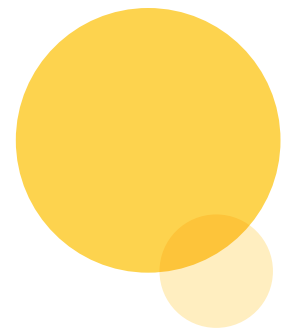


**kuraray**  
Possible starts here

# Kuraray Report 2023

For Fiscal 2022, Ended December 31, 2022



**For people and the planet—  
to achieve what no one else can.**



# About the Publication of Kuraray Report 2023

Since 2018, the Kuraray Group has issued the Kuraray Report so that all stakeholders, including shareholders and investors, can gain a deeper understanding of the Group's efforts toward value creation over the medium to long term.

The Report covers our Medium-Term Management Plan, "PASSION 2026," which runs from 2022 to 2026, the year marking our 100th anniversary, as well as efforts to fulfill our social responsibilities and contribute to society through business.

In compiling Kuraray Report 2023, we referred to the International Integrated Reporting Framework of the IFRS Foundation, the Guidance for Collaborative Value Creation from the Japanese Ministry of Economy, Trade and Industry, and other sources, creating a summary of our approaches across the Group.

We will continue to pursue constructive dialogue with all of our stakeholders, using the Kuraray Report as one of our engagement tools. At the same time, we will move forward in building corporate value as a Specialty Chemical Company contributing to customers, society, and the planet while growing sustainably.

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## Editorial Policy

The Kuraray Report compiles ESG-related financial and non-financial information with regard to the Kuraray Group's efforts to create sustainable value.

The Kuraray Report 2023 uses the Global Reporting Initiative (GRI) Standards as a reference. A comparison between them is shown on our website.

(🔗 <https://www.kuraray.com/csr/report2023/guidelines>)

For more information about our products, businesses, or other information, please visit the website. The year in the title of the report is the year of issue.

- \* All Kuraray financial data contained in this report is on a consolidated basis.
- \* Financial data (results) of Kuraray expressed in this report in billions of yen are rounded to the nearest hundred million yen.
- \* Forecasts and outlooks in this Report are based on assumptions and suppositions regarding the future operating environment and economic conditions at the time of publication, which may differ from actual results.

## Reporting Period

January 1 to December 31, 2022

- \* Some information from after January 2023 is included.

## Scope of the Report

Kuraray Co., Ltd. and the Kuraray Group companies

## Information Disclosure System

### ◆ Website



### General Corporate Information

(🔗 <https://www.kuraray.com>)

Financial information    Non-financial information

Offers general information about the Kuraray Group, including corporate information, products and services, R&D, IR activities and finance, sustainability, recruitment information, and news releases.



### Investor Relations

(🔗 <https://www.kuraray.com/ir>)

Financial information

Offers a range of information, including about the Kuraray Group's management policy and the Medium-Term Management Plan, various briefing materials, and performance-related data.



### Sustainability

(🔗 <https://www.kuraray.com/csr>)

Non-financial information

Offers information on the material issues of the Kuraray Group, our Sustainability Medium-Term Plan, and sustainability-related data.



### ◆ Kuraray Report (Integrated Report)

(🔗 [https://www.kuraray.com/csr/report\\_backnumber](https://www.kuraray.com/csr/report_backnumber))



Financial information    Non-financial information

Puts priority on key financial and non-financial information related to the Kuraray Group's creation of sustainable value. Please see the website for a wider range of more comprehensive information and detailed data.



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# At a Glance (As of December 31, 2022)

Established 

**1926**

Employees (Consolidated) 

**11,703**

(Ratio of overseas employees: 41.7%)

Bases 

**102** companies in **31** countries and regions around the world

(Production bases: 9 bases in Japan, 43 bases outside Japan)

Overseas sales ratio 


**76%**

Capital 

**¥89 billion**

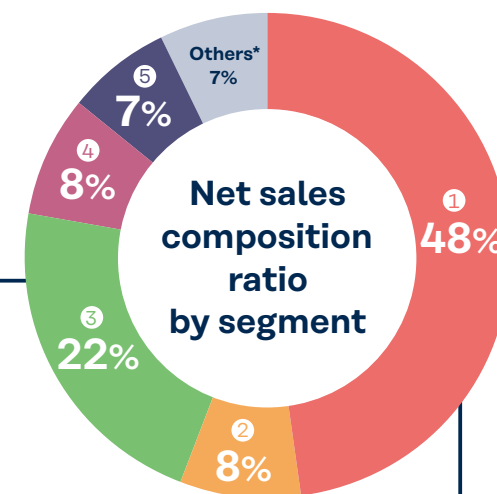
Net sales (Consolidated) 

**¥756.4 billion**

Operating income (Consolidated) 

**¥87.1 billion**

(Operating income ratio: 11.5%)



## Business Segments of the Kuraray Group

### ① Vinyl Acetate

We manufacture and sell materials ranging from PVOH resin offering properties such as water solubility and high adhesiveness; materials for LCD display applications; PVOH film used in soluble unit dose system for detergent and other products; PVB film used as an interlayer for safety glass; to EVAL™ EVOH resin that offers excellent gas barrier properties.

### ③ Functional Materials

We manufacture and sell methacrylic resin that offers excellent transparency and weatherability, dental materials enabling restorations that closely resemble natural teeth, activated carbon whose high adsorption performance is used to purify air and water, and water treatment equipment.

### ② Isoprene

We manufacture and sell isoprene chemical products made with a synthesizing method as well as SEPTON™ thermoplastic elastomer and GENESTAR™ heat-resistant polyamide resin, which are derivatives of isoprene chemical products.

### ④ Fibers and Textiles

We manufacture and sell KURALON™ PVA fiber, which is mainly used in reinforcing cement building materials and in automotive components; CLARINO™ man-made leather, which has a structure and functionality similar to natural leather; VECTRAN™ liquid crystal polymer fiber, mainly used as an industrial material due to characteristics such as high strength and low water absorption; KURAFLEX™ nonwoven fabrics which are used as household and industrial products; and MAGIC TAPE™ hook-and-loop fastener.

### ⑤ Trading

In addition to the manufacture and sale of polyester and other fiber and textile products, we sell Kuraray Group products in Japan and other parts of Asia.

\* Others indicates business segments not included in the reportable segments, including the engineering business.



At a Glance

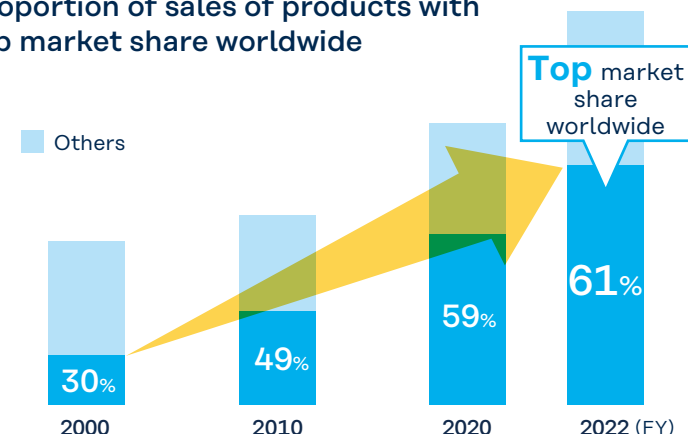
# Original Technology Yields Products with Top Market Share Worldwide\*

At Kuraray, we use our unique technical strengths to create products that the world has never seen before. Starting with the world's first commercialization of PVA fiber, we moved on to produce PVOH resin which is raw material of PVA fiber; optical-use poval film, which is essential to liquid crystal displays; EVAL™ EVOH resin, which features excellent gas barrier properties; and a lineup of various commercialized chemical products that use the world's only synthetic isoprene monomers as materials.

Sales of products with the highest global market share that we have created using our unique technologies accounted for 61% of the Kuraray Group's total sales in 2022.



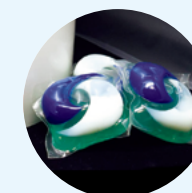



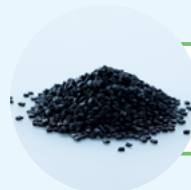


\* Based on in-house research

Proportion of sales of products with top market share worldwide



## Products with Top Market Share Worldwide

○ Vinyl Acetate    ○ Isoprene    ○ Functional Materials    ○ Fibers and Textiles

 <p><b>PVOH resin</b> (Excluding China)</p>	 <p><b>Optical-use poval film</b></p>	 <p><b>Water-soluble PVOH film</b></p>
 <p><b>EVAL™</b> EVOH (ethylene vinyl alcohol copolymer) resin</p>	 <p><b>Isoprene chemicals</b></p>	 <p><b>GENESTAR™</b> heat-resistant polyamide resin</p>
 <p><b>Activated carbon</b></p>	 <p><b>KURALON™, KURALON K-II™</b> PVA fiber</p>	 <p><b>VECTRAN™</b> liquid crystal polymer fiber</p>

## Corporate Statements

### Our Mission

We are committed to developing new fields of business using pioneering technology that improves the environment and enhances the quality of life throughout the world.  
“For people and the planet—to achieve what no one else can.”

### Our Values

#### Philosophy

Respect for individuals

Close cooperation to attain shared goals

Constant creation of new value

#### Guiding Principles

Safety is the cornerstone of everything we do

Customers' needs are our top priority

We act on ideas in the workplace

### Our Commitment

- We will constantly develop and provide safe, high-quality products and services.
- We will maintain a sound relationship with society through good communication.
- We will strive to preserve and improve the global environment, and to secure safety and health in all our workplaces.
- We will value all members of the Kuraray community and respect their rights.
- We will always conduct businesses in a free, fair and transparent manner.
- We will honor all intellectual property and secure data and information in a proper manner.

## Corporate Tagline

**kuraray**

Possible starts here

**Possibility can change the world.  
And it starts here.**

The Kuraray Group established a corporate tagline in 2022: “Possible starts here.” Since our founding, we have taken on the challenge of solving social issues and creating new value through our business activities. We formulated the phrase “Possible starts here” to express our unwavering corporate attitude as well as our desire to co-create value with society for a better future—starting with the Kuraray Group.



Brand Story of the Kuraray Group

<https://www.kuraray.com/possiblestartshere/>

# The DNA of the Kuraray Group and Its Strengths Gained through the Years

## Developing Solutions to Social Issues and Contributing to Economic Development through Our Business Activities

Kuraray was founded in 1926 in Kurashiki City, Okayama Prefecture, for the purpose of commercializing synthetic rayon.

Our founder, Magosaburo Ohara, and second President, Soichiro Ohara, sought to build up the business through technological innovation while emphasizing the importance of fulfilling the Company's social responsibilities, such as the response to environmental issues, focusing on addressing social issues through the Company's business activities.

In 1950, shortly after World War II, Soichiro Ohara established the technology to manufacture PVA fiber and its raw material, PVOH resin. The commercialization of this synthetic fiber did not just benefit one company—it helped revitalize Japan's textile industry. This achievement arose out of management's unwavering conviction that "to produce high-quality products with stable profits, we needed to make a product from raw materials without relying on imports."

The pioneering spirit of the Company's management has been passed down as the foundational DNA of the Kuraray Group. Since the beginning, it has been important to Kuraray, even before the phrase "corporate social responsibility" became mainstream.



Magosaburo Ohara  
First President

**"All the wealth gained from society should be returned to society."**

He established the Ohara Institute for Social Research, the Kurashiki Institute for the Science of Labour (now the Ohara Memorial Institute for Science of Labour) for the improvement and reformation of labor conditions, the Kurabo Central Hospital (now the Kurashiki Central Hospital), and the Ohara Museum of Art. These facilities contributed to the advancement of local medicine, welfare, education, culture, and people's standard of living.



Ohara Museum  
of Art



Kurashiki Central  
Hospital



Soichiro Ohara  
Second President

**"Any profit which a company might gain should be confined to those profits that come from technological innovation and from consideration of the social and economic benefits it brings to the entire nation."**

He was among the first to mention corporate responsibility for emissions at a time when the word "pollution" was still a rarity. In 1950, he pioneered the commercialization of KURALON™ PVA fiber, the first synthetic fiber made in Japan using proprietary technology. He continued to help address social issues and advance economic development through business activities, such as the development and commercialization of CLARINO™, the world's first man-made leather to replace natural leather.



KURALON™  
PVA fiber



CLARINO™  
man-made leather

# A Long History of Addressing Social Issues

Throughout its history, the Kuraray Group has continually sought to develop new technologies and markets, and has launched numerous pioneering businesses.

“For people and the planet—to achieve what no one else can.” Grounded in this mission, we have drawn on our creativity and resourcefulness to overcome technical challenges, giving rise to highly distinctive products that offer new value to society. These products have found widespread use throughout the world.

## A History of Addressing Social Issues and Advancing Economic Development through Business Activities

A look at some of the businesses and products that have helped to address social issues and advance economic development

Social issues and historical context

1926–

### Company founded with the aim of commercializing rayon, giving rise to Japan's first synthetic fiber, KURALON™ PVA fiber, and birth of a new business

Kuraray was founded in 1926 as Kurashiki Kenshoku Co., Ltd. in Kurashiki City, Okayama Prefecture for the purpose of commercializing synthetic rayon. In the 1950s, Kuraray became the first company in the world to commercialize PVA fiber, the first synthetic fiber made in Japan. These synthetic fibers replaced arboreous cotton, helping to ensure a sufficient supply of fabric for clothing and other daily commodities. Since then, we have launched a series of new businesses, including PVOH resin, CLARINO™ man-made leather, EVAL™ EVOH resin, isoprene chemicals, and dental materials, helping to address social issues and advance economic development through our business activities.

### Ensuring sufficient daily commodities, developing social infrastructure

- ◆ World War II
- ◆ Growth of heavy and chemical industry
- ◆ High economic growth period
- ◆ Oil crisis

1980–

### Creating highly functional synthetic fibers

We sought to diversify our business, focusing on the advantages of synthetic fibers, such as strength, weatherability, and resistance to chemicals. In 1983, we developed PVA fiber for cement reinforcement as a substitute for asbestos, which poses a danger to health, and entered into a long-term export agreement with Eternit (Schweiz) AG in Switzerland. We then developed VECTRAN™ liquid crystal polymer fiber, newly adding it to our product lineup of core fiber materials. In these and other ways, we worked to shore up the comprehensive strengths of the industrial materials business and speed up market development.

### Making life more convenient and more comfortable

- ◆ Plaza Accord
- ◆ Deregulation of telecommunications sector, privatization of national railways
- ◆ Flourishing of the electronics industry
- ◆ Bubble economy

1990–

### Growth of telecoms business, overseas expansion of chemicals and resins businesses

As the spread of the Internet and mobile phones were changing the way people lived, we developed VECSTAR™ liquid crystal polymer film, which supports faster communications. In 1999, we commercialized GENESTAR™ heat-resistant polyamide resin, anticipating brisk demand for use in electrical and electronic components for computers and mobile phones as well as automotive components. Meanwhile, in our chemicals and resins businesses, backed by strong product appeal, we increased sales overseas, expanded market share, and built a global production framework.

### Spread of the Internet, lifestyle changes

- ◆ Bursting of bubble economy
- ◆ Spread of Internet and mobile phones
- ◆ Adoption of Kyoto Protocol

A look at some of the businesses and products that have helped to address social issues and advance economic development

Social issues and historical context

2000–

**Development of environmentally friendly products, expansion of vinyl acetate business through acquisitions**

In response to mounting global awareness of environmental issues, in the United States we started full-scale operation of a newly completed production line for SEPTON™ thermoplastic elastomer, used as a substitute for vulcanized rubber and vinyl chloride. In the vinyl acetate segment, we reinforced the value chain and scaled up the business through overseas acquisitions. Due to these measures, the Kuraray Group's unique technologies and products found widespread use throughout the world, leading to dramatic growth in the ratio of overseas sales.

**Globalization, mounting environmental awareness**

- ◆ Izanami Boom (2002–2008 economic expansion period in Japan)
- ◆ Flourishing of IT and venture companies
- ◆ Global financial crisis

2010–

**Expansion of businesses, products that contribute to the natural and living environments**

Through ongoing overseas acquisitions and alliances, we achieved the global expansion of businesses and products that contribute to the natural and living environments, including activated carbon that aids in water and air purification, and PLANTIC™ biomass-derived gas barrier material that helps lower the logistical burden and reduce food loss.

**Realizing a sustainable society**

- ◆ World population surpasses 7 billion
- ◆ Paris Agreement
- ◆ SDGs adopted by UN
- ◆ Spread of COVID-19

2022–

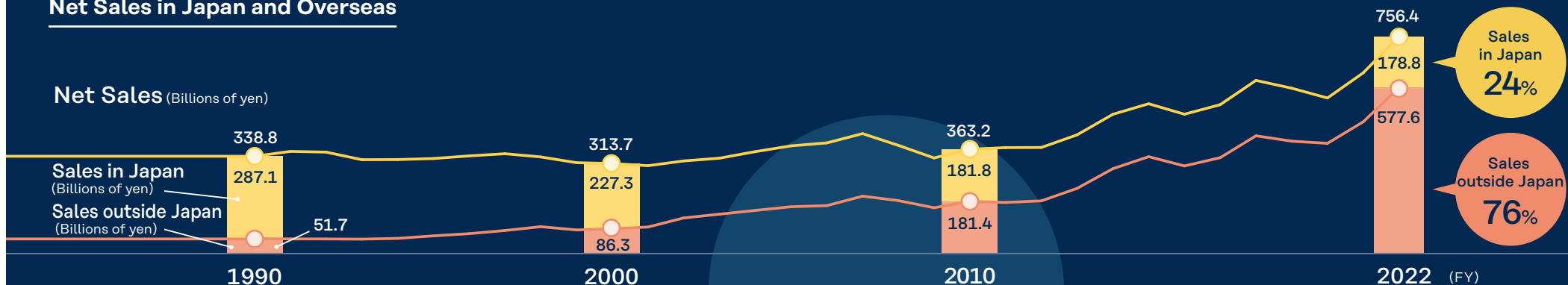
**Business portfolio emphasizing social and environmental value alongside economic value**

Our Mission sets target fields for social issues needing to be addressed to achieve sustainable growth, in light of macrotrends. Meanwhile, we aim to build a more sophisticated business portfolio by using the two axes of social and environmental value and economic value to assess our businesses. We are channeling resources into strategic businesses such as water-soluble PVOH film, EVAL™ EVOH resin, carbon materials, dental materials, highly functional plastics, and optical-use poval film.

**Positioning efforts to address social issues as an engine for growth**

**Net Sales in Japan and Overseas**

Net Sales (Billions of yen)





# Five Macrotrends and Target Fields

The Kuraray Group considers the products, technologies, and services we offer in light of macrotrends—improvement of the global environment, food and water security, digitalization and high-speed communications, effective utilization of energy, and higher quality of life (QOL)—thereby clarifying social issues needing to be addressed and setting target fields to address them.

We have core capabilities in each of these areas. By channeling management resources into businesses and products related to these areas, and by exploring strategic acquisitions and corporate alliances, we will work to grow existing businesses and generate new businesses.



## Improvement of the global environment

### Environmental load reduction

#### Air and water purification

- Adsorption, filtering

#### Reduce microplastics

- Biodegradable polymers
- Functional enhancement of paper products

#### Circular economy

- Shift to mono-materials
- Circular business models



### Global warming prevention

#### GHG capture

- Absorption and separation

#### GHG utilization

- Consider applications for Enhanced Oil Recovery (EOR)
- Polymer synthesized from CO<sub>2</sub>

#### Reduce GHG emissions

- Promote the use of bio-based materials
- Contribute to weight reductions
- Conversion to alternative fuels, higher efficiency



## Food and water security

### Food loss reduction

- Prolongation of shelf life

### Improve agricultural productivity

- Materials for insect prevention and seed coating

### Safe water supply

- Removal of PFAS, organic fluorine compounds



## Digitalization, high-speed communications

### Electric and electronic device materials

- Electronic devices and circuit substrates
- Semiconductor manufacturing equipment-related

### High-speed telecommunications device materials

- Mobile data terminals (electromagnetic wave shields)
- 5G telecommunication device-related



## Effective utilization of energy

### Materials for energy storage devices

- Secondary batteries (anode materials, etc.)

### Energy-related materials

- Wind power generation materials

### Materials for electric and electronics devices

- Next-generation vehicles (high-voltage parts)



## Calls for higher quality of life (QOL)

### Medical and healthcare

- Dental materials
- Regenerative medicine materials

### Beauty goods and living supplies

- Water-soluble films for individual product packaging
- Sanitary goods

### Improve indoor and in-vehicle environments

- Air purification
- Highly functional displays
- Vibration control sealants
- Interior parts (car seats, etc.)

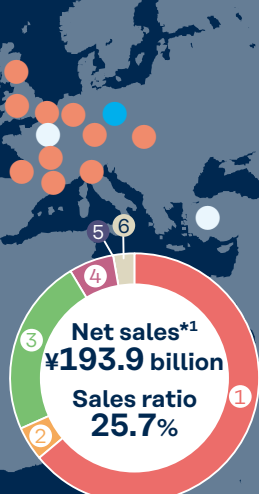




# Global Portfolio

Under our policy of making and selling products in the best-situated regions, the Kuraray Group is expanding overseas businesses by capitalizing on our proprietary technology. Our overseas network now includes 102 companies in 31 countries and regions, and sales outside Japan account for 76% of total sales.

Going forward, we will continue to strengthen the global network to meet the needs of countries and regions, worldwide and co-create value with society through our businesses.

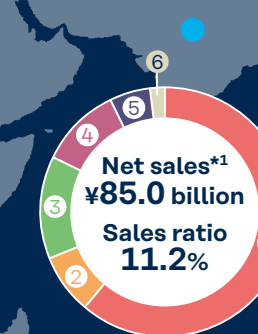


**Europe**  
31 companies

- ▶ **2019 Czech Republic**  
Started full-scale production of SentryGlas™ ionoplast interlayers
- ▶ **2022 Belgium**  
Belgian subsidiary of Calgon Carbon Corporation Expanded reactivated carbon production capacity
- ▶ **2022 Poland**  
Completed new plant for water-soluble PVOH film

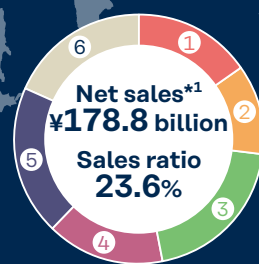


**China**  
11 companies



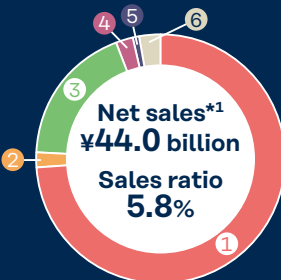
**Asia**  
14 companies

- ▶ **2018 South Korea**  
Expanded production capacity for PVB film
- ▶ **2023 Thailand**  
New isoprene plant production site went into operation



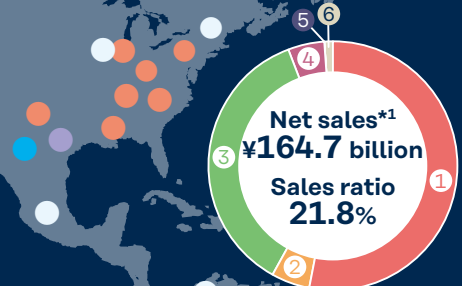
**Japan**  
25 companies

- ▶ **2019 Saijo**  
Expanded production capacity for VECSTAR™ liquid crystal polymer film
- ▶ **2020 Kashima**  
Started production of VECSTAR™ FCCL copper clad laminate
- ▶ **2020 Okayama**  
Expanded production capacity for meltblown nonwoven fabric production line
- ▶ **2024 Kurashiki**  
Plan to start operation of optical-use poval film production line



**Other regions**  
11 companies

- ▶ **2015 Australia**  
Acquired Plantic Technologies Limited [biomass-derived gas barrier material]



**United States**  
10 companies

- ▶ **2018**  
Acquired Calgon Carbon Corporation [activated carbon]
- ▶ **2020**  
Started operation of new plant for water-soluble PVOH film
- ▶ **2020**  
Started operation of resin production facilities for PLANTIC™ biomass-derived gas barrier material
- ▶ **2023**  
Plan to start operation of expanded production line for Virgin activated carbon at Calgon Carbon Corporation

Sales Ratio ① Vinyl Acetate ② Isoprene ③ Functional Materials ④ Fibers and Textiles ⑤ Trading ⑥ Others

Group Network 📍 Head Office/9 Plants/2 Laboratories 🌐 Regional Headquarters 🏭 Plants 🧪 Laboratories 🗺️ Other sales locations

\* The timeline for each region shows recent trends in capital investments and acquisitions.  
\*1 Net sales by region are classified by country or region based on customer location.

## Top Statement



**Mobilizing the strengths of our employees worldwide, we will work together as “One Kuraray” to fulfill our mission:  
“For people and the planet—to achieve what no one else can.”**

*Hitoshi Kawahara*

President and Representative Director

## Taking on Challenges Is the Force That Drives Success

Since its founding in 1926, the Kuraray Group has grappled head-on with ways of addressing social issues through its business activities. Magosaburo Ohara, our founder, and Soichiro Ohara, our second President, sought to build the business through technological innovation while stressing the importance of fulfilling the Company's social responsibilities, helping to address environmental issues, and contributing to the improvement of people's quality of life.

This mission has been passed down through the generations and remains unchanged today, as expressed in our Corporate Statements: "We are committed to developing new fields of business using pioneering technology that improves the environment and enhances the quality of life throughout the world. 'For people and the planet—to achieve what no one else can.'"

In fulfilling our mission, I believe it is vital to take on challenges without the fear of small failures. When I say "failure," I mean after making needed preparations and setting out to accomplish an ambitious goal or a new venture, to fail in a way that will lead to success down the road. Failure that leads to success is the driving force behind future accomplishments, which I believe has meaningful value.

The Kuraray Group has always had an uninhibited, open-minded corporate culture that affords employees opportunities to take on challenges regardless of age or job position. I still carry a strong impression from the department I got assigned to when I first joined the Company. The atmosphere was one in which team members could exchange opinions frankly without worrying about who was senior or who was junior, and younger employees didn't have to hesitate before jumping in and playing an active part.

I truly value the free, open culture the Kuraray Group has cultivated over the years. By bringing

together employees around the world as "One Kuraray," my hope is to create a dynamic company that brims with even greater vitality and creativity than ever before. For this reason, it is critical for our people to view sweeping changes in the operating environment as opportunities—to have the ambition, the will to act, the grit to come up with new ideas, and to continue taking on challenges in a range of contexts. This spirit of embracing challenges is the Kuraray Group's greatest asset and is the force that will drive our ongoing growth as a Specialty Chemical Company.

## Moving to Implement the Three Challenges of the Medium-Term Management Plan "PASSION 2026"

"PASSION 2026" is the five-year Medium-Term Management Plan we formulated to make the long-term "Kuraray Vision 2026" a reality.

The plan sets out three challenges for the Kuraray

Group to pursue to create value for customers, society, and the planet while growing sustainably as a Specialty Chemical Company. The first challenge is "Sustainability as an opportunity." To achieve the Sustainability Long-Term Vision, which was formulated alongside "PASSION 2026," we grouped sustainability-related measures based on the materiality of the Kuraray Group under three Ps: Planet, Product, and People. Then, we established performance indicators in our Sustainability Medium-Term Plan to guide these measures. The second challenge is "Innovations starting from networking." Here, we work to create innovation as a growth driver by connecting people with people and technologies with technologies—both outside and within the Company. The third challenge is "Transformation of people and organization." This involves digital-driven process innovation and the promotion of diversity, which will help us realize a broad range of ideas on the transformation of people and organizations.

The key to addressing these three challenges will

### Medium-Term Management Plan "PASSION 2026"

#### Three challenges

#### Sustainability as an Opportunity

Take sustainability as an opportunity and promote it with the collective strength of the whole group



> P.25

#### Innovations Starting from Networking

Create a growth driver by connecting people with people, and technologies with technologies, both within and outside the Company



> P.33

#### Transformation of People and Organization

Transform people and organization via digital-driven process innovation and the promotion of diversity which will, in turn, help us bring to bear a broad range of ideas



> P.37

be to understand the breadth and depth of all the issues involved and to frame our responses across concrete implementation phases. For example, “Sustainability as an opportunity” includes a goal of achieving net-zero carbon emissions by 2050. This requires us to take on challenges from a wide range of perspectives across the entire value chain. “Innovations starting from networking” involves the challenge of broadly surveying available resources within and outside the Company and pursuing collaboration. Meanwhile, the challenge “Transformation of people and organization” represents a profound call to build an organizational structure that capitalizes on the capabilities of every employee. I will say more about the main initiatives and the status of each challenge. But first, I want to note the initial year of the Medium-Term Management Plan got off to a solid start, moving the three challenges squarely into the implementation phase.



## Sustainability as an Opportunity

### Achieving Net-Zero Carbon Emissions by 2050



I would like to say a word about the first P, the Planet aspect of “Sustainability as an opportunity.” We are making Group-wide efforts to achieve net-zero carbon emissions by 2050. We set a goal of reducing greenhouse gas emissions (Scope 1 and 2) by 30% by the halfway point, 2030, against the benchmark year of 2019. We are now taking concrete steps to reach this goal.

In 2022, we moved ahead with energy-saving projects and realized greener electricity procurement by purchasing renewable energy certificates. We also aim to reduce CO<sub>2</sub> by-products in the manufacturing processes of the activated carbon business. We have positioned a carbon dioxide capture, utilization, and

storage (CCUS)\*<sup>1</sup> system as a longer-term initiative to achieve this goal, and we set up a cross-organizational project team to lead this effort. Regarding the shift to alternative energy (our long-term goal after 2030), we have started collecting information by taking part in regional research gatherings and various councils in Japan and abroad.

Many of the Kuraray Group’s products and services themselves contribute to the reduction of greenhouse gas emissions in society. Thus, we see the trend toward carbon neutrality not only as a risk but also as an opportunity for business growth, and will work to create and propose further value in this area.

\*1 Carbon dioxide Capture, Utilization, and Storage: An initiative to utilize or store CO<sub>2</sub> separated from exhaust gas from industrial facilities.

### Identifying Products, Technologies, and Target Areas for More Focused Resource Allocation



With regard to the second P, Product, let me explain our system for evaluating product sustainability. The Kuraray Group is committed to prioritizing resource allocation to products and technologies that make strong contributions to the natural and living environments as well as offer high economic value. To this end, we introduced the Kuraray Portfolio Sustainability Assessment (PSA) system in 2022 with the aim of continuously enhancing the business portfolio. Based on an evaluation index established by the WBCSD\*<sup>2</sup> to help companies build more sustainable product portfolios, we constructed our PSA system in accordance with specialized guidelines for the chemical industry and designed it with additional evaluation criteria unique to the Kuraray Group.

