

# Daicel Group

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## Sustainability Report

# 2020



Daicel celebrated its 100th anniversary on September 8, 2019.

# Contents

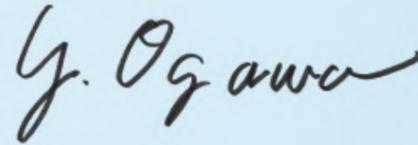
Sustainability Top .....	3
Basic Philosophy .....	5
Message from the President and CEO .....	6
Roundtable Discussion with Outside Directors .....	10
Sustainability Management	
Sustainability Promotion .....	14
Our SDG Focus and Initiatives .....	20
Responsible Care Activities .....	23
Targets, Results, and Assessments of RC Activities .....	33
Environmental Report	
Environmental Management .....	38
Global Warming Prevention .....	41
Reduction and Recycling of Industrial Waste .....	47
Chemicals Management .....	49
Water Resource Preservation .....	53
Environmental Management and Prevention of Air Pollution .....	55
Preserving Biodiversity .....	57
Environmental Accounting .....	58
Social Report	
Responsibility for Customers and Product Safety	
Enhancing Product Quality .....	62
Chemical and Product Safety .....	66
Process Safety and Disaster Prevention .....	68
Distribution Safety .....	71
Creating Attractive Workplaces	
Occupational Health and Safety .....	74
Human Resource Management .....	79
Initiatives to Help Employees Maintain Mental and Physical Health .....	84

Human Resource Development .....	89
Diversity Promotion .....	102
Work-Life Balance Promotion .....	106
<b>Human Rights</b>	
Respect for Human Rights .....	115
<b>Sustainable Procurement</b>	
Supply Chain Management .....	118
Contribution to Local Communities and Society .....	121
<b>Governance</b>	
Corporate Governance .....	125
Corporate Compliance .....	137
Daicel Group Conduct Policy .....	147
Daicel Code of Conduct .....	148
Risk Management .....	155
<b>Special Feature</b>	
Promoting Multifaceted Energy Savings .....	158
Human Development Center .....	163
Native Forests for Life Initiative .....	169
Independent Assurance Statement .....	174
Editorial Policies .....	175
<b>List of Data Collection Boundaries</b>	
Scope of Reporting for Human Resources and Governance Data .....	177
Scope of Data Calculation for Environmental and Occupational Safety Performance .....	182

# Sustainability

We continue to innovate “Monozukuri” to achieve both a sustainable society and corporate growth.

President and CEO,  
Daicel Corporation



## Message from the President and CEO

Daicel's Future Direction  
in New Long-Term Vision

## Roundtable Discussion with Outside Directors

Three Outside Directors Talk  
about Daicel's Goals

## Special Feature

Promoting Daicel's Energy-Saving  
Initiatives from Three Angles

## Basic Philosophy / Policies

[Basic Philosophy](#) >

[Policy List](#) >

## Sustainability Management

[Sustainability Management Policy](#) >

[Sustainability Promotion](#) >

[Our SDG Focus and Initiatives](#) >

## Daicel Group Sustainability

The Daicel Group is making a Company-wide effort to remain an organization that society trusts.



## Environmental Report

[Environmental Management](#) >

[Global Warming Prevention](#) >

[Reduction and Recycling of Industrial Waste](#) >

[Chemicals Management](#) >



## Social Report

[Responsibility for Customers and Product Safety](#) >

[Enhancing Product Quality](#) >

[Chemical and Product Safety](#) >

[Process Safety and Disaster Prevention](#) >



## Governance

[Corporate Governance](#) >

[Corporate Ethics](#) >

[Corporate Compliance](#) >

[Daicel Group Conduct Policy](#) >

- Water Resource Preservation >
- Environmental Management and Prevention of Air Pollution >
- Preserving Biodiversity >
- Environmental Accounting >

- Distribution Safety >
- Creating Attractive Workplaces -
- Occupational Health and Safety >
- Human Resource Management >
- Initiatives to Help Employees Maintain Mental and Physical Health >
- Human Resource Development >
- Diversity Promotion >
- Work-Life Balance Promotion >
- Human Rights -
- Respect for Human Rights >
- Sustainable Procurement -
- Supply Chain Management >
- Contribution to Local Communities and Society >

- Daicel Code of Conduct >
- Risk Management >

[Responsible Care Activities](#)

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- [Daicel Report2020](#) >
- [ESG Data2020](#) >
- [Archives](#) >



- [Independent Assurance Statement](#)
- [Editorial Policies](#)
- [GRI Standards Content Index](#)
- List of Declarations and Certifications**
  - [Status of Environmental Management System Certification](#)
  - [Status of Quality Management System Certification](#)
- List of Data Collection Boundaries**
  - [Scope of Reporting for Human Resources and Governance](#)
  - [DaEditorial Policies](#)
  - [Scope of Data Calculation for Environmental and Occupational Safety Performance](#)



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We place great importance on the Basic Philosophy concept, and in future will continue to hold this concept without being influenced by changing times.

## The company making lives better by co-creating value

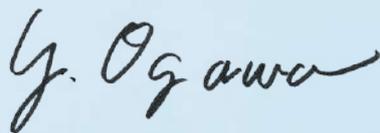
*Sustainable Value Together*

Co-creating value ●●●

Understanding and communicating together with various partners, to jointly create new value

# Message from the President and CEO

We continue to innovate  
“Monozukuri”\* to achieve  
both a sustainable society and  
corporate growth.



Yoshimi Ogawa  
President and CEO, Daicel Corporation



\*Although the literal meaning of the Japanese word “Monozukuri” is “making things,” we have defined “Monozukuri” as creating new value through all corporate activities.

## Encountering a Historic Turning Point

In the Group's FY2020/3 results, operating profit was down for the fourth consecutive year. In addition to the slowing of the Chinese economy in the wake of intensifying U.S.-China trade friction, other factors adversely impacted the global economy and society. Blaming external factors for our declining performance, however, will not ensure the survival of Daicel's business.

The current social environment is undergoing rapid change, and we thus face the challenge of staying afloat. The Sustainable Development Goals (SDGs) present opportunities for us to reassess the core of our business strategies, and new technologies such as AI and IoT are not only advancing automation and robotization but also overturning traditional societal structures and business models. In addition, the spread of COVID-19 has significantly impacted the lives and social functions of people around the world and is expected to trigger structural transformations in society and the economy.

We stand at a decisive turning point in our history, and the Daicel Group must transform itself in order to quickly and flexibly respond to these external factors. While the social environment remains unpredictable, we are nevertheless ready to face these challenges with the 12,000 employees working for the Daicel Group around the world and our various stakeholders.

## Long-term Direction and Future Vision

Last year, amid these historical changes, we celebrated our 100th anniversary. During that milestone year, we started formulating the Group's 4th long-term vision encompassing the new era along with our medium-term strategies for realizing this new vision. The global COVID-19 pandemic struck during these discussions and presented challenges we had never experienced. We have been witnessing how this pandemic has been changing people's lives as well as corporate economic activities and our supply chain, and we have been reassured that our decision to focus on speed and flexibility turned out to be correct and timely.

In our new long-term vision "DAICEL VISION 4.0," we focus on three areas: changing how work is done and how the company operates, combining technologies and skills to continually innovate manufacturing, and providing reliable and value-added manufacturing.

"Changing how the company operates" means going beyond the traditional concept of company boundaries and working with the entire supply chain to generate new value. The Daicel Group cannot operate in isolation. We need our customers and our suppliers, and when working on construction projects we work with partner companies. If we think beyond the boundaries of our company, our plant is just one process in a long supply chain made up of many manufacturing processes. To ensure that our supply chain is chosen, we believe that we must do more than just offer excellent cost performance and quick responses to our customers. We should put ourselves in their shoes, understand what they really need, and come up with the best solution for them. We will come across scenarios in which we actually do not have any products that suit their needs and therefore present them with competitors' products. These scenarios offer opportunities for identifying our shortcomings and enable us to strengthen our manufacturing capabilities by developing new products that surpass the competition. Our goal is to go beyond organizational boundaries in this way and flexibly leverage the capabilities of our cross-value chain to establish supply and value chains that deliver greater value to society and in which everyone shares a sense of achievement and accomplishment.

Our second focus is to continually innovate manufacturing. To strengthen our manufacturing capabilities, we must work on both our "know-why," that is, the technologies based on theories and analysis, and "know-how," the skills based on insight and experience. During our implementation of "DAICEL Production Innovation," I was involved in analyzing plant operations as an engineer. I soon realized that a theory-based analysis was not sufficient for capturing the massive on-site expertise that has been accumulated over the years. These categories of on-site know-how often come about from taking action to address a lack of technical capabilities. Analyzing these kinds of know-how offers opportunities for improving our technology and leads to innovation. And when new or improved technology is introduced, new elements of expertise are introduced and accumulated as well. The strength of Japan's manufacturing is at the center of this synergy between technologies and skills and how they interact to create an upward spiral of progress. This same principle can be applied to global businesses and expanded to encompass our overseas plants too. I truly believe that engineers and frontline operators who can think beyond the boundaries of their responsibilities and work together to holistically strengthen our manufacturing

# Message from the President and CEO

capabilities are crucial to the company's survival.

Our third focus is to continually provide and enhance reliable, value-added manufacturing. For society to accept the nature and value of our manufacturing, every product must clearly reflect a sense of safety and quality. While this may seem obvious, it is extremely important to remain diligent and focused, even on obvious things. In addition, in order to contribute to creating a sustainable society, we need to both develop products that advance society toward this goal and ensure our manufacturing process itself is friendly to people and the environment. To this end, we are working on forming a biomass product tree during product development and implementing an energy-offset process for reducing energy and resource consumption. Since our establishment, we have been working very closely with Cellulose, a naturally derived material, and have extensively explored its capabilities. We can leverage our expertise in Cellulose and turn it into a functional material that offers non petroleum-based solutions to society. We believe that this approach to new product development will naturally define and shape Daicel brand manufacturing. In the energy-offset process, our ultimate goal is to operate manufacturing processes that result in no loss of energy, in which the overall energy input does not exceed overall output. I recognize that this is a very ambitious goal; nevertheless, we are committed to this goal and to creating processes that can harmoniously coexist with the global environment.

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## Human-Centered Management

Our goal is to contribute to the creation of sustainable society and at the same time expand the Daicel Group's business. The achievement of these objectives must be based on

a foundation of vital principles, that is, safety, quality and compliance, and through integrity, hard work and our own transformation. To this end, we established the Sustainability Management Policies. These were drawn from Human-Centered Management and are intended to enhance our corporate value by ensuring happiness for workers, an environment that fosters happiness, and happiness for society and all people.

We believe that the happiness of each employee and their families is essential for bringing happiness to society as a whole. This belief forms the basis of our Sustainability Management Policies. A company is made up of people, those who happen to live in the same era and have been brought together to work for the same company. It is said that people spend more than one-third of their lives at work. Therefore, it makes perfect sense to ensure that their workplaces are happy places. A workplace in which employees can pursue their ambitions and apply their capabilities brings a sense of happiness, and this, in turn, makes their families happy. We need our workplaces to be environments in which employees feel enthusiastic about what they do and enjoy the changes they bring to the company. This leads to the company's growth, and our growth, in turn, brings even more happiness to their lives.

For many years, we have been advocating the need for a workplace environment in which everyone can excel, regardless of age, gender, nationality or disability. Every opportunity I get, I tell employees not to assume that working in plants is too dangerous for people with disabilities. Why not consider fully accident-proofing our plants to make them completely safe for anyone to work in? Times may change, but our basic management principle remains the same. Our human-centered management values each and every employee, and we hope to achieve success together.

In April 2020, we became a signatory of the United Nation's Global Compact. The Daicel Group is committed to maintaining a global perspective as we focus on our "Human-Centered Management" and aligning ourselves with the UN Global Compact's ten principles. We truly believe that this leads to our own growth and contribution toward a sustainable society.

We aspire to become a company that brings happiness to people's lives by sharing, resonating and co-creating new value with a diverse set of partners. In this context, we thank all our stakeholders for their continued guidance and support and look forward to continuing to share our progress in the coming years.



## Long-Term Vision “DAICEL VISION 4.0”

The Long-Term Vision “DAICEL VISION 4.0” is a set of guidelines to ensure that society always views the Daicel Group as a reputable and reliable corporation. These guidelines clearly indicate our future vision and confirm our commitment and determination to change, even if that requires us to transform our business model and company framework.

### Our Goals

Sustainable Product	Contributing to happiness of people and society	▶ Pursue happiness
Sustainable Process	Achieving goals with environmentally- and people-friendly methods	▶ Remove the existing company/plant framework ▶ Form biomass product tree ▶ Energy offset process
Sustainable People	Giving employees a sense of fulfillment	▶ Boldly delegate authority ▶ Lighter corporate role

### Four Domains of Happiness and Market Focus

Domain	<b>Health</b> 	<b>Safety/ Security</b> 	<b>Convenience/ Comfort (Smart)</b> 	<b>Environment</b> 
Market Focus	<ul style="list-style-type: none"> <li>▶ Cosmetics</li> <li>▶ Health Food</li> <li>▶ Medical Care</li> </ul>	<ul style="list-style-type: none"> <li>▶ Mobility</li> <li>▶ Industry</li> </ul>	<ul style="list-style-type: none"> <li>▶ Display</li> <li>▶ IC/Semiconductor</li> <li>▶ Sensing</li> </ul>	<ul style="list-style-type: none"> <li>▶ Water Processing</li> <li>▶ Biodegradable Resin</li> </ul>

## Growth & Acceleration Strategy

### Operations for goal achievement

#### Operation-I (OP-I) Original DAICEL

The area including domains on which we focus in addition to current businessness

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

#### Operation-II (OP-II) New DAICEL

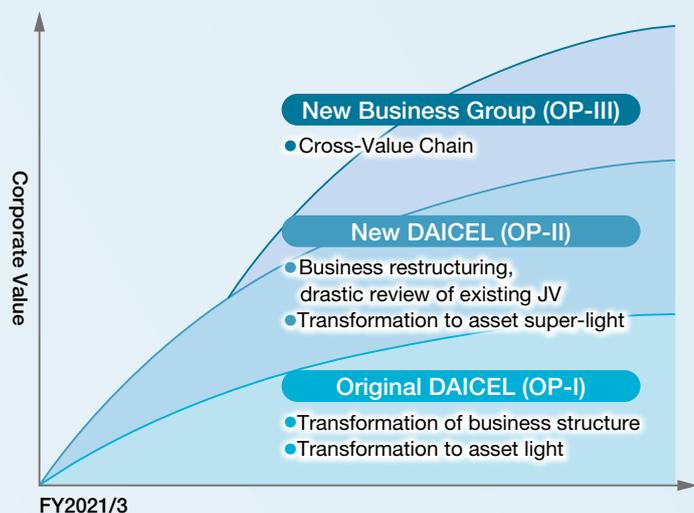
Peripheral areas of existing business to be expanded through M&A or collaboration

- Business restructuring, drastic review of existing JV
- 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

- Not limited to M&A, constructing the number one supply chain with various connections



## Roundtable Discussion with Outside Directors

# How to Achieve Sustainable Growth



### Masafumi Nogimori

Outside Director, Chairperson of the Nomination and Compensation Committee  
Retired as Chairperson and Representative Director of Astellas Pharma Inc. before becoming a Company director

### Sonoko Hacchoji

Outside Director, Member of the Nomination and Compensation Committee  
Outside Director of Japan Airlines Co., Ltd., Outside Director of Maruha Nichiro Corporation, Special Advisor to the President of Tsuda University

## Evaluation of Daicel's Corporate Governance

**Nogimori** Daicel operates an effective, well-balanced corporate governance structure. In my opinion, it compares favorably with its competitors. Board of Directors meetings are conducted in a very open atmosphere, and members are carefully chosen to ensure well-rounded conversations. The Company has a system in which the Audit & Supervisory Board Members can grasp the actual situation through on-site audits and reflect the results in corporate governance.

**Mizuo** The health of Daicel's corporate governance can be assessed from the two perspectives of its validity and efficiency. What I mean by its validity is whether it ethically and legally makes sense. From this perspective, I can confidently say that Daicel has a healthy corporate governance structure. From the perspective efficiency, the government structure, which is built on the principle of separation of ownership and management, is functioning well and effectively facilitates decision-making. Most notably, Daicel tries to genuinely evaluate the effectiveness of its Board of Directors, not as a mere formality but by conducting

questionnaire surveys and interviews with all directors. The chairperson of the board is also an excellent listener with the ability to encourage lively discussions. He ensures that each issue is heard and thoroughly discussed so that the efficiency of the decision-making process is secured.

**Hacchoji** Half of Daicel's Board of Directors are outside directors, and more than half of its Audit & Supervisory Board Members are outside members, which clearly indicates Daicel's commitment to seek external opinions. The discussions that take place in the Board of Directors meetings are both open and disciplined and convey a sense of being well-balanced. I feel that everyone on the board is committed to making Daicel a better company by openly discussing things that are going well and those that are not. Moreover, I can confirm that Daicel has a genuinely effective governance structure.

**Sugimoto** I have spent my entire career in chemical manufacturing. For me, these honest and diverse viewpoints from outside directors, who possess a wealth of experience in wide-ranging fields, is very valuable and enlightening.

**Nogimori** The Company considers that many of the directors are outside directors. Therefore, the Company asks

Daicel celebrated its 100th anniversary in 2019. Over the course of its long history, it has nurtured its signature Monozukuri\* Spirit and corporate culture of constantly seeking new challenges. With these qualities as its assets, what should Daicel's goals be for the next 100 years? Three of our outside directors from different backgrounds and Kotaro Sugimoto, the representative director of Daicel Corporation, joined in this roundtable discussion to share their evaluation of Daicel's corporate governance and culture as well as its needs in terms of focusing on a response to the challenges of society.

\*Although the literal meaning of the Japanese word "Monozukuri" is "making things," we have defined "Monozukuri" as creating new value through all corporate activities.



**Junichi Mizuo**

Outside Audit & Supervisory Board Member  
Representative Director and Chairperson of the Japan  
Compliance & Governance Institute, Honorary Professor at  
Surugadai University; specialized in CSR, corporate governance,  
business ethics, and marketing ethics.



**Kotaro Sugimoto**

Representative Director, Member of the Nomination and  
Compensation Committee, Member of the Management Advisory  
Committee. He joined the Company in 1984 and served as the  
head of the Raw Material Purchasing Center before becoming  
representative director and Senior Managing Executive Officer of  
the Company.

them to take ample time to learn about and keep up to date with Daicel's business activities so that when they discuss various matters they are familiar with the issues the Company currently faces.

**Hacchoji** The same can be said about the long-term vision and medium-term strategies that are kicking off in 2020. We were involved in the process of formulating these strategies, which took more than a year and involved many discussions and deliberations. Because we were involved from the planning stages of these long- and mid-term strategies, we understand them very well in addition to the various factors that might impact them. I trust that our future discussions will be even more productive and meaningful and contribute further to the successful implementation of these strategies.

**Mizuo** For matters of importance, the officer in charge goes through the details with us in person. This aids us in understanding what the Company is trying to achieve and helps our discussions become more productive. Daicel is very dedicated to maintaining a high level of transparency and accountability.

**Sugimoto** We try our best to have outside directors visit our business sites, both in Japan and abroad, so that they can

personally experience who we really are. It is important for them to see how we operate.

**Nogimori** I have visited Daicel's plants and have also had the opportunity to talk to their employees about the principles of safety and leadership. A company that provides outside directors with opportunities to talk to its employees is truly an open company.

**Sugimoto** Our employees also experience hearing from an outside director as a great opportunity, since they do not typically get a chance to meet them. We hope these interactions will help you continually deepen your understanding of our on-site operations, risk management, and other activities. Company management, on the other hand, will do its best to apply your abundant knowledge and experience.

## Current State and Future Goals of Diversity & Inclusion

**Hacchoji** I also visited several of Daicel's plants and had opportunities to speak with a few of the female employees

## Roundtable Discussion with Outside Directors



there. I was delighted to see these young talents, who may one day realize their career goals by taking on leadership roles. On the other hand, I see diversity and inclusion, particularly female advancement, as one of Daicel's major challenges.

**Nogimori** Daicel has the foundation to be a diverse organization, but the fact that many of its positions involve on-site operations is slowing its progress in female advancement. Why do you think it has been difficult to develop female leaders?

**Hacchoji** Regardless of gender or nationality, leadership development takes time. The Company needs to raise up leaders by exposing them to a wider range of operations in order to broaden their knowledge as well as by increasing their responsibilities, giving them opportunities to take ownership of issues, and allowing them to solve them on their own. Daicel has an action plan for increasing the number of women in management positions. The plan is very encouraging in that it eliminates bias toward women, and the goals outlined in the plan have been successfully achieved every year. In fact, a female manager is in charge of the cutting-edge medical device "Actranza™ lab." This provides just a glimpse of Daicel's commitment to the issue.

**Sugimoto** Thank you Hacchoji-san for pointing that out. We are trying to increase the ratio of females in our new graduate hiring pool and have recently placed a woman in a leadership position in Healthcare SBU, an area in which we can benefit even more from a woman's perspective. We have also been running the Nadeshiko seminar for the past three years as a training program for specifically developing female leaders.

**Mizuo** Having more female leaders in management positions is very important, but since Daicel is a global company with a large global footprint, it probably should consider having international members in its Board of Directors as well. Daicel should approach diversity and inclusion from many different angles.

**Nogimori** Human development is also key for increasing the Company's global footprint. We should consider incorporating aspects of human development into our ongoing business activities. For example, if Daicel's domestic employees communicated every day with their global counterparts, they would all gain a deeper mutual understanding and have greater influence on each other, which would in turn further strengthen Daicel as an international company. It is up to the management team to

develop this kind of human development approach.

**Mizuo** Since Mr. Ogawa became the CEO, the Company has once again been emphasizing its focus on human centered management. The key to managing a company is its employees. We need a workplace environment in which diverse teams of employees feel happy and can perform to the best of their abilities. Servant leadership, a management style whereby managers provide particular kinds of support to their employees, may help Daicel move toward this goal. In this management style, employees focus more on their customers and making them happy instead of making their managers happy. When this matures into a corporate culture where employees are always focused on what is good for customers and society as a whole, I believe that the company will have a good chance of achieving sustainable growth. The key to becoming a sustainable company is to have employees focus on society.

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### Expectations for Sustainable Management

**Sugimoto** In its new long-term vision, Daicel has established a sustainable management policy based on its basic principles. The policy clearly confirms the Company's commitment to becoming a sustainable company and making a greater contribution to creating a sustainable society. What would you like to see Daicel achieve from this perspective?

**Mizuo** I would like to see Daicel assume a leading role in the development of environmentally sound materials. While its market is primarily BtoB, Daicel should think of it as a BtoBtoC market and focus more on what is beyond B, to the end-users, as part of its business activities. Daicel can learn a lot from this and gain important perspectives toward achieving the SDGs.

**Nogimori** I totally agree. Companies are expected to gain a better understanding of what "C" wants and present solutions that leverage existing technologies. Daicel should be more innovative and come up with creative ways to utilize the materials it has. Material manufacturers tend to focus on perfecting the art of manufacturing a single, high-quality material and simply focusing on producing it for many years. I look forward to seeing Daicel break out of that shell and think more from the perspectives of customers and society





to come up with innovative ways to utilize those materials to provide better solutions.

**Sugimoto** It's very true that Daicel has been focusing on manufacturing. We actually pride ourselves in our manufacturing capabilities, but at the same time we recognize that we have not been paying enough attention to society and our end-users. We are now shifting the organization toward adopting a more market-in approach in an attempt to build momentum toward addressing this. However, Daicel cannot make it happen alone. In our new long-term vision, we are focused on "co-creation" and taking a big step toward a structure in which Daicel forms partnerships upstream and downstream while collaborating closely to generate new value.

**Mizuo** I hope this willingness to be the market leader and take on new challenges will become deeply ingrained in Daicel's corporate culture and lead to significant innovation.

**Hacchoji** Risk management at manufacturing sites is also a very important consideration. In addition to incurring physical injuries and facility damage, accidents may severely damage a company's reputation. The organization can lose the good public reputation and credibility it has built over many decades in an instant because of one accident. As a chemical manufacturer, Daicel handles hazardous chemicals at its sites, which also has the potential for causing pollution. I am sure everyone working at the plants is well aware of this and understands the importance of risk management. Although there is infrastructure in place for Daicel to monitor these risks, it is nevertheless important to stay focused. This may not be the most exciting and glamorous area to focus on, but it is important all the same.

**Nogimori** In terms of assessing the impact of business activities on the environment, I think Daicel and the material manufacturing industry as a whole is doing a good job. In the area of marine plastic debris, however, I think that it is necessary to raise consumer awareness of the issue. Plastic itself is extremely useful. There must be more Daicel can do to direct consumers toward more sustainable consumption of the material.

**Sugimoto** We will continue to focus on our fundamental

management principles: safety, quality, and compliance. In the area of tackling environmental issues, we are also looking to fulfill our corporate social responsibility by accelerating new material development that can potentially provide solutions to these issues.

## Responsibilities of Outside Directors

**Sugimoto** The diverse opinions we receive from our outside directors during Board of Directors meetings and other occasions are very enlightening. To close our conversation, I would like to hear your thoughts on the roles that outside directors play in Daicel's Board of Directors meetings?

**Nogimori** Companies that are trying to raise their corporate value and sustainably expand their businesses depend on having someone reviewing their operations and encouraging them to move forward. I see outside directors as playing the latter role, as private supporters that encourage Daicel to move forward.

**Mizuo** I hope that by sharing my experiences and my theory-based achievements in relation to business ethics and CSR, I am doing more than simply fulfilling the role of Audit & Supervisory Board member and monitoring Board of Directors meetings.

**Hacchoji** Outside directors need to be able to see matters from two perspectives, from a birds-eye view monitoring overall business management and from the ground up perspective of an ant, digging into the tiniest details. With your feedback into Daicel's business activities as well as my own past experiences, I hope I can act as both a bird and an ant, viewing the Company from their perspectives and contributing to Daicel's healthy and continuous future growth.

**Sugimoto** Your comments have really enabled us to see things from a broader perspective. We were reminded of the vital importance of incorporating these external insights into Daicel's business management. Thank you very much for your time today.

# Sustainability Promotion

## Basic Approach

The Daicel Group's daily activities are guided by its basic philosophy of making people's lives better by co-creating value. In a world where the values of people are changing significantly day by day toward the realization of a sustainable society, the Group has sought to clarify its management policy by laying out the Sustainable Management Policy. Under this, while we prioritize safety, quality, and compliance as the most important foundation, we seek to concurrently achieve a sustainable society and the Group's business expansion with integrity, tireless efforts, and self-transformation.

## Sustainable Management Policy

### Sustainable Management Policy

- We promote "human-centered business management" that enables diverse employees to grow while establishing their own presence and achieving fulfillment.
- We construct a circular process with all our stakeholders to make harmonious coexistence with the environment.
- We create and provide people with new values to achieve better quality of life.

■ Sustainable Management Policy (Conceptual diagram)

Corporate value: Overall improvement



Healthy, safe and good quality life



Partnership in value chain



Diversity & Inclusion

Happiness for society and people

Sustainable Product

Environment that offers happiness

Sustainable Process

Happiness for workers

Sustainable People

Spiral loop – Growth of organization



## Sustainable Management System

In FY2021/3, the Daicel Group set up a Sustainable Management Committee, which is chaired by the president, meets four times a year, and is part of a Group-wide effort to address sustainability issues. The committee promotes initiatives addressing key issues concerning the SDGs and sustainability through our business activities, manages the progress, and communicates the results to our stakeholders.

Comprising members from a broad range of areas, our CSR related divisions including as well our business and R&D divisions, the committee will bolster Daicel's CSR-related initiatives and accelerate its contribution to sustainability through business and innovation.



# The Ten Principles of the UN Global Compact

## Human Rights

- Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights; and  
Principle 2: make sure that they are not complicit in human rights abuses.

## Labour

- Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;  
Principle 4: the elimination of all forms of forced and compulsory labour;  
Principle 5: the effective abolition of child labour; and  
Principle 6: the elimination of discrimination in respect of employment and occupation.

## Environment

- Principle 7: Businesses should support a precautionary approach to environmental challenges;  
Principle 8: undertake initiatives to promote greater environmental responsibility; and  
Principle 9: encourage the development and diffusion of environmentally friendly technologies.

## Anti-Corruption

- Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.

Source: United Nations Global Compact website

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## Initiatives to Achieve the SDGs

The Sustainable Development Goals (SDGs) were adopted at the UN Sustainable Development Summit in 2015 as international goals aimed at creating a sustainable world that is better than today by 2030. Based on a pledge that no one will be left behind, the SDGs consist of 169 targets and 17 goals in areas including climate change, poverty, and gender equality, and enterprises are required to pursue initiatives to achieve the goals.

The Daicel Group is aware that its corporate mission lies not only in recognizing social issues but also ensuring that its products and business processes contribute to realizing a sustainable society, while achieving the SDGs and creating new value for society. Accordingly, the Group has identified specific SDGs that will serve as the focus of its efforts and set KPIs.

[For more information, please refer to Daicel's priorities across SDGs.](#)

# Cultivating a Sustainability Mindset

To accelerate sustainability in a concerted Group effort, we must nurture a mindset with which all employees develop a good understanding of the significance of sustainability, think about ways in which their work can accelerate sustainability, and take actions. To that end, the Corporate Sustainability Division is taking the lead in implementing the following activities aimed at cultivating a sustainability mindset among employees.

## ■ FY2020/3 Activities for Cultivating a Sustainability Mindset

Activity		Targets	Results*
Group-wide educational campaign on SDGs	Organized seminars to explain the SDGs and reason for corporate initiatives, held at major worksites including those of Group companies in Japan (total of 29 seminars at 15 worksites)	Total of over 600 participants including all management as well as the employees interested in the SDGs at Daicel Corporation and Group companies in Japan (reference material was made available to over 5,000 Group employees)	More than 90% of seminar participants and employees who voluntarily studied the reference material demonstrated an understanding of initiatives on SDGs (according to a survey conducted after the campaign)
Rank-based training	Conducted training on SDGs as part of a rank-based training program	Directors	Developed a deeper understanding of initiatives on SDGs and CSR required of companies, primarily through talks given by external lecturers
		Newly appointed directors of Group companies Newly appointed managers and new recruits	Corporate Sustainability Division staff led study groups to provide a basic knowledge of SDGs and the necessity for corporate initiatives and led discussions by the participants

Activity		Targets	Results*
Information sharing through corporate intranet and newsletter	Developed “Sustainable Portal” site for in-house communication of basic information about and initiatives on SDGs	All employees of Daicel Corporation and Group companies in Japan	Raised awareness of the SDGs among employees; about 70% of all employees were aware of the SDGs
	Published feature articles explaining the SDGs and commitment message from top management in the Group’s Palette newsletter	All employees at Group companies in Japan and overseas (in Japanese, English, and Chinese)	
Distribution of SDGs badges and stickers	Distributed SDGs (color wheel) badges so that employees can demonstrate Daicel’s commitment to the SDGs to outside stakeholders.	Available upon request from directors and employees at Daicel Corporation and Group companies in Japan (mainly for employees who come into contact with people outside the company)	Many employees wear the SDGs badges on a daily basis to maintain their sense of participation in the initiatives
	Distributed SDG stickers to facilitate employees’ thinking of their own preferred goals and mutual communication through SDGs.	Distribution to all Group employees in Japan through inclusion in the Palette newsletter	Many employees have placed the stickers on card holders and company computers to express their own SDG goals
SDGs Ambassador Program	Established the SDGs Ambassador Program to register employees interested in the SDGs as community members	Application process open to employees of Daicel Corporation and Group companies in Japan (Started its activities from FY2020 with 74 members as of June 2020)	Expected to create a working environment that cultivates awareness of the SDGs and creates business activities for achieving the goals through grassroots activities

Note: The results of seminars and internal communication activities are based on a survey of Daicel Group employees in Japan conducted in January 2020 (target: 3,348 employees, response rate: 80%).

# Our SDG Focus and Initiatives

Setting safety, quality and compliance as management foundation, Daicel is implementing sustainable management by reforming itself to seek concurrent achievement of a sustainable society and the Group's business expansion. Tackling the SDGs is therefore a key medium- to long-term management task.

Here are the approaches we have been taking, led by the Corporate Sustainability department, newly established in June 2019, to weave our SDG priorities into our new long-term vision and medium-term strategy.

## SUSTAINABLE DEVELOPMENT GOALS



## Determining Daicel's priority SDGs

We use the SDG Compass and its five steps to instill the understanding of our contribution to the SDGs across the company. In FY2020/3, we determined our priority SDGs and set specific goals.



## STEP 1 Understanding the SDGs

We believe it is vitally important for every Daicel Group employee to understand the significance of the SDGs and to act voluntarily or take action accordingly. The Corporate Sustainability department has adopted the following strategies to promote a thorough understanding by every Group employees. In May 2020, a special 74-member team (as of June 2020) of so-called “SDGs Ambassadors” was set up to encourage self-motivated, grassroots SDG activities that cross the boundaries of worksites and job types or positions.

### ■ Company-wide campaign for raising knowledge and awareness of the SDGs



### ■ Dissemination via the intranet and company newsletters



### ■ Distribution of SDG badges and seals



## STEP 2 Defining priorities based on our long-term vision and medium-term strategy

We defined our priority SDGs, out of the 17 goals and 169 targets, based on alignment with our business operations and sustainability initiatives already in place with due consideration for the following aspects.



## STEP 3 Setting goals

Based on our SDG priorities, we set the following medium-term focus points, initiatives and KPIs. We pursue the KPIs through our CAPD cycle\*1.

\*1 Instead of the conventional PDCA cycle, we use a CAPD cycle for our improvement activities to prevent failing to notice an important fact in an activity starting with planning.

## Our SDG focus and initiatives for FY2021/3

	SDGs	Focus	Initiatives	KPIs
Product	      	Products that contribute to a prosperous society	<b>Shift to value-delivery business<sup>*2</sup></b> <ul style="list-style-type: none"> <li>▶ Health: healthcare and medical products</li> <li>▶ Safety/Security: pyrotechnic devices in the mobility and industry sectors</li> <li>▶ Convenience/Comfort displays, IC/semiconductor, and sensing</li> <li>▶ Environment: energy-saving raw materials, biomass products, biodegradable resins, and water treatment membranes</li> </ul>	▶ Increasing sales of value-delivery products
	  	Building a circular value chains	<b>Establishing a biomass product trees</b> <ul style="list-style-type: none"> <li>▶ Using plant-derived natural resources</li> <li>▶ Making better use of unused natural resources</li> <li>▶ Expanding the use of biotechnology</li> </ul>	<ul style="list-style-type: none"> <li>▶ Substantially enhancing target biomass products</li> <li>▶ Constantly researching key topics related to the biomass product trees</li> </ul>
	 	Significantly reduced greenhouse gas (GHG) emissions	<b>Study and implementation of measures to reduce GHG emissions across the entire value chain</b> <ul style="list-style-type: none"> <li>▶ Constructing an energy offset processes</li> <li>▶ Developing an energy-saving manufacturing processes</li> <li>▶ Switching to renewable energy sources</li> </ul>	▶ Planning a measure for a 30% reduction (FY2019/3 baseline) of GHG emissions for FY2031/3 (Scope 1, 2)
People	  	Human-centered business management	<b>Creating a working environment in which everyone can develop their skills with a sense of ownership and accomplishment</b> <ul style="list-style-type: none"> <li>▶ Diversified human resource and skill development</li> <li>▶ Creating a workplace environment to support diversified human resources</li> <li>▶ Bold empowerment and appointment</li> <li>▶ Simple and flexible personnel system to encourage taking on challenges and recognizing significant performance</li> <li>▶ Establishing regionally optimized company rules and regulations</li> </ul>	<ul style="list-style-type: none"> <li>▶ Establishing indices for measuring employee sense of ownership and accomplishment</li> <li>▶ Establishing teleworking as a standard working style</li> <li>▶ Health and Productivity Management: continue holding the White 500 certification</li> </ul>
		Co-creation of values with a wide variety of partners	<ul style="list-style-type: none"> <li>▶ Collaboration with universities or other research institutions</li> <li>▶ Vertical and horizontal collaboration with other companies</li> </ul>	—
Common		Co-creation of values with a wide variety of partners	<ul style="list-style-type: none"> <li>▶ Collaboration with universities or other research institutions</li> <li>▶ Vertical and horizontal collaboration with other companies</li> </ul>	—

\*2 The domains of health, safety/security, convenience/comfort and the environment are defined in DAICEL VISION 4.0, our long-term vision, as the four triggers for happiness and also represent our focus markets.

### STEP 4 Integrating SDGs into management,

### STEP 5 reporting and communicating

We integrate our priority SDGs into our management plans and practices so all employees can pursue them as part of their business activities. We encourage ourselves to attain all these goals by announcing progress on our website and engaging in dialogue with our stakeholders.

# Responsible Care Activities

## Basic Approach

To practice the spirit of Responsible Care (RC), the Daicel Group established the Daicel Group Basic Policies for Responsible Care and is promoting across-the-board RC activities to contribute to the sustainable development of society.

## Daicel Group's Responsible Care

RC activities are undertaken by businesses that engage in the manufacture or handling of chemicals to preserve the environment and ensure health and safety at every stage of their operations, from product development, manufacture, distribution, and use to disposal. With chemical manufacturers around the world participating in these efforts, the disclosure of results and dialogue with society are also positioned as key RC activities. Recognizing RC activities as one of the important social responsibilities of the Daicel Group, the RC Committee, operating directly under Daicel's president and CEO, is committed to promoting the activities.

In 1995, the Daicel Group established its Basic Policies for Responsible Care (RC) based on "The Guiding Principles for the Improvement of Environmental, Health and Safety Conditions" of the Japan Chemical Industry Association (JCIA) and supplemented the items on the preservation of biodiversity in 2011. In 2017, the Basic Policies for Responsible Care were updated in response to the revision of the JCIA's guiding principles.

### Daicel Group's Basic Policies for Responsible Care

1. In accordance with management policy, we will comply with laws and regulations and strive to safeguard the environment, health, and safety. For this purpose, we share specific implementation plans among all employees and put them into action.
2. We will strive to continually improve environmental, health, and safety performance and the security of facilities as well as processes and technologies throughout the entire chemical lifecycle, from development to disposal, and inform society of the results of such efforts.
3. We will further reduce our consumption of resources and energy and strive to reduce, reuse, and recycle waste.
4. We will protect the environment and people's health and safety by driving continual improvement in chemical product safety and stewardship throughout the supply chain.

5. We will practice risk-based chemical management throughout the entire chemical lifecycle, from development and production to use, consumption, and disposal and strive to strengthen our chemical management systems by continual improvement.
6. We will influence the employees and the value chain stakeholders to promote the safe management of chemicals within their own operations.
7. We will strengthen our stakeholder relationships by understanding and responding to stakeholder concerns and expectations about safer operations and products as well as openly communicating about our performance and products.
8. We will put the Daicel Group's overall efforts into continually improving initiatives for the environment, health, and safety in order to meet stakeholder expectations.
9. We will contribute to the sustainable development of society by developing and providing unique and innovative technologies and other solutions.
10. We will promote biodiversity-friendly activities in order to pass on the wealth of nature to future generations.

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## Implementation System for Responsible Care

The Daicel Group is implementing RC activities on the following fronts: occupational health and safety, process safety and disaster prevention, environmental preservation, chemical and product safety, distribution safety, and "Communication with Society." The Daicel Group promotes these RC activities under the RC Council.

The council is chaired by a director placed in charge of RC by appointment by the president and CEO, who bears ultimate responsibility for RC activities. The council comprises the president of the Daicel workers union and heads of administrative divisions appointed by the chairperson as well as the Responsible Care Division, which serves as the secretariat for the council.

The council formulates basic policies, discusses and determines targets for the next fiscal year at the Planning Meetings based on the RC activities reported by each department, and rolls out activities toward these targets. The council reports the status of the activities at the Management Meetings and also periodically conducts RC audits in accordance with the Rules on Responsible Care Audits.

## ■ Implementation System for Responsible Care

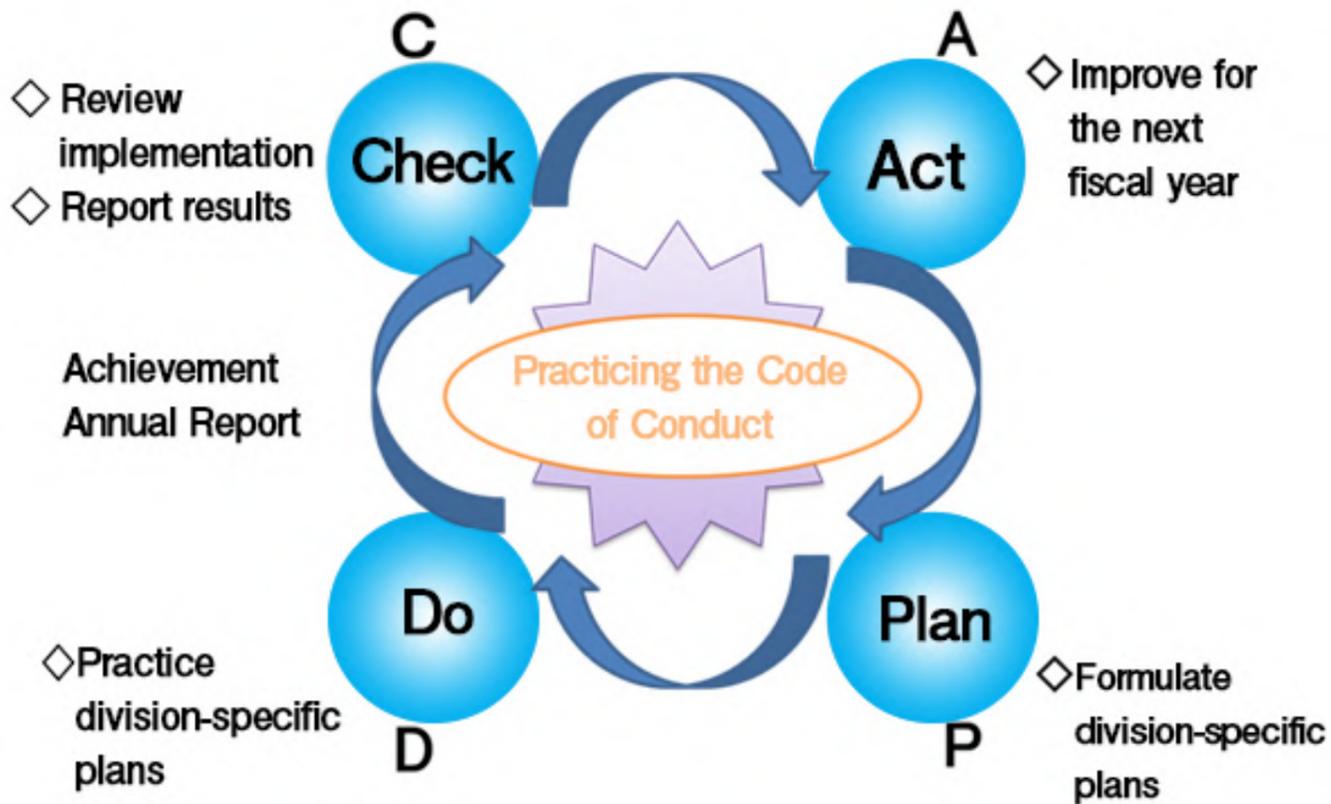


## Responsible Care Audits

The RC activities undertaken by Daicel and domestic Group companies are subjected to periodic RC audits in accordance with the Rules on Responsible Care Audits. The auditors are appointed by the director in charge of RC. In addition, secretariat members of the RC Council take part in auditing.

RC audits are thus conducted at each business site, with the aim of assessing progress on annual RC action plans and identifying issues to be addressed in the pursuit of planned targets. The audits are expected to help each business site and domestic Group companies enhance the level of their RC activities. Findings from RC audits are reflected in targets and plans for the following fiscal year, thereby supporting a CAPD cycle to achieve continuous improvement.

In FY2020/3, we conducted RC audits at our overseas Group company Lomapharm GmbH. We will strive to continue implementing effective RC audits in FY2021/3 and beyond by prioritizing based on a comprehensive assessment of the state of each Group company, with a focus, for example, on companies that have installed new equipment.



## Promotion of Responsible Care Activities

### Periodic Exchange Meetings for Supervisors of Environmental and Safety Divisions across the Group

Individuals charged with supervising the Environment and Safety divisions of each Daicel business site hold periodic meetings, while those in similar positions at other Group companies also meet regularly. With representatives from Daicel's Responsible Care Division also attending, these meetings focus on discussing the content of and progress in RC implementation plans prepared by each Group business site and based on the Group's overarching plans. Information is also exchanged on safety, environmental, and chemical regulations, and participants share their insights on other RC-related topics.

