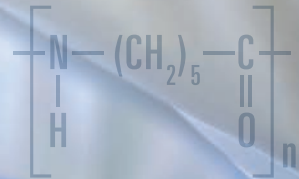
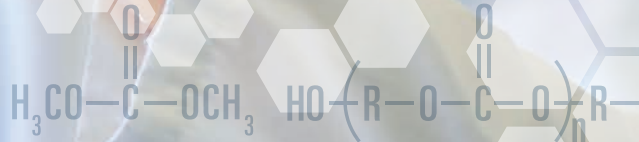
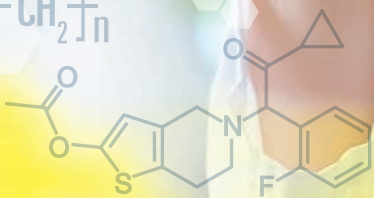
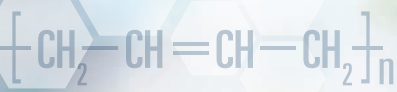
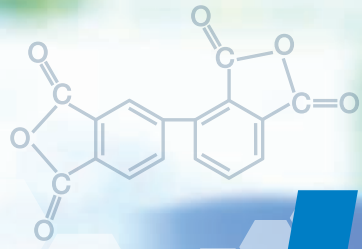




**UBE** Transform  
Tomorrow  
Today



## Our Philosophical Framework

### Founding Principles

# “Coexistence and Mutual Prosperity” “From Finite Mining to Infinite Industry”

### UBE Corporate Philosophy

Pursue technology and embrace innovation to create value for the future and contribute to social progress

### Purpose

Leveraging the manufacturing technologies the UBE Group has cultivated throughout its long history, create the value required by society, in the safe and environmentally friendly manner demanded by society, and deliver that value to the people. And by doing so, help to solve global environmental issues, which have become a common issue for all humankind, and contribute to people's lives and health, and an enriched future society.

### UBE Management Principles

## Ethics, Safety and Security, Quality, and People

## Building Value to Materialize Sustainable Growth

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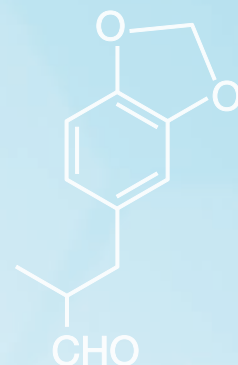
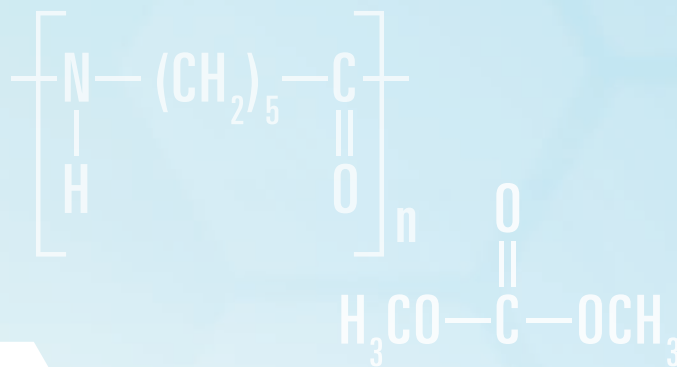
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### Editorial Policy

Integrated Report 2023 focuses on strategies and initiatives that will enable the UBE Group to materialize its basic policy of specialty chemicals growth to attain the goals of UBE Vision 2030.

The report also includes information on Mitsubishi UBE Cement Corporation, which is now an equity-method affiliate.



Long-Term Vision

Vision for 2030

A corporate group centered on specialty chemicals that contributes to the global environment, human health, and an enriched future society

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# The UBE Group's Evolution

The UBE Group's operations as a chemicals company date back to 1933, when we started producing ammonium sulfate with coal we mined in Ube. We have helped resolve social issues with our chemicals technology for 90 years. By integrating efforts to pursue growth in specialty chemicals with initiatives to tackle environmental issues, we aim to achieve sustained growth toward and beyond our centennial.

# 1900

# 1950

- 1897**
  - Okinoyama Coal Mine established
- 1914**
  - Ube Shinkawa Iron Works established
- 1923**
  - Ube Cement Production, Ltd., established
- 1933**
  - Ube Nitrogen Industry, Ltd., established
- 1942**
  - Ube Industries, Ltd. established through amalgamation of the four companies
- 1951**
  - Central Research Laboratory opened (now Pharmaceutical Research Laboratory)
- 1955**
  - Ube Caprolactam Factory established



## 1897

Okinoyama Coal Mine established  
UBE established

### UBE's origins

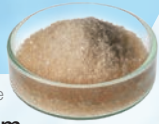
UBE started out as a silent partnership, called the Okinoyama Coal Mine, in which local residents invested to develop local coal fields



1910 Okinoyama Coal Mine

## 1933-

Ube Nitrogen Industry, Ltd., established  
Start of chemicals business



Ammonium sulfate

### Producing ammonium sulfate fertilizer from coal

While industry peers considered Ube's low-grade coking coal unsuitable, from it UBE was able to synthesize ammonia, a key raw material for ammonium sulfate. Ube Nitrogen Industry, Ltd., contributed to the agricultural progress by commercializing that inorganic salt.

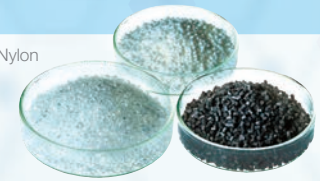


1934 First ammonium sulfate shipment

## 1942-

Established Ube Industries, Ltd.  
Chemicals business expands and specialty chemicals operations flourish

### Expanding the chemicals business



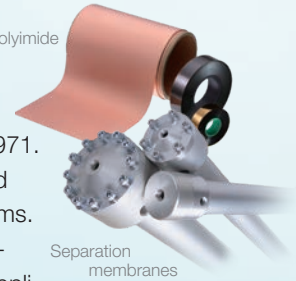
Nylon

The postwar period saw Japan rapidly rebuild its economy and drive advances in chemical technologies. UBE began manufacturing nylon precursor caprolactam in 1955 and nylon resin in 1959. We developed various nylon applications and grades, deploying films for food packaging and supplying highly reliable automotive components.

In 1971, we started making polybutadiene rubber in Chiba, Japan, primarily for automobile tires.

### Developing polyimide products

We started by synthesizing biphenyl tetracarboxylic dianhydride (BPDA) in 1971. In 1983, we became the world's second company to commercialize polyimide films. We leveraged its outstanding heat resistance and other properties to expand applications for polyimide film, primarily for circuit boards, such as integrated circuits for liquid crystal displays.



Polyimide

Separation membranes

On top of that, we developed gas separation membranes using polyimide, hitherto deemed hard to manufacture. This enabled us to enter the separation membrane business for hydrogen, nitrogen gas, carbon dioxide, and other gases.

**1971**

- Polybutadiene plant established in Chiba (now UBE Elastomer Co. Ltd.)

**1968**

- Polymer Laboratory opened (now Future Tech Laboratory)

**1967**

- Sakai Factory established

**1993 Spain**

**1997 Thailand**

- A global production structure established (Caprolactam, nylon, and fine chemicals businesses started continuously during this period)

**1998**

- Operations launched at Thai synthetic rubber plant

**1999**

- Machinery business spun off as UBE Machinery Corporation, Ltd.

**2016**

- Osaka Research & Development Center Opened

**2022**

- Ube Industries Ltd. changed its trade name to UBE Corporation
- Cement-related business spun off to Mitsubishi UBE Cement Corporation

2000



**2022–**  
Renamed UBE Corporation  
Focusing on specialty  
chemicals

**Overhauling our business structure**

We transformed into a corporate group centered on specialty chemicals on transferring our cement-related business to Mitsubishi UBE Cement Corporation. We accordingly renamed ourselves UBE Corporation.

We will pursue sustainable growth by integrating efforts to drive our expansion in such value-added specialty chemicals as polyimide, separation membranes, fine chemicals (C1 chemicals), composites, and pharmaceuticals and deliver solutions to environmental issues.

**Fine chemical product development**

Our C1 chemicals technology flourished in the 1970s with the discovery of the palladium-catalyzed nitrite process (see note below) carbon monoxide coupling reaction. We drew on proprietary techniques to develop C1 chemicals employing carbon monoxide as a raw material.

An excellent example of that approach was dimethyl carbonate, a solvent for electrolyte in lithium-ion batteries. We have been expanding our business downstream to such high-performance coatings as polycarbonate diol (PCD) and polyurethane dispersion (PUD).

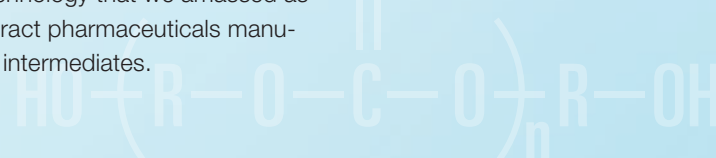
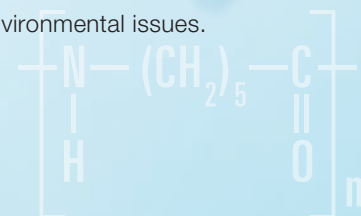
*Note: The nitrite process is a clean synthesis technology employing carbon monoxide and methanol as raw materials.*



**Started full-scale pharmaceutical research**

We initiated full-fledged research into pharmaceuticals from the 1980s. Under the collaboration with Mitsubishi Tanabe Pharma Corporation, we launched a jointly developed anti-allergy medication in 2000. A partnership with Daiichi Sankyo Company, Limited, led to a hypertension drug launch in 2003. To date, we have contributed to better health by commercializing four proprietary pharmaceuticals.

Also, we harnessed organic synthesis technology that we amassed as a chemical manufacturer to expand our contract pharmaceuticals manufacturing business for active ingredients and intermediates.



# The UBE Group's Business

The UBE Group is a manufacturer with a product lineup that includes chemical products and molding machines. Our products in the chemicals business range from basic chemicals to high-performance products in cutting-edge fields.

We deliver products and services from our network of domestic factories and offices in Japan and from overseas locations such as Thailand and Spain.

Segment	Main products	Major applications
<b>Specialty Products</b>  Net sales ¥62.2 billion	<ul style="list-style-type: none"> <li>● Specialty business</li> <li>● Basic business</li> <li>● Others</li> </ul> <ul style="list-style-type: none"> <li>● Polyimide </li> <li>● Separation membranes </li> <li>● Ceramics </li> <li>● Battery materials (Separators) </li> </ul>	<ul style="list-style-type: none"> <li>● COF films for large displays</li> <li>● Flexible OLED substrates</li> <li>● Biomethane production </li> <li>● Bearings and heat-dissipating substrates for xEVs</li> <li>● LiB separators for xEVs </li> </ul>
<b>Polymers &amp; Chemicals</b>  Net sales ¥293.4 billion	<ul style="list-style-type: none"> <li>● Composites </li> <li>● Fine chemicals / high-performance coatings </li> <li>● Nylon polymer </li> <li>● Caprolactam, ammonium sulfate </li> <li>● Industrial chemicals </li> <li>● Elastomer </li> </ul>	<ul style="list-style-type: none"> <li>● Automotive components </li> <li>● LiB electrolyte</li> <li>● Synthetic leather and water-based paints </li> <li>● Food packaging films </li> <li>● Nylon fibers for apparel and fertilizer</li> <li>● Industrial</li> <li>● Automotive tires </li> </ul>
<b>Machinery</b>  Net sales ¥96.9 billion	<ul style="list-style-type: none"> <li>● Molding machines (Plastics and metals)</li> <li>● Industrial machinery </li> <li>● Steel products </li> </ul>	<ul style="list-style-type: none"> <li>● Automotive component molding</li> <li>● Transportation systems, mills and bridges </li> <li>● Steel products</li> </ul>
<b>Others</b>  Net sales ¥73.1 billion	<ul style="list-style-type: none"> <li>● Pharmaceuticals (Drug discovery research / CDMO)</li> <li>● Electricity (In-house power generation)</li> </ul>	<ul style="list-style-type: none"> <li>● Drug discovery research</li> <li>● Manufacture of active ingredients and intermediates and process development </li> <li>● In-house power generation and sale of surplus power </li> </ul>

## Consolidated Five-Year Financial Summary

(FY)	2018	2019	2020	2021 <sup>2</sup>	2022
<b>Results of Operations (Millions of yen)</b>					
Net sales	¥ 730,157	¥ 667,892	¥ 613,889	¥ 655,265	¥ 494,738
Breakdown of net sales by reportable segments					
Chemicals <sup>3</sup>	314,984	286,041	259,380	341,493	
Specialty Products <sup>3</sup>					62,158
Polymers & Chemicals <sup>3</sup>					293,388
Pharmaceutical <sup>1,3</sup>	10,129				
Construction Materials <sup>3</sup>	250,250	303,037	282,855	221,476	
Machinery	97,264	90,799	78,727	96,987	96,921
Energy & Environment <sup>1</sup>	75,853				
Others <sup>3</sup>	4,935	4,576	3,117	3,411	73,110
Adjustment	(23,258)	(16,561)	(10,190)	(8,102)	(30,839)
Operating profit	44,551	34,033	25,902	44,038	16,290
Ordinary profit (loss) <sup>4</sup>	47,853	35,724	23,293	41,549	(8,689)
Profit (loss) before income taxes	44,678	30,364	22,433	36,794	(2,596)
Profit (loss) attributable to owners of parent	32,499	22,976	22,936	24,500	(7,006)
<b>Financial Position (Millions of yen)</b>					
Total assets	¥ 740,286	¥ 727,269	¥ 769,710	¥ 837,954	¥ 731,636
Total current assets	315,699	303,956	331,727	394,689	283,016
Total property, plant and equipment, net	331,316	330,042	331,223	332,757	208,027
Total investments and other assets	93,271	93,271	106,760	110,508	240,593
Total liabilities	385,734	372,822	389,075	443,919	349,977
Total current liabilities	226,063	199,336	200,440	249,174	171,159
Total long-term liabilities	159,671	173,486	188,635	194,745	178,818
Total net assets	354,552	354,447	380,635	394,035	381,659
<b>General</b>					
Net income (loss) per share (Yen)	¥ 312.36	¥ 227.33	¥ 226.79	¥ 249.31	¥ (72.25)
Cash dividends per share (Yen)	80.00	90.00	90.00	95.00	95.00
Shareholders' equity per share (Yen)	3,261.23	3,287.73	3,549.52	3,813.16	3,726.68
Return on sales (ROS) (%)	6.1	5.1	4.2	6.7	3.3
Return on assets (ROA) (%) <sup>5</sup>	6.9	5.2	3.7	5.4	(0.7)
Return on equity (ROE) (%) <sup>6</sup>	10.1	6.9	6.6	6.7	(1.9)
Shares of common stock issued (thousands) <sup>7</sup>	101,259	101,319	101,144	96,807	97,401
Number of consolidated subsidiaries	71	69	66	65	36
Number of employees	11,010	10,890	10,897	9,849	8,028

Notes: 1. The Pharmaceutical segment was integrated into the Chemicals segment and the Energy & Environment segment was integrated into the Construction Materials segment on April 1, 2019.

2. We have adopted the "Accounting Standard for Revenue Recognition" (Accounting Standards Board of Japan Statement No. 29, March 31, 2020) since the beginning of the consolidated first quarter of fiscal 2021. The respective figures from fiscal 2021 onward indicate the amounts after the aforementioned accounting standard has been applied.

3. As the cement-related business became an equity-method affiliate, on April 1, 2022, our reportable segments were changed to four new segments: Specialty Products, Polymers & Chemicals, Machinery, and Others. The Pharmaceutical segment, which was previously included in the Chemicals segment, has been integrated into the Others segment.

4. Based on Japanese GAAP

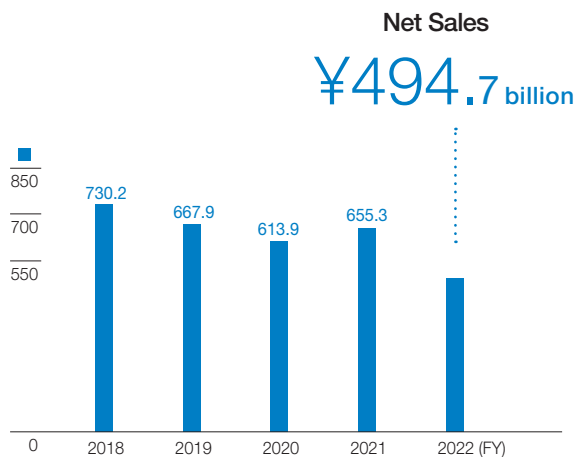
5. ROA = (Operating profit + Interest and dividend income + Share of profit of entities accounted for using equity method) / Average total assets

6. ROE = Profit attributable to owners of parent / Average shareholders' equity

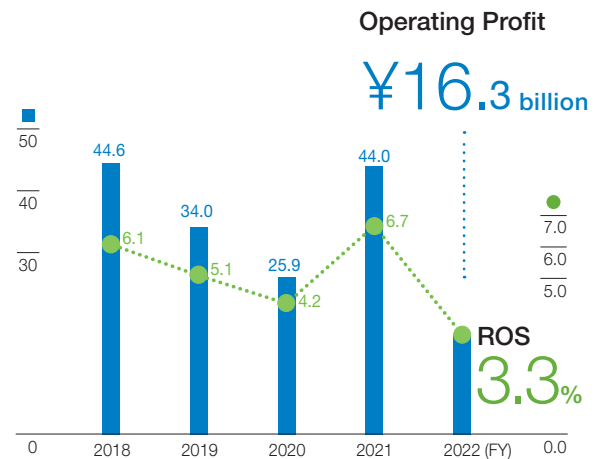
7. Shares of common stock issued excluded treasury stock

# Consolidated Financial and Non-Financial Highlights

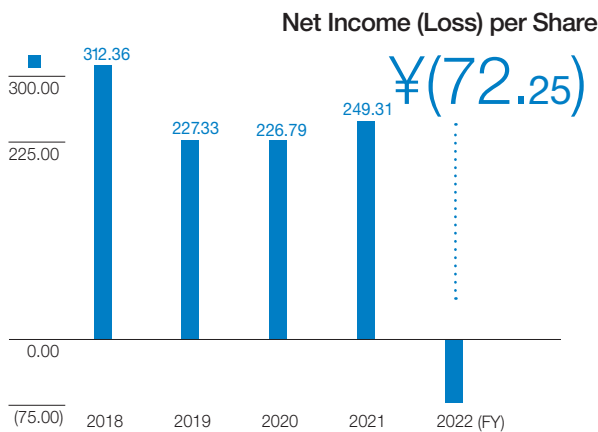
## Financial Highlights



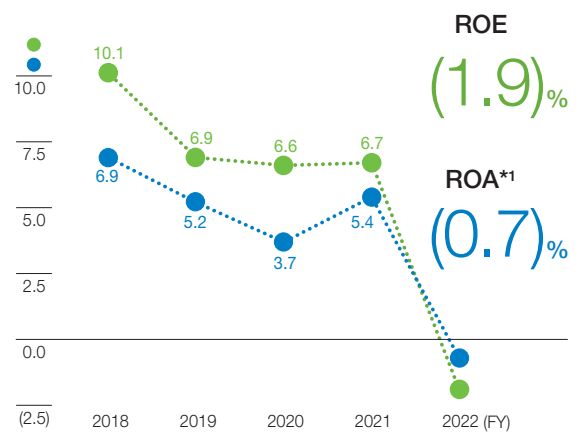
Net sales decreased 24.5% from a year earlier. This was because the transfer of our cement-related business to an equity-method affiliate outweighed gains from robust Specialty Products sales and higher prices in Polymers & Chemicals.



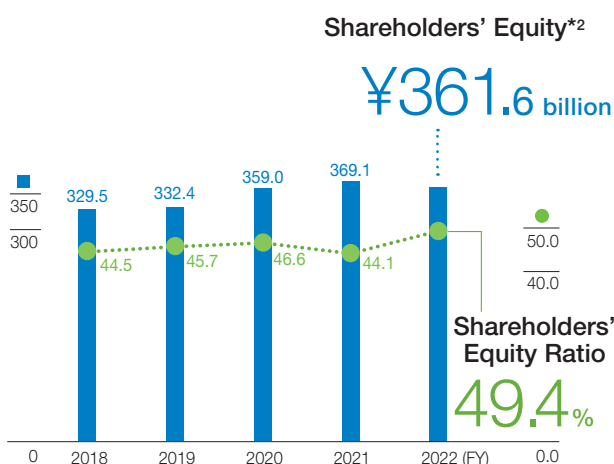
Operating profit fell 63.0% year on year owing to higher raw materials and fuel prices and lower sales volumes due to sluggish demand in Polymers & Chemicals, as well as the impact of biennial ammonia product factory inspections. The return on sales (ROS) dropped 3.4 percentage points, to 3.3%.



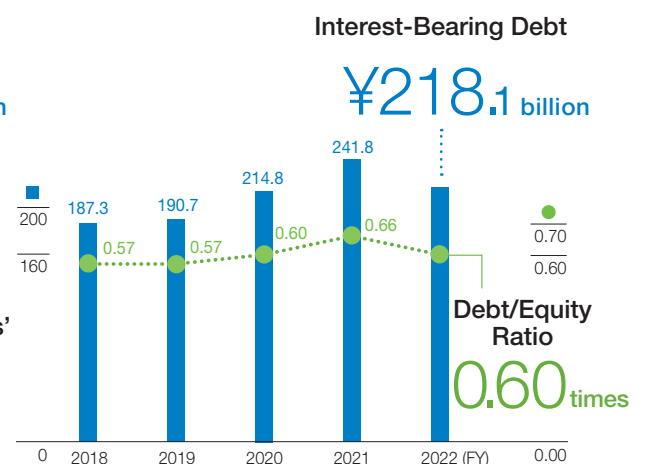
Net loss per share was ¥72.25, from net income of ¥249.31 a year earlier. Prime factors were an operating profit decline, the impact of surging coal prices on the cement-related business, and an extraordinary loss from restructuring expenses.



The return on equity (ROE) was (1.9)%, from 6.7% a year earlier. The return on assets (ROA) was (0.7)%, down from 5.4%.



Shareholders' equity was down 2.0%. At the same time, the shareholders' equity ratio rose 5.3 percentage points, to 49.4%. This reflected a decrease in total assets from divesting the cement-related business.



Interest-bearing debt declined 9.8% from a year earlier, owing largely to lower borrowings after divesting the cement-related business. The debt/equity ratio was accordingly a robust 0.60 times.

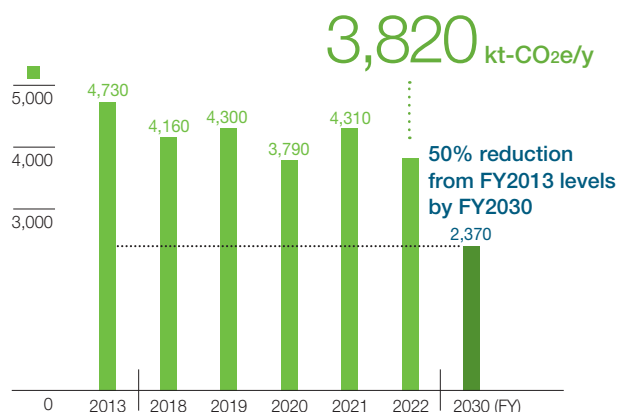
\*1 ROA = (Operating profit + Interest and dividend income + Share of profit of entities accounted for using equity method) / Average total assets

\*2 Shareholders' equity = Net assets - Share subscription rights - Non-controlling interests



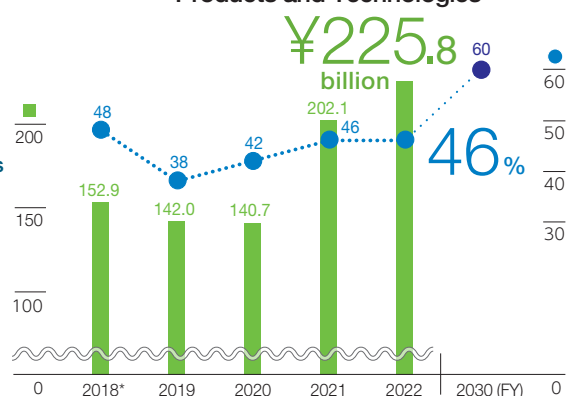
Non-Financial Highlights

UBE Group GHG Emissions\*<sup>3</sup>



GHG emissions decreased 11.4% from a year earlier and were 19.2% lower than in fiscal 2013.

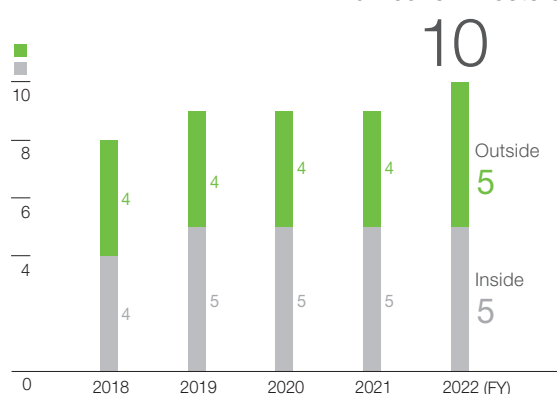
Sales of Environmentally Friendly Products and Technologies\*<sup>3</sup>



Sales of environmentally friendly products and technologies rose 11.7% year on year. They constituted 46% of net sales, unchanged from a year earlier.

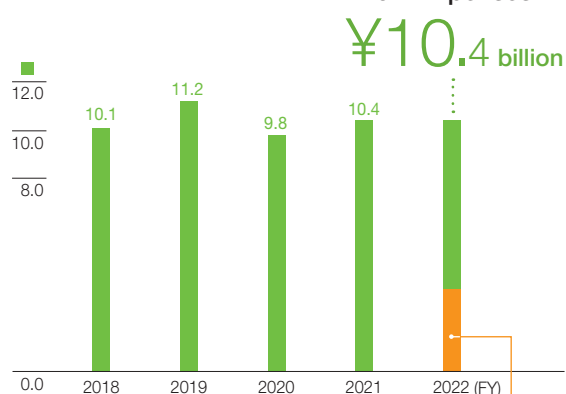
\* Figures for fiscal 2018 are references, and are based on different calculation criteria.

Number of Directors



The number of outside directors increased by one with the appointment of a woman. Outside members account for half of the Board of Directors.

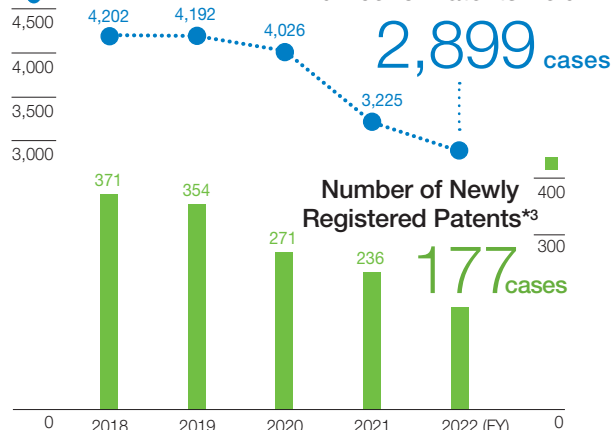
R&D Expenses\*<sup>3</sup>



R&D expenses were basically unchanged. Spending for environmental contribution represented 32% of these expenses in fiscal 2022.

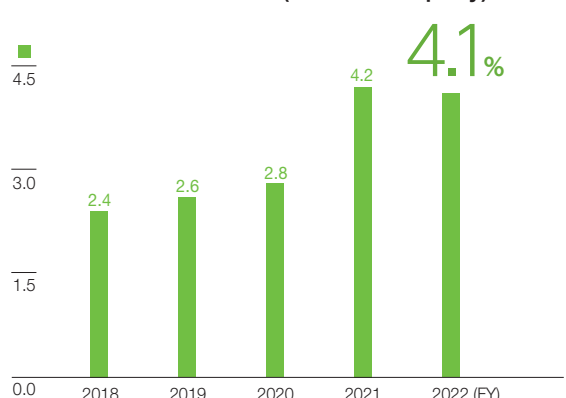
R&D expenses for environmental contribution 32%

Number of Patents Held\*<sup>3</sup>



The number of patents and new patent registrations declined because we split off one of the chemicals businesses and took inventory of patents held. Patents related to the specialty business accounted for 64% of the number held in fiscal 2022.

Percentage of Women in Management Positions (Parent Company)



Gender equality is a key focus of our diversity, equity, and inclusion measures. Despite intensive efforts in that regard, women held 4.1% of management positions, down 0.1 percentage point.

\*<sup>3</sup> Figures exclude those for the cement-related business transferred to Mitsubishi UBE Cement.

## To Our Stakeholders

# Stepping Up Business Structure Reforms and Making Necessary Forward Business Investments to Swiftly Materialize Our Vision for 2030

### Overview of Fiscal 2022

## Key Operating Climate Changes and Impacts

### Operating Climate and Business Progress Highlights

The fiscal year under review was generally challenging for all of our businesses. The operating climate changed far more than we initially envisaged. Prime factors included soaring energy prices stemming from the conflict in Ukraine, significant hikes in raw materials, fuel, and logistics costs, and a semiconductor shortage that slowed an automobile production recovery. It was against this backdrop that the cement business incurred a significant loss amid surging prices of raw materials and coal and other fuels. This situation also greatly affected the basic chemicals business. Inventory adjustments from the

third quarter affected products for digital applications. In contrast, strong prevailing demand for biogas, particularly in Europe and the United States, caused gas separation membrane sales to skyrocket.

### Progress with Medium-Term Management Plan: UBE Vision 2030 Transformation – 1st Stage

## Steady Progress as a Corporate Group Centered on Specialty Chemicals

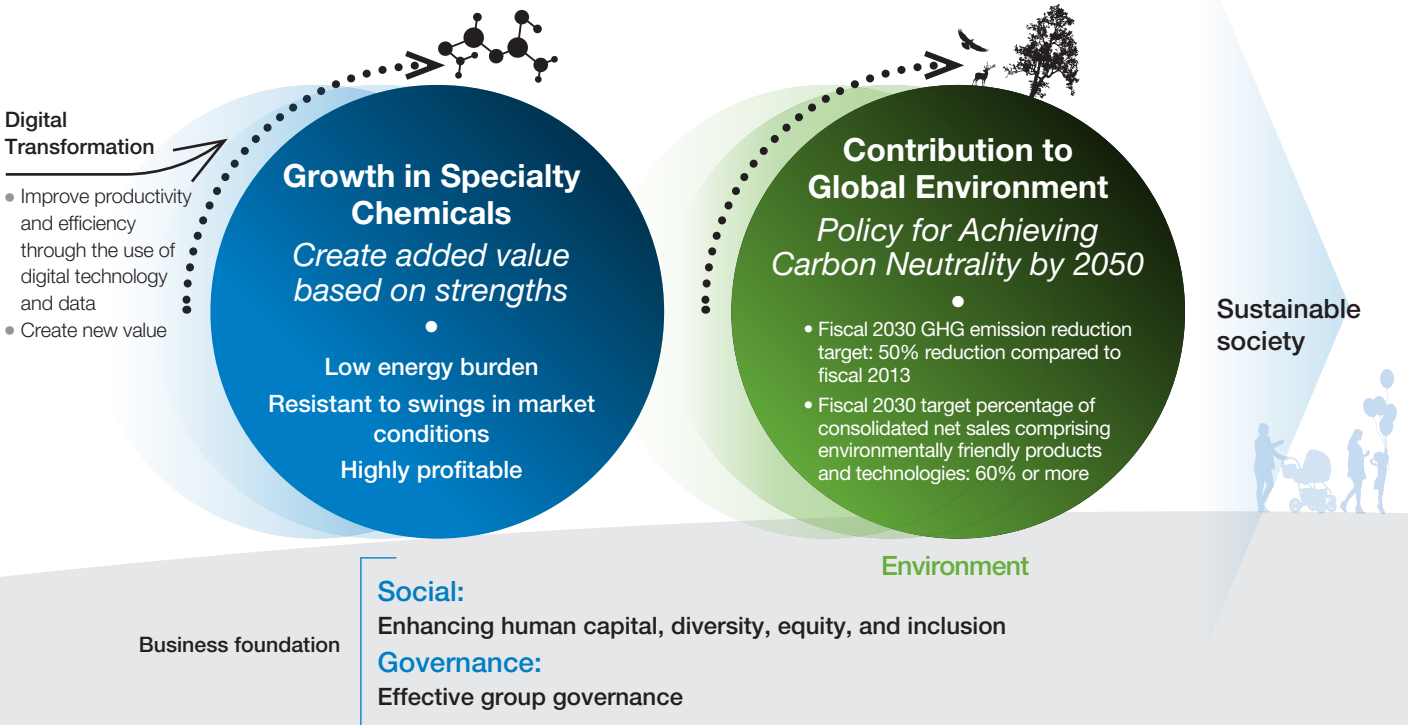
### Focused Firmly on Vision for 2030

Notwithstanding diverse changes in the operating climate that have greatly affected our business,

UBE Group's business model

Vision for 2030 (Long-Term Vision)

*A corporate group centered on specialty chemicals that contributes to the global environment, human health, and an enriched future society*



we remain firmly focused on our Vision for 2030.

The operating climate has little affected the specialty businesses, which have grown steadily. Dramatic changes in that environment have heightened our awareness of the need to reaffirm the legitimacy of our long-term vision and goals and to step up business structure reforms.

We have retained our long-term quantitative targets. While we fell short of our goals in the first year of our medium-term management plan, we will endeavor to turn things around in fiscal 2023 so we can reach our goals in fiscal 2024, the final year of that initiative. On the environmental front, we will do our utmost to cut greenhouse gas (GHG) emissions through business structure reforms. These will include shutting key caprolactam manufacturing lines in fiscal 2024 and withdrawing from the ammonia business in fiscal 2030.

### Restoring Our Price Book-Value Ratio

Our price book-value ratio at the end of fiscal 2022 was 0.55x. We are ashamed with this market assessment of our value. We are working to articulate and

execute a clear business strategy that stock market players understand to boost our corporate value.

We aim to achieve sustainable growth through “Growth in Specialty Chemicals” and “Contribution to Global Environment.” We believe that we can improve our ROE and cut the cost of capital by performing well, such as by becoming more profitable and steadily lowering GHG emissions,

*Masato Izumihara*

*President & Representative Director  
CEO*



1. Tyranno Fiber®
2. Separation membranes
3. Polyimide films
4. Polyimide films
5. Separators
6. PCD, PUD
7. Ceramics (silicon nitride)
8. Polyimide powder
9. Nylon

thus improving our equity spread. Management and employees will work as one to overcome this test of our ability to act for our vision.

**Growth Strategy for Specialty Chemicals to Achieve Long-Term Vision**

**Making Necessary Forward Business Investments to Position Ourselves for Growth**

**Priority Measures for Specialty Chemicals Growth**

In the specialty businesses, we are particularly keen to expand in polyimide and other functional chemicals. The ultraheat resistance of polyimide makes it ideal for such applications as chip-on-film (COF) applications for large displays. Other uses of polyimide include hollow fibers for gas separation membranes. We will focus on expanding our business for the polyimide chain overall.

Composites are also important to us, as they help lighten automobiles. These materials will be

vital as more vehicles are electrified. We will reinforce our global expansion to grow in that area.

We also seek to expand in fine chemicals and high-performance coatings by drawing on our C1 chemicals and other technologies. We are seeing particular growth in the market for high-performance coatings as environmentally friendly materials. Applications for starting material of high-performance coatings, dimethyl carbonate include lithium-ion battery (LiB) electrolytes. We will concentrate on cultivating these materials as core specialty chemicals.

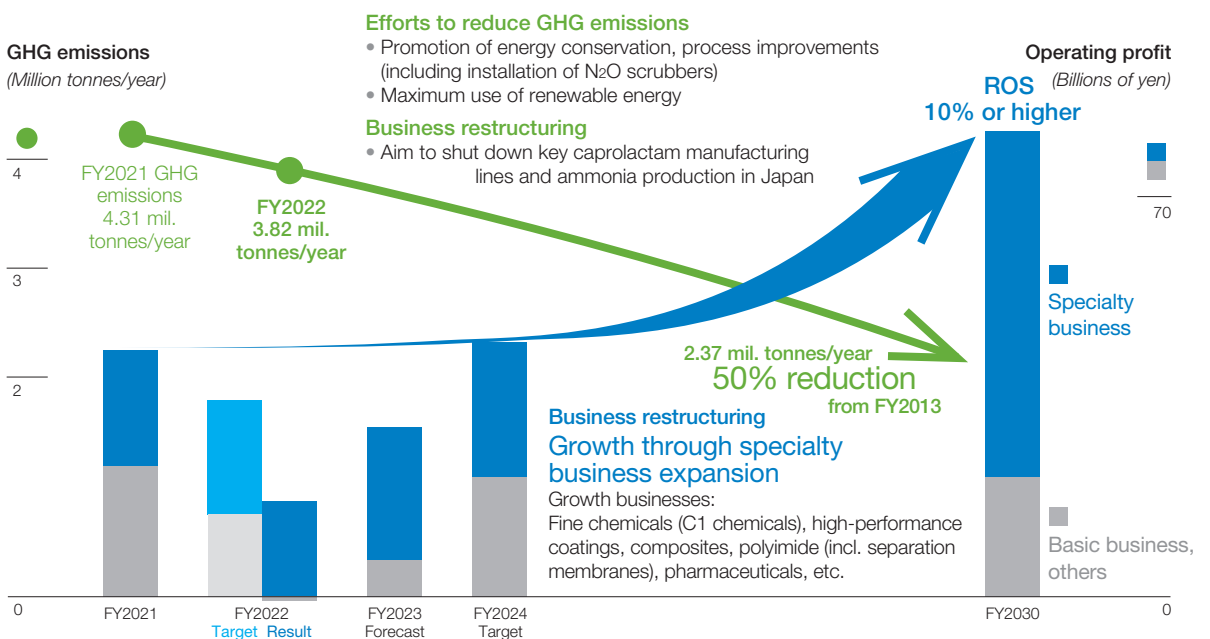
Stepping up contract development and manufacturing organization (CDMO) operations in the pharmaceuticals business will also be important in building our specialty chemicals presence. There, we aim to cultivate our capabilities in nucleic acid and small molecule drugs. We will expand the pharmaceuticals business based on organic synthesis technologies cultivated over the years in the chemicals business and the knowledge of drug discovery research.

**Investment Strategies for Specialty Chemicals Growth**

The three years of the current medium-term management plan will encompass many growth investment projects to materialize our Vision for 2030.

