiamonds and our ultra-high concentration boron-doped diamond technology, we succeeded in developing a diamond electrode capable of CO₂ reduction and CO generation (carbon recycling) using visible light (Ultra Solar-reduction) in FY2024/3. Going forward, we will further improve performance and aim for a future in which this technology contributes to carbon negativity.

VOICE



Hitoshi Asakawa

Professor
Faculty of Chemistry, Institute of
Science and Engineering
Kanazawa University

At first, I participated in the project for the Ultra Solar-reduction technology using diamond electrodes with the intention of just helping out a little, but I was swept up in the energy and enthusiasm of the people at Daicel and the university members and now I am working very hard on it. People from a variety of positions and fields are involved in this project, and we have fostered relationships in which we can freely have discussions without hesitation, and I am excited about this form of industry-academia collaboration, which I had never experienced before.

We aim to contribute to a carbon-negative society through this new industry-academia collaboration at the BGIC established at the Kakuma Campus of Kanazawa University and the diamond electrodes that have been developed there.

Information Disclosure in Line with TCFD Recommendations

The Daicel Group endorsed the TCFD recommendations in November 2021. In accordance with the recommendations, the Group disclosed information on each item related to climate change for governance, strategy, risk management, and metrics and targets, and conducted a scenario analysis in major business areas in FY2024/3.



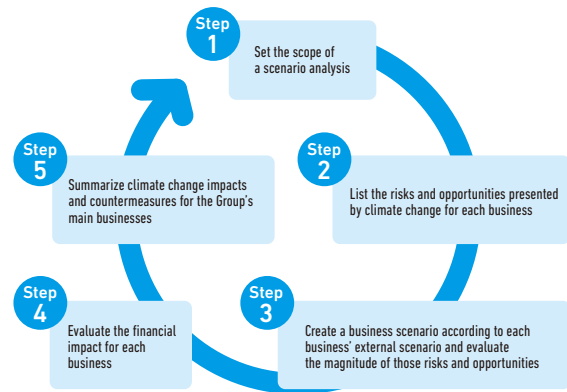
Governance

The response to climate change is discussed at the management level. At the Sustainable Management Committee held three times in FY2024/3, there were mainly discussions on the response to climate change, the certification system for the contribution to the development of a circular society, initiatives to reduce GHG emissions, and the calculation of our Carbon Footprint of Products (CFP), with the details reported to the Board of Directors.

Page 32: Sustainable Management System

Strategy

In order to examine strategies and organizational resilience in light of climate-related risks and opportunities, the Daicel Group conducted a scenario analysis using the following procedure with reference to climate change scenarios from the International Energy Agency (IEA) and the Intergovernmental Panel on Climate Change (IPCC), and considered the impact as of 2030.



● Implementation procedures for scenario analyses

Scenario analyses follow the procedures listed on the right.

● Scenario analysis conditions and overview

1. Scenario analysis scope

The following businesses were evaluated as the Group's main business areas.

- Engineering Plastics Business (Polyplastics)
- Acetyl Business centered on cellulose acetate (Smart and Material SBUs)
- Safety Business (Safety SBU)

2. Time frame

We examined transition risks, physical risks, and transition opportunities in 2030.

3. Assumed scenarios

Based on information from the IPCC, IEA, and other sources, we examined the risks and opportunities of two scenarios: one in which decarbonization progresses (1.5°C/2°C scenario) and the other in which decarbonization does not progress (4°C scenario).

As the temperature increase at 2030 in both the 4°C scenario and the 1.5°C/2°C scenario is around 1.5°C and not significantly different from one another, the physical risk in 2030 is assumed to be similar in both the 1.5°C scenario (in part, below 2°C scenario) and the 4°C scenario. Therefore, no distinction is made for each of the two scenarios in terms of physical risk, and the same situation is predicted for 2030.

Scenario Overview

	1.5°C/2°C	4°C
Societal changes	● In order to limit the increase in average temperature to less than 1.5/2°C by the end of this century, bold legislation and technological innovation will be promoted. ● Efforts are being made to realize a decarbonized society around the world, and environmental performance (low environmental impact) is a value provided to customers on a par with QCD. ● In the chemical industry, companies and businesses that cannot adapt to a decarbonized society will be weeded out, and procurement risks for raw materials and fuels will increase as consolidation progresses. ● Public scrutiny of non-compliance with environmental policies will increase (a condition for stopping transactions from customers). ● Increasing proportion of renewable energy will destabilize the power supply.	● There is a gap between regions where bold legislation is prompt, mainly in Europe, and where the emphasis is on economic growth and regions where the introduction of strict regulations is slow, especially in emerging countries. This gap results in a lack of progress in GHG reduction. ● Customers evaluating environmental performance (low environmental impact) are limited. ● In the fossil fuel and chemical industries, there is no active investment, and procurement risks for raw materials and fuels increases as consolidation of companies and businesses in such industries progresses due to the aging facilities. ● Public scrutiny of non-compliance with environmental policies will increase (a condition for stopping transaction from some customers). ● Increasing proportion of renewable energy will destabilize the power supply in some regions.
Technological innovation	● Technologies related to CCU* and resource recycling (circular economy) have been actively developed and put into practical use in 2030. ● Investment in energy-saving and CO₂-saving technologies is becoming more active, and the acquisition of these technologies is directly linked to cost competitiveness.	● Rising energy prices will increase investment in energy-saving technologies, and the availability of technology acquisition is directly linked to cost competitiveness.
Climate change	● The scale of disasters such as typhoons and floods will increase. ● Extreme weather, such as high temperatures, is progressing.	● The scale of disasters such as typhoons and floods will increase. ● Extreme weather, such as high temperatures, is progressing.

* Carbon dioxide Capture and Utilization

● Scenario Analysis Results -Risks and Opportunities-

The following table shows the risks and opportunities related to climate change in the analyzed businesses, their degree of impact, and proposed countermeasures.

Risks/ Opportunities	Category	Details	Overall		Engineering Plastics (Polyplastics)		Acetyl Chain		Safety		Response
			4°C	1.5/2°C	4°C	1.5/2°C	4°C	1.5/2°C	4°C	1.5/2°C	
Transition Risks	Policies and Regulations	Increased operating costs due to the introduction and strengthening of carbon pricing (taxes)	●●	●●●	●●	●●●	●	●●●	●	●●	Promote activities to achieve the GHG reduction target (50% reduction in total compared to FY2019/3)
		By introducing and strengthening carbon pricing (taxes), the increased costs to upstream business partners are passed on, resulting in higher procurement costs	●●	●●●	●●	●●●	●	●●	●	●●	Reduce the impact by promoting the reduction of GHG emission intensity in cooperation with suppliers Switch to low-GHG raw materials
		Strengthening of GHG emissions regulations based on carbon emission targets and policies of each country, including EU Carbon Border Adjustment Measure	●●	●	●●	●	—	—	●	—	Promote activities to achieve the GHG reduction target (50% reduction in total compared to FY2019/3) Switch to energy-saving, low-GHG raw materials, and change suppliers
	Market	Price fluctuations of petrochemical-derived raw materials to realize a low-carbon society	●●●	—	●●	●	●●●	—	●	—	Optimize inventory management Promote multiple purchases, simplification of raw materials through formulations, and standardization of quality through improvement of manufacturing technology
	Technology	Increase in equipment investment costs for energy saving and productivity improvement	●●	—	●●	—	●●	—	—	—	Resolve risks by accelerating the development of technology and know-how for formulation design and technical services
	Reputation	Identification of and response to risks and opportunities related to climate change, and increasing demand for disclosure of environmental management information	●	—	●	—	—	—	—	—	Reinforce systems and structures related to environmental measures Continue disclosing information related to the environment in accordance with the changing needs of society
Physical Risks	Chronic Acute	Intensification of disasters due to abnormal weather conditions (heavy rain, floods, and typhoons), resulting in suspension of operations and damage to raw materials and products Supply chain disruptions	●	—	●	—	●	—	●	—	Strengthen BCP for climate change
	Chronic	Worsening working conditions and the spread of infectious diseases due to the rise in average temperature	—	—	—	—	—	—	—	—	Continue making work environment improvements
Transition Opportunities	Market	Expansion of new markets for environment-friendly products Biodegradable plastics, EVs, renewable energy, recycling, and water resource conservation	●●●	—	●●	—	●●●	—	●●	—	Develop recycling business (recompounding business) Develop low-GHG products (utilization of CCU technology, and development of bio-based products) Functionalize cellulose acetate, develop new fine cellulose, and commercialize BIC* projects Develop market for EV current interrupters
	Resource Efficiency	Reduction of operating costs through energy saving and productivity improvements	●●●	—	●●●	—	●●●	—	●	—	Adopt DAICEL Production Innovation and the Autonomous Production System
Other Reduction Activities*2			●●	●●●	●●	●●●	●	●●●	●	●●	

(Impact) ●●●: Over 10 billion yen, ●●: Several billion yen, ●: Less than 1 billion yen, -: Almost no impact

*1 Biomass Innovation Center: The research division of our company aiming to convert biomass resources into raw materials.

*2 Other reduction activities: Investment for a 50% reduction in GHG emissions, reducing the impact of carbon pricing due to GHG emission reductions, transitioning to low-GHG raw materials, overall reduction activities in the supply chain, etc.

Risk Management

The Daicel Group regards climate change as a major risk in sustainable management, and we conduct risk assessment, formulate responses, and confirm implementation status as part of the Group's risk management system. The Sustainable Management Committee conducts detailed examinations for key issues.

Risk Management <https://www.daicel.com/en/sustainability/governance/risk-management.html?id=anc-2>

Metrics and Targets

The Group has listed "Respond to climate change," "Provide environment-friendly materials and technology," and "Contribute to the development of a circular society" as three of its 15 key sustainability issues (materiality), and has set KPIs for each. For "Respond to climate change," we will further develop energy-saving measures to achieve GHG emission reduction targets and carbon neutrality by 2050. In addition, we are promoting the introduction of an in-house certification system, the "Certification System for the Contribution to Build a Circular Society," and we will build a structure to visualize the level of contributions.

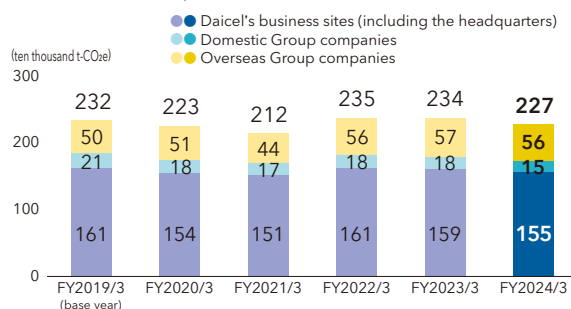
Page 33: Materiality List **KPI** https://www.daicel.com/en/sustainability/pdf/materiality_kpi_2024.pdf

The Group's Sustainable Management Policy includes the development of a circular processes that coexist with the global environment. We will continue to discuss products and services that contribute to a low-carbon economy, and consider setting better metrics and targets.

GHG Emissions Reductions and FY2024/3 Results

The Daicel Group's GHG emissions for FY2024/3 decreased by 3.4% year-on-year to 227 ten thousand t-CO₂e due to initiatives such as improving the tire-derived fuel ratio of boilers at the Ohtake Plant and increasing the self-consignment of electric power including at Group companies.

GHG Emissions (Scope 1, 2)



BUSINESS STRATEGY

DAICEL REPORT 2024

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BUSINESS STRATEGY

Medical / Healthcare

Business Overview

The Life Sciences business includes the manufacture and sale of chiral (optical isomer) columns^{*1} (in which we have a large share of the global market) and separation services, which are used to analyze and acquire optical isomers in the development and manufacturing processes of pharmaceuticals. We are also working to expand our business domain into the biotechnology field. In the Healthcare business (Cosmetics and Health Foods), we aim to contribute to improving people's QOL^{*2}, and are developing high-quality cosmetic ingredients, marine-biodegradable spherical cellulose acetate particles (BELLOCEA®), and unique functional food ingredients produced from natural ingredients through extraction and bioconversion technologies.

^{*1} Chromatographic columns for separation of optical isomers (used for separation of active pharmaceutical components, etc.) ^{*2} QOL: Stands for Quality of Life and refers to not only physical wealth but also mental quality of life

Main Businesses	Main Products
Life Sciences	Chromatographic columns/stationary phases (chiral columns and achiral columns), chiral reagents, separation services/purification services, analytical services, reagents for genetic analysis research, pharmaceutical additives, new drug delivery devices
Healthcare	Cosmetic ingredients (polyglycerols, spherical cellulose acetate particles (BELLOCEA®), etc.), functional food ingredients (equol, konjac ceramide, urolithin, and lactobionic acid, etc.)