### Special Meetings to Discuss Priority RC Issues

Representatives of Daicel's Responsible Care Division periodically tour business sites of the Company and those of domestic Group companies to hold special meetings to discuss priority RC issues. To help promote RC activities across the Group, these meetings are aimed at confirming progress in RC implementation plans at each business site, assessing countermeasures in place to prevent problems in terms of occupational and facility safety and disaster prevention, and discussing the status of their initiatives to address environmental concerns.

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# Promotion of Overseas Responsible Care Activities

## Global Safety Meeting

In FY2018/3, a Global Safety Meeting was held at the innovation park with 31 individuals in attendance. This number included those charged with supervising the Environment and Safety divisions at overseas business bases (namely DSSA, SDI, DSSE, DSSC, DSSK, DSST, and DSTT\*) as well as representatives from the Harima Plant, Daicel Pyrotechnics Ltd., and Daicel's Responsible Care Division. They exchanged opinions about such matters as the Basic Policies for Responsible Care, in-house standards for preventing occupational accidents, and the Group's performance in terms of environmental preservation and safety assurance while also discussing progress in chemical management surveys requiring supplier cooperation. Moreover, they discussed the status of security measures in place at each business site. We intend to continue holding these meetings as needed in a global effort to raise awareness.

\*DSSA : Daicel Safety Systems America Holdings, Inc.;  
Daicel Safety Systems America, LLC;  
Daicel Safety Systems America Arizona, Inc., and others;

SDI : Special Devices, Inc.;

DSSE : Daicel Safety Systems Europe Sp.z.o.o.;

DSSC : Daicel Safety Systems (Jiangsu) Co., Ltd.;

DSSK : Daicel Safety Systems Korea, Inc.;

DSST : Daicel Safety Systems (Thailand) Co., Ltd.;

DSTT : Daicel Safety Technologies (Thailand) Co., Ltd.;

## TOPICS Responsible Care Promotion Conference

RC activities are undertaken by chemical companies to proactively ensure environmental, health and safety preservation and constitute a key component of CSR activities. The Daicel Group holds a Responsible Care Promotion Conference at the start of each fiscal year to ensure that employees maintain a high level of awareness as they engage in RC activities.

In FY2020/3, the 18th Daicel group RC Promotion Conference was held at Innovation Park in April with about 100 participants, including members of Daicel management, company chiefs, presidents of Group companies, Daicel trade union representatives, and representatives of each department. During the conference, the president, along with the Responsible Care chairperson and vice chairperson, delivered messages, and the RC activity policies were confirmed. RC awards were also presented to five employees who had significantly contributed to RC activities in FY2019/3. This year, Mr. Takashi Kawabata, Representative of Device Equipment Technical Information Association, conducted a lecture entitled “Learning from Mistakes and Developing a Successful Medical Device Business.”



Presentation of the RC Award (left: representative of the recipients, right: RC chairperson)

## TOPICS KAIZEN Case Study Meeting

The Daicel Group holds KAIZEN (continuous improvement) Case Study Meetings to foster a spirit of continuous improvement among all Group employees under the theme of “be aware, think and act.” While the final presentation was held at one business site every year, it was held at each business site in April 2019. We place the highest priority on ensuring safety and quality, and will continue to work on improvement activities.

# Responsible Care Global Charter

The International Council of Chemical Associations (ICCA), an international RC activity organization, put in place the Responsible Care Global Charter in 2005 with the aim of promoting sustainable development within the chemical industry while contributing to society as a whole through RC activities. In complete agreement with the goals and principles of the charter, Daicel became a signatory in 2008. In order to more specifically detail the issues requiring attention with respect to the management of chemical product safety, improvements in the quality of life through the delivery and use of chemical products, and contributions to sustainable development in an easier to understand manner, the ICCA revised the charter in 2014. That same year, Daicel again declared its support of the revised version of the Responsible Care Global Charter and confirmed its participation as an ongoing signatory.



Declaration of Support for the Responsible Care Global Charter

# Total Environmental, Health and Safety Assessment System

The Daicel Group operates a Total Environmental, Health and Safety Assessment System (“Total EHS Assessment System”) as a means for evaluating risk in its business activities. Under the system, a prior assessment of diverse risks associated with all business operations in new plans—including R&D, production, consumption, and disposal—is initiated in order to ensure thorough consideration of environmental, health, and safety issues in new plans.

The Group’s Total EHS Assessment System has the following features:

1. The system evaluates the new plan based on prescribed standards for eight items: legal compliance, chemical safety, environmental preservation, occupational health and safety, operational safety at facilities, product safety, distribution safety and safety of production outsourcing, and purchasing and sales.
2. A new plan indicates all new changes that include the establishment and modification of facilities as well as changes in matters related to manufacturing, etc.
3. The system defines two types of assessment: Corporate Total EHS Assessment, which covers new plans that may cause a significant impact on management, and Division Total EHS Assessment, undertaken by each division. After evaluating new plans based on their scale and risk with an overall assessment rank (I and II), the Group determines items subject to assessment and designates individuals to serve as assessment executors and final evaluators in accordance with the overall assessment rank.
4. With regard to the adoption of a new process and/or increased production volumes, we carry out a Technical Assessment and Equipment Design Assessment, underscoring the importance of design specifications for technologies and facilities. After discussing the results of these assessments, a Corporate Total EHS Assessment is undertaken.

In addition, the Daicel Group began undertaking the Product Crisis Assessment in FY2016/3 with the aim of reinforcing product safety assessments. This assessment specifies risks associated with current product safety measures in place while also assessing the status of such steps as monitoring and incident responses. In FY2018/3, the Group initiated Product Safety Advisory Meetings, inviting a team of third-party specialists to conduct risk assessment.

In FY2020/3 we assessed the risks of abnormal reactions and runaway reactions at plants handling chemical substances with polymerizing or self-reactive properties and systematically reinforced our safety measures based on the assessment results.

The number of Corporate Total EHS Assessments that evaluate new plans deemed to have a significant impact on management, including those undertaken to assess new plans for overseas production bases, has reached approximately 950 since the system was introduced.

Risk Assessment Based on Total EHS Assessment System Criteria/Rank I Cases



**Examples of New Projects**

- New product launches
- New businesses
- Establishment, expansion, and renovation of facilities
- Changes in matters related to manufacturing (raw materials, processes, etc.)
- New contracts, changes at distributors, customers, and sales applications
- Acquisition and transfer of properties and equipment
- New contracts and changes in manufacturing outsourcing, purchasing, and sales
- New or changes in waste management

## ■ Breakdown of Total EHS Assessment System

Categories of the Total EHS Assessment System	
Legal compliance	Evaluate compliance with laws and regulations and with individual agreements between business sites and relevant government organs
Chemical Safety	Evaluate hazards posed by all chemical substances handled
Environmental Preservation	Evaluate environmental preservation activities
Occupational Health and Safety	Evaluate compliance in the context of preventing labor accidents
Operational Safety at Facilities	<ul style="list-style-type: none"><li>● Evaluate the risk of explosion and fire from the facility standpoint</li><li>● Assess the results of other evaluations and fitness of relevant facilities</li></ul>
Product Safety	Evaluate products for risk of causing bodily injury
Distribution Safety	Evaluate distribution safety
Safety of Production Outsourcing, Purchasing, and Sales	Evaluate from the perspectives of the environment, safety, and prevention of health problems

# Targets, Results, and Assessments of RC Activities

## ■ FY2020/3 Targets, Results, and Assessments

		Boundary* <sup>1</sup>	FY2020/3 Targets	FY2020/3 Results	Assessment
Environmental Preservation	Global warming countermeasures	Business sites of Daicel	<ul style="list-style-type: none"> <li>Promote energy conservation to achieve the FY2021/3 targets set forth in the KEIDANREN's (Japan Business Federation) Commitment to a Low Carbon Society.</li> <li>Reduce energy intensity by 1% or more from the previous fiscal year (based on calculation methods stipulated by the Energy Saving Act).</li> </ul>	<ul style="list-style-type: none"> <li>Emissions totaled 1.08 million tonnes against the GHG emission target of 1.58 million tonnes for 2020 (Business as Usual basis).</li> <li>Energy intensity improved by 1.1%</li> </ul>	◎
		Domestic Group companies	<ul style="list-style-type: none"> <li>Reduce energy intensity by 1% or more from the previous fiscal year (based on calculation methods stipulated by the Energy Saving Act).</li> </ul>	<ul style="list-style-type: none"> <li>Failed to meet the target of reducing energy intensity by 1% or more.</li> </ul>	△
	Waste reduction and recycling	Business sites of Daicel	<ul style="list-style-type: none"> <li>Reduce final landfill indices to not more than 16% of levels recorded in FY2001/3 to achieve our FY2021/3 target ahead of schedule.</li> </ul>	<ul style="list-style-type: none"> <li>Reduced final landfill indices to 20%.</li> </ul>	△
		Domestic Group companies	<ul style="list-style-type: none"> <li>Maintain zero emission status at all Domestic Group companies.</li> </ul>	<ul style="list-style-type: none"> <li>Accomplished zero emission status at all Group companies.</li> </ul>	◎

	Boundary* <sup>1</sup>	FY2020/3 Targets	FY2020/3 Results	Assessment
Occupational Health and Safety	Business sites of Daicel (including partner companies)	<ul style="list-style-type: none"> <li>• Aim for zero occupational accident (placing particular focus on preventing serious incidents, such as encounters with hazardous substances, heat stress and falling accidents).</li> <li>• Utilize TRC branch offices at each plant to enhance the content of hazard simulation training.</li> </ul>	<ul style="list-style-type: none"> <li>• 23 occupational accidents (17 in the previous year) Compared to the previous year, heatstroke incidents decreased, but each of injuries from hazardous substances and falling increased slightly.</li> <li>• Enhanced and strengthened training related to unique technologies and basic operations and hazard simulation training at TRC branch offices at each plant.</li> </ul>	△
	Domestic Group companies	<ul style="list-style-type: none"> <li>• Aim for zero occupational accidents (placing particular focus on preventing injuries due to encounters with hazardous substances and falls).</li> <li>• Continue holding workplace safety meetings by, for example, grouping attendees by type of manufacturing operations.</li> <li>• Continue to roll out activities aimed at learning from the lessons of the past.</li> </ul>	<ul style="list-style-type: none"> <li>• 13 occupational accidents (9 in the previous year) Compared to the previous year, injuries from falling decreased.</li> <li>• Held safety meetings focused on the processing and assembly-style manufacturing.</li> <li>• Confirmed lessons of the past and effectiveness of countermeasures.</li> </ul>	△

	Boundary* <sup>1</sup>	FY2020/3 Targets	FY2020/3 Results	Assessment
Process Safety and Disaster Prevention	Business sites of Daicel (including partner companies)	<ul style="list-style-type: none"> <li>• Aim for zero accidents involving fires, explosions, and leaks.</li> <li>• Systematically promote preventive measures against risks that may lead to accidents, the ability to deal with accidents, and measures to ensure the early resumption of product supply.</li> <li>• Enhance BCPs*<sup>2</sup>for key products.</li> <li>• Strengthen security measures in accordance with security guidelines.</li> </ul>	<ul style="list-style-type: none"> <li>• 2 small fires and 8 leaks occurred.</li> <li>• Reviewed risks that may lead to accidents, strengthened the system for responding to accidents, and prepared for the early resumption of product supply.</li> <li>• Strengthened the BCPs in accordance with BCP guidelines.</li> <li>• Systematically strengthened access control at the gates of each business site in accordance with security guidelines.</li> </ul>	△
	Domestic Group companies	<ul style="list-style-type: none"> <li>• Aim for zero accidents involving fire, explosions, and leaks.</li> <li>• Systematically address priority issues for each Group company.</li> <li>• Step up security measures at each Group company in accordance with security guidelines.</li> </ul>	<ul style="list-style-type: none"> <li>• There were 4 small fires.</li> <li>• Systematically addressed priority issues for each Group company.</li> <li>• Stepped up consideration of security measures in accordance with security guidelines.</li> </ul>	△

	Boundary* <sup>1</sup>	FY2020/3 Targets	FY2020/3 Results	Assessment
	Distribution Safety	<ul style="list-style-type: none"> <li>Prevent recurrence of logistics issues such as contact accidents at customer sites as well as shipping and delivery errors.</li> <li>Eliminate leaks of hazardous substances as well as shipping and delivery errors.</li> <li>Improve 5-year average energy intensity by at least 1% (based on the calculation method in the Energy Conservation Act).</li> </ul>	<ul style="list-style-type: none"> <li>Strove to prevent recurrence of logistics issues such as contact accidents at customer sites as well as shipping and delivery errors.</li> <li>Decreased from the previous fiscal year.</li> <li>Energy intensity did not improve by 1% or more.</li> </ul>	○
Chemical Safety Initiative	Response to REACH* <sup>3</sup>	<ul style="list-style-type: none"> <li>Ensure a consistent response to REACH.</li> </ul>	<ul style="list-style-type: none"> <li>Responded steadily to REACH.</li> </ul>	○
	Initiatives to secure compliance with other chemical regulations	<ul style="list-style-type: none"> <li>Remain apprised of the latest developments and trends in chemical regulations and act appropriately to secure responsiveness to such regulations.</li> </ul>	<ul style="list-style-type: none"> <li>Regularly researched information on the revision of chemical regulations in Japan and overseas while holding in-house meetings to share such information.</li> </ul>	○
	Management of chemical substance information	<ul style="list-style-type: none"> <li>Register new chemical products with the D-CLik*<sup>4</sup> database and update product information based on additional testing results.</li> </ul>	<ul style="list-style-type: none"> <li>Registered new chemical products with the D-CLik database and updated this information based on additional testing results.</li> </ul>	○
	VOC* <sup>5</sup>	<ul style="list-style-type: none"> <li>Maintain a reduction of VOC emissions by 40% or more from levels recorded in FY2001/3.</li> </ul>	<ul style="list-style-type: none"> <li>Reduced VOC emissions by 58% from levels recorded in FY2001/3</li> </ul>	◎
	PRTR* <sup>6</sup>	<ul style="list-style-type: none"> <li>Maintain a reduction of PRTR substance emissions by 40% or more from levels recorded in FY2002/3.</li> </ul>	<ul style="list-style-type: none"> <li>Reduced PRTR substance emissions by 81% from levels recorded in FY2002/3.</li> </ul>	◎

**Assessment criteria:**

◎→Succeeded by meeting or exceeding targets (100% or more)

○→Nearly achieved targets (80% or more)

△→Failed to meet targets (40% or more)

X →Results fell far short of targets (less than 40%)

\*1 Please click [here](#) for more information on the boundary of collected data.

\*2 BCPs (Business Continuity Plans) aim to minimize damage and ensure a swift restoration of operations should a business site be hit by an earthquake or other major disaster.

\*3 EACH (Registration, Evaluation, Authorization and Restriction of Chemicals) mandate that producers must register their chemical products with the European Union and conduct safety assessments, restrict their use, and control permits for their use.

\*4 D-CLik is a unique database developed by Daicel to manage chemical substance information.

\*5 VOCs (Volatile Organic Compounds) include such well-known examples as toluene, xylene, and ethyl acetate.

\*6 PRTR (Pollutant Release and Transfer Register) is a system with which business operators calculate the amount of chemical compounds emitted into the environment or transferred off-site for treatment or disposal during production, usage, or storage in Japan and also notify the government of these figures.

# Environmental Management

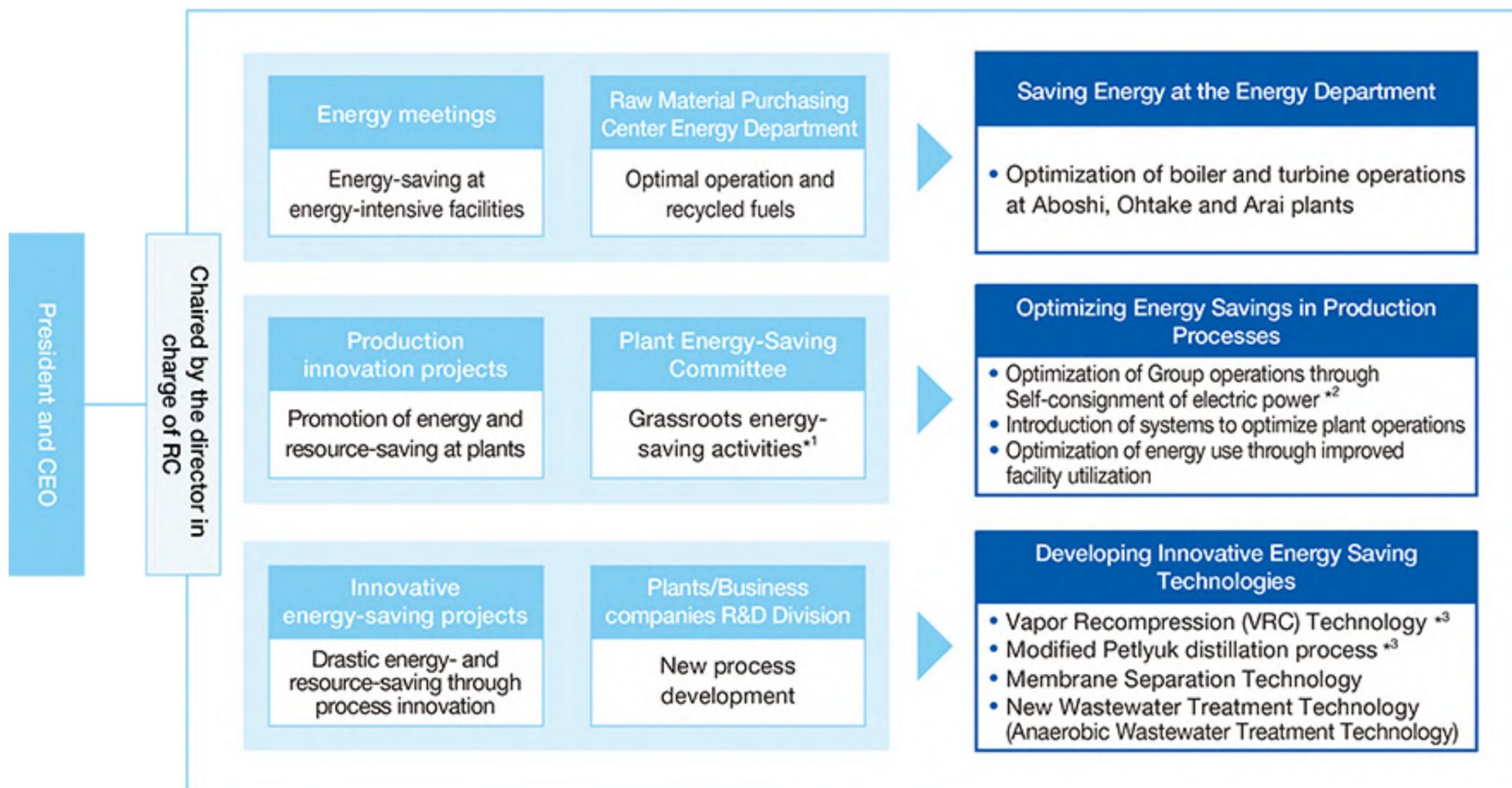
## Basic Approach

In accordance with the Daicel Group’s environmental management policy, each of Daicel’s business sites and Group companies execute their own Environmental Management System, including setting targets and monitoring progress. The entire Group will work together to utilize and innovate clean energy solutions effectively in order to reduce greenhouse gases and establish a recycling-based society by practicing the 3Rs and reducing environmental load. Through these efforts, the Daicel Group will contribute to building a sustainable society.

## Our Structure for Promoting Energy-Saving Initiatives

The Group’s Energy Conservation Committee is chaired by the director of Responsible Care and operated directly under the president and CEO. With representatives from all relevant divisions, the committee is spearheading across-the-board environmental management efforts such as reducing energy consumption, CO<sub>2</sub> emissions, and industrial wastes while also managing atmospheric and water pollution. The committee applies a three-dimensional strategy to manage such efforts.

### ■ Diagram of Energy-Saving Promotion System

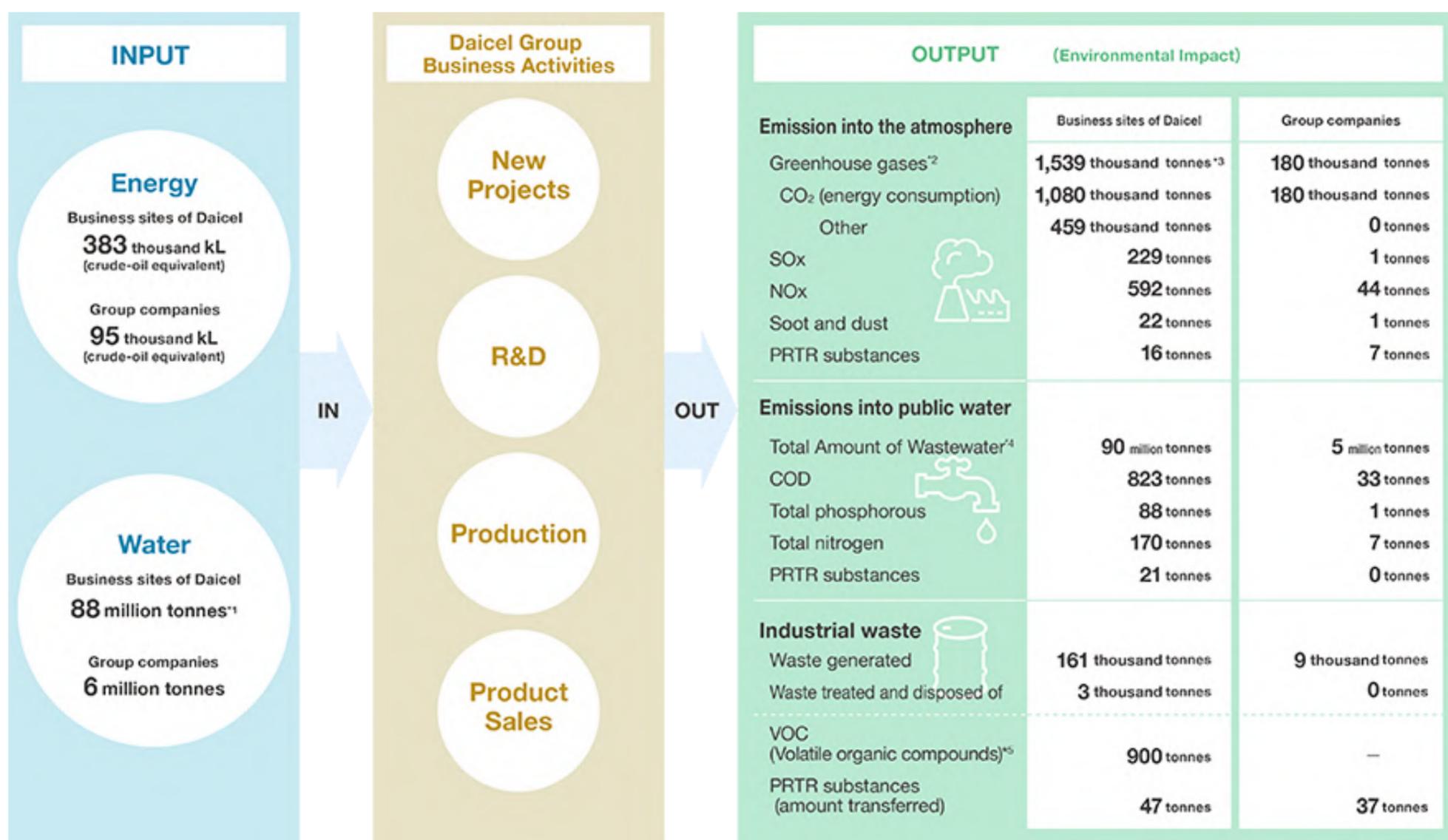


- \*1 Grassroots energy-saving activities: Activities aimed at saving energy by, for example, stepping up steam trap management, optimizing facility operations, and adjusting the temperature settings of air conditioners, with the aim of making a significant difference through the accumulation of small actions.
- \*2 Self-consignment of electric power: The supply of electricity to our facilities in other locations with energy generated by our own facilities using the electric company's distribution network.
- \*3 Modified Petlyuk distillation process and Vapor Recompression (VRC) Technology: For more information, [click here](#).

## Environmental Impact of Business Activities

The environmental impact of Daicel Group business activities in FY2020/3 (Domestic) is shown in the chart below.

### Environmental Impact in FY2020/3 (Domestic)



- \*1 Includes 34 million tonnes of seawater for cooling.
- \*2 Includes CH<sub>4</sub>, N<sub>2</sub>O, HFC, PFC, SF<sub>6</sub>, and NF<sub>3</sub> aside from CO<sub>2</sub>.
- \*3 Includes HQ, etc.
- \*4 Includes byproduct water from manufacturing.
- \*5 Scope: Business sites of Daicel Corporation

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# Status of Environmental Management System Certification

Environmental management system certification has been obtained by 85% of our production sites in Japan and 65% overseas.

Click here for a [list of certified facilities](#).

# Global Warming Prevention

## Basic Approach

The Daicel Group is striving to realize a sustainable low carbon society and is therefore participating in Keidanren's (Japan Business Federation) Commitment to a Low Carbon Society, which sets specific targets to be met by FY2021/3. The Group will continually work together to reduce energy use and CO<sub>2</sub> emissions by conducting fundamental reviews of business processes, introducing new technologies, and optimizing energy consumption across its operations.

## Initiatives to Reduce CO<sub>2</sub> Emissions

We set our target for the average annual energy intensity improvements, defined by Japan's Act on the Rational Use of Energy (Energy Saving Act) and for Daicel's business sites in Japan, to be at least 1%. In addition, they are working to reduce CO<sub>2</sub> emissions to less than 1.580 million t-CO<sub>2</sub> by FY2021/3 in accordance with the target set by Keidanren's Commitment to a Low Carbon Society.

In FY2020/3, as a result of leveraging a self-consignment system of electric power\*<sup>1</sup> by the Ohtake Plant for the Harima and Kanzaki plants and the Innovation Park as well as other efforts, energy consumption by Daicel's business sites in Japan decreased to 478 thousand kL, a reduction of 44 thousand kL year on year (an 8% reduction in crude-oil equivalent), while we also achieved an average annual energy intensity improvement rate of 1.1%.

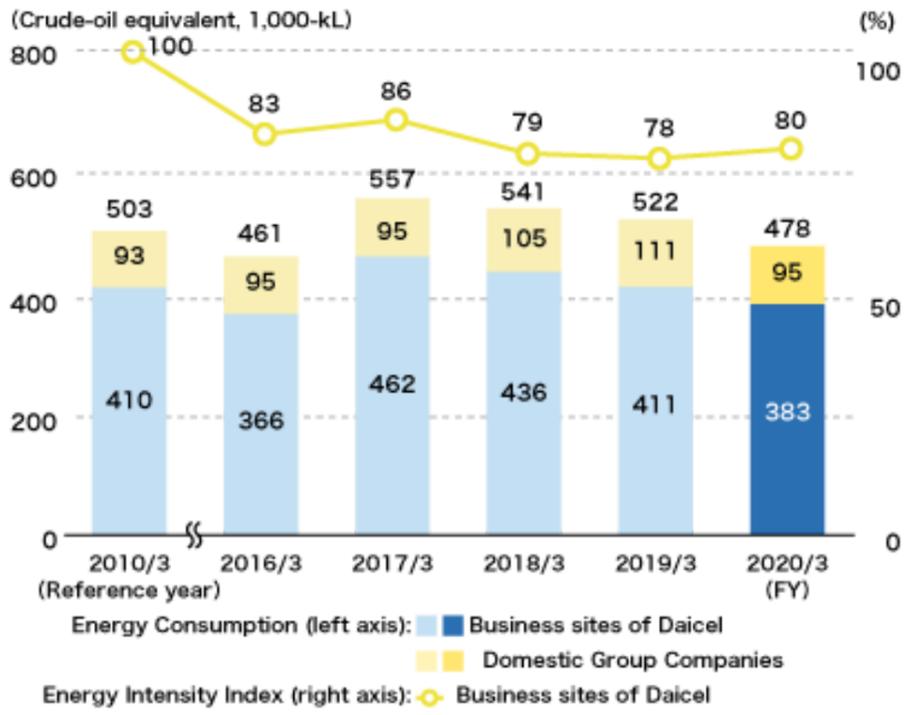
The energy intensity index\*<sup>2</sup> with a base year of FY2010/3 was down by 2 percentage points year on year. The power sold externally has been included in this calculation from FY2017/3 in accordance with the revised Electricity Business Act.

The CO<sub>2</sub> emissions by Daicel's business sites were 1.261 million t-CO<sub>2</sub>, a reduction of 147 thousand t-CO<sub>2</sub> (a 10% reduction) year on year. The CO<sub>2</sub> emissions by Daicel's business sites were 1.081 million t-CO<sub>2</sub> (a 10% reduction from the previous fiscal year), meeting the target set by Keidanren's Commitment to a Low Carbon Society (a reduction of BAU CO<sub>2</sub> emissions to less than 1.580 million t-CO<sub>2</sub> by FY2021/3).

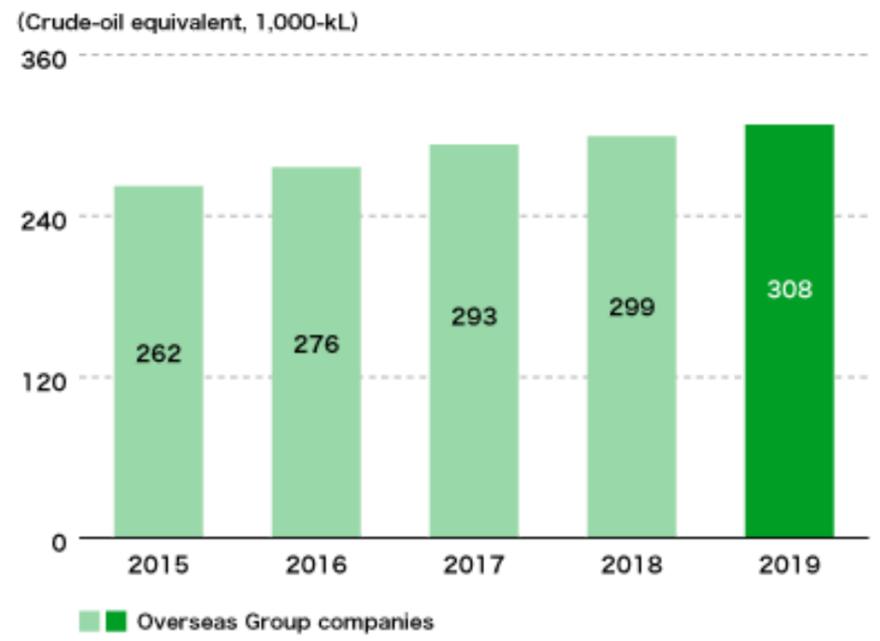
\*1 The system to supply of electricity to our facilities in other locations with energy generated by our own facilities using the electric company's distribution network.

\*2 Energy intensity is measured by the quantity of energy required per unit output or activity. In an index of energy intensity, the energy intensity is the quantity of energy required per unit output and the energy intensity of a reference year is treated as 100.

## Energy Consumption and Intensity Index (Domestic)

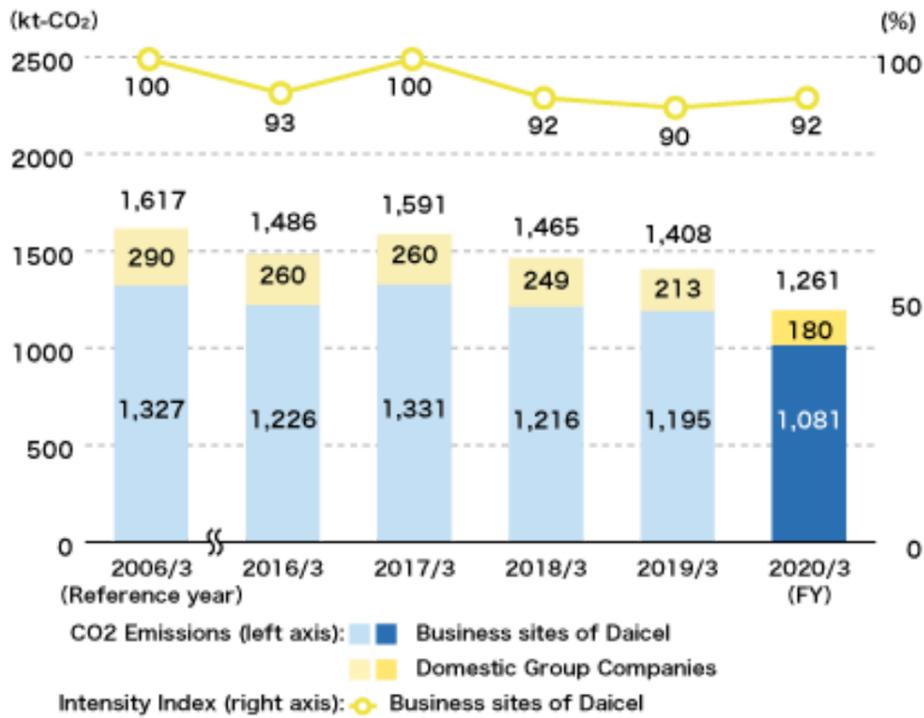


## Energy Consumption (Overseas)



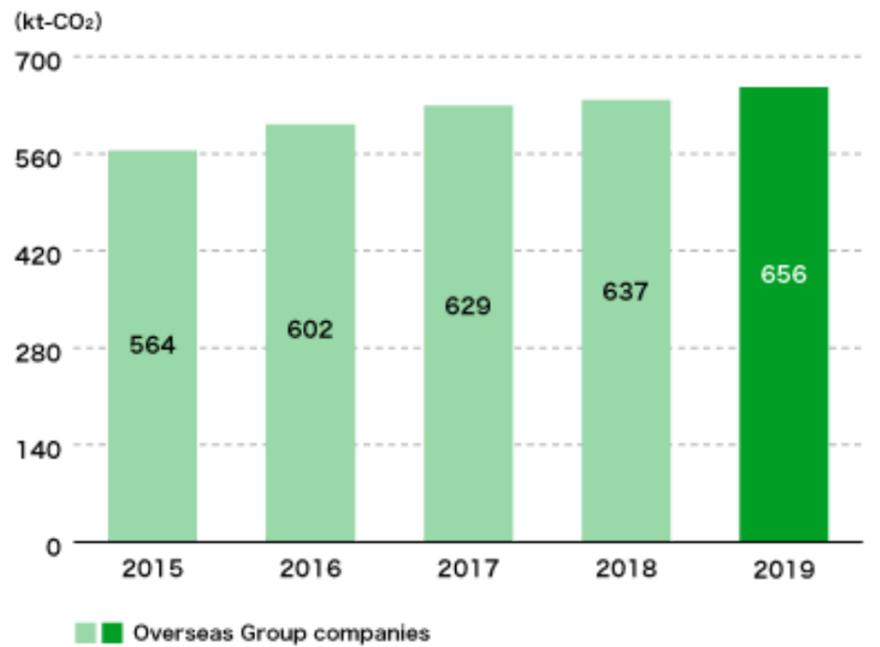
\* Due to the change of the boundaries, the data for previous years was revised

## CO<sub>2</sub> Emissions and the Intensity Index (Domestic)



\* Energy-related CO<sub>2</sub> emission data is collected.

## CO<sub>2</sub> Emissions (Overseas)



\*The data collection period is January to December each year.

\* Due to the change of the boundaries, the data for previous years was revised

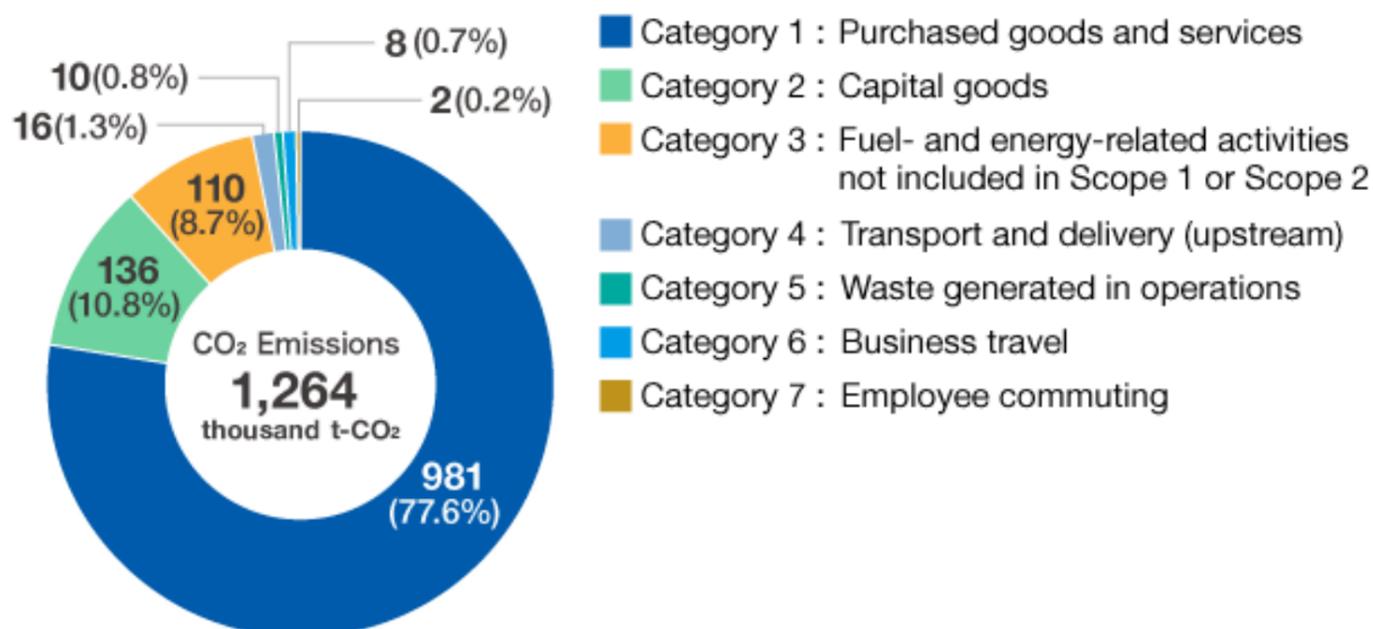
\* Energy-related CO<sub>2</sub> emission data is collected.

# Reducing CO<sub>2</sub> Emissions across Daicel's Supply Chain

We believe that we must reduce CO<sub>2</sub> emissions not only by the Daicel Group but also by its suppliers, and we have been working to identify and reduce the volume of CO<sub>2</sub> emissions across the entire value chain in accordance with the GHG Protocol, the world's most widely used standards, since FY2020/3.

## CO<sub>2</sub> emissions by Scope (Daicel's Business Sites)

Categories		Emissions (thousand t-CO <sub>2</sub> )	
Scope 1	Direct GHG emissions	1,498	
Scope 2	Electricity indirect GHG emissions	41	
Scope 3	Other indirect GHG emissions	1,264	
	Category 1	Purchased goods and services	981
	Category 2	Capital goods	136
	Category 3	Energy-related activities outside Scope 1 and 2	110
	Category 4	Transportation and distribution (upstream)	16
	Category 5	Waste generated in operations	10
	Category 6	Employee business travel	8
	Category 7	Employee commuting	2



\* Emissions of scope 1, 2 and 3 at our business site are calculated and verified by a third party.

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# Innovative Energy-Saving Technologies Aimed at Reducing Energy Consumption

The Daicel Group looks well beyond efforts to improve and refine its technologies when putting in place energy-saving measures. For example, it works to comprehensively review its production processes and develop new technologies.

Distillation processes tend to account for around 40% of general energy consumption in the chemicals industry. This is also true for Daicel's operations. As a result, uncovering new distillation process energy-saving technologies will go a long way toward reducing energy consumption. The distillation process utilizes high-temperature thermal energy while, on the other hand, generating large volumes of low-temperature exhaust heat energy, which is released unused. With this in mind, a truly beneficial energy-saving technology for the distillation process must focus not only on reducing high-temperature thermal energy use but also on the effective recovery and reuse of low-temperature exhaust heat energy.

The Daicel Group has launched an innovative energy-saving technology project and has been promoting cross-sectional activities throughout every level of the Company. These efforts have led to the creation of a modified Petlyuk process and vapor recompression (VRC) technology to reduce the energy consumption of distillation towers. Although Petlyuk and VRC technologies have been used for other applications, Daicel is the first in the world to verify their use in chemical plants.

Going forward, we will push ahead with energy-saving efforts. To this end, we will leverage membrane separation technologies and novel reaction technologies to realize process innovation aimed at reducing the thermal load of distillation. Here we introduce some technological breakthroughs we have already achieved to reduce the energy consumption of distillation towers.

## Enhancing Our Current Technologies

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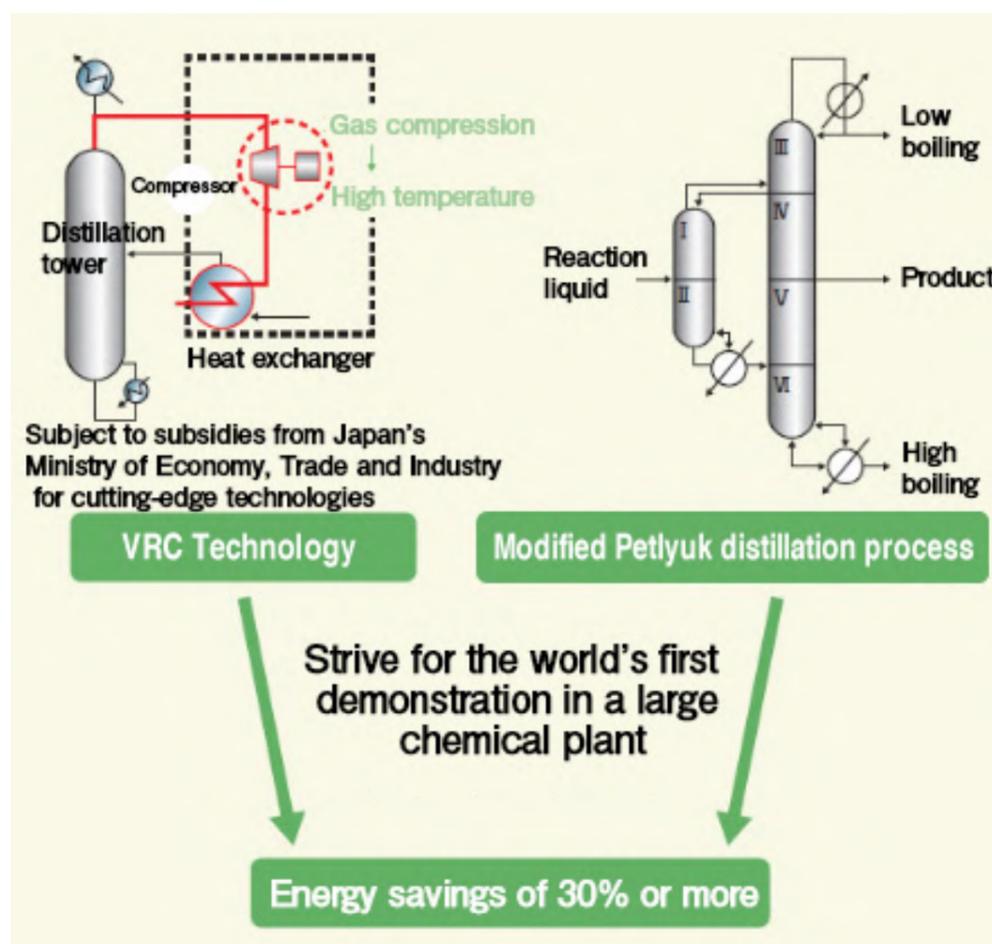
### Modified Petlyuk distillation process

Petlyuk distillation, and its practical application as a dividing-wall column (DWC), is widely recognized as an energy-saving technology. However, the introduction of a DWC has been limited to the complete replacement of distillation towers. Unable to use existing facilities, a DWC initiative entails massive amounts of capital expenditure. By refining Petlyuk technology, Daicel developed a new process technology that allows for application through improvements to distillation towers. Since 2014, the technology has been applied at the Arai Plant and the Company's acetic anhydride manufacturing facilities.

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### Vapor Recompression (VRC) Technology

Expectations are mounting that VRC technology will become ubiquitous to recover heat as high-temperature steam by compressing the exhaust heat inherent in low-temperature steam. While this technology has been widely used in aqueous-system simple distillation processes, there have been no examples of its application in organic solvent distillation processes. Aiming to do just this, Daicel has been working with a compressor manufacturer to develop a compressor that would enable the use of the VRC technology in organic solvent distillation processes. Verification is now underway using a prototype distillation process.



## New Technologies that Adapt to Environmental Change

### Membrane Separation Technology

The evaporation process in distillation consumes massive amounts of energy. Dramatic energy savings, however, are possible if a membrane separation technology is used instead. And we have been evaluating the operating life of various candidate membranes since April 2016.