**Vision for 2030—Transformation**

Transform its business structure through aggressive investment in specialty chemicals to achieve both GHG emission reductions and business growth.



For example, demand has risen faster than expected for CO<sub>2</sub> separation membranes for biomethane production and other gas separation membranes amid increasing concerns about the environment. This necessitates accelerated capital investments. We will keep making planned capital investments even in the currently challenging business climate with offerings for which demand should be robust in 2030. It is with that in mind that I would like to explain progress with key investments and plans for growth in specialty chemicals.

For polyimide, we look to complete work to upgrade production of raw materials and films from fiscal 2023. For gas separation membranes, which I mentioned a little earlier, we have already decided to ramp up capital investment significantly. We have decided to bolster the competitiveness of copolymer products, which are high-value-added nylon products, by transferring their manufacture from Japan to Thailand, where we will build new composites production facilities. In our business for high-performance coatings, for which demand is soaring in Asia, we are pushing ahead with construction to raise polycarbonate diol manufacturing in Thailand. Our new plant there should start full-capacity production in this fiscal year.

In the pharmaceuticals business, we acquired API Corporation from the Mitsubishi Chemical Group in December 2022. Our plant had limited production capacity. Incorporating the various technologies and production capabilities of API has vaulted our contract development and manufacturing organization business to a leading position in the Japanese market.

We are also looking into entering the dimethyl carbonate field in the United States and cultivating a high-performance coatings business there.

### Helping Resolve Environmental Issues

## Advance Action Vital to Sustainably Enhance Corporate Value

### Expanding by Integrating “Growth in Specialty Chemicals” and “Contribution to Global Environment”

We have emphasized the importance of accelerating business restructuring and stepping up vital business investments. The same approach applies to tackling environmental issues.



For example, delays in responding to carbon pricing and other changes in the operating climate would significantly affect performance. We will thus progress steadily with business structure reforms that we announced last year. These include withdrawing from the ammonia business in fiscal 2030 and shutting key caprolactam manufacturing lines in Japan in fiscal 2024. So, in view of the prevailing operating climate, including recent surges in energy prices, we will accelerate efforts to expand sales for environmentally friendly products while exploring the possibility of accelerating the implementation of these structural reforms.

### Digital Transformation Initiatives

## Creating Value through Digital Transformation to Create New Business Models

### Investing a Total of ¥20 billion in Digital Transformation by 2030

We have done much to respond to accelerating moves to digitize business processes since we established the DX Promotion Office in April 2022. We have already decided to bring forward our deployment of the SAP S/4 HANA enterprise resource planning system. Starting with these

and other investments, we plan to invest approximately ¥20 billion in adopting digital business processes by 2030, including for the above system and excluding maintenance investments in information infrastructure. Digital processes empower employees to focus on essential tasks, eventually leading to a business model that generates new enterprise value. We will leverage digital transformation to drive growth in specialty chemicals to streamline operations, stabilize production, and maintain and enhance quality. We will also take advantage of it to enable flexible work practices and cultivate an innovative corporate culture.

### Enhance and Strengthen Human Capital

## Embrace DE&I and Create an Innovative Corporate Culture

### Progress with DE&I

An innovative business culture extending to all of our workplaces will be vital for us to expand as a specialty chemicals company. Gender equality is the most important element of pursuing diversity, equity, and inclusion (DE&I) to reach that goal.

Our efforts to increase the proportion of female employees in career-track positions has boosted the number of women in management positions. We have been able to hire and train highly talented women. We are confident that we will reach our targets of 15% female employees and 6% female managers by the end of our medium-term management plan.

Also, I believe that UBE will benefit greatly from the expertise of those who have worked elsewhere. We accordingly plan to increase the ratio of mid-career hires to more than 50%. We also look to recruit some people with foreign nationalities each year. Securing diverse perspectives through that approach will better equip us to tackle changes in the operating climate.

### Respecting Human Rights

It goes without saying that we cannot fulfill our corporate social responsibilities without making efforts to respect human rights. UBE is a signatory to the United Nations Global Compact. We are also a signatory to the My Declaration of Human Rights Project of Japan's Ministry of Justice. As well as undertaking human rights due diligence, we

emphasize human rights initiatives across our supply chain from the perspective of sustainable procurement. We conduct regular surveys and monitor the human rights practices of key business partners.

### Making Safety Our Top Priority

As a manufacturer, we have committed ourselves to making products safely and reliably while caring for the environment. Because the chemicals industry operates facilities at high temperatures and pressures, major accidents could greatly harm employees and communities. We will ensure the safety of these stakeholders while doing our utmost to prevent accidents.

### Corporate Governance

## Making Materiality a Prime Priority for Substantive, In-Depth Board Deliberations

### Board of Directors' Activities

Our four materialities of growth in specialty chemicals, addressing global environmental issues, hiring and development of human resources, and strengthening the management platform (corporate governance and digital transformation) are the prime focuses of Board of Directors' deliberations.

Having added a female director and appointed another outside director since fiscal 2022, we have delegated as much authority as possible to executives, making the Board structure more conducive to discussions about materiality. The Board has deliberated extensively about the suitability and agility of growth strategies for the specialty businesses in light of explanations from executives.

To ensure that the Board of Directors properly fulfills its role, we created a forum for outside directors to gather and a joint training forum for executive officers and outside directors.

### Machinery and Cement-Related Business Governance

As a holding company, we help UBE Machinery Corporation, Ltd., and Mitsubishi UBE Cement Corporation operate autonomously. In our capacity as their parent company, we exercise Group governance by convening Holdings Meetings.

Mitsubishi UBE Cement aims to become an

industry leader, so it needs to establish an autonomous governance structure. It has independent members on its Board of Directors and has structured itself like a listed company. Starting in fiscal 2023, Mitsubishi UBE Cement has formulated a medium-term management plan. While the Japanese cement industry generally faces challenging conditions, Mitsubishi UBE Cement looks to turn around and return to profitability in fiscal 2023. It will do so by progressing in shifting prices along the value chain, restructuring production systems, and deploying technologies to tap low-cost coal. In its plan, Mitsubishi UBE Cement has set a target of reducing CO<sub>2</sub> emissions by 40% compared to 2013 by 2030. We will keep participating in discussions on ways to achieve growth at that company, monitoring and supporting its efforts to tackle environmental issues.

## Shareholder Returns

# Allocating Cash to Stable Dividends and Investing Extensively in Growth

### Shareholder Return Policy

We have retained our basic policy of stable dividends and investing extensively in growth. We seek to improve shareholder returns. Key targets are a dividend on equity (DOE) of 2.5% or more and a consolidated total return ratio of 30% or higher during our current medium-term management. Although earnings dipped in fiscal 2022, our dividends were unchanged in keeping with our DOE goal. At the same time, forward investments in specialty chemicals expansion are increasingly important. We will accordingly seek stakeholder understanding in allocating cash between stable dividends and extensive growth investments.

## Message to Stakeholders

# Materializing Vision for 2030 as Swiftly as Possible

In fiscal 2022, the first year of our current medium-term management plan, our results were



significantly below initial targets in an extremely challenging business climate. To reach our goals for fiscal 2024, the final year of this plan, we will set about achieving a solid recovery in fiscal 2023.

At the same time, in view of the current conditions I think that we should accelerate business structure reform efforts to materialize our Vision for 2030. We have long been adept at tackling change by recalibrating our business structure. By relentlessly pursuing structural reforms and investing in growth, we will reinforce our position to achieve Vision for 2030 as soon as possible.

I look forward to your ongoing support and encouragement for our efforts.

July 2023

Masato Izumihara  
President & Representative Director  
CEO

## Message from the CFO

We will keep UBE financially sound while enhancing corporate value by steadily investing to expand specialty businesses offering high earnings stability and growth potential and contributing solidly to a better environment.



*Hirotaka Ishikawa*  
Director, Executive Officer  
CFO

### Basic Financial Policies

Under our current medium-term management plan, we will invest heavily to grow our specialty businesses. We will also accelerate investments as needed. Expansion in these businesses should enable us to generate more cash. At the same time, we will stay financially sound by controlling debt so it is commensurate with our current cash-generating capacity and shareholders' equity.

We will serve investors by carefully explaining our Vision for 2030 measures and progress so they can better understand our growth potential.

### Overview of Operating and Financial Performances in Fiscal 2022

Fiscal 2022 earnings were far lower than we projected initially. This was due to surging raw materials and fuel prices, automobile production cuts, and dropping demand in the Chinese market. It is particularly noteworthy that equity-method affiliate Mitsubishi UBE Cement Corporation incurred a large operating loss owing to a hike in coal prices and an extraordinary loss from restructuring expenses. It thus posted its first ordinary loss since fiscal 1993.

Our ROS and ROE were 3.3% and (1.9)%, respectively. These numbers were much less than initial forecasts. On the upside, financial strength indicators were solid. Our debt/equity ratio improved to 0.60 times, while the shareholders' equity ratio rose to a sound 49.4%. These gains were due largely to a transfer of assets and liabilities to Mitsubishi UBE Cement.

### Fiscal 2023 Forecasts

Under our current medium-term management plan, we target an operating profit of ¥40 billion, ordinary profit of ¥47 billion, and ROS and ROE of 8% for fiscal 2024, the final year of that initiative. While our numbers in fiscal 2022 were much lower than we sought, we anticipate recoveries in fiscal 2023 performance of Polymers & Chemicals on demand recoveries, and somewhat lower raw materials and fuel prices. We also look for Mitsubishi UBE Cement to regain profitability in the fiscal year. Our forecasts for fiscal 2023 are therefore for operating profit of ¥30 billion, ordinary profit of ¥38.5 billion, ROS of 5.5%, and ROE of 7.4%.

### Numerical Targets and Progress under Medium-Term Management Plan

		2022		2023		2024 (FY)
		Targets	Results	Targets	Forecasts	Targets
<b>Key Figures</b> (Billions of yen)	Net sales	¥510.0	<b>¥494.7</b>	¥520.0	¥545.0	¥520.0
	Operating profit	34.5	<b>16.3</b>	41.0	30.0	40.0
	Ordinary profit (loss)	31.0	<b>(8.7)</b>	45.0	38.5	47.0
	Profit (loss) attributable to owners of parent	21.0	<b>(7.0)</b>	32.0	27.5	33.0
<b>Key Indicators</b>	ROS	6.8%	<b>3.3%</b>	7.9%	5.5%	8%
	ROE	5.6%	<b>(1.9)%</b>	8.2%	7.4%	8%



These results should position us well to attain our goals in fiscal 2024.

### Enhancing Corporate Value

As of March 31, 2023, our price book-value ratio\*<sup>1</sup> was a lackluster 0.55x. We will endeavor to eliminate this discount by tackling our four materialities\*<sup>2</sup> of growth in specialty chemicals, addressing global environmental issues, hiring and development of human resources, and strengthening the management platform (corporate governance and digital transformation).

We will drive growth, centered on specialty businesses by broadening our earnings scale to enhance our ROE. Increasing the proportion of specialty businesses should also cut equity costs, as those operations are less vulnerable to economic swings.

We will tackle environmental issues by halting production at our ammonia plant and scaling back domestic caprolactam production, thereby lowering GHG emissions. We think that this will reduce the cost of shareholders' equity by reducing uncertainty (performance volatility) together with the improvement of our ESG evaluation. We will additionally boost the ratio of environmentally friendly products and technologies. These areas should enjoy profitable growth as environmental concerns increase, thus boosting our growth rates over the medium through long terms.

We will accordingly strive to improve variables of corporate value, notably our ROE, our equity cost, and our growth rate. We will thus undertake initiatives combining growth centered on specialty businesses and efforts to address environmental issues. We will have to enhance human capital and strengthen our

business foundations to those ends. We are thus prioritizing DE&I and digital transformation.

\*<sup>1</sup> Price book-value ratio = ROE x Price-to-earnings ratio  
= ROE x 1 / (Equity cost - Expected growth rate)

\*<sup>2</sup> Please see pages 18–19 for details. Materiality

### Cash Allocation

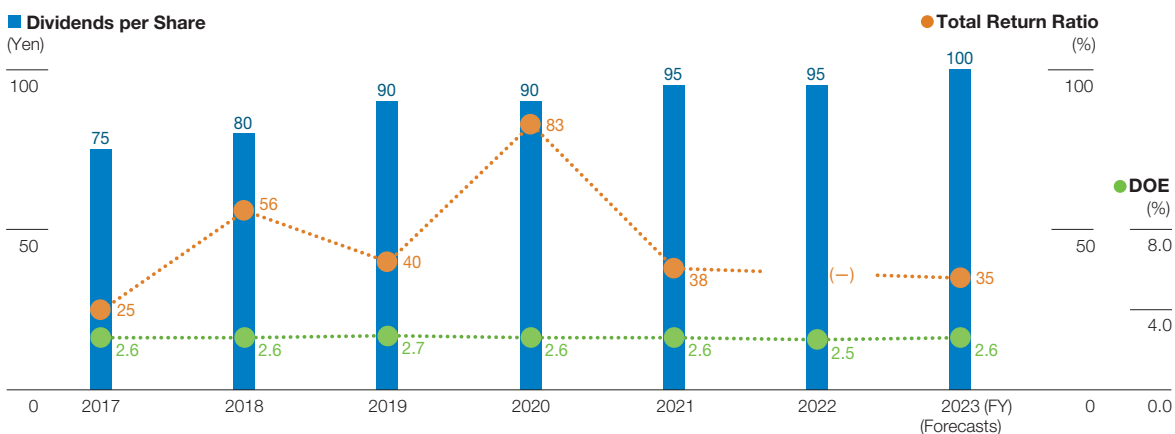
We project cash available for distribution over the three years of our current medium-term management plan at ¥250 billion. This would comprise ¥145 billion in operating cash flow, ¥15 billion from sales of assets and other sources, ¥55 billion from debt financing, and ¥35 billion from cash. At the same time, we assume cumulative cash outflows of ¥160 billion for investments, ¥32 billion for R&D, and ¥29 billion for shareholder returns.\*<sup>3</sup>

We have lifted investments ¥30 billion from an initial target of ¥130 billion. We have embarked on investments in specialty businesses, such as to upgrade polyimide film and the separation membrane plants. At the same time, we expect operating cash flow to decrease ¥37 billion. To overcome that, we are undertaking ¥55 billion in debt financing, compared with an initially planned repayment of ¥12 billion.

Our basic policy on shareholder returns is to maintain stable dividends, with a consolidated total return ratio of at least 30% and a DOE ratio of at least 2.5%. While we incurred a loss attributable to owners of parent in fiscal 2022, we decided to uphold dividends at the previous year's level in view of a solid DOE ratio.

We aim to further enhance future shareholder returns by investing heavily in growth during the current medium-term management plan.

\*<sup>3</sup> Please see pages 22–23 for details on cash allocation. Progress under UBE Vision 2030 Transformation — 1st Stage, Our Medium-Term Management Plan



Note: Total return ratio was calculated to reflect the effects of the stock purchases of ¥10 billion in fiscal 2018, and ¥10 billion in fiscal 2020 (implemented in fiscal 2021).

## Risks and Opportunities

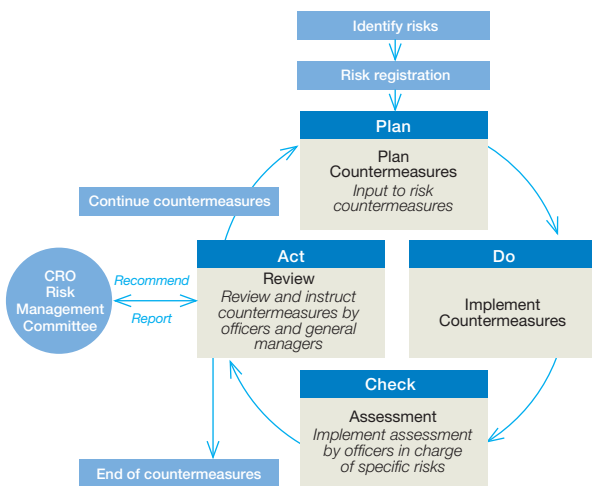
### Risk Management Policy and System

UBE suitably manages risks to the UBE Group and stipulates risk management rules, based on the internal control framework established by the Board of Directors. In this way, risk management is implemented for all Group companies.

The President of UBE appoints a director or executive officer to serve as Chief Risk Officer (CRO). The CRO is responsible for promoting the implementation of risk management tasks for the UBE Group. The Risk Management Department provides administrative and other support for the CRO, as the secretariat for risk management.

Serious (major) risks that impact the entire Group are reported to the Risk Management Committee for discussion. They are then submitted to the Strategic Management Meeting, where the members discuss approaches and effective measures based on the risk recognition. The details of these discussions are regularly reported to the Board of Directors, which monitors the risk management.

Individual officers are appointed to manage a particular serious (major) risk. Under this system, each officer evaluates the risk concerned along with the effectiveness of relevant risk management measures from a Groupwide perspective. The officer then provides guidance and instruction to relevant departments for risk management measure implementation in the following fiscal year.



Risk Management

<https://www.ube.co.jp/ube/en/sustainability/risk-management/risk-management.html>

Note: HAZOP (Hazard and Operability Study) evaluates the adequacy of safety measures in view of assumed process abnormalities.

## Risk Overview Examples

Category	Risk Items
Growth	<b>Deterioration of chemicals business results</b> <ul style="list-style-type: none"> <li>● If supplies increase owing to capacity hikes at other companies and there is a dramatic change in prices of key raw materials owing to demand balance and energy price changes, a smaller price spread between products and raw materials</li> <li>● It becomes impossible to secure the required raw materials owing to supplier accidents or other occurrences</li> <li>● It becomes impossible to respond in a timely manner to customer demands for products for which generational changes are swift, causing sales volumes to decline and prices to drop amid intensified competition</li> <li>● A pandemic causing production to shut down or business activities to halt</li> </ul>
	<b>R&amp;D</b> <ul style="list-style-type: none"> <li>● R&amp;D themes do not proceed as planned, significantly delaying new product development and leading to a cessation in development</li> <li>● Approvals for new drugs in the pharmaceuticals business are postponed or revoked</li> </ul>
	<b>Environmental issues</b> <ul style="list-style-type: none"> <li>● Costs increase significantly owing to the introduction of a carbon tax, as the Company has expanded its business while using coal effectively</li> <li>● If the Company is deemed a laggard in addressing environmental issues, sales could languish, with corporate value being adversely affected</li> <li>● Changing customer requirements for UBE Group products amid heightened interest in the global environment, such as circular economy and nature positive</li> </ul>
Environment	<b>Major natural disasters</b> <ul style="list-style-type: none"> <li>● Natural disasters that are larger than expected cause severe damage to domestic and overseas plants, causing production to halt at manufacturing sites and sales units to become inactive</li> </ul>
	<b>Major accidents (Explosions, fires, and leaks)</b> <ul style="list-style-type: none"> <li>● Large explosions, fires, and leaks occur as a result of facilities accidents or human error at plants that are heavy users of such resources as high-pressure gas and hazardous substances. Such accidents significantly affect the lives, property, and environments of employees and residents, resulting in accident response and recovery spending, opportunity costs, and compensation to customers and residents</li> </ul>
	<b>Society</b> <ul style="list-style-type: none"> <li>● It becomes difficult to secure talented people to improve corporate value</li> <li>● Vital people leave the Company, including those with experience and expertise</li> <li>● Failing to adequately address the human rights demands of society and stakeholders, eroding public trust</li> </ul>
Governance	<b>Product quality and liability</b> <ul style="list-style-type: none"> <li>● Inappropriately inspected products are shipped, leading to damage claims and other significant costs, eroding public trust</li> </ul>
	<b>Information security</b> <ul style="list-style-type: none"> <li>● A system shutdown from a cyberattack or other unforeseen event or critical information leaks, destruction, or other damage causing production to halt, leading to massive compensation claims</li> </ul>
	<b>Major compliance violations</b> <ul style="list-style-type: none"> <li>● Business activities languish because compliance violations damage credibility</li> <li>● The Company or its employees violate laws and regulations, making it subject to legal sanctions and constraints on business activities while undermining its social reputation</li> </ul>

Please see pages 24–27 of the 117th Securities Report for information regarding other risks and details (in Japanese only).



## Countermeasures

- Ensure an appropriate spread by close monitoring of raw material market and swiftly passing on price increases when raw material prices soar
- Cut cost in plants
- Accelerate growth of the specialty business by concentrating operating resources
- Establish a Crisis Response Committee to prepare response manuals and periodically review departmental and Group company business continuity planning and to respond flexibly to circumstances

- Concentrate operating resources based on business portfolio, swiftly materializing R&D results and endeavoring to enhance development precision
- Build technological superiority and shorten lead times by utilizing open innovation and DX

- Determine management priorities regarding environmental issues, focusing on reducing GHG emissions while developing and popularizing products and technologies that help lower environmental impact and foster a carbon-neutral economy
- Support the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD)
- Announce policy for achieving carbon neutrality by 2050 and establish UBE Group Medium-Term Targets to reach those objectives by fiscal 2030
- Accelerate R&D in view of a circular economy including the development of recycling technology for composite plastics

- Prepare disaster and other response manuals, undertake planned renovations and reinforcements at manufacturing and other facilities while conducting regular disaster drills
- Leverage risk management systems to identify specific risks and implement countermeasures
- Formulate business continuity plans (BCPs), regularly reviewing them and conducting drills

- Make safety a pivotal shared value for the UBE Group
- Rigorously comply with related laws and ordinances
- Regularly inspect, maintain, and repair facilities
- Secure educated and experienced employees, prepare management manuals, conduct risk assessment such as HAZOP<sup>(Note)</sup>, and conduct regular disaster drills and environmental safety audits

- Formulate management policies that require respect for individuality and diversity and foster comfortable work environments and provide rewarding jobs
- Enhance work-life balance, improve wages and other terms, and shorten working hours
- Create work environments that are conducive to female employees
- Formulate UBE Group Human Rights Guidelines and engage in human rights due diligence
- Educate executives and employees about human rights

- Manage processes, maintain and upgrade facilities, and install suitable measuring equipment
- Create work manuals and educate employees
- Implement extensive measures to prevent inappropriate quality inspection practices that came to light in the past from recurring

- Information Security Committee was established to step up efforts in the following respects:
  - Formulate and disseminate related regulations and develop technical measures to detect and prevent unauthorized intrusions
  - Provide security education and training for executives and employees
- Establish Computer Security Incident Response Team to minimize damage from security incidents

- Create and maintain an updated list of key domestic laws and regulations and share information on all laws and regulatory revisions and abolitions
- Identify and formulate measures for laws and regulatory risks using risk management systems
- Provide regular e-learning and training programs for all employees

## Opportunities

- Implement reforms to create a business structure in which carbon productivity is high and realize stable growth
- Enhance market competitiveness by staying a step ahead of rivals on the development front
- Increase in demand for products that cater to changes in social needs

- Strengthen specialty businesses and expand developing businesses

- Extensively conserve energy and improve processes
- Maximize the use of CO<sub>2</sub>-free energy
- Implement reforms to create a business structure in which carbon productivity is high and realize stable growth
- Increase in demand for environmentally friendly products and technologies
- Pursue R&D and commercialization for CO<sub>2</sub> usage and other technologies





- Swift recoveries in the event of wide-ranging disasters will build market trust

- Attract and retain talented people
- Create new businesses and products that embrace diverse perspectives

- Build solid growth foundations by fostering a corporate culture that emphasizes compliance and builds customer trust

## Materiality

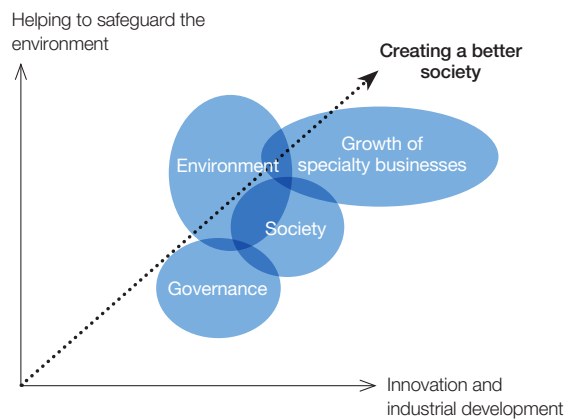
Materiality	The UBE Group's Measures	Key KPIs
<p><b>Growth in specialty chemicals</b></p>	<p>We aim to build an organization that can grow steadily and become more profitable in any economic climate. We will get there by increasing the ratio of specialty businesses* in our overall business. Specialty businesses encompass many operations that generate minimal GHG emissions. We look to lower emissions rates by lifting the contributions to sales of such businesses.</p> <p>We are emphasizing R&amp;D activities and intellectual property strategies to build a competitive edge in the specialty business.</p> <p>* Polyimide, separation membranes, ceramics, semiconductor gases, separators, composites, fine chemicals (C1 chemicals), high-performance coatings, pharmaceuticals, phenolic resin</p>	<p><b>FY2024 numerical targets</b></p> <p>Operating profit: <b>¥40.0 billion</b> <i>(Of which, specialty businesses: ¥24.0 billion)</i></p> <p>Ordinary profit: <b>¥47.0 billion</b> <i>(Including ¥8.0 billion in equity in earnings of Mitsubishi UBE Cement Group)</i></p> <p>ROS: <b>8%</b></p> <p>ROE: <b>8%</b></p> <p><b>FY2030 numerical target</b></p> <p>ROS: <b>10% or higher</b></p>
<p><b>Addressing global environmental issues</b></p>	<p>Global environmental issues stem from the expanding impacts of human activities. They include population growth, mass consumption, and international trade across national borders and regions.</p> <p>We have formulated the following three categories for ongoing environmental action.</p> <p>(1) Addressing climate change (carbon neutrality) (2) Contributing to a circular society (circular economy) (3) Contribute to nature conservation and restoration (nature positive)</p> <p>We are particularly stepping up efforts to reach carbon neutrality by cutting GHG emissions across our value chain. In addition, we will help resolve environmental issues by providing products, technologies, and services that materialize a circular economy and nature positive and by engaging and collaborating with stakeholders.</p>	<p><b>FY2030 numerical targets</b></p> <p>GHG emissions reduction: <b>50% reduction</b> compared to FY2013</p> <p>Percentage of consolidated net sales comprising environmentally friendly products and technologies: <b>60% or higher</b></p>
<p><b>Hiring and development of human resources</b></p>	<p>People will be the engine of the UBE Group's growth over the medium and long terms. We will hire more women and foreign nationals while educating employees to cultivate people with diverse values and perspectives, thereby enabling us to respond swiftly to changes in the business climate and pursue sustainable growth.</p>	<p><b>FY2024 numerical targets</b></p> <p>Percentage of women in the workforce: <b>15%</b></p> <p>Percentage of women in management positions: <b>6%</b></p> <p>Percentage of mid-career recruitment in the workforce (generalist positions): <b>50% or more</b></p> <p>Percentage of non-Japanese recruitment in the workforce (generalist positions): <b>Several people</b></p>
<p><b>Strengthening the management platform (corporate governance and digital transformation)</b></p>	<p>We will accelerate efforts to expand our specialty chemicals business and help resolve environmental issues by pushing forward with a digital transformation strategy that involves all employees and business areas.</p> <p>We adopted a new Group structure under UBE Vision 2030 Transformation — 1st Stage, our new medium-term management plan. We have structured ourselves to pursue specialization as a chemical company and ensure proper governance at our Group machinery and cement companies. We are striving to increase diversity on the Board of Directors and transfer authority to executives while preparing a framework to deepen deliberations about materiality.</p>	

Related Pages	SDGs Items to Which We Contribute
<p>Key specialty business growth strategies <i>Pages 24-35</i></p> <p>R&amp;D and intellectual property <i>Pages 36-39, 40-41</i></p>	
<p>Initiatives to materialize carbon neutrality and disclosure based on TCFD recommendations <i>Pages 54-55, 56-57</i></p> <p>Initiatives and disclosure regarding circular economy and nature positive <i>Pages 60-63</i></p>	
<p>Discussion about talent strategy <i>Pages 46-49</i></p> <p>Details and progress of priority measures <i>Pages 50-53</i></p> <p>Other information about human capital <i>Page 65</i></p>	
<p>Digital transformation strategy <i>Pages 42-45</i></p> <p>Corporate governance <i>Pages 68-75</i></p>	

● **Determining Materiality**

We comprehensively take into account environmental issues and other Group risks (Please see pages 16-17 for details), mega trends, the global consensus on sustainable social development, and the Group's technological capabilities for helping lower environmental impact in identifying and focusing on materiality impacts that affect our sustainable growth.

We consider the environment our greatest risk in view of our high GHG emissions. We seek to reduce these risks and turn them into opportunities not only by endeavoring to slash emissions but by building our portfolio of environmentally friendly products and technologies.



**Consensuses to which we have referred**

- Sustainable Development Goals
- SASB Standards, Value Reporting Foundation
- Universal Declaration of Human Rights
- Guiding Principles on Business and Human Rights
- ISO 26000, a global standard for social responsibility
- Global Reporting Initiative standards

## Value Creation Process

The UBE Group evaluates the risks and opportunities of environmental issues and other aspects of changes in the business climate to identify materiality. We then plan and implement management strategies and deliver products and solutions, thereby delivering real value to society while tackling the negative impacts of climate change and helping to realize social sustainability in our drive to generate sustainable growth.

Changes in operating climate

FY2022  
Capital components of enterprise value

### Climate change and other environmental issues

- Accelerating green transformation to become carbon neutral

### COVID-19 pandemic and other global outbreaks, increasing incidence of natural disasters and aging infrastructure

- Changing behavioral patterns to prevent infections and contain spreads
- Enhancing national resilience and rebuilding infrastructure to prevent and reduce disasters

### Population growth in emerging nations, expansion of middle class, and urbanization

- Food, water, resources, infrastructure, and energy shortages

### Russia's invasion of Ukraine

- Insecure access to food, resources, and energy

### Aging populations in developed nations, diversifying work practices and globalization

- Providing more opportunities for female employees
- Fostering diversity
- Cultivating global talent

### Digital transformation

- New business model
- Enhanced productivity
- Accelerated R&D

#### Financial Capital

Underpinning enterprise value with a sound financial position

Equity capital **¥369.1 billion\***

\* As of April 1, 2022

Credit ratings R&I: **A-** JCR: **A**

Please see pages 14–15 for details.

#### Manufacturing Capital

Building a three-region chemical products manufacturing structure

**Three plants** in Japan and **two** overseas

#### Human Capital

Respecting diverse people and values

Number of employees (Consolidated) **7,584\***

\* As of March 31, 2022

(Number of employees in the cement-related business is excluded.)

Please see pages 46–49, 50–53, and 65–66 for details.

#### Intellectual Capital

Broad technological foundations

R&D expenses **¥10.4 billion**

Number of patents held **3,225\***

\* As of April 1, 2022

Please see pages 40–41 for details.

#### Social Capital

Emphasizing stakeholder engagement

Number of one-on-one meetings with analysts and investors in fiscal 2022 **Approx. 200**

Regional Responsible Care (RC) engagement Since **1997**

Please see pages 58, 67, and 73 for details.

#### Natural Capital

Lowering environmental impact

Total energy input **7,841 thousand MWh**

Water resource withdrawals **370 million tonnes**

Please see pages 54–55, 56–57, 60–63 and the 2023 Integrated Report Supplementary Information (Environment and Safety/Quality Assurance) for details.

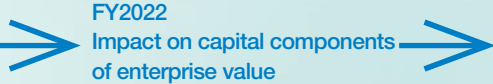
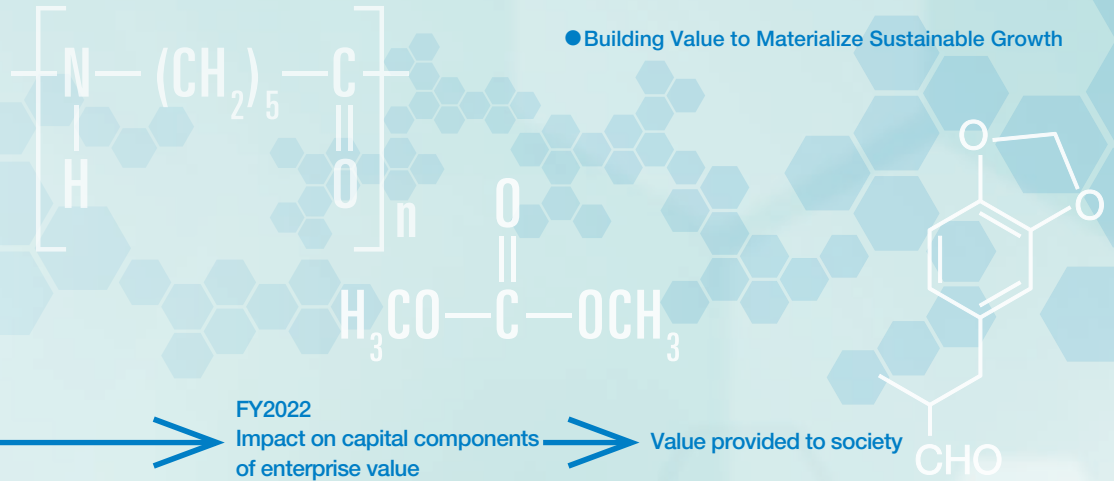
#### Purpose

Leveraging the manufacturing technologies the UBE Group has cultivated throughout its long history, create the value required by society, in the safe and environmentally friendly manner demanded by society, and deliver that

#### UBE Vision 2030 Transformation, our long-term vision



#### Bedrock of value creation



value to the people. And by doing so, help to solve global environmental issues, which have become a common issue for all humankind, and contribute to people's lives and health, and an enriched future society.

A corporate group centered on specialty chemicals that contributes to the global environment, human health, and an enriched future society

Operating profit ¥16.3 billion  
 Profit (loss) attributable to owners of parent ¥(7.0) billion

Free cash flow ¥(7.9) billion

ROS 3.3 %  
 ROE (1.9)%  
 ROA (0.7)%

Number of newly registered patents 177

Percentage of consolidated sales comprising environmentally friendly products and technologies 46%

GHG emissions 3,820 kt-CO<sub>2</sub>e/y  
 Water discharges 345 million tonnes  
 Savings from resource reuse and energy conservation ¥3.2 billion

*Please see the 2023 Integrated Report Supplementary Information (Environment and Safety/Quality Assurance) for details.*

**Contributions to the digitalization of society**

Developed organic electroluminescent displays and semiconductor manufacturing materials  
*Please see pages 24–26, 29–31, and 36–39 for details.*

**Addressing environmental issues**

Developing technologies to use CO<sub>2</sub> and waste plastic, manage energy, and use natural raw materials

*Please see pages 24–33, 36–39, 60–63, and 76–77 for details.*



**Providing environmentally friendly products and solutions**

(including products for manufacturing of lithium-ion batteries, eco-tires, lightweight automotive materials, and biofuels)

*Please see pages 54–55 for details.*

*Please see pages 54–55, 56–57, and 60–63 for details regarding initiatives for environmental issues.*

**Addressing healthcare and food issues**

Contributing to health, food hygiene, and food production (such as in terms of pharmaceuticals, food packaging films, and fertilizers)

*Please see pages 34–35 and 60–63 for details.*



**Contributing to a circular economy**

Recycling resources  
 Developing technologies to use CO<sub>2</sub> and waste plastics

*Please see pages 36–39 and 60–63 for details.*



**Contributing to regional communities**

Creating jobs, paying taxes, engaging in regional development, and helping conserve regional environments

*Please see pages 58–63 for details.*



**Strategy and Resource Allocation**

*Please see pages 22–23 for details.*

**Generating value**

**Addressing Environmental Issues**

**Products and Solutions**

*Please see pages 24–35 and 76–77 for details.*

**ESG** *Please see pages 46–75 for details.*

Capital reinjections into new value creation

## Progress under UBE Vision 2030 Transformation – 1st Stage, Our Medium-Term Management Plan

This initiative guides our drive to materialize our Vision for 2030. We have positioned three years through fiscal 2024 as a period for reinforcing our earnings base and investing in growth while pressing forward with ongoing business structure reforms to focus on specialty chemicals and address environmental issues.

### Basic Policy and Priority Measures

Related pages

Pursuing global profit growth driven by specialty chemicals	Pages <a href="#">24–35</a>
Structural changes in response to global environmental issues	Pages <a href="#">54–57</a>
Enhancing human capital for sustainable growth	Pages <a href="#">46–49</a> , <a href="#">50–53</a>
Enhancing corporate value and creating customer value by promoting DX	Pages <a href="#">42–45</a>
Further improving governance	Pages <a href="#">68–75</a>

An adverse business climate prevented us from reaching our targets for fiscal 2022. While the result for the Basic business was particularly below target, we aim to reach our goals for fiscal 2024 by pursuing growth in such specialty business areas as polyimide and separation membranes while improving the profitability of basic businesses.

### Progress of Numerical Targets

		2022		2023		2024 (FY)
		Targets	Results	Targets	Forecasts	Targets
<b>Key Figures</b> <i>(Billions of yen)</i>	Net sales	¥510.0	<b>¥494.7</b>	¥520.0	¥545.0	¥520.0
	Operating profit	34.5	<b>16.3</b>	41.0	30.0	40.0
	Ordinary profit (loss)	31.0	<b>(8.7)</b>	45.0	38.5	47.0
	Profit (loss) attributable to owners of parent	21.0	<b>(7.0)</b>	32.0	27.5	33.0
<b>Key Indicators</b>	ROS	6.8%	<b>3.3%</b>	7.9%	5.5%	8%
	ROE	5.6%	<b>(1.9)%</b>	8.2%	7.4%	8%

### Progress by Segment

*(Billions of yen)*

Segment	Net sales					Operating profit				
	2022		2023		2024	2022		2023		2024 (FY)
	Targets	Results	Targets	Forecasts	Targets	Targets	Results	Targets	Forecasts	Targets
Specialty Products	¥ 69.0	<b>¥ 62.2</b>	¥ 70.0	¥ 71.5	¥ 75.0	¥13.0	<b>¥10.5</b>	¥12.5	¥12.5	¥13.0
Polymers & Chemicals	302.0	<b>293.4</b>	320.0	313.0	316.0	18.5	<b>2.4</b>	24.0	12.0	22.0
Machinery	106.0	<b>96.9</b>	98.0	108.5	100.0	5.0	<b>5.2</b>	5.5	6.0	6.0
Others	60.0	<b>73.1</b>	57.0	88.5	54.0	2.5	<b>2.6</b>	3.5	3.5	4.0
Adjustment*	(27.0)	<b>(30.8)</b>	(25.0)	(36.5)	(25.0)	(4.5)	<b>(4.5)</b>	(4.5)	(4.0)	(5.0)
Total	¥510.0	<b>¥494.7</b>	¥520.0	¥545.0	¥520.0	¥34.5	<b>¥16.3</b>	¥41.0	¥30.0	¥40.0

\* Adjustment includes elimination of inter-segment transactions.