Daicel Group's Strengths

【Life Sciences】 A leading company in optical isomer separation technologies	Separation technology developed over many years since the commercialization of chiral columns in 1982, and a global network of pharmaceutical companies and researchers
【Life Sciences】 Special Medical Materials business	We promote business synergies through collaboration between medical businesses within the Group, such as Polyplastics' POM and COC (have superior functionality and are used as medical materials) and the Life Sciences SBU's Actranza® Lab (a new needle-free drug delivery device)
【Healthcare】 Unique manufacturing technology	In Cosmetics, it is possible to produce colorless, transparent polyglycerin with few byproducts and high water solubility. In Health Foods, we utilize our proprietary anaerobic fermentation technology* to manufacture with biotechnology intestinal metabolites that some people cannot produce in their body * Fermentation technology in the absence of oxygen

Our Business Environment

Opportunities	Risks
- Increased activity in the development of new gene medicines and vaccines, triggered by vaccines for the novel coronavirus - Growth of the cosmetics market in Asia and recovery in domestic demand of inbound tourism. - Increasing demand for biomass and biodegradable raw materials in the cosmetics industry - Growth of the functional health foods market due to increasing health consciousness	- Uncertainty over the Chinese economy - Technological innovation in the pharmaceutical and medical equipment fields as well as individualized market needs due to the decentralization of bases for research/clinical development and production - Replacement with new ingredients in healthcare products

Performance Targets, Capital Expenditures, Depreciation and Amortization

FY2024/3 Results				FY2025/3 Plans			
Net sales	Operating income	Capital expenditures	Depreciation and amortization	Net sales	Operating income	Capital expenditures	Depreciation and amortization
13.9 billion yen	0.8 billion yen	1.9 billion yen	1.1 billion yen	15.0 billion yen	0.8 billion yen	1.0 billion yen	1.0 billion yen

Growth Strategies

Full-fledged launch of efforts to obtain approval of medical equipment for new drug delivery devices



Actranza® Lab for experimental animal studies

The Group is accelerating its efforts to obtain approval of medical equipment for new drug delivery devices. Daicel established Daicel Medical Ltd. (hereinafter "Daicel Medical") in October 2023 and formed a strategic capital alliance with PharmaJet, a global leader in needle-free injection systems. In addition, Daicel Medical obtained a second-class marketing license for medical devices from the Tokyo Metropolitan Government in April 2024, which allows the company to manufacture and sell medical equipment in the second class or below in Japan. We are steadily establishing a structure toward applying for pharmaceutical approval for new drug delivery devices in Japan by FY2025/3 and subsequent FDA approval in the U.S.

The new drug delivery devices are drug delivery systems (hereinafter "DDSs") that utilize the One Time Energy® control technology we accumulated in the Safety Business. A precise depth control that is difficult to obtain with conventional injection systems enables us to effectively deliver pharmaceutical solutions into the skin where there are many immune cells. At the same time, the delivery of said solutions into cells is expected to allow for effective gene expression. With the future aim of using them in the fields of messenger RNA

vaccines and DNA vaccines where we can utilize these characteristics, we are proceeding with efforts toward their practical application with pharmaceutical companies and research institutions engaged in the development of new drugs. These needle-free DDSs are also garnering attention in terms of preventing medical accidents and reducing disposal costs, and we seek to obtain approval of medical equipment for subcutaneous DDSs, which have already gained a large market size in recent years.

With PharmaJet, we will jointly develop and deliberate on syringes that use materials owned by the Group and conduct joint marketing in Japan, the U.S., and Europe, leveraging PharmaJet's track record of commercializing needle-free injection systems in the U.S. and European markets as well as its partnership with pharmaceutical companies, and thereby collaborate on the launch of a global needle-free injection system market. At the same time, we will speed up efforts to expand our business centered on the Group's medical equipment.

Focus on the field of mid-molecular drugs with the application of technologies cultivated through chiral columns



Achiral column (in front)

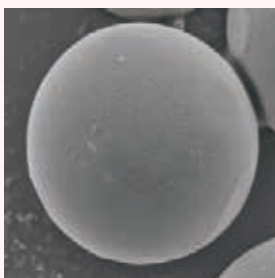
The Group operates its Optical Isomer Separation business, focused on chiral columns, around the world, centering around bases in Japan, the U.S., France, China, and India. Chiral columns are used for the analysis and acquisition of optical isomers, especially in the field of low-molecular drugs. In India and China, whose generic drug markets are experiencing significant growth, we are working not only on selling columns, but also expanding separation services as well as analysis and synthesis services.

The Group's chiral columns use high-polymer polysaccharide derivatives for silica gel carriers. These special columns enable efficient separation of compounds that cannot be separated with common chromatographic columns (i.e., optical isomers), and the Group boasts being a world market leader in this regard. The Group is developing and selling a new type of chromatographic column (achiral column) with high-polymer technologies developed through chiral columns for analysis and purification applications in the growing field of mid-molecular drugs (expected growth rate¹: 9.6% for peptide drugs through 2027 and 3.7% for nucleic acid drugs through 2029). These

columns have separation properties different from common achiral columns that use low-molecular ODS groups² for silica gel carriers, and we seek to expand sales taking advantage of this strength.

*1 According to our research *2 ODS groups: octadecyl silyl groups

Launch of BELLOCEA® BS7 spherical cellulose acetate particles in FY2025/3



BELLOCEA® BS7 particles

Amid concerns over environmental pollution arising from microplastic beads (hereinafter "microbeads") contained in cosmetics, expectations are growing for naturally derived and biodegradable substitute raw materials. In response to these needs, the Company is providing BELLOCEA® S7 spherical cellulose acetate particles as agents for improving the tactile feel of cosmetics. We have developed BELLOCEA® BS7 (hereinafter "BS7"), a product with higher biodegradability, by making full use of Daicel's cellulose technologies, and plan to launch it in FY2025/3.

Europe announced that it would impose a total ban on the sale of cosmetics using microbeads in 2035, and global cosmetics manufacturers in particular are taking the lead in replacing microbeads with substitute raw materials. However, it is considered difficult to develop materials with both a tactile feel as soft as microbeads and biodegradability for tactile feel-improving agents used in foundations and other cosmetics. The Company's BS7 boasts high biodegradability and a delicate tactile feel comparable to microbeads thanks to its properties, namely its smooth surface and spherical shape. Going forward, we will aim to expand sales in the market for substitute particles for microbeads

used in cosmetics, which has seen growth starting in Europe (with an expected average annual growth rate in sales volume from 2023 to 2027 of 11.2%*), while cutting manufacturing costs at the same time.

* Source: Fujii Chimera Research Institute, Inc. "Current Situation of the Fine Powder Market and Future Prospects 2023"

Smart

Business Overview

Our Smart Business provides materials and solutions mainly for the electronics market. The Functional Products business handles cycloaliphatic epoxies for which we use a globally unique manufacturing method and caprolactone derivatives. Based on our organic synthesis technology cultivated over many years, these products enjoy wide adoption in EV motor insulators and next-generation displays, and they are also used for semiconductor substrates. The Advanced Technology business manufactures high-performance polymers for photoresists and solvents for electronic materials used in the semiconductor manufacturing process as well as functional films with the anti-glare characteristics and strength required for various displays ranging from smartphones and tablets to in-vehicle displays.

Main Businesses	Main Products
Functional Products	Cycloaliphatic epoxies, caprolactone derivatives, optical lenses
Advanced Technology	Polymers for photoresists, solvents for electronic materials, organic semiconductors, high-performance films

Daicel Group's Strengths

Provision of market-oriented solutions that meet customer and market needs	Provides the electronics market with a variety of solutions and value from materials to components by leveraging material design such as synthesis and compounding as well as processing technologies including coating, printing, and resin molding
Achievement of the world's largest market share for cycloaliphatic epoxies through our unique manufacturing methods	Produces high-quality cycloaliphatic epoxies using the world's only distinctive manufacturing method. Cycloaliphatic epoxies are high quality and high performance, with a manufacturing method that does not contain chlorine, which corrodes and cracks metals, and is applicable to electronic materials and mobility materials for EV motor insulators, etc.
Continuation of stable supply and response to increasingly sophisticated demands	Possesses the technical capabilities and stable supply capacity to continuously meet the high level of quality requirements of the semiconductor industry. Based on the relationship of trust built through this track record, we can develop products in close contact with our customers and respond to new, increasingly sophisticated, requirements

Our Business Environment

Opportunities	Risks
- Semiconductor market expansion due to the full-fledged arrival of the IoT, AI, and 5G era - Expansion of the display market with the spread of new technologies such as high resolution, high durability, bendability and foldability, and curved surface structures - Popularization of EVs - Switch to fluorine- and silicon-free materials due to PFAS regulations	- Uncertainty over the Chinese economy - In the semiconductor materials market, lower prices due to the emergence of overseas products, and restrictions on available markets due to intensifying trade friction between the U.S. and China - Production contraction due to disruptions in the semiconductor supply chain caused by conflicts and other geopolitical factors - Shrinking domestic market due to customers' overseas relocation of development and production sites - The European Chemicals Agency's moves to tighten regulations on epoxy compounds

Performance Targets, Capital Expenditures, Depreciation and Amortization

FY2024/3 Results*				FY2025/3 Plans			
Net sales	Operating income	Capital expenditures	Depreciation and amortization	Net sales	Operating income	Capital expenditures	Depreciation and amortization
33.8 billion yen	-0.9 billion yen	3.0 billion yen	3.1 billion yen	35.5 billion yen	-0.5 billion yen	3.0 billion yen	3.0 billion yen

* Net sales and operating income by segment for FY2024/3 is the figure after segment changing in the TAC, Cycloaliphatic epoxies and Caprolactone Derivatives.

Growth Strategies

Expansion of the cycloaliphatic epoxies and caprolactone derivatives business

Thanks to its unique manufacturing method, Daicel's cycloaliphatic epoxies have few impurities and does not contain chlorine, which causes failures in electronic devices. Our chlorine-free products are widely used for electrical materials where quality reliability and durability are required, with the largest market share in the world.

With regard to our cycloaliphatic epoxies, we have stepped up our efforts to make a shift from general-purpose applications such as UV coating and coil-insulating varnish to high added-value applications in the electronic materials market and the mobility market, such as for electrification components for EVs, leveraging the strength of our quality. In particular, we are promoting the expansion of sales for next-generation displays, which have grown in demand. Moreover, in response to the European Chemicals Agency's moves to tighten regulations on epoxy compounds, we are working on the development and launch of new epoxy monomers by leveraging the molecular design and analysis technologies we have accumulated over many years. The epoxy compounds are also used as protective materials for growth-area components such as EV motor insulators and power modules with integrated power semiconductors. As the functionality of these components improves, higher heat resistance is required from the epoxy compounds destined to become future protective materials. We are making efforts to expand sales by leveraging the strength of our products, which have higher heat resistance than competing materials, with lower viscosity and better ease of use. In addition to existing sales of raw materials, we will also launch pre-mix materials (compounds of epoxy and other materials) with higher functionality and expand a market-oriented business model while monitoring development trends from a position closer to end customers.

Examples of applications that leverage the abrasion resistance, low viscosity, and other features of caprolactone derivatives include their adoption in the mobility field for automobile paint and exteriors, heat-dissipating adhesives for batteries, and cushioning materials. Among them, we will focus our marketing efforts on growth markets, such as paint protection films for automobiles and polyurethane pads.

In order to strengthen marketing in North America, where the development of new applications for both cycloaliphatic epoxies and caprolactone derivatives is booming, we started the operation of a technical service site in the U.S. in FY2024/3, in addition to sites in Japan and China. We will enhance our provision of solutions closely related to markets and customers through the integrated operation of new material creation, functional analysis, and technical services.



EV motor



Paint protection film for automobiles

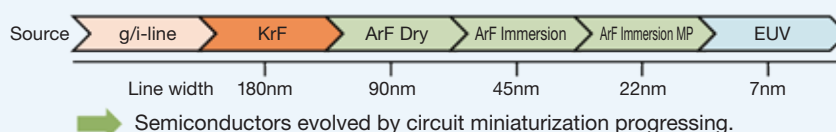
Enhancement of the Semiconductor business in line with cutting-edge needs

The Company manufactures high boiling point solvents used for resist solvents and thinners, which are essential in the photolithography process of semiconductor manufacturing. Our PGMEA (MMPGAC) is among the best in the domestic semiconductor photoresist industry in terms of market share.

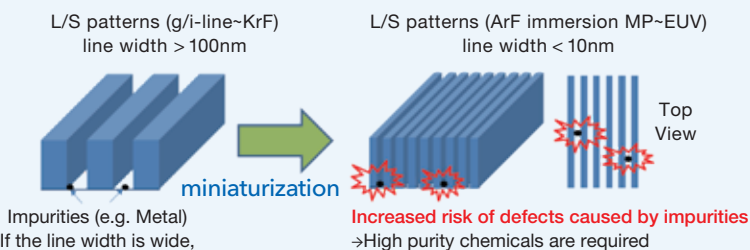
The performance of semiconductors improves as circuit miniaturization progresses. With the evolution of light sources used in lithography, the line width of semiconductor circuits has become narrower. As such, even a small amount of impurities, such as metals, can cause defects. We are the only company that produces PGMEA and PGME from start to finish in Japan, and our strength lies in our high-purity quality control and stable supply as well as our quality assurance suitable for semiconductors and provision of logistics. In addition, we developed low-metal grade solvents in FY2019/3, for which we further

enhanced metal control, in order to swiftly meet customer needs. We will strengthen the provision of solutions to our domestic customers while developing overseas customer bases, so as to ensure that we can tap into the growth of the semiconductor market, which is expected to achieve a CAGR of 10% through 2030.

Semiconductor technology evolution



Highering chemicals associated with miniaturization of semiconductors (illustration)



Safety

Business Overview

The main products of the Safety Business are automobile airbag inflators (gas generation devices), which protect the lives of occupants and pedestrians by inflating airbags within milliseconds after a collision. Our automobile airbag inflators are highly regarded as the key component of airbag systems. The instantly activated driving force/propulsive force developed for inflators is named One Time Energy®, and is being used in applications other than airbags. Pyro-Fuse, which can safely and instantaneously interrupt high voltage and large currents in an emergency, is one example, and is expected to be deployed in various industries where automation is advancing due to the spread of electric vehicles (hereinafter “EVs”) and AI.