### New Reaction Technology

We developed an innovative process, which leverages a proprietary reaction technology with a new catalyst. This is installed at the Aboshi Plant's 1,3-BG facility, which will be completed in September 2020. We expect that energy consumption will be reduced by approximately 20% compared to that of conventional technologies.

### New Wastewater Treatment Technology (Anaerobic Wastewater Treatment Technology)

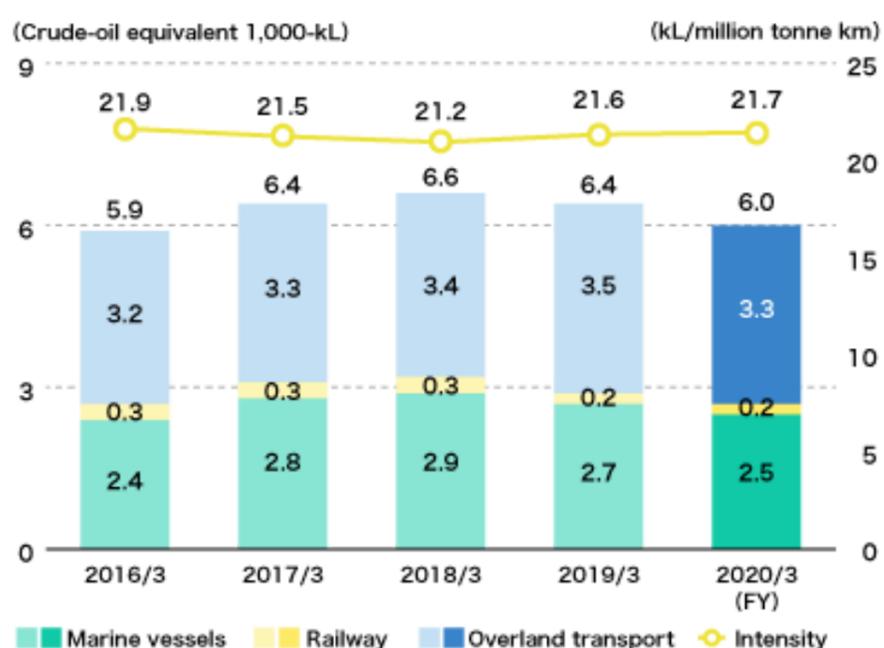
Anaerobic wastewater treatment does not require oxygen and therefore requires less energy. In addition, the methane gas generated can be used for heating. Since April 2016, we have been experimenting and validating this new technology for use in production.

# Initiatives to Reduce the Environmental Impact of Logistics Operations

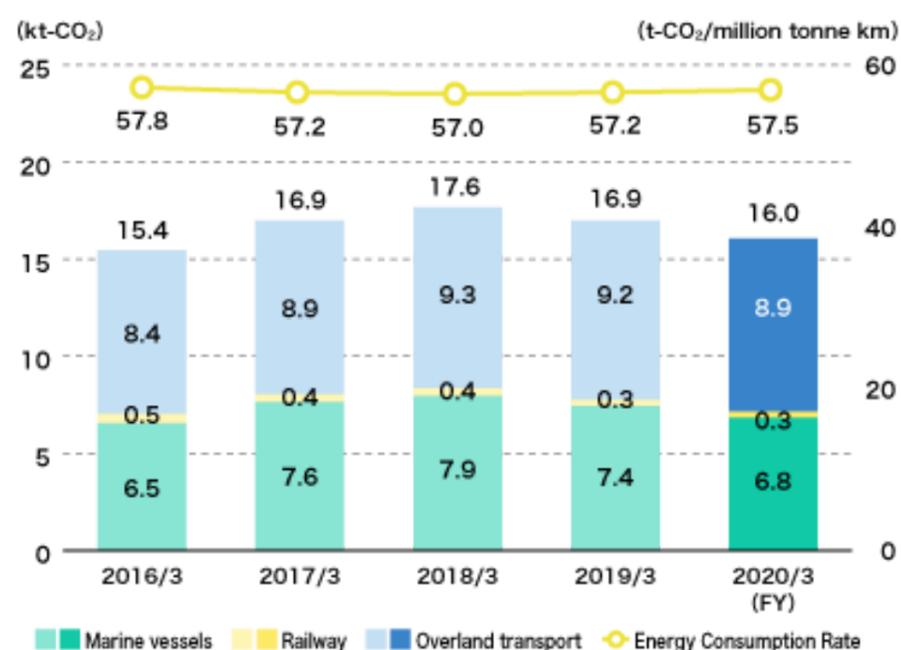
The Daicel Group is striving to step up its measures to secure distribution safety and enhance the quality of its logistics operations. Simultaneously, it is engaged in efforts to curb energy consumption associated with product transportation by, for example, promoting a modal shift\*<sup>3</sup> and container round use\*<sup>4</sup>.

As for conserving energy in logistics in FY2020/3, the Company has improved its energy consumption associated with marine vessels and land transportation, and CO<sub>2</sub> emissions intensity decreased by 0.3%.

## Energy Consumption and Energy Consumption Rates in Logistics Operations (The Daicel's business sites and Domestic Group companies)



## CO<sub>2</sub> Emissions/Intensity (The Daicel's business sites and Domestic Group companies)



\*3 The shift from truck-based goods transportation to more environmentally friendly marine and railway transportation.

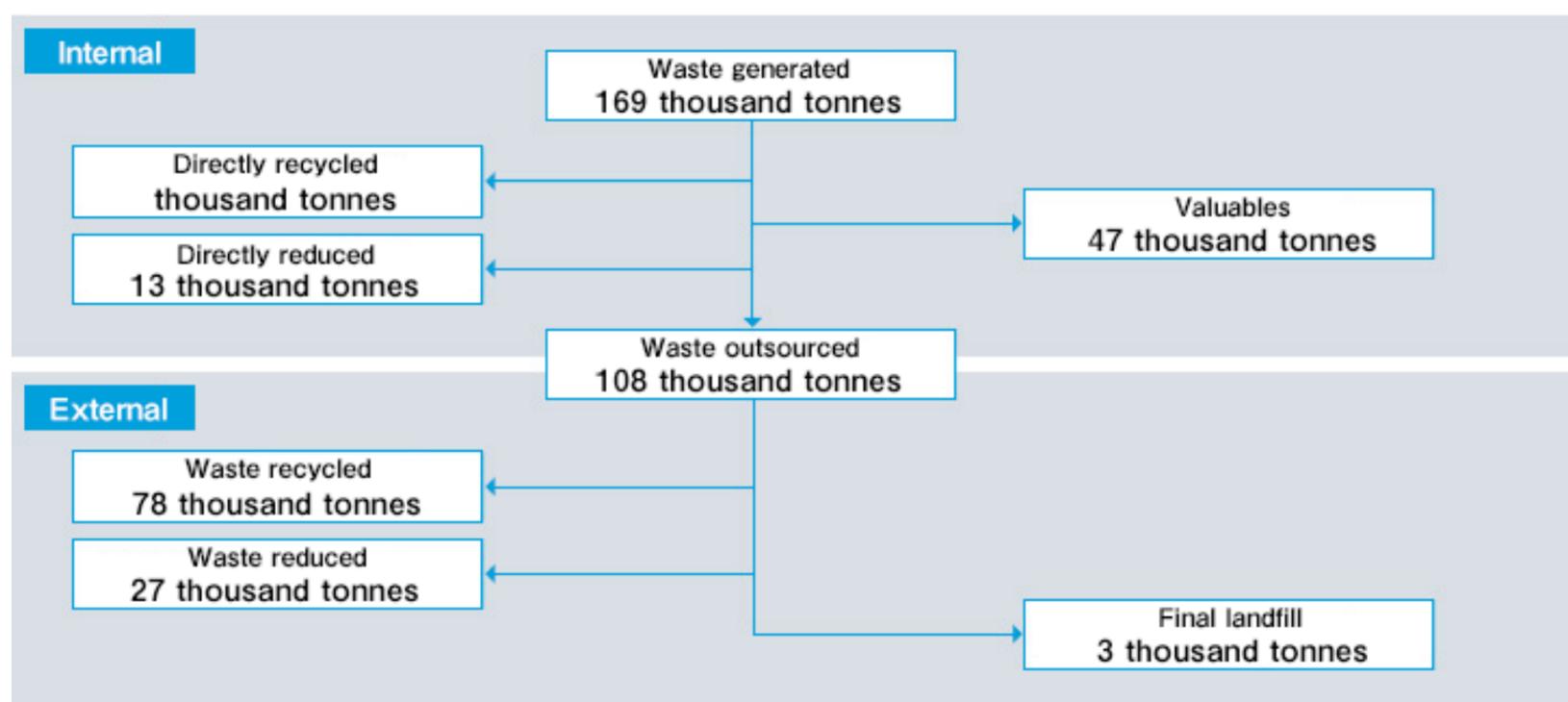
\*4 The practice of using devanned import containers for exports without returning them to the shipping companies.

# Reduction and Recycling of Industrial Waste

## Basic Approach

Daicel participates in the KEIDANREN Voluntary Action Plan for Establishing a Sound Material-Cycle Society. The Group is working on initiatives in line with this plan to reduce consumption of energy and resources and also to promote the reduction and recycling of industrial waste.

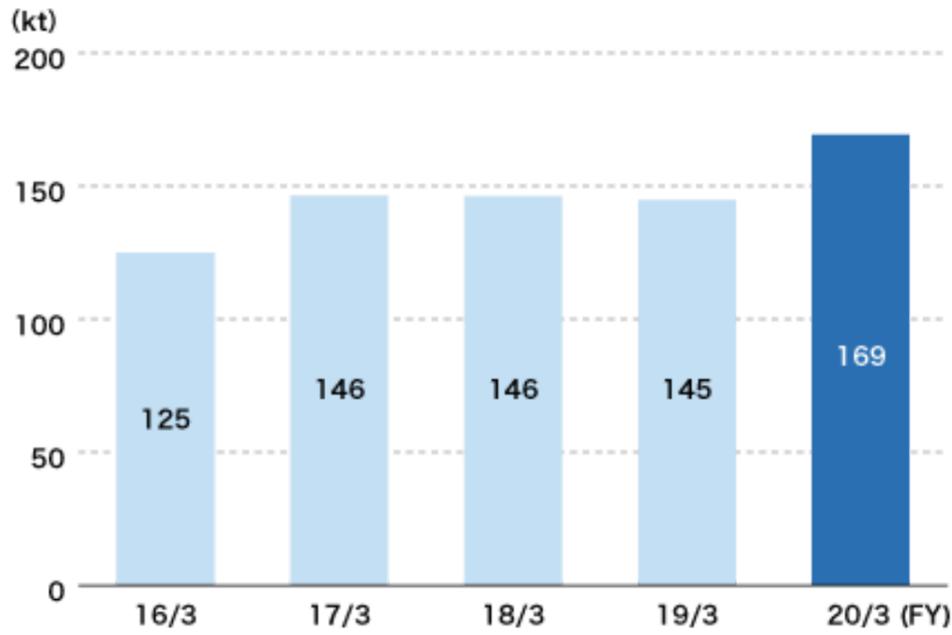
### Industrial Waste Reduction and Recycling Flow in Japan (FY2020/3)



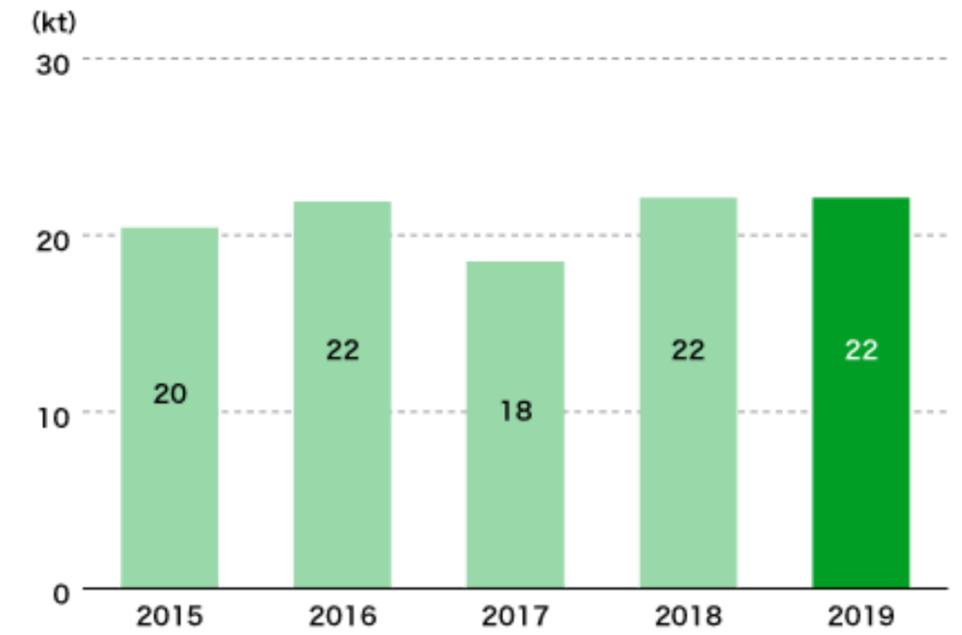
## Initiatives to Reduce Industrial Waste

In FY2020/3, the amount of industrial waste generated by domestic Group companies increased by approximately 24.6 thousand tonnes compared to the previous year due to factors such as an increase in metal waste from the removal of the Arai Plant. The final disposal amount for landfill increased by 1.6 thousand tonnes, and the final landfill rate was 19%. This was due to an increase in the disposal volume of products damaged by Typhoon No. 19, despite the efforts to reduce incineration residues at the Arai Plant and recycling scrap film at the Kanzaki Plant. On the other hand, the goal of zero emissions was achieved by our all six Group companies. As a company involved in businesses that create industrial waste, we ensure that all our waste is properly disposed of by checking the permit, disposal method, and other details of the contracted industrial disposal companies at their sites. In the coming year, we will continue to work on reducing and recycling industrial waste.

### Amount of Industrial Waste Generated (Domestic)

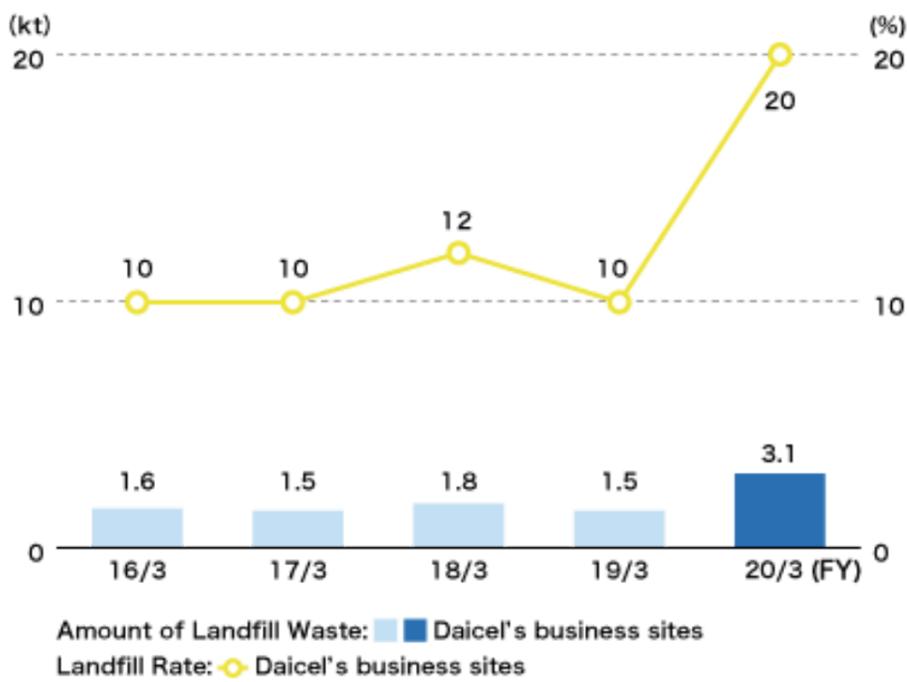


### Amount of Industrial Waste Generated (Overseas)

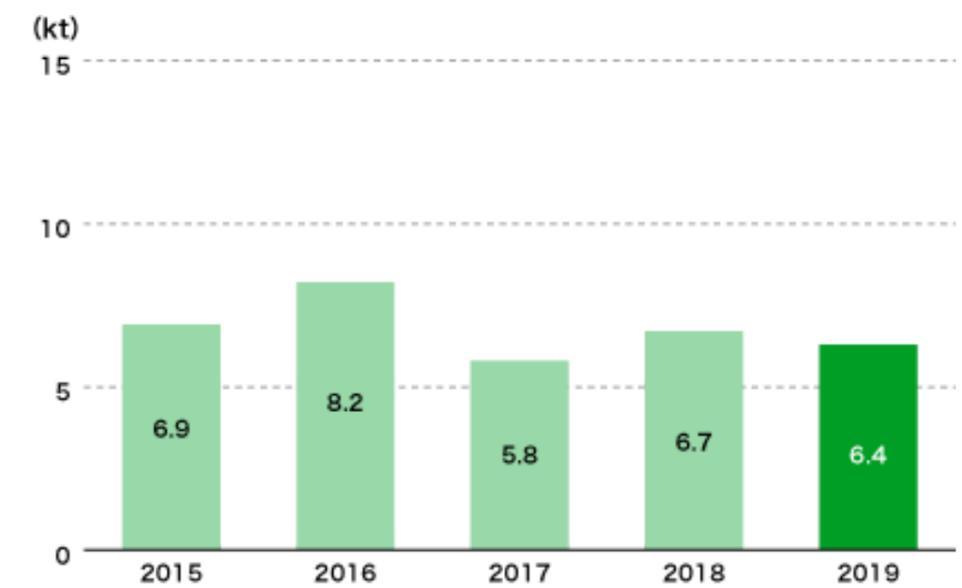


The figures have been revised in accordance with the change in the scope of aggregation.

### Amount of Landfill Waste and Landfill Rate (Domestic)



### Amount of Landfill Waste (Overseas)



The figures have been revised in accordance with the change in the scope of aggregation.

## Promoting Recycling

The Daicel Group is working to promote recycling in accordance with our targets of Responsive Care activities. In Japan, approximately 100 million scrap tires, or about 1 million tonnes, is generated every year. To reduce our impact on the environment, we carry out thermal recycling at the Ohtake Plant to effectively use scrap tires as energy fuel.

Because co-firing of coal and tire chips can reduce the use of fossil fuels, we have been partnering with a manufacturer of power generation equipment and making progress in the improvement of the co-firing rate and development of technologies that allow us to safely and adequately generate power. Moreover, we are engaged in recycling efforts such as the use of cement dust and cinder as well as roadbed improvement agents, which account for about 70% of the total industrial waste generated and the sorting and collection of plastic waste. Going forward, we will continue to expand our recycling efforts to realize a sustainable society.

# Chemicals Management

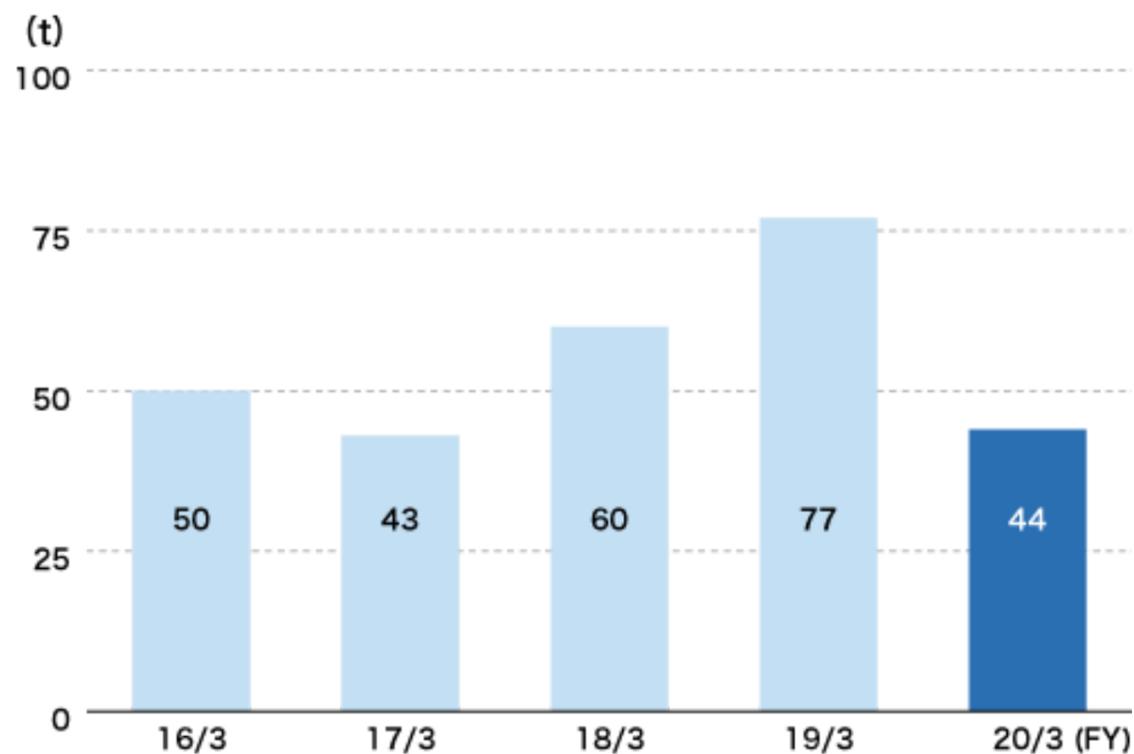
## Basic Approach

The Daicel Group is striving to reduce the release and transfer of chemical substances by monitoring them and to ensure the appropriate chemicals management.

## Reducing PRTR Substance Emissions

In FY2020/3 the total domestic emissions of chemical substances, specified by Japan’s Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management (PRTR Act) was 44 tonnes, down 33 tonnes from the previous fiscal year. We also continued to achieve our medium-term target of reducing total emissions by 40% or more (113 tonnes or less) from the FY2002/3 result (189 tonnes). Daicel handled 51 of 462 substances requiring mandatory registration.

### ■ Emission of PRTR Substances (Domestic)



\* Data of the previous year has been revised due to a change in the scope of aggregation.

■ Emission and Transfer of PRTR Substances(Domestic)\*<sup>1</sup>

Ordinance-designated number	Substance	Total emissions	Emissions				Transferred	
			Emissions into atmosphere	Emissions into water	Emissions into land	Business site landfill disposal	Sewage	Off-side
1	Zinc compounds(water-soluble)	1.8	0.0	1.8	0.0	0.0	0.0	0.0
9	Acrylonitrile	0.7	0.2	0.5	0.0	0.0	0.0	0.0
10	Acrolein	1.8	0.0	1.8	0.0	0.0	0.0	0.0
12	Acetaldehyde	2.0	0.6	1.4	0.0	0.0	0.0	2.1
13	Acetonitrile	0.1	0.1	0.0	0.0	0.0	0.0	26.0
28	Allyl alcoho	1.2	0.0	1.2	0.0	0.0	0.0	0.0
31	Antimony and its compounds	0.0	0.0	0.0	0.0	0.0	0.0	1.8
56	Ethylene oxide	0.9	0.3	0.6	0.0	0.0	0.0	0.0
67	2,3-Epoxy-1-propanol	10.6	0.0	10.6	0.0	0.0	0.0	0.0
84	Glyoxal	0.0	0.0	0.0	0.0	0.0	0.0	1.0
127	Chloroform	0.0	0.0	0.0	0.0	0.0	0.0	2.0
150	1,4-Dioxane	0.0	0.0	0.0	0.0	0.0	0.0	1.2
151	1,3-Dioxolane	4.0	4.0	0.0	0.0	0.0	0.0	0.0
186	Dichloromethane	0.5	0.5	0.0	0.0	0.0	0.0	1.7
238	Hydrogenated terphenyl	0.0	0.0	0.0	0.0	0.0	0.0	0.6
240	Styrene	4.5	4.5	0.0	0.0	0.0	0.0	0.0
243	Dioxins* <sup>2</sup>	0.3	0.0	0.3	0.0	0.0	0.0	2.0
277	Triethylamine	1.6	1.2	0.4	0.0	0.0	0.0	2.2
300	Toluene	7.8	7.8	0.0	0.0	0.0	0.0	30.3
308	Nickel	0.2	0.0	0.2	0.0	0.0	0.0	2.8
342	Pyridine	0.0	0.0	0.0	0.0	0.0	0.0	5.1
351	1,3-Butadiene	0.1	0.1	0.0	0.0	0.0	0.0	0.0
375	2-Butena	0.6	0.0	0.6	0.0	0.0	0.0	0.0
392	n-Hexane	1.7	1.2	0.5	0.0	0.0	0.0	5.6

Ordinance-designated number	Substance	Total emissions	Emissions				Transferred	
			Emissions into atmosphere	Emissions into water	Emissions into land	Business site landfill disposal	Sewage	Off-side
400	Benzene	0.1	0.1	0.0	0.0	0.0	0.0	0.6
405	Boron compounds	1.0	0.0	1.0	0.0	0.0	0.0	0.0
411	Formaldehyde	2.4	2.4	0.0	0.0	0.0	0.0	0.0
423	Monomethylamine	0.4	0.0	0.4	0.0	0.0	0.0	0.0
	Others* <sup>3</sup>	0.2	0.2	0.1	0.0	0.0	0.0	0.4
	Total	44.1	23.1	21.0	0.0	0.0	0.0	83.6

\*1 The threshold for amounts handled was 1 tonne/year/workplace.

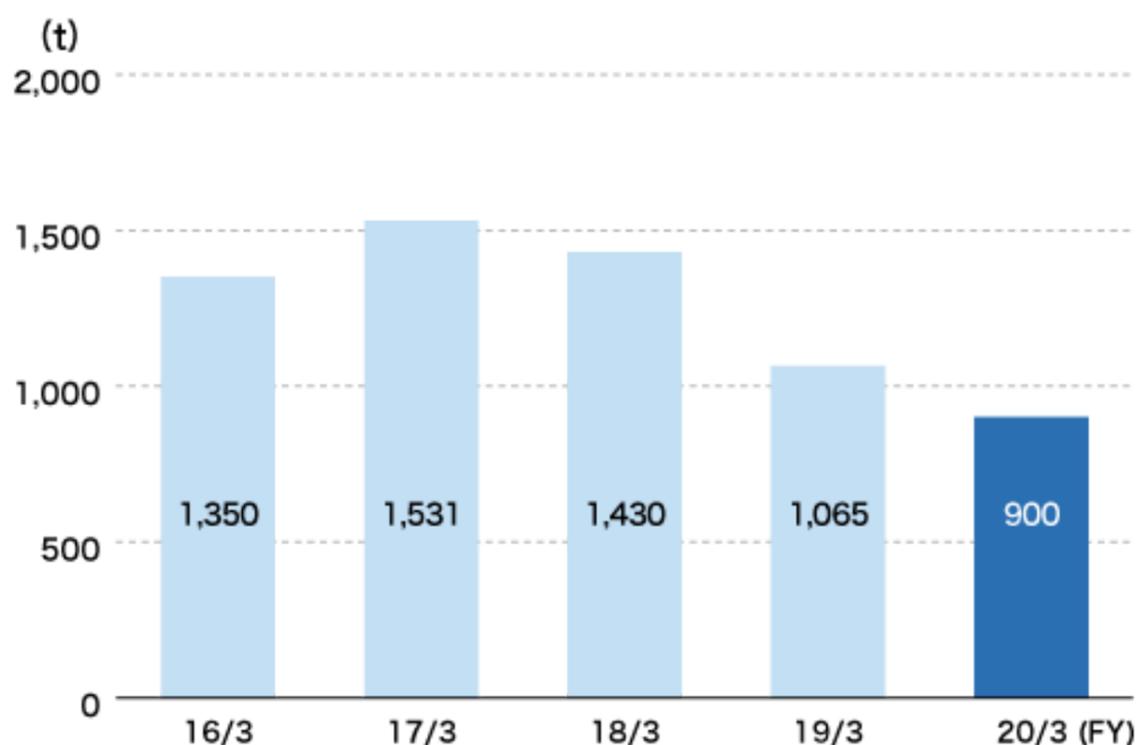
\*2 Unit for emissions and transfer of Dioxins is mg-TEQ/year.

\*3 Substances with emissions below 0.01 tonnes per year are consolidated under Others.

## Reducing of VOC Emissions

Acetone, a VOC, is used in the manufacture of acetate tow for cigarette filters at the Aboshi and Ohtake plants. The acetone emissions in FY2020/3 decreased through such measures as optimizing operating conditions and improving the accuracy of analysis. We achieved a 58% reduction, which is over our medium-term target for reducing the volume of emissions at Daicel business sites by more than 40% in FY2001/3. We will strive for further reductions in the coming years.

### Changes in VOC Emissions (Daicel Business Sites)



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# Appropriate Control of PCBs

In compliance with the Waste Management and Public Cleansing Act and the Act on Special Measures Concerning Promotion of Proper Treatment of PCB Wastes, the Daicel Group conforms to appropriate practices for the storage and management of transformers, capacitors, stabilizers of lighting equipment, and other machinery containing polychlorinated biphenyls (PCBs) ,and is systematically disposing of the waste.

In FY2020/3 the Company disposed of equipment containing high-concentration PCB stored at the Aboshi, Kanzaki, and Harima plants as well as equipment containing low-concentration PCB used at the Aboshi and Arai plants, at government-certified, pollution-free treatment facilities. As a result, the disposal of all equipment containing high- and low-concentration PCB used at the Kanzaki Plant has been completed.

# Water Resource Preservation

## Basic Approach

Water is one of Earth’s irreplaceable natural resources, and risks associated with water are on the rise across the globe. The Daicel Group is committed to protecting this resource by ensuring proper use and management of water in its business operations and through its efforts to preserve water quality.

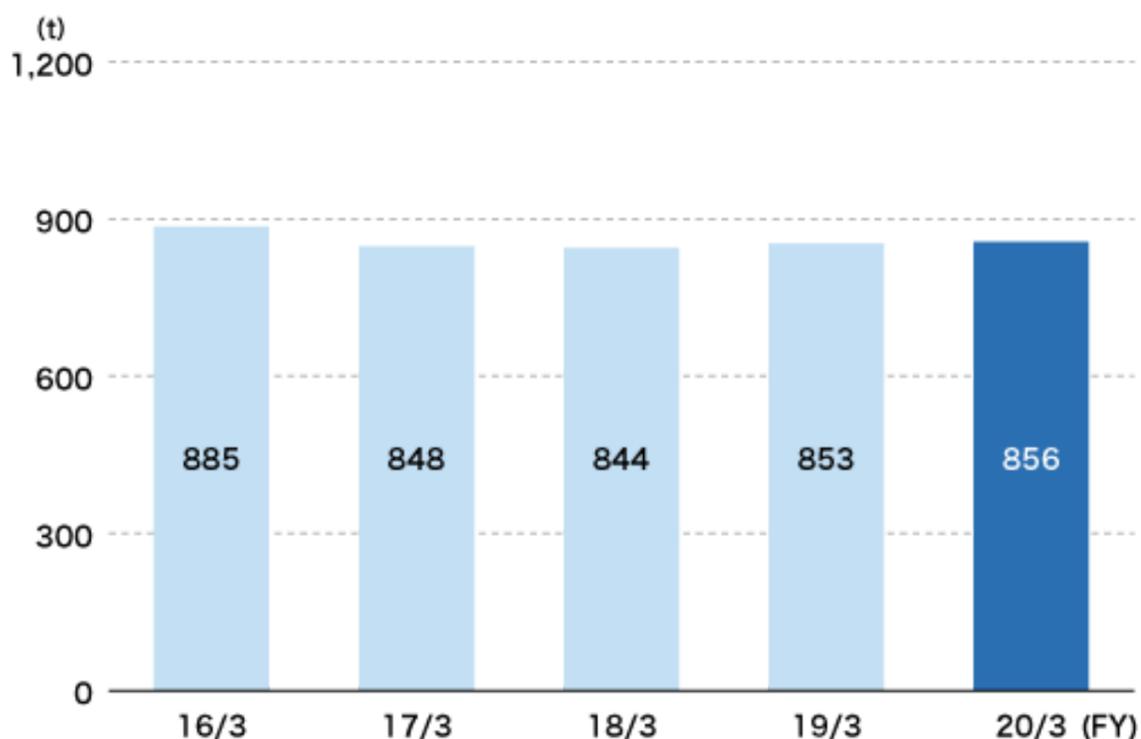
## Managing Water Quality

The Group endeavors to preserve the environment by periodically assessing industrial wastewater generated by each of its plants and to ensure that emissions fall below the targeted limits. These targets are voluntarily set by each plant and based on requirements defined by and negotiated with the local governments (prefectural, municipal, and regional). In FY2020/3 we continued to properly manage water quality based on our voluntary standards.

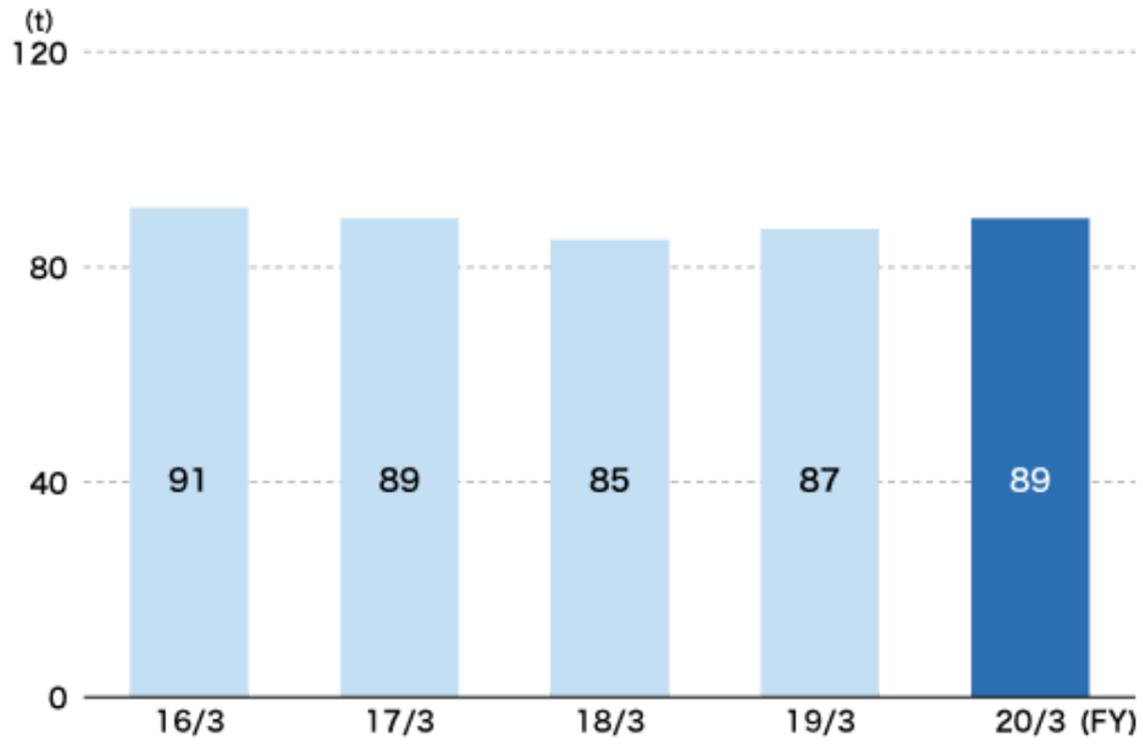
When formulating new plans for business, we evaluate the effects of wastewater on water quality in advance by operating the Total Environmental, Health and Safety Assessment System\*. To fulfill our manufacturer responsibilities, we take various measures to avoid the risks of water pollution from all possible causes. This includes improving wastewater treatment facilities in collaboration with facility manufacturers and developing wastewater simulation technology jointly with universities.

\* For details of the Total Environmental, Health and Safety Assessment System, see [Total EHS Assessment System](#) under Responsible Care Activities.

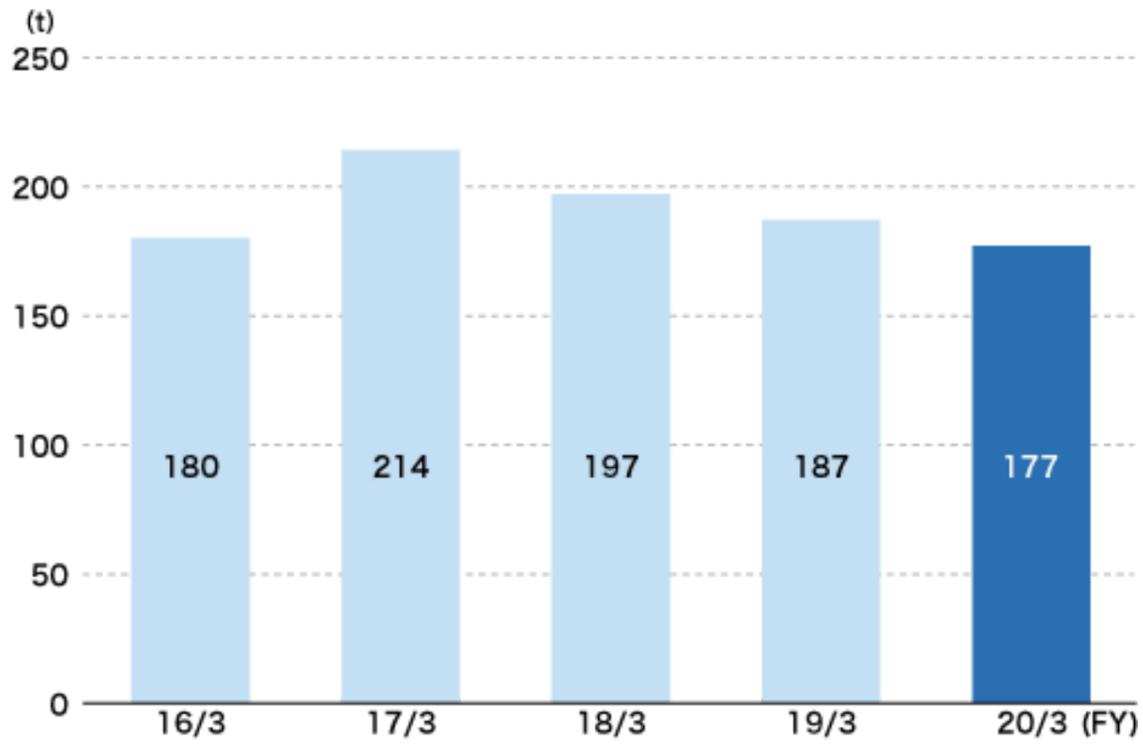
### ■ COD Emissions (Domestic)



### ■ Phosphorous Emissions (Domestic)



### ■ Nitrogen Emissions (Domestic)



# Environmental Management and Prevention of Air Pollution

## Basic Approach

The Daicel Group's efforts to reduce emissions of air pollutants extend beyond simply adhering to relevant regulatory requirements. It continually strives to reduce its environmental risk by improving the facilities at each of its plants and by periodically monitoring their emissions.

## Prevention of Air Pollution

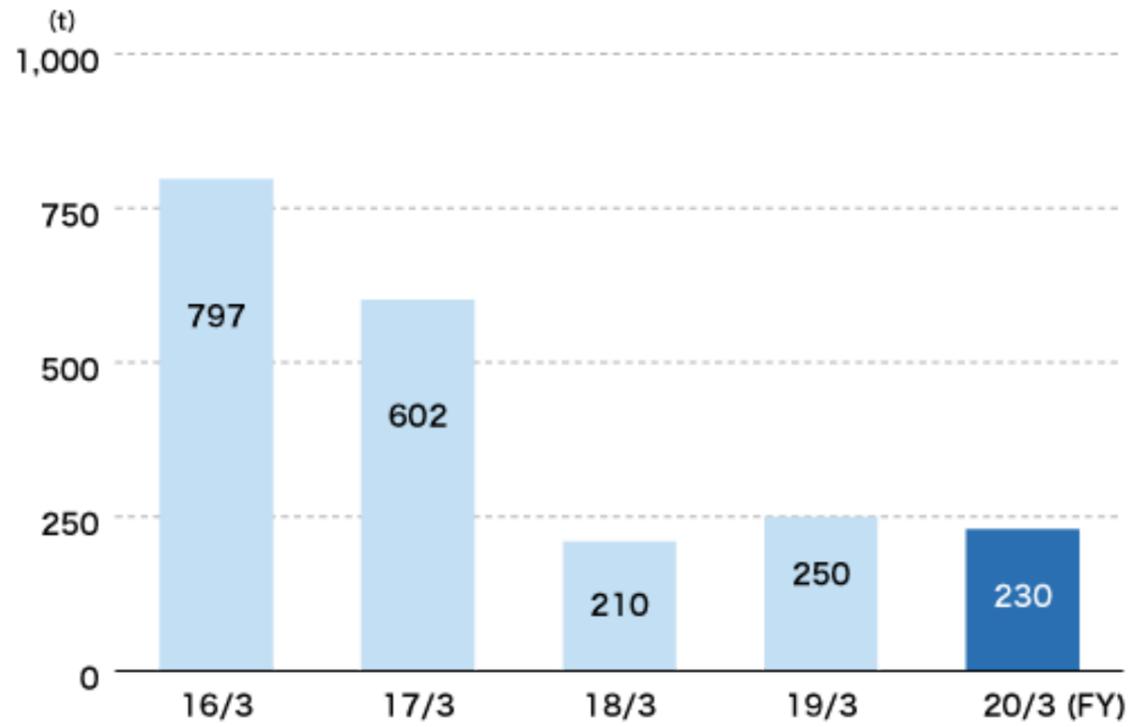
Daicel's business sites and Domestic Group companies strictly adhere to regulatory requirements as well as others determined through negotiations with local governments and municipalities with regard to total emission volume and the density of specific substances. Also, the Group strives to preserve the environment by voluntarily setting targets that are below these requirements.

Whenever we need to create fresh plans for new products or businesses, we first carefully assess the possible impact of our plans on air quality by operating our Total Environmental, Health and Safety Assessment System\*. Based on the results of the assessment, we take appropriate actions to address any issues we find and only allow the plans to be executed after ensuring that those issues are fully addressed.

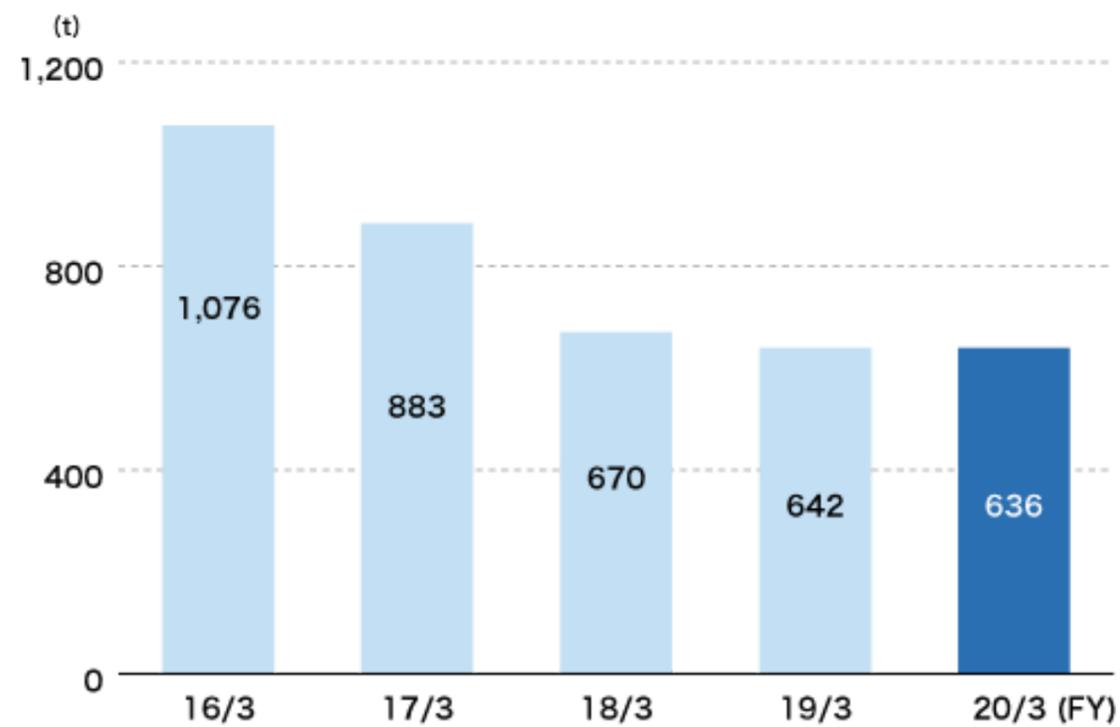
In FY2020/3, fuel conversion of boilers and optimization of operating conditions successfully reduced emission compared to the previous fiscal year.

\* For more information about Total Environmental, Health and Safety Assessment System, see the [Total Environmental, Health and Safety Assessment System](#) section on the Responsible Care Activities page.

