

**Toyobo's strength  
to realize prosperity**



# TOYOBO REPORT 2023

Toyobo's Declaration

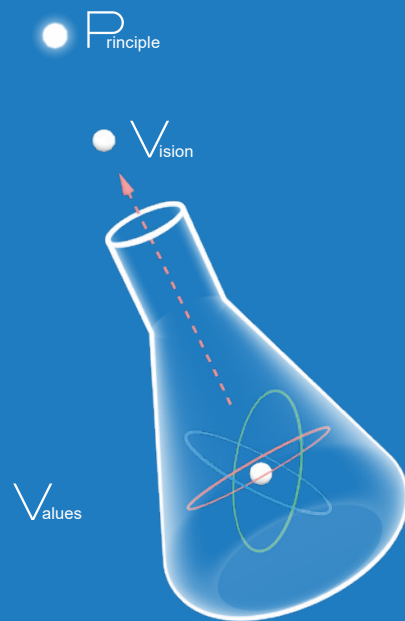
# Toyobo's strength to realize prosperity

Through the strength of Toyobo (materials + science), we will create the solutions needed by people and the earth and will contribute to the realization of a prosperous society.

## TOYOBO PVVS

We systematized the TOYOBO Group philosophy of "Jun-Ri-Soku-Yu".

The TOYOBO PVVs is the foundation on which we actively seek to build a flourishing society while also growing as a company.



### Principle

**Jun-Ri-Soku-Yu** Adhering to reason leads to prosperity

**"Jun-Ri"**

- Do what should be done (positive standpoint)
- Don't do what should not be done (defensive standpoint)

**"Soku-Yu"**

- Adhering to "Jun-Ri" leads to prosperous society while also realizing self-growth

This is the founding spirit of our company and is our belief.

### Vision

We will continue to create the solutions needed by people and the earth with our materials and science.

### Values

We welcome change, enjoy change, and create change.

### TOYOBO Spirit 9 Commitments

**Challenge**

Think Ahead Create Accomplish

**Reliability**

Safety First Customer Satisfaction Factual Basis

**Collaboration**

Mutual Communication Diversity Providing Opportunities



# Contents

## Introduction

- 1 Corporate philosophy framework "TOYOBO PVVs"
- 2 Contents
- 3 Editorial policy

## 01 Value creation story

- 5 **CEO message**  
"I aim for us to be a company that our stakeholders are proud of, and which grows sustainably."
- 8 **Value creation process**
- 9 **The history of Toyobo**
- 10 **At a glance**
- 11 **Financial highlights**
- 12 **Sustainability highlights**
- 13 **Sustainable Vision 2030**
- 15 **Materiality**

## 02 Value creation strategy

- 19 **CFO message**  
"We will respond with agility to business environment changes, and perform cash allocation to increase corporate value."

- 21 **2025 Medium-Term Management Plan**  
Transformation to sustainable growth
- 25 **Innovation**  
| Vision for creating innovation  
| Research and development  
| Intellectual property
- 29 **Toward digital transformation**

## 03 Value creation practice

- 32 **Overview by business**
- 33 **Films**
- 36 **Life Science**
- 39 **Environmental and Functional Materials**
- 42 **Feature: Launch of TOYOBO MC Corporation**
- 44 **Functional Textiles and Trading**

## 04 Foundation for value creation

- 48 **Sustainability management**
- 51 **Disclosure based on TCFD recommendations**
- 55 **Environment**  
| Realization of a decarbonized society  
| Realization of a circular society  
| Conservation of water resources, conservation of biodiversity, chemical substances management

- 61 **Society**  
| Safety and disaster prevention  
| Quality | Respect for human rights | Human capital  
| KAERU –Changing our organizational culture–  
| Partnerships (supply chain)  
| Partnerships (social contribution)
- 69 **Governance**  
| Outside Director message | Management team  
| Corporate governance  
| Risk management | Compliance

## 05 Reference material

- 79 **Key financial data (FY2013–FY2023)**
- 81 **Corporate data**
- 82 **External recognition, third-party assurance report**

### Using this report (PDF)

Category tabs and navigation buttons at the top of every page make movement among pages easy. Clicking a link button in the text will jump to the relevant website or page in this report.

#### Navigation buttons

- |  |                         |  |                                  |
|--|-------------------------|--|----------------------------------|
|  | Go to the previous page |  | Return to the previous page      |
|  | Go to the next page     |  | Go to the Table of Contents page |

#### Link buttons

- Link to the relevant website. Jump > p.00 Link to the relevant page in this report.

# Editorial policy

Since 2019, Toyobo has issued an Integrated Report that presents both financial information and sustainability information such as environmental, social, and governance (ESG) data.

Under the theme of Toyobo's strength to realize prosperity, this Integrated Report includes content focused on our Sustainable Vision 2030 as well as our 2025 Medium-Term Management Plan (2025 MTP), formulated from Sustainable Vision 2030 through backcasting. The report presents the views of our top management, dialogue concerning the start of a new company, and business overviews by segment, and introduces our products, services, and initiatives through examples of CSV to enhance understanding of the Toyobo group's value creation from multiple perspectives.

The purpose of this report is to deepen understanding of our group by shareholders, investors, and other stakeholders.

**Organizations subject to reporting** Unless otherwise stated, this report refers to TOYOBO CO., LTD. (non-consolidated basis). Numerical data in financial information is reported on a consolidated basis.


**Reporting period** April 2022–March 2023  
(Includes some information dated April 2023 and later)

**Published** September 2023  
Next scheduled publication: September 2024

- Reference guidelines, etc.**
- GRI Standards (Japanese version)
  - VRF "International Integrated Reporting Framework"
  - Task Force on Climate-related Financial Disclosures (TCFD) "TCFD Recommendations"
  - Ministry of the Environment "Environmental Reporting Guidelines" (2018 versions)
  - Ministry of Economy, Trade and Industry "Guidance for Collaborative Value Creation 2.0"

## About disclosure of information

**TOYOBO REPORT (Integrated Report)** [↗](#)



**Investor Relations website** [↗](#)

Here, we bring together investor relations (IR) materials such as financial results summaries, annual financial reports, and financial results briefing materials for the benefit of shareholders and investors. We also present an overview of the company's current financial status and business performance, stock information, an IR calendar, FAQ, etc.

**Sustainability website**

Here, we present information about the Toyobo group's ESG-related initiatives, along with relevant data.

[Sustainability](#) [↗](#)

[ESG performance data](#) [↗](#)

**Annual Financial Report** [↗](#)

Prepared in accordance with the requirements of Paragraph (1), Article 24 of the Financial Instruments and Exchange Act, the Annual Financial Report presents a summary of the company's current situation, details of its business areas, the current state of its facilities, its operational status, its financial statements, etc.

**Sustainability Report** [↗](#)

Compiled in November each year, this is a PDF version of sustainability-related information posted on the company's website.

**FACT BOOK** [↗](#)

The FACT BOOK presents 11 years' worth of key financial data and five years' worth of non-financial data for the company as a whole and for individual segments.

**Corporate Governance Report** [↗](#)

This report presents information about the Toyobo group's approaches and systems, in accordance with Japan's Corporate Governance Code.





# 01

## Value creation story

05 CEO message

08 Value creation process

09 The history of Toyobo

10 At a glance

11 Financial highlights

12 Sustainability highlights

13 Sustainable Vision 2030

15 Materiality



## Ikuo Takeuchi

President & Representative Director  
CEO & Co-CEO

# CEO message

I aim for us to be a company that our stakeholders are proud of, and which grows sustainably

### Management approach

**“People First.” Individuals’ sense of personal involvement will be the force driving transformation**

My vision of ideal Toyobo is a company that gains trust from society. I want our corporate group to be one that all of our stakeholders—employees, customers, business partners, shareholders, and others—can view with pride. The message of our corporate philosophy “*Jun-Ri-Soku-Yu*” (adhering to reason leads to prosperity) is “Do what we should do to contribute to the prosperity of society. Society will continue to advance as a result.” That is the true “realization of sustainable growth” that I seek.

In May 2022, the 140th anniversary of our group’s founding, we announced Sustainable Vision 2030. Within this, we revealed our vision for the future: “We will continue to create the solutions needed by people and the earth with materials and science\*.” For us to achieve this, it is vital that we first contribute to resolving social issues through our business. Moreover, if we are to contribute to society sustainably, we ourselves must be sustainable and resilient. We are working to build a solid foundation for our corporate activities, incorporating safe and secure workplaces, a quality assurance system, and compliance. We have drawn up a growth

\*We aim to go beyond mere manufacturing, providing materials, to create science, in other words, new value through ingenuity and ideas. We aim to be a group that realizes unique benefits, provides solutions, by combining materials and science.



## CEO message

strategy under which three businesses — film, life science, and environmental and functional materials — that contribute to resolving social issues are deployed atop this foundation.

What is important in this is that it is people, and the teams and organizations in which people connect, that will carry out the transformation aimed at realizing our long-term vision. Since becoming president, I have repeatedly put forth the message “People First.” Every employee tackling problems and work with a sense of personal involvement—that will be the force that drives transformation. Since the second half of fiscal 2023, I have again been making site visits in Japan and overseas. I make visits intending to encourage employees, but I’m the one who gets energized instead. It provides opportunities for me to boost my resolve as the CEO.

I was particularly impressed by a visit to Toyobo Indorama Advanced Fibers Co., Ltd., the joint venture that we launched last year with the Indorama group in Thailand. At the airbag yarn manufacturing company, located in Rayong province about three hours from Bangkok, over 10 Toyobo engineers built and launched a factory over the course of two years in an unfamiliar environment different from Japan where they were accustomed to living. I felt great pride seeing the engineers accomplish this huge job. I also visited the Otsu Pharmaceuticals Plant, which is working to rebuild its quality assurance system, and the Toyama Production Center, which is consolidating manufacturing bases in the textile business. However difficult the situation, we earnestly tackle whatever needs to be done. Seeing colleagues taking action with a strong sense of mission, I felt anew that this is the true strength of Toyobo.

Toward the realization of Sustainable Vision 2030

**Coming changes in the business environment are a fantastic opportunity. Our technologies, products, and services will have roles to play**

It has been about a year since we released our vision. Giving shape to the group’s vision in the form of Sustainable Vision 2030, with the 2025 Medium-Term Management Plan (2025 MTP) as a waypoint, has brought about great change in our executives and employees.

First, it has enabled us to engage in work on a foundation of having shared our vision and our action plan for realizing it. As an example, when setting themes for development, our Innovation Division (business development) has gained a strong awareness of questioning how a given theme corresponds to which vision, and how and to what it makes contributions. In addition, leaders and executives of our divisions talk increasingly about visions for their departments and plants in their own words, based on our overall vision. They then extend this to their workplace action plans and track progress. By holding visions for their own divisions, connected to our overall vision, every individual at every worksite is able to maintain an awareness of the meaning of their work and of their future.

At the start of Sustainable Vision 2030, I declared that we will make a shift from survival-oriented thinking to a sustainable growth orientation. The survival-oriented thinking that seeks short-term outcomes and profits for today and tomorrow became too strong during the period of structural reform that spanned the past 20 years, raising the issue that long-term perspectives and actions may have been insufficient. In response to this, there are increasing moves by leaders in divisions to not merely respond to current issues but to also think ahead toward 2030 and beyond.

We are now at a historical turning point. Looking toward the future business environment, I sense greater change than we had expected when we were formulating Sustainable Vision 2030. For example, our cost structure has undergone enormous change from that of a decade ago. Our group’s raw materials and fuel costs have increased by ¥28 billion over the past two years. The price hike is greater than our average operating profit for the past five years. The movement to achieve carbon neutrality has also entered the stage in which effectiveness is scrutinized. A large number of institutional investors are requesting that we address ESG and sustainability issues involving human capital and governance, as well as environmental issues.

In Sustainable Vision 2030, we set out conventional financial indicators as management goals, as well as sustainability indicators such as zero serious accidents, enhancement of employee engagement, and reduction of greenhouse gases (GHGs). I recognize that these sustainability initiatives form a foundation for achieving our financial targets, and that we need to carry them out in a manner integrated with our business activities.

Such changes in the business environment include aspects

that place increased burdens on us, but I view them positively as opportunities for the growth of our company. As an example, to address the issue of shifting away from plastics, our company has been an early adopter of recycled resin within our industry. We already possess or are developing related technologies including volume reduction of about 30% in conventional films, plastic made from 100% biomass, and chemical recycling. By providing film products created through these technologies, we will contribute to resolving issues that surround plastics. We also anticipate that, with the launch of the new TOYOBO MC Corporation, the technologies for water and air purification, separation, and adsorption that we have built up for over 30 years will see increased opportunities for widespread use in Japan and overseas. Our human-related technologies will also be able to contribute more and more to enhancing quality of life for people worldwide, in areas including infectious disease prevention, diagnostic drugs, and medical membranes.

The products and services that our group provides are indispensable to safety, security, and comfortable living for the public. I am confident that by expanding and creating products and services imbued with value that only Toyobo can provide, we will be able to make even further contributions to solving social issues.

Progress during the first year of the 2025 MTP

**Steady execution of our “four years to rebuild and prepare” action plan**

In fiscal 2023, the first year of the 2025 MTP, earnings fell significantly for reasons including sudden changes in the business environment. Our top priorities are first to regain our earnings capability (profitability) and to return to or exceed our normal earnings level, with operating profit of ¥20 billion or more by fiscal 2025.

We are generally making progress as planned in the four measures contained in the 2025 MTP.

The first of these is “thorough safety, disaster prevention, and quality assurance,” which we view as the most important issue. Acting under a strong determination to never again allow a major fire incident, our company as a whole is steadily executing our master plan for safety and disaster prevention, doing so through the 2025

## CEO message

MTP as well. We have made large investments in fire detection and containment, and have considerably enhanced our level of disaster prevention in physical terms. However, we recognize that we still have a way to go in terms of safety culture, that is, in people's awareness of safety and disaster prevention. We are enhancing training and workplace dialogue to enable a sense of personal involvement in safety.

Regarding the second measure in our plan, "reorganization of the business portfolio," we have divided our businesses into four strata along the dual axes of profitability and growth potential based on capital costs, and are advancing business operations according to the positioning of each. We are actively investing in our film business and life science business, which we have positioned for "growth expansion". In our environmental and functional materials business, positioned until now for "stable earnings," we launched TOYOBO MC Corporation as a joint venture with Mitsubishi Corporation in April 2023 to create a third pillar. Looking ahead, we will tackle growth expansion in areas including those related to environmental solutions and electric vehicles (EVs). At the same time, in businesses facing profitability issues and positioned as "requiring improvement," we are executing factory consolidation and earnings improvement measures in line with the master plan for reform that we have formulated.

With regard to the third measure of our plan, "preparations for the future," we are making preparations for the creation of innovation, the promotion of digital transformation, and the realization of carbon neutrality.

For the creation of innovation, we formulated our Innovation Creation Vision last year with an eye toward the future beyond 2030. By combining our strengths in polymer technology and biomedical technology, we will accelerate innovation in three areas of solutions: New Circular Plastics, Environmentally Active Clean, and Well-Being (see p.25).

As an initiative aimed at carbon neutrality, last year we obtained certification from the Science Based Targets initiative for the consistency of our group's 2030 GHG emission reduction targets with the level required by the Paris Agreement. We will steadily carry out actions including the introduction of energy conversion, energy conservation, and renewable energy, following the roadmap we have laid out. We also intend to put the internal carbon pricing system that we introduced in April 2022 into full operation and accelerate investments

that will contribute to GHG emission reduction, with plans to utilize these in the examination of business portfolio reform as well (see p.55).

The fourth measure in our plan is "rebuilding the foundation." This foundation is a necessity for carrying out the three measures noted above. While advancing development of our business infrastructure through the renewal of aging facilities and systems including information system, we are also making efforts toward human resource development and organizational culture reform.

Operating under our conviction that it is people and teams of people who will shoulder corporate reform, we will build human resources management mechanisms that allow all employees to experience growth and play active roles with pride and motivation. More specifically, pressing issues that lie before us include promoting the selection and development of the next generation of management candidates and the training of workplace leaders to support manufacturing, as well as increasing the number of women leaders who advance to executive positions. We have also developed optimal personnel placement mechanisms, education systems, and programs to enable diverse ways of working so that all employees can achieve personal development within the company (see p.64).

### Launch of TOYOBO MC Corporation

#### A turning point for our group. Tackling growth by changing our ideas and actions

The establishment of TOYOBO MC Corporation is a major project to which we apportioned a quarter of the sales of Toyobo. We view it as a large investment in growth. Our primary aim is to develop new markets and achieve growth by combining the cutting-edge technologies and products of Toyobo with the strengths of Mitsubishi Corporation. At the same time, considering anticipated future changes in the business environment, behind the establishment of the new company was also a powerful sense of crisis over the difficulty of maintaining our status quo through business as usual.

By changing the conventional ideas of Toyobo and our ways of working while adding different ideas, we will make ourselves capable of taking on great opportunities for growth. Toward that end, we selected a partner that could be seen as an unorthodox choice for our company. I expect to see innovation result from this

combination of differences. In terms of approach to seizing business opportunities, ability to execute, and speed, Mitsubishi Corporation has strengths that we do not. By pairing our cutting-edge products and technologies with Mitsubishi Corporation's global management capabilities and its domestic and overseas networks, we will execute growth measures using inorganic and other methods.

### Message to our stakeholders

#### Carrying out the four measures of the 2025 MTP to enhance our corporate value (economic value x social value)

I define corporate value as the product of economic value (earning power) times social value (trust by stakeholders). This means naturally that no corporate value can exist without the trust of society, or without the power to earn. Our group aims to be a company that contributes to the sustainability of society while itself continuing to grow sustainably.

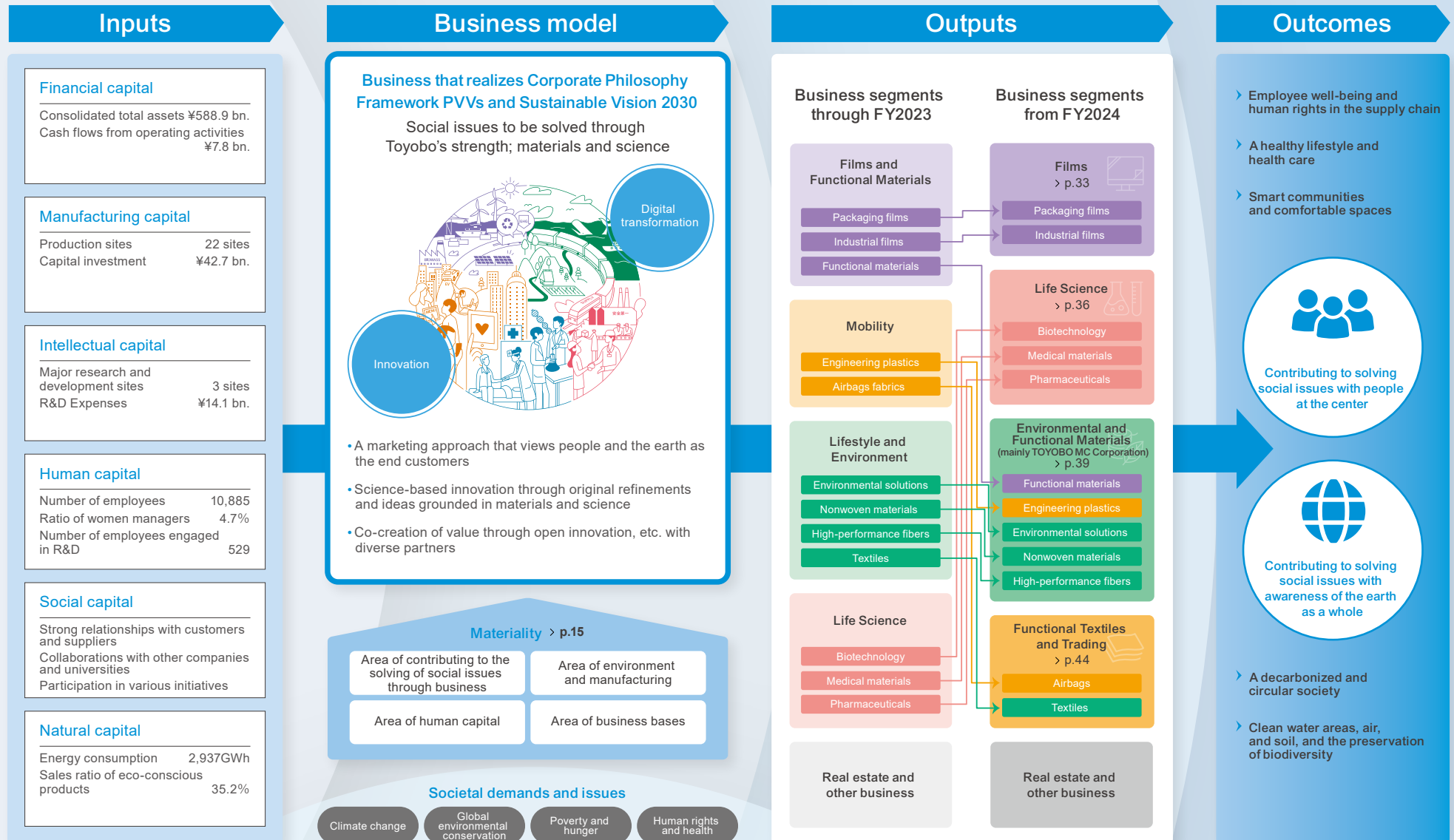
My mission is to sustainably enhance our corporate value through business activities aimed at realizing our corporate philosophy. The key to doing so will be carrying out the four measures stated in the 2025 MTP. By enhancing asset efficiency and achieving growth through portfolio reform and by further enhancing people's trust in our company, we will transform into a corporate group in which our stakeholders can take pride.

I ask our stakeholders for their continued understanding and support for our group.





# Value creation process



# The history of Toyobo

Since our founding, the Toyobo group has undertaken technological innovation with a sensitivity to changes in the times, which has yielded fruit in the form of our four core technologies. Acting through businesses that leverage these technologies, we create products that meet the expectations of society and contribute to the realization of a sustainable society as we grow our business.

FY2023 results

Net sales (¥ mn)

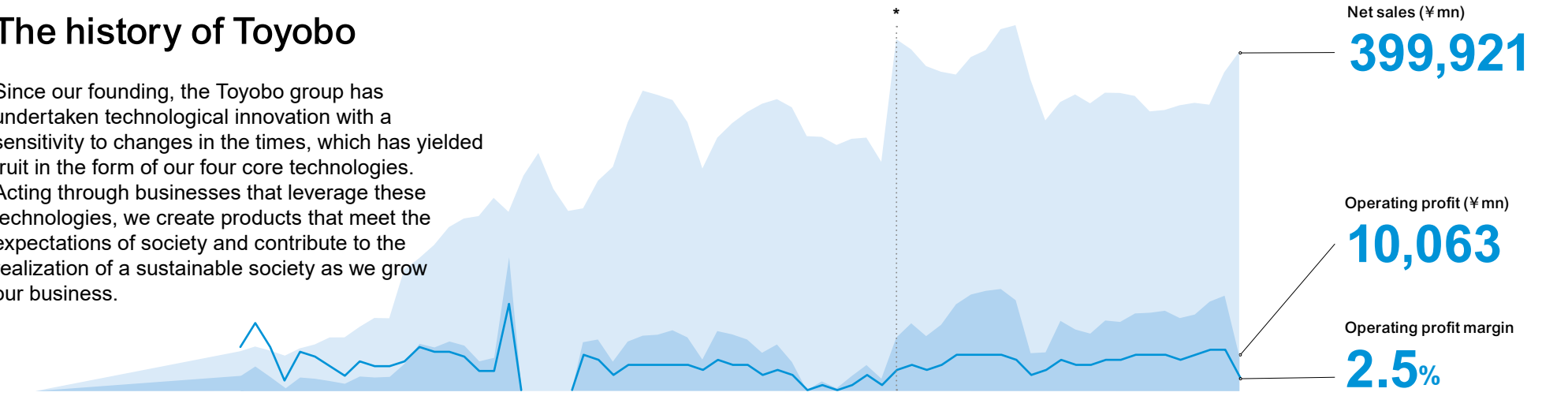
**399,921**

Operating profit (¥ mn)

**10,063**

Operating profit margin

**2.5%**



\* Consolidated net sales and operating profit (margin) from FY2000 onward

1880	1920	1960	1970	1980	1990	2000	2010	2020
		<b>1st transformation period</b> Acquisition and development of polymer technology	<b>2nd transformation period</b> Subdivision of technology					<b>3rd transformation period</b> From "creating" to "providing solutions"
<p><b>1882</b> Established Osaka Boseki. Began a spinning business in a large-scale plant, as Japan's first private company organization</p> <p><b>1914</b> Osakabo and Mie Boseki merged. Established Toyobo</p> <p><b>Spinning and weaving of natural fibers</b></p>	<p><b>1956</b> Started synthetic fiber business, beginning with acrylic fiber. Adopted polyester fiber technology in 1962</p> <p><b>1963</b> Started film business. Subsequently solidified our footing as a comprehensive manufacturer of packaging films</p> <p><b>Chemical fiber</b></p>	<p><b>1963</b> Started film business. Subsequently solidified our footing as a comprehensive manufacturer of packaging films</p> <p><b>Synthetic fiber</b></p>	<p><b>1970</b> Started plastics business based on our synthetic fiber business and polymer technologies</p> <p><b>1972</b> Entered into the diagnostic drugs and raw materials business, with yeast research in the pulp business as the foundation. Later entered into the diagnostic drug market</p> <p><b>1979</b> Started commercial sales of seawater desalination modules in the functional membrane business. Later also began provision of membranes for hemodialysis</p> <p><b>2020</b> Developed and marketed a SARS-CoV-2 detection kit capable of detection and measurement as quickly as 60 minutes from sampling</p> <p><b>Yeast and culturing</b></p>	<p><b>Making use of seawater</b> Provision of membranes used in seawater desalination equipment</p> <p><b>For clean air</b> Development and provision of equipment to efficiently absorb and detach VOCs and reuse recovered VOCs</p> <p><b>Enhancement of QOL for dialysis patients</b> Provision of membranes with outstanding filtration performance for artificial kidneys</p>	<p><b>Enhancement of digital environments</b> Provision of films with outstanding water resistance and durability for monitor screens</p> <p><b>Reducing damage from traffic accidents</b> Provision of optimal materials for use in airbags that protect passengers</p>	<p><b>Reducing food loss and waste</b> Contributing to the reduction of waste food by providing film that extends shelf life</p>	<p><b>Four core technologies</b></p> <ul style="list-style-type: none"> <li><b>Polymer technology</b> Proposal of wide-ranging technologies for the design, polymerization, and molding of polymer primary structures. Core technologies of Toyobo</li> <li><b>Biomedical technology</b> Proposal of medical materials created through high-level application of biotechnology and polymer technology developed from effluent treatment</li> <li><b>Environmental technologies</b> Integration of filtration technologies and absorption/desorption technologies, and proposal of air (vapor) and water (liquid) purification</li> <li><b>Analysis and simulation technologies</b> Foundation for computing science and years of accumulated analysis and evaluation</li> </ul>	<p><b>Solving the five social issues</b></p> <ul style="list-style-type: none"> <li>Employee well-being and human rights in the supply chain</li> <li>A healthy lifestyle and health care</li> <li>Smart communities and comfortable spaces</li> <li>A decarbonized and circular society</li> <li>Clean water areas, air, and soil, and the preservation of biodiversity</li> </ul>

## At a glance

Toyobo group applies the four core technologies it has developed over many years –polymer technology, biomedical technology, environmental technology, and analysis and simulation technology– to materials and products in varied fields that solve problems facing people and the earth. We do so in four segments: Films, Life Science, Environmental and Functional Materials, and Functional Textiles and Trading.

### Net sales by segment

Net sales in FY2023

¥**399.9** bn.



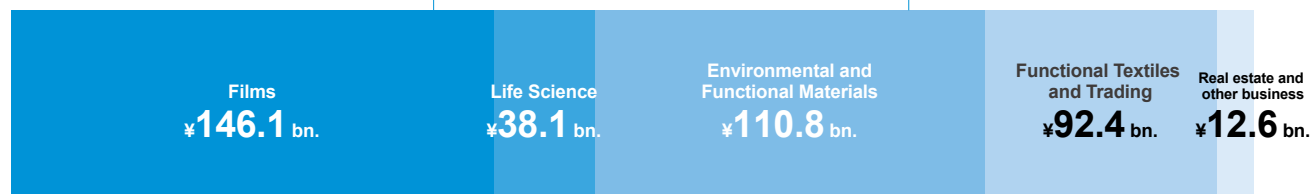
**Contributing to reduction of environmental impact and to a circular society**

Through industrial films and packaging films, we provide products that contribute to a circular society and the reduction of plastics.



**Contributing to cleaner water, air, and soil through our proprietary technology**

We provide unique membrane and filter technologies and high-performance materials that make effective use of water and other resources and that reduce environmental impacts.



(¥ bn)

Segment	Net sales	Operating profit
Films	146.1	1.6
Life Science	38.1	9.2
Environmental and Functional Materials	110.8	4
Functional Textiles and Trading	92.4	-2.5
Real estate and other business	12.6	2.2
Elimination & Corporate/company-wide	-	-4.5
Total	399.9	10.1



**Contributing to the advancement of medical care and to the enhancement of QOL for patients through biotechnology and membrane technology**

With biotechnology and membrane technology as our core technologies, we provide artificial kidney hollow fiber with outstanding biocompatibility and other high value-added products that contribute to the enhancement of QOL for patients and to the advancement of medical care.



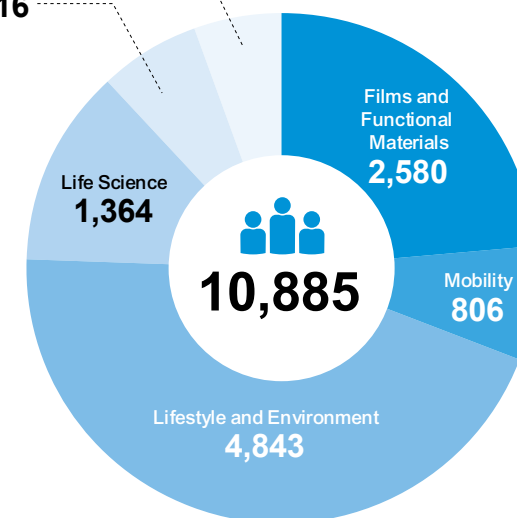
**Contributing to comfortable living through textile technology and to the reduction of environmental impacts**

From airbag fabrics to textile and eco-conscious materials, we contribute to all kinds of lifestyle scenarios through products with textile technologies at their core.

### Number of employees by segment

Company-wide (shared)  
**576**

Real estate and other business  
**716**

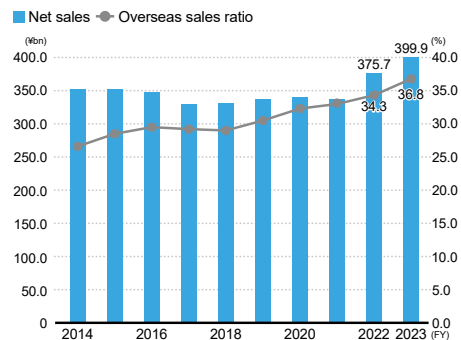


\* Indicated net sales and operating profit are figures for the consolidated fiscal year ended March 31, 2023, reorganized into post-change segments. Post-change segment results have not been audited by the Accounting Auditor.  
\* Number of employees is shown for pre-change segments for the consolidated fiscal year ended March 31, 2023.



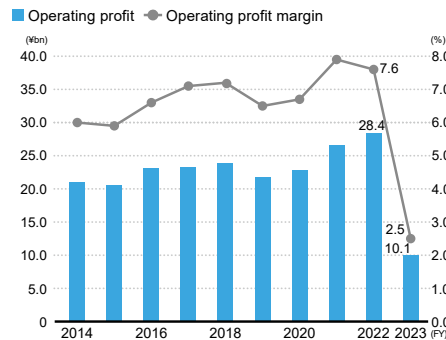
# Financial highlights

### Net sales / Overseas sales ratio



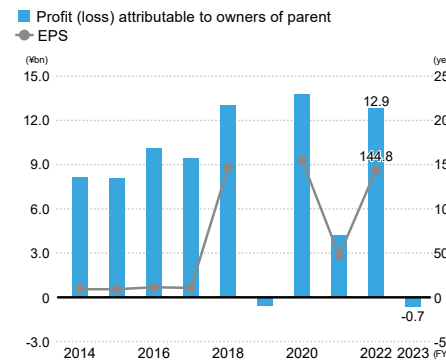
In fiscal 2023, sales prices increased in the film and other businesses in response to rising raw material and fuel prices, and sales of VOC recovery equipment and exchange elements remained strong in the environmental solutions business. As a result, net sales increased by 6.4% from the previous fiscal year to ¥399.9 billion. The overseas sales ratio reached 36.8% due to sales growth in China, Southeast Asia, and other regions, as well as the impact of the weak yen.

### Operating profit / Operating profit margin



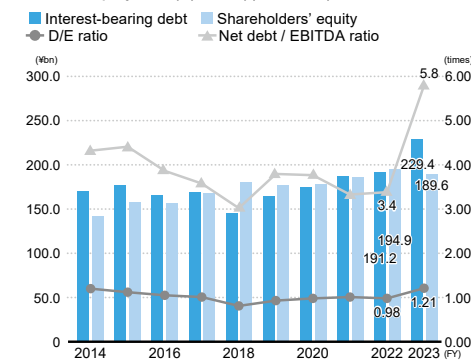
In fiscal 2023, soaring prices of raw materials and fuel affected the film, engineering plastics, non-woven material, and other businesses. Industrial films were affected by the decline in demand for products including mold releasing films for MLCC, while costs for new equipment startup increased in packaging films. As a result, operating profit decreased by 64.6% from the previous fiscal year to ¥10.1 billion.

### Profit (loss) attributable to owners of parent / EPS



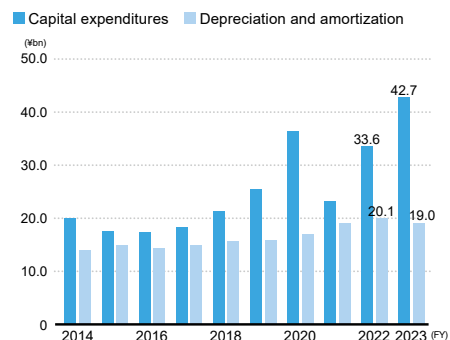
In fiscal 2023, Toyobo recorded ¥5.6 billion in insurance claim income received related to the fire at the Inuyama Plant and ¥2.9 billion from the sale of investment securities. However, the company recorded impairment losses of ¥9.8 billion related to assets scheduled for discontinuation and business assets in the nonwoven materials and other businesses, which, in addition to an operating loss, resulted in a loss attributable to owners of the parent of ¥0.7 billion.  
 \*Fiscal 2018: 10-for-1 reverse stock split of common stock. Fiscal 2019: ¥13.8 billion in losses due to fires. Fiscal 2021: ¥7.8 billion in impairment losses in the acrylic fiber business.

### Interest-bearing debt / Shareholders' equity / Debt-to-equity ratio (D/E ratio) / Net debt / EBITDA ratio



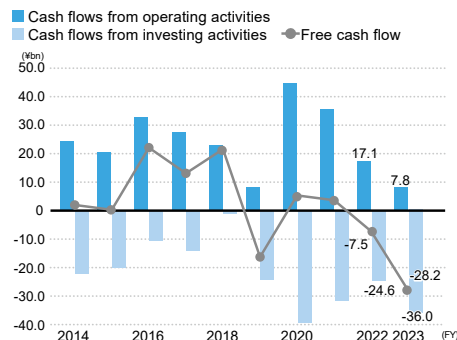
Interest-bearing debt at the end of fiscal 2023 increased by ¥38.2 billion from the fiscal previous year to ¥229.4 billion, due to financing through borrowing for capital expenditures. Conversely, shareholders' equity decreased by ¥5.3 billion from the previous fiscal year to ¥189.6 billion, resulting in a D/E ratio of 1.21. The net debt/EBITDA ratio was 5.8 due to an increase in interest-bearing debt and decrease in EBITDA.

### Capital expenditure / Depreciation and amortization



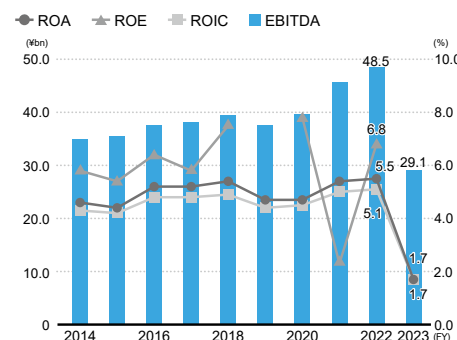
In fiscal 2023, capital expenditure increased by ¥9.1 billion from the preceding fiscal year to ¥42.7 billion. Depreciation and amortization was ¥19 billion as a result of investment in production facilities for mold releasing films for MLCC and renewal work on bio-plants and the Research Center.

### Cash flow



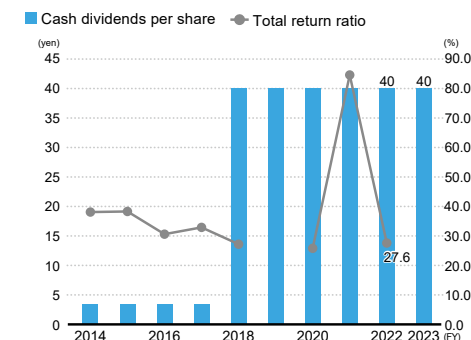
In fiscal 2023, cash flows from operating activities recorded an inflow of ¥7.8 billion owing to factors such as an increase in funds due to depreciation and amortization and a decrease in funds due to an increase in operating capital. Cash flows from investing activities recorded an outflow of ¥36 billion, owing to factors including the purchase of tangible and intangible assets. As a result, free cash flow recorded an outflow of ¥28.2 billion, a decrease of ¥20.7 billion from the previous fiscal year.

### ROA / ROE / ROIC / EBITDA



ROA and ROIC were both 1.7% due to a decrease in operating profit. ROE was -0.3% due to a loss attributable to owners of parent. EBITDA was ¥29.1 billion due to a decrease in operating profit and a decrease in depreciation and amortization.

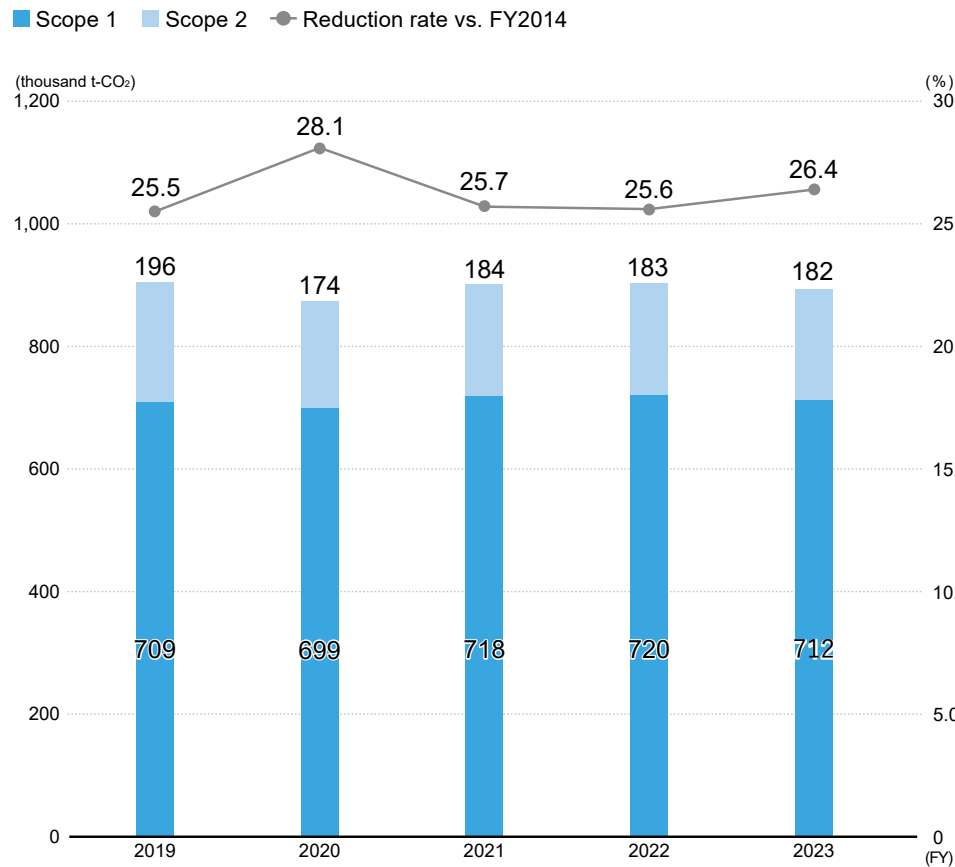
### Cash dividends per share / Total return ratio



Fiscal 2023 yielded a net loss for the year, but the company focused on shareholder returns and set a dividend of 40 yen per share.  
 \* Toyobo conducted a 10-for-1 reverse stock split of common stock on October 1, 2017.