Main Businesses	Main Products
Mobility	Automobile airbag inflators
Industry	Pyro-Fuse, gas generators for seat belt pretensioners (PGG)

Daicel Group's Strengths

Inflator technology accumulated over the years	After launching automobile airbag inflators 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

Our Business Environment

Opportunities

- Growth of automobile production in emerging countries
- Growing need for enhanced automotive safety performance
- Rise of Chinese EV manufacturers
- Advancement and popularization of technologies such as EVs and renewable energy aimed at achieving carbon neutrality

Risks

- Uncertainty over the Chinese economy
- Changing function and performance needs as self-driving and other active safety technologies evolve
- Changes in the industrial structure due to the popularization of EVs

Performance Targets, Capital Expenditures, Depreciation and Amortization

FY2024/3 Results				FY2025/3 Plans			
Net sales	Operating income	Capital expenditures	Depreciation and amortization	Net sales	Operating income	Capital expenditures	Depreciation and amortization
95.6 billion yen	3.0 billion yen	9.4 billion yen	7.1 billion yen	108.0 billion yen	7.7 billion yen	14.0 billion yen	7.5 billion yen

Growth Strategies

Enhanced expansion of sales in the inflator business in India and China

We currently operate our business in automobile airbag inflators, our Group's flagship products, around the globe, with production sites in Japan, China, Thailand, India, the U.S., and Poland. In particular, we are focusing on the Indian and Chinese markets, which will see increases in the number of automobiles produced and in the number of vehicles equipped with airbags. While the number of automobiles produced globally is expected to grow by approximately 8% by 2030 (compared to 2023)^{*1}, high growth is expected in the Indian and Chinese markets, with projected growth of nearly 40% in the former^{*1} and a little over 10% in the latter^{*1}. Furthermore, due to enhanced automobile safety assessments in both markets, the number of vehicles equipped with airbags for side collisions in addition to those for frontal collisions is expected to continue increasing. To tap into this demand, the Group established a new production site in India in October 2023 to start mass-producing airbag inflators for frontal collisions and plans to establish a production line for airbag inflators for side collisions in FY2025/3. In the Chinese market as well, we are planning to establish additional production lines for inflators for side collisions in order to ensure that we can tap into increasing demand from Chinese automakers, along with their Japanese, European, and U.S. counterparts. With regard to the Japanese, European, and U.S. markets, we will further deepen our cooperation with module manufacturers^{*2} and jointly work on sales expansion, with the aim of increasing our market share even more. By doing so, the Daicel Group will further increase its global presence.

We have also consolidated production bases since 2020 and are promoting the type integration (cataloging) of inflators globally, which differed by vehicle type. We are thus seeking to streamline our production lines through cooperation with module manufacturers. We are aiming to win a global market share of 25% in FY2026/3 (with an estimated share in FY2024/3 of 20%) by expanding our capacity to meet the demand for airbags, which is expected to rise going forward. At the same time, we are seeking to expand profits by enhancing our cost competitiveness.

^{*1} Growth rate in the number of automobiles produced according to S&P

^{*2} Please refer to Feature 1: Stories of Co-Creation with Our Customers—TGD Project: Increasing the Competitiveness of the Safety Business on page 34.



Automobile airbag inflators

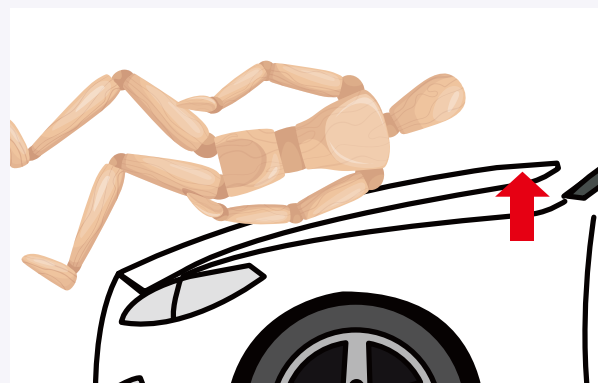
Promotion of businesses in China that use One Time Energy® to provide value toward safety and security

The Company is engaged in the creation of new businesses that use One Time Energy®, a technology developed in the course of producing inflators for many years, which produces power instantaneously, reliably, and safely. In FY2025/3, we plan to commence the mass production of Pyro-Fuses for EVs as a new business and expand global sales. In particular, China is an important market for the Group.

Generally, making Pyro-Fuses for EVs smaller and lighter poses a challenge; nevertheless, we have realized smaller Pyro-Fuses with the technologies and knowledge accumulated in the course of producing airbag inflators for many years. With the aim of further reducing their weight, we will conduct R&D toward the use of engineering plastic materials provided by Polyplastics through collaboration within the Daicel Group, and going forward, we will continue to demonstrate our Group synergies and contribute to the safety and security of automobiles.

In addition, current interruption is attracting attention in the green energy field as well. In recent years, China has been forging ahead with its action plan for carbon dioxide peaking before 2030 and is accelerating development plans for green energy, such as wind power generation. Accordingly, off-grid* fires due to overcurrent and other factors have become an issue, and there is a growing need for Pyro-Fuses as countermeasures. Going forward, we will develop Pyro-Fuses that can accommodate high voltages for green energy applications.

Moreover, China followed Europe in adding an evaluation item for pedestrian protection to automobile safety assessments from 2024 onward, leading to a growing need for hood lifters, a safety device for pedestrian protection, throughout the world. Hood lifters use the power of combustion gas to lift up automobile hoods upon collision with pedestrians to secure space within the engine bay, preventing pedestrians from hitting their head on the hard part under the hood (e.g., the engine, battery, etc.) and reducing the risk of head injuries. Up to now, the Group has provided passenger protection devices such as airbag inflators and gas generators for seat belt pretensioners. By newly launching pedestrian protection products, we will further expand our provision of value to society in terms of safety and security.



Hood lifter activates upon collision with a pedestrian



Hood lifter

* Off-grid: the state of not being connected to the grid of an electric company, or being self-sufficient in terms of power without relying on an electric company

Materials

Business Overview

The Materials Business provides a wide variety of materials to a wide range of industries. We are the only manufacturer in Japan of acetic acid, which has a wide variety of applications, and have built an acetyl chain centered on acetic acid that consists of chemicals made from acetic acid, cellulose acetate, which is made from wood and cotton fiber-derived cellulose and acetic anhydride, and acetate tow, which is spun from this. We have the highest share of triacetate cellulose (TAC), which is used for LCD optical films, in the world and a high share of acetate tow in global terms. Besides these products, we manufacture and sell various chemical products based on our organic synthesis technology developed over many years. Our distinct odorless grade of 1,3-butylene glycol (1,3-BG), an ingredient for cosmetics, is highly regarded.

Main Businesses	Main Products
Acetyl	Acetic acid, acetic anhydride, acetate tow
Chemical	Cellulose acetate for LCD optical films (TAC), cellulose acetate, 1,3-butylene glycol (1,3-BG), ethyl acetate and other organic solvents, ketene derivatives, ethylamine

Daicel Group's Strengths

Optimized plant operation through DAICEL Production Innovation	Achieved energy and resource savings, high quality, and stable supply in the manufacturing process through optimized plant operation that greatly reduced wastage and loss DAICEL Production Innovation https://www.daicel.com/en/daicel-production-innovation/
Acetic acid recycling system that supports the acetyl chain	As a system that supports the acetyl chain, in addition to manufacturing acetic acid which sits at the core of this chain, established a recycling system whereby we recover, refine, and reuse acetic acid byproducts from customers and our Group plants
Technical support that leverages our technological capabilities	Offers global technical support in response to customer needs regarding cellulose acetate and acetate tow, leveraging our accumulated property control for cellulose, a natural material, and processing technologies

Our Business Environment

Opportunities	Risks
- Expectations for biomass materials and marine biodegradable materials - Recovery in demand for various products due to economic growth - Increased demand for heated tobacco products	- Uncertainty over the Chinese economy - Fluctuations in raw material and fuel prices - Rise of competing manufacturers, especially in emerging countries - Intensifying competition with competing materials

Performance Targets, Capital Expenditures, Depreciation and Amortization

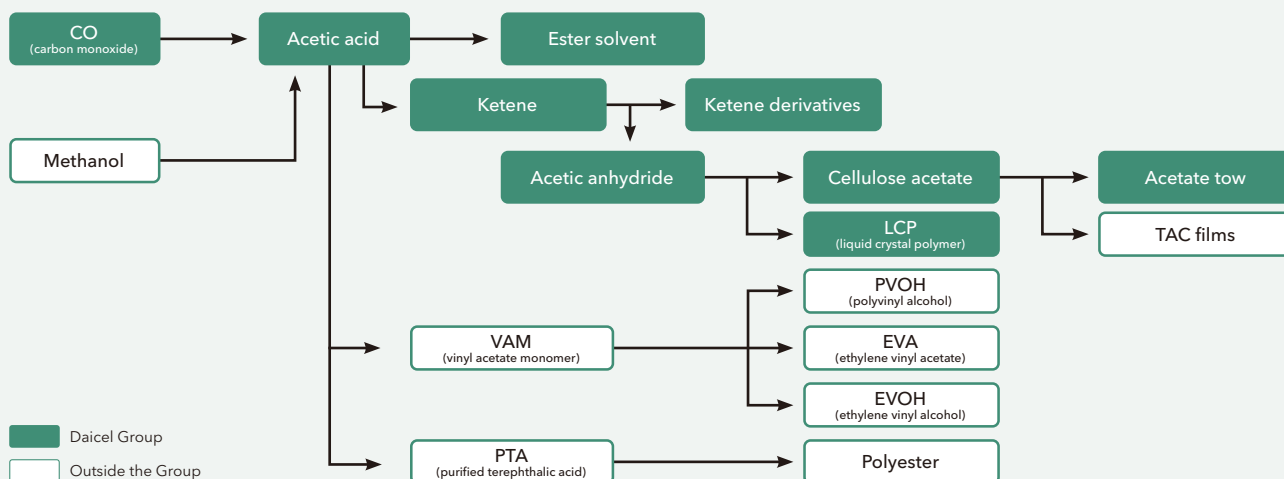
FY2024/3 Results*				FY2025/3 Plans			
Net sales	Operating income	Capital expenditures	Depreciation and amortization	Net sales	Operating income	Capital expenditures	Depreciation and amortization
182.2 billion yen	40.8 billion yen	16.9 billion yen	12.9 billion yen	186.0 billion yen	32.5 billion yen	6.0 billion yen	19.0 billion yen

* Net sales and operating income by segment for FY2024/3 is the figure after segment changing in the TAC, Epoxy Compounds and Caprolactone Derivatives.

Growth Strategies

Enhancement of the acetyl chain

The Materials Business offers a wide variety of products and contributes to many industries ranging from daily necessities to high-performance electronic devices. The core among this group of products is acetic acid, which we are the only manufacturer of in Japan. We have built a globally unique acetyl chain, by consuming approximately half of the acetic acid we manufactured from methanol and using it to develop various acetic acid derivatives. In FY2024/3, we upgraded a plant for carbon monoxide, a raw material of acetic acid, due to equipment deterioration. At the same time, we switched the raw material of carbon monoxide to a less expensive and easier to procure alternative thereby further strengthening the acetyl chain.



Enhancement through the Autonomous Production System

DAICEL Production Innovation, one of our strong points, is also the source of the acetyl chain's strength, and our optimized plant operation achieves not only cost competitiveness but also high quality and stable supply, allowing us to earn a high degree of trust from our customers, even for general-purpose applications. We are currently introducing the Autonomous Production System, which is a further evolved version of DAICEL Production Innovation using AI, to each plant in the acetyl chain. The planned implementation of the system at cellulose acetate and acetate tow plants by FY2024/3 is complete, and we are planning to implement it at carbon monoxide plants in FY2025/3. We have also embarked on efforts to expand the scope of this implementation to the acetyl chain across corporate boundaries, and we will strive to strengthen our competitiveness across the value chain.

Page 38: Autonomous Production System

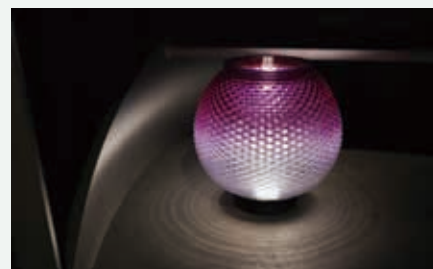
Enhancement through changes in manufacturing methods

The Company offers acetic anhydride, cellulose acetate made from naturally derived pulp, and acetate tow, which is spun from this, as its flagship products. triacetyl cellulose (TAC) for LCD optical films is used as raw materials in protection films and retardation films for LCDs, and we have a high share of the product. We have a high share of acetate tow, which is made from cellulose acetate, namely diacetyl cellulose (DAC), for its main applications in tobacco filters. Amid trends toward a tight supply-demand situation, we have stepped up our efforts to improve productivity through means such as debottlenecking and thus increase our production capacity, thereby ensuring profits by meeting the demand.

Naturally derived pulp, the raw material for these cellulose acetates (TAC and DAC), does not easily undergo chemical reactions, resulting in the issue of easy formation of impurities in the product. The Company will change manufacturing methods to improve the reactivity of the pulp and reduce impurities, thereby improving productivity. At the same time, we will use pulp with less chemical processing and a lower environmental impact during production while enabling the production of products equivalent in quality to existing ones, thereby leading to the enhanced competitiveness of our cellulose acetates (TAC and DAC) and acetate tow.

Cultivation of new businesses

We have refined our cellulose acetate manufacturing technologies for many years since its commercialization in 1938, and our cellulose acetates are garnering considerable attention as bioplastics in recent years due to being biodegradable biomass materials. As bioplastics are expected to achieve high market growth, the Company has developed CAFBLO® resin in response to environmental needs and strengthened its marketing efforts. While it has several issues such as costs, compared to petroleum-derived plastics, we will take advantage of the technologies we have cultivated for many years and launch the product in Europe, where people are highly environmentally conscious, as a first step, and thereby contribute to the solution of global environmental problems.