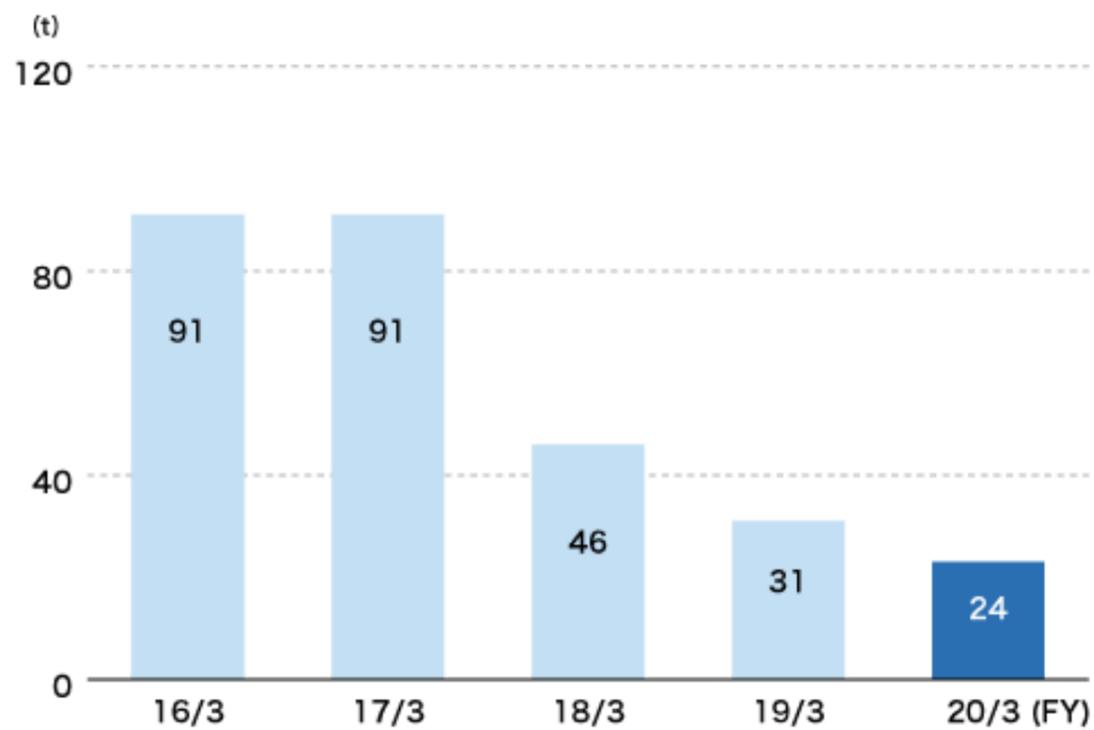
### SOx Emissions (Domestic)



### NOx Emissions (Domestic)



### Soot and Dust Emissions (Domestic)



\* For more information about VOC, see the [Reducing of VOC Emissions](#) section on the Initiatives to Reduce Emissions of Chemical Substances page.

# Preserving Biodiversity

## Basic Approach

To pass on to future generations the wonders nature has to offer, we operate our business with due consideration for the preservation of biodiversity.

## Initiatives Aimed at Preserving Biodiversity

Biodiversity provides numerous direct and indirect benefits every day, yet human activities are placing significant stress on the Earth's ecosystems. This is causing a rapid increase in endangered species and threatening biodiversity. Given these circumstances, protecting biodiversity and using biological resources in a sustainable manner is indispensable to enable future generations to benefit from nature's richness.

In FY2011/3, Daicel joined the Japan Business and Biodiversity Partnership, jointly established by KEIDANREN (Japan Business Federation), the Japan Chamber of Commerce and Industry, and KEIZAI DOYUKAI (Japan Association of Corporate Executives) in conjunction with the 10th Conference of the Parties (COP10). In FY2012/3, the Company clarified its commitment to preserving biodiversity and, to this end, incorporated initiative policies for biodiversity conservation into the Daicel Group's Basic Policies for Responsible Care.

Daicel's R&D divisions established in-house rules to ensure that their research and development activities are undertaken in conformity with the "Law Concerning the Conservation and Sustainable Use of Biological Diversity through Regulations on the Use of Living Modified Organisms" (Cartagena Protocol).

Also, we have been implementing the Native Forests for Life initiative since FY2017/3, which is a more effective and sustainable version of our global warming countermeasures centered on curbing CO<sub>2</sub> emissions and energy consumption.

To read more about our Native Forests for Life initiative, [click here](#).

# Environmental Accounting

Daicel has introduced an environmental accounting system to quantitatively measure costs associated with environmental protection efforts and results yielded from these activities in terms of economic value or physical mass. By doing this, it strives to ensure that such activities are efficient and effective.

In FY2020/3, we invested approximately ¥4 billion in measures to protect the environment. Total investment in the environmental activities accounted for 16.2% of total investment, up 2.6% from the previous fiscal year (13.6%). FY2020/3 investments in the environment included approximately ¥2.5 billion for building the infrastructure for the resource recycling business. Another roughly ¥1.9 billion was invested in pollution control measures for installing new plants.

The economic benefits resulting from environmental conservation activities grew, as the cost reduction from resource-saving efforts increased to ¥0.46 billion from ¥0.06 billion in the previous fiscal year.

We will continue to assess these impacts through environmental accounting and promote environmental conservation.

## ■ Basic Elements of Environmental Accounting

<b>Target period</b>	April 2019 to March 2020
<b>Calculation method</b>	Calculated according to the Environmental Accounting Guidelines, Year 2005 Edition, published by the Ministry of the Environment of Japan and the Environmental Accounting Guidelines for the Chemical Industry, published by the Japan Chemical Industry Association (JCIA)
<b>Amounts invested</b>	Actual sums for capital investment in environmental conservation in FY2020/3.
<b>Cost amounts</b>	The totals for actual expenses of equipment depreciation, maintenance, management and labor related to environmental conservation.
<b>Economic benefits associated with environmental conservation activities</b>	Indicated as monetary benefits only and do not include risk avoidance effects or de facto effects. Economic effects attributable to reductions in energy costs are presented as the effects of energy cost reductions over a 12-month period realized through energy-saving initiatives.

# Environmental Conservation Costs

## ■ 2020/3 Environmental Conservation Costs

Classifications		Amounts invested (Millions of yen)	Cost (Millions of yen)	Classifications
(1) Business area costs		4,596	4,828	<ul style="list-style-type: none"> <li>Environmental conservation costs of controlling the environmental impact of our production and service operations that occur within business areas (business area costs)</li> </ul>
Breakdown	① Pollution prevention costs	1,910	1,699	<ul style="list-style-type: none"> <li>Investments and costs associated with the prevention of air and water pollution, control of harmful substances</li> <li>Levies for pollution-related health damages</li> </ul>
	② Global environmental conservation costs	164	1,312	<ul style="list-style-type: none"> <li>Costs associated with the introduction of energy-saving facilities (such as new boilers and freezers), capital expenditures for fuel conversion and depreciation costs associated with these facilities</li> <li>Costs associated with thermal pinch analysis and other energy-saving initiatives</li> </ul>
	③ Resource recycling costs	2,522	1,817	<ul style="list-style-type: none"> <li>Costs associated with resource-saving initiatives, recycling and the appropriate treatment and disposal of industrial waste, etc.</li> </ul>
(2) Upstream and downstream costs		0	339	<ul style="list-style-type: none"> <li>Costs associated with initiatives to curb the environmental impact of upstream or downstream operations supporting our production and service activities (such as costs for the disposal of automobile airbag inflators)</li> </ul>
(3) Administrative costs		0	657	<ul style="list-style-type: none"> <li>Costs for maintaining the environmental management systems, performing environmental measurements and providing environmental education in addition to costs associated with divisions in charge of environmental management, etc.</li> </ul>

Classifications	Amounts invested (Millions of yen)	Cost (Millions of yen)	Classifications
(4) R&D costs	2	217	<ul style="list-style-type: none"> <li>Costs associated with R&amp;D work for reducing the environmental impact of products and technologies (such as the development of eco-friendly products)</li> </ul>
(5) Community activities costs	288	38	<ul style="list-style-type: none"> <li>Costs attributable to environmental promotion activities, participation in community events and payments of association fees, etc.</li> </ul>
(6) Environmental damage costs	0	3	<ul style="list-style-type: none"> <li>Costs for environmental conservation related to environmental damage and environmental remediation costs, etc.</li> </ul>
Total	4,886	6,082	

Items	Amount (Millions of yen)	Environmental Rate (%)	Remarks
Capital expenditures in the applicable period	30,171	16.2	Ratio of environmental investment
R&D expenditures in the applicable period	15,623	1.4	Ratio of environmental protection research and development expenses

# Economic Effects (Monetary Benefits) Resulting from Environmental Conservation Activities

## ■ FY2020/3 Environmental Conservation Benefits

	Items	Amount (Millions of yen)
Economic effect	① Cost reduction through energy conservation	321
	② Cost reduction through resource conservation	457
	③ Benefits obtained by recycling	307
	④ Reduction of expenses for waste treatment or disposal	57
	Total	1,142

## Enhancing Product Quality

### Basic Approach

Daicel Group Conduct Policy states our determination to “offer safe, high-quality products and services that satisfy and earn the trust of customers.” Through our steadfast commitment to this policy as well as the following quality policy, we will remain committed to raising the level of customer satisfaction.

### Quality Policy for Daicel Group

Each member of the Daicel Group promises to deliver safe and quality products which can be used with assurance by the customer. In order to realize this policy, we undertake the following actions.

- We listen to customer requirements and deliver trust and satisfaction.
- We clarify and seek to achieve the required quality.
- We obey laws and regulations.
- Each member looks at matters from the customer’s perspective and undertakes actions on their own initiative.

### Quality Management System

Taking advantage of the characteristics of our products that have been developed through our long history and rich heritage of technologies, our plants and Group companies have been certified under international quality standards for each business field. We have the quality management system necessary for our businesses in place that complies with standards such as ISO 9001, which specifies the basic concepts, IATF 16949 for the automotive sector, ISO 22000 for food safety management, and JIS Q9100 for Aerospace & Defense Systems.

All complaints, inquiries, and requests from our customers are first reviewed by the marketing department, which is responsible for customer contact. Then they are immediately sent to the dedicated database and shared with the relevant departments, such as quality assurance, manufacturing, and development. Our plants and internal departments regularly hold quality assurance meetings and continue to discuss how to improve or stabilize product quality based on feedback from customers. As such, our plants and marketing departments work together to continually maintain and improve our quality management system. Meanwhile, the Quality Management Division, operating directly under the president and CEO, collects and analyzes quality data and conducts quality audits, which lead to continuous improvement of the entire Group.

Each plant sets annual quality targets, such as the first pass yield\*<sup>1</sup> and the number of complaints, in-process defects. Plant general managers, and the relevant departments review the progress at the end of each fiscal year to determine the targets for the next fiscal year. By effectively operating the CAPD\*<sup>2</sup> cycle in this way, we are striving to offer products that meet high-quality standards and further satisfy our customers.

\*1 First pass yield: The percentage of items that passes through production processes cleanly without any defect detected in the in-process and pre-shipment processes.

\*2 CAPD cycle: Instead of a plan, do, check, and act (PDCA) cycle, a more common methodology for making improvements, Daicel has adopted a CAPD improvement cycle to avoid the risk of overlooking crucial facts and realities that often lie in the initial planning stage.

[> Quality management system certification acquired by Daicel Group companies](#)

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## Initiatives to Take Product Quality to the Next Level

### Visualizing Issues to Prevent Recurrence

All data related to customer complaints and inquiries, including the details, cause analysis findings, and corrective actions, are stored and managed in a database. The follow-up statuses are reviewed by a quality committee and during management review meetings at each plant. In addition, the information is shared in the monthly report and the White Paper on product quality to prevent recurrences across the board.

Any product deficiencies identified during manufacturing processes or quality assurance checks at each plant are also visualized, e.g., in a database, and the data is used to improve product quality, including the prevention of recurrences.

### Image Analysis System that Leverages Cutting-edge IoT and AI-driven Technologies

To live up to customer expectations, Daicel is relentlessly striving to enhance product quality. To this end, it is incorporating leading-edge technologies that help it earn customer trust and confidence in terms of quality. For example, with the help of our partner Hitachi Ltd., we introduced an IoT-driven image analysis system that leverages AI to the Harima Plant (Tatsuno City, Hyogo Prefecture), one of our manufacturing sites for inflators, a key component of automobile airbags.

The system is capable of consistently monitoring the status of operations, facilities and materials via images captured by multiple cameras installed along production lines. This made it possible to closely manage the quality of every product unit being manufactured, instead of inspecting samples on behalf of the entire lot. With this upgraded quality assurance structure, these production lines are now capable of “all point management” precisely controlling product quality on the basis of serial number, rather than “representative management,” assuring the quality of a group of products based on lot number. Moreover, the AI-based analysis of a massive volume of image data helps us spot the types of manual operations most susceptible to mistakes (and most in need of improvement), determine optimal conditions for facility operations and enhance overall operational efficiency.

In the coming years, we plan to roll out the system to six overseas plants, all manufacturing bases for inflators, and establish a globally integrated management system. We will leverage a cloud-based database to collect and analyze the images from the system and develop plans to move toward globally standardized designs and procedures.



An example of the sensing system in action and how the image analysis system monitors the action of frontline operators

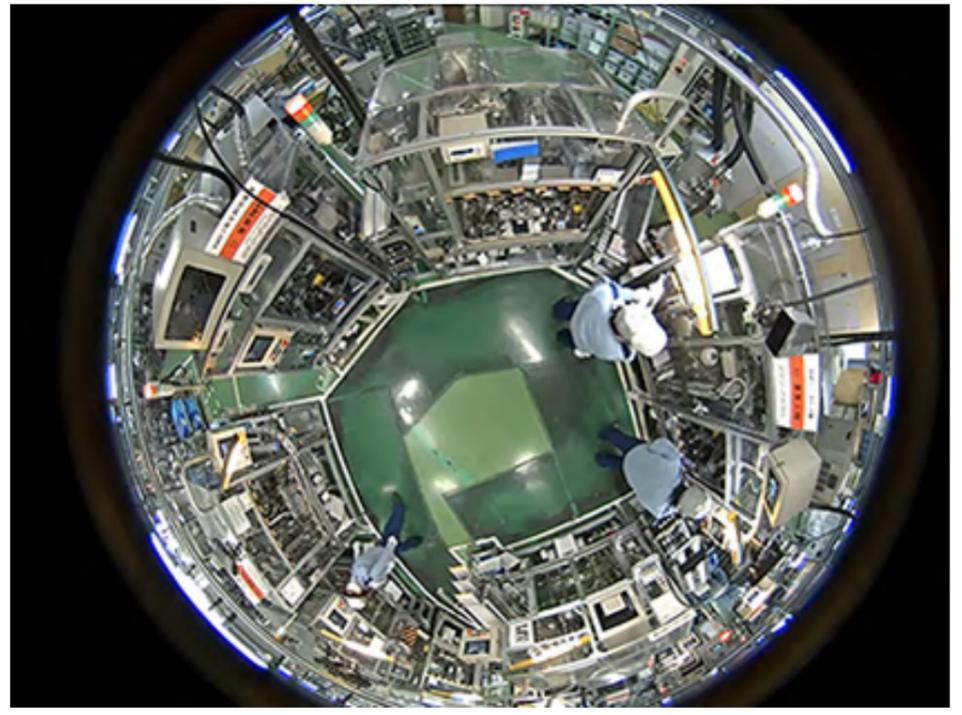


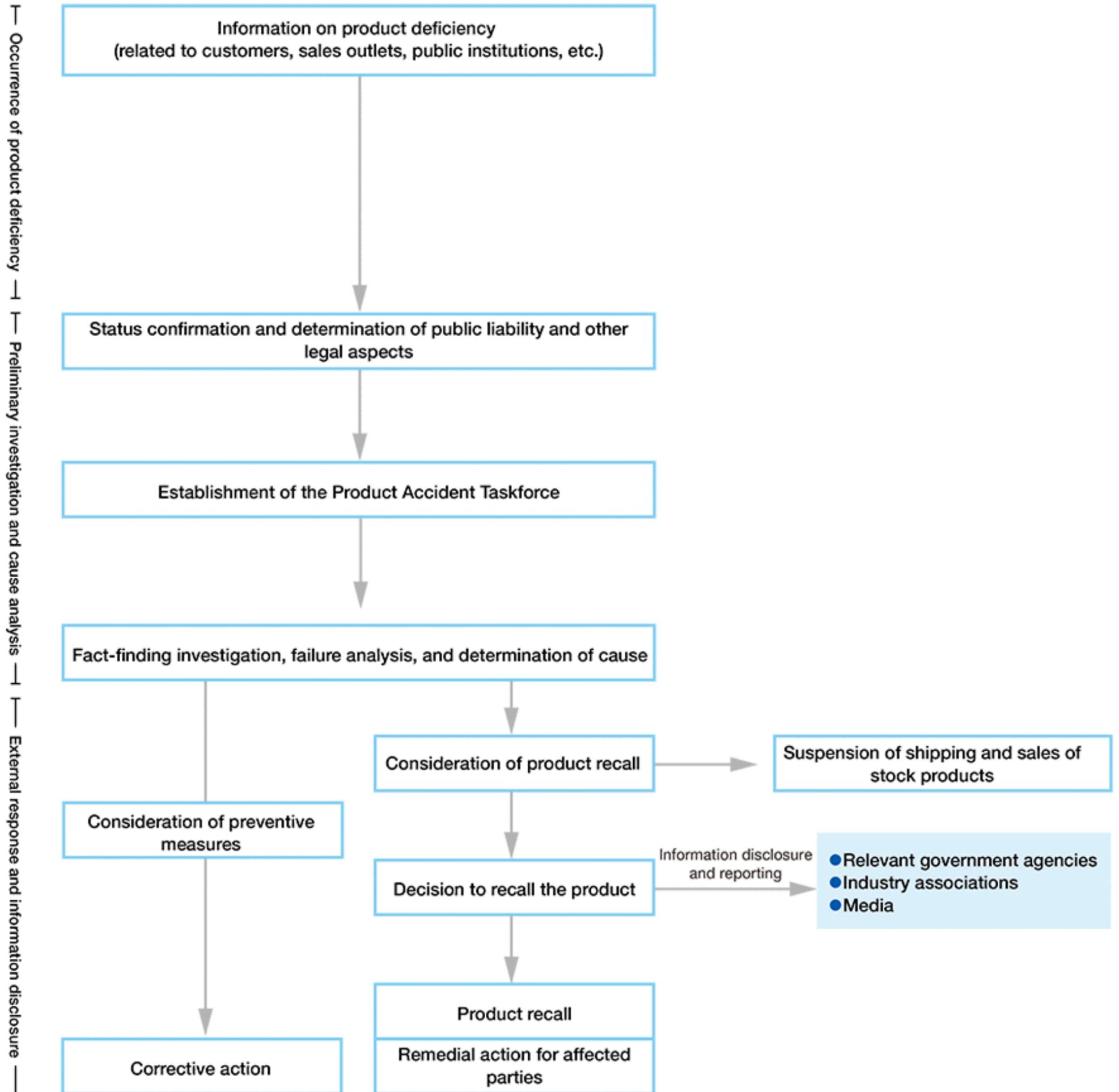
Image photographed by the 360-degree camera

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## Responding to Customer Complaints Related to Quality

When we receive a customer complaint related to product quality, our quality assurance department plays a central role in investigating and analyzing the cause, taking corrective and preventive actions in accordance with the specified workflow. Our highest priority is always the safety and security of our customers. We have therefore established a system that allows us to take appropriate and prompt action in the case of any serious accident that may cause physical injury, loss of life, or property damage and ensure that these actions are in accordance with our internal rules.

## ■ Process Flowchart for Responding to Serious Product Deficiencies



# Chemical and Product Safety

## Basic Approach

In line with its [Basic Policies for Responsible Care](#), Daicel aims to ensure the safety of its chemical products in all stages of its operations, ranging from manufacture and use to disposal, and also throughout its supply chain while striving to mitigate risk associated with these products. To this end, the Company is committed to maintaining robust information disclosure with regard to its chemical products.

## Chemical Substance Management

### Initiatives to Maintain Compliance with International Chemical Regulations

In addition to complying with domestic regulations pertaining to the management of chemical products, Daicel maintains compliance with the chemical regulations enforced in Europe, the U.S., the Asia-Pacific region, and other region's nations, by regularly acquiring the latest information on revisions to laws and on regulatory trends in these places while utilizing search databases for domestic and international laws as well.

In May 2018, the Company completed all the phase 1 to 3 registrations of its products designated under the European Union's REACH\*, complying with regulatory timelines specified by the regulations based on the volume of substances being manufactured or exported.

Moreover, dedicated staff involved in chemical management at both our internal divisions and Domestic Group companies regularly meet to gather and exchange the latest information on laws and updates on regulations related to chemicals and trends among industrial associations in Japan and overseas.

\* REACH (Registration, Evaluation, Authorization and Restriction of Chemicals) : the regulation mandates that producers must register their chemical products with the European Union and conduct safety assessments, restrict their use, and control permits for their use.

### Provision of Chemical Information

Since Daicel aims to ensure that customers can always use its products with confidence, the Company maintains compliance with GHS\*<sup>1</sup> and such regulations as the Industrial Safety and Health Law, preparing mandatory SDS\*<sup>2</sup> for every product in the Company's lineup and making these sheets available to customers. In addition, Daicel discloses SDS for its mainstay products via its website.

Daicel is a participant in GPS/JIPS\*<sup>3</sup>, both of which are voluntary initiatives promoted by the Japan Chemical Industry Association (JCIA) aimed at reinforcing risk-based chemical substance management at companies. Applying the results of risk assessments on its chemical products, Daicel prepares and posts 12 Safety Summaries on the GPS Chemicals Portal Site run by the International Council of Chemical Associations (ICCA).

Furthermore, the Company declared its support for chemSHERPA\*<sup>4</sup>, a private-public information communication scheme developed by Japan's Ministry of Economy, Trade and Industry in an effort to promote the standardization of communications about the chemicals included in products.

- \*1 GHS: Globally Harmonized System of Classification and Labelling of Chemicals that provides rules regarding the presentation of hazard information of chemical substances and precautions for their handling based on globally harmonized classification and labeling methods.
- \*2 SDS: Safety Data Sheet, a document providing information on the properties of chemical substances and instructions about their handling.
- \*3 GPS/JIPS: Global Product Strategy/Japan Initiative of Product Stewardship, the voluntary actions of the chemical industry promoted by JCIA and based on the chemical management strategy of ICCA. Through these actions, the industry conducts risk assessments of chemical products, creates safety summaries to easily explain results to people outside the industry, and makes these summaries publicly available.
- \*4 chemSHERPA: A scheme that aims to ensure the appropriate management of content of chemical products while communicating information regarding their ingredients throughout supply chains and based on a unified list.

## Consolidated Management of Chemical Information

Through Daicel's unique chemical information management data bank called D-CLik, the Company unified information on raw materials, intermediates, and finished products with regard to their physical, chemical, and hazardous properties and relevant regulations. D-CLik registers new chemical substances and updates data by collecting monthly safety test reports and other relevant documents from the entire Company for the Responsible Care Division, which is responsible for the management of chemical information. This allows us to create SDSs and labels for the safe and secure handling of our products. The necessary information can also be promptly provided to customers, and we can assess the risks associated with chemical substances including our products.

## Employee Education on Chemical Substance Management

To ensure the appropriate management of chemical substances, we provide all employees who handle chemical substances with educational programs themed on risk and hazardous properties of chemical substances, appropriate methods for handling these chemicals, and the laws and regulations applied to them. Also, those working at administrative divisions are subject to periodic compliance training aimed at keeping them apprised of chemical regulations enforced in Japan and overseas.

# Process Safety and Disaster Prevention

## Basic Approach

Through its risk assessment process, the Daicel Group identifies risks associated with process safety and disaster prevention. We continuously strive to maintain safe and stable operations and achieve zero accidents by taking the necessary measures to reduce these identified risks.

## Initiatives on Process Safety and Disaster Prevention

In FY2020/3, the entire domestic Group encountered six cases of small fires (e.g., ignition of powder and foamed resin products) and eight leakage accidents. None of the incidents had much impact on our operations; however, we are investigating the root causes and taking preventive measures to address both physical and human errors.

Since most of the small fires were caused by static electricity, we thoroughly inspected how powder is handled within the Group and strengthened measures to prevent electrostatic accidents. We also established a working team consisting of young and expert engineers from each plant to verify the conformity of on-site work with our safety standards and remind everyone of the lessons of past electrostatic accidents.

In addition, we worked on strengthening security at our business sites to prevent illegal access to our grounds and monitor our visitors. We are making progress on our plans to enforce the perimeter fence and install access control systems using biometrics at our gates. Moreover, our Group companies are taking steps to strengthen security. Looking ahead, we will continue to focus on ways to reduce risks related to process safety and disaster prevention.

## Earthquake, Tsunami, and Liquefaction Countermeasures

Taking a systematic approach, Daicel has been pushing ahead with assessments of risks associated with earthquakes, tsunami, and liquefaction as well as the analyses of seismic conditions at its facilities and their structural reinforcement. In FY2016/3, we completed structural reinforcement work in line with the Act for Promotion of Renovation for Earthquake-Resistant Structures. Currently, efforts are underway to equip the facilities with greater earthquake resilience in accordance with Daicel's in-house standards.

To enhance our preparedness for earthquakes, tsunami, and liquefaction risks, we also erected satellite communication antennas at the Osaka head office, Tokyo head office, and Innovation Park. This is an example of our efforts to upgrade our information network infrastructure to secure communications between key business sites at times of widespread disaster. Also, all Group business sites in Japan introduced systems for safety confirmation and emergency calls.

## Disaster Prevention Drills

The Daicel Group conducts emergency safety drills in accordance with the annual plans of each business site. The drills are designed to repeatedly train our employees so that, in the event of an emergency, they are well versed in lifesaving and first-aid practices, capable of preventing spillover effects from disasters, and able to efficiently collaborate with other members of communities around our business sites. The drills are conducted on a regular basis in tandem with municipal fire departments. Also, we rolled out the Disaster Information Sharing System, a tool for sharing data such as videos in a prompt way, to the Aboshi and Ohtake plants in FY2019/3 and also to Innovation Park and the Tokyo and Osaka head offices in FY2020/3.

Complementing these efforts, Daicel periodically conducts Groupwide disaster countermeasure exercises that address the possibility of a widespread disaster. Without giving participants advance warning, we conducted one such exercise in FY2020/3. The exercises are intended to simulate real disaster scenarios as closely as possible and provide opportunities to feel and experience the impact of a disaster.



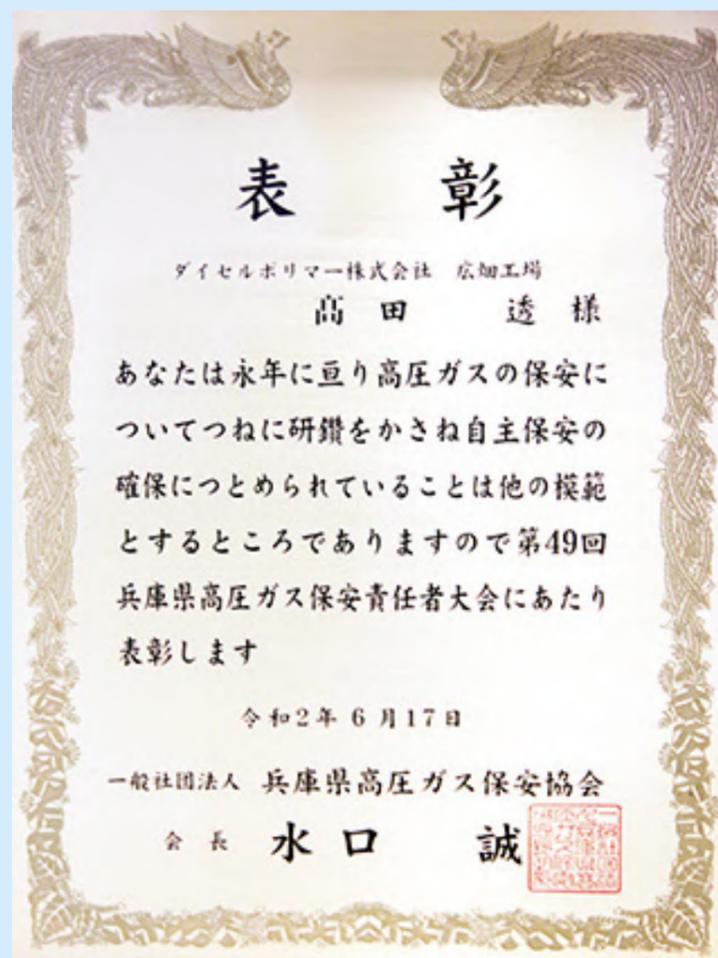
Emergency drill at a petroleum complex in Hyogo Prefecture





Emergency drill with a fire department and neighboring companies

## TOPICS Award from The High Pressure Gas Safety Institute of Japan



Toru Takata, a member of Group 1, Production of Hirohata Plant at Daicel Polymer Ltd. received the High-Pressure Gas Safety Manager Chairperson's Award for his long-term achievement from the Hyogo High-Pressure Gas Safety Organization at the 49th Hyogo Prefectural High-Pressure Gas Safety Management Convention.

## Distribution Safety

### Basic Approach

As a distributor, Daicel Corporation works with Daicel Logistics Service Co., Ltd. to ensure safe distribution and quality management. Daicel Logistics Service Co., Ltd. has set its safety target as maintaining its status of zero logistics accidents and zero occupational accidents and achieving zero at-fault traffic accidents. Its quality management target is stated as: “take responsibility as a logistics contracting company by quickly and sincerely responding to complaints and accidents relating to logistics to earn the CS (customer satisfaction) of the distributors.”

## Efforts to Achieve Zero Logistics Accidents

In FY2020/3, Daicel Logistics Service maintained zero-accident status, but one incident occurred at our partner company in the course of logistics operations. The number of logistics issues including shipping and delivery errors and customer Complaints as defined by Daicel Logistics Service’s standards decreased by five from the previous fiscal year. Since most of the observed incidents were reoccurrences of past issues, we intend to improve our preventive measures and raise employee awareness. In addition, with the help of partner companies, we will identify the root causes for the observed issues to improve our prevention measures.

## Promotion of the White Logistics Movement

Agreeing to the White Logistics Movement, launched by the Ministry of Land, Infrastructure, Transport and Tourism (MLIT), Ministry of Economy, Trade and Industry (METI) and Ministry of Agriculture, Forestry and Fisheries (MAFF), the Daicel Group submitted a declaration of its voluntary activities to the secretariat of the movement on September 27, 2019.

The White Logistics Movement is a key initiative of the National Action Plan for Realizing the Work-style Reform in the Motor Carrier Business being promoted mainly by the MLIT, METI, and MAFF. Shipping line and logistics service providers work together to contribute to economic growth by addressing the growing shortage of truck drivers and ensuring stable logistics necessary for people’s lives and industrial activities.

The key objective of the movement is to improve productivity of truck transportation and logistics efficiency while also striving to realize a “white” labor environment that makes work easier for female drivers and those over the age of 60.

Promotion of the White Logistics Movement is expected to improve productivity, reduce CO<sub>2</sub> emissions, ensure stable logistics, and fulfill social responsibilities.

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## Reduction in Transport CO<sub>2</sub> Emissions by Modal Shift

Daicel Logistics Service switched its logistics between the main ports of imports and exports and Daicel's plants from road to sea transport in 2007 to reduce CO<sub>2</sub> emissions generated in logistics. Currently, approximately 8,000 containers are transported by sea every year. With this modal shift, the company has successfully achieved a 70% reduction in CO<sub>2</sub> emissions compared to road transport.

Note: Calculated on the basis of 40-foot containers.

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## Promoting Container Round Use

Daicel Logistics Service is working to further reduce CO<sub>2</sub> emissions by reusing containers used for imported and exported loads. The company has developed a unique system to reuse the containers that allows for the smooth matching of containers to each shipping company and effortless transportation work, including reviewing the container standards to be used and simple container repairs. Currently, the company has a 75% round use rate in terms of containers used for importing cargoes, and is thus contributing to the reduction of CO<sub>2</sub> emissions.

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## Technical Training at the Safety and Quality Education Center

In 2011, Daicel Logistics Service opened the Safety and Quality Education Center on the premises of the Kansai Logistics Center Amagasaki Sales Office. This move was intended to step up its efforts to maintain distribution safety and quality, both essential to earning customer trust. Since then, the facility provides training programs aimed at enhancing the operational skills of tank truck drivers and plant staff in charge of loading and unloading cargoes, utilizing a unique curriculum prepared by Daicel Logistics Service. As of March 31, 2020, a total of approximately 1,070 trainees completed training at the center.



Technical Training

[Click here \(in Japanese only\)](#)  for more information on training at the Safety and Quality Education Center of Daicel Logistics Service Co., Ltd.

# Occupational Health and Safety

## Basic Approach

To build a safe work environment as set forth in the Daicel Code of Conduct, the Group conducts self-assessments of all its activities, such as R&D, manufacturing, and logistics, in accordance with relevant laws and regulations and promotes various measures to ensure the safety of its own workplaces. All our business sites promote 3S, namely seiri (tidying), seiton (putting everything in order), and seisou (cleaning), as an effort to improve the foundation of our production sites that place the highest priority on safety. Our Operation Training Center (TRC) branch offices also provide labor safety and health training as companywide training.

## Initiatives toward Zero Occupational Accidents

As part of Responsible Care activities, the Group appropriately manages its labor safety and health under the Responsible Care Promotion System, which operates directly under the supervision of the president and CEO.

In FY2020/3, as in the previous fiscal year, the occupational health and safety manager, health nurses, and facility managers at each plant worked together to strengthen patrols to prevent heat stroke and chemical injuries and actions for a rise of WBGT (Wet Bulb Globe Temperature) to eliminate serious occupational accidents caused by chemical injuries and heat stroke. We also worked to provide a safer and cleaner environment with readily accessible drinking water and mineral supplies as well as rest areas. Through these ongoing efforts, the number of accidents caused by heat stroke has decreased compared to FY2019/3 (down three accidents from the previous year).

In FY2020/3, the number of occupational accidents that occurred in Japan was 36, consisting of 16 with lost workdays and 20 without lost workdays. In particular, we have strengthened safety measures for employees working in high places, taking into account the fall of an employee from a contract company during the equipment removal work at the Arai Plant. In terms of the types of accidents, the number of chemical injuries increased from FY2019/3 (up by one) but the number of heat stroke-related accidents decreased (down by one). Overseas, the number of occupational accidents was 39, an increase of 13 compared to FY2019/3.

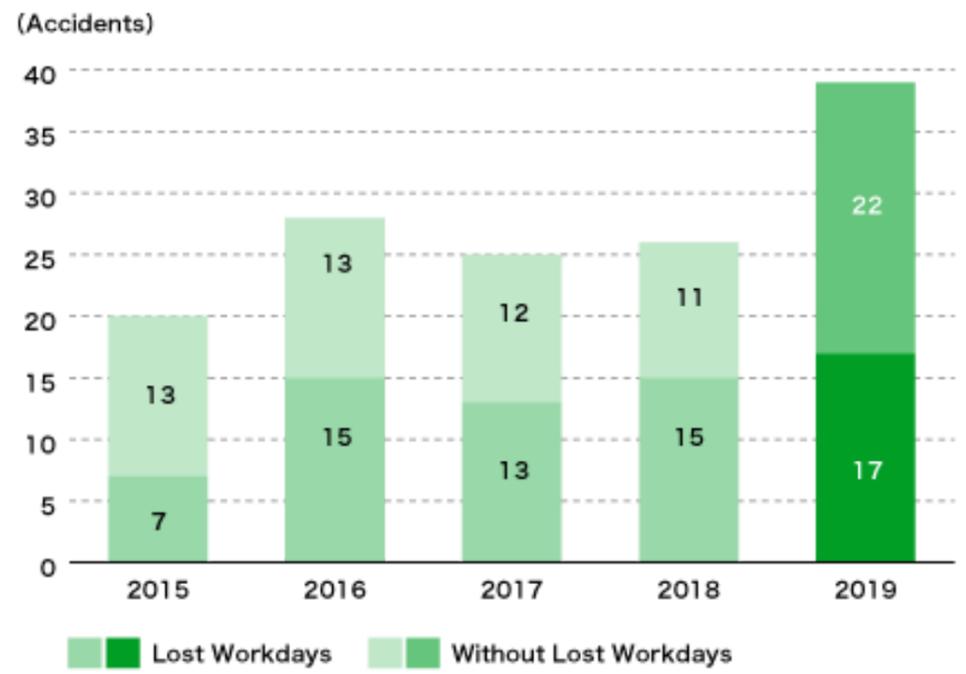
Going forward, we will continue to focus on preventing serious occupational accidents such as heat stroke and injury from hazardous substances as well as falls, as our top priority.

For more information about our Responsible Care Promotion System, [click here](#).

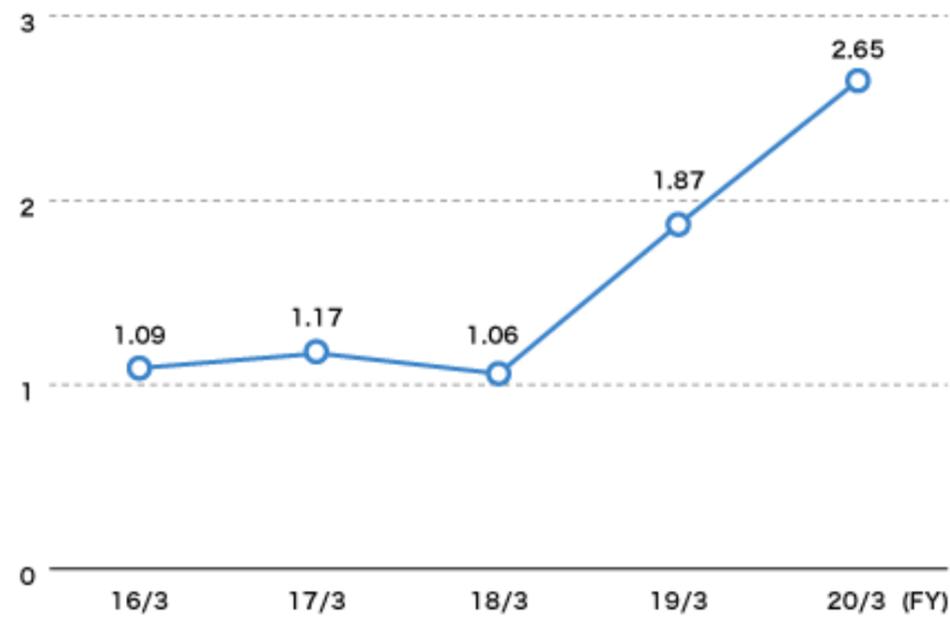
## Number of Occupational Accidents (Domestic)



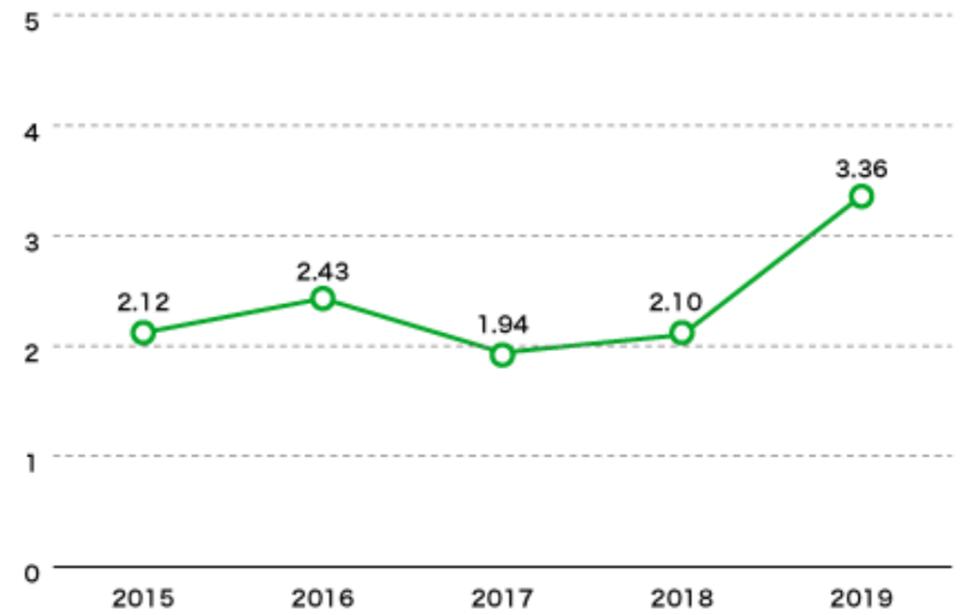
## Number of Occupational Accidents (Overseas)



## Occupational Accident Frequency Rate\* (Domestic)



## Occupational Accident Frequency Rate (Overseas)



\* Occupational Accident Frequency Rate = (number of people involved in an occupational accident / total actual working hours) × 1 million hours



Patrols to ensure against heatstroke and injuries from hazardous substances

## 2019 Hyogo Prefecture Governor's Award for Excellent Hazardous Materials Engineer

Nakaoka, a member of the Environment and Safety Department of the Aboshi Plant of the Himeji Production Sector, received the Hyogo Prefecture Governor's Award for Excellent Hazardous Materials Engineer for his long years of dedication on the handling of hazardous materials and compliance with relevant laws, regulations, and safety controls.



2019 Hyogo Prefecture Governor's Award for Excellent Hazardous Materials Engineer

## TOPICS Operation Training Center (TRC) Branch Office

Each Daicel Group business site conducts training sessions aimed at addressing issues specific to their operations in terms of occupational health and safety, environmental preservation, and chemical management. To increase the effectiveness of our training, we established multiple TRC branch offices at different production sites. Beyond covering the basic principles, the sessions at the branch offices are tailored to each business site, such as by looking at takeaways from past onsite incidents.

At the TRC branch offices in FY2020/3, we continued to strengthen and enhance our hazard simulation training programs by incorporating details related to past incidents. At the Harima Plant, the Education Center is used for developing human resources, including through hands-on and experience-based education in classroom lectures and by practicing greetings, while we also provide the basic knowledge and skills needed for Monozukuri Manufacturing and build up the trainees' manufacturing experience.

# Initiatives to Improve Occupational Health and Safety

## Safety Exchange Meetings for Group Members

Since FY2015/3, we have been holding casual exchange meetings aimed at fostering a sense of unity among Group members and heightening the awareness of those who take on front-line operations with regard to 3S and other safety assurance initiatives. With the labor union and management acting in collaboration, these meetings are attended by forepersons and mid-level managers from Daicel production sites and other domestic Group companies. The sessions usually involve a tour of plant facilities and small-group discussions on 3S case studies to help participants exchange their insights.

In FY2020/3, a safety exchange meeting was held at the Harima Plant and H.R. Training Center. This time the meeting was intended for those in charge of promoting 3S, instead of the team leaders, and a total of 12 people from 6 companies participated: Daicel Pyrotechnics Ltd., DM Novafoam Ltd. (Nagano, Okayama, and Aomori plants), Daicel Logistics Service Co., Ltd., Daicel Pack Systems Ltd., Dainichi Chemical Corp., and Polyplastics Co., Ltd. During the meeting, the 3S and safety initiatives at the Harima Plant were presented to participants, and they were also taken on a plant tour and given simulation training at the Education Center. At the H.R. Training Center, the director of the center gave a lecture entitled “the purpose of basic actions and 3S initiatives” and participants engaged in group discussions on the differences between 3S practiced in their workplaces and at the Harima Plant and on future plans.

### ■ Safety Exchange Meetings

FY	Location	Participants
FY2019	Harima Plant	12
FY2018	Kanzaki Plant, Daicel Logistics Service Co., Ltd. Amagasaki site	25
FY2017	Okayama Plant, DM Novafoam Ltd.	18
FY2016	Hirohata Plant	18
FY2015	Harima Plant	19
FY2014	Aboshi Plant	21



Facility tour given by the Safety Exchange Meeting Members

## The Essence of Safe Operations

Daicel has established numerous in-house rules on manufacturing safety. To summarize the basic operational rules that should be practiced by all front-line operators, we released the first edition of the “Essence of Safe Operations” in FY2014/3. This pocket-size leaflet aims to provide Daicel Group employees in charge of manufacturing with unified guiding principles that they should be fully aware of, deeply contemplate, and use to address safety issues. It includes well-organized content designed to provide readers with quick references anytime and anywhere. In April 2018, we issued the leaflet’s third edition, which includes more diagrams and photos so as to facilitate reading and understanding. In June 2020, the fourth edition was distributed, which includes rules for preventing electrostatic accidents and the appropriate wearing of new uniforms.

# Human Resource Management

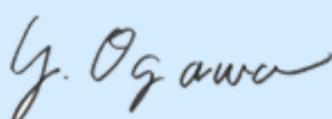
## Human Resources Policy

In following our aim to globalize our businesses and rapidly expand overseas, we established the Human Resources Policy of the Daicel Group in 2013 to guide our employees with diverse values on working together.