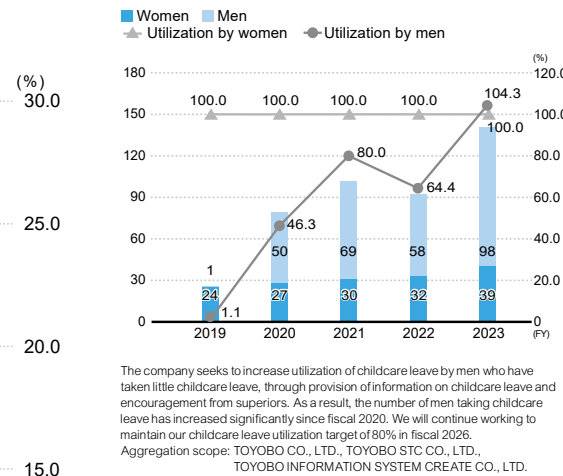
# Sustainability highlights

GHG emissions / Reduction rate vs. FY2014

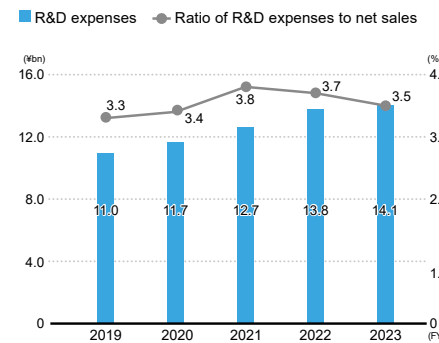


Toyobo group has set a goal of achieving carbon neutrality, with effective net zero GHG emissions, by fiscal 2051. In May 2022, we announced the raising of our fiscal 2031 target to "46% or more reduction in GHG emissions compared to fiscal 2014." In fiscal 2023, GHG emissions fell below the level of the previous fiscal year through the promotion of energy-saving activities and production efficiency improvement measures, despite a 6.4% increase in net sales.  
Aggregation scope: Consolidated

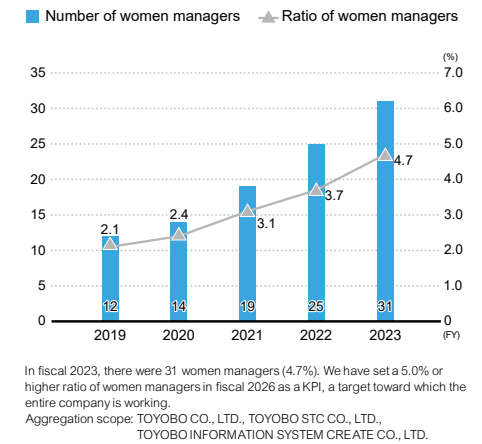
Childcare leave utilization



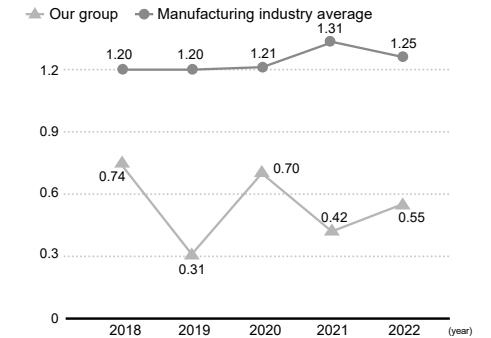
R&D expenses



Ratio of women managers



Frequency rate of workplace accidents resulting in lost workdays (rate of accidents resulting in lost workday injuries per one million hours worked)



# Sustainable Vision 2030

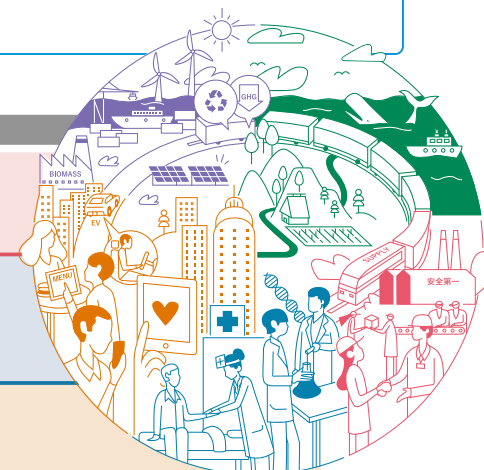
Announced in May 2022, Sustainable Vision 2030 envisions changes in the future business environment and grounds itself in our corporate philosophy of “Jun-Ri-Soku-Yu” (adhering to reason leads to prosperity). It sets out sustainability indicators and action plans from the perspective of “the Three Ps” (People, Planet, Prosperity) and from our vision of “We will continue to create the solutions needed by people and the earth with materials and science.” Our goals are to be a sustainable company that contributes to sustainability and to shift our corporate culture toward a sustainable growth orientation. We will advance an upward spiral of the realization of a prosperous and secure society and the enhancement of our corporate value.

## Social change and trends in 2030

- Standardization in handling safety, human rights and social justice issues
- Demographic changes, humancentric innovation, accelerated urbanization
- Increased and diversified needs concerning access to medical care/health promotion
- Decarbonization, resource circulation, limited natural resources

## Social issues to be solved through contribution and goals for the future

Five social issues / Goals for the future		Sustainability targets for fiscal 2031
People	<p><b>Employee well-being and human rights in the supply chain</b></p> <ul style="list-style-type: none"> <li>• People First: Employee safety, company pride, and rewarding work</li> <li>• Respect for human rights across the entire supply chain</li> </ul>	<ul style="list-style-type: none"> <li>• Zero industrial accidents in workplaces</li> <li>• Certification as a “Top 500 Company” for Outstanding Health and Productivity Management by FY2026</li> <li>• Employee engagement score: 70% or more</li> <li>• Respect for human rights across the entire supply chain</li> <li>• Expanding and improving educational and training systems for employees</li> </ul>
	<p><b>A healthy lifestyle and health care</b></p> <ul style="list-style-type: none"> <li>• Contributing to the field of epidemiology</li> <li>• Contributing to improve quality of life</li> </ul>	<ul style="list-style-type: none"> <li>• Number of tests conducted by the provision of infectious disease diagnostics, etc.: 10 million per year</li> <li>• Number of dialysis patients provided with Toyobo dialysis membranes: 250,000</li> <li>• Share in the market of raw materials for biochemical and other tests: 30%</li> <li>• Number of patients provided with Toyobo regenerative inducers: 100,000 per year</li> <li>• Proliferation and expanded sales of 3D network-structured fiber materials in the medical and nursing care fields</li> </ul>
	<p><b>Smart communities and comfortable spaces</b></p> <ul style="list-style-type: none"> <li>• Contributing to the realization of a humancentric digital society</li> <li>• Creating of comfortable spaces</li> </ul>	<ul style="list-style-type: none"> <li>• Sales of product groups supporting DX: 1.5-fold increase over FY2021</li> <li>• Cumulative sales of car cabin air filters: 1.2 million units</li> <li>• Creation of a comfortable space inside electric vehicles through sound and heat management</li> </ul>
Planet	<p><b>A decarbonized and circular society</b></p> <ul style="list-style-type: none"> <li>• Contributing to carbon neutrality</li> <li>• Establishing an ecosystems for circulating resources</li> </ul>	<p><b>Decarbonized society</b></p> <ul style="list-style-type: none"> <li>• Ratio of GHG emissions reduction in Scope 1 and 2: 46% or more compared with FY2014</li> <li>• Net zero in FY2051</li> <li>• Avoided emissions &gt; Amount of GHG emissions throughout the entire value chain</li> <li>• Entry into new solution fields</li> </ul> <p>Osmotic power generation, offshore cables and insulating resin for wind power generation, adhesive sheets for cells used in fuel cell vehicles, electrode materials for large storage batteries, hydrogen-related materials, etc.</p> <p><b>Circular society</b></p> <ul style="list-style-type: none"> <li>• Achieve final disposal rate from business activities: Less than 1%</li> <li>• Ratio of green films: 60%</li> <li>• Join resource circulation ecosystem (R PLUS JAPAN)</li> </ul>
	<p><b>Clean water areas, air, and soil, and the preservation of biodiversity</b></p> <ul style="list-style-type: none"> <li>• Improving the environment through solutions</li> <li>• Food loss reduction and sustainable food</li> </ul>	<ul style="list-style-type: none"> <li>• Air volume treated by the volatile organic compound recovery equipment: 7 billion Nm<sup>3</sup> per year</li> <li>• Desalination of sea water using membranes: Equivalent to the volume of tap water for 10 million people</li> <li>• Sales volume of highly functional films that contribute to reducing food loss: Fourfold increase over FY2021</li> <li>• Entry into sustainable food field</li> </ul>



## Where we'd like to be by 2030

**Prosperity** Advance an upward spiral of the realization of a prosperous and secure DX society and the enhancement of our corporate value

## Sustainable Vision 2030

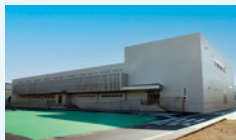
## Fiscal 2023 initiatives that contribute to solving the five social issues



## Innovation

**Renewal of the Research Center to strengthen R&D functions**

To accelerate the creation of innovation that contributes to solving social issues while utilizing and integrating the four core technologies —polymer, biomedical, environmental, and analysis and simulation technologies— that Toyobo has developed and to strengthen our R&D functions, we will undertake a major renewal of the Research Center, our hub for R&D in Otsu, Shiga Prefecture. As the first phase in the work, in January 2023 we completed the Pilot Plant Building that will engage in development and testing of prototypes aimed at the practical application of new products and technologies, centered on high-performance films.



## Innovation

**Conclusion of comprehensive partnership agreement with Kobe University, and public implementation of joint research outcomes**

On April 11, 2022, Kobe University and Toyobo signed an “Agreement on the Promotion of Comprehensive Industry-Academia Collaboration” with the aim of advancing research and technology and contributing to society. Following exchanges of human resource and joint research that includes the development of energy-saving seawater desalination technology using forward osmosis (FO) membranes, the parties have now agreed to further strengthen their partnership. From here on out, the parties will accelerate the public implementation of research outcomes by advancing joint research primarily in the environment field, such as membrane technology that contributes to carbon neutrality, and in the life science field, which leads to enhancement of quality of life (QOL), while also studying measures to contribute to more active human resources exchanges and to human resource development.

**Conclusion of comprehensive partnership agreement with Kobe University**



## Employee well-being and human rights in the supply chain

**First “Top 500 Company” certification under the 2023 Health & Productivity Management Outstanding Organizations Recognition Program**

In March 2023, Toyobo received its first certification as a “Top 500 Company” (large enterprise category), a certification given to outstanding organizations in the 2023 Certified Health & Productivity Management Outstanding Organization Recognition Program conducted jointly by the Ministry of Economy, Trade and Industry and the Nippon Kenko Kaigi (Japan Health Council).



## A healthy lifestyle and health care

**Strengthening of development and production structure for PCR test reagents and genetic diagnostics raw materials**

We will invest approximately ¥6.5 billion in the Tsuruga Biochemicals Plant (Tsuruga, Fukui Prefecture) and establish a new facility to manufacture PCR test reagents used in genetic testing and raw materials for genetic diagnostic such as enzymes and antibodies. Construction is set to begin in March 2023, followed by operation in November 2024.



## Smart communities and comfortable spaces

**BREATHAIR® adoption by Nishikyushu Shinkansen “Kamome”**

On September 23, 2022, Toyobo's BREATHAIR® 3D network-structured fiber materials, which features light weight, high resilience, outstanding durability, and breathability, was adopted for use in all non-reserved seats of the Nishikyushu Shinkansen “Kamome” train newly operated by Kyushu Railway Company.

**BREATHAIR® adopted by Nishikyushu Shinkansen “Kamome”**



## A decarbonized and circular society

**New film production facility and start of mass production**

Our Inuyama Plant (Inuyama, Aichi Prefecture) built a new facility to produce biaxially-oriented polypropylene (OPP) films for food packaging and industrial materials and began mass production of some brands in February 2023. In the facility, we have introduced state-of-the-art film-making machinery that reflects our many years of know-how in the film business, and are strengthening our supply structure for environmentally conscious film products. We will ramp up production of brands in turn at later dates.

**Other examples of a decarbonized and circular society**

- Acquisition of SBT initiative certification for greenhouse gas emission reduction targets
- Issuance of sustainability-linked bonds



## Clean water areas, air, and soil, and the preservation of biodiversity

**Cooperation with the “Lake Biwa 100-Point Survey” Acceleration of initiatives to preserve biodiversity**

The Research Center, Toyobo's R&D base in Shiga Prefecture, has been involved in activities to preserve biodiversity at Lake Biwa. Since fiscal 2023, it has accelerated its efforts through cooperation with the “Lake Biwa 100-Point Survey” conducted by the Center for Biodiversity Science of Ryukoku University. The Research Center will take part in the yearly sampling work conducted by voluntary organizations and local companies, while independently performing regular sampling of Lake Biwa water at the company premises and cooperating with the collection of data over time.

**Acceleration of initiatives to preserve biodiversity at Lake Biwa**

# Materiality



To meet the demands and expectations of our stakeholders and realize our aim to be “a group that continues to create the solutions needed by people and the earth,” Toyobo group identifies material issues and enacts initiatives through business activities.

## Toyobo group's materiality

Our group's material issues are set on the basis of Sustainable Vision 2030, which we announced in May 2022.

Working from the two axes of influence on stakeholders and influence on our group, we clarified high-priority targets and organized them into four areas: “contributing to the solving of social issues through business,” “human capital,” “environment and manufacturing,” and “business bases” (see diagram below).

## Process of identifying material issues

With reference to external initiatives and 12 international guidelines, including the GRI Standards, we selected candidate items. The positive and negative impact of these social issues were clarified through internal questionnaires and interviews, and, taking into account the views of external parties such as institutional investors, we finally determined our material issues with approval by the Board of Directors.

As a result of the discussions by the Sustainability Committee, we also decided to separate quality agenda from compliance and add chemical substances management. We will review our goals and KPIs, including these items, in fiscal 2024.

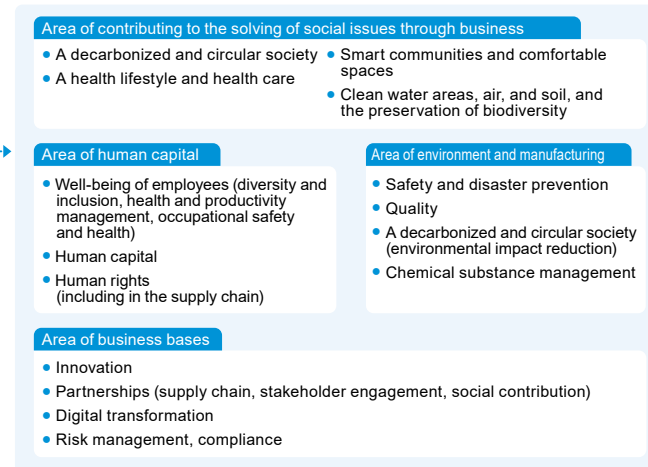
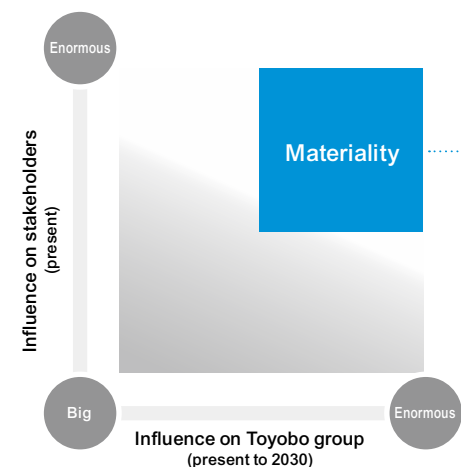
## Management of materiality KPIs (PDCA)

To steadily ensure the progress of our materiality initiatives, we have assigned officers in charge of each materiality and have formulated KPIs and targets.

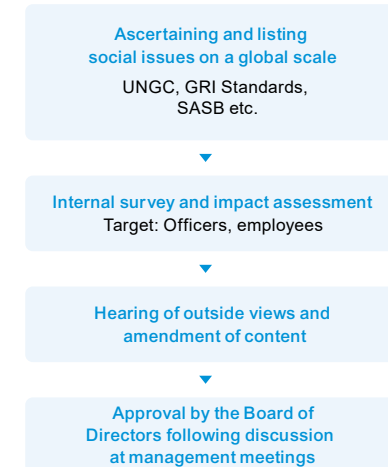
We report and share information on progress toward the KPIs two times a year within the Sustainability Committee, and, in accordance with progress status, work toward continuous enhancement of our efforts by reviewing KPIs and targets.

The content of discussions within the Sustainability Committee is also reported to the Board of Directors as appropriate.

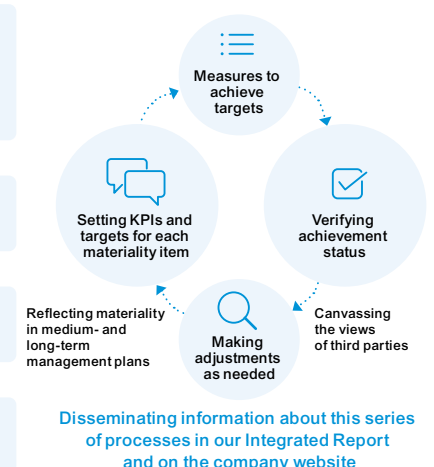
### Materiality map



### Identification process



### KPI management (PDCA)





# Materiality

## Materiality KPIs

April 1, 2023

Category	Major items	Related SDGs	Officer in charge	KPIs: Timeframe for achievement set for each theme		
				Themes	Targets (single fiscal year targets)	FY2023 results
Area of contributing to the solving of social issues through business	<b>E</b> : A decarbonized and circular society		Taichi Sakai Managing Executive Officer Head of Safety and Disaster Management Division	1) Scope 1, 2 greenhouse gas emissions (consolidated) 2) Expansion of ECO-PARTNER SYSTEM® products and services that contribute to the environment (TOYOBO CO., LTD. only)	1) Reduction of emissions by at least 46% compared to FY2014* 2) Sales ratio of 40%**  *Target set in anticipation of increase in greenhouse gas emissions associated with expansion of targeted sales in FY2031 (assumed ¥500 billion in FY2031) **FY2031 target	1) 26.4% reduction (894 thousand t-CO <sub>2</sub> ) 2) 35%
	<b>S</b> : Employee well-being (diversity and inclusion, health and productivity management, occupational safety and health) <b>S</b> : Human capital		Takehiko Inada Executive Officer Controlling Supervisor of HR, Administration and Legal Division	1) Number of core overseas personnel undergoing training in Japan 2) Training investment per employee (and training time) 3) Ratio of women managers 4) Ratio of annual paid leave taken 5) Reduction in annual time worked outside specified working hours (no. of employees working more than 360 hours of overtime per year / total no. of employees) 6) Ratio of men employees taking childcare leave 7) Certification as a "Top 500 Company" for Outstanding Health and Productivity Management 8) Improvement in how positive employees feel about their work, based on employee engagement surveys a. Percentage of respondents agreeing with the statement that they do not feel that their day-to-day work is difficult to perform b. Percentage of respondents agreeing with the statement that the company respects the diverse views and ideas of each individual employee	1) 15 employees per year* 2) ¥50,000 per year, 21 hours* 3) 5.0% or above* 4) 75%* 5) 2.0% or lower (reduction of 20% from FY2020)* 6) At least 80% of eligible men employees taking childcare leave, with average leave of 14 days or more (20% increase from FY2021)* 7) Acquisition/maintenance* 8) Increase in the percentage of respondents agreeing with this statement  * FY2026 target	1) Canceled because of COVID-19 (894 thousand t-CO <sub>2</sub> ) 2) 4.7% 3) 4.7% 4) 80.2% 5) 4.2% 6) 104.3% of eligible men employees; average leave taken: 14.8 days 7) Certification as a 2023 "Top 500 Company" for Outstanding Health and Productivity Management 8) a. 38% b. 50%
	<b>S</b> : Human rights (Toyobo group)		Takehiko Inada Executive Officer Controlling Supervisor of HR, Administration and Legal Division	1) Implementation of human rights education and training 2) Employment ratio of people with disabilities	1) Once a year for 20% of non-consolidated* employees 2) 2.3%  * TOYOBO CO., LTD., TOYOBO STC CO., LTD., and TOYOBO INFORMATION SYSTEM CREATE CO., LTD. * FY2026 target	1) 48.0% 2) 2.3%
Area of environment and manufacturing	<b>E, S, G</b> : Safety and disaster prevention		Taichi Sakai Managing Executive Officer Head of Safety and Disaster Management Division	1) No. of major accidents* 2) Frequency rate of workplace accidents resulting in lost workdays 3) No. of fires or explosions 4) No. of spills  * Set internal standards based on definitions stipulated by the Ministry of Health, Labour and Welfare	1) 0 accidents per year 2) 0.25 or less 3) 0 accidents per year 4) 0 accidents per year  Tabulated by calendar year	1) 0 accidents 2) 0.55 3) 0 accidents 4) 0 accidents
	<b>S, G</b> : Quality		Masakazu Iwasaki Executive Officer Head of Quality Assurance Division	1) No. of incidents related to products* 2) Implementation of product safety and quality assurance training  * Set internal standards based on definitions stipulated by the Ministry of Economy, Trade and Industry	1) 0 accidents per year 2) 100%	1) 0 accidents 2) 100%
	<b>E</b> : A decarbonized and circular society (environmental impact reduction)		Taichi Sakai Managing Executive Officer Head of Safety and Disaster Management Division	1) VOC emissions (total for operations in Japan) 2) Discharge of hazardous substances into water (total for operations in Japan) 3) Waste volume (consolidated) 4) Final disposal (landfill disposal) rate (total for operations in Japan)	1) 60% reduction from FY2015* 2) 80% reduction from FY2015* 3) 15% reduction from FY2016* 4) Less than 1% every year  * FY2031 target	1) 60% reduction 2) 71% reduction 3) 13% increase 4) 0.4%

\* In April 2023, the company merged with TOYOBO INFORMATION SYSTEM CREATE CO., LTD.



# Materiality



## Materiality KPIs

April 1, 2023

Category	Major items	Related SDGs	Officer in charge	KPIs: Timeframe for achievement set for each theme		
				Themes	Targets (single fiscal year targets)	FY2023 results
Areas of business Bases	G: Governance		Takehiko Inada Executive Officer Controlling Supervisor of HR, Administration and Legal Division	1) No. of meetings of the Board of Directors/committees 2) Attendance rate of officers at meetings in 1) 3) Effectiveness evaluation of the Board of Directors, content disclosure	1) Disclosure of results 2) Disclosure of results 3) Disclosure of details of effectiveness evaluation	1) 23 meetings 2) Attendance by directors and corporate auditors at meetings >p.71 3) Evaluation of the effectiveness of the Board of Directors >p.75
	E, S: Innovation		Katsuya Ito Executive Officer Controlling Supervisor of Innovation Division	1) Percentage of research themes that contribute to achievement of Sustainable Vision 2030 2) Direct investment in open innovation (commercialization PoC with invested companies, start of joint development, etc.) 3) No. of cases of intellectual property information analysis 4) No. of cases of business termination due to patent infringement 5) No. of intellectual property training sessions for employees (Toyobo and group companies) 6) Profit contribution through the securing of intellectual property rights (expansion of intangible assets) 7) No. of industry-academia-government comprehensive cooperative projects	1) At least 90% in FY2026 2) 4 cases or more per year 3) 20 cases per year 4) 0 accidents per year 5) Toyobo: 13 times; group companies: 6 times 6) Under review 7) 2 cases	1) July 2023 evaluation 2) 2 cases 3) 17 cases (FY2023 target: 14 cases) 4) 0 accidents per year 5) Toyobo: 15 times; group companies: 7 times 6) — 7) 2 cases
	E, S: Partnerships (supply chain)		Nobuya Fujiwara Managing Executive Officer Head of Corporate Sustainability Division Controlling Supervisor of Procurement and Logistics Department	1) Ratio of biennial CSR procurement surveys returned 2) Ratio of reduction in CO <sub>2</sub> emissions (basic unit) related to logistics (sales)	1) 90% or above (In years when survey is not implemented, we carry out dialogue with business partners that had issues in past surveys) 2) Year on year reduction of 0.5%	1) Response and engagement following surveys 2) Year on year reduction of 5.3%
	S, G: Partnerships (stakeholder engagement)		Nobuya Fujiwara Managing Executive Officer Head of Corporate Sustainability Division Controlling Supervisor of Procurement and Logistics Department	1) No. of press releases 2) No. of interviews with investors 3) Frequency of meetings with employees and labor unions 4) Frequency of engagement with stakeholders	1) 75 per year 2) 150 per year* 3) At least 30 times per year 4) Twice a year  * 2) covers the period from August 2022 to July 2023	1) 103 2) 124 3) 77 times 4) 3 times
	S, G: Partnerships (social contribution)		Nobuya Fujiwara Managing Executive Officer Head of Corporate Sustainability Division Controlling Supervisor of Procurement and Logistics Department	1) Clean activities (outside company)	1) 70% (Non-consolidated + domestic group companies, implementation rate at all sites)	1) FY2023: 93%
	S, G: Digital transformation (data security, privacy)		Ichiro Takai Senior Managing Executive Officer Controlling Supervisor of Corporate Planning Division	1) No. of information security education sessions* 2) No. of incidents (information leaks, service outages, etc.)* 3) Implementation of information security measures**  * Scope is TOYOBO CO., LTD., TOYOBO STC CO., LTD., and TOYOBO INFORMATION SYSTEM CREATE CO., LTD. ** Scope is 63 directly or indirectly held group companies; Specific measures for target group companies: • Roll-out of Information Security Policy • Implementation of education and training • Roll-out of IT reinforcement measures • Development of incident structure	1) 15 times per year 2) 0 incidents per year 3) 100% completion (FY2023-2025)	1) 51 times 2) 0 incidents 3) Promotion of activities with the Cyber Security Committee in central role
	S, G: Compliance		Takehiko Inada Executive Officer Controlling Supervisor of HR, Administration and Legal Division	1) Increase in awareness of compliance 2) Awareness and use of Compliance Consultation Desks 3) No. of serious legal violations	1) Improvement in compliance questionnaire responses a. Does the company emphasize compliance? b. Awareness of case study reports, expansion of compliance study sessions and other training c. Frequency of compliance study sessions (managers) and other training 2) Improvement in compliance questionnaire responses a. Awareness of Compliance Consultation Desks b. Ease of use of Compliance Consultation Desks c. Disclosure of no. of cases handled 3) 0 cases	1) a. I feel that it does, or by and large I feel that it does: 81% b. I read every issue, or I sometimes read it, or I read those articles that are of interest to me: 78% c. Compliance study sessions: 20 times + video streaming to all employees Other training: 38 times 2) a. 90% b. I would like to try using it, or I can't really say one way or the other: 92% 78 cases 3) 0 violations
	S, G: Compliance (R&D, intellectual property)		Katsuya Ito Executive Officer Controlling Supervisor of Innovation Division	1) No. of product safety or quality assurance violations in the R&D QA system 2) No. of violations of ministerial guidelines or of funding bodies' rules 3) No. of violations of rules governing handling of research topics 4) No. of cease and desist orders received relating to display/items	1) 0 violations per year 2) 0 violations per year 3) 0 violations per year 4) 0 orders per year	1) 0 violations 2) 0 violations 3) 0 violations 4) 0 orders

\* In April 2023, the company merged with TOYOBO INFORMATION SYSTEM CREATE CO., LTD.



# 02

## Value creation strategy

- 19 CFO message
- 21 2025 Medium-Term Management Plan
- 25 Innovation
- 29 Toward digital transformation

# CFO message

## We will respond with agility to business environment changes, and perform cash allocation to increase corporate value

### Hiroshi Otsuki

Representative Director and Senior Managing Executive Officer, CFO, Controlling Supervisor of Management and Administration Division

#### The mission of the CFO is to perform accurate cash allocation while discerning market structure that is in flux

In the fiscal year ended March 31, 2023, drastically rising raw material and fuel prices impacted many of our businesses, while worsening market conditions also affected our core business of film, leading to a decline in near-term profits. As I see it, the worldwide rise in raw material and fuel prices is not temporary, and probably represents irreversible changes in cost structure. In addition, given that fixed costs of investment in human capital and GHG emissions reduction are expected to rise, we are again made aware that the conventional method of passing increased manufacturing costs through to sales prices will not be enough. We must set product prices that are appropriate to assumed increases in business cost as we also work to develop products with higher added value.

As CFO, the most important mission I have is that of executing cash allocation accurately to increase corporate value as we respond with agility to essential changes in the structure of the market. In our previous medium-term management plan, we set the target for our D/E ratio at lower than 1.0, and we achieved this guideline for financial soundness. Because to make progress with upfront investment toward future growth in our 2025 medium-term management plan (2025 MTP, FY2023 to FY2026), we need to exercise control to keep from disrupting the balance between cash flow generation capacity and interest-bearing debt. In addition to the D/E ratio, our policy is therefore to use the Net Debt/EBITDA ratio as a means of managing our financial condition stably.

Highlights of our financing activities in the fiscal year ended March 31, 2023 included completion of repayment of a subordinated loan procured immediately after the 2008 financial crisis. As a new source of capital procurement, we then issued sustainability-linked bonds, as a type of environmental bond. To improve our asset efficiency, we have also been reviewing the significance of our cross-shareholdings more intensively, and continued selling them during this fiscal year.

#### Improving profitability through reorganization of the business portfolio

We have identified the term of the 2025 MTP as a four-year period for “remaking and preparing” that will serve as a milestone on the way toward achieving the goals we have laid out in Sustainable Vision 2030. The crucial task will be thoroughgoing execution of reorganization of the business portfolio. Even among products that are generating a profit today, I would rather not pass products down to the younger generation which will diminish in value from a long-term perspective. It’s easier said than done, and will entail some extremely difficult decisions, but I feel strongly that we must find out whether we can gain the world’s recognition of the value of TOYOBO products, determine their intrinsic appeal, and accelerate the reorganization of our business portfolio.

As the 2025 MTP clearly states, in order to thoroughly implement this business portfolio reorganization, we have stratified



## CFO message

each of our businesses with respect to two axes, profitability and growth potential, and we specify the hurdle rate for each one in terms of ROCE and CAGR. The Board of Directors performs a rigorous check of each business operation based on these factors, looking at how much capital the operation has and how it is positioned relative to its hurdle rate. It then deliberates actions that might be taken.

Of the three businesses that require improvement, textiles, airbag fabrics and contract manufacturing of pharmaceuticals, we are steadily moving ahead toward profitability under a plan that is in line with our profit improvement roadmap. Moreover, we will steadily execute growth strategies for the film and life science businesses, which we have positioned as businesses focusing on expansion, and will expand our environmental and functional materials business through TOYOBO MC Corporation, while ensuring that about 4% of our sales amount goes to R&D investments in preparation for the future.

In advancing the reorganization of the business portfolio described above, our intention for the 2025 MTP is to maintain an overall ROE of 7.0% and ROIC of 5.0%. The fact that our group's PBR is currently below 1.0 is something we take seriously. While working hard to boost our profitability (ROE and ROIC), we will also work on communicating our growth potential in a way that is even more readily understood. While continuing to advance management with an awareness of the cost of capital, we will

proactively communicate to all of our stakeholders the fact that we are a company that can aim for sustained robust growth into the future by providing high-value-added products that meet society's needs.

### Ensuring consistency between management strategy and our human resource base, while aiming for transformation into a company with an interesting “something extra”

Under Sustainable Vision 2030, our group has defined several issues and business opportunities that we could not sufficiently respond to within the time frame of our previous medium-term management plans. Although we have formulated a series of action plans, we acknowledge that one major prerequisite to executing them is securing a human resource base. I have the sense that during the long period of our group's structural reform, our efforts to secure and train the necessary human resources have not necessarily been sufficient. In taking this reflection to heart, I believe we must ensure that our management strategy and human resource base are consistent with each other.

And yet, merely securing from somewhere else the human resources that we need to implement our current business operations will not be sufficient for us to fulfill our aspiration to be a group that discerns the changes happening in the world, creates appealing products, and develops together with our customers. Only people are capable of creating businesses of the future, unbound by the present. I am aware of a strong need to get back to this point of departure, and to transform everything from our personnel system to our organizational culture.

We recently performed a thorough review of our personnel evaluation system, and I think that creating a workplace environment that enables people to engage cheerfully and with liveliness will make the implementation of our business more interesting.

In looking back on the past of businesses that have driven our group's growth, we see many cases in which the technologies nurtured through persistent efforts of employees have borne fruit because the employees believed in the interesting future developments they were working toward, even if they could not produce profit immediately. I believe that by establishing an environment that ensures psychological safety conducive to

free expression of opinions while encouraging wholehearted acceptance of challenges, we can enable our employees' abilities to flourish, please our customers, and come closer to our group's vision of being a group that continues to create the solutions needed by people and the earth with materials and science.

The Toyobo group encourages everyone throughout the group to engage in “casual discussions on serious issues,” from management on down. Chatting with employees in various situations makes me aware of completely fresh perspectives and things happening in the world. I get a sharp sense of how those of us in management understand only a portion of what is happening in the world. I think we can make strong progress as a sustainable company by making this a company with an awareness of generational, gender and other forms of diversity which takes an interest in sharing different perspectives and values that have not existed in the past (i.e., “something extra”).

### At the stage of forward-looking investment for growth. Working to link shareholder returns with business performance toward a target of 30% total return ratio

Returning profit to all of the shareholders is the most crucial matter for a company, and one of its most important cash allocation priorities. We are now at the stage in which we make forward-looking investments, and spend money boldly in areas of priority investment. Since investment will be particularly extensive during the period of the 2025 MTP, our cash allocation involves the use of external capital procurement while also distributing dividends. For the fiscal year ending March 31, 2024, we anticipate distribution of a ¥40 per share annual dividend. We will work on linking shareholder returns to business performance during the 2025 MTP period as we target a total return ratio of 30%. I would like to ask all of our shareholders for their long-term support for us, the Toyobo group, as we accelerate our harvest of the fruits of our investment, and steadily move forward toward the ideals we seek to realize.

Management and financial indicators referenced  
 ROCE: Return on capital employed  
 CAGR: Compound annual growth rate  
 ROE: Return on equity  
 ROIC: Return on invested capital  
 PBR: Price to book value ratio



# Transformation to sustainable growth: 2025 Medium-Term Management Plan

— The first stage of rebuilding and preparing toward achieving our ideal for 2030 —

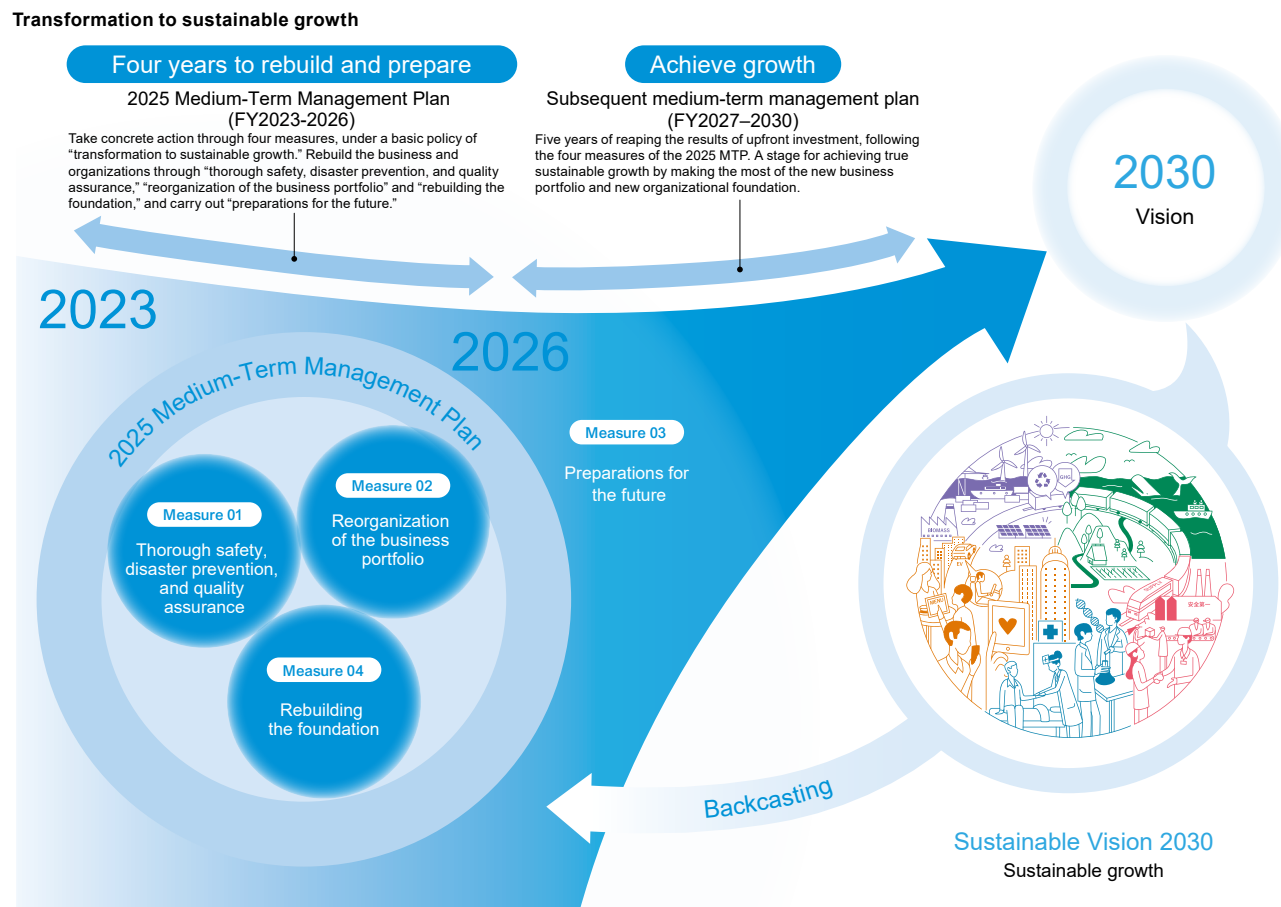
In May 2022, the Toyobo group broke away from our former survival mindset and announced Sustainable Vision 2030, with the aim of sustainable growth.

Toward the realization of this goal, we have formulated and launched the four-year 2025 Medium-Term Management Plan, which lays the foundation for growth.

## Depicting sustained growth amid a discontinuous business environment undergoing massive changes

As we entered the 2020s, a pandemic, large-scale natural disasters, and major political changes have occurred, the impacts of which have brought discontinuous, dramatic change to the business environment for companies. New challenges are emerging in rapid succession, including the orientation toward decarbonization and circular economies, DX-driven acceleration of technological progress and social implementation, resource prices remaining high globally, disruption and blockage of supply chains, and alterations in people's awareness, values, and behavior, all of which require companies to attend to all stakeholders while increasing their corporate value.

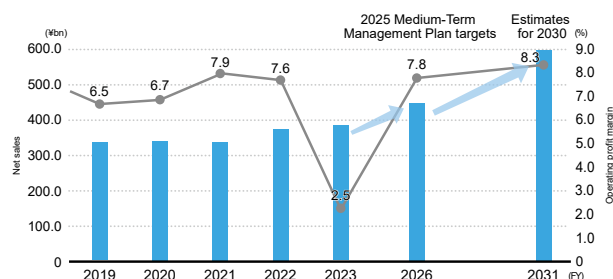
In order to aim for future growth while confronting this epochal turning point, companies must speed up their own transformation. Our group aims to achieve sustainable growth through Sustainable Vision 2030, in which we set forth our ideal: We will continue to create the solutions needed by people and the earth with materials and science. We identified fiscal 2026 as a milestone on the way to our vision for 2030, initiating the 2025 Medium-Term Management Plan (2025 MTP) in fiscal 2023. We have identified the 2025 MTP as four years in which to rebuild and prepare for the transformation to sustainable growth, and have solidified our course toward reforming our businesses and making forward-looking investments in growth. Moreover, the subsequent medium-term management plan, starting from fiscal 2027, represents the next stage, in which we will achieve genuine growth by reaping the fruits of these efforts.



## Transformation to sustainable growth: 2025 Medium-Term Management Plan

### The 2025 Milestone

—Medium-Term Management Plan Targets and vision concept for 2030—



### 2025 Medium-Term Management Plan financial targets

	FY2022 results	FY2023 results	2025 MTP targets	2030 vision concept
Sales (billions of yen)	375.7	399.9	450.0	600.0
Operating profit (billions of yen)	28.4	10.1	35.0	50.0
Operating profit margin (%)	7.6	2.5	7.8	8.3
EBITDA (billions of yen)	48.5	29.1	63.0	90.0
Net profit (billions of yen)	12.9	-0.7	15.0	23.0
ROE(%)	6.8	-	≥7.0	≥9.0
ROIC(%)*1	5.1	1.7	≥5.0	≥7.0
D/E ratio	0.98	1.21	<1.20	<1.00
Ratio of net debt to EBITDA (multiples)*2	3.4	5.8	<5.0	<4.0

\*1 NOPAT ÷ (interest-bearing liabilities + net assets)

\*2 (interest-bearing liabilities - cash and deposits) [at fiscal year end] ÷ EBITDA

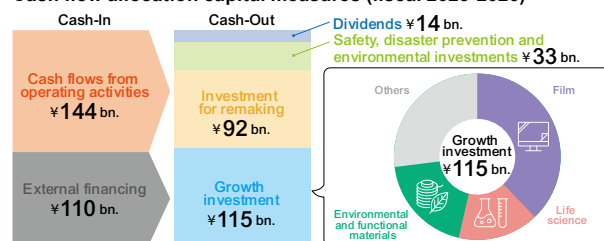
### • Interim targets toward our vision: Sales of ¥450 billion, operating profit of ¥35 billion

Under our Sustainable Vision 2030 financial targets, we envision sales on the order of ¥600 billion, operating profit of ¥50 billion, and ROE of 9.0% or higher. Now almost at its mid-point, the 2025 MTP specifies financial targets for fiscal 2026, the final year of the plan, that include sales of ¥450 billion, operating profit of ¥35 billion, and ROE of 7.0% or higher.