### Progress by Portfolio Segmentation

*(Billions of yen)*

Portfolio	Net sales					Operating profit				
	2022		2023		2024	2022		2023		2024 (FY)
	Targets*1	Results	Targets*1	Forecasts	Targets*1	Targets*1	Results	Targets*1	Forecasts	Targets*1
Specialty business	¥143.5	<b>¥138.2</b>	¥149.0	¥165.0	¥162.0	¥23.5	<b>¥18.3</b>	¥24.5	¥20.0	¥24.0
Basic business	238.5	<b>236.9</b>	252.0	252.0	240.0	11.0	<b>(3.2)</b>	16.5	7.0	15.5
Machinery business	106.0	<b>96.9</b>	98.0	108.5	100.0	5.0	<b>5.2</b>	5.5	6.0	6.0
Other businesses (incl. adjustment) *2	22.0	<b>22.8</b>	21.0	19.5	18.0	(5.0)	<b>(4.0)</b>	(5.5)	(3.0)	(5.5)
Total	¥510.0	<b>¥494.7</b>	¥520.0	¥545.0	¥520.0	¥34.5	<b>¥16.3</b>	¥41.0	¥30.0	¥40.0

\*1 The targets announced in May 2022 have been reset by allocating adjustments for internal transactions to each portfolio.

\*2 Adjustment includes elimination of inter-segment transactions.



## Business Portfolio

Business Portfolio Segmentation		Businesses
<b>Specialty business</b>	Aim for further growth and expansion in business that can create added value and achieve high profitability based on the Group's core technologies and strengths in the value chain	<ul style="list-style-type: none"> <li>● Polyimide</li> <li>● Separation membranes</li> <li>● Ceramics</li> <li>● Semiconductor gases</li> <li>● Separators</li> <li>● Composites</li> <li>● Fine chemicals (C1 chemicals)</li> <li>● High-performance coatings</li> <li>● Pharmaceuticals</li> <li>● Phenolic resin</li> </ul>
<b>Basic business</b>	Aim to steadily improve and add to profits	<ul style="list-style-type: none"> <li>● Nylon polymers</li> <li>● Caprolactam, ammonium sulfate</li> <li>● Industrial chemicals</li> <li>● Elastomers</li> <li>● Polyethylene films</li> <li>● Processed resin products</li> </ul>

Others: Sales companies outside Japan, logistics and analytical services, real estate business, machinery, etc.

Note: See pages 24–35 for details on the growth strategies of businesses in blue text.

## Capital Allocation

Allocate cash generated to growth investments, R&D, and shareholder returns

3-year cumulative cash inflows (Billions of yen)	Initial targets in the medium-term management plan	Projected 3-year cumulative total	Total available for distribution ¥250.0 billion	3-year cumulative cash outflows (Billions of yen)	Initial targets in the medium-term management plan	Projected 3-year cumulative total	
Operating cash flow* <sup>1</sup>	¥182.0	¥145.0		Initial targets in the medium-term management plan ¥232.0 billion	Investments	¥130.0	¥160.0
Sale of assets, etc.	15.0	15.0			R&D	32.0	32.0
Debt financing	0.0	55.0			Debt repayment	12.0	0.0
<b>Cash</b> (Billions of yen)				Shareholder returns	29.0	29.0	
Cash on March 31, 2022	¥ 35.0	¥ 35.0* <sup>2</sup>		<b>Cash</b> (Billions of yen)	Initial targets in the medium-term management plan	Projected 3-year cumulative total	
				Cash on March 31, 2025	¥ 29.0	¥ 29.0	

\*<sup>1</sup> Operating cash flow before R&D investment

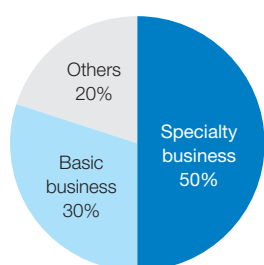
\*<sup>2</sup> Excludes the cash and deposits transferred to Mitsubishi UBE Cement Corporation as of April 1, 2022

## Business Resources Allocation Plan by Portfolio Segmentation and Progress

We plan to lift capital expenditures, investments, and loans by ¥30 billion from initial plans, concentrating resources on the Specialty business. The proportion of Others is increasing as we accelerate investments in digitization and other areas.

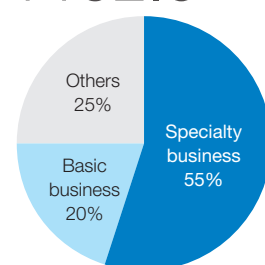
### Medium-Term Management Plan (Original targets)

¥162.0 billion\*



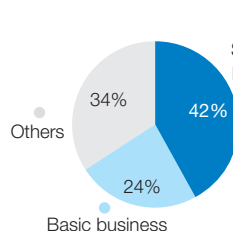
### Three-Year Forecast

¥192.0 billion\*



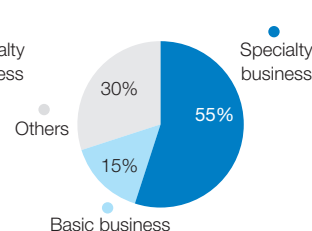
### FY2022 Results

¥50.1 billion\*



### FY2023 Forecast

¥58.5 billion\*



\* Total capital expenditures, investments and loans (including acquisitions), and R&D expenses

## Key Measures in Fiscal 2022

Business and capacity expansions		Alliances, acquisitions, and business restructuring	
Industrial chemicals	Started boosting high-purity nitric acid plant capacity by 50%	Cement-related business	Mitsubishi UBE Cement started operations
High-performance coatings	Started 4,000-metric tonnes polycarbonate diol production capacity upgrade in Thailand	Phenolic resin	Absorbed Meiwa Plastic Industries
Composites	Began constructing special compounding facilities in Thailand	Pharmaceuticals	Acquired API Corporation
Separation membranes	Started expanding separation membrane production facilities capacity by 80% in Japan	Companywide	Established new company to oversee U.S. business and reorganize Group companies

Growth Strategies of Specialty Chemicals:

# Polyimide and Separation Membranes

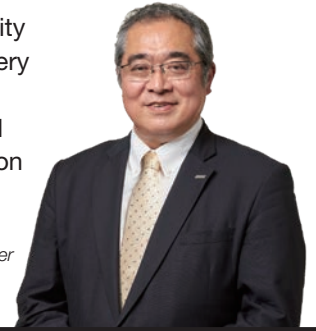


Specialty products are key focuses for UBE. This category comprises finished products resulting from processing raw materials and raw materials for specialty offerings.

The polyimide products covered here are from raw materials made in-house, films, varnishes, hollow-fiber membrane modules, and other products stemming from processing expertise. They are showing higher growth than projected in our current medium-term management plan amid significantly fluctuating raw materials and fuel costs.

As well as polyimide, our inorganic materials-based offerings include high-purity silicon nitride. Group companies provide such functional products as lithium battery materials, with their product lineups centering on separators.

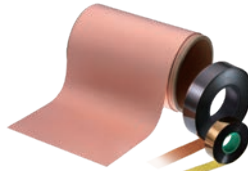
Under our medium-term management plan, we seek to increase revenues and earnings by setting main target markets of high heat-resistant polyimide and silicon nitride materials for electric vehicles (xEVs) and separation membranes for biofuels that contribute to carbon neutrality in addition to our traditional target markets of semiconductors and electronic components.



*Keiichi Nagata*  
Senior Managing Executive Officer  
General Manager,  
Specialty Products Div.

Growth Strategies of Specialty Chemicals:

## Polyimide



### Product Characteristics

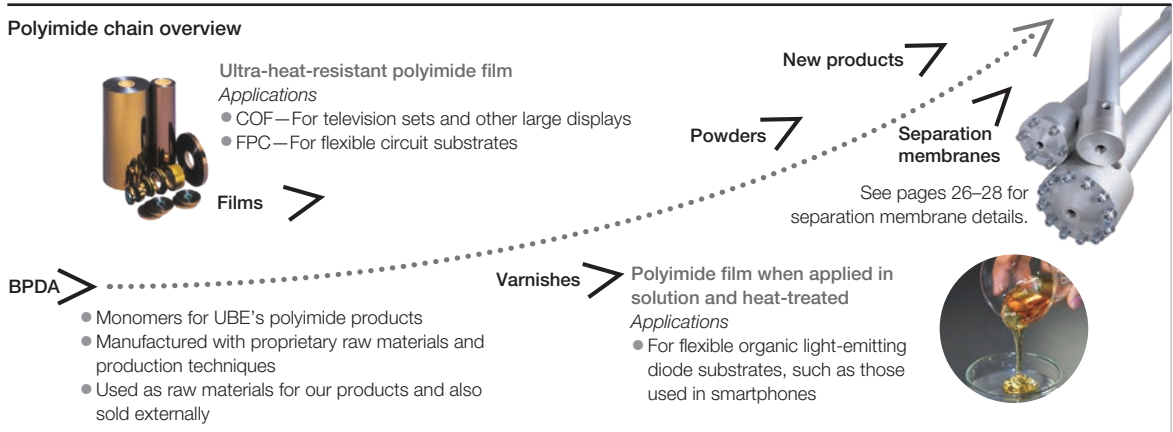
Polyimide is a super engineering plastic with outstanding strength and heat resistance. Its applications span from televisions, smartphones, and automobiles to aerospace.

UBE is the world's only manufacturer to have

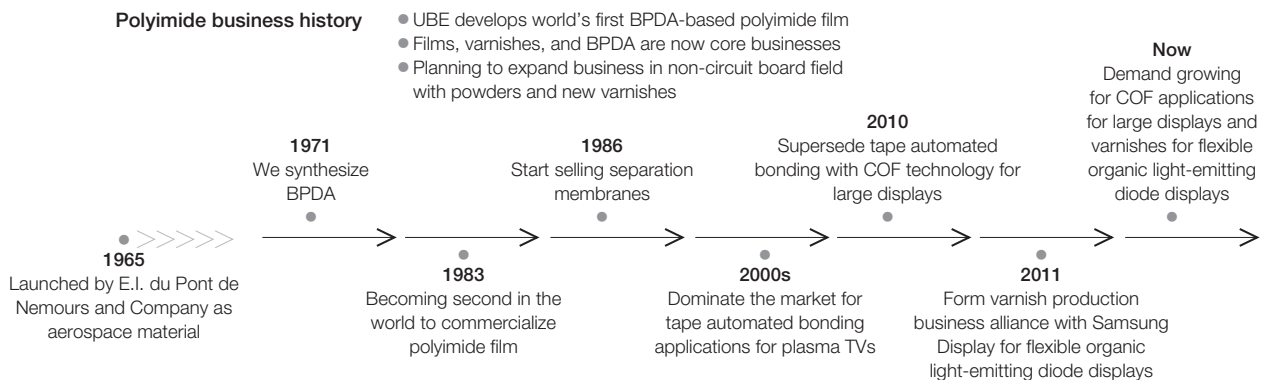
integrated production from biphenyl tetracarboxylic dianhydride (BPDA), a raw material, to varnish, film, and powder. Our raw materials and proprietary manufacturing techniques enable us to create products with features that competitively differentiate us. Our polyimide has a high market share in chip-on-film (COF) applications for large displays and flexible organic light-emitting diode substrates.

We also manufacture gas separation membranes incorporating polyimide hollow fibers (see pages 26–28 for details) and develop new products.

### Polyimide chain overview



### Polyimide business history



**New Value Creation**

**Opportunities and risks**

**Opportunities**

- Demand for high heat-resistant polyimide is growing amid the uptake of 5G communications for smartphones and automobile electrification
- New applications created for BPDA-based polyimide requiring high heat resistance

**Risks**

- Changes in prescribed properties and replacements with other technologies
- Greater emergences among new polyimide manufacturers, particularly in China

**UBE's strengths**

- Integrated production of films, varnishes, and powders with in-house raw materials
- Unmatched line of BPDA-based products and unique molding and processing technologies
- BPDA-based polyimide product development capabilities and intellectual property strategy
- Market intelligence gathering capabilities



**New value creation**

- Contribute to an advanced digital economy by continuing to deliver distinctive offerings that markets need and only we can offer (for better living)

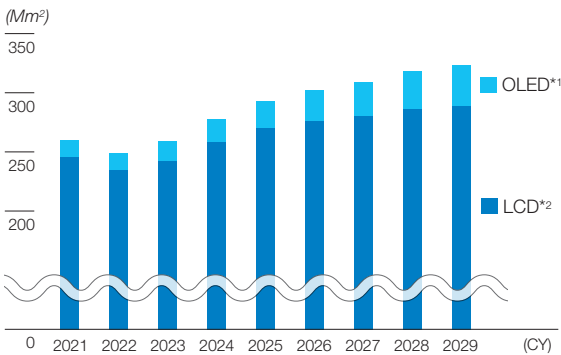
We are expanding target markets to contribute further to earnings growth through our polyimide chain.

**Social and Market Analysis**

UBE enjoys a high share of the market for chip-on-film applications. We expect demand for large television sets employing this technology to expand at 3% to 4% annually. In the smartphone market, we expect that more products will incorporate flexible organic light-emitting diodes, for which our varnish is a strength. Also, we look for polyimide demand to increase in 5G-compatible flexible printed circuits, automotive, and other new applications.

We expect that materials requirements will diversify with technological innovations in displays. Demand for flexible solar cells and other environmentally friendly products should rise as environmental concerns grow.

**Display area trends**



Source: UBE estimates based on a range of data  
 \*1 Organic light-emitting diode  
 \*2 Liquid crystal display

**Vision for 2030**

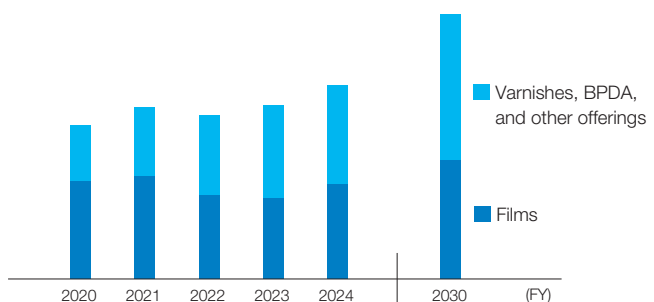
We will leverage our strengths in BPDA, films, and varnishes to secure high market shares in niche markets and remain very profitable to generate steady earnings growth in line with market expansion. By drawing on our edge in technology, product development, information gathering, and other areas, we will flexibly tackle changes in demand attributes and establish a structure that enables us to remain very competitive beyond 2030.

**Growth Strategies**

**Progress under the Medium-Term Management Plan**

- Chip-on-film unit sales for large displays declined amid lower demand for TVs and other products in fiscal 2022. On the upside, varnishes for flexible organic light-emitting diodes remained robust on a higher ratio of products with panels incorporating these offerings despite sluggish smartphone demand.
- Sales of powders for semiconductor manufacturing and inspection equipment increased as planned.

**Sales trends**





**Toward 2030**

For biphenyl tetracarboxylic dianhydride and films, we will decisively capture expanding demand by steadily launching new facilities.

While expanding sales of films for flexible solar cells, we will steadily develop binders for lithium-ion batteries and water-based varnishes and contribute to a growing range of environmentally friendly products.

**Growth Investments (expansion plans)**

(Production capacity increases)

<b>BPDA</b>	<b>Operational start in second half of fiscal 2023</b>	<b>+60%</b>
<b>Films</b>	<b>Test Operation start in second half of fiscal 2024</b>	<b>+20%</b>

**R&D and Intellectual Property**

We will develop advanced products in response to social needs. These could include better living

**R&D employee message**

I develop polyimide materials for advanced displays. I endeavor to attain properties that customers prescribe by employing organic synthesis techniques and evaluation methods that are comparable to actual processes while communicating closely with customers. I aim to help enhance UBE's brand position and technological prowess in the flexible display market.

through digital technology and a growing awareness of the need to safeguard the environment.

We will provide products that leverage our strengths in BPDA-based polyimides, thus helping improve living standards and embedding environmentally friendly technologies in society.

**Digital Transformation**

- Strengthen marketing  
We cultivate new applications and customers through outbound marketing by digitally gathering customer information, analyzing markets, and strengthening customer touchpoints.
- Reinforce quality controls  
We are working to investigate the causes of defects by analyzing big data, monitor processes by using business intelligence tools, and visualize changes.
- Automation  
We are digitizing processes by deploying tablets and using robotic process automation to automatically collect data and streamline process management



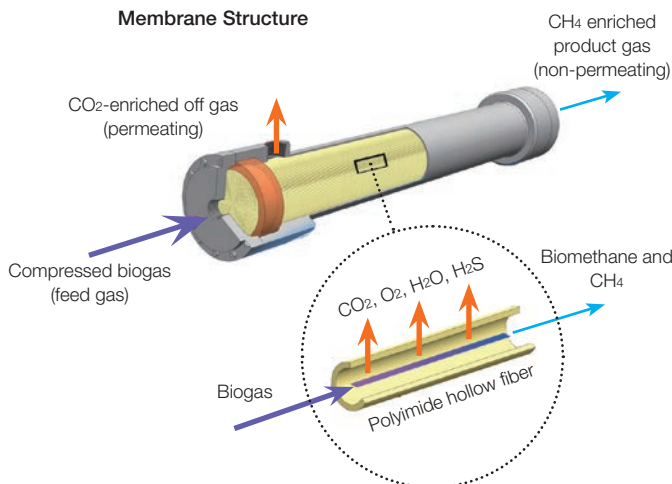
**Yuki Nemoto**  
Polyimide Group,  
Polyimide and Specialty Products R&D Dept.,  
Specialty Products Div.

**Growth Strategies of Specialty Chemicals:**

**Separation Membranes**



**Membrane Structure**



**Product Characteristics**

There has been extensive research into polyimide as a separation membrane material because it offers outstanding heat and chemical resistance, mechanical strength, and high gas and vapor permeability and separation. UBE's gas separation membranes employ fine straw-shaped hollow fibers (with an outer diameter of 0.2 mm to 0.5 mm and an inner diameter of 0.1 mm to 0.4 mm) made of BPDA-based polyimide. The membranes separate mixtures of gases and vapors (with a molecular size of 250–550 picometers) by harnessing the permeability differences of the polyimide layer, which is about 100 nanometers thick, on the exterior surfaces of the membranes.

We package BPDA-based polyimide membranes in containers and provide them to customers as separation membrane modules. Their diverse applications include nitrogen enrichment (air separation), dehumidification, organic



**New Value Creation**

**Opportunities and risks**

Opportunities

- Building on the environmental contribution lead of our European business to replicate that approach in North America and Asia

Risks

- National policy changes or revisions owing to international conflicts

**UBE's strengths**

- Growing awareness of its energy-saving, maintenance-free membrane separation method
- UBE separation membranes employing in-house raw materials to deliver high gas permeability, separability, and durability



**New value creation**

- Contributing to surging production of biomethane and other renewable energy sources
- Contribute to a better environment and cut GHG emissions

solvent dehydration (alcohol dehydration), and hydrogen and carbon dioxide separation.

**Social and Market Analysis**

The public and private sectors are diversifying their energy sources, chemical raw materials, and other resources to cut GHG emissions and stabilize procurement. This situation has increased demand for carbon dioxide separation membranes

for biomethane production, organic solvent dehydration membranes for alcohol purification, and hydrogen separation membranes for hydrocarbon production. This trend should continue. We anticipate surging demand in this area in view of accelerating efforts to produce biomethane by separating carbon dioxide from biogas derived from livestock manure and waste, especially in Europe and the United States.

**Application Examples**

**Environment and Safety**



**Nitrogen enrichment**

Removing oxygen from compressed air to obtain nitrogen



Including protection from explosions of oil, gas, coal, chemicals, or other materials, the On-Board Inert Gas Generation System for aircraft, analytical gases, and laser cutter gases



**Dehumidification**

Obtaining dry air by removing water vapor from compressed air



Including railroad and machine tools and other pneumatic equipment, medical devices, and analytical equipment

**Environment and Energy**



**Organic solvent dehydration**

Removing water from alcohol and other organic solvents



Refining bioethanol, industrial and pharmaceutical ethanol, isopropanol, ketones, and other substances

**Hydrogen separation**

Obtaining hydrogen and other useful gases from mixed gases



Hydrogen recovery for oil refineries, methanol, ammonia and renewable energy production, and adjusting concentration of syngas

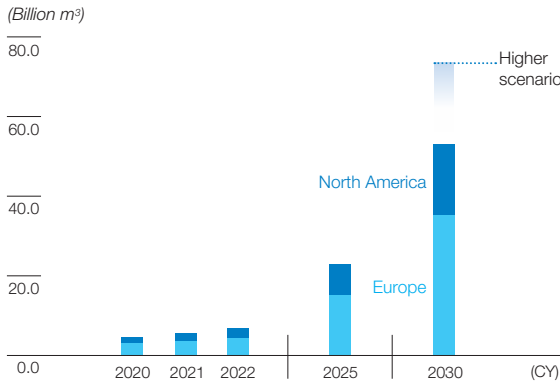
**Carbon dioxide separation**

Removing carbon dioxide from carbon dioxide and methane mix to obtain pure methane



Biogas, landfill gas, natural gas, and other methane enrichment

### Biomethane production



### Vision for 2030

Demand is surging for carbon dioxide separation membranes for biomethane production. These offerings accounted for around 50% of membrane sales volume in fiscal 2022. We are a leading supplier of carbon dioxide separation membranes for biomethane production. We thus aim to capture fast growing demand and significantly enhance earnings growth by 2030. At the same time, we will strive to lift sales of environmentally friendly products, including hydrogen separation membranes and alcohol dehydration membranes, to 70% of sales and establish a business model delivering sustainable growth.

### Growth Strategies

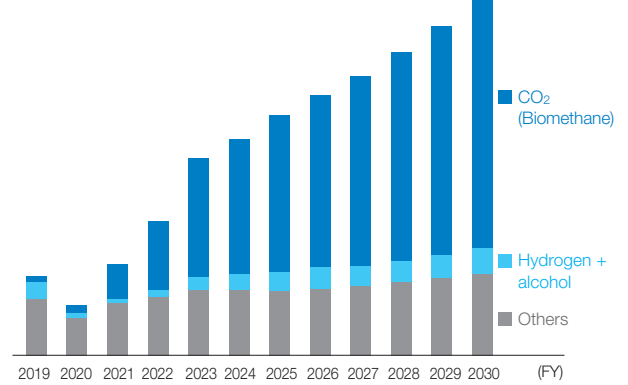
#### Progress under the Medium-Term Management Plan

- In view of surging demand for carbon dioxide separation membranes to produce biomethane, we decided to bring forward plans to upgrade our polyimide hollow fiber membrane production facilities for gas separation membranes at the Ube Chemical Factory and separation membrane module production facilities in the Sakai Factory. These new facilities should go on line in the first half of fiscal 2025.
- We will prepare for further demand growth by gathering intelligence and will explore additional investments at the right times and places.

#### Toward 2030

Renewable energy uptakes are accelerating. We

### Sales volume



will therefore cultivate technologies and solutions to materialize a green, hydrogen-based economy. Such an economy would feature such energy sources as biomethane, bio-alcohol, and sustainable aviation fuel, and use carbon dioxide separation membranes effectively. We aim to expand our separation membrane business across diverse fields.

### R&D and Intellectual Property

Research and development into polyimide hollow fiber for gas separation membranes started in the 1970s. This work bore fruit in 1986 with hydrogen separation commercialization. We have since developed separation membranes offering high permeability, separation, and durability for a range of applications. In R&D for manufacturing and applying hollow fiber membranes, containers, and separation membrane modules, repeated molecular, materials, strength, process, and other design processes and verification are driving our technology forward. We will continue to bolster our product capabilities and keep undertaking R&D to resolve environmental issues.

### Digital Transformation

Our membrane module factory was an early adopter of a smart factory. It has enhanced productivity and quality, human resources development, and technology transfers. We will leverage big data from that factory to keep enhancing design and production technologies.

### Sales employee message

I engage in gas separation membrane sales at UBE Europe GmbH (Germany). The European Union seeks to shift away from the fossil resources that it procures from Russia. It has embarked on plans to increase biomethane production around 10-fold as a natural gas alternative by 2030. Because of their outstanding durability and gas separation performance, UBE's gas separation membranes have earned the trust of customers and continue rapid growth for this application. Refining biogas can produce bio-derived CO<sub>2</sub> together with biomethane, therefore its value in use is increasing. Our separation membranes are helping to decarbonize the economy.

Kentaro Wakamura  
UBE Europe GmbH



## Growth Strategies of Specialty Chemicals:

# Fine Chemicals and Composites



Dimethyl carbonate is a key C1 chemical product derived from our proprietary nitrite technology. We expect demand to grow for this product as a raw material for lithium-ion battery electrolytes and semiconductor photoresist developer solutions. High-performance coatings are downstream offerings in the C1 chemical chain. They have earned high regard for being eco-friendly. We will continue to expand our business in that area.

Composites are downstream from such businesses as lactams and nylon. We will expand composites beyond nylon, developing functions to meet market innovation needs as eco-friendly offerings, symbolized in the shift to electric vehicles.

We will lift production capacity overseas for C1 chemicals, high-performance coatings, and composites businesses and drive significant global growth for them.



*Masayoshi Ota*  
 Managing Executive Officer  
 General Manager,  
 Performance Polymers & Chemicals Div.

### Growth Strategies of Specialty Chemicals:

## C1 Chemicals and High-Performance Coatings



### Product Characteristics

Our C1 chemicals are chemical chains derived from our unique nitrite technology, which we developed using carbon monoxide as a raw material. They are pivotal to downstream high-performance coatings and other aspects of our specialty chemicals growth strategy.

Dimethyl carbonate is a key offering. Our nitrite process for this product differs from those of other companies, delivering high quality without by-products. It is thus increasingly important as a raw material for lithium-ion battery electrolytes and semiconductor photoresist developer solutions, which both require high quality. It is also an important basic raw material for our expanding range of downstream polycarbonate diols. Dimethyl

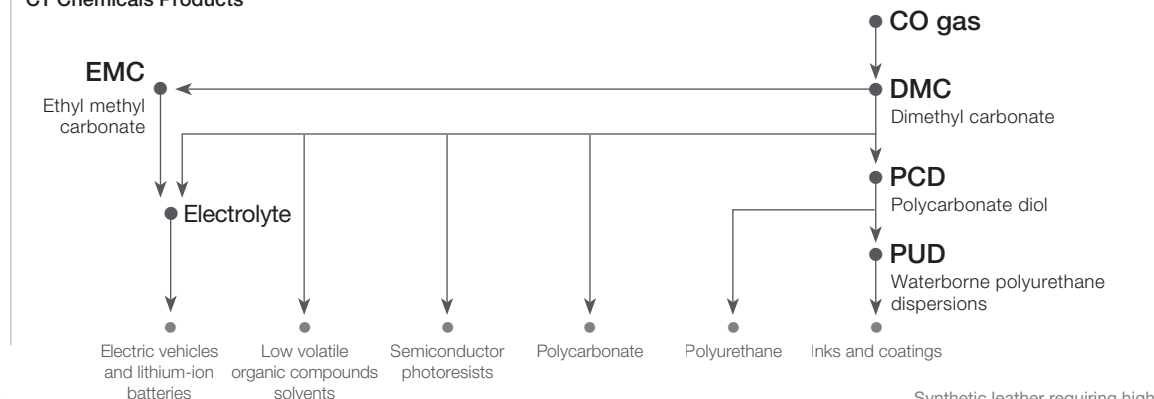
carbonate is a common eco-friendly solvent because it is not a volatile organic compound.

UBE dominates the global polycarbonate diol market. We develop diverse grades to match the properties that customers prescribe. Our structure for supplying this product from Japan, Spain, and Thailand allows us to match our sales and development setups to specific market needs.

Polycarbonate diol is the main ingredient (polyol) in such high-performance polyurethane resins, notably for synthetic leather and coating materials. It can improve the heat, weather, hydrolysis, and oil resistance of polyurethane products. It enjoys high regard as an environmentally friendly product.

Waterborne polyurethane dispersions made from polycarbonate diol feature nano- through micron-level polyurethane particles dispersed in water. Common applications are as key constituents of automotive exterior paints and textile printing inks for clothing because these dispersions are free of volatile organic compounds and are environmentally friendly.

### C1 Chemicals Products





**New Value Creation**

**Opportunities and risks**

Opportunities

- Growing demand for lithium-ion battery electrolyte in expanding market for battery electric vehicles
- Rising demand for eco-friendly, high-performance resin products

Risks

- New manufacturer entries intensifying cost competition
  - ➔ Better performance and lower costs from technological development
- New powerplants replacing lithium-ion batteries
  - ➔ Development of diverse applications

**UBE's strengths**

- We offer carbon monoxide-based dimethyl carbonate that gives more choices of plant locations and with higher quality than from other companies, which use ethylene as a raw material
- Global development and supply structure and diverse product range for polycarbonate diol
- Automotive paints and textile printing inks employ polyurethane dispersions, taking advantage of the swelling and abrasion resistance of their polycarbonate diol raw materials and eco-friendliness

**New value creation**

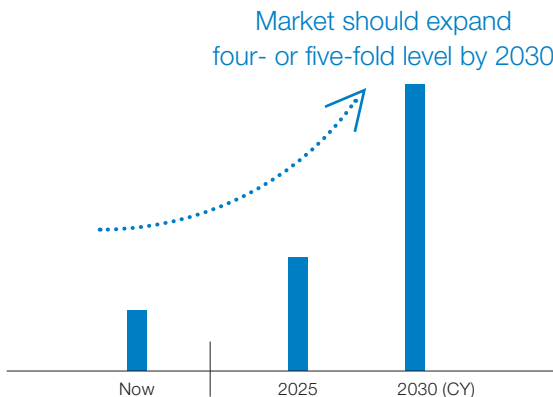


- Supplying environmentally-friendly products and high-performance materials for better living
- Bolstering overseas sites to cater to local production and consumption needs and building supply structure encompassing multiple sites as part of business continuity planning

**Social and Market Analysis**

- A semiconductor shortage that reduced battery electric vehicle growth adversely affected the lithium-ion battery market in 2022. We nonetheless look for the market to expand four- or five-fold by 2030. Demand for dimethyl and ethyl methyl carbonate serving as the principal electrolyte components in various lithium-ion types should also soar.
- Demand for high-performance polyurethanes should climb 5% or so annually through 2030.
- The market for solvent-free coatings should expand 5% to 10% annually amid tighter environmental regulations.

Global lithium-ion battery market forecast



Source: UBE estimates based on a range of data

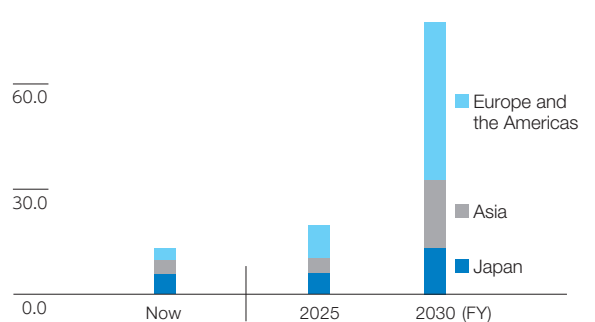
**Vision for 2030**

We will broaden local production and consumption by securing overseas plants for dimethyl and

ethyl methyl carbonate as battery electric vehicle markets expand. We will also transition faster to environmentally friendly products and increase our business in global markets, including through mergers and acquisitions and other inorganic growth strategies. By 2030, we target annual sales totaling ¥60 billion to ¥80 billion, with operating margins of 20% to 25%, from such C1 chemicals as dimethyl carbonate, polycarbonate diol, and polyurethane dispersion.

**C1 chemical chain product sales**

(Billions of yen)



**Growth Strategies**

**Progress under the Medium-Term Management Plan**

Sales of dimethyl carbonate for lithium-ion battery electrolyte are basically expanding on target. Polycarbonate diol sales are recovering despite a temporary dip owing to an economic slowdown in China. In Thailand, we look to expand sales as third facilities of polycarbonate diol becomes operational in fiscal 2023. In polyurethane dispersion,





the Ube Chemical Factory has inaugurated solvent-free grade facilities. We plan to fully begin producing base coat grades for automotive exteriors in fiscal 2023, a new application for us.

**Toward 2030**

- We will leverage our proprietary manufacturing process, which is free of by-products that could detract from earnings and ensures high quality to expand sites in North America and Europe to attain local production and local consumption worldwide of dimethyl and ethyl methyl carbonate and satisfy rising demand for lithium-ion battery electrolyte. In China, we will keep to licensing our technology to generate solid earnings.
- We will increase downstream polycarbonate diol and polyurethane dispersion production capacity, principally in Thailand and North America, to capture rising demand and expand our business.

**Growth Investments**

**Planning to build new dimethyl and ethyl methyl carbonate plants in North America and Europe**

**Boost downstream polycarbonate diol and polyurethane dispersion production capacity in Thailand and North America (through third polycarbonate diol facilities in Thailand that should become operational in fiscal 2023)**

**R&D and Intellectual Property**

The environment is a prime focus of research and development in this business area. In dimethyl and ethyl methyl carbonate, our ongoing efforts to develop manufacturing processes with low environmental footprints are steadily yielding results.

We design polyurethane dispersion to dry fast at low temperatures, thereby cutting carbon dioxide emissions during coating. We also make this offering durable, extending end-product lives. We satisfy customer performance requirements through an internal assessment program that we set up to correlate performance requirements and basic physical properties, providing materials for

**Employee message**

We endeavor to provide customer solutions at a laboratory in China by reinforcing our paint formulation technology. For customers urgently needing to develop water-based paints, we offer proposals for compatible compounding materials matching applications to maximize fast drying, durability, and other performance attributes of our products. We will keep helping to shrink environmental footprints by collaborating with customers to develop water-based paints.

relevant applications.

We have embarked on such new R&D focuses as using carbon dioxide, recycling, biodegradability, and tapping biomaterials to push toward carbon neutrality and a circular economy.

We established a laboratory in Shanghai in 2022 to serve the market in China, which is tightening its environmental regulations. We set up a program in China to propose ways to use polyurethane dispersion in line with local customer needs.

On the intellectual property strategy front, we aim to formulate a technology roadmap in view of our long-term vision and build a patent map that enables us to secure exclusive licensing rights and sharpen our competitive edge.



Osaka Research & Development Center



Laboratory in China

**Digital Transformation**

Developing diverse grades is important for polyurethane dispersion. For that business, we are standardizing and upgrading manufacturing and sales planning and better visualizing production, sales, and inventory. We are more closely linking customer and supplier information to integrate and optimize supply chain management overall for demand, production, and raw materials in terms of sales, plants, and procurement.

**Highlights**

- Set up a laboratory in China, bringing it on line in September 2022 to reinforce polyurethane dispersion marketing structure system across Asia and accelerate sales in the Chinese market
- Responded to growing market demand for fully water-based, solvent-free grades in line with tighter environmental regulations by installing polyurethane dispersion solvent-free grade facilities at the Ube Chemical Factory to cater to customer demand for such offerings

**Yoshinori Sugimura**

General Manager,  
Development Office, UBE (Shanghai) Ltd.





## Growth Strategies of Specialty Chemicals: Composites



### Product Characteristics

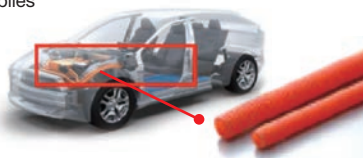
Composites combine multiple materials to perform functions that are beyond the scope of single materials. UBE's composites are the engineering plastics whose design encompasses not only resin materials design and blending processes but also molding and processing at customer sites and end-product usage.

Diverse applications for our composites include automobiles, electrical and electronic components, industrial machinery, and construction parts. They have found particular favor for automotive parts as metal substitutes that can help reduce vehicle weights.

*Application:* Corrugated tubes for automotive wire assemblies

*Resin type:* Nylon 6

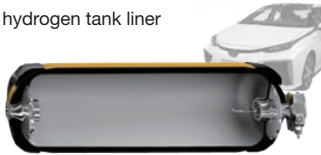
*Prescribed properties:* Extrudability, flame retardance, and voltage resistance



*Application:* Fuel cell vehicle hydrogen tank liner

*Resin type:* Nylon 6

*Prescribed properties:* Moldability, compressive strength, hydrogen barrier properties



*Application:* Battery electric vehicle charger cases

*Resin type:* PBT

*Prescribed properties:* Flame retardance, high strength, and dimensional stability



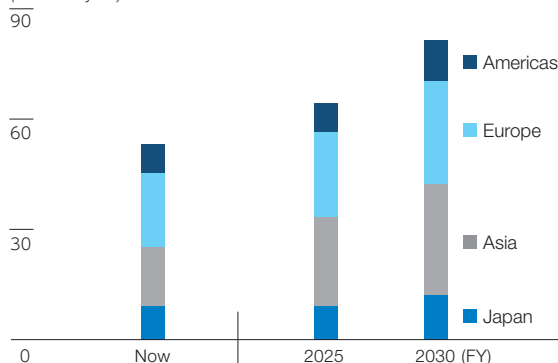
### Social and Market Analysis

The prime application for engineering plastics is the automotive components market. We expect global vehicle production to reach 140 million units annually by 2050. Demand should accordingly grow for these plastics. At the same time, the transformation of powertrains is increasing the number of internal combustion engine-free automobiles, battery electric and fuel cell vehicles among them. This situation should diversify the composition and prescribed properties of automotive components. The UBE Group's composite products already serve in battery electric, fuel cell, and other renewable energy vehicles as well as in the engine parts of conventional gasoline models. We will expand our business by adapting to such market changes associated with decarbonization.

### Vision for 2030

We aim to become a solutions provider with a global presence as a manufacturer of engineering plastic composites, including resins other than nylon, with sales of more than ¥60 billion in 2030. We aim to lift our production capacity from 53,000 metric tonnes annually, to 61,000 metric tonnes by the end of our current medium-term management plan. We would thereafter boost capacity to 80,000 metric tonnes by 2030.

Production through sites in the Americas, Europe, Asia, and Japan (k-tonnes/year)



### Growth Strategies

#### Progress under the Medium-Term Management Plan

Unit sales expanded more slowly than expected in fiscal 2022 because shortages of semiconductors and other materials caused automobile production cutbacks. We anticipate automotive applications to recover somewhat in fiscal 2023. In Thailand, we have acted as planned to boost capacity at existing facilities and build new production facilities for nonreinforced products, which is one of our strengths.