Having unveiled the Human Resources Policy, Daicel's President delivered the following message to all employees worldwide with the aim of ensuring the policy's spirit would be shared by every Group employee.

On behalf of the Daicel Group, I am pleased to present this human resource policy covering all employees of the Daicel Group worldwide.

Our human resources policy establishes the underpinning for various personnel practices such as recruitment, training and development, placement, and determining appropriate treatment. We, the Daicel Group, have characterized the policy with the phrase "People are the foundation for our success." To start with, no company can exist without people, and many companies emphasize the importance of their employees. The word "people" holds a special significance for us because we deeply believe that people are imbued with infinite power, and we depend on our ability to realize the full potential of this source of power. Sometimes we can expose our world to unknown potential, balancing even the very fate of the company, but our cumulative history has made us the very people we are. I am also convinced that future prosperity cannot be achieved without the contribution of our people, namely, it is people that form the foundation of our success. Herein we reiterate the firm determination of the Daicel Group under our human resources policy, and we are pleased to put these thoughts into a form that all can share.

President & CEO 

# People are the Foundation for Our Success

## The Three Core Principles of Our Human Resources Policy

### Will

We encourage the strong will and courageous decisions of each individual.

### Diversity & Inclusion

We continue to evolve through the interaction of our diverse personalities.

### Integrity

We do the right thing and proudly follow the right path.

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## Human Resource Guidelines

The Daicel Group has established unified human resource guidelines for all Group members. Since 2013, we have been building a solid foundation for our human resource management systems based on these guidelines. We revised some of the guidelines in 2019 to place more emphasis on human rights and labor while also making the guidelines more understandable globally.

The human resource guidelines describe matters to be observed by all Daicel Groups. The guidelines specify objectives, basic concepts, compliance rules and recommendations associated with human resource practices ranging from human rights and labor, recruitment, compensation, human resources development system and the appraisal system. In the guidelines, basic concepts, for instance, stipulate the need to 'respect human rights and reject complicity in human rights violations' and 'develop a culture where the employer, superiors and subordinates think of each individual's career and put ideas into practice'. Recommendations include the need to 'utilize the training programs offered by other Group companies actively'. In accordance with these guidelines, we invited participants from our overseas Group companies to attend a management training workshop in 2019. The regional head office in China has also been planning and providing training programs to Daicel Group companies in China.

Applying the guidelines, we will continue to improve our human resource practices that will help employees enhance their capabilities and raise their motivation to perform their duties.

## ■ Objectives and Basic Concepts of the Human Resource Guidelines

Practices	Objectives	Basic Concepts
Human rights and labor	Improve productivity by respecting human nature and realizing a workplace environment whereby each employee can demonstrate his/her full potential	<ul style="list-style-type: none"> <li>● Respect human rights and reject complicity in human rights violations</li> <li>● Provide equal opportunities, such as for promotion and training, without undermining fairness on the grounds of race, nationality, gender, etc.</li> <li>● Acknowledge diversity and inclusion to achieve a favorable workplace environment through promoting mutual communication and compromise</li> <li>● Contribute to lives of people and society through work, and create a company which is trusted by society</li> <li>● For resolution of issues, the company and employees understand each others' viewpoints, and promote solutions through negotiation and discussion</li> <li>● Create a healthy mental and physical working environment which values communication with employees</li> <li>● Improve productivity throughout the workplace with a good environment, and retain an appropriate number of employees</li> </ul>
Recruitment	Recruit talent who empathize with Daicel Group Basic Philosophy and Human Resources Policy (Will, Diversity & Inclusion, Integrity)	<ul style="list-style-type: none"> <li>● Recruit talent with strong will and integrity who can create new value</li> <li>● Carry out equal and fair recruiting process regardless of ethnicity, nationality, gender etc. (Diversity &amp; Inclusion)</li> </ul>
Compensation	Create a corporate culture that efforts as well as results will be rewarded	<ul style="list-style-type: none"> <li>● Design a human resources system that reflects both company performance and individual performance</li> <li>● Create a system that can reflect fair treatment, based on approach to HR Policy (Will, Diversity &amp; Inclusion, Integrity) and contribution to the company of each employee</li> <li>● Ensure fairness, rationality and transparency in determination of compensation</li> <li>● Continuously verify the validity of the company's reward standards</li> </ul>

Practices	Objectives	Basic Concepts
Human resources development system	Implement effective and systematic human resources development system based on HR Policy that “People are the foundation for our success”	<ul style="list-style-type: none"> <li>● Develop employees who can work properly while protecting safety and quality standards based on rules established in each country and region</li> <li>● For strong-willed and decisive employees working at their own initiative, provide opportunities to take on more challenging roles and broader duties for their growth</li> <li>● Broaden employee field of vision by providing a stimulating environment that allows discussion encompassing a variety of interests and values</li> <li>● Enhance employees' value by developing their awareness of self-development and providing maximum support for them to improve their abilities</li> <li>● Develop a culture where the employer, superiors and subordinates think of each individual's career and put ideas into practice</li> </ul>
Appraisal system	Through appraisal system, create the foundations of company success by disseminating HR Policy and Corporate Values, developing human resources and realizing proper compensation	<ul style="list-style-type: none"> <li>● Design appraisal system that appropriately evaluates the performance of each employee</li> <li>● Establish a system which takes into account employee making efforts to achieve targets of HR Policy (Will, Diversity &amp; Inclusion, Integrity) and also processes leading to good results</li> <li>● Promote communication between superiors and subordinates through an appraisal system and use this system for human resource development</li> <li>● Establish a fair and transparent appraisal system</li> <li>● Realize the appraisal which is based on objective facts by cultivating understanding of the system</li> </ul>

## Human Resource Evaluation System

The Daicel Group has adopted an evaluation system based on Management By Objectives (MBO) to ensure the fair and accurate evaluation of our employees and motivate them toward performing at their full capacity. The evaluation is performed by breaking down the goals of each department to individual levels and assessing the achievement level of each goal. In addition to evaluating employee job performance, the system evaluates their conduct and attitudes related to their specific jobs and rank, providing feedback accordingly. We are committed to maintaining a fair and equitable evaluation system by sharing it with the entire Group and providing evaluator training so staff can make evaluations that promote human resource development.

# Communication with Employees

## Organizational Health Index

The Daicel Group conducted the Organizational Health Index (OHI) survey in FY2020/3 in order to understand the current status of the organization. Taking into account the results, we will consider appropriate steps and measures as required.

### ■ Overview of OHI in FY2020/3

Period	January 2020
Respondents	All employees of Daicel at domestic and overseas Group companies
Number of respondents (response rate)	6,855 (81%)
Survey method	Online
Main questions	<ul style="list-style-type: none"><li>● Work Environment</li><li>● Motivation</li><li>● Innovation &amp; Learning</li><li>● External Orientation</li></ul>

## Communication with Group Companies

Recognizing employees as important stakeholders, we are constantly developing systems to meet their expectations and needs while also maintaining dialogue and other communications through the labor union. One of our communication tools is the internal newsletter Palette, written in both Japanese and English and distributed to our overseas Group companies as well.

# Initiatives to Help Employees Maintain Mental and Physical Health

The Company recognizes the importance of its employees' health and their ability to perform their work happily. It will help employees lead positive, fulfilling lives, and at the same time it will contribute to sustainable corporate development. Accordingly, Daicel has positioned helping employees maintain mental and physical health as an important management task.

## Daicel Declaration on Health Management

- The Company will strive to offer a safe and comfortable workplace based on the conviction that its business foundation relies upon the mental and physical health of each employee.
- The Company will act in collaboration with the health insurance society to help each employee as well as their families engage in autonomous and proactive efforts to maintain and improve their health conditions.

President and CEO 

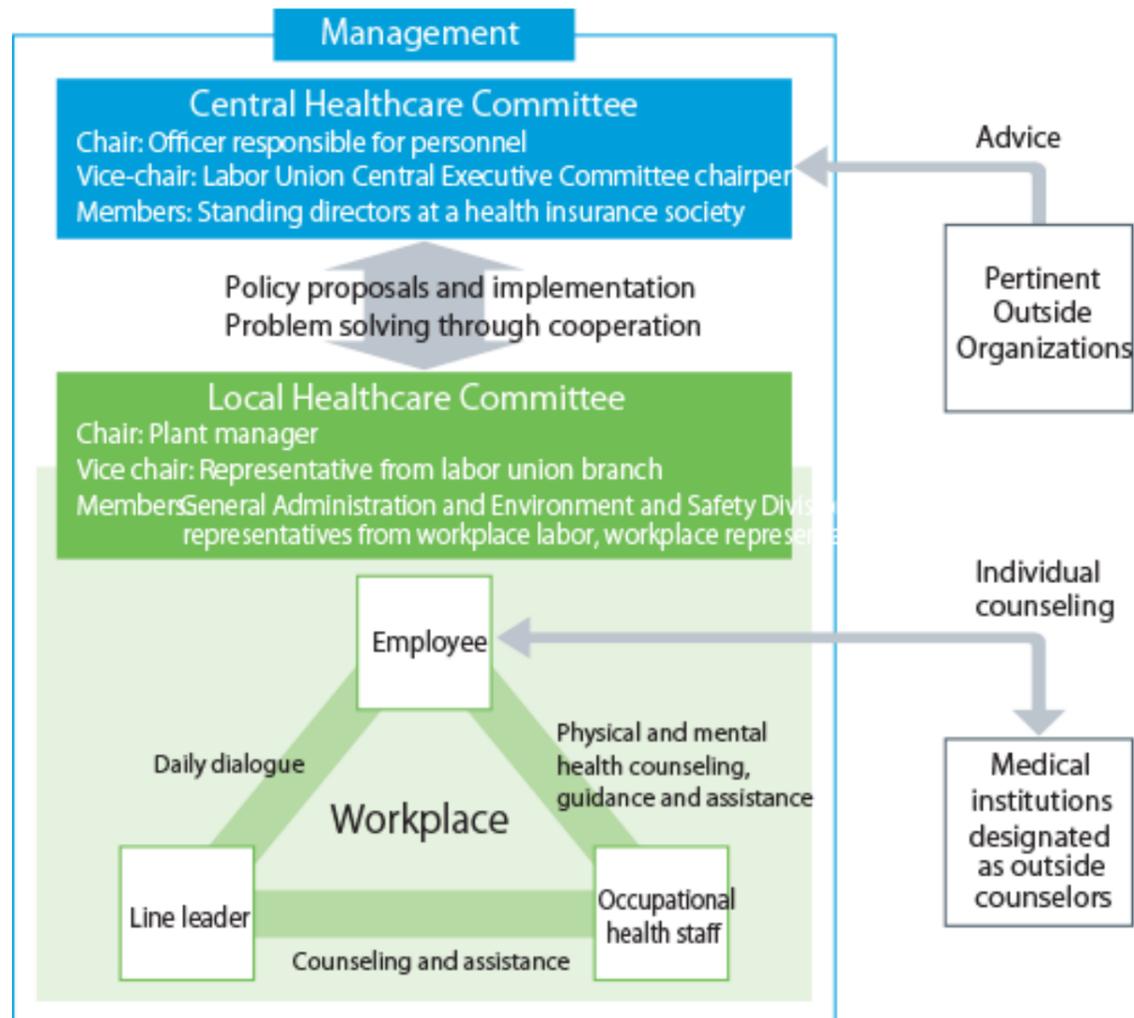
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## Organizational Structure for Health Promotion

In 2003, the Company established Central and Local Healthcare Committees consisting of representatives from labor unions, management, and Daicel's health insurance society. The committees are working to create workplaces within Daicel where individual Daicel employees can exert their individuality and capabilities and promote health throughout the Company's workplaces.

Daicel has implemented a variety of measures to make the health support system for employees more comprehensive across the organization. In addition to the Central Healthcare Committee, Local Healthcare Committees set up at each site provide employees with health guidance on a regular basis, consultations with contracted psychiatrists for any mental health-related issue, and more. We will continue to focus on the health of our employees, both mental and physical, and aim to implement additional measures that can further help them, such as programs to support those with mental health problems in returning to work as well as training workshops and a system for detecting health problems at an early stage.

## ■ Organizational Structure for Health Promotion



## Strengthening Our Organizational Structure for Health Promotion

As an additional measure to strengthen the organizational structure for promoting better health, Daicel has designated company health nurses and psychiatrists as industrial healthcare workers while also making it easier for employees to seek consultation.

### Initiatives Undertaken by the Health Nurse Team

Operating under the Healthcare Committee, a health nurse team helps build a cooperative framework that works across business sites and promotes the sharing of information. The team participates in formulating and executing action plans to improve the workplace environment for each business site based on the results of mandatory stress checks. Moreover, it is involved in educational sessions focused on preventing physical and mental health issues, with team members sharing their insights as lecturers during position-specific training and orientation training for new graduates and lateral hires. These activities help prevent any health issues from arising and also supports health nurses in improving their planning and teaching skills.



A health nurse discusses how to stay healthy and enthusiastic



Attendees take turns giving presentations

## Utilizing Psychiatrists Employed Exclusively by Daicel

Currently, Daicel employs four psychiatrists to bolster its follow-up care system for employees who have developed mental health issues. Every psychiatrist is assigned a geographical segment for his/her oversight, thereby ensuring that employees in need receive meticulous care.

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## Maintaining and Promoting Good Health

### Mandatory Stress Checks

Aiming to develop a vibrant workplace, Daicel has been assisting each business site in efforts to better manage their working environments by, for example, utilizing the results of stress checks. In FY2020/3, the stress checks carried out by Daicel and its Group companies achieved 99.8% coverage of all employees. The Group is providing employees with face-to-face sessions with a psychiatrist if they suffer excessive stress and are in need of counseling. In addition, the Local Healthcare Committees conduct comprehensive analyses of stress check results and then formulate and execute plans to tackle any issues that are identified in order to maintain and promote employees' good health.

Continuing from the previous year, Daicel conducted special training for managers called Mental Health Line Care training, introduced in FY2018/3, as well as training sessions for employees and Line Care and Self Care training, introduced in FY2018/3 and FY2019/3, respectively. Fourteen sessions were conducted for employees across all our business sites, with high attendance. They learned how to provide staff members with appropriate care, manage stress, and improve their mental health, and external specialists served as lecturers. The attendees also took part in a hands-on experience workshop aimed at enhancing communication skills. We plan to continue conducting these sessions at each business site in the coming years.



Mental Health Line Care training

## Specified Health Checkups

We are actively strengthening our disease prevention activities in alignment with Japan's Data Health Plan and in order to achieve medical goals set by the Health Insurance Union within three years. With regard to specified health checkups and specific health guidance, we have reinforced activities to raise awareness for employees and their families in order to achieve the national targets.

### ■ Specified Health Checkups and Specific Health Guidance Rate

	Target value	FY2018/3	FY2019/3	FY2020/3
Specified health checkup rate (%)	90%	79.2%	80.9%	84.6%
Specific health guidance rate (%)	60%	41.2%	50.6%	55.6%

## Initiatives to Shorten Working Hours

With the firm belief that the mental and physical health of each employee form the foundation of business success, the Company is actively working on improving the work-life-balance of staff and taking appropriate measures to shorten their working hours.

\* Click [here](#) for details on Shortened Working Hours.

## Health Guidance and Consultations for Employees Posted Overseas

In FY2016/3, Daicel began closely assessing the working status of employees posted overseas, with the aim of realizing more robust health management. In FY2009/3, the Company began implementing measures such as providing face-to-face health nurse counseling to employees whose working hours were deemed excessively long, aligning the treatment of employees working overseas with standards applied to domestic employees.

Moreover, health nurses have been visiting overseas affiliates, providing guidance, consultation services, and support to employees posted overseas. Through specialized and professional health guidance and advice, Daicel is helping to maintain and improve the health of these employees, who play an important role in the operations of overseas affiliates.

## Prevention of Secondhand Smoke Exposure

In order to protect employees from the harm of being exposed to secondhand smoke, we have designated smoking spaces at our business sites.

### TOPICS Recognized as a “WHITE 500” organization under the 2020 Certified Health & Productivity Management Outstanding Organizations Recognition Program

Daicel Corporation was recognized as a “WHITE 500” organization under the 2020 Certified Health & Productivity Management Outstanding Organization Recognition Program. Under the Certified Health & Productivity Management Outstanding Organizations Recognition Program, co-sponsored by the Ministry of Economy, Trade and Industry and Nippon Kenko Kaigi, companies are selected for their excellent health management initiatives such as those tailored to the needs of local communities and initiatives in line with Nippon Kenko Kaigi’s goals.

In Daicel, under the themes “mental health care” and “physical health care,” members of the Central Health Care Committee organized by labor management and the health insurance society, including industrial health staff (industrial doctors, public health nurses, etc.) and psychiatrists, take action together to maintain and improve the mental and physical health of employees. Their activities also involve supporting the reinstatement of employees with mental health disorders, preventive education to provide early detection, and a timely response to mental issues and framework development. These are the efforts that have led to our receiving this honorable recognition.



## Human Resource Development

### Desirable Traits of Our Human Resources

Of the Daicel Group's many management resources, people are the most important. From around the globe, the Company welcomes a diversity of individuals, each contributing different backgrounds and ways of thinking, who are inspired by the Daicel Spirit. Daicel Group employees respect each other and seek collaborative work relationships. We believe that in these ways, we can maximize the strengths of the Daicel Group.

#### Basic Approach

People are the foundation of our corporate activities. The Daicel Group has defined its basic approach to human resource development to secure employees who respect others and appreciate new situations and perspectives while also sustaining the passion and focus to see tasks through to completion.

- Nurturing human resources will help the Company grow.
- Any attempt to achieve better results will nurture employees.
- With a corporate culture that trusts and values people, all Daicel employees shall undergo human resource development in line with their respective posts and responsibilities.

### Systems Supporting Our Human Resource Development Initiatives (Overview)

Various systems and structures are in place to support Daicel's human resource development, as shown in the following table. The effectiveness of human resource development is further enhanced by skillfully combining these methods according to the position and ability of each employee.

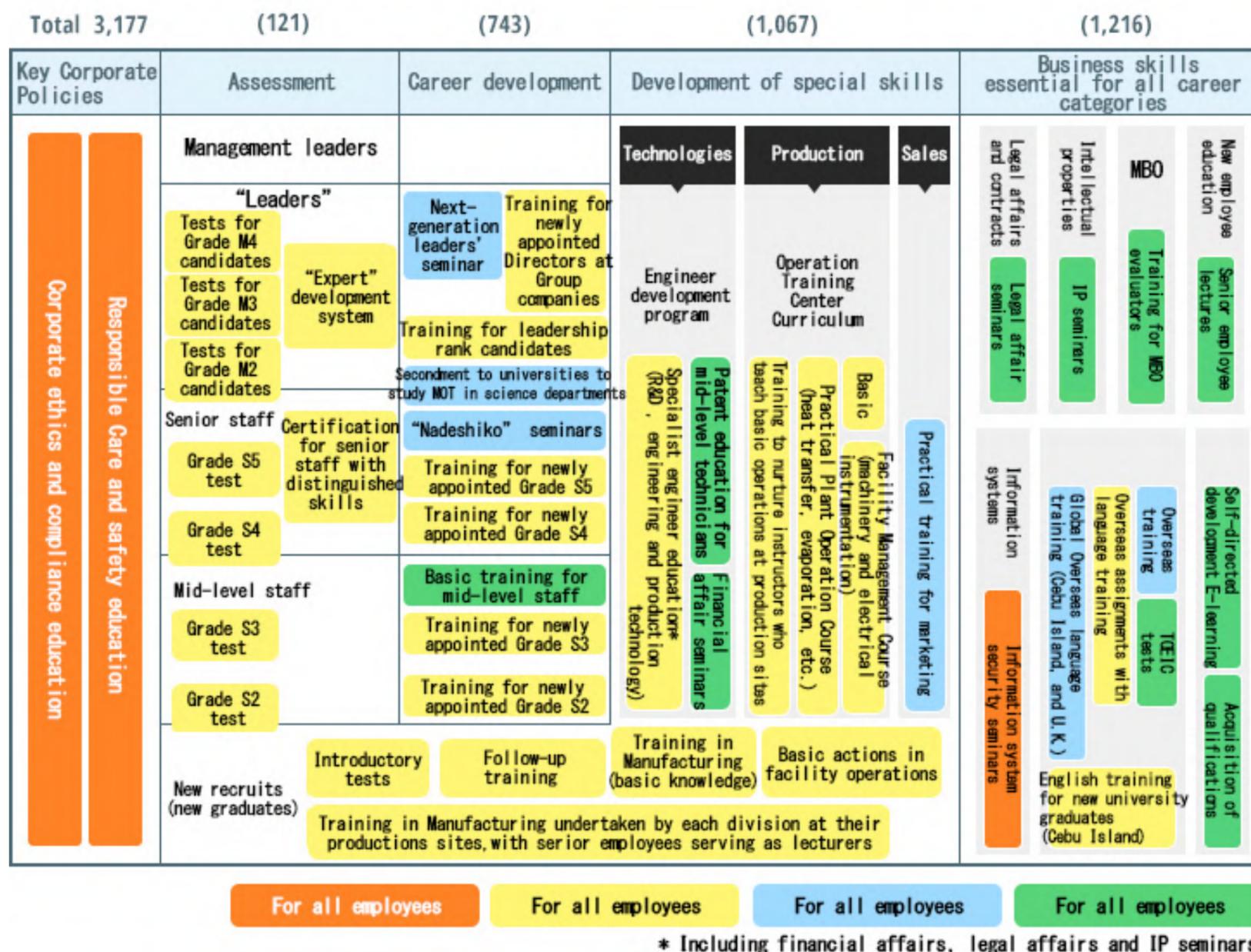
## ■ Human Resource Development Methods

Method	Content
On-the-Job Training (OJT)	<ul style="list-style-type: none"> <li>● Fundamental component of Daicel's human resource development</li> <li>● Systematically conduct training at workplaces through work</li> </ul>
Offsite Job Training (Off-JT), e.g., Group seminars	<ul style="list-style-type: none"> <li>● Programs implemented outside workplaces</li> <li>● Opportunities to gain experience that cannot be acquired via OJT</li> <li>● Active discussions between persons with different ideas help enhance their individuality</li> </ul>
Self-directed development	<ul style="list-style-type: none"> <li>● A fundamental practice that must be embraced by those seeking to achieve personal growth</li> <li>● Continuously achieve self-innovation through individual volition</li> </ul>
Rotation (change of roles or functions)	<ul style="list-style-type: none"> <li>● Help employees gain a broader range of skills and experience and nurture the capabilities of those serving as leaders</li> <li>● Encourage employees to realize their full potential by changing workplaces and duties</li> </ul>
Assessment <b>(reviewing the skills of each individual)</b>	<ul style="list-style-type: none"> <li>● Help employees objectively review their skillsets against the standards of the division and Company</li> <li>● Facilitate self-directed development by helping individuals assess their own strengths and weaknesses</li> </ul>

# Human Resource Development and Training Programs

The Company has various human resource development programs for enhancing the skills of employees.

## Overview of Training Programs in Place (the number of employees who completed training during FY2020/3)



## Training Programs for New Employees

To quickly equip new employees with the skills needed to start making contributions to the Company, Daicel provides a training program that covers a wide range of areas, from workplace conduct to basic knowledge, which prepares them for on-site training.

The program is conducted at the Nishiharima Training Center, and new employees initially learn about social and workplace conduct, Company policies, and other basic knowledge and skills. This is followed by training at the Operation Training Center and production sites. Through these activities, new staff acquire the essential knowledge they need to perform their duties in a manufacturing workplace.

## ■ Training Schedule for New Employees

	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Assignment				Admin. staff (university graduates) interviewed	▶▶▶▶▶▶▶▶	▶▶▶▶▶▶▶▶					Engineers (university graduates/high school graduates) interviewed	▶▶▶▶▶▶▶▶	▶▶▶▶▶▶▶▶	Engineers (university graduates/high school graduates) assigned to workplaces
Group seminars	Introductory training (high school graduates)	Introductory training (university graduates)				Overseas language training (administrative staff)	Follow-up training 1	Overseas language training (engineers)					Follow-up training 2	
Training for manufacturing	Administrative staff (university graduates)	Basic operation training	Plant training											
	Engineers (university graduates)		Plant training		Interim presentation meeting								Final presentation meeting	
	High school graduates	Basic operation training	Basic operation course (renewed)		Plant training		Interim presentation meeting							
Self-directed development				E-learning (first-half) In-house TOEIC tests							E-learning (second-half) In-house TOEIC tests			

## Training in Manufacturing

All newly graduated employees are initially assigned to a plant and undergo one year of training in manufacturing. At this time they learn the fundamentals of manufacturing and plant operations through OJT at the front line of production.

Plant training consists of instruction on basic facilities and the eight-hour-shift system, allowing new employees to actually see, hear, and feel what it is like to be in a plant. This experience deepens their appreciation of safety, quality, costs, and the environment, all watchwords of plant operations. Moreover, they are instructed in subjects relevant to their particular work areas.

While receiving advice and guidance at the workplace, trainees come into contact with many employees in each work area. Through the training, we aim to give new employees an appreciation of what it takes to aspire to do our best in manufacturing.

## Career Development

For the Company, employee career development is an ongoing process, and as part of it we create a human resource development plan every year. The plan's objective is to encourage the mid- to long-term growth of each employee and link their career objectives to the Company's goals.

## Position-Specific Training

Daicel provides training programs that are tailored toward different positions as defined in the Company's job grade system, ranging from new employee to new director for Group Companies. Each training session is aimed at nurturing human resources to live up to the expectations for their positions and respective roles and responsibilities. They include sessions that deal with subjects such as corporate ethics, basic legal literacy, and other essential knowledge and rules that employees need to know as well as those intended to improve their soft skills, such as for communication and management.

Training is offered to both newly promoted employees and mid-career recruits who have started their jobs within the fiscal year. It is also intended to instill motivation to do well in the Company and provide opportunities for networking with other staff. We focus on learning experiences they can put into practice on the job and improving their capabilities and conduct.

## Nadeshiko Seminar

In 2017, we introduced a new training program called “Nadeshiko seminar,” which aims to encourage ambitious female employees who aspire to achieve personal growth to take leadership roles and earn greater career success.

\* Click [here](#) for more information about the Nadeshiko seminar.

## Overseas Language Training

We have also established programs for dispatching all employees for overseas language training, ranging from short-term study (English) for all new employees, to sending employees recommended by department managers to study overseas, and to various universities for longer periods (English and Chinese). We aim to foster a global mindset among new employees by creating opportunities to promote not only language learning but also cross-cultural understanding.

### ■ Number of Employees Assigned Overseas in FY2020/3

Purpose	Target employees	Number of employees
Short-term overseas English training course	New employees	49
Study abroad	Employees nominated by division managers	17

## Management Training with a Global Scope

In FY2020/3, the Company conducted management training at the main office in Osaka and invited participants from the Safety SBU’s international business sites to participate. One goal was to provide attendees with opportunities to communicate and exchange ideas with their global counterparts and learn the importance of having a broader perspective in management. Over the course of two days, the training included a variety of programs that covered topics such as career vision, leadership, management styles in Daicel, and steps to formulate strategies. Subsequent to the training, the Company has been conducting follow-up exercises.

## Self-Development System (Mechanism for Receiving Employee Requests)

The Self-Development System enables employees to communicate to the Company their vision for their future career development. Once a year, every employee tells their supervisor how they feel about their job type, job location, and career. Supervisors take these conversations into consideration along with other factors, such as work preferences and job suitability, when creating a future placement recommendation or training and development plan.

## Human Resource Development Plan

As part of the ongoing career development process for employees, we create a human resource development plan every year. The objective is to encourage the mid- to long-term growth of each employee and link their career objectives to the Company's goals.

One aspect of career development is succession planning. We are continuously identifying candidate successors for various positions and training them for their next steps. These activities help to secure capable resources who can potentially take on key management positions as leaders in the years to come. Some of our global counterparts have also adopted this successor planning process. For example, in the Safety SBU, a periodic review of their succession planning is conducted at their overseas sites.

Through these processes we hope to create a robust human resource development infrastructure that will lead to a strong and continuous leadership pipeline globally.

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## Development of Specialized Skills

As a manufacturing company, capable engineers are the foundation of our business, and developing them is one of our most significant tasks. We maintain an extensive training curriculum, which ranges from the Monozukuri Training (manufacturing training), offered to new employees, to sessions on specialized knowledge and skills needed at various points in their careers.

### Engineer Development Program

The Company's Human Resource Development for Engineers Committee meets quarterly to review progress on the Engineer Development Program, which includes financial literacy as well as technical skills and knowledge, and improve its content. Completing the program is considered a prerequisite for promotion to a managerial position, and it is effective for strengthening employees' engineering capabilities over several years.

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### Technician Training System

Sustainable growth is a corporate mission, and it is necessary to promote product and process innovation as the driving force for sustainable growth. For this reason, the role of technical personnel as a professional group is particularly important, and individual growth is essential. In order to support individual growth, our company has established a system for training young engineers.

### Professional Career Track

Daicel has a separate career track focused on developing human resources specialized in very specific fields and who require the skills and knowledge for tackling challenges in their particular areas. We have cultivated a corporate culture that enables these experts to concentrate on their specialties and develop a dedicated career track, as a career option, for those who aspire to reach new heights in their respective fields. 11 employees are on this career track as of March 31, 2020, each playing key roles in their areas of specialty.

## Desirable Traits of Professional Career Track Employees

- Those capable of taking key roles as leading authorities in specific areas
- Those determined to stay committed to acquiring specialist skills and knowledge at the early stage of their careers

## In-house Certification System for Skilled Experts



Daicel has an in-house certification system in place, which is aimed at fostering a culture that respects manufacturing techniques and encourages individuals' efforts to develop their skills, and we consider this system as a key for nurturing technicians. As of March 31, 2020, we have certified 60 employees for their distinguished skills. The system also provides employees with a concrete career target and is expected to better motivate them and help them view their job as rewarding. We hope that this will lead us to new heights as a company, as it will allow us to focus more on our advanced skills and know-how and improve them.

At the same time, passing down our legacy of manufacturing skills, we will systematically nurture successive new generations to ensure manufacturing safety and quality, which constitute the very foundation of the Company's business.

## Developing Global Talent

The Safety Strategic Business Unit (Safety SBU) manufactures airbag inflators for automobiles at six manufacturing sites, one in Japan and the other five overseas (U.S., China, South Korea, Thailand, and Poland). While each site develops its own training and development programs, the Human Development Center at the Harima Plant trains and certifies trainers specialized in critical processes and special skills to ensure that the same level of quality and safety are incorporated into manufacturing practices worldwide. As of March 31, 2020, there are 18 certified trainers across the globe, and each trains and certifies new trainers locally at the various business sites.

Daicel Safety Systems (Jiangsu) Co., Ltd. (DSSC) in China, the largest of our manufacturing sites, has a new training center, completed in 2019, where educational programs are run in four Dojos (safety, quality, maintenance, and assembly). In FY2020, Daicel Safety Systems (Thailand) Co., Ltd. (DSST) in Thailand is planning to set up two Dojos (safety and maintenance), where it will carry out its educational programs. We will continue to instill the monozukuri spirit of Daicel in our employees and conduct training and development programs tailored to local cultures and the size of each business site, primarily to ensure safety and quality.

\* Dojo is a Japanese word meaning "a place of training."



During the training program



During the training program

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## Passing Down the Legacy of Technologies and Skills

Safety and quality assurance are the foundation for manufacturing activities and top priorities for the sustainability of our business activities. With an eye on safety and quality assurance, the Daicel Group has traditionally focused its efforts on human resource development.

In the following articles, we introduce our initiatives at the Operation Training Center, where operators and engineers who will be in charge of the manufacturing line are trained, and at the Maintenance Dojo\* initiative, where a new training course opened in 2015.

\* Dojo is a Japanese word meaning “a place of training.”

### Operation Training Center (TRC)

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#### Objective and Overview of Operation Training Center

The Operation Training Center (TRC) was set up in 2002 as a facility responsible for the Company-wide education and training programs for all employees, with the goal of instilling and maintaining “Production Innovation by the Daicel Way”. Production Innovation by the Daicel Way goes back to the basics and focuses on human-oriented manufacturing. By systemizing the skills and know-how of experienced workers and enabling everyone to put them to practical use, it endeavors to achieve a broad range of results including: (1) safe and stable operations, (2) dramatically higher productivity, (3) substantially lower manufacturing costs, (4) smoother, more uniform operations and quality stabilization, (5) the passing on of skills and techniques and human resource development, and (6) energy conservation. The TRC is considered as a place where operators, through experience-based training, acquire the necessary “knowledge”, “experience”, and “actions” required in their specific jobs.

Assurance of safety and quality is the basis for Monozukuri (manufacturing) activities and a matter of the utmost importance for our ongoing business, and thus, we need to develop human resources who are capable of achieving them. We should not be satisfied with simply acquiring more sophisticated technologies and knowledge. It is also important to

remain focused on the basics and diligently execute basic manufacturing activities such as greetings; 3S activities, namely Seiri (tidying), Seiton (putting everything in order), and Seisou (cleaning); crisis-identification activities; and hazard prediction activities. We will maintain our management principle of “start with basics, and return to basics,” adopted at the time of our founding, and continue to develop the right people who support Daicel’s Monozukuri activities with a focus on “assurance of safety and quality”.



Operation Training Center (TRC) and Small-Scale Plant

During the training, trainees gain an overall understanding of the structures of the equipment used in actual production and how they work. Consequently, they learn the most effective ways to operate and control the equipment. The TRC therefore provides equipment for teaching purposes such as pumps and valves, distillation towers, cutaway models of instruments, training devices, and filling and packing materials. The courses are tailored to specific job types and job levels and provide hands-on experience and work on small-scale chemical plants and training devices. Such courses include the operation of distributed control systems (DCS).

A wide range of training programs are targeted not only toward new employees but also toward different levels of operators, engineers, and workplace leaders, including foremen, managers, and general managers (25 programs in total). Every year since the TRC opened, we have promoted the use of the check, act, plan, and do (CAPD\*) cycle, introduced new educational and training programs, and made improvements to the curriculum and text content. In March 2013, the TRC was revamped to raise the level of education and training.

The TRC has enhanced its training and lab rooms to keep up with the growing demand. It has also added a curriculum aimed at bolstering “assurance of safety and quality. In the new curriculum, employees can review basic actions, study the history of safety and improvement through Production Innovation by the Daicel Way, and look back on the objectives and background of the measures and rules introduced on the basis of lessons learned from past incidents. Moreover, hazard simulation equipment was installed (entanglement, static electricity, solvent and dust explosion, pressure, and exposure to chemicals) in order to raise awareness of occupational safety and health and to ensure appropriate measures are being reflected in the actions of employees.

\* Instead of a plan, do, check, and act (PDCA) cycle, which is a general methodology for making improvements, Daicel has adopted a CAPD improvement cycle to avoid the risks of overlooking crucial facts and realities that often lie in the initial planning stage.

### Pressure Experience

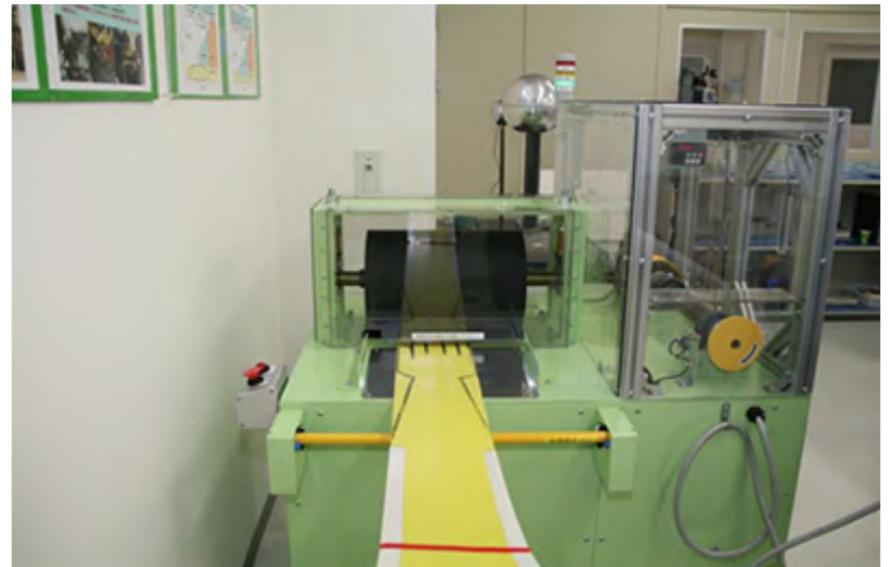
This equipment runs pressurized water through pipes of varying diameters and simulates different pressures resulting from pipes of varying diameters. Trainees develop a better understanding of pressure, which they rarely come across in their daily lives.



Pressure simulator

### Entanglement Experience

This equipment simulates an artificial hand getting entangled in a roller. By demonstrating the shock of entanglement, we teach about the danger of rotating components.



Entanglement simulator

On an annual basis, the TRC offers experience-based training with a focus on chemical plants, not only to Company employees but also to university and vocational high school students. The number of people who have completed the training at TRC, from the time it opened in 2002 to the end of FY2019, totals 7,303, of which 5,184 are operators, 1,728 are engineers, and 391 are students and others.

Taking into account the positive educational effects of this training, we have kept class sizes small (interactive education with about six students) since its inception.

The TRC was awarded “the Responsible Care Award (RC Award)” at the JCIA’s 9th Responsible Care Awards in 2015, in recognition of its activities toward “passing on skills, and education and training in the process industry” since FY2002.



RC Award Certificate

# Maintenance Dojo

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## The Opening of the Maintenance Dojo

In the past, Daicel has taken various initiatives in the area of maintenance of chemical plants. However, with the passing of the torch from one generation to the next in and around 2007, the Company began noting signs of declining capabilities in maintenance skills, construction management and supervision, acceptance inspections, and problem analysis. In response, we opened the Maintenance Dojo in FY2015 to ensure future generations fully gain the vital maintenance skills and techniques they need to improve construction quality. The targets for this training are not only Daicel employees but also workers of partner companies engaged in maintenance work.

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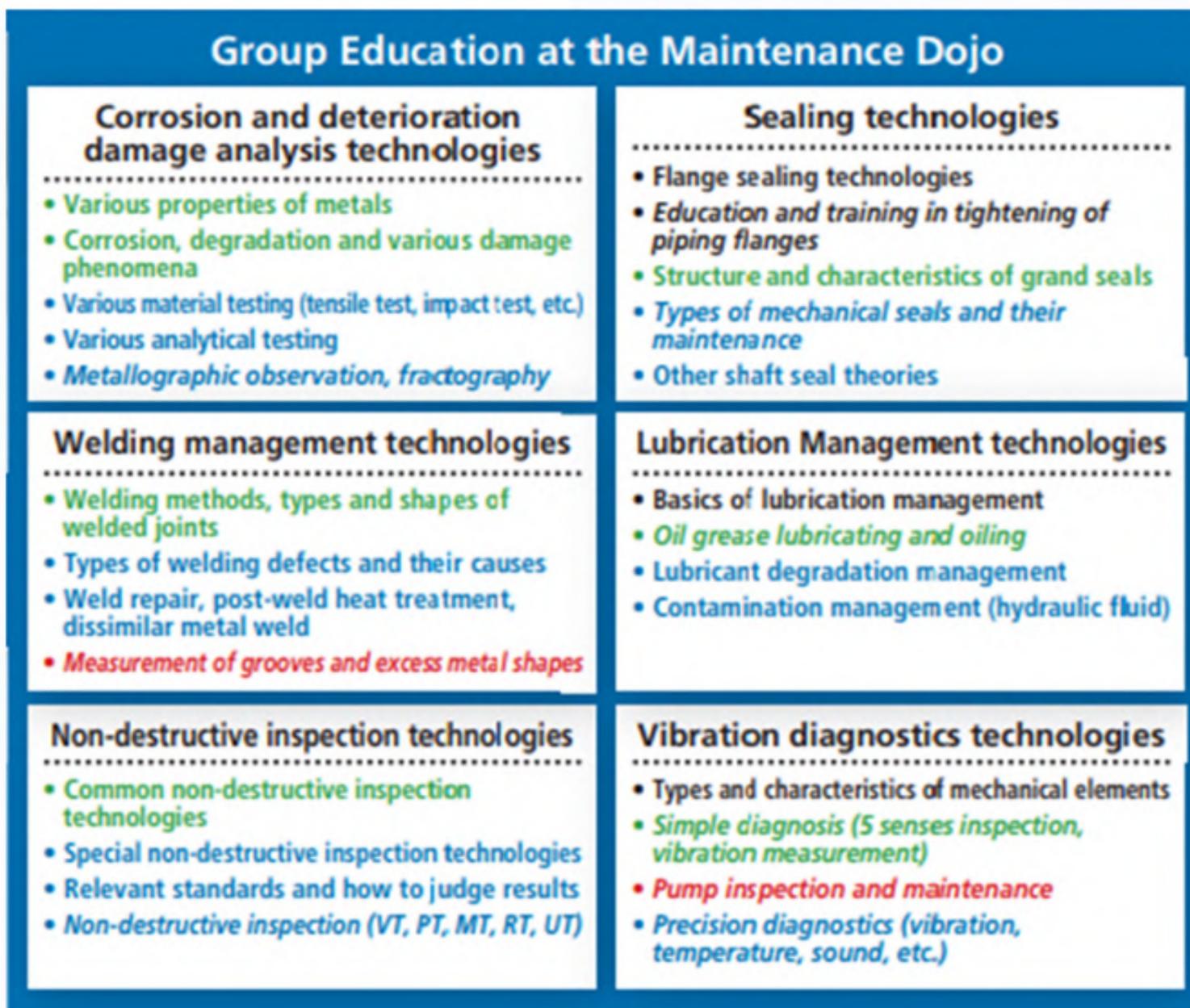
## Maintenance Dojo Overview and Initiatives

Core members of our equipment diagnostic engineering department serve as supervisors and instructors at the Maintenance Dojo where maintenance technology required for the Company is organized into the following categories.

1. Specialized maintenance education for maintenance engineers
2. Voluntary maintenance education for operators
3. Technical training for workers of partner companies

The educational curriculum offers a practical education not limited to imparting knowledge through classroom lectures and which consists of six core technologies: corrosion and deterioration damage analysis, welding management, non-destructive inspection, sealing technologies, lubrication management, and vibration diagnostics. In addition, technical skills acquired at the Maintenance Dojo are put to practical use through inspection for construction approval during the periodic repair and construction work (SDM construction), thereby improving the level of trainee skills.

## Curriculum (Six Core Areas)



**Practice (on-the-job training) in shut down/maintenance (SDM) work**

Black → shared    Blue → specialty    Green → specialty + voluntary  
 Red → specialty + partner companies    *Italic (bold face) training item*

### Case Study Regarding Education and Training for Tightening Pipe Flanges

The Aboshi Plant has been conducting training on tightening pipe flanges since 2009. A skill certification system was also introduced, and these efforts have had a remarkable impact on preventing leakage from pipe flanges and resolving related problems. The training uses a flange tightening skill evaluation device that was developed in-house. The device enables the visualization of the user's skills by displaying on a computer screen in real time the axial force of a bolt at the time of flange tightening and the surface force of a tightened gasket. In 2015, the training was incorporated into the Maintenance Dojo and fully rolled out at other plants.

## TOPICS Maintenance Dojo: Transcending Traditional Personnel Training

To assure safety and quality in chemical plants, it is important to properly maintain and manage equipment on a daily basis. To this end, it is necessary to accurately identify and evaluate equipment conditions and take the necessary measures at a stage when defects are small. It is of course people that take these actions.

We believed that traditional knowledge- and experience-based human resource development was inadequate for developing these human resources, and so we newly opened a Maintenance Dojo as a place for practical education in techniques and skills. At this site, we are nurturing human resources who can take ownership of the maintenance and management of Daicel equipment and perform these tasks with confidence and pride.



During practical training

# Diversity Promotion

## Basic Approach

In line with the Daicel Group Conduct Policy, the Group is implementing initiatives to develop working environments that respect the diversity, personality, and individuality of everyone employed at our Group companies. We hope that these initiatives contribute to eradicating any form of discrimination and harassment from society. Moreover, we will continue to focus on diversity promotion and strive to be a company where employees from a diverse background respect and inspire each other and work together to create new value.

## Initiatives to Promote Diversity

### Helping Women Earn Career Success

In April 2016, we established an action plan for the Daicel Corporation to ensure that women who wish to develop high-profile careers are not encumbered in any way and are free to pursue their ambitions. Since the goals outlined in the plan were achieved ahead of schedule, new goals were established in December 2018. This five-year action plan is intended to achieve the following three targets by 2021 (in comparison with figures recorded in 2016).