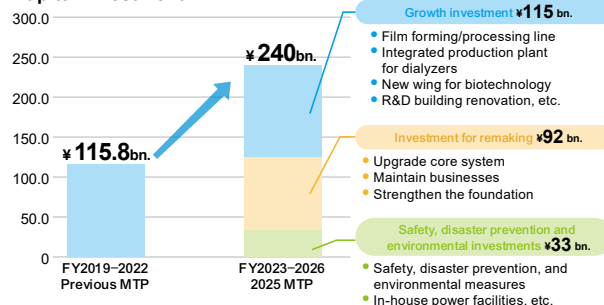
### Execute strategic investments for growth

—Cash allocation—

#### Cash flow allocation capital measures (fiscal 2023-2026)



#### Capital investment



### • Three investment objectives: Safety, disaster prevention, and the environment; rebuilding; and growth

We will invest ¥240 billion, approximately doubling the amount of the previous medium-term management plan. With top priority on investments in safety and disaster prevention, as well as on addressing the environment, we will invest ¥115 billion of growth investments in the three businesses of film, life science, and environmental and functional materials. In fiscal 2023, we made our investments more or less according to plan. As sources of funding, we expect to use ¥144 billion (estimated) of operating cash flow, as well as externally procured funds of ¥110 billion, for which we have specified financial management indicators defining the limits within which we plan to raise these funds, including a D/E ratio of less than 1.2, and a net debt/EBITDA multiple of 4.

### Building a foothold for growth and great strides forward

—Four measures—

Measure 1	Thorough Safety, Disaster Prevention, and Quality	<ul style="list-style-type: none"> <li>Implementation of “Zero Disaster,” our Master Plan for Safety and Disaster Prevention</li> <li>Rebuilding of our quality assurance management system</li> <li>Strengthening of our risk management system</li> </ul>
Measure 2	Business Portfolio Realignment	<ul style="list-style-type: none"> <li>Business stratification (return on capital employed and average annual growth rate)                             <ol style="list-style-type: none"> <li>Expansion prioritization: Implement proposed growth measures and strengthen competitive advantages</li> <li>Stable profit: Explore growth or maintain improvements</li> <li>Necessary improvements: Execute the Master Plan toward achieving our proper state</li> </ol> </li> </ul>
Measure 3	Preparing for the Future	<ul style="list-style-type: none"> <li>Creation of new businesses and technologies: Strengthen environmental and biotechnology</li> <li>DX strategies: Sales force automation (SFA), materials informatics (MI), smart plants, new ways of making money</li> <li>Roadmap to carbon neutrality (2050)</li> </ul>
Measure 4	Rebuilding Our Foundation	<ul style="list-style-type: none"> <li>Development of human resources and promote diversity</li> <li>Workplace manufacturing capabilities</li> <li>Establishment of business infrastructure</li> <li>Governance and compliance</li> <li>Organizational culture reform</li> </ul>

### • Reforms based on key concepts: Social problem-solving, sustainability, and the workplace taking the leading role

We are undertaking four measures in the 2025 MTP. The first of these is “thoroughgoing safety, disaster prevention and quality,” which we have specified as a matter of the highest priority in gaining our stakeholders’ unwavering trust. The second measure is “business portfolio realignment,” in which we assess each business with respect to the two axes of profitability and growth potential. We categorize this among the four quadrants of “businesses to be newly developed,” “businesses to be prioritized for expansion,” “businesses requiring improvement,” and “businesses with stable profit.” We then implement measures at each business stratum. Our three pillars of growth are film, life science, and environmental and functional materials. The third measure is “preparing for the future,” in which we take a long-term perspective on advancing the creation of innovations in which we combine core technologies with marketing and digital technologies and know-how.

The fourth measure is “rebuilding our foundation,” in which we advance reconstruction according to five themes in order to establish a robust structure for sustainable growth: Developing human resources and promoting diversity, frontline workplace manufacturing capabilities, development of business infrastructure, governance and compliance, and reform of organizational culture.

## Transformation to sustainable growth: 2025 Medium-Term Management Plan

### Measure 1 Thorough safety, disaster prevention, and quality

#### • In fiscal 2023, we achieved zero serious accident incidents

In line with our Master Plan for Safety and Disaster Prevention, we are systematically advancing active investment in disaster prevention and renovation of aging facilities. We have also installed a disaster prevention training space to carry out education that raises the awareness of on-site staff and individual managers toward safety and responding in the event of disaster.

Where quality is concerned, we are taking on a major revision of our promotional structure while also reforming our organizational culture, with the aim of fostering a new culture of quality assurance.

In efforts to create a structure that ensures the sustainability of our business, we are also reinforcing our system of risk management on the premise that risk is ever-present.

Although this in itself is not sufficient assurance of thoroughgoing safety, disaster prevention and quality, which are works in progress, we did achieve zero serious accidents in fiscal 2023. By implementing quality assurance training and thorough PL/QA assessments, we made progress in fostering a culture of quality assurance. We continue to advance each of these measures, including the development of a group company governance structure.

Implement of "Zero Disaster," our Master Plan for Safety and Disaster Prevention	Review
<ul style="list-style-type: none"> <li>Measures to address items noted in comprehensive workplace and disaster prevention inspections</li> <li>Investment in safety and disaster prevention, and renovation of aging facilities</li> <li>Safety and disaster prevention training, creation of a culture of safety (safe, secure workplaces)</li> <li>Establishment of management systems for disaster prevention and safety</li> </ul>	<ul style="list-style-type: none"> <li>Execution and progress for each action</li> <li>Introduction of ISO 45001 (Iwakuni)</li> <li>11 lost-workday accidents (zero serious)</li> <li>Security awareness (dependent-type)</li> </ul>
Rebuilding of our quality assurance management system	Review
<ul style="list-style-type: none"> <li>Reinforcement of personnel and structures, creation of mechanisms and adoption of systems</li> <li>Quality assurance training, creation of an organizational culture, and a culture of quality</li> </ul>	<ul style="list-style-type: none"> <li>Company-wide implementation of improvement projects</li> <li>In-house quality assurance seminars</li> <li>ISO and FDA approval</li> </ul>
Strengthening of Toyobo group governance, risk management structure	Review
<ul style="list-style-type: none"> <li>Risk map (grasping risk location and impact: Preparedness)</li> <li>Establishment of group corporate governance→ Establishment of the Group Administrative Management Department</li> <li>Monitoring of system expansion</li> </ul>	<ul style="list-style-type: none"> <li>Risk Management Committee established</li> <li>Identification of fatal risks</li> <li>Implementation from non-consolidated to group</li> </ul>

### Measure 2 Business portfolio realignment

#### • Each business evaluated and classified along two axes: Growth potential and profitability

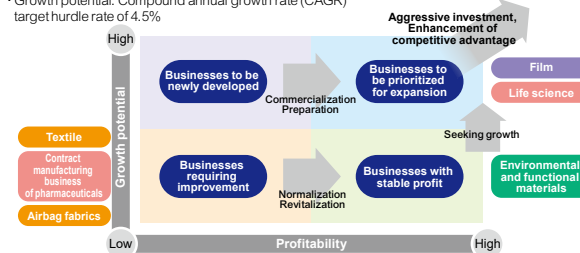
In our categorization among the four quadrants, comprising "businesses to be newly developed," "businesses to be prioritized for expansion," "businesses requiring improvement," and "businesses with stable profit," the average annual growth rate is our criterion for judging growth potential, for which we have set a guideline of 4.5%, which is the acknowledged average for the chemical industry. Return on capital employed, the criterion for judging profitability, is set at 6.5% from the perspective of capital costs.

In fiscal 2023, we invested capital aggressively in businesses prioritized for expansion. In the environmental and functional materials business, identified as a business with stable profit, we established TOYOBO MC Corporation in April 2023. For businesses requiring improvement, including textiles, airbag fabrics and contract manufacturing of pharmaceuticals, we are aiming to achieve profitability in each by fiscal 2026 in line with their respective Master Plans. In the textile business, we established the new TOYOBO TEXTILE CO., LTD. in April 2022, integrating and reorganizing group companies in efforts to boost profitability and efficiency of assets. In the airbag fabrics business, we established Toyobo Indorama Advanced Fibers Co., Ltd.

#### Ideal portfolio concept

Each business evaluated and stratified among four quadrants along the two axes of profitability and growth potential

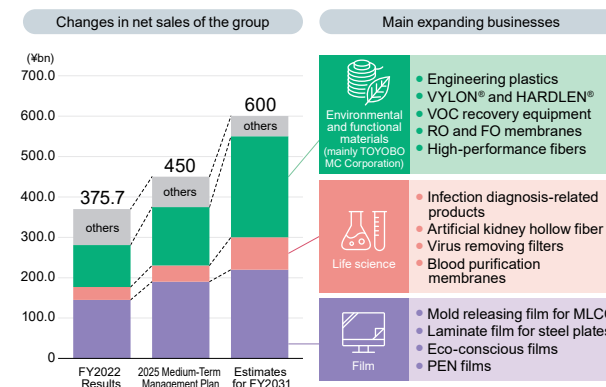
- Profitability: Return on capital employed (ROCE) = operating profit ÷ capital employed \* target hurdle rate of 6.5%
- Growth potential: Compound annual growth rate (CAGR)\* target hurdle rate of 4.5%



- Rather than the hurdle rate alone, include qualitative information to determine whether a business is one with stable profit or needs improvement
- ROIC is used as a capital efficiency indicator for the group as a whole, while ROCE is a management indicator for each business

in October 2022 as a joint venture with the Indorama group in Thailand.

Although each plan has been moving ahead steadily, reaping the effects of these efforts still lies ahead. The plans will demonstrate effect in fiscal 2024.



#### • Three businesses comprising the pillars of sustainable growth

Our target of ¥600 billion in group sales for fiscal 2031 includes a target of ¥220 billion for our core film business, ¥80 billion for life science, in which we expect growth starting in fiscal 2026, and ¥250 billion for environmental and functional materials through the newly established TOYOBO MC Corporation. Amid the advance of carbon neutrality and electric vehicle (EV) expansion, major business opportunities are expected for the environmental and functional materials business, which we expect to become a third pillar of business alongside film and life science.

As cost structures undergo major changes, we changed packaging film from a business prioritized for expansion to a business with stable profit, under the idea that stable earnings should be prioritized over growth. Also, engineering plastics, functional materials, and environmental solutions, which we had categorized as businesses with stable profit, are to be expanded aggressively as growth businesses within TOYOBO MC Corporation.



## Transformation to sustainable growth: 2025 Medium-Term Management Plan

### Measure 3 Preparing for the future

#### • Obtained SBT certification for GHG emission reduction targets toward carbon neutrality

Through our DX strategy to promote and accelerate business innovation, we aim to create new businesses and business models. We are advancing investments in updating our legacy systems as investments in establishing the IT infrastructure that forms the basis of this effort.

We have formulated a roadmap for carbon neutrality (CN), which we are striving to achieve. We received Science Based Targets (SBT) certification in December 2022 for our GHG emission reduction targets. Raw material and fuel costs have increased temporarily due to factors including the adoption of renewable energy, but given that future cost increases are expected to result from factors including carbon pricing, we have set aggressive targets.

<p>Creation of new businesses and technologies</p> <ul style="list-style-type: none"> <li>Creation of innovations (four core technologies x marketing x digital → integration and restructuring)</li> <li>New business creation (Mirai Value Proposition Project, Open Innovation expansion)</li> <li>Establishment of research infrastructure and development of human resources to support these</li> </ul>	<p>Review</p> <ul style="list-style-type: none"> <li>Mirai Value Proposition Project</li> <li>Expanding areas of MI utilization in research departments</li> <li>Talent management + training</li> </ul>
<p>DX Strategy: Acceleration and advancement of business innovation</p> <ul style="list-style-type: none"> <li>Establishment of IT infrastructure (Business systems / IT infrastructure, security)</li> <li>Refinement of business processes and services (Establishing data utilization infrastructure)</li> <li>Business model co-creation (expansion of partnerships inside and outside the group)</li> </ul>	<p>Review</p> <ul style="list-style-type: none"> <li>Eliminating hosting and updating legacy systems</li> <li>Considering MI utilization and marketing automation (MA) adoption</li> <li>Partnerships within and outside the group</li> </ul>
<p>Roadmap to carbon neutrality (2050)</p> <ul style="list-style-type: none"> <li>Setting of GHG emission reduction targets (Scope 1 and 2)</li> <li>Renewal and fuel conversion of in-house thermal power plants (coal → liquefied natural gas)</li> <li>Introduction of a cross-functional team for CN strategy deliberation and adoption of internal carbon pricing</li> </ul>	<p>Review</p> <ul style="list-style-type: none"> <li>Execution and progress for each action</li> <li>SBT certification obtained</li> <li>Issuance of sustainability-linked bonds</li> </ul>

#### • Clarify targets through the vision for creating innovations

In April 2023, we formulated the Toyobo group vision for creating innovation.

By combining core technologies from the disparate fields of polymers and biomedical technology, we will create new opportunities and bring about innovation in three new fields (solutions). Our New Circular Plastics Solution can be expected to have applications in bio-foundry platforms and other bio-manufacturing technology. With our Environmentally Active Clean Solution, we are pursuing the potential to apply technologies that put unutilized biomass to use, and with our Well-Being Solution, we are pursuing uses for biocompatible polymers in medical applications.

We also clarified priority themes for new business fields. Chemical recycling and 100% biomass plastic development are representative examples in the area of renewable polymers, as is the development of sepsis treatment devices in the field of acute blood purification. Regarding research reagents, we made progress with commercialization of enzymes with applications in pharmaceuticals manufacturing.

#### Assignment of priority themes to new business areas



### Measure 4 Rebuilding our foundation

#### • Start of human resources development for diversity and management under our new personnel system

The group's key business foundation consists of people, infrastructure, and systems. We made major revisions to our personnel system, which was renewed in fiscal 2022, with a job-type orientation intended to strike a balance between work duties and remuneration, including an overhaul of the seniority system and establishment of a system for promoting junior employees to executive positions. From fiscal 2023, we have created increased opportunities for those with motivation to play more active roles, and are including junior personnel in our development of human resources for management. In our efforts to promote diversity, we have revised our promotion system into one that is more inclusive of diverse human resources such as women and foreign personnel, aiming for a ratio of women in management positions of 5.0% or more by fiscal 2026.

<p>Human resources development, work-style reform, promotion of diversity</p> <ul style="list-style-type: none"> <li>Personnel system reform: Appraisal, training expansion, rotation, assigning the right person to the right job</li> <li>Development of next-generation management human resources, promotion of active participation by women (women's leadership development)</li> </ul>	<p>Review</p> <ul style="list-style-type: none"> <li>Development of next-generation management human resources, new human resource system</li> <li>Women's leadership training, emergence of women board members</li> </ul>
<p>Front-line workplace manufacturing capabilities</p> <ul style="list-style-type: none"> <li>Innovation in production and reinforcement of training for technical personnel</li> </ul>	<p>Review</p> <ul style="list-style-type: none"> <li>Construction of a platform for manufacturing</li> <li>Establishment of education for technical personnel, reinforcement of level-specific education</li> </ul>
<p>Establishment of business infrastructure</p> <ul style="list-style-type: none"> <li>Renewal investment, consideration of company-wide business site location concept</li> <li>Legacy systems updates</li> </ul>	<p>Review</p> <ul style="list-style-type: none"> <li>Renovations moving forward at each business site</li> <li>Legacy systems to be updated</li> </ul>
<p>Governance and compliance</p> <ul style="list-style-type: none"> <li>Governance system restructuring, group administrative management</li> <li>Strengthening of compliance system and internal audit functions</li> </ul>	<p>Review</p> <ul style="list-style-type: none"> <li>Strengthening of compliance promotion system</li> <li>Compliance incident occurrence</li> </ul>
<p>Reform of the organizational culture</p> <ul style="list-style-type: none"> <li>Spread of corporate philosophy framework PVVs, organizational development, "casual discussions on serious issues"</li> </ul>	<p>Review</p> <ul style="list-style-type: none"> <li>Spread of PVVs, from KAERU Project to KAERU Department</li> <li>Engagement Survey (55% / target 70%)</li> </ul>

Innovation

# Vision for creating innovation

We have formulated a vision for creating innovations, aimed at achieving Sustainable Vision 2030, and looking beyond it to 2050 as we work to achieve sustained and discontinuous growth, which amounts to increasing our corporate value. Under this vision, Toyobo group makes a declaration that we will realize innovations needed by people and the earth.

### “Beyond Horizons,” a declaration

In progressing toward 2050, we at Toyobo group aim to provide solutions through the integration of our core technologies and businesses, creating innovations in a wide range of fields as our contribution toward the development of a sustainable future for society.

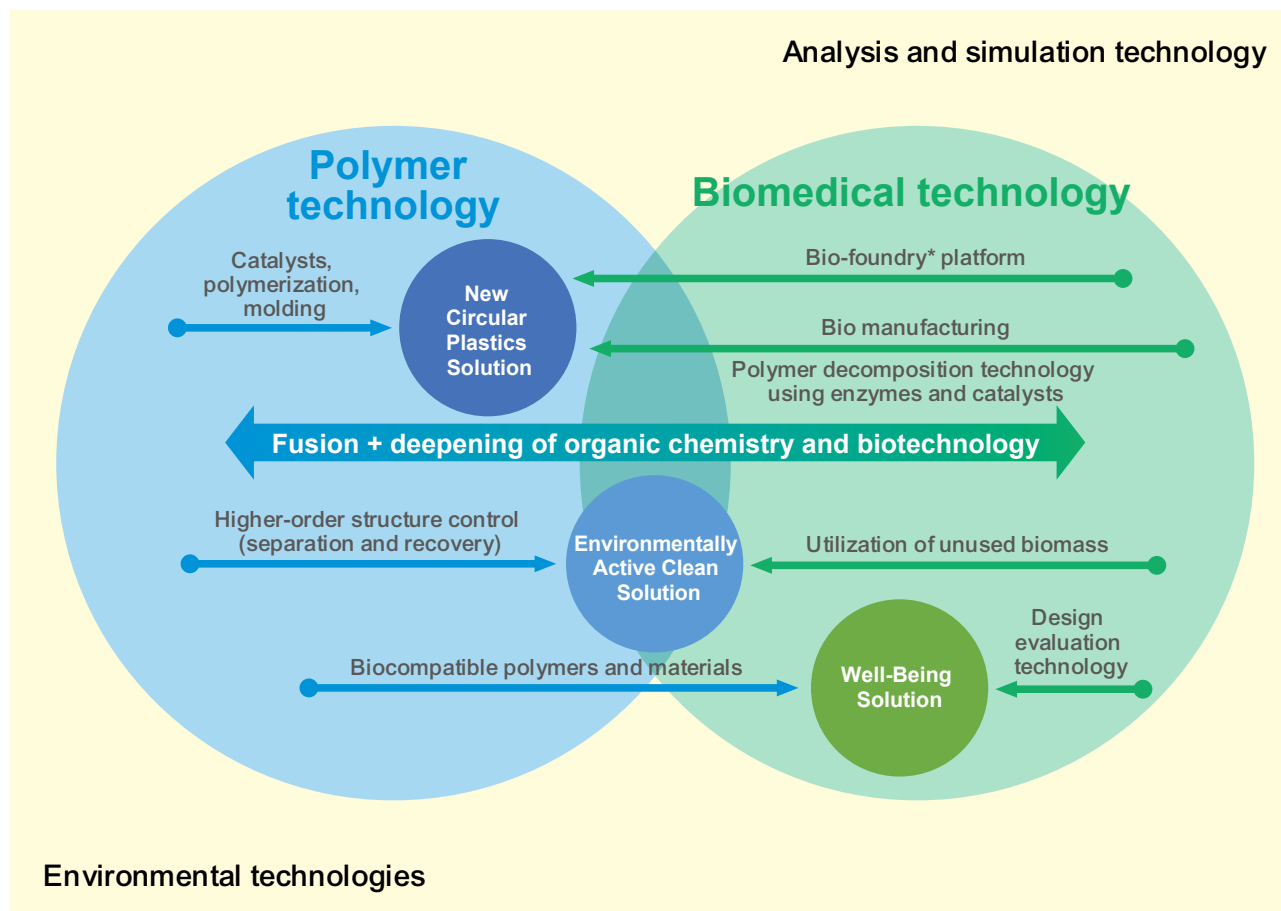
Through its long history of more than 140 years, Toyobo group has combined a wide range of materials, processes, and processing techniques to create and implement its own value. We will greatly value these technological development capabilities that are the source of our competitiveness, create innovation through the technologies accumulated up to now as well as those newly undertaken, and contribute to the sustainable development of society by providing products that bring about solutions to social issues.

In envisioning ourselves in 2050, Toyobo group will emphasize three areas of our value proposition to realize a future that is needed by people and the earth.

### Key areas of our value proposition toward creating innovations

By combining and rebuilding our four core technologies (polymer technology, biomedical technology, environmental technology, and analysis and simulation technology) as well as our business value chains and markets (film, environmental and functional materials, life science, and functional textiles and trading), Toyobo group is working to create a wide range of solutions.

### Taking on challenges in new domains by integrating core technologies and businesses



\*Bio-production systems such as cultivation, transport, and contract manufacturing aimed at enhanced productivity and reduced cost for bio-derived products

Innovation

**Vision for creating innovation**

In order to achieve the future we envision for 2050, we will advance research and development efforts in three priority areas for provision of value: Our New Circular Plastics Solution targeting 100% renewable polymers, our Environmentally Active Clean Solution that helps with environmental cleanup and CO<sub>2</sub> recovery and utilization, and our Well-Being Solution that aims for a society in which people can live out their lives in good health. Our aim in doing so is to solve the five social issues specified in Sustainable Vision 2030.

**Four actions leading to creation of innovation**

Within the three key areas of our value proposition, we aim to create sustainable innovations through the following four actions.

**(1) Assign prioritization themes**

Promote prioritized research and development, including adoption of new technologies, in responding to social issues with an awareness of people and the earth

Measures: Prioritize technology investment for new business development

**(2) Take on challenges by integrating core technologies and businesses (see p.25)**

Integrate existing businesses and technologies, and establish marketing innovation throughout the company

Measures: Integrate polymer technology x biomedical technology + business

**(3) Accelerate open innovation**

Build structure that actively promote new market participation and adoption of new technologies

Measures: Engage in corporate collaboration across industry boundaries, direct and indirect startup investment, and partnerships with universities, etc.

**(4) Develop human resources**

Nurture human resources with scientific literacy and entrepreneurial spirit, enable each to refine their skills, and create a basis for human resources exchange, while providing a space in which they can apply their knowledge and experience to the fullest

Three priority areas for provision of value in innovation creation, for the achievement of sustained, discontinuous growth

<p><b>Sustainable Vision 2030</b> Solving the five social issues</p>	<p><b>New Circular Plastics Solutions</b> 2050: 100% renewable polymers</p>	<p><b>Environmentally Active Clean Solutions</b> Environmental cleanup CO<sub>2</sub> recovery &amp; utilization</p>	<p><b>Well-Being Solutions</b> Innovative medical devices Reagents and devices for ultra-early diagnosis</p>
<p> Employee well-being and human rights in the supply chain</p>	<p>✓</p>	<p>✓</p>	<p>✓</p>
<p> A healthy lifestyle and health care</p>	<p></p>	<p></p>	<p>✓</p>
<p> Smart communities and comfortable spaces</p>	<p>✓</p>	<p></p>	<p>✓</p>
<p> A decarbonized and circular society</p>	<p>✓</p>	<p>✓</p>	<p></p>
<p> Clean water areas, air, and soil, and the preservation of biodiversity</p>	<p></p>	<p>✓</p>	<p></p>

Innovation

# Research and development



In order to create and provide solutions centering on the four core technologies, Toyobo group will reinforce its structure aimed at improving efficiency of research and development and speed up the commercialization so as to achieve diverse forms of innovation.

## Basic approach

Toyobo group aims to be a group that continues to create the solutions needed by people and the earth, and will achieve innovations in diverse areas so that we can contribute to the sustainable development of society toward 2050.

The four core technological supports for our group businesses are: Polymer technology, biomedical technology, environmental technology, and analysis and simulation technology. With these core technologies, as well as reconstruction of value chains, application of digital technology, marketing, and diverse other innovations, we will provide new solutions as we continue to contribute to a sustainable society.

## Organizational structure

Our R&D organizational structure comprises two components: The Corporate R&D Department and the Divisional R&D Departments. We are also refining the technologies of each of these and working on collaboration including human resource exchange as we strive to make research and development more efficient and commercialization speedier.

### • Corporate R&D Department

The Corporate R&D Department includes three sections, which engage in research aimed at acquiring basic technologies and advanced technologies for the future, project research that targets reliable commercialization, and the research infrastructure that has supported the Group's research and development up to now. Analytical technologies including chemical identification, ultramicroscopic observations and measurement of physical characteristics, as well as technologies that use computational science, such as simulations, digital transformation, and materials informatics, enable our creation of next-generation technologies, our new products and new business commercialization, and thus form the basis for our competitive development. The department also

partners with domestic and overseas companies, universities and research institutions to fulfill its role of studying and evaluating new technologies and new technological trends.

### • Divisional R&D Departments

As each business department performs integrated operation of its production, sales, and development functions, research and development activities within each business department are related directly to its products and technological trends. We understand customer needs to be characteristic to our products, so we cooperate across areas of business and with the Corporate R&D Department on a routine daily basis to improve our products and strengthen our product lineups.

## Coordination of company-wide innovation: The Innovation Strategy Department

The function of the Innovation Strategy Department is to support the management, planning, and promotion of research and development from the perspective of group management. It manages and supports commercialization projects for promising themes advanced by the Corporate R&D Department. In addition, through the effective, efficient operation of research and development resources including utilization of intellectual property, the department participates in research and development projects of the national government, and advances open innovation with universities and other external organizations, while also making use of external venture capital to make investments that expand the possibilities of new fields of technology and product development.

## Four core technologies

Our group has four core technologies: Polymer technology which we have been accumulating since synthetic fibers were introduced and which includes polymerization, modification, and processing; biomedical technology developed from our waste pulp liquid

processing research using yeast culture; environmental technology based on polymer technology enabling water and air purification as well as recycling of solvents and other substances; and analysis and simulation technology based on our accumulation over many years of analytical evaluations and computing science. These are at the root of our group's creation of products with natural fibers, synthetic fibers, chemicals and processed products, films, life science and membrane separation, and they continue to deepen, integrate and develop in response to changing times.

## Creation of innovations through core technologies

Our group advances open innovation in order to apply our core technologies to solving social issues. We apply the digital technologies that are emerging in rapid succession, and combine our continuously-developing core technologies with innovative and reliable external technologies to remake them into new core technologies while achieving innovation. Our group's aim is to place a high value on our original thinking while creating new products and expanding into domains of business that we have never taken on before.

## Innovation

# Intellectual property



The innovations by which Toyobo group contributes to society's sustainable development are supported by diverse group assets centered around our four core technologies.

By carefully protecting them, securing them as intellectual property rights, and putting them to use, we will achieve stability in our business operations, high profitability, and sustained growth.

## Basic approach

By creating innovations based on our four core technologies of polymer technology, biomedical technology, environmental technology, and analysis and simulation technology, our group will contribute toward the resolving of social issues. We will then aggressively secure and put to use the results of these efforts as intellectual property rights including patents, and will stabilize our business operations and achieve high profitability, which will contribute to our sustained growth.

## Organizational structure

The Intellectual Property Department meets regularly with the intellectual property liaison persons assigned to each department at liaison meetings in order to share information on intellectual property and make related activities more effective.

## Intellectual property strategy development

The Intellectual Property Department collaborates closely with business and R&D departments, formulating intellectual property strategies and seeing to coordination between business and R&D strategies. It reports twice a year to the Sustainability Committee regarding intellectual property strategy, and advances strategy while checking on its consistency with company-wide policy.

## Building a patent portfolio

We have built a flawless, high-quality patent portfolio to ensure that our products have predominance, and proactively maintain contacts among research and development experts to discover inventions. We aggressively apply for overseas patents for completed inventions to ensure the security of their global deployment and promotion.

## Toyobo group brand management

All items to be displayed outside the company are checked by the departments such as legal, quality, public relations, pharmaceutical,

so that labels and other displays are appropriate as we strive to elevate our group's brand value and gain the trust of the customers.

## Respect for the rights of others

Patent reviews are performed in conjunction with design reviews according to the stage of new product development, as we advance development while being careful not to infringe on the rights of other parties. In addition, we hold regular patent review meetings to understand the patent-holding status of other companies, and to confirm the security of business continuity while respecting others' rights.

## Initiatives

### • Use of intellectual property information

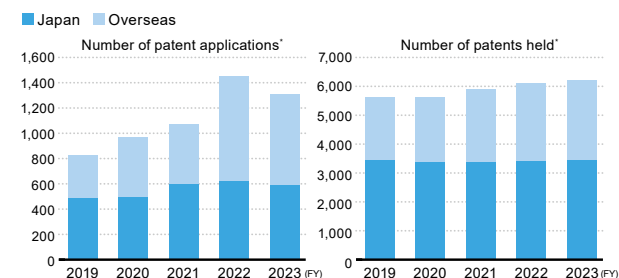
We analyze patent and non-patent information, and carry out activities to put the inferred technological and market trends to use in our business and R&D strategies. In addition, we intend to make our business operations more efficient and sophisticated by applying digital technologies to enable paperless operations and robotic process automation (RPA), which we started as part of our early adoption of a workflow system.

### • Invention incentive system

Through our patent award system, we honor inventors whose patents contribute to company profits at or above a specified threshold level, offering a cash reward (with no upper limit) commensurate with the profit. In order to honor the inventors early on, an "Application Commendation" is conferred on inventors who hold pending applications for patents expected to make a future contribution. Also, in order to stimulate the solutions business, from fiscal 2023 inventors holding pending applications for patents highly likely to help solve social issues are honored with an "Excellent Solution Application Commendation."

### • Intellectual property education

We perform systematic education on intellectual property according to job group and function. We hold practical patent seminars for engineering-related employees during their first three years of employment to enable them to learn about patents. We also conduct education specializing in patent searches and the production of detailed descriptions for patent applications. Through lectures that include practical hands-on training, participants work with Intellectual Property Department members to gain competence in producing high-quality detailed descriptions. In addition to engineering-related personnel, sales personnel also receive education in intellectual property-related knowledge that is requisite for sales.



\* Figures include patent applications and patents held by the (former) Toyobo Film Solutions Limited, which was merged into TOYOBO on April 1, 2021.

# Toward digital transformation

## — Transforming into organizations and human resources that can co-create business —

Toyobo group aspires to be a group that continues to create solutions needed by people and the earth. We strive to advance business innovation and realize an accelerated IT environment while addressing not only the issues facing us today but also those we can expect in the future.

### Our vision for digital transformation

Given that digital transformation (DX) is a means of advancing and accelerating business innovation, it is crucial that we understand how it can contribute to business expansion. By establishing IT infrastructure and building up a DX promotion structure, Toyobo group is moving forward with human resource development and organizational transformation enabling us to co-create business as we pursue our 2030 objectives of doing business that contributes to solving the issues facing people and the earth, being a company where people can continue to work with pride and satisfaction, and being a company that grows sustainably.

### Initiatives to advance DX

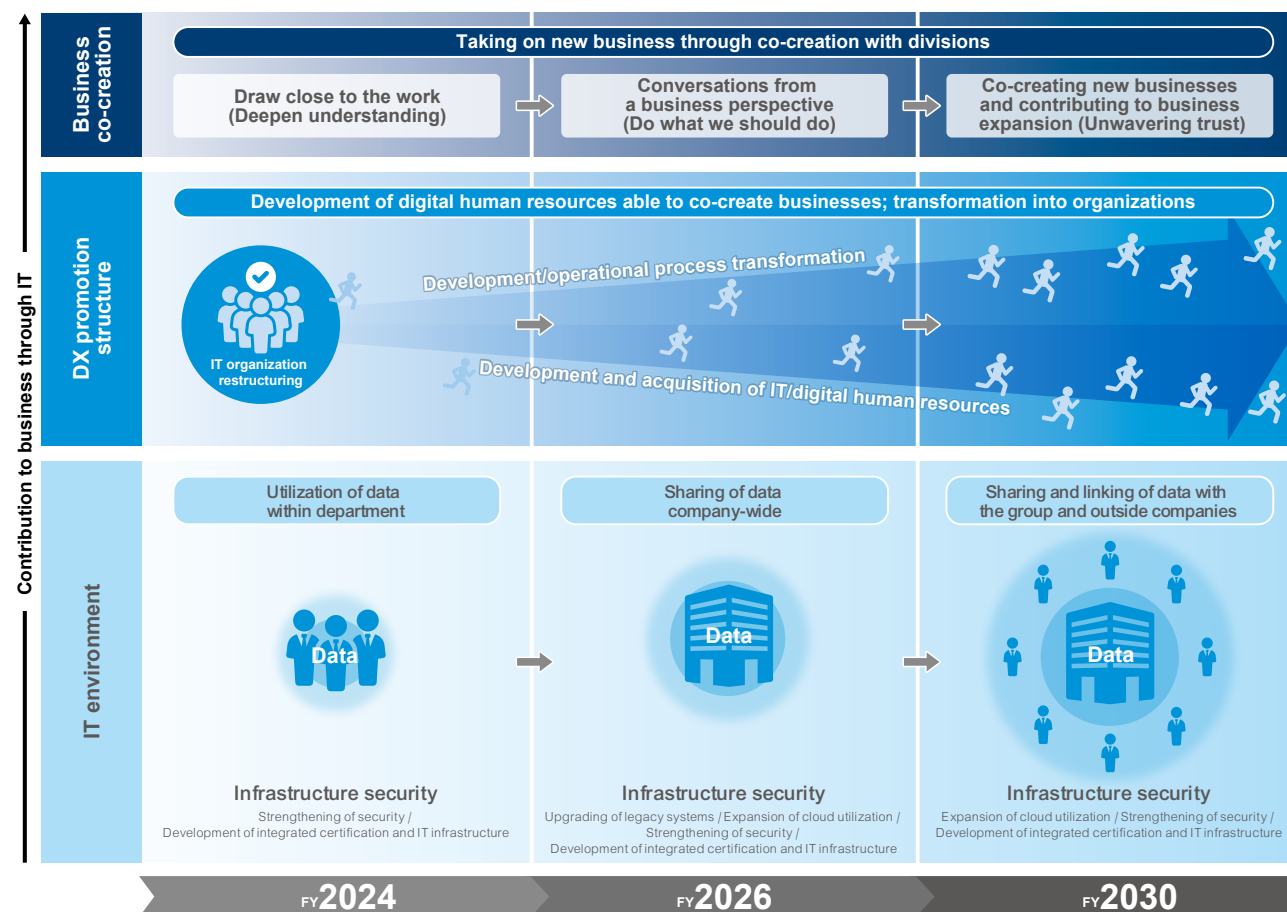
As we aim for collaborative work between the digital promotion division and business divisions that creates new business, we will develop human resources for DX with competence in business co-creation, transform our organization, and work on establishing our IT environment, by means including updating legacy systems.

In fiscal 2023, we drew up a DX roadmap oriented toward business co-creation, designed the organization and process for DX advancement, and formulated a plan for human resources development. We also started work on establishing an IT environment to provide a foundation for the initiative, and focused effort on building up infrastructure for DX advancement. In fiscal 2024, we will complete our preparations for accomplishing DX as we take action in three areas: Establishment of IT infrastructure, strengthening of governance and organization, and promotion of business co-creation.

### Priority themes for fiscal 2024

1	Establishment of IT infrastructure	<ul style="list-style-type: none"> <li>Steady updating of legacy systems</li> <li>Establishing an information infrastructure prepared for the future</li> </ul>
2	Strengthening of governance and organization	<ul style="list-style-type: none"> <li>More sophisticated DX investment cost management</li> <li>Transition to an organizational structure that helps with business co-creation</li> </ul>
3	Promotion of business co-creation	<ul style="list-style-type: none"> <li>Advancing company-wide themes oriented toward societal needs like GHG and chemical substances management</li> <li>Holding regular meetings with business divisions regarding DX promotion</li> </ul>

### Steps to advancing DX to promote and accelerate our vision for business innovation



## Toward digital transformation

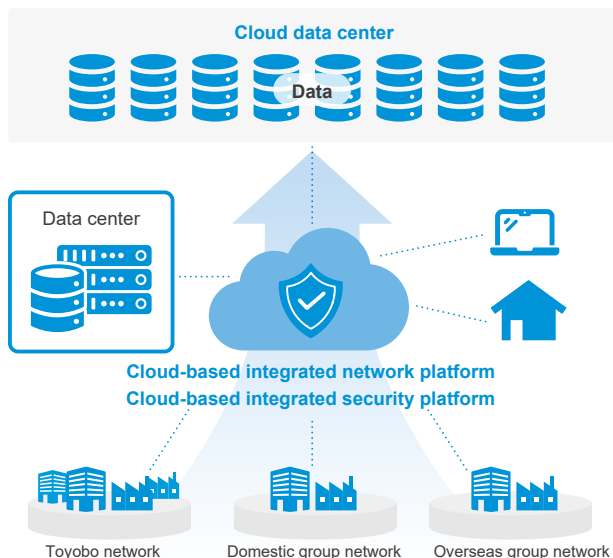
### Priority Theme 1 Establishing IT infrastructure

Our group is moving ahead with investments for renewal of our legacy systems. In fiscal 2024, pilot implementation begins for a new core online system, and by fiscal 2027, we plan to have finished our reinforcement of security and conversion to cloud computing.

As we move ahead with revamping systems peripheral to our new IT infrastructure implementation, we will be building up an IT infrastructure that enables safe, flexible data utilization and collaboration, not just between divisions, but also within and outside of the group.

As an example, once the system renewal is complete, we will expand investment in DX projects and others that contribute to business expansion. By fiscal 2031, we will have established an IT environment enabling immediate, secure sharing of information with every future partner.

#### Concept for future IT infrastructure

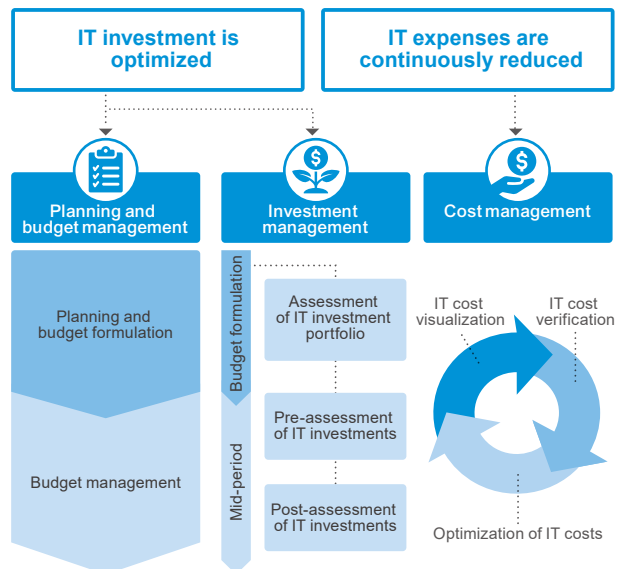


### Priority Theme 2 Strengthening governance and organization

Our group's adoption of IT has been advanced by our subsidiaries involved in information-related businesses for approximately 30 years. Amid the shift from IT utilization to the DX era, in fiscal 2024 we will apply the organizational strengths in systems construction and operation that we have established to designing business expansion-oriented themes for co-creation between business divisions and with external partners, as we work to strengthen organizational functions other than manufacturing, such as by shifting from an individual concept of optimization to overall optimization.

Moving forward, we will optimize IT investment through planning and budgeting management and will strengthen the systems that enable us to bring about continuous reductions of IT expenses through cost management. We will undertake organizational reforms to make ourselves an organization truly capable of helping our business expand, such as human resources development and self-directed career visioning by each and every employee, as well as improvements in awareness enabling us to take on our work with a sense of purpose.

#### Strengthen governance (refine DX promotion cost management)

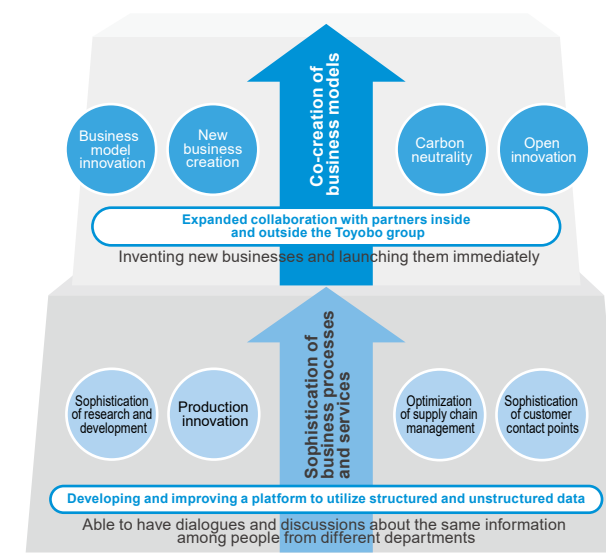


### Priority Theme 3 Promotion of business co-creation

In our business divisions and innovation divisions, actions are oriented toward advancing digital and IT themes that contribute to business expansion, and toward advancing digitalization through business reform. As a manufacturer, we set priorities for resource allocation with attention to putting in place the infrastructure directly related to our manufacturing, and also to the impact on our business as seen from a bird's-eye view of all business divisions. Individual discussions that had previously been conducted by those in charge in the front-line workplace are conducted at regular meetings held by top managers of business divisions for overall optimization.