Molded product made of CAFBLO® (lampshade)

Engineering Plastics

Business Overview

Polyplastics, our Group company, accounts for a large portion of sales in this business. Polyplastics is a leading manufacturer of engineering plastics with special features such as mechanical strength, heat resistance, and chemical resistance, contributing to making automobiles lighter and more electrified, and to the higher performance of electronic devices. Daicel Miraizu Ltd. (hereinafter “Daicel Miraizu”) offers a diverse range of commercial products to various industries, including AS resins, which have a wide range of applications from daily necessities to automobiles, as well as water-soluble polymers noted for use in lithium-ion batteries for EVs, which have rapidly gained popularity in recent years.

Main Businesses	Main Products
Polyplastics	Polyacetal (POM), polybutylene terephthalate (PBT), polyphenylene sulfide (PPS), liquid crystal polymer (LCP), cyclic olefin copolymer (COC)
Daicel Miraizu	AS resin, water-soluble polymers (CMC), barrier films for packaging

Daicel Group's Strengths

Ability to develop new applications and group synergies	As a group of engineering plastics experts, we work with customers to develop applications that meet the needs of key industries (e.g., electrical and automotive industries) and society as they change with the times. In addition, we provide optimal solutions across the group by combining the extensive product lineups of Polyplastics, Daicel Miraizu, and Polyplastics-Evonik
Expansion of technical solutions system in major regions	Polyplastics' Technical Solutions Centers in the major regions of Japan, China, Taiwan, Thailand, the U.S. 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
Sophisticated manufacturing technologies and quick delivery with uniform quality	Promotes the further sophistication of production by combining manufacturing technologies for engineering plastics that we have accumulated for over 50 years with DAICEL Production Innovation. Polyplastics leverages a network of 32 sites in 11 countries and globally provide these technologies with uniform quality and quick delivery

Our Business Environment

Opportunities

- Recovery and growth of global automobile production
- Proliferation of electric vehicles and autonomous driving technology
- Changes in infrastructure, devices, and services due to next-generation communications
- Higher expectations for biomass materials and growing interest in the circular economy
- Switch to fluorine- and silicon-free materials due to PFAS regulations

Risks

- Uncertainty over the global economy
- Soaring raw material prices and procurement concerns due to greenflation
- Rise of competing manufacturers, especially in emerging countries
- Various tighter regulations in Europe, including environmental ones
- Changing supply-demand balance due to rapid economic fluctuations

Performance Targets, Capital Expenditures, Depreciation and Amortization

FY2024/3 Results				FY2025/3 Plans			
Net sales	Operating income	Capital expenditures	Depreciation and amortization	Net sales	Operating income	Capital expenditures	Depreciation and amortization
226.8 billion yen	18.3 billion yen	45.7 billion yen	8.2 billion yen	260.0 billion yen	23.7 billion yen	38.0 billion yen	11.0 billion yen

Growth Strategies

Enhancement of sales capabilities by expanding our development structure and developing new polymers

As Japan's first specialized manufacturer of engineering plastics, Polyplastics has supported worldwide manufacturing for more than half a century. New POM facilities with an annual production capacity of 90,000 tonnes in China and LCP facilities with an annual production capacity of 5,000 tonnes in Taiwan will begin operation in the second half of FY2025/3. We will improve the top line by enhancing our development and sales capabilities, while increasing productivity by introducing DAICEL Production Innovation to our Group plants, thereby enhancing our profit structure.

POM is used for a wide range of applications, mainly in the automobile field. The development of the CASE* market is accelerating in the automobile field, the largest market where we supply engineering plastics, with significant growth expected especially in China. In order to ensure that we can tap into such growth, we will strengthen our marketing and technical support structures at our Chinese sites and develop businesses that provide products adapted to customer specifications, which is Polyplastics' forte, for the OEM market in China, thereby expanding sales. We will build a structure that will allow us to integrate more closely with markets and customers by utilizing local distributors and by hiring and fostering local staff, while constructing a swift technical solutions system that can keep up with the development speed of EV-related components by Chinese automakers. Through collaboration with Safety SBU, which has fostered relationships with Chinese automakers and Tier 1 suppliers in the inflator business, we will leverage each other's respective marketing and sales channels to widely promote commercial products with the aim of increasing our presence in the Chinese market.

In the electronics field, low dielectric constants are required for component materials to prevent transmission loss in high-speed communications such as 5G and 6G. In the electronic device field, LCP is widely used as its high fluidity and dimensional stability make the material excellent for precision molding. Amid the increasing miniaturization of electronic components, we are developing new polymers with ultra-high fluidities that enable the formation of components by securing sufficient fluidity even at thicknesses of less than 0.1 mm, as well as polymers with low dielectric loss that conventional LCPs cannot achieve, by controlling molecular structures. Leveraging our lineup that allows us to make proposals according to the performance required by customers, including in terms of costs, we will provide solutions with higher added value as a company specializing in engineering plastics.



Connectors using LAPEROS® LCP

* CASE is an acronym for Connected, Autonomous, Shared, and Electric, and represents the big reforms occurring in the automobile industry.

Creation of an environmental business as a driver of future growth

In addition to a growing interest in the circular economy, countries are pushing ahead with the formulation of environmental regulations, such as the ELV Directive*. Against such a background, Polyplastics is working on the creation of an environmental business as a driver of future growth. Along with the reduction of GHG emissions across the entire Daicel Group, Polyplastics has set a target of a 30% reduction compared to FY2019/3 in its product carbon footprint (hereinafter "PCF") during the manufacturing process from the procurement of raw materials to product shipment by FY2031/3, and is making developments centered on the following three measures.

(1) Conversion of raw materials into biomass: In addition to manufacturing and selling POM utilizing biomethanol (DURACON® bG-POM), we are working on manufacturing new engineering plastics that are 100% biomass-derived, by combining Polyplastics' knowledge in engineering plastics and Daicel's organic synthesis technology to utilize lignin extracted from wood as LCP monomers.

(2) Horizontal recycling of unused/used engineering plastics: We established a mechanism for the horizontal recycling of unused engineering plastics (Post-Industrial Recycling: PIR), the first of its kind in the engineering plastics industry, by recovering and refining molding scraps generated in our customers' manufacturing processes, which had been discarded, and by reorganizing formula design. We ensure the properties of products through the quality control of molding scraps in cooperation with our customers and through thorough process control and rigorous inspections. Furthermore, we launched a project in FY2025/3, with the aim of establishing a Post-Consumer-Recycling (PCR) technology, in which we conduct horizontal recycling by recovering used engineering plastics, including those made by other manufacturers, from the market, analyzing them, and reorganizing their formula design. The development of recycling options similar to those for general-purpose plastics is a necessary measure to ensure that we can continue to provide engineering plastics for continued use by our customers with the formulation of environmental regulations in the background.

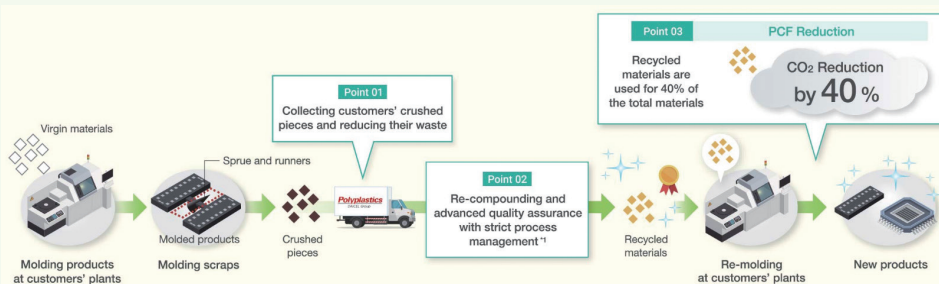


Illustration of Polyplastics' re-compounding service (PIR)

(3) Reduction and recycling of emitted CO₂: Daicel's Ultra Solar-reduction with Nanodiamonds technology enables us to semi-permanently and efficiently reduce CO₂ into CO and O₂ using only sunlight. By reducing CO₂ emitted during the manufacturing process into CO and reacting it with H₂, methanol, a raw material of POM, can be manufactured. This reduces our PCF and contributes to climate change countermeasures, while recycling CO₂.

Page 45: Achievement of Carbon Negativity through the Use of Nanodiamonds

We will carry out these measures to flexibly respond to changing customer needs in various countries and markets and develop options conducive to carbon neutrality for every type of resin by FY2031/3.

* ELV Directive: a directive designed to reduce the impact of end-of-life vehicles on the environment in the EU

GOVERNANCE

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Small Meeting with Outside Directors

Aiming to Promote Mutual Understanding through Dialogue

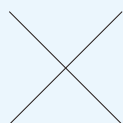
On December 22, 2023, a small meeting between our Outside Directors and institutional investors was hosted by Mr. Mikiya Yamada, an analyst at Mizuho Securities Co., Ltd.

Fourteen institutional investors from 11 companies attended the meeting and engaged in a dialogue concerning topics such as the status of management supervision by our Outside Directors, initiatives to create added value over the long term, and management succession plans.



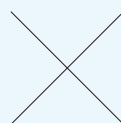
Mr. Mikiya Yamada

Mizuho Securities Co., Ltd.
Senior Analyst, Equity Research
Department



Toshio Asano

Outside Director
Chairperson of the Nomination and
Compensation Committee



Keita Nishiyama

Outside Director
Member of the Nomination and
Compensation Committee

Daicel's Strengths and Human Capital Management

Mr. Yamada (hereinafter titles omitted): First, please tell us about Daicel's strengths and potential.

Asano: Daicel's strength lies in the fact that it has built up a strong global position across a series of acetyl chains, from methanol to acetic acid, cellulose acetate, and acetate tow. Furthermore, Daicel is unique in that, although it is a chemical company, it also excels in mechanical technologies that require high reliability as seen in the inflator business, and has successfully commercialized these technologies.

Nishiyama: I think Daicel's strength lies in its commitment to fundamental principles, as represented by DAICEL Production Innovation. As demonstrated by its "virtual company," "microfluidic device plant," and other initiatives, this commitment is what leads to the uniqueness of its approach, which is not to create a single product, but rather to conceive and realize a completely new manufacturing structure from scratch.

Yamada: Because of Daicel's unique value chain, it has little competition in Japan and even if DAICEL Production Innovation is applied to other companies, there would be no losses for Daicel. This gives Daicel the potential to grow while achieving co-existence and co-prosperity through various collaborations. What is your impression of Daicel from the perspective of human capital? To achieve Daicel's ambitious Long-Term Vision and Mid-Term Management Strategy, Daicel's management must have a strong will and on-site behavioral changes are essential.

Asano: Human capital management is something that all companies have been addressing up to now, and the history of each company shows how they have achieved growth while doing so. In the case of Daicel, the starting point for human capital management was when eight companies merged together before World War II. Consequently, management was keen to express their intentions and communicated with stakeholders, which is precisely why employees were able to follow along too. With the commercialization of cellulose from its founding celluloid business, it established an area where it could demonstrate its competitiveness while making profits, and even in the inflator business, it has identified a profitable area with an awareness toward social issues and is doing its level best to make the business a success. I believe that this history of Daicel is the result of Daicel's management recognizing its merger roots and valuing people while steering the company in the right direction.

Monitoring of Daicel's Mid-Term Management Strategy

Yamada: From that story about how Daicel was able to successfully commercialize products like inflators, I feel that it is very important that the intentions of Daicel's management are conveyed to employees. Next, I would like to hear your views on the supervision provided by Outside Directors. Daicel's current Long-Term Vision and Mid-Term

Management Strategy aim to form a new business group that will expand the scope of value creation while creating overall optimization across company boundaries, and to form a new Daicel, which is the step before that. However, from an outsider's perspective, it seems that the milestones and KPI management required to achieve these aims are quite challenging. From your positions as Outside Directors, how do you evaluate the degree to which these aims have been achieved?

Asano: I would like investors to understand that the first step for Daicel is to grow as a real company, and then to realize a virtual company (new business group). The most important target of the current Mid-Term Management Strategy as a real company was to make Polyplastics a wholly owned subsidiary of Daicel and to demonstrate synergies. At the time of the formulation of the Mid-Term Management Strategy, this endeavor had some uncertain elements. But with the setting of targets, the leadership of our President and CEO Mr. Ogawa, and the efforts of both our management and employees alike, the integration of both companies' management personnel is progressing smoothly, and synergies are also being achieved. The virtual company that follows this is, to be more specific, an alliance with other companies. Although it is too early to make an announcement about it, I understand that seeds have been sown to create value by forming alliances throughout the supply chain, including customers of existing businesses. The challenge ahead is to bring about the breakthroughs needed to illustrate the benefits of co-creation across corporate boundaries. The results of these breakthroughs will eventually be reflected in financial statements, but before that, they will be visible qualitatively like if a patent is successfully registered, if a certain product is strengthened or able to be created, or if something is able to be done or not. So I think that even as an Outside Director, I will be able to grasp the progress of the Mid-Term Management Strategy.

Nishiyama: Simply speaking, DAICEL Production Innovation means virtualization. What people used to see physically on site will be digitized with the IoT and software and efficiently managed. In this sense, there is a continuity between our efforts regarding the virtual company (new business group) that we are aiming to realize and our efforts regarding DAICEL Production Innovation. The DX capabilities of an organization are directly linked to its ability to realize a virtual company. This is a little different from quantitative KPIs, but since a virtual company goes beyond just Daicel and is something that can be achieved by working with other companies, I think it is easy to evaluate from the outside whether or not progress is being made regarding this concept.

Yamada: I agree that DAICEL Production Innovation means virtualization. It is my view that thorough standardization and the elimination of wastage and loss will free up people's time and create a culture of looking at things comprehensively. This is an important point when discussing Daicel's corporate culture, but why do you think this kind of production innovation emerged at Daicel and why did it take root?