Products that contribute to both the natural and living environments include EVAL™ EVOH resin used in food packaging and PLANTIC™ biomass-derived

gas barrier material, as well as activated carbon used in water and air purification. Products that contribute to the natural environment include KURALON™ PVA fiber, which is used as an asbestos substitute in building materials, and various products that use bio-based or recycled raw materials. Products that contribute to improving the living environment include dental materials, VECSTAR™ liquid crystal polymer film, and GENESTAR™ heat-resistant polyamide resin.

The Kuraray PSA system can be applied to a variety of other uses, such as providing indicators for a phase gate product development process or decision-making criteria for capital investment. The system can also be used to help verify the direction of marketing and application development, and to confirm points that make products most appealing to users. In the case of EVAL™ mentioned above, when this material is used in food packaging, it helps to reduce food loss (by enabling the long-term storage of food) and the logistics burden (by enabling more lightweight containers). Conversely, EVAL™ is highly rated for its ability to prevent vaporized gasoline from escaping into the atmosphere when used in plastic automobile gasoline tanks. However, in regions where vehicle electrification is progressing, the market for gasoline-powered vehicles will contract, and the use of plastic gasoline tanks will decline. In such a case, the evaluation of EVAL™ would be lower from an economic value point of view. Because the same product may contribute differently depending on its practical application, our PSA system can be used as an excellent guide for determining the direction of product development.

However, the PSA system is still a work in progress, and there is an ongoing need to reassess and reconsider its evaluation criteria. For instance, the PSA system determines economic value based on fluctuations in net sales but does not yet incorporate

\*2 World Business Council for Sustainable Development.





a standard for operating income, which is a profitability indicator. We want to evolve the system so that it can make an in-depth analysis of products from a variety of angles—for example, which choices of application or region would make a greater contribution to society, and which would lead to greater profitability.

### The “Power of People” Is the Well-Spring of Our Competitiveness

The third P is People, who are the foundation of all these activities. I believe that the well-spring of the Kuraray Group’s competitiveness is the “power of people;” in other words, our human capital.

The Kuraray Group has accelerated its expansion into overseas markets through a series of acquisitions and other efforts since the 2000s. The result is that, although we grew rapidly as a global company, our personnel systems did not keep track with the global framework. This has given rise to issues such as the underutilization of human resources at overseas bases. To address these issues, “PASSION 2026” established three priorities for creating a global framework for our personnel systems: developing an HR platform and personnel data, HR development based on a long-term perspective, and personnel measures to promote diversity.

In developing the HR platform and personnel data, we defined basic approaches and frameworks that are common across our global network. We are now working to align job grades in Japan and overseas, visualize the process for determining compensation, and introduce successor development plans at overseas bases. In terms of long-term HR development, we are enhancing our executive candidate development program and expanding the global talent development program. Measures to promote diversity include the start of initiatives to build horizontal collaboration among foreign employees working in Japan.

Furthermore, we established a new Global HR Center in January 2023, transitioning to an organizational framework that forms project teams based on different themes. I have high expectations the Center will increase the pace of various measures and implement an IT infrastructure to support our HR initiatives.

Through these measures, we are striving to become a company where employees in a diverse workforce can find fulfillment in their work and take on challenges without fear of failure, generating a series of innovations while responding to change and continuing to grow.



Our  
Challenges  
(2)

### Innovations Starting from Networking

#### Generating New Business Opportunities through Collaboration

The Innovation Networking Center (INC) is at the heart of the second challenge, “Innovations starting from networking.” INC is tasked with integrating internal and external resources and serving to accelerate innovation. One of our major goals is to break away from a traditional corporate culture where each division is vertically divided and construct a network that can create value comprehensively.

Currently, INC is pursuing six strategic areas: Automotive, Paper & Packaging, Agriculture, Sports & Outdoors, Architecture & Construction, Life & Personal Care. In each area, INC is identifying unmet needs through customer dialogue and discovering new business opportunities. I have been very pleased to see INC identify a series of opportunities, more than I anticipated. Moreover, the number of employees applying to join INC, both in Japan and overseas, is growing.

In terms of next steps, in fiscal 2023 we are dividing INC into a Marketing Department and an Incubation Department. The Marketing Department

will continue to identify opportunities in strategic areas. The Incubation Department will narrow down the many identified opportunities and coordinate various in-house capabilities, such as in the business and Research and Development divisions, to target the commercialization of products and services.

Compared to INC, which is situated close to various customer markets, the Research and Development Division generates essential innovation through a creative, sophisticated technological framework that fuses related peripheral technologies and expertise based on our core technologies in polymer and synthetic chemistry. Under “PASSION 2026,” as a new foundational platform, we have examined consumer and customer lifestyles 20 to 30 years from now. Backcasting from there, we identified suitable themes in terms of sustainability, QOL, and other factors, and have started R&D activities. We are also stepping up other efforts to generate innovation, such as reinforcing internal and external collaboration; globally marketing products developed in collaboration with INC; working with university research institutions; and making use of venture capital.

Our Challenges  
(3) **Transformation of People and Organization**

### Building Digital Technology into Our Management and Pursuing Transformation

To address the third challenge, “Transformation of people and organization,” we are pursuing digital transformation across the Group. Our DX Vision challenges us to “Improve competitiveness, continuously evolve, and contribute to the world as a digitally savvy company.” To this end, we are working on four priority fields: customer experience (CX) reforms, operational process reforms, business model reforms, and R&D and production technology simulations.

To harness digital transformation as a driver of

growth, it is crucial to first establish a governance framework that enables the active use of IT infrastructure globally. In January 2023, to further address Group-wide digital transformation, we reorganized and integrated the Global Digital Transformation (GDx) Office, IT Department, and G-SAP Promotion Group, to launch the new DX-IT Division. We will draw on progress in digital technology to build an operating framework that enables Group-wide projects to move forward more quickly and efficiently. Meanwhile, we are strengthening the cultivation of digital professionals. We are offering education and training to raise the level of digital literacy among all employees, including executives and managers. We will continue to aggressively invest in strategic digital transformation areas, as well as pursue management reforms, thereby further accelerating our evolution into a digitally savvy company.

### Creating Second and Third Drivers of Profit

“PASSION 2026” describes our mission to address the three challenges while also creating the next profit drivers beyond our mainstay vinyl acetate business. To this end, we are focusing on the isoprene and activated carbon businesses to underpin the growth of the Kuraray Group going forward.

In the isoprene segment, we completed a new plant in Thailand, which began producing isoprene chemicals in February 2023, followed by SEPTON™ thermoplastic elastomer and GENESTAR™ heat-resistant polyamide resin. As a cost-competitive production site with state-of-the-art equipment, the new plant will play a central role in meeting mounting global demand for isoprene products. From a business continuity perspective, the new plant will play a key role in supporting stable supply. We expect demand for GENESTAR™ to increase in line with the weight reduction, electronic control, and electrification of automobiles. With the addition of the new plant,





we plan to increase expansion into global markets, including the Americas, Europe, and Asia, eventually leading to a second expansion stage in Thailand.

Activated carbon is a product that makes significant contributions to the natural and living environments. Rather than simply selling materials, the Kuraray Group has positioned the activated carbon business as a “solution business,” which includes equipment proposals. Currently, the scale of the global market for activated carbon is 1.8–1.9 million tons. Boasting a combined production capacity of roughly 230,000 tons for virgin and reactivated carbon, the Kuraray Group ranks in the top position in the world in this market. We will continue to expand operations to solidify our presence in this market, which holds the promise of significant growth.

The Kuraray Group has three major strengths in the activated carbon business. First, our production and sales bases in Japan, Asia, the Americas, and Europe enable us to supply and sell products from a position in each country and region. Second, we have a wide range of activated carbon raw materials, including coconut-, bituminous coal-, and wood-based activated carbon. This allows us to offer products and services that meet customer needs. Third, with production facilities for both virgin and reactivated carbon, we have established a circular business model of collecting and reactivating used carbon from customers. Reactivated carbon is also a material that supports the environment, reducing the volume of greenhouse gases generated in the manufacturing process by about 80% compared to virgin activated carbon. In October 2022, we completed the expansion of our reactivated carbon production facility in Belgium, reinforcing our supply framework in the European region. Going forward, we plan to make further inroads with our reactivated carbon business in the Asian market.

## Non-Negotiable: Safety Is the Cornerstone of Everything We Do

As we reinforce our global production framework, safety is non-negotiable; it’s the cornerstone of everything we do. Our business continuity depends on us acting with safety as the top priority. At production sites, staying within budget and proceeding according to plan often tends to take precedence, making safety concerns unintentionally secondary. However, ensuring safety is precisely what makes stable production possible and this ultimately feeds profits.

Since 2019, each of our business companies and divisions have been engaging in activities to establish a safety management framework for our overseas production sites. We created a Global Process Safety Management Audit Team in 2022, which began safety audits of our chemical and activated carbon plants. This team of experts, consisting of members throughout the organization who are well-versed in process safety, allows us to identify and grasp issues from multiple perspectives and share knowledge to make safety improvements. Ultimately, we plan to deploy these safety management activities and the most effective safety management framework horizontally throughout the Kuraray Group.

## Working Together as “One Kuraray” to Fulfill Our Mission

In the two years since becoming president, I have pondered ways to maximize the potential of all our employees around the world. We are a manufacturer of specialty chemicals, but the power of people is the foundation from which we conduct our business operations, such as developing materials, building manufacturing production facilities, managing logistics for raw materials and products, and carrying out

sales and marketing. I am convinced that maximizing the full potential of each employee, and amplifying that many times over as part of the collective strength of a team, will enable us to build a rock-solid framework that will not be shaken by changes in the environment, and will be reflected in our performance results. For this reason, daily communication with one another is important; creative tension arises when people express their convictions. But this also becomes the energy that supports expression of ideas. The creativity born out of such communication and discussions is highly valuable to our corporate activities.

I believe the three challenges identified in “PASSION 2026” serve as the focal points of communication between employees as they come together to collaborate and are the key themes guiding our efforts to work together as “One Kuraray” in creating new value in society.

The Kuraray Group marks its 100th anniversary in 2026. Looking ahead to this milestone, the whole Group will come together with a shared passion to address the three challenges. Moreover, we will strive for sustainable growth by building up the Group’s comprehensive strengths, seeking competitive advantages, and expanding new business areas as we draw on our pioneering technology to fulfill our mission.

I look forward to your continued understanding and support.

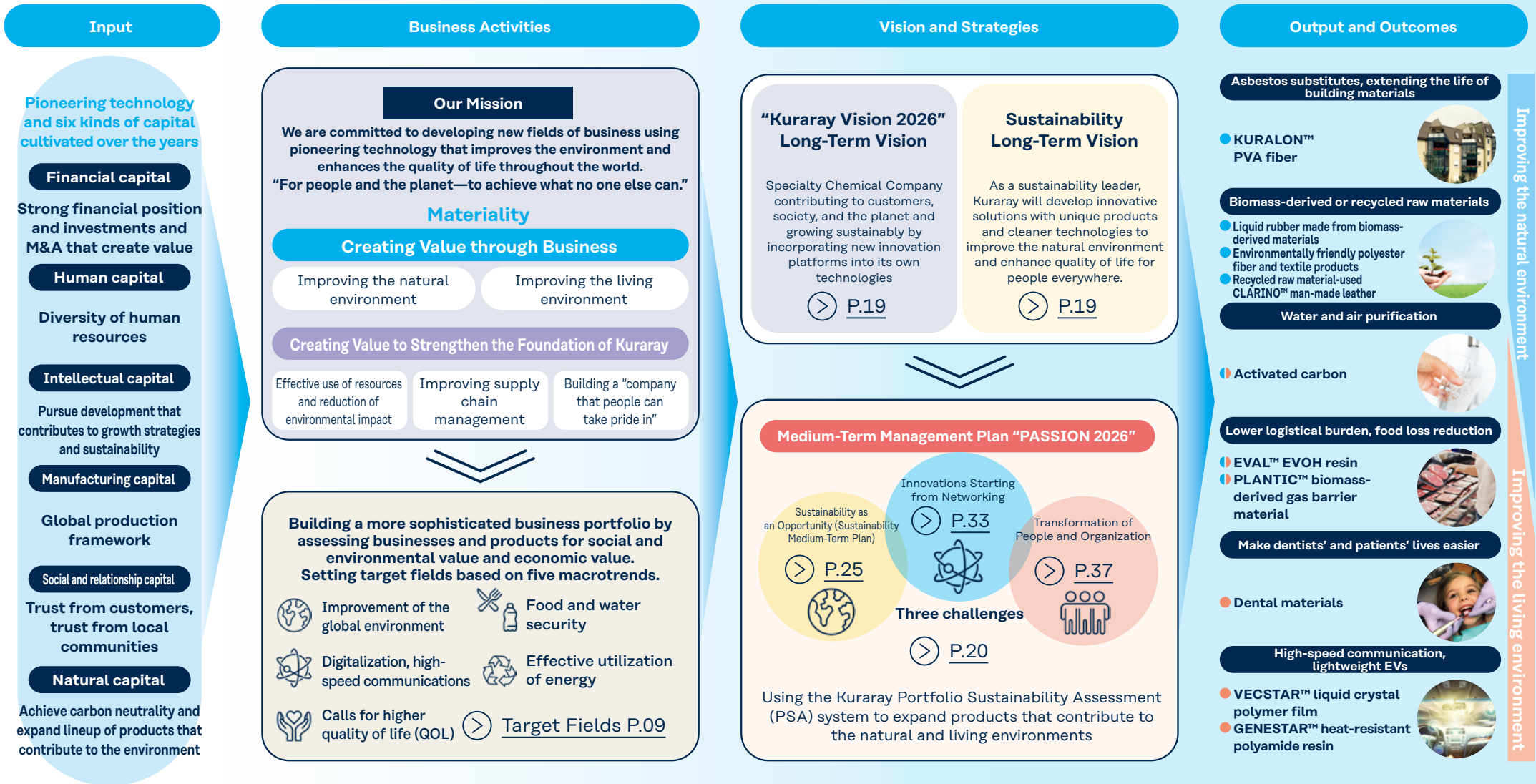
**Hitoshi Kawahara**

President and Representative Director

# Value Creation Process

To contribute to improving the environment and enhancing the quality of life through our business activities. This is the mission of the Kuraray Group.

Building on six kinds of capital and the pioneering technology we have cultivated over the years, we will seek sustainable growth and carry out our mission through initiatives set out in the Medium-Term Management Plan "PASSION 2026."



Improving the natural environment  
Improving the living environment

# Working to Strengthen Capital

## Financial capital

## Human capital

## Intellectual capital

## Manufacturing capital

## Social and relationship capital

## Natural capital

### Importance of capital

A sound financial foundation is essential to creating value. While securing our ability to generate cash flow, we will invest in areas that contribute to the natural and living environments, working to expand profits and enhance capital efficiency.

The Kuraray Group consists of people of various nationalities and backgrounds. To create innovation and continuously enhance corporate value, the active participation of diverse human resources is vital.

Our business activities are grounded in our unique polymer and synthetic chemistry technologies. We will focus on R&D that helps address social issues to pursue the creation of new businesses.

Our overseas sales account for more than 70% of total net sales. To maintain our competitiveness in global markets, it is essential to have a product supply framework based on making and selling products in the best-situated regions.

The Kuraray Group rests on a solid customer base and on relationships of trust with a range of stakeholders. We are striving for sustainable development by further deepening dialogue with stakeholders and co-creating with them.

We believe it is important to offer products and services needed to realize a low-carbon and environment-friendly society. We manufacture our products in a way that minimizes environmental impact.

### Expansion of capital (FY2022 results)

- ◆ Net assets: **¥668.5** billion
- ◆ Equity ratio: **52.9%**
- ◆ Capital investment: **¥72.6** billion (acceptance basis)
- ◆ ROIC: **7.0%**
- ◆ ROE: **9.0%**
- ◆ EBITDA: **¥152.6** billion
- ◆ EBITDA margin: **20.2%**

- ◆ Number of consolidated employees: **11,703**
- ◆ Ratio of overseas employees: **40.7%**
- ◆ Ratio of female employees: **19.4%**
- ◆ Ratio of female employees in managerial positions: **11.2%**
- ◆ Diversity of core human resources\*1: **13%** (Ⓢ P.30)

\*1 Ratio of managers in Japan who are women, foreign nationals and mid-career hires, excluding production sites

- ◆ R&D expenses: **¥22.7** billion
- ◆ Ratio of R&D to sales: **3.0%**
- ◆ Patent asset value index: **7,115** (PAI: Patent Asset Index™)
- ◆ Technological value index: **4,979** (TR: Technology Relevance™)

Ⓢ P.36  
\*2 Index of patent asset value of the entire portfolio calculated taking into account citations in junior applications and countries of application.

\*3 Index of the technological value of the entire portfolio calculated based on citations in junior applications.

- ◆ Production bases in Japan: **9**
- ◆ Production bases outside Japan: **43**

- ◆ Number of investor briefings
  - Institutional investors: **101**
  - Sell-side analysts: **48**
  - Management briefings (ESG, business briefings): **2**
  - Individual investors: **2**
- ◆ Coverage of CSR procurement survey: **82.5%** (in Japan)
- ◆ Safety audits (outside Japan) United States: **4**, Europe: **1**, Asia: **1**
- ◆ Social contribution activities (Ⓢ P.31)

- ◆ Measures to address climate change
  - GHG emissions (Scope 1, 2): **2,896** thousand tons-CO<sub>2</sub>e
- ◆ Various measures for the ongoing reduction of environmental impact (Ⓢ P.26)
- ◆ Sales ratio of products that contribute to the natural and living environments: **54%**

### Points to be reinforced under "PASSION 2026"

- ◆ Ability to generate cash flow to support the building of a sound financial position and growth investments
- ◆ Aggressive investment in areas that contribute to the natural and living environments
  - Expanding capacity to meet growing demand, including investments to reduce GHG emissions
  - Expanding lineup of products that contribute to the natural and living environments
- ◆ Capital efficiency to bring about growth and shareholder returns
  - Boosting capital efficiency
  - Enhancing shareholder returns (total return ratio of at least 35%, annual dividend of at least ¥40 per share)

- ◆ Unified platforms for HR management
  - Establishing globally unified employee grading system (for managers)
  - Human resources database (to visualize human resources status, leverage resources efficiently)
- ◆ Optimal staffing, encouragement to cultivate personal growth
  - Global mobility system (to expand career opportunities, invigorate human resources exchanges)
  - Global human resources development program
  - DX Talent Development Project
  - Systematically nurturing senior management candidates
- ◆ Culture that encourages those who take on challenges
  - Shift to personnel evaluation system that encourages those who take on challenges
  - Promoting diversity and inclusion, spreading a culture that appreciates these values
  - Making assistance programs available to support diverse workplace options

- ◆ Development based on the customer perspective
  - Establishment of Innovation Networking Center (INC, pursuing global marketing activities, collaboration inside and outside the Group)
  - R&D based on backcasting
- ◆ Development that contributes to sustainability
  - Developing materials, offering solutions that contribute to the natural and living environments
  - Accelerating development of technologies to reduce GHG
  - Establishment of Environment and Energy Research Laboratory (developing new biomass-derived carbon materials, etc.)
- ◆ Planning, promoting IP strategies
  - Establishment of IP Management Center (proposing, promoting global IP strategies)
  - Further enhancing, capitalizing on IP such as patents that contribute to profit in various businesses, also making use of patent scores

- ◆ Reinforcing stable supply framework drawing on integrated production from the raw materials stage and global network
  - ◆ Optimizing logistics
  - ◆ Constructing new plants
    - EVAL™ EVOH resin
    - Liquid rubber
  - ◆ Expanding production capacity
    - Optical-use poval film
    - Water-soluble PVOH film
    - Phase two construction for GENESTAR™ heat-resistant polyamide resin in Thailand
    - VECSTAR™ liquid crystal polymer film
  - Dental materials
  - LiB anode materials

- ◆ Building stronger relationships of trust with stakeholders
- ◆ Implementing human rights due diligence
- ◆ Reinforcing safety activity management (gaining trust of local communities)
  - Forming Global Process Safety Management Audit Team made up of in-house experts from across the Group
- ◆ Strengthening quality management (gaining customer trust)

- ◆ Initiatives to counter climate change
  - TCFD-based disclosure
  - Acquiring SBT (Science Based Targets) certification
  - Use of internal carbon pricing system
- ◆ Targets for ongoing reduction in environmental burden
  - More efficient energy (energy saving), effective use of waste, effective use of water resources (excluding seawater), emission management of chemical substances
- ◆ Through use of Kuraray PSA system, expanding lineup of products that contribute to the natural and living environments, building a more sophisticated portfolio

### Financial, non-financial KPIs

#### Financial KPIs

**FY2026 target**  
 ROIC: **8%**  
 EBITDA: **¥170** billion  
 ROE: **10%**  
 (Reference) EBITDA margin: **23%**

#### Non-financial KPIs

**FY2030 target**  
 GHG emissions (Scope 1, 2): **2,230** thousand tons-CO<sub>2</sub>e  
 (30% less than 2019 benchmark)  
 Diversity of core human resources\*1: **25%**

**FY2026 target**  
 Developing products that contribute to the natural and living environments  
 Sales ratio: **60%**

**Toward Co-Creating Value with Society 1**

# Roadmap for the Vision

Kuraray Group has declared its mission: “For people and the planet—to achieve what no one else can.” Based on this mission, we formulated the “Kuraray Vision 2026” long-term vision and the Sustainability Long-Term Vision. By pursuing the three challenges laid out in “PASSION 2026,” our Medium-Term Management Plan, we are aiming to achieve sustainable growth and realize the vision.

## Looking Back at Our Path

### Previous Medium-Term Management Plan “PROUD 2020” (2018–2020)

#### Measures and Results

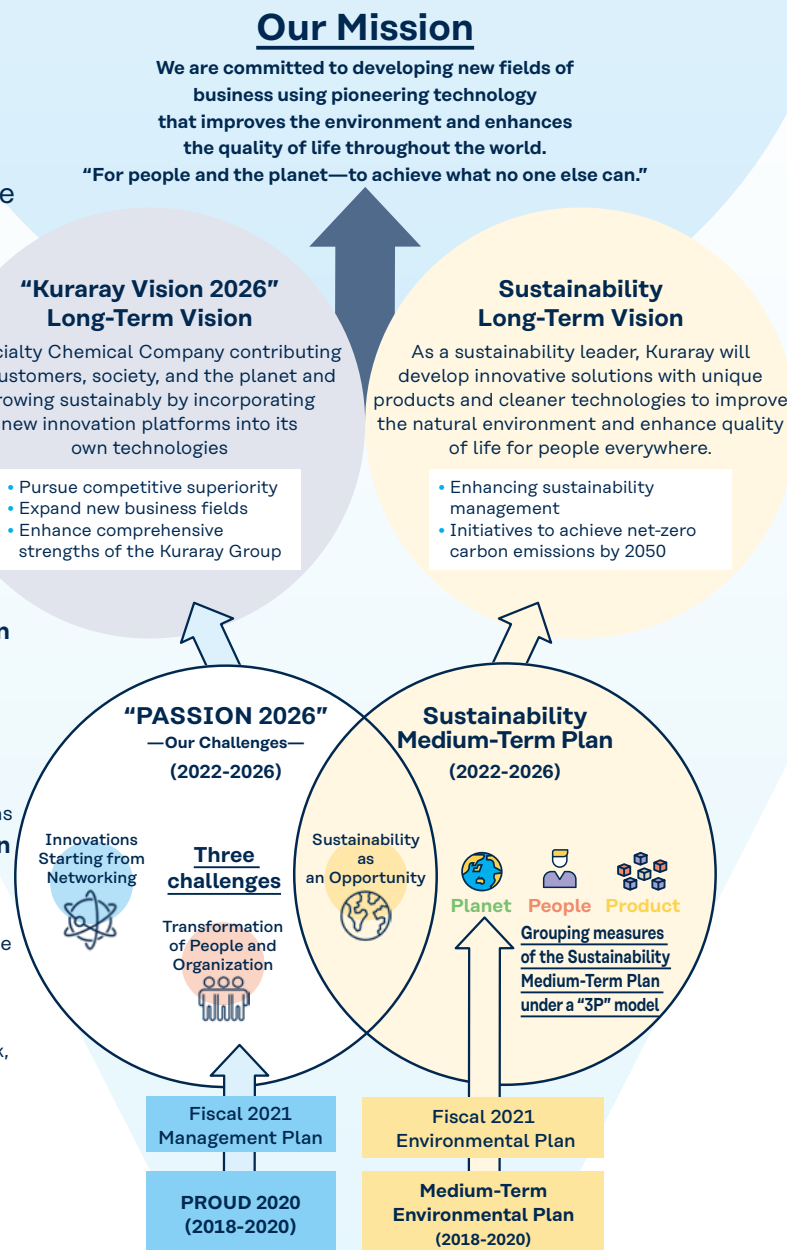
- ◆ **Pursue competitive superiority**
  - Acquired Calgon Carbon Corporation in the United States. Decided to expand production facilities for virgin activated carbon (United States) and reactivated carbon (Belgium)
  - Decided to invest in a new plant in Thailand for the isoprene business
  - Boosted production capacity for optical-use poval film (Japan), water-soluble PVOH film (United States), PVB film (South Korea), and SentryGlas™ ionoplast interlayers (Czech Republic)
- ◆ **Expand new business fields**
  - Expanded existing production capacity in Japan for VECSTAR™ liquid crystal polymer film
  - Decided to invest in resin production facilities in the United States for PLANTIC™ biomass-derived gas barrier material
- ◆ **Enhance comprehensive strength of the Kuraray Group**
  - Generated integration synergies with the Environmental Solutions business (carbon materials)
  - Established Personnel Development Department for the purpose of reinforcing personnel development and handing down technical expertise
  - Promoted work-style reforms
- ◆ **Contribute to the environment**
  - Improved the natural environment: Expanded activated carbon business
  - Enhanced the living environment: Strengthened and expanded the EVAL business and Plantic businesses

### Fiscal 2021 Management Plan\*

#### Measures and Results

- ◆ **Steadily implement capital investment decided in previous Medium-Term Management Plan “PROUD 2020”**
- ◆ **Expand the Environmental Solutions business (carbon materials)**
  - Further integrated operations after organizational consolidation. Steadily captured expanding demand by drawing on our ability to address environmental regulations
- ◆ **Increase production capacity of EVAL™ EVOH resin**
  - While tracking demand trends and business feasibility, explored candidate sites mainly in the Asian region
- ◆ **Promote digitalization across the entire Group**
  - Established the Global Digital Transformation (GDx) Office
- ◆ **Initiatives to create innovation**
  - Established the Innovation Networking Center (INC)

\* Given uncertainties over the future of the global economy and the business environment in 2020 due to the COVID-19 outbreak, the Fiscal 2021 Management Plan was for a single year.





## Two Long-Term Visions

Since its founding in 1926, the Kuraray Group has grappled head-on with ways of addressing social issues through its business activities. This stance is part of the DNA that has been passed down throughout our history. In 2022, we added a message to “Kuraray Vision 2026”—the long-term vision that describes the kind of company we want to be when we mark our 100th anniversary in 2026—namely, “contributing to customers, society, and the planet.” In our Sustainability Long-Term Vision as well, we convey our determination to continue helping to address social issues across the Group through forward-looking measures to achieve sustainability. Based on the pioneering technology we have cultivated over the years, we will continue to seek after sustainable growth and endeavor to fulfill our mission.

## Medium-Term Management Plan “PASSION 2026”

Based on our “Kuraray Vision 2026” long-term vision and Sustainability Long-Term Vision, the Kuraray Group launched “PASSION 2026” as a five-year action plan spanning fiscal 2022 to fiscal 2026. Looking ahead at the coming era, in which predicting the longer-term outlook for the economy or the operating environment is extremely difficult, “PASSION 2026” identifies three new challenges for the Kuraray Group to take on in order to continue growing. These are: “Sustainability as an opportunity,” “Innovations starting from networking,” and “Transformation of people and organization.”

We are working to turn our vision into a reality by working together as a Group to take on these challenges.

### Medium-Term Management Plan “PASSION 2026”

Three challenges

**Sustainability as an Opportunity** > P.25  
Take sustainability as an opportunity and promote it with the collective strength of the whole group

**Innovations Starting from Networking** > P.33  
Create a growth driver by connecting people with people, and technologies with technologies, both within and outside the Company

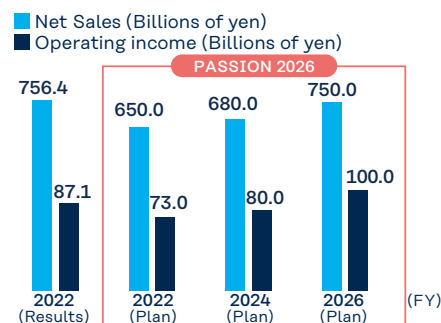
**Transformation of People and Organization** > P.37  
Transform people and organization via digital-driven process innovation and the promotion of diversity which will, in turn, help us bring to bear a broad range of ideas

Medium-Term Management Plan

## Management Targets

Through the steady implementation of the “PASSION 2026” management strategy, the Kuraray Group targets net sales of ¥750 billion and operating income of ¥100 billion in the final year of the plan, 2026, which marks our 100th anniversary.

We have established ROIC, EBITDA, and ROE as financial KPIs to guide us in conducting management with an eye toward capital efficiency and steadily expanding our ability to generate cash. Furthermore, we will shift toward a more sustainable business portfolio, having set quantitative non-financial KPIs for greenhouse gas emissions, the sales ratio of products that contribute to the natural and living environments, and the diversity of core human resources.