Some themes require efforts to be taken by the company as such, including environmental issues such as carbon neutrality and chemical substances management, and response to human capital. By setting targets and building systems, the DX promotion department takes a central role in company-wide efforts to make steady progress.

#### Business co-creation by upgrading business processes and services



SCM: Supply chain management



# 03

## Value creation practice

32 Overview by business

33 Films

36 Life Science


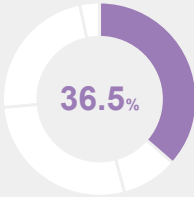


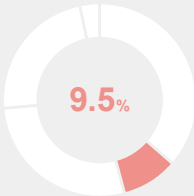
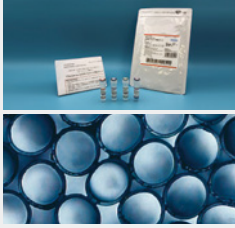

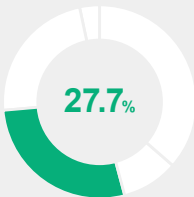


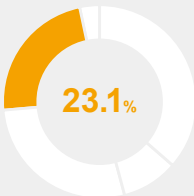

39 Environmental and Functional Materials

42 Feature: Launch of  
TOYOBO MC Corporation

44 Functional Textiles and Trading



# Overview by business

		Consolidated net sales composition ratio	Net sales and operating profit (¥billion)	Main applications	Examples of products
<p><b>Films</b></p>  <p>This consists of two fields: The industrial film business and the packaging film business. Industrial films include films for liquid crystal polarizers, displays, synthetic paper, labels, ceramic capacitors, etc. Packaging films include multifunctional films centered on food packaging, for which we maintain a leading share in Japan.</p>		 <p>36.5%</p>	<p>Net sales <b>146.1</b></p> <p>Operating profit <b>1.6</b></p>	<ul style="list-style-type: none"> <li>• Industrial films</li> <li>• Packaging films</li> </ul>	
<p><b>Life Science</b></p>  <p>This consists of three fields: The bio business, medical materials business, and pharmaceutical contracting business. The bio business includes material enzymes related to clinical testing, diagnostic reagents and drugs, and diagnostic systems. The medical materials business includes materials related to treatment, such as dialysis membranes. The pharmaceutical contracting business involves contract manufacturing of drugs.</p> <p>Our high-value-added products, made possible through our proprietary technology, include artificial kidney hollow fiber and diagnostic systems that halve the time required to obtain PCR testing results.</p>		 <p>9.5%</p>	<p>Net sales <b>38.1</b></p> <p>Operating profit <b>9.2</b></p>	<ul style="list-style-type: none"> <li>• Bio-related products</li> <li>• Cosmetics ingredients</li> <li>• Medical separation membranes and modules</li> <li>• Medical equipment</li> <li>• Pharmaceutical-related products</li> </ul>	
<p><b>Environmental and Functional Materials</b></p>  <p>TOYOBO MC Corporation launched in April 2023 as a joint venture with Mitsubishi Corporation. Its businesses consist of the resin and chemical business and the environment and fiber business. Businesses that have migrated to the new company include VYLON<sup>®</sup>, HARDLEN<sup>®</sup>, photo functional materials, fine chemicals, engineering plastics, aqua membranes, VOC recovery equipment, functional filters, spunbond, lifestyle materials, and super fibers.</p>		 <p>27.7%</p>	<p>Net sales <b>110.8</b></p> <p>Operating profit <b>4</b></p>	<ul style="list-style-type: none"> <li>• Adhesion and coating agents</li> <li>• Engineering plastics</li> <li>• Elastomers</li> <li>• Seawater desalination membranes and modules</li> <li>• Environmental solution equipment and filters</li> <li>• High-performance fibers</li> <li>• Lifestyle materials</li> </ul>	
<p><b>Functional Textiles and Trading</b></p>  <p>This consists of the airbag business, functional textile business, apparel textile business, and trading company functions (TOYOBO STC CO., LTD.). For overseas expansion, the airbag business operates under a tripolar structure in Thailand, China, and the U.S. The textile business is advancing globally, including in Southeast Asia, China, and India.</p>		 <p>23.1%</p>	<p>Net sales <b>92.4</b></p> <p>Operating profit <b>-2.5</b></p>	<ul style="list-style-type: none"> <li>• Airbag fabrics and yarn</li> <li>• Sports, inner wear, uniforms, and other apparel</li> </ul>	

# Films

We will contribute to sustainability for people and the earth through our technologies for high-performance films



**Muneo Hirooka**  
Managing Executive Officer  
Head of Films Division

## The strengths of Toyobo

- Films for packaging (a leading share in food packaging)
- Industrial films (mold releasing films for MLCC, polarizer protective films for LCDs, etc.)

## Opportunities and risks

- |               |  |
|---------------|--|
| Opportunities | <ul style="list-style-type: none"> <li>• Expansion of demand for green films aimed at a circular society and carbon neutrality</li> <li>• Expansion of need for reduction of plastics (increase in the value of technologies for thinner materials)</li> <li>• Expansion of demand for high-performance films as digital society advances</li> </ul> |
| Risks         | <ul style="list-style-type: none"> <li>• Rise of political instabilities around the world and subsequent impacts on markets</li> <li>• Soaring costs of raw materials and fuels and increase in procurement risks</li> </ul>   |

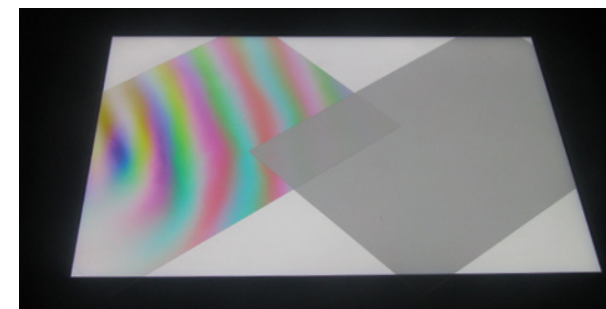
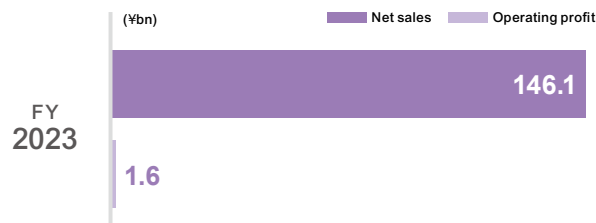
## Business overview in fiscal 2023

In fiscal 2022, customers in many industries resumed production activities, resulting in special demand. Consequently, a backlash occurred in fiscal 2023, and the market overall remained sluggish under multiple factors including an inventory adjustment phase. Industrial films in particular were greatly affected by slumping automotive production and let-up in demand for mold releasing films for MLCC. In the area of earnings, prices of raw materials and fuels continued their sharp rise. Turmoil also occurred in procurement, due to factors including withdrawal from business by domestic and overseas manufacturers of crude raw materials and other materials. In packaging films, our revisions of product prices were unable to keep up with increases in raw material and fuel prices, leading to a significant decrease in overall profit from the previous year.

Amid sluggishness in the overall market, environmentally considerate films made with recycled resins, bioresins, and other materials are exhibiting growth beyond expectations, with demand expected to continue growing. High-retardation LCD polarizer protective film, an area in which Toyobo enjoys a technological advantage, remained solid.

As a result of the above, net sales in the segment were ¥146.1 billion and operating profit was ¥1.6 billion (results for new segment).

## Net sales and operating profit (¥billion)



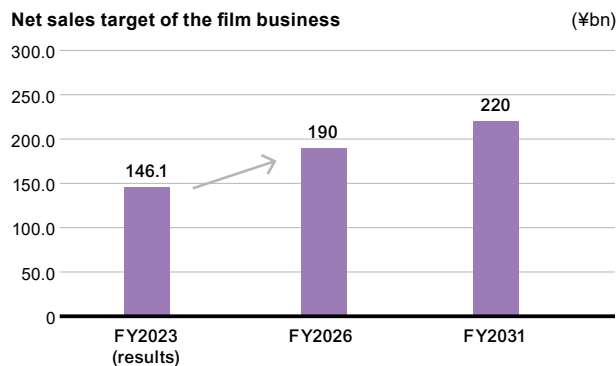
COSMOSHINE SRF<sup>®</sup> LCD polarizer protective film

## Films

### Growth strategy

We are advancing our growth strategy atop the two pillars of “progress of digital society” and “a decarbonized and circular society.” Our main strength lies in the polyester-based releasing film used in the ceramic capacitor manufacturing process. Our film is highly regarded for its functionality, and our capabilities for integrated production and processing of film give us an advantageous position in the market. We intend to undertake new product development for this film as well as establish technology for its recycling. We will also advance the development of new products and applications for LCD polarizer protective film and high-durability and heat-resistant polyethylene naphthalate (PEN) film for use as fuel cell sealing material.

In the area of reducing plastic waste, films stand at the forefront of environmental issues. We will reduce the thickness of films and advance adoption of biomass-based raw materials to help achieve a decarbonized society. Our new machinery for biaxially-oriented polypropylene (OPP) films let us maintain strength even in significantly thinner OPP films, contributing to a circular society through a shift to mono-materials. Films are indispensable materials in distribution and in people’s lives. We are making efforts in individual products to increase our environmentally considerate product lineup.



### Capital investment and R&D investment

We plan to invest ¥80 billion under our 2025 Medium-Term Management Plan (2025 MTP, FY2023 to FY2026), of which about 80% is earmarked toward growth investments. We will first continue increasing production and expanding sales in line with market recovery in high-performance films. Production capacity for mold releasing film for ceramic capacitors will increase about 2.5-fold through the combination of our new first and second coating machinery units, and production volume of COSMOSHINE SRF<sup>®</sup> LCD polarizer protective film will increase about 1.2-fold. We will also make active investments in the development of the high-rigidity films noted earlier, in 100% bioresin films, and in films made with recycled raw materials, as well as in the creation of mechanisms for recycling processed films inside and outside of our company.



New manufacturing facilities at the Utsunomiya Plant (mold releasing film for ceramic capacitors)

### Future initiatives

In fiscal 2024, we will first work to reset our pillars of earnings and recover profitability. We will further undertake price revisions for packaging films, a major issue remaining from fiscal 2023, and will quickly undertake full-scale launches of new products and an OPP film production line. Keeping a constant eye on the state of recovery in markets, we will meet customers’ expanded production structures with our mold releasing film for MLCC and will proceed with construction of a new production line. In LCD polarizer

protective film, too, we will meet customers’ expanded production structures while also carrying out price revisions.

Under the 2025 MTP, the film business is focusing its sight on three of the five social issues of Sustainable Vision 2030. The first of these is “employee well-being and human rights in the supply chain.” With seven manufacturing sites in Japan and overseas, the business considers the safety of employees, the fostering of motivation, and the achievement of disaster prevention and zero disasters at worksites to be the most important issues for its business bases. The next issue of focus is “a decarbonized and circular society.” Here the business seeks to achieve Scope 1 and 2 carbon neutrality and to widely supply society with films that contribute to the environment and resource recycling-oriented films. Finally, with regard to the issue of “clean water areas, air and soil, and the preservation of biodiversity,” the business will contribute to the reduction of food loss and waste through high-performance packaging films that maintain food freshness. In this business, we will set individual targets for these issues, make them known throughout the company, and tackle them together.

On the theme of resource recycling, initiatives at the level of the company or this business face limits in increasing the efficiency and efficacy of recycling. Accordingly, we are actively taking part in resource circulation initiatives that span industries, including the creation of mechanisms for the recycling of films for ceramic capacitors with the involvement of electrical and electronic products manufacturer customers, as well as a recycling project for label paper (KAMISHINE<sup>®</sup> mold releasing film) in cooperation with medical manufacturer and printing industry customers. We hope to expand our recycling technologies not only within Japan but also into initiatives that cross national borders.

CSV examples

Films

**Contributing to reducing plastic volume**  
**New development of the world's thinnest 20µm shrink film**



**Masahito Jinguji**

Manager  
 Packaging Operating Department



**Shigeto Yoshida**

Manager  
 Packaging Operating Department

Toyobo is a specialty manufacturer of PET films in the shrink film market. Our policy is to boost our competitiveness through product development that is cutting-edge in terms of both performance and environmental consideration. Our production technology creates thinner films while maintaining strength, an achievement that cannot be imitated by others. In 2012, we succeeded in developing and launching SPACECLEAN<sup>®</sup>, a heat shrinkable PET film that significantly cuts the mainstream 40µm thickness to a world's-thinnest 20µm. This product offers benefits not only in the environmental value of reducing plastic volume but also in terms of productivity, and has found use with many customers, mainly beverage producers.

In response to strong demands by customers, we will also start using recycled PET material from bottles to produce this 20µm film. In the past, the use of recycled raw materials yielded differing grades of product. We will further expand this and contribute to achieving customers' specific goals for sustainable packaging.

Along with the reduction of plastics, the reduction in use of virgin raw materials is also a pressing global issue. We plan to actively propose products made from recycled raw materials to our customers overseas as well. As PET labels are easier to recycle than polyvinyl chloride and polystyrene labels, we aim to build a resource circulation network for recycling containers that use shrink film, drawing on cooperation from brand owners, converters, and recycling business operators in overseas markets.



PET bottle labels made with SPACECLEAN<sup>®</sup> heat-shrinkable PET film

**Contributing to the proliferation of next-generation energy and a carbon-neutral society**  
**TEONEX<sup>®</sup> PEN film adopted for use in Toyota's fuel cell vehicles**



**Hisato Ichimiya**

Manager  
 Films New Business  
 Development  
 Operating Department



**Kenji Handa**

Industrial Films Operating  
 Department

Our TEONEX<sup>®</sup> high-durability and heat-resistant polyethylene naphthalate (PEN) film is positioned as a de facto global standard, finding wide use in automotive applications in recent years. Since the early 2000s, we have proposed TEONEX<sup>®</sup> to the automotive market as a material that will contribute to innovation in highly anticipated, next-generation technologies for fuel cells. In 2020, we developed a sealing material that subjects TEONEX<sup>®</sup> to a proprietary adhesive coating and precision processing. This sealing material has been adopted for use in the "MIRAI" fuel cell automobile for its high durability even in high-temperature or other harsh environments, and for its contribution to ensuring long-term reliability in fuel cells. Changing from conventional vulcanized bonding to thermoplastic bonding with sealing material that uses TEONEX<sup>®</sup> has significantly improved cycle time from over 10 minutes to several seconds. This accomplishment earned the product the "Toyota Group Technology & Development Award" in fiscal 2021.

Fuel cell vehicles are the ultimate "eco-cars," emitting only water during operation. Fuel cell vehicles, including large buses, trucks, and passenger automobiles, are expected to become widespread throughout the mobility sector. In addition to bonding, TEONEX<sup>®</sup> provides functions including protection of power generation surfaces, insulation, and retention of gas intake/exhaust shape, contributing to technological innovation in fuel cells. The product is also expected to see use in water electrolytic hydrogen generators. The use and evaluation of TEONEX<sup>®</sup> is advancing in hydrogen-related markets around the world. TEONEX<sup>®</sup> holds potential as a key component supporting the hydrogen society of the future, and is indispensable as a material for proliferation of next-generation energy and the achievement of a carbon-neutral society.



"MIRAI" fuel cell vehicle, an adopter of TEONEX<sup>®</sup>

# Life Science

Through our proprietary technologies, we are aiming for the top of our global niche and will contribute to healthy living and health care for people worldwide



**Takahito Sagara**  
Managing Executive Officer  
Head of Life Science Division

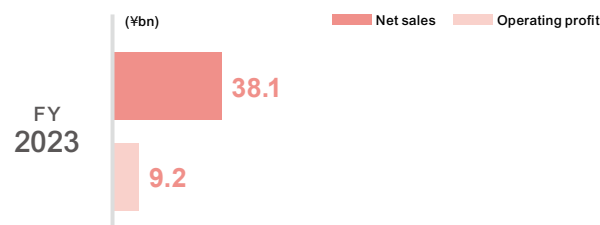
## The strengths of Toyobo

- Integrated development and manufacturing that spans raw materials to end products in the diagnostic reagent and drug domain; securing of dominance in quality
- Film forming technology for hollow separation membranes (development began in the 1970s)
- Exclusive position in the global market for CTA membranes for dialysis applications

## Opportunities and risks

- |               |   |
|---------------|---|
| Opportunities | <ul style="list-style-type: none"> <li>• Expansion of demand for genetic testing (PCR) amid the spread of infectious diseases</li> <li>• Acquisition of national policy-based development support and subsidies for antibody drugs and testing systems</li> </ul> |
| Risks         | <ul style="list-style-type: none"> <li>• Sharp exchange rate fluctuations</li> <li>• Soaring oil and coal prices due to shift away from fossil fuels</li> <li>• Shortages of supplies of goods procured overseas</li> </ul>                                       |

## Net sales and operating profit (¥billion)



## Business overview in fiscal 2023

In the bio business, sales of PCR test reagents decreased as cases of COVID-19 infections fell significantly in the 4th quarter, but sales of raw material enzymes for diagnostic drugs and genetic testing reagents in overseas markets remained strong. To expand the infection diagnosis solution business, in fiscal 2023 we introduced new products including in vitro diagnostics and reagents for simultaneous detection of whooping cough bacteria + para whooping cough bacteria, SARS-CoV-2 + respiratory syncytial virus, and SARS-CoV-2 + influenza virus.

In the medical materials business, sales of artificial kidney hollow fibers remained strong but were affected by soaring prices of raw materials and fuels. In policy measures, the business made preparations for the implementation of market evaluations ahead of the market launch of continuous renal replacement treatment (CRRT) in the next fiscal year.

The contract manufacturing business of pharmaceuticals ran up expenses related to dealings with the U.S. Food and Drug Administration (FDA), but sales recovered as production and shipment of over-the-counter formulations resumed in turn.

As a result, net sales in the segment were ¥38.1 billion and operating profit was ¥9.2 billion (results for new segment).



Reagents for the GENECUBE® fully automated gene analysis system SARS coronavirus nucleic acid kit

## Life Science

### Capital investment and R&D investment

In the bio business, we have invested about ¥6.5 billion in the Tsuruga Biochemicals Plant to create new manufacturing facilities, and are undertaking development of raw materials for PCR test reagents and genetic diagnostic drugs along with strengthening of our production system. A third cultivation and purification building will be built in first-stage construction, going into operation in April 2024. A research reagent building and genetic testing building will be built in second-stage construction, with completion and operation expected during fiscal 2025. We plan to further continue investments with the aim of tripling development and production capacity.

In the medical materials business, we have invested about ¥5 billion in the launch of an integrated production plant for dialysis equipment together with NIPRO Corporation. As this business's hollow fiber membrane manufacturing site is located in Yamaguchi Prefecture with assembly performed at a customer's plant in Akita Prefecture, issues have occurred in dealing with customers and the risks of long-distance transport. With the new investment, we are constructing and readying manufacturing facilities in an integrated production plant that connects our hollow fiber membranes and NIPRO's Odate Plant assembly lines, with the building structure and other components already completed.

Full-scale shipment of products is scheduled for July 2024.

We have also been tackling the development of CRRT with the aim of entering the field of acute blood purification therapy for conditions such as sepsis. In May 2023, we were granted approval by the Pharmaceuticals and Medical Devices Agency (PMDA). We will continue investing in a manufacturing and sales structure to achieve market launch in the near future.

### Growth strategy

The Life Science Division is tackling innovation by generating new chemical reactions, combining the cutting-edge technologies that Toyobo has built up in the medical treatment, medicine, and pharmaceutical fields. As technologies and products related to medicine cannot be supplied without production structures that

meet strict standards, we are constructing a leading world-class quality management system (QMS) along with structures for drug manufacturing management and quality control standards (GMP). To deliver peace of mind and smiles to people worldwide, we have put forth a business policy of seeking to maximize future value.

Nearly all of the main products of the bio business are used in clinical testing, but its product groups are largely unrelated to each

other. Accordingly, we are working to concentrate resources in the field of epidemiology, establish the Toyobo brand in the infectious disease testing market, and provide value through one-stop solutions for infectious disease.

In the medical materials business, we are focused on the development of applications other than membranes for dialysis, including acute blood purification membranes and process separation membranes that take our strengths in hollow fiber membrane manufacturing technology as their starting point. In the field of process separation membranes in particular, we have begun supplying products to major overseas vendors and are engaged in sales promotions toward major manufacturers in every market. We will also focus on our Bonarc® bone regeneration-inducing materials in the dental area, constructing a stable supply structure to contribute to new dental treatments.

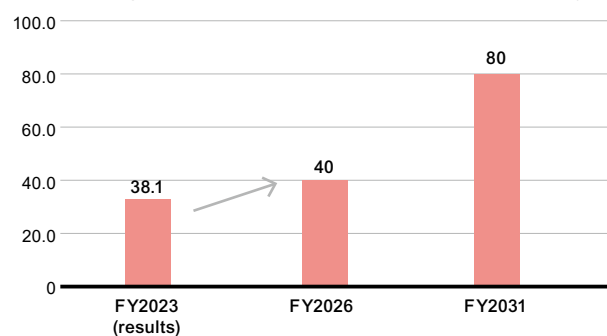
### Realizing sustainable growth

This division is active in the areas of diagnosis and treatment in the patient journey. While these areas largely go unseen by the general public, they make great contributions to health and treatment for people around the world. As one of the social issues in Sustainable Vision 2030, we are focusing on "a healthy lifestyle and health care." Our people involved in this business work with great pride.

To make a greater contribution to society by providing higher-performance products to the clinical testing market in the diagnostic area, we are tackling two targets in the bio business: A yearly 10 million tests that contribute through the provision of diagnostic drugs for infectious diseases, and a 30% market share in raw materials for biochemical tests, etc.

In the medical materials business, we will take advantage of our world-class hollow fiber development and manufacturing technologies, as well as our materials development capabilities, to expand into the area of treatment, thereby contributing to society through products that medical professionals and patients can use with confidence.

Net sales target of the life science business (¥bn)



Integrated production plant for dialyzers

## CSV examples

## Life Science

**Contributing to measures against unknown infectious and other diseases that threaten humanity  
GENECUBE® fully automated gene analysis system for PCR testing, and specialized reagents**

**Toshihiro Kuroita**

 General Manager  
Biotechnology Operating Department

Toyobo developed the GENECUBE® fully automated gene analysis system in 2011. The system's combination of fast-acting DNA amplification PCR enzyme KOD® DNA polymerase with a high-speed temperature control system is able to return results as quickly as 25 minutes from the start of measurement. As COVID-19 began running rampant across the globe in 2020, we leveraged our experience in the development of enzymes to accelerate development of PCR testing drugs for SARS-CoV-2 tests, receiving regulatory approval in July of that year. At present, over 300 GENECUBE® units have been adopted by medical institutions in Japan, where they contribute to society through use in daily testing.

About 70 years ago, Toyobo undertook the development of technology using microorganisms to treat effluent generated from the manufacturing of pulp used as a raw material for rayon. We also investigated the potential for industrial use of the enzymes created in the cells of microorganisms, and succeeded in applying the enzymes to diagnostic drugs. Expanding the types of enzymes, about 40 years ago we moved into the field of genetic research reagents, focusing on restriction enzymes for genetic engineering. Reagents using the KOD® DNA polymerase PCR enzyme developed by our company, collected from unique microorganisms inhabiting the undersea volcanic craters of Kodakara-jima Island in Kagoshima Prefecture, demonstrate a particularly fast DNA amplification rate and accurate replication. This has led to the reagents' use in genetic diagnosis and many other applications. Today, enzyme technologies have become core technologies in the life science business.

Unknown infectious diseases and other diseases that threaten humanity are expected to occur again in the future. By providing higher-performance products to clinical testing and other markets, we will contribute to the health of people around the world and to greater efficiency in treatment.



GENECUBE® fully automated gene analysis system

**Contributing to both patients and the earth through high permeability  
Cellulose-derived artificial kidney hollow fiber membrane unique to Toyobo**

**Kimihiro Mabuchi**

 General Manager  
Medical Materials Operating Department

The life science business's products are involved in the diagnosis and treatment of diseases, contributing to patients and society. Hollow fiber membranes are a core product of the business. Since the late 1970s, we have engaged in development of hollow fiber membranes for seawater desalination. We developed artificial kidney hollow fiber membranes as one of the applications and launched full-scale production in 1984. For four decades years since then, we have provided artificial kidney hollow fiber membranes for ever-increasing numbers of dialysis patients. The product features two main strengths. First, it boasts outstanding waste removal performance with little change over time during dialysis, thanks to our proprietary film-forming technology. Second, it features outstanding biocompatibility, with few cases of allergies. While general dialysis membranes are made from petroleum-derived materials, our cellulose triacetate (CTA) membrane uses natural cellulose from cotton as its starting material. This confers the advantage of very few patients experiencing allergic reactions during treatment due to conversion of hydroxy groups that affect patients to acetate. Our precise control of the membrane surface further prevents clogging and thus a lower likelihood of pressure fluctuations during dialysis, letting patients undergo treatment with confidence.

We are now working with NIPRO Corporation to build a new plant capable of integrated production that spans hollow fiber manufacturing to processing into dialyzers (filtration devices) and commercialization, with the start of operation scheduled for July 2024.

We have also extended our film-forming technology to other treatments and developed concentrated ascites reinfusion therapy (CART) membranes in 2020. These membranes see application in treatment that filters ascites accumulated due to conditions such as cancer and cirrhosis of the liver, then collects beneficial proteins with a concentrator and returns them to the patient's body. We are also advancing development of acute blood purification membranes for patients with conditions including sepsis, with delivery to patients planned for fiscal 2024.



Illustration of Dialyzer using Toyobo's CTA membrane

# Environmental and Functional Materials

## Contributing to solving the world's issues through highly functional materials



### Chikao Morishige

Representative Director & Co-COO  
 Head of Environmental and Functional Materials Division  
 President & Representative Director  
 CEO  
 TOYOBO MC Corporation

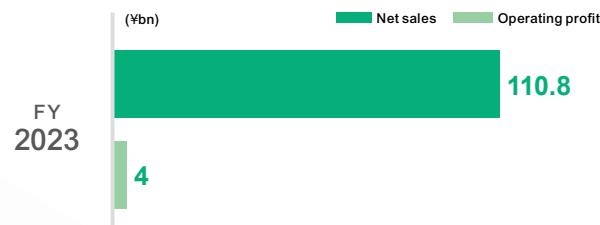
### The strengths of Toyobo

- A new corporate body created through a functional materials manufacturer and a general trading company
- Uniqueness of technology, development capabilities, responsiveness, and ability to comprehend needs
- Global expandability leveraging our network of overseas sites and wide-ranging points of customer contact

### Opportunities and risks

- |               |   |
|---------------|---|
| Opportunities | <ul style="list-style-type: none"> <li>• The global trend toward a circular society and carbon neutrality (holding of many technologies)</li> <li>• Overseas expansion through co-management with a general trading company</li> </ul>  |
| Risks         | <ul style="list-style-type: none"> <li>• Soaring costs of raw materials and fuels and increase in procurement risks</li> <li>• Alliances between textile and chemical manufacturers</li> <li>• Intensification of market competition due to significant changes in business conditions</li> </ul> |

### Net sales and operating profit (¥billion)



### Business overview in fiscal 2023

In fiscal 2023, the final year of financial results under the previous segment categories of Toyobo group, soaring prices of raw materials and fuels and other significant changes in business conditions yielded severe results.

In the environmental solution business, sales of VOC recovery equipment for lithium-ion battery (LiB) separator plants and replacement elements were strong under growing demand for LiBs amid global adoption of electric vehicles (EVs). Non-woven materials struggled as revisions of product prices were unable to keep up with increases in prices of raw materials and fuels. In particular, the business was unable to effect price pass-through in products for civil engineering and construction while quantities did not recover in automotive-related products, resulting in an operating loss. We plan to advance reforms including a review of production capacity. Sales remained strong for high-performance ZYLON® fiber, primarily for architectural reinforcement and bicycle tire applications. Sales of IZANAS® remained strong, primarily for fishing line applications.

As a result, net sales in this segment were ¥110.8 billion and operating profit was ¥4 billion (results for new segment).

### Start of a new company

TOYOBO MC Corporation began operation in April 2023 as a joint venture between our company and Mitsubishi Corporation. Our aim is to grow the environmental and functional materials businesses shouldered by the new company as a third pillar of the Toyobo group, alongside the film business and life science business.

The businesses cover many functional, cutting-edge products based on Toyobo's proprietary technologies, including functional resins and environmental solution systems. Looking back, however, net sales of these have been sluggish in terms of growth, with overseas expansion in particular presenting challenges. In response, we made the decision to create a new "manufacturer + general trading company" framework, in order to grow the business through Toyobo's commitment to technology combined with the overseas expansion and marketing capabilities of Mitsubishi Corporation.

From the day the business launched, we began efforts to



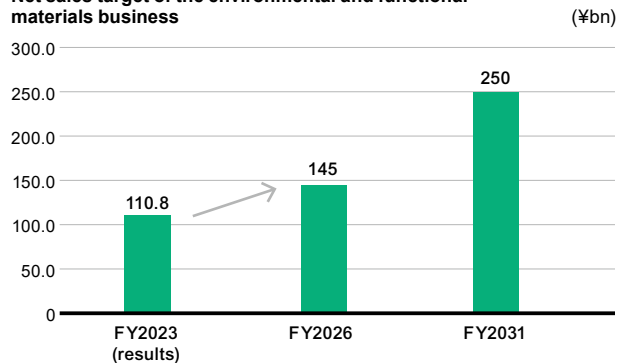
## Environmental and Functional Materials

enhance the solidarity of the employees. The initiatives have included briefings on the Medium-Term Management Plan (MTP); training camps for managers; Medium-Term Management Plan caravans (dialogues with top management) for three divisions, domestic and overseas workplaces, and affiliated companies; and dialogues with vice presidents.

### Growth strategy

To achieve target sales of ¥600 billion for the Toyobo group in fiscal 2031 as set out in Sustainable Vision 2030, we believe that the achievements of the Environmental and Functional Materials Division will be instrumental. In this business, we are aiming for net sales of ¥250 billion in fiscal 2031, with ¥145 billion in fiscal 2026, the final year of the Medium-Term Management Plan. To achieve this high target, we will strategically roll out initiatives that take a bird's-eye view of the materials value chain and the industry overall. Specifically, we are tackling individual businesses divided into "growth," "revenue enhancement," and "business reform" categories, and, through fiscal 2026, are making efforts aimed at expanding applications in existing businesses while leveraging the information

Net sales target of the environmental and functional materials business



network of Mitsubishi Corporation. From fiscal 2026 onward, we will broaden our development of new technologies to meet new needs and speed the cycle overall, while advancing M&A and corporate alliances.

This growth strategy represents a major challenge for Toyobo group. We are committed to achieving significant business transformation in terms of three points: Global penetration and expansion of our customer base which has been centered on Japanese companies in Japan and overseas, acceleration of our development cycle, and enhancement of production efficiency. Positive evaluation from our customers will be indispensable in achieving this. We intend to grow TOYOBO MC Corporation into a company that customers can trust to create things in response to requests.



VOC recovery equipment

### Future initiatives

Among the five social issues named in Sustainable Vision 2030, we recognize that "a decarbonized and circular society" and "clean water areas, air, and soil, and the preservation of biodiversity" in particular involve aspects to be shouldered by this business.

Within its Vision of "solving the world's issues through highly functional materials," TOYOBO MC Corporation has put forth three matters to address as its Mission: (1) Ceaselessly transforming itself, (2) Connecting material technologies to future needs, and (3) Engaging in co-creation to solve social issues. On this foundation, the company will make every effort to enhance its corporate value by solving social issues.

Materials that achieve lighter weight and greater functionality in the field of mobility, along with components and materials required for flexible printed circuits (FPCs) and for the LiBs vital to the shift to EVs, are the core products of TOYOBO MC Corporation. In the environmental field, the company will be able to ably leverage aqua membrane technologies and effluent treatment technologies in LiB manufacturing, contributing to the effective use of water and other resources and to the reduction of environmental impacts. Osmotic power generation using aqua membranes, now at the stage of practical application in Denmark, is considered highly promising for deploying high-performance fiber in offshore wind power generation. These are technologies that will contribute greatly to carbon neutrality. The business's products bring together elements that can make general contributions to the environment despite their differing scopes. We believe that we will be able to expand the business on the back of worldwide megatrends.

## CSV examples

## Environmental and Functional Materials

### Contributing to enhanced performance and safety in lithium-ion batteries HARDLEN® sustainable adhesive



**Kenji Shiga**

Manager  
TOYOBO MC Corporation

The appearance of diverse electronic devices and the accelerated development of electric vehicles (EVs) are spurring ever greater demand for lithium-ion batteries (LiBs). The electrolytes in LiBs must be tightly sealed to prevent internal leaks. As the batteries themselves become hot, however, high heat resistance is also required for sealing materials and adhesives. Impurities must be thoroughly removed, as their presence in the materials used in LiBs can result in degradation of battery performance and in fires. The HARDLEN® adhesion promoter for polyolefin handled by TOYOBO MC Corporation is an adhesive that features excellent adhesion to polypropylene (PP) resin. With its heat resistance enhanced through the application of maleic anhydride modification technology, it has been adopted as an adhesive for LiB sealing materials. The company achieved supply to customers from an early stage of the growing demand for LiBs thanks to its one-of-a-kind technologies and manufacturing processes for removal of impurities, and boasts a high market share even now.

These technologies originate in the company's textile dyeing technologies. About 50 years ago, the resin known as PP faced a challenge in that while it was light and convenient, it did not dissolve in organic solvents and was thus difficult to process and dye. Toyo Kasei Kogyo Co., Ltd.\* developed a technology to chlorinate PP, dissolve it in solvent, and dye it. The company also introduced maleic anhydride modification technology that enables precise modification of the chlorinated PP, for free control over its physical properties. HARDLEN® which is able to freely bond PP to other polymers, has won strong approval in the marketplace and has grown its market share primarily in automotive coating applications. As a further application, the company developed the above-mentioned adhesive for LiB sealing materials and has been boosting production since 2017.

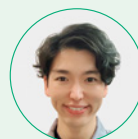
LiBs are indispensable not only for EVs but also for renewable energy storage batteries, robots, IoT devices, and more. The stable supply of HARDLEN® which aids battery performance and safety, will contribute to the evolution and advancement of electronic devices.



New HARDLEN® manufacturing facility at the Takasago Plant

\*Merged into TOYOBO CO., LTD. in 2010

### Helping to bring on the 6G communication era HARDLEN® leverages the strength of low dielectric properties

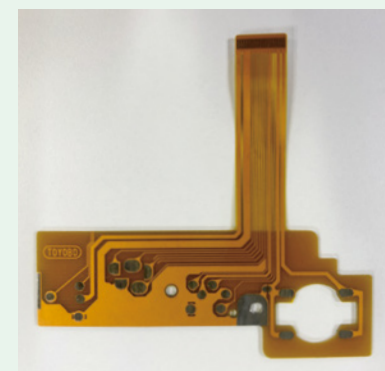


**Koichi Sakamoto**

TOYOBO MC Corporation

Toyobo's maleic anhydride modification technology and impurity removal production technology are both without rival. Making use of these technologies, HARDLEN® boasts a strong advantage in the marketplace. We are currently conducting research and development into new applications. The terms "5G" and "6G" are commonly heard in the context of next-generation communication systems as an era of ultra-high speed, ultra-low latency, and massively simultaneous connections rapidly approaches. Technical hurdles remain, however, including those of materials. As an example, 6G makes use of even higher frequency electromagnetic waves than 5G does, but signal attenuation and delay problems arise with the use of current materials. Prevention of these problems demands materials with lower dielectric constants for use in components such as antennas. The key to technological innovation in this area is our company's impurity removal production technology. Adhesives designed around HARDLEN® are able to achieve a low dielectric constant. We are already supplying our low dielectric adhesives to printed circuit board material manufacturers in the Asian region, and our development unit is rushing to develop ultra-low dielectric adhesives for 6G that leverage the strengths of HARDLEN®.

Multiple sensors and radar systems are also used in autonomous driving systems and factory automation systems, which are expected to proliferate in the future. As high speed, high-capacity, and stable communication infrastructure is indispensable for the safety of these systems, low dielectric properties are demanded of the adhesives used in this infrastructure. Under the belief that our business will see use in many industrial and lifestyle scenarios and that it can broadly contribute to the safety and security of society, we undertake our work with enthusiasm every day.



Circuit board using HARDLEN®

## Feature

### Launch of TOYOBO MC Corporation

TOYOBO MC Corporation (TMC), established by Toyobo and Mitsubishi Corporation as a new joint venture to plan, develop, manufacture, and sell functional materials, began operations on April 1, 2023. We spoke about TMC's growth strategy with vice presidents from both parent companies, who have been involved in the new company's launch from the preparation stage onward.

#### The road to the launch of a new company

The fusion of the two companies will create a stronger, more interesting company

**Fujii** I was involved in preparations for the company for about two years from the start of the project. From 2022, I served as the officer in charge of establishing a new company. During the process, I had many discussions with Mitsubishi Corporation. What I think connected the two companies, in a word, is fate.

Toyobo's environmental and functional materials business, which the new company is succeeding, is an area that enjoys cutting-edge technology, yet has not been able to grow significantly. I sensed a risk that growth could become even more problematic for the business during a phase of rising management costs for reasons such as environmental response. I wondered whether insufficient marketing capabilities in Toyobo, especially in terms of overseas marketing and deployment, might underlie the inability to significantly expand the businesses. If it were a



#### Juro Baba

Executive Vice-president & Representative Director, COO  
Controlling Supervisor of Portfolio Management  
TOYOBO MC Corporation

#### Dialogue



#### Naoki Fujii

Director, Vice President, Executive Officer,  
Assistant to the President, Special Mission Officer, CCO  
TOYOBO MC Corporation



matter of just one business, working with manufacturers could yield greater synergy. However, transferring 12 businesses and growing them significantly definitely requires comprehensive strengths. The partner who offered those strengths was Mitsubishi Corporation.

**Baba** I think there are two main things expected of Mitsubishi Corporation.

One is marketing, a traditional strength of trading companies. Mitsubishi Corporation has enormous contact area in regions and industries around the world, which we will leverage to increase opportunities for entry into customer bases, regions, and markets that have eluded Toyobo so far.

Another expectation is for the knowledge and experience gained from sending management teams to about 1,700 companies in which Mitsubishi Corporation has invested. Incorporating the good parts of the company's problem-solving know-how, including technical support, overseas regulatory compliance, and governance measures, into TMC should enable a stronger, more interesting company.

**Fujii** Mitsubishi Corporation has very compelling functions and assets, including a 110-site network, global information capabilities, the intelligence functions to analyze that information, and planning capabilities. Mitsubishi Corporation has also been investing heavily in carbon neutrality, and is developing a lot of clean energy with a focus on wind power generation. I believe that this will make considerable contributions to expanded use of Toyobo's energy-related materials, as well as to the advance of energy conversion at production sites.

Trough our discussions, I've felt a difference between two companies in terms of sense of speed and persistence, a weak point for Toyobo. This sort of cross-cultural integration itself is a

major factor in growth. I have expectations that growth opportunities for human resources, including experience at overseas sites, will broaden.

#### The strengths of TOYOBO MC Corporation

Meeting the needs of society with technology, information, and planning capabilities

**Baba** TMC has already announced its medium- to long-term management targets. Approaching those high targets will require growing existing customers while also cutting into new customers and markets not yet reached. Decarbonization has become a large movement over the past few years, and we've arrived at an era that demands a change from the passive environmental response of the past to an aggressive environmental response. Toyobo has many materials that are needed now, not only in Japan but across the world. These include engineering plastic materials that contribute to weight reduction in electric vehicles (EVs) and low dielectric adhesive raw materials that are required for the advance of digitalization. In talks with several companies before the establishment of TMC, I heard many times that Toyobo is a company that has the creation capabilities to properly meet customers' detailed demands.

**Fujii** We had discussions with Mitsubishi Corporation about how we want to make TMC a company with technology at its core. Although the company's materials all contribute in different forms, they all hold the potential to be environmentally conscious. In the coming era of providing solutions rather than materials themselves, it will be important to use materials and technologies to solve the problems customers face. I think that if we can also uncover and suggest issues that customers are not aware of, we can make even greater contributions. I believe that we'll be able to achieve this by combining the strong technical capabilities of

Toyobo with the high-level information and planning capabilities of Mitsubishi Corporation.

**Baba** Mitsubishi Corporation has continued to think about where the world's needs lie, and what we can connect, and how, in order to address those. As long as we can learn where the needs are that call for TMC, we can consider what to make and then execute on that, which is Toyobo's area of expertise. This fusion is our greatest strength.