Nishiyama: I have had contact with Daicel since around 2008, when I



was working as a government official. As I understood it, Daicel's organizational culture was rooted in "the hardships of a company with merger roots." In this context, its culture and ideas that emphasize delegating authority to young employees, changing things, and aiming for overall optimization from a broad perspective must have taken root some time in the past. This open mindset is also evident in the development process of the Autonomous Production System, the evolved version of DAICEL Production Innovation using AI which was jointly developed with the University of Tokyo. Currently, Daicel has concluded comprehensive collaboration agreements with several universities, aiming to accelerate R&D. I believe these relationships have been established precisely because the universities also see Daicel as a company that is ready to discuss and incorporate new ideas.

Looking Back on the Decision That Made Polyplastics a Wholly Owned Subsidiary

Yamada: You mentioned earlier how making Polyplastics a wholly owned subsidiary was a major point for the new Daicel, the step before realizing a virtual company. At the time, paying such a high acquisition price might have compromised Daicel's financial soundness in some respects, but looking back, do you think the Board of Directors had sufficient discussions on the matter? Also, do you think that Polyplastics' performance and synergies with Daicel are being realized as planned?

Asano: Naturally, the Board of Directors discussed the extent to which this acquisition decision would affect Daicel Group's financial position and the extent to which it would lower Daicel's credit rating. While it is true that our debt would temporarily increase, that was a hurdle that we had to overcome. I was confident that the synergistic effects in terms of business areas as well as technology and personnel exchanges had a greater medium- and long-term appeal that would outweigh any financial impacts, and I think all the Directors at the time thought so too.

As mentioned above, efforts to realize synergies, such as the integration of management personnel, are progressing smoothly. However, the challenge going forward is to create new value, such as new products, manufacturing methods, business models, and alliances, from the strengths and differences of both companies. I believe we can achieve that over the long-term, and looking back over the last five years, I believe we have delivered the results we expected.

Nishiyama: I was not in my current position when the decision to acquire the company was made, but Polyplastics' business model was original from the beginning, and I believe it is a company with strengths that differ from the organizational capabilities cultivated by Daicel. The two companies also differ in what their respective employees believe is important to do, as well as in their relationships with customers. Also, from the viewpoint of globalization, the two companies have distinct differences. In that sense, making Polyplastics a wholly owned subsidiary is an opportunity for Daicel itself to acquire new organizational capabilities that Polyplastics possesses. I believe that gradually learning about each other's differences and changing over time will bring about more substantial acquisition benefits from an organizational point of view than forcibly integrating in a short period of time.



Mr. Mikiya Yamada

Mizuho Securities Co., Ltd.
Senior Analyst,
Equity Research Department

Received an MS degree in Chemistry in 1990 from the Graduate School of Science, Tohoku University. Joined Dow Chemical Japan the same year as a chemist, and was promoted to Financial Planning Manager - Pacific Area before starting his equity research analyst career at Goldman Sachs in 2001. Covered the chemicals, fibre and textile sectors at JP Morgan from 2002, and joined Mizuho Securities in 2016 (current) after stints at Lehman Brothers and Barclays.

Questions from Institutional Investors

Q. Regarding Daicel's policy on compensation for Directors, I believe that net sales and operating income account for a large portion of the evaluation items for Daicel's performance-based bonuses. While many companies include efficiency-based perspectives such as ROE and ROIC, Daicel has not adopted such indicator targets. What discussions have the Board of Directors held about this? In addition to sales and operating income, investors also have asset efficiency as a key target. I would like you to consider a compensation system that takes this into account.

Asano: While there are various indicators, we would like our investors to understand that our policy is based on mutual understandability. As for ROE and ROIC, we have only just started introducing them in our business. And it is difficult to determine compensation with difficult-to-change KPIs, which is why Daicel set them as they are now. Going forward, taking the feedback we have received into account, we will consider a compensation system that not only satisfies investors, but also is easy to understand for the people at Daicel and encourages us to do better.

Q. I think Mr. Ogawa's various reforms in the current Mid-Term Management Strategy are great and consider the big picture. On the other hand, at a previous financial results briefing, Mr. Ogawa commented that some on-site employees were unable to keep up with the speed of the reforms. What is your advice as Outside Directors regarding this situation?

Nishiyama: I do not think it is a good thing that employees cannot keep up, but I do think it is necessary for management to set differential targets. Even within the Daicel Group, employees' work is diverse, with some initiatives being cutting-edge and others being conventional. It is the role of management to explain what the Company is trying to achieve and to help employees understand where their work fits in the big picture. On the other hand, some cutting-edge initiatives require new organizational structures or involve significant changes to

relationships with other companies. We believe that the role of Outside Directors is to advise management on the challenges of how to concretely conceptualize and implement such initiatives as a company.

Asano: There is no doubt that this was a tumultuous period for employees. I think there initially was some confusion regarding the reforms. This issue was discussed repeatedly by the Board of Directors, with the general consensus being that Directors should have sufficient discussions with employees and give them detailed explanations. I recognize that management is making efforts to gather employees' opinions and candid feedback in a variety of ways.

Q. Daicel's current Long-Term Vision and Mid-Term Management Strategy are aiming for a bold change in direction, but, looking from outside Daicel, there is a strong sense that it is being guided by the strong leadership of Mr. Ogawa. Could you please provide us with details from the Nomination and Compensation Committee's discussions, including those that take Daicel's potential successors—its next-generation management candidates—into account?

Asano: We discuss how to develop and decide on potential management personnel, including not only the President and CEO's successor but also Directors, Executive Officers, and those immediately below them. One issue that has been pointed out is that efforts must be made to secure and develop personnel from the perspective of diversity.

Nishiyama: In order to develop next-generation management personnel in a broader sense, it is important to create a vibrant environment that produces candidates with diverse backgrounds and ideas by securing and developing personnel from the perspective of diversity, as Mr. Asano mentioned, and by appointing external personnel. Furthermore, there is a need for initiatives that share the know-how possessed by Daicel's management as organizational knowledge and ensure its continuity across generations, which I would like to support as Outside Director.



Directors, Audit & Supervisory Board Members, and Executive Officers (as of June 21, 2024)

Directors



Yoshimi Ogawa

Representative Director, President and CEO, Member of the Nomination and Compensation Committee, Responsible for Institute of Human-oriented Management, Executive Consultant of Polyplastics Co., Ltd.

April 1983 Joined the Company
 April 2002 Head of Business Process Innovation
 June 2006 Executive Officer, Vice President 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)



Toshio Shiwaku

Director, Senior Managing Executive Officer, General Manager of Assessment Headquarters, General Manager of R&D Headquarters, Responsible for Safety and Quality Assurance Headquarters, and Responsible for Intellectual Property Center

April 1987 Joined Polyplastics Co., Ltd.
 April 2007 Chief of Research and Development Center of Polyplastics Co., Ltd.
 March 2011 Executive Officer, Chief of Business Strategies Department, Corporate Strategy Division, Chief of POM Business Strategies Department and Chief of New Business Development Department of Polyplastics Co., Ltd.
 June 2015 Managing Executive Officer, General Manager of Corporate Strategy Division and General Manager of Corporate Planning Department of Polyplastics Co., Ltd.
 June 2016 Representative Director of Polyplastics Co., Ltd.
 June 2017 Representative Director and President of Polyplastics Co., Ltd.
 April 2021 Senior Managing Executive Officer of the Company (incumbent)
 General Manager of Performance Materials Headquarters
 June 2024 Director (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, Corporate Sustainability and Digital Strategy Center

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



Naotaka Kawaguchi

Director, Senior Managing Executive Officer, General Manager of Production Management Headquarters, Responsible for Engineering Center, and Responsible for Monozukuri Production Innovation Center

April 1986 Joined the Company
 April 2002 General Manager of Manufacturing Technology Department, Ohtake Production Company
 June 2006 Head of Production Innovation Center, Production Technology
 June 2009 Representative Director and President of Daicel Safety Systems Inc.
 April 2011 Vice President of Aerospace & Defense Systems/Safety Systems Company
 June 2014 General Manager of Harima Plant, Aerospace & Defense Systems/Safety Systems Company
 June 2015 Executive Officer
 June 2019 President of Aerospace & Defense Systems/Safety Systems Company
 April 2020 Head of Safety SBU
 June 2020 Managing Executive Officer
 April 2023 Senior Managing Executive Officer (incumbent)
 June 2024 Director (incumbent)



Yasuhiro Sakaki

Director, Senior Managing Executive Officer, General Manager of Corporate Planning & Strategy Headquarters, General Manager of SCM Headquarters, Responsible for Safety SBU, Healthcare SBU, Material SBU, Smart SBU, and Life Sciences SBU

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

Standing Audit & Supervisory Board Members

Mikio Yagi Kenichi Yamada

Outside Audit & Supervisory Board Members

Junichi Mizuo*

Representative Director and Chairperson of the Japan Compliance & Governance Institute, Honorary Professor of Surugadai University

Hideo Makuta*

Attorney at Law, Ginza Chuo Law Office

Hisae Kitayama*

Certified Public Accountant, Representative of Kitayama Public Accounting Office

Senior Managing Executive Officers

Takashi Miyamoto

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

Managing Executive Officers

Yoichi Nemoto

Deputy General Manager of Corporate Support Headquarters
 Division Manager, FP&C Group, Corporate Support Headquarters

Seiji Sakano

Head of Life Sciences SBU

Hiroshi Iwase

Head of Smart SBU
 President, Daicel Beyond Ltd.

* Independent Director or Independent Audit & Supervisory Board Member



Teisuke Kitayama*

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 to Sumitomo Mitsui Banking Corporation (incumbent)



Yuriya Komatsu*

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 INTELLASSET, 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.
June 2022 Director of Daicel Corporation (incumbent)
January 2023 Director of IA Partners Inc.



Toshio Asano*

Outside Director, Chairperson 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
June 2019 Director of Daicel Corporation (incumbent)
June 2022 Advisor of Asahi Kasei Corporation (incumbent)



Mari Okajima*

Outside Director, Member of the Nomination and Compensation Committee

April 2012 Vice President of Cabin Safety Promotion Department of Japan Airlines Co., Ltd.
April 2013 Vice President of Cabin Attendants Department, Haneda of Japan Airlines Co., Ltd.
November 2014 Deputy General Manager of Cabin Division and Vice President of The 1st Cabin Attendants Department, Haneda of Japan Airlines Co., Ltd.
June 2015 Deputy General Manager of Cabin Attendants Division and Vice President of Cabin Attendants General Affairs of Japan Airlines Co., Ltd.
September 2021 Professor at J. F. Oberlin University (incumbent)
June 2023 Director of Daicel Corporation (incumbent)



Takeshi Furuichi*

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
June 2020 Director of Daicel Corporation (incumbent)
July 2022 Advisor of Nippon Life Insurance Company (incumbent)



Keita Nishiyama*

Outside Director, Member of the Nomination and Compensation Committee

April 1985 Joined Ministry of International Trade and Industry (currently Ministry of Economy, Trade and Industry)
June 2011 Director-General of the Task Force for Management and Financial Investigation of TEPCO, Cabinet Secretariat
June 2012 Senior Executive Managing Officer, Innovation Corporation of Japan (currently Innovation Network Corporation of Japan)
July 2012 Deputy Director-General (Economic and Social Policy), Minister's Secretariat, Ministry of Economy, Trade and Industry
June 2013 Deputy Director-General (Economic and Industrial Policy Bureau), Minister's Secretariat, Ministry of Economy, Trade and Industry
July 2014 Deputy General Manager of Liaison and Coordination Office, Nuclear Damage Liability Support Organization, Executive Officer of Tokyo Electric Power Company (Assistant to Chairman and in charge of Corporate Planning Division (joint))
June 2015 Director and Executive Officer of Tokyo Electric Power Company (Assistant to Chairman and in charge of Corporate Planning Division (joint))
July 2018 Director-General of Commerce and Information Policy Bureau of Ministry of Economy, Trade and Industry
July 2020 Retired from the Ministry of Economy, Trade and Industry
November 2020 Representative Director at Nishiyama Research Institute, Inc. (incumbent)
June 2023 Director of Daicel Corporation (incumbent)

Executive Officers

Hitoshi Hayashi

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

Akio Kojima

Assistant Head of Institute of Human-oriented Management

Haruyoshi Tashika

General Manager of Safety and Quality Assurance Headquarters

Seiji Yamakado

Representative Director and President of Daicel Miraizu Ltd.
Chairperson of Shanghai Daicel Polymers, Ltd.

Nobuhiko Ikeda

Plant General Manager of Arai Plant
Representative Director and President of Daicel Arai Chemical Ltd.

Kazuya Kurosawa

Head of Material SBU

Takaharu Takikawa

Head of Engineering Center

Masahiko Hirokawa

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

Mitsuteru Mutsuda

Deputy General Manager, R&D Headquarters

Ryohei Yamada

Deputy Head of Life Sciences SBU
Division Manager of Medical Device Division, Life Sciences SBU

Eiichi Ryobo

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

Corporate Governance

Based on our Basic Philosophy of being a “company making lives better by co-creating value,” we see the reinforcement of corporate governance as a key management priority for improving corporate value and thereby contributing to the interests of our various stakeholders. Along with maintaining an efficient and dynamic organizational structure that enables us to quickly respond to changes in our business environment, we strive to preserve and reinforce the already highly effective corporate governance structure through which we consistently improve our corporate value by ensuring managerial transparency and legal compliance.