#### Toward 2030

We will develop unreinforced value-added products more swiftly. These include hydrogen tanks and gasoline tank valves for fuel cell vehicles and flame retardant corrugate products for battery electric vehicles.

We plan to boost capacity in Europe and the United States after similar moves in Thailand to cater to diversifying demand for automotive components in coming years. We will also explore expanding our business laterally and downstream, including by considering more acquisitions and alliances.

We will also focus firmly on developing eco-friendly products that incorporate recycled materials. They include biomass raw materials and nylon 6, for which we expect demand to grow. The goal here is to deliver new added value to customers.



## New Value Creation

### Opportunities and risks

#### Opportunities

- Automobile production continuing to grow and globalization (local procurement) accelerating at customer production sites
- Extensively using resins to lighten automobiles
- Creating new parts in line with powertrain changes
- Increasing focuses on lowering environmental impact in addition to enhancing conventional features

#### Risks

- A shrinking domestic automobile market  
➔ Expanding overseas sites
- Products becoming generalized from textiles manufacturers in emerging nations entering engineering plastics market ➔ Cultivating product specialization
- Nylon substitutes emerging  
➔ Range of resin products other than nylon expanding

### UBE's strengths

- Supply structure across Japan, elsewhere in Asia, Europe, and North America
- Basic technologies and intellectual property for bonding, joining, and laminating dissimilar materials
- A superb customer base, including with Japanese original equipment manufacturers and Tier 1 parts companies, and a long track record of doing business with them
- Materials design and development capabilities in keeping with customer needs



### New value creation

- Locally providing high-quality products through our global supply structure that meet regional needs
- Delivering solutions by drawing on excellent customer relationships, processing technologies, materials design, and development capabilities
- Developing products with low environmental footprints to match growing customer needs

## Growth Investments

As well as boosting capacity in Thailand, we are constructing a new production line for unreinforced value-added products, with operations scheduled to begin in early 2024.

### R&D and Intellectual Property

In the engineering plastics business, we have concentrated development, primarily in composites, in Sakai. This is closer to our market, empowering us to swiftly identify customer and market needs and develop applications with customers.

As well as expanding our tank applications and existing value-added application businesses, we are cultivating environmental conservation areas. They include cellulose nanofiber composites and recycled nylon composites. We are constantly developing products to underpin our composites business by 2030.

## Digital Transformation

We have made our composites business the first for which we are building a global SAP system linking Japan with Thailand and Spain. We share real-time data every day on sales, orders, accounts receivable, purchases, production, and inventory, using it for internal reporting and to deepen communications with local subsidiaries.

We will manage composites information globally, including such qualitative data as market information, customer requirements, and development focuses, and will build our information infrastructure.

### Highlight

- Established Composite Business Dept. as a spin-off of the former Nylon Business Dept., reinforcing its functions. We will invest extensively in this area as a specialty business, targeting profitable growth worldwide.

## Employee message

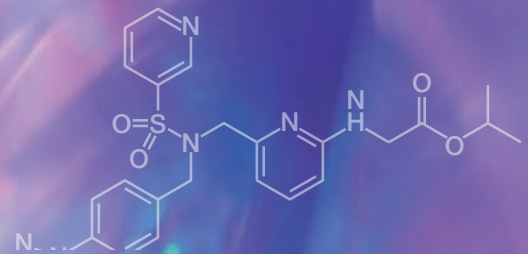
We are developing composite materials employing the biomass-based cellulose nanofiber as a reinforcing material in developing eco-friendly products. The low density and strength of this nanofiber can make automotive and other components thinner, lighter, and more fuel-efficient. We expect the market for this nanofiber to expand in coming years because repeated molding and crushing does not weaken it, making it highly recyclable. We will keep helping to materialize a circular economy by leveraging proprietary technology to swiftly develop and market cellulose nanofiber composites.

*Emi Sugata*

*Composite Materials Development Group,  
Engineering Plastics Development Dept.,  
Performance Polymers & Chemicals Div.*



# Growth Strategies of Specialty Chemicals: Pharmaceuticals



UBE plans for the Pharmaceuticals Division to become a core Group business in life sciences. In drug discovery research, the division has accordingly embraced the challenge of developing small molecule drugs and creating such high-value-added offerings as antibody-drug conjugates. The objective of the contract development and manufacturing organization (CDMO) business is to establish a highly profitable structure by bolstering the existing small molecule drug field while expanding contract manufacturing for low-dose, high-potency pharmaceuticals and obtaining production technologies for nucleic acid drugs and other new modalities. These considerations prompted UBE to strategically purchase all shares in 2022 of CDMO player API Corporation from Mitsubishi Chemical Group company Life Science Institute, Inc. We will keep expanding our business, including through more acquisitions in existing business areas, while exploring ways to enter new life science business areas to reach our goals as a growth strategy business.



*Yoichi Funayama*  
Managing Executive Officer  
General Manager,  
Pharmaceutical Div.

## Business Overview and Features

The Pharmaceuticals Division engages in drug discovery research and CDMO operations. While operating independently of each other, they maintain business models unique to a chemical manufacturer in that we can draw on their dual capabilities to generate synergies as we need.

The drug discovery research business creates candidate compounds for active pharmaceutical ingredients (APIs) that we license to pharmaceutical manufacturers at preclinical stages. It also undertakes joint research and development to bring new drugs to market.

The CDMO business creates APIs, intermediates, and investigational drugs based on the contract with pharmaceutical manufacturers. It maintains stable supplies of high-quality offerings and provides development solution services, including to create manufacturing processes and optimize existing ones.

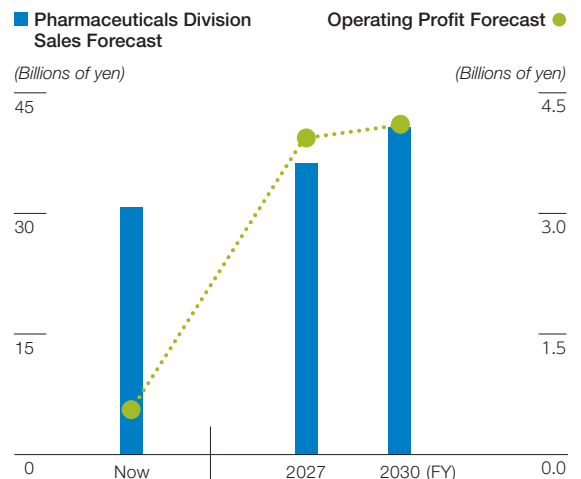
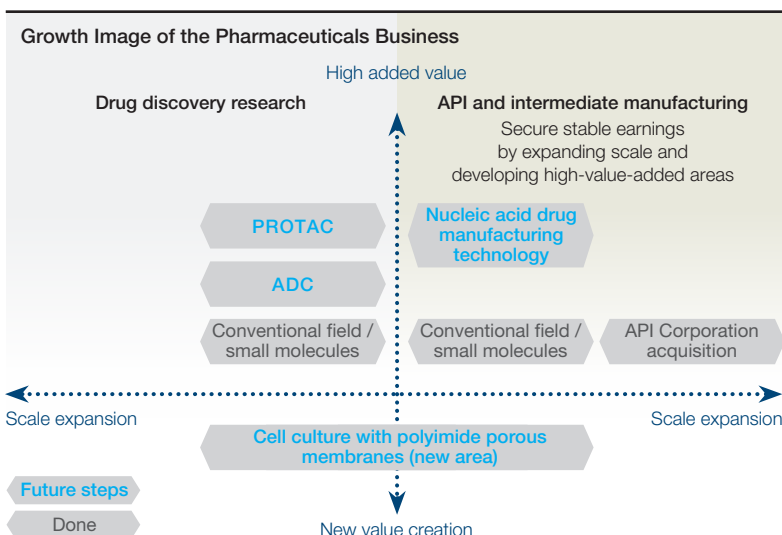
## Social and Market Analysis

Despite declining populations in Japan and some other developed nations, demand for advanced medical care is expected to grow with society aging. On the contrary, in developing countries, fast population growth and rising economic standards should boost demand for pharmaceuticals.

Demand for drugs to treat cancers and rare diseases is expanding more than for lifestyle illness treatments. Nucleic acid medicines, biopharmaceuticals, gene therapy, and other new modalities are emerging to meet such needs.

## Vision for 2030

We aim to generate stable royalty income from several drugs that we have developed. We also look to become highly profitable by doing more business in high-value-added fields, such as contract manufacturing for nucleic acid drugs, while entering new business areas in the life science field.





## New Value Creation

### Opportunities and risks

#### Opportunities

- Increasing demand for advanced medical care
- Growing need for stable supplies of top-shelf pharmaceuticals in developing countries

#### Risks

- Paucity of target molecules and increasing difficulty of first-in-class development in small molecule drug field
  - ➔ Standardize development priorities, strengthen open innovation, and leverage ecosystems to streamline drug discovery research

### UBE's strengths

- Joint development with pharmaceutical manufacturers and proven record in drug discovery based on organic synthesis technologies cultivated over many years as a chemical manufacturer
- High-quality API manufacturing capabilities based on a variety of facilities, equipment, and advanced quality control systems that match setups in Japan, the United States, and Europe
- Solution services for manufacturing and developing APIs and intermediates, which have earned accumulated results



### New value creation

- Help develop and manufacture new medicines and provide means to safeguard human health and lives from diseases

## Growth Strategies

### ● Drug Discovery Research Business

We will expand drug discovery targets by accord- ing top priority to clinical needs, developing such new modalities as antibody-drug conjugates and proteolysis-targeting chimera\* and conventional small molecules to bolster our pipeline and swiftly launch products.

\* A molecule with two active domains and a linker that can remove specific unwanted proteins

### ● CDMO Business

The UBE Group will establish a highly profitable structure through action in several respects. First, we will leverage our production capacity, which is one of the biggest in Japan, to expand contract manufacturing of small molecule drugs. Second, we will maximize earnings from our fifth pharma- ceutical plant, which manufactures low-dose, high-potency pharmaceuticals, and do more of our business in such high-value-added fields as nucleic acid drugs.

### ● New Business Creation

We aim to enter new business areas in life sciences, focusing on cell culture systems using polyimide porous membranes.

### R&D and Intellectual Property

Our CDMO business develops APIs for nucleic acid drugs. We are striving to streamline nucleic acid drug development. To that end, we are lever-

aging an investment in Luxna Biotech Co., Ltd., a venture company developing nucleic acid drugs based on a modified nucleic acid group that Osaka University developed. We are also joining RNA-targeted drug discovery technology develop- ment carried out by the Japan Agency for Medical Research and Development. While there are issues in developing and manufacturing bulk nucleic acid drugs, such as impurity control asso- ciated with increasing scale, we are striving to resolve these issues by collaborating more with equipment manufacturers to innovate.

### Digital Transformation

We are accelerating drug discovery research by deploying chemo-informatics, optimizing existing processes with process informatics, improving efficiency by adopting automated operations, and exploring digital plants that provide data assurance.

### Highlight

- Protecting biodiversity is the 15th of the United Nations' Sustainable Development Goals (SDGs). For this reason, in January 2023 Pharmaceutical Research Laboratory obtained Japan Pharmaceu- tical Information Center certification for maintain- ing appropriate animal welfare systems for animal testing. We will continue to properly supervise and manage all animal testing.

## R&D

The UBE Group has positioned R&D as a sustainable growth driver. It is accordingly transitioning to specialty chemicals and tackling environmental issues.

R&D supports the UBE Group’s growth to materialize its Vision for 2030. Our mission is to develop technologies in order to transition to specialty chemicals and tackle environmental issues. Our distinctive products derive from proprietary manufacturing processes that we have amassed over the years. Our offerings are outcomes from creative ideas and innovative production techniques, and perform better than counterparts from rivals. We seek to contribute to society by delivering value that helps resolve social issues. We will accomplish this by nurturing such proprietary technologies while collaborating with other companies, universities, and research institutions to create new ones. We will keep developing technologies to overcome troubled todays and brighten tomorrows.



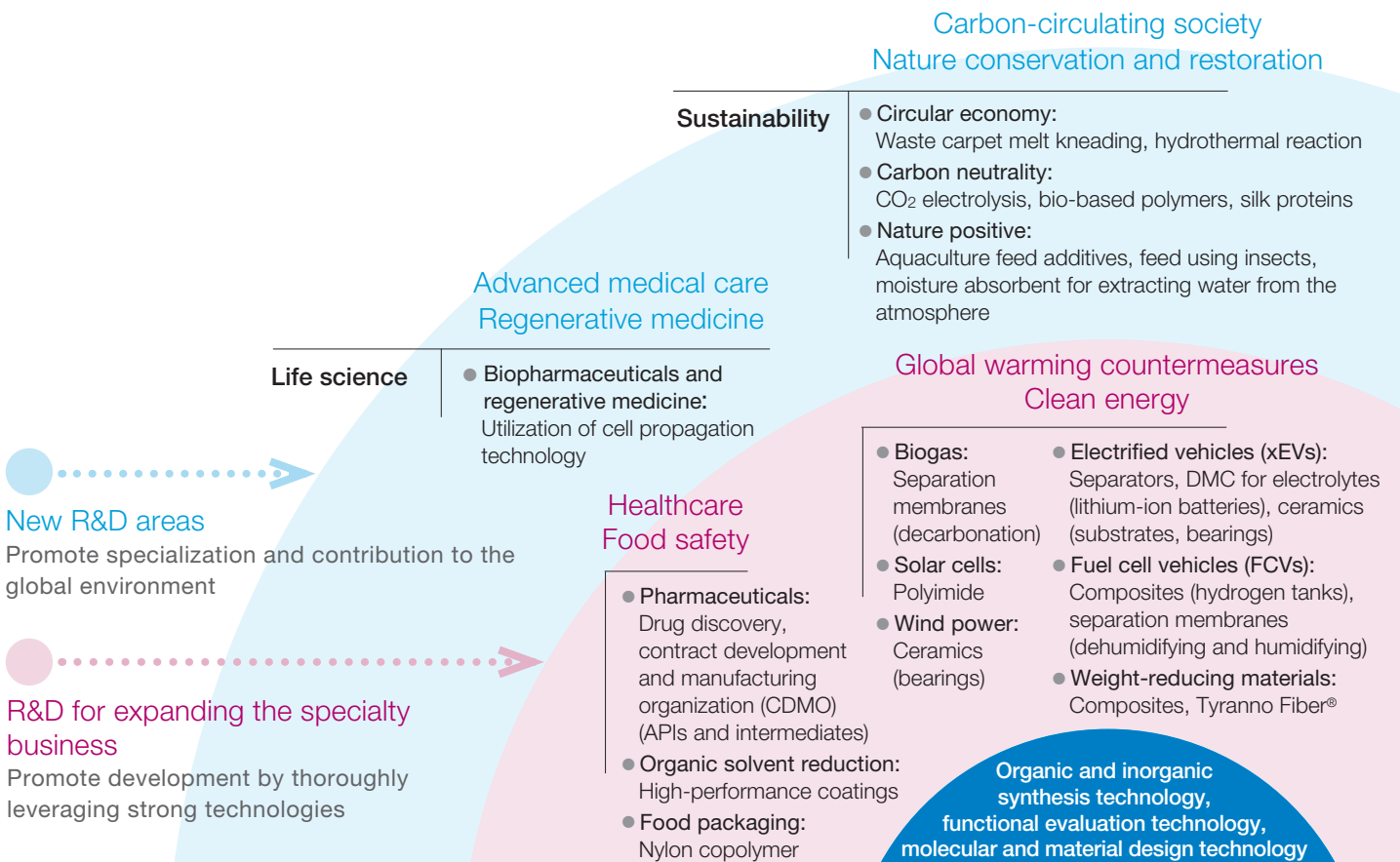
*Masahiro Naiki*

*Executive Officer, General Manager,  
Research & Development Div.,  
with responsibility for development section  
and Intellectual Property Dept.*

### R&D Policies and Structure

The UBE Group is striving to transform its business portfolio, which is vital for long-term growth, by leveraging R&D to create new businesses and resolve environmental issues at core domestic sites in Ube, Sakai, and Chiba and at business sites in Spain and Thailand. Two particular challenges are to focus on specialty businesses and become carbon neutral. We therefore engage with

prospective customers to offer unique solutions that integrate core technologies that have underpinned our chemicals business with the specific requirements of customers. We will provide materials matching social demands. We will do this by employing open innovation to build a technological edge, combining core internal technologies with external ones while digitizing processes as part of efforts to shorten R&D lead times.



## Core Technologies Supporting Specialty Businesses

**Distinctive technologies** Molecular and material design, functional evaluation, and information technologies

**Core technologies** Organic and inorganic synthesis, engineering, polymerization, processing, catalyst, compounding, and quality and process control technologies

We will generate and deliver value that helps resolve social issues by drawing on proprietary technologies and innovative manufacturing capabilities that we have cultivated over our more than 120 years. Particular priorities are to use molecular and materials design technology based on customer requirements to design chemical structures and compositions, and functionally evaluate them. We will swiftly reflect feedback regarding these molecular and materials designs to provide brand new solutions to customers. Those customer requirements could include materials' heat resistance, strength, and recyclability or target biomolecule binding for pharmaceuticals.

## Technology Strategy and Marketing Activities

Our R&D policy is pivotal to us as a manufacturer because technology is and will remain fundamental to our business. We formulate and review

technological strategies to meet contemporary needs through marketing to create new themes and marketing for products created by the Research & Development Div.

We have established three key research domains. The first is life sciences, where we will focus on healthcare. The second is energy management, spotlighting energy efficiency in the automotive and electrical and electronics areas. The third will be sustainability, encompassing the circular economy, carbon neutrality, and nature positive. We will create specific R&D themes based on forecasts.

We will take stock of the core technologies that make us competitive in providing new solutions to customers. We will refine and clarify our technology portfolio and acquire new core technologies for the Group.

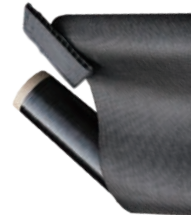
## Key Examples of Specialty Chemicals R&D

### Inorganic Materials Development

UBE offers top-notch inorganic materials with performance properties that differentiate them competitively. They serve largely in vital high-end applications. We must specialize increasingly as social needs change so that we can cater to demand niches. Promptly identifying and addressing key challenges with advanced materials is vital to our ongoing success. Society has demanded urgent action in recent years to cut GHG emissions and shrink environmental footprints. This situation has accelerated efforts to electrify automobiles and heighten engine efficiencies in such fields as passenger aircraft, where electrification is extremely difficult.

UBE is well positioned to overcome the performance and quality hurdles of such mobility transitions. We will continue developing materials to tackle these challenges.

High-performance ceramics, for example, result from eliminating foreign matter and defects that impede reliability. They serve for long periods of time under harsh conditions, including high voltages, high-speed scraping, and high temperatures requiring thermal efficiency. We will overhaul the manufacturing technologies that are our strengths while monitoring social issues and collaborating with customers to help resolve those issues.



Tyranno Fiber®

xEV/FCV mobility innovation  
High-speed, high-capacity  
information transmission

### Energy management

Heat-dissipating composite materials  
New bonding material

### Prosperous future Digitalization

- Displays, circuit substrates:  
Polyimide
- Semiconductors:  
Resins for encapsulation materials

### Drug Discovery Research and Pharmaceutical Product Development

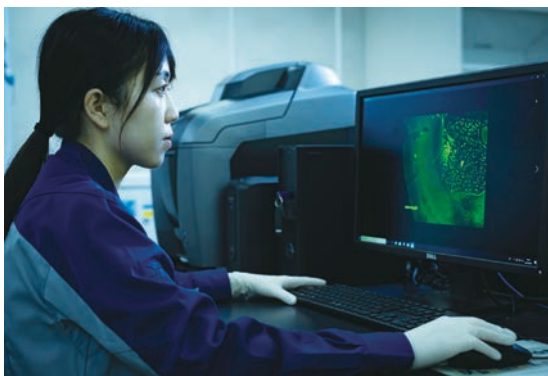
In recent years, drug discovery research and pharmaceutical product development with diverse discovery platform technologies have driven the commercialization of small molecule drugs and antibody drugs and other molecules. These have included nucleic acid drugs and gene therapeutics for commercial pharmaceuticals.

It is against this backdrop that UBE is expanding its drug discovery targets. One focus is small molecule drugs, four of which we have developed and launched in collaboration with pharmaceutical companies. Another is for disease areas with pressing clinical needs. We are, for example, working on modalities to fully leverage our conventional small molecule drug discovery experience, such as with antibody drug conjugates and proteolysis-targeting chimera.

Such a conjugate comprises three components. They are an antibody, a therapeutic payload, and a linker that attaches the payload to the antibody. The antibody transports the conjugate payload to diseased tissues. Because of its molecular design, the linker efficiently cleaves and releases the payload from the conjugate in the tissues to which the antibody carries it. We aim to build a business model in which we create new conjugates by harnessing our expertise in small molecule drug discovery to design, applying linker and payload combinations to antibody drugs offering exceptional safety and efficacy.

Proteolysis-targeting chimera combines two functions and similarly has three components. These are a target protein binding site, a binding site for enzymes that degrade proteins, and a linker. UBE looks to make it feasible to target proteins that have been beyond the capabilities of antibody drugs, as well as small molecule compounds. We have started exploring this area as new drug discovery modalities in which we can leverage our experience with small molecules.

We will also pursue R&D in new modalities to bolster our pipeline and swiftly bring offerings to market.



### Heat-Dissipating Composite Materials

The information economy has improved lifestyles with rapid increases in the performances of electronic devices and communication technology speeds.



*Heat-dissipating composite materials*

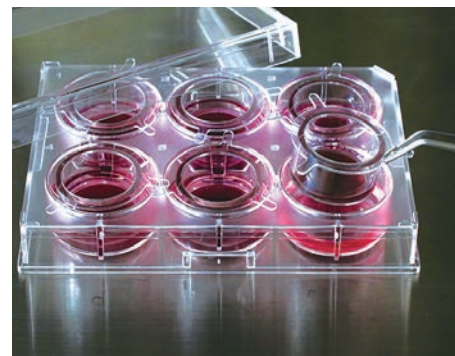
Work is progressing on advanced electric power networks in line with the renewable energy uptakes. Thermal heat issues are becoming more apparent as these technologies go mainstream and information and telecommunications equipment and power control devices become more sophisticated, integrated, and miniaturized.

One solution for these issues is a heat-dissipating composite material for energy management that UBE developed with Akane Co., Ltd., in Hiroshima. This material's thermal conductivity is three-fold that of aluminum nitride for heat-dissipating substrates and is roughly double that of copper. Its low thermal expansion coefficient could offer good bonding with advanced semiconductors. Another advantage is that its specific gravity is just one-third that of copper, which makes it possible for manufacturers to reduce the weight of their products. We are commercializing such composite materials based on the world-class thermal conductivity of our materials.

### 3D Cell Culture

Biopharmaceuticals come from the protein-producing capabilities of cells, microorganisms, and other living organisms. The emergence of biopharmaceuticals has fostered the development of drugs that can combat diseases that have been hard to treat. The quality of biopharmaceuticals is difficult to control, as they result from cell metabolisms that change in varying external environments. The slightest difference in manufacturing process conditions can drastically transform quality. These drugs are thus extremely expensive, which is a social issue.

UBE's proprietary 3D cell culture substrates overcome these issues because they stabilize long-term animal cell cultivation. We are researching and developing a proprietary biopharmaceuticals production process. We are working on a prototype cell culture kit to make exosomes and



*Cell culture kit under development*



therapeutic antibodies on small scales for testing among diverse industry players.

### Progress in Developing CO<sub>2</sub> Capture and Utilization Technologies

CO<sub>2</sub> emissions are a global problem. It is necessary to innovate technologies that position these emissions as resources and tap them effectively.

Long-term studies are necessary to develop chemically stable CO<sub>2</sub> utilization technologies needed to become carbon neutral. UBE is collaborating with universities, research institutions, and other companies to develop such technologies.

### Polycarbonate Diol Employing CO<sub>2</sub>

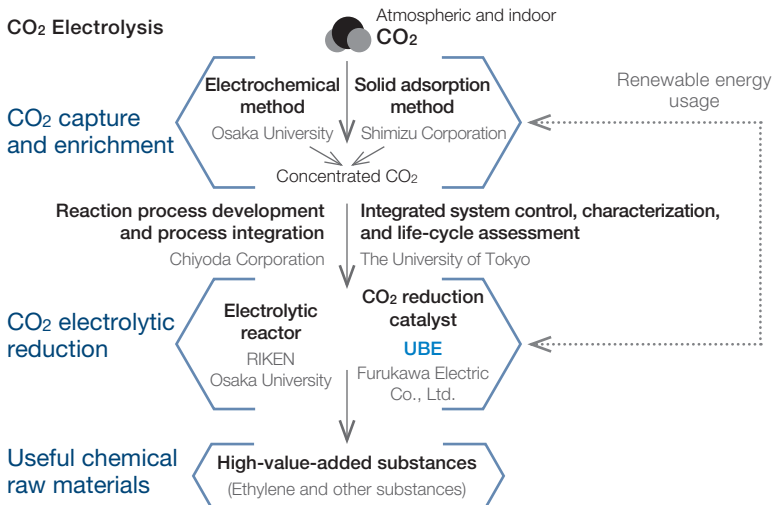
Polycarbonate diol is an essential intermediate for highly durable polyurethanes. UBE manufactures it in a multistep reaction process that uses carbon monoxide and other substances.

Osaka Metropolitan University, Nippon Steel Corporation, UBE, the University of Tokyo, Kyoto University, and Tohoku University have together embarked on an initiative to develop a one-step synthesis process for polycarbonate diol from CO<sub>2</sub>. This effort is part of a project that the New Energy and Industrial Technology Development Organization (NEDO) commissioned. It is called Development of Technologies for Carbon Recycling and Next-Generation Thermal Power Generation/Carbon Recycling and Next Generation Thermal Power Generation Technology Promotion Project/Development of Common Basic Technology for Carbon Recycling Technology.

UBE will evaluate quality and suggest improvements to processes to pave the way to commercialization and help achieve carbon neutrality by 2050.

### CO<sub>2</sub> Electrolysis

UBE is collaborating with industry, academic, and government bodies in a project in NEDO's Moonshot R&D Program, called Integrated Electrochemical Systems for Scalable CO<sub>2</sub> Conversion to Chemical Feedstocks. The project aims to develop an integrated electrochemical system that captures and enriches atmospheric emissions of diluted CO<sub>2</sub> with physical and chemical techniques, and then converts it to chemical feedstocks such as ethylene with renewable energy. We are creating electrode components that very efficiently reduce CO<sub>2</sub>. We will continue working on technologies for real-world implementation.



### Talent Development Initiatives

As well as R&D, creating new businesses entails understanding entire processes through commercialization. We are developing people who can set up new businesses by having them gain experience outside R&D, rotating them to other divisions and seconding them to other companies.

#### Employee message



I focused on materials research after joining UBE but wanted to be capable of creating new businesses. So, I requested a secondment to Refinverse Group, Inc. to learn about sales and business development. There, I interviewed and presented solutions to companies engaged in circular economy initiatives. Beyond these marketing activities, I also developed biomaterials businesses tapping unutilized resources.

**Keisuke Kuroishi**

Seconded to: Refinverse Group, Inc. Business Development Dept.  
Now: Technology Marketing Group, Research & Development Div. of UBE Corporation

I will draw on that experience to create new environmentally friendly businesses at UBE.

Before secondment, I was keenly aware of how hard it would be to launch new businesses. I wanted to transfer to a venture capital firm to broaden my perspectives beyond in-house walls. My primary role is to start companies based on academic technology seeds. I am learning a lot about investment practices and about the philosophies that are essential to establish and grow new businesses and make them succeed. After returning to UBE, I look to apply this mindset to deliver results.



**Yuji Hirai**

Seconded to: Universal Materials Incubator Co., Ltd.

# Intellectual Property

## Basic Policy and Structure

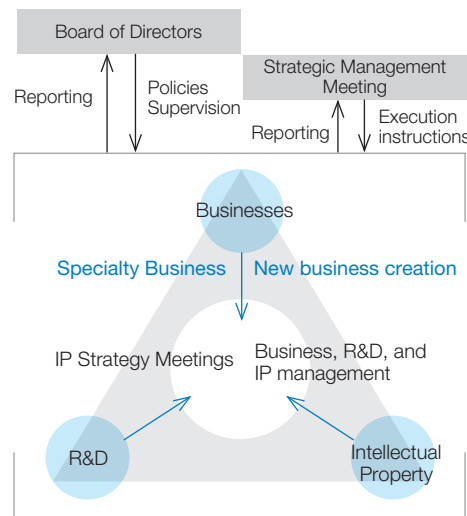
### Basic Policy

We will gain a sustainable competitive edge in our specialty chemicals business by having our business, R&D, and IP departments collaborate closely in IP initiatives.

### Structure

For the specialty business, these three departments hold IP strategy meetings. There, they discuss IP acquisitions and progress with investments in that area to ensure initiatives are on track.

Regular reports on overall IP activities go to the Strategic Management Meeting and the Board of Directors. They issue instructions on and supervise policies and execution approaches for IP efforts.



## IP Initiatives under the Current Medium-Term Management Plan

Under UBE Vision 2030 Transformation — 1st Stage, our current medium-term management plan, our vision is to become a corporate group centered on specialty chemicals that contributes to the global environment, human health, and an enriched future society. We will help achieve our vision by taking several steps in the IP arena. One will be to disseminate useful information and make proposals by tapping patent search and other digital tools. Others will be to build a patent portfolio relating to specialty chemicals and environmentally friendly products and technologies, enhance Group IP governance, and bolster specialist talent. Details are as follows.

### 1. Build an IP Portfolio

It would be impossible to build a specialty chemicals business without IP. We are building a portfolio for that property that matches the nature of each specialty chemicals business. Specifically, we are amassing the patents we hold and the strategies we are using to reach business targets under our Vision for 2030. We will draw on IP information through patent maps\*1 and IP landscapes\*2 to identify new issues for resolution, new applications, and prospects for alliances with other companies.

For new inventions, our application review council assesses their essences and patentability

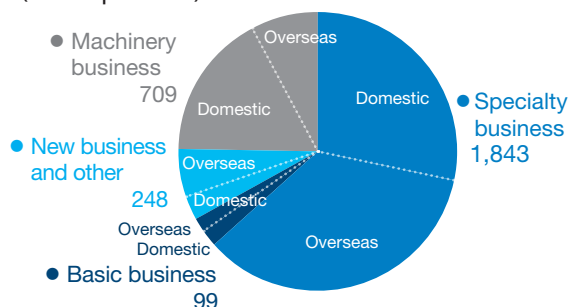
and determines the scope of rights in view of the supply chain and future implementation approaches. By deciding appropriately on whether to keep information open or closed, we seek to sufficiently safeguard our technical achievements, establish high barriers to entry through IP, and build a sustainable competitive edge for our businesses.

### Utilization Strategy Examples

Product groups	Number of patents	Recent applications	Other company focuses	Responses
A	○		○	Current mainstays →Maintenance measures
B		○	○	Focus→Build portfolio
C			○	Licensing
D				Divest and sell

The R&D and Intellectual Property part of the Growth Strategies of Specialty Chemicals section on page 24 presents progress with specialty

### Number of Registered Patents by Portfolio (As of April 2023)



### Glossary

\*1 A patent map is a visual representation from collecting, analyzing, processing, and organizing patent information into charts, graphs, and other visual information.

\*2 IP landscape is an analysis of management and business information incorporating IP information in formulating management and business strategies and sharing results (including overviews of current situations and prospects) with management and business leaders.

chemicals R&D. We are pushing ahead with timely patent applications and rights acquisitions.

The number of registered patents is as shown on the left. We will increase the proportion of new and specialty chemicals patents.

### 2. Strengthening IP Landscape Efforts in R&D

Through R&D stages leading to commercialization, we research and analyze IP information and supply insights to the Research & Development Division about technological trends and competitor activities.

By tapping IP information from early R&D stages, we help develop themes, explore new businesses, and create collaborative partnerships.

### 3. Patent Clearance

We endeavor to respect the IP rights of other companies as we do our own. We accordingly do our utmost to conduct patent clearance searches and minimize business risks in existing businesses and at the commercialization stage in R&D.

### 4. Group IP Management

Collaboration between IP personnel at UBE Group companies enables us to handle the Group's inventions, supply IP information, and drive progress in IP management.

### 5. IP Human Resource Development

We foster a culture that emphasizes and respects IP by enhancing IP literacy.

We provide IP education by conducting Companywide programs that we tailor to new employee, general worker, and management levels. We also educate departmental information management personnel about trade secrets.

We look for specialists from the Intellectual Property Department to be proposal approach oriented to contribute extensively to R&D, business, and management by leveraging IP information and experience in applying for and obtaining patents.

We encourage employees to obtain external qualifications relating to IP, such as by becoming patent attorneys, acquiring IP skill certifications,

and becoming IP analysts. We had four qualified patent attorneys as of March 2023.

### Brand Tagline Trademark Applications

UBE Industries, Ltd., renamed itself UBE Corporation in April 2022.

UBE has long maintained and managed trademark rights to the UBE logo. In view of the renaming, we developed the Transform Tomorrow Today tagline and applied for trademark registration in Japan and abroad for the combined trademark and tagline. We are in the process of acquiring these rights.



### Inventor Incentives

In line with employee invention rules, we incentivize inventors upon applying for, registering, and implementing patent protections. At UBE Group R&D briefings, we honor inventors of patents that have contributed significantly to our business. Such recognition motivates inventors and encourages them to pursue further advances.

In fiscal 2022, we presented awards to inventors for patents in the polyimide and pharmaceuticals areas of our specialty businesses.



### Message from outside counsel

I have served as representative for the UBE Group in its IP practice for more than 20 years. The Group holds many specialty chemicals patents. We endeavor to secure rights not only to fundamental technologies but also to such related technologies as manufacturing techniques and applications so that UBE can maintain its competitive edge in the specialty chemicals sector for many years to come.

I look forward to collaborating closely with internal teams and representatives to bolster UBE's IP network, thereby contributing to its progress as a specialty chemicals company.

#### Kazuya Senda

Representative Partner of Kisaragi Associates  
The former Vice-President of Japanese Patent Attorneys Association  
Daini Tokyo Bar Association Counselor at Law and Patent Attorney



# Business Transformation with Digital—Transforming Our Business with Digital Technology— Digital Transformation Strategy

Our vision is to become a corporate group centered on specialty chemicals that contributes to the global environment, human health, and an enriched future society. We have accordingly committed ourselves to collaborating with stakeholders to create new value by leveraging technology and innovation to digitize and overhaul business processes.

Yuki Nishida

Senior Managing Executive Officer  
Assistant to the President, General Manager,  
Production & Technology Div. and DX Promotion  
Office, with responsibility for Information  
Systems Dept. and C1 Chemicals Project



## Our Digital Transformation Approach

In fiscal 2022, we launched the first stage of UBE Vision 2030 Transformation to focus on growth in specialty chemicals and contribution to the global environment. One of our basic policies and priority measures is to enhance corporate value and create customer value through such a transformation. It is important to emphasize that our digital transformation push goes well beyond conventional approaches. Our strategy is to deploy digital transformation so our businesses can accelerate our specialty chemicals growth and environmental

contributions. We will enlist all employees and operational domains in transforming our business. It is against this backdrop that we are refining our digital transformation strategy by establishing roadmaps for eight themes while sharing insights and knowledge in boldly and swiftly executing these strategies.

## Our Eight Digital Transformation Themes

We formulated these themes to drive digital transformation advances.

### 1. Smart Factory

We will use AI to harness the massive data resources of our factories. We will work to make these facilities smarter in several ways. This could include tapping AI to stabilize and streamline operations and managing facility data to predict and avoid equipment failures.

### 2. Digital Marketing

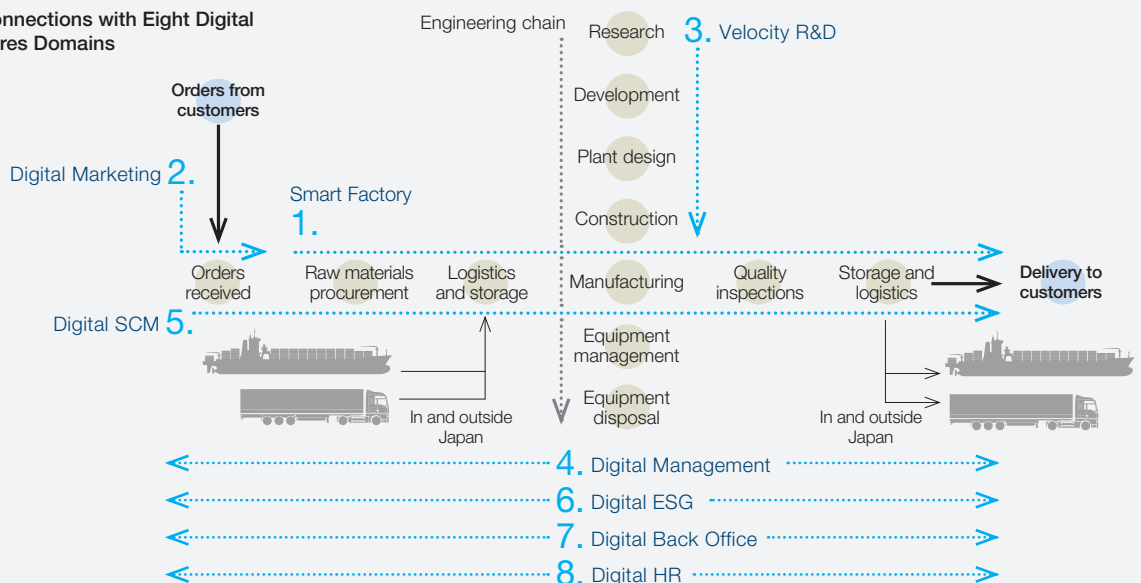
We are supporting sales and marketing with customer relationship management and salesforce automation platforms. We will clarify customer relationships and information across all businesses to drive cross-selling. We will draw on the data we

## Basic Digital Transformation Policy under the Medium-Term Management Plan

Enhance corporate value and create customer value by pursuing digital transformation

- Develop digital talent
- Improve operational efficiency and productivity by using digital technology
- More swiftly create new customer value and businesses

## Interconnections with Eight Digital Measures Domains



acquire in these processes for marketing and production planning.