	FY2022 Results	Assumptions during the Medium-Term Management Plan period
JPY/USD	132	110
JPY/Euro	138	130
Domestic naphtha (JPY 1,000/kl)	75	58

## Financial KPIs

	FY2022 result	FY2026 target
ROIC	7.0%	8%
EBITDA*1	¥152.6 billion	¥170.0 billion
ROE	9.0%	10%
EBITDA Margin (reference)	20.2%	23%

\*1 Operating income + depreciation and amortization

## Non-financial KPIs

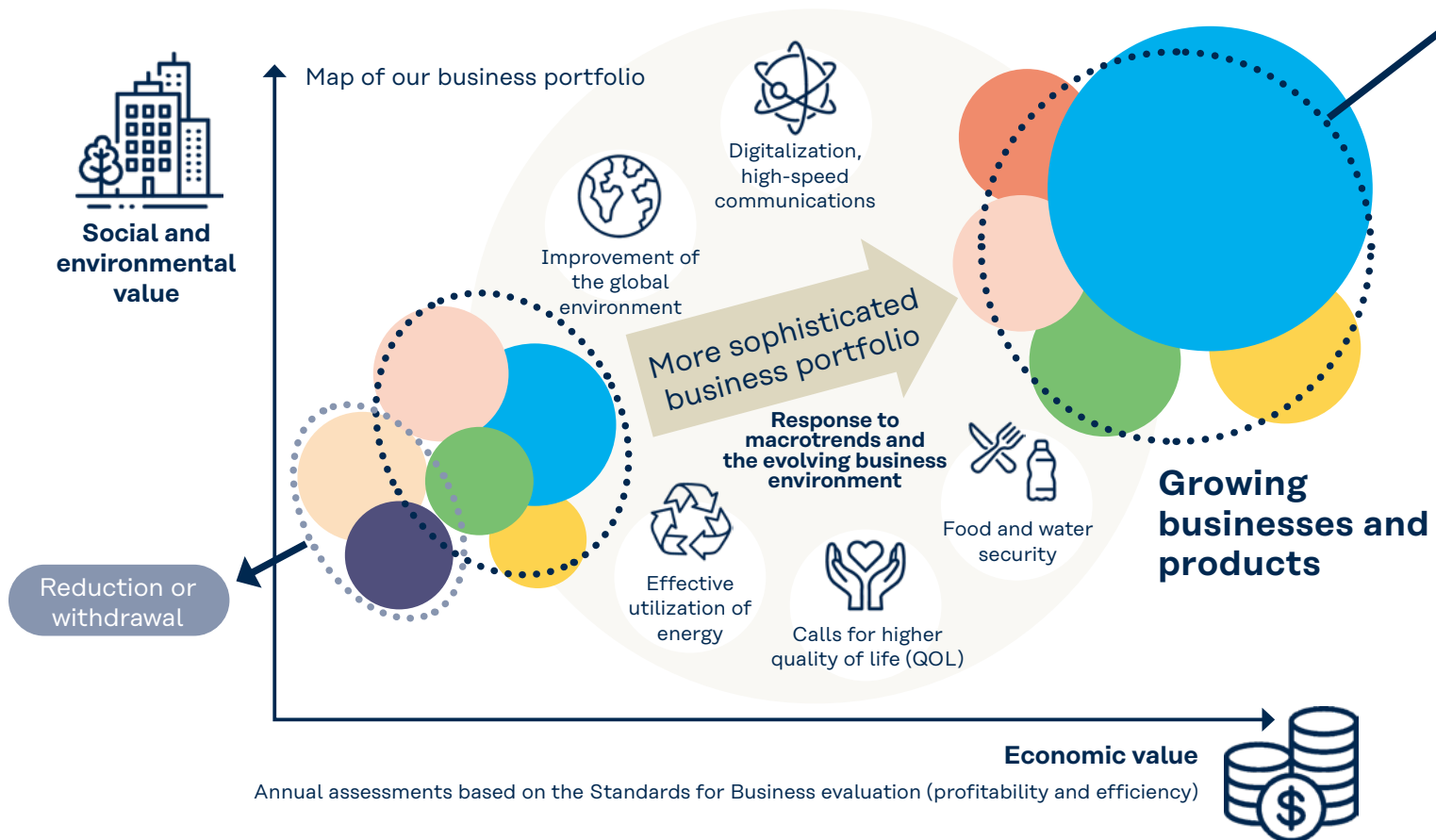
	Benchmark	FY2022 result	Target
GHG emissions (Scope 1, 2)	3,230 thousand tons-CO <sub>2</sub> e (in FY2019)	2,896 thousand tons-CO <sub>2</sub> e	FY2030 2,230 thousand tons-CO <sub>2</sub> e (30% less than benchmark)
Sales ratio of products contributing to natural and living environment	46% (in FY2020)	54%	FY2026 60%
Ensuring diversity of core human resources*2	12% (in Sep. 2021)	13%	FY2030 25%

\*2 Ratio of managers in Japan who are women, foreign nationals and mid-career hires, excluding production sites

**Toward Co-Creating Value with Society 2**

# Building a More Sophisticated Business Portfolio

As a Specialty Chemical Company with strengths in intermediate materials, the Kuraray Group strives to achieve sustainable growth by maximizing the potential of these materials. We will build a more sophisticated business portfolio while addressing macro trends and calls to contribute to the environment and to the quality of life, including by continuing to explore new combinations of materials as well as their applications and target regions. Meanwhile, we will evaluate the portfolio using the two axes of social and environmental value and economic value.



**Main businesses and products targeted for priority resource allocation**

-  **Water-soluble PVOH film**
-  **EVAL™ EVOH resin**
-  **Carbon materials**
-  **Dental materials**
-  **Highly functional plastics**  
  - GENESTAR™ heat-resistant polyamide resin
  - VECSTAR™ liquid crystal polymer film etc.
-  **Optical-use poval film**



## Assessing Social and Environmental Value and Economic Value

Based on our Basic Policies for Portfolio Management, we assess the economic value of businesses and products by means of the Standards for Business Evaluation, which use the twin indicators of earning power (operating cash flow) and efficiency (ROIC). For social and environmental value, we use the Kuraray Portfolio Sustainability Assessment (PSA) system based on PSA, a highly objective and transparent product portfolio evaluation method established by the WBCSD\*1 which is also widely used by

\*1 World Business Council for Sustainable Development.

\*2 A mechanism for creating economic incentives to reduce emissions and save energy, promoting low-carbon investment and encouraging climate change response by setting an internal carbon price and using it to calculate a monetary cost of emissions.

other chemical manufacturers, mainly in Europe, as well as use internal carbon pricing (ICP)\*2.

Continuing to assess and screen using these two axes will help us determine whether to aggressively expand, maintain, scale down, or withdraw from businesses and products, depending on the situation. Our goal is to build a strong business portfolio by channeling resources into fields with high growth potential. At the same time, we will navigate changes in the business environment and in society to generate new opportunities and respond appropriately to risks.

> P.21

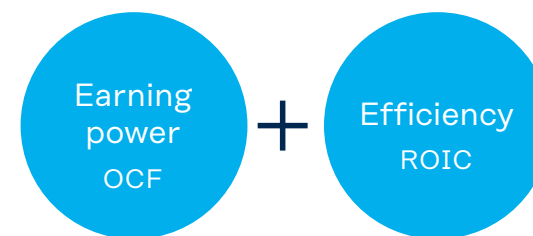
## Basic Policies for Portfolio Management

- 1 We aim to develop a business portfolio focused on fulfilling Our Mission, as defined under our corporate statement, in a way that aligns with our recognition of the internal and external conditions.
- 2 We aim to secure a solid and stable business portfolio encompassing multiple core businesses serving as earnings pillars.
- 3 We periodically assess the potential of each business based on clearly defined quantitative internal standards. **Economic value**
- 4 In addition to undertaking quantitative assessments, we assess each business based on qualitative standards (contribution to the environment and society, synergies arising from combinations with other business, etc.). **Social and environmental value**
- 5 Based on the results of the quantitative and qualitative assessments, we review allocations of resources and decide to expand, maintain, reduce or withdraw from each business.

## Evaluation Indicators

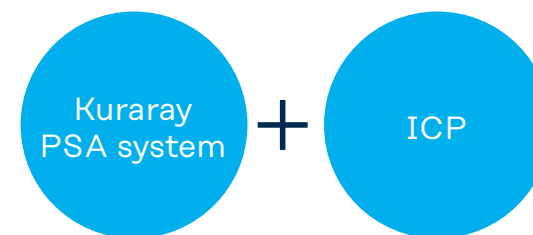
### Economic value

We make use of the Standards for Business Evaluation, which utilize the twin indicators of earning power (operating cash flow: OCF) and efficiency (ROIC).



### Social and environmental value

We assess value using the Kuraray PSA system based on the PSA product portfolio evaluation method established by the WBCSD, which offers a high degree of objectivity and transparency and is also used by other chemical manufacturers, mainly in Europe. We also use internal carbon pricing (ICP).



**Toward Co-Creating Value with Society 3**

# Visualizing and Quantifying Social and Environmental Value

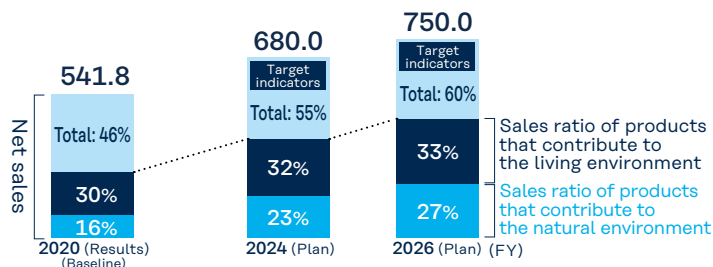
## Seeking to expand the product lineup from the starting point of contributing to the natural and living environments

The Kuraray Group has identified material issues relevant to the Company as shown at right. Among these issues, we are taking products and technologies that contribute to the natural and living environments as our starting point as we aim to create a sustainable product portfolio. To this end, we constructed the Kuraray PSA system based on the PSA guidelines of WBCSD, which offer a consistent methodology for evaluating products with a high degree of objectivity and transparency.

Looking at products, applications, and the regions where they are used, we evaluate products using a 5-point scale based on criteria such as fundamental requirements, social and regulatory trends, and comparison of contributions to the natural and living environments against benchmark products. Products receiving the two top rankings are designated as products that contribute to the natural and living environments. We will build a more sophisticated business portfolio by expanding sales of such products, from 46% of all sales in 2020 to 55% in 2024 and 60% in 2026.

### Net sales, target indicators

(Billions of yen)



### Materiality of the Kuraray Group

#### Creating Value through Business

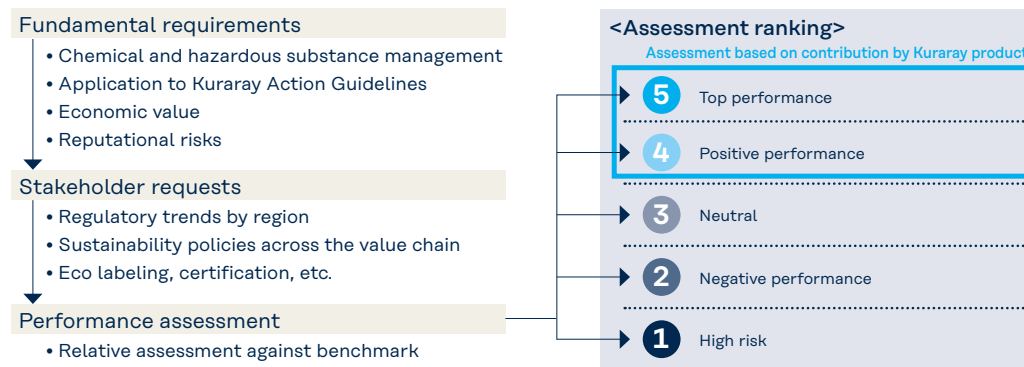
Improving the natural environment	Improving the living environment
<ul style="list-style-type: none"> <li>- Climate change measures—GHG reduction and energy conservation</li> <li>- Solution of marine plastics and plastic waste</li> <li>- Water and air purification</li> </ul>	<ul style="list-style-type: none"> <li>- Biodiversity conservation</li> <li>- Development of next-generation applications, products, and technologies</li> <li>- Circular economy</li> </ul>
	<ul style="list-style-type: none"> <li>- Contribution to the safe and reliable supply of food and water</li> <li>- Improvement of quality of life</li> <li>- Promotion of health and wellness for all</li> </ul>

#### Creating Value to Strengthen the Foundation of Kuraray

Effective use of resources and reduction of environmental impact	Improving supply chain management	Building a “company that people can take pride in”
<ul style="list-style-type: none"> <li>- Reduction of GHG emissions</li> <li>- Reduction of chemical emissions</li> <li>- Reduction of waste volume and intensity</li> <li>- Reduction of marine plastics and plastic waste</li> </ul>	<ul style="list-style-type: none"> <li>- Sustainability procurement</li> <li>- Improvement of product stewardship</li> </ul>	<ul style="list-style-type: none"> <li>- Promotion of safety activities</li> <li>- Improvement of safety and disaster prevention preparedness</li> <li>- Enhancement of technology and working smarter</li> <li>- Promotion of workplace diversity and inclusion</li> </ul>

Materiality Procedure to Identify Materiality

### Assessment of contribution using Kuraray PSA system



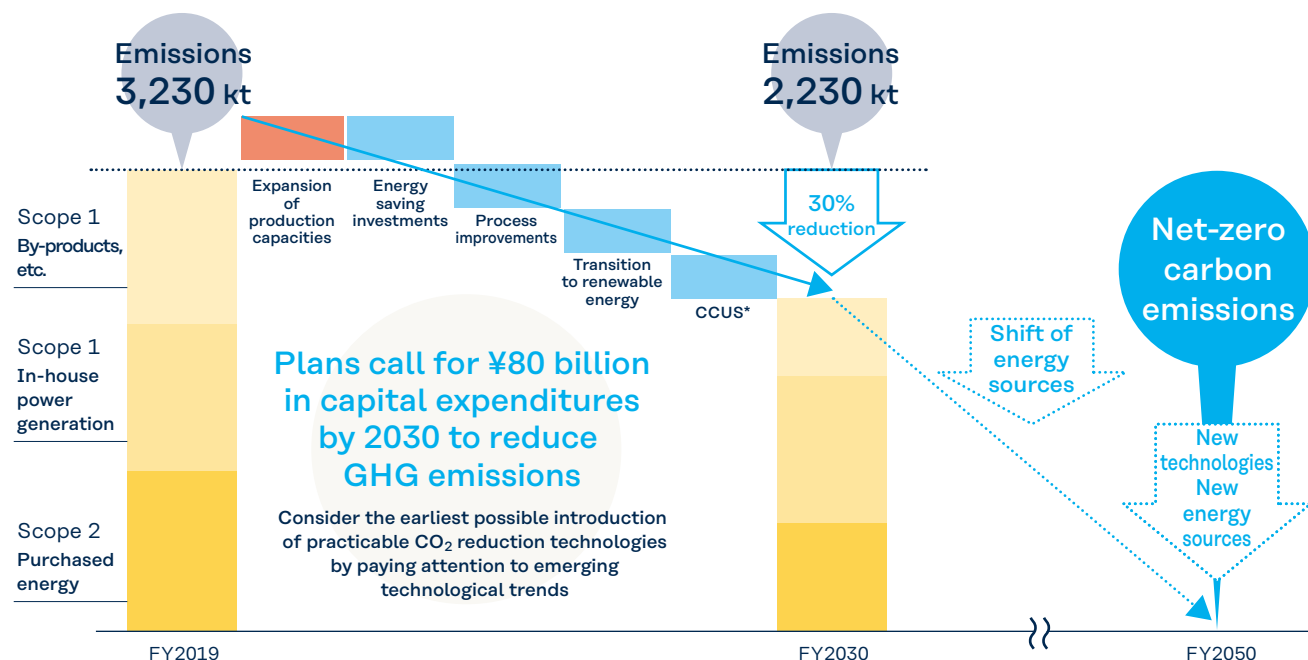
Contribution Products for Natural and Living Environment

## Maximizing Environmental Value

The Kuraray Group has formulated a roadmap for reducing Scope 1 and Scope 2 greenhouse gas (GHG) emissions, with the goal of achieving net-zero carbon emissions in 2050. The roadmap calls for no increases in emissions during “PASSION 2026” compared to the 2019 benchmark, a 30% reduction in 2030, and ultimately net-zero carbon emissions in 2050. It also calls for us to invest ¥80 billion by 2030 to reduce GHG emissions.

The Kuraray Group also views carbon neutrality as a business opportunity. We will maximize environmental value by reducing GHG emissions while simultaneously expanding the lineup of products that contribute to the natural and living environments.

➤ [P.26](#)



\* Carbon dioxide Capture, Utilization, and Storage: An initiative to utilize or store CO<sub>2</sub> separated from exhaust gas from industrial facilities.

## Adoption of Internal Carbon Pricing (ICP) System

In 2021, the Kuraray Group adopted an internal carbon pricing (ICP) system to govern capital spending. In line with the start of “PASSION 2026,” we revised our internal carbon pricing from 2022, to ¥10,000 per ton of CO<sub>2</sub>. We will use this system in multiple ways as we aim to reach the goal of net-zero carbon emissions, including as an incentive to promote capital spending that leads to energy conservation, as a means of identifying profit opportunities and risk, and as a social and environmental value indicator for evaluating businesses and making investment decisions.

Internal carbon pricing  
Effective from

¥10,000/t-CO<sub>2</sub> (calculated using internal exchange rates overseas)

January 1, 2022

### Already implemented

- Capital spending to increase/decrease GHG emissions
- Calculating virtual cost/profit with internal carbon pricing and using as one criteria in making investment decisions

### Under consideration

- Converting GHG emissions of each business and product to cost at an internal carbon price and evaluating their resilience to future carbon taxes, etc.

Our Challenges

1

# Sustainability as an Opportunity

The Kuraray Group is pursuing sustainability as we seek the prosperity of society. We will harness our unique products and cleaner technologies to improve the natural environment and enhance quality of life for people everywhere.



## Sustainability Long-Term Vision and the "3P" Model

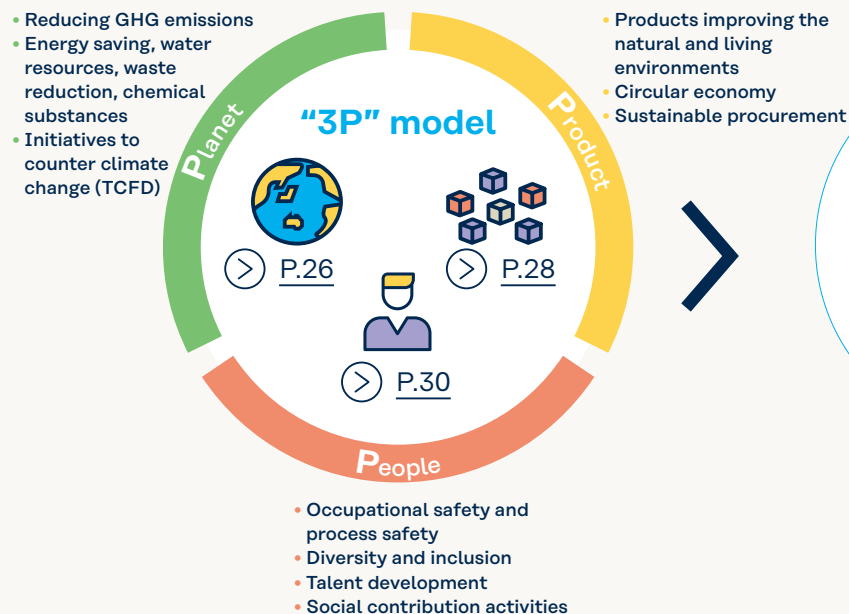
Considering sustainability to be one of our most critical management strategies, the Kuraray Group established the Sustainability Long-Term Vision to express our commitment to pursuing sustainability across the entire Group. To realize this vision, under the Medium-Term Management Plan "PASSION 2026," sustainability-related measures are summarized in the Sustainability Medium-Term Plan and grouped into three Ps: Planet, Product, and People. Through our global engagement using the "3P" model, we aim to convey our sustainability initiatives to all of our stakeholders in an easy-to-understand format. By steadily moving forward with the various measures indicated under the "3P" model, we are striving to bring about the prosperity of both society and the Kuraray Group.

 [Sustainability Long-Term Vision](#)

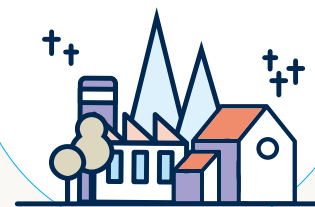
 [Sustainability Medium-Term Plan](#)

## Sustainability Long-Term Vision

As a sustainability leader, Kuraray will develop innovative solutions with unique products and cleaner technologies to improve the natural environment and enhance quality of life for people everywhere.



## Prosperity (Social Prosperity)





Sustainability Medium-Term Plan: Planet

## Environmentally Friendly Manufacturing

We believe it is vital for the Kuraray Group as a Specialty Chemical Company to provide the world with the products and services needed to realize a low-carbon and environmentally friendly society, and to manufacture our own products with as little environmental impact as possible. Based on this philosophy, the Kuraray Group in its global manufacturing activities continues to conserve the environment, including the promotion of measures against global warming, reduction of chemical substance emissions, and effective use of resources.

Environmental Management System

## Environmental Performance

Activity	Sustainability Medium-Term Plan for Planet: Environmental Impact Reduction Targets (FY2022–FY2026)		FY2022 Results
GHG emissions	Kuraray Group in Japan and outside Japan:	Scope 1 + 2: No increase in emissions compared to 2019. (30% reduction compared to 2019 by 2030)	Scope 1 + 2 emissions: 2,896 thousand tons-CO <sub>2</sub> e (2019: 3,230 thousand tons-CO <sub>2</sub> e)
		Scope 3: Target the entire Group and identify categories that account for more than two-thirds of emissions; formulate reduction targets for 2024 and 2026	We are currently identifying major categories for the entire Group to formulate reduction targets.
Improved energy efficiency (energy conservation)	Kuraray Group in Japan and outside Japan:	Sales intensity of energy consumption: Reduction of 5% or more in 2026 compared to 2019 (improvement)	Sales intensity of energy consumption: 17.2% reduction compared to 2019 (improvement)
Effective use of waste	Kuraray Group in Japan and outside Japan:	Sales intensity of waste generation: Reduction of 5% or more in 2026 compared to 2019 (improvement)	Sales intensity of waste generation: 28.0% reduction compared to 2019 (improvement)
Effective use of water resources (excluding seawater)	Kuraray Group outside Japan:	Sales intensity of water usage (excluding seawater): Reduction of 5% or more in 2026 compared to 2019 (improvement)	Sales intensity of water usage (excluding seawater): 25.6% reduction compared to 2019 (improvement)
Emission management of chemical substances	Kuraray Group in Japan:	Chemical substance emissions: Manage at levels below 2019 results	Chemical substance emissions: 894 tons (2019: 967 tons)
	Kuraray Group outside Japan:	Comply with chemical substance emission regulations in each country and region where overseas production bases are located, and continue quantitative emission control	Complied with chemical substance emission regulations and implemented quantitative emission control.

## Reduction of Greenhouse Gas (GHG) Emissions (Scope 1 + 2)

The Kuraray Group has formulated a roadmap for reducing Scope 1 and Scope 2 GHG emissions, with the goal of achieving net-zero carbon emissions in 2050. In 2022, we pursued energy-saving investments using our internal carbon pricing system. We also promoted the greening of electricity, such as by purchasing Unbundled Energy Attribute Certificates (renewable energy certificates) at Group companies overseas and installing solar power generation facilities at our activated carbon manufacturing site in Belgium. In the United States, we established a cross-organizational project team to handle carbon capture, utilization and storage (CCUS\*), where the carbon is a by-product of coal-based activated carbon production. We are seeking to expand this initiative as a corporate project.

\* Carbon dioxide Capture, Utilization, and Storage: An initiative to utilize or store CO<sub>2</sub> separated from exhaust gas from industrial facilities.

## “PASSION 2026” Targets and Fiscal 2022 Results

	FY2022 results	FY2024 targets	FY2026 targets
GHG emissions (Scope 1 + 2)	2,896 thousand tons-CO <sub>2</sub> e	No increase in emissions compared to 2019 (3,230 thousand tons-CO <sub>2</sub> e)	

Global Warming Prevention / GHG Emissions and Reduction Measures



## Reduction of Greenhouse Gas (GHG) Emissions (Scope 3)

We had calculated Scope 3 GHG emissions only in Japan, but are now moving forward with Group-wide calculations. By 2023, we will target the whole Group and also improve the accuracy of measurements, seeking to identify categories that account for two-thirds of all Scope 3 emissions. We will also deepen the dialogue with business partners and set Scope 3 reduction targets for the entire supply chain.

We aim to obtain SBT (Science Based Targets)\*1 certification for our Scope 1 and 2 as well as Scope 3 GHG emission reduction targets.

\*1 SBT (Science Based Targets): Voluntary targets set by business corporations with regards to GHG emission reductions over the course of 5 to 15 years in a manner consistent with the levels required by the Paris Agreement.

## Disclosure in Line with TCFD Recommendations

In November 2020, the Kuraray Group endorsed the recommendations of the Task Force on Climate-Related Financial Disclosure (TCFD) in recognition of the importance of climate change control as one of our high-profile issues. We will gradually enhance disclosure structured around TCFD recommendations for governance, strategy based on scenario analysis, risk management, and metrics and targets.

In 2022, we conducted scenario analysis based on the below 2-degree scenario (including a 1.5-degree scenario) amid a continued shift toward a low-carbon society, and the 4-degree scenario, amid advancing climate change, assessing the impact of climate-related risks and opportunities. For this, we drew on insights from reports such as the World Energy Outlook published by the International Energy Agency (IEA). It was discovered that carbon pricing\*2 has a significant impact on GHG emissions and energy procurement in the below 2-degree scenario. Carbon taxes for the Group are also projected to total approximately ¥32 billion in 2030 following measures to combat GHG emissions, indicating a potential increase in operating costs. As part of our measures, we will steadily advance our GHG emission reduction program toward achieving carbon neutrality by 2050 while reflecting the market value generated by highly environmentally friendly products and services in their pricing.

In addition, we calculated the business impact of climate risks and opportunities in each scenario of the vinyl acetate-related business and the Environmental Solutions business, both of which are significantly affected by climate change. We will take appropriate measures to deal with each calculated impact, and continue to analyze other businesses.

\*2 Calculated based on World Energy Outlook 2022 at \$140/t-CO<sub>2</sub>e for developed countries, \$25/t-CO<sub>2</sub>e for emerging countries [2030, 1.5°C scenario].

 [Disclosure Based on TCFD Recommendations](#)

## “PASSION 2026” Targets and Fiscal 2022 Results

	FY2022 results	FY2024 targets	FY2026 targets
GHG emissions (Scope 3)	1,002 thousand tons-CO <sub>2</sub> e (Japan only*)	Target the entire Group and identify categories that account for more than two-thirds of emissions	In 2023, formulate reduction targets for 2024 and 2026

\* We are gauging major categories for the Kuraray Group as a whole in preparation for formulating reduction targets.

 [Global Warming Prevention / GHG Emissions and Reduction Measures](#)

## Business Impact of Climate Change Risks and Opportunities in Each Scenario of the Vinyl Acetate-Related Business and the Environmental Solutions Business

Blue font: Profit Red font: Loss Large ≥ ¥10 billion ¥10 billion > Medium ≥ ¥1 billion ¥1 billion > Small

	Risks and opportunities	Business impact	Business impact in 2030		
			Scenario		
			4°C	Below 2°C	
Transition Risk to low-carbon society	Decrease in revenue from the burden of carbon taxes on GHG emissions and energy procurement	Costs due to carbon tax*3	Medium	Large	
		Change in purchase cost of fossil fuels/oil-derived raw materials	Small	Medium	
		Change in utility costs (electricity)	Small	Medium	
	Expand business of products made by biomass-derived materials	Impact of achieving GHG emission reduction targets	Costs avoided by GHG emission reduction initiatives	Medium	Large
		Expand business of renewable (recyclable) products	Increase in operating income for packaging materials derived from biomass	Small	Medium
		Expand business of renewable (recyclable) products	Change in operating income for recyclable plastic products	Small	Small
Physical Risk from climate change	Increased damage to plants and production capacity reduction or shutdowns due to flooding in areas near oceans and rivers	Decrease in internal-combustion engine related products due to increase of electric mobility ratio	Small	Small	
		Costs of damage caused by future increases in flooding	Small	Small	
	Decline in production efficiency due to unfavorable working conditions amid rising temperatures	Increase in labor costs	Small	Small	
		Expand businesses that reduce scarce water supply	Increase in operating income for activated carbon used in water purification	Medium	Small

\*3 Below 2°C scenario (including 1.5°C scenario): \$140/t-CO<sub>2</sub>e for developed countries and \$25/t-CO<sub>2</sub>e for emerging countries in 2030.  
4°C scenario: \$90/t-CO<sub>2</sub>e for EU in 2030

 [Global Warming Prevention / Response to TCFD Recommendations and Internal Carbon Pricing](#)



# Product

## Sustainability Medium-Term Plan: Product

### Expanding Products That Contribute to the Natural and Living Environments

The Kuraray Group believes that its unique products and cleaner technologies will help bring about a sustainable society, and we are working to expand the range of products that make positive contributions.

Under "PASSION 2026," in setting out targets to expand the lineup of products that contribute to the natural and living environments, we put in place the Kuraray Portfolio Sustainability Assessment (PSA) system\* to ensure objectivity and transparency in our product screening. The Kuraray Group has also positioned social and environmental value as an axis used to build a more sophisticated business portfolio. To use the screening results of the Kuraray PSA system as an indicator for this axis, we had to expand the ratio to total sales of products evaluated based on the PSA guidelines of the WBCSD. Such products accounted for 58% of total sales in fiscal 2022. We plan to increase this ratio to 80% by 2024.

In addition, we designate products with high PSA scores as the Kuraray Group products that contribute to the natural and living environments. We aim to increase the

sales ratio of such products from 46% in 2020 to 55% by 2024, and to 60% by 2026. In fiscal 2022, we continued to expand the businesses of such products, raising their sales ratio to 54%. "PASSION 2026" calls for us to continue seeking to achieve the sales ratio target for products that contribute to the natural and living environments.

\* A system based on PSA guidelines developed by the World Business Council for Sustainable Development (WBCSD)

> P.23

### "PASSION 2026" Targets and Fiscal 2022 Results

	FY2022 results	FY2024 targets	FY2026 targets
Sales ratio of products that contribute to the natural and living environments	54%	55%	60%
(Products that contribute to the natural environment)	(20%)	(23%)	(27%)
(Products that contribute to the living environment)	(34%)	(32%)	(33%)
Ratio of PSA-screened products to total sales	58%	80%	—

### Kuraray Group Products That Contribute to the Natural and Living Environments

#### Improving natural environment

##### Asbestos substitutes

- KURALON™ PVA fiber
  - Helps extend the life of cement materials
  - Fewer GHG emissions compared to competitive products

##### Biomass-derived or recycled raw materials

- Liquid rubber made from biomass-derived materials
- Environmentally friendly polyester fiber and textile products
- Recycled raw material-used CLARINO™ man-made leather



• Reduces Scope 3 GHG emissions

##### Water and air purification

- Activated carbon



- Easy to reactivate
- Suitable for environmental regulation

##### Lower logistical burden, food loss reduction

- EVAL™ EVOH resin

- Recyclable (contributes to a circular economy)
- Reduces food loss

- PLANTIC™ biomass-derived gas barrier material

- Reduces Scope 3 GHG emissions
- Reduces food loss



#### Improving living environment

##### Makes dentists' and patients' lives easier

- Dental materials
  - Shortens time of treatment
  - Long-lasting products reduce number of replacements

##### High-speed communication

- VECSTAR™ liquid crystal polymer film
  - Realizes high-speed communication



##### Lightweight EVs

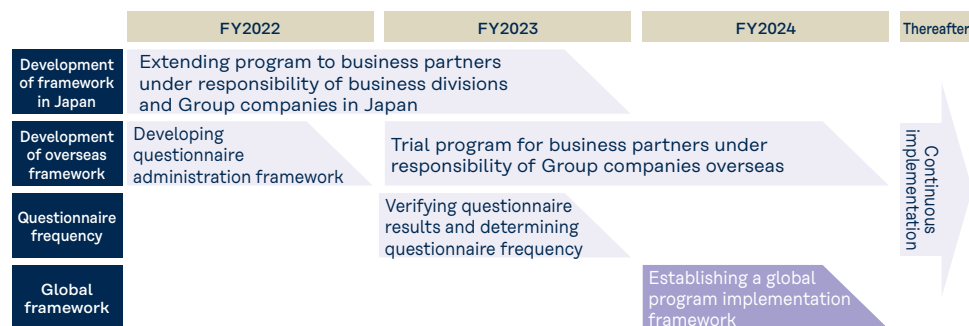
- GENESTAR™ heat-resistant polyamide resin
  - Improves durability of end-product

## Promoting Sustainable Procurement

In line with growing social demand for adequate supply chain management, the Kuraray Group revised its CSR Procurement Policy in 2019 and is requesting the cooperation of business partners to comply with this policy. Under "PASSION 2026," we will extend the scope of this activity to business partners, including overseas partners, representing 80% of the Group's total purchase amount (90% of the purchase amount for raw materials, secondary materials and products).

