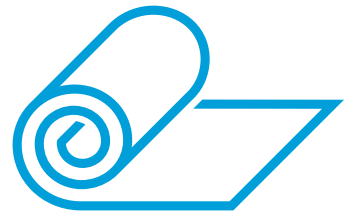
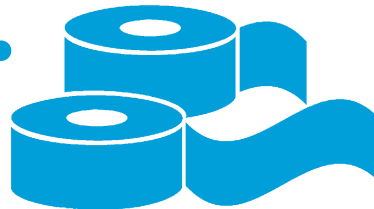
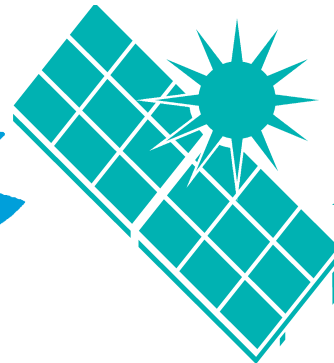
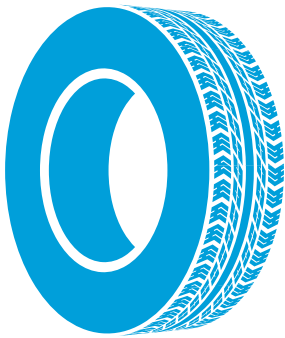


## I n t e g r a t e d R e p o r t 2019

Year ended  
March 31, 2019



## UBE Group Profile

Establishment  
1897

### Business segments

Chemicals, construction materials,  
and machinery

*Consolidated results for fiscal 2018,  
ended March 31, 2019*

### Net sales

¥730.1 billion

### Operating profit

¥44.5 billion

### Net income per share (Primary)

¥312.36

### Employees

11,010 (Consolidated)

3,298 (Non-consolidated)

*(As of March 31, 2019)*

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### Editorial Policy

In fiscal 2017, the UBE Group began publishing an Integrated Report to replace its annual and CSR reports. The Integrated Report presents management policies, business models, materiality, business strategies, and environmental, social, and governance (ESG) information, as well as other non-financial and financial information that has significant impacts on corporate value.

Integrated Report 2019 was comprised of five sections to deepen understanding of the UBE Group's management policies and plans, strengths (operating resources), business model, risk initiatives, materiality, and ESG initiatives. These sections were the Introduction and Management Message, Building Value to Materialize Sustainable Growth, Initiatives to Create Value and Drive Sustainable Growth, ESG: Underpinning Value Creation and Sustainable Growth, and the Financial Section.

### Reference Guidelines

International Integrated Reporting Framework of the International Integrated Reporting Council (IIRC), and 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 2018, ended March 31, 2019, and also includes activities and information before and after that term.

### Scope of Coverage

Ube Industries, Ltd., consolidated subsidiaries, and non-consolidated subsidiaries

### Investor Relations

Management policies, finances, results, and shareholder information and investor relations (IR) materials are available in the Investor Relations section of the UBE Group's website:  
<https://www.ube-ind.co.jp/ube/en/ir/>

### CSR / Environment and Safety

Information regarding corporate social responsibility (CSR) initiatives, environmental and safety initiatives, contributions, compliance, and corporate governance are available in the CSR Activities section of the UBE Group's website:  
<https://www.ube-ind.co.jp/ube/en/csr/>





## Basic Approach to Sustainable Growth

### Founding Principles of UBE

“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

### UBE Management Principles

- |                        |   |            |   |
|------------------------|---|------------|---|
| 1. Ethics              | Be highly ethical, comply with laws and regulations, and respect social norms   | 3. Quality | Deliver quality that earns the trust of customers and society                     |
| 2. Safety and Security | Work to conserve the global environment and practice safe, secure manufacturing | 4. People  | Respect individuality and diversity, and build healthy and comfortable workplaces |

### Vision for 2025: Vision UBE 2025

“We Continue to Create Value for All Stakeholders”

### Medium-Term Management Plan

#### Three basic strategies of Vision UBE 2025–Prime Phase–

- |   |   |
|---|---|
| 1. Strengthening the platform for business growth               | 3. Address and be part of the solution to resource, energy, and global environmental issues |
| 2. Strengthening the management platform (corporate governance) |   |

| Shareholders   | Customers  | Business Partners           | Employees  | Communities   |
|--|--|-----------------------------|--|---|
| Proper disclosure and shareholder returns such as dividend payment | Providing safe and high-quality products and solutions | Fair and impartial dealings | Optimizing work environments in terms of salaries, motivation, growth, and work-life balance | Maintaining the environment, creating jobs, paying our taxes, and contributing to local communities and society |

#### 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.

Fiscal years are years ended March 31 of the following calendar year: for example, fiscal 2018 in the text is the year ended March 31, 2019.





Masato Izumihara

President & Representative Director  
CEO

1983 Joined the Company

2010 Executive Officer, Group CFO, and General Manager of Corporate Planning & Administration Office and Corporate Planning Department

Group CFO, and General Manager of Corporate Planning & Administration Office

2013 Managing Executive Officer

2015 Vice President, Chemicals Company

2018 Senior Managing Executive Officer, President of Chemicals Company, Ube Industries, Ltd. (current position)

2018 Director (current position)

2019 Representative Director and CEO, President of Chemicals Company

Economic Value

Net sales (Billions of yen)

Operating profit (Billions of yen)

Ordinary profit (Billions of yen)

Profit attributable to owners of parent (Billions of yen)

Return on sales (ROS)

Return on equity (ROE)

Total return ratio\*

Environmental and Social Value

Greenhouse gas emissions (GHG) (1,000t - CO<sub>2</sub>e/y)

Percentage of female managers (Parent company)

R&D expenses (Billions of yen)

\* Total return ratio = (Cash dividends + Share repurchase) / Profit attributable to owners of parent



# Pursuing Further Growth while Solidifying Our Underpinnings

I recently became president and CEO, embarking on a range of changes for the UBE Group since the start of fiscal 2019.

We have updated our business principles and management policies. We have also rolled out a new medium-term management plan, reorganized into a three-company operating structure, and adopted a Company with Audit & Supervisory Committee setup.

Our reforms have essentially balanced growth ambitions while solidifying our foundations. Under our plan, we seek to become a growth-centric entity that steadily delivers results to stakeholders. Safety first is our shared values, and we will do our best to occupational, environmental, and facilities incidents, establishing our foundations for expansion by strengthening governance and internal controls. I recognize that it is vital for me to ensure that we can pursue further growth while solidifying our underpinnings.

## Updating Our Business Principles and Management Policies

## Ensuring that Our Founding Spirit Keeps Meeting Contemporary Challenges

Since our establishment more than 120 years ago, our business principles have focused on coexistence and mutual prosperity for all stakeholders, including regional communities, and the notion of shifting from finite mining to infinite industry because we knew that we could not rely forever on an exhaustible resource like coal.

We have updated our corporate philosophy statement to express our *raison d'être*, which is to pursue technology and embrace innovation to create value for the future and contribute to social progress. We formulated management principles regarding ethics, safety and security, quality, and people (please see page 1 for details) in recognition that best practices are operational essentials. A guiding factor in establishing these management principles was our deep reflection on inappropriate quality inspection practices last year, and it is a major management priority to ensure Groupwide awareness of the need to prevent recurrences.

## Reflections on Change & Challenge 2018 Medium-Term Management Plan

## Steadily Solidifying Underlying Strengths to Fully Revitalize the Chemicals Business

### Performance

The table on the left presents our progress with respect to our original performance targets over the past three years. In fiscal 2017, conditions in the chemicals business were particularly favorable, enabling us to greatly exceed our target. In fiscal 2018, the final year of Change & Challenge 2018, earnings were less than envisaged owing to a

| FY2016<br>(Results) | FY2017<br>(Results) | FY2018<br>(Results) | Previous medium-term management plan<br>Change & Challenge 2018 |                     |
|---------------------|---------------------|---------------------|---|---------------------|
|                     |                     |                     | FY2018<br>(Plan)  | Achievement<br>rate |
| ¥616.5              | ¥695.5              | <b>¥730.1</b>       | ¥750.0  | <b>97%</b>          |
| 34.9                | 50.2                | <b>44.5</b>         | 50.0  | <b>89%</b>          |
| 33.3                | 50.7                | <b>47.8</b>         | 49.0  | <b>98%</b>          |
| 24.1                | 31.6                | <b>32.4</b>         | 29.0  | <b>112%</b>         |
| 5.7%                | 7.2%                | <b>6.1%</b>         | more than 6.5%  | <b>94%</b>          |
| 8.7%                | 10.5%               | <b>10.1%</b>        | more than 9.0%  | <b>112%</b>         |
| 36%                 | 25%                 | <b>56%</b>          | more than 30%   | <b>—</b>            |
| 12,100              | 12,100              | <b>12,000</b>       |   |                     |
| 1.4%                | 1.5%                | <b>2.4%</b>         |   |                     |
| 13.6                | 13.2                | <b>12.1</b>         |   |                     |



decrease in earnings due to regular ammonia facilities repairs in the Ube area, the absence of such extraordinary factors as a temporary expansion of synthetic rubber spreads in fiscal 2017, and the impact of higher coal prices. Nonetheless, I think we basically achieved our goals for the three years.

Under our previous two medium-term management plans, our ongoing focus was on driving an earnings turnaround in the chemicals business. In fiscal 2018, that business generated ¥23.7 billion in operating profit, against our original target of ¥20 billion. A favorable operating environment contributed partly to that result, so we cannot claim that our performance in that business was solely the outcome of a full resurgence. Nonetheless, we can say that being able to translate good conditions into profits demonstrated ample fundamental strengths toward achieving such a resurgence.

#### Key Results and Issues

In the chemicals business, battery materials operations centered on separators expanded as planned in fiscal 2018. Other major achievements were the stabilization of caprolactam and nylon as a chain and the return of polyimide, once a central functional material, as a prime earnings driver. In the machinery business, the integration of our injection molding machine business with that of Mitsubishi Heavy Industries, Ltd., was an important move. Following integration, we sold models under a uniform brand and progressed in establishing an optimal global production system, forming the basis for growth.

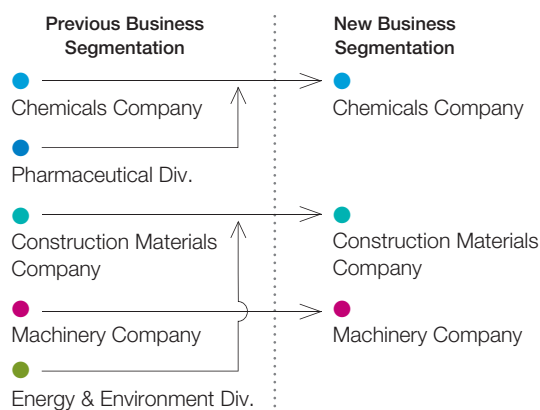
In contrast, the construction materials business did not benefit as much as originally envisaged from demand growth associated with the Tokyo 2020 Olympic and Paralympic Games, and a surge in coal costs drove higher expenses. Although raw materials costs increased, we were unable to raise prices in a cement business requiring reinvestments, and this is still a challenge for us.

## Reorganizing into a Three-Company Operating Structure

### Bringing Together Compatible Businesses in Making Internal Controls More Effective

To date, we have maintained three internal companies—Chemicals, Construction Materials, and Machinery—and the Pharmaceutical and Energy & Environment businesses. In fiscal 2019, we integrated those two businesses into relevant areas of the Chemicals and Construction Materials companies. We thus now have a three-company operating structure. Because much of its output is for the chemicals area, we made the Corporate Research & Development unit part of the Chemicals Company.

The purpose was to become more flexible in expansionary and defensive respects. In defensive terms, reorganizing enables us to more effectively allocate operational resources to enhance internal controls. All three companies have already put systems in place to focus on environmental safety and quality assurance. On the expansionary front, having these companies function more autonomously should help us to accelerate decision making.



Our new medium-term management plan incorporates a three-year action plan for driving growth toward and well beyond 2025.



## Launching Our New Medium-Term Management Plan

# Vision UBE 2025 — Prime Phase —

### About Our New Medium-Term Management Plan

This plan (please see pages 6–7 for details) first describes our vision for continuing to create value for all stakeholders by 2025 and also incorporates a three-year action plan for driving growth toward and well beyond 2025.

### Direction for Each Business

The chemicals business is central to the UBE Group's growth. There, we simultaneously target stability in basic chemicals operations and growth in specialty chemicals. The basic chemicals business focuses on caprolactam and synthetic rubber, so it is susceptible to large profit swings owing to market conditions. We will therefore strive to stabilize earnings by cutting costs and differentiating our offerings, making basic chemicals a bedrock of our chemicals operations. We will additionally pursue further expansion in such specialty chemicals fields as functional and fine chemicals, thus enhancing the overall profitability of the chemicals business. Key areas are separators and other battery materials, high-performance coatings, and polyimides. In basic chemicals, we will pursue expansion in nylon and synthetic rubber.

Although markets for the construction materials business are maturing, demand should drop only moderately after the Tokyo 2020 Olympic and Paralympic Games. We will

therefore continue to generate stable cash flows while focusing on areas offering growth potential, such as biomass and resource recycling, with earnings expanding steadily.

Globalization and services are keys to the future of the machinery business. We believe that the previously mentioned integration of our injection molding machine business with that of Mitsubishi Heavy Industries and services business expansion overseas should enhance our profitability (please see pages 32–37 for details).

*Please see pages 6–7 for details on Vision UBE 2025—Prime Phase—New Medium-Term Management Plan.*

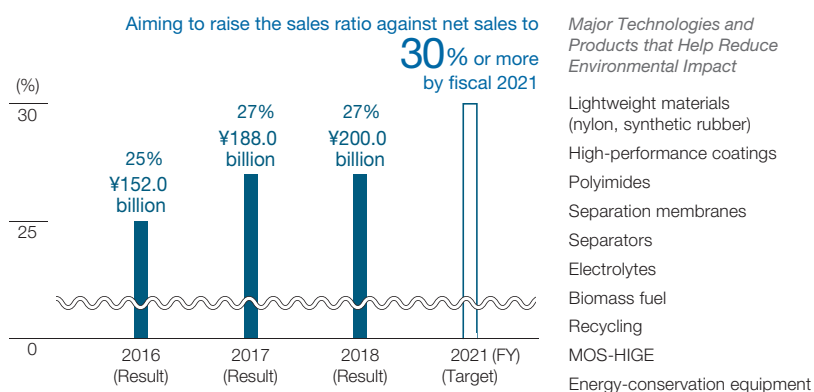
### Tackling Environmental Issues

We developed our businesses by drawing on coal as a key energy source. Our operations thus consume considerable energy, and we recognize the importance of tackling environmental issues.