### 3. Velocity R&D

One development goal is to digitize data from experiment notes and other paper data and incorporate it in materials informatics, which uses information science techniques to accelerate efforts to enhance development efficiency. A second objective is to build an IP landscape to bolster our strategy in that area. We will draw on that setup to pursue acquisitions and explore new businesses beyond current divisional boundaries.

### 4. Digital Management

We will manage performance by digitizing processes to streamline settlements and make budgeting more precise. We plan to deploy the SAP S/4 HANA enterprise resource planning platform in 2024 so management can become more data-driven, using real-time information dashboards to make decisions.

### 5. Digital SCM

We will link our supply chain to our smart factory and digital marketing themes. We will digitally manage our supply chain in everything from raw materials procurement planning through production and sales planning and later stages. Such an integrated and systematic approach would enable us to reinforce our supply chain as a specialty chemicals company.

### 6. Digital ESG

We will use digital processes to develop environmentally friendly products and manage information on GHG emissions including Scope 3 to safeguard the environment.

### 7. Digital Back Office

We will enhance back-office operations by adopting standard business processes based on total quality management, a companywide unified quality control initiative to improve quality.

### 8. Digital HR

We will do much more than simply develop digital talent. We will clearly identify the technology innovators, marketers, and other individuals we need to drive our specialty chemicals growth. We will also present career paths to young people and help older employees to reskill.

We have assigned executives to oversee these themes to digitize operations from management

perspectives. We established a program that partially links executive compensation to progress in those themes to help make our digital drive more effective.

#### Attracting and Developing Digital Talent

We employ the Innovator Theory model in seeking to secure and develop individuals, of whom 2.5% are innovators and 13.5% are early adopters. We currently have approximately 60 innovators and 300 early adopters, which is basically on target in view of the size of our workforce. We additionally develop digital talent by offering learning about digital transformation at the Plant Operation Technology Training Center, which is part of the Production & Technology Division. Through such efforts, we believe that innovators and early adopters can systematically cultivate digital technology experts who can help us progress in specialty chemicals while spreading knowledge Company-wide about digital processes.

#### Business Division-Led DX Promotion Office

In April 2022, we established the DX Promotion Office. I head that entity, which spearheads UBE's digital transformation strategy, including through initiatives described earlier. IT departments oversee digital transformation efforts at most companies. In contrast, this office comprises more than 60 employees in their 20s to 40s whom it secured from business divisions, factories, laboratories, and headquarters departments.

Although the office has only operated for around a year, it has underlined President & Representative Director Masato Izumihara's confidence that UBE will become a specialty chemicals company. He is keen to leverage digital transformation to foster a new business model for UBE. We have progressed significantly in the past year, doubling the number of digital transformation themes to eight and bringing more digital natives to the fore.

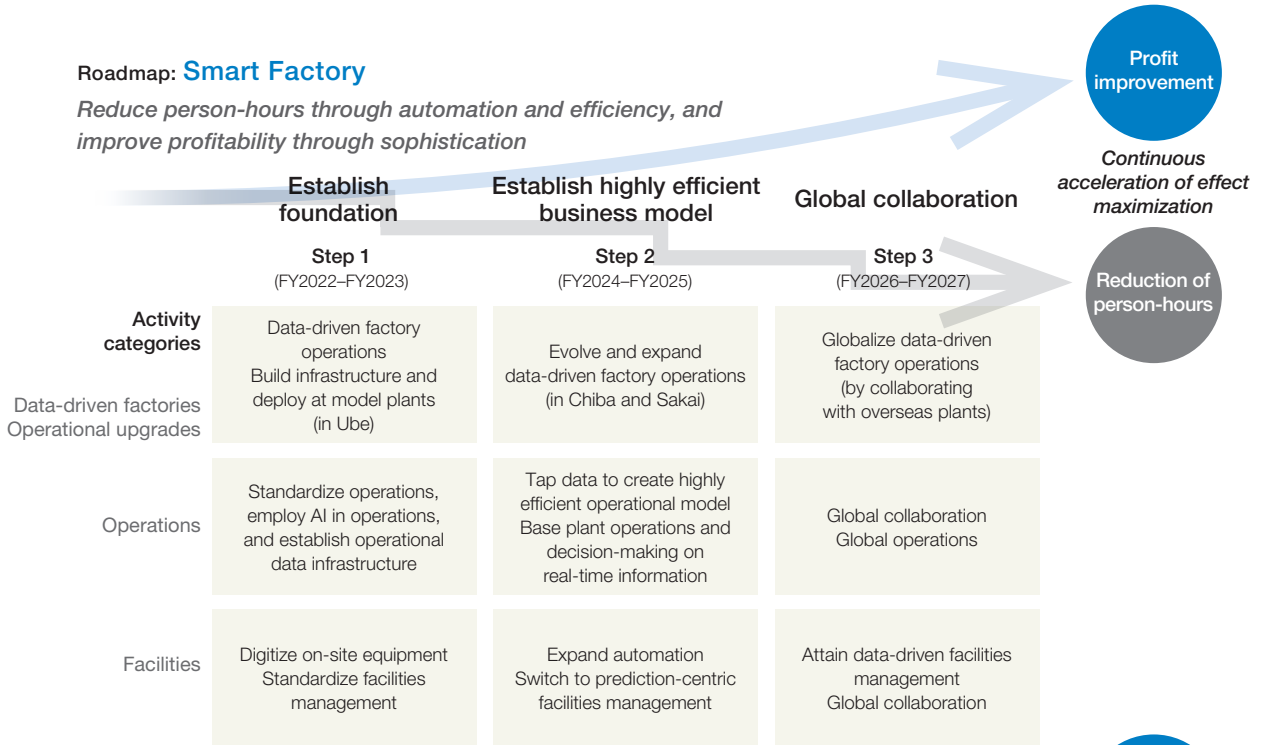
While frankly a late-starter in digital transformation efforts, UBE has learned much from the experiences of many other companies, fueling its fast progress in this respect over the past year. We have pledged to all stakeholders that we will keep pressing ahead in digitizing our business processes until we reach our goal of transforming our organization. We will draw on the digital literacy of all employees and overhaul their capabilities in a drive to deliver new value for customers and the economy.

**Excerpt from Theme Roadmaps**

For all themes, we created the following roadmaps to systematically digitize our business processes.

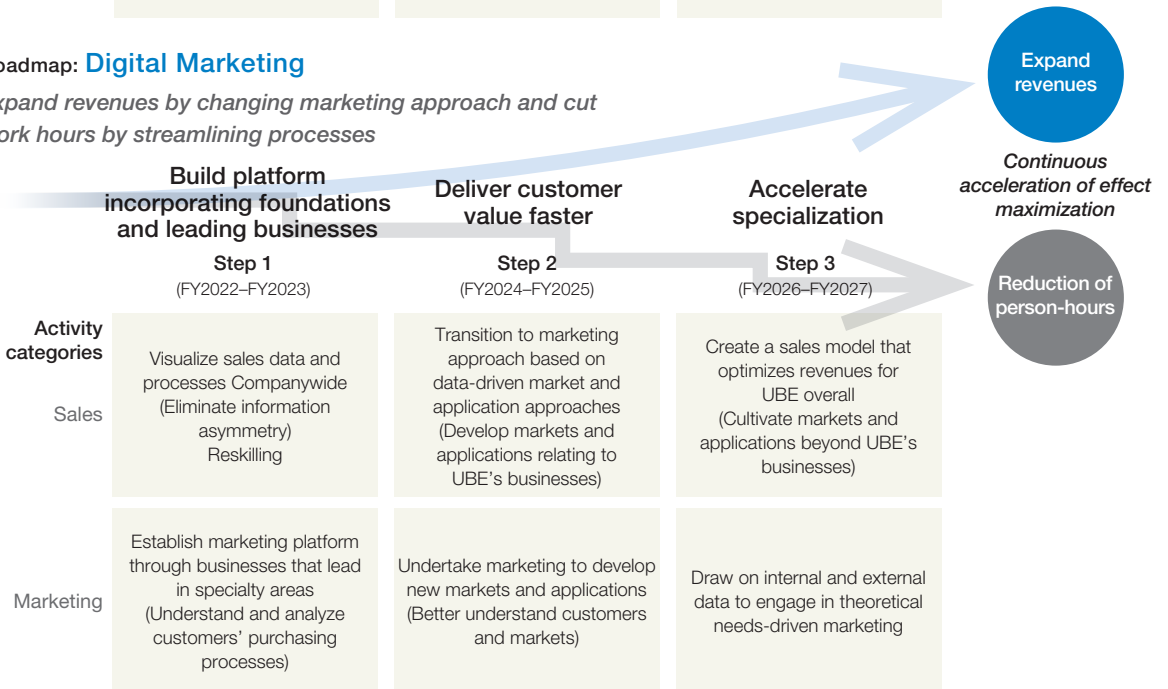
**Roadmap: Smart Factory**

*Reduce person-hours through automation and efficiency, and improve profitability through sophistication*



**Roadmap: Digital Marketing**

*Expand revenues by changing marketing approach and cut work hours by streamlining processes*



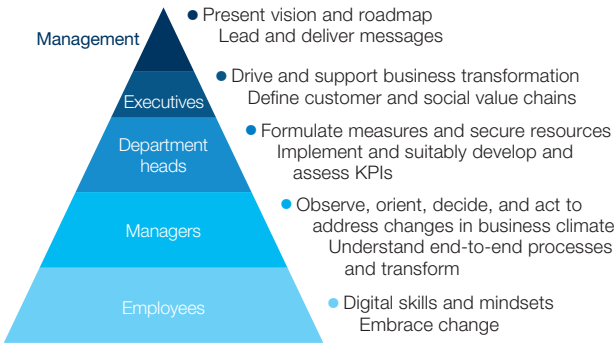
**Digital Transformation Investments and Returns**

<p><b>Investments in fiscal 2022 through fiscal 2030</b>  <b>Approx. ¥20 billion</b>                  (Under current medium-term management plan, approx. ¥10 billion, including to deploy S/4 HANA platform)</p>	<p><b>Returns: Estimated profit contributions of digital transformation</b>                  Gradually accruing from fiscal 2024, reaching approx. ¥30 billion in fiscal 2030</p>
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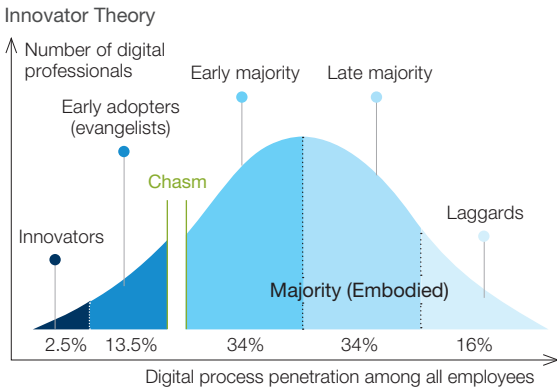
### Developing Digital Talent

We offer group and practical training, e-learning, correspondence courses, and assistance for securing qualifications by job level in line with the digital talent profiles that we have defined.

#### Encouraging All Employees to Acquire Digital Literacy Skills and Mindsets



#### Digital Talent Development (Workforce percentages)



	Fiscal 2022 results	End of fiscal 2024 targets
● Innovators	2.7%	2.7%
● Early adopters (Evangelists)	10.5%	13.5%
● Majority (Embodied)	—	83.8%

### Success Story

#### Leveraging AI to Detect Anomalies: Smart Factory Theme

Distributed Control Systems centrally monitor chemical plants. They constantly track more than 1,000 instruments at some larger facilities. The number of instruments that operators monitor has increased in recent years, but human monitoring is reaching its limits. UBE has accordingly harnessed machine learning and AI image recognition technologies to make anomaly detection more accurate.

In one case, we deployed this recognition technology to automatically detect abnormalities in product packaging. One internal strength that we can leverage here is that we employ general-purpose software to collect images for recognition and program applications in-house. We have thus been able to eliminate all abnormalities without incurring outsourcing expenses.

#### Results of Abnormal Packaging Detection Testing with AI Image Recognition



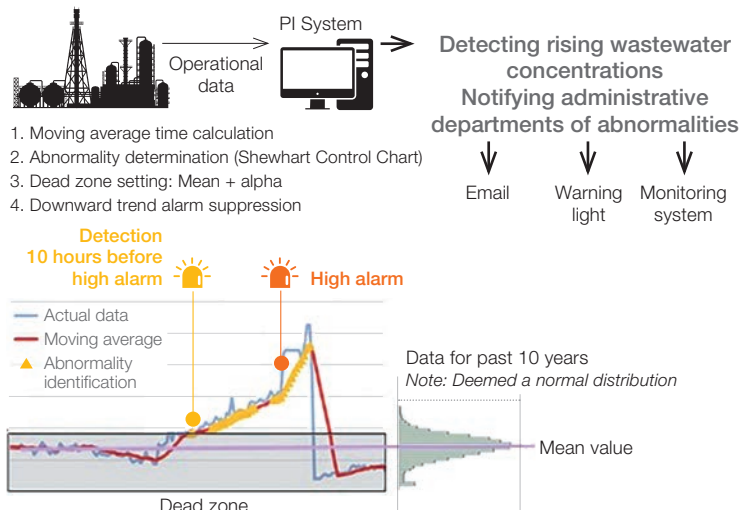
Tom bag

AI-based recognition of tear and wrinkling

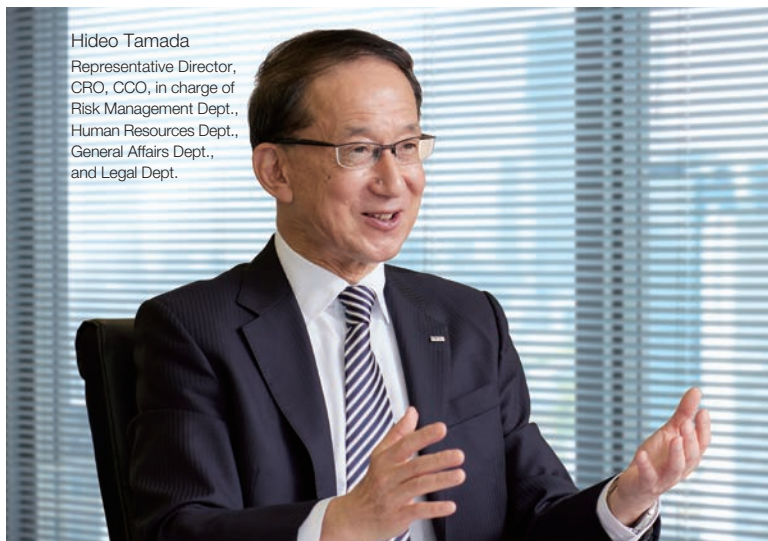
#### Data Monitoring-Based Predictive Detection: Smart Factory Theme

Detecting abnormalities at plants prevents problems from occurring. We deployed our Plant Information Management System for that reason in the late 1990s. The system generates huge volumes of empirical, quality, and other digital data related to manufacturing at each plant. In monitoring impurity concentration of plant's wastewater, we adopted trend monitoring, which statistically processes data for the past 10 years and factors in abnormality probabilities. This setup has enabled us to detect these issues at early stages, even where such situations would not have normally triggered alarms, when concentrations of abnormalities gradually increase. The system notifies the person in charge by email and warning lights as soon as it detects an aberration.

#### Predictive Detection Concept



## Three-Way Discussion about Talent Strategy to Expand the Specialty Chemicals Business



# Talent Strategy to Expand the Specialty Chemicals Business

The UBE Group is pushing to transform its businesses and the Company as a whole to drive growth in specialty chemicals. An institutional investor with expertise in ESG investments, a director spearheading UBE's human resources strategy, and an outside director sat down to exchange views on bolstering the talent underpinning the Group's growth.

### What is your basic approach to strengthening human resources to drive growth, particularly in specialty chemicals?

**Tamada:** We aim to become a corporate group focusing on specialty chemicals by 2030. We are overhauling our business structure and reinforcing our earnings base under our current medium-term management plan. We consider it vital to spotlight people as part of these specialization efforts. One of my focuses is its linkage with a promotion of digital transformation in the plan.

I discussed this with Yuki Nishida, a senior managing executive officer, who oversees digital transformation. We agreed that the human element will ultimately determine the success or failure of these efforts and their creative impact.

Given that digital transformation will be a prime driver in our specialty chemicals growth, I believe that there are two current priorities. One is to develop experts who can build our technological prowess in that field. The other is to combine

those capabilities with each theme of the digital transformation measures.

**Suzuki:** While I sense that UBE's current workforce finds it hard to adapt to changing times, I do appreciate that it greatly understands its purpose and social roles, as it endeavors to create products that benefit others. Also, I think it is important to explore ways to link personnel policies to non-financial and financial metrics. We should additionally consider how these policies can have a positive impact on financial figures.

**Watanabe:** I calculate a company's intrinsic value as an institutional investor. I focus on three critical value components. These are ROE, profit growth rates, and cost of capital.

It is in that context that recognizing the continuity and scalability of human capital in IP, R&D, and other aspects of the foundations for profit expansion enables us to project long-term profit growth and calculate lower cost of capital. A company's intrinsic value thereby increases.





While it is challenging to properly evaluate human capital, you have to do this in seeking intrinsic value. So, I look for UBE to go beyond mandatory requirements and comprehensively disclose information, including the significance of KPIs and strategies relating to personnel.

**How do you think addressing gender gap and other DE&I initiatives connect to UBE's growth as a specialty chemicals company?**

**Tamada:** While the UBE Group lags others slightly in some aspects of DE&I, we do not set KPIs just to tick boxes. Progress in these respects, including gender equality, is essential in securing diversity of decision-making. Ensuring diversity is essential for us to progress in specialty chemicals and overhaul our business structure. In view of the prospective benefits of diversity, the UBE Group is endeavoring to increase the ratio of women for generalist positions, mid-career postings, and non-Japanese employee hiring.

**Suzuki:** We realize that we need to do more than just base measures on existing social systems and rethink things from zero-based perspectives. By 2050, for example, diversity may be fully integrated into workplace culture, with our focus shifting to exploring the future of work in that era.

I believe that diversity is essential for us to become a specialty chemicals company. In a recent Audit & Supervisory Committee visit to a European subsidiary, it was gratifying to see that many of its researchers are women. Still, there is room to advance DE&I by improving communication within the Group.

**Yuji Watanabe**

*Chief Analyst (Materials Sector)  
Active Fund Management Department II  
Daiwa Asset Management Co. Ltd.*

*Became an analyst at Daiwa Asset Management in 2006 after working at a bank, where he worked in lending. Was seconded to an investment advisory firm and engaged in asset management, then moved to venture capital at an operating company.*

*Committee Member of IR Award of Japan Investor Relations Association  
Member of Corporate Disclosure Study Group (Chemicals and Textiles) of The Securities Analysts Association of Japan*

**Watanabe:** I get the impression from what you said that you have a clear vision for the future, that you have set KPIs as stepping stones and have a strong DE&I consciousness. It is important for DE&I within the UBE Group to always connect its specialty chemicals drive with gender equality and diversity.

As your specialty chemicals efforts make technology and IP more important, it will be vital for you to retain the people in your talent pool, regardless of gender. One of the things I benchmark in assessing chemical companies is the proportion ratio of women in R&D. I believe that DE&I will play a major role in UBE becoming a specialty chemicals player. As well as meeting mandatory disclosure requirements about personnel in its annual securities report, I believe the UBE Group can fulfill its commitment to DE&I by highlighting its distinctive initiatives in that regard. I hope that it will focus on such areas.

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**Tell us about the UBE Group's stance and initiatives for recruiting and career development and its compensation structure as it progresses with DE&I.**

**Tamada:** For the compensation system, we have committed to increasing starting and base salaries as a matter of course. We used to hold performance evaluations and career development interviews at around the same time. We now stagger them to devote sufficient time to meaningfully discuss career development with people. We began formulating succession plans for executive officers and executives from 2016 and 2017, respectively. Down the track, we will focus on how to encourage more female employees to become part of succession planning and increase the number of candidates for this.

**Watanabe:** Recruiting, career development, and assessments are as important as I noted with DE&I in UBE becoming a specialty chemicals company. When striving to improve talent, companies often emphasize providing attractive compensation packages. As an investor, however, I would like you to not simply boost pay but also link it to per capita earnings and other productivity outcomes. To secure sustainability, assessments and compensation need to be managed in this regard.

**Suzuki:** The financial principle for investing in people is multiplying time and unit cost, or quantity by quality. As such, I think UBE needs to reconsider some aspects of conventional concepts in striving to become a specialty chemicals company. Investors have long discussed whether to include human capital on the balance sheets. After hearing what Mr. Watanabe had to say, I realized we also need to assess outcomes from investing in talent. People tend to discuss ESG factors abstractly. But we need to quantify and evaluate them as much as possible.

**Tamada:** We will keep considering how best to enhance corporate value in pushing forward with our human resources policies.

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**How do you secure and develop talent for R&D and IP which are so crucial to UBE becoming a specialty chemicals company?**

**Tamada:** A key current priority for the UBE Group is how to strengthen marketing and technical capabilities. With IP, for example, we have

had successes with specialty products stemming from close collaboration with people involved, including up to licensing stages. Also, we look to strategically tap the IP landscape to determine areas we should enter and build our presence. We need diverse ideas to think of new products. Accordingly, I believe that R&D should embrace diversity. We have to attract and develop specialty chemicals experts. Women account for roughly 17% of employees in our Research & Development Division, Pharmaceutical Research Laboratory, and Intellectual Property Department. We will keep presenting clear information to employees about talent requirements and career paths. At the same time, we will attract and develop people with expertise in R&D and IP, which are essential for us to grow as a specialty chemicals company.

**Suzuki:** Even highly specialized knowledge can fast become obsolete in this era of rapid change. We must constantly build highly skilled teams that align with contemporary demands. We believe that instead of relying on conventional processes that cultivate cookie-cutter skill sets, we have to focus on acquiring highly specialized talent from outside. This may entail taking bold steps, including to overhaul our compensation structure. On the downside, such people typically move around. They may often leave for opportunities elsewhere. As certified public accountants, we understand that contributing to society underpins our profession. We naturally understand that motivation to attract people for high-level research positions is to create products that benefit others. It is equally important to develop a talent strategy that appeals to individuals wishing to join the UBE Group to make meaningful impacts and contribute to society.

**Watanabe:** We tend to associate R&D and IP with outcomes from people. But as Ms. Suzuki reminded us, we must always remember that what individuals can offer society is inspirational. I find it encouraging that there are such opinions among Board members. And because technology underpins success in a chemicals company, I think it is important to first clarify the R&D strategy and create an environment that attracts and retains people who share that vision and play an active role in the Company. A solid IP strategy is important for the same reason.

**Tamada:** We have to align management and human resources strategies. We cannot become more productive if we don't integrate strategy, organization, and the actions of our people.

We plan to engage in extensive discussions with our R&D and IP directors and reassess the Human Resources Department's role while remembering business strategy perspectives.

**How are you progressing in acquiring and developing the digital talent you need to grow as a specialty chemicals company?**

**Tamada:** We are leveraging the Innovator Theory in focusing on cultivating digital experts in-house. We are starting out in that respect by cultivating trailblazing innovators and early adopter evangelists. We are in the initial stages of that approach, and ultimately look for all of employees to become implementers.

**Suzuki:** While this effort has only just gotten underway, a suitable sense of urgency seems to be driving action. I think there is a close correlation between digital transformation and diversity. As the areas that digital transformation and people handle become clear, ensuring diverse perspectives among people will be extremely important.

**Watanabe:** Shareholders and other investors and other external stakeholders broadly recognize that digital transformation strategy is important. Still, it is difficult to determine whether the details of that strategy are suitable for the company. I want the UBE Group to clearly indicate whether the strategy will help increase productivity, make it more competitive, or foster new businesses. Also, it might take time for digital transformation to fully bear fruit, but even if small but positive impacts result, I would like UBE to disclose them. That will instill confidence in external stakeholders watching progress with digital transformation investments.

*Note: Please see pages 42–45 for information on attracting and developing digital talent.*

**Finally, please share your challenges in bolstering talent.**

**Tamada:** The UBE Group's prime human resources strategy is that in order to foster a more innovative corporate culture in which employees can take control of their own careers, we will identify gaps in the required skill-sets of our employees and offer the appropriate training and career paths as necessary steps in attracting diverse talents and those who will contribute towards our focus on specialization. The challenge will be how best to share this strategy across the organization.

Our efforts will naturally encompass our digital transformation and human resources portfolios, which we would like to strategically combine or clarify and present to all of our employees. On top of that, I think we need to review our talent profile so it relates more to employees so they can embrace it as their own. We look to extensively discuss our strategy and talent profile and match them to the aspirations of each employee.

**Suzuki:** To add to what Mr. Tamada just said, it might be worthwhile to discuss UBE's vision and role in view of such factors as environmental and social conditions in 2050 and work out how to secure and develop the people we need to fulfill that role. We must also reconfirm the objectives of a series of initiatives. We have to ensure that outcomes align solidly with those aims. Quantifying and measuring results will be crucial to communicating effectively with investors about our progress and achievements. In the same vein, I think we should flesh out specifics about diversity, including with regard to gender equality, the sort of innovative corporate culture we need for specialty chemicals, and when we can attain our cultural goals in this era of accelerating change.

**Watanabe:** Finally, I must share a candid observation. The UBE Group's people do not seem to be very productive in terms of management index from the perspectives of shareholders and other investors. UBE will have to demonstrate that the human resources strategies you are considering will drive improvements. Amid upheavals that will accompany UBE's focus on specialty chemicals, you will have to work out how you can increase employee interest and motivation about such changes. We cannot do too much in that regard. The stock market seems to want the UBE Group to accelerate efforts to reform its business and human resources structures. We look for the Group to tackle those challenges.



## Fostering Talent to Achieve Corporate Growth

We have made diversity, equity, and inclusion (DE&I) central to attaining our Vision for 2030 goals. We will foster innovation by integrating diverse technologies, knowledge, and perspectives to expand globally and create new value. We will also endeavor as a group to enhance work engagement.

We will define and execute a management strategy-aligned human resources strategy to become a specialty chemicals company.

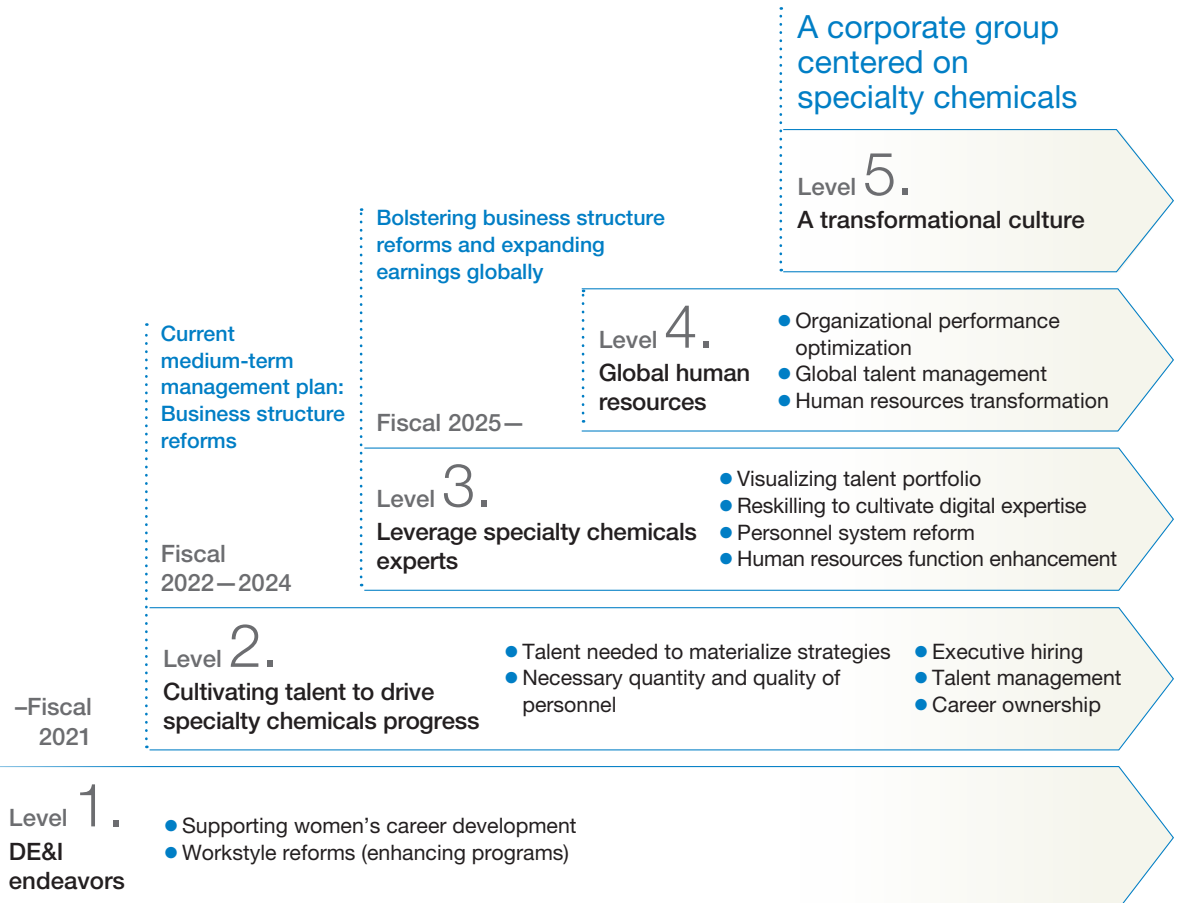
*Hideo Tamada*

*Representative Director,  
Senior Managing Executive Officer, CRO, CCO,  
in charge of Risk Management Dept.,  
Human Resources Dept., General Affairs Dept., and  
Legal Dept.*



### Talent Strategy for Becoming a Specialty Chemicals Company

We have formulated a five-level talent strategy to undertake initiatives that drive our transformation into a company focusing on specialty chemicals. We are accordingly recruiting and training talent under our current medium-term management plan, which corresponds to Level 2.



### UBE's Talent Strategy

In order to foster a more innovative corporate culture in which employees can take control of their own careers, we will identify gaps in the required skill-sets of our employees and offer the appropriate training and career paths as necessary steps in attracting diverse talents and those who will contribute towards our focus on specialization.

#### Our DE&I Policy

Because we aim to become a specialty chemicals company, we know that we have to integrate diverse technologies, expertise, and perspectives to foster innovation so we can overhaul our corporate culture and drive that transformation. We are

accordingly fostering gender equality, stepping up recruiting of talented individuals who can hit the ground running, and improving job satisfaction by reviewing our work structure for senior employees. We are also broadening career opportunities for individuals with disabilities.

We conduct surveys and enhance opportunities for dialogues to better understand the needs of individuals while expanding our support programs. This is because we prioritize equity and want our people to flourish. We consider it important for managers to be more inclusive leaders so diverse employees can harness their talents and do well. We thus train managers to enhance their career interview skills, better understand work–life balance programs, and ensure psychological safety in workplaces.

### Providing Greater Opportunities for Women

We are aiming to attain gender equality, which is a top priority, by setting targets for the percentages of women in management positions and in our workforce. We encourage female employees to be involved in decision-making by increasing the number of female line managers and to take part in recruiting and promotion interviews to reflect diverse perspectives. We recognize that women tend to undertake more unpaid work to care for their families, which impedes their career advancement. We thus provide e-learning about unconscious bias and endeavor to cut total working hours while expanding work–life support programs

for all employees. We additionally encourage men to take parental leave.

Shortages of women with science, technology, engineering, and mathematics skills are a social issue. We strive to increase the number of female employees with such proficiency by collaborating with educational institutions and neighboring businesses. One initiative in which we take part in this regard is a Yamaguchi University consortium to accelerate diversity.

#### Wage gaps between men and women (Parent company)

Category	Wage gaps between men and women (Ratio of female to male wages)
All workers	78.8%
Regular workers	79.4%
Contract workers	55.8%

- Disparities come from underrepresenting women in management-level regular and contract worker positions, so we are striving to hire and advance them.
- Many women in regular worker positions do not do shift work, leading to wage gaps from not getting shift and late-night allowances.

#### Priority Measures (FY2024 Targets)

##### 1 Providing greater opportunities for women

Percentage of women in the workforce: 15%  
Percentage of women in management positions: 6%

##### 2 Mid-career hires and non-Japanese national hires

Percentage of mid-career hires (Generalist positions): **50% or more\***  
Non-Japanese national hires (Generalist positions): **Multiple people\***

##### 3 Introducing specialist system, hiring highly specialized mid-career recruits, and enhancing measures for rehired retirees

##### 4 Creating comfortable, motivating workplaces, and increasing employee satisfaction

Percentage of male employees taking childcare leave: **100%\***  
Average childcare leave taken: 15 days  
(Average FY2022–FY2024 (Parent company))  
Total hours worked: 1,900 hours  
(KPI for FY2025 (Parent company))

#### Progress (FY2022 Results)

##### 1 Providing greater opportunities for women

Percentage of women in the workforce: 14.4% (FY2021) ⇒ 15.0% (FY2022)  
Percentage of women in management positions: 3.3% (FY2021) ⇒ 4.1% (FY2022)

##### 2 Mid-career hires and non-Japanese national hires

Percentage of mid-career hires (Generalist positions): 37.3%  
(Consolidated basis in Japan) 40.0% (Parent company) (FY2022)  
Non-Japanese national hires in new graduate recruits (Generalist positions): Two (Consolidated basis in Japan)  
Two (Parent company) (FY2023)

##### 3 Increased timely recruitment of highly skilled and work-ready personnel in line with business strategy, and revised re-employment system for rehired retirees based on surveys and opinion exchanges.

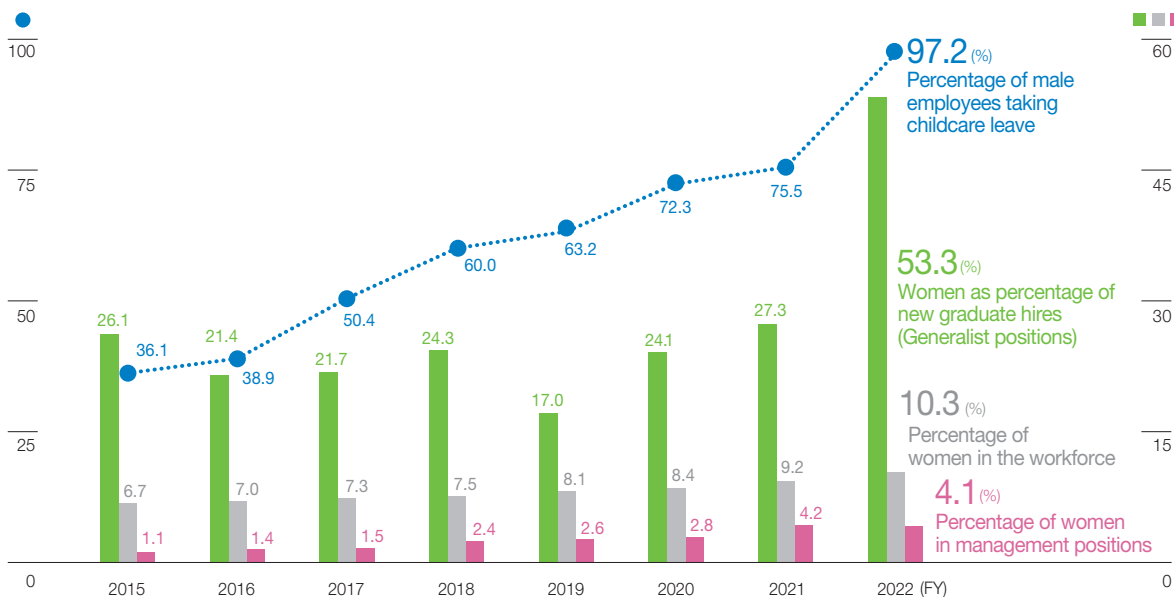
##### 4 Creating comfortable, motivating workplaces, and increasing employee satisfaction

Under the Certified Health & Productivity Management Outstanding Organizations Recognition Program, one Group company has been selected as a Bright 500 company, and seven Group companies have been recognized as excellent corporations.  
Percentage of male employees taking childcare leave: 97.2% (FY2022)  
Average childcare leave taken: 10.1 days (Parent company)

\* Partially revised indicators from when formulating the medium-term management plan

Double mid-career recruiting ratio for generalist positions to more than 50% to secure more highly talented and work-ready people to align with transformation into a specialty chemicals company  
Increase the percentage of non-Japanese nationals hired for generalist positions from a target of more than 5% to commit to expanding multiple individuals (lift recruiting to overhaul corporate culture through DE&I efforts and global business expansion)  
Percentage of male employees taking childcare leave: More than 75% ⇒ 100% (FY2022 result: 97.2%)

Benchmarks for Providing Greater Opportunities for Women (Parent Company)



### Recruiting Specialists

We have committed to hiring diverse people to become a specialty chemicals company that contributes to people’s lives and health and an enriched future society. We systematically hire new graduates and experienced individuals while recruiting non-Japanese nationals.

In fiscal 2022, mid-career professionals accounted for 37.3% of hires for generalist positions in Japan on a consolidated basis. This resulted from efforts to strengthen timely recruiting and secure specialists with immediately deployable capabilities in line with our business strategies.

We doubled our target percentage for mid-career generalist hires to at least 50% for fiscal 2024 under our medium-term management plan. We will keep recruiting specialists.

#### Hiring Breakdown (Parent company)

Fiscal Year	Number of People (Number of women in parentheses)		
	2020	2021	2022
New graduate hires (Generalist positions)	58 (14)	33 (9)	15 (8)
New graduate hires (Key employee positions)	69 (10)	36 (7)	32 (0)
Mid-career hires	18 (1)	13 (3)	34 (9)
Hires with disabilities	1 (0)	1 (0)	6 (2)
Hires of non-Japanese nationals	1 (0)	2 (1)	—

### Career Development

We are enhancing investments in people to cultivate talent that can achieve growth and drive innovation. Even during the COVID-19 pandemic, we prioritized enhancing internal communication by

providing some in-person training to augment largely online sessions to boost efficiency and optimize effectiveness. We draw on external e-learning services for job level-specific training to foster a culture in which employees keep growing by taking ownership of career development.