Our initial focus has been in Japan. Here, our initiatives started with disseminating our CSR Procurement Policy to major business partners in 2020, which we followed with CSR procurement questionnaires. We analyzed and evaluated the results of the questionnaires, providing feedback and supporting improvement as necessary. In 2022, we extended these initiatives to include the separate suppliers of our various business divisions and affiliated companies, representing 80% of the Group's total purchase amount.

Also in 2022, we established a framework for carrying out procurement surveys overseas to expand this initiative to the business partners of overseas Group companies. Starting in 2023 we will request overseas business partners to comply with the CSR Procurement Policy and begin auditing the status of compliance.



### Sustainable Procurement

## Quality Management

The Kuraray Group conducts ongoing activities to improve quality and ensure reliability with the goal of offering products and services that contribute to customers and to society. In particular, we are pursuing digitalization to allow us to reliably store and trace quality data and to visualize quality information. This system is due to come online in some business divisions in 2023.

Another focus is on in-house seminars to hone the capabilities of persons tasked with quality assurance. In 2022, we held a seminar on the topic of learning from failure to aid in prevention, which gave insights into ways of approaching quality improvement activities.

In addition, we are revising internal quality assurance regulations and verifying the methods of managing certified products that were found to have problems at other companies. These and other activities aim to improve quality across the Group, among persons in charge of production, sales, and development as well as persons in charge of quality assurance and quality control.

In 2023, we will continue to offer products and services that achieve customer satisfaction through these activities.

### Quality Management

## Product Safety and Chemical Management

To ensure the safety of products, the Kuraray Group's respective divisions make evaluations and improvements using risk assessment techniques in developing new products and managing changes to ensure product safety and guarantee quality. In addition, with regard to manufactured products or products under development that are particularly in need of safety validation, such as those that are ingested and those that use nanomaterials, we set up a deliberation committee led by the Corporate Sustainability Division to confirm safety.

In the management of chemical substances, we have established a system that enables us to acquire information on laws governing chemicals and hazards and prepare and manage safety data sheets (SDSs), including Group companies in Japan and overseas. In addition, we appoint people responsible for and in charge of chemical management at each division. These staff take the lead in conducting continuous in-house education to deepen understanding of chemical substance management and laws and regulations governing chemicals. Furthermore, by collaborating with Group companies outside Japan to research and share information on laws and regulations in each country, we are aiming to achieve proper chemical substance management across the entire Group.

### Product Safety and Chemical Management



## Sustainability Medium-Term Plan: People

### Education on Kuraray's Values and Philosophy

Based on the Kuraray Group Global Human Resource (HR) Policy, the Kuraray Group is making efforts to develop its organizational system regarding the promotion of diversity, cultivation of human resources, and just and fair evaluation of performance, as well as cultivating a healthy corporate culture and creating new employment opportunities, so that each employee can grow personally through work.

The Kuraray Group carried out its first global engagement survey in 2022, called Our Voice. We will use the survey results to heighten employee engagement and give impetus to the goals of innovation and transformation of people set out in "PASSION 2026."

#### Activities at Workplaces

### Diversity and Inclusion Initiatives

The Kuraray Group has set the destination for its diversity and inclusion initiatives as becoming "a company where each employee in a diverse workforce works enthusiastically and tackles challenges without fear of failure, generating a succession of innovations while responding to change and continuing to grow."

To this end, under "PASSION 2026," we will develop a consistent HR platform and personnel data across the entire Group, and implement measures to promote HR development and diversity based on a long-term perspective. We will seek globally to assign and promote personnel best suited to each job position in a way that allows individuals to reach their full potential and help grow the business. We will cultivate an organizational culture in which each person respects diversity and tackles challenges without fear of failure.

Our focus in Japan is on ensuring diversity in core human resources, defined as the management layer. We will work to advance women, foreign nationals, and mid-career hires to positions of management. Our goal is to boost the ratio of such managers from 12% as of September 2021 to 25% or more by 2030 (excluding production sites).

#### Diversity and Inclusion

### "PASSION 2026" Targets and Fiscal 2022 Results

	FY2022 results	FY2024 targets	FY2026 targets
Global measures	—	Human resource development from a long-term perspective and promotion of global mobility HR measures to promote diversity (personnel database, personnel recruitment, etc.)	
Ensuring diversity of core human resources*	13%	16%	20%

\* Ratio of managers who are women, foreign nationals, and mid-career hires (in Japan, excluding production sites)

### HR Platform and Personnel Database

To put fair, effective HR measures in place across the Group worldwide, it is essential to build an HR platform that includes a common global personnel system and personnel database. In 2022, our first step toward aligning job grades globally involved revising conditions for positions above a certain level. Regarding compensation, we integrated the process for determining the rate of salary raises and established rules for the performance indicators affecting bonuses.

In 2023, we will establish a global standard for job grades across all management levels. As for the personnel database, we will expand the pool of personnel to be included, enhance career training information, and take other steps to create a framework that can be used for HR development and the recruitment of diverse human resources.

### Personnel Evaluation System

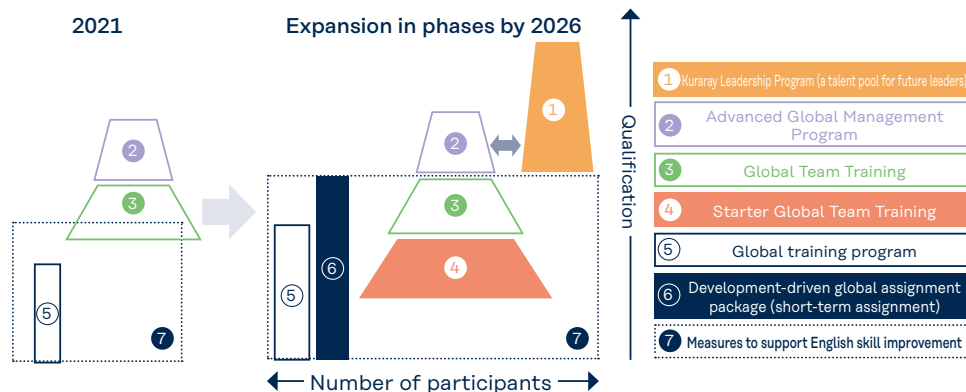
The Kuraray Group seeks to cultivate an organizational culture where employees take on challenges without fear of failure, without settling for the status quo, adopting a forward-thinking attitude and embracing new perspectives. To this end, we recommend setting "challenge goals" for individual employees, and evaluating employees not only by results but also in light of the processes and actions they take to achieve their goals. Moreover, to spur the creation of business value for the Group as a whole, we encourage active participation in collaborative activities that transcend organizational barriers.

## Global Talent Development

One cornerstone of the further growth of the Kuraray Group is the development of personnel who can play an active role in a global context. In addition to our existing program for global team leaders (Global Team Training = ③ in the chart), in 2022 we launched a full-fledged program for employees who are expected to play an active role as global senior leaders down the road (Advanced Global Management Program = ②). We have also started a trial run of a global talent development program targeting younger employees at an early stage (Starter Global Team Training = ④). Going forward, we plan to continue expanding and enhancing the Global Talent Development Program.

### Talent Development

#### Expansion of Global Talent Development Program



## Cultivating Successors

We believe providing appropriate opportunities in a fair and systematic manner so that people working in the Kuraray Group can fully demonstrate their diverse capabilities will lead to the growth of both individuals and the Company. To this end, we are preparing a program to cultivate successors. Concretely, we are working to visualize the capabilities required for job positions and the capabilities of individual employees, and to develop specific training and other support geared to cultivate the requisite capabilities identified in that process.

## Social Contribution Activities

We in the Kuraray Group consider the sound and sustainable advancement of society to be a precondition for corporate growth and prosperity, as well as the ultimate objective of corporate activities. It goes without saying that we see it as our duty to contribute to society by providing people with products with genuine value. Beyond this, we consider helping to resolve social issues to be another important form of social contribution in our capacity as a corporate citizen.

The Kuraray Group carries out activities focusing on the priority areas of culture, science, environment, and social welfare in accordance with its policy for social contribution activities. Amid the global expansion of the businesses and market presence of the Kuraray Group, the Kuraray Foundation was established in April 2016 with contributions from Kuraray to pursue sustainable social activities. The Kuraray Foundation carries out creative activities informed by the history of Kuraray to contribute to society even more broadly and with greater impact.

### Interaction with Society

### Kuraray Foundation website

#### Review of Fiscal 2022, Fiscal 2023 Plan

FY2022 plan	Results	Evaluation and challenges	FY2023 plan
<b>[Science] [Social Welfare]</b> Implement "Sending School Backpacks Across the Sea" campaign even during COVID-19. (Japan)	Delivered: 7,995 backpacks As usual, called for donations of school backpacks through the Kuraray website and elementary schools near Kuraray sites. Scaled down packing work and ensured adequate space to avoid crowding	Even amid the pandemic, we were able to collect and ship backpacks as usual. We took sufficient measures to prevent infection	Mark 20th time to carry out the campaign since its start. Aim to bring back events held before COVID-19 (We collected roughly 7,800 backpacks from all over Japan in fiscal 2023, and employee volunteers inspected, packed, and boxed them in April.)
<b>[Science]</b> To the extent possible, plan and host "Chemistry Classes for Boys and Girls" despite COVID-19. (Japan)	While monitoring COVID-19 case levels in each business region, we: - Visited elementary schools near the Niigata and Kashima plants and hosted classes while taking steps to prevent infection - Hosted classes at a local cultural facility near the Tsurumi Plant while taking steps to prevent infection		Aim to hold events as before COVID-19, including at offices that could not host events in fiscal 2022
<b>[Social Welfare]</b> Operating workshops for people with intellectual disabilities. (Japan)	Number of people employed Intellectually and physically disabled people: 42 Instructors: 15 (Results are total for Niigata, Saijo, Kurashiki, Kashima, and Okayama.)	Operated workshops as usual, taking all possible steps to prevent infection. We will continue to promote safety and health management and train instructors	While diversifying the content of work, ensure rigorous workplace safety and emotional security
<b>[Culture] [Science] [Environment] [Social Welfare]</b> Offices and affiliated companies in Japan and overseas subsidiaries will carry out social contribution activities together with local communities that are of benefit to local residents. (Japan, overseas)	Support for art and folk art museums, education, and sports; cleanup activities at neighborhood roads, rivers, and parks; forest conservation; recreation; charity events; disaster area support; donating to public utility projects. Continued activities to the extent possible during the pandemic, both in Japan and abroad	Resume pre-COVID-19 activities to the extent possible in each region	Reiterate the Kuraray Group's philosophy of contributing to society, explore activities to pursue in collaboration

## Reinforcing Occupational Safety, Process Safety

In the Kuraray Group's business activities, safety is the cornerstone, an absolute requirement that forms the basis for all activities. It is evident that realizing workplaces where people can safely work at ease without accidents is a critical theme both in maintaining a stable supply of products and in maintaining society's trust. Based on this view, the Kuraray Group has developed and operates safety management systems and is pursuing various initiatives to raise employee awareness of safety and establish safe actions and safety checks as routine practices.

At each workplace, we uncover risks related to occupational safety and process safety, conduct thorough risk assessment activities, promote fundamental equipment safety measures, and prevent process accidents and occupational injuries. Additionally, to prepare for the event of an accident or injury, we are carrying out training to minimize damage, sharing information on cases of accidents and lessons learned, and horizontally deploying countermeasures.

Guiding Principle for Ensuring Safety	Action Courses for Ensuring Safety (FY2023)
<p><b>Safety Is the Cornerstone of Everything We Do</b></p>	<ol style="list-style-type: none"> <li>1) Ensure and Practice "Safety First, Production (Construction, R&amp;D) Second"</li> <li>2) Ensure and Practice that Predict Hazards and Make Sure the Safety Before Taking Action, and Confirm If the Action Results are What You Expected</li> <li>3) Each Employee Should Think of Safety as "Their Own Issue" and Act Accordingly</li> </ol>

## "PASSION 2026" Targets and Fiscal 2022 Results

		FY2022 results	FY2024 targets	FY2026 targets
Occupational safety	A and B rank injuries*1	5 cases	Zero	Zero
	Frequency rate of all occupational injuries*2	2.40	1.7 or less	1.3 or less
Process safety	A, B, and C rank accidents*3	5 cases	Zero	Zero
	D1 and D2 rank accidents*3	3 cases	3 or less	3 or less

\*1 Evaluation ranking of occupational injuries using Kuraray's proprietary system. Four ranks in order of seriousness: A > B > C > D.

\*2 Frequency rate of all occupational injuries: Number of all occupational injuries (lost-time and no lost-time injuries) per million working hours.

\*3 Evaluation ranking of process accidents using Kuraray's proprietary system. Five ranks in order of seriousness: A > B > C > D1 > D2.

### Occupational Safety and Process Safety

## Safety Activity Management

Based on Kuraray's Safety Activity Management Rules, the Kuraray Group develops a safety plan every fiscal year and implements it to ensure occupational safety and process safety. Specifically, at the Safety Promotion Committee attended by the President and executives in charge, we make an overall assessment and have a discussion on safety activity performance of the current fiscal year and establish an activity policy for the coming fiscal year. This policy is reflected in and implemented through specific action plans of each plant and department. A group of safety representatives from headquarters, including executives in charge of safety, visit every production site of the Group in Japan twice a year to examine their activity plans, the management of implementation progress, and the results. In addition, staff members from headquarters visit Group subsidiaries outside Japan once every three years to confirm their status\*4 as well as conduct examinations via remote conferencing. We perform an overall assessment of results based on the issues found through the surveys made at each plant, the safety results for that year, and other factors. We incorporate this assessment into the formulation of company-wide policies for the next year, thereby operating a management system for safe operations.

\*4 From 2020 to 2022, the verification of safety activities was conducted via web meetings remotely due to the COVID-19 situation.

### Occupational Safety

The frequency rate of all occupational injuries for the Group in 2022 was 2.40 (2.05 for Group companies in Japan, 2.98 for Group companies overseas). This was an improvement over 2021, although under our target rate of below 2.0. The frequency rate for Group companies in Japan, which had been declining for three consecutive years, more than doubled year on year. On the other hand, the frequency rate for Group companies overseas improved significantly, reaching its lowest level ever. We have also introduced a unique index to assess the severity of occupational injuries using a four-level ranking, from A to D. Our target is to eliminate A and B rank (more serious) occupational injuries. There were a total of five A and B rank occupational injuries across the Group in 2022 (four B rank injuries in Japan, one B rank injury overseas); thus, we did not achieve our target of zero. The B rank injuries that occurred involved being caught or entangled in machinery, burns to eyes from chemical vapors, and scalding from contact with hot water. These issues resulted from a lack of attention to the risks of being caught or entangled or the toxic risk of chemicals and from inadequate protective measures, which we have proceeded to address. We are putting rigorous measures in place to deal with newly discovered issues as we continue to work toward safe, injury-free workplaces.

### Process Safety

In 2022, Group companies in Japan experienced seven accidents involving leakage of hazardous materials or high-pressure gas, and one small-scale fire. Of these, five were relatively large accidents (rank A, B, and C according to our in-house standards). We thus fell short of our target of zero such accidents. There were three minor (D1, D2 rank) accidents (e.g., leakage of a very small amount of hazardous materials). We will continue to aim for zero relatively serious accidents, while also aiming to reduce the occurrence of minor accidents by identifying on-site risks and promoting response measures. In addition, while continuing safety audits of overseas chemical plants that started in 2019, we also formed a new Global Process Safety Management Audit Team made up of in-house experts from across the Group that started up activities in 2022. We are working to thoroughly prevent recurrence of accidents at overseas chemical plants, take steps to address issues identified through audits, and work to improve the level of safety management.



Our Challenges

2

# Innovations Starting from Networking

Coming together across the Group as “One Kuraray,” we continue to take on the challenge of creating innovation by connecting people with people, and technologies with technologies, both within and outside the Company.

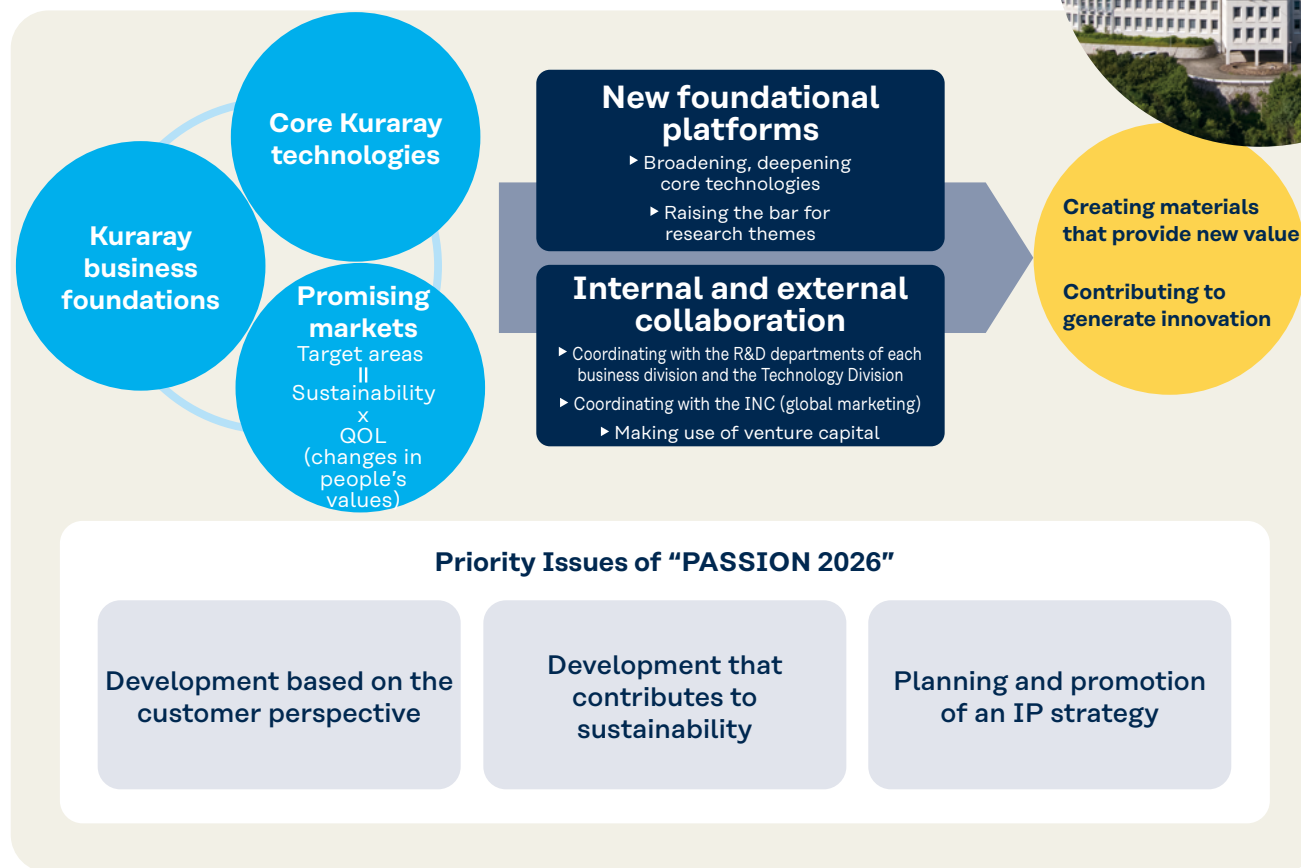


## Basic Strategy for Creating Innovation

The Research and Development Division works closely with in-house companies, business divisions, and Group companies to promote projects that contribute to Group-wide business expansion and profit growth under the respective missions of “creating new business,” “strengthening and expanding existing businesses,” and “establishing and deepening core technologies.” Our Supporting Project has contributed to the sustained enhancement and expansion of existing businesses, while our New Business Creation Activities have broadened the scope of the business foundation by discovering promising new opportunities in areas peripheral to our businesses.

Under “PASSION 2026,” we established the Innovation Networking Center (INC) in January 2022 as an organization to generate innovation by integrating internal and external resources. The Research and Development Division and INC work closely together to promote collaboration both within and outside the Company, such as in the areas of global marketing activities for items under development and the generation of new business ideas through the sharing of R&D seeds and unmet needs\*. We are also looking ahead to the society and living standards we hope to see 20 to 30 years down the road from the perspective of consumers, and backcasting from there to set more challenging R&D themes. In this way, we intend to incorporate new foundational platforms and extend our reach into new fields, not limited to conventional R&D areas.

\* Unsatisfied or unidentified potential demand or needs.



## Framework for Creating Innovation

### Research and Development Framework

Aiming to become a Specialty Chemical Company achieving sustained growth, the Research and Development Division plays a core role in implementing R&D and new business activities as a corporate organization. The Research and Development Division manages the Kurashiki Research Center, Tsukuba Research Center, Intellectual Property Department, Planning and Administration Department.

Our research centers pursue the development of new businesses, products, and technologies using their core technologies, which include organic synthesis and synthetic polymer technologies, catalytic chemistry, polymer materials technology, environment- and energy-related technologies, precision polymerization and polymer modification, compound materials, polymer processing, and computational science. Drawing on their sophisticated analytical capabilities and safety assessment techniques, the research centers also function as analysis hubs for Kuraray Group companies, and work to address technical problems across the Group. We also established the DX Promotion Group in 2023 and are actively working on to incorporate digital R&D technologies to accelerate our R&D initiatives.

The Research and Development Division evaluates and analyzes IP data to support business strategies.

Each business division has an R&D department at its base plant. Including overseas bases, these plants engage in R&D activities while working closely with corporate and business divisions' research, development, and production bases.

The Technology Division, responsible for corporate production technology development, manages the Technology Development Center and the Technology and Maintenance Management Department. It promotes progress in production technology by partnering with the Production and Technology Management Division of each Group company and the Production and Technology Development Department of each plant. It has also begun collaborating with the Research and Development Division in the early stages of development to accelerate the evolution of new businesses and products. This division is also taking the lead in implementing digital strategies for Group-wide production technology R&D.

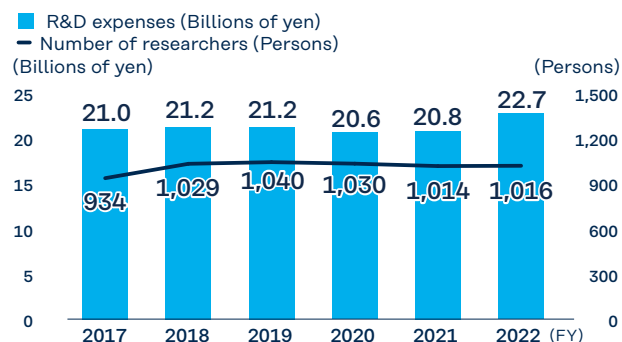
### Innovation Networking Center (INC)

The most important objective of the INC is to generate innovation by integrating internal and external resources.

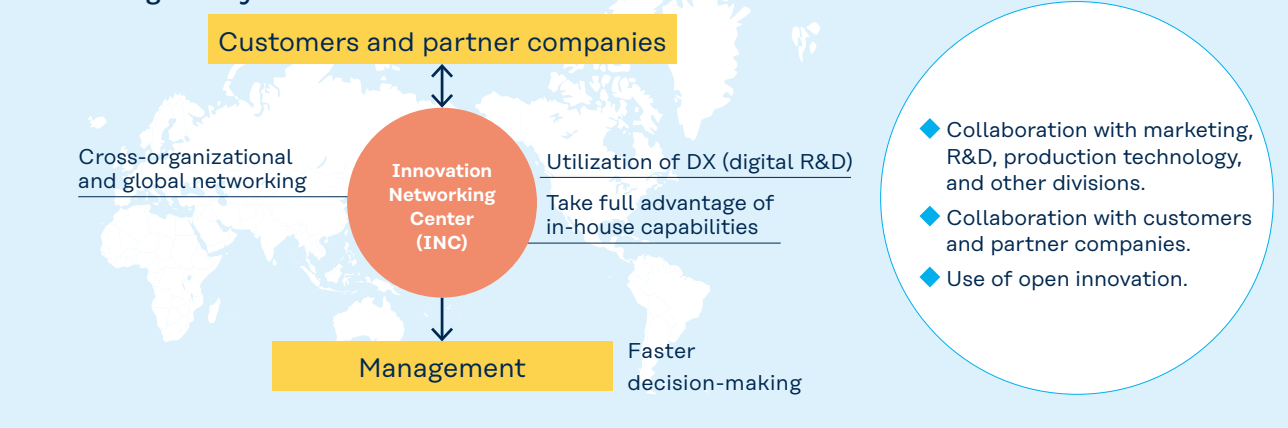
To empower individual divisions and customers to take the initiative in generating ongoing innovation, the Center is playing the role of accelerator in the Kuraray Group's innovation efforts, promoting activities involving the participation of all corporate divisions and employees. We have adopted an ambassador system for the Center, whereby around two dozen core members from diverse backgrounds are collaborating globally in digital venues with over 50 ambassadors representing various Group organizations.

By leveraging the Kuraray Group's resources on a global scale, from its diverse human resources in Japan and overseas and its unique technical capabilities to the customer relationships and market approaches it has cultivated over the years, we will continue to create new business opportunities over the longer term.

### R&D Expenses and Number of Researchers



### Networking Led by INC



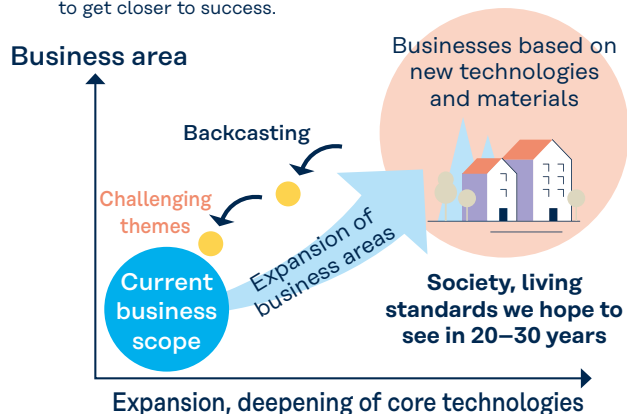
## Priority Issues of “PASSION 2026”

### Development Based on the Customer Perspective

#### Backcasting in R&D

The Research and Development Division generates R&D themes that lead to new value proposals addressing issues and trends in society and markets and customer issues. Under “PASSION 2026,” we looked ahead to the society and living standards we hope to see 20 to 30 years down the road from the perspective of consumers and customers. Backcasting from there, we have set more challenging R&D themes that will enable us to achieve this. We drew up a longer-term roadmap for market areas and R&D activities the Kuraray Group should pursue going forward outside the sphere of our existing businesses. In the short term, our goal is to adopt a “fail fast”<sup>\*1</sup> approach. For this concept, we have set our sights initially on the areas of food and personal care. By capitalizing on networks within the Group and beyond, we aim to generate challenging R&D themes and extend our reach into new fields, not limited to conventional R&D areas.

\*1 The concept of making mistakes quickly and learning from them to get closer to success.



#### Collaboration with INC (Global Marketing)

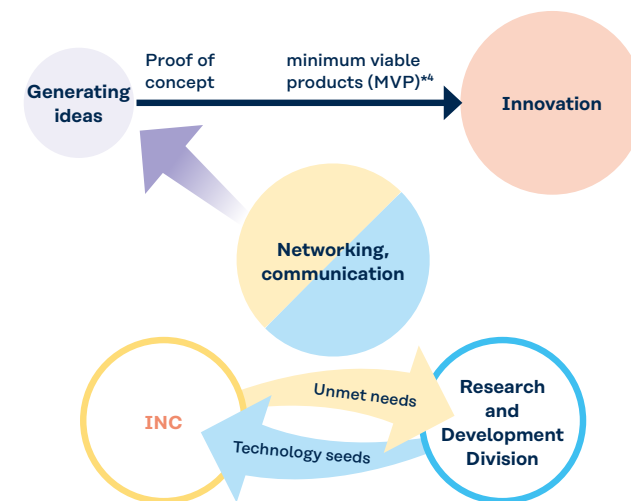
In achieving ongoing innovation, it is essential at the early stage of development to learn from markets and customers about where they see the value of materials made using the proprietary technologies of the Research and Development Division, and then implement proof of concept demonstrations. This requires being closely connected to the markets. For this reason, staff in charge of each of our R&D themes collaborate with the segment teams<sup>\*2</sup> formed by INC to promote marketing and develop products based on a deep familiarity with the market. In addition, as members of the segment teams, such staff seek to discover the unmet needs of customers at an early stage and encounter ideas that lead to new R&D themes.

We started holding regular Pitch Days<sup>\*3</sup> in 2022. These are global communication events that bring together members of the Research and Development Division and INC. The goal of the events is to construct a Group-wide innovation process, cultivate a culture of innovation, and achieve more active networking and communication. Through this venue, which combines the collective strengths of the Research and Development Division and INC, we are accelerating the generation of ideas, development of minimum viable products (MVP)<sup>\*4</sup>, and proof of concept to create innovation.

\*2 Segment teams targeting six strategic areas: Automotive, Paper & Packaging, Agriculture, Sports & Outdoors, Architecture & Construction, Life & Personal Care.

\*3 Events to speed up the “fail fast” process by inviting researchers from the Research and Development Division to give presentations on their seed development themes, and discovering new possibilities through questions and feedback from INC members.

\*4 Products that provide the minimum viable value to users.



#### Development That Contributes to Sustainability

The Research and Development Division strives to further hone Kuraray’s proprietary technologies and create new businesses in areas that serve to improve both sustainability and the quality of life, issues that are of pressing importance to society.