### Action Plan Based on Japan's Act on Promotion of Women's Participation and Advancement in the Workplace

Target 1 : Increase the number of women who take managerial positions by 2.5 times to a ratio of 4%\*<sup>1</sup>

Target 2 : Increase the number of females in senior roles (candidates for managerial positions) by 1.3 times to a ratio of 8%\*<sup>2</sup>

Target 3 : Raise the annual paid leave acquisition ratio from 62% to 70% or greater

\*1 The original target, doubling the number of women who take managerial positions, was achieved in July 2018, and therefore a new target was established. The target is to increase the number from 12 in April 2016 to 30 by March 2021. It also includes the ratio of women in managerial positions.

\*2 To clarify the target, it includes the ratio of women in senior roles (1st and 2nd level). The target is to increase the number from 84 in April 2016 to 109.

## ■ Progress

		April 2017	April 2018	April 2019	April 2020
Target 1 Women in Managerial Positions	Number of Women	15	17	26	29
	(Ratio)	(2.0%)	(2.0%)	(3.3%)	(3.6%)
Target 2 Women in Senior Roles	Number of Women	93	105	108	121
	(Ratio)	(9.2%)	(9.2%)	(9.2%)	(10.2%)
Target 3 Annual Paid Leave Acquisition	Ratio	63.2%	64.4%	70.0%	73.4% (as of March 31, 2020)

\* Click [here](#) for additional information about our initiatives to create a more inclusive workplace that encourages a diverse workforce to pursue success.

### TOPICS

## Certified as a “Leading Company with Active Women Participation”



On November 1, 2019, Daicel was certified by Osaka City as a “Leading Company with Active Women Participation.” The city identifies companies that actively promote the development of a workplace that allows women with career ambition to remain in the workforce, work-life balance, and men’s participation in childcare, housework, and activities in the local communities. It also gives this certification to organizations that meet a set criteria. We will continue to focus on promoting diversity and creating workplaces where every employee can express their individuality and perform at the best of their abilities regardless of gender, nationality, or disabilities.

### Nadeshiko Seminar, Training Aimed at Developing Women Leaders

In FY2018/3, we introduced a new training program that includes what we call a “Nadeshiko seminar,” which aims to encourage ambitious female employees aspiring to achieve personal growth to take leadership roles and earn greater career success. In FY2020/3, six employees participated in the program, and each worked on a project to tackle issues identified in their respective areas. As project leaders, they were responsible for formulating action plans and led the effort of addressing these issues with help from their colleagues. We will continue to work on raising awareness across all parts of our Group by holding similar events for women and other employees in managerial positions, and in turn promote diversity and work style reform across our organization.



Lecture by Mr. Fudaba, Chairperson, at Nadeshiko Seminar

## TOPICS “Diversity and Work Style Reform as Management Strategy” Seminar for Top Management

With the aim of sparking the change needed in employee awareness and conduct, in order to achieve diversity promotion and work style reform, the Company held “Diversity and Work Style Reform as Management Strategy” seminars at each of its business sites. Guest lecturer Hisano Ueda, renowned for her role in promoting diversity and work style reform activities, discussed various topics, including the importance of breaking out of the classic style in the Showa era corporate culture; promotion of women’s advancement = work style reform = corporate culture reform; and change in employee awareness triggers corporate culture reform. A total of 1,200 employees attended the seminars.



Diversity Seminar (Participant Discussion)

## Promoting Employment of Persons with Disabilities

Daicel systematically hires persons with disabilities to fulfill its social responsibilities of maintaining the ratio of these individuals in the total workforce above the statutory employment rate. It also offers them opportunities to contribute as members of society and leverage their capabilities to the greatest extent possible. As a result, the ratio of persons with disabilities in the total workforce amounted to 2.12% (non-consolidated) as of March 31, 2020. To ensure that each individual can contribute in the best possible way, we pay the utmost attention to assigning suitable jobs according to the degree of disability.

### ■ Ratio of persons with disabilities in the total workforce (non-consolidated)

	FY2018/3	FY2019/3	FY2020/3
<b>Ratio of persons with disabilities in the total workforce</b>	2.16%	2.02%	2.12%

\* Statutory employment ratio: 2.0% until March 31, 2018 and 2.2% from April 1, 2018

\* Above ratios are as of March 1 of each year

## Encouraging Senior Employees to Remain Active in the Workforce

Daicel has a system in place that allows employees who have reached the retirement age of 60 to continue working for the Company and use their extensive knowledge and experience in the workforce. In FY2020/3, 52 out of 57 employees who reached that age were reemployed under the system, with 167 senior employees (as of March 31, 2020) currently working at the Company after passing their retirement age. In accordance with the revised Law Concerning Stabilization of Employment of Older Persons, applying the system to employees seeking to continue to work through age 65, Daicel will maintain working environments where veteran employees can make use of their careers, knowledge, and experience.

## Work-Life Balance Promotion

### Basic Approach

Daicel is striving to develop an environment in which all employees can work vibrantly with confidence, and the Company therefore supports work-life balance. It is also promoting flexible work styles while improving working conditions in order to establish an environment that helps diverse human resources pursue success.

Furthermore, we are taking on work style reforms and, to this end, proactively making changes in the ways we process our tasks, with the aim of securing greater productivity.

## Initiatives to Shorten Working Hours

In order to improve the work-life balance of all our employees and create working environments that meet their individual needs, Daicel is proactively pursuing three targets: 1) shortening mandatory working hours, 2) increasing the number of holidays, and 3) reducing overtime hours.

### ■ Measure to Shorten Working Hours

Timing	Description
April 2017	Reached an agreement with the labor union in regard to shortening mandatory working hours and increasing the number of holidays.
April 2018	Mandatory working hours for full-time employees, other than shift workers, was reduced from 8 to 7.5 hours per business day. Achieved a decrease of approximately 120 hours, or about 6.2%, in mandatory annual working hours.
April 2020	Increased the annual holidays for shift workers by 10 days.

## Improvement in the Annual Paid Leave Acquisition Ratio

In 2016, the Group set out a goal of achieving 70% or more in its annual paid leave acquisition ratio. To accomplish this, the Group mandates each worksite to designate a few days in their annual operational calendar, on which employees are encouraged to take annual paid leave. The number of designated days was increased from 3 to 4 in FY2019/3 and then increased to 5 in FY2020/3. This has led to our current 73.4% annual paid leave acquisition ratio.

## TOPICS Selected as a “Company with Best Practices”

In November 2019, the Company was selected as a “Company with Best Practices” by the Osaka Labor Bureau. In conjunction with the Ministry of Health, Labor and Welfare’s “No Overwork Campaign,” held every year in November, the bureau identifies companies taking active measures to reduce overwork and gives them the title of “Company with Best Practices.” Our achievements in 1) shortening working hours, 2) introducing “free-address” seating in our main offices, and 3) introducing work-from-home, satellite offices, and other telework capabilities were highly evaluated and resulted in our receiving the honor.

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# Initiatives to Help Realize a Flexible Working Style

## Helping Employees to Manage Work-Life Balance

At Daicel we are focused on implementing measures that offer diverse and flexible working arrangements to our employees, which in turn help them better manage their work-life balance.

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### Promoting Telework (Working from Home)

The Company promotes telework as a flexible, efficient work style that eliminates the limitations associated with specific working times or workplaces. In April 2017, we implemented a program that allows eligible employees, including those engaged in child and nursing care, to work from home. In October 2018, the program’s eligibility was extended to include all employees, and the limitation on the number of days that employees are allowed to work from home per month was eliminated. At the start of 2020, telework quickly became widespread as a preventive measure against the spread of COVID-19. During the nationwide state of emergency, our office workers in principle worked from home, and we reduced the number of employees coming into the office by almost 70% at our main offices in Osaka and Tokyo and Nagoya Sales Office. In addition, we had our worksite employees partially working from home, and we do not intend for this to be a temporary trend. Instead we view this as an opportunity to change our work style with a view to continuing to encourage our employees to make full use of telework.

Furthermore, the Company has established about 30 satellite offices, mainly within the Tokyo metropolitan area. These offices have the necessary equipment and Internet/intranet access and provide working environments for employees on business trips or in transit so they can do their jobs without having to return to their offices.

We have confirmed multiple benefits resulting from these initiatives, including less time spent in transit or commuting and increased productivity. Looking ahead, we will continue to review our current work styles and seek ways to improve efficiency. We hope to further increase productivity and achieve a better work-life balance by offering employees diverse, flexible work styles.

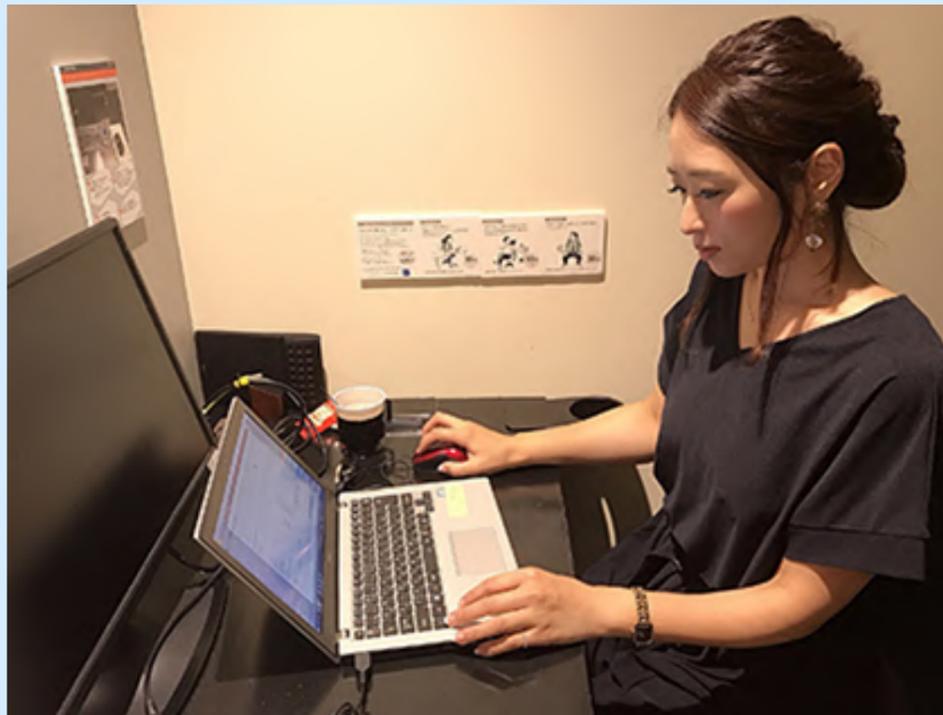
\* At Daicel, the work-from-home program (implemented in April 2017) and the work-from-satellite-offices program (implemented in February 2019) are collectively referred to as telework.

## TOPICS Participation in TELEWORK DAYS 2019



In FY2020/3, continuing from the previous year, the Company participated in the Japanese government's national campaign entitled "TELEWORK DAYS 2019," and each business unit was involved in activities that help us toward work style reforms. During the campaign, 280 employees worked from home or from satellite offices.

In addition, the Company conducted a survey immediately after the campaign. It was distributed to 553 employees working in our Tokyo and Osaka offices, and we received 506 responses (response rate of 91.5%). About 80% of the respondents indicated that they were able to focus more on their work and "their work efficiency was improved." Also, 86% indicated that they worked from home for one or two days during the campaign (ten working days). Our goal is to improve the work efficiency for each and every employee, and we will continue to improve our working environments and support more diverse and flexible work styles.



Employee working at our satellite office

### Encouraging Child-Rearing Leave for Male Employees

As part of "Improving the Work-Life Balance" and creating a workplace that encourages male employees to take child-rearing leave, the Company made a small portion of this type of leave (five days) as paid leave in FY2018/3. The percentage of eligible male employees taking the leave in FY2020/3 was 47%.

### Daicel's Programs to Help Employees Adopt Flexible Work Styles

We ensure that our programs and policies exceed statutory requirements.

■ Daicel's Programs to Help Employees Adopt Flexible Work Styles

Program/Policy		Full-time Employee	Contract Employee	
			Post-Retirement Employee	Contract Employee
Support for Child-rearing and Nursing Care	<p>Child-rearing leave*</p> <ul style="list-style-type: none"> <li>● Until the day before a child has reached the age of one</li> <li>● In certain cases, until the day before a child has reached the age of two</li> </ul>	○	○	○
	<p>Nursing care leave*</p> <ul style="list-style-type: none"> <li>● Up to 5 days per year</li> <li>● In cases where employees need to engage in the nursing care of two or more family members whose conditions meet such criteria, up to 10 days per year</li> </ul>	○	○	○
	<p>Extended nursing-care leave*</p> <ul style="list-style-type: none"> <li>● Up to 365 calendar days</li> </ul>	○	○	○
	<p>Family care leave*</p> <ul style="list-style-type: none"> <li>● In case employees need to care for their preschool-age children, they are entitled to special leave of up to 5 days per year aside from their annual paid leave (if raising more than two preschool-age children, up to 10 days per year)</li> </ul>	○	○	○
	<p>Special leave due to non-work accidents or illness</p> <ul style="list-style-type: none"> <li>● Employees are entitled to take special leave of up to 20 days per year aside from their annual paid leave, in the event they have a non-work accident or are sick and must be absent from work for over 3 consecutive working days.</li> </ul>	○	○	○
	<p>Special paid leave for employees whose spouse gives birth</p> <ul style="list-style-type: none"> <li>● Male employees are entitled to special paid leave of up to 3 days when their wife gives birth.</li> </ul>	○	○	○

Program/Policy		Full-time Employee	Contract Employee	
			Post-Retirement Employee	Contract Employee
Mental and Physical Health	<p>Annual paid leave</p> <ul style="list-style-type: none"> <li>Employees are entitled to a fixed number of annual paid leave days based on years of service from the first day of their employment.</li> </ul>	○	○	○
	<p>Promotion of annual paid leave acquisition</p> <ul style="list-style-type: none"> <li>In conjunction with the formulation of annual operational schedules, each worksite designates multiple dates on which employees are encouraged to take annual paid leave.</li> </ul>	○	○	○
	<p>Health Day</p> <ul style="list-style-type: none"> <li>Employees are entitled to special paid leave for the purpose of health management during the month of their birthday or the previous or following month.</li> </ul>	○	○	○
Work-Life Balance	<p>Reduced work hour system</p> <ul style="list-style-type: none"> <li>Employees who meet the criteria (pregnant, child birth, child rearing, nursing care) are allowed to reduce their working hours by up to 135 minutes per day. They can also use flextime in combination with this program.</li> </ul>	○	○	○
	<p>Flextime</p> <ul style="list-style-type: none"> <li>Employees are allowed to work under a flexible work schedule that meets a set of criteria without defining the core hours.</li> </ul>	○	○	○
	<p>Work from home</p> <ul style="list-style-type: none"> <li>All employees are entitled to work from home on an as-needed basis (no limitations on frequency per month).</li> </ul>	○	○	○
	<p>Work from a satellite office</p> <ul style="list-style-type: none"> <li>For the purpose of work efficiency and higher productivity, employees can work at locations that are not their designated business sites.</li> </ul>	○	○	○

\* Program or policy that exceeds statutory requirements.

\* Click [here](#) for various employee data.

## Working Environments that Provide Flexibility for Employees

Daicel is focused on creating working environments that enable employees to perform at the best of their capabilities, thus contributing to higher productivity.

### Introduction of the Free-Address System

Daicel's Tokyo and Osaka Head Offices as well as the Nagoya sales office have non-territorial office layouts. The "free-address" (free seating) work platform at these sites facilitates worksite communication and in-house collaboration, and the Company will continue to step up its efforts to promote work style reforms.

In addition, iCube, a part of the Innovation Park, which is an R&D powerhouse that opened in April 2017, is equipped with a large, non-territorial office space designed to spark formal and informal communication between workers. It thus provides an innovative working environment for those specializing in such fields as exploratory research, product development, production innovation, process innovation, and engineering. The setting helps them to inspire each another, boosting motivation as they work together to push forward with the development of new products and innovative mass-production technologies as well as the creation and commercialization of new businesses.



Office atmosphere

### Introduction of the New "Office Casual" Dress Code

As part of its work style reforms, the Company introduced the new "Office Casual" dress code for employees at its main and branch offices. Apart from "Cool-Biz" and "No Tie" attires, already accepted in our workplaces, employees can also wear T-shirts, sneakers, and other casual clothing under the new dress code. This gives them the flexibility to choose what to wear according to their specific roles. The Company will continue to focus on creating working environments that enable employees to perform at the best of their capabilities, thus contributing to higher productivity.

In our worksites other than the main and branch offices, employees wear uniforms as a protective measure. In October 2019, these were upgraded to be more functional.



Employees in Office Casual Attire

## Employee Benefits and Welfare (Yu Ai Kai Mutual Aid Association)

This fraternal association was created to leverage the mutual aid of members for their improved well-being and to nurture self-motivation and a spirit of friendship.

This fraternal association was created, in accordance with the welfare policies defined by Daicel's labor union and management, to leverage the mutual aid of members for their improved well-being and to nurture self-motivation and a spirit of friendship. Its members consist of Daicel's employees and staff of Daicel Group companies who are also Yu-Ai-Kai members.

### ■ Benefits and Welfare

Item	Description
Congratulatory stipend for weddings	The stipend is paid when a member gets married.
Congratulatory stipend for childbirth	The stipend is paid when a member or their spouse gives birth to a child.
Congratulatory gifts when a member's child enters school	A gift is presented when a member's child has entered elementary, junior high, or high school (recipients choose a gift from a catalogue).
Stipend for members at the passing of a family member	The stipend is paid when a family member of a member has passed away. The amount varies by the degree of kinship.
Consolatory stipend for injuries and illness	The stipend is paid when a member takes a leave of absence due to a work-related injury or illness. The amount varies by the required days of leave.

Item	Description
Consolatory stipend for damage attributable to disasters	The stipend is paid when a member's dwelling is damaged by a fire, storm, flood, earthquake, or other disaster. The amount varies by the degree of damage.
Stipend for members on leave of absence	The stipend is paid when a member takes a leave of absence due to a non-work accident or illness, provided that the reasons for such leave meet the in-house criteria stipulated by the entities for which they work. The stipend is paid based on the required days of leave.
Stipend for subsidizing hospitalization expenses	The stipend is paid when a member or family member is hospitalized at a medical institution where health insurance is applied due to non-work accidents or illness. The stipend is paid per day of hospitalization, and the amount varies by the type of injury or illness.
Nursing care support stipend	The stipend is paid when a member applies for a nursing care leave program in place at their respective entity. The amount varies by the length of nursing care leave applied for.
Orphanage education annuity	Following a death, an annuity is paid to a member's dependent child or children. The annuity is paid monthly for each child attending elementary, junior high, or high school.
Refund upon withdrawal from membership	A refund is paid to members withdrawing from the association, with the sliding amount determined based on the period of membership.
Survivor's benefits	Benefits are paid to the survivor when either the member or registered spouse passes away.
Social contribution activity awards	A cash award is given to commend individual (or a group of) members deemed to have made a significant contribution to society.
GLTD insurance	Long-term disability insurance is in place to provide coverage for members who are unable to work for an extended period of time due to disability resulting from an injury or illness and who are not fully insured by the public insurance system or conventional disability income insurance.

# Sound Labor-Management Relations

## Summary of the Labor and Management Charter

- The Company and the Union shall understand each other's position and make decisions through negotiations and discussions based on respect for human life and dignity.
- The Company shall give latitude to Union activities and will not discriminate against its employees due to such Union activities.
- The Company and the Union shall eliminate managerialism and respect the humanity of employees. Employees shall contribute to the Company's business on their own will through efforts to enhance productivity.
- The Company shall treat employees in a fair and appropriate manner with the aim of making the maximum use of the capabilities of each employee.

Daicel considers its employees to be an important stakeholder and, accordingly, has established the Labor and Management Charter, which has been signed by representatives of labor unions and management. Both parties respect each other's standpoints and discuss issues in good faith in order to best develop the Company's business. Through these efforts, we are maintaining and reinforcing a healthy relationship between labor and management. In addition, labor and management committees are set up at each workplace. The Daicel Group undertakes a variety of measures covering a wide range of areas. This includes discussions between labor and management regarding such issues as working conditions, productivity improvement, personnel systems, working hours, and health management.

# Respect for Human Rights

## Daicel Group Human Rights Policy

At the Daicel Group, we recognize that, in order to progress and grow in tandem with society, it is imperative that we respect the human rights of anyone and everyone involved in or connected to us through our business activities. To fulfill this responsibility, the Daicel Group hereby establishes the Daicel Group Human Rights Policy (“the Policy”).

### Basic Position

We, the Daicel Group, are strong believers that “People are the foundation for our success.” The Daicel Group Conduct Policy and each Group company’s Code of Conduct declare our determination to comply with all laws and regulations; act with high ethical standards and sound judgment; respect the diversity, personality and individuality of every member connected to the Daicel Group and contribute to realizing a healthy and sound society that is free from discrimination and harassment.

Moreover, as a signatory of the United Nations Global Compact, we fully support international standards for human rights. We acknowledge the standards listed in the United Nations International Bill of Human Rights (Universal Declaration of Human Rights and both International Covenants), the core conventions set forth by the International Labour Organization (ILO) in their Declaration on Fundamental Principles and Rights at Work, and the United Nations Guiding Principles on Business and Human Rights. Accordingly, we promise to continue and promote efforts to respect and address the human rights in line with the above standards.

### Scope of Application

The Policy applies to all executives and employees of the Daicel Group. The Daicel Group will also encourage its business partners and suppliers to support the Policy, and in concert with them, will promote activities to fulfill its responsibilities relating to human rights.

### Human Rights Due Diligence

The Daicel Group will establish a system of human rights due diligence which will be continuously implemented. Human rights due diligence is a series of processes that includes identifying any adverse human rights impact connected to the Daicel Group and preventing or mitigating potential risks to human rights.

### Correction and Remedy

When the Daicel Group identifies that it has caused or contributed to an adverse impact on human rights contrary to the Policy, it will promptly take corrective and remedial actions through appropriate procedures.

### Education and Training

The Daicel Group will provide appropriate education and training to ensure that the Policy is integrated into all business activities and that human rights due diligence is effectively implemented.

## **Applicable Laws and Regulations**

The Daicel Group will observe laws and regulations of countries and regions where it conducts business. However, if a conflict occurs between internationally recognized standards of human rights and the standards stipulated by laws and regulations of an individual country or region, the Daicel Group will pursue a direction that respects international principles of human rights.

## **Dialogue and Consultation**

In implementing the Policy, the Daicel Group will seek expert advice on human rights both from within the company and external independent experts, and engage in dialogue and consultation with our Group stakeholders.

## **Information Disclosure**

The Daicel Group will publicly disclose the progress and results of its human rights activities based on the Policy.

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# **Efforts to Instill Respect for Human Rights in Practice**

From FY2020/3, the Human Resources Division and the Corporate Compliance Program Division at Head Office began visiting domestic and overseas Group companies to exchange opinions on human rights and labor issues. The presidents, CSR staff, and human resource managers of each Group company come together to discuss and evaluate the current situation of human rights and labor practices in the context of international standards to determine if there are potential risks associated with company practices. Henceforth, we plan to develop this activity to establish a mechanism of human rights due diligence that entails the process of identifying any adverse human rights impact connected to the Daicel Group and preventing or mitigating potential risks to human rights.

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# **Human Rights Training**

The Daicel Group provides human rights training to employees. In FY2019/3, we conducted special training focused on diversity led by an external specialist for the executive officers of Daicel and the presidents of domestic Group companies. In FY2020/3, we provided similar training mainly to our managers as well as female employees in general. In addition, we focused on human rights as a theme in the discussion-based training for our Group companies during the compliance promotion period. We also provide individual human rights training programs that accommodate the needs of our divisions and domestic Group companies.

Click [here](#) for details on training through e-learning.

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# Reporting and Consultation

The Daicel Group has established the Compliance Help Line System (Whistleblowing System) to receive reports and provide consultation on issues that include human rights. Issues can be raised anonymously to protect the identity and privacy of the reporter, and rules are in place that prohibit any adverse treatment of the individual.

Click [here](#) for details on the Reporting and Consultation System.

# Supply Chain Management

In its purchasing activities, the Daicel Group carefully evaluates quality, pricing, and delivery dates while also considering social impact, in such areas as the environment, human rights, and the labor force. We established Basic Purchasing Policy and the Daicel Group CSR Purchasing Guidelines to encourage suppliers to gain an understanding of our policies and to fulfill our corporate social responsibilities in tandem with all of its supply chain constituents toward realizing a sustainable society.

## Basic Purchasing Policy

### 1. Fairness and Rationality of Transactions

- We shall be fair in providing prospective suppliers with opportunities for participating in business transactions. Also we shall conduct our purchasing activities in an open manner with no regard for previous dealings and with no preference for companies domiciled in Japan.
- Our overall considerations shall be limited to matters of quality, price, stability of supply, state of technological development, environmental considerations, and the assurance of safety. We shall consider these aspects in a comprehensive manner.

### 2. Legal Compliance and Confidentiality

- We shall comply with laws and corporate ethics in our business operations.
- We shall strictly protect confidential information obtained through businesses and shall never infringe the intellectual property rights of third parties.

### 3. Establishing Relationships of Trust

- We shall strive to establish better partnerships with our suppliers in consideration of mutual benefit and trust as well as good faith.

### 4. Adherence to CSR Initiatives

- We shall promote sustainable development with our suppliers through our activities for corporate social responsibility and value improvement.

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## Daicel Group CSR Purchasing Guidelines

To help realize a sustainable society, the Daicel Group aims to fulfill its corporate social responsibilities in tandem with all of its supply chain constituents. To this end, we established the Daicel Group CSR Purchasing Guidelines in line with our Basic Purchasing Policy, specifying CSR issues where we encourage our suppliers to adopt a proactive stance. The

support of suppliers and their cooperation with these guidelines are prerequisites for business transactions with the Daicel Group. The Daicel Group CSR Purchasing Guidelines encompass the following items.

## Daicel Group CSR Purchasing Guidelines

1. Compliance with laws, regulations, and social norms
  - In the course of business activities, we shall comply with laws, regulations, and social norms with regard to such matters as business transactions, labor management, environmental preservation, safe operations, and intellectual property, thereby living up to higher standards of corporate ethics and fair business conduct.
  - In addition to complying with laws and regulations enforced in the countries and regions where we operate, we shall respect the cultures and customs of these local communities.
  - We shall not provide or receive entertainment or gifts that can be deemed to exceed the scope of sound commercial practice and social norms.
2. Respect for human rights and the working environment
  - We shall not condone forced labor, child labor, underpaid labor, or any other inhuman labor practices.
  - We shall eliminate discrimination within our workforce and strive to offer equal opportunity and realize the fair treatment of employees.
  - We shall prevent workplace harassment, bullying, and violence.
  - We shall respect the rights of our employees and, to this end, provide adequate wages while appropriately managing their working hours.
3. Occupational safety and health
  - We shall prevent occupational accidents and diseases by offering a safe and sanitized working environment and by paying close attention to the management of employee health.
  - We shall formulate emergency countermeasures by anticipating possible accidents and disasters with the aim of protecting employee safety.
4. Environmental consideration
  - We shall strive to reduce the environmental impact of our operations by, for example, reducing resource and energy consumption in the course of production, packaging, and distribution and by curbing emissions of CO<sub>2</sub> and industrial waste.
  - We shall pursue business operations that give due consideration to the protection of the global environment and the conservation of biodiversity.
5. Sound business management
  - We shall strive to engage in sound and transparent business management and appropriately disclose corporate information with stakeholders with the aim of establishing sincere relationships based on a spirit of mutual interest, respect, and trust.
  - We shall not provide any benefit to antisocial forces while also strictly prohibiting the provision or receipt of undue gain attributable to such fraudulent activities as insider trading.
6. The pursuit of product quality and product safety as well as improvement in technologies

- We shall strive to meet customer requirements with regard to product quality and safety in addition to providing accurate information about our products and services.
  - We shall strive to develop products and solutions through the pursuit of new technologies and better quality.
- 7.** Stable supply and flexibility to remain responsive to changes
- We shall deliver our products on time and strive to maintain stable supply.
  - We shall formulate business continuity plans to secure our preparedness for emergencies, including natural disasters and operational accidents.
- 8.** Information security
- We shall put in place security measures to combat network threats with the aim of ensuring that none of our systems are damaged by such threats or exploited by hackers to harm the systems of others.
  - We shall appropriately protect the personal information we handle whether it pertains to customers, employees, or other third parties.
  - We shall maintain the appropriate management of confidential information we receive from customers or other third parties, striving to prevent the leakage of such information.
- 9.** Contribution to communities and society
- We shall develop collaborative relationships with local communities and strive to contribute to the development of society.
- 10.** Promotion of CSR initiatives in which all supply chain constituents play their roles
- We shall proactively push ahead with CSR initiatives while also disclosing the status of such initiatives.
  - We shall ask our business partners to join our efforts to promote CSR with the aim of encouraging our entire supply chain to engage in CSR.
  - We shall engage in responsible purchasing practices, observing purchasing regulations that are in place to address social issues related to specific materials such as conflict minerals regulations.

\* Click [here](#) for more information on the procurement of raw materials, fuels, and components.

\* Click [here](#) for more information on equipment procurement.

# Contribution to Local Communities and Society

## Communication with Society

As part of its Responsible Care initiative, the Group maintains active communication with local communities. In order to build good relationships and contribute to local community development, we participate in an extensive range of activities such as those for nurturing children as the future generation and volunteer projects.

### Participating in the 2019 Children's Chemistry Experiment Show (Japan)

In October 2019, the Children's Chemistry Experiment Show was held at the Kobe International Exhibition Hall for two days, attracting approximately 3,200 visitors. This was our seventh exhibition, which we have held every year since 2013. As in previous years, we named our booth "Let's make colorful beads," which was very popular once again this year and welcomed about 600 children over the two days. Children, geared up with white lab coats and protective glasses enthusiastically took part in the experiment, and their family members enjoyed capturing the moments on their cameras. This was a great opportunity for them to explore the magic of chemistry in a fun and exciting way.



Children participating in an experiment



Children enthusiastically making colorful beads

### Holding a Japanese Culture Experience Event for Interns

In November 2019, we held a Japanese culture experience event at the communication space "KUSU," which was created at the Innovation Park as part of the Daicel Group's 100th anniversary celebrations. Interns from Germany and Indonesia participated and learned the etiquette and history of the Japanese flower arrangement and tea ceremony from our employees, who have some skills in these areas. After the event, they expressed how much they had enjoyed themselves and mentioned "Although it was my first time, I could make a beautiful flower arrangement thanks to the very helpful and patient instructor", "The Japanese tea was delicious, and I had such a wonderful time."



Interns with our employees instructor at the event



Learning flower arrangement

## Presenting High-performance Liquid Chromatographs (HPLCs) and Chiral Columns to the Indonesian Agency for the Assessment and Application of Technology (BPPT)

Since 2015, we have been building a relationship with a government R&D institute in Indonesia called the Agency for the Assessment and Application of Technology (BPPT) through technological cooperation on the analysis and safety of pharmaceuticals. In addition to the chiral columns we have provided, we presented the BPPT with a set of new HPLCs and additional chiral columns to help them obtain laboratory certification for chiral analysis. The analysis of chiral compounds is an essential technology in pharmaceutical development and manufacturing. Indonesia imports the majority of its pharmaceutical raw materials but does not yet have adequate technology and regulatory infrastructure to conduct sufficient chiral analysis. Through our technological support for the BPPT, we will continue to contribute to Indonesia's development.



Presenting a column to Indonesia (photo courtesy of the BPPT)

## Visiting a Foster Home

In May 2019, employees from Daicel Safety Systems (Jiangsu) Co., Ltd. (China) visited a foster home in Danyang City and donated various daily necessities such as disposable diapers, shampoo, toothpaste, soap, and towels. Through this type of volunteer activity, the company strives to raise public awareness of the children in these facilities with the hope that they will feel the warmth of community support.



Donating daily necessities to a foster home

## Daicel Cup Half Marathon in Danyang City

In December 2019, Daicel Safety Systems (Jiangsu) Co., Ltd. and Daicel Safety Technologies (Jiangsu) Co., Ltd. (China) sponsored the Daicel Cup Danyang Half Marathon. This was the first such event held in Danyang City, which aimed to promote the health of its residents. The event included a half marathon and “happy running” (5 km run), with 10,000 participants running through the city. The event has also been approved as a Japan-China Youth Exchange Promotion Event by the consulate general of Japan in Shanghai, contributing to the promotion of people-to-people exchanges between the two countries.



Daicel Cup Danyang Half Marathon

## Exchange with the Suranaree University of Technology

On January 23, 2020, Daicel Safety Systems (Thailand) Co., Ltd. and Daicel Safety Technologies (Thailand) Co., Ltd. held a briefing session on Cooperative Education (work experience program) with the Suranaree University of Technology. This took place at their university and was joined by 724 senior engineering students, who exchanged opinions with the alumni engineers. Participants seemed to have learned a lot and found new inspirations in a friendly and supportive atmosphere. The experience was a great opportunity for them to gain real-world experience and prepare themselves for the workforce.



With students at Suranaree University of Technology

## Soccer Lesson with Gamba Osaka at a Japanese School in Thailand

In December 2019, we held a soccer lesson with the support of a Japanese professional soccer team (J1 league), Gamba Osaka, at the Thai-Japanese Association School Sriracha in Thailand. The lesson, jointly conducted by Gamba Osaka and Daicel as its Diamond Partner, was called the “Asia Soccer Clinic in Thai by Gamba Osaka and Daicel” and also joined by employees of Daicel Safety Systems (Thailand) Co., Ltd. A total of 523 children from the school in their first to ninth grades participated, watching soccer techniques demonstrated by the coaches and taking part in a mini game. After the lesson, children begged the team to come back again someday. This was a great opportunity not only for children to experience the fun of playing soccer but also for Daicel and Gamba Osaka to promote their names in Thailand.



Children participating in the soccer lesson



Children with their eyes glued to the coaches' demonstrations

# Corporate Governance

## Basic Approach

Strengthening corporate governance is a key management initiative that enables us to enhance corporate value and achieve our social mission and responsibilities as a listed company.

Daicel maintains its agility by clarifying the responsibilities of each part of its organization and by adopting a management system that supports timely decision-making and implementation. Moreover, by actively soliciting external opinions to improve management transparency and fairness, Daicel will strive to maintain the soundness of its corporate management.

## History of Strengthening Corporate Governance

Date	Initiative	Purpose
June 1999	Introduced the Executive Officer System	To separate supervisory and business execution functions clearly
June 2000	Appointed Outside Directors	To strengthen decision-making and supervisory functions and ensure transparency in management
	Established the Nomination and Compensation Committee	To improve objectivity and transparency in the nomination and compensation assessment process
April 2002	Established the Management Advisory Committee	To strengthen decision-making functions through deliberation of important matters
June 2003	Shortened the term of Directors from two years to one	To clarify management responsibilities of Directors to shareholders
March 2006	Established the Information Disclosure Committee	To ensure reliability of the information to be disclosed
April 2006	Established the Risk Management Committee	To accurately understand and appropriately manage risks

Date	Initiative	Purpose
August 2010	Established the Internal Control Council	To build an internal control system and ensure the adequateness of its operation
June 2015	Increased the ratio of Outside Directors to 50%	To ensure further transparency of decision-making and supervisory functions and management
January 2016	Started to evaluate the effectiveness of the Board of Directors	To maintain and improve the effectiveness of the Board of Directors
January 2020	Improved the method for evaluating the effectiveness of the Board of Directors	To introduce individual interviews in addition to surveys

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## 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. Daicel has also established two types of Strategic Business Units (SBUs) that have business planning, marketing, and R&D functions. These are Value-Providing SBUs that deliver common value to target markets and Material-Providing SBUs that offer additional value from the chain of technologies and materials that Daicel has long cultivated, regardless of markets. With regard to production functions, we have integrated our plants into two Production Companies according to common core technologies and integrated functions related to ordering, production planning, and logistics into Customer Center to further improve our productivity in such areas as product quality and production cost and to strengthen competitiveness by optimizing the entire value chain. Moreover, we have adopted an Executive Officer System that has enabled us to clearly separate our decision-making, supervisory, and business execution functions. Such a clear division of roles has allowed us to bolster our business management structure and, consequently, corporate activities.

[> Corporate Governance Report \(June 30, 2020\) \[PDF : 858KB\]](#) 

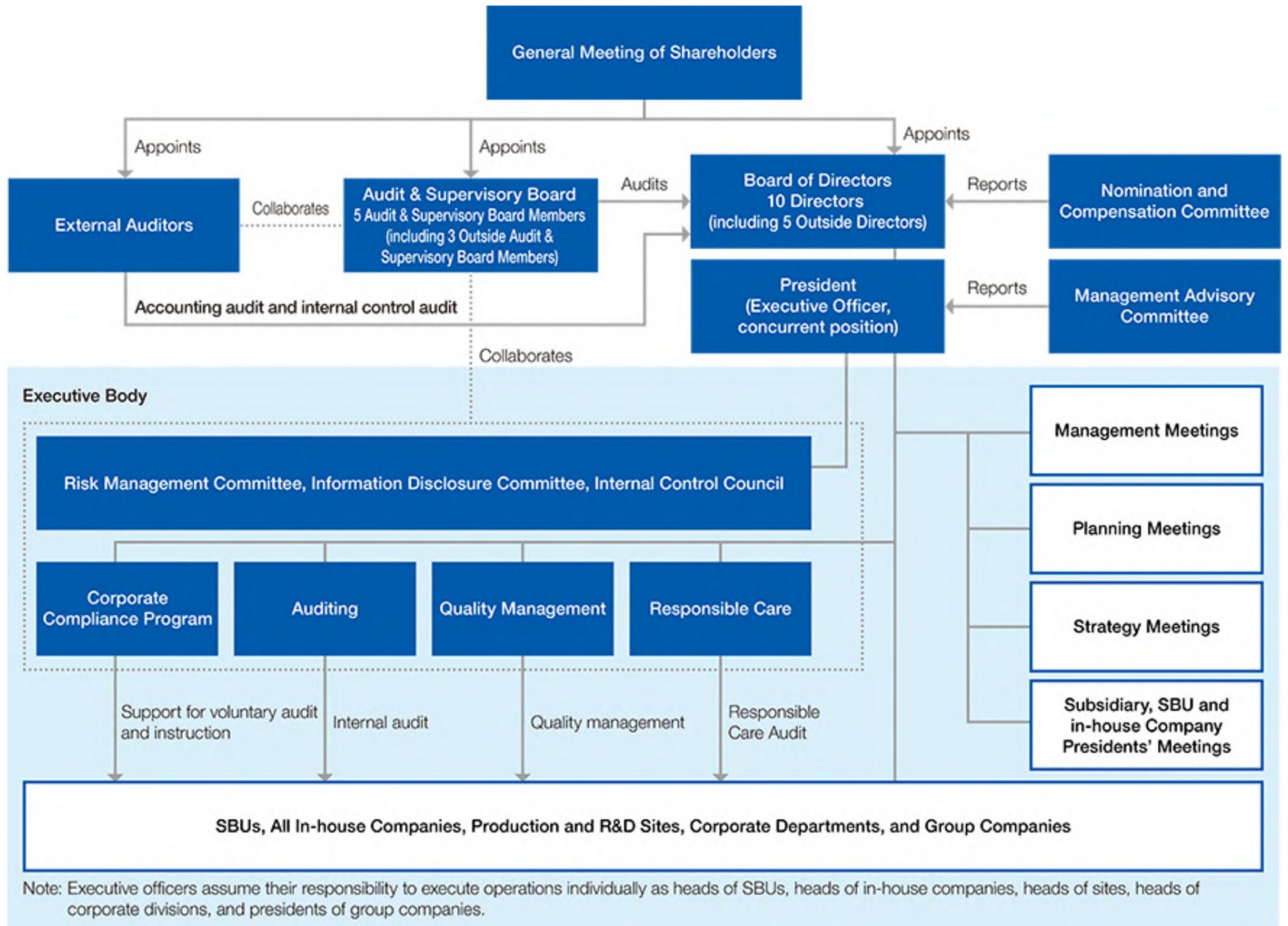

■ Outline of the Corporate Governance Framework (as of June 19, 2020)

Item	Content
Type of organizational structure	Company with Audit & Supervisory Board
Chairperson of the Board of Directors	Chairperson
Number of Directors	10
Number of Outside Directors (number of Independent Directors)	5 (5)
Number of Audit & Supervisory Board Members	5
Number of Outside Audit & Supervisory Board Members (number of Independent Directors)	3 (3)
Number of Executive Officers (number of Officers concurrently serving as Directors)	23 (4)
Number of female Directors	1
Number of Board of Director meetings held (average attendance rate of Outside Directors / Outside Audit & Supervisory Board Members)	14 in FY2020/3 (100% /100%)
Term of Directors	1 year
Voluntary advisory body to the Board of Directors	Nomination and Compensation Committee is composed of 8 Directors (including 5 Outside Directors) and chaired by an Outside Director.
Body that deliberates important corporate matters and reports to the President	Management Advisory Committee
Compensation system for Directors and Audit & Supervisory Board Members*	<ol style="list-style-type: none"> <li>1. Monthly compensation</li> <li>2. Performance-linked remuneration (excluding Outside Directors and Outside Audit &amp; Supervisory Board Members)</li> <li>3. Restricted Stock Compensation (excluding Outside Directors and Audit &amp; Supervisory Board Members)</li> </ol>
Auditor	Deloitte Touche Tohmatsu LLC

\* The compensation system also applies to executive officers and others.

The ratio between the three types of compensations (1, 2, and 3) is roughly maintained at 65:20:15.

■ Corporate Governance Framework (as of June 19, 2020)



➤ [Directors & Senior Management](#)

## Reasons for Appointment and Status of Activities of Outside Directors and Outside Audit & Supervisory Board Members

Daicel appoints its Outside Directors in accordance with its Standards for Independence of Outside Directors/Outside Audit & Supervisory Board Members, which require that Outside Directors be sufficiently independent and to present no risk of conflict of interest with general shareholders. Daicel also designates all Outside Directors who satisfy the independence criteria as Independent Directors.

### Reasons for Appointment and Status of Activities of Outside Directors (FY2020/3)

Directors	Term of Office	Reason for Appointment	Number of Board of Directors' Meetings Attended	Number of Nomination and Compensation Committee Meetings Attended
Masafumi Nogimori	3 years	Mr. Nogimori possesses a wealth of insights and experience, fostered as a manager of a company that produces and sells medical products, and applies these in the management of Daicel.	14/14	9/9 (Chairperson)
Kunie Okamoto	2 years	Mr. Okamoto possesses a wealth of insights and experience, fostered as a manager of financial institutions, and applies these in the management of Daicel.	14/14	9/9
Teisuke Kitayama	2 years	Mr. Kitayama possesses a wealth of insights and experience, fostered as a manager of financial institutions, and applies these in the management of Daicel.	14/14	9/9
Sonoko Hacchoji	1 year	Ms. Hacchoji possesses a wealth of insights and experience, fostered as a member of a management team at financial institutions and a hotel management company, and applies these in the management of Daicel.	12/12	5/6
Toshio Asano	1 year	Mr. Asano possesses a wealth of insights and experience, fostered as a manager of companies that manufacture and sell chemical goods, and applies these in the management of Daicel.	12/12	6/6

■ Reasons for Appointment and Status of Activities of Outside Audit & Supervisory Board Members (FY2020/3)

Audit & Supervisory Board Members	Years in Office	Reason for Appointment	Number of Board of Directors' Meetings Attended	Number of Audit & Supervisory Board Meetings Attended
Toshio Takano	8 years	Mr. Takano possesses highly specialized knowledge and insight as a jurist as well as experience gained through his involvement in corporate legal affairs. He has also served as an Outside Director and is experienced in practical business operations. For these and other reasons, the Company has determined that he is qualified for the post of Outside Audit & Supervisory Board member.	14 / 14	14 / 14
Ryo Ichida	6 years	Mr. Ichida possesses highly specialized knowledge, insight and experience gained through his practice of accounting and tax affairs. He has also served as an Outside Director and is experienced in practical business operations. For these and other reasons, the Company has determined that he is qualified for the post of Outside Audit & Supervisory Board member.	14 / 14	14 / 14
Junichi Mizuo	2 years	Mr. Mizuo possesses highly specialized knowledge and experience as a scholar of CSR, corporate governance and business ethics. He has also served as an Outside Director and is experienced in practical business operations. For these and other reasons, the Company has determined that he is qualified for the post of Outside Audit & Supervisory Board member.	14 / 14	14 / 14

> [Standards for Independence of Outside Directors and Outside Audit & Supervisory Board Members \[PDF : 22KB\]](#) 

# Effectiveness Evaluation of the Board of Directors

To maintain or improve the effectiveness of the Board of Directors, its performance is evaluated by Daicel. In addition to using questionnaires, we held individual interviews in the third quarter of FY2020/3 to ensure that our effectiveness evaluations are more effective and more appropriate than ever before.