FY2022  
(Parent company)

Investment in off-the-job training per person*1	¥120,000
Training hours per person*2	17

\*1 Calculation methodology: (Total education and training expenses + Labor costs for department overseeing training) / Number of employees on non-consolidated basis (as of fiscal 2022 year-end)

\*2 Calculation methodology: (Total hours of group training + Total hours of e-learning) / Number of employees on non-consolidated basis (as of fiscal 2022 year-end)

### Diverse, Flexible, and Efficient Work Practices

We maintain a work and vacation structure that encourages diverse work practices. We are progressing steadily in cutting total working hours, targeting 1,900 hours per person in fiscal 2025. For fiscal 2023, labor and management agreed to a target of 1,915 hours. We share monthly results with all employees as part of our efforts.

In October 2022, we published a handbook to help employees balance their professional and personal commitments. It presents support programs for balancing work with childbirth, childcare, nursing care, and medical treatment. It provides user-friendly information on these programs. We foster understanding among supervisors and peers by providing training for



managers and opportunities for safety and health committee lectures.

In April 2023, we rolled out a program that allows employees to take leave for personal injury or illness, nursing care, childcare, volunteer work, infertility treatment, personal and family anniversaries, and life events. Workers can use the program as a safety net when life's emergencies arise, making it easier for them to take annual paid leave.

We foster flexible and efficient work practices by maintaining our telework and flexible work-hour programs. The downside is that communication issues have arisen owing in part to the pandemic. We are accordingly striving to create work environments that enhance productivity while ensuring the psychological safety of employees by encouraging them to come to our work sites at least twice weekly and use cameras during online meetings.

### Increasing Job Satisfaction

Our efforts thus far have resulted in positive work environments. We will undertake initiatives that improve job satisfaction and work engagement.

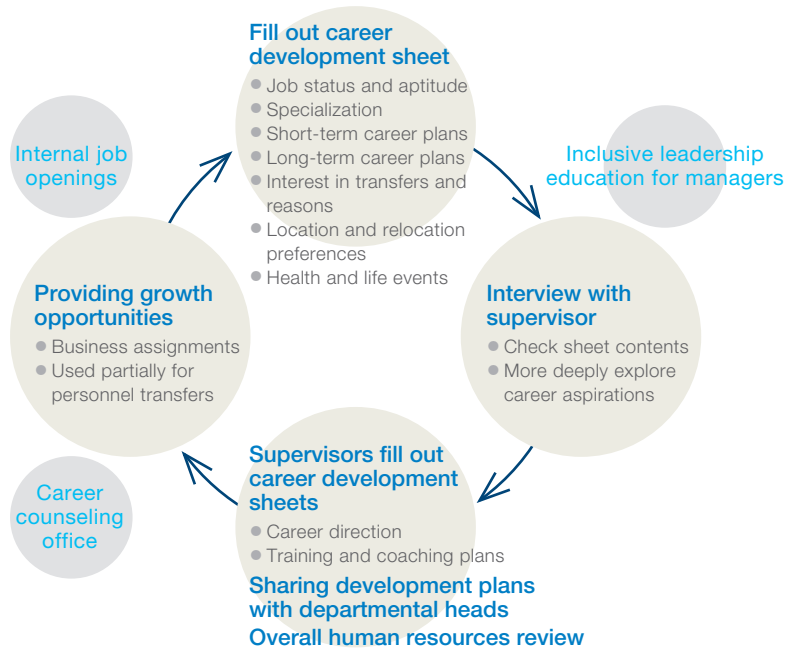
We maintain a setup in which employees prepare annual career development sheets to explore career plans through interviews with supervisors.

We offer employees opportunities to transfer

internally to other positions and pursue new career paths.

In April 2023, we set up an in-house career consultation office that enables employees to shape their own careers with assistance from consultants.

We also train managers in improving their interviewing skills and organizational work engagement.



### Employees Supporting Growth

I consolidate information on the performance and investments of the Performance Polymers & Chemicals Div., and engage in management and improvement. I find my work fulfilling because it occasionally contributes to business decisions. My experience in studying for an MBA internationally has proven valuable when engaging directly with offices overseas to get insights into management situations and explore solutions. Having taken maternity leave for around a year, I use UBE's shortened working hours, flextime, and telecommuting programs. The understanding and cooperation of colleagues has enabled me to continue my career.

While I work with few other women, I have never found it hard to do my job here. I find that I have actually had many opportunities to get support. I consider restructuring the chemicals business a personal responsibility, and will remain committed to my job.

**Sakura Nitta**

*Business Management Group, Business Planning & Management Dept., Performance Polymers & Chemicals Div.*

Joined UBE in 2012: Worked in cost controls at a factory. Worked thereafter in management at the nylon business. Studied at University of Cambridge Judge Business School. Then worked in sales and management for fine chemicals business, took maternity leave, and is now in management for the Performance Polymers & Chemicals Div.

I joined the Research and Development Div. in 2020 as a mid-career life science professional. I lead a team that is developing a novel cell culture system employing UBE's proprietary 3D substrates. I enjoy collaborating with experts from diverse fields in crafting new products to create value for the future. I ultimately aim to launch a biopharmaceutical business that harnesses 3D cell culture substrates. I accordingly approach my daily tasks with a strong sense of responsibility, with my eyes on tomorrow. All of my team members are women. I seek to offer better work-life balances and create work environments in which women can do well.

Joined UBE in 2020 after previously working for a medical devices manufacturer: Currently works in the Life Sciences Research Group of the Future Tech Laboratory

**Kayoko Semura**

*Life Science Research Group, Future Tech Laboratory, Research & Development Div.*

## Addressing Climate Change (Carbon Neutrality)

In May 2021, the UBE Group declared its commitment to becoming carbon neutral by 2050. In April 2022, we embarked on a quest to halve our fiscal 2013 GHG emission levels by fiscal 2030. At the same time, we set the sales target of environmentally friendly products and technologies to account for at least 60% of consolidated net sales by fiscal 2030.

We will achieve these targets by accelerating business structure reforms to drive growth in specialty chemicals. At the same time, we will work hard to contribute to the realization of a sustainable society including helping materialize carbon neutrality, by capitalizing on opportunities to resolve environmental issues.

**Futoshi Takase**

Senior Executive Officer  
with responsibility for Environment & Safety Dept.,  
Quality Assurance Dept., Purchasing &  
Logistics Dept. and Ube Corporate Service Dept.



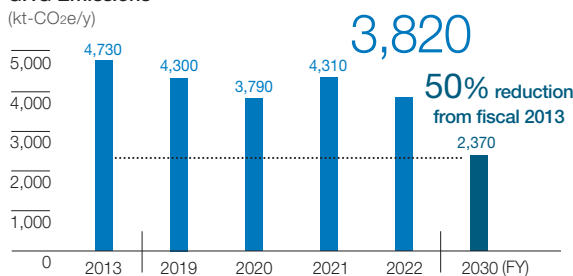
### Fiscal 2030 Targets

GHG emissions reduction target: **50% reduction compared to FY2013**

Target percentage of consolidated net sales comprising environmentally friendly products and technologies: **60% or more**

### Initiatives to Reduce GHG Emissions

Progress toward GHG Emissions Reduction Targets\*1  
**GHG Emissions**

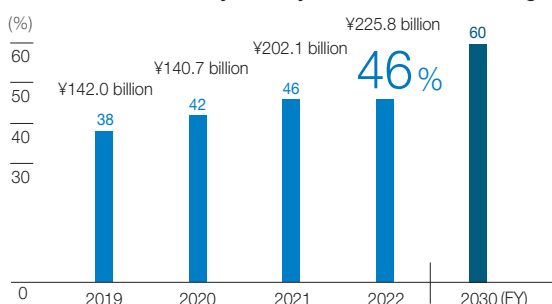


### GHG Emissions in Fiscal 2022

Business sites	kt-CO <sub>2</sub> e/y		
	Scope 1	Scope 2	Total
Chemicals business	3,230	400	3,630
Japan	2,360	110	2,470
Thailand	600	280	880
Spain	270	10*2	280
UBE Machinery Group	170	20	190
<b>Total</b>	<b>3,400</b>	<b>420</b>	<b>3,820</b>

Note: Numbers may not add up due to rounding.

### Sales of Environmentally Friendly Products and Technologies\*\*



\*1 Excluding cement-related business transferred to Mitsubishi UBE Cement Corporation.

\*2 Electricity purchased from external sources was renewables based.

### Roadmap for Carbon Neutrality

#### GHG Emissions Reduction Targets

We will continuously promote energy conservation and improve processes in our production activities, and promote the maximization of the use of renewable energy and the minimization of the use of fossil resources. Furthermore, since innovative technological development is essential to achieve carbon neutrality by 2050, we will work on research and development and practical application of non-fossilization of raw materials and CO<sub>2</sub> utilization technologies, including collaboration with other companies, from a medium- to long-term perspective.

#### Environmentally Friendly Products and Technologies

By promoting the development of environmentally friendly products and technologies and providing them to more customers, we aim to contribute to carbon neutrality for the UBE Group and society as a whole.

**Estimated Contributions to GHG Emissions Reductions of Environmentally Friendly Products and Technologies**  
Fiscal 2021: Approx. 11,800 kt-CO<sub>2</sub>e/y

Note: Calculations based on the UBE Group's market shares and sales volumes of environmentally friendly products based on CO<sub>2</sub> reductions in usage stages compared with conventional counterparts for end products incorporating UBE Group environmentally friendly products (based on CO<sub>2</sub> reductions for one year of use based on volumes of end products used during fiscal 2021).

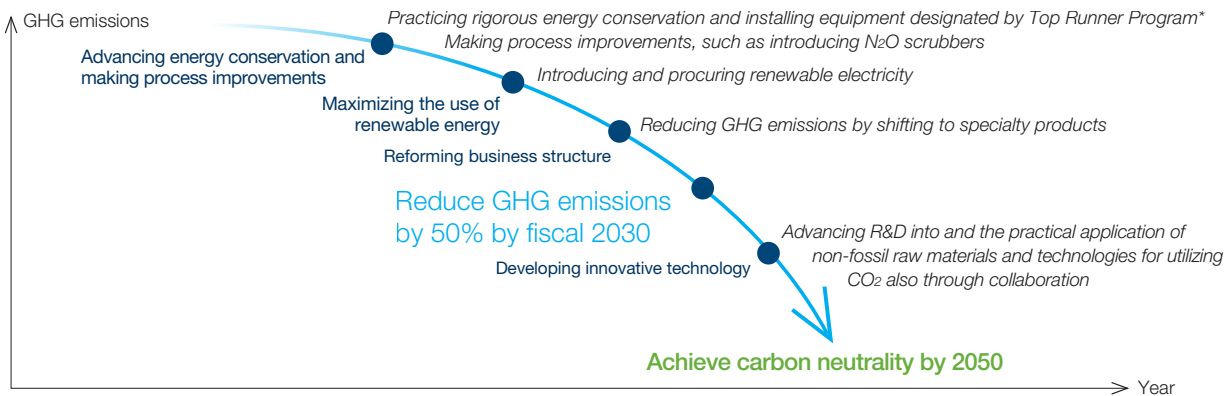
We formulated guidelines based on ISO 14001: 2015 to define environmentally friendly products and technologies.

#### Business Restructuring

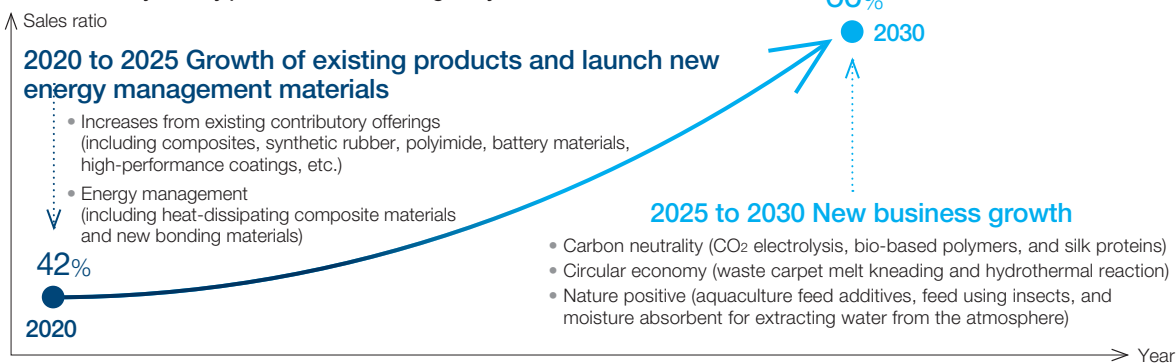
Shifting to specialty chemicals should lower GHG emissions by minimizing fossil resource usage and creating a business structure that is significantly less vulnerable to market conditions, including for raw materials and fuels. We aim to establish a business structure that minimally affects the environment, focused on specialty chemicals, from profitability and growth potential perspectives. We will also add value to basic chemicals products and restructure these businesses.



### Roadmap for carbon neutrality



### Timeline for generating more than 60% of consolidated net sales from environmentally friendly products and technologies by fiscal 2030



We aim to halt domestic ammonia production by 2030, whose processes generate high GHG emissions. We also look to shut down key manufacturing lines for caprolactam production in Japan by fiscal 2024 in view of the high energy consumption in processes and poor prospects for improving profitability in the medium through long terms.

Such business structure reforms should enable us to reach our goal of cutting GHG emissions by 50% by 2030.

### Fiscal 2022 Initiatives

#### Commitment Letter Submitted to Science Based Targets Initiative

In March 2023, the UBE Group submitted a commitment letter to the Science Based Targets initiative. We made this move to secure certification from that body for our targets for reducing GHG emissions across our supply chain over the next five to 10 years in keeping with the criteria of the Paris Agreement, an international treaty on climate change. We made this move in view of growing interest in environmental protection and sustainability in recent years. Our efforts to reduce our environmental impact extend beyond in-house operations to encompass our whole supply chain, from raw materials procurement through product use and disposal.

### Deploying System to Calculate Product GHG Emissions Data

UBE and NTT DATA Japan Corporation jointly created a system to calculate product GHG emissions. In January 2023, we began providing data from that system to customers. This information makes it easy for customers to assess GHG emissions across their supply and value chains and contribute to efficiently implement measures to reduce these emissions.

We are using this system for some Ube Chemical Factory offerings, and look to extend its product and plant coverage.

### Participating in GX League's Emissions Trading Scheme

In October 2022, we announced our endorsement of the GX (for green transformation) League. Japan's Ministry of Economy, Trade and Industry leads that initiative, which aims to reach the nation's GHG emissions goals by 2030 and achieve carbon neutrality by 2050. We also announced our participation in the league's voluntary emissions trading schemes, which will be fully operational from 2026. We consider our involvement in the league an opportunity to grow sustainably by reducing our GHG emissions while becoming more competitive.

### Glossary

\* Under the Energy Conservation Act, Japan deployed the Top Runner Program designating equipment and facilities that deliver outstanding energy efficiency.

## Disclosure Based on TCFD Recommendations

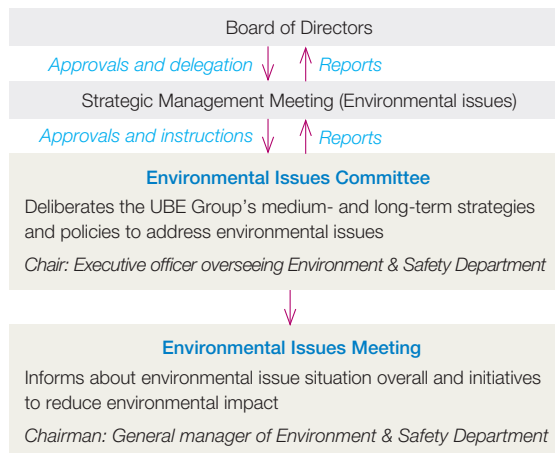
We endorse the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). We established a governance structure, and are evaluating the risks and opportunities of climate change on our operations. We are reflecting this information in our business strategies and disclosing it externally.



### Governance Structure

The UBE Group established the Environmental Issues Committee to identify and act on problems in that regard. The President and CEO chairs the

#### Environmental Issues Governance Structure



Strategic Management Meeting, which receives deliberation reports from the Environmental Issues Committee, provides instructions as needed, and constantly monitors countermeasures progress. A report on important matters goes to the Board of Directors once annually.

### Strategies

In view of efforts to tackle climate change and transition to a low-carbon, decarbonized economy, management assessed a range of scenarios for 2030 and beyond, analyzed risks and opportunities for the UBE Group under each scenario, and formulated the required strategies. The scenarios covered all business units, including for the cement-related business, although the assessment findings stated below exclude information relating to the cement-related business.

For each scenario, we confirmed that while the impacts of risks are unavoidable, we can sustainably enhance corporate value by capitalizing on the opportunities that stem from risks materializing.

### Scenario Analysis

	Risk categories	Business risks	Impacts	Potential impacts
<b>Risks</b>	Transition	Greater costs and impacts on product prices from adoption of carbon pricing	Operations	Major
	Transition	Adverse situation for coal-fired private power generation	Operations	Major
	Transition	Requests to expand renewable energy deployments	Products	Major
	Transition	Customers requesting disclosure of GHG emissions intensity by product and lower emissions	Products	Major
	Transition	Product sales falling from shift to EVs and less coal-fired power production	Products	Major
	Physical	Shutdowns from more frequent and larger climate-related disasters	Operations	Major
	<b>Opportunities</b>	Transition	Boost sales of environmentally friendly products and technologies across the supply chain	Products
Transition		New business growth and creation	Products	Major

● Analysis Assumptions, Details for Scenarios and Assessment Steps



Detailed information is available in the Support for TCFD Recommendations section of the UBE Group's website:  
<https://www.ube.co.jp/ube/en/sustainability/csr/initiatives/tcfid.html>

Risk Management

We maintain a risk management system, for which the Risk Management Department serves as the secretariat, to register and centrally oversee risks. We identify pertinent risks for each division and business unit, classifying them as major, medium, and minor in line with their risk impacts. We define major risks as having financial impacts of at least ¥1 billion. The Strategic Management Meeting discusses major business risks, reflecting them in specific strategies and measures.

We registered and manage our climate change countermeasures in our risk management system. The Environmental Issues Committee, whose chair is the executive officer in charge of the Environment & Safety Department, is a Companywide entity. The committee formulates and implements measures and policies to address climate change-related risks that it has identified for the UBE Group overall.



Detailed information is available in the Risk Management section of the UBE Group's website:  
[https://www.ube.co.jp/ube/en/sustainability/risk-management/risk-management.html#person\\_in\\_charge](https://www.ube.co.jp/ube/en/sustainability/risk-management/risk-management.html#person_in_charge)

Benchmarks and Targets

In April 2022, we reviewed and formulated our fiscal 2030 targets for tackling environmental issues, as shown on the right.

**GHG emissions: Reduce by 50% from fiscal 2013 level**

**Environmentally friendly products and technologies as a percentage of consolidated net sales: At least 60%**

*Data scope: Scope 1 and Scope 2 on a consolidated basis for designated energy management companies and key overseas businesses (in Thailand and Spain).*



Detailed information is available in the Global Environmental Issues section of the UBE Group's website:  
<https://www.ube.co.jp/ube/en/sustainability/rc/environment/issues.html>

We look to reach these GHG emissions reduction goals by halting ammonia production in Japan by 2030 and by transitioning to specialty chemicals.

Our fiscal 2022 GHG emissions were 3.82 million tonnes. This was 19% below the level of fiscal 2013, and reflected energy-saving and other initiatives.

Sales related to environmentally friendly products and technologies rose in fiscal 2022. At the same time, overall sales increased on higher prices. These products and technologies thus again represented 46% of net sales.

Strategies and responses	Period of impact	Related pages
<ul style="list-style-type: none"> <li>● Rigorously conserve energy and improve processes</li> </ul>	Short to long terms	
<ul style="list-style-type: none"> <li>● Maximize renewable energy usage</li> </ul>	Medium to long terms	
<ul style="list-style-type: none"> <li>● Restructure businesses, including by shifting to specialty chemicals</li> </ul>	Medium to long terms	Pages <a href="#">24–35</a> Growth Strategies
<ul style="list-style-type: none"> <li>● Innovate technologies</li> </ul>	Long term	Pages <a href="#">36–39</a> R&D
<ul style="list-style-type: none"> <li>● Explore phased coal-fired private power shutdowns</li> </ul>	Medium to long terms	
<ul style="list-style-type: none"> <li>● Produce and procure renewable electricity</li> </ul>	Medium to long terms	
<ul style="list-style-type: none"> <li>● Rigorously conserve energy and improve processes</li> </ul>	Short to long terms	
<ul style="list-style-type: none"> <li>● Maximize renewable energy usage</li> </ul>	Medium to long terms	
<ul style="list-style-type: none"> <li>● Use non-fossil-based fuels (including biomass and from recycled materials)</li> </ul>	Medium to long terms	
<ul style="list-style-type: none"> <li>● Undertake in-house and collaborative R&amp;D to create and commercialize offerings that match market needs</li> </ul>	Short to long terms	Pages <a href="#">36–39</a> R&D
<ul style="list-style-type: none"> <li>● Step up infrastructural and other disaster countermeasures</li> </ul>	Short to long terms	
<ul style="list-style-type: none"> <li>● Offer more environmentally friendly products, including composites, synthetic rubber, polyimide, battery materials, and high-performance coatings</li> </ul>	Short to long terms	Pages <a href="#">24–35</a> Growth Strategies
<ul style="list-style-type: none"> <li>● Launch energy management materials, including heat-dissipating composite and radiative cooling materials</li> </ul>	Medium to long terms	Pages <a href="#">36–39</a> R&D
<ul style="list-style-type: none"> <li>● Develop and commercially deploy carbon-neutral technologies (CO<sub>2</sub> electrolysis, bio-based polymers, and silk proteins), electrified and fuel cell vehicle-related materials, and high-speed, high-capacity information transmission materials</li> </ul>	Medium to long terms	Pages <a href="#">36–39</a> R&D
<ul style="list-style-type: none"> <li>● Commercially deploy circular economy technologies (waste carpet melt kneading and hydrothermal reaction)</li> </ul>	Medium to long terms	Pages <a href="#">61–62</a> Tackling Environmental Issues Contributing to a Circular Economy
<ul style="list-style-type: none"> <li>● Commercially deploy nature-positive technologies (aquaculture feed additives, feed using insects, and moisture absorbent for extracting water from the atmosphere)</li> </ul>	Medium to long terms	

# Sustainability

## Approach to Sustainability

In order to fulfill its purpose (raison d'être) as a corporate group centered on specialty chemicals, the UBE Group aims to achieve sustainable growth by effectively utilizing its management resources and creating new value for society. The cornerstone of our efforts is a focus on realizing a sustainable world. Toward that end, we work to ensure that all executives and employees of the UBE Group are fully aware of the UBE Group Basic Policies for Sustainability, identifying material issues in the areas of growth, environment, society, and governance, and proactively seeking solutions to these issues.

## UBE Group Basic Policies for Sustainability

The UBE Group lives up to its founding spirit and corporate philosophy by pursuing Group sustainability through its business activities. At the same time, we are focused on strengthening our efforts to address global environmental issues and contributing to the realization of a sustainable world that exists in harmony with nature.

1. We will secure safety and quality in providing products and technologies that contribute to the environment.
2. We will practice appropriate information disclosure for all stakeholders and readily communicate with society.
3. We will pursue corporate governance that is in keeping with the demands of society and strive to continuously expand revenues and enhance our corporate value.
4. In accordance with laws and regulations at home and abroad, and international norms and guidelines that should be observed, and with respect for human rights, we will pursue our corporate activities in a sound and fair manner.
5. We will respect the culture and customs of all countries and regions and contribute to the development of local communities.

## Sustainability Framework

Our committees and other entities deliberate on sustainability matters, reporting to the Board of Directors and the Strategic Management Meeting on their efforts overall and receiving guidance.



## United Nations Global Compact

In April 2021, we signed the United Nations Global Compact and joined the Global Compact Network Japan. The network's 14 subcommittees explore global sustainability trends. Our quarterly cross-departmental meetings share the latest trends from these subcommittees to foster sustainable management.



## Environmental Safety Management

The UBE Group has made safeguarding the environment, safety, and health top priorities so it can provide products and services that contribute to better lives and achieve solid and sustainable growth.

We defined priority environmental and safety measures under the UBE Group Environmental and Safety Guidelines to reflect the activities of business sites and partner companies\*.

### UBE Group Environmental and Safety Guidelines

We have made it our shared value to prioritize safety in everything we do. This includes ensuring safety and security in the workplace and in local communities, and conserving the global environment.

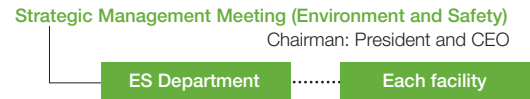
1. We will secure healthy, safe and comfortable working conditions, aiming to eliminate occupational accidents.
2. We will ensure the safety and security of facilities and operations, aiming to eliminate facilities accidents.
3. We will reduce our emissions of waste and chemical substances, and contribute to establishing a recycling-based society by recycling and effectively using resources.
4. We will voluntarily and continuously work to address global environmental issues in order to contribute to a sustainable society.
5. We will strive to maintain and improve the health of working persons, who give vitality to society and corporations.

### Environmental Safety Measures

We implement PDCA cycles based on our environmental safety measures to constantly improve efforts relating to occupational safety and health,

process safety and disaster prevention, environmental preservation, and environmental issues.

### Structure of Environment and Safety-Related Meetings



### Environmental Safety Measures

We implement PDCA cycles based on our environmental safety measures to constantly improve efforts relating to occupational safety and health, process safety and disaster prevention, environmental preservation, and environmental issues.



The Outline of Environment and Safety Activities on pages 1–2 of the 2023 Integrated Report Supplementary Information (Environment and Safety/Quality Assurance) presents our environmental safety activity plans and achievements.

[https://www.ube.co.jp/ube/en/ir/ir\\_library/integrated\\_report/pdf/2023/integrated\\_report\\_environmental\\_safety\\_qa\\_0.pdf](https://www.ube.co.jp/ube/en/ir/ir_library/integrated_report/pdf/2023/integrated_report_environmental_safety_qa_0.pdf)

### Annual RC Activities' PDCA Cycle



# Tackling Environmental Issues

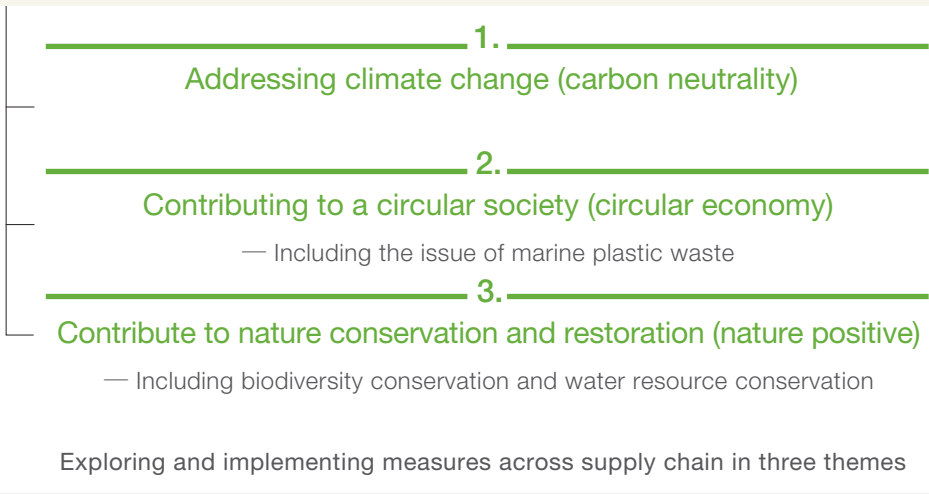


## Basic Guidelines for Addressing Global Environmental Issues

The UBE Group focuses on responding to climate change (carbon neutrality), and on contributing to a circular economy and nature conservation and restoration (nature positive). We are helping resolve environmental issues by steadily implementing strategic measures. These include reducing GHG emissions across the value chain, providing environmentally friendly products, technologies, and services, and engaging with stakeholders.

### Purpose

Leveraging the manufacturing technologies the UBE Group has cultivated throughout its long history, create the value required by society, in the safe and environmentally friendly manner demanded by society, and deliver that value to the people. And by doing so, help to solve global environmental issues, which have become a common issue for all humankind, and contribute to people's lives and health, and an enriched future society



## Basic Activities Policy on Environmental Issues

To realize “Addressing climate change (carbon neutrality),” “Contributing to a circular society (circular economy),” and “Contributing to nature conservation and restoration (nature positive),” we have formulated the following strategies and KPIs and are steadily implementing them.

- Ensuring that the management cycle works properly by analyzing materiality, identifying risks and opportunities, formulating strategies and KPIs, and disclosing information
- Minimizing the impacts of internal operations
- Continuing to engage
  - Reach out to entire value chain (suppliers,

employees, customers, investors, and communities) to resolve issues in everything from product and services purchases to in-house manufacturing and product processing, usage, and disposal

- Disclose information appropriately to all stakeholders and encourage collaboration to resolve environmental issues

### 1. Addressing climate change (carbon neutrality)

#### Strategy

Reduce internal GHG emissions.  
Keep developing and providing environmentally friendly products and technologies that help cut GHG emissions.

**Targets and Business Plan**

We have formulated a business plan that encompasses overhauling our business structure reforms and deploying measures to conserve energy so we can reach our fiscal 2030 target of halving GHG emissions from fiscal 2013 levels to aim for becoming carbon neutral by 2050.

**Significance**

- The increase of GHG emissions into the atmosphere due to human activities is causing global warming and major changes in the climate.
- This could transform the natural environment and degrade ecosystem services. Rapid climate change could profoundly affect lives and businesses. It is our social responsibility and mission to tackle these changes as swiftly as possible.

**Initiatives**

Please see Addressing Climate Change (Carbon Neutrality) on pages 54–55.

2

**Contributing to a circular society (circular economy)**

**Strategy**

We will tap discarded and other resources effectively and recycle them. We will develop and provide circular materials, products, and technologies.

**Targets and Business Plan**

Our goal is to increase the sales ratio of environmentally friendly products and technologies, including products that contribute to the realization of a circular economy, to 60% by 2030. In addition, we aim to effectively utilize and reduce waste such as plastics generated by our own operations.

**Significance**

- Population growth and economic development have raised concerns about depleting resources and destabilizing resource supplies. Circulating limited resources will help ensure stability.
- Achieving a circular economy will suppress the deterioration of circulation caused by linear material flows, such as the accumulation of large amounts of plastic waste in the ocean.
- Achieving a circular economy entails transforming linear materials flow into circular ones to

establish an economic structure that produces value by reusing waste and used products.

**Initiatives**

**About UBECycle Recycled Multilayer Film**

Contemporary social demands and regulations are driving the use of raw materials derived from recycled materials across the industry landscape. Prime examples are the packaging, automotive, electrical, electronics, construction, and other sectors. It is against this backdrop that the UBE Group seeks to recycle offerings incorporating its nylon while drawing on its end-product expertise, partner company network, and technical prowess.

A good example of Group endeavors was UBE Corporation Europe, S.A. Unipersonal (UCE)’s launch of UBECycle. This product is recycled from multilayer film waste. UCE will collect the factory trimmings of the film from film manufacturers to recycle (crush, extrude, and pelletize) them. The UBE Group plans to upcycle materials, including this nylon, for in-house production and commercialization.

UCE has earned certification of this innovative polyethylene–nylon multilayer film from recycling bodies such as RecyClass\*1 and APR\*2.

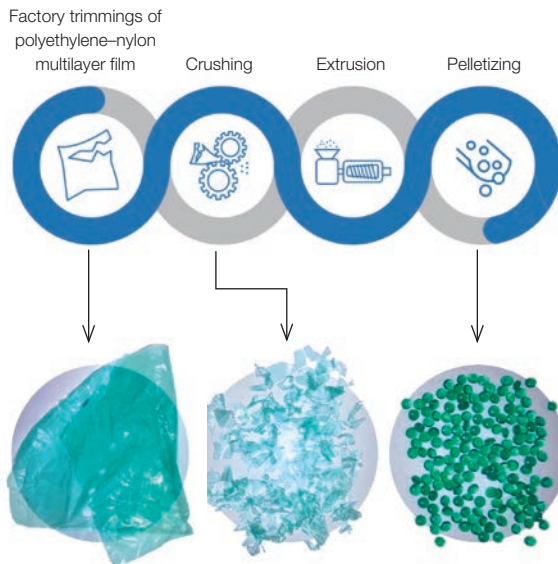


\*1 <https://recyclclass.eu/wp-content/uploads/2021/09/2020-PO-011-UBE-technology-approval-letter.pdf>



\*2 <https://ube.es/association-of-plastics-recyclers-apr-acknowledges-recyclability-of-pe-based-film-with-ubes-pa6-66-based-on-critical-guidance-recognition/>

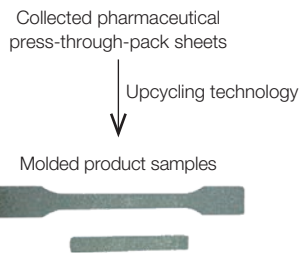
**UBECycle Material Recycling Flowchart**



**Developing Upcycling Technology for Composite Plastics**

As most waste plastics are composites, they cannot be reused in regular recycling processes, so they are mostly incinerated. UBE is developing upcycling technologies for composites, adding new features to aluminum and plastic of pharmaceutical press-through-pack sheets. We are collaborating with aluminum manufacturers and recyclers to create an efficient system to collect these sheets. We are employing proprietary upcycling technology to cultivate applications for the collected sheets.

In coming years, we look to refine our composites upcycling technologies. We will endeavor to grow as a chemicals manufacturer that helps resolve environmental issues, such as by cutting CO<sub>2</sub> emissions by reducing the use of petroleum-derived raw materials and tackling marine plastic waste.



3

**Contribute to nature conservation and restoration (nature positive)**

**Strategy**

We will identify the impacts and dependencies of our business activities on nature, identify risks and opportunities, and contribute to the conservation and restoration of the natural environment and the sustainable use of ecosystem services. We also provide products, technologies, and services that help realize nature positive.

**Targets and Business Plan**

- **Water sources:**  
We analyze water stress trends based on the water conditions (context) and water supply and demand scenario at each site.  
At sites where water stress is expected to rise, we will reduce water withdrawal and improve water recycling rates by formulating water use strategies and monitoring KPIs.
- **Environmental impacts of our operations, including from air, water, and soil pollution:**  
We monitor and reduce pollutant emissions to eliminate environmental incidents.
- **Engagement:**  
We will work with the supply chain (environmental impact assessment), employees (education), customers (provision of environmentally friendly products and technologies), investors (provision of information and exchange of opinions), and local communities (environmental improvement activities).  
We will verify adverse effects (trade-offs) on the natural environment and minimize negative impacts.

**Significance**

A lot of the products, services, and energy supporting our lives are the fruits of nature. Protecting the environment, restoring nature, and preserving ecosystem services will help safeguard our living environment and livelihoods. Nature conservation and restoration can reduce weather-related disasters while protecting cultures and traditions, landscapes, and our diets.

**Initiatives**

To respond to the conservation of the natural environment (biodiversity) and water resources, we conduct risk analysis at each business site.

**Water Risk Assessment Results**

We maintain five water risk levels for our key business sites. We take into account information we

Water Risks	Business Sites	Key Risk Factors
High	Not applicable	
High to moderate	Not applicable	
Moderate	Key sites in Thailand	Constraints on water supply and demand and droughts
Low to moderate	Key sites in Spain Key sites in Japan	Flooding
Low	Not applicable	



secure from the World Resources Institute’s Aque-duct water risk atlas and other external sources, as well as by our sites.

Key business sites in Thailand and Spain formulated the following KPIs, and are addressing projected increases in water stress from 2030.

Business Sites	KPIs
Key sites in Thailand	Reduction in water consumption per unit of production By 2024, down 5% from the 2021 level Water recycling rate As of 2024, 26%
Key sites in Spain	Reduction in water consumption per unit of production By 2030, down 10% from the 2022 level Water recycling rate As of 2030, 10%

We draw on the Integrated Biodiversity Assessment Tool and local information to check the proximity of key business sites to nature conservation areas and locations that are important for conserving biodiversity and constantly check potential impacts and extents.

- Not near Ramsar Sites
- The sea level near the Ube area is in the International Union for Conservation of Nature’s management category VI for protected areas.
- The Ube-Fujimagari area borders key biodiversity areas (Suonada and the Koto River estuary).
- The national government regulates the seawater area bordering the Ube area, fishing rights there.

**Fiscal 2022 Initiatives**

**Ube Chemical Factory**

**Marine Plastic Waste**

- Participated in year-end street cleanup that an Ube City volunteer group organizes
- Patrolled waste storage sites every quarter
- Recycled waste plastic

**Biodiversity Conservation**

- Participated in Mine Agriculture, Forestry and Fisheries Office’s forestation initiatives to protect water
- Helped exterminate Argentine ants by contributing to administrative reports and exterminated nests to prevent infestations from spreading beyond business sites



Employees participating in the 15th Forest Creation Experiential Activity for Water Conservation

**Sakai Factory**

**Marine Plastic Waste**

- Undertook joint cleanups with neighboring companies

**Biodiversity Conservation**

- Took part in forestation initiative on January 14, 2023
- Attended Osaka metropolitan government and Sakai City government seminars

**Water Resource Conservation**

- Implemented measures to conserve water, including by installing sensors on office washing basin faucets

**UBE Machinery Group**

**Marine Plastic Waste**

- Separately disposed of plastic bottle caps

**Water Resource Conservation**

- Upgraded waterworks facilities and stepped up wastewater management

## Occupational Safety and Health / Process Safety and Disaster Prevention Quality Assurance and Product Safety



### Occupational Safety and Health / Process Safety and Disaster Prevention

We undertake occupational safety and health as well as process safety and disaster prevention initiatives in keeping with the UBE Group Environmental and Safety Guidelines. The guidelines embody a firm commitment to prioritizing safety in everything we do by ensuring safety and security in workplaces and in communities while protecting the global environment.

#### Occupational Safety and Health

We aim to eliminate occupational accidents, and endeavor to reinforce and keep enhancing safety initiatives by fostering a culture of safety. We also strive to reduce risks in operations that are prone to major accidents and make them inherently safe. From fiscal 2020, we began prioritizing undertaking safety initiatives in collaboration with partner companies\*. From fiscal 2021, we deployed education and training programs to increase safety awareness.

We investigate and respond to all accidents causing time and workday losses. We thereafter confirm the effectiveness of these measures and roll them out across our organization to prevent similar incidents.

\* Partner companies include those handling construction contracts

#### Process Safety and Disaster Prevention

We undertake security initiatives to eliminate accidents, and to make facilities safe and secure. We also conduct disaster-preparedness activities. Our focuses in fiscal 2022 were on eliminating facilities and environmental accidents, improving safety at high-pressure gas facilities, and preparing for natural disasters.