For instance, in the area of biodegradable materials that contribute to the natural environment, we are working to develop materials that are both biodegradable and functionally sophisticated. We are also working to shed light on the mechanism that controls biodegradability, and applying this to the development of materials. In this area, we cooperate with customers to confirm the value of the materials and enhance their performance, including exploring technologies for scaling up development. We will continue to contribute to the natural and living environments and support the creation of new businesses that tie into creating value for customers.

➤ [Target Fields P.09](#)

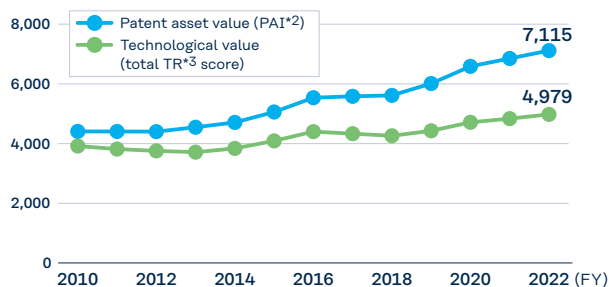
## Planning and Promotion of an IP Strategy

The Kuraray Group seeks to respect its own intellectual property (IP) and that of other companies. With the aim of strengthening and accelerating our businesses and R&D in line with the Group’s management strategy, we engage in activities to create, protect, and make effective use of our assets, guided by our business, R&D, and IP strategies. We established the IP Management Center in January 2022 to support the IP strategies of each business division, while also formulating and implementing a globally integrated IP strategy. In this way, we are working to implement IP actions that go beyond our former strategy, focused on securing rights, to include business development activities.

### Building an IP Portfolio

Aiming to achieve business results in line with the Kuraray Group’s management strategy, we have been working to build our IP portfolio\*<sup>1</sup> as we grow the business on a global scale. As a result, we have raised both our patent asset value index (PAI: Patent Asset Index™\*<sup>2</sup>) and technological value index (TR: Technology Relevance™\*<sup>3</sup>) scores. We will continue to enhance our IP portfolio and develop a new IP strategy by leveraging our IP assets to drive business expansion and cross-border collaboration between companies and industries.

### IP Portfolio

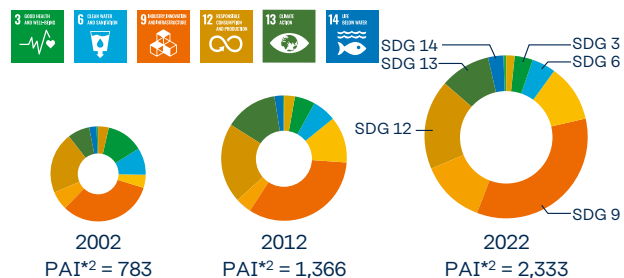


\*1 Created by the Kuraray Group using the LexisNexis® PatentSight® patent analytics from the IP division of U.S.-based LexisNexis.  
<https://www.lexisnexisip.com/solutions/ip-analytics-and-intelligence/patentsight/>  
 \*2 Index of patent asset value of the entire portfolio calculated taking into account citations in junior applications and countries of application.  
 \*3 Index of the technological value of the entire portfolio calculated based on citations in junior applications.

### IP Analysis Related to Our Mission

The business activities of the Kuraray Group are grounded in our mission, which states that “We are committed to developing new fields of business using pioneering technology that improves the environment and enhances the quality of life throughout the world.” We categorized our IP related to this mission in terms of the Sustainable Development Goals (SDGs). Our analysis determined that patents related to developing new fields of business (SDG 9) accounted for 34% of our SDG-related patent portfolio and patents related to improving the natural environment (SDGs 6, 13, and 14) and improving the living environment (SDGs 3, 6, and 12)—which we have identified as material issues for the Group—together accounted for 39% of the portfolio. The patent asset value index scores for these IP are also increasing year by year. We will draw on this analytical data in new business

### SDG-related patent portfolio



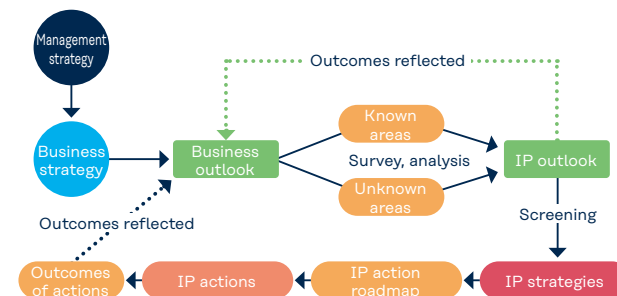
development, including identifying business areas where we can maximize the Kuraray Group’s competitive strengths.

### Implementing an IP Management Cycle

The Kuraray Group has drawn on its unique technologies to create unparalleled products while maintaining and honing our competitive edge by pursuing proper IP management, which includes filing patent applications and securing IP rights on the outcomes of our R&D activities.

To navigate rapid changes in the business environment and the globalization of our business in recent years, and to make effective use of all our assets, we will continue to pursue the proper management of our IP. Specifically, we are creating an IP outlook based on the overall business outlook, which is rooted in business strategies originating from the Group’s management strategy. Our goal is to establish an IP management cycle, implementing actions in line with IP strategies based on the IP outlook and incorporating the results into the business outlook. Going forward, we will continue to build and capitalize on the IP portfolio to help achieve business results in line with our management and business strategies.

### IP Management Cycle





## Our Challenges

## 3

# Transformation of People and Organization

Our aim is to become “a digitally savvy company” that draws on competitive strengths to continue contributing to society, harnessing digital technology to change our processes and drawing on diversity to expand our thinking, bringing transformation to both people and the organization.



## Digital Transformation (DX) Framework

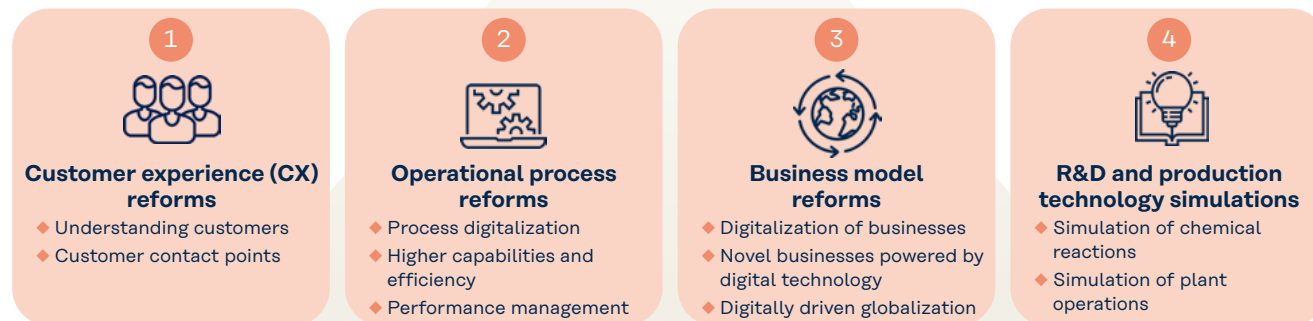
The Kuraray Group’s DX Vision is: “Improve competitiveness, continuously evolve, and contribute to the world.” Guided by this vision, we set four priority fields: customer experience (CX) reforms, operational process reforms, business model reforms, and R&D and production technology simulations. Group-wide digital transformation is a core strategy in our Medium-Term Management Plan “PASSION 2026.” Achieving this vision demands comprehensive strengths to achieve rapid digital transformation while integrating the four aspects of people, data, processes, and systems. For example, to achieve more sophisticated cyber security, along with deploying superior security systems, it is necessary to raise people’s digital literacy, properly manage and understand crucial data, and develop security management processes on a global scale.

To pursue a more concerted approach to the above four aspects, the Kuraray Group in January 2023 reorganized and integrated the Global Digital Transformation (GDX) Office, IT Department, and G-SAP Promotion Group, to launch the new DX-IT Division. The aim of the integrated organization is to help us become “a digitally savvy company” by putting digital transformation measures into place quickly and efficiently.

## DX Vision

Improve competitiveness, continuously evolve, and contribute to the world as a digitally savvy company

## Priority Fields



## DX-IT Division

### Data-driven organization

“Think in data, decide by data.”

### Higher digital literacy

Improve ratio of data analytics talents.

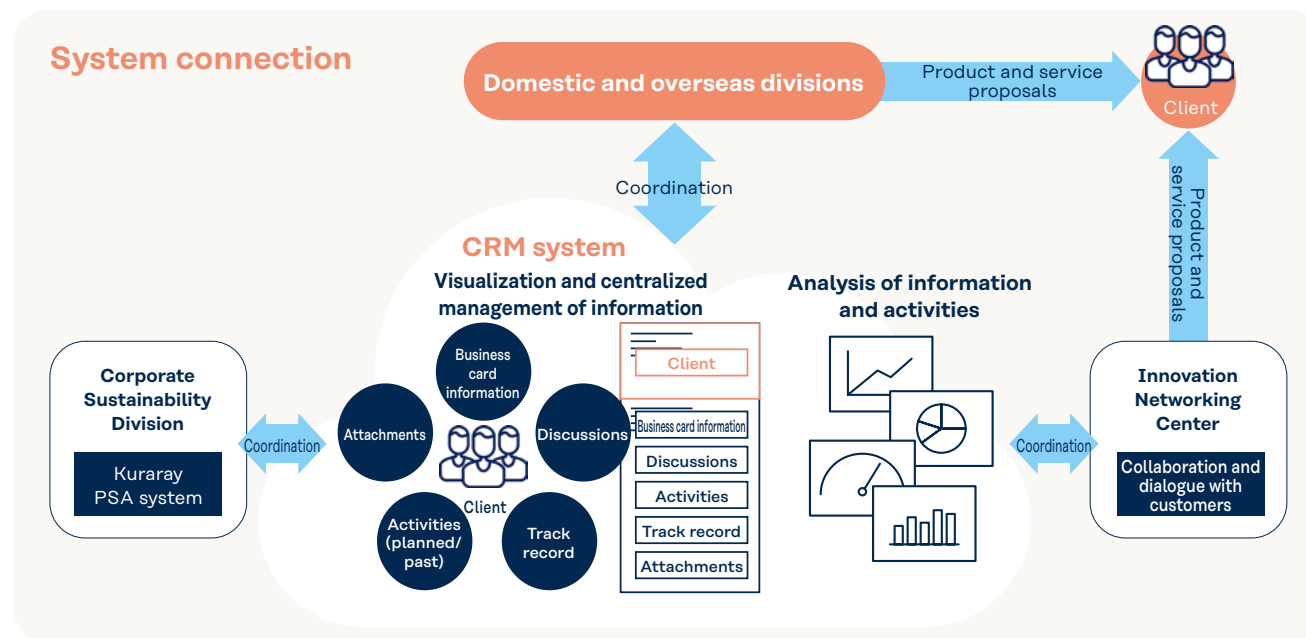


## Customer Experience (CX) Reforms

The Kuraray Group recognizes the importance of customer experience. As a manufacturer of chemicals, we strive to earn the trust of our customers and become the kind of partner they seek out.

To focus on better communication with customers and offer products and services that address their issues and needs, we will reinforce the coordination and analysis of our core systems, customer relationship management (CRM) system, and R&D data.

To offer customers an even better experience in their dealings with the Kuraray Group, our business divisions, the Innovation Networking Center (INC), and the organizations pursuing sustainability activities will work together to boost customer satisfaction and build long-term relationships across the Group.



## Operational Process Reforms

Operational process reform is a broad topic, encompassing ways of enhancing performance by digitalizing individual processes. We are moving forward with the selection of processes we anticipate will drastically boost productivity through the digitalization of tasks currently done by hand.

In addition, to build a framework that enables the effective use of IT globally in a secure environment, we have begun developing IT governance based on the Control Objectives for Information and Related Technology (COBIT) framework\*<sup>1</sup>. In 2022, we evaluated the sophistication of the Kuraray Group's IT governance in line with criteria stipulated by COBIT, identified measures to fill gaps with target levels, prioritized these, and drew up a roadmap for implementation.

In addition, in April 2023, six business divisions in Japan began using the global SAP system (SAP S/4HANA). By using the same enterprise resource planning system\*<sup>2</sup> globally, these divisions are able to achieve more efficient business operations.

\*<sup>1</sup> An IT governance and management framework developed by the ISACA

\*<sup>2</sup> A system for centrally managing a company's management resources and optimizing the Company as a whole

## Business Model Reforms

We are actively working to build a framework for creating new value by combining services with digital technology. With strengths in pioneering products, the Kuraray Group has tended to adopt a product-centered business model. One shortcoming with this is that once a social need has subsided, the product loses its adaptability. Furthermore, there has been a growing shift in consumer behavior in recent years from material things to experiences.

Against this background, the Kuraray Group in 2022 began engaging in concept design to provide new value to users. By adding the value of IoT-based interactive digital services to existing business models, we are constructing new business models.

## R&D and Production Technology Simulations

We regularly plan and hold hackathons\*1 as a way of solving new challenges in R&D and production technology. These events aim to uncover and explore a wide range of ideas, including solutions previously unknown to the Kuraray Group, using an approach that differs from those that draw on existing in-house resources and joint research.

To set the stage for ongoing hackathons, the Kuraray Group in November 2022 invited students from several universities in the United States to participate. Starting in 2023, we plan to apply the management expertise we gained to increase the frequency of these events and expand target areas.

\*1 A technology competition offering prize money, in which teams of university students propose solutions to technical problems in a short period of time.

## Hackathons

- Participants can come from a broad range of fields
- Can lead to solutions that the organizer had never thought of
- Generate a wealth of ideas in a short period of time

Prize  
Winners

1st Place

Robert Morris University  
(ROMO's Gold)

2nd Place

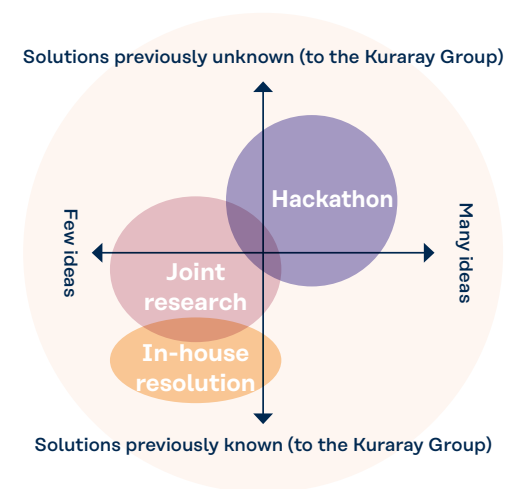
Butler University  
(ACM @ Butler)

3rd Place

University of California, Irvine  
(Kemists)

4th Place

University of California, Irvine  
(DS\_Chemist)

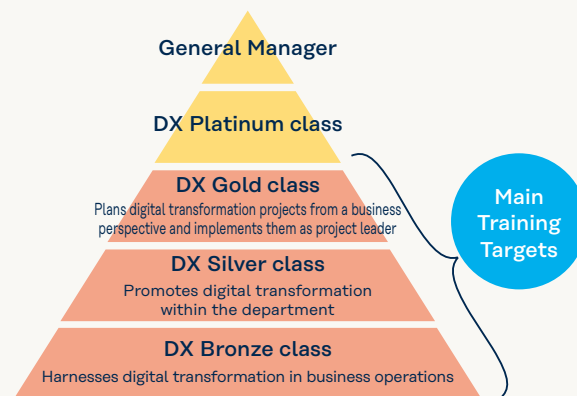


## Developing DX Talent

The Kuraray Group believes it is vital to cultivate a culture and environment in which all employees can stay abreast of progress in digital technology, where learning is an ongoing process. We established three classes of digital literacy—Gold, Silver, and Bronze—and developed a training curriculum corresponding to each class. Our educational framework mandates that all employees acquire at least Bronze class certification.

We also train and deploy at least one person to each department to lead digital transformation efforts and spread technological knowledge throughout the department, and eventually to all parts of the Company. In 2023, we have started exploring the cultivation of data scientists and other highly specialized talent.

## DX Talent Development Project



## People to Receive DX Talent Development Project under "PASSION 2026" (Japan)\*2

Class/Target	FY2023	FY2024	FY2025	FY2026	Cumulative
DX Gold class Selected employees	25	25	25	25	100
DX Silver class Executive candidates (general staff)	100	300	400	400	1,200
DX Bronze class All employees	4,800	200	200	200	5,400

\*2 Forecast as of the end of December 2022. We will estimate overseas training targets after conducting a fact-finding survey.

# Employee Roundtable

## Creating New Value through Three Challenges



**Yoshihisa Inui**

Corporate Sustainability  
Department  
Corporate Sustainability  
Division

**Yoshimi Ohta**

Analytics Group Leader  
GDx Promotion  
Department  
DX-IT Division

Facilitator

**Jiro Ishikawa**

Strategic Project  
Management Group Leader  
Corporate Management  
Planning Department  
Corporate Management  
Planning Office

**Akito Miyagi**

Business Partner Group and  
Talent Vitalization Group  
Supervisor  
Global HR Center  
General Affairs and HR Division

**Yuki Takasuka**

Marketing Department  
Innovation Networking  
Center (INC)

To achieve the three challenges identified in “PASSION 2026,” collaboration across various organizational units is essential. Some of our employees who strive hard every day to support customers, society, and the planet shared some of their initiatives and thoughts.

### A new organization to take on the three challenges

**Ishikawa:** Our Medium-Term Management Plan “PASSION 2026” outlined three challenges that create value: “Sustainability as an opportunity,” “Innovations starting from networking,” and “Transformation of people and organization.” To meet these challenges, I believe we must rise above various organizational barriers and collaborate with one another. First of all, please tell us about your organization and its relationship to the three challenges.

**Miyagi:** I belong to the Global HR Center, which implements various people-related measures to address the challenge, “Sustainability as an opportunity.” We focus on cultivating globally minded people and organizations. We work with HR managers at overseas bases to transform people and organizations and cultivate a global corporate

culture, such as discovering talent within the Group and cultivating successors.

**Takasuka:** The Innovation Networking Center (INC) is deeply involved in the challenge, “Innovations starting from networking.” We are playing three major roles: creating a framework for sustainable innovation, drawing on internal and external collaboration to create new businesses, and cultivating the people that will lead these efforts and fostering a culture to facilitate them.

**Inui:** The Corporate Sustainability Division focuses on the challenge, “Sustainability as an opportunity.” We oversee the Sustainability Medium-Term Plan, which summarizes the Kuraray Group’s sustainability-related measures. We also host activities that encourage people at our various offices to get involved with initiatives that embrace sustainability.

**Ohta:** The DX-IT Division addresses the challenge, “Transformation of people and organization.” We pursue all kinds of transformation from a digital angle. Therefore, we often work with the Corporate Sustainability Division and INC. We are currently engaged in various projects to support digital transformation, including building the infrastructure for data analysis and application.

### Collaborating beyond organizational barriers

**Ohta:** We often collaborate with other divisions, on special projects and day-to-day operations. For example, we are working with INC on the use of digital technology and simulations in R&D. Together with the Global HR Center, we are nurturing personnel who will drive the Group’s digital transformation efforts going forward.

**Takasuka:** Because the digital element is critical to cultivating innovation, we have a close relationship with the DX-IT Division. Looking at major trends in society, I believe cooperation with the Corporate Sustainability Division is also indispensable. It is obvious to me that addressing sustainability is now a requirement when creating any new business.

**Inui:** The concept of sustainability has rapidly gained widespread recognition over the past few years. The Kuraray Portfolio Sustainability Assessment (PSA) system visualizes the contribution of products and services that improve the natural and living environments. But, I would like to brainstorm with people in other business divisions about how to connect the PSA system to new businesses and higher value-added products.

**Ohta:** I would like to see the DX-IT Division become more involved in collaborative efforts, such as sharing the PSA system data throughout the Company, and proposing products and services that offer higher customer satisfaction.

**Ishikawa:** Collaboration across organizational units sometimes leads to conflict arising from differences in values. How do you deal with that?



**Inui:** We have placed ambassadors at multiple overseas bases, and launched initiatives to jointly develop and pursue activities to instill sustainability awareness. Disparities exist between regions in terms of sustainability awareness and pressing social issues. By sharing information about different initiatives and good sustainability practices with each regional base, we are raising awareness and advancing various initiatives.

**Takasuka:** In some regions, even before the Corporate Sustainability Division was established, Group companies were already undertaking life-cycle assessments in collaboration with external parties. That's a situation where conflict is likely to occur.

**Inui:** Yes. There is a strong push for standardization across the Kuraray Group. One example is the method of calculating greenhouse gas emissions. So, we are carefully talking through issues as we develop common guidelines.

**Miyagi:** In terms of human resources, the concept of talent management is more advanced in Europe and the United States, and differs from what occurs in Japan. However, our Japan sites have been thinking

about the global use of employees for a long time. This region is working to gain a common awareness by sharing stories and ideas on how to enhance the Kuraray Group's organizational strengths as a whole.

**Ishikawa:** All of you belong to the corporate organization, which supports business activities across the Group, but what about collaboration with the various business divisions?

**Takasuka:** The business division system has been optimized for each business, and I think it's great that we have built a framework that can respond swiftly to customer needs. On the other hand, since each business is also under pressure to make short-term profits, it is sometimes difficult to create innovation across the Kuraray Group from a long-term perspective. INC does not have its own businesses or products. This becomes a major challenge when working alongside the business divisions to create innovation that serves the entire Group. It sometimes causes conflict. I try to cultivate constructive dialogue with each of the divisions and respect each one's values and plans, and then mesh those plans with INC initiatives.

**Inui:** I'm searching for ways to make everyone aware that sustainability leads to the creation of business opportunities. Our conventional CSR framework demands that organizations mount a strong response to critical matters such as risks and systems. By introducing the Kuraray PSA system, I hope to create value-based businesses that contribute to the sustainability of each division and society.

**Takasuka:** INC is engaged in a wide range of activities. One is called segment team activities, where members from across the organization work together to reach designated markets. I lead the Sports & Outdoors team, which consists of members from 11 of our business divisions. We engage in highly forward-looking activities, such as proposing

products from multiple businesses to existing customers. Currently, a project is underway to develop a new type of resin for sports applications that draws on our core technologies. Previously, we would have outsourced such processing trials, but when we shared activities from the Sports & Outdoors team with others in the Company, one business division proposed conducting the processing trials in-house. My sense is that barriers between the business divisions are lower than before.

**Ohta:** I'm also participating in that project. I am proposing ways of raising the quality and impact of presentations. One way is through using digital technology to speed up the hypothesis-testing cycle for products and by incorporating simulation results into proposals.

**Miyagi:** As one aspect of training, I also gathered about 20 people from various business divisions and held a marketing workshop with Mr. Takasuka. Much of the workshop feedback included gratitude for the chance to network with employees from other divisions. This suggests that there may be a surprisingly large number of employees who have not yet experienced such collaboration.

### Creating virtuous cycles of growing and contributing

**Ishikawa:** In your current work, what are you doing to create virtuous cycles in which the Kuraray Group continues to grow while contributing even more effectively to customers, society, and the planet?

**Miyagi:** In 2022, we started a training program designed to build organizational performance. To help grow the entire organization, we encourage every program participant to share their challenges and vision, regardless of age or job grade. As the size of the organization and the issues they regularly face are different in headquarters and plant offices, I



would like to expand this program to other locations to further enhance growth and performance of the entire organization.

**Takasuka:** I really like that perspective of thinking about growth across the entire organization. That forces us to confront an array of outlooks and challenges, as well as various societal developments, which can be a stimulus for action. I believe the innovation born out of this program will further contribute to customers, society, and the planet.

**Inui:** I think it's important to understand each other's differences in communication. I hope learning about differences in initiatives across regions will feed innovation, like technologies and products that were previously unimaginable.

**Takasuka:** Exactly. What we need is innovation, not invention. For example, as a wide range of people come into contact—from the Corporate Sustainability Division, the DX-IT Division, and the various business divisions—there's bound to be some kind of chemistry that will generate unanticipated new value. That will tie into contributing to customers, society, and the planet. I think this process is vitally important. In that sense, all we can do is roll up our sleeves and keep networking.

**Ohta:** I'm thinking about whether a digital outlook can bring any benefit to such networking. Among our customers, there are moves to make the best use of digital technology. Going forward, I believe digital technology will be a major key to contributing even more effectively to customers, society, and the planet.

**Inui:** I totally agree. For example, recipe-sharing sites on social media are digital platforms that collect scattered knowledge about cooking that leads to new discoveries. I think our role also involves motivating others to want to contribute.

### New possibilities starting from individuals

**Ishikawa:** In the Kuraray Group's corporate tagline, "Possible starts here," President Kawahara emphasizes that the term "here" encompasses every employee. What is the "possible" that starts with you?

**Inui:** Taking on new perspectives opens a broad range of new business possibilities. We are at a point now where society recognizes the great value of sustainability. I believe instilling a sustainability mindset in all facets of the Company will link to new business opportunities.

**Ohta:** The DX-IT Division created a climate in which it is easy to speak up. Our basic principles include "Fight & Unite" and "We Have An Equal Voice." I am convinced that taking on such relatively small challenges and working to cultivate a conducive environment will lead to new possibilities.

**Miyagi:** I'm interested in creating opportunities for direct conversation, as a means of bridging the distance between people. In 2021, our Global Team Training program was held completely online. In 2022, we gathered in person and held an additional workshop in Silicon Valley as a follow-up exercise.

**Takasuka:** I want to connect people by simply encouraging them to try out new things. I think this is how we can uncover new possibilities that become the starting point for innovation. By combining the charm of individuals with unique products and technologies, we can create value and become a corporate group that customers specifically request to work with. Furthermore, I want us to value being a company where people can openly appreciate the good points of others. Always keeping that in mind will naturally generate a positive working atmosphere.

**Miyagi:** Yes. It's about finding what stands out about a person and encouraging that trait. There's a

method of communication that uses the phrase "yes, and" to affirm the other person. Saying "Yes, that's great. And then..." generates more and more ideas. Wouldn't it be fascinating if this kind of interaction spread throughout the Company? Rather than worrying and criticizing each other, a corporate culture of saying, "That's great," before anything else.



**Ishikawa:** What struck me as I was listening to this discussion was that the "here" in our tagline represents in a way the smallest unit of energy that each person brings. We have a mission: "For people and the planet—to achieve what no one else can." Gathering the convictions of every employee—what they bring when they are "here" at Kuraray and taking that beyond organizational barriers through a "yes, and" style of communication—will eventually pervade the entire company. It will even spread beyond the Group, ultimately shaping the mission of Kuraray as a whole. I would like us to contribute to our customers, society, and the planet by surmounting barriers, closing the distance between people, and working together to address the three challenges.

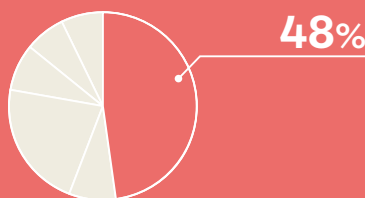


# Strategies by Segment

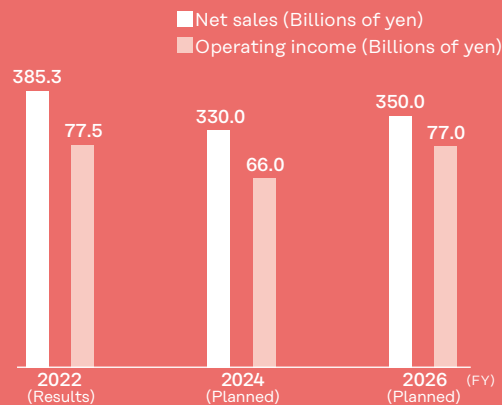
## Vinyl Acetate

We manufacture and sell materials ranging from PVOH resin offering properties such as water solubility and high adhesiveness; materials for LCD display applications; PVOH film used in soluble unit dose system for detergent and other products; PVB film used as an interlayer for safety glass; to EVAL™ EVOH resin that offers excellent gas barrier properties.

### Net sales composition ratio



### Net sales / Operating income



#### Strengths

- ▶ Integrated production based on advanced technology from raw material monomers to finished products
- ▶ Numerous high-quality, cost-competitive product lines
- ▶ Stable supply framework backed by our global network; strong customer base
- ▶ Capabilities in proposing value to customers and in marketing

#### Opportunities

- ▶ Increased demand due to a shift toward larger LCDs and accelerated digitalization trends
- ▶ Growing concern about food safety and security amid rising living standards in emerging countries
- ▶ Heightened demand to reduce food loss globally
- ▶ Increased global demand for soluble unit dose system for detergent
- ▶ Expanding demand for barrier paper and paper straws in line with growing environmental awareness

#### Risks

- ▶ Maturing of the LCD market and expansion of the OLED display market
- ▶ Increased country risks
- ▶ Soaring raw materials and fuel prices and sharp exchange rate fluctuations

### Medium-Term Management Plan "PASSION 2026" Key Measures

We will maximize customer value and expand earnings by strengthening our supply framework and optimizing logistics service through our global network and integrated production system starting with raw materials.

As the core business of the Kuraray Group, we will propose to customers new applications and high-value-added products that capitalize on the characteristics of each of our products. We will also reinforce the global supply framework by upgrading production capacity in a timely manner to support expanding volume.

### Strategies by Business

PVOH resin	<ul style="list-style-type: none"> <li>● Maintain a strong supply framework by taking advantage of our strengths backed by our own raw material production capabilities</li> <li>● Continue to shift from quantity to quality (new applications and high-value-added products)</li> </ul>
Optical-use poval film	<ul style="list-style-type: none"> <li>● Strengthen production and sales frameworks in accurate response to expanding demand and the market shift to China</li> <li>● Launch and expand lineup of value-added products that meet customer needs, such as high-transparency or thin film</li> </ul>
Water-soluble PVOH film	<ul style="list-style-type: none"> <li>● Timely capacity expansion to cover demand growth and to maintain stable supply to the market</li> <li>● Promote the development of new applications as well as biodegradable and bio-based raw materials to contribute to a circular economy</li> </ul>
Advanced interlayer solutions	<ul style="list-style-type: none"> <li>● Expand lineup of SentryGlas™ ionoplast interlayers, our unique product</li> <li>● Leverage the strengths of the global supply system supported by bases in Europe, the United States and South Korea while accelerating the launch of newly developed products</li> </ul>
EVAL	<ul style="list-style-type: none"> <li>● Strengthen the stable supply framework and build a new plant in Asia</li> <li>● Contribute to reduction in food loss as we strive to meet growing demand for food packaging applications</li> </ul>

## Review of 2022 and Outlook

Demand for optical-use poval film was affected by inventory adjustments in the supply chain, but performance in other businesses was generally favorable. We will continue to maximize customer value and expand earnings by drawing on our global network to strengthen our stable supply framework and by optimizing logistics.