Carbon dioxide (CO<sub>2</sub>) emissions come from energy and processes. Processes related to cement and ammonia production represent half

*The page continues on page 8.*

### Sales of the Business That Help Reduce Environmental Impact



### Numerical Targets

|   | Billions of yen    |                  |                  |                    |                 |
|---|--------------------|------------------|------------------|--------------------|-----------------|
|   | FY2018 (Results) a | FY2019 (Targets) | FY2020 (Targets) | FY2021 (Targets) b | Differences b-a |
| Net Sales                               | <b>¥730.1</b>      | ¥760.0           | ¥740.0           | ¥770.0             | <b>¥39.9</b>    |
| Operating Profit                        | <b>44.5</b>        | 47.0             | 49.0             | 55.0               | <b>10.5</b>     |
| Ordinary Profit                         | <b>47.8</b>        | 47.0             | 51.0             | 58.0               | <b>10.2</b>     |
| Profit Attributable to Owners of Parent | <b>32.4</b>        | 31.0             | 32.0             | 35.0               | <b>2.6</b>      |

*FY2021 assumptions (business factors):  
Exchange rate at ¥105 / USD  
Naphtha at US\$640 / tonne (CIF)  
Australian coal at US\$125 / tonne (CIF)*



# Vision UBE 2025

“We Continue to Create Value for All Stakeholders”

The UBE Group will anticipate market needs and create products and services that are in harmony with the environment. Furthermore, the Group will positively contribute to all stakeholders as a corporation with a global presence.

## Outline of the New Medium-Term Management Plan

# Vision UBE 2025 — Prime Phase —

Vision UBE 2025—Prime Phase—is a medium-term *management plan for the next three years* through fiscal 2021 with a strong focus on long-term growth, looking ahead to fiscal 2025 and beyond.

## Basic Strategies



\*<sup>1</sup> Stable growth of chemical business was identified as materiality based on this basic strategy. Please see page 25 for details.

\*<sup>2</sup> Attracting and cultivating human resources was identified as materiality based on this basic strategy. Please see page 25 for details.

\*<sup>3</sup> Strengthening internal controls was identified as materiality based on this basic strategy. Please see page 25 for details.

\*<sup>4</sup> Addressing environmental issues was identified as materiality based on this basic strategy. Please see page 25 for details.



## Business Portfolio

|                            |   |
|----------------------------|---|
| ● Developing businesses    | Tyranno Fiber®, lithium titanium oxide (LTO)  |
| ● Active growth businesses | Nylon, fine chemicals, high-performance coatings, synthetic rubber, polyimides, separation membranes, separators<br>Magnesia and calcia, biomass fuel, resource recycling |
| ● Platform businesses      | Caprolactam, industrial chemicals, electrolytes, pharmaceuticals<br>Cement and ready-mixed concrete, energy<br>Molding machines, industrial machines, steel products      |

## Investments and R&D Expenditure

We will increase the share of business resources allocated to active growth businesses while focusing on capital efficiency. At the same time, we will continue to build a platform for securing stable revenues and implement cost reductions through streamlining.

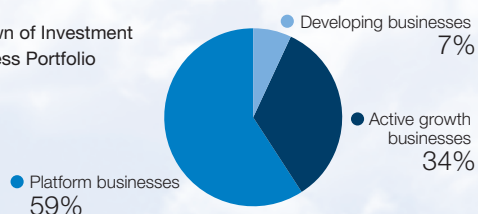
Investments over three years —¥160.0 billion

Breakdown: Capital investment ¥140 billion  
Other investment (including M&A) ¥20 billion

R&D expenditure over three years —¥ 45.0 billion

Total ¥205.0 billion

Breakdown of Investment  
by Business Portfolio



## Numerical Targets for FY2021

### Key Figures

Operating profit

**¥55.0 billion**

Ordinary profit

**¥58.0 billion**

### Key Indicators

Return on sales (ROS)

**7%**

Return on equity (ROE)

**10%**

| Net Sales and Operating Profit Targets by Segment |                        | Billions of yen |                |                |                |
|---|------------------------|-----------------|----------------|----------------|----------------|
|   |                        | FY2018 Results  | FY2019 Targets | FY2020 Targets | FY2021 Targets |
| Net sales   | Chemicals              | ¥324.2          | <b>¥345.0</b>  | <b>¥330.0</b>  | <b>¥350.0</b>  |
|   | Construction Materials | 321.0           | <b>330.0</b>   | <b>325.0</b>   | <b>330.0</b>   |
|   | Machinery              | 97.2            | <b>100.0</b>   | <b>100.0</b>   | <b>105.0</b>   |
|   | Others                 | 4.9             | <b>5.0</b>     | <b>5.0</b>     | <b>5.0</b>     |
|   | Adjustment*            | (17.3)          | <b>(20.0)</b>  | <b>(20.0)</b>  | <b>(20.0)</b>  |
|   | Total                  | ¥730.1          | <b>¥760.0</b>  | <b>¥740.0</b>  | <b>¥770.0</b>  |
| Operating profit                                  | Chemicals              | ¥24.6           | <b>¥26.5</b>   | <b>¥27.0</b>   | <b>¥32.0</b>   |
|   | Construction Materials | 14.4            | <b>15.0</b>    | <b>16.0</b>    | <b>16.5</b>    |
|   | Machinery              | 5.4             | <b>6.0</b>     | <b>6.5</b>     | <b>7.0</b>     |
|   | Others                 | 0.8             | <b>0.7</b>     | <b>0.5</b>     | <b>0.5</b>     |
|   | Adjustment*            | (0.7)           | <b>(1.2)</b>   | <b>(1.0)</b>   | <b>(1.0)</b>   |
|   | Total                  | ¥44.5           | <b>¥47.0</b>   | <b>¥49.0</b>   | <b>¥55.0</b>   |

\* Includes elimination of inter-segment transactions

of our total CO<sub>2</sub> emissions. The truth is that as long as we do business it will be challenging to do much about CO<sub>2</sub> emissions from processes. There is room, however, to reduce CO<sub>2</sub> emissions from energy by conserving energy and enhancing efficiency, and we will do our best to achieve reductions. We will also strive to expand our eco businesses, transforming challenges in that area into new opportunities (please see pages 28–29 for details).

### Our Message to Stakeholders

## Better Empowering Our People to Help Create Long-Term Value

Our people are vital to helping our businesses keep abreast of dramatic changes. We are nothing without our people. In research and development, for example, the zeal of our professionals and their commitment to creating technologies that are commercially viable have enabled us to create and develop a range of businesses. While our journey began in the Ube area, we now operate globally. A prime focus of business management is therefore how best to empower our people wherever they are and combine their collective talents.

Given significant labor shortages, it is essential for us to secure individuals who can help us respond to change. I thus wish to cultivate work environments in which diverse people can collaborate and provide more opportunities and operations that reward employees as we grow (please see pages 18–19 and 50–51 for details).

## Continuing to Transform Ourselves and Pursue Further Growth While Leveraging the Talents of Our People

On the governance front, we transitioned in June 2019 from a Company with Board of Corporate Auditors to a Company with Audit & Supervisory Committee. Such a transformation should enable us to accelerate efforts to strengthen the supervisory role of the Board of Directors and enhance internal controls and governance, which are the defensive elements of our business. On the expansionary front, this should help us to delegate more authority to executives to accelerate decision making (please see pages 39–49 for details).

We have always harnessed the talents of our people in ongoing changes so that we can pursue new growth opportunities in response to contemporary needs. We will continue that basic approach in the years ahead, and look forward to the ongoing support and encouragement of all stakeholders for our endeavors.

August 2019



Masato Izumihara  
President & Representative Director  
CEO

We will do our best to reduce CO<sub>2</sub> emissions.  
We will also strive to expand our eco businesses,  
transforming challenges in that area into new opportunities.





## Financial Strategy

### Reaching Our Three-Year Cumulative Earnings and Cash Flow Targets

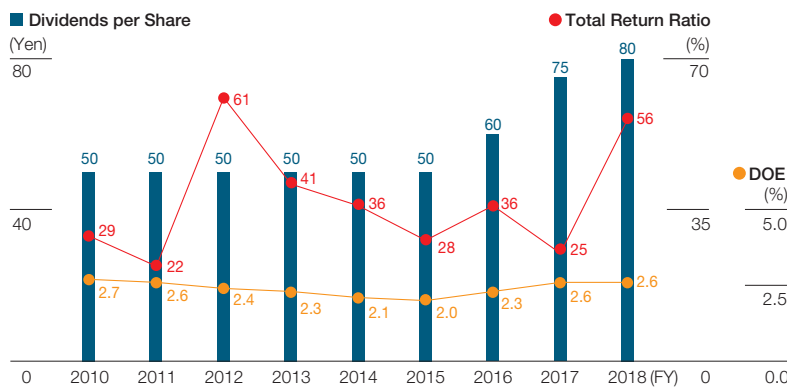
In fiscal 2018, earnings were down from a year earlier despite revenues increasing. Although operating profit and ordinary income were lower than aimed for in the final year of our medium-term management plan, profit attributable to owners of parent was a record high that exceeded our initial forecast at the beginning of the year, and three-year cumulative earnings achieved our plan target.

We have progressed well financially. While cumulative operating cash flows exceeded the

plan target, investment cash flows were less than projected, owing partly to changes in the business climate. As such, free cash flow exceeded our initial goal. We have also reached the objectives of our medium-term management plan in terms of equity capital and interest-bearing debt at year-end. The equity and debt/equity ratios improved to 44.5% and 0.57 times, respectively. On the capital efficiency front, ROE was again up and exceeded 10%.

### Maintaining Financial Discipline While Intensifying Growth Investments

We seek to secure free cash flow of ¥40 billion over the three years of our new medium-term management plan, and aim to intensify growth investments. At the same time, we will continue to improve our financial position in keeping with a firm commitment to a focus on cash flow and keeping our overall funds in positive territory. ROE will remain a key efficiency benchmark. Our target for the final year of the plan is 10%. We will work to further amass capital.



Note: The Company consolidated every 10 shares into one share, effective October 1, 2017. Dividends per share for FY2016 and earlier have been converted based on the shares after the share consolidation.



Note: The Company consolidated every 10 shares into one share, effective October 1, 2017. Stock prices are adjusted for consolidation.

### Increasing Cash Dividends per Share by ¥5

In fiscal 2018, we implemented a ¥10 billion share buyback and increased cash dividends per share by ¥5, to ¥80. The cumulative total return ratio was therefore 39%.

Stable and sustainable dividends underpin our shareholder return policy. Under our new medium-term management plan, we rolled out a new key performance indicator (KPI), a dividend on equity (DOE) ratio of at least 2.5%. At the same time, we will maintain a consolidated total return ratio of 30.0% or more during the three years of the plan. We aim to further reflect revenue growth in greater shareholder returns in the years ahead while investing for growth and maintaining healthy internal reserves.

We are focusing on free cash flow and investing actively in growth.

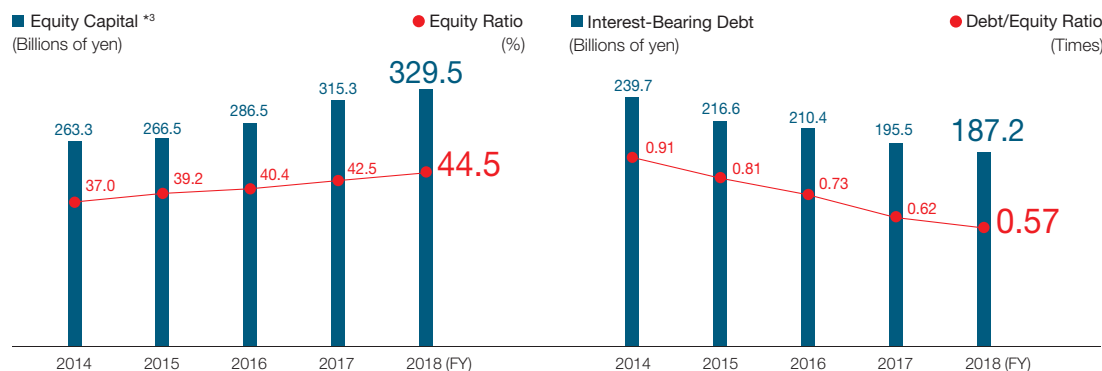
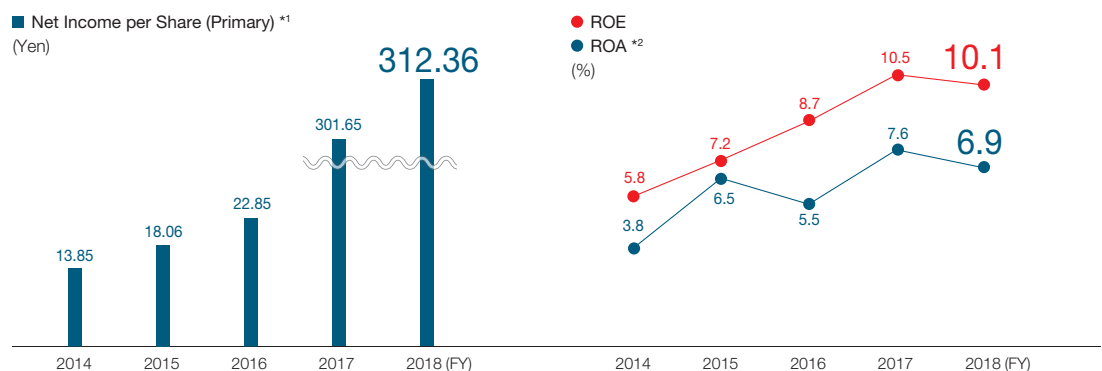
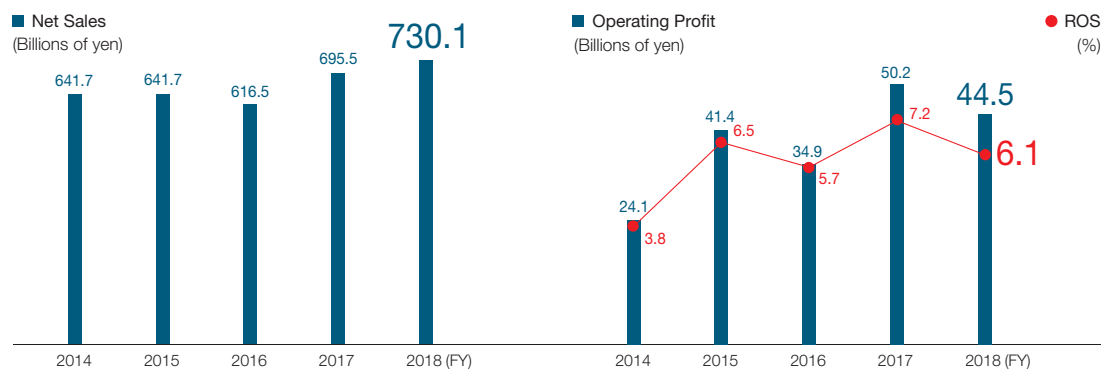
Masayuki Fujii