## ■ FY2020/3 Effectiveness Evaluation of the Board of Directors

Evaluated	10 Directors and 5 Audit & Supervisory Board Members
Evaluation methods	<ul style="list-style-type: none"><li>● Questionnaire</li><li>● Individual interview</li></ul>
Main themes	<ul style="list-style-type: none"><li>● Composition of the Board of Directors</li><li>● Contents of deliberation, resolutions, reports, etc.</li><li>● Operating methods of the Board of Directors</li></ul>
Overview of evaluation results	<ul style="list-style-type: none"><li>● The Board of Directors engaged in productive discussions with Outside Directors and actively offered their opinions, and we were able to confirm that the board is effective. On the other hand, there were some issues that needed to be addressed to improve the board's effectiveness.<ul style="list-style-type: none"><li>(1) Board composition issues<ul style="list-style-type: none"><li>● Determining the ratio of inside and outside directors</li><li>● Addressing diversity in the Board of Directors (including the necessity of foreign directors)</li></ul></li><li>(2) Board deliberation issues<ul style="list-style-type: none"><li>● Setting the themes that are particularly appropriate for board deliberations</li><li>● Sharing information with the Board of Directors in an appropriate way</li></ul></li><li>(3) Board operation issues<ul style="list-style-type: none"><li>● Properly allocating time and providing clear rules and procedures for deliberation and reporting</li><li>● Making technical/internal terms easy to understand especially for Outside Directors</li></ul></li></ul></li></ul>

## Addressing Issues in Effectiveness Evaluations

To promote the effectiveness of the Board of Directors, Daicel takes various initiatives every fiscal year in response to the results of the previous year's effectiveness evaluation.

We would like to establish an effectiveness evaluation method that is appropriate for Daicel by considering a variety of options such as conducting individual interviews and introducing third-party evaluation.

## ■ Details of Major Initiatives for the FY2020/3 Effectiveness Evaluation for the Board of Directors

Major Initiatives	Details
Further enhance discussions on mid- to long-term issues (discussions on management strategy, ESG or SDGs)	Along with discussions on mid-term management strategies and long-term visions, discussions on ESG and SDGs were also carried out, which led to the establishment of the Sustainable Management Committee.
Maintain and improve the appropriate board composition to enhance discussion	The number of Directors was set at 10, and also female Outside Directors were appointed to facilitate broader, more diverse discussions.
Provide sufficient and timely information necessary for productive discussions (prepare reference materials that are easy to understand, and create opportunities for Outside Directors to understand business content)	To help Outside Directors better understand business content, opportunities to introduce each business field were created. To help the Board of Directors with the decision-making process, reference materials including risk information that are easy to understand were prepared and provided to the board.

## Appointment and Compensation of Directors and Audit & Supervisory Board Members

### Appointment and Nomination Procedures for Directors and Senior Management

In nominating candidates for Directors and Audit & Supervisory Board Members and appointing senior management, Daicel in principle requires the individuals to agree with and inherit the Daicel Group's Basic Philosophy, Conduct Policy, and Daicel Code of Conduct and to possess the necessary credentials and experience to realize mid- and long-term enhancement of the Company's corporate value. The Company also nominates and appoints individuals with adequate personality, knowledge, motivation, ethical views, and management perspective to lead the company. Decisions on nominations and appointments are made by the Board of Directors based on the advice of the Nomination and Compensation Committee.

### Nomination and Compensation Committee

The Nomination and Compensation Committee was established as an advisory body on the nomination of directors and executive officers and make recommendations on their compensation in response to consultation by either the chairperson of the Board of Directors or the Audit & Supervisory Board. To ensure transparency, validity, and objectivity regarding decisions on personnel and compensation, the committee is chaired by an Outside Director, and five Outside Directors represent the majority of the committee's eight members.

### Compensation for Directors and Audit & Supervisory Board Members

#### 1. Basic Approach

- (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 65:20:15 ratio. This rule does not apply to Outside Directors, who shall be paid only a monthly compensation. The compensation of Audit & Supervisory Board Members shall consist solely of monthly compensation.
- (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- and long-term business plans, and social situation, among other factors.

### (2) Performance-based Bonuses

Performance-based bonuses of directors are paid in accordance with the accomplishment of performance indicators designated by the Board of Directors. Currently, net sales and operating income are used as the indicators to emphasize business growth, market expansion, and improvements in the earning power of our core business. These indicators are given a 50-50 weighting, and the basic amount of the performance-based bonus is calculated by multiplying the rank-based amount with a payout rate that fluctuates between 0% and 200% depending on the level of accomplishment of the performance indicators. The payout rates linked to the indicators are calculated as follows.

- Calculate the standard deviation ( $\sigma$ , sigma) based on the average value of net sales over the past five years.
- Draw a line based on three points: the value of net sales for the relevant fiscal year, which serves as an indicator; the value that is  $1\sigma$  higher than the first figure, and the value that is  $1\sigma$  lower than the first figure.
- The payout ratio is determined by plotting the actual net sales of the relevant fiscal year on that line.

The final amount of performance-based bonuses are determined by assessing the status of each director from the perspectives of practicing sustainable management policies and accomplishing medium-term strategies, 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 Stock Compensation System to step up value-sharing with shareholders and motivate directors to contribute more to medium- to long-term improvement in corporate value. The stocks cannot be transferred for a period of 30 years, and the Board of Directors decides on an amount for each eligible individual, which is then divided by the stock price at a certain point to calculate the number of shares to be awarded.

## ■ FY2020/3 Total Compensation

Category	Number of Recipients	Amount (Annual)			
		Cash Compensation		Stock-based Compensation	Total
		Monthly Compensation	Performance-based Bonus		
Directors (Outside Directors)	13 (6)	289 million yen (62 million yen)	0 (-)	52 million yen (-)	342 million yen (62 million yen)
Audit & Supervisory Board Members (Outside Members)	6 (3)	103 million yen (39 million yen)	- (-)	- (-)	103 million yen (39 million yen)
Total	19	392 million yen	0	52 million yen	445 million yen

Note: The above figures for the number of recipients and amount include 3 Directors and 1 Audit & Supervisory Board Member who retired as of the 153rd General Meeting of Shareholders, held on June 21, 2019.

## Management Advisory Committee

The Management Advisory Committee is in charge of deliberating on such important corporate matters as the formulation of Group strategies and business restructuring based on such strategies. By doing so, the committee serves as an advisory body for the president. The committee comprises the president, Directors (excluding Outside Directors) and executive officers designated by the president, and the committee convenes these members on an as-needed basis.

## Internal Control Systems

In accordance with basic policy for structuring internal control systems, the Daicel Group works to administer and enhance its internal control systems. Furthermore, Daicel has established the Internal Control Council as a body charged with grasping accurately the status of the establishment and management of these systems in an effort to ensure the effectiveness of internal controls throughout the Group.

➤ [Basic Policy for Structuring Internal Control Systems \[PDF : 48KB\]](#) 

## Training for Directors and Senior Management

Directors and Audit & Supervisory Board Members attend external seminars and training sessions in order to acquire the knowledge necessary for the performance of their duties and work tasks in addition to updating their skills. The Company bears the costs of these activities. It also provides annual compliance training for Directors, Audit & Supervisory Board Members, Executive Officers, and other senior employees (excluding outside directors).

In addition, we provide opportunities for Outside Directors to tour our manufacturing sites and receive an explanation of Daicel's business activities during the Board of Directors' meetings so they can better understand our business and utilize their knowledge in discussions with in Board of Director's meeting.

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# Communication with Shareholders and Investors

## Appropriate Information Disclosure and Constructive Dialogue

Daicel encourages fair evaluation of its corporate value by following its disclosure policy to foster accurate understanding of the Company among its stakeholders, including shareholders and investors. With the aim of building relationships of trust with all its stakeholders, Daicel has opted for a basic policy of disclosing corporate information in a timely, impartial, accurate, and proactive manner on an ongoing basis. We also carry out IR activities to engage in dialogue with our shareholders and investors to further enhance the company's value.

[> Our disclosure policy, including our basic policy on information disclosure, is available on our website.](#)

## General Meeting of Shareholders

We have considered the Annual General Meeting of Shareholders as a valuable opportunity to engage with our shareholders. Daicel posts the convocation notice for its Annual General Meeting of Shareholders on its website prior to distributing it by postal mail, aiming to provide shareholders with sufficient time to examine the agenda items. Moreover, to ensure that as many shareholders as possible to exercise their voting rights, we offer voting alternatives via postal mail or the Internet for those who are unable to attend the meeting.

To facilitate their further understanding of initiatives of the Daicel Group, we are striving to provide easy-to-understand answers to questions voiced by shareholders.

At the Annual General Meeting of Shareholders held on June 21, 2019, we set up an exhibition booth outside the venue with the aim of showcasing the Daicel Group's products and technologies.

After the closure of the meeting, we invited attendees to join a casual gathering aimed at facilitating interaction between shareholders and Daicel's officers and Directors. This enabled Daicel's officers to engage in in-depth dialogue with attendees.

## IR Activities

In line with the aforementioned basic policy on Information disclosure, Daicel adopts a proactive approach toward its IR activities.

By holding quarterly results briefings as well as individual interviews, and interviews at conferences sponsored by securities companies, the Company actively strives to promote communication, aspiring to foster better understanding of the organization among institutional investors.

In addition to disseminating information through our website and newsletters to shareholders, we are actively engaged in investor relations activities focused on the business briefings for individual investors that we offer at investment events hosted by securities companies.

[> For Investors](#)

■ FY2020/3 Activities

Events	Occasions (FY2020/3)	Content
Financial briefing sessions for analysts and institutional investors	4	Held on a quarterly basis; the interim and period-end results were presented by the president, while the first and third quarter results were explained via conference calls hosted by the Investor Relations Department
Individual interviews with analysts and institutional investors	Approx.200	Conducted individual interviews and conference calls with analysts and institutional investors
Participation in conferences for overseas investors	1	Participated in domestic conferences for overseas investors, with the officer in charge of IR conducting individual interviews
Business briefings for individual investors	2	Participated in investment events for individual investors hosted by the head office or branch offices of securities companies and offered business briefings

# Corporate Compliance

## Basic Approach

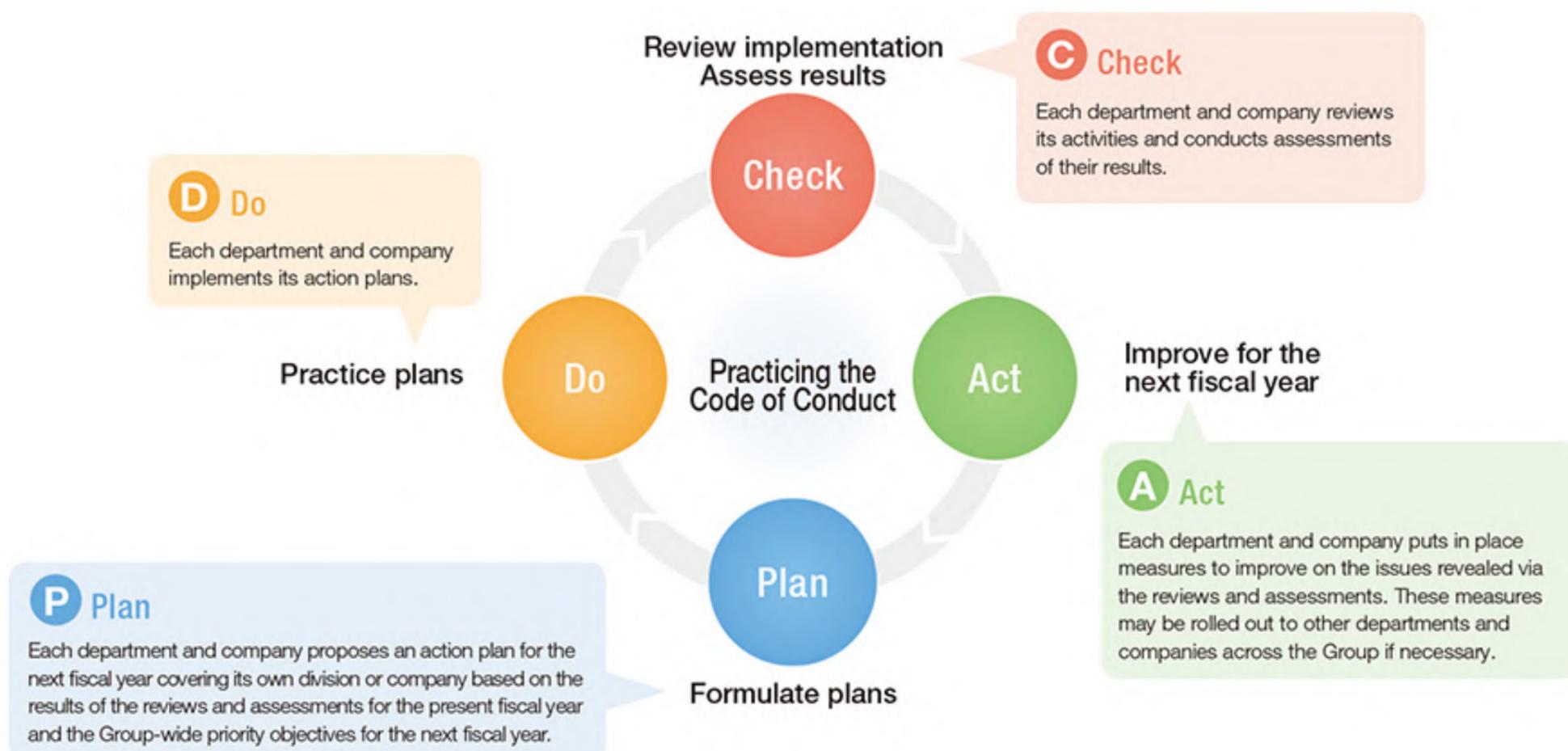
Our code of corporate compliance contributes to the foundation of sustainable management. Also, each department and Group company in the Daicel Group systematically conducts a number of corporate compliance activities. Instilling a sense of corporate compliance in every employee is considered to be just as vital, and therefore we promote corporate compliance Group-wide.

## Corporate Compliance Management System

The Daicel Group positions both the Daicel Group Conduct Policy, formulated based on the Group's basic philosophy, and each Group company's Code of Conduct, established to embody the policy, as corporate compliance activities. We believe that these are not to be carried out only by certain individuals or organizations; but rather all employees across the Group should be involved. In promoting them, we have established the Corporate Compliance Management Regulations and Corporate Compliance Management System based on the Check-Act-Plan-Do (CAPD) cycle\* to drive continuous improvement and development of the activities.

\* Instead of a plan, do, check, and act (PDCA) cycle, the more widely known approach to continuous improvement, Daicel 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.

## ■ CAPD Cycle



For details on the Daicel Code of Conduct, [click here](#).

## System for Promoting Corporate Compliance Activities

Daicel established the Corporate Compliance Program Division to promote corporate compliance activities and appointed a representative director of the Company as its corporate compliance officer. Each Daicel department and Group company appoints a Compliance Activity facilitator, who spearheads activities related to corporate compliance.

The Corporate Compliance Program Division compiles a report on the status of corporate compliance and related issues at each department and Group company at the end of each fiscal year and reports to the president and other members of the management team during the corporate compliance Top Management Review, where issues and the activity objectives for the following fiscal year are discussed. Once the activity objectives for the next fiscal year are approved by the Board of Directors, the division requests each department and Group company to formulate and execute their respective activity plans for the next fiscal year based on the objectives.

### ■ Promotion System for Corporate Compliance



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# Compliance

We have established the Legal Compliance System, in which each supervisory department responsible for applicable laws and regulations ensures compliance with and manages information on the latest legal developments. Under the system, 11 corporate departments, including the Legal Group, are responsible for providing the relevant departments with information on revisions to laws, regulations, and guidelines as well as educational materials.

Furthermore, every department and Group company in Japan completes an annual compliance self-evaluation checklist to review the status of compliance at each workplace and clarify any issues. If there are any non-compliance or possible non-compliance issues, appropriate measures are taken to ensure compliance. The self-evaluation checklist items are reviewed every year to reflect revisions to relevant laws and social trends so that compliance is integrated throughout the Group

## ■ Key Self-Evaluation Checklist Items Added or Updated in FY2020/3

- Understanding the laws related to harassment and to examining and implementing communication measures to build a healthy harassment-free work environment, including the revised “Act on Comprehensive Promotion of Labor Policies” and “Stabilization of Employment and Improvement of Workplace Environments” (Anti-Power Harassment Law)
- Examine and implement measures necessary for promoting annual paid leave acquisition

## ■ Flow of Compliance Self-Evaluation



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# Initiatives Pursued by Daicel’s Committees

To address specific compliance issues, such as export management and the protection of personal information, individual committees are established in accordance with each set of relevant rules and regulations. These committees consider pertinent issues and help resolve them in an effort to ensure robust compliance.

## ■ Committees

Committees	Regulations	Frequency of Meetings	Members	Purpose
Risk Management Committee	Risk Management Regulations	Once per year	Chairman: Representative director, managing executive officer Members: <ul style="list-style-type: none"> <li>• Heads of corporate departments</li> </ul>	To discuss and approve issues and countermeasures related to promoting risk management of the entire Group
Information Disclosure Committee	Regulations on Information Disclosure	As needed	Chairman: President & CEO Vice chairman: <ul style="list-style-type: none"> <li>• Representative director, managing executive officer</li> </ul> Members: <ul style="list-style-type: none"> <li>• Management and heads of other related departments</li> </ul>	To discuss and determine the concrete details, schedule, and methods of information disclosure, and to discuss information that may be required for future disclosure from the perspective of crisis management
Export Controls Committee	Regulations on Export Controls	Once per year	Chairman: Representative director, managing executive officer Members: <ul style="list-style-type: none"> <li>• Executive officer, general manager of Production Technology Headquarters</li> <li>• Head of Corporate Sustainability</li> <li>• Head of Responsible Care</li> <li>• Head of Corporate Compliance Program</li> <li>• Leader of Administration and Legal Group</li> </ul>	To establish and thoroughly integrate an internal management system across the Company in order to ensure there are no illegal export activities or the provision of goods and technologies under security trade-related laws and regulations for maintaining international peace and security

Committees	Regulations	Frequency of Meetings	Members	Purpose
Personal Information Protection Committee	Regulations on Personal Information Protection	As needed	Chairman: Representative director, managing executive officer Members: <ul style="list-style-type: none"> <li>● Head of Corporate Compliance Program</li> <li>● Leader of Personnel Group</li> <li>● Leader of Digital Strategy</li> <li>● Leader of Investor Relations &amp; Corporate Communications</li> <li>● Leader of Administration and Legal Group</li> </ul>	To ensure the proper handling of personal information based on the relevant laws and regulations such as the Act on the Protection of Personal Information

## Fair Business Practices

The Daicel Group Conduct Policy clearly expresses our determination to conduct honest trade in accordance with the basic principles of fair and free competition. Moreover, the Daicel Code of Conduct mandates adherence to compliance with antitrust laws and highly transparent political and governmental relationships. In the course of procurement, the code states that we shall conduct business fairly and honestly based on economically rational measures and, with respect to entertainment and gifts, we will act with a clear distinction between public and private matters within the scope of sound commercial practice and judgment. All Daicel Group employees are determined to act in line with the spirit of this policy and live up to the code in their day-to-day operations.

## Compliance with Antitrust Laws

To maintain fair and free competition, the Daicel Group conducts all its business activities in compliance with the applicable laws and guidelines of each country, including “the Act on Prohibition of Private Monopolization and Maintenance of Fair Trade” and “the Act against Delay in Payment of Subcontract Proceeds, Etc. to Subcontractors”. We are working to raise employee awareness by establishing the Antitrust Law Compliance Manual, Practical Guide to the US Antitrust Laws (Do’s & Don’ts) and EU Competition Law Practice Guidelines, and also by providing stratified group training and e-learning programs. Moreover, we provide training focused on precautions regarding local laws and regulations for employees to be transferred outside of Japan.

## Prevention of Bribery and Corruption

The Daicel Group has signed the United Nations Global Compact and is determined to prevent all forms of corruption, including bribery. Regardless of where we operate, we do not engage in any actions that may be mistaken for bribery, and we maintain highly transparent relationships with politicians, government officials, business partners, and all other stakeholders. As a general rule, we prohibit the giving and accepting of gifts, meals, and entertainment to or from business partners, except when it is deemed to be within the scope of sound business practices and social common sense and is approved by the relevant department head. For employees to be transferred outside of Japan, we provide them with training focused on the Prevention of Bribery of Foreign Public Officials under the Unfair Competition Prevention Act and precautions regarding local laws and regulations (including the extraterritorial reach of the US Foreign Corrupt Practices Act).

For details on signing the United Nations Global Compact, [click here](#).

## Tax Policy

Regardless of where we conduct business, the Daicel Group strives not only to comply with applicable laws and regulations, social norms, and internal regulations but also to act with social decency so as to earn the trust of society. When dealing with tax matters, we will thoroughly investigate tax risks associated with international business transactions, including transfer pricing, to ensure that our tax payments are made in a legally compliant and appropriate manner.

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## Priority Objectives and Results of Corporate Compliance Activities

Based on issues identified in FY2019/3, we set the Group-wide priority objectives for FY2020/3 as follows.

### FY2020/3 Priority Objectives of the Daicel Group's Corporate Compliance Activities

- Let's create workplace where all members can "Visualize, Voice, Listen and Respond."
- Spreading awareness of Help Line (how to use, confidentiality, recovery from disadvantages and others)

The Corporate Compliance Program Division shared the purpose and background of these objectives with all employees and Group companies (including those outside of Japan). In response, each workplace created its own corporate compliance activity plan. To check the progress of these plans and exchange opinions on the issues specific to each department and company, the Corporate Compliance Program Division toured all Daicel departments and Group companies (including those outside of Japan) to assist them in running CAPD cycles for their corporate compliance activities.

We realize there are still more efforts to be made to create a workplace that satisfies the three objectives. Through the

survey of employees, including those working in Group companies in Japan, we also found that many had responded positively to the existence of the Help Line but also had a number of questions about how to use it. This indicated that the Help Line has yet to be sufficiently understood across the Group.

We therefore set priority objectives for FY2021/3 based on the results obtained in the previous fiscal year.

## FY2021/3 Priority Objectives of the Daicel Group's Corporate Compliance Activities

① Early detection of workplace problems and nip them in the bud

For that:

② Let's create a workplace where all members can "Visualize, Voice, Listen and Respond"

③ Spreading awareness of Help Line (how to use, confidentiality, recovery from disadvantages and other)

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## Initiatives for the Daicel Group Compliance Enhancement Period

In addition to the initiatives planned by each workplace, we also designated every August and September as the Daicel Group Compliance Enhancement Period. The following initiatives were carried out by Daicel and its Group companies (including those outside of Japan) in FY2020/3.

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### 1. Small Group Discussions

We held small group discussions on the examples covering the issues that require the attention of all our Group employees. Participants discussed the causes of the occurrence, countermeasures, and similar experiences and shared their various opinions.

#### ① Harassment

To regain an understanding of the appropriate way of providing guidance and the importance of putting oneself in other people's shoes, examples were created and discussed.

#### ② Information leakage

The causes and environmental factors that lead to information leakage and means of protecting confidential information were discussed.

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### 2. Educational Sessions

We provided e-learning programs on the Basic Philosophy, Conduct Policy, each Group company's Code of Conduct, Compliance Help Line System (whistleblowing system), and other compliance issues. In total, 4,925 employees took part in the program in FY2020/3 (98% attendance).

### 3. Senryu\* Contest

We encouraged our Group employees in Japan to submit their own senryu poem on compliance, then selected excellent pieces for prizes from 260 works.

We are convinced that this contest provided Group employees throughout Japan with good opportunities to reflect on compliance.

As we did in the previous fiscal year, we uploaded a variety of compliance education materials each month to the intranet covering all Group companies. These materials included the latest news related to compliance, case studies aimed at facilitating group discussions, everyday examples of potential compliance violations depicted in four-panel cartoons, and compliance quizzes, all used effectively while facilitating casual compliance classes at workplaces.

\* Senryu: a humorous seventeen-syllable poem

## Education and Training Programs

Daicel systematically provides corporate compliance training tailored to each position and role for new graduate recruits, recently promoted employees, managers, directors, presidents of Group companies, employees posted to outside of Japan Group companies, and others. We also organize seminars on specific themes in response to requests from individual departments and Group companies.

### ■ Group Training Programs in FY2020/3

Name	Target	Content	Number of Participants
Rank-based Training	New recruits	General course on corporate compliance (lectures, group discussions)	83
	Newly appointed mid-level staff, Grade S2 & S3		96
	Newly appointed senior staff, Grade S4		80
	Newly appointed senior staff, Grade S5		65
	Newly appointed managers		55
Engineering compliance Training	Employees enrolled in our engineer development program	General course on engineering compliance (lectures, group discussions)	56

## ■ Other Training Programs in FY2020/3

Name	Target	Content
Training for Expatriate Employees	Employees posted outside of Japan	Competition law, bribery, discrimination, harassment, prevention of misconduct
	Newly appointed presidents of outside of Japan Group companies	Business compliance
Training for Newly Appointed Directors of Group Companies	Newly appointed directors of Group companies	Business compliance
Training for Directors	Daicel directors, presidents of domestic Group companies	SDGs

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## Reporting and Consultation (Whistleblowing System)

With the same intent of the Whistleblower Protection Act, Daicel has put in place the Compliance Help Line System, through which employees can report compliance-related issues and receive consultation if they are unable to do so using the regular reporting line. A whistleblower can also use the Help Line via internal and external (independent third party) contact points, and this goes for employees at Group companies in Japan as well. Additionally, we established another help line system, which enables Group company personnel to report to and consult with Daicel in their own language.

Since February 2020, we have been establishing an online consultation contact that can be reached by external parties on our website (available 24 hours).

It has also put in place the Corporate Compliance Management Guidelines: (1) The personal information and privacy of whistleblowers and those who request consultations must be protected; (2) Adverse treatment in response to whistleblowers and those who request consultations must be prohibited; and (3) Results related to investigations must be fed back to whistleblowers and those who requested consultations. Steps are being taken to ensure that these guidelines are strictly upheld to protect the whistleblowers.

We provide the responses properly and follow up on each situation reported and consulted on, including establishing the facts and implementing corrective measures, warnings, and education if any non-compliance is found. All reporting and consultation through email is directly transferred to our Standing Audit & Supervisory Board Members, and the status of our response and the results of cases are regularly reported to the Board of Directors and Audit & Supervisory Board.

We keep employees at each workplace informed of the system while also providing information through rank-based training and e-learning programs offered during the Daicel Group Compliance Enhancement Period. There were no cases in FY2020/3 that significantly affected management.

## ■ Number of Reports and Consultations

(Reported cases including those which were not confirmed as fact)

	2018/3	2019/3	2020/3
Reports and consultations	30 (13)	52 (35)	51 (39)
Including cases that significantly affected management	0 (0)	0 (0)	0 (0)
Not applicable	1 (0)	0 (0)	0 (0)
Total	31 (13)	52 (35)	51 (39)

- The total number of cases indicates ones reported to the Corporate Compliance Program Division from individuals across the Group.
- Figures in brackets represent the numbers of reports and consultations received from Group companies outside Japan.

## Daicel Group Conduct Policy

We, the Daicel Group, have established the following Conduct Policy in order to realize our Basic Philosophy. Every member of the Daicel Group shall fully understand and voluntarily consider this Conduct Policy and shall put it into practice in a tangible way through their daily activities.

1. We shall not only comply with all laws and regulations but also act with high ethical standards and sound judgment.
2. We shall contribute to the development of society as good corporate citizens.
3. We shall offer safe, high-quality products and services that satisfy and gain the trust of our customers.
4. We shall contribute to the development of local communities by complying with international rules and each country's laws and regulations and by respecting local cultures and customs.
5. We shall willingly and justly disclose reliable corporate information.
6. We shall conduct honest trade in accordance with the basic principles of fair and free competition.
7. We shall work positively to conserve the natural environment and to ensure safety.
8. We shall properly manage corporate assets and information.
9. We shall respect the diversity, personality and individuality of every member connected to Daicel Group and shall contribute to realize a healthy and sound society that is free from discrimination and harassment.

# Daicel Code of Conduct

## **Introduction**

This Code of Conduct gives shape to the Daicel Group Conduct Policy and clearly defines the code for carrying out corporate affairs for everyone working at Daicel.

It is not just a matter of having a thorough understanding of the Code of Conduct. Each and every one of us has to actively put this Code into practice in our own everyday activities to create a vibrant corporate culture within the Company and to create a company that gains society's trust.

However, the items stated in the Code of Conduct do not cover all cases. It is important for everyone to carry out their daily activities while giving full consideration to the Daicel Group Conduct Policy.

## **1. We shall not only comply with all laws and regulations but also act with high ethical standards and sound judgment.**

### 1-1 Response with integrity to stakeholders

We shall respond with integrity, respect and gratitude to all people connected to Daicel - customers, shareholders, business partners, employees and local society.

### 1-2 Compliance with laws and ethics

Rigorously complying with legal rules and regulations, whether within or outside Japan, we shall act to be constantly trusted and respected by all in society by using sound social judgment in the performance of our duties.

### 1-3 Maintenance of effective internal systems and training

In order to further ensure that laws and corporate ethics are complied with, we shall constantly review and improve our internal rules and regulations to strengthen effective internal systems and shall thoroughly familiarize the entire organization through training sessions.

### 1-4 Response to antisocial influences

We, in cooperation with the police, industrial associations and regional entities, shall take a firm stand against anti-social influences and/or organizations that disturb civil order and safety.

We shall have no connections with them in any way, either directly or indirectly.

1-5 Report and whistleblowing

In case we recognize behavior that does not comply with this Code of Conduct, in order to resolve such behavior, we will immediately report to a superior or, when it is difficult to do so, report by utilizing the whistleblowing system such as the Compliance Help-Line System.

**2. We shall contribute to the development of society as good corporate citizens.**

2-1 Implementation of social contribution activities

We shall make social contributions from the viewpoint of trying to coexist in mutual prosperity with society through corporate activities, through cultural and sporting events, as well as by assisting in rescue and relief operations in the event of an emergency such as an accident or natural disaster.

2-2 Implementation of communication with society

We shall strive to promote the understanding of our corporate activities by active communication with society.

**3. We shall offer safe, high-quality products and services that satisfy and gain the trust of our customers.**

3-1 Offer of products and services that are of use to society

We shall always listen to the opinions of each of our customers, such as consumers and users and shall develop and offer products and/or services that are of use to society. We shall thereby contribute significantly to the realization of a society that is affluent and pleasant to live in.

3-2 Safety and quality assurances of products and services

With respect to the supply of our products and/or services, in compliance with relevant laws and regulations, we shall be aware that safety and quality assurances are a corporate social responsibility. We shall strive for those assurances throughout the entire product life cycle, from product development and manufacture to distribution, sales and use.

3-3 Provision of product quality information

With respect to the supply of our products and/or services, we shall provide easily understandable product quality information, guides to safe usage, etc., as appropriate.

3-4 Response to incidents involving products

In the event of a safety or quality problem arising with a product supplied to a customer, we shall promptly respond with integrity to contain and prevent a recurrence of the problem.

**4. We shall contribute to the development of local communities by complying with international rules and each country's laws and regulations and by respecting local cultures and customs.**

4-1 Compliance with international rules and the laws of each country

In conducting our international business affairs, we shall fully look into and comply with international rules and the laws of each country.

4-2 Coexistence with and contribution to the development of society at national and local levels

We shall respect cultures and customs in order to coexist with the national and local societies in which we operate our businesses, and contribute to their development. In addition, we shall integrate with national and local society by means of local procurement and employment.

**5. We shall willingly and justly disclose reliable corporate information.**

5-1 Disclosure of corporate information

We shall actively disclose to actors in the financial markets, such as shareholders and investors, information concerning our corporate finances and the status of our business activities in an appropriate, timely and clear manner.

5-2 Implementation of fair accounting procedures

We shall accurately and properly record and store information on our corporate trading, asset and expense status by using fair accounting procedures based on legal and generally accepted accounting standards.

5-3 Prohibition of insider trading

We shall not buy or sell securities such as stocks or corporate bonds for the purpose of making personal profit, etc., by using undisclosed important information gained through business activities.

**6. We shall conduct honest trade in accordance with the basic principles of fair and free competition.**

6-1 Compliance with competition laws

We shall not act in breach of competition laws such as antitrust laws and shall compete equitably and freely.

6-2 Compliance with laws relating to imports/exports

As an importer and exporter of technology and products, we shall examine and comply with the laws and regulations relating to imports/exports. The export of our technology and products shall in no way be illegally connected to the development and manufacture of weapons, munitions or narcotics.

6-3 Advertisements

We shall advertise on an equitable basis without defaming or denigrating other companies or their products and without using socially discriminatory language.

6-4 Highly transparent political and governmental relationships

We shall not engage in behavior that could be mistaken as corrupt but shall foster highly transparent relationships with government agencies and political bodies, whether in local or overseas activities.

6-5 Implementation of fair and honest procurement transactions

With respect to procurement transactions, we shall comply with the Corporate Procurement Transaction Guidelines and CSR Purchasing Guidelines, shall

conduct business fairly and honestly based on economically rational measures and shall not engage in the pursuit of personal profit.

6-6 Business entertainment, etc.

With respect to entertainment and gifts given to or received from clients, we shall act with a clear distinction between public and private matters within the scope of sound commercial practice and judgment.

**7. We shall work positively to conserve the natural environment and to ensure safety.**

7-1 Reduction of environmental impact

We shall address the reduction of environmental impact by such measures as preventing global warming through reduced energy consumption, activities aimed at saving natural resources, managing chemical substances, effective utilization of resources and reducing waste.

7-2 Realization of a sustainable society

Recognizing achievement of SDGs set by the United Nations as a common challenge for our business activities, we shall strive to realize a sustainable society that can balance environmental protection such as efforts on global environmental issues with economic development.

7-3 Creation of safe working environments

In compliance with relevant laws and regulations, we shall conduct our own assessments to promote all measures to ensure safety in our workplaces in all of our activities, including research and development, manufacturing and distribution.

**8. We shall properly manage corporate assets and information.**

8-1 Effective use of corporate resources

We shall not use corporate resources such as people, materials, financing, information and time for private purposes, and shall make effective use of them.

8-2 Handling of confidential information

We shall not acquire confidential information about our customers, business partners, etc. by illegal methods. We shall strictly control any confidential information on companies or third parties obtained in the course of business to prevent leakage and shall not disclose any such information without predetermined procedures. We shall not use such information for anything other than the purpose intended.

8-3 Maintenance and protection of intellectual property (IP) rights

We shall recognize that IP rights (covering patents, utility models, trademarks and designs) held by the Company are important assets and shall strive to maintain and protect them, and shall also respect IP rights owned by third parties.

8-4 Control of personal information

We shall strictly control any information of a personal nature acquired in the course of our business activities and shall not use it for any purpose other than the intended purpose. In addition, any disclosure shall be strictly managed by obtaining prior consent of the person concerned.

8-5 Appropriate use of information systems

We shall use in-house corporate information systems only for Company-authorized duties and shall pay particular attention to the prevention of theft or falsification of data.

We shall enforce all the necessary information security measures to prevent any unauthorized access and information leaks, etc.

8-6 Prohibition of behavior causing damage to the Company

We shall not gain profit for ourselves or third parties and shall not harm the reputation of the Company by using our business position, power or information acquired in the course of our business activities.

**9. We shall respect the diversity, personality and individuality of every member connected to Daicel Group and shall contribute to realize a healthy and sound society that is free from discrimination and harassment.**

9-1 Prohibition of human rights/discrimination, harassment

Our basic position shall be to respect humanity. We shall never violate human rights through such acts as discrimination on the grounds of race, ethnicity, nationality, creed, thought, religion, gender, sexual orientation, gender identification, illness, disability, etc., or through harassment. We also shall never conduct employment and work such as forced labor and child labor contrary to international norms in any country or region.

9-2 Vibrant corporate culture

We shall strive to foster a vibrant “Visualize, Voice, Listen and Respond” corporate culture by promoting honest and open communication between employees.

9-3 Respect for individual ability

By realizing flexible work styles and respecting diverse values and qualifications, we shall enable everyone to display his or her abilities to the fullest possible extent. For this we shall establish various human resource development programs and fair and appropriate treatment methods.

9-4 Healthy workplace environment

We shall strive to create a healthy and sound workplace environment and to enhance the health of individuals by promoting all measures for health management including mental healthcare.

# Risk Management

## Basic Approach

Daicel 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.

## Risk Management System

Daicel established the Risk Management Committee in 2006 as an organization to coordinate and promote Company-wide risk management activities. Chaired by the corporate compliance officer (representative director), it is responsible for periodically reviewing the status of risk awareness in each department and Group company and offers advice and support on countermeasures and initiatives. It also monitors the status of activities carried out by departments and Group companies by reviewing their respective activity reports submitted at the end of each fiscal year.

The status of the management of the “focused points set at the beginning of each fiscal year, as well as critical risks and the risk management policies for the following fiscal year, are reported to the Management Meeting and Board of Directors’ Meeting at the end of the fiscal year, and discussions are carried out accordingly.

## Risk Management Initiatives

The Daicel Group maintains an inventory of potential risks that could have a major impact on its ability to achieve its business targets. Potential risks are entered into an intranet database together with countermeasures and initiatives designed to prevent the incidence of risk or to reduce any subsequent impact. The countermeasures are revised in consultation with the risk managers of corporate departments. Each department and Group company assigns a priority level to each risk and carries out countermeasures accordingly while also regularly updating the status and progress of the countermeasures in the database. Each department and Group company also pursues its respective risk management activities by making use of the database and following a Check-Act-Plan-Do (CAPD) cycle.

In FY2020/3, we focused on identifying the risks of potential information leakage etc. risk when handling removal media and using SNS(Social Networking Service). With the results, we intend to implement the following risk countermeasures in FY2021/3.

1. Take more stringent steps to prohibit the use of personal devices for work purposes
2. Strengthen the prevention of data leakage from USB flash drives for internal use
3. Strengthen the detection of illegal copying of data
4. Continue to raise risk awareness of employees and business social media account management staff

## Strengthening BCP Management

Daicel 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 ensure the early resumption of business in the event of such contingencies. In FY2020/3, to prevent the recurrence of past accidents, we continued to re-inspect for risks related to substances with self-degradation or thermal polymerization properties. And to prevent the spread of damage, we promoted the introduction of (1) remote monitoring cameras as corporate standards and (2) a disaster information sharing system.

## Information Security Initiatives

The Daicel Group implements information security initiatives encompassing the IT operations of the entire Group under its Information Systems Security Policy. With respect to cyberattacks, we have introduced a system that instantly detects security anomalies.

We also consign third parties to regularly conduct vulnerability assessment and systematically address any issues that arise. As of the publishing of this report, every issue had been addressed.

As a measure to prevent the spread of the novel coronavirus, we have expanded teleworking (working from home) arrangements for our employees. Accordingly, we have enhanced our remote access environment and strengthened the monitoring of any suspicious access and email attacks targeting the remote environment. Furthermore, we are diligent about reminding our employees of precautions being taken in terms of teleworking.

Looking ahead, we intend to continue implementing initiatives to keep abreast of advances in information technology and increasingly sophisticated cyberattacks.

## Measures Against the Spread of the Novel Coronavirus

In response to the global spread of the novel coronavirus, we established the Daicel Group Countermeasures Headquarters, headed by the president, on February 5, 2020, followed by local countermeasures headquarters at each business site. Our countermeasures headquarters are working together to ensure the safety and well-being of our employees and their family members and to maintain stable, continued operations at our plants and businesses. To do so, we have taken the following measures to prevent the spread of the coronavirus based on government information on the disease.

## ■ Description of Measures

Applicable areas	Measures
Internal environment	<ul style="list-style-type: none"> <li>• Actively recommending staggered shifts</li> <li>• Preventing any person with coronavirus symptoms from entering business sites (introduction of thermal imaging cameras at some sites)</li> <li>• Changing the layout of business sites or offices to avoid close contact with others</li> <li>• Implementing a split team system (splitting employees into groups)</li> <li>• Encouraging employees to wear masks, wash and disinfect their hands</li> <li>• Using video conference system, online meetings, and other remote communication tools</li> <li>• Allowing teleworking for employees who have to care for children whose schools have been closed or who came into close contact with infected persons (or allowing them to take leave if teleworking is not possible)</li> </ul>
Teleworking	<ul style="list-style-type: none"> <li>• Teleworking mainly for offices (result: approximately 70% reduction of workers at the head offices in Osaka, Tokyo, and Nagoya sales office)</li> <li>• Partial teleworking for business sites</li> <li>• Developing IT infrastructure for active use of teleworking</li> </ul>
Meetings, events, etc.	<ul style="list-style-type: none"> <li>• Restricting various in-person meetings and events or holding them online</li> <li>• Restricting business dinners and banquets</li> </ul>
Business trips	<ul style="list-style-type: none"> <li>• Restricting both domestic and overseas business trips</li> </ul>
Temporary return	<ul style="list-style-type: none"> <li>• Temporary return of expatriate employees and their family members in areas at high risk of infection</li> </ul>
Personal life	<ul style="list-style-type: none"> <li>• Monitoring daily health conditions and reporting to the countermeasures headquarters in case of sickness</li> <li>• Self-restraint towards traveling overseas for private reasons</li> </ul>

(as of May 10, 2020)

Special Feature

## Promoting Multifaceted Energy Savings



Energy-intensive companies, including chemical manufacturers, are increasingly under pressure to reduce their environmental impact. At the Daicel Group, we are managing and making good progress in our energysaving initiatives from three angles: Energy Department energy savings; energy savings in existing production processes through production innovation initiatives; and the introduction of innovative energy-saving technologies.



### Saving Energy at the Energy Department

Each of our plants generates its own steam and electricity for its manufacturing processes while also upgrading their facilities and switching to better fuels for greater energy conservation.

#### Aboshi Plant

In September 2012, the plant installed a cogeneration system with gas turbines. In June 2019, it started selling its excess electricity.

## Ohtake Plant

In August 2007, the plant started selling its excess electricity. In July 2016, it installed an additional boiler. Two dual fuel boilers are run in parallel using a mix of coal and scrap tires as fuel.

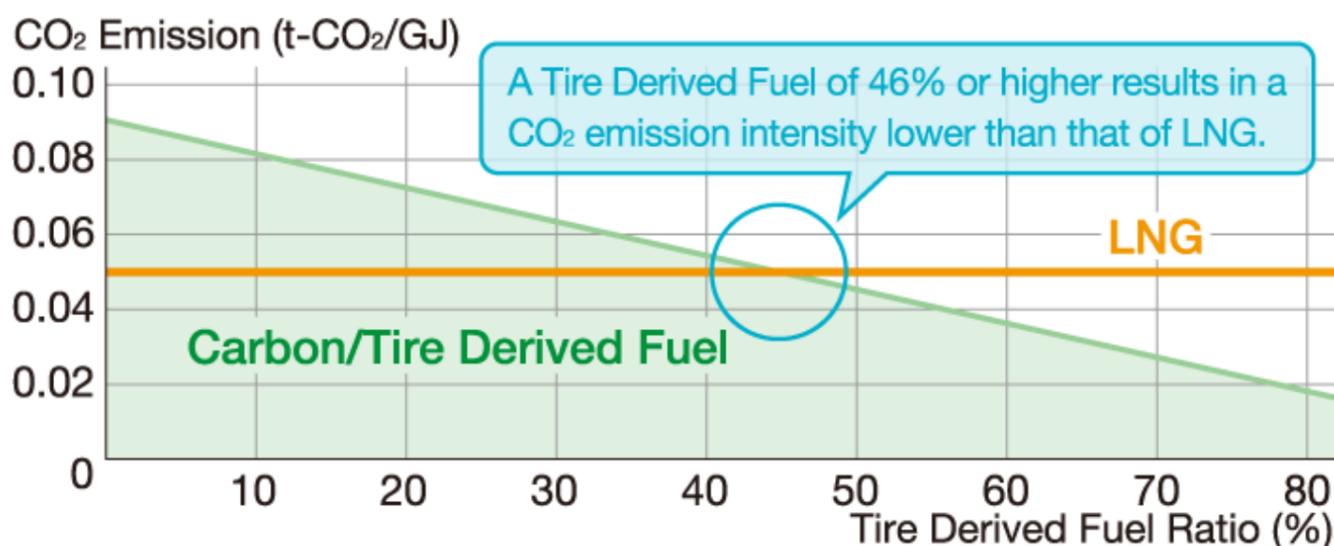
## Arai Plant

In January 2017, the plant switched from a coal boiler to a cogeneration system with gas turbines.