### ◆ PVOH resin

The sales volume decreased due to the suspension of some production facilities at a United States subsidiary and a contraction in demand in the latter half of the year. We continued shifting to high-value-added products while revising prices amid soaring raw material and fuel prices. Going forward, we will continue to shift to high-value-added products as we work to achieve sustainable growth.



### ◆ Optical-use poval film

Shipments declined significantly from the middle of the year due to the impact of LCD panel inventory adjustments. Signs of recovery emerged at the end of the year, however. We will continue to maintain a strong competitive edge by enhancing quality and promoting differentiation. To meet needs for larger TV panel sizes, we decided to invest in expanding production capacity at the Kurashiki Plant.

### ◆ Water-soluble PVOH film

Sales were firm for use in unit dose laundry detergent packets. We will continue to expand the market by strengthening cooperation with customers and developing new applications.



### ◆ Advanced interlayer solutions

Sales of PVB film, especially for use in construction applications in North America, held steady year on year. We will continue to expand sales of high-value-added products, including SentryGlas™ ionoplast interlayers.

### ◆ EVAL

Performance of food packaging applications was steady, and the sales volume increased. Also, in response to soaring raw materials and fuel costs, we revised product prices globally. In response to strong demand, we worked to improve productivity and decided to invest in production capacity expansion in Europe and the United States. Going forward, we will continue to capture steadily expanding demand stemming from the shift toward a circular economy.



## Focus

### 50th Anniversary of EVAL Business

EVAL™, the world's first EVOH resin developed by Kuraray and commercialized in 1972, marked its 50th anniversary in 2022. Originally used to extend the shelf life of foods, this product has garnered renewed interest as a solution that contributes to sustainability as it not only curbs food loss but also reduces logistics load by making containers lighter. Through this business, we will fulfill our social responsibility to improve the natural and living environments while aiming for further growth and development.



First shipment of EVAL™ (at the time)

### Decision to Expand Production Facilities for Optical-Use Poval Film

As the base for polarized film, a key material used in LCDs, optical-use poval film is expected to see further growth in demand. Accordingly, we made the decision to expand production capacity at the Kurashiki Plant. We expect to see continued growth in the area of LCD panels due to the shift toward larger LCD TVs. The new line will enable the production of a wide films, and help to improve the production efficiency of large-scale polarized films. It is scheduled to start operations in mid-2024.



Kurashiki Plant

# Isoprene

We manufacture and sell isoprene chemical products made with a synthesizing method as well as SEPTON™ thermoplastic elastomer and GENESTAR™ heat-resistant polyamide resin, which are derivatives of isoprene chemical products.

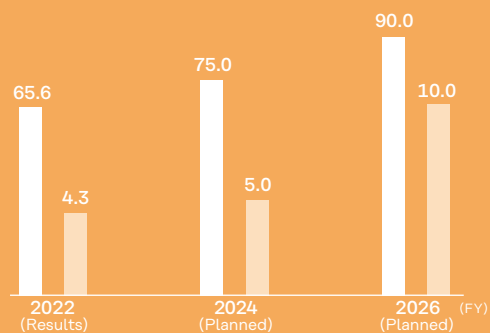
## Net sales composition ratio



8%

## Net sales / Operating income

■ Net sales (Billions of yen)  
■ Operating income (Billions of yen)



### Strengths

- ▶ Broad lineup of unique products based on proprietary technology
- ▶ Advanced technological services that meet customer needs
- ▶ Stable supply framework through global network, with newly added base in Thailand
- ▶ Capabilities in proposing value to customers and in marketing

### Opportunities

- ▶ Expanding demand for materials development for the weight reduction, electronic control, and electrification of automobiles
- ▶ Growing demand for high-end materials to meet next-generation communication standards
- ▶ Increased demand for environmentally friendly materials and bio-based materials due to growing environmental awareness

### Risks

- ▶ Soaring costs of raw materials and fuel, difficulties in procurement, and sharp fluctuations in foreign exchange rates
- ▶ Reduced automobile and electrical and electronic device production due to semiconductor shortages
- ▶ Low-cost strategies of competitors and other factors will undermine markets

## Medium-Term Management Plan "PASSION 2026" Key Measures

In each of our businesses, we will strengthen the global supply framework through the startup of operations at the plant in Thailand, seeking to contribute to earnings as soon as possible.

In the Genestar business, we will expand our marketing and technical service frameworks and accelerate development of applications that take advantage of material characteristics. By expanding into global markets, including Europe, the United States, and Asia, we aim to achieve an average annual growth rate of 10%, which will lead to a second round of investment in Thailand.

## Strategies by Business

Isoprene Chemicals	<ul style="list-style-type: none"> <li>● Expand sales of one-of-a-kind products</li> <li>● Quickly commercialize newly developed products to secure new profit contributors</li> <li>● Promote sustainability (Reduce GHG emissions via the switchover of raw materials and the improvement of the manufacturing process)</li> </ul>
Elastomer	<ul style="list-style-type: none"> <li>● Strengthen global supply framework for SEPTON™ thermoplastic elastomer</li> <li>● Build a new liquid rubber plant in the United States</li> <li>● Promote development and expand sales of products that are high-value-added and made from sustainable raw materials</li> </ul>
Genestar	<ul style="list-style-type: none"> <li>● Expanded use of GENESTAR™ heat-resistant polyamide resin in parts due to the weight reduction, electronic control, and electrification of automobiles</li> <li>● Penetrate further into global markets, including Europe, the United States and Asia</li> <li>● Consider the second phase of facility construction in Thailand</li> </ul>

## Review of 2022 and Outlook

In all businesses, we moved ahead with revising product prices amid soaring raw material and fuel prices. Sales volumes decreased in the first half of the year due to a decline in production stemming from a temporary difficulty in procuring raw materials, and in the second half of the year due to lower demand because of the economic slowdown. In 2023, we forecast growth in sales volume by leveraging the supply capabilities of our base in Thailand, which is now in operation.

### ◆ Isoprene Chemicals

Amid soaring raw material and fuel prices, we revised the prices of isoprene chemicals. The sales volume decreased due to a temporary difficulty in procuring raw materials and a contraction in demand in the latter half of the year. We will grow the business in 2023 by expanding supply capacity through the operation of our base in Thailand.



### ◆ Elastomer

Amid soaring raw material and fuel prices, we revised the prices of elastomer. As with the isoprene chemicals business, production was down due to difficulties in procuring raw materials as well as lower demand in the second half of the year. In 2023, we will harness the heightened competitiveness of butadiene base grade products at our base in Thailand to expand the business.



### ◆ Genestar

The sales volume decreased due in part to inventory adjustments in automotive parts and electric and electronic devices. We expect the market to recover in 2023, and also expect to see growth of new adoption for automotive applications as the shift to electric vehicles continues. The operation of our base in Thailand will enable a stable supply across multiple bases, contributing to the business continuity planning of customers.

## Focus

### 50th Anniversary of Isoprene Business

We commercialized polyisoprene rubber as an alternative to natural rubber in 1972. Starting with this material, we have created a number of product lines with many characteristics, mainly at the Kashima Plant, the main plant of the isoprene business. The isoprene business, which marked its 50th anniversary in 2022, has developed into a diverse business encompassing products that are one-of-a-kind in the world and environmentally friendly high-performance products that draw on Kuraray's unique technologies. We will aim to further develop the isoprene business following the addition of our Thailand base, which recently started operation.



Panorama of Kashima Plant  
(photo taken at start of operations)

### New Plant Starts Operation in Thailand

In February 2023, we launched a new plant in Thailand for isoprene-related businesses. The new plant manufactures products such as GENESTAR™ heat-resistant polyamide resin, SEPTON™ thermoplastic elastomer, and 3-Methyl-1.5-Pentanediol (MPD). It is our largest overseas base for isoprene-related businesses. Responding to rising global demand for each of these products, the Thailand plant will aim to contribute to earnings as soon as possible, serving as a manufacturing hub that is pivotal to efforts to reinforce our global supply framework.



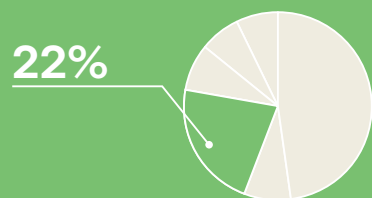
Aerial view of the new plant



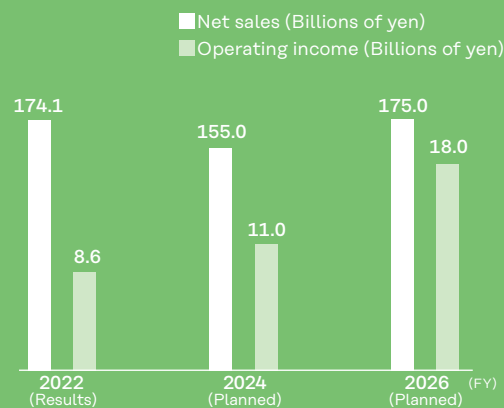
# Functional Materials

We manufacture and sell methacrylic resin that offers excellent transparency and weatherability, dental materials enabling restorations that closely resemble natural teeth, activated carbon whose high adsorption performance is used to purify air and water, and water treatment equipment.

## Net sales composition ratio



## Net sales / Operating income



### Strengths

- ▶ Development of high-value-added products with advanced technological capabilities and high quality
- ▶ Supply and sales capabilities using our global network as a comprehensive manufacturer of activated carbon
- ▶ Capabilities in proposing value to customers and in marketing

### Opportunities

- ▶ Increased demand for air and water purification under tighter environmental regulations worldwide
- ▶ Global expansion of the circular economy
- ▶ Expansion of energy-related markets
- ▶ Growing demand for cosmetic dentistry in line with rising standards of living
- ▶ Digitalization of dental lab work using CAD/CAM
- ▶ Increased demand to develop materials with transparency and optical properties in line with the increasing sophistication of automobiles

### Risks

- ▶ GHG emissions from the activated carbon production process
- ▶ Decreasing cost competitiveness and supply capacity due to inadequate raw materials procurement capabilities
- ▶ Soaring raw materials and fuel prices and sharp exchange rate fluctuations

## Medium-Term Management Plan "PASSION 2026" Key Measures

In the Environmental Solutions business, we will leverage our strengths as a general activated carbon manufacturer, strengthening our global supply framework by expanding our virgin activated carbon production base in the United States and our reactivated carbon production base in Europe. In addition to promoting R&D and production technology development based on the control and design of carbon structures, we will capture growing demand and expand into new applications. We aim to generate ¥10 billion in synergies by 2026 from the Calgon Carbon Corporation acquisition.

We will also strive to grow the Aqua business, which was incorporated into the Functional Materials segment in 2022, through tie-ups with the Environmental Solutions business.

In the Methacrylate business, we will develop high-value-added materials and technologies and aim to establish a recycling system with a view to the circular economy.

In the medical business, we will draw on our technological advantages in dental materials to develop products that help reduce the burden on patients and dentists, contributing in this way to improving people's quality of life (QOL). By strengthening sales and marketing and improving our product supply framework, we will target an average annual growth rate of 10%, mainly through greater sales in Europe and the United States.

### Strategies by Business

Methacrylate	<ul style="list-style-type: none"> <li>● Develop and realize high-value-added materials and technologies for the next generation</li> <li>● Establish a recycling system and achieve production process innovation</li> </ul>
Medical (dental materials)	<ul style="list-style-type: none"> <li>● Constantly introduce a stream of new high-value-added products in the CAD/CAM field</li> <li>● Strengthen the product supply framework to support global expansion</li> </ul>
Environmental Solutions	<ul style="list-style-type: none"> <li>● Expand profitability leveraging strengths as an activated carbon manufacturer</li> <li>● Fully realize synergies and growth by enhancing our production capabilities for both virgin and reactivated carbon</li> <li>● Develop products related to reducing GHG emissions for electrical material and mobility applications</li> </ul>
Aqua*	<ul style="list-style-type: none"> <li>● Strengthen the membrane business by leveraging our unique technologies</li> <li>● Promote environment-related businesses backed by synergies with the Environmental Solutions business</li> </ul>

\* Aqua business was transferred to Functional Material segment from FY2022.

## Review of 2022 and Outlook

Demand in the methacrylate business decreased and there was also impact from higher raw materials costs and deteriorating market conditions, but demand for other businesses remained steady. Going forward, we will tap into the unique technologies and other strengths of each of our businesses to expand the business. In the Environmental Solutions business, we will generate synergies with Calgon Carbon Corporation and the Aqua business.

### ◆ Methacrylate

The sales volume decreased due in part to electric and electronic device inventory adjustments. Soaring raw material prices and deteriorating market conditions also had a negative impact. Going forward, we will promote the development of high-value-added materials and technologies.



### ◆ Medical (dental materials)

Sales of cosmetic dental materials expanded in Japan and overseas. Going forward, as we expand our business, mainly in Europe and the United States, we will develop user-friendly products that leverage our technological advantages that help improve people's quality of life.



### ◆ Environmental Solutions

Demand for drinking water and water for industrial applications increased, especially in Europe and the United States, and sales of activated carbon expanded. We revised product prices due to soaring raw material and fuel prices. Going forward, we will step up the pace of efforts to realize synergies from integration, which had been delayed as we expanded production capacity in Europe and the United States, thereby driving further business expansion.



### ◆ Aqua

Demand for hollow fiber membranes for water treatment remained steady. Going forward, as well as further developing new high-performance membranes, we will expand the business through collaboration with the Environmental Solutions business.



## Focus

### Started Operation of Reactivated Carbon Production Facilities in Belgium

Facilities to increase production of reactivated carbon in Belgium started operation in October 2022. Activated carbon is widely used in environmental applications such as water and air purification. Demand for activated carbon is growing for industrial applications such as emission gas treatment and wastewater purification. This is being driven by tighter environmental regulations and growing awareness of the importance for the environment of the sustainable use of natural resources and the reduction of carbon dioxide emissions. With this expansion, we will continue working to expand our global stable supply framework for activated carbon and facilitate solutions to environmental issues.



Expanded facilities exterior

### GL module—a Hollow-Fiber Membrane Module for Water Treatment Wins 54th JCIA Technology Special Award and 55th Ichimura Prize in Industry for Excellent Achievement

Kuraray was awarded the Technology Special Award at the 54th Japan Chemical Industry Association (JCIA) Technology Award Program in May 2022 in recognition of its development and industrialization of GL module, a hollow-fiber membrane module for water treatment that enables the efficient reuse of wastewater due to its superior water permeability as well as its exceptional ability to treat high-turbidity water.

In March 2023, this product received the 55th Ichimura Prize in Industry for Excellent Achievement for its contributions to the more effective use of water resources across industries, in its role as an efficient treatment technology for high-turbidity water, in securing a stable supply of industrial water, and in boosting water recovery rates.

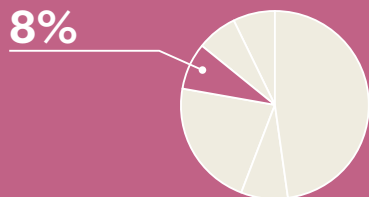


GL module units installed at Kurashiki Plant

# Fibers and Textiles

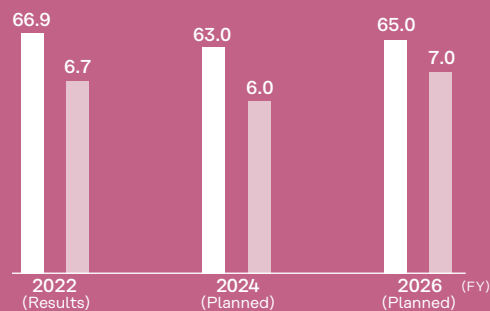
We manufacture and sell KURALON™ PVA fiber, which is mainly used as a material in cement and a reinforcing material for automotive components; CLARINO™ man-made leather, which has a structure and functionality similar to natural leather; VECTRAN™ liquid crystal polymer fiber, mainly used as an industrial material due to characteristics such as high strength and low water absorption; KURAFLEX™ nonwoven fabrics which are used as household and industrial products; and MAGIC TAPE™ hook-and-loop fastener.

## Net sales composition ratio



## Net sales / Operating income

■ Net sales (Billions of yen)  
■ Operating income (Billions of yen)



## Medium-Term Management Plan "PASSION 2026" Key Measures

We will work to enhance profitability by shifting to high-value-added products drawing on our unique raw materials and manufacturing methods.

### Strategies by Business

Clarino	<ul style="list-style-type: none"> <li>● Expand sustainable products using recycled raw materials and bio-based raw materials while shifting to environmentally friendly manufacturing and processing processes</li> <li>● Expand the supply framework in response to the globalization of supply chains</li> </ul>
Fibers and Industrial Materials	<ul style="list-style-type: none"> <li>● Expand sales of VECTRAN™ leveraging the characteristics of materials</li> <li>● Expand operations by concentrating resources on such strategic applications as rubber reinforcement and concrete reinforcement</li> <li>● Expand the breadth of product applications in fields requiring compliance with environmental regulations (e.g., asbestos substitutes)</li> </ul>
Consumer Goods and Materials	<ul style="list-style-type: none"> <li>● Expand environmentally friendly products* and sustainable materials</li> <li>● Expand the lineup of unique products, such as MAGIC TAPE™, to meet labor-saving needs for customers' manufacturing processes</li> </ul>

\* Products that have acquired FSC® certification, an international forestry certification system

<b>Strengths</b>	<ul style="list-style-type: none"> <li>▶ Development and proactive deployment of sustainable products</li> <li>▶ Capabilities in proposing value to customers and in marketing</li> </ul>
<b>Opportunities</b>	<ul style="list-style-type: none"> <li>▶ Strengthening measures that contribute to society, such as meeting asbestos regulations</li> <li>▶ Expanding demand for environmentally friendly products</li> </ul>
<b>Risks</b>	<ul style="list-style-type: none"> <li>▶ Competition with products from emerging countries and with other materials</li> </ul>

## Focus

### Launched Recycled Type of MAGIC TAPE™ Hook-and-Loop Fastener

In autumn 2022, Kuraray Fastening Co., Ltd. launched a new product. The new environmentally friendly type uses recycled polyester yarn. The world's first recyclable woven hook-and-loop fastener made of 100% polyester which does not use a back coating, this product will be sold for use in sports and outdoor brands going forward.



### Review of 2022 and Outlook

Higher costs of raw materials, fuel, and logistics were offset by an improved sales mix and product price revisions, resulting in higher sales and profits.

#### ◆ Clarino

Sales expanded in vehicle and luxury applications. We will respond to the increasing environmental awareness of our customers in this area going forward. This will involve expanding sales of sustainable materials, such as products based on recycled raw materials and environmentally friendly manufacturing processes, in various applications including sports shoes.



#### ◆ Fibers and Industrial Materials

KURALON™ PVA fiber was affected by a delayed recovery in the production of automobiles and an economic slowdown, while sales of VECTRAN™ liquid crystal polymer fiber remained favorable, especially for exports. Going forward, we will further deepen our presence in areas that make use of the physical properties of KURALON™ as we further expand the use of VECTRAN™.

#### ◆ Consumer Goods and Materials

While shipments of KURAFLEX™ nonwoven fabric increased for hygienic applications, demand in the restaurant industry was sluggish. Going forward, we will expand sales of KURAFLEX™, which uses functional resins and composite technologies, and of MAGIC TAPE™, our unique hook-and-loop fastener, including promoting an environmentally friendly type.

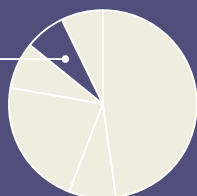


# Trading

In addition to the manufacture and sale of polyester and other fiber and textile products, we sell Kuraray Group products in Japan and other parts of Asia.

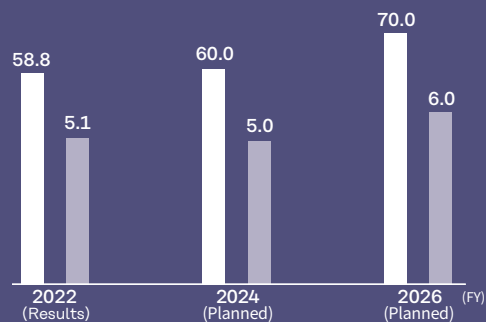
## Net sales composition ratio

7%



## Net sales / Operating income

■ Net sales (Billions of yen)  
■ Operating income (Billions of yen)



## Medium-Term Management Plan "PASSION 2026" Key Measures

In addition to boosting profitability by promoting high-value-added products and expanding our processing business, we will expand overseas sales, mainly in Asia. In addition, in cooperation with the Innovation Networking Center (INC), we will promote the creation of businesses that span our organizations.

### Review of 2022 and Outlook

Although performance in the resins and chemicals business was affected by the economic slowdown in the second half of the year, overall the business remained steady, resulting in year-on-year increases in both sales and profits.

#### ◆ Fibers and Textiles

In the apparel sector, sales of sports apparel and outdoor wear expanded steadily in Japan and China. In the materials sector, sales of CLARINO™ man-made leather and other products were favorable. We will continue to expand our sewing business, especially for sports and outdoor applications, by deepening our efforts with major business partners.



#### ◆ Resins and Chemicals

Although sales in the Asian market were favorable in the first half of the year, the economic slowdown affected business in the second half. Going forward, we will steadily implement the various measures set forth in "PASSION 2026" and strive to expand the market as demand recovers.

## Focus

### Expanded Wearable Gear Applications and Launched Online Store

As part of the expansion of the value-added (processing) business, one of our key strategies in "PASSION 2026," we have completed the upgrade of production facilities for wearable gear applications such as electrical muscle stimulation (EMS) devices. We are exploring the expansion of the production lineup at our new Okayama plant. In November 2022, we launched a new online store selling high-performance lifestyle products to consumers. By making the website a venue for communication, we will pursue product development informed by customer feedback as we work to create better products.



Online Store (Japanese)  
<https://store.kuraray-trading.co.jp/>

## Strategies by Business

### Expanding proprietary product businesses

- Shift from raw yarn and fabric sales centered on polyester filaments to product sales including wearable gear
- Expansion of value-added processed products

### Expanding overseas businesses

- Overseas expansion adapted to growing Asian markets
- Utilization of Vietnamese production sites



## Toward Achieving Sustainable Growth Message from the Officer in Charge of Finance



**Keiji Taga**

Director and Managing Executive Officer  
Officer responsible for Corporate Management Planning Office; Corporate Sustainability Division; DX-IT Division; and Accounting and Finance Division

**We will strive to grow profits and boost capital efficiency by seizing opportunities to contribute to the natural and living environment as we communicate the growth narrative of the Kuraray Group through dialogue with our stakeholders**

### “PASSION 2026” gets off to a good start in its first year

Throughout 2022, we faced ongoing uncertainty in the operating environment, including the soaring costs of raw materials and fuel. Our focus was on maintaining a stable supply of high-value-added products, capitalizing on the global network we have built. Although sales volume of optical-use poval film, one of our mainstay products, was down, year-on-year, sales of high-demand products—such as EVAL™ EVOH resin, activated carbon, and dental

materials—increased. As a result, net sales for the year of ¥756.4 billion and operating income of ¥87.1 billion were both record highs, as was net income attributable to owners of the parent, at ¥54.3 billion.

In terms of key financial indicators, we achieved 7.0% ROIC, ¥152.6 billion EBITDA, and 9.0% ROE on the back of higher profits and improved capital efficiency. We got off to a good start in the first year of our Medium-Term Management Plan, “PASSION 2026.” We will see higher depreciation costs from 2023 onward as large-scale facilities start operation. However, we will seek to expand profits to either meet or exceed capital outlays while boosting capital efficiency to reach our 2026 targets of 8% ROIC, ¥170 billion EBITDA, and 10% ROE.

We paid an annual dividend of ¥44 per share in fiscal 2022. We also bought back 9,424 thousand shares (¥10.0 billion worth) of treasury stock during the year. We plan to pay a dividend of ¥48 in fiscal 2023. “PASSION 2026” includes a commitment to a total return ratio of at least 35%. We will continue to strive to enhance shareholder returns through further increases in dividends and flexible share buybacks drawing on expanded profits.

### We will achieve sustainable growth by reinvesting in growth areas that can contribute to society and the environment

Several large-scale facilities will start operation in 2023. At our new plant in Thailand, we have begun

production of isoprene chemicals, SEPTON™ thermoplastic elastomer, and GENESTAR™ heat-resistant polyamide resin. We expect to complete a new activated carbon production line in the United States in the third quarter. Our new plant in Poland is also scheduled to start producing water-soluble PVOH film by year’s end. We aim to quickly establish a stable supply framework at each of these locations to steadily capture future demand and achieve profitability as soon as possible.

The Kuraray Group plans a total of ¥380 billion in capital expenditures (decision base) over the five years that encompass “PASSION 2026.” This includes an equivalent of ¥350 billion for depreciation costs during the period and an additional ¥30 billion for investments in greenhouse gas emission reductions. Going forward, in addition to outlays to boost production capacity for VECTRAN™ liquid crystal polymer fiber and dental materials currently under consideration, we are exploring construction of a new plant for EVAL™ EVOH resin in Asia. We will create a virtuous cycle of reinvesting the steady profits generated by these capital investments into growth fields that contribute to society and the environment. This supports sustainable growth for our company and society.

	Shareholder Return Policy in “PASSION 2026” (FY2022- FY2026 plan)	FY2022 results
Total return ratio	35% or more	45.5%
Annual dividends per share	¥40 or more	¥44
Share buybacks	Conduct flexibly	¥10 billion

**Enhance shareholder returns by expanding profits**

## Building a more sophisticated business portfolio in terms of both social and environmental value and economic value

The Kuraray Group is striving to build a business portfolio that is more sophisticated in terms of both social and environmental value and economic value. These axes inform our decisions. In 2022, we decided to withdraw from two businesses—our PVA gel business for wastewater treatment and our acrylic artificial marble business—after assessing these businesses in terms of economic value, including earning power (operating cash flow) and capital efficiency (ROIC).

Going forward, we will draw on the Kuraray Portfolio Sustainability Assessment (PSA) system\*<sup>1</sup> we adopted as an index to quantitatively assess social and environmental value to the fullest extent possible to help us further enhance the business portfolio, as well as utilize the internal carbon pricing (ICP) system we introduced in 2021.

PSA-contribution products accounted for 54% of all sales in 2022, up from the 2020 benchmark of

46%. Since they tend to carry higher margins than other products, expanding sales of PSA-contribution products will also feed greater profits for the Kuraray Group.

\*1 A system that conforms to the PSA guidelines developed by the World Business Council for Sustainable Development (WBCSD)

## Investing in greenhouse gas reductions to achieve net-zero carbon emissions by 2050

The Kuraray Group has drawn a roadmap for achieving net-zero carbon emissions by 2050. Our first goal is to reduce Scope 1 and 2 greenhouse gas emissions by 30% by the halfway point, 2030, against the benchmark year of 2019.

To this end, we have earmarked outlays of ¥80 billion by 2030, of which we will invest ¥30 billion by 2026.

Our greenhouse gas emissions were approximately 2,896 thousand tons-CO<sub>2</sub>e in 2022, clearing our goal of keeping emissions below the 2019 level. We expect an increase in emissions in 2023 as new plants and production facilities start operation.

However, to counter this, we will aggressively invest in energy-saving and production process improvements at each production site. We will also pursue a shift to renewable energy for the electricity we purchase, striving to bring down net emissions.

One issue we need to address is our in particular coal-based activated carbon plant in the United States, which emits significant amounts of greenhouse gas as by-products. We will consider constructing a carbon dioxide capture and storage (CCS)\*<sup>2</sup> pilot plant. We will also proceed with development of carbon dioxide capture and utilization (CCU)\*<sup>3</sup> technologies, with a view to collaborating with other companies, and will also explore emissions reductions through CO<sub>2</sub> utilization.

\*2 Carbon dioxide Capture and Storage. An initiative to store CO<sub>2</sub> that has been separated from exhaust gas at industrial facilities.  
\*3 Carbon dioxide Capture and Utilization. An initiative to utilize CO<sub>2</sub> that has been separated from exhaust gas at industrial facilities

## We will seek out competitive advantages and increase corporate value.

The Kuraray Group boasts a wealth of unique products that claim high shares of their respective markets. Many are considered indispensable to society. In addition, we have established a framework capable of supplying these products on a global scale. We will continue to leverage these competitive advantages to contribute to society and the environment while also increasing profits.

We will further deepen dialogue with our stakeholders as we seek to gain their understanding and trust in the Kuraray Group's growth narrative. Meanwhile, we will work hard to achieve the targets set out in "PASSION 2026" and increase corporate value by improving capital efficiency and enhancing shareholder returns.

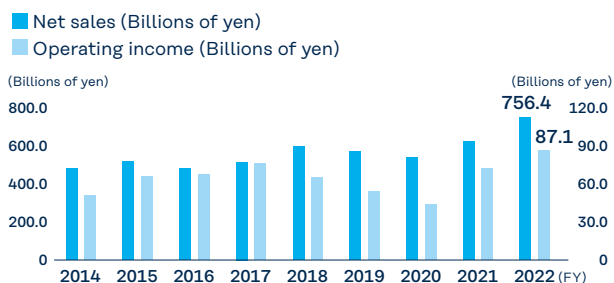
We ask for your ongoing understanding and support going forward.



# Financial and Non-Financial Highlights

## Financial Data

Net sales **¥756.4 billion**  
Operating income **¥87.1 billion**

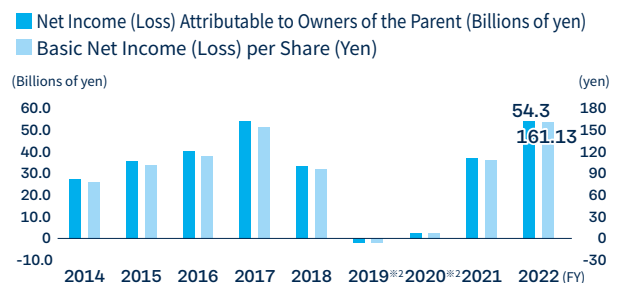


Products having the world's highest market shares\*1 **¥460.5 billion**  
Sales ratio of products having the world's highest market shares\*1 **61%**



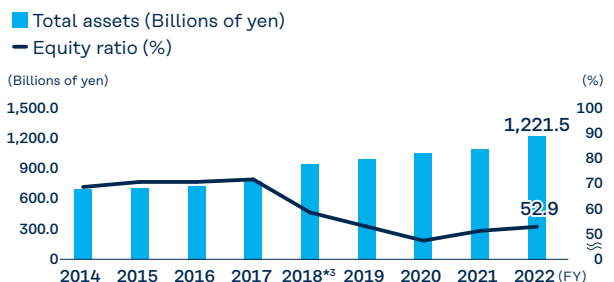
\*1 In-house survey

Net income attributable to owners of the parent **¥54.3 billion**  
Basic net income per share **¥161.13**



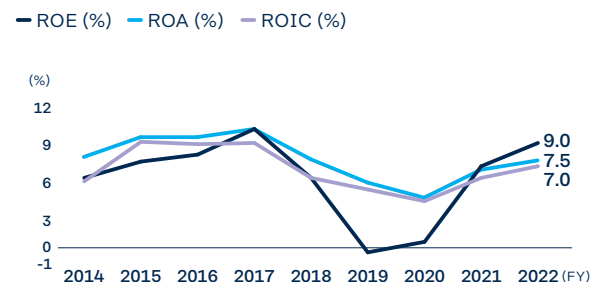
\*2 Net income attributable to owners of the parent declined significantly due to the recording of an extraordinary loss of approximately ¥51 billion in fiscal 2019 and approximately ¥22 billion in fiscal 2020 for litigation surrounding a fire incident at a subsidiary in the United States.