Please see pages 3–5 of the 2023 Integrated Report Supplementary Information (Environment and Safety/Quality Assurance) for details on occupational safety and health as well as process safety and disaster prevention activities and outcomes from initiatives in fiscal 2022.

[https://www.ube.co.jp/ube/en/ir/ir\\_library/integrated\\_report/pdf/2023/integrated\\_report\\_environmental\\_safety\\_qa\\_1.pdf](https://www.ube.co.jp/ube/en/ir/ir_library/integrated_report/pdf/2023/integrated_report_environmental_safety_qa_1.pdf)



### Quality Assurance and Product Safety

We undertake quality assurance and product safety initiatives based on the UBE Group Fundamental Quality Guidelines.

#### Quality Assurance

We have drawn on lessons from previous inappropriate quality inspection practices to strengthen Groupwide quality assurance activities. In our drive to become a specialty chemicals company, we will bolster quality management efforts to maximize corporate value by satisfying customers. We will accelerate our endeavors so customers consider quality one of our greatest strengths.

#### Product Safety

We factor health, safety, and the environment into chemical substance management by complying with domestic and international chemical control regulations, closely overseeing these substances in the supply chain, and disclosing Safety Data Sheets\* for key products on our website.

In fiscal 2022, we deployed a 24/7 emergency contact service worldwide to deal with transportation accidents and logistics safety issues should they happen.



Please see page 17 of the 2023 Integrated Report Supplementary Information (Environment and Safety/Quality Assurance) for details on quality assurance and product safety activities and outcomes from initiatives in fiscal 2022.

[https://www.ube.co.jp/ube/en/ir/ir\\_library/integrated\\_report/pdf/2023/integrated\\_report\\_environmental\\_safety\\_qa\\_7.pdf](https://www.ube.co.jp/ube/en/ir/ir_library/integrated_report/pdf/2023/integrated_report_environmental_safety_qa_7.pdf)

\* A Safety Data Sheet is documentation containing hazard and toxicity information about chemical substances that manufacturers disclose when supplying chemical substances and products incorporating them.

# Human Capital



We aim to remain an innovative organization that enables sustainable growth. We are pursuing Groupwide goals to foster diversity, equity and inclusion, work engagement, and health management. People is one of UBE Management Principles. We formulated the UBE Group Human Resources Management Guidelines to provide fulfilling work environments.

(See pages 50–53 for information on priority measures in UBE’s medium-term management plan.)

## Engaging with Employees

Management engages closely with employees as key stakeholders. We survey them to identify areas in which we need to attain equity, provide feedback, and reflect swiftly findings in our measures. Management and employees also engage in direct dialogue to exchange views about UBE’s goals and deepen mutual understanding. We discuss human resources strategy issues that come to light by the survey and dialogues in meetings of the Board of Directors, the Strategic Management Meeting, and the Executive Management Workshop. We also share them in labor-management meetings to foster cooperation between both parties.

### Results of parent company dialogue with and surveys of employees in fiscal 2022

- Providing greater opportunities for women
- DE&I
- Work–life balance support
- Health issues
- Unconscious bias
- Assisting rehired retirees
- Support for management

### Reflected in personnel measures from fiscal 2022

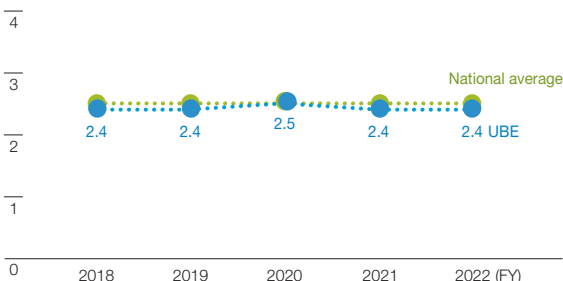
- Initiated childcare support allowance (¥20,000 monthly per child under 3 years old)
- Extended paid childcare leave from 7 days to 15
- Introduced life assistance leave (switched from accumulated leave)
- Published a handbook to help employees balance their professional and personal commitments
- Shortened prescribed working hours for day shift workers by 15 minutes daily
- Increased time off for shift workers by two days
- Revised rehired retiree system and enhanced interviews
- Inclusive Leadership Education for managers

## Work Engagement

UBE uses index of the new Brief Job Stress Questionnaire that companies around Japan administer to employees to gauge work engagement levels and trends. We will improve work engagement and strengthen the organization. We will do so by creating a structure that enables managers to track circumstances at each workplace. We will also create opportunities for growth through education and provide interactive positive mental health training in collaboration with external employee assistance programs to motivate workers.

### Work Engagement Score

(4-point scale)



## Health Management Initiatives

The UBE Group enhances human capital by encouraging employees to manage their health while investing in health to create fulfilling, psychologically safe workplaces. Efforts have included deploying health apps and instituting e-learning

programs to improve health literacy. In fiscal 2022, we published a handbook to help employees balance their professional and personal commitments to help employees understand a system to support work-life balance that their professional commitments do not undermine their medical treatment needs. We also provide health management tips to all managers. In fiscal 2022, concerted Groupwide health management efforts culminated in a leading Japanese health council, the Nippon Kenko Kaigi recognizing machinery subsidiary Fukushima Ltd., as a Bright 500 company. Seven Group companies have been recognized as excellent corporations. We will keep striving to manage employee health.

## Employing People with Disabilities

The UBE Group has employed such individuals since establishing a special-purpose subsidiary for them in 1991. A team specializing in dealing with people with disabilities creates a supportive environment by collaborating with local support bodies to assist with everything from recruiting to job placements. That subsidiary matches tasks and individuals and discusses and constantly fosters progress by evaluating career development. A parallel endeavor is to broaden job opportunities through special purpose subsidiaries and agricultural jobs. We will continue to practice social inclusion and empower people to showcase their skills and get fulfillment through their work.

# Human Rights



## Respect for Human Rights

The UBE Group has made respecting human rights central to its corporate activities. We formulated the UBE Group Human Rights Guidelines in line with the United Nations Guiding Principles on Business and Human Rights. We will fulfill our corporate social responsibilities.



Details about the UBE Group Human Rights Guidelines are on the UBE Group's website:

<https://www.ube.co.jp/ube/en/sustainability/labor-rights/respect-for-hr.html>

The UBE Group Action Guidelines state our respect for individuals, fostering mutual understanding, and eliminating discrimination based on gender, nationality, race, disabilities, age, social status, religion, beliefs, or sexual orientation. The guidelines oppose inhumane practices, including forced and child labor. They reject ties with individuals or organizations engaging in such activities.

We signed the United Nations Global Compact. We participate in the Human Rights Due Diligence Working Group and the Human Rights Education Working Group of Global Compact Network Japan. We are a permanent member of a corporate human rights liaison council in the Ube-Sanyoonoda area, through which we engage in enlightenment activities with neighboring companies.

## Human Rights Training

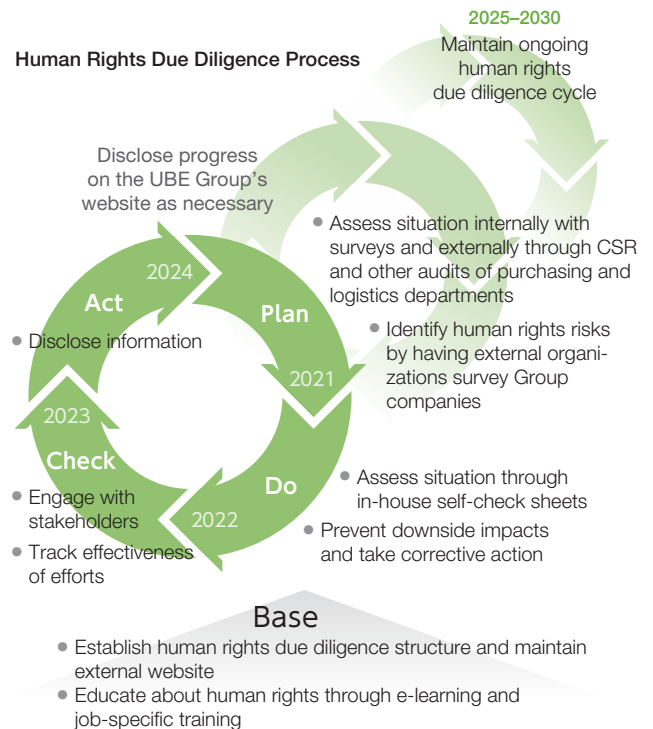
We created a Groupwide framework to educate employees about human rights based on the UBE Group Human Rights Guidelines. We ensure that all employees understand and embody our stance on human rights in all aspects of business by providing ongoing training. In fiscal 2022, all UBE Group operations in Japan conducted an e-learning initiative marking Human Rights Week to showcase the topics of business and human rights and human rights due diligence and our initiatives.

We also conducted a survey to identify areas in which employees perceive that there are human rights risks.

Initiative	Times held	Participants
e-learning	1	6,794 (Domestic Group operations, including directors)
New employee training	1	47 (Parent company)
Job-specific training	1	310 (Parent company)

## Human Rights Due Diligence Progress

We endeavor to identify, prevent, and address any human rights infringements in our activities. We will deploy a PDCA cycle through and beyond 2024 based on the following action plan.



## Human Rights Due Diligence Progress through Fiscal 2022

Initiatives	Specific Initiatives	Results and Future Initiatives
Third-party desktop survey of human rights risks among Group companies by an external agency	Surveyed human rights risks of 18 domestic and 21 overseas based on information from leading nongovernmental organizations, media outlets, and social networking services around the world	Survey identified no noteworthy risks
Identify human rights risks based on e-learning course participant questionnaire	Listed employee-perceived risks and adverse impacts based on Japanese government table of 25 key human rights and human rights risks related to corporate activities	Enhanced counseling channels and bolstered education in view of the high number of respondents identifying harassment as a risk. In fiscal 2023, we will map out and prioritize risk probabilities and severities and act accordingly
Share initiative progress and challenges with key overseas sites	Used United Nations Guiding Principles Reporting Framework Self-Assessment Check Sheet to track site progress and share specific initiatives	Look into rolling out initiatives across organization while factoring in national legal and cultural backdrops
Explicitly state respect for human rights in procurement guidelines and survey supply chain CSR efforts	See page 67 for more information on supply chain management.	

## Supply Chain Management



### Thorough Procurement in Line with Basic Purchasing Guidelines

The UBE Group endeavors to build fair and honest business relationships. We purchase in line with the Basic Purchasing Guidelines—Fair and Equitable Transactions, Objective Assessment in Selection of Business Partners, Legal Compliance and Confidentiality, Green Procurement, and Sustainable Procurement, as disclosed in the purchasing information on the UBE Group’s website.



Detailed information on these policies is available on the UBE Group’s website:

<https://www.ube.co.jp/ube/en/koubai/>

### Declaration on Partnership Building

On April 1, 2022, the UBE Group joined the Declaration on Partnership Building\*, through which it committed itself to focusing on the following endeavors to build new partnerships with supply chain partners and business operators that create value. Another aim is to promote UBE’s founding principle of Coexistence and Mutual Prosperity.



- Pursue coexistence and mutual prosperity throughout the supply chain and newly collaborate with entities of all sizes and affiliations
- Ensure that parent enterprises and subcontractors comply with desirable business practices (promotion standards based on the Act on the Promotion of Subcontracting Small and Medium-sized Enterprises)

The UBE Group will keep enhancing collaboration with suppliers in keeping with its founding principle of Coexistence and Mutual Prosperity to add more value to the entire supply chain.



Please visit the UBE Group’s website for more information on the Declaration on Partnership Building.

[https://www.ube.co.jp/ube/jp/news/2022/20220401\\_02.html](https://www.ube.co.jp/ube/jp/news/2022/20220401_02.html) (in Japanese only)

### Sustainable Procurement

The UBE Group has committed to sustainable procurement from business partners and elsewhere across the supply chain to enhance social credibility.

We seek to give priority to procurement from business partners who fulfill the following commitments.

- Have established an internal structure for practicing sustainability
- Ensure stable supply and emphasize quality
- Practice fair transactions in compliance with corporate ethics, the law, and social norms
- Place importance on environmental friendliness

- Work to address respect for human rights as well as safety and health management
- Value social contribution and communication with society, and practice information management and disclosure



For more information on sustainable procurement, see the UBE Group Sustainable Procurement Guidelines on the UBE Group’s website.

[https://www.ube.co.jp/ube/en/koubai/pdf/csr\\_guideline.pdf](https://www.ube.co.jp/ube/en/koubai/pdf/csr_guideline.pdf)

### Business Partner Survey Regarding Sustainability

UBE has conducted four business partner sustainability surveys to assess progress and request improvements where necessary. We hold discussions with partners whose response levels are low to help them improve their efforts. We plan to keep surveying partners regularly.

Question categories

1. Internal structure for practicing sustainability
2. Ensuring stable supply and quality
3. Corporate ethics, compliance with the law and social norms, and fair transactions
4. Consideration for the environment
5. Respect for human rights, safety, and health
6. Social contribution, communication with society, and information management and disclosure, etc.

Survey year	Large companies (capitalizations exceeding ¥300 million)	Small and medium-sized enterprises (capitalizations below ¥300 million)	Totals
2016 Companies responding	54	154	208
Score	4.5	3.3	3.6
2019 Companies responding	92	184	276
Score	4.5	3.5	3.8
2021 Companies responding	88	183	271
Score	4.5	3.5	3.8



Please visit the UBE Group’s website for more information on the results of the fourth survey of business partners on sustainability in 2021.

[https://www.ube.co.jp/ube/en/koubai/pdf/customer\\_01.pdf](https://www.ube.co.jp/ube/en/koubai/pdf/customer_01.pdf)

### Policy on Conflict Minerals

The UBE Group practices responsible procurement of raw materials, in order to meet its social responsibilities as a corporation. If it is found that conflict minerals (minerals that are mined and sold under the control of armed groups in the Democratic Republic of the Congo and surrounding regions) are used in procured raw materials, we will immediately stop procurement of the raw materials.

#### Glossary

\* Declaration on Partnership Building: The Council on Promoting Partnership Building for Cultivating the Future established this framework for building new partnerships. This entity’s members include the Cabinet Office and the Small and Medium Enterprise Agency. A company as the ordering party, declares to build a new partnership, by the name of the representative of the company.

# Corporate Governance

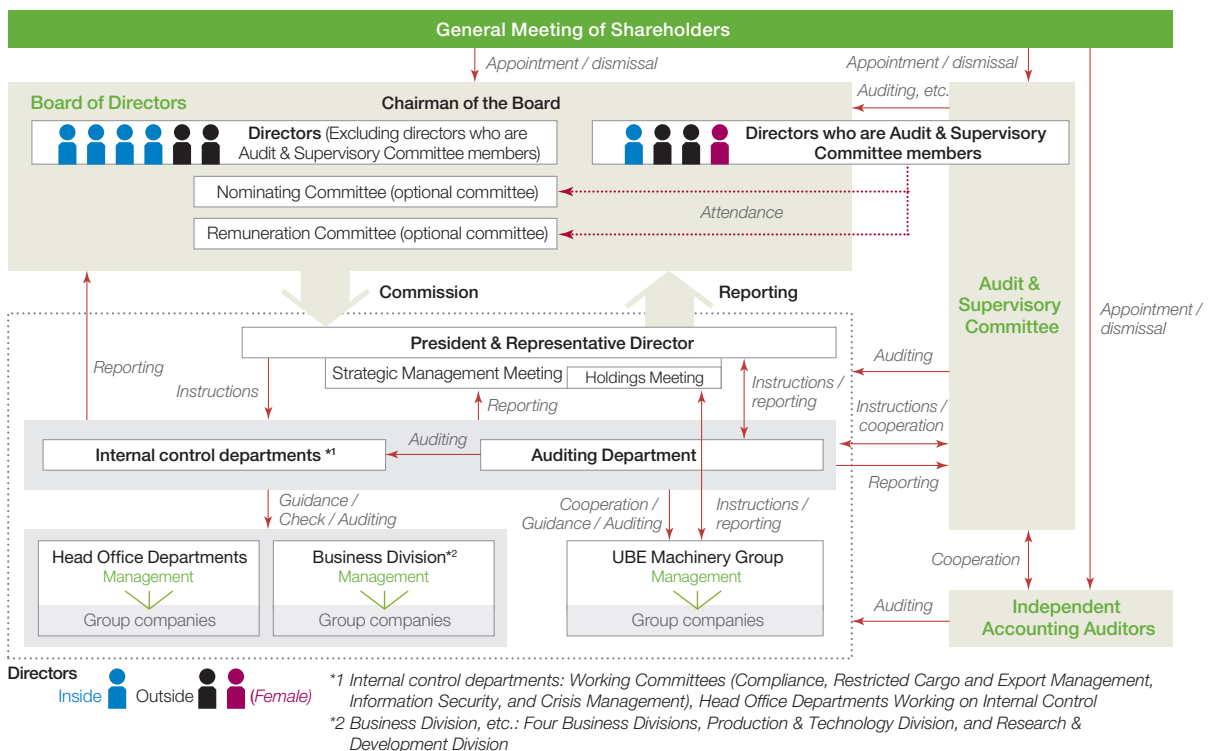
## Corporate Governance Initiatives in Fiscal 2022

- Better supervised progress with key management matters linked to achieving business plans over medium and long terms and swiftly implemented initiatives
- As a chemicals company, constantly enhanced Groupwide internal controls and risk management systems while more closely overseeing their effectiveness
- As a holding company, bolstered oversight of effective governance system operations for machinery and cement-related businesses

Detailed information on UBE's corporate governance is available on the UBE Group's website: [https://www.ube.co.jp/ube/en/corporate/management/governance\\_report.html](https://www.ube.co.jp/ube/en/corporate/management/governance_report.html)



### Overview of Corporate Governance and Internal Controls



### Basic Approach to Corporate Governance

Our basic mission is to deliver sustainable growth Groupwide and increase corporate value over the medium to long terms. We accordingly deemed it vital to take the following steps to ensure effective corporate governance and operate sustainably to fulfill our responsibilities to all stakeholders, including shareholders, customers, business partners, employees, and communities, and gain their trust.

- Reinforce the Board's business oversight by establishing a framework in which directors who are Audit & Supervisory Committee members with rights to audit and express their opinions can also vote in Board of Directors' meetings
- Expedite implementation by delegating important business decisions to the President & Representative Director

### Board of Directors

In principle, a director who is not concurrently an executive officer serves as Chairman of the Board of Directors. In accordance with laws, regulations

and the Articles of Incorporation, the Board of Directors stipulates key management matters, encompassing basic corporate policies and key financial and risks based on the Regulations of Board of Directors and makes decisions about these. It also oversees that directors and executive officers carry out their duties appropriately and efficiently. As a Company with Audit & Supervisory Committee, we are accelerating operational execution by delegating a part of decision-making on important operations to the President and CEO while consistently reinforcing supervision.

### ● Key Agenda Items in Fiscal 2022

#### Progress in Implementing Medium-Term Management Plan

- Overseeing progress in executing growth strategies and sustainability management (business structure reforms that prioritize addressing global environmental issues and such measures as bolstering human capital and digitizing business processes buttressing such reforms)

**Directors' Attendance at Board and Committee Meetings**  
From April 1, 2022 to March 31, 2023

	Name	Board of Directors	Audit & Supervisory Committee	Nominating Committee	Remuneration Committee
Directors	Yuzuru Yamamoto	13/13 (100%)		4/4 (100%)	3/3 (100%)
	Masato Izumihara	13/13 (100%)			
	Makoto Koyama*1	3/3 (100%)			
	Hideo Tamada*2	10/10 (100%)			
	Masayuki Fujii	13/13 (100%)			
Outside Directors	Keikou Terui*1	3/3 (100%)		2/2 (100%)	2/2 (100%)
	Tetsuro Higashi*3	8/9 (89%)		3/3 (100%)	3/3 (100%)
	Takefumi Fukumizu*2	10/10 (100%)		2/2 (100%)	1/1 (100%)
Director, Member of the Audit & Supervisory Committee	Atsushi Yamamoto	13/13 (100%)	18/18 (100%)		
Outside Directors, Members of the Audit & Supervisory Committee	Takashi Shoda	13/13 (100%)	18/18 (100%)	1/1 (100%)	
	Tadahiko Fukuhara*1	3/3 (100%)	4/4 (100%)		
	Tamesaburo Yamamoto*2	9/10 (90%)	14/14 (100%)		
	Satoko Suzuki*2	10/10 (100%)	14/14 (100%)		

\*1 Retired as of June 29, 2022  
\*2 Appointed as of June 29, 2022  
\*3 Retired as of January 4, 2023

**Group Governance**

- Oversee the effectiveness of Groupwide internal controls and risk management systems
- Supervise new administrative structure as a holding company for machinery and cement-related businesses
- Assess effectiveness of Board of Directors and debate initiatives to address issues
- Discuss disclosure content in Corporate Governance Report reflecting UBE's commitment to all 83 principles of the Corporate Governance Code
- Evaluation of the economic rationality of cross-shareholdings, etc.

**Audit & Supervisory Committee**

The Audit & Supervisory Committee monitors and verifies the establishment and operations of internal control systems and supervises directors and others executing business in line with laws and regulations and committee regulations by implementing such initiatives as below.

- Cooperating with the Auditing Department and Independent Auditors
- Exchanging views with the President and CEO
- Auditing executive directors, executive officers, and business divisions, including subsidiaries, and the Internal Control Departments, and expressing opinions as needed

Audit & Supervisory Committee	Name	Role
Percentage of outside directors on the Audit & Supervisory Committee	Tamesaburo Yamamoto (Chairman)	Outside Director Independent Director
	Satoko Suzuki	Outside Director Independent Director
	Tatsuya Tanaka	Outside Director Independent Director
	Masayuki Fujii	Non-Executive Inside Director, Full-time



Outside directors in the Audit & Supervisory committee attend Nominating Committee and Remuneration Committee meetings to confirm details and procedures and supervise selections and dismissals of directors (excluding those on the Audit & Supervisory committee) and their remuneration.

Nominating Committee	Name	Role
Percentage of outside directors on the Nominating Committee	Takefumi Fukumizu (Chairman)	Outside Director Independent Director
	Tsugio Mitsuoka	Outside Director Independent Director
	Yuzuru Yamamoto	Chairman of the Board, Non-Executive Inside Director



Remuneration Committee	Name	Role
Percentage of outside directors on the Remuneration Committee	Tsugio Mitsuoka (Chairman)	Outside Director Independent Director
	Takefumi Fukumizu	Outside Director Independent Director
	Yuzuru Yamamoto	Chairman of the Board, Non-Executive Inside Director



**Outside Directors**

UBE has appointed outside directors to add independent, third-party viewpoints to the decision-making



**Number of Directors**



\* As of June 29, 2023

process and to the monitoring of management to ensure efficiency, transparency, and objectivity from June 2005. In addition, UBE employs a Nominating Committee and Remuneration Committee as advisory bodies to the Board of Directors. Each comprises three members—two outside directors (excluding members of the Audit & Supervisory Committee) and one non-executive inside director (Chairman of the Board)—and is chaired by an outside director.

### Effectiveness Assessment of the Board of Directors

UBE convenes an annual Evaluation Meeting for Effectiveness of the Board of Directors composed of all directors to hold deliberations on evaluating the effectiveness of the Board of Directors, based on directors' self-assessment of the Board of Directors (to be obtained through questionnaires, etc.). The Board of Directors conducts an evaluation of its effectiveness based on these deliberations. In the April 2023 meeting of Board of Directors, the board concluded that the effectiveness of the Board of Directors is ensured because it was functioning effectively in view of an assessment that its composition and operation was effective and that it had engaged in vigorous discussions and deliberations.

Key challenges for fiscal 2022 were as follows.

#### Challenges

1. Better supervise progress with key management matters linked to achieving business plans over medium and long terms and swiftly implement initiatives.
2. As a holding company, bolster oversight of effective governance system operations for machinery and cement-related businesses.

#### Major Initiatives

- The Board stepped up efforts to supervise progress with key management matters linked to achieving

business plans over medium and long terms and the effectiveness of Groupwide internal controls and risk management systems by requesting executives to constantly improve reporting and instructing them to accelerate their efforts.

- The Board supervised operational progress with a new administrative structure as a holding company for the machinery business cement-related businesses.
- In an Executive Management Workshop, Board members drew on information from external experts in the global business environment and corporate strategies in the chemicals industry to discuss UBE's issues in seeking to drive specific initiatives to reach medium- and long-term management plan objectives.

At the same time, the Board of Directors is becoming more diverse as outside directors changed. It was in view of that transition that members presented prospective issues and improvement proposals to enhance the Board's effectiveness. These included providing more business and organizational information to outside directors, enhancing business reports, and broadening preliminary explanations so deliberations in Board gatherings could be more comprehensive. The Board accordingly decided to improve its effectiveness by stepping up efforts to address basic and material issues that it identified in fiscal 2022.

### Director Skills Matrix

Members of the Board of Directors have a wealth of experience and advanced expertise in general business management and sustainability, finance and accounting, manufacturing, technology and R&D, sales and marketing, compliance and risk management, human resources management, and global business. We ensure diversity in gender as well as other areas, and choose directors who are members of the Audit & Supervisory Committee for their experience, capabilities, and knowledge of finance, accounting, and legal matters.

**Skills Matrix for Directors**

		General Business Management / Sustainability	Finance / Accounting	Manufacturing / Technology / R&D	Sales / Marketing	Compliance / Risk Management	Human Resources Management	Global Business
Directors	Yuzuru Yamamoto	●		●		●		
	Masato Izumihara	●			●			●
	Hideo Tamada	●				●	●	
	Hiroataka Ishikawa	●	●				●	
Outside Directors	Takefumi Fukumizu	●		●		●		
	Tsugio Mitsuoka	●		●		●		
Director, Member of the Audit & Supervisory Committee	Masayuki Fujii	●	●					●
Outside Directors, Members of the Audit & Supervisory Committee	Tamesaburo Yamamoto	●				●	●	
	Satoko Suzuki	●	●			●		
	Tatsuya Tanaka	●			●			●

Note: Up to three skills expected of director are indicated.

#### Anticipated Areas and Roles

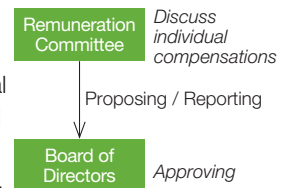
**General business management/sustainability** Oversee efforts to resolve UBE's business issues and improve corporate value by leveraging corporate management experience at companies and knowledge of organizational operations and management strategies to drive sustainability management



- Finance/accounting** Draw on experience and expertise in finance and accounting to deliver sound judgments and advice regarding capital policies, financial strategies, and financial reporting.
- Manufacturing/technology/R&D** Draw on experience and expertise in technological fields to determine the suitability and advice regarding policies, strategies, and management resource investments in product manufacturing, technology development, and R&D
- Sales/marketing** Harness experience and expertise in sales and marketing to assess and advise on sales and marketing policies, strategies, and business resource investments
- Compliance/risk management** Oversee and advise on compliance and risk management initiatives based on experience and expertise in compliance and risk management
- Human resources management** Employ experience and expertise in human resources, labor relations, and human resources development to evaluate and advise on Group human resources management initiatives
- Global business** Draw on experience and expertise in global business to oversee and advise on the Group's global deployment and issue resolution efforts

### Director and Executive Officer Remuneration

The Remuneration Committee advises the Board of Directors and comprises the chairman and a majority membership of outside directors. This body deliberates on the compensations of individual directors (excluding those of Audit & Supervisory Committee members) and executive officers, and presents its findings to the Board of Directors, which then makes decisions. Audit & Supervisory Committee members discuss and determine remunerations for directors who are committee members.



### Director and Executive Officer Remuneration System and Method of Calculation

Fixed Compensation/ Performance-linked Remuneration	Structure of Remuneration	Name of Remuneration	Method of Calculation
Fixed Compensation	Base Compensation	Fixed remuneration for each position	Fixed remuneration for each position
Performance-linked Remuneration	Annual incentives	Company performance-linked remuneration	Consolidated ordinary profit in the previous fiscal year × Coefficient for each position
		Remuneration based on evaluation of achievement of annual individual performance targets	Level of achievement of annual targets for each officer
	Long-term incentives	Remuneration based on evaluation of achievement of medium- to long-term individual performance targets	Level of achievement of 3–5 year medium- to long-term targets for each officer
		Restricted stock remuneration	Ordinary year: Base amount for each position / Average share price during the previous fiscal year + Number of shares carried over from the previous fiscal year  Adjusted year: Base amount for each position / Average share price during the previous fiscal year × (100% + Grant ratio - 20–30%*) + Number of shares carried over from the previous fiscal year

Note: Directors who are Audit & Supervisory Committee members and outside directors receive base compensation only, at a fixed amount.  
\* Adjusted in a range from 80% to 130% depending on the level of achievement of the management indicators

### Ratios of Base Compensation and Annual and Long-Term Incentives of Directors (Excluding Members of the Audit & Supervisory Committee and Outside Directors) and Executive Officer Remuneration

Fixed remuneration	Performance-linked remuneration		
Base compensation	Annual incentives	ESG-related initiatives	Long-term incentives
Approx. 50%	Approx. 30%	Approx. 10%	Approx. 20%

Note: The ratios of annual incentives for the President and the Chairman are higher, and base compensation lower, compared to those for other directors and executive officers.

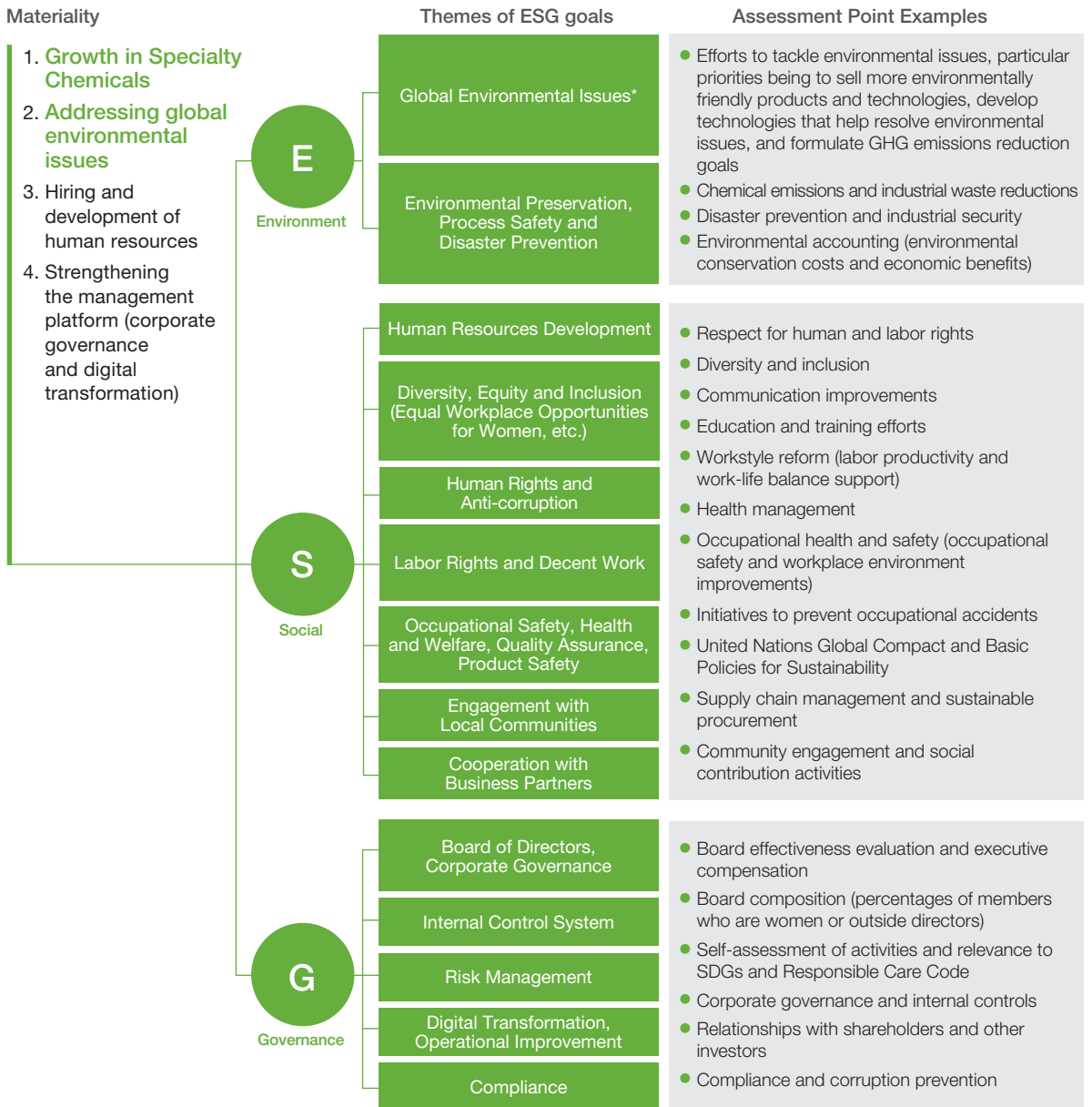
### Total Amounts of Remuneration, etc., for Each Category of Officer, Total Amounts for Each Type of Remuneration, etc., and the Number of Eligible Officers

(Millions of yen)	Total Remuneration	Base Compensation	Breakdown			Number of Eligible Officers
			Fixed Remuneration	Performance-Linked Remuneration		
				Annual Incentives	Of Which, Share Compensation	
Directors (Excluding directors who are Audit & Supervisory Committee members)	301	147	92	62	30	8
(Of which, outside directors)	(21)	(21)	(—)	(—)	(—)	(3)
Directors who are Audit & Supervisory Committee members	78	78	—	—	—	5
(Of which, outside directors)	(40)	(40)	(—)	(—)	(—)	(4)
Total	379	225	92	62	30	13
(Of which, outside directors)	(61)	(61)	(—)	(—)	(—)	(7)

● **ESG Targets**

Our annual and medium- to long-term targets include ESG-related initiatives. We draw on ESG initiatives in tackling the pivotal challenges of growth in specialty chemicals and addressing global environmental issues. We set ESG targets for each director, evaluating performance and calculating compensation to build incentives to reach. ESG goals differ among directors. In fiscal 2022, progress with ESG targets accounted for approximately 10% of total compensation for directors. A similar setup applies to executive officers.

**Fiscal 2022 ESG Targets**



\* Global environmental issues: Set guidelines in three priority areas in response to changes in the external environment.

1. Addressing climate change (carbon neutrality)
2. Contributing to a circular society (circular economy)
3. Contribute to nature conservation and restoration (Nature Positive)

**Executive Officers**

UBE has been using an executive officer system to separate supervision and business execution since June 2001. The President and Representative Director delegates authority to executive officers, who perform their duties based on management policies decided by the Board of Directors.

**General Meeting of Shareholders and Exercise of Voting Rights**

The Notice of Convocation is sent out three weeks prior to the General Meeting of Shareholders, but its contents are posted on the UBE Group’s website earlier. UBE provides access to mobile phone and internet voting in addition to voting by

mail so that shareholders unable to attend can also exercise their voting rights. UBE also uses an electronic voting platform for institutional investors.

We are live streaming the gathering to make it accessible for shareholders unable to attend in person.

At the General Meeting of Shareholders held on June 29, 2022, a total of 20,725 shareholders exercised their voting rights (including 20,625 shareholders who exercised voting rights in writing and via the internet), representing 78.7% of total voting rights.

### Engagement with Shareholders

#### ● Two-Way Communication through IR Activities

We aim to fairly disclose timely and appropriate information. We engage closely with investors and draws on their feedback to improve corporate value. We accordingly provide extensive opportunities for investors to speak directly with the president and CEO and other members of the management team.



Detailed information is available in the Investor Relations section of the UBE Group's website:

<https://www.ube.co.jp/ube/en/ir/>

### Internal Control Systems

We have chief compliance and chief risk officers, and undertake Groupwide internal controls and risk management through the Legal Department, Risk Management Department, Environment & Safety Department, QA Department, and other internal control bodies, and through a range of operational

committees and risk management committees overseeing compliance, information security, export controls, and crisis management.



Detailed information on the Basic Policy for Establishing Internal Control is available on the UBE Group's website:

<https://www.ube.co.jp/ube/en/corporate/management/internalcontrol.html>

### Compliance

UBE established the UBE Group Action Guidelines as a code of conduct guiding basic behavior within the UBE Group and among constituent members. The guidelines outline the standards and criteria for compliance in corporate activities, which directors and employees are expected to adhere to.

UBE is working to upgrade and strengthen structures and frameworks for compliance. Initiatives include the introduction of the "UBE C-Line," a hotline that allows executive officers and employees to directly report compliance issues without going through normal channels. This encourages the rapid finding and swift correction of workplace harassment and labor problems, embezzlement and other misconduct, corruption such as bribery, collusion, and other compliance issues. By providing compliance-related information, e-learning, team coaching, and other programs, UBE continuously educates and enlightens its employees.

In fiscal 2022, we conducted legal training to educate about the Anti-Monopoly Act, Subcontract Act, Unfair Competition Prevention Act, and other legislation by in-house and outside instructors. We also conducted compliance training for Group

#### Key investor relations activities in fiscal 2022

	Main representatives	Times held
Management Overview Briefing	President and CEO	1 (After the announcement of financial results for the fiscal year)
Earnings briefings	CFO	4 (Quarterly)
Overseas road shows	President and CEO, and CFO	3 (Individual meetings with investors in United States and Asia and teleconferences with European investors owing to pandemic)
Small meetings	President and CEO, and executive officers	2 (one meeting with sell- and buy-side analysts)
Individual meetings with institutional investors and securities analysts Of which, accounted for by ESG meetings	CFO and Accounting & Finance Dept.	About 160 times (130 with domestic investors and 30 with foreign investors) Approx. 10 times

#### Key topics and areas of interest

- Specialty business growth strategies and business structure reforms
- Initiatives to tackle environmental issues, particularly climate change
- Performance trends and outlook for cement-related businesses
- Shareholder return policy direction

#### Feedback to management

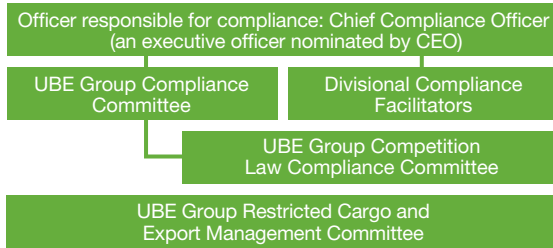
- Sharing feedback from meetings with analysts and investors in Board and other gatherings
- Distributing securities firm analyst reports by email and other channels

#### Outcomes from engaging with shareholders and other investors

- Investor request: While your cement-related business is now a separate unit, I would like to see you maintain user-friendly disclosure regarding that area.  
→ From fiscal 2023, we have held management briefings and other gatherings regarding cement-related businesses in which representatives of Mitsubishi UBE Cement take part.
- Investor request: Please present a coherent rationale for your growth strategies.  
→ We have improved disclosure to focus on priority businesses, starting with medium-term management plan and other materials in fiscal 2023.

company managers and online meetings with people at overseas offices to foster compliance Groupwide.