As an example, even as a circular society advances, there are still many plastics that are thrown away without recycling. To recycle these, their materials must be recyclable to begin with. It is also important to create mechanisms for the recycling of these materials. If we can participate in the creation of regulations and rules for countries and industries to create such social mechanisms, and propose materials to customers, I think that would be really interesting.

## Reviewing organizational design

### Going beyond the conventional boundaries of materials manufacturers

**Fujii** In the organizational design of TMC, I thought it would be good to review our organizations so far. In Toyobo, the growth potential of individual businesses reached limits because of silos created in organizations under the vertical divisions of the business division structure. I thought that we should first change these vertical divisions.

**Baba** Right. I think that the business division structure, with businesses subdivided and with sales, production, and development integrated, functioned extremely efficiently in terms of quickly responding to customers'

needs. Since the 1990s in particular, with no large new products appearing and sales stagnant, the company overcame difficult times through solid earning in small units.

However, looking at what's important in a phase where the company aims for further growth, I think there are two things. The first is bold allocation of management resources. When vertical division is strong, maximizing its own return becomes the goal for an individual organization, which leads to the encircling of human resources and funds. Taking down such walls and creating a functional division structure at TMC, capable of making concentrated shifts of people and funds, was a major decision.

The other important thing is the achievement of co-creation that goes beyond businesses and products. Until now, cooperation among business departments has been weak, and we've been unable to make multifaceted responses even when potential arises to provide varied products and solutions. As the needs of the world become increasingly complex, solving problems through a single product will likely become difficult. A mindset of proposing solutions that combine several businesses or different products, or of going horizontal and introducing other business divisions depending on the issue, will be important.

As information sharing is the key to functional organizations, to address adverse effects such as increased difficulty in communicating, we established strategic planning departments at three functional divisions to facilitate information sharing and operations. These departments shoulder a big role in achieving cooperation among divisions.

**Fujii** There is no correct answer to the question of what form organizations should take. The answer naturally changes according to goals and strategy. With the new company, I expect that a lot of

things will come to light through the change to function-specific organizations.

## A wonderful fusion

### A shiny new company with a one-of-a-kind corporate culture

**Baba** I was surprised that the two companies, which both have long histories, share a common corporate philosophy of viewing contribution to a prosperous society as the purpose of their business activities, going back to our "Jun-Ri-Soku-Yu" and Mitsubishi Corporation's "The Three Corporate Principles," corporate philosophies set by our companies' respective founders in the Meiji era. I feel that, flowing beneath, there was something very common to both companies. In terms of work, however, there's a difference akin to that of hunting people versus agricultural people. There's a stark contrast between Toyobo, which advances matters carefully and accurately to avoid any mistake, and Mitsubishi Corporation, which tends to first take action and think on the run. With those completely different corporate cultures coming together, I want to see the good parts of each merge, to create a company with a new culture not seen before.

**Fujii** Yes. I think it's a fusion of dissimilar things. One goal of TMC is enhancing the mobility of people. This may be a brash thought, but I want to implement human resource development that takes a step forward to let employees grow through diverse experiences, by means such as creation of opportunities for inter-company learning that includes Mitsubishi Corporation too, rather than interaction within TMC alone. Creating a shiny, new company with a wonderful corporate culture is what I see as my biggest mission as a vice president.



### Juro Baba

April 1990  
September 2001  
April 2013  
April 2022  
July 2022

Joined Mitsubishi Corporation  
Mitsubishi Corporation (Americas)  
Corporate Planning Department  
Appointed Executive Officer  
Senior Vice President  
Special Appointments  
General Manager to Industrial Materials  
Group CEO

### Naoki Fujii

April 1987  
November 2007  
June 2011  
April 2015  
April 2018  
April 2021

Joined TOYOBO CO., LTD.  
General Manager, Procurement Department  
General Manager, Planning and Management Functional Materials  
Manager, Iwakuni Production Center  
Manager, Corporate Planning Department  
Appointed Executive Officer



# Functional Textiles and Trading

## Executing business portfolio reform to arrive at what our business should be

### The strengths of Toyobo

- Know-how for deployment of biodegradable fibers, developed as a synthetic fiber manufacturer, to airbags
- A product lineup friendly to people and the earth
- Polymerization and modification technology developed as Japan's first acrylic fiber manufacturer

### Opportunities and risks

#### Opportunities

- Expansion of business opportunities through replacement with environmental materials (biodegradation and recycling)
- Restructuring of the environmental materials industry, strengthening of corporate constitution through alliances, and expansion of opportunities

#### Risks

- Soaring prices due to monopolization and discontinuation of production of biodegradable, recyclable, and other small-lot raw materials
- Risk of acceleration of business closures by domestic subcontractors in the apparel industry, and risk in securing labor in plants

### Business overview in fiscal 2023

In this business, we are making efforts to carry out a business reform master plan for arriving at what our business portfolio should be, based on the 2025 Medium-Term Management Plan.

In fiscal 2023, businesses were significantly affected by soaring prices of raw materials and fuels, with exchange rate factors caused by sharp depreciation of the yen also having a negative impact. Amid this, sales and profit were led by thobe, traditional Middle Eastern apparel. We were able to pass along nearly all of the increase in raw material prices but struggled significantly in passing along fuel prices, with the result that performance declined other than in TOYOBO STC CO., LTD.

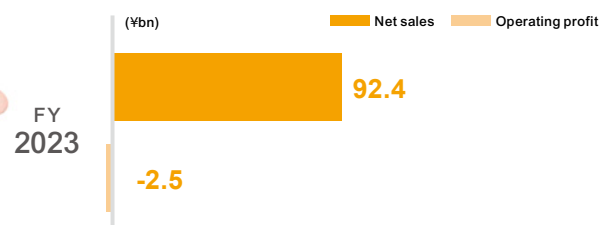
As a result, net sales in this segment were ¥92.4 billion and operating profit was - ¥2.5 billion (results for new segment).

With the exception of cost increase factors, progress was made according to schedule in addressing issues in each business. We expect that exchange rate impacts will be mitigated through new contracts.

### Shigeo Nishiyama

Senior Managing Executive Officer  
Head of Functional Textiles and Trading Division

### Net sales and operating profit (¥billion)



Thobe, traditional Middle Eastern apparel

## Functional Textiles and Trading

### Business strategy

Under its vision of creating small comfortable changes in living through textile technologies, the business is working to develop and commercialize distinctive technologies that find use in varied lifestyle scenarios. The division's business is diverse, covering many products related to everyday living. To solve users' concerns and issues, we intend to leverage our technical and development capabilities and use trading company functions to bring together wide-ranging knowledge and skills, then commercialize and globally deploy these. We will abandon the idea of continuing through our own efforts, and will enhance our strategies through alliances with other companies and other industries, including industry restructuring. With regard to the social issues noted in Sustainable Vision 2030, we are strengthening our initiatives related to "employee well-being and human rights in the supply chain" and "a decarbonized and circular society" in particular.

Based on our master plan, we are working to achieve early profitability, prioritizing "withdrawal from unprofitable businesses and products," "optimization of production scale and personnel," "pass-through pricing to address cost increases," and other items in order to earn an appropriate marginal profit rate in each business.

We entered the airbag business through non-coated fabrics. We also manufacture silicone coated fabrics at present, but in the recycling society of the future, non-coated fabrics that do not require removal of silicone will grow in importance. Our know-how in the utilization and manufacturing of biodegradable fibers is also a strength. We are steadily carrying out our roadmap for achieving profitability and are moving forward with negotiations on base price revision, integration of product numbering, proper allocation, and review of shared expenses. Toyobo Indorama Advanced Fibers Co., Ltd. (TIAF), a joint venture with Indorama Polyester Industries PCL (IPI) to manufacture airbag yarn, began operation in October 2022. We are working to achieve stable operation as quickly as possible.

The functional textile business is carrying out improvements to its human capital structure, with the start of a new structure scheduled for March 2024. Together with this, we are also undertaking transfer of production technology to Toyobo Textile

(Malaysia) SDN.BHD.

In the textile business, our founding industry in which we have accumulated over 140 years of technologies, we have carried out integration and reorganization of group companies with the goal of enhanced profitability and asset efficiency, and launched TOYOBO TEXTILE CO., LTD. in April 2022. Through the consolidation of three plants and a return to profit through integrated business operations at overseas sites, we aim to establish a foundation for profitability. The greatest advantage of woolen menswear company Miyukikeori Co., Ltd. is its status as a luxury brand capable of integrated production that spans yarn, weaving, processing, and sewing. The company is also developing the world's finest, lightest class of fabrics using ultra-strong yarn (Manerd® wool technical hybrid yarn). While achieving stable management through enhanced efficiency in the textile business, we are engaging in selection and concentration of business partners (moving away from department stores and toward high value-added apparel).

Responding to a sharp rise in construction steel materials and construction-related costs, acrylic fiber company Japan Exlan Co., Ltd. conducted a review of its original revitalization plan, and has undertaken a new start. The company will shift to OEM for acrylic raw cotton, improve the efficiency of its production processes, and carry out sales strategies and sales expansion measures that include external collaboration.

The trading company TOYOBO STC CO., LTD. will focus on the expansion of new commercial flows with Toyobo group companies and on expansion of proprietary technical products.



Completion of a nylon yarn production plant for TIAF's airbags on the grounds of IPI

## CSV examples

### Contributing to the advancement of the domestic recycling market through our technology Taking on the upcycling of apparel



**Eiichi Shimizu**

President  
TOYOBO TEXTILE CO., LTD.

While the Toyobo group has established a variety of recycling technologies, recycling related to apparel has been limited to the reuse of fiber scrap in plants. One reason for this is that the development of a domestic recycling market in the field of apparel is still a matter for the future. A considerable problem has existed in that value creation supporting both the economy and the environment cannot be achieved without the creation of recycled clothing with greater appeal to consumers. However, unlike general apparel manufacturers, our textile business performs integrated production that spans fiber to yarn making and sewing. Accordingly, operating a recycling loop throughout the supply chain will enable higher-value recycling. TOYOBO TEXTILE CO., LTD. is undertaking full-scale upcycling of apparel, seeking to create a market by providing high-quality and compelling recycled products in Japan.



Upcycled apparel products (hangers made from crushed and pelletized fiber scrap)

## CSV examples

## Functional Textiles and Trading

### Contributing to the protection of lives and the environment Successful development of airbag fabric technologies



**Tadao Kuroki**  
General Manager  
Airbag Operating Department

For its heat resistance and other merits, nylon 66 has been widely adopted as airbag fabric that protect lives in emergencies while driving. However, the material faces issues including shortages of supply and difficulty in recycling, leading to increased calls for polyester fabrics.

Compared to nylon, the use of polyester as a raw material is expected to roughly halve CO<sub>2</sub> emitted in the polymer resin production process. A high percentage of recycled polyester materials can also be used. Our company has undertaken the development of polyester airbag fabric that features outstanding environmental compatibility. The material achieves heat resistance and storability on par with nylon 66, and was adopted by automobile manufacturers in 2022.

We will continue advancing technological innovations aimed at creating “the solutions needed by people and the earth.”



Varied types of airbags to secure greater safety

### Contributing to the prevention of damage to health and reduction of environmental impacts Development of adhesive-free waterproof sheets



**Masahide Takemoto**  
President  
TOYOBO STC CO., LTD.

The urethane coating film waterproofing and ventilation buffer method, a standard method used in rooftop waterproofing, makes use of conventional chloroprene adhesives. This entails a major issue in atmospheric dispersion of toluene, xylene, and other chemicals contained in the adhesives. As these chemical substances are causes of damage to site workers' health and photochemical smog, posing a concern about global warming impacts due to chemical changes in the smog, it is hoped that use of the substances will be reduced or discontinued.

New asphalt self-adhering ventilation buffer sheets developed by TOYOBO STC CO., LTD. can be directly affixed to rooftops with no use of adhesives. This alleviates concerns over air pollution and significantly reduces construction work man-hours as well, enabling reduction of both environmental impacts and construction costs compared to conventional products. Through the development of industrial materials that take the global environment into consideration, we will continue contributing to both business and the environment.



Applying waterproof material coating to ventilation buffer sheets

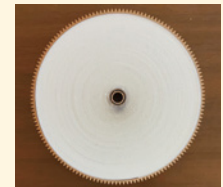
### Contributing to the reduction of environmental impacts through high energy efficiency Joint development of energy-saving air conditioner components and materials together with Panasonic



**Tatsuaki Sumitani**  
Director  
Japan Exlan Co., Ltd.

Japan Exlan Co., Ltd. has developed a desiccant rotor using paper coated with fine particles that absorb and desorb moisture through acrylic material. Heat pump-type air conditioning is typically used in buildings and plants. Absorbing moisture from air prior to intake by the heat pump, followed by contact with the refrigerant, eliminates discharge of drain water and enables highly energy-efficient cooling. Providing humidity in winter also enables efficient heating, achieving significant energy savings compared to conventional heat pump-based air conditioning.

Panasonic evaluated the desiccant rotor, which features quick regeneration at lower temperatures and with low energy usage and adopted for use in its air conditioners in 2022. As a result of achieving industry-leading energy-saving performance through joint system design by Panasonic Corporation and our company, Panasonic Corporation was a recipient of the Energy Conservation Grand Prize in fiscal 2022 and fiscal 2023.



Desiccant rotors adopted for use in Panasonic air conditioners

# 04

## Foundation for value creation

48 Sustainability management

51 Disclosure based on TCFD recommendations

55 Environment

- Realization of a decarbonized society
- Realization of a circular society
- Conservation of water resources, conservation of biodiversity, chemical substances management

61 Society

- Safety and disaster prevention
- Respect for human rights
- KAERU — Creating opportunities for dialogue that brings awareness —
- Partnerships (supply chain)
- Quality
- Human capital
- Partnerships (social contribution)

69 Governance

- Outside Director message
- Corporate governance
- Compliance
- Management team
- Risk management



# Sustainability management



## Commitment of the officer in charge of sustainability

### We accomplish sustainable growth by solving social issues through our business and with steady advancement of our initiatives



**Nobuya Fujiwara**

Managing Executive Officer  
Head of Corporate Sustainability Division

Toyobo group has strengthened its sustainability initiatives since fiscal 2021, and has achieved definite results over these past three years. In Sustainable Vision 2030, the long-term vision we announced in May 2022, we identified five social issues that we can solve through our contributions, given the society we envision for 2030, including climate change, biodiversity, and human rights.

Regarding measures against climate change, we revised our GHG Emissions Reduction Plan, raising the fiscal 2031 reduction target for Scope 1 and 2 from 30% of the fiscal 2014 level to 46% or higher, and also setting a new reduction target for Scope 3. Our reduction target has been recognized as adhering to the levels stipulated by the Paris Agreement, and was also certified by the global Science Based Targets initiative in December 2022. As we work to reduce GHG emissions throughout our supply chain, we will strengthen our collaboration with our diverse stakeholders.

Our biodiversity conservation efforts include joining the 30 by 30 Alliance for Biodiversity in November 2022, an initiative to conserve 30% or more of land and sea as healthy ecosystems by the year 2030. We also applied for OECM international certification for forests owned by our group. We are implementing activities toward the (nature-positive) goal of stopping biodiversity loss and effecting restoration.

Regarding business and human rights, in October 2020 we laid out the Toyobo Group Human Rights Policy, and have stated our "respect for human rights throughout our supply chain" at the top of Sustainable Vision 2030. Having begun practicing due diligence in human rights from fiscal 2023, we place priority for our group on gaining a thorough understanding of the operational status of non-Japanese technical trainees. After starting the effort in Japan, we will implement a phased expansion to other countries in the future. Regarding our supply chain, we have established CSR Procurement Guidelines for all suppliers, and are advancing efforts to ensure our policies are understood, including through dialogue with suppliers that have issues.

Corporate sustainability consists of solving social issues through our business.

We have numerous products and solutions that contribute directly to solving social issues, and while expanding those products, we will generate new businesses by evolving and integrating our stock of technologies accumulated in the past. We could, for example, expand our products that bring about a reduction in carbon footprint through a combination of Scope 1 and 2 reductions and the use of recycled and biomass raw materials, thinning of components, etc. We will expand products and solutions that contribute to measures against climate change and to preservation of biodiversity, such as seawater desalination using less energy and renewable sources of energy, reuse of water, power generation using membranes, and devices that collect and reuse the volatile organic compounds used in the manufacture of electric vehicle batteries.

Genetic test reagents for PCR tests are helping with measures against the spread of COVID-19 and other infectious diseases. Biomanufacturing, which combines polymer technology and biomedical technology, the core technologies involved in genetic test reagents, can create businesses that solve issues in both climate change countermeasures and biodiversity conservation. We have, for example, started conducting basic research on uses for unutilized biomass. Future potential is thus hidden in such raw materials as those produced by thinning our group-owned forests.

We have been operating businesses that contribute to solving the social issues of the times ever since our founding in 1882, and our business portfolio has therefore been changing. One of the mottoes of our company's founder, Eiichi Shibusawa, was "*Jun-Ri-Soku-Yu* (Adhering to reason leads to prosperity)." With this as our corporate philosophy, we aim to be a group that continues to create solutions needed by people and the earth.

Being oriented toward sustainable growth means becoming a company that achieves sustainable growth through its contributions to the sustainability of society. Spreading and promoting this awareness is my duty.

# Sustainability management



## Basic approach

By contributing to the realization of a sustainable society, we realize the vision of Toyobo group, which expresses how we think about sustainability: “We are a group that continues to create the solutions needed by people and the earth with materials and science.” At the same time, the contributions our group makes to realizing a sustainable society will lead to profits, thereby increasing our corporate value, which in turn will lead to the growth of our business and to the realization of the next sustainable society. Our concept of sustainability consists in the continuation of this positive spiral.

### • Policy

1. Management that takes the sustainability of society into consideration, and thus management that increases the sustainability of our company
2. Sustainability that builds a solid management foundation: The axis of our management foundation (ESG)
3. Sustainability that strengthens our competitiveness and drives growth: The axis of our business (CSV)

## Organizational structure

Toyobo group has established a Sustainability Committee, with our President serving as chairperson. Committee meetings were held four times in fiscal 2023, with deliberations covering themes including checking on company-wide sustainability action, GHG emission reduction targets, nature-positive matters, geopolitical risk, and committee structure in consideration of the requirements of ISSB, etc. In April 2023, we reviewed our vision for our Sustainability Committee as a component of the sustainability management required by the Corporate Governance Code and by international sustainability standards. We reformed the committee into a system for integrated deliberations with a focus on medium- to long-term sustainability themes related to our company-wide long-term strategy.

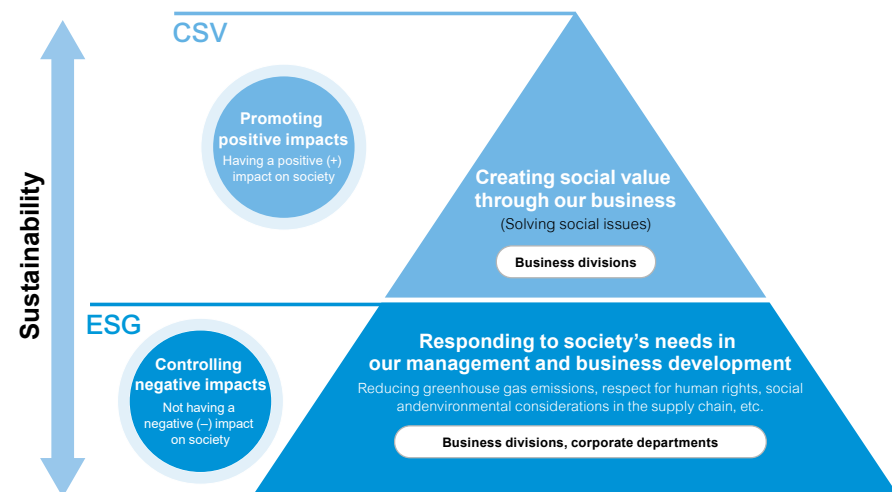
This new structure transfers the roles of eight committees previously under the Sustainability Committee umbrella to the respective divisions in charge, which will be responsible for advancing their activities. We are continuing with the Risk Management Committee and Compliance Committee, which require company-wide cross-organizational discussions and tasks,

and have established a new Climate Change and Biodiversity Committee.

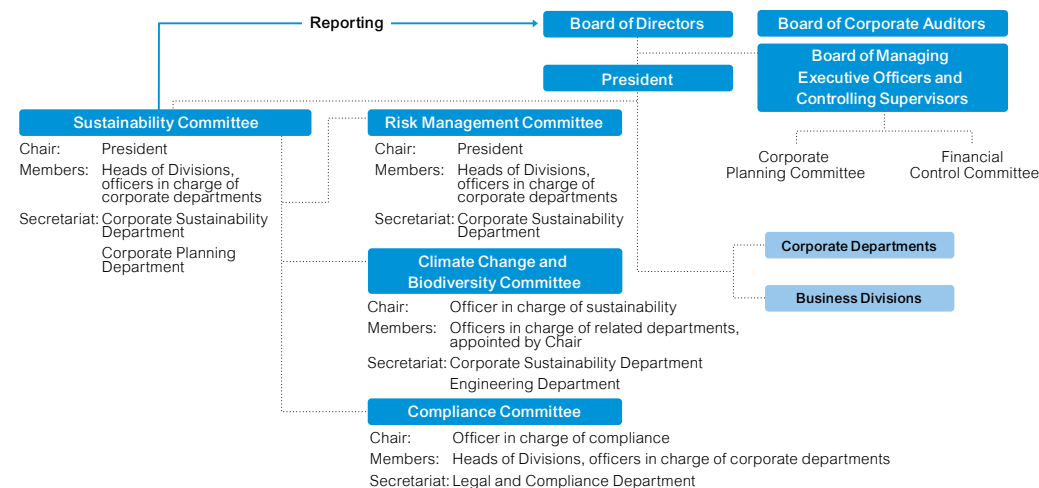
Meeting six times a year beginning in fiscal 2024, the committee will advance sustainability initiatives that lead us toward our envisioned ideal. It will engage in integrated discussions of priority issues (materialities), deliberate on strategies, measures, and indicators from the perspective of risk and opportunity, and manage the progress.

We have also established a Corporate Sustainability Division, which is responsible for drafting and promoting various specific measures, communicating them externally, and encouraging dialogue.

## Conceptual clarification: Sustainability/CSV/ESG



## Sustainability promotion structure (as of April 1, 2023)



# Sustainability management



## Initiatives

Since our group's founding by Eiichi Shibusawa, we have taken the philosophy of one of his mottoes, "Jun-Ri-Soku-Yu (Adhering to reason leads to prosperity)," as the basis for our concept that we grow our own business by enriching society. By putting this into practice, we have anticipated modern CSV.

Since fiscal 2021, we have been moving ahead with activities under a full-fledged sustainability management orientation. Our efforts have been particularly directed toward carbon neutrality, the circular economy, human rights, human capital, and biodiversity, and upon formulating these strategies, we have specified milestones.

## The United Nations Global Compact

In January 2020, we became a signatory to the United Nations Global Compact (UNGC) and joined the Global Compact Network Japan, which comprises Japanese companies and organizations that are UNGC signatories. We have done so because we agree with the principle of solving global issues and achieving sustainable growth as a responsible corporate citizen. Moreover, through participating in subcommittees of the Global Compact Network Japan (on ESG, supply chains, environmental management, Kansai, reporting research, etc.), we gather information that we apply in our day-to-day activities.



Moving forward, we will strengthen our efforts in keeping with the Ten Principles of the UNGC as we contribute to the realization of a sustainable society.

Year and month	Details of initiatives
January 2020	Became a signatory to the United Nations Global Compact and joined the Global Compact Network Japan
	Endorsed the recommendations of the Task Force on Climate-related Financial Disclosure (TCFD)
April 2020	Established the Corporate Sustainability Department. Incorporated ESG elements into management and strategy, and strengthened communication of information to stakeholders
	Established the Sustainability Committee (renamed the CSR Committee), chaired by the President
April 2021	Placed the Corporate Sustainability Department under direct control of the President
	Established a system to promote efforts toward carbon neutrality
	Established the Carbon Neutral Strategies Council and the Carbon Neutral Strategies Cross-Functional Team
April 2022	Established the Risk Management Committee, chaired by the President
	Established the Corporate Sustainability Division
May 2022	Announced Sustainable Vision 2030
	Formulated the GHG Emission Reduction Plan by 2050
November 2022	Joined the 30 by 30 Alliance for Biodiversity
December 2022	Obtained Science based target (SBT) certification
April 2023	Restructured the Sustainability Committee

## The Ten Principles of the UNGC

Human Rights	Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights; and	See p.15-17, p.63, p.67
	Principle 2: make sure that they are not complicit in human rights abuses.	
labour	Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;	See p.15-17, p.64-65
	Principle 4: the elimination of all forms of forced and compulsory labour;	
	Principle 5: the effective abolition of child labour; and	
	Principle 6: the elimination of discrimination in respect of employment and occupation.	
Environment	Principle 7: Businesses should support a precautionary approach to environmental challenges;	See p.15-17, p.32-41, p.44-46, p.55-60
	Principle 8: undertake initiatives to promote greater environmental responsibility; and	
	Principle 9: encourage the development and diffusion of environmentally friendly technologies.	
Anti-Corruption	Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.	See p.15-17, p.77

## Disclosure based on TCFD recommendations

Recognizing the enormity of the impact that climate change has on our stakeholders and our group, Toyobo group has identified the realization of a decarbonized and circular society among its important sustainability goals.

In January 2020, we endorsed the Task Force on Climate-related Financial Disclosure (TCFD) recommendations, and are moving forward with disclosure of our initiatives in keeping with the recommendations.

In May 2022, we published our Roadmap for Carbon Neutrality as part of Sustainable Vision 2030.

In keeping with the levels sought by the Paris Agreement, we aim to reduce emissions of greenhouse gases (GHGs) from our business activities (Scope 1 and 2) by 46% or more from the fiscal 2014 level by fiscal 2031, and to reach net zero emissions by fiscal 2051.

Moreover, we have set a goal for fiscal 2051 of avoided emissions in an amount that exceeds the GHG emissions of the entire value chain of Toyobo group.

### Governance

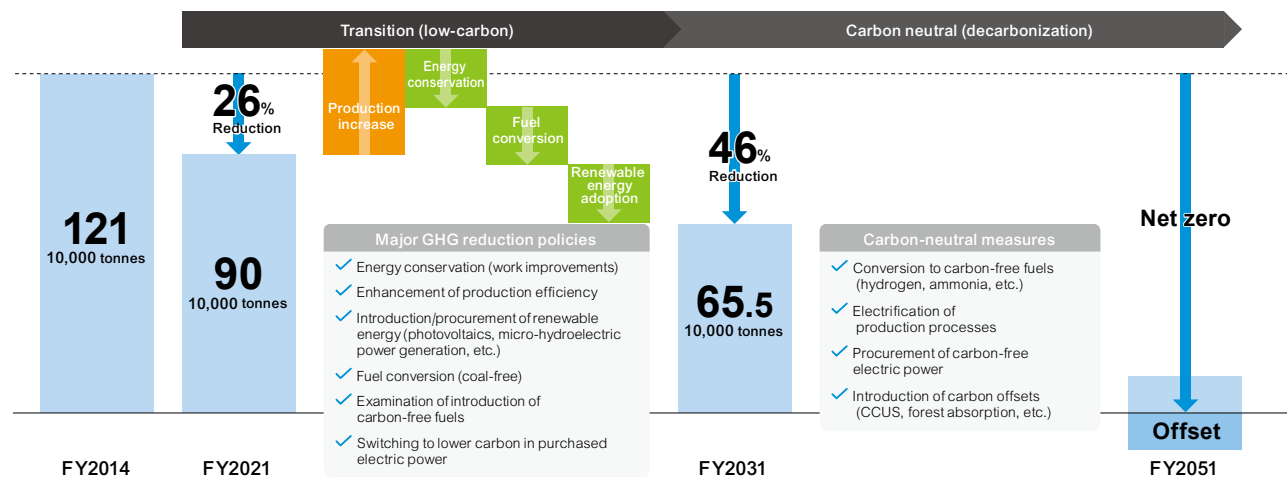
We have established the Sustainability Committee, chaired by the president who has the highest seniority regarding issues related to climate change. The committee deliberates the setting of high-level policies and targets for solving these issues. The Board of Directors receives the committee reports, approves important items such as high-level policies and targets, and monitors progress of the relevant activities.

We established the Carbon Neutral Strategies Council and the Carbon Neutral Strategies Cross-Functional Team (CN-CFT), and since fiscal 2022 have tasked them with formulating and advancing

strategies toward realizing carbon neutrality. To steadily address the realization of carbon neutrality, we also formed a working group within the CN-CFT comprising members from an organizational cross section of the whole company, and undertook initiatives including formulation of a roadmap for carbon neutrality and the introduction of internal carbon pricing.

We revised our structure in fiscal 2023, including establishment of the Climate Change and Biodiversity Committee. As we incorporate international sustainability standards, we are moving ahead with a company-wide response to climate change.

### Roadmap for Carbon Neutrality



### Promotion structure (after fiscal 2024)



\*The president, vice-president, heads of divisions, executive officers in controlling supervisory positions, the chairperson, and corporate auditors may express opinions.

# Disclosure based on TCFD recommendations

## Risk management

In fiscal 2022, our group set up a Risk Management Committee, which performs uniform group-wide management of risks including climate change issues. In addition to its overall administration of risk management activities (identification, analysis, assessment, and response), the committee formulates policy related to risk management for the whole group, builds and operates effective, sustainable organizations and systems by running the PDCA cycle, and works to strengthen the risk management system.

As our point of departure for risk management activities, we identify serious company-wide risks requiring intensive attention from the results of evaluations in terms of the two axes of severity of impact\*1 and likelihood of occurrence\*2 based on each risk scenario. Toyobo group manages its important risks based on a company-wide assessment of risks that include natural disasters such as flooding (floods, storm surges, etc.), which are increasing in severity due to climate change.

\*1 Scope of impact, duration of business operation stoppage, personal harm, reputation, and financials are evaluated on a three-point scale that includes "major damage equivalent," "moderate damage equivalent," and "minor damage equivalent."

\*2 Evaluations use a three-point scale including "occurs frequently," "occurs occasionally," and "occurs infrequently."

## Strategy

In Sustainable Vision 2030, Toyobo group has identified the realization of a decarbonized and circular society among its important sustainability goals.

In keeping with the TCFD recommendations, we also analyzed and compiled future risks and business opportunities under climate change scenarios based on the Paris Agreement. After identifying the financial and other impacts of these risks and opportunities, we intend to boost the resilience of our business strategy by specifying countermeasures together with indicators and targets.

### • Scenario analysis

Although a wide range of scenarios are conceivable depending on how global warming countermeasures are implemented, we referenced the scenario shown in the diagram on the right as being typical. We considered the impact on our business and new opportunities for our group through 2050 under each of two scenarios: One in which the average global temperature increase is kept under 2°C, and one in which it rises by 4°C.

## Summary scenario analysis

Specified scenario	Under 2°C scenario	4°C scenario
Description of society	Sweeping policies and technological innovations are advanced in efforts to keep the average atmospheric temperature increase by the end of the century to within 1.5°C, and to achieve sustainable development of society. We will have a society in which social changes accompanying a shift to a decarbonized society will be highly likely to impact business. Case example • Introduction of a carbon tax and increased carbon prices • Shift to vehicle electrification, spread of renewable energy	Even with the implementation of intended nationally determined contributions established by Paris Agreement signatory countries in line with the agreement, average atmospheric temperature rises by as much as 4°C under business as usual by the end of the century. We will have a society in which changes in climate, including rising temperatures, will be highly likely to impact business. Case example • Increase in flooding damage due to heavy rains
Reference scenarios	• SDS (IEA WEO2021/ETP2020) • NZE (IEA Net Zero by 2050 A Roadmap for the Global Energy Sector) • RCP2.6 (IPCC AR5) • SSP1-1.9 (IPCC AR6)	• RCP8.5 (IPCC AR5) • SSP5-8.5 (IPCC AR6) • STEPS (IEA WEO2022/ETP2020)
Risk and opportunity trends	In the transition, risks and opportunities emerge more readily	Physical risks and opportunities emerge more readily

## Risks, opportunities, and their countermeasures under each scenario

Social change and its impact	Risks and opportunities			Measures taken by the Toyobo group
	Category	Period	Details	
Impacts of the transition to a decarbonized society (sweeping changes in policy, laws and regulations, technology, markets, etc.)	Transition and risk	Short term	Introduction of carbon pricing	<ul style="list-style-type: none"> <li>• Advancement of GHG reduction plans (energy conservation, better production efficiency, fuel conversion, renewable energy adoption, etc.)</li> <li>• Use of internal carbon pricing systems</li> </ul>
		Medium to long term	Increase in raw material prices (carbon price pass-through, etc.)	<ul style="list-style-type: none"> <li>• Appeals to and collaboration with suppliers (low-carbon raw material development, production technology assistance, etc.)</li> <li>• Diversification of raw material procurement methods (expanded multiple purchasing and local procurement)</li> </ul>
			Increase in costs resulting from promotion of energy conservation, adoption of high-efficiency equipment, etc.	<ul style="list-style-type: none"> <li>• Innovation in production processes and pursuit of super-efficiency</li> <li>• Greater efficiency of production throughout the value chain (affiliate integration, stronger partnerships, M&amp;A, etc.)</li> </ul>
	Transition and opportunities	Medium term	Cost increases due to adoption of renewable energy	<ul style="list-style-type: none"> <li>• Renewable energy procurement method selection</li> </ul>
			Cost increases due to requirements for low-carbon and decarbonized product manufacturing	<ul style="list-style-type: none"> <li>• Expansion of renewable energy adoption and procurement</li> <li>• Promotion of greater efficiency and energy conservation in production processes</li> <li>• Fuel conversion for (coal-free) in-house power generation</li> <li>• Study of carbon-free fuel utilization (hydrogen, ammonia, etc.)</li> <li>• Study of adoption of CCU/CCS or other innovative technologies</li> </ul>
			Increasing demand for petroleum-derived resource reduction and replacement	<ul style="list-style-type: none"> <li>• Acceleration in the shift in raw materials toward recycled and biomass-derived materials</li> <li>• Study of withdrawal from general-purpose materials business that relies on petroleum-derived resources</li> <li>• Acceleration in the shift in raw materials toward recycled and biomass-derived materials</li> <li>• Addressing of procurement issues (shortages) with raw materials (recycled and biomass-derived materials)</li> <li>• Advancement of development and planning of products with low-carbon and decarbonized materials</li> <li>• Enhanced production and quality control systems for low-carbon and decarbonized products</li> </ul>
Physical risks	Short to medium term	Stoppage of raw material supply due to natural disasters	<ul style="list-style-type: none"> <li>• Review of inventory levels and expansion of multiple purchasing</li> </ul>	
		Facilities damage and operational shutdowns due to flooding (floods, storm surges, etc.)	<ul style="list-style-type: none"> <li>• BCP training implementation</li> <li>• Enhancement of durability of production and power facilities, relocating or elevating them to higher locations</li> <li>• Production site dispersal, relocation, and consolidation</li> </ul>	
	Medium term	Increase in demand for civil engineering work	<ul style="list-style-type: none"> <li>• Expansion of products used in disaster mitigation and restoration work</li> <li>• Sand-proofing sheets, concrete delamination prevention sheets, soft roadbed improvement materials, etc.</li> </ul>	
Physical opportunities	Medium term	Increased demand for seawater desalination due to water shortages and droughts	<ul style="list-style-type: none"> <li>• Expanded sales of (RO/FO, etc.) membranes for seawater desalination</li> <li>• Energy-conserving and high-durability development for RO/FO membranes, etc.</li> <li>• Strengthening of production and quality control system for RO/FO membranes, etc.</li> </ul>	
	Long term	Increased demand for (prevention and treatment) measures against infectious diseases associated with temperature increases	<ul style="list-style-type: none"> <li>• Expanded demand for products related to food packaging</li> <li>• Promotion of research and development of products and technologies related to infectious diseases</li> </ul>	

## Disclosure based on TCFD recommendations

### • Determining risks and opportunities under each scenario

We worked out the group's risks and opportunities focused on climate change in the under-2°C scenario and the 4°C scenario. Only the film business was under consideration in fiscal 2022, but the study was expanded to cover all group businesses in fiscal 2023. We compiled the specified risk and opportunity items, reclassified them from the standpoint of social changes, and then considered countermeasures proposed for each (diagram: "Risks, opportunities, and their countermeasures under each scenario"). Risks and opportunities we recognize as being particularly important upon evaluation along the two axes of severity of impact and likelihood of occurrence are described as follows.

We recognize GHG emissions reduction throughout the supply chain, including in raw material procurement, as a means of both reducing risk and creating opportunity. Specifically, through planned Scope 1 and 2 reductions, we will lighten the future burden of carbon pricing as we prepare to reliably meet our customers' requirements for decarbonization. In addition, shifting to recycled and biomass materials for our raw materials will lower our reliance on petroleum-derived resources, reduce future business risk, and lead us to obtain and expand business opportunities. With respect to the water shortage issue, which poses a growing worldwide risk, we intend to obtain and expand business opportunities through solving this social issue by selling membranes for seawater desalination, which enables low-energy fresh water production.

### Risks and opportunities recognized as particularly important

#### • Important risk 1: Risk of damage to buildings and facilities due to flooding (floods, storm surges, etc.)

Our group's primary plants at Tsuruga, Iwakuni, and Inuyama, are all located near rivers and coastline and are situated in low-lying areas, which puts them at risk of flood damage. In the event that climate change progresses, we assume that rising sea levels and changes in rainfall patterns will further heighten the flood damage risk. Our estimate of asset decrease (the amount of damage to buildings and equipment) due to flood damage in the 2030s, calculated from book value, indicated a maximum total for all three plants of approximately ¥50 billion. To obtain our estimate of the

amount of asset decrease from flood damage at these three plants, we multiplied the book value of their buildings and equipment by the flood damage rate\* published by the Ministry of Land, Infrastructure, Transport and Tourism.

Because our group understands the flood damage risk to our plants to be an important climate-related risk, we are implementing a phased reinforcement of our flood damage countermeasures that includes moving items such as our production and power facilities to higher locations.

\*\*Flood Control and Economic Research Manual (Draft)" (April 2020), Ministry of Land, Infrastructure, Transport and Tourism

#### • Important risk 2: Carbon pricing implementation

Under a business-as-usual (BAU\*) scenario taking fiscal 2021 (actual 900,000 tonnes CO<sub>2</sub>) as the base year, Scope 1 and 2 will increase to approximately 1.3 million tonnes CO<sub>2</sub> in fiscal 2031 as sales expand. Assuming that the unit price for carbon is ¥15,000 per tonne CO<sub>2</sub> in fiscal 2031, our annual cost would be approximately ¥20 billion under a BAU scenario.

Our group understands Scope 1 and 2 increases to be an important climate-related risk, and published Sustainable Vision 2030 in fiscal 2023, which includes our Roadmap for Carbon Neutrality through fiscal 2031. With the roadmap, we are targeting reductions in Scope 1 and 2 in fiscal 2031 to 655,000 tonnes CO<sub>2</sub> or less through energy optimization measures that involve energy conservation (including increased production efficiency), fuel conversion, and adoption of renewable energy. In such a case, our annual cost incurred from carbon pricing would be approximately ¥10 billion, resulting in the cost reduction effect of approximately ¥10 billion compared to under the BAU scenario. We plan to include the cumulative amount of investments through 2025 under our Roadmap for Carbon Neutrality in our investments in the environment, safety, and disaster prevention (approximately ¥33 billion).

\*BAU: "Business as Usual," indicating a case in which no particular GHG emission reduction measures are taken.

#### • Important risk 3: Increase in demand for reduction and replacement of petroleum-derived resources

#### • Important opportunity 1: Increase in demand for low-carbon and decarbonized materials and products

Our group's core films and functional materials businesses represent more than 40% of total group sales. Amid the change (transition) of society into future decarbonization, we can expect to see increasing demands from society, including our customers, that we reduce or replace our use of petroleum-derived resources, and we acknowledge that this is an important climate-related risk. At the same time, we recognize that there are business opportunities in the simultaneous increase in demand for low-carbon and decarbonized materials and products.

Of our current film business sales, approximately 90%, or ¥120 billion, depend on petroleum-derived resources. In Sustainable Vision 2030, we have defined the technologies and initiatives\* that bring about reductions in petroleum-derived resource use as "greening," and have set the goal of greening 60% of our film products by fiscal 2031. Film products that cut down on petroleum-derived resource use are also low-carbon or decarbonized products, and by promoting the greening of our film products, we intend to reduce risk while also obtaining and expanding business opportunities.

Of our film business sales target for fiscal 2031 of approximately ¥220 billion, approximately ¥130 billion is to come from obtaining and expanding these opportunities.

\*Development of films using biomass raw materials, and films of thin, lightweight materials (strengthening), environmentally friendly design facilitating post-use film recycling (mono-materialization), development of films using recycled raw materials and of recycling technology

## Disclosure based on TCFD recommendations

### • Important opportunity 2: Increase in demand for seawater desalination

Our group recognizes that the advance of climate change will increase the risks of water shortages and droughts worldwide. Securing water will become an issue in many regions, not just for industrial uses, but for domestic uses as well. This is expected to further intensify the demand for seawater desalination.