Director, Managing Executive Officer,  
CFO



# Consolidated Financial and Non-Financial Highlights

## Financial Highlights



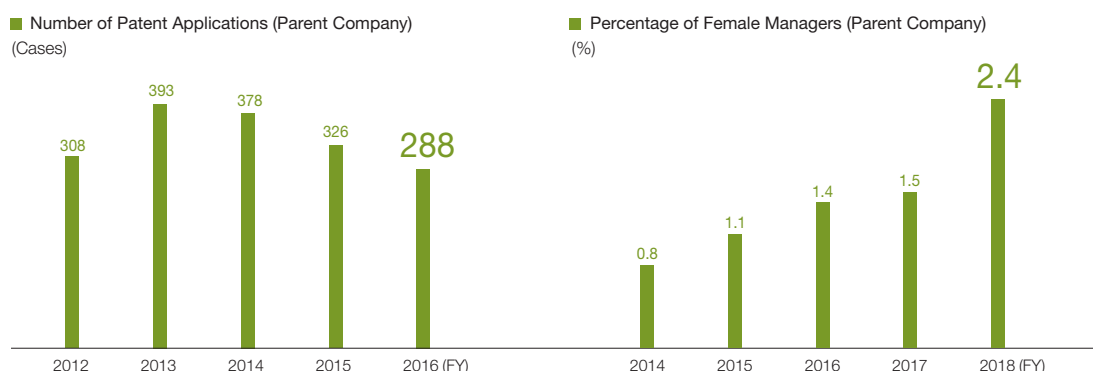
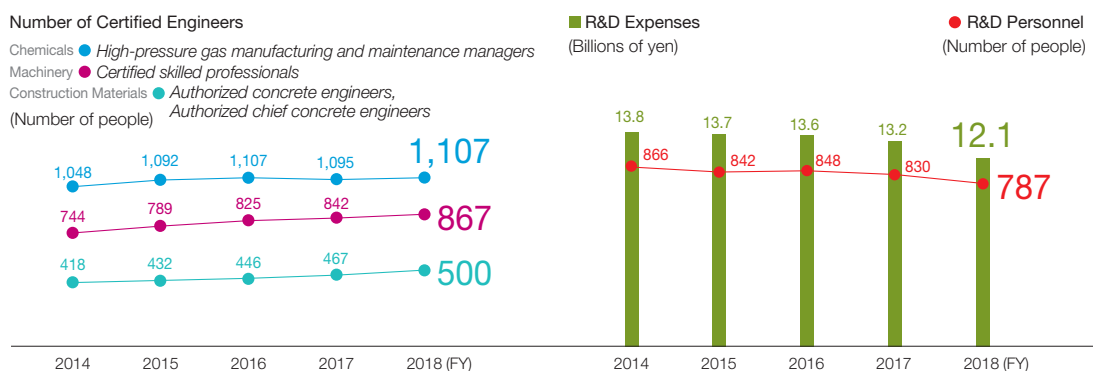
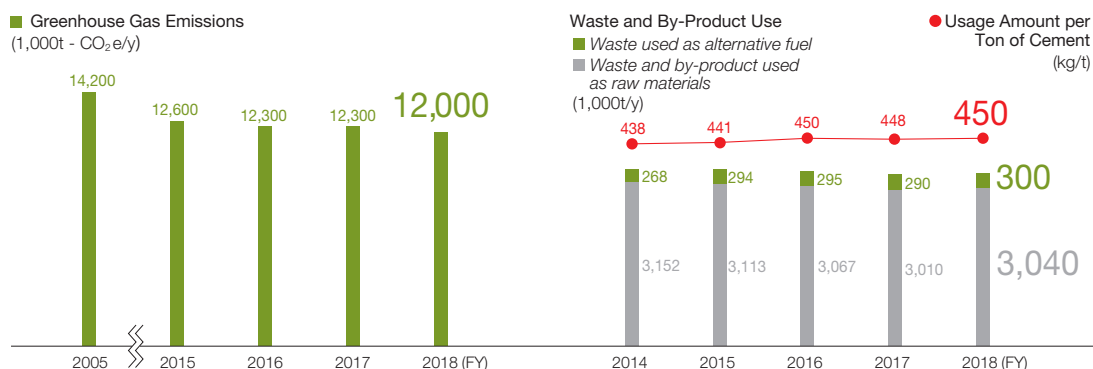
Notes: 1. The Company consolidated every 10 shares into one share, effective October 1, 2017.  
 2. ROA = (Operating profit + Interest and dividend income + Share of profit of entities accounted for using equity method) / Average total assets  
 3. Equity capital = Net assets - Share subscription rights - Non-controlling interests

## Topics for Fiscal 2018

| Month      | Category               | Topic   |
|------------|------------------------|---|
| 2018 April | Construction Materials | Integrated construction materials business into UBE Construction Materials Co., Ltd.  |
|            | Chemicals              | Launched ABS resin business Techno-UMG Co., Ltd.  |
|            | CSR                    | Announced donation to the UBE Industries Foundation to commemorate 120th anniversary of the UBE Group                           |
|            | Construction Materials | Decided to construct demonstration facility for carbonized fuel from woody biomass (Energy Business)                            |
| September  | CSR                    | Awarded the sixth Green Social Contribution Award   |
| October    | CSR                    | Held the 11th annual UBE Group Charity Concert  |
|            | Machinery              | UBE Machinery Corporation, Ltd., completed expansion of U.S. subsidiary's assembly plant for plastic injection molding machines |
|            | Machinery              | U-MHI Platech Co., Ltd., decided to construct plastic injection molding machine plant   |



## Non-Financial Highlights



|      |                 |                          |  |
|------|-----------------|--------------------------|--|
|      | <b>November</b> | • IR                     | Announced a share buyback  |
|      |                 | • Construction Materials | Began shipping limestone from Kanayamada Mining zone at Isa limestone quarry   |
|      |                 | • Chemicals              | Domestically launched Eybelis® Ophthalmic Solution 0.002%, a glaucoma and ocular hypertension treatment (Pharmaceutical Business)                                    |
|      | <b>December</b> | • Chemicals              | Concluded strategic research collaboration agreement with Shionogi & Co., Ltd., for novel anti-respiratory syncytial virus drug candidates (Pharmaceutical Business) |
| 2019 | <b>January</b>  | • Chemicals              | Transferred lithium-ion secondary batteries separator business to consolidated subsidiary UBE Maxell Co., Ltd.   |
|      | <b>February</b> | • Corporate              | Announced appointment of a new president and representative director   |
|      | <b>March</b>    | • Corporate              | Announced transition to a Company with Audit & Supervisory Committee   |
|      |                 | • Chemicals              | UBE Corporation Europe, S.A. Unipersonal acquired majority of the shares of a Spanish compound manufacturer  |

# The UBE Group's Evolution

The UBE Group was established as a coal mining operation in 1897. It has since overcome turbulent times, drawing on creative technologies and innovative manufacturing capabilities to relentlessly innovate and develop various businesses.

## 2018

- 2017/Integrated our injection molding machinery business with that of Mitsubishi Heavy Industries, Ltd., to pursue synergies in injection molding machines

- 2014/Concluded capital and business alliance with Toyo Machinery & Metal Co., Ltd., to pursue synergies in die-casting machines

## 2000

- 2001/Established UBE Machinery (Shanghai) Ltd.

- 1996/Began manufacturing injection molding and die-casting machines in the United States

- 1982/Completed and opened the Kosan-Ohashi Highway Bridge

- 1981/Started extrusion press production

## 1980

- 1976/Developed and started manufacturing originally developed injection molding machines

- 1973/Launched bridge business

- 1963/Developed and started manufacturing large die-casting machines (then the world's largest)

Held a 20% to 30% share of the global market for large die-casting machines (As of March 2019)

- 1954/Began manufacturing vertical mills

## 1960

- 2018/Constructed demonstration facility for torrefied pellets, woody biomass fuel (production scheduled to start in October 2019)

- 2016/Began heat exhaust power generation at the Kanda Cement Factory

- 2014/Launched megasolar operations (joint venture with Showa Shell Sekiyu K.K.)

- 2013/Made UBE Material Industries, Ltd., then listed on the Second Section of the Tokyo Stock Exchange, a wholly owned subsidiary through a share swap

- 2004/Started electricity wholesaling to Chugoku Electric Power Co., Inc. (using coal and woody biomass as fuel)

- 1998/Established UBE-MITSUBISHI CEMENT CORPORATION, the second-largest player in its industry domestically in sales terms as of March 2019

- 1982/Completed a 145,000-kilowatt coal-fired power facility to supply electricity to all Ube business sites

- 1980/Completed the Okinoyama Coal Center as Japan's largest thermal coal importing facility

- 1977/Closed the last coal mine

### Energy Business

- 1964/Established the Kanda Cement Factory (created the cement production structure of three facilities)

- 1958/The West plant of Ube Cement Factory begins production

- 1955/The Isa Cement Factory started production

- 1952/Acquired control of Nippon Lime Industries Ltd. (now UBE Material Industries, Ltd.)

- 1951/Acquired control of Ube Chemical Industries Co., Ltd. (now UBE Material Industries, Ltd.)

### Construction Materials Company

## 1923 Cement

Inaugurated cement operations by drawing on the abundant limestone resources of Ube's surrounding areas as well as coal

## 1942

Established Ube Industries, Ltd.

## 1897 Coal

The UBE Group started out in Ube, Yamaguchi Prefecture as a coal mining operation.



### Machinery Company

## 1914 Machinery

Machinery business began by manufacturing and maintaining coal mining machinery





2018



## Chemicals (Pharmaceuticals)

- a 2018/Started production of *Eybelis*<sup>®</sup>, an ophthalmic solution for glaucoma and ocular hypertension treatment
- b 2009/Started production of *Effient*<sup>®</sup>, an oral anti-platelet agent
- c 2003/Started production of *Calblock*<sup>®</sup>, an antihypertensive agent
- d 2000/Started production of *Talion*<sup>®</sup>, an anti-allergy agent

2000

## Separators

- 1 Lithium-ion battery (LiB) materials
- 2 1994/Strengths in applications requiring excellent safety and high output, expanding in automotive applications, centered on coated separator films
- 3 250 million m<sup>2</sup>, with a 10% share of global market



1990

## PCD, PUD

Polycarbonate diol (PCD), polyurethane dispersion (PUD), and other advanced fine chemical coatings



- 1 Automotive paints and floor coverings
- 2 PCD 1995, PUD 2011/High margins from proprietary technologies
- 3 No. 1 share in the PCD market, with shipments of 14.0 kilotons; PUD 2 kilotons

## Separation Membranes

- 1 Explosion-preventing nitrogen separation membranes and dehumidification
- 2 1986/Japan's sole gas separation membrane manufacturer; The world's only company with specialty technology for removing water from alcohol with organic membranes
- 3 Produces 1,800,000 kilometers annually of polyimide hollow fibers and 80,000 modules annually

## Polyimide Film

- 1 Electronic materials applications including flexible circuit boards and IC mount carrier tapes
- 2 1983/The world's only integrated manufacturer of these films, starting with raw materials
- 3 Ranking 4th worldwide; 70% share of market for chip-on-films for LCD television panels



1980

## Synthetic Rubber

- 1 Tires
- 2 1971/Mainly for value-added products; Supplies major global tire manufacturers
- 3 320 kilotons; Ranking 5th worldwide (Global demand totaled 3,490 kilotons in 2018 (estimate))



## Caprolactam Nylon Chain

A world-class offering from the UBE Group; Optimizing production and cost competitiveness through *ammonia*→*caprolactam*→*nylon* chain

### Nylon

- 1 Engineering plastics widely used in such applications as automotive parts and food packaging films
- 2 1959/Strengths in high-performance applications and high-quality automotive parts materials that have earned the trust of domestic and foreign automakers, and drive for global leadership in extruded materials (films and filaments)
- 3 198 kilotons; One of the world's top manufacturers (Global demand for nylon 6 resin totaled 2,550 kilotons in 2018)

### Caprolactam

- 1 Raw material for nylon
- 2 1956/Supplying high-quality, highly competitive raw material for nylon in Japan, Thailand, and Spain
- 3 315 kilotons (Global demand amounted to 5,960 kilotons in 2018)

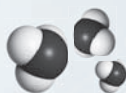
### Ammonia

- 1 Caprolactam, acrylonitrile, nitrogen fertilizer, and other raw materials
- 2 1933
- 3 380 kilotons; Ranking 1st in Japan (Domestic demand totaled 1,130 kilotons in fiscal 2018)

1960



## Chemicals Company



## 1933 Ammonia, fertilizers

Chemical business started by manufacturing ammonium sulfate for chemical fertilizers from coal.

### Content Descriptions

- 1 Applications
- 2 Year production started and / or features
- 3 Group production capacity and / or market share



## The UBE Group's Strengths: Accumulated Infrastructure in the Ube Area

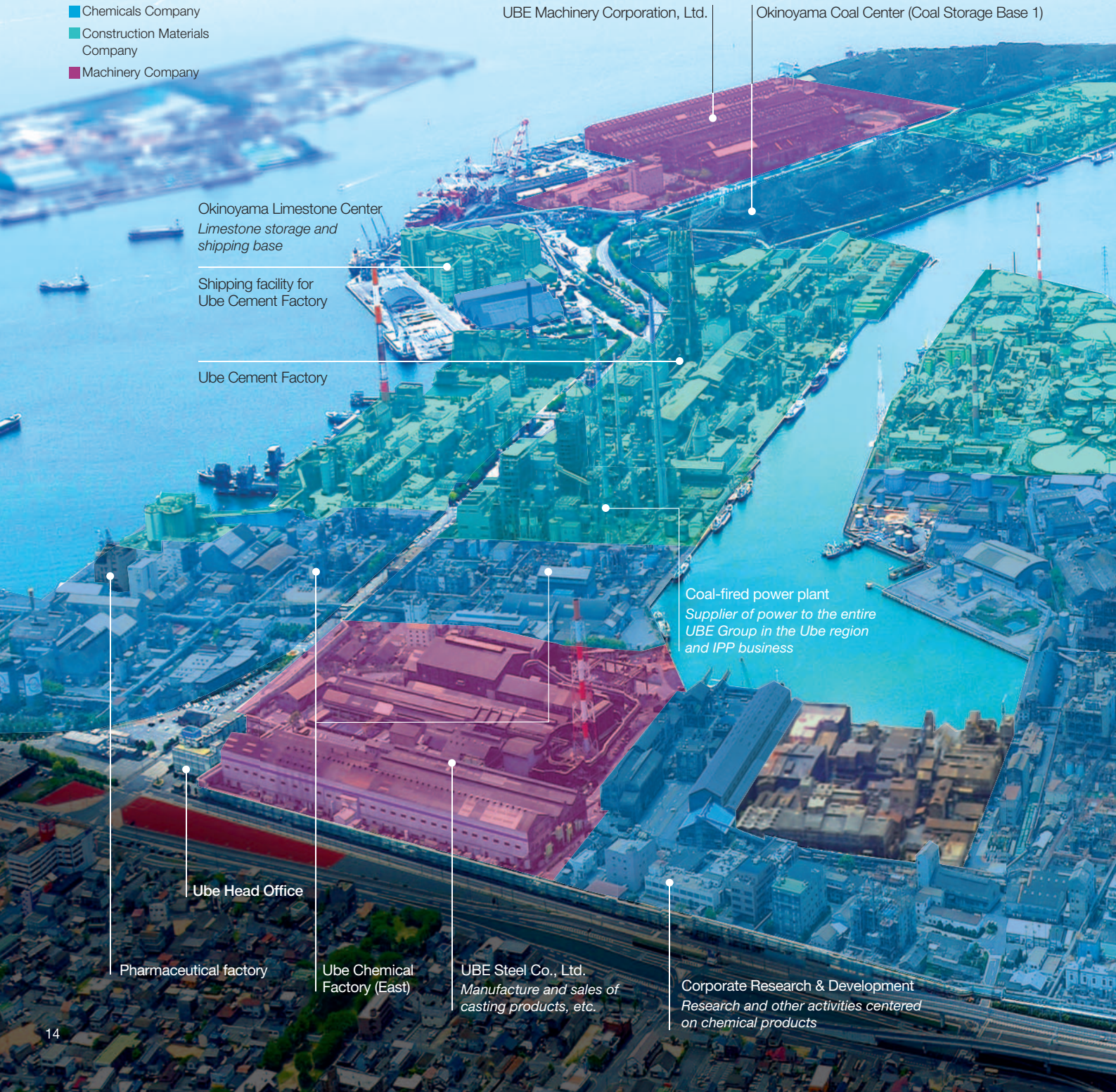
The UBE Group started out in coal mining, thereafter manufacturing mining machinery, employing coal and limestone in cement manufacturing, and producing chemical fertilizers based on coal. We thereafter supplied an array of products serving social needs. Our manufacturing facilities accordingly concentrated in the Ube area of Yamaguchi Prefecture, where we maintain in-house power plants and a port.