## Using Tire Derived Fuel to Reduce Fossil Fuel Use

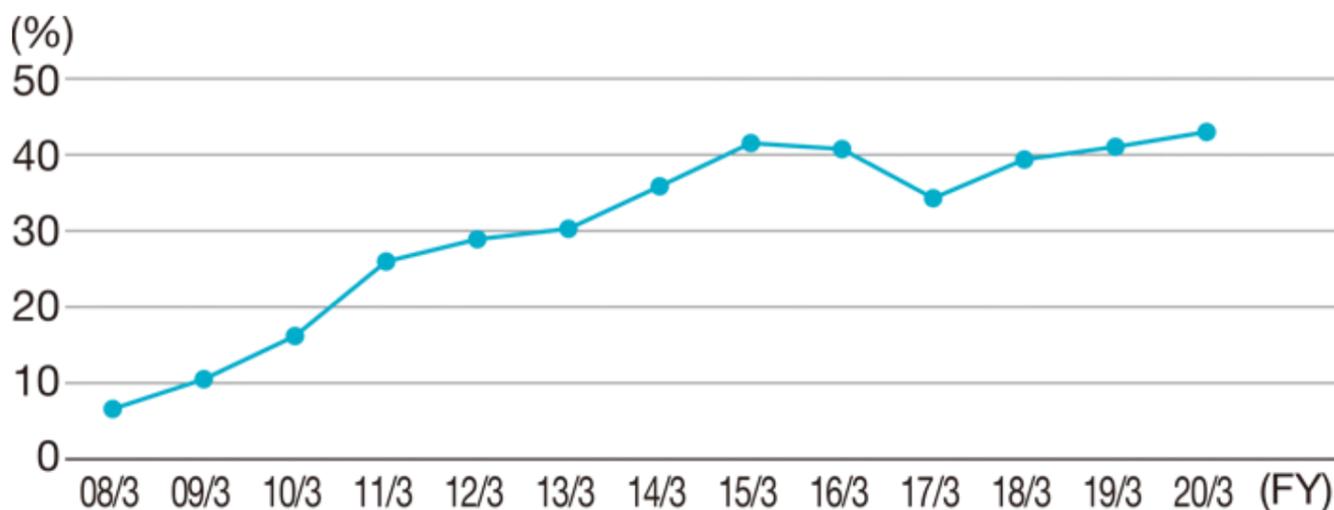
At the Ohtake Plant, a mix of coal and scrap tires is used as fuel for its boilers. Using a mixture that contains at least 46% of scrap tires enables the generation of steam and electricity that emits less CO<sub>2</sub> than LNG, a lower carbon fuel. Excess electricity is sent to our other business sites using a self-consignment system and also sold externally to start-up energy companies. We are improving this process continuously by procuring higher quality scrap tires, ensuring stable boiler operation, and using a fuel mix with a higher scrap tire ratio. We have recently been working toward a ratio of over 50%.

### How the Tire Derived Fuel Ratio Affects CO<sub>2</sub> Emission intensity\*



\* Volume of energy-derived CO<sub>2</sub> emissions as defined in the Energy Conservation Act.

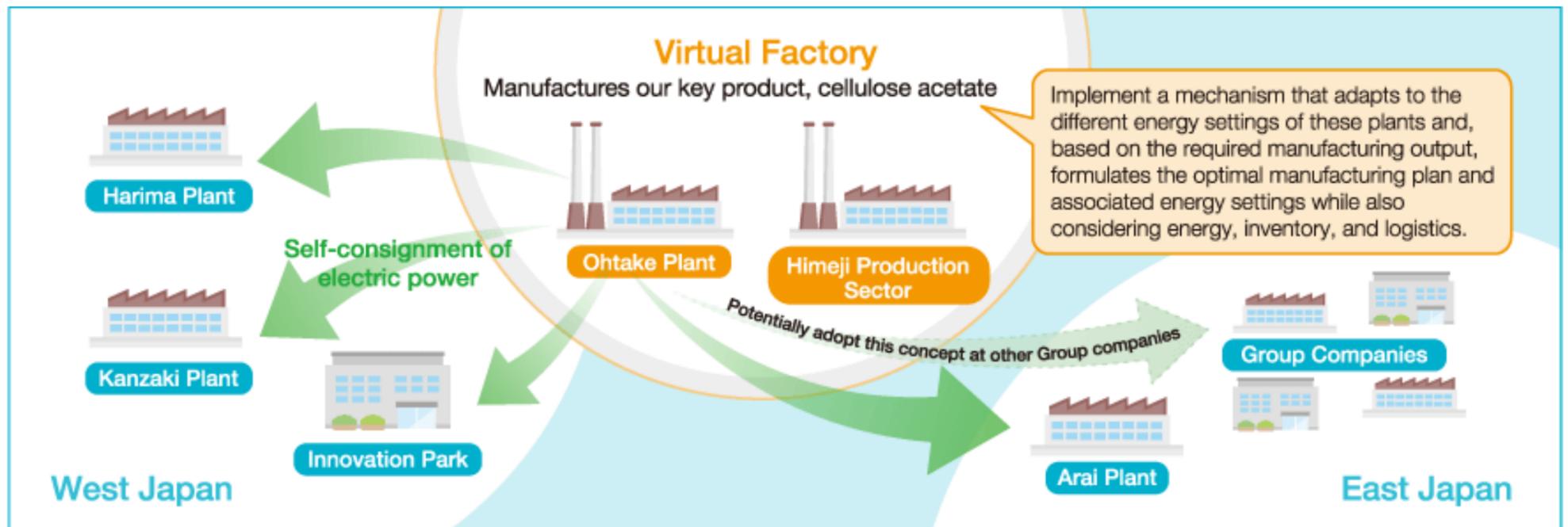
### Tire Derived Fuel Ratio at the Ohtake Plant



# 2

## Optimizing Energy Savings in Production Processes

Energy consumption by the Himeji Production Sector and Ohtake Plant account for 80% of the Group’s overall consumption. We treat these as one virtual factory and centrally manage information related to their manufacturing processes. This enables us to formulate optimal manufacturing plans and achieve overall optimization and energy savings.



### Energy Operation Optimization System

In order to manage our energy consumption in accordance with the optimal manufacturing plan, we have introduced the Energy Operation Optimization System. This provides online monitoring and controls over the actual operational settings based on the optimal settings as calculated by simulation, and it is used by the Himeji Production Sector and Ohtake Plant.

### Leveraging the Self-Consignment System\*

As part of optimizing energy supply and demand, in June 2018 the Ohtake Plant started sending excess generated electricity to other worksites in West Japan using the self-consignment system. In May 2020, the system was extended to the Arai Plant in East Japan. Looking ahead, we expect to further extend the system to other Group companies toward achieving zero purchased electricity at the Group level.

\* The system to supply of electricity to our facilities in other locations with energy generated by our own facilities using the electric company’s distribution network.

# 3

## Developing Innovative Energy Saving Technologies

We have achieved significant energy savings by aggressively identifying energy-intensive processes and taking action to reduce energy consumption by improving our technologies or developing new ones.

### ■ Enhancing Our Current Technologies

#### Vapor Recompression (VRC) Technology

We have established a technology for recovering low-temperature exhaust heat from the organic solvent distillation process, which previously was not possible. In January 2015, we implemented an acetic acid recovery plant with a proof-of-concept capability in the cellulose acetate manufacturing area of the Aboshi Plant and started a test run the following month. We have so far achieved our goal of reducing energy consumption by 30% and will continue to analyze the new technology toward establishing a stable, long-term application.

#### Modified Petlyuk distillation process

Daicel has modified the Petlyuk distillation process so that our facilities can use the technology. After lab-scale experiments and simulations, our acetic anhydride manufacturing facilities were identified as candidates for application. Demonstration tests conducted in January 2014 achieved the targeted energy savings of 30%, and we are currently in the process of commercializing the technology at these facilities. In future, we plan to extend its use to other similar processes at the Ohtake Plant and lower our CO<sub>2</sub> emissions even more.

See [here](#) for additional information on VRC technology and the modified Petlyuk distillation process.



VRC proof-of-concept facility

## ■ New Technologies that Adapt to Environmental Change

### Membrane Separation Technology

The evaporation process in distillation consumes massive amounts of energy. Dramatic energy savings, however, are possible if a membrane separation technology is used instead. And we have been evaluating the operating life of various candidate membranes since April 2016.

### New Reaction Technology

We developed an innovative process, which leverages a proprietary reaction technology with a new catalyst. This is installed at the Aboshi Plant's 1,3-BG facility, which will be completed in September 2020. We expect that energy consumption will be reduced by approximately 20% compared to that of conventional technologies.

### New Wastewater Treatment Technology (Anaerobic Wastewater Treatment Technology)

Anaerobic wastewater treatment does not require oxygen and therefore requires less energy. In addition, the methane gas generated can be used for heating. Since April 2016, we have been experimenting and validating this new technology for use in production.

## Continued Focus on Additional Energy Saving Measures

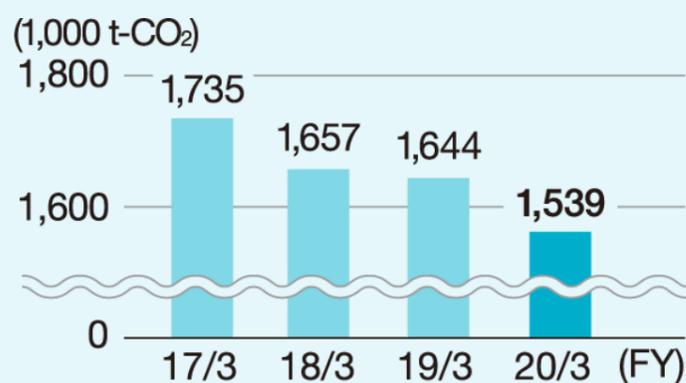
The Daicel Group will continue to seek energy saving opportunities and implement additional measures via its three-angle approach, including the introduction of innovative process technologies.

#### ■ Energy Consumption



\* Scope: Daicel's plants

#### ■ Greenhouse Gas (GHG) Emissions



\* Scope: Daicel's plants, Tokyo main offices, Osaka main office, Nagoya sales office, H.R. Training Center, employee welfare facility in Himeji

# Human Development Center



## Human Development Center

### Purpose and Overview of the Human Development Center

Safety Strategic Business Unit, has for a long time been involved in pyrotechnic devices. The company applies this expertise in the development, manufacturing, and sales of products such as inflators for automobile airbags and micro gas generators for seatbelt pretensioners (PGG), and it conducts its business operations on a global scale. Its manufacturing style is more what's referred to as "assembly-based;" this is very different from the style applied in chemical plant manufacturing, which is known as "process-based."

The Daicel Safety Systems (DSS) Human Development Center was established as a facility specialized in the development of human resources for assembly-based manufacturing. To keep pace with its globally expanding operations, it became a function of the company's



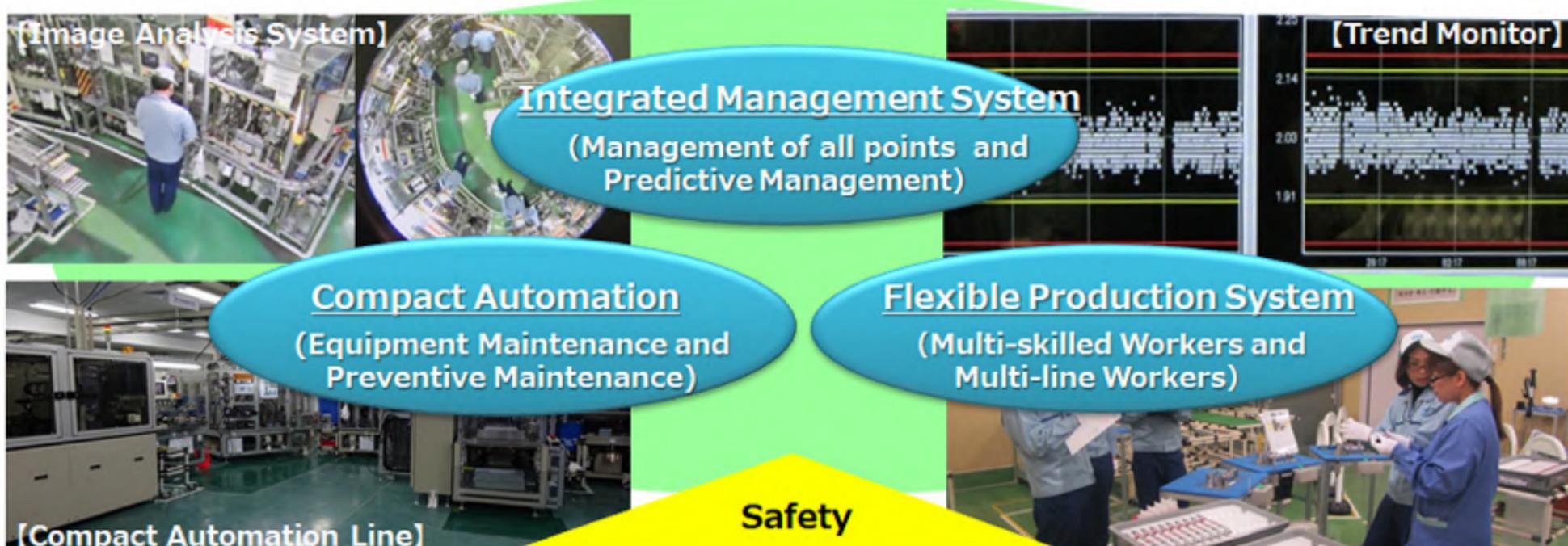
Harima Plant Deputy General Manager  
Human Development Center  
Division Manager  
Multiple Production Company  
Takao Mimura

headquarters in 2018, when it was renamed the Human Development Center. Also, it plays an integral role in developing the human resources who drive the growth of the Safety Systems business.



Human Development Center (Harima Plant)

## High Quality and Highly Efficient Manufacturing System



## Human Resource Development

Daicel Group's  
Human Resources Policy

### People are the Foundation for Our Success

The Three Core Principles of Our Human Resources Policy

#### Will

We encourage the strong will and courageous decisions of each individual.

#### Diversity & Inclusion

We continue to evolve through the interaction of our diverse personalities.

#### Integrity

We do the right thing and proudly follow the right path.



The Kanji characters used in its Japanese name signify the following intentions:

1. Collaborate across organizational and regional boundaries and grow together
2. All employees regardless of rank help each other to reach new heights together
3. Provide learning opportunities for those who provide training and those who receive training

The Human Development Center focuses on the following four missions based on these aspirations as well as the Group's human resource policy entitled, "People are the Foundation for Our Success," a belief in the infinite power of our human resources and the Group's reliance on realizing the full potential of this power.

1. DSS Human Resource Development Specialized in Manufacturing Skills
2. Manufacturing Training for the Technology Development in the Safety Systems Division
3. Developing Global Talent
4. Safety Training at the Harima Plant

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## Human Resource Development for DSS-style Manufacturing

DSS manufactures inflators for automobile airbags, and the Harima Plant is its primary manufacturing site in Japan. Under its motto, "Safety and Quality," the company strives to strengthen and grow its manufacturing capability while basing its activities on these goals: 1) build an automated assembly line for highly efficient manufacturing, 2) develop multi-skilled workers for a flexible production line, and 3) leverage the latest IoT technology for an integrated management system. The company is therefore focused on developing human resources who contribute to achieving these goals.

The Human Development Center has established its own structure for educational programs, including (1) position-specific programs such as training for new employees, operators, supervisors, and leaders; (2) specialized programs encompassing manufacturing knowledge and skills specific to each job type; and (3) development of certification or qualification systems for specialized or key processes. The educational programs cover the knowledge and skills required for manufacturing processes, including standard procedures based on TPS (Toyota Production System), IE (Industrial Engineering), statistical quality control, problem-solving skills, and equipment maintenance. Trainees acquire this knowledge and the related knowledge and skills through classroom lectures and hands-on experience.

In addition to the standard training rooms, we have three specialized rooms for these lectures: Assembly Dojo, Maintenance Dojo, and Safety Dojo. We use the term "Dojo" to encourage participants to view these facilities as places where they can deepen self-awareness and develop the discipline necessary for independently acquiring and practicing the targeted skills.

### Assembly Dojo

This dojo provides training for inflator assembly and also develops trainers for this process. New employees and contractors receive training here using simulation devices as part of their onboarding process. This ensures they have the standard level of knowledge and skills before engaging in production line operations, thus ensuring safety, quality, and operability. In addition, the space is equipped with various simulation devices, each tailored for specific product types and procedures. The devices are used to develop multi-skilled workers and contribute toward building a flexible production line.

The dojo also provides training and certifications for operator trainers as well as certifications for critical roles such as visual inspectors, among other services. It consists of a lecture area for classroom lectures and a practice area, equipped with simulators and focused on practical application lectures. In short, this is a place where trainees not only can acquire new knowledge and skills but also receive certifications.



Practical application lecture using simulation devices at the Assembly Dojo

## Maintenance Dojo

The focus in this dojo is on the knowledge and skills required for facility maintenance. Trainees are offered basic information about electrical and mechanical engineering as well as practical application lectures on machining processes such as drilling and tapping, electrical wiring, soldering, and sequence programs.

Two types of training are conducted. The Line-Keeper Development Program (six months) is intended to train key maintenance persons for the manufacturing division. The Machine-Keeper Development Program (ten days) helps trainees develop their daily maintenance knowledge and gives them troubleshooting skills for common problems.

In the final phases of the Line-Keeper Development Program, trainees create end-to-end processes from scratch, assembling a training device from component parts, creating a sequence program for the device, and confirming its operation. Through the exercise, they learn about the focus areas for adjusting devices and acquire the practical skills for maintaining them.

In addition, trainees also go through other exercises, such as troubleshooting for intentionally introduced failures in simulation devices and teaching X-Y robots and multiple axis robots. Through these exercises, the dojo passes on the knowledge and skills to the next generation and improves facility maintenance competency.



Maintenance Dojo training using electric components kits



Assembling a training device during Maintenance Dojo training

## Safety Dojo

The focus here is on safety, and training at the dojo is part of the site training for the Harima Plant. It is offered to everyone working there, including approximately 1,300 people such as employees, contractors, and Group company employees. A total of 4,000 people each year have attended the training since its launch in May 2017.

The Safety Dojo works toward these goals: 1) provide a sacred place where trainees learn from past incidents and gain self-discipline, 2) provide opportunities for trainees to become accustomed to factory rules and regulations, and 3) enable trainees to cultivate their awareness and accurate understanding of safety.

The dojo consists of two areas: one where materials and photos of past incidents at Harima plants are exhibited, and a training area with simulators where trainees attend lectures. There are five zones in the training area: 1) the factory rule zone, where trainees get accustomed to factory rules such as those related to customary greetings, dress codes, and pointing-and-calling procedures; 2) the basic behavior zone, where trainees learn safety basics using simulators that replicate the experience of risks; 3) the operation zone, 4) the practice zone, and 5) the safety pledge zone, where trainees chant the safety slogan.



Safety Dojo training areas

Since the business site handles explosives, the dojo is equipped with devices that simulate explosions caused by static electricity. Trainees learn about the risks of these situations and the importance of removing electrostatic charges. The dojo is also equipped with devices that simulate entanglements, residual air pressure, and ascending or descending stairs. During the sessions, trainees are divided into 77 teams, each consisting of 20 people, and each team is led by an instructor. Rather than trying to explain difficult concepts with words alone, the dojo encourages trainees to experience risks directly by using simulators and other equipment.

The goal in this dojo is to cultivate what we refer to as a “safety-first work culture” at the Harima Plant together with all of its

workers. We try to achieve that by having each employee diligently conduct basic manufacturing activities, such as customary greetings and 3S (seiri (tidying), seiton (putting everything in order), and seisou (cleaning)) activities and triggering changes in their behavior. These changes ultimately become the standard and lead to a workplace free from occupational accidents.



Practicing a pointing-and-calling procedure at a pedestrian crossing during a Safety Dojo training session

## Developing Global Talent

Safety Strategic Business Unit, operates five manufacturing sites in the U.S., China, South Korea, Thailand, and Poland. While each location develops its own training and development programs, the Human Development Center trains and certifies trainers specialized in critical processes and develops special skills to ensure that the same level of quality and safety are being incorporated into manufacturing practices worldwide.

Currently, there are 18 certified trainers across the globe, and each one trains and certifies new trainers locally at the various business sites.

Daicel Safety Systems (Jiangsu) Co., Ltd. (DSSC) in China, the largest manufacturing site, completed building their new training center in February 2019 and the four dojos (safety, quality, maintenance, and assembly) have launched their educational programs. The dojos of Daicel Safety Systems (Thailand) Co., Ltd. (DSST) are also scheduled to be completed in FY2021/3. We conduct training and development programs that are tailored to local cultures and the size of each business site based on the principle of safety and quality assurance and with the same Daicel Spirit.



Training and Certification Program for Trainers

## Native Forests for Life Initiative

### What Are Native Forests for Life?

Dr. Akira Miyawaki is a professor emeritus of Yokohama National University and a plant ecologist who advocates for and practices revitalization of natural forests on the land where they originally stood, thus preserving ecosystems adapted to the local regions. He has planted over 40 million trees in Japan and around the world through initiatives promoting the creation of resilient forests that help mitigate the effects of earthquakes, floods, and other natural disasters. Many companies and organizations are participating in these efforts with his unique method of planting trees. Using the Miyawaki method, diverse trees are interspersed throughout the area with a focus on potential natural vegetation, which is adapted to each of the local natural environments.

### Daicel Group's Creation of Native Forests for Life



The Miyawaki method is not just about planting different varieties of trees; another of its important characteristics is the participation of people from local communities, including children. He believes that people grow through the creation of forests. Some grow from doing—planting and implementing the creation of native forests for life—while others grow from actively learning about ecology. Planting seeds, cultivating saplings, watering them, and nurturing them into a forest: these all help foster talent and are related to building business and societies. In addition, the method of interspersing various types of trees to closely resemble the natural makeup of forests parallels the promotion of a dynamic global workforce of diverse people.

In short order, the sapling surpasses the height of the person who planted it and goes on to surpass the life of the person as well. Similarly, the business also surpasses the abilities of the person who launched it. The creation of the Native Forests for Life initiative helps foster talent, and fostering talent helps the business to grow and forge ahead into the future. This is related to the vision the Daicel Group is aiming for. More than anything, we will be the best partner of our customers and local communities.

# Reasons for the Native Forests for Life Initiative

## 1. Restoring natural vegetation through mixed planting

Natural forests consist of a wide variety of wooden species. Like one of these forests, we aim to become a stronger organization, with each staff member playing a role and supporting each other through forest development activities.

## 2. Strengthening cooperation with local communities

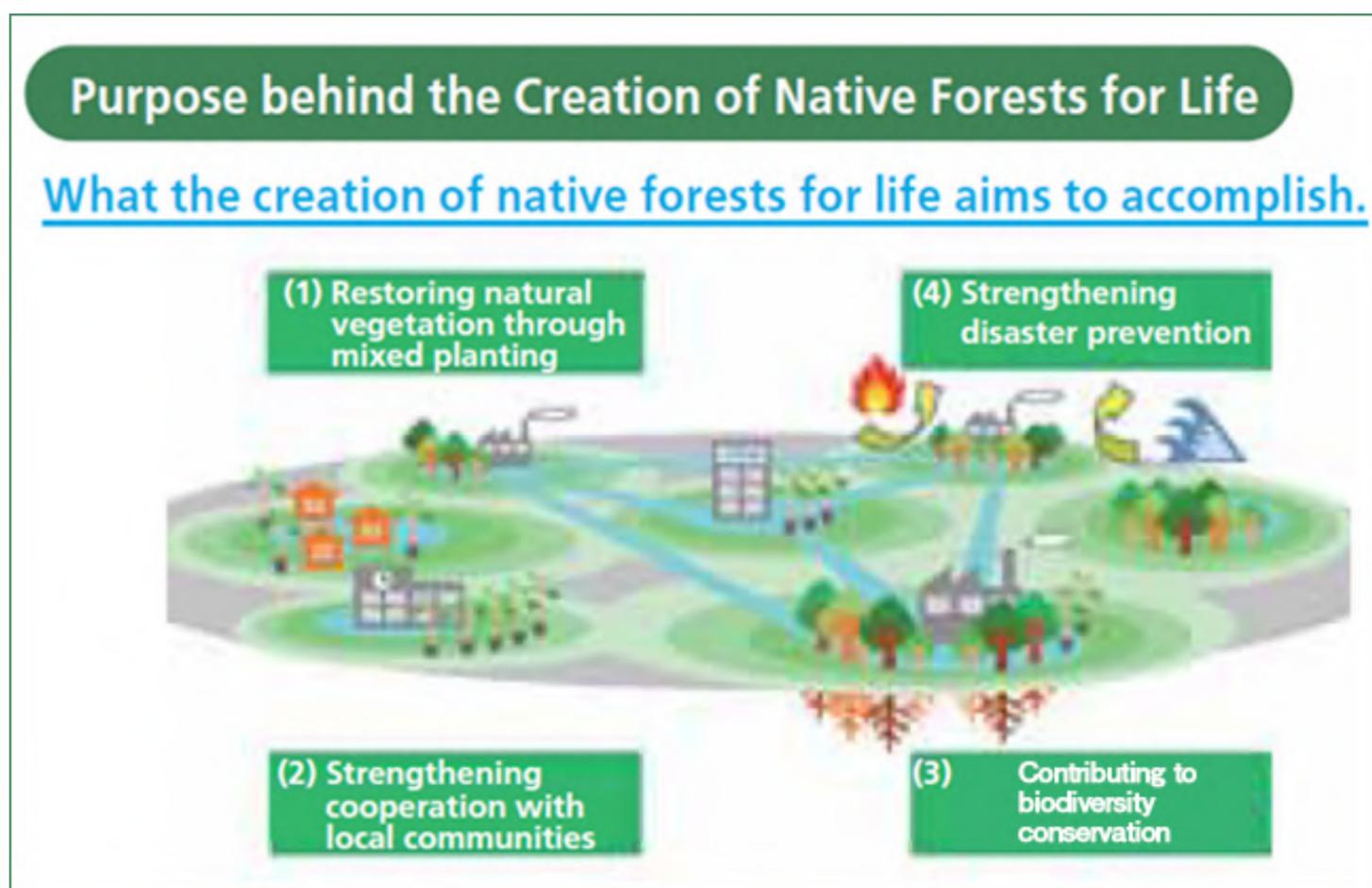
Through tree planting activities, we build ties with people in neighboring communities and help them understand our manufacturing activities and business operations by interacting with them through tree planting.

## 3. Contributing to biodiversity conservation

We help realize a low-carbon society while striving to preserve the global environment.

## 4. Strengthening disaster prevention

We create forests that will, in turn, prevent fires from spreading, mitigate the fallout of natural disasters, and reduce noise from human activity.



# Recent Events Related to the Native Forests for Life Initiative

The Creation of Native Forests for Life Committee, chaired by the president, was created in March 2016. On April 9, 2016, we hosted a tree planting ceremony at the Harima Plant as a kickoff event for the Native Forests for Life initiative for the entire Daicel Group. Since then, similar tree planting ceremonies have been held at various sites, including the Arai, Ohtake, and Harima plants, with the family members of employees, representatives from partner companies, and residents of neighboring communities invited to take part in the tree planting.

## ■ Past Tree Planting Ceremonies

Business site	Date	Location of tree planting	Number of trees planted	Number of species	Number of participants
Himeji Area (Aboshi Plant Hirohata Plant Innovation Park)	November 2, 2019	Shiohama (along the border of the parking lot)	10,300	36	1,500
Harima Plant	March 29, 2019	North property border	1,399	36	138
Harima Plant	December 21, 2018	East property border	1,410	36	183
Ohtake Plant	April 14, 2018	Areas surrounding the office building site	2,000	36	517
Arai Plant	September 30, 2017	Areas surrounding the truck gate	1,272	30	335
Harima Plant	April 9, 2016	Areas surrounding parking lot No. 1	2,052	36	543

## Daicel's 100th Anniversary Tree Planting Ceremony

Our tree planting ceremony was held at the Himeji area: the Aboshi Plant, Hirohata Plant, and Innovation Park on November 2, 2019. About 1,500 employees from our plants and partner companies took part, and 10,300 seedlings were planted in a concerted effort.



At the 100th Anniversary Tree Planting Ceremony

## Native Forests for Life Initiative as Part of Introductory Training

Since FY2018/3, Daicel has been training new recruits for the Native Forests for Life initiative. The 84 new recruits for FY2020/3 received training on March 28 and April 5, 2019, and they learned about the program's background and planted trees as part of hazard prevention.



New recruits during training

## Independent Assurance Statement

September 10, 2020

Mr. Yoshimi Ogawa  
President and CEO  
Daicel Corporation

### 1. Purpose

We, Sustainability Accounting Co., Ltd., have been engaged by Daicel Corporation (hereinafter "the Company") to provide limited assurance on greenhouse gas (GHG) emissions of the Company in FY2019/3, which are 1,498 thousand t-CO<sub>2e</sub> (Scope1), 41 thousand t-CO<sub>2e</sub> (Scope2 Market-Based) and 1,264 thousand t-CO<sub>2</sub> (Scope3 Categories 1,2,3,4,5,6 and 7). The purpose of this process is to express our conclusion on whether the GHG emissions data were calculated in accordance with the Company's standards. The Company's management is responsible for calculating the GHG emissions data. Our responsibility is to independently carry out a limited assurance engagement and to express our assurance conclusion.

### 2. Procedures Performed

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

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

### 3. Conclusion

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

We have no conflict of interest relationships with the Company.



Takashi Fukushima  
Representative Director  
Sustainability Accounting Co., Ltd.

# Editorial Policies

The Daicel Group has published the Daicel Group Annual Report—CSR & Financial Report to convey financial and nonfinancial information that facilitates understanding among all its stakeholders, including shareholders and investors, regarding the Group’s business activities and CSR initiatives.

The Daicel Group aims to achieve sustainable growth of both society and the Group through its long-term vision and medium-term strategies, which will be steadily implemented starting in FY2021/3. As a communication tool to gain more alliances and cooperation from our stakeholders for our efforts, we publish “Daicel Report 2020,” which integrates financial and nonfinancial information.

Under the Sustainability section of our corporate website, we disclose comprehensive and detailed information on the Group’s sustainability initiatives. Moreover, in 2019 we started disclosing ESG data on factors related to the environment, society, and governance through the site.

As these reports are important tools for communicating with our various stakeholders, we keep in mind during the editing process that they must be easy to read, easy to understand, and proactive in terms of reporting on our CSR activities.

## Reporting Period

FY2020/3 (April 2019 to March 2020)

## Entities within the Scope of Reporting

The report covers initiatives of Daicel Group companies and those of other companies as noted.

The following terms are used in the report.

- Daicel/We/Our: Daicel Corporation
- Daicel Group/The Group: Daicel Corporation and its affiliates
- Group companies: Affiliates of Daicel Corporation

The following terms are used in the report on environmental and occupational safety and health.

- Daicel’s business sites: Daicel’s plants and research institutes as well as the business sites of domestic Group companies operating on the premises of Daicel’s plants (not including the headquarters)
- Domestic Group companies: business sites of the domestic Group companies operating outside the premises of Daicel’s business sites
- Overseas Group companies: business sites of Daicel’s overseas Group companies

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

➤ [Scope of reporting for human resources and governance data](#)

➤ [Scope of reporting for environmental and occupational safety and health data](#)

- \* Regarding the following companies reorganized as of July 1, 2020, their former company names are used in this report.
- Sales departments of Daicel FineChem Ltd., Daicel Polymer Ltd., and Daicel Value Coating Ltd. were integrated into a new company named Daicel Miraizu Ltd., which succeeded Daicel FineChem. Also, on the same day, the production departments of Daicel Polymer were transferred to Daicel's Multiple Production Company, and Daicel Polymer was dissolved.
- Daicel Polymer (Hong Kong) Ltd. changed its name to Daicel Miraizu (Hong Kong) Ltd.
- Daicel Polymer (Thailand) Co., Ltd. changed its name to Daicel Miraizu (Thailand) Co., Ltd.

## Dates of Website Update and Publication of the Report

Sustainability section of our website: September 2020 (Next update: September 2021/last update: September 2019)(next edition: September 2021/previous edition: September 2019)

\* We also update the website as necessary.

Daicel Report 2020: September 2020

## Guidelines Used for Reference

Sustainability section of our website

- Sustainability Reporting Standards 2016/2018/2019. GRI

Daicel Report 2020

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

# Scope of Reporting for Human Resources and Governance Data

The Daicel Group consists of a total of 77 companies.(As of March 31, 2020)

In this report, initiatives of the Daicel Group are reported. Reports about Daicel Corporation or other Group company are noted in each text.

The scope of the Daicel Group varies depending on the content of initiatives. Regarding the initiatives of

① to ③ below, the scope of the Daicel Group reporting is as shown in the table below.

- ① Corporate Ethics (Compliance) and Risk Management Initiatives
- ② Initiatives reported in Creating Attractive Workplaces (Except ③ and Initiatives of Occupational Health and Safety)
- ③ Initiatives of the Healthcare Committee reported in Initiatives to Help Employees Maintain Mental and Physical Health, under Creating Attractive Working Place

## Consolidated Companies

Company Name	Region	City	①	②	③
DAICEL CORPORATION	Domestic	Tokyo	○	○	○
Polyplastics Co., Ltd.	Domestic	Tokyo	○	○	○
PTM Holdings, Inc.	Domestic	Tokyo	-	-	-
Daicel Polymer Ltd.* <sup>1</sup>	Domestic	Tokyo	○	○	○
Daicel Pack Systems Ltd.	Domestic	Tokyo	○	○	○
Daicel Value Coating Ltd.* <sup>1</sup>	Domestic	Tokyo	○	○	○
Daicel FineChem Ltd.* <sup>1</sup>	Domestic	Tokyo	○	○	○
Daicel Membrane-Systems Ltd.	Domestic	Tokyo	○	○	○
PI-CRYSTAL, Inc.	Domestic	Chiba	-	-	-
Daicel Pyrotechnics Ltd.	Domestic	Gunma	○	○	-
Dainichi Chemical Co.,Ltd.	Domestic	Fukushima	○	○	-
Daicel Arai Chemical Ltd.	Domestic	Niigata	○	○	○
DM Novafoam Ltd.	Domestic	Nagano	○	○	-

Company Name	Region	City	①	②	③
PolyplaService Co., Ltd.	Domestic	Shizuoka	○	○	-
Kyoei Shokusan Co.,Ltd.	Domestic	Osaka	○	○	-
Daicel Logistics Service Co.,Ltd.	Domestic	Osaka	○	○	○
Daicel Safety Systems Inc.	Domestic	Hyogo	○	○	○
Kyodo Sakusan Co.,Ltd.	Domestic	Hyogo	○	○	-
Daicel Aboshi Sangyo Co.,Ltd.	Domestic	Hyogo	○	○	○
Daicel Ohtake Sangyo Co.,Ltd.	Domestic	Hiroshima	○	○	○
Daicel Safety Systems (Jiangsu) Co., Ltd.	East Asia	Jiangsu	○	○	-
Daicel Safety Technologies (Jiangsu) Co., Ltd.	East Asia	Jiangsu	○	○	-
PTM Engineering Plastics (Nantong) Co., Ltd.	East Asia	Jiangsu	○	○	-
Polyplastics (Nantong) Ltd.	East Asia	Jiangsu	○	○	-
Daicel Nanning Food Ingredients Co., Ltd.	East Asia	Shaanxi Sojin Autonomous Region	○	○	-
Daicel Chiral Technologies (China) Co., Ltd.	East Asia	Shanghai	○	○	-
Polyplastics Trading (Shanghai) Ltd.	East Asia	Shanghai	○	○	-
Polyplastics (Shanghai) Ltd.	East Asia	Shanghai	○	○	-
Shanghai Daicel Polymers, Ltd.	East Asia	Shanghai	○	○	-
Daicel Trading (Shanghai) Ltd.	East Asia	Shanghai	○	○	-
Daicel (China) Investment Co., Ltd.	East Asia	Shanghai	○	○	-
Polyplastics China Ltd.	East Asia	Hong Kong	○	○	-
Daicel Polymer (Hong Kong) Ltd.* <sup>2</sup>	East Asia	Hong Kong	○	○	-
Polyplastics Taiwan Co., Ltd.	East Asia	Taipei	○	○	-
Daicel Micro Optics Co. Ltd.	East Asia	Hsinchu	○	○	-
Daicel Safety Systems Korea, Inc.	East Asia	Yeongcheon	○	○	-

Company Name	Region	City	①	②	③
Polyplastics Korea Ltd.	East Asia	Seoul	○	○	-
Special Devices (Thailand) Co., Ltd.	South and Southeast Asia	Saraburi	○	○	-
Polyplastics Marketing (T) Ltd.	South and Southeast Asia	Bangkok	○	○	-
Daicel Polymer (Thailand) Co., Ltd.*3	South and Southeast Asia	Bangkok	○	○	-
Daicel Safety Systems (Thailand) Co., Ltd.	South and Southeast Asia	Prachinburi	○	○	-
Daicel Safety Technologies (Thailand) Co., Ltd.	South and Southeast Asia	Prachinburi	○	○	-
Polyplastics Asia Pacific Singapore Pte. Ltd.	South and Southeast Asia	Singapore	○	○	-
Daicel (Asia) Pte. Ltd.	South and Southeast Asia	Singapore	○	○	-
Polyplastics Asia Pacific Sdn. Bhd.	South and Southeast Asia	Kuala Lumpur	○	○	-
Daicel Safety Systems India Pvt. Ltd.	South and Southeast Asia	Gurugram	○	○	-
Daicel Chiral Technologies (India) Pvt. Ltd.	South and Southeast Asia	Hyderabad	○	○	-
Daicel Safety Systems Americas, Inc.	North and Central America	Arizona	○	○	-
Daicel America Holdings, Inc.	North and Central America	California	○	○	-
Daicel ChemTech, Inc.	North and Central America	New Jersey	○	○	-
Chiral Technologies, Inc.	North and Central America	Pennsylvania	○	○	-

Company Name	Region	City	①	②	③
Arbor Biosciences (official name: Biodiscovery LLC)	North and Central America	Michigan	○	○	-
Polyplastics USA, Inc.	North and Central America	Michigan	○	○	-
Polyplastics Marketing Mexico, S.A. de C.V.	North and Central America	Mexico City	○	○	-
Lomapharm GmbH	Europe	Emmerthal	-	○	-
Polyplastics Europe GmbH	Europe	Raunheim	○	○	-
Topas Advanced Polymers GmbH	Europe	Raunheim	○	○	-
Daicel (Europa) GmbH	Europe	Raunheim	○	○	-
LCP Leuna Carboxylation Plant GmbH	Europe	Leuna	○	○	-
Daicel Safety Systems Europe Sp. z o. o.	Europe	Żarów	○	○	-
Chiral Technologies Europe S.A.S.	Europe	Illkirch Cedex	○	○	-

## Other Affiliated Companies

Company Name	Region	City	①	②	③
Special Devices Japan Ltd.	Domestic	Tokyo	-	-	-
Daicel-Evonik Ltd.	Domestic	Tokyo	○	○	-
Daicel-ALLNEX Ltd.	Domestic	Tokyo	○	○	-
Kyoudou Polymer Co., Ltd.	Domestic	Tokyo	-	-	-
Toyo Styrene Co., Ltd.	Domestic	Tokyo	-	-	-
Nagano Novafoam Sangyo Ltd.	Domestic	Nagano	○	○	-
Toyoshina Film Co.,Ltd.	Domestic	Nagano	-	-	-
Toyama Filter Tow Co., Ltd	Domestic	Toyama	-	-	-
Hirohata Terminal Company Ltd.	Domestic	Hyogo	-	-	-
Hayashi Shipping,Co.Ltd	Domestic	Hyogo	-	-	-
Ningbo Da-An Chemical Industries Co., Ltd.	East Asia	Zhejiang	-	-	-
Xi'an Huida Chemical Industries Co., Ltd.	East Asia	Shaanxi	-	-	-
Shanghai Da-Shen Cellulose Plastics Co., Ltd.	East Asia	Shanghai	-	-	-
Daicel Prosperity (China) Ltd.	East Asia	Hong Kong	-	-	-
Polyplastics Marketing (India) Pvt. Ltd.	South and Southeast Asia	Mumbai	○	○	-
Chrom Tech Ltd.	Europe	Buckinghamshire	-	-	-

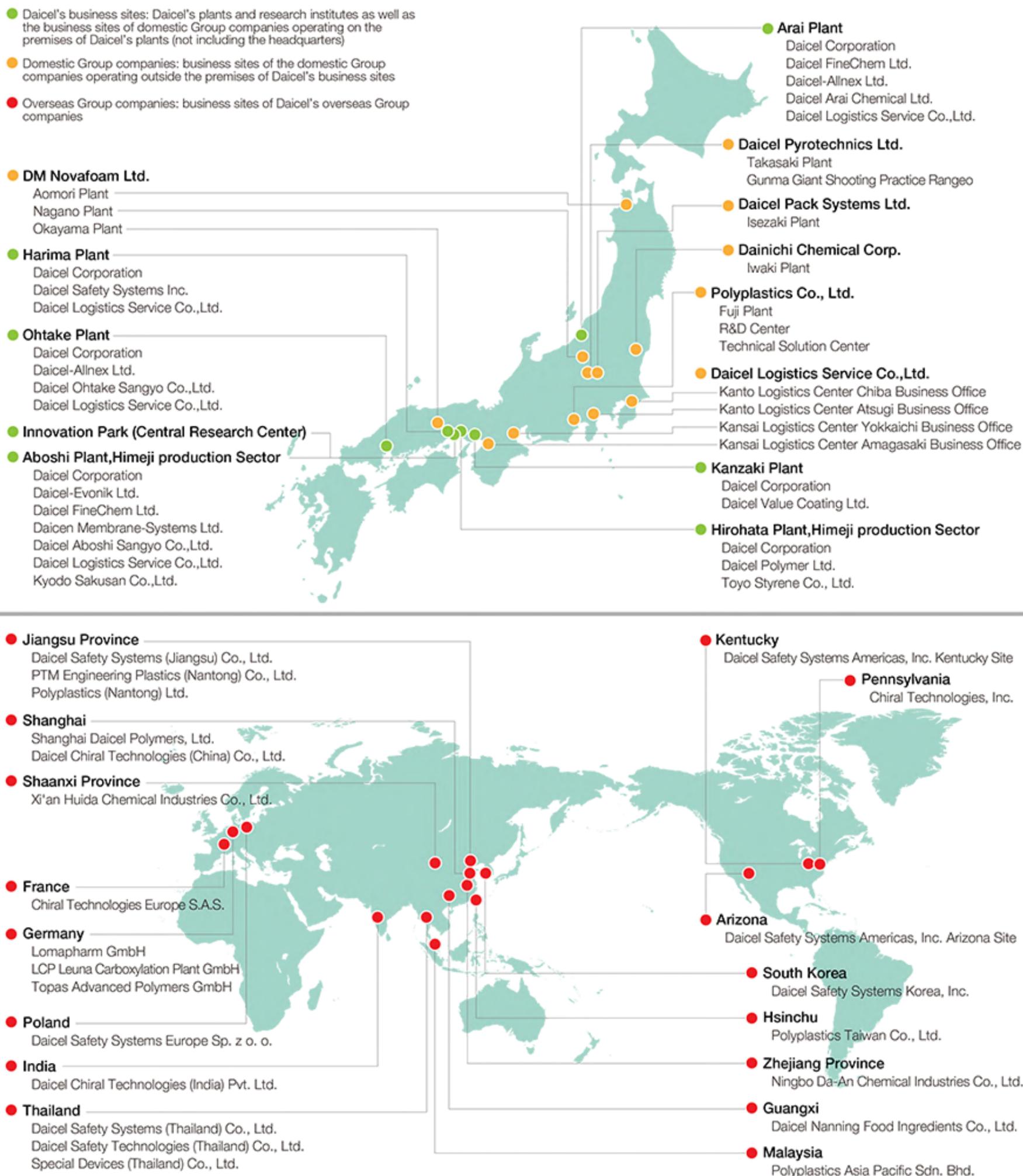
\*1 As of July 1, 2020, Sales departments of Daicel FineChem Ltd., Daicel Polymer Ltd., and Daicel Value Coating Ltd. were integrated into a new company named Daicel Miraizu Ltd., which succeeded Daicel FineChem Ltd. Also, on the same day, the production departments of Daicel Polymer Ltd. were transferred to Daicel's Multiple Production Company, and Daicel Polymer Ltd. was dissolved.

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\*3 As of July 1, 2020, Daicel Polymer (Thailand) Co., Ltd. changed its name to Daicel Miraizu (Thailand) Co., Ltd..

# Scope of Data Calculation for Environmental and Occupational Safety Performance

Scope of Data Calculation for Environmental and Occupational Safety Performance encompasses the business sites and Group companies involved in manufacturing and logistics.



\* As of July 1, 2020, Sales departments of Daicel FineChem Ltd., Daicel Polymer Ltd., and Daicel Value Coating Ltd. were integrated into a new company named Daicel Miraizu Ltd., which succeeded Daicel FineChem. Also, on the same day, the production departments of Daicel Polymer were transferred to Daicel's Multiple Production Company, and Daicel Polymer ceased to exist.