Our group's HOLLOSEP® hollow fiber reverse osmosis membrane module has characteristics that include resistance to contamination, giving it particular advantages in desalination of seawater in enclosed sea areas (such as in the Middle East) that are susceptible to proliferation of microorganisms. Since its superior chlorine resistance enables HOLLOSEP® to supply chlorinated raw water directly to the module, this controls microbial growth within the module at a relatively low cost, while easy maintenance also helps improve desalination plant operating rates.

As we work toward obtaining and expanding business opportunities through solving societal issues, our group set the goal in Sustainable Vision 2030 of using seawater desalination with membranes to produce a volume of tap water equivalent to the needs of 10 million people in fiscal 2031.

### Indicators and targets

Our group has set targets with respect to climate change, and we are moving forward with measures for each of them. Our targets for Scope 1 and 2, as well as for Scope 3\*, are based on levels sought by the Paris Agreement, and were certified as Science Based Targets under the SBT Initiative in December 2022.

Amid a 6.4% year-on-year increase in sales, we produced 894 thousand t-CO<sub>2</sub> under Scope 1 and 2 in fiscal 2023 (a 1% decrease from 903 thousand t-CO<sub>2</sub> the previous fiscal year).

\*Indirect emissions other than Scope 1 and 2. This SBT certification concerns GHG emissions resulting from activities (manufacturing, etc.) related to the purchase of products and services, and to the use of sold products.

### Indicators and targets

Category	Indicator	Target	Key measures
GHG	GHG emissions	Scope 1, 2 FY2031: 27% reduction (SBT)* (From FY2014: Equivalent to a 46% reduction) *Base year: FY2021	<ul style="list-style-type: none"> <li>Improved energy conservation, improved production efficiency, fuel conversion, adoption of renewable energy, etc.</li> </ul>
		FY2051: Net zero	<ul style="list-style-type: none"> <li>Adoption of carbon-free fuels, renewable energy procurement, production process innovation, etc.</li> </ul>
		Scope 3 (Categories 1 and 11) FY2031: 12.5% reduction (SBT)* *Base year: FY2021	<ul style="list-style-type: none"> <li>Category 1*: Acceleration in the shift in raw materials toward recycled and biomass-derived materials</li> <li>*Emissions from activities (manufacturing, etc.) related to purchased raw materials and services</li> <li>Category 11*: Energy conservation with VOC recovery equipment, etc.</li> <li>*Emissions from the use of products sold</li> </ul>
Climate-related opportunities	Green ratio of film products (Specified also as an indicator for transition risk reduction)	FY2031: 60% or more	<ul style="list-style-type: none"> <li>Progress in material and chemical recycling, development and increased adoption of biomass raw materials, reduction of film thickness, etc.</li> </ul>
	Seawater desalination with membranes	FY2031: Equivalent of tap water volume for 10 million people	<ul style="list-style-type: none"> <li>Expansion of sales of (RO/FO, etc.) membranes for seawater desalination</li> <li>Energy-conserving and high-durability development for RO/FO membranes, etc.</li> <li>Strengthening of production and quality control system for RO/FO membranes, etc.</li> </ul>
Capital allocation	Capital investment	FY2023-26 cumulative total: ¥33 billion (Total capital investment for environment, safety, and disaster prevention)	<ul style="list-style-type: none"> <li>Carbon reduction for in-house power generation facilities, adoption of renewable energy facilities, etc.</li> </ul>
Internal carbon pricing	-	<ul style="list-style-type: none"> <li>Set an in-house carbon price of ¥10,000 per tonne CO<sub>2</sub> (revised annually as needed)</li> <li>Expansion of decision-making on capital investment and investment in development facilities which increase or decrease CO<sub>2</sub> emissions</li> </ul>	
Compensation	-	<ul style="list-style-type: none"> <li>Consideration of officer's compensation set according to the state of GHG reduction</li> </ul>	

# E Policies and activities—environmental aspects

## Realization of a decarbonized society



### Basic approach

At Toyobo group, we recognize that climate change is a social issue of great importance and will have major impacts on our business. We support the Paris Agreement and the Glasgow Climate Pact adopted by the Conference of the Parties (COP) to the United Nations Framework Convention on Climate Change (UNFCCC), and we aim by fiscal 2051 to achieve carbon neutrality according to the global target of 1.5°C.

### Organizational structure

Our president serves as our most senior executive officer for climate change-related issues. We have established a Sustainability Committee chaired by the CEO & Co-CEO, which deliberates high-level policies aimed at solving climate change-related issues. The Board of Directors receives committee reports, approves important items such as high-level policies and targets, and monitors progress of the relevant activities.

### Targets and results

#### • Targets

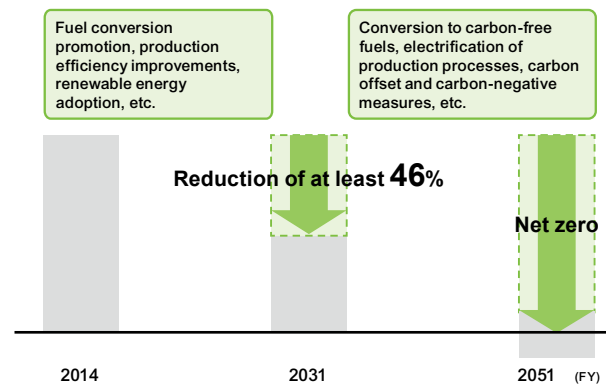
Our target for fiscal 2051 is net zero (Scope 1 and 2\*) greenhouse gas (GHG) emissions from our business activities. As momentum toward realizing a decarbonized society has grown, we responded in May 2022 with the passage by our Board of Directors of a resolution to increase our fiscal 2031 interim target to a reduction of 46% or more compared to fiscal 2014. We will promote the reduction of GHG emissions throughout the value chain involved in our activities, and will expand the avoided emissions of GHGs through our products and services.

In December 2022, we received certification from the global Science Based Targets initiative confirming that our group's GHG emission reduction targets are grounded in science.

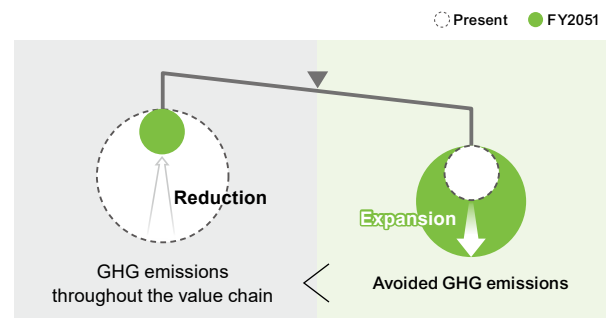
\* Scope 1: Direct emissions by the business itself.  
Scope 2: Indirect emissions resulting from use of electricity, heat or steam provided by other companies.

[Details on acquiring SBT certification](#)

### Targets for Scope 1 and 2 reduction of emissions from business activity



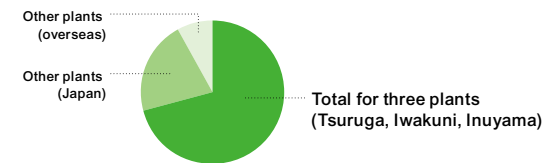
### Targets for the whole value chain (Fiscal 2051, including contributions made through products and solutions)



### • Results

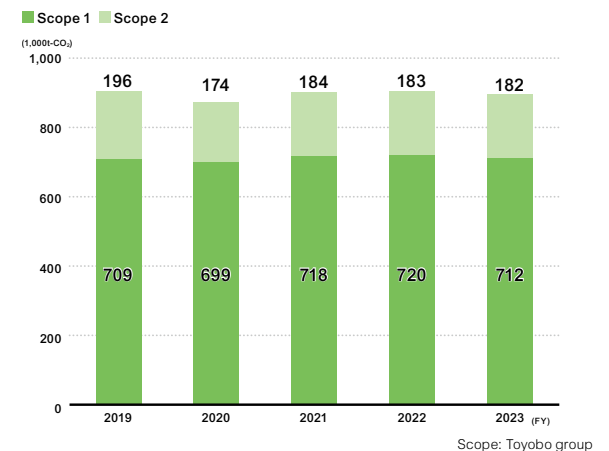
Of the GHG emissions (Scope 1 and 2) from our group's business activities, about 70% are emitted by our three main plants (Tsuruga, Iwakuni, and Inuyama).

### Scope 1 and 2 ratios by emissions source



In fiscal 2023, our total Scope 1 and 2 emissions were 894 thousand t-CO<sub>2</sub> (down 26.4% compared to fiscal 2014). Amid a sales increase of 6.4%, we kept GHG emissions below the level of fiscal 2022 by acting to conserve energy and taking measures to improve production efficiency.

### GHG emissions





# E Policies and activities-environmental aspects

## Realization of a decarbonized society



### Initiatives

#### • Reduction of Scope 1 and 2

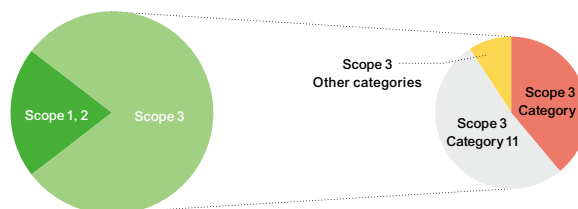
In our efforts for the low-carbon transition, we are moving forward with fuel conversion (coal-free) for our in-house power generation facilities, and with expansion of our gas co-generation systems.\*<sup>1</sup> We will begin by renewing our in-house thermal power generation plant at the Iwakuni Production Center, converting the fuel from coal to liquefied natural gas and RPF.\*<sup>2</sup> Major reductions in GHG emissions are expected from the operation, scheduled for October 2023. We are carrying out GHG reduction measures including fuel conversion at other business sites as well.

Solar power generation equipment that takes advantage of rooftops and vacant lots is also being installed at business sites, with systems to become operational at the Inuyama Plant in fiscal 2023 and at the Utsunomiya Plant in fiscal 2024. We are considering the introduction of renewable energy sources at other sites as well.

\*<sup>1</sup> A system that uses natural gas or other fuels to generate electricity where it is needed, while making effective use of the thermal energy generated simultaneously to make steam or hot water, which will be used in the production process, hot water supply, or heating and cooling.  
\*<sup>2</sup> An acronym for "Refuse-derived Paper & Plastics Densified Fuel," solid fuel made mainly from used paper and waste plastic

#### • Scope 3 reduction

Our group is aiming for reductions in Scope 3 emissions, focusing efforts on Category 1\*<sup>3</sup> and Category 11\*<sup>4</sup> in which emissions are large. In Category 11, we will continue to reduce GHG emissions by reducing our usage of utilities (steam, electricity, etc.), adopting new and energy-conserving technologies for VOC recovery equipment.\*<sup>5</sup>



\*<sup>3</sup> Emissions from activities (manufacturing, etc.) related to purchased raw materials and services  
\*<sup>4</sup> Emissions from the use of products sold  
\*<sup>5</sup> Equipment that recovers volatile organic compounds (VOCs) as liquid organic solvents through VOC removal by absorption or cooling methods. In addition to zero CO<sub>2</sub> emissions from VOC decomposition, this enables the reuse of the recovered organic solvents.

#### • Expansion of the avoided emissions

Our group's products mostly comprise materials and intermediates. Among these are many that contribute to reducing GHGs in the value chain, compared to conventional products and technologies. We are conducting calculations to quantitatively assess the avoided emissions of GHGs over the products' life cycles. Some typical examples of these technologies are reverse osmosis (RO) membranes used in seawater desalination, and VOC recovery equipment that suppresses emissions of VOCs, which are of concern in terms of atmospheric pollution and their effects on the human body.

In fiscal 2023, we compiled in-house guidelines that summarize our methods of calculating the GHG emissions avoided as a means of integrating our in-house rules for calculation while expanding the range of products subject to the calculations. Moving forward, we will advance the development of technology and expand sales of products that help reduce GHGs as we promote the expansion of avoided emissions.

#### • Participation in organizations focused on climate change issues

Our group has endorsed the GX League (GX: Green transformation) announced by the Japanese government. GX refers to the aim of transforming the overall economic and social system toward achievement of the nation's 2030 targets for GHG emissions reduction, and of carbon neutrality in 2050. Through our participation in the GX League, which has been fully operational since April 2023, we will accelerate our in-house initiatives toward decarbonization.

As a member organization of the Japan Chemical Industry Association (JCIA), we also participate in the Carbon Neutral Action Plan of the Japan Business Federation (Keidanren). Through the activities of JCIA, we confirm the climate change policies of the Japanese government and reflect them in our group policies. Together with JCIA, we carry out climate change countermeasures such as submission of opinions on policies, and conduct activities aimed at achieving a decarbonized society.

### Solar power generation equipment installation at the Inuyama Plant

We have proclaimed the slogan "Aiming for a Sustainable Plant" at our Inuyama Plant, where we are striving to improve energy efficiency, adopt energy-conserving facilities, and put renewable energy to use. In March 2023, we used a power purchase agreement (PPA) arrangement to install a new solar power generation facility of approximately 500 kW. We will use the resulting knowledge to move forward with the adoption of solar power generation facilities at our other plants in the future.



At the Inuyama Plant, 1,608 solar panels installed on the rooftop generate approximately 500 kW.

#### Voice of the person in charge

This was the first time our company had tried a PPA (Power Purchase Agreement), so we got the cooperation of a range of people, and the manufacturer of the solar power generation facilities, company headquarters and the manufacturing division within the plant all worked together. It was a particular struggle connecting these facilities while giving consideration to the effect it would have on our existing electrical system. When it started generating electricity without a hitch, I breathed a sigh of relief, and our hard work is paying off even more as it leads to reduced electric charges while prices continue to soar.

**Tatsuro Fukudome**, Section Manager  
**Kenjiro Ueda**, Section Chief  
Inuyama Plant

# E Policies and activities-environmental aspects

## Realization of a decarbonized society



### FY2023 results

☑ Indicators for fiscal 2023 with this icon are externally assured by KPMG AZSA Sustainability Co., Ltd. See p.82 of this Integrated Report for Independent Assurance Report. > p.82

Relevant laws are shown in abbreviated form, e.g., Act on the Rational Use of Energy (Energy Conservation Act)

Data aggregation period: (Domestic) April 1, 2022 - March 31, 2023 (Overseas) January 1, 2022 - December 31, 2022

	FY2023 results	Calculation methods
Scope 1	☑ 712 thousand t-CO <sub>2</sub>	In accordance with the GHG Protocol, we include GHG emissions, calculated by converting the quantity of energy required to produce electricity or steam sold to other companies. GHG emissions with non-energy origins are calculated for Toyobo (non-consolidated) only. The factors shown below are used in the respective calculations. ■ CO <sub>2</sub> emission factors for purchased electricity: (Domestic) Adjusted emission factor for each electric power service provider listed in "Emission Factors by Electric Utility (for Use in Calculating Greenhouse Gas Emissions of Specific Emitters), FY2022 Results," Ministry of the Environment. (In cases where the emission factor of a given utility was unknown, the "national average factor" was used.) (Overseas) Factors for 2019 listed by country "Emission Factors 2021" (2021), IEA ■ CO <sub>2</sub> emission factors other than for purchased electricity: "Greenhouse Gas Emissions Calculation and Reporting Manual (v4.8)" (2022), Ministry of the Environment and Ministry of Economy, Trade and Industry (used for both domestic and overseas subjects).
Scope 2	☑ 182 thousand t-CO <sub>2</sub>	
Energy consumption	☑ 2,937 GWh	In accordance with the GHG Protocol, the quantity of energy required to produce electricity or steam sold to other companies is not deducted. The values from Energy Conservation Act are used in showing the unit calorific value of fuel as a higher calorific value.

Boundary of aggregated data: Toyobo group (TOYOBO CO., LTD. [non-consolidated] with domestic and overseas group companies)

Scope 3 Categories	FY2023 emissions	Calculation methods
1. Purchased goods and services	2,055 thousand t-CO <sub>2</sub>	The total value obtained by multiplying the quantity of activity (the amount of purchases of raw materials, services, etc., during one year) by the emissions intensity (Ministry of the Environment DB) <sup>*1</sup>
2. Capital goods	55 thousand t-CO <sub>2</sub>	The total value obtained from multiplying the amount of activity (the book value of capital goods purchased during one year) by emissions intensity (Ministry of the Environment DB) <sup>*1</sup>
3. Fuel- and energy-related activities (not included in scope 1 or scope 2)	☑ 113 thousand t-CO <sub>2</sub>	The total value obtained from multiplying the amount of activity (the amount of fuel and electricity purchased during one year) by the respective emissions intensities of fuel and electricity (Ministry of the Environment DB, IDE A)
4. Upstream transportation and distribution	50 thousand t-CO <sub>2</sub>	The total value obtained from multiplying the amount of activity (the distance and weight of upstream transportation during one year) by emissions intensity (Ministry of the Environment DB) <sup>*1</sup>
5. Waste generated in operations	53 thousand t-CO <sub>2</sub>	The total value obtained from multiplying the amount of activity (waste generated in business activities during one year) by the respective emissions intensities of each waste category (Ministry of the Environment DB, IDE A) <sup>*1</sup>
6. Business travel	7 thousand t-CO <sub>2</sub>	The total value obtained from multiplying the amount of activity (annual employee business travel expenses by transportation organization used) by the respective emissions intensities of each transportation organization (Ministry of the Environment DB) <sup>*1</sup>
7. Employee commutings	6 thousand t-CO <sub>2</sub>	The total value obtained from multiplying the amount of activity (the scale of the city in which the business site or plant is located, the number of employees, and the days of business operation per year) by the respective emissions intensities of each form of work and city size class (Ministry of the Environment DB) <sup>*1</sup>
8. Upstream leased assets	—	Toyobo group does not perform calculations for upstream leased assets because they are not pertinent.
9. Downstream transportation and distribution	—	The basic practice of Toyobo group is for our company to serve as the cargo owner for transportation to the shipment destination, so that emissions associated with these shipments are calculated in Category 4.
10. Processing of sold products	—	At Toyobo group, we have wide-ranging and diverse array of procedures for processing beyond shipment destinations, which makes it impossible to determine all GHG profiles or perform reasonable calculations. The information therefore is not disclosed.
11. Use of sold products	☑ 2,745 thousand t-CO <sub>2</sub>	The total value obtained from multiplying the amount of activity (the amount of electric, steam, cold water and other utilities consumed during the use of final products sold annually) by emissions intensity, years of service life, and operating rate. Our company uses a unique emissions intensity unit, which is calculated from the Ministry of the Environment DB, IDE A, IEA, and the product specifications of equipment used in generating each utility. We perform calculations for VOC recovery equipment, urine sediment testing equipment, and fully automated gene analysis systems.
12. End-of-life treatment of sold products	207 thousand t-CO <sub>2</sub>	The total value obtained by multiplying the amount of activity (assuming the disposal of the total one-year sales volume) by the respective emissions intensities of each material used in the items sold (Ministry of the Environment DB)
13. Downstream leased assets	—	Toyobo group does not perform calculations for downstream leased assets because they are not pertinent.
14. Franchises	—	Toyobo group does not engage in franchise activities, and therefore does not perform calculations for them because they are not pertinent.
15. Investments	—	Toyobo group's emissions from investments are extremely small, and we therefore do not disclose them.
Total	5,290 thousand t-CO <sub>2</sub>	

Boundary of aggregated data: Toyobo group (TOYOBO CO., LTD. [non-consolidated] with domestic and overseas group companies.)

\*1 Calculations are made using weighted averages for some subsidiary and affiliated companies, according to ratios of sales, sales volume, and number of employees.

### Referenced Guidelines

- (1) In making the calculations, we referred to "Corporate Value Chain (Scope 3) Accounting and Reporting Standard" and its evaluation guidelines from the GHG Protocol; "Guidance for Accounting & Reporting Corporate GHG Emissions in the Chemical Sector Value Chain" from the WBCSD; and various sources of information on the Green Value Chain Platform.
- (2) With regard to emission intensity, we referred to the following database as of March 2023.
  - "Emission Intensity Database for Calculating Greenhouse Gas Emissions by Organizations Throughout Supply Chains ver. 3.3" (March 2023), Ministry of the environment. Cited as "Ministry of the Environment DB."
  - "IDEA (Inventory Database for Environmental Analysis) ver2.3" (December 2019), National Institute of Advanced Industrial Science and Technology/Sustainable Management Promotion Organization. Cited as "IDEA."
  - "Emission Factors 2022" (September 2022), International Energy Agency (IEA). Cited as "IEA."

# E Policies and activities—environmental aspects

## Realization of a circular society



### Basic approach

At Toyobo group, we handle numerous plastic products, including the films that comprise our core products, and we acknowledge that the transition to a resource-circular society not only poses a business risk, but also may present major opportunities. In 2022, we clarified in Sustainable Vision 2030 the contributions that our group can make to realization of a circular society, and set targets for fiscal 2031. We will initiate the effort with progress in greening (by promoting the use of biomass and recycled materials, reducing thickness, introducing mono-materials, etc.), beginning with our film products (excluding some products where safety and life are at stake).

### Targets and results

#### • Targets

In Sustainable Vision 2030, which outlines the ideal that we envision for our group in 2030, we set ourselves the goal of increasing the greening ratio of films\* to 60% by fiscal 2031. In fiscal 2023, we deliberated methods of calculating the greening ratio, and tabulated results for the present.

Themes	FY2031 target	FY2023 results
Greening ratio of films	60%	11%

\*Volume ratio

### Initiatives

Our group has undertaken recycling and biomass materials use since the 1990s. We have since developed many products and materials to date, such as ECHORCLUB®, a PET bottle recycled fiber product that we have been developing since 1996. Moving forward, we aim to realize a circular economy from a 3R+Renewable\* perspective.

\*Rationalize (reduce and reuse) plastic uses that can be avoided, switch to recycled materials and renewable resources for uses that are unavoidable (renewable), and implement through recycling (recycle).

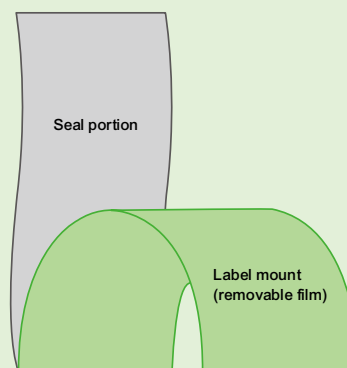
### Material recycling of label backing paper and resource recycling project

In 2022, we developed a new recycling technology for our KAMISHINE® mold releasing film, one of our polyester-based synthetic papers made with recycled PET bottle raw material, that was developed for label mount paper (removable film) applications. This is a technology for using label backings after use and collection as a raw material to manufacture KAMISHINE® series products that maintain performance on a par with the conventional product.

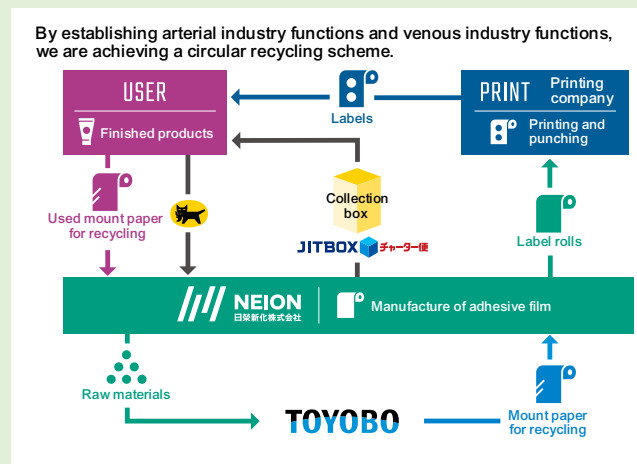
In order to socially implement resource recycling initiatives using this product and technology, the Resource Recycling Project was launched at the invitation of NEION Film Coatings Corporation, an all-round manufacturer of PSA-films and Coating Technology. We are replacing label mount paper with KAMISHINE® mold releasing film, and collecting used label backing paper from users. This is a resource recycling project in which we collect used label backing paper to recycle it as raw material for film.

Since resource recycling initiatives are limited when carried out by individual companies, such efforts are being advanced collaboratively across different industries by those with expertise in their fields.

#### Conceptual image of label structure



#### Overall scheme of the Resource Recycling Project



# E Policies and activities—environmental aspects

## Realization of a circular society

### Plastic resource circulation

### An overall picture of Toyobo group's efforts to address the plastics lifecycle and resource recycling

#### Product development using biomass raw materials

By reducing CO<sub>2</sub> emissions and reliance on petroleum-derived resources, using biomass is expected to serve as a climate change mitigation measure.

Our group is working for the conversion and expanded use of biomass raw materials, and for the practical application of biomass plastics that remain highly functional.

- Related technologies and products**
  - BIOPRANA®
  - VYLOAMIDE®
  - HOLLOSEP®
  - Polyethylene furanoate (PEF) resin (under development)
- Collaborations and initiatives**
  - Partnership with Avantium N.V. to develop PEF resin
  - Partnership with Suntory Group and Anellotech, Inc. to develop PET resin that uses 100% plant-based raw material
  - Japan BioPlastics Association
  - THE JAPAN PLASTICS INDUSTRY FEDERATION

#### Chemical recycling\*<sup>1</sup> technology development

In developing and practically applying chemical recycling technologies, we seek out technologies from around the world and collaborate proactively with external organizations and companies. For example, we participate in the R PLUS JAPAN project, actively pursuing development of chemical recycling technologies for converting recycled plastic into raw material for the production of high-quality recycled plastic.

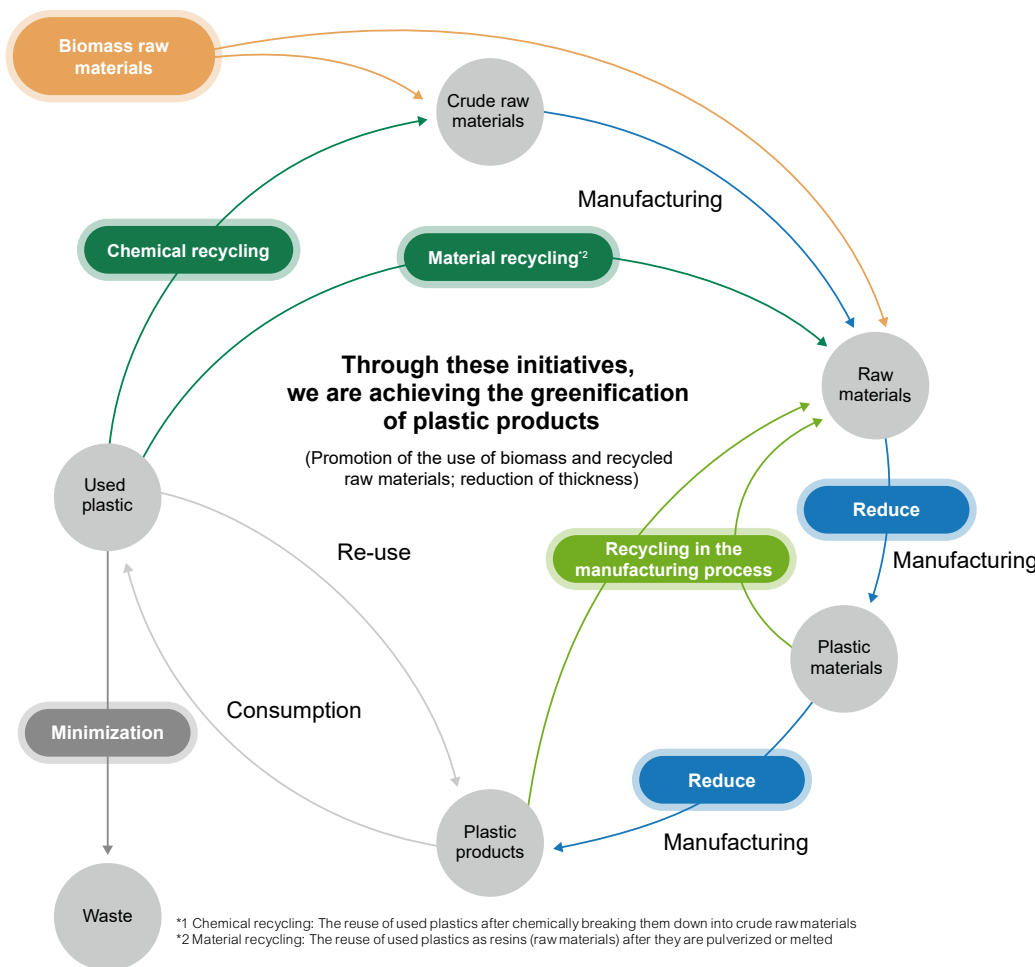
- Collaborations and initiatives**
  - R PLUS JAPAN
  - Anellotech, Inc.
  - Japan Chemical Industry Association

#### Development of technology and products for material recycling\*\*

We proactively develop and market products made of used plastics as raw materials. We have also developed and are marketing TOYOBO GS Catalyst<sup>†</sup>, a polymerization catalyst for PET resin designed to make resin recyclable after polymerization reactions.

Through efforts centering on the PET material to which this technology is applied, we are advancing the expansion of material recycling technologies and materials in the global market.

- Related technologies and products**
  - ECHORCLUB®
  - Crisper®
  - TOYOBO GS Catalyst<sup>†</sup>
- Collaborations and initiatives**
  - Licensing of technology to Indorama Ventures Public Company Limited



\*1 Chemical recycling: The reuse of used plastics after chemically breaking them down into crude raw materials  
 \*2 Material recycling: The reuse of used plastics as resins (raw materials) after they are pulverized or melted

#### Reduce: Development of thin, lightweight materials

We reduce the amount of raw material used by reducing thickness while retaining strength and functionality. When these kinds of materials are used by customers, packaging can be simplified and the amount of packaging materials used in the final product can be reduced.

- Related technologies and products**
  - HARDREN® DN036
  - SPACECLEAN®

#### Reduce: Development of mono-materialization technologies and products

We are reducing the amount of raw materials used while increasing recyclability by replacing previous products consisting of several different materials with those using a single material while maintaining strength and functionality.

- Related technologies and products**
  - ECOSYAR® VP Series
  - PYLEN EXTOP®

#### Recycling in the manufacturing process

We collect offcuts generated in the manufacturing process (originating from airbags and film products) and reuse them as materials for products in the same and other categories. In doing so, we reduce waste generated in the production process.

In addition to the manufacturing processes of our group, we also implement initiatives to advance recycling in the manufacturing processes of our customers.

- Related technologies and products**
  - ECHORCLUB®
  - ECOVYLOPET®
  - COSMOSHINE SRF®
- Collaborations and initiatives**
  - Resource Recycling Project (KAMISHINE® mold releasing film)

#### Marine plastic and microplastic response

To help reduce marine plastic waste, we participate in the Clean Ocean Material Alliance (CLOMA) established in Japan, as well as other initiatives in our efforts to develop and advance alternative materials.

- Collaborations and initiatives**
  - CLOMA

#### Waste reduction

- Waste reduction**

# E Policies and activities-environmental aspects

## Conservation of water resources, conservation of biodiversity, chemical substances management



### Conservation of water resources

#### Basic approach

Water is an invaluable resource that supports us in our lives and our livelihoods, so conserving it is one of the world's most important issues.

The Toyobo Group Charter of Corporate Behavior affirms that Toyobo group will work to reduce and reuse water and other resources we use, and take protective measures against environmental risk. We work to conserve water resources in our business activities by minimizing their use through efforts such as promoting the use of recycled water.

As we also aim to become a group that continues to create the solutions needed by people and the earth with materials and science, we will contribute to water resource conservation in Japan and overseas through such activities as our seawater desalination membrane business.

#### Initiatives

As a group, we are aware that securing water resources is an important matter of business continuity, and we are promoting reduction of water consumption and use of recycled water. Specifically, we strive to recycle water by reusing once-used cooling water, etc., in the manufacturing process.

In addition, we used the World Resources Institute's AQUEDUCT Water Risk Atlas to evaluate water risk at each business site worldwide, and discovered that amounts of usable water in some areas in which we have business sites were at high risk. At those business sites, we are taking measures against risk, and the water usage is less than 0.1% of the total water withdrawals of the group, so we assume that the sites are not currently at serious water risk.

### Conservation of biodiversity

#### Basic approach

We work hard to minimize any negative impacts that our business activities might have on the ecosystem, as reflected in the TOYOBO Group Fundamental Policy on the Global Environment, in which we state that, as a good corporate citizen we will actively support and participate in environmental protection and biodiversity conservation activities throughout society and in local regions.

With an understanding of how our business activities relate to biodiversity, we are working under the Action Guidelines for Biodiversity Conservation on making a contribution through our products and solutions, minimizing the environmental impact of our business activities, and cooperating with local communities on conservation activities.

#### Initiatives

In our business activities, we discharge emissions only after appropriately treating harmful substances in waste water and waste gas from our business sites and plants. In order to prevent these substances from being released accidentally, we install monitoring equipment within the manufacturing process, and strive to improve them in order to keep the amounts in which they are used and emitted to an absolute minimum. Through the equipment that our group sells, such as VOC recovery equipment, we also help our customers reduce their environmental impacts.

In 2022, we endorsed the Declaration of Biodiversity Initiative of the Japan Business Federation (Keidanren), and also joined the 30 by 30 Alliance for Biodiversity led by the Ministry of the Environment and other organizations to enhance biodiversity conservation efforts.

### Chemical substances management

#### Basic approach

Under the TOYOBO Group Fundamental Policy on the Global Environment, our group works hard to manage chemical substances appropriately throughout the whole product lifecycle (research, development, design, manufacturing, sales, use, and disposal) for the sake of global environmental conservation, disaster prevention, occupational health and safety, product safety, as well as compliance with regulations around the world concerning chemical substances.

#### Initiatives

Recent years have seen requirements that chemical substances be managed through the supply chain. In Japan, management is required under the Act on the Regulation of Manufacture and Evaluation of Chemical Substances (Chemical Substances Control Law) and other chemical substance control regulations, while the United Nations has standardized the classification and labeling of chemical substances under the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Considering these circumstances, we have adopted a system for chemical substance management that covers all processes, from procurement to manufacturing and sales of our products, as a means of ensuring accurate, rapid green procurement and customer service. We use it to check on the usage status of chemical substances subject to laws and regulations, and to examine the chemicals contained within products. It is also used to help suppliers with chemical substance safety data sheet (SDS) production. We have also established the TOYOBO Chemical Substance Management Classification, with which we categorize the chemical substances we handle among five levels, specifying details of management for each rank to facilitate efficient use and substitution.

# S Policies and activities with social aspects

## Safety and disaster prevention



### Basic approach

At the Toyobo group, we believe that ensuring health and safety is a key prerequisite to corporate activity, and have established the TOYOBO Group Basic Policy on Health & Safety. Applicable to group employees and partner companies, the policy is part of our efforts to create a safe workplace environment. As of April 2022, we have adopted the safety declaration, "We thoroughly adhere to 'safety first' -work safety, environmental safety, product safety, and equipment safety," and the slogan, "Protect yourself. Protect your colleagues. If you notice something, speak out." September has been designated Disaster Prevention Month, while September 6 is TOYOBO Group Disaster Prevention Day. We will continue to spread awareness of preventing disasters, including fires.

### Organizational structure

The Safety and Disaster Management Division has been established under the direct control of the President in order to steadily promote safety and disaster prevention initiatives, which are of prime importance among management issues. The Head of the Safety and Disaster Management Division hosts the Safety and Disaster Management Conference, which has experts in varied fields as its members, and evaluates the effectiveness of safety and disaster management

activities, drafts and formulates company-wide policies, and determines policy through the Sustainability Committee. The Conference reports on progress to the Board of Directors as appropriate.

Placed under the Safety and Disaster Management Division, the Safety and Disaster Management Department hosts the Safety and Disaster Management Promotion Conference, whose members comprise representatives of each department, to engage in policy-based deliberation and decision-making on specific matters and to manage progress. It also organizes teams of members and a chairperson to visit the company's business sites, factories, and group companies to conduct safety and environmental assessments and to inspect local activities. To address fire and explosion risks in particular, we perform periodic inspections of on-site management through third-party experts.

### Targets and KPIs

We establish and appropriately manage the following goals and KPIs.

#### • Targets

- Toyobo group as a whole will make the fundamentals of safety clear, adhere to them thoroughly, and work to prevent incidents and serious accidents.

### Initiatives

#### • Safety initiatives

We identify serious hazards and enact measures to prevent serious accidents. We use risk assessments and work research to assess on-site risks and improve facilities and work processes, and to conduct education on these matters.

In order to promote security and disaster prevention, all employees participate in disaster prevention drills at least once a year to reaffirm responses in the event of a fire. Regarding fire and explosion risks, worksite management status is inspected by third-party experts on a regular basis.

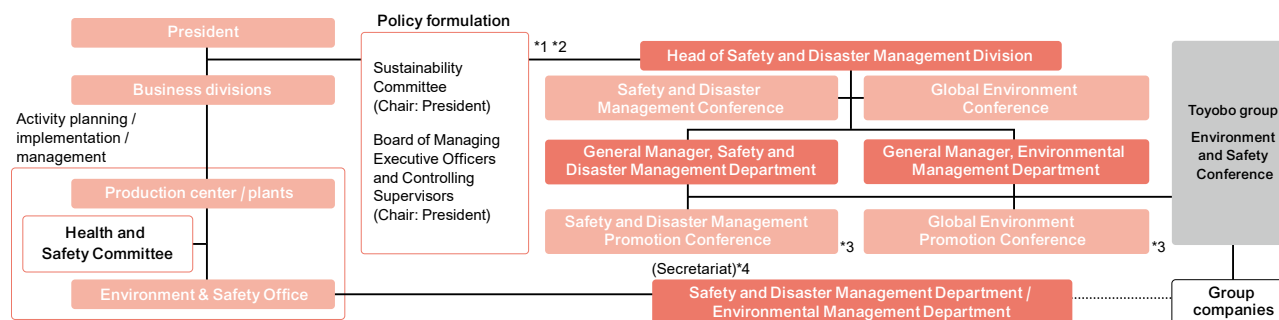
#### • Acquisition of occupational health and safety management system certification (ISO45001)

In order to reduce risks in the work environment, we are working toward acquiring occupational health and safety management system (ISO45001) certification. As of March 31, 2023, both the Iwakuni Production Center and Utsunomiya Plant have been certified.

#### • Initiative to prevent recurrence of fire accidents

Following the fire incidents that occurred at the Tsuruga Research and Production Center No. 2 in September 2018 and at the Inuyama Plant in September 2020, we have been working on preventing recurrences from the two perspectives of nurturing a culture of safety and improving safety infrastructure. We held safety workshops for newly appointed officers and group company presidents in fiscal 2023, and have administered safety awareness surveys of members of management, our employees, and employees of various partner companies (7,525 subjects, 93% response rate). We are also working on development of a disaster prevention management system under the Disaster Management Project. In fiscal 2024, the initiative will move forward on the key issues of deployment of safety and disaster prevention activities with participation by all employees, enhancement of hierarchy-specific training, and reduction of fire and explosion risks.

### The Toyobo group system for safety, disaster prevention, and the environment



\*1 Deliberates and decides policy on safety and disaster prevention \*2 Deliberates and decides policy on the global environment \*3 Deliberates and decides specific matters and manages progress \*4 Supports activities, provides information, and conducts interdepartmental coordination

# S Policies and activities with social aspects

## Quality



### Basic approach

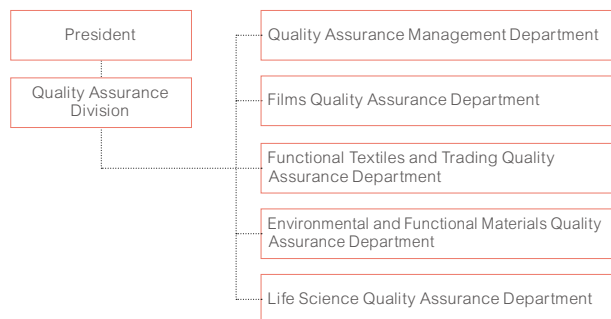
Out of consideration for the environment, the safety of our products and services, compliance with laws and regulations, and also to gain the satisfaction and trust of customers by providing high quality, Toyobo group has established the TOYOBO Group Basic Policy on Quality Assurance and the TOYOBO Group Basic Policy on Product Safety. We have established a management system appropriate to ensuring the quality and safety of the products and services that we provide, and we follow proper procedures in performing quality inspections, while also working to handle data, etc., appropriately.

### Organizational structure

Our group has established the Quality Assurance Division Conference to oversee product liability (PL) and quality assurance (QA). This body meets on a monthly basis, and is formed by controlling supervisor (Executive Officer) overseeing quality, the Quality Assurance Department General Manager in charge of business divisions, and members of the Quality Assurance Management Department. The PL/QA Promotion Committee, composed of members at the business division General Manager level, is scheduled to meet six times a year, and did so in fiscal 2023.

In terms of organizational structure, we have established the Quality Assurance Division, under whose authority the Quality

### Quality assurance system (as of April 2023)



Assurance Management Department and the Quality Assurance Departments, responsible for the business divisions, are situated. In working to establish an appropriate quality management system and to improve our system of governance, we have granted the Quality Assurance Management Department authority to direct or halt development, production, and sales operations at our company or group companies in connection with group product safety and quality assurance.

### Targets and KPIs

We establish and appropriately manage the following goals and KPIs.