### Competitive Advantage from Accumulated Infrastructure

- Improved production efficiency from sharing infrastructures while lowering environmental impact
- Efficiently using steam from in-house power plants, cement plant heat, and other resources for each business
- Close collaboration between each business, notably in supplying raw materials and reusing waste
- Blessed with ample local limestone deposits, water, a port for large vessels, and other resources

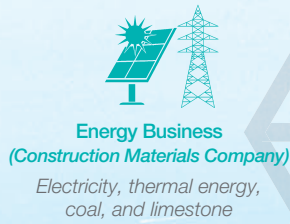
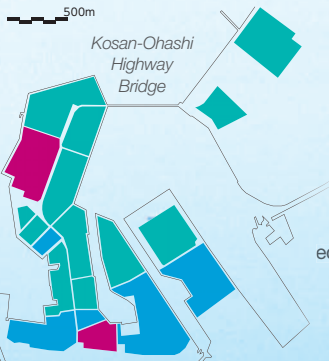
### Key Facilities in the Ube Area

- Chemicals Company
- Construction Materials Company
- Machinery Company





**Accumulated Production Facilities and Infrastructure in the Ube Area**



We have taken advantage of the competitive edge gained from the accumulation of infrastructure to build a business model based on businesses sharing electricity and other infrastructures and close collaboration between each business.

**Chemicals Company**

**Construction Materials Company**

**Machinery Company**

Okinoyama Coal Center (Coal Storage Base 2)

Kosan-Ohashi Highway Bridge

UBE Material Industries, Ltd. (Plant 2)  
*Manufacture and sales of magnesium hydroxide slurry, etc.*

Road for the exclusive use of the UBE Group  
*Linking Isa and Ube, the longest private road in Japan (31.94km)*

UBE Material Industries, Ltd. (Plant 1)  
*Manufacture and sales of magnesia clinker, etc.*

West Okinoyama Limestone Center  
*Limestone storage and shipping base*

US Power Co., Ltd.  
*Megasolar power plant*

Meiwa Plastic Industries, Ltd.  
*Manufacture and sales of phenolic resins and others*

Ube Chemical Factory (West)

UBE-MC Hydrogen Peroxide Limited  
*Manufacture and sales of hydrogen peroxide*

UBE-Fujimagari Factory (UBE Ammonia Industry, Ltd.)  
*Manufacture and sales of ammonia and industrial gases*





## Building Value through Robust R&D Activities and Intellectual Property Initiatives

Our R&D activities draw on synthetic technologies that we have amassed since starting out in coal mining, and we continue to carry out a variety of R&D activities to date. We also undertake strategic intellectual property initiatives that are vital to corporate growth while endeavoring to avoid intellectual property infringements.

### R&D

#### *Harnessing Proprietary Synthetic Technologies to Develop Products and Pursue Licensing*

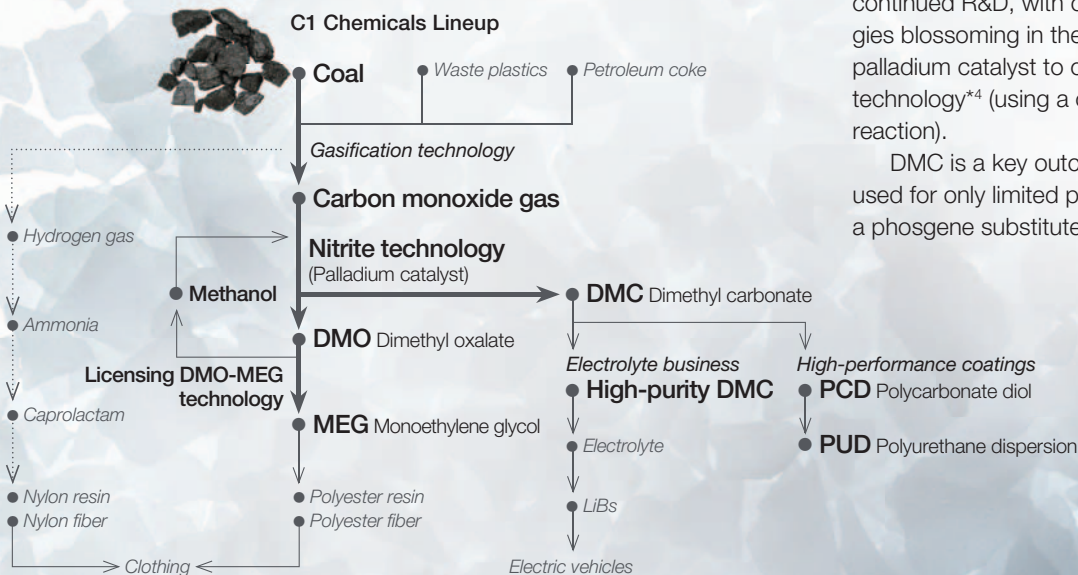
#### **C1 Chemistry\*<sup>1</sup> Technologies Centered on Dimethyl Carbonate**

Over the years, we have synthesized chemicals based on raw materials sourced in-house to pursue higher added value. As a result, C1 chemistry has become a world-renowned technology, not

only for the creation of dimethyl carbonate (DMC) and dimethyl oxalate (DMO) but also for the synthesis of derivatives such as polycarbonate diol (PCD)\*<sup>2</sup> and polyurethane dispersion (PUD)\*<sup>3</sup>, and heterocyclic compounds that are part of drug substances. This continues to be a source of profit for the Group.

Our efforts to derive oxamides to be used as fertilizer by using a synthetic gas (a mixture of carbon monoxide and hydrogen) from coal helped us to pioneer our organic chemistry. We thereafter continued R&D, with our C1 chemistry technologies blossoming in the 1970s after we used a palladium catalyst to create a proprietary nitrite technology\*<sup>4</sup> (using a carbon monoxide coupling reaction).

DMC is a key outcome of our efforts. It was used for only limited purposes when marketed as a phosgene substitute\*<sup>5</sup> for carbonate synthesis



#### Glossary

- \*1 C1 chemistry: A technology that uses carbon monoxide and other one-carbon molecules to create other compounds incorporating carbon.
- \*2 Polycarbonate diol: Please see page 27 for details.
- \*3 Polyurethane dispersion: Please see page 27 for details.
- \*4 Nitrite technology: A clean synthesis technology that uses carbon monoxide and methanol as raw materials.
- \*5 Phosgene substitute: Phosgene is a raw material for PCD and polyurethane, but has been replaced by other chemicals in recent years owing to its high toxicity.

#### Masayoshi Oota

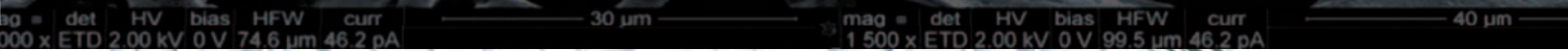
Senior Executive Officer, General Manager, Research & Development Div., with responsibility for Technology Development Dept. and development section, Chemicals Company





### Key R&D Focuses That Could Enhance Our Competitiveness

| Category                        | Focus  | Advantage  |
|---------------------------------|--|--|
| Healthcare                      | Bioreactor systems   | Building a cell culture system employing our proprietary polyimide porous membranes                |
| Construction and infrastructure | Urethane-based prevention method for falling concrete pieces | Product development that brings together our construction materials channels and organic chemistry |
| Mobility                        | New battery material (lithium titanium oxide)                | A robust battery materials channel   |
|                                 | Ceramic matrix composites for next-generation aircraft       | Developing products harnessing our patented Tyranno Fiber®   |



because of a reputation for poor reactivity. We were about to stop production, however, we discovered that incorporating small amounts of an additive resulted in DMC becoming a much better electrolyte than existing counterparts in lithium-ion batteries (LiBs). Since then, this organic compound has been a core product for us, particularly as an electrolyte.

We have progressed steadily in developing derivatives, and have extended our PCD manufacturing network\* to include sites in Thailand and Spain. We have also developed and commercialized such high-value-added offerings as PUD, which are derived from PCD.

In recent years, we have augmented the licensing business of our C1 chemistry technologies internationally. A good example is the technology for monoethylene glycol (MEG). This is made from DMO, which shares the same raw materials as those of DMC. We have licensed production of more than 12 million metric tons of DMO and more than 6 million metric tons of MEG.

MEG is a compound whose market is growing as a raw material for polyester fibers used in apparel and polyethylene terephthalate resins, commonly for plastic beverage bottles. While hydrogen is needed to make MEG from DMO, the synthetic gas that is a raw material of DMO already incorporates hydrogen. Our production process for MEG is thus highly regarded because it minimizes environmental impact. China's national policy of harnessing coal as a raw material for chemicals rather than as a fuel is contributing to a bright future for our technology.

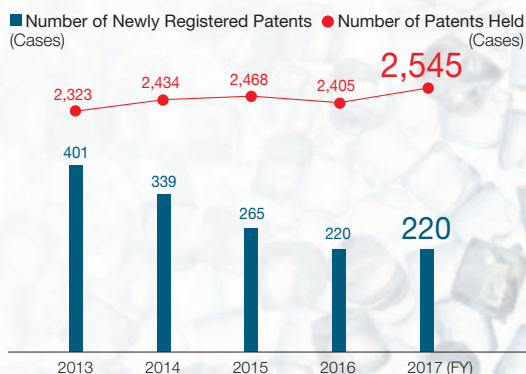
\* Please see pages 26–27.

### Intellectual Property (IP)

The UBE Group's initiatives to reinforce and optimally leverage IP aim to enable us to create new businesses and bolster competitiveness, thereby helping to build and expand enterprise value.

We seek to maximize our enterprise and IP value by formulating IP strategies according to our business strategies and by implementing the plan-do-check-act (PDCA) cycle of IP strategy activities. Furthermore, to strengthen IP research and analysis capabilities, we are working to improve operational efficiency, including in R&D departments, by utilizing tools with artificial intelligence (AI) functions and to utilize IP portfolios\*1 and open/close strategies\*2 while promoting IP activities that contribute to business revenue. At the same time, we are promoting global IP management as the UBE Group, and are advancing the sharing of activity policies and IP information with Group companies in Japan and overseas.

#### Number of Domestically Held and Newly Registered Patents



#### Glossary

\*1 IP portfolios: Patents, copyrights, know-how, and other intellectual property that corporations can use to formulate strategies and assess competitiveness

\*2 Open/close strategies: Management strategies that give companies competitive edges by making intellectual property open or closed



## The UBE Group's Strengths: Cultivating Human Resources



# Fostering the Human Resources That Will Drive the UBE Group Forward

## Global Business Leader (GBL) Program\*

Cultivating human resources is a top priority for management, as people are vital to creating value. In an increasingly interconnected world, the UBE Group offers a wide range of opportunities for its people to study and gain experience, equipping them to drive our business forward no matter where they are.

### Our Stance on Developing Human Resources

*Hideo Tamada*

*Managing Executive Officer*

The UBE Group's 11,000 or so employees work to fulfill its corporate mission and social responsibilities. They also underpin our efforts to manufacture safe and secure products, generate sustainable corporate growth, and build corporate value.

Employee education and training are focused on knowledge acquisition, mainly to improve expertise and foster leadership. Eight years ago, we launched our GBL program to concentrate more on human resources development worldwide.

Going forward, we will cultivate the potential of individuals by transferring them in-house or externally so they can pursue new challenges and become proficient in new roles. I believe that those with diverse experience can be prospective executives and guide subordinates as on-site managers.

I also consider it important to encourage further diversity and create more attractive work environments so that we can shift toward more performance-based evaluations and create a culture that is conducive to colleagues being more supportive of each other in performing their duties.

### Benefits of the GBL Program

*Tsuyoshi Muratani*

*Manager*

*Coal Technical Center*

*Energy Division*

*Construction Materials Company*

I joined the GBL program when I was 41. Before then, I often wondered if I would be a capable leader in times of diversity, as I was somewhat introverted and rather conservative in my thinking. The program



\* **Global Business Leader (GBL) program:** Program participants learn about management and strategy and master leadership in cultural and gender diversity. They are selected from UBE Group companies in Japan and overseas and engage in joint training and team projects over roughly a six-month period.

*Hideo Tamada*

*Managing Executive Officer  
CRO, CCO, with responsibility for  
Risk Management Dept.,  
Human Resources Dept.,  
CSR & General Affairs Dept.,  
Legal Dept.*



started with each of the 24 participants from UBE Group operations in Thailand, Spain, Germany, and Japan quietly introducing ourselves. Over time, however, we found ourselves discussing late into the evenings UBE's future and finally singing the praises of our strenuous efforts with high fives. I learned a lot from my new mates about what makes a good global leader, and seven years later the experience still helps me to grow the sense of diverse values at the workplace.

**Roser Herrero Pons**

*Development Manager  
R&D Engineering Plastics*

**UBE Corporation Europe, S.A. Unipersonal**

I was thrilled when I found out I had been nominated for the GBL program.

Training required me to be very motivated, challenge my limits, and inspire myself. These qualities apply to life in general as well as the workplace, and I realized that nothing is impossible. Once I changed,

my whole world did. I learned the importance of listening to others and asking questions without fear of failure. I also recognized the need to embrace failure and get out of my comfort zone and even to sometimes differ with others. The knowledge I acquired has proven useful both professionally and personally.

I was able to share an understanding of the importance of global communication with a team that was essentially my family, and we were able to help each other to complete our final presentation.