**Compliance System**



**Preventing Corruption**

Chapter 3 of the UBE Group Action Guidelines for Business Conduct, titled Fairness and Integrity, states a commitment to maintaining healthy relationships with governments and regulators. The objective is to prevent the bribery of public officials in Japan or abroad as well as other forms of corruption. We accordingly formulated the UBE Group Policy on Bribery Prevention, and provide e-learning and collective training courses for executives and employees. We maintain a framework that if such matters of concern as suspected bribery of public officials, excessive entertainment with business partners, exchanges of money and goods, or collusion come to light through our internal hotline, compliance officers and departments collaborate to swiftly inquire into the facts and take the necessary measures.

In fiscal 2022, there were no incidences of corruption, which would be subject to disciplinary

action, or any penalties or other charges for corruption.



Please visit the Compliance section of the UBE Group's website for the UBE Group Policy on Bribery Prevention.

<https://www.ube.co.jp/ube/en/sustainability/compliance/compliance.html#bribery>

**Information Security**

Cyberattacks and other information security threats have surged in recent years as digitization has advanced and social conditions have changed. These considerations prompted us to create a suitable structure to safeguard our operations. This effort entailed appointing a chief information security officer (the executive officer overseeing the Information Systems Department). We additionally set up the Information Security Committee to advise that officer and plan and deliberate on key related matters.

On top of that, we formulated our Information Security Guidelines to ensure that we rigorously disclose, use, preserve, and manage information properly and implement and constantly review information security measures on an ongoing basis.

Also, we conduct regular in-house training for all executives and employees to ensure that they understand the importance of information security. Through these and other initiatives, we strive to safeguard information and enhance our standing as a good corporate citizen.



Please visit the Information Protection and Management section of the UBE Group's website for details on our information security management structure and information security guidelines.

<https://www.ube.co.jp/ube/en/sustainability/compliance/compliance.html#information>

**Directors** (As of June 29, 2023)



Hiroataka Ishikawa  
Director  
CFO

Masayuki Fujii  
Director  
Member of the Audit & Supervisory Committee

Tsugio Mitsuoka  
Outside Director

Takefumi Fukumizu  
Outside Director

Hideo Tamada  
Representative Director  
CRO and CCO

Yuzuru Yamamoto  
Director  
Chairman of the Board

Masato Izumihara  
President & Representative Director  
CEO

Tamesaburo Yamamoto  
Outside Director  
Member of the Audit & Supervisory Committee

Satoko Suzuki  
Outside Director  
Member of the Audit & Supervisory Committee

Tatsuya Tanaka  
Outside Director  
Member of the Audit & Supervisory Committee

Chairman of the Board and Director	President and Representative Director	Representative Director	Director	Director, Audit and Supervisory Committee Member
<b>Yuzuru Yamamoto</b> 1977 Joined the Company 2001 Executive Officer, UBE Machinery Corporation, Ltd. 2003 Representative Director, President of UBE Machinery Corporation, Ltd. Executive Officer 2007 Managing Executive Officer 2010 Senior Managing Executive Officer 2013 Representative Director, and Senior Managing Executive Officer 2015 President & Representative Director, President & Executive Officer, and Group CEO 2019 Chairman of the Board of Directors & Representative Director Chairman of the Board of Directors & Director (current position)	<b>Masato Izumihara</b> 1983 Joined the Company 2006 General Manager, Corporate Planning Dept. and Investor Relations & Public Relations Dept. 2010 Executive Officer 2011 Director, and Executive Officer 2013 Director, and Managing Executive Officer 2018 Director, and Senior Managing Executive Officer 2019 President & Representative Director, President & Executive Officer, CEO (current position)	<b>Hideo Tamada</b> 1981 Joined the Company 2009 General Manager of Planning and Management Dept. of Ube Industries Central Hospital 2015 Executive Officer 2018 Managing Executive Officer 2021 Senior Managing Executive Officer 2022 Representative Director, Senior Managing Executive Officer (current position)	<b>Hiroataka Ishikawa</b> 1989 Joined the Company 2022 General Manager of Accounting & Finance Dept. (current position) 2023 Director, Executive Officer (current position)	<b>Masayuki Fujii</b> 1985 Joined the Company 2010 General Manager, Corporate Planning Dept. 2015 Executive Officer 2019 Director, and Managing Executive Officer 2023 Director, Audit and Supervisory Committee Member (current position)

Outside Directors

<b>Takefumi Fukumizu</b> 1976 Joined the Ministry of International Trade and Industry (currently the Ministry of Economy, Trade and Industry) 2004 Director-General, Kansai Bureau of Economy, Trade and Industry 2006 Director-General, Regional Economic and Industrial Policy 2007 Director-General, Small and Medium Sized Enterprise Agency 2008 Deputy Director, NEDO 2013 Vice President, Japan Alcohol Corporation 2017 Director, Japan Testing Center for Construction Materials 2021 Advisor, Japan Testing Center for Construction Materials (current position) 2022 Outside Director of the Company (current position)
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<b>Tsugio Mitsuoka</b> 1980 Joined Ishikawajima-Harima Heavy Industries Co., Ltd. (currently IHI Corporation) 2010 Executive Officer, Vice President of Aero Engine & Space Operations, IHI Corporation 2013 Managing Executive Officer, President of Aero Engine & Space Operations 2014 Director, Managing Executive Officer, President of Aero Engine & Space Operations 2016 Representative Director and President, Chief Operating Officer 2017 Representative Director and President, Chief Executive Officer 2020 Representative Director and Chairman of the Board and President, Chief Executive Officer Representative Director and Chairman of the Board, Chief Executive Officer 2021 Representative Director, Japanese Aero Engines Corporation (current position) Representative Director and Chairman of the Board, IHI Corporation (current position) 2022 Chairman, The Society of Japanese Aerospace Companies (current position) 2023 Outside Director of the Company (current position)
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Outside Directors and Members of the Audit & Supervisory Committee

<b>Tamesaburo Yamamoto</b> 1998 Professor, Faculty of Law, Keio University 2006 Examiner, Certified Public Accountant Examination Examiner, New Bar Examination 2010 Director, Japan Association of the Law of Trust (current position) 2015 Director, Japan Association of Private Law 2022 Outside Director and member of the Audit & Supervisory Committee of the Company (current position) 2023 Professor Emeritus, Keio University (current position)
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<b>Satoko Suzuki</b> 1996 Joined Tohmatsu & Co. (currently Deloitte Touche Tohmatsu LLC) 2003 Registered certified public accountant 2005 Representative, opened Suzuki Satoko CPA Office (current position) 2006 Registered tax accountant 2012 Director, NPO Accounting & Tax Professionals Network 2015 Supervisory Director, Ichigo Hotel REIT Investment Corporation (current position) 2019 Outside Director, Bull-Dog Sauce Co., Ltd. (current position) 2022 Outside Director and member of the Audit & Supervisory Committee of the Company (current position) 2023 Outside Auditor, Helios Techno Holding Co., Ltd.
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<b>Tatsuya Tanaka</b> 1980 Joined Fujitsu Limited 2005 Director of the Board & Vice President, Fujitsu (China) Holdings Co., Ltd. 2012 Corporate Executive Officer, Manufacturing Industry Business Unit, Fujitsu Limited 2013 General Manager, Manufacturing Industry Business Unit, Manufacturing Industry, Logistics, and Sales Group 2014 Corporate Senior Vice President, and General Manager, Asia Region 2015 Corporate Executive Officer, SEVP and General Manager, Asia Region Corporate Executive Officer, SEVP Representative Director 2019 Chairman of the Board of Directors 2020 Chairman of the Board, Fujitsu Marketing Limited Chairman of the Board, Fujitsu Japan Limited 2021 Outside Director, Nippon Light Metal Holdings Company, Ltd. (current position) 2022 Senior Adviser, Fujitsu Japan Limited Adviser, Tsukishima Kikai Co., Ltd., (currently Tsukishima Holdings Co., Ltd.) 2023 Outside Director and member of the Audit & Supervisory Committee of the Company (current position)
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Executive Officers (As of June 29, 2023)

President & Executive Officer	Senior Managing Executive Officers	Managing Executive Officers	Senior Executive Officers	Executive Officers
Masato Izumihara	Hideo Tamada	Hisaaki Yokoo	Bruno de Bièvre	Masahiro Naiki
	Yuki Nishida	Masayoshi Ota	Watchara Pattananijirundorn	Hirofumi Nonaka
	Keiichi Nagata	Yoichi Funayama	Futoshi Takase	Hiroataka Ishikawa
				Kazunori Yukimoto
				Ryo Kawamura
				Shinya Takahashi



Hayatsue River Bridge



The UBE Machinery Group will operate in line with its new purpose, which is to contribute to better tomorrows for society by caring for the environment and continuing to generate the value that customers demand.

### Long-Term Vision

Enhance business value by reinforcing the revenue base while becoming more autonomous and competitive

**Goal: Contribute to customers with products and services offering brand value**

- Keep developing products that match market needs
- Globally supply services that leverage ICT and AI and realize digital transformation in after-service processes

#### Principal Products and Businesses

- Molding machines  
(Die-casting machines, extrusion presses, and injection molding machines)
- Industrial machinery  
(Kilns, vertical mills, transportation systems, water screening equipment, crushers, and chemical equipment), bridges, and grab buckets
- Machinery services
- Steel products  
(Billets and castings)
- Control boards

### Business Policies under the Medium-Term Management Plan

We seek to enhance the profitability of product businesses by capitalizing on globally expanding market

needs, such as the shift to xEVs and carbon neutrality. At the same time, we look to expand service businesses by developing new proposals and catering to the products of other companies.

The UBE Machinery Group will reinforce corporate governance and establish an independent business operation.

#### Numerical Targets

(Billions of yen)

	2022		2023		2024 (FY)
	Targets	Results	Targets	Forecasts	Targets
Net sales	106.0	96.9	98.0	108.5	100.0
Operating profit	5.0	5.2	5.5	6.0	6.0

### Growth Strategy toward Fiscal 2030

#### Molding Machine Business

For die-casting machines, we will develop equipment and processes that make it possible to manufacture new, lightweight components for automobiles at low costs. These include battery cases and body and chassis parts that will replace conventional engine and transmission parts with the shift to xEVs. We will expand earnings by supplying these offerings to customers.

For injection molding machines, we will create carbon-neutral, recycling-friendly new products and molding processes. We will pursue new materials approaches that contribute to a better environment.

### Employee Spotlight on Strengths

We design a wide range of conveyors, cranes, and other transportation equipment models. We recently completed a testing machine at our facilities for a new air-float conveyor. We are using it to offer specifications that match customer needs and promote our efforts. We will keep supplying products and services that match customer requirements, including air-float conveyors that help lower environmental impacts.

#### Tomohiro Kawasaki

A staff member: Storage and Transportation System Crane & Bulk Handling Machinery Engineering Gr. Industrial Machinery Engineering Dept. (Bulk Handling & Crusher & Water Screen) Industrial Machinery Headquarters



Air-float conveyor testing machine





Air-float conveyor for biomass co-firing power plants

**SWOT Analysis**

**Strengths**

- We have a robust record in serving the automotive, electric power, cement, steelmaking, and other key sectors, and have earned solid customer reputations for our efforts.
- We can draw on numerous domestic and overseas operations to quickly cater to various customer needs in everything from development through after-service.
- With one of the biggest processing facilities in Japan and talented engineers, we deliver manufacturing capabilities that customers trust.

**Weaknesses**

- While our broad product lineup is a plus, the small businesses of our offerings expose us to economic fluctuations.  
**Countermeasures:** We will focus on creating core businesses that are impervious to economic downturns by developing technologies and markets in environmental and other fields with growth potential and exploring alliances.

**Opportunities**

- There are accelerating efforts in carbon neutrality, product recycling, and other areas across society to contribute to a better environment.
- The technical requirements of customers for electrifying and lightening automobiles are diversifying.
- Demand for services and support is robust across diverse markets, including for global and other companies' products.

**Threats**

- While technological development is progressing in carbon neutrality, digital transformation, and other respects, there are concerns about negative impacts on corporate value, such as from slow sales stemming from delays in delivering product value or addressing technological needs.  
**Countermeasures:** We will collect timely information from customers and other sources to develop technologies and improve systems.
- Intensifying competition in terms of pricing and delivery owing to rocketing raw materials and fuel costs and longer delivery times for electrical components, as well as delays in customer capital investment decisions, could affect our business.  
**Countermeasures:** We will secure business opportunities, such as by proposing lower product costs, shorter lead times, and government subsidy usage.



Injection molding machine 1300em III

In Chinese market, we will focus on enhancing earnings by reinforcing our local production structure for large die-casting machines in addition to regular injection molding models. In the promising Indian market, we will use local distributors to expand sales and build our brand image. We will also enhance our ICT offerings to eliminate downtimes, provide preventive maintenance, and swiftly resolve issues.

**Industrial Machinery Business**

We will expand our business by providing products and services that meet the needs of carbon-neutral and other environment-related markets. We will focus on capturing demand for new energy and expanding sales in that area. Efforts in that regard will include entering the markets for biomass fuel transportation equipment, offshore wind power generation equipment, and ammonia-related facilities. For bridges business, we will help develop social infrastructure by alleviating urban traffic congestion and renovating deteriorating overpasses.

**After-Service**

We will cater to customer demand at existing facilities,

adding value and stepping up after-service by extending the operating lives and enhancing the performances of facilities by leveraging advanced technology while focusing on control equipment renovations. We will additionally build a structure that enables us to serve customers faster by allocating personnel more flexibly.

**Steelmaking Business**

We will continue to transition our business structure from quantity to quality and stabilize earnings while taking advantage of our production capacity to manufacture special steel types and specially sized billets and large castings, which are our strengths. We will expand our environmental recycling business as a third key earnings source.

**Sustainability-Related Initiatives**

We will keep striving to develop and supply equipment and service offerings that help conserve energy and develop processes and facilities that improve customers' recycled materials usage rates. In the steelmaking business, we will contribute to communities and society from the perspective of circular economy. We will do so by recycling scrap steel and melting and detoxifying medical and industrial waste.



Medium-term Management Strategy

**Infinity with Will 2025 ~MUCC Sustainable Plan 1st STEP~** (Fiscal 2023 to 2025)

We will strive to improve corporate value by formulating a vision based on business climate projections for around 2030. A top priority will be to lay the groundwork in keeping with prevailing circumstances.

The name uses Mitsubishi UBE Cement's tagline, "Infinity with Will."

*Mission* **Continue to support the future of the planet by providing the highest quality with the best technology and services.**

**Business Climate**

- Domestic market gradually declining
- High coal prices
- Southern Californian market growing
- Carbon neutrality accelerating
- Environmental protection initiatives
- Innovative digital technologies progressing
- Workforce shrinking
- Export markets deteriorating

*Value* **Integrity and Sincerity  
Teamwork and Group Strength  
Challenges and Change**

**Our Vision**

- Cost leader in the domestic business
- Continue to grow overseas businesses
- Carbon neutrality leader
- Sophisticated value chain
- Unique technologies for building new value

**Vision for 2030**

**Corporate group with leading technology and high profitability by maximizing the synergistic effects of business integration**

Deliver domestic consolidated operating income of at least ¥30 billion and overseas consolidated operating income of at least US\$350 million by expanding **domestic and international businesses**  
Consolidated ROE and ROA of at least 8% and 6%, respectively

**Business Policies and Growth Strategies under the Medium-term Management Strategy**

**1. Strengthening and Cost Reduction of Domestic Cement Business**

Become Japan's most competitive cement business by cutting costs, restructuring businesses, and bolstering value chain

- Transact at fair prices
- Become more competitive by optimizing production and logistics
- Tackle energy price hikes by transitioning to a decarbonized society
- Overhaul and rationalize business infrastructure

**2. Business Growth in the U.S. and Exploration of New Business Sites**

Strengthen vertical integration model based on top share of ready-mixed concrete in Southern California, endeavoring to maximize value and exploring new sites that can be the second core pillar following U.S. businesses

- Cater to growing demand (secure stable supplies of cement and ready-mixed concrete and stable procurement of aggregate)
- Pass on costs
- Become carbon neutral

**3. Promotion of Global Warming Countermeasures**

Establish and swiftly commercialize advanced

technologies and materialize cement manufacturers' business-oriented decarbonization schemes to cut CO<sub>2</sub> emissions by 40% by 2030 from 2013 levels and become carbon neutral by 2050

**(1) Undertake swift energy conversion**

*Convert thermal energy for firing*

- Reach waste-derived fuel ratio of 50% by 2030
- Attain carbon-free fuel ratio of 50% by 2050
- Decarbonize electricity (reduce emissions by 2030 and fully decarbonize by 2050)

**(2) Swiftly commercialize carbon dioxide capture and utilization**

Position low-cost, high-concentration CO<sub>2</sub> captured from cement production processes as useful resource and establish carbon dioxide capture and utilization business model by 2030

**4. Strengthening and Expansion of Domestic Value Chain**

**(1) Environment and Energy Business**

Generate profits by strengthening energy value chain (expand use of thermal energy alternatives and biomass conversion) through the Ube Coal Center, one of Japan's largest such facilities

- Establish and strengthen energy value chain
- Explore affordable fuel (expand sources)

**(2) Mineral Resources Business**

Stably procure limestone, maximize added value, and minimize costs





- Optimize organizational structure for mining limestone, secure silica resources by developing mines, and secure procurement sources and resources
- Maximize synergies by integrating Ube Material Industries' aggregate and limestone businesses and optimizing group-wide supply structure
- Expand magnesia applications and quicklime sales channels
- Broaden sales of MOS-HIGE fibrous magnesium oxysulfate by expanding automotive applications
- Enhance supply capacity for ultra-high-purity calcium carbonate for multilayered ceramic capacitors

**(3) Ready-mixed concrete operations and distributors**

Strengthen business infrastructure, generate stable earnings, and form groups that lead their fields and contribute to domestic cement sales strategy

- Restructure directly affiliated ready-mixed concrete operations and distributors
- Leverage alliances to lead areas
- Tap Group human resources
- Capture low-carbon product demand

**5. Enhancement of R&D and Business Management**

**(1) R&D**

Leverage superior development capabilities to innovate technologies and create new value to drive business growth and contribute to a sustainable society

- Global environmental measures: Swiftly acquire technologies to cut and tap CO<sub>2</sub>
- Rebuild and strengthen existing businesses: Improve profitability and productivity by deepening and leveraging proprietary technologies
- Create new businesses (strengthen and expand growth areas): Promote development and practical application of proprietary technologies and materials

**(2) Human resources**

We accept diverse individuals and offer rewarding work environments. We achieve group-wide efficiency by strategically reallocating people.

- Allocating people appropriately: Shift people abroad, to R&D operations, and group companies by enhancing operational efficiency and mobilizing individuals
- Secure and develop specialists in such areas as digital transformation (DX) and global operations
- Adopt job-based employment
- Embrace diversity and inclusion

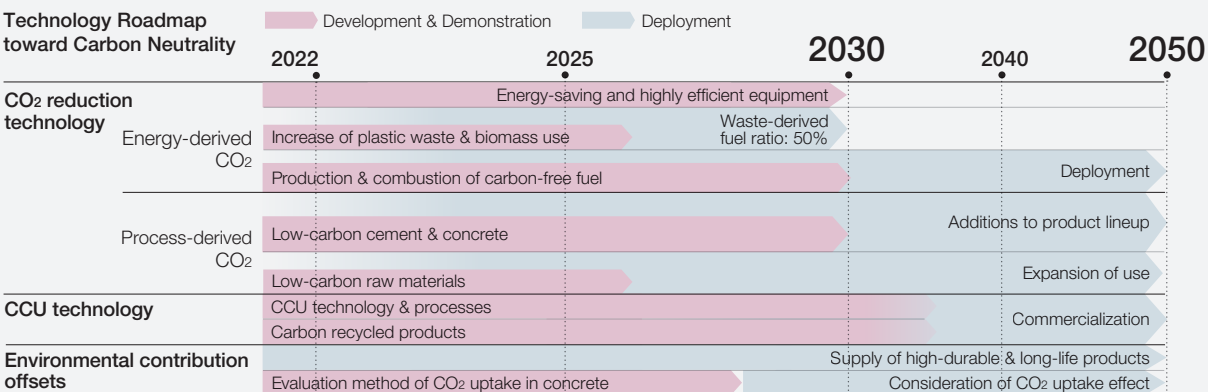
**(3) DX strategy**

Leverage digital technology and data to support sustainable growth group-wide by deploying digital infrastructure that supports business transformation and establish a competitive edge by continuing to capture new value creation opportunities

- Develop DX structure to formulate strategies and cultivate talent and streamline and automate operations

**Contribution to Carbon Neutral Society and Circular Economy**

Mitsubishi UBE Cement has made tackling global warming a top Group priority under this medium-term management strategy. It seeks to become carbon neutral group-wide by 2050 by undertaking a business-centric decarbonization framework unique to that of a cement manufacturer. It is drawing on strengths from concentrating core sites in coastal areas of western Japan, where there are large ports, and technologies and supply chains amassed as a conglomerate. The company will pursue new initiatives to become carbon neutral by collaborating with neighboring regions and other industries and become a top runner in its sector.



## Segment Results Overview

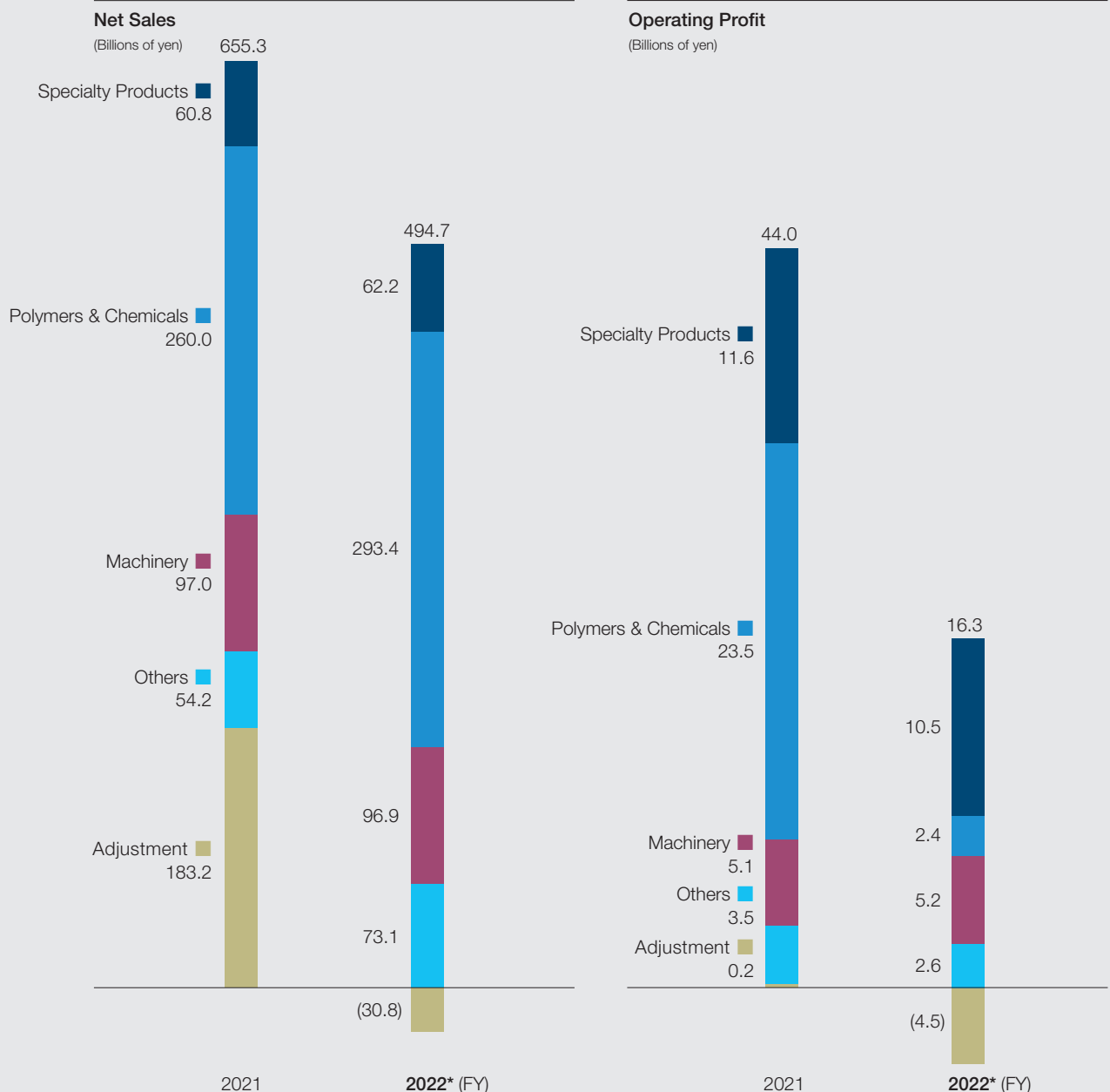
In fiscal 2022, consolidated net sales of the UBE Group decreased, although sales in the Specialty Products Segment remained stable and sales prices in the Polymers & Chemicals Segment rose thanks to strong market prices, the transformation of the cement-related business to an equity-method affiliate significantly affected overall performance.

Operating profit decreased, because rising prices of raw materials and fuel as well as a decrease in sales volume as a result of weak demand had a significant negative impact on the Polymers & Chemicals Segment, in addition to the biennial inspection of the ammonia product factory.

The UBE Group reported ordinary loss, because share of profit of entities accounted for using equity method declined significantly due to the strong impact that the sharp price increase of coal had on the cement-related business, which had transformed to an equity-method affiliate.

Loss attributable to owners of parent was reported despite gain on change in equity due to the separation of the cement-related business, because ordinary loss significantly affected the overall performance.

The graphs on this page show consolidated net sales and operating profit.



Note: In accordance with the integration of the cement-related business into an equity-method affiliate from fiscal 2022, the Company has been reclassified from Chemicals, Construction Materials, Machinery, and Others into the four segments of Specialty Products, Polymers & Chemicals, Machinery, and Others. Pharmaceutical is included in Others. Therefore, the results for fiscal 2021 have also been reclassified into new segment categories for comparison, and Construction Materials is included in Adjustment.

## Specialty Products

Fiscal Year	Billions of yen		Change from FY2021
	2021	2022	
Net sales	60.8	<b>62.2</b>	2.3 %
Operating profit	11.6	<b>10.5</b>	(10.0)%

Revenues **up**  
and earnings **down**

- The Polyimide Business recorded a net sales decrease because of negative impact of inventory adjustments of the COF films for displays, although sales of varnish used on organic EL panels remained stable.
- The Separation Membrane Business recorded an increase in net sales thanks to the continued stable demand for its products, particularly those relating to biogas.
- The Ceramics Business recorded an increase in net sales thanks to strong demand for bearings and products used on substrates.
- The Separators Business recorded a decrease in net sales due to the negative impact of production reduction in the automobile industry that was mainly the result of the shortage of semiconductors.

The Specialty Products Segment as a whole recorded an increase in net sales and a decrease in operating profit. While demand for separation membranes and ceramics remained strong, the performance of the Polyimide Film Business was affected by inventory adjustment, and the Separators Business was negatively influenced by production reduction in the automobile industry.

## Polymers & Chemicals

Fiscal Year	Billions of yen		Change from FY2021
	2021	2022	
Net sales	260.0	<b>293.4</b>	12.8 %
Operating profit	23.5	<b>2.4</b>	(89.7)%

Revenues **up**  
and earnings **down**

### Performance Polymers & Chemicals Business

- The Composites Business recorded a sales increase despite being affected by the production reduction in the automobile industry, because of rising sales prices supported by price increases in raw materials such as caprolactam.
- Net sales of the Nylon Polymer Business were almost the same as the previous fiscal year despite sales price increases mainly due to the rising market price of caprolactam, as demand for products such as nylon film for food packaging was weak.
- The Caprolactam & Ammonium Sulfate Business recorded a net sales increase because of a higher sales price as the result of higher market prices for raw materials such as benzene and ammonium.
- The Industrial Chemicals Business recorded a net sales increase despite a decrease in shipment volume due to the biennial inspection of the ammonia product factory. Sales prices of products rose thanks to higher market prices of raw materials.
- The Fine Chemicals Business recorded a sales increase, because sales prices rose due to

rising raw materials prices.

### Elastomer Business

- The Elastomer Business recorded an increase in net sales, as sales prices rose thanks to higher market prices of raw materials such as butadiene.

As a whole, net sales increased, but operating profit decreased in the Polymers & Chemicals Segment. While sales prices rose, rising raw materials and fuel prices as well as a decrease in sales volume due to weak demand had a significant negative impact, in addition to the biennial inspection of the ammonia product factory.

## Machinery

Fiscal Year	Billions of yen		Change from FY2021
	2021	2022	
Net sales	97.0	<b>96.9</b>	(0.1)%
Operating profit	5.1	<b>5.2</b>	1.7 %

Revenues **down** and earnings **up**

- The Molding Machine Business recorded an increase in net sales, because sales increased as demand from the automobile industry recovered.
- The Industrial Machines Business recorded a decrease in net sales, because a series of big projects to supply conveyors used in the electric power industry were completed.
- The Steel Products Business recorded an increase in net sales due to rising sales prices mainly as a result of rising raw materials prices.

In the Machinery Segment, both net sales and operating profit were almost the same as the previous fiscal year as a whole, because a decrease in net sales in the Industrial Machinery Business was offset mainly by an increase in sales of molding machines and rising sales prices of steel products.

## Others

Fiscal Year	Billions of yen		Change from FY2021
	2021	2022	
Net sales	54.2	<b>73.1</b>	34.8 %
Operating profit	3.5	<b>2.6</b>	(25.5)%

Revenues **up** and earnings **down**

- The Pharmaceuticals Business recorded a net sales increase despite a decrease in royalty revenues, mainly because of positive impact by acquisition of a contract development and manufacturing organization (API Corporation) in December 2022.
- The Power Producer Business recorded an increase in net sales, because power supply to the Cement-Related Business was recorded as a gain in sales and prices also rose.

The Others Segment as a whole recorded an increase in net sales and a decrease in operating profit. Although some factors such as the price rise of sold electric power contributed to the overall performance, a decrease in royalty revenues of the Pharmaceuticals Business had a significant negative impact on the overall segment.

## Investor Information

# UBE Corporation

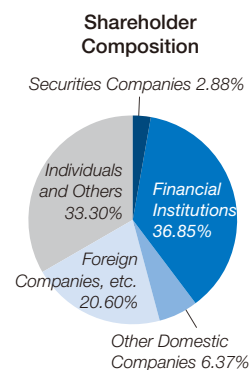
(As of March 31, 2023)

Head Office	Tokyo Head Office (General Affairs Dept.)	Seavans North Bldg., 1-2-1, Shibaura, Minato-ku, Tokyo 105-8449, Japan Phone: +81-3-5419-6110 Fax: +81-3-5419-6230
	Ube Head Office	1978-96, Kogushi, Ube, Yamaguchi 755-8633, Japan Phone: +81-836-31-2111 Fax: +81-836-21-2252
Establishment	1897	
Consolidated Companies	51 (36 consolidated subsidiaries and 15 equity-method affiliates)	
Fiscal Year	April 1 to March 31	
Common Stock	Outstanding: 97,040,569 shares (excluding treasury stock of 9,159,538 shares)	
Paid-in Capital	¥58.4 billion	
Number of Shareholders with Voting Rights	57,865	
Annual General Shareholders' Meeting	June	
Stock Exchange Listings	Prime Market of Tokyo Stock Exchange (Code: 4208) Fukuoka Stock Exchange	
Transfer Agent and Share Registrar	Mitsubishi UFJ Trust and Banking Corporation, 1-4-5, Marunouchi, Chiyoda-ku, Tokyo 100-8212, Japan	
Independent Auditors	Ernst & Young ShinNihon LLC	

### Major Shareholders

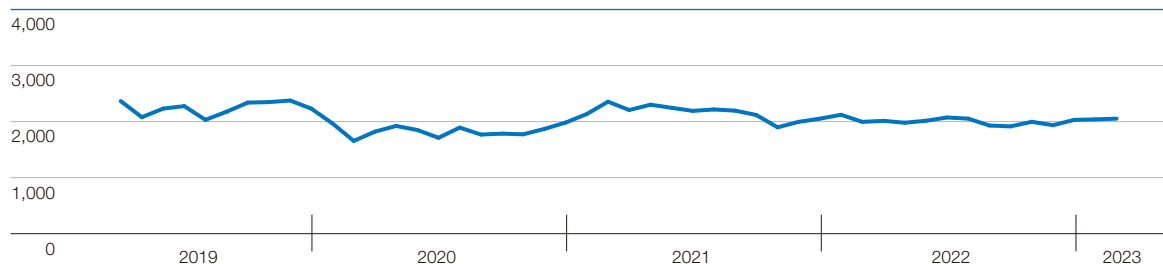
Shareholder	Share Units Owned	Percentage of Voting Rights (%)
1 The Master Trust Bank of Japan, Ltd. (Trust Account)	16,778,000	17.29%
2 Custody Bank of Japan, Ltd. (Trust Account)	6,731,400	6.94%
3 SUMITOMO LIFE INSURANCE COMPANY	2,000,000	2.06%
4 DFA INTL SMALL CAP VALUE PORTFOLIO	1,918,054	1.98%
5 CITY INDEX ELEVENTH CO.,Ltd	1,773,700	1.83%
6 Nippon Life Insurance Company	1,600,009	1.65%
7 THE YAMAGUCHI BANK, Ltd.	1,548,264	1.60%
8 JP MORGAN CHASE BANK 385781	1,270,545	1.31%
9 The Norinchukin Bank	1,237,409	1.28%
10 STATE STREET BANK WEST CLIENT - TREATY 505234	1,201,100	1.24%

Note: As UBE holds 9,159,538 shares of treasury stock, we are excluded from the major shareholders stated above. Percentages of voting rights are calculated by subtracting the number of shares of treasury stock.



### Stock Price

(Yen)



### UBE's Inclusion in ESG Investment Benchmarks

(As of June 2023)



2023 CONSTITUENT MSCI JAPAN  
ESG SELECT LEADERS INDEX

2023 CONSTITUENT MSCI JAPAN  
EMPOWERING WOMEN INDEX (WIN)



Note: The inclusion of UBE Corporation in any MSCI index, and the use of MSCI logos, trademarks, service marks or index names herein, do not constitute a sponsorship, endorsement or promotion of UBE Corporation by MSCI or any of its affiliates. The MSCI indexes are the exclusive property of MSCI. MSCI and the MSCI index names and logos are trademarks or service marks of MSCI or its affiliates.

### Morningstar Japan ex-REIT Gender Diversity Tilt Index (GenDi J)

## About this Integrated Report

### Executive Officer Declaration

Thank you for reading the UBE Group's Integrated Report 2023.

This publication presents the UBE Group's comprehensive strengths to help you understand how it will grow as a corporate group centered on specialty chemicals to achieve its Vision for 2030. It contains growth strategies for key specialty chemicals products as well as strengths including R&D, intellectual property, digital transformation, human resources, and environmentally friendly products and technologies to showcase our comprehensive strengths.

In producing this report, we presented top management with feedback from annual meetings with several institutional investors about this publication. We identified issues that needed addressing before we started planning this edition. At the production stage, we collaborated with relevant departments to gather the most up-to-date and appropriate information, editing it as intended.

I hereby declare that the editorial process and the published content are valid and genuine. I hope that this report will help you understand the UBE Group's ability to generate value over the medium through long terms.

*Hirota*ka Ishikawa

Director  
Executive Officer, CFO, General Manager of Accounting & Finance Dept. with responsibility for Group Management Dept. and Corporate Planning Dept.

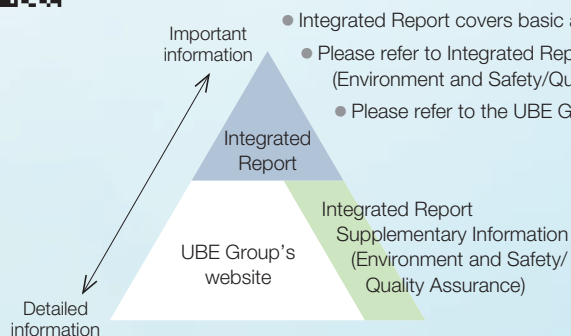


- Reference Guidelines** — International Integrated Reporting Framework of the Value Reporting Foundation (VRF)  
Ministry of Economy, Trade and Industry (METI) Guidance for Integrated Corporate Disclosure and Company-Investor Dialogue for Collaborative Value Creation
- Reporting Period** — This report covers fiscal 2022, ended March 31, 2023, and also includes activities and information before and after that term.
- Scope of Coverage** — UBE Corporation consolidated subsidiaries, and non-consolidated subsidiaries
- Fiscal Year-End of the Company** — March 31  
The fiscal year ended March 31, 2023, is fiscal 2022.
- Forward-Looking Statements** — This report contains forward-looking statements regarding UBE's plans, outlook, strategies, and results for the future. All forward-looking statements are based on judgments derived from information available to the Company at the time of publication.  
Certain risks and uncertainties could cause the UBE Group's actual results to differ materially from any projections presented in this report. These risks and uncertainties include, but are not limited to, the economic circumstances surrounding the Company's business, competition, product development, exchange rates, and revision of related laws and regulations.

### The UBE Group publishes information for its stakeholders through a variety of media.



UBE Group's Website <https://www.ube.co.jp/ube/en/>



#### Investor Relations

Management policies, finances, results, and shareholder information and IR materials are available in the Investor Relations section of the UBE Group's website:

<https://www.ube.co.jp/ube/en/ir/>



#### Sustainability

Information regarding sustainability, environmental and safety initiatives, compliance, risk management, corporate governance, human rights and labor, and quality are available in the Sustainability section of the UBE Group's website:

<https://www.ube.co.jp/ube/en/sustainability/>

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