#### • Targets

By managing quality upstream and elsewhere throughout the supply chain, we ensure trust in our quality while increasing customer satisfaction.

### Initiatives

#### • Quality assurance activities

Our Quality Assurance Manual, which lays out the basic concepts and action guidelines for employees as they perform the group's development, production, and sales activities, is provided in multiple languages. It represents our group's basic thinking on manufacturing activities. We have also set Quality Assurance Guidelines as we take action to build systems that can guarantee quality. In fiscal 2023, we conducted Head of Quality Assurance Division's reviews to check on the quality assurance initiatives at each business division.

We designate November of every year as Quality Month. During this period of fiscal 2023, a message from the President, a response message from each head of division, and a Quality Month poster were displayed on digital signage at all locations. We also held PL/QA seminars and conducted reviews of quality-related irregularities at workplaces, as described in the Compliance Manual.

#### • Product safety promotion activities and education

The Quality Assurance Division, which is independent from the Sales and Marketing Division, and quality assurance personnel from other divisions, carry out PL/QA evaluations to confirm and improve the product safety (PS) activities of each division and group company. We have also established criteria for judging levels of PL and PS risk. In working to reduce risk, we perform inspections based on these standards at each step from product development to sales. We also implement product safety and quality assurance education as appropriate for each level of employee.

#### • Strengthening the quality-related risk management system

Our group established the Three-line System in response to the quality-related misconduct incidents that came to light in 2020. Made up of three components, the system detects and prevents irregularities by multiple means comprising three Lines: Line 1 (business division, production sites), Line 2 (Quality Assurance Division), and Line 3 (Internal Audit Department). Since then, we have been making progress in strengthening various systems, such as establishing a Risk Management Audit Team, conducting Line 1 audits by the Internal Audit Department in cooperation with the Quality Assurance Division, and making efforts to control human error.

# S Policies and activities with social aspects

## Respect for human rights



### Basic approach

We believe that respect for human rights is an element essential to Toyobo group in fulfilling our responsibilities as a member of society, and also in remaining a company that people trust. Among the ten principles in the TOYOBO Group Charter of Corporate Behavior, we included “4. Respect for human rights,” and “6. Active employee participation,” in the TOYOBO Group Human Rights Policy formulated in October 2020.

Our group upholds and respects international norms regarding human rights, such as those described in the International Bill of Human Rights, the ILO Declaration on Fundamental Principles and Rights at Work, the Children’s Rights and Business Principles, and the Guiding Principles on Business and Human Rights.

Regarding respect for human rights in the supply chain, we clearly state in our CSR Procurement Guidelines that we take matters involving human rights (including the prohibition of child labor, forced labor, and discrimination against people of any attributes, including LGBTQ) into account in our selection of business partners.

### Organizational structure

Aiming to positively and systematically address respect for human rights, our group has appointed managers in charge within the Diversity Promotion Group of the Human Resources Department, to address employees of the group, and within the Planning Group of the Procurement and Logistics Department, to address the supply chain. As we deepen our understanding of international human rights issues and other matters requiring attention, we are also moving forward on preparing initiatives on due diligence in human rights. The Head of the Corporate Sustainability Division and officer (Managing Executive Officer) overseeing the Procurement and Logistics Department supervise and take responsibility for human rights.

### Targets and KPIs

We establish and appropriately manage the following goals and KPIs.

### Targets

- Our whole group works to respect basic human rights and diversity, a commitment that we spread among our employees through training, etc.
- Our aim in these initiatives is to make ourselves a company that is fair and trusted by society.

### Initiatives

#### • Human rights considered from a global perspective

The countries and regions in which our group is located have various human rights-related issues associated with political, economic, and social conditions.

In order to grasp human rights-related issues that require our consideration as a group, we participate in the Human Rights Subcommittee of Global Compact Network Japan. Together with participating companies, we are collecting information on international human rights issues and other matters requiring attention by companies, and are deepening our understanding of human rights issues. In the future, we will move forward with efforts at our group business sites to identify human rights issues that require attention.

#### • Survey on labor and human rights administered

In fiscal 2023, we conducted a “Labor and Human Rights” survey regarding child labor, employment equality, health and safety, etc. for our domestic business sites (non-consolidated). Through the survey, we were able to confirm the absence of any violations of human rights laws and ordinances.

#### • Respect for workers’ rights

Our group respects the rights to freedom of association and collective bargaining. Our employees have formed a labor union, whose membership is acknowledged under a collective bargaining agreement to which labor and management have consented (as of the end of fiscal 2023, 85.1% of all employees were union members). Labor-management dialogues are held on an annual basis between the labor union and the company.

#### • Establishment of a system to handle complaints and internal whistleblowing reports

Human rights-related consultation and reports are accepted by the Grievance Committee and the Compliance Consultation Desks, an internal whistleblowing system. In addition, we work to identify and resolve human rights problems early on through compliance questionnaires.

#### • Internal dissemination

Our group has produced an English-language edition of the TOYOBO Group Charter of Corporate Behavior so that employees all over the world share the same vision. We use our TOYOBO Group Compliance Manual to familiarize employees with rules and case studies concerning respect for human rights, prohibition of discrimination, prohibition of child labor and forced labor, and protection of personal information.

Moreover, we implement training, etc., to spread awareness and understanding of our Human Rights Policy. We continued the effort at each business site in fiscal 2023, with 515 participants joining in training for new employees, education by job level, lecture sessions, and training conferences for Human Rights Promotion Committee members.



# S Policies and activities with social aspects

## Human capital



### Basic approach

Our group aspires to be an organization that undergoes continuous transformation for new value creation aimed at realizing the TOYOBO PVVs corporate philosophy framework. Since revising our personnel system in July 2022, we have proclaimed and implemented four policies so that all employees can experience growth, pride and motivation: Promotion and support of competence upgrades, compensation and evaluation commensurate with job duties, strengthening of management, and active promotion of diverse specialized human resources.

### Organizational structure

The person assigned to be in charge of executing human resources management is the controlling supervisor (Executive Officer) with overall supervisory responsibility for the HR department. The Human Resources Department takes a leading role, providing opportunities for regular exchange of information and discussion with those in charge at each business site and group company, and seeing to the proposal and execution of human resources management-related measures. Priority issues in the annual plan are reported to the officer in charge on a quarterly basis, and are also discussed in the Sustainability Committee, while the Board of Managing Executive Officers and Controlling Supervisors and the Board of Directors confer on important measures.

### Targets and KPIs

We establish and appropriately manage the following goals and KPIs.

#### • Targets

As a whole group, we will build an organizational structure in which employees can work comfortably and feel genuine job satisfaction, in which impartiality and fairness are guaranteed, and which is considerate of diversity and human rights.

### Initiatives

#### Human resources management

#### • Developing human resources

As a group, we regard human resources to be the most important resource of management. It is by supporting the growth of each and every employee in their diverse individuality and views, and by putting in place an environment in which they can be active and self-actualized both within and outside the company, that our group as a whole will be able to survive and thrive. We manage human resources development under an educational system that provides education for everyone from new employees to senior management, designed according to job level, category of position, and purpose.

As part of our development of next-generation management human resources, we select personnel, rotate personnel, and implement support for successor candidate training, based on discussions in the Human Resources Conference, in operation since fiscal 2022.

Although we had to halt global human resources development measures during the COVID-19 pandemic, we resumed short-term overseas business training for domestic employees during the fiscal 2023 second half, and in fiscal 2024, national staff training for executive candidates at overseas business sites will also resume.

Under our TOYOBO PVVs corporate philosophy framework, we conduct training for all management positions to ensure awareness of security and disaster preparedness, occupational safety, quality, and compliance, and to advance organizational initiatives.



Training in fiscal 2023

#### • Prevention of harassment

As a group, we believe that striving to put in place a work environment free of harassment will boost work motivation and heighten job fulfillment, leading to securing and developing excellent human resources, so we focus effort on these measures. While implementing manager training to deepen understanding of our organization, we ensure that employees are aware of the Compliance Consultation Desks and Grievance Committee in which the labor union participates, so that we can discover problems and develop solutions as early as possible.

#### • Employee engagement

In 2021, our group launched a survey on organizational climate and job satisfaction, targeting all officers and employees, and we conducted the second survey in September 2022. In addition to communicating an overview of the survey results to employees, we offer feedback on the survey results at the workplace level, promote dialogue within workplaces, and prepare and carry out action plans.

Improvement in employees' affirmative responses about work based on the engagement survey	2021	2022
1. No difficulty performing daily work duties	33%	38%
2. Respect the diverse views and ideas of each person	42%	50%

#### • Work-life balance

As a group, we are working on work style reform to enable employees to undergo changes in mindset, work with greater efficiency, and have fulfilling work and personal lives, so we have set up systems for childcare, nursing care, flextime, telework, and more. We have built an environment enabling more flexible work styles tailored to employee lifecycles, and are providing opportunities to heighten their creativity.

# S Policies and activities with social aspects

## Human capital



### Diversity and inclusion

Our group understands that when people of different work styles, careers, genders, nationalities, races, and creeds mutually acknowledge each other and cooperate as they make efforts toward a goal, individual and organizational growth will result. While promoting women's participation and advancement as a matter of course, we also advance a range of initiatives to foster a corporate culture that enables diverse human resources to experience professional fulfillment, and we put in place the necessary systems and measures.

#### • Promotion of women's participation and advancement

In order to carry out our group's activities for women's participation and advancement, we have established a Diversity Promotion Group within the Human Resources Department to advance various initiatives from the three perspectives of recruitment, training, and continued employment support.

For our Phase 2 Action Plan from fiscal 2022 to fiscal 2026, we have formulated and announced targets for the final fiscal year for increasing the ratio of women in management positions to at least 5%, the ratio of women in managerial career-track positions to at least 22%, and the percentage of men taking paternity leave to at least 80%, while also increasing the number of days taken by at least 20% from the level of fiscal 2021. These ratios were on track in fiscal 2023, with the ratio of women in management positions at 4.7%, and of women in managerial career-track positions at 18%.

#### Important measures

- Women's Leadership Training Seminar
- Seminar for supervisors on managing women subordinates
- Career Development Support Program
- Project for the Promotion of Women's Participation and Advancement conducted for six consecutive fiscal years (with membership changes)
- Notification for employees and supervisors to promote the paternity leave usage rate, and promotion of interviews before and after leave
- Inter-industry exchange meetings held with other companies to broaden the views of junior and women employees regarding work styles
- Mentoring system (for new-graduate hires and women hired mid-career, with eligibility up to the second year of employment)
- Babysitter support system (the company covers babysitting costs during business travel)
- In-house nursery school established (Research center, capacity for 10 children)

#### • External evaluation

We have received "Eruboshi (Level 2)" certification from the Minister of Health, Labor and Welfare as a company that engages proactively in women's participation and advancement, as well as "Platinum Kurumin" certification acknowledging our support for childrearing.



#### • Participation and advancement of diverse human resources

In hiring people with disabilities we maintain the work environment, seek understanding of the workplace, and recruit actively. In 2023, the percentage of our hires with disabilities was 2.29%, compared to the legally mandated hiring rate of 2.3%. We have introduced a senior employee system for rehiring employees who have left work at the retirement age of 60, who wish to return to work, and who have been recognized as capable of regular work duties. They are active in training junior employees and in passing on their technical expertise. We also have a variety of support systems in place to enable the smooth return to work by employees who have taken childcare leave, family care leave, or mental health leave.

### Health and productivity management

In order to create a comfortable workplace with consideration for employee health, our group engages in helping our employees maintain and improve their mental and physical health. We believe that investing in employee health and having a lively workplace where employees can work energetically are what lead to long-term corporate growth. Our labor affairs department, occupational physicians, occupational health nurses/medical care nurses, and the health insurance association all cooperate under the Executive Officer supervising the HR Department, who serves as Chief Health Officer (CHO). We also undertake priority measures with input from the labor union. In March 2020, our President led the creation of the TOYOBO Health & Productivity Management Declaration.

In 2023, our company received its first "Top 500" certification (large enterprise category) in the 2023 Certified Health &

Productivity Management Outstanding Organizations Recognition Program.

#### • Response to health and productivity management issue

We organize and analyze issues from multiple angles, including health check-up results and the use of scoring reports and data indexed over time in cooperation with insurers, to put measures into practice. We use content from our annual Health and Productivity Management Survey to conduct annual reviews of our initiatives, and connect this to our activities in the following fiscal year.



#### • Improvement of employee lifestyle habits

We are carrying out measures for regular exercise habits and smoking cessation, and providing educational opportunities to improve literacy, which leads to improved lifestyle habits for employees.

In fiscal 2023, in conjunction with seminars on passive smoking and nicotine addiction, we provided information on online outpatient clinics for smoking cessation and implemented measures to partially subsidize the cost of outpatient smoking cessation treatment for those who successfully quit.

#### • Mental healthcare and restricting prolonged working hours

When working hours exceed specified standards for three consecutive months, we examine measures in management meetings (company-wide, including managerial staff) to prevent recurrence. Labor and management have specified lines for each business site, and reductions in excessive working hours are being promoted, with a KPI of a 20% reduction set for the number of employees subject to overtime work.

Regarding mental healthcare, training for managers is conducted once a year, and occupation health staff engage in individual consultations at each business site.

# S Policies and activities (topics) on social aspects KAERU — Creating opportunities for dialogue that brings awareness —

## KAERU, an overview

We launched the KAERU Project in April 2018 with participation of all executive officers and employees across the company. (KAERU means “to change.”) This project was initially proposed by an officer who felt a sense of crisis and urgent need for change because Toyobo group had failed to meet the targets in its previous four medium-term management plans, and compliance violation incidents had occurred. Many employees agreed to the officer’s idea, leading to the establishment of this project. In March 2019, we established TOYOBO PVVs as a framework of corporate philosophy that can also be a banner for reform, which we have been advancing by spreading the corporate philosophy from the dual perspectives of systems and structural KAERU and work and workplace environment KAERU. In April 2022, we renamed the KAERU Project Department the KAERU Department as we continue making KAERU activities take root in our culture.

### Dialogue and exchange workshop example

#### Exploring learning through dialogue

Nonwoven Fabrics Materials Operating Department (at the time)

wanted to create opportunities to think again about what it means to learn. We hosted a talk by company former employee Hisao Nishinaka titled “Textile Vision (Road Map) and Reskilling,” which was followed by a “casual discussions on serious issues” gathering in which all participants could converse frankly and openly without regard to rank. A diverse range of views were exchanged, inspired by contact with the enthusiasm of Mr. Nishinaka, who has remained energetic and active in his work and study since his retirement as Corporate Auditor. In a follow-up survey, 95% of the participants responded that it had given them an opportunity to think about learning.



#### Participant feedback (excerpts)

- As I answered questions posed by other people, I sometimes found myself being made aware of ways of thinking and feelings that I myself hadn’t understood very well.
- I realized that increasing the motivation we bring out while talking with lots of people is also really important in continuing to learn.
- Every other person besides ourselves has something we can learn from, which makes it important to take an interest in people.

## KAERU in numbers (results)

Themes	Results	FY2023	FY2019-2023
Increase the number of people with awareness	Basic training in organizational development	Number of attendees	66 157
	Basic training in organizational development for managers	Number of attendees	8 8
	Facilitation training	Number of attendees	315 1,155
Creating opportunities for awareness	Writing business department operations into unified company-wide workflow	Flow (number)	12 16
	Briefings and talk sessions	Number of times held (events)	3 25
	Dialogue and exchange workshops *See case examples above.	Number of times held (events) Number of attendees	133 275 1,043 2,749
Leading from awareness to KAERU	Isolating issues through taking inventory and writing	Incidents	90 640
	Support for improvement	Incidents	18 223
Connecting with people eager for change	Work style proposals by interdepartmental teams	Number of subcommittees (type)	8 28
		Number of attendees	68 170
KAERU members (planners and promoters)		9 full-time, 80 concurrently (as of May 2023)	
KAERU supporters (those who have experience as members, supporters, etc.)		163 (as of the end of March 2023)	
Participants in KAERU activities		2,471 (as of July 2022)	

\*Totals.

## Workplace-led KAERU



### Ikuo Takeuchi

President & Representative Director  
 CEO & Co-CEO

KAERU is now in the sixth year since its launch, and its activities have shifted focus to building up people and organizations capable of sustained transformation. Creating an organizational culture in which people feel at ease freely exchanging words with each other enables mutual recognition and ties between people across organizations. Different perspectives and ideas give rise to an awareness of improvement, reform, and transformation. Meanwhile, it can be expected to provide occasions to discover safety risks and signs of malfunctions that can lie hidden in daily routine work and in the workplace.

Through KAERU, we take ownership of workplace issues and discuss them in teams to solve issues by ourselves as we carry out the initiative known as T-UP (boosting team capabilities through TOYOBO TALK, our in-house term for organizational development). As this initiative gradually spreads, case examples are emerging of how it is transcending workplace barriers.

I am also continuing with monthly “casual discussions on serious issues” in which I speak directly with employees. It provides many new insights, not just for the people participating but for me as well. There are also new interactions that begin with these “casual discussions on serious issues”. I believe that these activities will ensure the solid trustworthiness of our safety, disaster prevention, and quality, and that they will result in our creation of an organizational culture that reflects the attitude expressed in our TOYOBO PVVs corporate philosophy framework: “We welcome change, we enjoy change, and create change.”

# S Policies and activities with social aspects Partnerships (supply chain)



## Basic approach

Toyobo group supports the development of a sustainable society throughout our supply chain, and we have established the proper transaction policies and execute responsible procurement and logistics so as to contribute to achieving the Sustainable Development Goals (SDGs).

In keeping with Principle 2, Fair Business Practices, of the TOYOBO Group Charter of Corporate Behavior, we will engage in proper competition and transactions, as well as responsible procurement and distribution, and we will maintain a healthy relationship with society. We also established our CSR Procurement Guidelines to address issues including legal compliance, fair transactions, environmental considerations, and respect for human rights, and our Green Procurement Guidelines to address environmental considerations. In September 2022, we revised our CSR Procurement Guidelines in light of several recent global issues.



## Organizational structure

Having established a proper basic policy on transactions, we have also built systems for responsible procurement and logistics. Moreover, we have established our CSR Procurement Guidelines and Green Procurement Guidelines, and administer CSR procurement survey to all of our suppliers, while requesting their understanding of and cooperation with our proactive advancement of initiatives.

## Targets and KPIs

We establish and appropriately manage the following goals and KPIs.

### • Targets

- Throughout our supply chain, we will realize procurement and logistics with consideration for its social and environmental

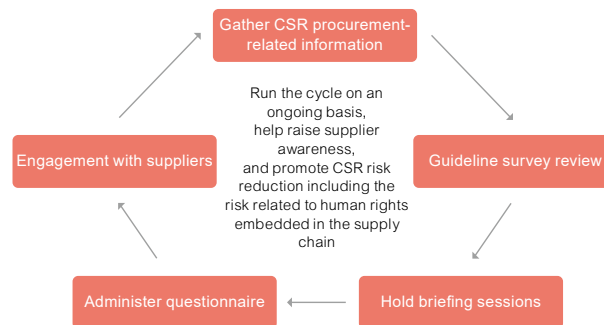
aspects, fair and honest transactions, and respect for human rights.

- By promoting green logistics, including modal shifts and better loading efficiency, we will reduce CO<sub>2</sub> emissions.

## Initiatives

### • CSR procurement survey

To all of our major suppliers worldwide, we provide notification of our CSR Procurement Guidelines and administer a survey based on the guidelines every other year. We administered it most recently in fiscal 2022, and in fiscal 2023, we took corrective measures and revised our CSR Procurement Guidelines based on the results.



### • Education for sustainable procurement

Training for personnel in charge of procurement and logistics (buyers) is conducted once a year for all of those in charge, in which each group manager in the Procurement and Logistics Department is involved in presenting a thorough familiarization with the CSR Procurement Guidelines. We also incorporate goals related to contribution to sustainable procurement (stable procurement) into personnel evaluations of procurement and logistics staff, and conduct guidance and training on topics including management of progress toward the goals. We solicit proposals for improvement

including for sustainable procurement activities, and reward excellent proposals with commendations.

### • Addressing conflict minerals

In our CSR Procurement Guidelines, our group calls for the promotion of responsible procurement with respect to regulations on conflict minerals. Using specific Chemical Substances Data Sheets, we investigate whether conflict minerals are used in the raw materials behind all of our company's products. In fiscal 2023, we investigated products that contain the four minerals tin, tantalum, tungsten and gold among their raw materials. We also prepared an internal survey and response system that lets us provide prompt and proper responses to survey requests from customers.

### • Solving social issues of logistics

In efforts to solve social issues that emerge in logistics, we are working to reduce environmental impacts through such means as shortening transport distances, increasing loading efficiency, and adopting effective systems, while also reforming work styles in the logistics field.

# S Policies and activities with social aspects

## Partnerships (social contribution)



### Basic approach

In the TOYOBO Group Charter of Corporate Behavior, we declare that “We will actively participate in society as a good corporate citizen and contribute to its development.” It is our belief that fulfilling our responsibilities as a good corporate citizen and making investments for the future is one way for us to put our corporate philosophy of “*Jun-Ri-Soku-Yu*” into practice. To build and support a better society as a member of that society, we will engage in the promotion of science and technology, environmental conservation, and communication with local communities, and will incorporate what we gain from these activities into our corporate activities.

### Promotion of science and technology

#### Supporting junior researchers to contribute to the biotechnology field

In order to promote interdisciplinary academic research in the field of biotechnology so that the results can contribute to society, Toyobo established the Toyobo Biotechnology Foundation in May 1982 to mark the centennial anniversary of the company. The foundation has since hosted research conferences and symposiums, and offered research grants. In recent years, it has focused its activities



Fiscal 2023 long-term research grant recipients and foundation officials (at the February 13 presentation ceremony)

on providing international students with research grants in support of the young researchers who represent the future.

In fiscal 2023, six young researchers were granted long-term research subsidies totaling ¥33 million, with a presentation ceremony held in February 2023. With the current fiscal year included, a total of 220 researchers have received long-term research subsidies. The recipients are actively engaged at the forefront of research and education in the field of biotechnology, and there are some who have served as directors and trustees of the foundation out of a desire to contribute to the development of the next generation.

### Contribution to local communities

#### Toyobo Aya-no-Mori forest conservation and contribution to the local community

We have been purchasing pine and other forests since the 1950s for the purpose of domestic self-sufficiency in chemical fiber raw materials (wood pulp). As the composition of the chemical fiber business has changed, however, we have now accomplished this mission of supplying raw materials, and are holding some of the forests we own in order to produce lumber.

Among our company-owned forests is Toyobo Aya-no-Mori, located in the town of Aya-cho, Miyazaki Prefecture. It has been discovered that the forest contributes to the recharging of local water sources, that a rich ecosystem is maintained by its mixture of natural forest and cedar and cypress plantations, and that rare plants and animals find their homes there, which have led to our reassessment of its value. Moreover, the whole woodland owned by the company (approximately 1,500 hectares), which contains Aya-no-Mori, is estimated to absorb approximately 6 thousand t-CO<sub>2</sub> annually, thus contributing to society from the standpoint of climate change mitigation.

By maintaining this valuable ecosystem, we will contribute to achieving the target of conserving 30% or more of land and sea as healthy ecosystems by the year 2030, set by the 30 by 30 Alliance for Biodiversity, an international initiative agreed upon at the 15th Conference of Parties to the UN Convention on Biological Diversity

(COP15) in 2022. One of the means by which we aim to achieve this goal is to obtain certification under the international database of other effective area-based conservation measures (OECM).

In addition, given Toyobo Aya-no-Mori’s location adjacent to a UNESCO Eco Park, and its convenient proximity to the city center, we are considering a collaboration with the local community in which we would offer it as a site for visitor education on the natural environment. Furthermore, the forest has a rich ecosystem that holds within it the potential to yield new materials and raw materials that we think could be developed into better products in the future, which would contribute to a prosperous society.



Toyobo Aya-no-Mori, Aya-cho, Miyazaki Prefecture



# Outside Director message

**We will overcome our immediate issues and difficulties to achieve transformation. Look forward to the future of TOYOBO!**

**Hiroshi Fukushi**

Outside Director



## Helping to overcome high hurdles to transform the business portfolio

Toyobo is currently undertaking the reorganization of our business portfolio, which is our biggest management challenge. It is a process that any long-established company must go through in order to grow sustainably when changes in the times diminish the competitiveness of the businesses it has built, resulting in pressure to transform the portfolio. Amid weakening growth potential at some of the businesses at Toyobo, excessive importance was placed on immediate profits, which resulted in the occurrence of serious fire accidents and quality problems, making it necessary to review the business structure. I commend the group's highly active initiatives under President Takeuchi, first of all for the strengthening of its safety and disaster readiness system that is a foundation of manufacturing as well as the rebuilding of its quality assurance system, while taking further steps to reorganize its business portfolio. Toyobo's Board of Directors has five outside directors with diverse backgrounds including business operation, research and development, and compliance, and engages in active discussions. Among these, I have been in charge of managing a manufacturing company, where I experienced a major business portfolio transformation. Transformation is not easy, but we must achieve it for the sake of the company's future survival and development. I will make the most of my own experience toward Toyobo's transformation, and I will back President Takeuchi and all of the executive officers in their efforts to overcome this high hurdle.

Most recently, our operating cash flow has dropped under the impact of the economic disturbances during the COVID-19 pandemic and soaring raw materials and fuel prices, so we must reclaim our earning power as we advance efforts to earn unwavering trust in our safety, disaster prevention, and quality. Although I think all chemical manufacturers are confronting the same issue, the difficulty of raising prices on product lines that have undergone commoditization is precisely what makes this a critical moment. Toyobo must change its business structure to one that generates cash flow by optimizing product prices and advancing the shift to high value-added products.

## Management aiming for a high position in the long term only makes sense in a harsh business environment

In order for Toyobo to be a company that continues to envision a growth trajectory through contributing to society while responding to changing times, there is enormous significance to our establishment of the TOYOBO PVVs corporate philosophy system and Sustainable Vision 2030. In addition to the major changes currently taking place in the global and business environments, we are also being rushed by a wave of digital transformation (DX). In order to weather high seas like these, it is crucial that everyone aim for a high position from a long-term perspective, and move toward that goal step by step.

In Japan, DX tends to be understood as the introduction of digital technology, but the genuine meaning of DX is the application of digital technology to the transformation of society. In looking at Amazon or Apple, we get a true sense of the power of advanced DX companies. DX has the kind of speed and power in which one equation can answer everything, so industrial and occupational structures change, renewing everything having to do with companies, lifestyles, and work. This kind of transformation has already started everywhere throughout industry, so that both companies and individuals are all under pressure to make a decision and do something about whether to ride this rogue wave or get swamped by it.

In order to realize the TOYOBO PVVs, it will be necessary for Toyobo to review its existing businesses and operations from the ground up and to rebuild the company, and DX will be essential to that effort. Ten years from now, Toyobo's business portfolio will have undergone some enormous changes. Now is the time that management must exercise its leadership to transform Toyobo into a company that will keep growing. As an outside director, I intend to solidly advance that transformation.

# G Policies and actions on governance aspects

## Management team

### Director



**Seiji Narahara**  
Chair of the Board & Director

January 1988 Joined TOYOBO  
 April 2010 Executive Officer  
 June 2011 Director and Executive Officer  
 April 2014 President & Representative Director, CEO & Co-CEO  
 April 2021 Chair of the Board & Director (to present)



**Ikuro Takeuchi**  
Representative Director & Co-CEO  
CEO & Co-CEO  
Controlling Supervisor of Corporate Sustainability Division, Internal Audit Department, and KAERU Department

April 1985 Joined TOYOBO  
 October 2015 Deputy Director, General Manager, Corporate Planning Office  
 April 2018 Executive Officer  
 April 2020 Managing Executive Officer  
 June 2020 Director and Managing Executive Officer  
 April 2021 President & Representative Director CEO & Co-CEO (to present)



**Chikao Morishige**  
Representative Director & Co-CEO  
Assistant to the president, Head of Environmental & Functional Materials Division

April 1983 Joined TOYOBO  
 April 2014 Deputy Director, Head, Films Development Department  
 April 2017 Executive Officer  
 April 2019 Managing Executive Officer  
 April 2020 Senior Managing Executive Officer  
 June 2021 Representative Director & Senior Managing Executive Officer  
 April 2022 Representative Director & Co-CEO (to present)  
 April 2023 TOYOBO MC Corporation President & Representative Director CEO (to present)



**Hiroshi Otsuki**  
Representative Director  
Senior Managing Executive Officer  
CFO, Controlling Supervisor of Management and Administration Division, Supervisor of KAERU Department

November 1987 Joined TOYOBO  
 October 2014 Deputy Director, General Manager, Chemicals Management Planning Office & General Manager, Films Business Management Office  
 April 2017 Executive Officer  
 June 2020 Director and Executive Officer  
 April 2021 Director and Managing Executive Officer  
 April 2022 Representative Director, Senior Managing Executive Officer, CFO (to present)



**Taichi Sakai**  
Director, Managing Executive Officer  
CTO, Head of Safety and Disaster Management Division, Controlling Supervisor of Production Technology Division

April 1986 Joined TOYOBO  
 March 2012 General Manager, Production Technology Division & Member, Corporate Planning Office (project under direct control of the President)  
 April 2016 Deputy Director, Production Technology Supervisory Division Head & Member, Global Promotion Department  
 December 2020 Executive Officer  
 April 2023 Director, Managing Executive Officer, CTO (to present)



**Takafumi Isogai**  
Outside Director

January 1987 Associate Professor, Department of Education, Osaka University  
 April 1996 Associate Professor, Graduate School of Engineering Science, Osaka University  
 April 2002 Professor, Faculty of Merchant Marine, Kobe University of Maritime Sciences, Kobe University  
 October 2003 Professor, Faculty of Maritime Sciences, Kobe University  
 April 2013 Professor, Faculty of Commerce, University of Marketing and Distribution Sciences  
 April 2018 Part-time lecturer, University of Marketing and Distribution Sciences  
 June 2018 Outside Director of the company (to present)



**Kimie Sakuragi**  
Outside Director

March 1981 Fukutake Publishing Co., Ltd. (currently Benesse Holdings Inc.)  
 April 1995 General Manager, Book Business Department, Publishing Department, Benesse Holdings  
 November 1998 Section Manager, Business Ethics Committee  
 January 2003 General Manager, Corporate Ethics and Compliance Office  
 June 2003 Full-time Corporate Auditor (retired in June 2019)  
 April 2007 Specially Appointed Professor, University of Aizu Graduate School (to present)  
 June 2019 Outside Director of the company (to present)  
 June 2021 Isuzu Motors Limited Outside Director (Audit and Supervisory Committee member) (to present)  
 June 2021 Outside Director, Kumagai Gumi Co., Ltd. (to present)



**Masaaki Harima**  
Outside Director

April 1977 Assistant Judge, Osaka District Court  
 May 1981 Registered as attorney (Osaka Bar Association)  
 September 1987 Established Harima Law Offices (now Fushimicho Law Offices)  
 April 2010 Chairperson, Osaka Fairness Review Board  
 June 2011 Outside Corporate Auditor, Ishihara Sangyo Kaisha, Ltd. (to present)  
 June 2014 Member, Independent Committee  
 June 2020 Outside Director of the company (to present)  
 April 2021 Chairperson, Pollution Control Board, Osaka Prefecture (to present)



**Hiroshi Fukushi**  
Outside Director

April 1984 Joined Ajinomoto Co., Inc.  
 June 2011 Executive Officer  
 June 2013 Director & Managing Executive Officer  
 June 2019 General Manager, Bio-Fine Business Division  
 June 2021 Chief Digital Officer  
 June 2022 Director, Representative Director & Vice President  
 June 2022 Special Advisor (to present)  
 June 2022 Outside Director of the company (to present)  
 June 2022 Outside Director, MEGMILK SNOW BRAND Co., Ltd. (to present)



**Shoko Takase**  
Outside Director

April 1987 Joined IBM Japan Ltd.  
 January 2005 Seconded to IBM Corporation (IBM U.S. head office)  
 July 2015 Manager, Growth Strategy, Mobile Strategy, IBM Japan Ltd.  
 July 2016 General Manager, Global Technology Services Business  
 July 2018 General Manager, Resiliency Services Division  
 July 2018 Director, General Manager, Cloud Solution Center  
 April 2019 Senior Managing Executive Officer & Head, Enterprise Business, Cisco Systems G.K.  
 July 2021 Consultant, TechnoPro Holdings, Inc.  
 September 2021 Outside Director (to present)  
 June 2023 Outside Director of the company (to present)

### Corporate Auditor



Takayuki Tabo



Yasuo Ohta



Akihiko Irie  
(Outside)



Wakyu Shinmen  
(Outside)

### CEO & Co-CEO

Ikuro Takeuchi

### Co-CEO

Chikao Morishige

### Senior Managing Executive Officers

Hiroshi Otsuki  
 Shigeo Nishiyama  
 Ichiro Takai

### Managing Executive Officers

Nobuya Fujiwara  
 Taichi Sakai  
 Takahito Sagara  
 Muneo Hirooka

### Executive Officers

Seiji Yamazoe	Yoshihiro Nomi	Naoki Fujii
Eiichi Shimizu	Kazuyuki Kawata	Kenji Fujihashi
Nobuyuki Hoshino	Masanao Kudo	Atsushi Sogabe
Tadao Kuroki	Masakazu Iwasaki	Tetsuro Yabuki
Sonoko Ishimaru	Katsuya Ito	Takehiko Inada
Hisashi Arimoto	Kazuhiro Ikeda	

# G Policies and actions on governance aspects

## Management team

### Directors and Corporate Auditors attendance status and skills matrix

	Outside	Independent	Age	Gender	Nomination and Compensation Advisory Committee	Chairpersons of each committee	Attendance status (attendance rate)			Of the skills and experience we seek, those that can be put to particularly effective use							Years in office	Reasons for election
							Board of Directors	Board of Corporate Auditors	Nomination and Compensation Advisory Committee	Corporate management	Production, technology, and development	Marketing and sales	Finance and accounting	Environment and society	Governance, risk management, and compliance	IT/DX		
Director	Seiji Narahara		66	Man	○	Board of Directors	18/18 sessions (100%)		5/5 sessions (100%)	○			○	○		12	Based on his deep knowledge of finance, accounting, and other areas, Mr. Narahara has supported the long-term reform of the company's business portfolio, and, acting as President and Representative Director since April 2014, has led the management of the group, including the reworking of our corporate philosophy structure and the expansion of the film business, committed to the improvement of corporate value. He assumed the post of Chair of the Board & Director in April 2021, and in that position, plays an appropriate role in decision-making on key matters and in the oversight of execution.	
	Ikuo Takeuchi		60	Man		Board of Managing Executive Officers and Controlling Supervisors	18/18 sessions (100%)			○		○		○	○	3	After serving in key positions in corporate planning and overseas business sites of the company, Mr. Takeuchi was appointed as Head of the Functional Membranes and Environment Division, a position from which he set a concrete path toward growth of the business. Since April 2021, he has undertaken formulation of the 2025 Medium-term Management Plan as President and Representative Director, demonstrating strong leadership and steering the sustainable growth of the group.	
	Chikao Morishige		63	Man			18/18 sessions (100%)			○	○	○		○		2	Mr. Morishige has held key positions in the fields of R&D and production technologies in the company's core Films Division, and has contributed to the expansion of the Division's performance. He assumed the post of Representative Director in June 2021 and has played a central role in management as an assistant to the President.	
	Hiroshi Otsuki		62	Man			18/18 sessions (100%)			○		○		○		3	Mr. Otsuki has held key positions in the company's corporate departments, including in finance and accounting, corporate planning, and corporate communications. Since June 2020, he has contributed to the strengthening of the group's financial base and to corporate governance in the role of Director.	
	Taichi Sakai (New appointment)		60	Man							○			○	○	0	Mr. Sakai has held key positions in the company's production technology department and core manufacturing sites and, drawing on his abundant experience and expertise in the field of production technology, contributes to initiatives aimed at technological innovation.	
	Takafumi Isogai	○	○	74	Man			18/18 sessions (100%)						○		5	Leveraging specialized knowledge and wide-ranging insights gained as an academic expert versed in the field of quality control, Mr. Isogai made proactive statements from an independent standpoint at meetings of the Board of Directors. He appropriately fulfills roles expected of him by the company, including those of supervising management through vital decision-making and providing counsel to management, advising management in areas including technology and R&D.	
	Kimie Sakuragi	○	○	64	Woman	○		18/18 sessions (100%)		5/5 sessions (100%)				○	○	4	Leveraging her abundant experience and wide-ranging insights in fields including corporate ethics, compliance, and sustainability, Ms. Sakuragi made proactive statements from an independent standpoint at meetings of the Board of Directors. She appropriately fulfills roles expected of her by the company, including those of supervising management through vital decision-making and providing counsel to management, serving as a member of the Nomination and Compensation Advisory Committee.	
	Masaaki Harima	○	○	72	Man			17/18 sessions (94%)						○	○	3	Leveraging specialized knowledge and wide-ranging insights gained as an attorney, Mr. Harima made proactive statements from an independent standpoint at meetings of the Board of Directors. He appropriately fulfills roles expected of him by the company, including those of supervising management through vital decision-making and providing counsel to management, advising management with the aim of strengthening risk management and governance.	
	Hiroshi Fukushi	○	○	65	Man	○		14/14 sessions (100%)			○	○	○		○	1	Leveraging his abundant experience and wide-ranging insights gained as a business manager, Mr. Fukushi made proactive statements from an independent standpoint at meetings of the Board of Directors. He appropriately fulfills roles expected of him by the company, including those of supervising management through vital decision-making and providing counsel to management, drawing on his high-level expertise in the bio and digital fields to advise management.	
Shoko Takase (New appointment)	○	○	58	Woman						○	○			○	0	In addition to extensive experience and wide-ranging insights as a business manager, Ms. Takase possesses high-level expertise in the IT and digital fields. The company expects that she will appropriately fulfill roles including those of supervising management through vital decision-making and providing counsel to management.		
Corporate Auditor	Takayuki Tabo		62	Man			18/18 sessions (100%)	15/15 sessions (100%)		○	○	○		○	2	Mr. Tabo has a long involvement in the accounting and control department of the company, possesses considerable knowledge of finance and accounting, and has a deep understanding of the management and business operations of the group.		
	Yasuo Ohta (New appointment)		63	Man							○	○		○	0	Mr. Ohta has a long involvement in the field of research and development, and, after serving as head of the Research Center, has held key positions in the biochemical business and in corporate planning, contributing to new business development and global expansion. He possesses abundant experience and a record of performance as a manager in charge of various departments, and has a deep understanding of the management and business operations of the group.		
	Akihiko Irie	○	○	66	Man		18/18 sessions (100%)	15/15 sessions (100%)		○	○			○	2	Mr. Irie possesses abundant experience in auditing and has served as a corporate auditor at listed companies.		
	Wakyu Shinmen (New appointment)	○	○	66	Man	Observer								○	0	Mr. Shinmen possesses abundant experience in auditing as a certified public accountant.		



# G Policies and actions on governance aspects Corporate governance



## Basic approach

Under our corporate philosophy of “Jun-Ri-Soku-Yu,” we at Toyobo believe that discerning social issues from a long-term perspective and helping solve them with our own unique technologies is our purpose for being.

In order to respond to changing times and continually improve our corporate value, we will do our utmost to collaborate appropriately with all of our stakeholders, beginning with our shareholders, based on how we think about ensuring prompt,

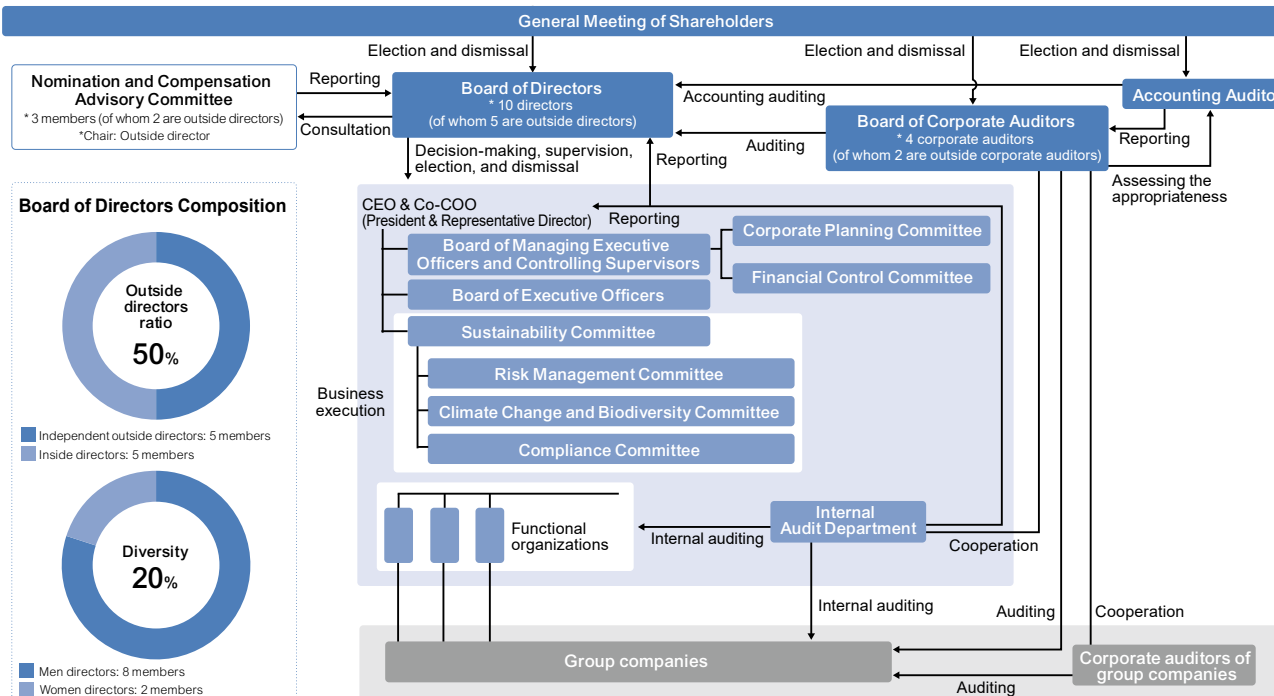
accurate decision-making, ensuring transparency of management, and placing importance on fairness. We will also fulfill our fiduciary and accountability duties to ensure the effectiveness of our corporate governance, and will strive to make continual improvements.