**Sisurat Prakobchat**

*Quality Assurance Manager*

**UBE Chemicals (Asia) Public Company Limited**

I have been a member of the UBE Group for approximately 20 years, and recently I was fortunate enough to participate in the GBL program. I learned a great many things from colleagues from all over the world that also took part, and now feel that I have a better understanding of, and appreciation for, the value of a diverse workforce. Diversity can help the Group to achieve successes as a global team. We also learned to apply strategic skills and use execution excellence processes.



Through the GBL program, I learned that success relies largely on the following:

- Trusting relationships within the team
- Clear goals
- Clear communication
- Clear priorities

I am utilizing experience gained from the GBL program to implement projects more effectively and strengthen team performance. I am also improving my communication skills by listening more openly to feedback.

**Cumulative Number of Employees Dispatched Abroad for MBA Programs and as Trainees**

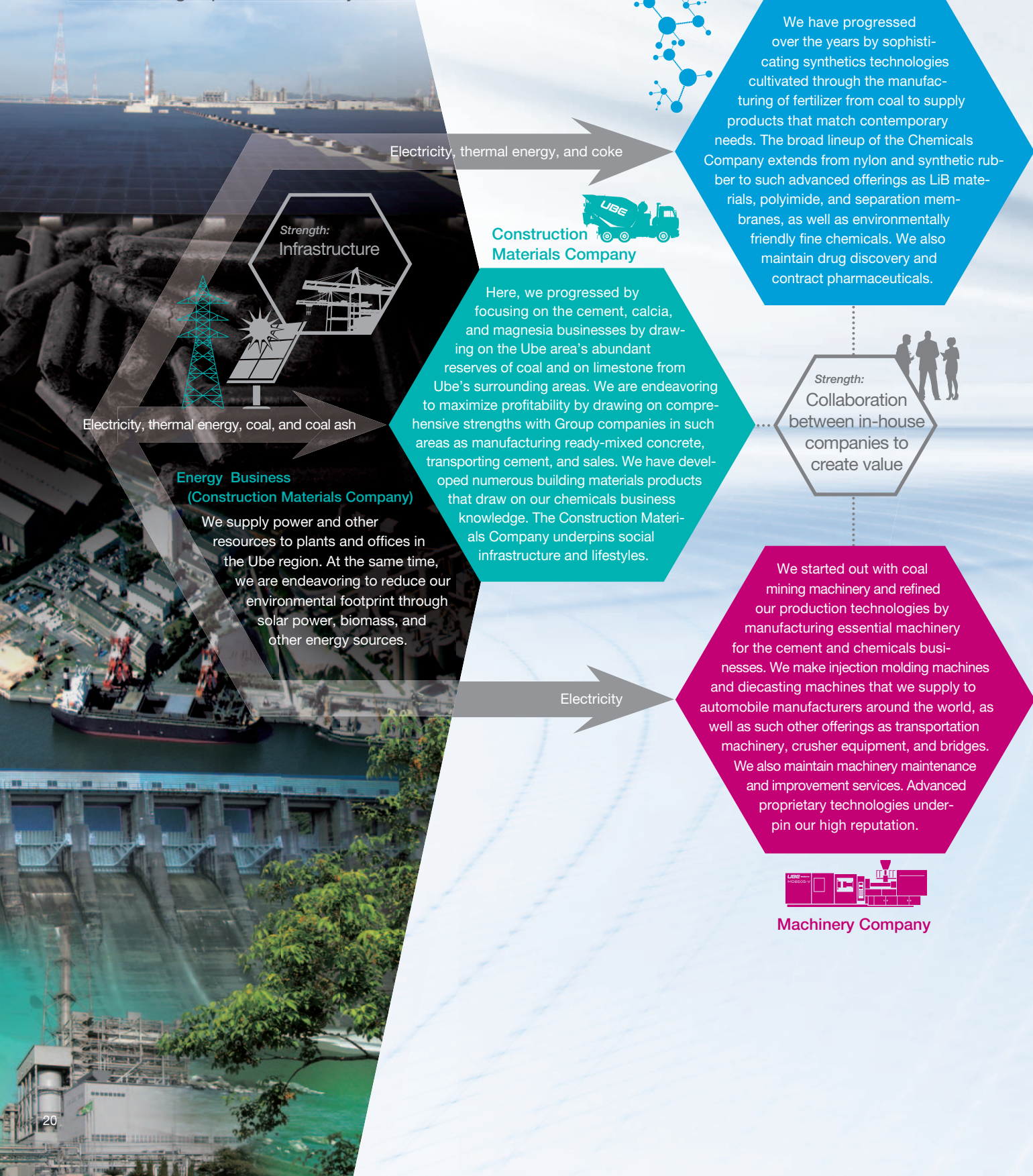
*FY2013-2018  
(Number of employees)*





*Building Value to Materialize Sustainable Growth*  
**The UBE Group's Business Model**

The UBE Group's Chemicals, Construction Materials, and Machinery segments are sharing its electric power, ports and harbor, and other infrastructure in the Ube area. Together with cost-competitiveness by sharing infrastructure and technologies developed through our solid customer base and our people, we are creating value to build a bright future. We are creating value that contributes to sustainable social progress by harnessing our creative technologies and innovative manufacturing capabilities not only in Ube but all over the world.



*Strength:*  
Infrastructure

Electricity, thermal energy, coal, and coal ash

**Energy Business**  
**(Construction Materials Company)**

We supply power and other resources to plants and offices in the Ube region. At the same time, we are endeavoring to reduce our environmental footprint through solar power, biomass, and other energy sources.

Electricity, thermal energy, and coke

**Construction Materials Company**



Here, we progressed by focusing on the cement, calcia, and magnesia businesses by drawing on the Ube area's abundant reserves of coal and on limestone from Ube's surrounding areas. We are endeavoring to maximize profitability by drawing on comprehensive strengths with Group companies in such areas as manufacturing ready-mixed concrete, transporting cement, and sales. We have developed numerous building materials products that draw on our chemicals business knowledge. The Construction Materials Company underpins social infrastructure and lifestyles.

**Chemicals Company**



We have progressed over the years by sophisticating synthetics technologies cultivated through the manufacturing of fertilizer from coal to supply products that match contemporary needs. The broad lineup of the Chemicals Company extends from nylon and synthetic rubber to such advanced offerings as LiB materials, polyimide, and separation membranes, as well as environmentally friendly fine chemicals. We also maintain drug discovery and contract pharmaceuticals.

*Strength:*  
Collaboration  
between in-house  
companies to  
create value



Electricity

We started out with coal mining machinery and refined our production technologies by manufacturing essential machinery for the cement and chemicals businesses. We make injection molding machines and diecasting machines that we supply to automobile manufacturers around the world, as well as such other offerings as transportation machinery, crusher equipment, and bridges. We also maintain machinery maintenance and improvement services. Advanced proprietary technologies underpin our high reputation.



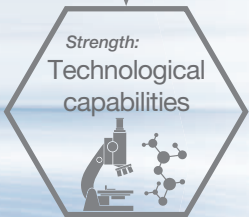
**Machinery Company**





**Strength:**  
Our people

- Diversity
- Motivated people
- Pleasant working environment



**Strength:**  
Technological capabilities

**Synthetics technologies:** We started out by employing coal, which is difficult to use as a chemicals raw material, and amassed synthetics technologies that we have leveraged in downstream product development.



**Strength:**  
Our solid customer base

(Osaka Research & Development Center)

(Development centers in Thailand and Spain)

## Strategies Employing Our Strengths

### Concentrating operational resources on active growth businesses

Nylon, fine chemicals, high-performance coatings, synthetic rubber, polyimide, separation membranes, separators, magnesia, calcia, biomass fuel, and resource recycling

### Stepping up business globalization

### Strengthening proposal-based businesses



## Medium-Term Growth Areas

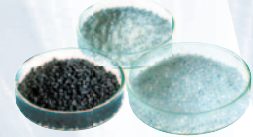
### Creating new businesses in four priority areas:



## Products Leveraging Our Strengths

### Nylon

Continuous polymerization to stably produce high-quality nylon



### Synthetic rubber

We specialize in making top-quality butadiene rubber using cobalt catalysts, and rank 5th worldwide in terms of annual production capacity.



### Separators

We are one of a few dry separator manufacturers, and are highly regarded in automotive applications, with a 10% global share.



## Sustainable growth

### Polyimide

Films based on our thermal imide technique using biphenyltetracarboxylic dianhydride (BPDA) as a raw material are rated highly for high heat resistance and dimensional stability. We account for 70% of the global chip-on-film market.



### Ready-mixed concrete

Nationwide plant network that uses cement transported throughout Japan in large ships



### Diecasting machines and injection molding machines

We rank highly in global markets, including among automakers, with a large specialty lineup.



# The UBE Group's Value Creation Process

The UBE Group builds new value by leveraging its technological and manufacturing capabilities in response to changes in the operating climate and the resulting social issues. We aim to realize social sustainability and drive sustainable growth for the UBE Group by helping to resolve these issues.

Changes in operating climate → FY2018  
Capital components of enterprise value

**Global warming and other environmental issues**  
Toward a sustainable economy

---

**Increasing incidence of natural disasters and aging infrastructure**  
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

---

**Aging populations in developed nations**  
**Diversifying work practices and accelerating globalization**  
Providing more opportunities for female employees  
Fostering diversity  
Cultivating global talent

|   |
|---|
| <p><b>Financial Capital</b><br/>Underpinning enterprise value with a sound financial position</p> <p>Equity Capital<br/><b>¥315.3 billion*</b><br/><small>* As of April 1, 2018</small><br/><i>Please see page 9 for details.</i></p>               |
| <p><b>Manufacturing Capital</b><br/>Infrastructure, businesses, human resources, and expertise concentrated in the Ube area</p> <p><b>5 sites in Japan</b><br/><b>4 sites overseas</b><br/><i>Please see pages 14–15 and 26–27 for details.</i></p> |
| <p><b>Human Capital</b><br/>Respecting diverse people and values<br/><i>Please see pages 18–19 and 50–51 for details.</i></p>   |
| <p><b>Intellectual Capital</b><br/>Broad technological foundations</p> <p>R&amp;D Expenses<br/><b>¥12.1 billion</b><br/><i>Please see pages 16–17 for details.</i></p>  |
| <p><b>Social and Natural Capital</b><br/>Ties with stakeholders</p> <p>Technologies that contribute to the environment<br/><i>Please see pages 32–37 and 52–53 for details.</i></p>   |



Bedrock of value creation — Management Philosophy — Pursue technology and embrace

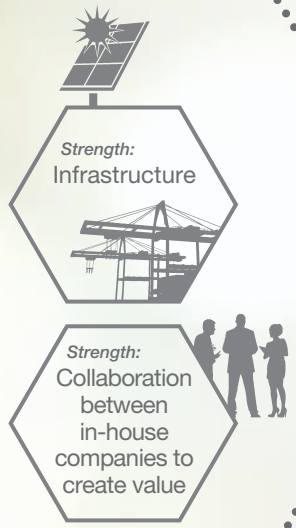




Vision for 2025  
 Vision UBE 2025  
 Medium-Term Management Plan  
 “Vision UBE 2025—Prime Phase—”

**Strategy and Resource Allocation**

Please see pages 6–7 for details.



**Creating value**

**Products and Solutions**

Please see pages 32–37 for details.

**Corporate Governance, CSR (ESG)**

Please see pages 38–61 for details.

innovation to create value for the future and contribute to social progress

Capital reinjections into new value creation

**FY2018 Impact on capital components of enterprise value**

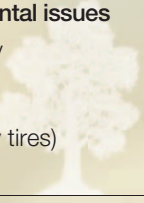
|  |               |
|--|---------------|
| Profit before Income Taxes   | ¥44.6 billion |
| Free Cash Flow   | ¥7.7 billion  |
| ROE  | 10.1%         |
| Number of People Who Are Newly Qualified* That Underpin Front-Line Capabilities  | 125           |
| * High-pressure gas manufacturing and maintenance managers (Chemicals)<br>Authorized concrete engineers<br>Authorized chief concrete engineers (Construction Materials)<br>Certified skilled professionals (Machinery) |               |
| Number of Patent Applications  | 288*          |
| * FY2016   |               |
| Percentage of Total Sales Derived from Eco Businesses  | 27%           |
| Savings from Resource Reuse and Energy Conservation  | ¥5.9 billion  |

**Value provided to society**

Sustainable Development Goal (SDG) initiatives

**Addressing environmental issues**

Environmentally friendly products and solutions (including LiBs and environmentally friendly tires)



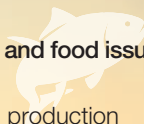
**Environmental contributions**

Contributions to more compact, lighter, and more durable products (such as from replacing metals with resins, contributing to national resilience, building and maintaining infrastructure, and providing concrete pavement)



**Addressing healthcare and food issues**

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



**Contributing to a recycling-oriented society**

Pushing forward with resource cycles (use as raw materials for cement)



**Contributing to regional communities**

Creating jobs, paying taxes, and engaging in regional development





## Key Risks and Opportunities

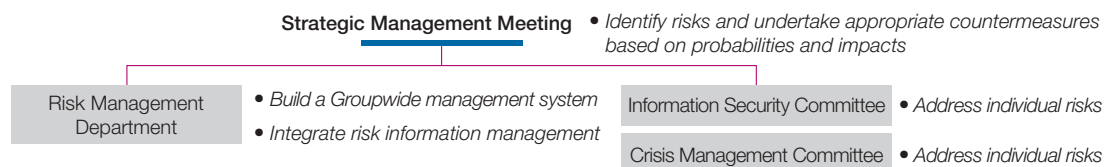
### Risk Management Policy and System

The UBE Group implements suitable risk countermeasures after assessing probabilities and impacts that might prevent it from reaching its business objectives in every decision-making process, including in gatherings of the Board of Directors and the Strategic Management Meeting.

We established a Companywide integrated management system to assess risks and gather information on probabilities and impacts. We also set up the Risk Management Department to centrally oversee related information, and maintain internal systems to manage the Group’s risks.

We set up the following entities to tackle individual risks.

1. Information Security Committee    The committee formulated the Information Security Policies, informing everyone and checking compliance while creating information security terms and rules.
2. Crisis Management Committee    The committee ensures swift responses to domestic and overseas emergencies by preparing manuals on gathering information and taking internal and external action, and is building a unified internal and external emergency structure.