Changes in Corporate Governance Enhancement

	FY2001/3	FY2011/3	FY2021/3
Separation of supervisory from business execution functions	● 2000/3 Introduced the Executive Officer System ● 2001/3 Appointed Outside Directors		● 2018/3 Increased the ratio of Outside Directors to 50% ● 2023/3 Increased the ratio of Outside Directors to 60%
Clarification of management responsibility and building a system that responds quickly to changes in the environment		● 2004/3 Shortened the term of office for Directors from two years to one	
Establishment of various committees	● 2001/3 Established the Nomination and Compensation Committee	● 2007/3 Established the Information Disclosure Committee / the Risk Management Committee ● 2011/3 Established the Internal Control Council	
Effectiveness evaluation of the Board of Directors		● 2017/3 Started to evaluate the effectiveness of the Board of Directors	● 2021/3 Improved the method for evaluating the effectiveness of the Board of Directors ● 2023/3 Changed the method for evaluating the effectiveness of the Board of Directors (Evaluation by an external expert)
Development of internal control systems		● 2007/3 Established the Basic Policy for structuring Internal Control Systems	

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](https://www.daicel.com/en/sustainability/governance/)
<https://www.daicel.com/en/sustainability/governance/>

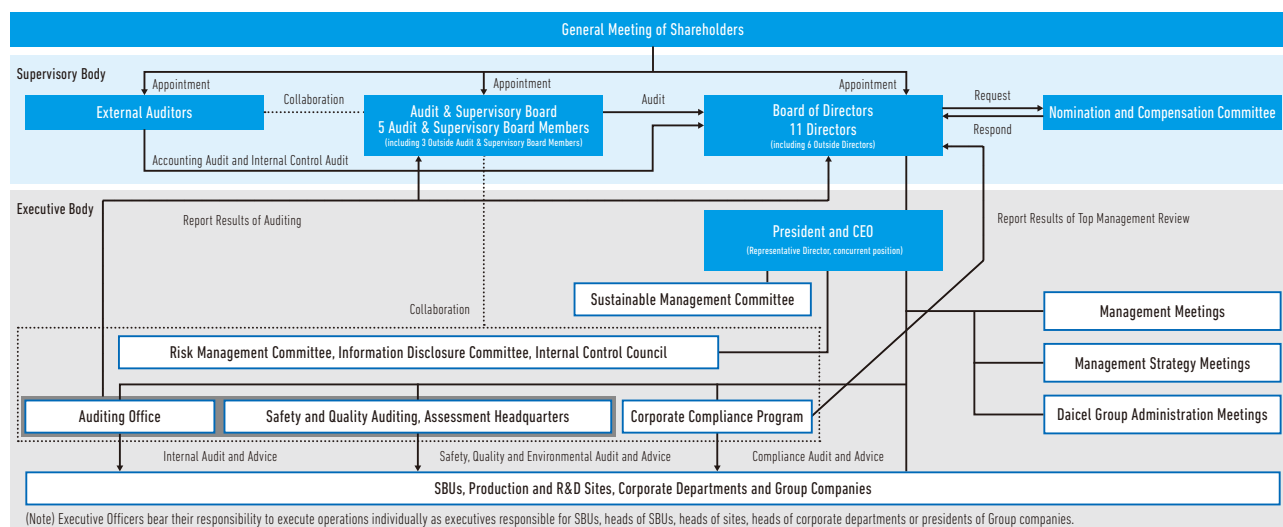
[Corporate Governance Report \(July 1, 2024\)](https://www.daicel.com/en/sustainability/pdf/governance/cg_report_20240701.pdf)
https://www.daicel.com/en/sustainability/pdf/governance/cg_report_20240701.pdf

[Standards for Independence of Outside Directors / Outside Audit & Supervisory Board Members](https://www.daicel.com/en/sustainability/pdf/governance/Standards_for_Independence.pdf)
https://www.daicel.com/en/sustainability/pdf/governance/Standards_for_Independence.pdf

Outline of Corporate Governance Framework (As of June 21, 2024)

Item	Content
Type of organizational structure	Company with Audit & Supervisory Board
Chairperson of the Board of Directors	President and CEO
Number of Directors	11 (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	20 (including 5 officers concurrently serving as Directors)
Number of Board of Director meetings held in FY2024/3 (Average attendance rate of Outside Directors/Outside Audit & Supervisory Board Members)	15 (100%/97.8%)
Number of Audit & Supervisory Board meetings held in FY2024/3 (Average attendance rate of Outside Audit & Supervisory Board Members)	15 (100%)
Term of office for Directors	1 year
Term of office for Audit & Supervisory Board Members	4 years
Average term in office for Directors	4.6 years
Average term in office for Audit & Supervisory Board Members	3.4 years
External Auditor	Deloitte Touche Tohmatsu LLC

Corporate Governance Framework (as of June 21, 2024)



[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 five 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.

Number of Resolutions, Discussions, and Reports by the Board of Directors (FY2024/3)

Resolution and Report Classification	Number of Topics under Discussion
Management strategy, sustainability, governance, IR, individual matters	53
Accounting and finance	40
HR and remuneration	27
Risk management, corporate compliance and corporate ethics	6
Audit & Supervisory Board Members, External auditors and internal audits	6
Total	132

[Audit & Supervisory Board]

The Audit & Supervisory Board comprises five members, and three members are Outside Audit & Supervisory Board Members. The Audit & Supervisory Board holds meetings to share information, deliberate on, and make decisions about important issues related to the Company's audits. Outside Audit & Supervisory Board Members possess extensive experience in accounting, finance, legal affairs, and other disciplines, as well as broad insight into fields such as CSR, corporate governance, and business ethics, and fulfill auditing functions from a third-party, independent standpoint.

Major Activities of Audit & Supervisory Board Members

Dialogue with Executive Officers such as the President and CEO	The Audit & Supervisory Board Members are provided opportunities for dialogue with the President and CEO, senior managing executive officers, managing executive officers, etc. to ascertain the management situation and concerns, and when necessary, issues are raised and suggestions are made.
Attending important meetings	Besides the Board of Directors meeting, the standing Audit & Supervisory Board Members attend other important meetings such as management meetings, planning meetings, management strategy meetings, internal control council meetings, grasp a wide range of information and state their opinions as and when necessary.
Audit and site visit	The standing Audit & Supervisory Board Members take a lead in conducting site visits at offices, Group companies and other units in Japan and overseas. During the visits, they receive explanations of the status of business execution, ask questions, and state opinions based on their expert knowledge. In FY2024/3, we conducted audits of 22 internal departments, on-site audits at 7 business sites, and on-site audits at 28 Group companies.
Collaboration with internal audit departments and External Auditors	The Audit & Supervisory Board Members hold regular meetings with the Auditing office, Corporate Compliance Program, and Safety and Quality Auditing, which are internal audit departments, and receive reports on the implementation status of plans and activities. They hold meetings with the external auditors about ten times a year and receive timely reports on the status of execution of duties and the results of audits, and they also exchange necessary information and opinions through discussions on major audit matters.

[Nomination and Compensation Committee]

The Nomination and Compensation Committee 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, Audit & Supervisory Board Members and Executive Officers. The committee is chaired by an Outside Director and consists of six Outside Directors and two Representative Directors.

Composition of the Board of Directors and Audit & Supervisory Board (as of June 21, 2024)

Position	Name	Responsibilities, Key Background, etc.	Sex	Term of Office	Independent Director or Independent Audit & Supervisory Board Member	Business Execution	
Directors	Inside	Yoshimi Ogawa Representative Director, President and CEO, Chairperson of Board of Directors, Member of the Nomination and Compensation Committee Responsible for Institute of Human-oriented Management, Executive Consultant of Polyplastics Co., Ltd.		13 years			
		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, Corporate Sustainability, and Digital Strategy Center		5 years			
		Yasuhiro Sakaki Director, Senior Managing Executive Officer General Manager of Corporate Planning & Strategy Headquarters, General Manager of SCM Headquarters, Responsible for Safety SBU, Healthcare SBU, Material SBU, Smart SBU, and Life Sciences SBU		4 years			
		Toshio Shiwaku (New Appointment) Director, Senior Managing Executive Officer General Manager of Assessment Headquarters, General Manager of R&D Headquarters, Responsible for Safety and Quality Assurance Headquarters, and Responsible for Intellectual Property Center		-			
		Naotaka Kawaguchi (New Appointment) Director, Senior Managing Executive Officer General Manager of Production Management Headquarters, Responsible for Engineering Center, and Responsible for Monozukuri Production Innovation Center		-			
	Outside	Teisuke Kitayama Outside Director Member of the Nomination and Compensation Committee Honorary Advisor of Sumitomo Mitsui Banking Corporation		6 years			
		Toshio Asano Outside Director Chairperson of the Nomination and Compensation Committee Advisor of Asahi Kasei Corporation		5 years			
		Takeshi Furuichi Outside Director Member of the Nomination and Compensation Committee Advisor of Nippon Life Insurance Company		4 years			
		Yuriya Komatsu Outside Director Member of the Nomination and Compensation Committee Former Director of IA Partners Inc.		2 years			
		Mari Okajima Outside Director Member of the Nomination and Compensation Committee Professor at J. F. Oberlin University Former Deputy General Manager of Cabin Attendants Division of Japan Airlines Co., Ltd.		1 year			
		Keita Nishiyama Outside Director Member of the Nomination and Compensation Committee Representative Director at Nishiyama Research Institute, Inc. Former Director-General of Commerce and Information Policy Bureau of Ministry of Economy, Trade and Industry		1 year			
Audit & Supervisory Board Members	Inside	Mikio Yagi Standing Audit & Supervisory Board Member		1 year			
		Kenichi Yamada (New Appointment) Standing Audit & Supervisory Board Member		-			
	Outside	Junichi Mizuo Outside Audit & Supervisory Board Member Representative Director and Chairperson of the Japan Compliance & Governance Institute, Honorary Professor of Surugadai University		6 years			
		Hideo Makuta Outside Audit & Supervisory Board Member Attorney at Law, Ginza Chuo Law Office		4 years			
		Hisae Kitayama Outside Audit & Supervisory Board Member Certified Public Accountant, Representative of Kitayama Public Accounting Office		2 years			

* In "Primary Areas of Knowledge and Experience (Skill Matrix)", up to five items that are particularly expected from each person are listed. It does not represent all the knowledge and experience that each person possesses.

 male
  female

	Board of Directors (Attendance Rate)	Audit & Supervisory Board (Attendance Rate)	Nomination and Compensation Committee (Attendance Rate)	Primary Areas of Knowledge and Experience (Skill Matrix)*								
				Corporate Management	Global Management	Marketing and Business Planning	Technology and R&D	Finance and Accounting	Legal Affairs, Intellectual Property and Risk Management	DX	Sustainability	
											Environment	DE&I
	(93%)		(88%)									
	(100%)		(100%)									
	(100%)											
	(-)											
	(-)											
	(100%)		(100%)									
	(100%)		(100%)									
	(100%)		(100%)									
	(100%)		(100%)									
	(100%)		(100%)									
	(100%)	(100%)										
	(-)	(-)										
	(100%)	(100%)										
	(93%)	(100%)										
	(100%)	(100%)										

Effectiveness Evaluation of the Board of Directors

Every year, the Company conducts and publicly releases a summary of an effectiveness evaluation of the Board of Directors, which aims to maintain and improve the Board's performance and find the most suitable approach to corporate governance.

FY2024/3 Initiatives Based on the FY2023/3 Effectiveness Evaluation

In view of the Effectiveness Evaluation of FY2023/3, in FY2024/3 we spent more time reporting on the status of execution of management strategies, matters related to return on capital and stock prices, and the status of initiatives related to sustainability and human capital in order to further enhance discussions at the Board of Directors.

Summary of the Evaluation Process and Results

Evaluation Process	Questionnaires were distributed to all Directors and Audit & Supervisory Board Members, the results were further deepened through individual interviews, and the results were summarized and analyzed by the secretariat and reported to the Board of Directors for discussion.
Main Evaluation Item	• Composition of the Board of Directors • Details of deliberations, resolutions, reports, etc. • Method of operation of the Board of Directors
Overview of Evaluation Results	Members of the Board of Directors engaged in productive discussions with Outside Directors and Outside Audit & Supervisory Board Members who actively offered their opinions, and we were able to confirm that the effectiveness of the board is generally satisfactory. On the other hand, it was confirmed that there are issues to be discussed for further improvement of effectiveness. The main issues raised are as follows: (1) Board composition issues • Discussions to further enhance diversity from a long-term perspective • Further discussions on the process of appointing senior management (2) Board deliberation issues • Further enhancement of reports on sustainability initiatives and human capital management promotion • Explanation of individual proposals linked to portfolio management (3) Board operation issues • Further consideration to the provision of information that contributes to appropriate judgment (technical terms, in-house terminology, etc.) • Discussions on the role of the Chairperson of the Board of Directors
Actions to Be Taken	We will discuss the above issues at the Board of Directors meeting for FY2025/3 and confirm our commitment to continue addressing them in order to further enhance effectiveness.

Appointment and Nomination Procedures for Directors and Senior Management

In nominating and appointing Directors, Audit & Supervisory Board Members, and management executives such as Executive Officers, Daicel seeks individuals with the right personality, knowledge, motivation, ethical stance, and management perspectives for leading the Company and who meet the basic criteria of supporting and upholding the Daicel Group's Basic Philosophy, Sustainable Management Policies, Daicel Group Code of Conduct, and Ethical Standards of Daicel Group, and possess the necessary credentials and experience for enhancing Daicel's medium- to long-term corporate value. The Board of Directors decides on nominations and appointments based on the advice of the Nomination and Compensation Committee.

Compensation for Directors and Audit & Supervisory Board Members

1. Basic Policy

- (1) 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.
- (2) Compensation of Directors shall consist of monthly compensation, performance-based bonuses, and stock compensation, which will generally be paid according at a 55:30:15 ratio that is subject to change according to one's position. 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.
- (3) 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.

2. 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- to 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 payment rate that fluctuates between 0% and 200% based on the level of accomplishment of the performance indicators. Further, the payment rate based on the level of accomplishment of the indicators is calculated based on the table below.

The Coefficients of Payment Rate for Calculating Performance-Based Bonuses

Indicator	Weight	Target Achievement Rate	Coefficient
Consolidated net sales	50%	120% or more	200%
		More than 100% and less than 120%	*1
		100%	100%
		More than 80% and less than 100%	*2
		80% or less	0%
Consolidated operating income	50%	120% or more	200%
		More than 100% and less than 120%	*1
		100%	100%
		More than 80% and less than 100%	*2
		80% or less	0%

*1 These bonuses are proportional to the percentage that the target figure was achieved, within a range of 101% to 199%. *2 These bonuses are proportional to the percentage that the target figure was achieved, within a range of 1% to 99%.