Total assets **¥1,221.5 billion**  
Equity ratio **52.9%**



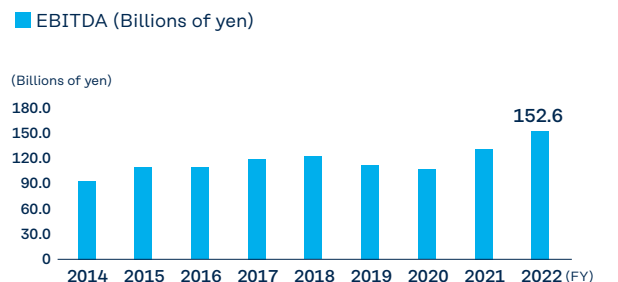
\*3 In fiscal 2018, total assets increased due to the inclusion of Calgon Carbon Corporation in the scope of consolidation.

ROE\*4 **9.0%** ROA\*5 **7.5%**  
ROIC\*6 **7.0%**



\*4 Return on equity (ROE) = Net income attributable to owners of the parent / Average shareholders' equity x 100 (%)  
\*5 Return on assets (ROA) = Operating income / Average total assets x 100 (%)  
\*6 Return on invested capital (ROIC) = Net operating income after tax / (Interest-bearing debt + Shareholders' equity) x 100 (%)

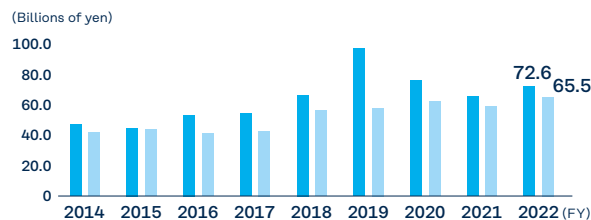
EBITDA\*7 **¥152.6 billion**



\*7 EBITDA = Operating income + Depreciation and amortization

Capital expenditure\*<sup>8</sup> **¥72.6** billion  
 Depreciation and amortization **¥65.5** billion

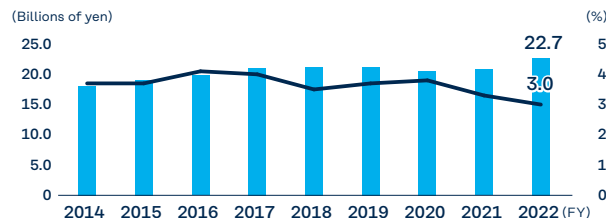
■ Capital expenditure (Billions of yen)  
 ■ Depreciation and amortization (Billions of yen)



\*<sup>8</sup> Capital expenditure is on an acceptance basis.

R&D expenses **¥22.7** billion  
 R&D expenses ratio **3.0%**

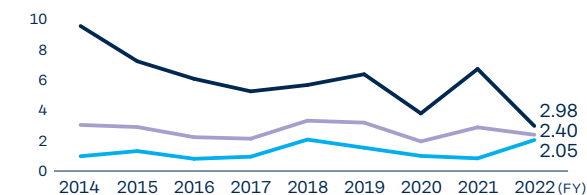
■ R&D expenses (Billions of yen)  
 — R&D expenses ratio (%)



## Non-Financial Data

Frequency Rate of All Occupational Injuries\*<sup>9</sup>  
 Kuraray Group as a whole **2.40**  
 Kuraray Group in Japan **2.05**  
 Kuraray Group outside Japan **2.98**

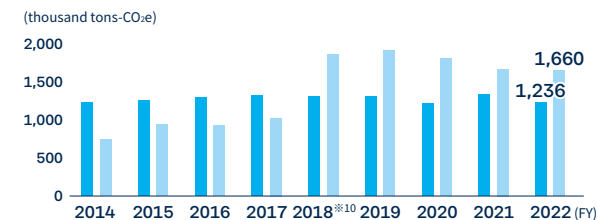
— Kuraray Group as a whole  
 — Kuraray Group in Japan — Kuraray Group outside Japan



\*<sup>9</sup> Number of all occupational injuries (lost-time and no lost-time injuries) per million working hours.

Greenhouse Gas (GHG) Emissions  
 Kuraray Group in Japan **1,236** thousand tons-CO<sub>2</sub>e  
 Kuraray Group outside Japan **1,660** thousand tons-CO<sub>2</sub>e

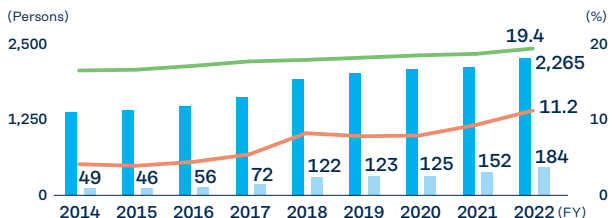
■ Kuraray Group in Japan  
 ■ Kuraray Group outside Japan



\*<sup>10</sup> Calgon Carbon Corporation has been included in data since fiscal 2018.

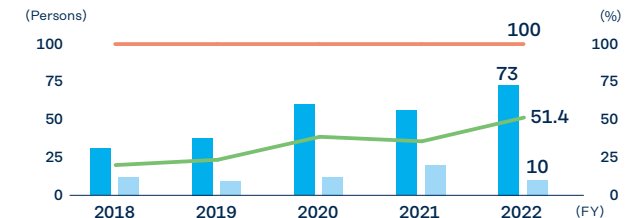
Number of female employees **2,265**  
 Ratio of female employees **19.4%**  
 Number of female managers **184**  
 Ratio of female managers **11.2%**

■ Number of female employees (Persons) — Ratio of female employees (%)  
 ■ Number of female managers (Persons) — Ratio of female managers (%)



Number of employees taking childcare leave\*<sup>11</sup>  
 Men **73** Women **10**  
 Ratio of childcare leave-taking\*<sup>11</sup>  
 Men **51.4%** Women **100%**

■ Number of male employees (Persons) — Ratio of male employees (%)  
 ■ Number of female employees (Persons) — Ratio of female employees (%)



\*<sup>11</sup> Number and ratio of employees for Kuraray Co., Ltd.



# Corporate Governance

## Message from the Chairman of the Board of Directors



*Masaaki Ito*

Chairman and Director

**We will engage in more lively deliberations, strive to swiftly make the best possible decisions, and seek to enhance long-term, sustainable corporate value.**

## Corporate Governance Framework of the Kuraray Group

I believe that maintaining appropriate relationships with various stakeholders and fulfilling our duties to society by building an effective corporate governance system to ensure the efficiency, transparency, and fairness of management will ultimately contribute to the long-term, sustainable enhancement of corporate value.

We have adopted as our form of governance “a company with Audit & Supervisory Board,” and this is the framework within which we ensure the efficiency of management. Meanwhile, to enhance the effectiveness of our supervisory and monitoring functions, we are working to establish a corporate governance structure centered on the Board of Directors and the Audit & Supervisory Board. We are

discussing various issues, including management remuneration, the selection and cultivation of new company officers, internal controls, and risk management.

## Cultivating Constructive Dialogue while Understanding and Respecting Differences

I believe that the greatest contribution to our global business development, and our expansion and growth into an even better company, is not only the knowledge, abilities, and experience of the members of the Board of Directors. It is also their ability to speak out and perform their duties from multifaceted perspectives, born out of diversity in terms of gender, nationality, and career background.

In January 2021, I became Chairman of the Board and a non-representative director. In this new role, I am free to pursue my duties with a focus on monitoring and supervising management. It is my long-held conviction that listening attentively to what people have to say is vital. As Chairman of the Board, I seek to ensure that members respect and listen carefully to one another and that all members are free to express their opinions without prejudice. I run meetings of the Board of Directors so that members can exchange questions and opinions. Looking back, Kuraray has a long-standing culture of encouraging free and open discussion among employees. We create value by cultivating constructive dialogue while seeking to understand and respect differences. This is reflected in the values upheld in our philosophy: respect for individuals, close cooperation to attain shared goals, and constant creation of new value. Our outside officers share this philosophy as they take part in management.

I believe enabling each member to express a wide

array of opinions and engage in lively discussion based on his or her own knowledge and experience is essential to the decision-making process at Board meetings. As Chairman of the Board, I will work to cultivate even more lively deliberations so that the Company can swiftly make the best possible decisions and actively contribute to the long-term, sustainable enhancement of the Kuraray Group’s corporate value.

## Further Increasing Diversity of the Board of Directors and Striving to Enhance Corporate Value

Every year, the Company evaluates the effectiveness of the Board of Directors. In December 2022, we administered an attributed survey to all Directors and to Members of Audit & Supervisory Board.

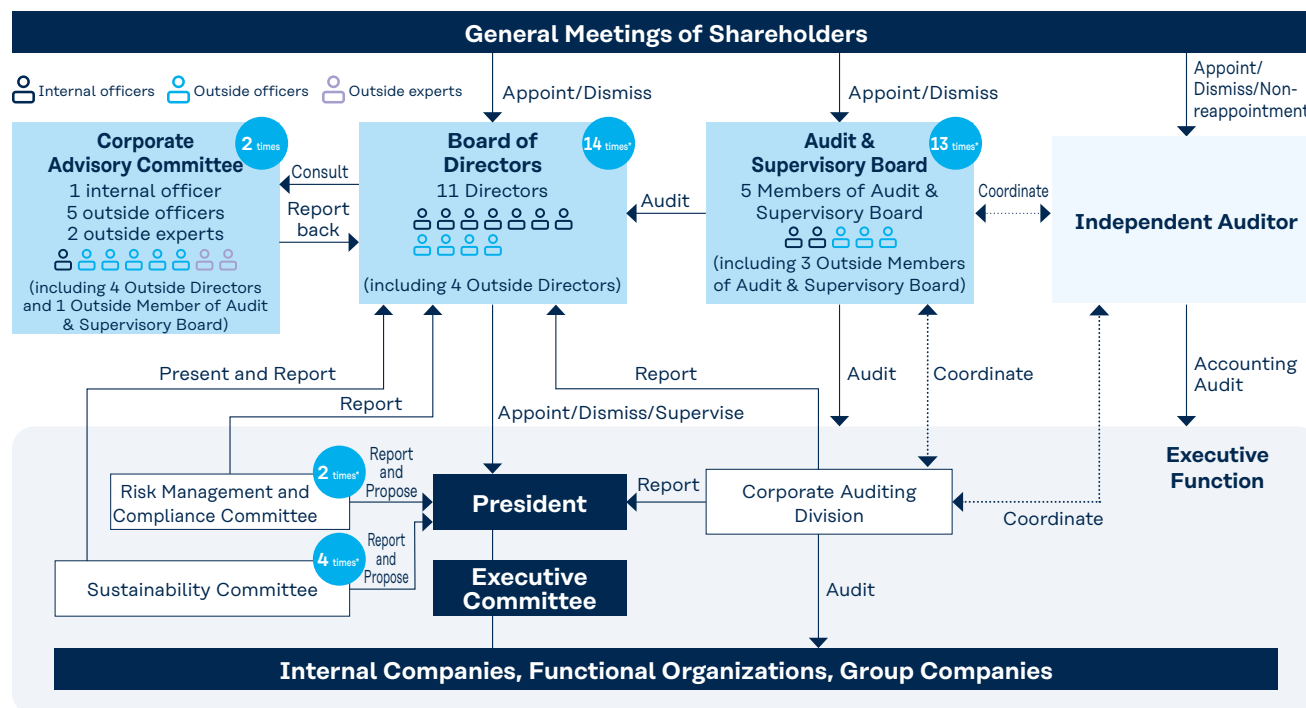
Having analyzed and evaluated the responses, we confirmed that, generally, the Company’s Board is functioning appropriately. For example, we have ensured its effectiveness regarding the Board’s makeup, meeting agendas, how meetings are run, and the framework for cooperation and communication outside the Board of Directors. However, we also identified a number of issues to be addressed going forward.

Among these issues, some respondents expressed the opinion that further increasing the diversity of Board members should be an objective over the longer term. After I became president of the Company, we increased the diversity of the Board by bringing a non-Japanese Director and a female Director on as new members, but I believe we still have a way to go in this regard. We will continue to work on further improvements going forward.



[Points of Corporate Governance](#)

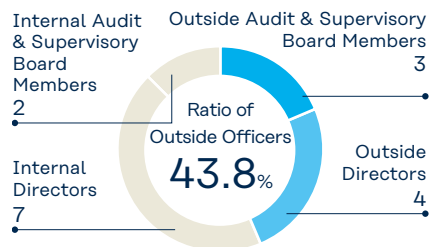
## Corporate Governance System (As of March 29, 2023)



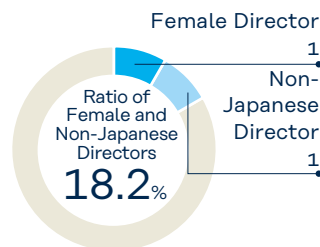
\* Number of times held in 2022.

## Corporate Governance Highlights

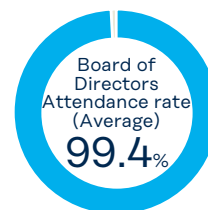
### Independence



### Diversity



### Attendance



## Kuraray's Steps to Strengthen Corporate Governance

Initiative / Purpose	
2003	Reduced the maximum number and the term of office of Directors Introduced Executive Officer system
	Increased the number of Outside Corporate Auditors from two to three
	<b>Strengthening the management monitoring function of Members of Audit &amp; Supervisory Board</b>
	Established <b>the CSR Committee</b>
	Established <b>the Management Advisory Committee</b> Establishing an advisory body for the President
2008	<b>Introduced Outside Directors (two)</b> <b>Strengthening the management monitoring function of the Board of Directors</b>
	Started early delivery of the notice of convocation of the ordinary general meeting of shareholders (at least three weeks before the date of the meeting) <b>Providing enough time for shareholders to examine each proposal</b>
	Started uploading an English translation of the notice of convocation of the ordinary general meeting of shareholders to the Tokyo Stock Exchange platform and the Company's website <b>Enhancing disclosure targeting overseas shareholders</b>
2016	Started analysis and evaluation of the effectiveness of the Board of Directors
2017	Split off the Risk Management and Compliance Committee from the CSR Committee
	<b>Strengthening risk management and compliance measures</b>
2018	Abolished the Management Advisory Committee and established <b>the Corporate Advisory Committee</b> as an advisory body to the Board of Directors, comprised mainly of Outside Officers
	<b>Improving the transparency, fairness, and objectivity of decision-making on important management matters such as the appointment and remuneration of Directors, etc., and further enhancing corporate governance</b>
2020	<b>Increased the number of Outside Directors from three to four (one-third of the Board of Directors)</b>
	<b>Strengthening the management monitoring function and independence of the Board of Directors</b>
2022	CSR Committee reorganized into <b>Sustainability Committee</b> <b>Stepping up sustainability promotion initiatives</b>

## Corporate Governance System

### Board of Directors

The Board of Directors, which meets at least once a month, sets bylaws for the Board, deliberates and decides on statutory matters and other key management issues, and supervises business execution. The Board of Directors is chaired by the Chairman and Director. The maximum number of Directors is set at 12, to facilitate agile management decision-making by the Board, and the term of office is set at one year to clarify their responsibilities to shareholders. There are currently 11 incumbent Directors, of whom one is female and one is non-Japanese. Four are Outside Directors, who possess a wealth of experience in and broad insight into the economy, finance, and corporate management, and are responsible for supervising management from an independent, third-party standpoint.

#### Major Proposals and Reports in Fiscal 2022

- ▶ Status of key measures in the Medium-Term Management Plan "PASSION 2026"
- ▶ Verification of significance of holding cross-held shares
- ▶ TCFD-based climate change initiatives
- ▶ Expansion of optical-use poval film production facilities
- ▶ Impact of Russian invasion of Ukraine

### Corporate Advisory Committee

The Company has established a Corporate Advisory Committee comprised mainly of Outside Officers to serve as an advisory body to the Board of Directors. The committee works to improve the transparency, fairness, and objectivity of decision-making on important management matters such as the appointment and remuneration of Directors and further enhance corporate governance. Corporate Advisory Committee meetings are held twice a year in principle.

The committee consists of eight members: the Chairman and Director (Mr. Masaaki Ito), four Outside Directors (Mr. Jun Hamano, Ms. Keiko Murata, Mr. Satoshi Tanaka, and Mr. Kiyoto Ido), one Outside Member of Audit & Supervisory Board (Ms. Tomomi Yatsu), and two outside experts (Mr. Takeshi Komura and Mr. Go Egami [listed under the name Mr. Haruki Kohata]). No head of the committee has been appointed; meetings are run by the Chairman of the Board of Directors. As Outside Officers make up the majority of committee members, the independence of the Corporate Advisory Committee is sufficiently ensured.

#### Major Discussions and Reports in Fiscal 2022

- ▶ Officer remuneration
- ▶ Officer personnel matters
- ▶ Medium-Term Management Plan "PASSION 2026"

### Audit & Supervisory Board and Internal Audits

The Audit & Supervisory Board consists of five Members, including three independent Outside Members of Audit & Supervisory Board. Four are male and one is female. The Audit & Supervisory Board convenes monthly, in principle.

The Members of Audit & Supervisory Board meet regularly with the Independent Auditor and receive reports on audit planning, implementation status, and audit content. They also receive reports on the results of internal audits from the Corporate Auditing Division, the in-house audit department. In addition, the Members of Audit & Supervisory Board serve as corporate auditors at major Group companies and conduct Group company audits as appropriate. They also attend the periodic Group Auditor Liaison Meetings consisting of the Group company auditors to gain information on the respective companies.

There are also staff to assist the Members of Audit & Supervisory Board in carrying out their duties.

### Risk Management and Compliance Committee

The committee, under the direct control of the President, is tasked with ensuring the appropriate management of risks that could have a significant impact on business management, thorough compliance with laws and regulations and corporate ethics, and fair business practices. The committee identifies material risks and proposes them to the President in its regular monitoring of risks for Group companies. The President then specifies those that require countermeasures as management risks and appoints a supervising officer for each risk to implement risk avoidance and mitigation measures. This committee also reports on a range of activities to the Directors and incorporates their direction in future risk response measures.

➤ P.63

### Sustainability Committee

The former CSR Committee was reorganized in January 2022 and the Sustainability Committee was established. The committee is chaired by the President and is made up primarily of members of the Executive Committee. The committee helps to better promote sustainability by enabling swift decision-making on sustainability projects at the management level and expedited planning and implementation of such projects. The Sustainability Committee also reports on a range of activities to the Board of Directors and reflects the results of Board discussions in sustainability initiatives.

#### Major Agenda Items for Fiscal 2022

- ▶ Promotion framework, plans, and status of various sustainability projects\*
- ▶ Progress of CCUS Project Team
- ▶ PDCA for Responsible Care

\* Global environment and measures to reduce GHG emissions, TCFD disclosure, sustainable portfolio, sustainable procurement, diversity and inclusion, new strategy proposals

## Evaluation of the Effectiveness of the Board of Directors

Every fiscal year, the Company evaluates and verifies the effectiveness of the Board of Directors to make improvements as needed.

In fiscal 2022, the Company administered a signed questionnaire for evaluating the effectiveness of the Board of Directors to all Directors and Members of Audit & Supervisory Board. The secretariat of the Board of Directors aggregated the responses and opinions and analyzed and evaluated the effectiveness of the Board of Directors based on the data.

Question Content  
(38 questions in total)

- ▶ Composition of the Board of Directors
- ▶ Board meeting agendas
- ▶ Operation of Board meetings
- ▶ Framework for cooperation and communication outside the Board of Directors

### Summary of Evaluation Results

Fiscal 2022 evaluation of the effectiveness of the Board of Directors can be summarized as follows.

The Company's Board of Directors was found to be functioning properly and its effectiveness is being ensured in all respects, including the makeup of the Board in terms of size and diversity; agenda items for Board meetings, including the scope of discussion and reporting; operation of Board meetings, including the timing of scheduling, meeting frequency, and time set aside for deliberation; the framework for cooperation and communication outside the Board of Directors, including providing additional information and training opportunities to Directors.

### Key Comments

- The makeup of the Board of Directors is generally appropriate, but there is room for further diversity to achieve the vision of the Group, such as increasing the number of female and non-Japanese members and directors with knowledge of digital transformation, IT, and ESG.
- To deepen discussions at the Board of Directors, it is desirable to have more opportunities to report on key matters and more in-depth report content.
- Outside Officers had more opportunities to take part in discussions on the formulation of the Medium-Term Management Plan, resulting in deeper deliberation on the strategic direction of the Company. It is desirable to have even more opportunities for discussion going forward.
- To have constructive discussions, it is desirable to make further improvements to Board meeting materials and set aside adequate time for open discussion.

### Initiatives for the Future

In light of the results of the fiscal 2022 evaluation, the Company will continue to explore measures to make discussions more lively and more productive at Board of Directors meetings.

- ▶ Makeup of the Board of Directors to realize the vision of the Group (diversity, expertise)
- ▶ More in-depth reports on key matters, greater opportunities for reporting
- ▶ More in-depth materials and preliminary explanations for Outside Directors to gain greater understanding (i.e., background and positioning of project proposals)
- ▶ Ongoing, expanded business site tours and other means to increase Outside Directors' understanding of the business

## Policies and Procedures for the Election and Dismissal of Executives\*<sup>1</sup> and the Appointment of Candidates for Directors and Members of Audit & Supervisory Board

The Company appoints individuals who have the experience, knowledge, and capabilities required for Directors of the Company at Board of Directors meetings with the attendance of Outside Officers, and elects them as Directors with a resolution of the General Meeting of Shareholders. However, candidates for Outside Directors will satisfy the criteria of independence provided separately.

The Company appoints individuals who have the experience, knowledge, and capabilities required for Members of Audit & Supervisory Board of the Company at Board of Directors meetings with the attendance of Outside Officers, and elects them as Members of Audit & Supervisory Board with a resolution of the General Meeting of Shareholders after obtaining the consent of the Audit & Supervisory Board. However, candidates for Outside Members of Audit & Supervisory Board will satisfy the criteria of independence provided separately.

The election and dismissal of Directors and the appointment and removal of Representative Directors and Directors with special titles are determined by the Board of Directors after deliberation by the Corporate Advisory Committee.

\*1 The Company defines executives as Directors and Members of Audit & Supervisory Board.

### Support System for Outside Officers

Information is shared with Outside Officers by distributing and explaining in advance the proposals to be deliberated at the regular and extraordinary meetings of the Board of Directors. Staff from the Secretariat Group of the General Affairs Department assist in sharing this information with Outside Directors. Staff are appointed to assist Members of Audit & Supervisory Board including Outside Members of Audit & Supervisory Board. Staff collect and provide information necessary for their auditing activities and offer other forms of support.

### Cross-Shareholdings

From the viewpoint of stable, long-term business operations, the Company holds the shares of its business partners and other entities if maintaining and strengthening the relationships with such business partners and other entities are deemed to contribute to the enhancement of corporate value. The Board of Directors regularly verifies the economic rationality and significance of holding shares (cross-shareholdings), and seeks to sell shares, as necessary, whose holding is deemed not to be appropriate, to reduce such stocks. In fiscal 2022, the Company sold all shares of four stocks and part of two stocks of its cross-held shares. Additionally, as a result of the examination of all cross-held shares held as of the end of December 2022 at the Board of Directors meeting held on February 9, 2023, the Company plans to continue to sell some stocks.

 [Corporate Governance Report](#)

 [Points of Corporate Governance](#)



## Officers' Remuneration System

### Basic Policy

The Company's basic policy for the remuneration of its officers is to have a competitive level and system of remuneration that can secure and retain competent Directors fit for their positions and responsibilities to achieve long-term and sustainable improvements in corporate performance and corporate value. The remuneration system for Directors comprises three parts: (1) fixed remuneration as basic remuneration per job responsibilities, (2) performance-linked remuneration as an incentive to achieve yearly business results, and (3) stock-based remuneration designed to enhance corporate value over the medium to long term and sharing of value with shareholders through appropriate corporate management, provided that remuneration for Outside Directors will solely comprise fixed remuneration without performance-linked or stock-based remuneration, as their role is to supervise management from an independent standpoint.

The specific level and system of remuneration will be verified and deliberated by the Corporate Advisory Committee, mainly comprising outside officers and outside experts, on whether the level and system of remuneration are appropriate, based on the results of a survey by a specialized external research institution on executive remuneration covering companies such as those listed on the First Section of the Tokyo Stock Exchange, and the salary of the managers of the highest level in the Company. The Board of Directors receives reports on the results from the Committee and gives it due consideration to determine the level and system of remuneration.

Performance-Linked Remuneration System	<p>The Company abolished the bonus scheme for Directors and introduced a performance-linked remuneration system in July 2006, thereby strengthening the incentives of Directors to increase the Company's corporate value. In addition, to respond to the increase in the amount of performance-linked remuneration in conjunction with improved business performance, it was resolved to increase the maximum amount of annual remuneration to Directors from ¥450 million to ¥800 million (including ¥100 million annually for Outside Directors) at the Company's 131st Ordinary General Meeting of Shareholders, held on June 22, 2012. Performance-linked remuneration is not paid to Outside Directors. (Calculation Method)</p> <p>As a short-term performance incentive, the performance-linked remuneration for the President will be the amount that is obtained by multiplying the amount of actual net income attributable to owners of the parent for the current fiscal year (before deducting performance-linked remuneration [bonus]) by 0.75/1000. The performance-linked remuneration for Directors will be determined by multiplying the said amount by a predetermined index corresponding to each Director's position. The amounts of performance-linked remuneration paid to Directors in charge of business units will be determined so that they partially reflect the performance of the relevant business units.</p>
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Restricted Stock Compensation Plan	<p>At the 140th Ordinary General Meeting of Shareholders held on March 25, 2021, the Company resolved to abolish the existing stock option plan and introduce a restricted stock compensation plan, with the aim of incentivizing Internal Directors and Executive Officers to improve the Company's corporate value in a sustainable manner as well as raise the degree to which they share value with shareholders. Restricted stock compensation for Directors under this plan will not exceed the annual amount of ¥90 million, separately from the maximum amount of fixed remuneration by position and performance-linked remuneration. The number of shares to be granted under the plan will not exceed 60,000 shares each year. Restricted stock compensation is not paid to Outside Directors. Monetary compensation linked to stock price (phantom stock) has been introduced in lieu of restricted stock compensation for Directors who are non-residents of Japan.</p>
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As the stock option scheme was abolished in March 2021, no new stock options will be granted. However, the exercise of previously granted stock options held by Directors and Executive Officers on retirement will continue until such time as all Directors and Executive Officers currently holding stock options have retired.

### Total Amount of Remuneration, etc., Paid to Directors and Members of Audit & Supervisory Board

(FY2022)

Category	Total amount of remuneration, etc. (Millions of yen)	Total amount by type of remuneration, etc. (Millions of yen)				Number of persons paid*4
		Monetary remuneration			Stock-based remuneration	
		Fixed remuneration	Performance-linked remuneration*1	Other*2	Restricted stock compensation*3	
Directors [of which Outside Directors]	536 (57)	321 (57)	185 (–)	1 (–)	27 (–)	12 (4)
Members of Audit & Supervisory Board [of which Outside Members of Audit & Supervisory Board]	95 (37)	95 (37)	–	–	–	5 (3)

\*1 Performance-linked remuneration is calculated based on net income attributable to owners of the parent for fiscal 2022. The fiscal 2022 target for net income attributable to owners of the parent was ¥43.0 billion, while the actual result was ¥54.3 billion (rounded down to the nearest ¥100 million based on figures given in the securities report).

\*2 One Director who is not a resident of Japan received monetary compensation linked to stock price (phantom stock) instead of restricted stock compensation within the range of the monetary remuneration limit.

\*3 This is the restricted stock compensation of seven Directors. Separately from the restricted stock compensation under the Scheme, another ¥14 million in restricted stock compensation was given to five Directors concurrently serving as Executive Officers of the Company as compensation to serve as Executive Officers.

\*4 The number of persons paid includes one Director who retired at the conclusion of the 141st Ordinary General Meeting of Shareholders held on March 24, 2022.