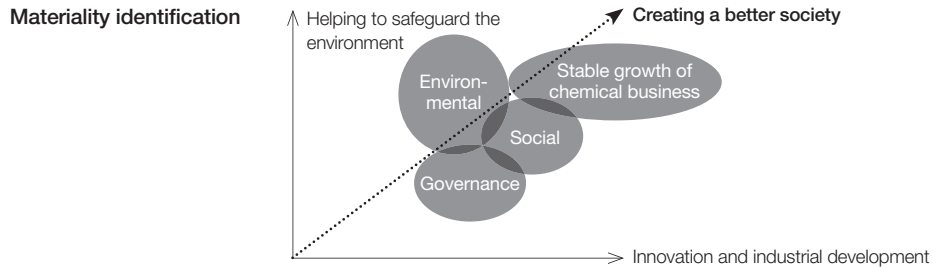
### Key Risks, Measures, and Opportunities

| Risk Overview  | Measures   | Opportunities  |  |
|--|--|--|--|
| Environmental issues (excluded from investment portfolio)          | Excluded from investment portfolio due to fossil fuel-dependent business structure   | While enhancing energy efficiency, make known our contributions to lowering environmental impact to the public   | Create and expand businesses that use products or technologies that help lower environmental impact                                |
| Environmental issues (strengthening policies: environmental taxes) | Significantly higher costs from tighter taxation on the use of fossil fuels  | In view of the balance between benefits of using fossil fuels and increasing costs, consider using alternatives  | Improve corporate image and value  |
| Serious compliance violations                                      | Serious compliance violations that detract from stakeholder trust and lead to massive damage liabilities   | While reinforcing governance through tougher management supervision, a stronger quality assurance system, and more extensive measures to prevent quality issue recurrences, keep improving attitudes and nurturing a corporate culture that does not tolerate any dishonesty | Improve market presence  |
| Market supply-and-demand imbalances                                | Massive losses from market slowdowns or tighter spreads if demand plunges or supplies surged owing to production capacity increases at other companies   | Continue extensive cost cuts and promote differentiation in targeted markets, to reinforce cost competitiveness and to secure stable demands in markets  | Promote work environments that allow diversified human resources to succeed and are able to secure next-generation human resources |
| Personnel shortages  | Business continuity issues from chronic and serious labor shortages from such factors as the difficulty of attracting the right people or significantly higher turnover ratios against a background of declining birth rates, economic trends, and diverse individual values | Undertake such measures as work style reform, operational reviews, diversity initiatives, and leverage information and communication technology (ICT)  | More swiftly reap rewards from developing fields and create new businesses   |
| Spread of alternative products                                     | Large losses from being slow to respond to the rapid spread of alternative new products from other companies   | Anticipate market needs in product development and focus resource allocations based on the business portfolio, thereby steadily expanding active growth businesses and cultivating developing fields   | —  |
| Major facilities accidents   | In the event of a major accident at a plant handling hazardous substances or high-pressure gas, restoration costs, opportunity losses from production shutdowns, compensation to customers and workers, and erosion of social credibility                                    | Bolster process safety measures (such as to maintain facilities, produce better manuals, and use ICT), undertake disaster prevention measures, educate about safety, pass on skills of veteran workers, and formulate and regularly review business continuity plans (BCPs)  | —  |
| Earthquakes, tsunamis, and other major natural disasters           | Lost opportunities because earthquakes or tsunamis greatly damage production facilities  | To prepare for major natural disasters, produce and regularly review disaster prevention measures and BCPs to minimize damage while educating employees, partner companies, and other entities about safety  | —  |

**Building Value to Materialize Sustainable Growth**  
**Materiality: Overview**

In light of global social trends and its history of more than 120 years, the UBE Group identifies and focuses on tackling materiality impacts that affect its sustainable growth.

We will continue to help realize the SDGs by addressing these issues.



| Materiality   | UBE Group's Measures  | SDGs Items to Which We Contribute |
|---|---|-----------------------------------|
| <p><b>Sustainable growth</b></p> <p><b>Stable growth of chemical business</b><br/> <i>Base for identified as materiality</i><br/>                     Please see <i>Strengthening the platform for business growth of medium-term management plan's Basic Strategies</i> on page 6.</p>                                 | <p>We will concentrate resource injections into active growth businesses that we are expanding, pursue differentiation strategies for platform businesses, and work to continue cutting costs. Through these, we will attain sustainable growth. In addition, we will create next-generation businesses by cultivating developing fields.</p> <p><i>Please see pages 26–27 for details.</i></p> |                                   |
| <p><b>Environment</b></p> <p><b>Addressing environmental issues</b><br/> <i>Base for identified as materiality</i><br/>                     Please see <i>Address and be part of the solution to resource, energy, and global environmental issues of medium-term management plan's Basic Strategies</i> on page 6.</p> | <p>We undertake voluntary, ongoing efforts to address environmental issues and contribute to social sustainability.</p> <p><i>Please see pages 28–29 for details.</i></p>   |                                   |
| <p><b>Society</b></p> <p><b>Attracting and cultivating human resources</b><br/> <i>Base for identified as materiality</i><br/>                     Please see <i>Strengthening the platform for business growth of medium-term management plan's Basic Strategies</i> on page 6.</p>                                    | <p>We believe that our people are central to the Group's growth over the medium and long terms, making it vital to strengthen and improve human resources through hiring, education, training, and on-the-job experience in diverse business units.</p> <p><i>Please see pages 18–19 and 50–51 for details.</i></p>   |                                   |
| <p><b>Governance</b></p> <p><b>Strengthening internal controls</b><br/> <i>Base for identified as materiality</i><br/>                     Please see <i>Strengthening the management platform (corporate governance) of medium-term management plan's Basic Strategies</i> on page 6.</p>                              | <p>In fiscal 2019, we transitioned to a Company with Audit &amp; Supervisory Committee to reinforce internal controls.</p> <p><i>Please see pages 39–48 for details. See page 49 for information on stronger internal controls for quality.</i></p>   |                                   |



**Sustainable Development Goals**

More than 150 world leaders adopted the 2030 Agenda for Sustainable Development at the United Nations Sustainable Development Summit in New York in September 2015. The agenda includes 17 Sustainable Development Goals (SDGs) and 169 targets.







## Chemical Business Driving Stable Growth for the UBE Group

The UBE Group has positioned the stable expansion of the chemical business, a Group growth driver, as a materiality issue. We practice the UBE Management Philosophy—Pursue technology and embrace innovation to create value for the future and contribute to social progress—by creating products that societies need. In the process, we take advantage of our technological and human resources strengths and our solid customer base.

A key strength of our chemical business is synthetic technologies that we have cultivated since our foundation. This business has innovated numerous products with global growth potentials, including in nylon, synthetic rubber, battery materials, high-performance coatings, and polyimide. Such offerings will continue to drive the Group's growth.

We have set up chemical production sites overseas, including in Thailand and Spain. We have also deployed our outstanding proprietary technologies cultivated in Ube at overseas businesses in keeping with strategies that match regional needs. Each business runs its own production sites and has systems in place to supply customers the world over.

Products created with our technological prowess and global supply structure contribute in various ways to conserving energy, producing lighter and longer-lasting products, reducing greenhouse gas emissions, and enhancing convenience. They also help to resolve global warming, health-care, food, and other issues and contribute to recycling-oriented societies.



### Spain

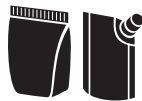
UBE Corporation Europe, S.A.  
Unipersonal

Manufacture and sales of caprolactam, ammonium sulfate, nylon, and fine chemical products

### Examples of Products with Global Growth Potential

#### Nylon

(Japan, Thailand, and Spain)



Nylon is used in everything from apparel and food packaging film to automotive components. Key advantages of our nylon resins are stable quality stemming from proprietary continuous polymerization and superior product development capabilities. Quality consistency is particularly important in food packaging film, and our ability to develop various grades of components in line with customer requirements is highly valued in the automotive industry.



**Global Network  
(Major Production Sites)**



**Thailand**

UBE Chemicals (Asia) Public Company Limited  
THAI SYNTHETIC RUBBERS COMPANY LIMITED  
UBE Fine Chemicals (Asia) Co., Ltd.

Manufacture and sales of caprolactam, ammonium sulfate, nylon, synthetic rubber, and fine chemical products

**Synthetic Rubber  
(polybutadiene rubber)**

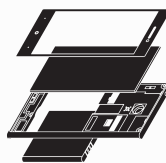
(Japan, Thailand, China, and Malaysia)



Polybutadiene rubber is a highly abrasion-resistant rubber. The UBE Group's polybutadiene rubber is a top-quality cobalt-catalyzed rubber, mainly for tires. In recent years, applications for our offering have extended to low-fuel-consumption tires.

Our strengths are our ability to cater technologically to the advanced requirements of tire manufacturers and the added value we deliver through joint development.

**Polyimide  
(Japan)**



Polyimide is a highly heat-resistant super engineering plastic.

The UBE Group's offerings are made from BPDA using integrated production and thermal imidization processes.

They are highly regarded for their heat resistance and dimension stability.

They are used extensively in various electronic devices, and should contribute much to advances with ICT and the Internet of Things (IoT).



**Separators (for LiBs)  
(Japan)**

We manufacture separators, which are key components in LiBs, notably for electric vehicles (EVs).

The UBE Group is one of a very few to manufacture separators using dry processes.

These separators excel in applications requiring superior safety and high output.

We will reinforce our production capabilities in line with the expansion of EVs and other types of EV markets, principally through our core, safety-enhancing coated separator films.



**High-Performance Coatings  
(Japan, Thailand, and Spain)**

We manufacture PCD, PUD, and other raw materials for highly durable artificial leather, eco-friendly automotive coatings, and other applications.

We will accelerate global developments by entering new markets and delivering customer solutions.





Materiality: Addressing Environmental Issues

# Lowering Environmental Impact through the Supply Chain

## Assessing Corporate Value According to Responsiveness to Climate Change

With the Paris Accord in effect, and such climate change-related disclosures as Science Based Targets (SBTs) and recommendations by the Task Force on Climate-related Financial Disclosures (TCFD) are virtually norms, this is the time to directly reflect efforts to combat climate change in corporate value.

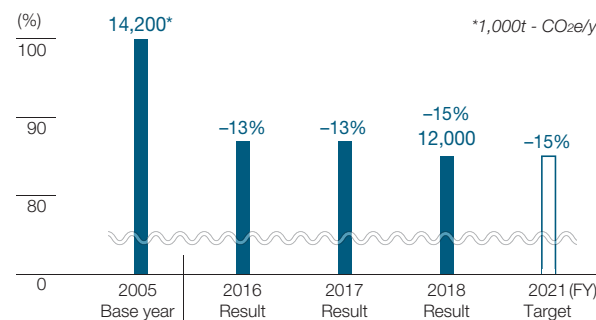
## The UBE Group’s Greenhouse Gas Emissions Reduction Goals

We have set a target of reducing greenhouse gas emissions 15% from fiscal 2005 levels by fiscal 2021.

We also aim to lift revenues from businesses that contribute to the environment to more than 30% of net sales as part of efforts to cut greenhouse gas emissions overall from our supply chain.

We have steadily implemented energy-conservation measures, driving our greenhouse gas emissions down since 1990.

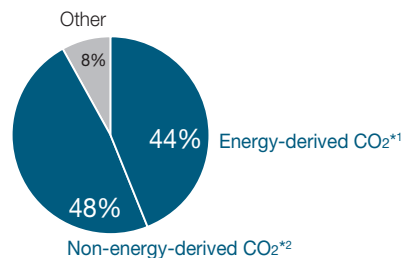
### Progress toward Greenhouse Gas Emissions Reduction Targets



## Group CO<sub>2</sub> Emissions and Challenges

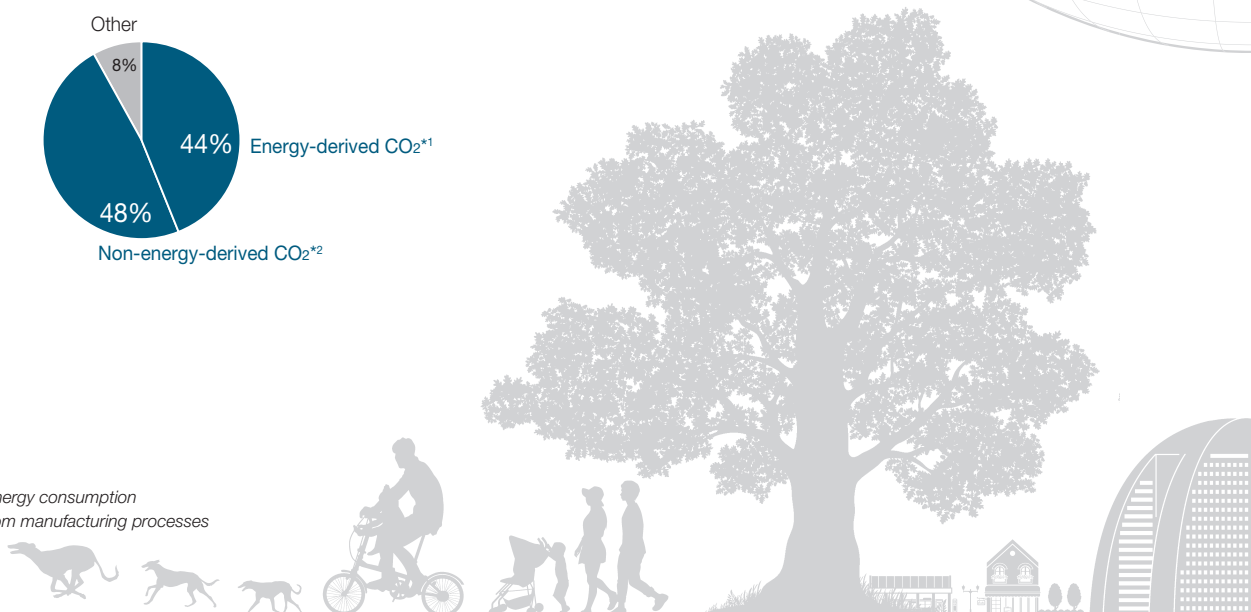
About half of the UBE Group’s greenhouse gas emissions are from energy consumption, with the balance from non-energy sources of CO<sub>2</sub>. We will reduce energy-derived CO<sub>2</sub> emissions through ongoing efforts to conserve energy. The latter emissions stem from our manufacturing processes, so cutting such by-products presents a major challenge.

### Greenhouse Gas Emissions by Origin in Fiscal 2018



Glossary

<sup>\*1</sup> Energy-derived CO<sub>2</sub>: From energy consumption  
<sup>\*2</sup> Non-energy-derived CO<sub>2</sub>: From manufacturing processes



## Long-Term Initiatives to Contribute to a Low-Carbon Economy

Climate change presents risks and opportunities for the UBE Group. With this in mind, we believe that it will be important to expand our businesses to cater to a low-carbon economy. Our focuses in driving beyond 2030 will be to:

### 1. Endeavor to reduce our consumption of fossil materials and energy

## Relentlessly develop and improve processes and introduce energy-saving facilities

**Case Study:** Our efforts encompass endeavoring to reduce CO<sub>2</sub> emissions by installing advanced energy-saving facilities at cement production sites and by expanding the use of waste as an alternative fuel at cement plants.



Cement production facilities

### 2. Reduce environmental impact across the entire supply chain

## Create and expand new technologies and products that help reduce environmental impact

**Case Study:** Our LiB electrolytes and separators have contributed greatly to the growth of EVs in recent years. We continue to place a high priority on developing and spreading more environmentally friendly technologies and products in the years ahead.