The final amount of performance-based bonuses are determined by assessing the status of each Director from the perspectives of practicing Sustainable Management Policy and accomplishing Mid-Term Management Strategy, and adding or subtracting up to 20% to or from the basic amount of the performance-based bonus.

(3) Restricted Stock Compensation System

Daicel introduced Restricted 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.

Total Compensation for Directors and Audit & Supervisory Board Members (FY2024/3)

Category	Number of recipients	Amount (Yearly)			
		Monetary compensation		Stock-based compensation	Total
		Monthly compensation	Performance-based bonuses		
Directors (Outside Directors)	12 (8)	271 million yen (79 million yen)	120 million yen (-)	55 million yen (-)	447 million yen (79 million yen)
Audit & Supervisory Board Members (Outside Audit & Supervisory Board Members)	6 (3)	111 million yen (39 million yen)	-	-	111 million yen (39 million yen)
Total	18	383 million yen	120 million yen	55 million yen	559 million yen

* A resolution of the 158th Ordinary General Meeting of Shareholders held on June 21, 2024, held the amount of compensation for Directors to a maximum of 640 million yen annually (including compensation for Outside Directors to a maximum of 140 million yen annually).

* A resolution of the 158th Ordinary General Meeting of Shareholders held on June 21, 2024, held the amount of compensation for Audit & Supervisory Board Members to a maximum of 130 million yen annually.

Corporate Compliance / Risk Management

Corporate Compliance

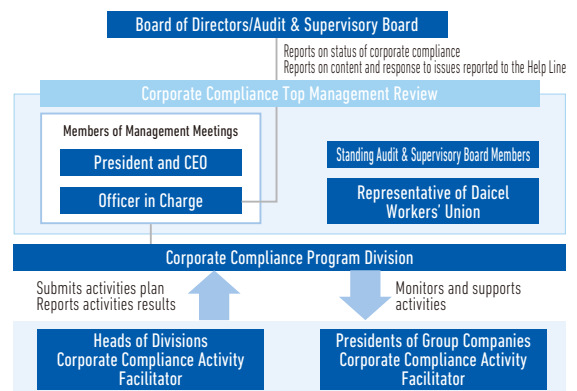
One of the foundations for sustainable management is corporate compliance. Each department and Group company (hereinafter “each organization”) of the Company formulates action plans based on the Daicel Group Code of Conduct and Ethical Standards of Daicel Group, and under the same sense of values, we are working on corporate compliance activities throughout the Group and instilling corporate compliance in each and every employee.

Daicel Group Code of Conduct	As a guideline for regulating the behavior of individuals, it shows the items that each officer and employee should always be aware of and put into practice with the first priority to self-control as a member of society.
Ethical Standards of Daicel Group	It is a necessary condition for survival in a diversifying global society as a model of business execution of the Company, and indicates universally applicable items in all areas of activity.

Promotion System

The Company has established a Corporate Compliance Program Division under the responsibility of Senior Managing Executive Officers to promote its corporate compliance activities across the entire Group. Each organization independently practices corporate compliance activities with a corporate compliance activity facilitator at their cores. At meetings of the corporate compliance Top Management Review which are held at least once a year, 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 that include an internal audit aspect, to promote better corporate compliance activities, and works to raise awareness of and support organizations' corporate compliance activities in addition to swiftly identifying and correcting business risks through dialogue.

Corporate Compliance Program Promotion System



Fair Business Practices

The Group stipulates its compliance with fair transactions in the Ethical Standards of Daicel Group and has formulated the Daicel Group Basic Policies on Anti-Corruption and Compliance with Competition Law. We promote fair business practices by thoroughly implementing rules on approval of expenses for entertainment and gifts to public servants and business partners and offering employee education through e-learning and hierarchical training. In FY2024/3, there were no violations in anti-corruption laws and regulations, including those related to anti-competitive conduct, bribery, and conflicts of interest, with no fines or administrative monetary penalties.

Compliance Help Line System (Whistleblower System)

We have established a “Compliance Help Line System” in accordance with the Whistleblower Protection Act. In addition to the internal contact points, we have also set up external points of contact hosting an external institution for receiving reports and consultations from within the Company. We have also set up a contact point on our website to respond to inquiries from outside the Company. The Board of Directors is regularly reported on the status and results of responses to all reports and consultations received by the Group’s hotline. We have also formulated rules on whistleblower protection, and are working on raising awareness of the rules and complying therewith. In response to the occurrence of misconduct related to third-party certification at our Group company, we are working to strengthen awareness-raising activities at each workplace and raise awareness through hierarchical training and e-learning during Compliance Awareness Month, and we also conduct reporting drills using simulated cases.

Overview of the Compliance Help Line System of Our Group

Target users	All employees in the Daicel Group and all stakeholders (e.g., customers, suppliers, partner company employees, retirees, and community residents)
Reporting content	Matters that may be in violation of the Ethical Standards of the Daicel Group (Illegal acts, anticompetitive 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

Cases of Reporting and Consultation of the Entire Daicel Group as Reported to the Corporate Compliance Program Division

	FY2022/3	FY2023/3	FY2024/3
Identified disruptive behaviors	24	35	50
Harassment, etc.	19	20	30
Dissatisfaction with the Company	4	16	21
Others	3	5	1
Total	50	76	102

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 (hereinafter “each organization”) seek to improve risk management by carrying out the CAPD cycle^{*1} as a part of their business operations. Each organization identifies risks that could have a major impact on its ability to achieve business targets and classifies them into risk categories (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).

In addition, Daicel has established the Risk Management Committee, which coordinates and promotes the risk management for each organization. The committee reviews the progress of risk-related measures for each organization, and it provides advice and support as necessary. Risks requiring a Company-wide response are addressed by setting up projects and implementing other measures. The committee reports on its discussions about progress on countermeasures addressing risks that could have a major impact on the management of the Group, the status of Business Continuity Plans (BCPs), and other key issues during the Management Meeting and Board of Directors Meeting at the end of each fiscal year.

^{*1} 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

Targeted Risk Categories

- | | |
|---|---|
| 1. Risks related to business strategy | 10. Risks related to group management / control |
| 2. Risks related to production technology, production equipment and utilities | 11. Risks related to legal and corporate compliance |
| 3. Risks related to construction and repair (including safety, quality, purchasing, etc.) | 12. Risks related to employment, human resources and employee fraud / crime |
| 4. Risks related to stable supply of products | 13. Risks related to finance / investment, credit, finance, and accounting |
| 5. Risks related to intellectual property | 14. Risks related to public relations and inappropriate information use |
| 6. Risks related to purchasing and procurement | 15. Risks related to antisocial groups and social communities |
| 7. Risks related to quality management and product liability | 16. Risks related to climate change |
| 8. Risks related to responsible care (including environmental problems), accidents, and disasters | 17. Risks related to human rights |
| 9. Risks related to information systems / networks and information security | |

Strengthening BCP Management

The Daicel Group formulates and manages business continuity plans (BCPs) 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. The BCPs are revised as necessary.

The Group organizes BCPs in all three stages 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 BCPs in FY2024/3.

Preparedness (BCP I)	- Consider and implement preventive measures through risk assessments, and post-measures through crisis assessments^{*2} for processes dealing with self-reactive substances - In preparation for material procurement risks, procure long lead-time components needed for the maintenance of proper inventory levels
Initial Contingency Response (BCP II)	- Confirm and review disaster risks, such as tidal waves and tsunamis, using hazard maps for each region in the Plan for a Resilient Japan - The planned installation of remote monitoring cameras and remote firefighting equipment - Enhance the information sharing system among sites in the company-wide disaster preparedness system - Review and consider disaster preparedness measures for wide-area disasters - Conduct disaster drills at each site, and confirm the operation of the company-wide information sharing system
Resumption of Operations (BCP III)	Prepare “BCP for Individual Products”^{*3}

^{*2} An assessment of response measures to prevent further damage or secondary accidents anticipating the occurrence of an accident

^{*3} “BCP for Individual Products” summarizing plans and information required to maintain or resume business operations for individual products or product groups

Financial Information

Consolidated Eleven-Year Summary

As of and for the years ended March 31

	FY2014/3	FY2015/3	FY2016/3	FY2017/3
Operational Results				
Net sales	¥ 413,786	¥ 443,775	¥ 449,878	¥ 440,061
Operating income	37,912	51,303	64,349	64,306
Net income attributable to owners of the parent	22,843	31,252	40,313	43,198
Financial Position				
Net assets	¥ 295,805	¥ 356,177	¥ 368,720	¥ 399,429
Total assets	509,834	565,332	560,190	599,708
Interest-bearing debt	105,917	86,981	71,276	72,291
Cash Flows				
Cash flows from operating activities	¥ 44,777	¥ 57,412	¥ 65,419	¥ 86,168
Cash flows from investing activities	(34,984)	(30,283)	(31,407)	(34,722)
Cash flows from financing activities	(4,472)	(29,230)	(31,470)	(19,942)
Cash and cash equivalents, end of year	62,573	66,737	65,237	96,275
Per Share Information				
Basic net income per share (yen)	¥ 64.98	¥ 88.95	¥ 115.02	¥ 124.61
Net assets per share (yen)	764.51	922.71	966.36	1,067.63
Cash dividends per share (yen)	15.00	21.00	26.00	30.00
Financial Indicators				
EBITDA	¥ 63,005	¥ 76,936	¥ 90,320	¥ 95,142
Ratio of operating income to net sales (%)	9.2	11.6	14.3	14.6
ROIC (%)	6.6	8.0	9.5	9.1
ROE (%)	9.0	10.5	12.2	12.2
ROA (%)	4.7	5.8	7.2	7.4
Total asset turnover (times/year)	0.9	0.8	0.8	0.8
Equity Ratio (%)	52.7	57.3	60.2	61.6
Dividend payout ratio (%)	23.1	23.6	22.6	24.1
Total return ratio (%)	23.1	23.6	32.5	33.3
Others				
Capital expenditures	¥ 25,617	¥ 30,629	¥ 40,256	¥ 39,528
Depreciation and amortization	23,669	23,409	23,914	29,031
Research and development expenses	13,360	14,031	15,306	16,806
Number of employees (at year-end)	9,700	10,173	10,709	11,556

(Note) Amortization of goodwill is not included in depreciation and amortization

(Millions of Yen)

	FY2018/3	FY2019/3	FY2020/3	FY2021/3	FY2022/3	FY2023/3	FY2024/3
	¥ 462,956	¥ 464,859	¥ 412,826	¥ 393,568	¥ 467,937	¥ 538,026	¥ 558,056
	58,932	51,171	29,644	31,723	50,697	47,508	62,393
	37,062	35,301	4,978	19,713	31,254	40,682	55,834
	¥ 413,541	¥ 423,243	¥ 392,583	¥ 245,000	¥ 279,544	¥ 310,435	¥ 374,861
	644,078	654,791	597,992	640,385	698,836	765,606	839,169
	99,743	104,306	92,787	270,938	283,553	321,974	304,118
	¥ 66,888	¥ 58,523	¥ 57,193	¥ 57,869	¥ 42,993	¥ 26,847	¥ 76,729
	(33,189)	(41,095)	(45,864)	(34,220)	(46,528)	(44,093)	(55,374)
	(1,962)	(25,636)	(47,883)	(17,050)	(5,452)	19,956	(52,373)
	128,290	120,016	80,674	90,747	87,986	93,493	68,408
	¥ 107.81	¥ 105.38	¥ 15.49	¥ 65.18	¥ 104.14	¥ 138.87	¥ 197.56
	1,136.32	1,198.77	1,166.56	789.34	919.88	1,033.52	1,301.21
	32.00	32.00	34.00	32.00	34.00	38.00	50.00
	¥ 91,888	¥ 82,221	¥ 59,765	¥ 59,128	¥ 78,893	¥ 79,084	¥ 96,098
	12.7	11.0	7.2	8.1	10.8	8.8	11.2
	7.7	6.1	3.8	4.1	6.2	5.3	6.3
	9.8	9.1	1.3	6.6	12.3	14.3	17.1
	6.0	5.5	0.8	3.2	4.7	5.6	7.0
	0.7	0.7	0.7	0.6	0.7	0.7	0.7
	59.8	60.1	60.6	37.1	38.9	38.6	42.8
	29.7	30.4	219.5	49.1	32.6	27.4	25.3
	56.6	67.2	577.3	91.1	48.6	51.7	52.0
	¥ 30,819	¥ 44,694	¥ 47,568	¥ 39,555	¥ 40,840	¥ 56,308	¥ 77,458
	31,720	30,044	29,002	25,830	26,948	30,835	32,970
	18,843	20,749	21,295	19,540	20,741	21,878	23,393
	12,309	12,319	11,606	11,142	11,104	11,207	11,134