# Executives

(As of March 29, 2023)

The reasons for the election of Directors and Corporate Auditors are disclosed in the reference documents for the general meeting of shareholders at the time of election:

## Representative Directors



**Hitoshi Kawahara**

President and Representative Director

**Apr. 1984** Joined Kuraray Co., Ltd.  
**Apr. 2014** General Manager, Poval Film Division, Vinyl Acetate Company  
**Jan. 2016** Vice President, Vinyl Acetate Film Company  
**Mar. 2016** Executive Officer  
**Jan. 2018** President, Vinyl Acetate Resin Company  
**Mar. 2018** Managing Executive Officer  
**Mar. 2019** Director and Managing Executive Officer  
**Jan. 2021** President and Representative Director (Current position)



**Hiroaya Hayase**

Representative Director and Senior Managing Executive Officer

**Apr. 1980** Joined Kuraray Co., Ltd.  
**Apr. 2012** General Manager, Poval Resin Division, Resin Company  
**Jun. 2012** Executive Officer  
**Apr. 2013** General Manager, Poval Resin Division, Vinyl Acetate Company; and General Manager, Production and Technology Management Division, Vinyl Acetate Company  
**Jun. 2014** Managing Executive Officer  
**Jan. 2015** President, Vinyl Acetate Film Company  
**Mar. 2015** Director and Managing Executive Officer  
**Jan. 2016** President, Vinyl Acetate Resin Company  
**Mar. 2016** Director and Senior Managing Executive Officer  
**Mar. 2020** Representative Director and Senior Managing Executive Officer (Current position)  
**Jan. 2021** Executive Supervisor, Vinyl Acetate Resin Company (Current position); Executive Supervisor, Vinyl Acetate Film Company (Current position)  
**Jan. 2022** President, Vinyl Acetate Film Company (Current position)

## Board of Directors



**Masaaki Ito**

Chairman and Director

**Apr. 1980** Joined Kuraray Co., Ltd.  
**Apr. 2010** General Manager, Methacrylate Division, Chemicals Company  
**Jun. 2012** Executive Officer  
**Apr. 2013** Vice President, Functional Materials Company  
**Jun. 2013** Managing Executive Officer  
**Apr. 2014** Officer Responsible for Corporate Management Planning Division; Officer Responsible for CSR Division  
**Jan. 2014** Director and Managing Executive Officer  
**Jan. 2015** President and Representative Director  
**Jan. 2021** Chairman and Director (Current position)  
**Apr. 2021** Chairperson, Saijo Central Hospital (Current position)



**Yoshimasa Sano**

Director and Senior Managing Executive Officer

**Apr. 1980** Joined Kuraray Co., Ltd.  
**Apr. 2010** General Manager, Elastomer Division, Chemicals Company  
**Jun. 2012** Executive Officer  
**Apr. 2014** General Manager, Methacrylate Division, Functional Materials Company  
**Jan. 2016** Vice President, Functional Materials Company  
**Mar. 2016** Director and Managing Executive Officer  
**Jan. 2017** General Manager, Carbon Materials Division, Functional Materials Company  
**Jan. 2018** President, Functional Materials Company  
**Jan. 2020** President, Fibers and Textiles Company (Current position); Responsible for Osaka Office (Current position)  
**Mar. 2020** Director and Senior Managing Executive Officer (Current position)



**Keiji Taga**

Director and Managing Executive Officer

**Apr. 1984** Joined Kuraray Co., Ltd.  
**Apr. 2014** General Manager, Medical Division, Functional Materials Company  
**Mar. 2017** Executive Officer  
**Jan. 2018** Officer Responsible for Corporate Management Planning Office (Current position); Officer Responsible for CSR Division  
**Mar. 2018** Managing Executive Officer  
**Apr. 2018** General Manager, Corporate Management Planning Office  
**Mar. 2019** Director and Managing Executive Officer (Current position)  
**Jan. 2020** Officer Responsible for Administrative Unit  
**Jan. 2022** Officer Responsible for Corporate Sustainability Division (Current position); Officer Responsible for Global Digital Transformation Office; Officer Responsible for Accounting and Finance Division (Current position);  
**Jan. 2023** Officer Responsible for DX-IT Division (Current position)



**Matthias Gutweiler**

Director and Managing Executive Officer

Foreign national

**Mar. 1988** Joined Hoechst AG  
**Jun. 1996** Plant Manager, Mowiol Plant, Hoechst AG  
**Dec. 2001** Joined Kuraray Specialities Europe  
**Jan. 2009** President, Kuraray Europe GmbH (Current position), Executive Officer, Kuraray Co., Ltd.  
**Apr. 2013** General Manager, PVB Division, Vinyl Acetate Company  
**Mar. 2018** Managing Executive Officer  
**Mar. 2020** Director and Managing Executive Officer (Current position)



**Nobuhiko Takai**

Director and Managing Executive Officer

**Apr. 1984** Joined Kuraray Co., Ltd.  
**Apr. 2014** General Manager, Genestar Division, Isoprene Company  
**Mar. 2016** Executive Officer  
**Jan. 2019** Vice President, Functional Materials Company; General Manager, Carbon Material Division, Functional Materials Company  
**Mar. 2019** Managing Executive Officer  
**Jan. 2020** President, Functional Materials Company (Current position)  
**Mar. 2020** Director and Managing Executive Officer (Current position)



**Jun Hamano**

Outside Director (Independent Director)

Outside Independent

**Apr. 1974** Entered Economic Planning Agency of Japan (EPA)  
**Jul. 1999** Director, Minister's Secretariat Division, EPA  
**Jul. 2004** Director General for Economic and Fiscal Management, Cabinet Office  
**Jul. 2006** Vice-Minister for Policy Coordination, Cabinet Office  
**Jul. 2008** Deputy Vice-Minister, Cabinet Office  
**Jul. 2009** Vice-Minister, Cabinet Office  
**Jan. 2012** Advisor, Cabinet Office  
**Apr. 2013** Executive Advisor, Dentsu Inc.  
**Jun. 2015** Chairman, Ohara Memorial Institute for Science of Labour (Current position)  
**Mar. 2016** Director, Kuraray Co., Ltd. (Current position)  
**Apr. 2020** Representative Director and Vice Chairperson, Ohara Memorial HealthCare Foundation  
**Jun. 2021** Representative Director and Chairperson, Ohara Memorial HealthCare Foundation (Current position)

## Board of Directors



Keiko Murata

Outside Director  
(Independent Director)

Outside Independent

**Apr. 1986** Entered Economic Planning Agency of Japan (EPA)  
**Aug. 2005** Director for Overseas Economies, Directorate General for Economic Research, Cabinet Office  
**Aug. 2006** Director for International Affairs, Secretariat of the Science Council of Japan, Cabinet Office  
**Jul. 2008** Professor, Graduate School of Social Sciences, Tokyo Metropolitan University  
**May 2015** Advisor to the President, Tokyo Metropolitan University  
**Jul. 2017** Trustee, Nippon Life Insurance Company (Current position)  
**Apr. 2018** Professor, Graduate School of Management, Tokyo Metropolitan University  
**Mar. 2020** Director, Kuraray Co., Ltd. (Current position)  
**Apr. 2022** Professor Emeritus, Tokyo Metropolitan University (Current position); Professor, Graduate School of Economics, Risscho University (Current position)



Satoshi Tanaka

Outside Director  
(Independent Director)

Outside Independent

**Apr. 1981** Joined Mitsui & Co.  
**Apr. 2007** General Manager, Corporate Strategy & Planning, Mitsui & Co.  
**Apr. 2011** Managing Officer, Mitsui & Co.  
**Apr. 2013** Executive Managing Officer, Mitsui & Co.  
**Apr. 2015** Senior Executive Managing Officer, COO of Asia Pacific Business Unit, Mitsui & Co.  
**Apr. 2017** Executive Vice President and CAO<sup>\*1</sup>; CIO<sup>\*2</sup>; CPO<sup>\*3</sup>, Mitsui & Co., Ltd.  
**Jun. 2017** Representative Director, Executive Vice President, Mitsui & Co.  
**Apr. 2019** Director, Mitsui & Co.  
**Jun. 2019** Counselor, Mitsui & Co.  
**Mar. 2020** Director, Kuraray Co., Ltd. (Current position)  
**Apr. 2020** Outside Director, Sekisui House, Ltd.  
**Jan. 2021** Independent Director, IHH Healthcare Berhad (Current position)  
**Apr. 2021** Representative Director, Executive Vice President & Executive Officer, Sekisui House, Ltd. (Current position)



Kiyoto Ido

Outside Director  
(Independent Director)

Outside Independent

**Apr. 1973** Entered the Ministry of Finance (MOF)  
**Mar. 1980** Consul, Consulate-General of Japan, Frankfurt in Germany  
**Jul. 1989** Deputy General Manager, Finance Dept., Inter-American Development Bank, Washington, D.C.  
**Apr. 1998** Deputy Vice Minister of Finance for International Affairs, MOF Deputy Director-General, International Bureau, MOF  
**Jun. 1999** Minister, Embassy of Japan, Washington, D.C.  
**Jul. 2002** Deputy Director-General, International Bureau, MOF  
**Jul. 2004** Director-General, International Bureau, MOF  
**Aug. 2006** Executive Director, Bank of Japan  
**Apr. 2011** Vice Chairman, Institute for International Economic Studies  
**Mar. 2021** Director, Kuraray Co., Ltd. (Current position); Director (Outside), Japan Investment Adviser Co., Ltd. (Current position)



Kazuhiro Nakayama

Full-time Member of Audit & Supervisory Board

**Apr. 1980** Joined Kuraray Co., Ltd.  
**Apr. 2012** General Manager, Kurashiki Plant  
**Jun. 2012** Executive Officer  
**Apr. 2013** General Manager, Overseas Business, Vinyl Acetate Company  
**Apr. 2014** General Manager, Technology Division  
**Jan. 2016** Officer Responsible for Technology Division; Officer Responsible for Plants in Japan; Officer Responsible for Environmental Business Development and Promotion Division  
**Mar. 2016** Director and Managing Executive Officer  
**Jan. 2018** Officer Responsible for Environmental and Industrial Safety Management Center  
**Jan. 2020** Assistant to the President  
**Mar. 2020** Member of Audit & Supervisory Board (Current position)

\*1 Chief Administrative Officer \*2 Chief Information Officer \*3 Chief Privacy Officer



Naoya Uehara

Full-time Member of Audit & Supervisory Board

**Apr. 1982** Joined Kuraray Co., Ltd.  
**Apr. 2013** Vice General Manager, Corporate Management Planning Division  
**Jun. 2014** Vice General Manager, GLS Division, Kuraray America, Inc.  
**Jan. 2018** Vice President, Kuraray Europe GmbH  
**Mar. 2020** Executive Officer, Kuraray Co., Ltd.  
**Jan. 2021** Assistant to the President  
**Mar. 2021** Member of Audit & Supervisory Board (Current position)



Mitsuhiro Nagahama

Outside Member of Audit & Supervisory Board  
(Independent Member of Audit & Supervisory Board)

Outside Independent

**Apr. 1976** Entered The Fuji Bank Limited (the present Mizuho Bank, Ltd.)  
**Apr. 2002** General Manager, Americas Non-Japanese Corporate Banking Division No. 2, Mizuho Corporate Bank, Ltd. (the present Mizuho Bank, Ltd.)  
**Mar. 2003** Executive Officer and General Manager, Otemachi Corporate Banking Division No. 6 and No. 7, Mizuho Corporate Bank, Ltd.  
**Apr. 2005** Managing Executive Officer in charge of corporate banking, Mizuho Corporate Bank, Ltd.  
**Mar. 2006** Managing Executive Officer, Head of the Americas, Mizuho Corporate Bank, Ltd.  
**Apr. 2010** Deputy President, Head of the Americas, Mizuho Corporate Bank, Ltd.  
**Apr. 2013** Chairman of the Board, Mizuho Securities Co., Ltd.; Chairman of the Board, Mizuho Securities USA Inc.  
**Apr. 2015** Senior Advisor, Mizuho Securities Co., Ltd.  
**Jun. 2015** Outside Audit & Supervisory Board Member, Azbil Co., Ltd.  
**Mar. 2018** Member of Audit & Supervisory Board, Kuraray Co., Ltd. (Current position)  
**Mar. 2019** Outside Director, Tokyo Tatemono Co., Ltd.  
**Jun. 2019** Outside Director, Azbil Co., Ltd. (Current position)  
**Jun. 2020** Outside Director, NSK Ltd. (Current position)



Tomomi Yatsu

Outside Member of Audit & Supervisory Board  
(Independent Member of Audit & Supervisory Board)

Outside Independent

**Apr. 1983** Entered Tokyo Electron Ltd.  
**Oct. 1986** Entered Tohmatsu Awoki & Sanwa (the present Deloitte Touche Tohmatsu LLC)  
**Sep. 1990** Registered as a Certified Public Accountant  
**Oct. 2001** Registered with Tokyo Bar Association; Entered Shin-Tokyo Sohgo Law Office (later merged with Bingham Sakai Mimura Aizawa-Foreign Law Joint Enterprise)  
**Jun. 2009** Outside Audit & Supervisory Board Member, Calbee, Inc.  
**Jun. 2010** Outside Audit & Supervisory Board Member, Taiko Pharmaceutical Co., Ltd.  
**Mar. 2012** Outside Audit & Supervisory Board Member, KOKUYO Co., Ltd.  
**Mar. 2015** Outside Audit & Supervisory Board Member, Yamaha Motor Co., Ltd.  
**Apr. 2015** Partner, TMI Associates  
**Jun. 2016** Outside Director, SMBC Nikko Securities Inc. (Current position)  
**Jun. 2017** Outside Audit & Supervisory Board Member, IHI Corporation  
**Mar. 2019** Member of Audit & Supervisory Board, Kuraray Co., Ltd. (Current position)  
**Mar. 2021** Outside Audit & Supervisory Board Member, Kyowa Kirin Co., Ltd. (Current position)  
**Apr. 2022** Representative, Yatsu Law & Accounting Office (Current position)



Kenji Komatsu

Outside Member of Audit & Supervisory Board  
(Independent Member of Audit & Supervisory Board)

Outside Independent

**Apr. 1978** Entered Mitsubishi Corporation  
**Feb. 1996** Entered GE International Inc.  
**Jul. 2005** Representative Director and President, Ecolab Inc. (the present Ecolab GK)  
**Apr. 2007** Senior Vice President, Ecolab Inc.  
**Dec. 2010** Senior Executive Officer, Sanden Corporation (the present Sanden Holdings Corporation)  
**Nov. 2011** Entered Bain Capital Asia, LLC  
**Mar. 2013** Director, President and CEO, BELLSYSTEM24, Inc.  
**Mar. 2016** Director and Chairman, BELLSYSTEM24 Holdings, Inc.  
**Jun. 2016** Advisor, COACH A Co., Ltd.  
**Dec. 2018** Advisor, API Consultants CO., LTD.  
**Mar. 2019** Member of Audit & Supervisory Board, Kuraray Co., Ltd. (Current position)  
**May 2020** Executive Vice President, Fujitsu Component Limited  
**Oct. 2022** Director, Fujitsu Component Limited (Current position)  
**Jan. 2023** Chairman and Representative Director, Longreach Business Partners Inc. (Current position)

**Managing Executive Officers**

Akira Omura	Officer Responsible for Technology Division; Officer Responsible for Plants in Japan; Officer Responsible for Environmental and Industrial Safety Management Center
Toshihiro Omatsu	President, Isoprene Company
Toshinori Tsugaru	Officer Responsible for Innovation Networking Center; Officer Responsible for Research and Development Division; Officer Responsible for IP Management Center
Satoru Fujinami	Officer Responsible for General Affairs and HR Division; Officer Responsible for Confidential Information Management; Officer Responsible for Purchasing and Logistics Division
Tomoyuki Watanabe	President, Vinyl Acetate Resin Company; Officer Responsible for Electronics Materials Promotion Division

**Executive Officers**

Stephen Cox	General Manager, Advanced Interlayer Solutions Division
Koichi Takano	General Manager, Purchasing and Logistics Division
Takaharu Kawahara	President, Kuraray America, Inc.
Fuyuo Ueyama	General Manager, Poval Film Division
Stevan R. Schott	General Manager, Environmental Solutions Division; President, Calgon Carbon Corporation
Yoji Ikemori	General Manager, Genestar Division
Kazushige Sakamoto	General Manager, Okayama Plant
Koichi Daifuku	General Manager, Electronics Materials Promotion Division
Junichi Fujiwara	General Manager, Corporate Management Planning Office
Hideo Ohi	General Manager, Corporate Auditing Division
Hiroyuki Shimo	General Manager, EVAL Division
Yoshinobu Nakamura	General Manager, Methacrylate Division
Akiko Ide	General Manager, Corporate Sustainability Division
Nobuyoshi Takai	General Manager, Fibers and Industrial Materials Division
Christian Herrmanns	General Manager, MonoSol Division; President, MonoSol
Stanley Fukuyama	General Manager, DX-IT Division

**Main Areas of Expertise and Experience of Directors and Members of Audit & Supervisory Board\*<sup>1</sup>**

	Name	Board of Directors Audit & Supervisory Board Attendance* <sup>2</sup>	Knowledge, Experience of Officers								
			Corporate Management	Global	Sales and Marketing	Production and Equipment Technology	R&D	Legal Affairs and Risk Management	Finance and Accounting	Environment and Society	Human Resources and Labor Management
Directors	Hitoshi Kawahara	100%	○	○	○						
	Hiroaya Hayase	100%	○	○		○	○				
	Masaaki Ito	100%	○	○		○	○				
	Yoshimasa Sano	100%		○	○						
	Keiji Taga	100%		○	○			○	○		
	Matthias Gutweiler <small>Foreign national</small>	100%	○	○		○	○				
	Nobuhiko Takai	100%		○	○						
	Jun Hamano <small>Outside Independent</small>	100%								○	○
	Keiko Murata <small>Outside Independent</small>	100%		○					○	○	
	Satoshi Tanaka <small>Outside Independent</small>	93%	○	○	○						○
Members of Audit & Supervisory Board	Kiyoto Ido <small>Outside Independent</small>	100%		○					○	○	
	Kazuhiro Nakayama	100%		○		○	○			○	
	Naoya Uehara	100%		○				○			
	Mitsuhiro Nagahama <small>Outside Independent</small>	100%	○	○					○		○
	Tomomi Yatsu <small>Outside Independent</small>	100%						○	○		
	Kenji Komatsu <small>Outside Independent</small>	100%	○	○	○						

\*<sup>1</sup> The above table shows up to four areas of knowledge or experience possessed by Directors or Members of Audit & Supervisory Board. It does not represent all of their knowledge or experience.

\*<sup>2</sup> Rate of attendance rate from January 2022 to December 2022.



# Risk Management and Compliance

## Risk Management Framework and Policy Risk Management

The Kuraray Group monitors risks regularly, led by the Risk Management and Compliance Committee, and identifies risks that could have a significant impact on business management. Such risks are proposed to the President, who then specifies those that are critical management risks, and priority countermeasures are carried out after deliberation by the Board of Directors. The Risk Management and Compliance Committee works to manage the progress of priority countermeasures against business management risks as well as to ensure thorough compliance with laws and regulations and corporate ethics and the realization of fair business practices.

The Kuraray Group Risk Management Policy, which the President disseminates to each Group organization, consists of two elements: a long-term, ongoing Basic Policy encompassing overall Group risk management, and priority issues that are the focus for a particular fiscal year in light of the findings of risk analysis of the Kuraray Group and recent social conditions and trends. This framework allows flexible and prompt actions to be taken in response to changes in the risk environment while maintaining the underlying approach to risks. The priority issues are tasks that the President clearly indicates for the organization to mitigate priority risks, instructing the organization on how to carry them out.

### Kuraray Group Risk Management Policy in Fiscal 2023

#### Basic Policy

- 1) Completely prevent illegal or inappropriate conduct that betrays the trust of society.
- 2) Completely prevent accidents and injuries (e.g., process accidents, occupational injuries, pollution, and product defects) that threaten the health and safety of employees, the local community, clients, partners, and so on.
- 3) Should an event occur that seriously impacts the business or society, be sure to secure trust from society, safety, and health, and implement measures to achieve business continuity or early recovery. (Prioritize trust from society, safety, and health, and then work to continue or restore the business.)

## Business Management Risks in Fiscal 2023

The Kuraray Group's risk management is characterized by a two-tier approach. In terms of vertical risk management, each business division, office, plant, and affiliate identifies risks facing their own organization, independently evaluates such risks, and devises and implements an appropriate response. In terms of horizontal risk management, the responsible corporate organizations evaluate pure risks that may occur across the organization, such as natural disasters and infringement of laws and regulations, that have purely a negative impact. Measures to adapt to risks associated with climate change are the purview of the Risk Management and Compliance Committee, which discusses the results of the various organizations' annual risk self-assessments from the perspective of disaster response and business continuity. From among these, the Committee selects significant risks that require a Group-level response. The President then designates these as critical management risks and reports them to the Board of Directors, while assigning them to an officer in charge. In fiscal 2023, critical management risks are classified into three priority risks to be taken up as priority issues, and nine risks requiring ongoing monitoring, and proper measures are taken for both types of risks. The risks requiring ongoing monitoring in fiscal 2023 are: risks concerning product quality, regulations of chemical substances, natural disasters, antitrust violations, bribery, intellectual property risks, pandemics, harassment, and the securing of human resources at production sites.

#### Priority Issues in Fiscal 2023

- 1) Further reinforce management of confidential information by implementing ongoing measures to shore up information security throughout the Group.
- 2) Continue to implement measures to strengthen operation and facility management at overseas plants to reduce the risk of process accidents. At the same time, through the activities of the Global Process Safety Management Audit Team and other actions, identify issues in the safety management frameworks of overseas affiliates and work to improve them.
- 3) Review all elements, including commodity materials, from a supply chain perspective for supply risks affecting raw materials, fuels, secondary materials, and equipment. Further improve the accuracy and effectiveness of business continuity planning (BCP) by taking risk countermeasures, starting with high-priority measures in the BCP of each business.

## Initiatives on Priority Issues in Fiscal 2022

### Priority Issues in Fiscal 2022

- 1) Implement immediate measures to prevent the recurrence of confidential information leakage.
- 2) In order to mitigate the risk of occurrence of safety-related accidents, objectively evaluate through the audits by in-house expert teams and steadily improve the status of action towards the countermeasures which were recognized through the survey of not only safety design but also management aspects (operation management and facility management) including human resource development at overseas plants.
- 3) For supply risks or raw materials, fuels, and secondary materials, review all including commodity materials from a supply chain perspective and formulate a more comprehensive BCP (Business Continuity Planning).
- 4) Continue ensuring preparation for COVID-19 pandemic.

Priority Issue 1

We formed a Confidential Information Management Team in June 2022 to monitor and better implement the Kuraray Group Confidential Information Management Policy, reformulated in November 2021, both in Japan and overseas. We bolstered IT security by building an emergency response framework for IT incidents and putting in place a more secure data storage system.

#### Preventing Leakage of Confidential Information

Priority Issue 2

Since 2019, members from Japan have been conducting safety audits of chemical plants outside Japan. In 2022, a Global Process Safety Management Audit Team made up of in-house experts from across the Group started up activities to gauge and take steps to address security risks.

#### Safety Audits for Chemical Plants outside Japan

Priority Issue 3

Based on the findings of our analysis of priority production areas and the risk of suspension of the supply of raw materials in each business, we are formulating a succession of risk-mitigation measures, starting with high-priority raw materials.

Priority Issue 4

In response to the global COVID-19 pandemic, a response team formed in January 2020 worked with Group companies in Japan and abroad to identify infection levels and take measures to prevent infection, continuing to implement preventive measures while responding to the specific context in each country.

## Group Compliance

### Group Compliance

The statement “Our Commitment” outlines the principles of conduct to which the Kuraray Group should adhere in its business activities, which involve diverse points of contact with society. Our Code of Conduct serves as a guideline for putting the commitment in practice in day-to-day operations. We distribute a Compliance Handbook to all Group employees in Japan and overseas to familiarize them with the clear commitment of top management to compliance with laws and regulations and with “Our Commitment,” which contains an easy-to-understand explanation of the Code of Conduct.

In addition, we have appointed compliance officers at plants and overseas offices of Kuraray and Group companies, and have organized regional compliance committees, linked to the activities of the Risk Management and Compliance Committee, to raise awareness of compliance throughout the Group.

### Whistleblower System

We have set up a Kuraray Group Employee Counseling Room and a Global Compliance Hotline for Group employees around the world as an internal reporting system for either preventing or detecting and resolving at an early stage any compliance violations. Consultation and reporting can be anonymous, and we have put strict regulations in place to protect people making reports from being treated unfairly.

In 2022, the Kuraray Group Employee Counseling Room handled 29 consultations in Japan. In addition, following the June 2022 amendment of Japan’s Whistleblower Protection Act, we designated separate contact personnel to receive information that can identify persons consulting or reporting. We also revised relevant regulations based on the amended Act.

	FY2018	FY2019	FY2020	FY2021	FY2022
Kuraray Group Employee Counseling Room Consultations in Japan	16	35	23	11	29

### Departmental Compliance Education

In 2022, we held an online seminar for general managers of Group companies in Japan to learn about the kind of communication that cultivates an open workplace, which is effective in ensuring compliance and preventing harassment. The training aimed for a level at which participants could talk about what they learned in their own words to subordinates. Participants subsequently brought back the knowledge and awareness gained at the seminar to their departments and conducted interactive departmental education, seeking to identify compliance issues and improve communication. Through this approach, we are working to instill a greater awareness of compliance among all Group employees in Japan.

## Messages from an Outside Director



**Jun Hamano**  
Outside Director  
(Independent Director)

**My hope is that Kuraray will always hold fast to its corporate culture of providing value for society and will flourish as a truly world-leading, global company.**

I believe the role of an Outside Director is to help enhance corporate value by providing a third-party perspective based on a range of experiences and by proposing angles that differ from inside officers. Discussions among Kuraray's Board of Directors meetings are very lively. I actively make proposals from a long-term perspective, drawing on my background in administrative planning.

Chairman Ito, who chairs Board meetings, leads our discussions after allowing sufficient time for us to hear the broadly diverse opinions of officers with specialized skills. He has excellent qualities as a

chairperson. For example, he points out necessary issues that need to be addressed going forward and encourages more active discussion. In terms of diversity, about half of the officers are outside officers. There is one non-Japanese Director and one female Outside Director on the Board of Directors, as well as another female Outside Member of Audit & Supervisory Board. However, compared to other companies with a sophisticated governance framework, this is inadequate. The Group's business has expanded globally and it has seen growth in the ratio of female employees in managerial positions. As such, I believe allowing the Board of Directors to become more diverse—by adding overseas personnel and female directors who have risen up in the Company—will further deepen the level of discussions.

In our 2022 Board of Directors, we talked about how to lower logistics costs and how to revise product prices in a business environment that is highly uncertain. This includes Russia's invasion of Ukraine, the yen's rapid depreciation, and soaring raw materials, fuel, and logistics costs. Ultimately, the Company's mainstay vinyl acetate business was able to demonstrate its competitive superiority, with net sales and operating income reaching record highs. The Board also decided to increase the dividend. I take these as very positive outcomes for the first year of the Medium-Term Management Plan "PASSION 2026." The Company also faces challenges, however. Again, we recognized the need to create a new driver of future profits as quickly as possible to follow the vinyl acetate business. This issue is a key theme of "PASSION 2026." Positioning the isoprene business as a next driver of profits, the Company started operations at its new plant in Thailand during the year, which holds promise for leading to near-term profitability. Measures that involve large-scale investment may take time to bear fruit, but also offer high hopes for growth. As another profit driver, the Company is focusing on the activated carbon

business in its Environmental Solutions Division. In 2018, Kuraray acquired Calgon Carbon Corporation in the United States. Although progress in this business is not as fast as we had anticipated, synergies are steadily emerging. Both products are experiencing mounting demand worldwide and are beginning to show the potential to grow into the next profit drivers. At the same time, the global economy is changing dramatically. I think it is key to carefully review the progress of "PASSION 2026" and re-open the discussion of individual measures in line with changes in the environment.

One piece of advice I would give to ensure the strong growth of the Kuraray Group as a truly global company is the need to shore up human capital. The Kuraray Group rapidly developed a global presence through a series of strategic acquisitions beginning in the 2000s. This has left room for improvement in terms of global HR development and personnel systems. The Company's efforts to date have been driven by a sense of urgency. But I think this is an area that warrants continued focus, informed by repeated deliberations. Moreover, the working population in Japan has been on a steady decline since 1995, an issue that affects all Japanese companies. Going forward, as the shortage of human resources becomes more pronounced, Kuraray should shore up its human capital so that it can continue to be the Company of choice in the job market.

The Kuraray Group inherited a wonderful corporate ethos from its founders, Magosaburo and Soichiro Ohara, which is now expressed in the Group's mission statement: "For people and the planet—to achieve what no one else can." The Group is enhanced by an unwavering corporate culture that practices the vision of providing value for society, generating profits, and returning those profits to society. My hope is that Kuraray will never lose sight of its origins. I will also continue to lend my support to the Group so that it can become a truly world-leading global company.

## Corporate Overview (As of December 31, 2022)

Company Name	Kuraray Co., Ltd.
President and Representative Director	Hitoshi Kawahara
Established	June 1926
Head Office	Tokiwabashi Tower, 2-6-4, Otemachi, Chiyoda-ku, Tokyo 100-0004, Japan
URL	https://www.kuraray.com
Capital	JPY89 billion
Employees (Consolidated)	11,703
Group Companies	77 consolidated subsidiaries, two equity-method affiliates
Major Operations	United States, Germany, Belgium, China, Singapore

 [Main Group Locations](#)

## Inclusion in ESG Indexes (As of April 30, 2023)

Kuraray has been included in the following ESG investment indexes.



2022 CONSTITUENT MSCI JAPAN ESG SELECT LEADERS INDEX

In line with its corporate mission statement, “For people and the planet—to achieve what no one else can,” the Kuraray Group will remain committed to improving the natural and living environments through its business activities and striving to solve social issues, while working to strengthen corporate governance.

THE INCLUSION OF KURARAY CO., LTD. IN ANY MSCI INDEX, AND THE USE OF MSCI LOGOS, TRADEMARKS, SERVICE MARKS OR INDEX NAMES HEREIN, DO NOT CONSTITUTE A SPONSORSHIP, ENDORSEMENT OR PROMOTION OF KURARAY CO., LTD. BY MSCI OR ANY OF ITS AFFILIATES. THE MSCI INDEXES ARE THE EXCLUSIVE PROPERTY OF MSCI. MSCI AND THE MSCI INDEX NAMES AND LOGOS ARE TRADEMARKS OR SERVICE MARKS OF MSCI OR ITS AFFILIATES.

## Stock Information

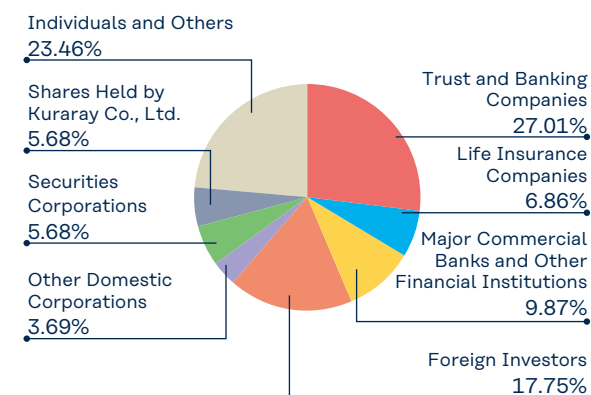
Securities Code	3405
Issued and Outstanding Shares	354,863,603 shares (including 20,171,061 shares of treasury stock)
Number of Shareholders	105,644
Domestic Stock Exchange Listing	Prime Market in Tokyo Stock Exchange
Shareholder Register Agent	Sumitomo Mitsui Trust Bank, Limited 1-4-1, Marunouchi, Chiyoda-ku, Tokyo 100-8223, Japan
Independent Auditor	PricewaterhouseCoopers Aarata LLC

## Major Shareholders

Name of shareholder	Number of shares held (thousands)
The Master Trust Bank of Japan, Ltd. (Trust Account)	61,150
Custody Bank of Japan, Ltd. (Trust Account)	28,469
National Mutual Insurance Federation of Agricultural Cooperatives	10,882
Nippon Life Insurance Company	10,448
Kuraray Employee Stock Ownership Plan	6,151
SMBC Nikko Securities Inc.	6,099
Meiji Yasuda Life Insurance Company	5,969
THE BANK OF NEW YORK MELLON 140042	4,808
Kuraray Business Partner Stock Ownership Plan	4,671
Japan Securities Finance Co., Ltd.	4,510

Note: Kuraray Co., Ltd. holds 20,171,061 shares of treasury stock.

## Shareholder Composition (Shareholding Ratio)







KURARAY CO., LTD.

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