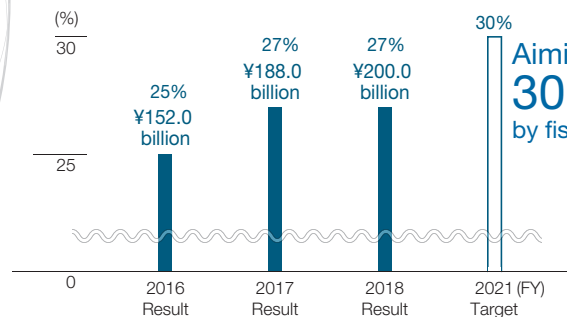
LiB electrolytes

Separators

Fiscal 2018 sales of

### technologies and products that help reduce environmental impact

totaled roughly **¥200.0 billion**



Aiming to raise the ratio to **30% or more** by fiscal 2021

### 3. Cultivate technologies and undertake R&D to help realize a low-carbon economy

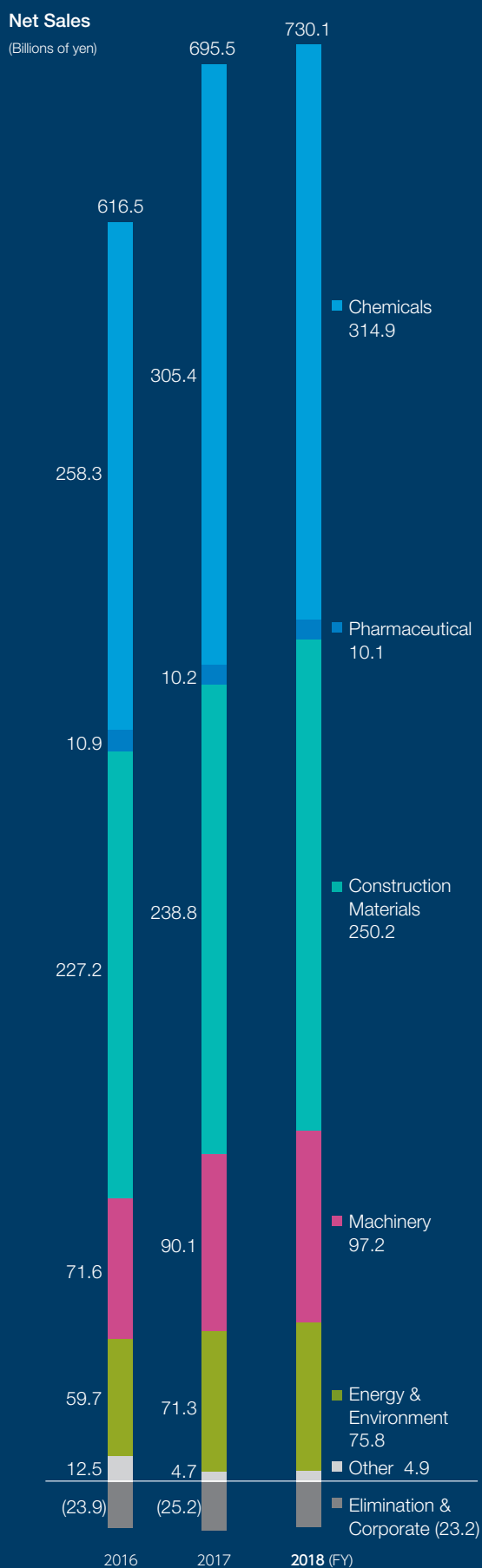
## Create businesses for a low-carbon economy

**Case Study:** Through the Company's R&D activities, we are participating in the New Energy and Industrial Technology Development Organization (NEDO)'s project for chemicals manufacturing processes based on inedible vegetable oils and in the Japanese Cabinet Office's Cross-ministerial Strategic Innovation Promotion Program for energy carriers. We are developing chemical products incorporating wood biomass. We are also tackling the issue of climate change by participating in industry-academia-government initiatives to develop direct combustion (mono and also mixed fuel) technologies that harness ammonia as fuel.



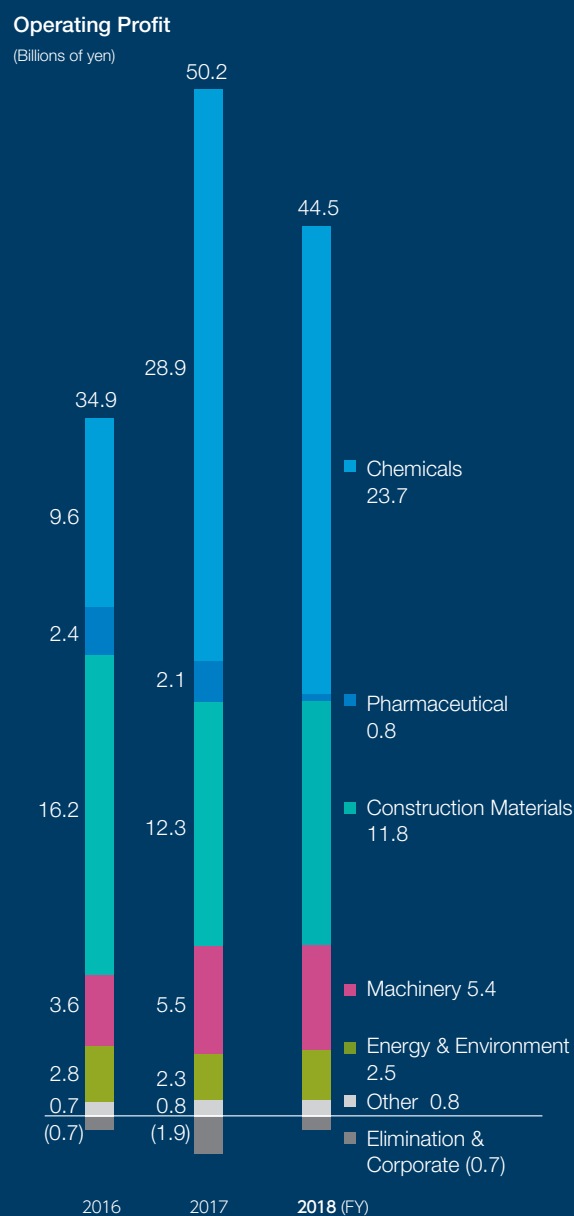


## Overview



Consolidated net sales increased in the period under review, reflecting price normalization in keeping with higher raw materials and fuel costs, particularly for chemical products. Other contributors were higher sales, mainly in Construction Materials products and machinery, stemming from robust demand in the Japanese market. At the same time, higher coal costs, periodic ammonia product factory inspections, and lower prices in the synthetic rubber market hampered operating profit. Non-operating income increased, primarily because of equity-method affiliate business integrations.

Consolidated net sales and operating profit are presented in graphs on this page.



## ● Chemicals

Revenues **up** and earnings **down**

| Fiscal Year      | Billions of yen |        |        | Change from FY2017 |
|------------------|-----------------|--------|--------|--------------------|
|                  | 2016            | 2017   | 2018   |                    |
| Sales            | ¥258.3          | ¥305.4 | ¥314.9 | 3.1 %              |
| Operating Profit | 9.6             | 28.9   | 23.7   | (18.0)%            |

### *Nylon, Caprolactam, and Industrial Chemicals*

- Caprolactam sales were up on price corrections, mainly in the Chinese market.
- Nylon sales increased with higher volumes stemming from a rise in production capacity in Spain.
- Industrial chemicals sales declined because production and shipments dropped owing to ammonia product plant repairs conducted every second year and production issues thereafter.

Nylon, caprolactam, and industrial chemicals sales were up overall, although operating profit declined because of such factors as regular ammonia product plant repairs.

### *Synthetic Rubber*

- Synthetic rubber volumes increased, mainly for tire usage. While synthetic rubber sales were up, operating profit dropped owing to lower product prices amid higher raw materials costs in the first half of the year.

### *Battery Materials and Fine Chemicals*

- Battery materials volumes rose as a result of greater separator production capacity against a backdrop of expanding demand, mainly for automotive applications. Sales were down, however, with one factor being electrolyte business restructuring in China.
- Sales of fine chemicals increased with generally higher prices.

Battery materials and fine chemicals businesses were generally strong. Sales were down amid organizational restructuring, but operating profit increased.

### *Polyimide and Functional Products*

- Polyimide sales advanced on solid sales volumes for films used mainly in circuit boards and higher volumes for varnish used in organic electroluminescent panels.

Polyimide and functional products continued to perform strongly as a whole, with both sales and operating profit rising.

## ● Pharmaceutical

Revenues and earnings **down**

| Fiscal Year      | Billions of yen |       |       | Change from FY2017 |
|------------------|-----------------|-------|-------|--------------------|
|                  | 2016            | 2017  | 2018  |                    |
| Sales            | ¥10.9           | ¥10.2 | ¥10.1 | (0.8)%             |
| Operating Profit | 2.4             | 2.1   | 0.8   | (59.4)%            |

- While sales volumes of drugs manufactured under contract increased, sales and operating profit declined because of lower royalty income.

## ● Construction Materials

Revenues **up** and earnings **down**

| Fiscal Year      | Billions of yen |        |        | Change from FY2017 |
|------------------|-----------------|--------|--------|--------------------|
|                  | 2016            | 2017   | 2018   |                    |
| Sales            | ¥227.2          | ¥238.8 | ¥250.2 | 4.8 %              |
| Operating Profit | 16.2            | 12.3   | 11.8   | (3.6)%             |

- Sales of cement and ready-mixed concrete were up amid strong volumes, but higher coal costs hampered profitability.
- Sales of calcia and magnesia were up owing to increased volumes, especially for magnesia products, and improved prices.

Sales increased but operating profit decreased in the Construction Materials segment as a whole, reflecting the impact of coal cost hikes.

## ● Machinery

Revenues **up** and earnings **down**

| Fiscal Year      | Billions of yen |       |       | Change from FY2017 |
|------------------|-----------------|-------|-------|--------------------|
|                  | 2016            | 2017  | 2018  |                    |
| Sales            | ¥71.6           | ¥90.1 | ¥97.2 | 7.9 %              |
| Operating Profit | 3.6             | 5.5   | 5.4   | (1.8)%             |

- Sales of molding and industrial machines were up owing to solid product sales.
- Sales of steel products advanced amid price corrections in response to high secondary materials and electricity costs.

Machinery segment sales rose but operating profit declined, reflecting hikes in raw materials and construction costs.

## ● Energy & Environment

Revenues and earnings **up**

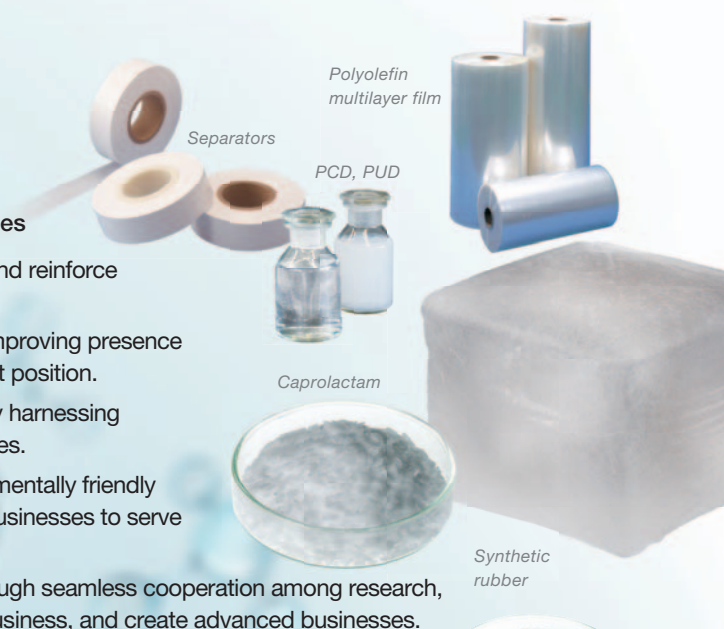
| Fiscal Year      | Billions of yen |       |       | Change from FY2017 |
|------------------|-----------------|-------|-------|--------------------|
|                  | 2016            | 2017  | 2018  |                    |
| Sales            | ¥59.7           | ¥71.3 | ¥75.8 | 6.3%               |
| Operating Profit | 2.8             | 2.3   | 2.5   | 9.1%               |

- Coal business sales were up owing to favorable coal market conditions, which underpinned higher prices.
- Power sales were up on higher electricity volumes in the absence of biannual repairs of independent power producer (IPP) facilities.

Segment sales and operating profit increased overall, largely because of the absence of biannual IPP facilities repairs.

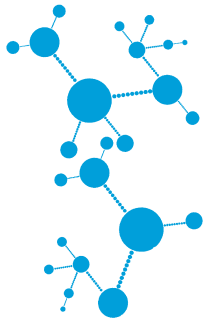


Initiatives to Create Value and Drive Sustainable Growth  
**Business Strategies of Chemicals Company**



**New Medium-Term Management Plan Policies**

- Stabilize revenues through basic chemicals and reinforce growth from specialty chemicals businesses.
- Augment operations in Asia and Europe by improving presence in the United States to reinforce global market position.
- Improve labor productivity by more effectively harnessing human resources and reforming work practices.
- Further develop and expand sales of environmentally friendly products and technologies and create new businesses to serve a low-carbon society.
- Quickly materialize development themes through seamless cooperation among research, development, technology, production, and business, and create advanced businesses.



**Principal Products and Businesses**

|   |   |
|---|---|
| Synthetic rubber                                    |   |
| Nylon and fine chemicals                            | <ul style="list-style-type: none"> <li>• Nylon</li> <li>• Caprolactam</li> <li>• Industrial chemicals, high-purity chemicals</li> <li>• Fine chemicals</li> <li>• High-performance coatings</li> </ul>                    |
| Specialty products                                  | <ul style="list-style-type: none"> <li>• Polyimide</li> <li>• Ceramics, boron trichloride</li> <li>• Separation membranes</li> <li>• Tyranno Fiber®</li> <li>• Battery materials (Electrolytes and separators)</li> </ul> |
| Pharmaceuticals (Active ingredients, intermediates) | <ul style="list-style-type: none"> <li>• In-house pharmaceuticals</li> <li>• Contract pharmaceuticals</li> </ul>  |



backdrop that we have cut caprolactam costs since the previous medium-term management plan by positioning caprolactam as a raw material for nylon while upgrading facilities for nylon extrusion applications—one of our strengths—to expand sales. These efforts have begun to bear fruit. We will continue to stably supply differentiated nylon and synthetic rubber products that leverage our strengths, including joint product development with customers. At the same time, we will expand extensively in specialty chemicals, where we can draw on such proprietary technologies as separators and polyimide, to drive the Group's growth. As for new business and R&D, we will focus on nurturing future growth drivers based on a clear policy and direction.

**Active Growth Businesses**

We will expand production in the nylon business and create a highly profitable structure while

**Business Strategies for Fiscal 2019**

The chemicals industry experienced adversity as the result of a deteriorating demand–supply balance, owing to new competition from players in China and emerging nations, and massive facilities upgrades. Although markets have recovered since mid-fiscal 2017 due to tighter environmental regulations in China, a downturn in the Chinese economy should cause the business environment to deteriorate in fiscal 2019. It is against this



To drive the UBE Group's growth, we will solidify our foothold to stabilize revenues and enhance profitability.