Consolidated Balance Sheets

Daicel Corporation and Consolidated Subsidiaries
March 31, 2024 and 2023

Millions of Yen

	FY2023/3	FY2024/3
Assets		
Current assets		
Cash and deposits	¥ 93,840	¥ 73,183
Notes receivable - trade	4,602	6,557
Accounts receivable - trade	96,932	107,855
Inventories	177,169	182,510
Other	34,149	39,426
Allowance for doubtful accounts	(66)	(52)
Total current assets	406,627	409,481
Non-current assets		
Property, plant and equipment		
Buildings and structures	181,794	190,774
Accumulated depreciation	(116,985)	(121,749)
Buildings and structures, net	64,809	69,024
Machinery, equipment and vehicles	591,652	663,018
Accumulated depreciation	(516,850)	(544,768)
Machinery, equipment and vehicles, net	74,802	118,249
Tools, furniture and fixtures	33,018	35,054
Accumulated depreciation	(27,942)	(29,797)
Tools, furniture and fixtures, net	5,076	5,257
Land	35,639	36,547
Construction in progress	75,803	79,871
Total property, plant and equipment	256,130	308,949
Intangible assets		
Goodwill	338	85
Other	10,853	10,687
Total intangible assets	11,191	10,773
Investments and other assets		
Investment securities	67,914	80,023
Deferred tax assets	2,425	2,394
Retirement benefit asset	7,648	13,977
Other	13,707	13,602
Allowance for doubtful accounts	(40)	(33)
Total investments and other assets	91,656	109,964
Total non-current assets	358,978	429,688
Total assets	¥ 765,606	¥ 839,169

Millions of Yen

	FY2023/3	FY2024/3
Liabilities		
Current liabilities		
Notes and accounts payable - trade	¥ 56,167	¥ 62,184
Short-term borrowings	36,267	31,758
Short-term bonds payable	30,000	27,000
Current portion of bonds payable	30,000	10,000
Current portion of long-term borrowings	12,742	16,291
Income taxes payable	5,343	6,378
Provision for repairs	3,565	-
Other	46,768	55,191
Total current liabilities	220,856	208,804
Non-current liabilities		
Bonds payable	100,000	90,000
Long-term borrowings	108,823	124,741
Deferred tax liabilities	14,394	23,677
Provision for retirement benefits for directors	71	36
Provision for repairs	-	1,344
Provision for environmental measures	122	102
Retirement benefit liability	4,735	2,710
Asset retirement obligations	1,170	1,198
Other	4,995	11,691
Total non-current liabilities	234,314	255,503
Total liabilities	455,170	464,308
Net assets		
Shareholders' equity		
Share capital	36,275	36,275
Capital surplus	132	0
Retained earnings	204,529	233,115
Treasury shares	(15,716)	(15,895)
Total shareholders' equity	225,221	253,496
Accumulated other comprehensive income		
Valuation difference on available-for-sale securities	32,906	43,319
Deferred gains or losses on hedges	43	(14)
Foreign currency translation adjustments	33,519	53,371
Remeasurements of defined benefit plans	3,519	8,723
Total accumulated other comprehensive income	69,988	105,399
Non-controlling interests	15,225	15,964
Total net assets	310,435	374,861
Total liabilities and net assets	¥ 765,606	¥ 839,169

Consolidated Statements of Income

Daicel Corporation and Consolidated Subsidiaries
Years Ended March 31, 2024 and 2023

Millions of Yen

	FY2023/3	FY2024/3
Net sales	¥ 538,026	¥ 558,056
Cost of sales	392,214	398,776
Gross profit	145,811	159,280
Selling, general and administrative expenses	98,303	96,887
Operating profit	47,508	62,393
Non-operating income		
Interest income	697	1,565
Dividend income	3,277	2,367
Share of profit of entities accounted for using equity method	2,335	2,067
Foreign exchange gains	-	1,339
Rental income from non-current assets	482	472
Subsidy income	147	344
Other	696	794
Total non-operating income	7,637	8,952
Non-operating expenses		
Interest expenses	1,432	1,666
Foreign exchange losses	201	-
Bond issuance costs	1	2
Donations	550	370
Other	925	909
Total non-operating expenses	3,111	2,949
Ordinary profit	52,035	68,396
Extraordinary income		
Gain on disposal of non-current assets	74	155
Gain on sales of investment securities	4,208	11,198
Subsidy income	513	-
Gain on sales of investments in capital of subsidiaries and associates	722	-
Total extraordinary income	5,519	11,354
Extraordinary losses		
Loss on retirement of non-current assets	1,524	819
Impairment losses	-	1,668
Loss on tax purpose reduction entry of non-current assets	513	-
Loss on valuation of investment securities	-	506
Loss on sale of shares of subsidiaries and associates	-	723
Loss on liquidation of business	548	-
Total extraordinary losses	2,587	3,718
Profit before income taxes	54,967	76,032
Income taxes - current	13,055	17,113
Income taxes - deferred	270	2,374
Total income taxes	13,326	19,487
Net profit	41,641	56,545
Net profit attributable to non-controlling interests	958	710
Net profit attributable to owners of parent	¥ 40,682	¥ 55,834

Consolidated Statements of Comprehensive Income

Daicel Corporation and Consolidated Subsidiaries
Years Ended March 31, 2024 and 2023

Millions of Yen

	FY2023/3	FY2024/3
Net profit	¥ 41,641	¥ 56,545
Other comprehensive income		
Valuation difference on available-for-sale securities	(3,910)	10,416
Deferred gains or losses on hedges	15	(58)
Foreign currency translation adjustments	7,579	20,144
Remeasurements of defined benefit plans	(942)	5,229
Share of other comprehensive income of entities accounted for using equity method	89	700
Total other comprehensive income	2,831	36,432
Comprehensive income	44,473	92,977
Comprehensive income attributable to		
owners of parent	43,353	91,245
non-controlling interests	¥ 1,119	¥ 1,732

Consolidated Statements of Cash Flows

Daicel Corporation and Consolidated Subsidiaries
Years Ended March 31, 2024 and 2023

Millions of Yen

	FY2023/3	FY2024/3
Cash flows from operating activities		
Profit before income taxes	¥ 54,967	¥ 76,032
Depreciation	31,516	33,644
Impairment loss	-	1,668
Amortization of goodwill	59	59
Increase (decrease) in provision for environmental measures	(16)	(20)
Interest and dividends income	(3,975)	(3,933)
Interest expenses	1,432	1,666
Share of loss (profit) of entities accounted for using equity method	(2,335)	(2,067)
Loss (gain) on disposal of non-current assets	(74)	(155)
Loss on retirement of non-current assets	1,524	819
Loss (gain) on sales of investment securities	(4,208)	(11,198)
Loss (gain) on sales of investments in capital of subsidiaries and associates	(722)	-
Loss (gain) on sales of shares of subsidiaries and associates	-	723
Loss (gain) on valuation of investment securities	-	506
Loss on liquidation of business	548	-
Decrease (increase) in trade receivables	4,498	(6,177)
Decrease (increase) in inventories	(31,875)	1,420
Increase (decrease) in trade payables	(8,701)	487
Other, net	(7,365)	(4,967)
Subtotal	35,274	88,510
Interest and dividends received	6,063	5,921
Interest paid	(1,372)	(1,433)
Income taxes paid	(14,425)	(16,901)
Income taxes refund	1,308	633
Net cash provided by (used in) operating activities	26,847	76,729
Cash flows from investing activities		
Net decrease (increase) in time deposits	(208)	(4,236)
Purchase of property, plant and equipment	(47,386)	(65,618)
Proceeds from sales of property, plant and equipment	318	6,318
Purchase of intangible assets	(4,537)	(3,590)
Purchase of investment securities	(365)	(1,232)
Proceeds from sales and redemption of investment securities	8,677	13,216
Proceeds from sales of investments in capital of subsidiaries and associates	1,125	-
Proceeds from sales of shares of subsidiaries resulting in change in scope of consolidation	-	466
Loan advances	(807)	(513)
Proceeds from collection of loans receivable	445	809
Other, net	(1,353)	(992)
Net cash provided by (used in) investing activities	(44,093)	(55,374)
Cash flows from financing activities		
Net increase (decrease) in short-term borrowings	13,413	(5,690)
Net increase (decrease) in short-term bonds payable	29,998	(3,002)
Proceeds from long-term borrowings	15,074	29,489
Repayments of long-term borrowings	(13,107)	(12,852)
Redemption of bonds	(10,003)	(30,000)
Proceeds from share issuance to non-controlling shareholders	7,200	-
Purchase of treasury shares	(10,000)	(15,000)
Proceeds from sale of treasury shares	0	-
Dividends paid	(10,651)	(12,859)
Dividends paid to non-controlling interests	(742)	(893)
Payments from changes in ownership interests in subsidiaries that do not result in change in scope of consolidation	-	(200)
Repayments of lease liabilities	(1,224)	(1,363)
Net cash provided by (used in) financing activities	19,956	(52,373)
Effect of exchange rate change on cash and cash equivalents	2,795	5,932
Net increase (decrease) in cash and cash equivalents	5,506	(25,084)
Cash and cash equivalents, beginning of year	87,986	93,493
Cash and cash equivalents, end of year	¥ 93,493	¥ 68,408

Corporate Information

Company Data (as of March 31, 2024)

Corporate Overview

Corporate Name:	Daicel Corporation
Establishment:	September 8, 1919
Capital:	¥36,275,440,089
Number of employees:	11,134 (Consolidated) 2,510 (Non-consolidated)

Status of Stock

Common stock authorized:	1,450,000,000 shares
Issued:	286,942,682 shares
Listing:	Tokyo Stock Exchange Prime Market
Stock Code:	4202
Shareholder registry administrator:	Sumitomo Mitsui Trust Bank, Limited 1-4-1, Marunouchi, Chiyoda-ku, Tokyo, Japan
Number of shareholders:	28,746
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

■ H.R. Training Center
14-1, Kouto 3-chome, Kamigori-cho, Akou-gun, Hyogo 678-1205

Innovation Park

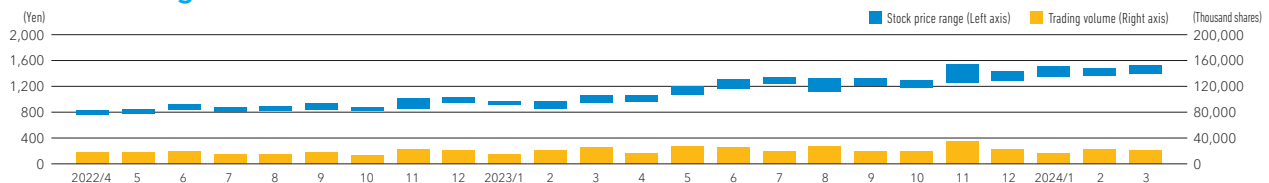
1239, Shinzaikae, Aboshi-ku, Himeji-shi, Hyogo 671-1283

Plant

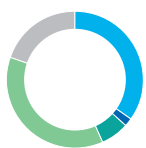
■ Himeji Production Sector/Aboshi Plant	1239, Shinzaikae, Aboshi-ku, Himeji-shi, Hyogo 671-1281
■ Himeji Production Sector/Hirohata Plant	12, Fuji-cho, Hirohata-ku, Himeji-shi, Hyogo 671-1123
■ Harima Plant	805, Umaba, Ibogawa-cho, Tatsuno-shi, Hyogo 671-1681
■ Arai Plant	1-1, Shinko-cho, Myoko-shi, 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, 2024)



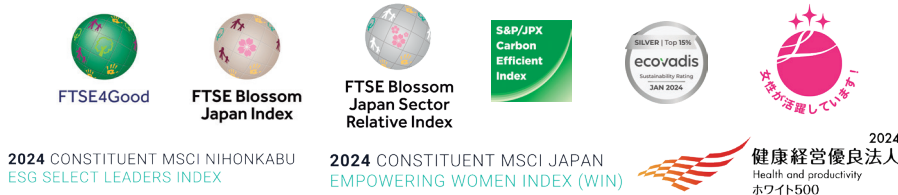
	Thousand shares	%
■ Financial institutions	111,391	38.82
■ Securities companies	10,197	3.55
■ Other domestic corporations	21,647	7.54
■ Foreign investors	91,650	31.94
■ Individual & other investors	52,056	18.15

Top 10 Shareholders (As of March 31, 2024)

	Number of shares (Thousand shares)	Shareholding ratio (%)
The Master Trust Bank of Japan, Ltd. (Trust Account)	45,152	16.37
Custody Bank of Japan, Ltd. (Trust Account)	24,707	8.95
Nippon Life Insurance Company	17,402	6.30
NORTHERN TRUST CO. (AVFC) RE SILCHESTER INTERNATIONAL INVESTORS INTERNATIONAL VALUE EQUITY TRUST	10,794	3.91
FUJIFILM Holdings Corporation	8,390	3.04
Sumitomo Mitsui Banking Corporation	6,209	2.25
Daicel Group Employee Shareholding Association	6,179	2.24
Daicel Shareholding Ownership Association	6,045	2.19
NORTHERN TRUST CO. (AVFC) RE U.S.TAX EXEMPTED PENSION FUNDS	5,443	1.97
NORTHERN TRUST CO. (AVFC) RE NON TREATY CLIENTS ACCOUNT	4,177	1.51

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

Rating for Our ESG Initiatives (As of August, 2024)



* 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 Index Series is 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 Index is 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 index is the exclusive property of MSCI. MSCI and the MSCI index names and logos are trademarks or service marks of MSCI or any of its affiliates.

Independent Third-Party Assurance Report



Independent Assurance Statement

September 11, 2024

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's business sites in FY2024/3, which are 1.51 million t-CO_{2e} (Scope1), 38.8 thousand t-CO_{2e} (Scope2 Market-Based) and 1.44 million t-CO_{2e} (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
- Onsite inspection of business sites
- 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.

Thoughts on the Cover

Daicel has been taking on the challenge of contributing to the transformation of society from one that consumes large amounts of fossil resources to a sustainable one that recycles renewable resources.

Co-creation with various partners across organizational boundaries is essential in our journey to contribute to the creation of a circular society while aligning ecology and economy, armed with our pride as a pioneer in biomass chemistry and our proprietary, innovative technologies.

The cover illustration represents our progress toward creating a future of promise, which advances with each and every co-creation project we undertake, not only within our Company but also with partner companies linked to us via our supply chain and universities with whom we conduct joint research.



*Creating a Future
of Promise*

Daicel Corporation

Inquiries:

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The text in this report uses
easy-to-see characters
based on the concept of
Universal Design (UD).