## Organizational structure

As a company furnished with a Board of Corporate Auditors, we have adopted an executive officer system. Our Articles of

Incorporation stipulate this system, by which the Board of Directors supervises the execution of business operations by executive officers. We have thus built a structure of governance that enables prompt decision-making and effective business execution by making a clear separation between the decision-making and oversight functions of the Board of Directors and the business execution functions of the executive officers.

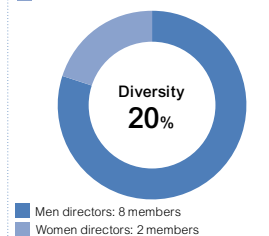
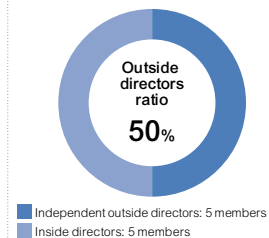
## Corporate governance structure (as of June 2023)



## Conference and committee overview (Numbers of persons as of June 2023)

	Number of meetings in fiscal 2023	Constituent members
Board of Directors	18	10 members. The Board of Directors is composed of the chairperson who presides over its deliberations, 5 independent outside directors, and directors who serve concurrently as executive officers. It is stipulated that the number of Board of Directors members may not exceed 14, that the term of office is one year, and that the ratio of outside directors must be one-third or greater.
Board of Corporate Auditors	15	4 members. Includes 2 independent outside corporate auditors.
Nomination and Compensation Advisory Committee	5	3 members. Consists of 2 independent outside directors and the chairperson. An outside director chairs the meeting. One outside corporate auditor also attends as an observer.
Board of Managing Executive Officers and Controlling Supervisors	32	12 members. Includes those serving concurrently as directors. The chairperson and 2 internal corporate auditors may also participate and express opinions.
Sustainability Committee	4	13 members. The members of the Board of Managing Executive Officers and Controlling Supervisors are members of the committee, with the president serving as chairperson. 2 internal corporate auditors may also participate and express opinions.
Corporate Planning Committee	8	19 members. Members of the committee are selected from each area of expertise and business department. The officer in charge of planning serves as chairperson.
Financial Control Committee	17	There is 1 chairperson and 4 permanent members.

### Board of Directors Composition



# G Policies and actions on governance aspects

## Corporate governance



### Targets and KPIs

#### • Targets

We have set KPIs and manage them appropriately in order to build a fair and transparent governance structure through compliance with the Corporate Governance Code and proactive information disclosure, etc. We set KPIs for initiative items involving the strengthening of corporate governance and information disclosure.

### Senior management election and dismissal, and nomination of director and auditor candidates

#### • Policy

In selecting and dismissing senior management (executive officers who serve concurrently as directors), and in nominating director and corporate auditor candidates, consideration is given to whether the person excels in the character and insight appropriate to the respective duties as a basis for consideration with respect to our criteria for nominating officers and corporate auditors. The decisions are made by the Board of Directors after deliberation by the Nomination and Compensation Advisory Committee.

#### (1) Conceptual approach to the composition of the Board of Directors and the Board of Corporate Auditors

##### ① Board of Directors

In order to achieve overall structural balance while ensuring diversity of career history, gender and age, while affording the expertise and skills necessary to exercise appropriate strategic direction and decision-making on execution of important business, and the independence needed to strengthen supervision of the management team, the Board of Directors is composed of the chairperson who presides over its deliberations, outside directors and directors who serve concurrently as executive officers. In keeping with our mindset regarding the assurance of prompt, accurate decision-making, management transparency, and placing importance on fairness, our Articles of Incorporation stipulate that the number of Board of Directors members may not exceed 14, and that the ratio of outside directors must be one-third or greater.

##### ② Board of Corporate Auditors

From the standpoint of ensuring the effectiveness of its audits, the Board of Corporate Auditors is composed of personnel who possess finance and accounting expertise and skills as well as knowledge of the group's business operations.

#### (2) Outline of criteria for nomination, etc.

##### ① Directorship candidates (excluding outside director candidates)

- Must have managerial knowledge, track record, experience and skills, and a company-wide perspective

##### ② Outside directorship candidates

- Must help increase corporate value and strengthen oversight functions by providing business suggestions, management support, etc.
- Must satisfy the separately defined criteria for independence of outside officers

##### ③ Corporate auditorship candidates

- Must be capable of appropriate decision-making from an independent and objective standpoint in executing audits and other duties
- Outside corporate auditorship candidates must satisfy the independence criteria

#### • Procedures for nomination, etc.

In order to ensure fairness and transparency, the Nomination and Compensation Advisory Committee has been established as an advisory body for the Board of Directors, with outside directors making up a majority of its members. An outside director serves as chairperson of the Nomination and Compensation Advisory Committee.

The Nomination and Compensation Advisory Committee reports to the Board of Directors upon deliberating basic policies and criteria such as officer nominations, succession planning, and other matters based on proposals from the president.

#### • Policy and procedures for dismissal

In the event of any conduct suspected of being unfair, unjust or constituting a breach of trust, or any other cause of unfitness for

service as an officer, the Board of Directors will make a decision regarding dismissal upon deliberation by the Nomination and Compensation Advisory Committee.

### Officer training

In addition to conducting briefings for newly appointed directors and corporate auditors on their roles and duties, we also help them acquire the necessary knowledge by sending them to external training programs upon assuming their posts as executive officers and directors. Newly appointed outside directors and outside corporate auditors are also briefed on the company's business operations, finances, and organization. After they assume office, we provide further support for their participation in external training programs, while also presenting lectures by outside instructors so that each individual can continuously strengthen their management literacy.

### Officer compensation system

#### • Basic policy

We have designed our system for officer compensation in accordance with the following policy items, within the scope of the compensation amounts approved by the General Meeting of Shareholders.

- ① It must incentivize the motivation to increase sustained growth of the group and medium- to long-term increase in corporate value.
- ② It must facilitate the securing of excellent management personnel.
- ③ It must have a highly objective, transparent decision-making procedure. We will review the composition and levels of compensation with reference to our management environment, employee salary levels, and levels current at other companies, according to surveys conducted by external expert organizations.

#### • Monetary compensation (including performance-linked component)

##### (1) Composition of monetary compensation

Monetary compensation for directors (excluding outside directors) consists of fixed monthly compensation comprising the following two components.

# G Policies and actions on governance aspects

## Corporate governance



### 1 Base compensation

### 2 Short-term incentives

#### (2) Short-term incentives

- 1 Short-term incentive compensation reflects evaluations of company-wide performance and the performance of the department under charge, in accordance with position.
  - Representative Director and Executive Director: Company-wide performance only
  - Director: Company-wide performance 2; performance of department under charge 1
  - Executive Officer (full-time): Company-wide performance 1; performance of department under charge 2
- 2 Individual compensation is calculated to reflect company-wide performance and the performance of the department under charge, and is decided by the Board of Directors.
- 3 The major management indicator EBITDA is used as a KPI for company-wide performance. It varies between 0% and 200%, according to the degree of achievement with respect to the target value.
- 4 With regard to specific target values, the Nomination and Compensation Advisory Committee is consulted. Based on its reports, the Board of Directors makes decisions.
- 5 Performance of the department under charge is evaluated on a 5-point scale that takes into account the degree of operating income achieved, the degree of improvement in ROA, EBITDA, and

other factors in the department under charge. It varies between 50% and 200%.

#### • Stock compensation

In order to strengthen incentives for a sustained increase in corporate value, and to promote even greater value-sharing with shareholders, we offer a certain percentage of compensation in the non-monetary form of restricted stock (non-performance-linked and pre-delivery type).

#### • Ratio of paid compensation

The ratio is designed to allow incentives for enhancement of corporate value to function appropriately. For base compensation, short-term incentive, and long-term incentive, a ratio of 6:3:1 is set as a guideline (when KPI achievement is 100%).

#### • Other

- (1) Compensation for outside directors consists only of a fixed amount of monetary compensation, given their role and independence.
- (2) Compensation for corporate auditors consists only of a fixed amount of monetary compensation according to the duty and responsibility of each auditor, and given their role and independence, is determined in consultation with the auditor.
- (3) In order to ensure transparency and objectivity in the

determination of compensation, the Nomination and Compensation Advisory Committee has been established as an advisory body for the Board of Directors, with outside directors making up a majority of its members. It is consulted by the Board of Directors, and deliberates on the structure, levels, and methods of calculation of officer compensation, as well as the target amounts for company-wide performance evaluations that are a component of the compensation for each position. The Board of Directors makes final decisions on individual compensation amounts with reference to reports from the Nomination and Compensation Advisory Committee.

#### • Revision of the officer compensation system

The Board of Directors partially revised the system of officer compensation in fiscal 2023 in light of considerations of social trends and appropriate incentives for improved business performance. Effective from July 2022, the key content of the revision is shown below.

##### (1) Compensation composition ratios

The guidelines for the ratio of base compensation, short-term incentives, and long-term incentives (restricted stock compensation) will be changed as follows.

Pre-change: 7:2:1 Post-change: 6:3:1

##### (2) Short-term incentive composition ratio

Pre-change: Calculated by multiplying evaluations of company-wide performance and departmental performance.  
 Post-change: The ratios of company-wide performance and departmental performance reflected in short-term incentives are as follows:

- Representative Director and Executive Director: Company-wide performance only
- Director: Company-wide performance 2; performance of department under charge 1
- Executive Officer (full-time): Company-wide performance 1; performance of department under charge 2

### Details of officer compensation (fiscal 2023)

Category	Total compensation, etc. [millions of yen]	Total compensation, etc., by type			Number of eligible officers*
		Base compensation [millions of yen]	Performance-linked compensation [millions of yen]	Non-monetary compensation (restricted stock compensation) [millions of yen]	
Directors (including outside directors)	407 (50)	275 (50)	101 (-)	31 (-)	12 (5)
Corporate auditors (including outside corporate auditors)	70 (18)	70 (18)	- (-)	- (-)	4 (2)
<b>Total (including outside officers)</b>	<b>478 (68)</b>	<b>345 (68)</b>	<b>101 (-)</b>	<b>31 (-)</b>	<b>16 (7)</b>

\*Including officers newly appointed and retired during the term

# G Policies and actions on governance aspects

## Corporate governance

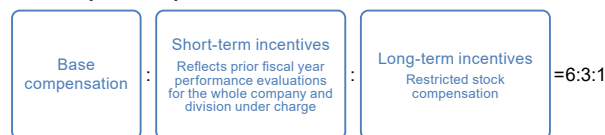


### (3) Short-term incentive KPI

The KPI for company-wide performance will be changed from consolidated operating income to EBITDA,\* linking it to the targets of the 2025 Medium-Term Management Plan.

\*EBITDA: An acronym for "earnings before interest taxes depreciation and amortization," a corporate profit level indicator.

#### Ratio of paid compensation



During fiscal 2024, the Board of Directors decided that from July 2024, the short-term incentives within officer compensation would incorporate a sustainability index in the pursuit of sustained growth and environmental, social, and governance (ESG) perspectives.

### Evaluation of the effectiveness of the Board of Directors

With the goal of further increasing the functionality of the Board of Directors, we obtained the advice of an external organization in conducting an analysis and evaluation of the overall effectiveness of the Board of Directors in fiscal 2023. A summary is as follows.

#### • Methods of analysis and evaluation of effectiveness

- (1) Subjects: All directors and corporate auditors
- (2) Method: We administered a questionnaire (with approximately 50 questions), with responses made directly to the outsourced external organization.
- (3) Analysis and evaluation: Performed by the Board of Directors upon consideration of the report of aggregate results from the external organization.

### • Summary of evaluation results

- (1) The number of directors, the ratio of inside to outside directors, and the Board of Directors chairperson's management of the discussion agenda were generally assessed as appropriate.
- (2) It was confirmed that certain results and improvements were achieved as a result of addressing the five issues identified previously: 1) addressing risk management including of quality assurance and of safety and disaster prevention, 2) tackling medium- and long-term themes, 3) initiatives towards succession planning and appointment procedures, 4) further streamlining Board of Directors' management of meetings procedures, and 5) strengthening of group governance. However, some voices viewed the improvements as insufficient.
- (3) The items 2), 3), and 5) above in particular received relatively low evaluations, and were identified as issues to be addressed along with the newly identified issue of reviewing our business portfolio. In addition, the item 1) above remained an issue to be addressed in order to make further improvements through ongoing initiatives.

### • Issues and future initiatives

Through the following initiatives, the Board of Directors will strive to improve its overall effectiveness.

- (1) **Risk management to address safety, disaster prevention, quality assurance, etc.**  
We will further enhance the risk management systems of our group as a whole by means including supervision of the status of our initiatives for KPIs and materiality targets.
- (2) **Business portfolio review initiative**
  - We will set this as a priority theme in our annual plans, and will undertake it from the beginning as we work to enhance discussions.
  - We will engage in a review of our business portfolio, with group companies included.
- (3) **Strengthening of group governance**
  - We will receive reports on risk management at group companies and on other topics from the Corporate Business

Management Department, and will engage appropriately.

- We will ensure the effectiveness of internal audit functions through means including audit plans from the Internal Audit Department and reports on their outcomes, and will work to strengthen group governance.
- (4) **Initiatives for CEO succession planning and appointment procedures**  
We will further ensure transparency and fairness by means including activity reports from the Nomination and Compensation Advisory Committee.
  - (5) **Initiatives aimed at other medium- to long-term themes (DX, human capital, environmental action, etc.)**  
We will set this as a priority theme in our annual plans, and will undertake it from the beginning as we work to enhance discussions.

### Cross-shareholdings

We inspect cross-shareholdings on a regular basis for validity in terms of a range of perspectives including effectiveness in medium- to long-term elevation of corporate value, and economic rationale. When such shares are no longer regarded as significant, our policy is to sell them. On the other hand, we may hold shares of business partners in cases where we determine that doing so will contribute to our sustainable growth and increase in corporate value over the medium to long term through the maintenance and strengthening of stable relationships with important partners. Each year, the Board of Directors individually considers the validity of cross-shareholdings, including consideration of future business strategies and relationships, and decides whether or not to continue holding the shares.

In exercising our voting rights on our cross-shareholdings, we make comprehensive decisions upon in-depth study of the circumstances of the business partners involved and of the details of their proposals. When necessary, we engage in dialogue to determine factors such as whether or not the proposal will contribute to the sustained growth and an increase in the medium- to long-term corporate value of the business partners involved and our company.

# G Policies and actions on governance aspects Risk management



## Basic approach

Having established a Basic Policy on Business Risk that presents our basic stance toward risk management activities, Toyobo group also anticipates a diverse range of crises that might threaten our business activities overall, and we implement risk management by means appropriate to the characteristics of each risk. In the event of an emergency, we establish a task force under the direction of the responsible executive officer to swiftly contain the crisis through a prompt response. By putting these systems in place and making these efforts, we strive to secure the trust of all of our stakeholders, which include our customers, members of local communities, and shareholders.

## Organizational structure

We have established a Risk Management Committee chaired by the President, which performs uniform group-wide management of risks. Comprising the members of the Board of Managing Executive Officers and Controlling Supervisors, as well as members

appointed by the chairperson, it met four times in fiscal 2023. The committee supervises risk management activities (identification, analysis, assessment, and response), formulates group-wide risk management policies, and works to strengthen the risk management system under its objective of building up and operating an effective and sustainable organization and system.

## BCP conceptual approach and structure

As we carry out continuous improvements, our group has formulated a Business Continuity Plan (BCP) structured around a dual core of performing our supply responsibilities as a manufacturer and coexisting with the local environment and society. It provides clear instructions in chronological order regarding the roles and functions of each department from the emergence of a crisis to its resolution, and lays out the specific details of preparedness during normal times.

## Conceptual approach and system for information security

As stated in our TOYOBO Group Charter of Corporate Behavior, our

group must ensure that each and every employee acknowledges the importance of information security, and that we properly manage information and prevent problems involving information security from occurring if we are to contribute to society and remain a company that earns people's trust. Our basic Information Security Policy includes a declaration of its five essentials: A system of management, legal compliance and in-house regulations, education and training, information systems operation, and incident response.

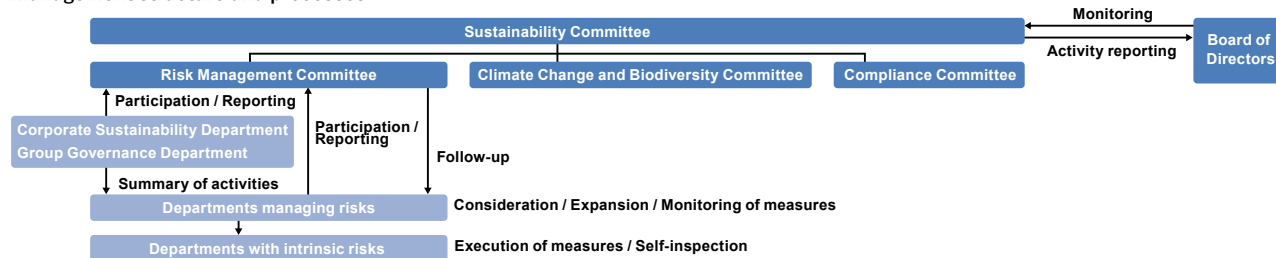
### Information security management system

We have established an Information Security Sub-committee (TOYOBO-CSIRT), led by a chief information security officer (CISO) appointed by top management, as an organization to promote information security measures and activities. TOYOBO-CSIRT assesses the status of information security across the company, formulates basic policies, maintains management systems, and implements and supervises specific measures.

### Information security measures

Cyber attacks are intensifying year by year, often targeting overseas sites and group companies. In response, we are working to raise the information security measures of our domestic and overseas affiliates to the same level as our headquarters, and to strengthen information security across the group. Specific measures include support for communication and improvement of policies and regulations, support for the introduction of education for employees and managers, implementation of targeted email attack drills, deployment and inspection of IT reinforcement measures, and continuous strengthening of our contact system for security and incident response.

## Management structure and processes



Major risks we recognize as having the potential to seriously impact the business results and financial status of the Toyobo group.

Risks that have occurred or could occur	Medium- to long-term risks	Financial risks
(1) Disasters, accidents, and infectious diseases (2) Further worsening of political and economic conditions (3) Inappropriate conduct, etc., related to the content of third-party certification registration	(4) Raw materials purchasing (5) Product defects, etc. (6) Securing human resources (7) Climate change (8) Environmental impact	(9) Information security (10) Regulations and compliance (11) Overseas business activities (12) Litigation (13) Major exchange rate fluctuations (14) Major interest rate increases (15) Major stock price declines (16) Fixed asset impairment

(The risks included here are not an exhaustive list of all risks involving the group. Forward-looking statements are based on determinations made by the group as of the end of fiscal 2023.)

# G Policies and actions on governance aspects

## Compliance



### Basic approach

Based upon our corporate philosophy of “Jun-Ri-Soku-Yu,” at the core of Toyobo group’s compliance activities is the idea of “do what should be done” and “don’t do what should not be done.” In addition, based on the principles declared in the TOYOBO Group Charter of Corporate Behavior, we created the TOYOBO Group Compliance Manual, in which we compile in concrete and easily understood terms the rules that employees should follow as we work to encourage understanding among group employees and thoroughly familiarize them with our rules.

### Organizational structure

We have established a Compliance Committee made up of members of the Board of Managing Executive Officers and Controlling Supervisors to promote compliance throughout the group from a management perspective, and a subordinate Compliance Promotion Committee to consider specific initiatives, while the Legal and Compliance Department promotes legal and regulatory compliance throughout the group.

### Targets and KPIs

We have set KPIs and manage them appropriately in order to foster an ethical corporate climate and culture in which each and every employee adheres to laws, regulations and rules, and responds appropriately and transparently. The initiative items for which we specify KPIs include improvement in compliance awareness, recognition and utilization of Compliance Consultation Desks, and the number of serious legal and regulatory violations.

### Initiatives

During fiscal 2023, the Compliance Committee met two times and the Compliance Promotion Committee held four meetings in efforts to increase the effectiveness of education, training, and preventive measures.

#### • Compliance Consultation Desks

Our group has established a variety of points of contact available

to all group employees, including the internal reporting desk and Compliance Consultation Desks, where whistleblowing and consultation inquiries are received for the prevention, early discovery, and correction of problems. There were 78 consultation cases during fiscal 2023 (including 7 taken by external consultation services). A breakdown by type shows that the most common problems were with communication, human relations, and harassment, followed by labor relations (attendance, employee treatment, etc.). Depending on the nature of the consultation, we recommended corrective or disciplinary action in cases where problems were recognized, offered advice to those seeking consultation, and answered questions regarding the issues.

#### Number of Compliance Consultation Desk cases (including the internal reporting desk)

FY2019	FY2020	FY2021	FY2022	FY2023
32	35	37	62	78

Consultation details	Incidents
Communication, personal relationships, harassment	31
Labor relations (attendance, treatment, etc.)	12
Violations of work rules, etc.	9
Other	26
Total	78

#### • Activities for education and awareness

In order to promote understanding among all group employees and to thoroughly familiarize them with the rules, we have produced the TOYOBO Group Compliance Manual. Every year, we revise and distribute the Manual during Compliance Enforcement Month, while overseas sites create local versions with additional edits. We familiarize all employees with the TOYOBO Group Charter of Corporate Behavior through readings of the Manual during training at workplaces.

During fiscal 2023, we conducted 20 compliance study (training) sessions for management-level personnel at all of our business sites and affiliate companies, as well as 38 sessions of various training types categorized by rank and job type.

#### • Compliance risk assessment

Every year, we administer a compliance awareness survey and check on workplace compliance risk status. In fiscal 2023, 6,566 employees responded to the survey. We disclose the results to all employees, and share the information with the related departments in a form that prevents identification of those who filled out the questionnaires, which has been useful in improving circumstances and preventing problems.

#### • Corruption prevention initiatives

In addition to coercion or corruption including bribery, we rank the prevention of unfair bidding or competition, and of falsification of financial records, as priority compliance issues.

Every year, we make a report to the Board of Directors on the status of our corruption prevention initiatives and other compliance activities to enable effective supervision. To build fair and sound business relationships with partners, we decline the receipt of gifts or entertainment that exceed socially accepted norms, and have adopted a system for reporting the receipt of any gifts or entertainment.



# 05

## Reference material

- 79 Key financial data (FY2013–FY2023)
- 81 Corporate data
- 82 External recognition, third-party assurance report

## Key financial data (FY2013–FY2023)

\*1 Since partial Amendments to the Accounting Standards for Tax Effect Accounting have been applied since fiscal 2019, these figures represent values resulting from the retroactive application of the standards to fiscal 2018.

Fiscal Year	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023
<b>Items of consolidated statements of income (millions of yen)</b>											
Net sales	339,009	351,577	351,279	347,763	329,487	331,148	336,698	339,607	337,406	375,720	399,921
Operating profit	17,081	21,006	20,580	23,123	23,332	23,923	21,727	22,794	26,657	28,430	10,063
Ordinary income	15,522	18,426	16,257	20,393	20,650	20,415	17,788	18,035	20,706	23,092	6,590
Extraordinary income	2,673	595	1,160	702	469	11,492	1,519	11,206	629	6,529	9,753
Extraordinary losses	5,420	5,151	5,101	4,871	7,179	13,683	19,204	9,525	15,753	14,825	15,731
Profit or loss (-) attributable to owners of parent	7,639	8,154	8,117	10,150	9,444	13,044	-603	13,774	4,202	12,865	-655
Comprehensive income	11,097	12,988	18,182	2,147	13,519	15,611	-467	4,437	9,471	12,112	-1,232
<b>Items of consolidated balance sheet (millions of yen)*1</b>											
Current assets	184,739	184,630	196,607	186,633	196,293	186,571	193,125	206,416	212,963	239,314	299,133
Non-current assets	262,707	271,625	269,202	257,954	254,497	258,924	267,922	282,458	278,225	278,460	289,773
Current liabilities	164,831	160,582	146,250	130,690	136,865	125,110	131,768	122,321	131,444	146,750	202,500
Non-current liabilities	127,093	150,558	158,472	153,795	143,016	135,870	148,053	183,916	171,109	173,876	164,984
Net assets	155,522	145,115	161,087	160,101	170,910	184,515	181,226	182,636	188,635	197,149	221,422
Shareholders' equity	138,024	142,310	157,988	156,915	167,773	180,561	176,585	177,890	185,729	194,876	189,588
Total assets	447,445	456,256	465,809	444,587	450,790	445,495	461,047	488,874	491,188	517,774	588,906
Interest-bearing debt	159,430	170,721	177,085	165,358	169,230	145,594	164,769	175,139	186,958	191,249	229,405
<b>Cash flow (millions of yen)</b>											
Cash flow from operating activities	30,354	23,927	20,107	32,337	26,872	22,353	7,838	44,255	35,028	17,097	7,798
Cash flow from investing activities	-11,294	-22,218	-20,089	-10,636	-14,132	-1,174	-24,286	-39,216	-31,678	-24,608	-36,011
Cash flow from financing activities	-2,636	-10,839	797	-21,384	-324	-27,831	12,608	-1,805	5,340	-1,729	61,295
Free cash flow	19,060	1,709	17	21,701	12,740	21,178	-16,448	5,040	3,350	-7,511	-28,213
Cash and cash equivalents at end of period	26,467	19,177	20,389	20,101	32,179	25,857	22,167	25,084	34,526	26,433	60,204
<b>Capital expenditure, depreciation and amortization, and R&amp;D expenses (millions of yen)</b>											
Capital expenditure	18,041	20,074	17,491	17,336	18,360	21,259	25,512	36,445	23,253	33,640	42,734
Depreciation and amortization	13,246	14,038	14,916	14,434	14,939	15,666	15,823	17,005	19,095	20,080	19,050
R&D Expenses	9,966	10,474	10,819	11,266	11,114	10,402	11,022	11,690	12,656	13,792	14,112



## Key financial data (FY2013–FY2023)

\*2 As of October 1, 2017, Toyobo consolidated every 10 shares of its common stock into 1 share based on a resolution of the 159th Ordinary General Meeting of Shareholders held on June 28, 2017. In addition, the number of shares comprising one unit of stock changed from 1,000 to 100 on the same date.\*3 ROE: Profit attributable to owners of parent ÷ average fiscal year-end/year-initial shareholders' equity.\*4 ROA: Operating profit ÷ total assets.\*5 ROIC: NOPAT ÷ average fiscal year-end/year-initial invested capital (invested capital: Net assets + interest-bearing debt).\*6 Calculated using fiscal 2012 as base year.\*7 EBITDA: Operating profit + depreciation and amortization (including goodwill).\*8 In fiscal 2015, we changed the acrylate-based fiber (AP) business from films and functional polymers to industrial materials. In fiscal 2017, we changed the activated carbon fiber (AC) business from industrial materials to healthcare, and the AP business from industrial materials to textiles and trading.\*9 We changed the business segment in fiscal 2021. Figures for fiscal 2020 have been reclassified under the altered categories to facilitate comparison.

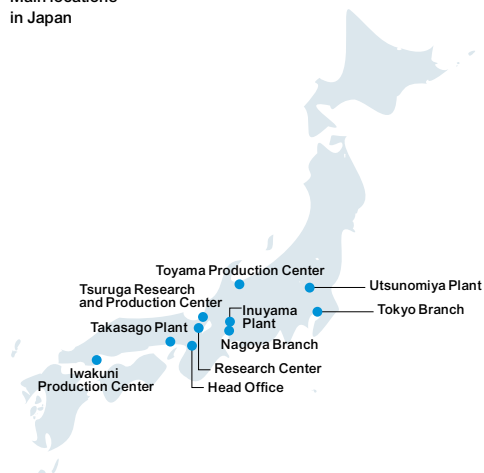
Fiscal Year		FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019		FY2020	FY2021	FY2022	FY2023
<b>Per-share information (yen)*2</b>													
Book value per share (BPS)		155.35	160.28	177.95	176.75	188.98	2,034.04	1,989.29		2,003.01	2,090.47	2,192.17	2,146.46
Earnings or loss (-) per share (EPS)		8.61	9.18	9.14	11.43	10.64	146.93	-6.80		155.12	47.30	144.75	-7.37
Dividend per share		3.50	3.50	3.50	3.50	3.50	40.00	40.00		40.00	40.00	40.00	40.00
<b>Financial indicators</b>													
Overseas sales ratio (%)		23.4	26.6	28.5	29.5	29.2	29.0	30.5		32.3	33.0	34.3	36.8
Operating profit margin (%)		5.0	6.0	5.9	6.6	7.1	7.2	6.5		6.7	7.9	7.6	2.5
Return on equity (ROE)*3 (%)		5.7	5.8	5.4	6.4	5.8	7.5	-0.3		7.8	2.3	6.8	-0.3
Return on assets (ROA)*4 (%)		3.8	4.6	4.4	5.2	5.2	5.4	4.7		4.7	5.4	5.5	1.7
Return on invested capital (ROIC)*5 (%)		3.4	4.3	4.2	4.8	4.8	4.9	4.4		4.5	5.0	5.1	1.7
Price earnings ratio (PER)		18.58	17.65	17.72	14.78	18.14	14.29	—		7.37	30.11	7.55	—
Price book value ratio (PBR)		1.0	1.0	0.9	1.0	1.0	1.0	0.7		0.6	0.7	0.5	0.5
Total return ratio (%)		40.6	38.1	38.3	30.6	32.9	27.2	—		25.8	84.6	27.6	—
Dividend on equity (DOE) (%)		2.3	2.2	2.1	2.0	1.9	2.0	2.0		2.0	2.0	1.9	1.8
Total shareholder return (TSR)*6 (%)		138.6	143.2	146.2	155.1	178.4	196.1	141.5		121.9	149.1	124.4	123.2
Equity ratio (%)		30.8	31.2	33.9	35.3	37.2	40.5	38.3		36.4	37.8	37.6	32.2
EBITDA*7 (millions of yen)		30,328	35,044	35,496	37,557	38,272	39,589	37,550		39,799	45,752	48,509	29,113
D/E ratio (multiples)		1.16	1.20	1.12	1.05	1.01	0.81	0.93		0.98	1.01	0.98	1.21
Net debt / EBITDA ratio (multiples)		4.4	4.3	4.4	3.9	3.6	3.0	3.8		3.8	3.3	3.4	5.8
<b>Results by business segment (millions of yen)*8, *9</b>													
Net sales	Films and Functional Polymers	137,394	148,000	146,029	143,398	138,574	148,667	156,241	Films and Functional Materials	127,127	152,842	170,326	170,028
	Industrial Materials	71,891	71,704	71,520	70,522	59,925	63,454	66,540	Mobility	43,905	36,573	44,721	49,320
	Healthcare	24,839	27,344	28,777	27,723	36,423	35,723	34,675	Lifestyle and Environment	128,409	109,148	114,295	129,872
	Textiles and Trading	79,211	79,089	85,093	85,486	77,552	68,317	64,585	Life Science	25,538	27,087	35,003	38,134
	Real estate and other business	25,673	25,440	19,860	20,634	17,013	14,987	14,657	Real estate and other business	14,629	11,757	11,375	12,567
Operating profit	Films and Functional Polymers	7,634	7,794	6,988	9,920	12,747	13,713	13,727	Films and Functional Materials	14,582	20,028	19,897	4,641
	Industrial Materials	5,453	5,501	6,601	6,288	3,875	4,262	2,620	Mobility	-701	-1,572	-1,753	-4,485
	Healthcare	4,170	5,140	5,042	4,726	5,242	5,179	5,170	Lifestyle and Environment	5,936	4,376	3,453	2,999
	Textiles and Trading	213	2,952	2,334	2,500	1,066	645	914	Life Science	3,798	4,517	8,655	9,212
	Real estate and other business	2,739	2,732	2,630	2,841	3,344	2,819	2,233	Real estate and other business	2,623	2,302	2,218	2,187
Adjustment	-3,128	-3,113	-3,016	-3,152	-2,941	-2,694	-2,936	Adjustment	-3,444	-2,993	-4,041	-4,490	

# Corporate data (As of March 31, 2023)

## Corporate data

<b>Company name</b>	TOYOBO CO., LTD.
<b>Established</b>	May 3, 1882
<b>Head Office</b>	Osaka Umeda Twin Towers South 1-13-1 Umeda, Kita-ku, Osaka 530-0001, Japan Main TEL: +81-6-6348-3111
<b>Number of employees</b>	10,885 (consolidated) / 4,015 (non-consolidated)

### Main locations in Japan



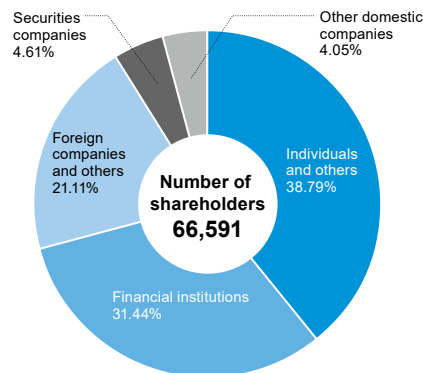
### Main locations overseas

- TOYOBO (SHANGHAI) CO., LTD. (China)
- TOYOBO U.S.A., INC.
- TOYOBO (THAILAND) CO., LTD.
- TOYOBO DO BRASIL PARTICIPACOES LTDA. (Brazil)
- TOYOBO INDUSTRIAL MATERIAL (THAILAND) LTD.
- TOYOBO Chemicals Europe GmbH (Germany)
- PT. TOYOBO TRIAS ECOSYAR (Indonesia)
- Spinreact, S.A.U. (Spain)
- TOYOBO TEXTILE (MALAYSIA) SDN. BHD.
- Arabian Japanese Membrane Company, LLC (Saudi Arabia)

## Investor information

<b>Stock exchange listings</b>	Tokyo Stock Exchange Prime Market
<b>Securities code</b>	3101
<b>Administrator of shareholder register</b>	Sumitomo Mitsui Trust Bank, Limited 1-4-1 Marunouchi, Chiyoda-ku, Tokyo 100-8233, Japan
<b>Independent auditing corporation</b>	KPMG AZSALLC 3-6-5 Kawaramachi, Chuo-ku, Osaka 541-0048, Japan
<b>Number of shares</b>	Total number of authorized shares 200,000,000 Total number of shares issued 89,048,792
<b>Paid-in Capital</b>	¥51,730 million
<b>Number of shareholders</b>	66,591
<b>Ordinary general meeting of shareholders</b>	Held annually in June
<b>Number of shares per unit</b>	100

### Distribution of shares by shareholder (according to number of shares owned)



### Major shareholders

Shareholder name	Number of shares held (thousands)	Shareholding ratio (%)
The Master Trust Bank of Japan, Ltd.	13,894	15.73
Custody Bank of Japan, Ltd.	7,444	8.43
Toyobo Employees Stockholders' Association	2,315	2.62
Toyukai	1,940	2.20
SMBC Nikko Securities Inc.	1,854	2.10
NIPPON LIFE INSURANCE COMPANY	1,750	1.98
DFAINTL SMALL CAP VALUE PORTFOLIO	1,472	1.67
Meiji Yasuda Life Insurance Company	1,402	1.59
STATE STREET BANK WEST CLIENT-TREATY 505234	1,111	1.26
STATE STREET BANK AND TRUST COMPANY 505223	946	1.07

Note: Treasury stock (723,040 shares) is excluded from shareholding ratio calculations

### Share price

Fiscal year	Five-year highest / lowest				
	2019	2020	2021	2022	2023
Highest price (yen)	2,164	1,684	1,687	1,505	1,134
Lowest price (yen)	1,386	903	1,033	1,046	979

# External recognition, third-party assurance report

## External ESG evaluation

### Incorporation into ESG indicators

Toyobo was selected in June 2021 as a constituent security for inclusion in the FTSE Blossom Japan Index, a global index of share prices for ESG investments; for inclusion in the MSCI Japan ESG Select Leaders Index in December 2021; and for inclusion in the FTSE Blossom Japan Sector Relative Index in March 2022. (Selection remained effective as of June 2023.)

We are included as a constituent stock in the MSCI Japan Empowering Women Index (WIN), the Morningstar Gender and Diversity Index (GenDi), and the S&P/JPX Carbon Efficient Index, as well as a constituent stock in the ESG indices of Japanese stocks adopted by the Government Pension Investment Fund (GPIF). We have also been selected as a constituent security for all ESG indicators targeting Japanese stocks referenced by Japan's Government Pension Investment Fund (GPIF).



**2023 CONSTITUENT MSCI JAPAN ESG SELECT LEADERS INDEX**  
**2023 CONSTITUENT MSCI JAPAN EMPOWERING WOMEN INDEX (WIN)**

THE INCLUSION OF TOYOBO 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 TOYOBO 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. Morningstar Japan ex-REIT Gender Diversity Tilt Index

### Other evaluations

The following are some assessments of our initiatives.



## Third-party assurance report

### Independent Assurance Report

To the President & Representative Director, CEO & Co-CEO of TOYOBO Co., Ltd.

We were engaged by TOYOBO Co., Ltd. (the "Company") to undertake a limited assurance engagement of the environmental performance indicators marked with ✓ (the "Indicators") for the period from April 1, 2022 to March 31, 2023 included in its TOYOBO REPORT 2023 (the "Report") for the fiscal year ended March 31, 2023.

#### The Company's Responsibility

The Company is responsible for the preparation of the Indicators in accordance with its own reporting criteria (the "Company's reporting criteria"), as described in the Report.

#### Our Responsibility

Our responsibility is to express a limited assurance conclusion on the Indicators based on the procedures we have performed. We conducted our engagement in accordance with the 'International Standard on Assurance Engagements (ISAE) 3000, Assurance Engagements other than Audits or Reviews of Historical Financial Information' and the 'ISAE 3410, Assurance Engagements on Greenhouse Gas Statements' issued by the International Auditing and Assurance Standards Board. The limited assurance engagement consisted of making inquiries, primarily of persons responsible for the preparation of information presented in the Report, and applying analytical and other procedures, and the procedures performed vary in nature from, and are less in extent than for, a reasonable assurance engagement. The level of assurance provided is thus not as high as that provided by a reasonable assurance engagement. Our assurance procedures included:

- Interviewing the Company's responsible personnel to obtain an understanding of its policy for preparing the Report and reviewing the Company's reporting criteria.
- Inquiring about the design of the systems and methods used to collect and process the Indicators.
- Performing analytical procedures on the Indicators.
- Examining, on a test basis, evidence supporting the generation, aggregation and reporting of the Indicators in conformity with the Company's reporting criteria, and recalculating the Indicators.
- Visiting one of the Company's factories and one of the Company's subsidiaries selected on the basis of a risk analysis.
- Evaluating the overall presentation of the Indicators.

#### Conclusion

Based on the procedures performed, as described above, nothing has come to our attention that causes us to believe that the Indicators in the Report are not prepared, in all material respects, in accordance with the Company's reporting criteria as described in the Report.

#### Our Independence and Quality Management

We have complied with the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which includes independence and other requirements founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior. In accordance with International Standard on Quality Management 1, we design, implement and operate a system of quality management including policies or procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

/s/ Shinosuke Kayumi  
 Shinosuke Kayumi, Director  
 KPMG AZSA Sustainability Co., Ltd.  
 Osaka, Japan  
 October 20, 2023

Notes to the Reader of Independent Assurance Report:  
 This is a copy of the Independent Assurance Report and the original copies are kept separately by the Company and KPMG AZSA Sustainability Co., Ltd.

Sustainable Vision 2030

# Prosperity

Ushering in both a prosperous society  
where people can live with peace of mind,  
and the enhancement of corporate value



**TOYOBO**

**TOYOBO CO., LTD.**  
**Corporate Sustainability Department**

Osaka Umeda Twin Towers South  
1-13-1 Umeda, Kita-ku, Osaka City, Osaka 530-0001, Japan  
URL : <https://www.toyobo-global.com/sustainability/> MAIL : [sustainability@toyobo.jp](mailto:sustainability@toyobo.jp)

#### Disclaimer

This report contains forward-looking statements that reflect the plans, outlook, strategies and performance of Toyobo group. These forward-looking statements are based on judgments reached using currently available information. Therefore, please be aware that actual performance is influenced by a variety of factors such as risks and uncertainties that could result in performance significantly different from these forward-looking statements. Factors influencing our future outlook include the economic environments in which we conduct business operations, competitive pressure, related laws and regulations, changes in the status of product development, and exchange rate fluctuations. The factors that could affect our outlook include, but are not limited to these.