**Masato Izumihara**  
 President & Representative Director  
 CEO  
 Company President, Chemicals Company

## SWOT Analysis

### Strengths

- Our product range is extensive, encompassing such basic chemicals businesses as our core lactam-nylon chains and synthetic rubber and such specialty chemicals businesses as specialty products, high-performance coatings, and battery materials.
- We integrate diverse materials and technologies to supply differentiated products and services worldwide.
- We have the technology and manufacturing capabilities to meet sophisticated customer needs as a trusted joint development partner, and to provide solutions to customers.

### Weaknesses

- Because our business emits a considerable amount of greenhouse gases, we are exposed to regulatory risks, such as environmental taxes.  
**Countermeasures:** We will provide products and technologies that help reduce greenhouse gases in the supply chain while reducing the UBE Group's overall emissions.

### Opportunities

- We anticipate favorable market expansion for functional products, high-performance coatings, and nylon.
- We forecast strong electric and hybrid vehicle demand and growing markets for coated separators.
- We are expecting business opportunities for environmentally friendly products for new battery materials, EVs, lighter mobility, and fuel economy improvements.

### Threats

- Intensifying price competition from market entries of players in middle-income countries  
**Countermeasures:** We will extensively cut costs to improve our competitive position and ally with other companies.
- Shorter product lifespans and swifter changes in the external environment  
**Countermeasures:** We will anticipate customer needs by providing joint product development and other solutions, and create new applications.

building closer relationships with customers from global perspectives. In the fine chemicals business, we will step up overseas development of our C1 chemicals business, which is a competitive strength. For the high-performance coatings business, we will progress as a solutions provider while expanding in volume zones around Asia and North and Central America.

In the synthetic rubber business, we will pursue joint product development with customers and swiftly supply high-value-added products by catering to customer needs. At the same time, we will reinforce production capacity, particularly in high-value-added offerings, and will push forward in exploring a fifth production site.

In January 2019, we completed the transfer of our separator business, from base to coated films, to UBE Maxell Co., Ltd. We will fully realize benefits from integration and enhance cost competitiveness while stabilizing the supply system for tomorrow's businesses.

For the polyimide business, we will stably expand revenues and reform the business structure by fully operating existing facilities and expanding capacity. In separation membranes, we will reinforce the competitiveness of mainstay nitrogen membranes and expand market share in the mobility field.

### Platform Businesses

We will cut costs further at production units in Japan, Thailand, and Spain that underpin our caprolactam business, a raw material for nylon. In industrial chemicals, we will establish a dominant position in the domestic ammonia industry and explore global development opportunities.

In the pharmaceutical business, we will set up a research structure for nucleic acid drugs and will reinforce our development, production, and sales framework for fluorine materials. We will restructure the Ube Factory to establish a multi-product, small-lot production setup.

### Developing Fields

For the Tyranno Fiber® business, we will develop ceramic matrix composite fibers for civil aircraft engines and mass production technologies, establishing these offerings as competitively superior next-generation sintered fibers.

### R&D

We will swiftly create new businesses in the environment and energy, mobility, construction and infrastructure, and healthcare domains, and bolster development pipeline themes.



### ESG-Related Initiatives

- We will supply products that lower environmental impact and contribute to society. Such offerings include environmentally friendly high-performance coating materials, synthetic rubber and nylon that improves the fuel economy and lowers the weight of automobiles, battery materials for electric and hybrid vehicles, separation membranes for fuel cell vehicles, and Tyranno Fiber®, which helps enhance aircraft engine fuel economy.
- We will create new businesses to serve a low-carbon society and engage in R&D and verification tests that help reduce CO<sub>2</sub> emissions and usage.



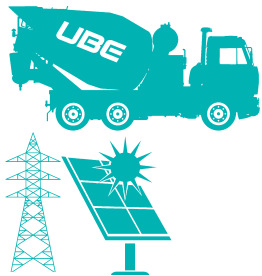
Initiatives to Create Value and Drive Sustainable Growth  
**Business Strategies of Construction Materials Company**



Ready-mixed concrete

**New Medium-Term Management Plan Policies**

- Strengthen business foundations.
- Enhance growth strategy.
- Pursue Group synergies.



**Principal Products and Businesses**

- Cement, ready-mixed concrete
- Biomass, industrial waste recycling
- Building materials (Self-leveling materials, waterproofing materials, and renovation)
- Magnesia and calcia
- Fine chemicals
- Energy (Coal and electricity)

**Business Strategies for Fiscal 2019**

Our construction materials are essential for society. We expect to remain profitable in the years ahead by expanding new businesses on top of stable business foundations. While construction related to the Tokyo 2020 Olympic and Paralympic Games should create some construction demand in fiscal 2019, persistently high coal and heavy oil costs is projected to continue to constrain near-term results.

It is against this adverse business backdrop that the Company will strive to reach its new medium-term management plan targets while reaping the rewards from actions to date under the new medium-term management plan.

**1. Strengthen business foundations**

While building a stable shipment framework and conserving energy and costs in cement, ready-mixed concrete, magnesia and calcia, and energy operations, we will improve profitability through consistent efforts to revise prices and overcome the challenges of a deteriorating business climate.

- Installing a high-efficiency clinker cooler at the Kanda Factory to cut energy and costs (construction started in fiscal 2019, with operations slated to begin in fiscal 2020). Waste heat power facilities at the Isa Factory should start operating in fiscal 2019.

**Makoto Koyama**

Representative Director  
 Senior Managing Executive Officer  
 Company President,  
 Construction Materials Company

We will accelerate independent operational management to ensure safety, security, stability, and growth.



Ube Isa Mine

## SWOT Analysis

### Strengths

- We can optimize Group synergies through our diverse Groupwide product businesses.
- We maintain a solid infrastructural setup through our coal and power supply structure and large port facilities.
- We are able to harness a wide range of waste substances and draw on our advanced technical capabilities to conserve resources.

### Weaknesses

- Aging facilities  
**Countermeasures:** We will overcome this issue by lowering opportunity losses through formulating long-term facilities maintenance plans and using ICT to consolidate facilities maintenance information.

### Opportunities

- We continue to enjoy solid demand in urban areas in line with the Tokyo 2020 Olympic and Paralympic Games, redevelopment, Osaka Expo, and other projects.
- We must ensure stable supplies of materials that are essential for building social capital and competitive energies.
- We anticipate further synergies through the integration of energy and environmental businesses.

### Threats

- Sluggish domestic cement demand and increasing thermal energy costs  
**Countermeasures:** We will tackle this challenge by constantly revising cement prices while building solid, low-cost operating foundations.
- Tighter environmental regulations  
**Countermeasures:** We will undertake the following energy-saving measures, which aim to (1) deploy high-efficiency facilities, (2) reuse waste heat, (3) use more biomass fuel in power generation, and (4) streamline kiln operations.

Self-leveling materials

- Deploying Renewal Phase II (covering fiscal 2019–2021) at the Ube Factory of Ube Materials Industries to maintain stable operations and deliver high-added-value for magnesia (fiscal 2019–2021).
- Rolling out environmental measures, aging facilities countermeasures, and efficiency improvements to maintain competitive and stable supplies of energy.

## 2. Enhance growth strategy

We have positioned fine materials, biomass, and recycling as growth businesses and are pursuing new ideas beyond existing business frameworks to expand by commercializing businesses and generating profits.

- In fine materials, we will lift production capability in MOS-HIGE magnesium oxysulfate whiskers (Thai plant construction started in April 2018, with operations scheduled to begin in fiscal 2020).
- In biomass and recycling, we will expand sales of environmental materials, notably by increasing biomass incinerations at IPP, and are looking to produce polybutylene terephthalate (PBT) overseas while creating new recycling operations and expanding sales of such environmental materials as neutral stabilizers and heavy metal immobilizers.



Solar power plant

## 3. Pursue Group synergies

From the beginning of fiscal 2019, the energy & environment business (coal and electricity) have been integrated into the Construction Materials Company. Although operations collaborated closely with cement factories and Group companies, being in the same company should further generate new synergies. These will include maximizing and optimizing the use of waste and biomass and more effectively harnessing and developing human resources.

Finally, this fiscal year is the start of our new medium-term management plan. While responding flexibly to business climate changes in the years ahead, we will accelerate independent operational management as a new company and ensure safety, security, stability, and growth.



## ESG-Related Initiatives

- We are installing waste heat power facilities at the Isa Cement Factory that should start operating in February 2020. We plan to install a high-efficiency clinker cooler at the Kanda Factory to begin operation from summer 2020. Together, these measures should reduce annual emissions of CO<sub>2</sub>, a greenhouse gas, by roughly 80,000 metric tons - CO<sub>2</sub>e/y.
- We are endeavoring to greenify former limestone quarries. Since fiscal 2008, we have planted citrus trees, ivy, and other vegetation on the slopes of the Kanda Mine. Since fiscal 2011, we have planted wild cherry trees and round leaf holly on the slopes of the Ube Isa Mine.



# Business Strategies of Machinery Company

## New Medium-Term Management Plan Policies

- Develop products and cultivate markets in response to the need for lighter automobiles (die-cast and extrusion).
- Globally integrate business operations and reinforce overseas sales expansion associated with a business integration (injection molding).
- Enter new markets for environmentally friendly products and resource recycling (industrial machinery).
- Reinforce services and support capabilities at overseas service sites (machinery services).



## Principal Products and Businesses

- Molding machines (Die-casting machines, extrusion presses, and injection molding machines)
- Industrial machinery and bridges
- Machinery services
- Steel products
- Control boards

## Business Strategies for Fiscal 2019

### Molding Machinery Business

While the domestic market saw replacements of aging machines and an increase in capacity widening plans in response to rising demand for lighter automobiles, new capital investment in the North American market plateaued owing to lower

automobile sales. There were some revisions in capital investment plans in China for manufacturing equipment of automobile components, for which demand has been solid to date, and there were some delivery delays because of Sino-American trade friction.

We will improve product efficiency in fiscal 2019 as we have already secured larger order backlogs than in normal years.

In die-cast machinery, we will develop advanced products for lighter automobiles. In extrusion presses, we will start expanding sales of a new product offering considerable energy savings.

We will develop global strategic injection molding machines tailored to local needs and a new series offering improved performance. At the same time, we will build an efficient global optimum production framework to boost sales.



Injection molding machines

### Industrial Machinery Business

In Japan, capital investment in large facilities peaked, with price competition intensifying. Overseas markets slowed owing to excessive capacity in China. Demand for new capital investment in



We will reinforce our business foundations to materialize our Vision for 2025.

*Tokuhisa Okada*

Senior Managing Executive Officer  
Company President, Machinery Company

## 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 cater to customer needs in everything from development through after-service.
- We have large processing facilities and skilled engineers and workers.

### Weaknesses

- Slow to take advantage of ICT because our business is based on manufacturing to order  
**Countermeasures:** We have accordingly launched an ICT project to enhance product development and production efficiency.

### Opportunities

- Customer needs and requests are diversifying as target markets globalize.
- An extremely responsive global service and support framework is increasingly essential.
- There is a growing need for technologies that help lighten the weight of automobiles and contribute to the environmentally friendly product and resource recycling fields.

### Threats

- Intensifying competition from the emergence of manufacturers in Europe, the United States, China, and emerging nations  
**Countermeasures:** We will tackle this challenge by developing new products, bolstering overseas sites, and reinforcing service and support capabilities to enhance customer satisfaction.
- Concerns about product competitiveness deteriorating amid rocketing raw materials costs and longer delivery times  
**Countermeasures:** We will resolve this issue by cutting costs Companywide, cultivating new vendors, and increasing productivity.

emerging nations was low due to low crude oil and resources prices.

In fiscal 2019, we will focus on production processes and cost management for large domestic electric power plant orders received while developing new products to enter markets for environmentally friendly products and resource recycling, taking advantage of our strengths in combustion, crushing, and materials handling technologies. We will also focus on the licensing business.

### Machinery Services Business

This business is a major source of income that generates more stable profits than machinery products businesses, which are more exposed to various factors. That said, we need to reinforce the business because rivals have also focused in recent years on reinforcing services operations.

In fiscal 2019, we will bolster overseas services sites and support capabilities. In particular, we will enhance our services structure by integrating and reinforcing sites while training and beefing up service personnel. We will also become more responsive by stocking more components.

### Steel Products Business

The business environment is adverse because of surging costs of raw and indirect materials and electricity.

This situation is expected to persist in fiscal 2019. As such, while continuing to improve materials procurement and production efficiency we will work to enhance profitability by constructing an optimal production framework that is responsive to changes in the operating climate and to expand our industrial waste recycling business.



Bridges



### ESG-Related Initiatives

- Companies in the Machinery segment are focusing on developing products that help protect the environment while providing services that apply to existing facilities.
- UBE Steel Co., Ltd., a group company of the Machinery Company, completely melts the industrial and medical waste in manufacturing processes.



For more than 120 years, the UBE Group has retained its founding spirit of coexistence and mutual prosperity as the cornerstone of its operations. We believe that our corporate governance, environmental protection, community contribution, and other initiatives will enable us to enhance corporate value, drive sustainable growth, and remain a good corporate citizen.

**UBE Group Basic Guidelines for CSR**

Based on the founding spirit and corporate philosophy of the UBE Group, we will meet our CSR in order to contribute to the sustainable growth of society through our business.

- (1) 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.
- (2) We will pursue corporate governance that is in keeping with the demands of society and strive to continuously expand revenues as well as increase corporate value.
- (3) We will secure safety and quality in providing environmentally friendly products.
- (4) We will strive to reduce the environmental impact of our business activities and effectively utilize resources in order to conserve the global environment.
- (5) We will practice appropriate information disclosure for all stakeholders and readily communicate with society.
- (6) As a good corporate citizen, we will engage in social initiatives at home and abroad, to contribute to the growth of communities.

For more information on the UBE Group's CSR, please visit the UBE Group's website.  
<https://www.ube-ind.co.jp/ube/en/csr/>



**Sustainable Growth /  
 Increasing Enterprise Value / Coexist with Society**



**Stakeholder Engagement**

The UBE Group endeavors to engage with its five key stakeholders as stated here.

| Stakeholders      | UBE's Mission   | Main Means of Engagement   |
|-------------------|---|--|
| Customers         | Provide safe, high-quality products and services that are useful to society at fair prices and swiftly react to customer needs  | Communication through sales activities and providing information by various means (including the UBE Group's website and product catalogs)   |
| Business Partners | Engage in fair, honest transactions   | Communication through purchasing activities  |
| Employees         | Stable employment, fair assessments and salaries, human resources development, appropriate work time management, and work-life balance support                                    | Corporate briefings, the Central Labor-Management Conference, training, reporting and counseling systems, internal publications, and the Company intranet  |
| Communities       | Provide stable, fair employment, pay taxes appropriately, and engage in dialogue with local communities and society   | Regional dialogue meetings, the local newsletter "Tsubasa," charity concerts, and collaboration with academia  |
| Shareholders      | Continuously raise corporate value, provide timely, appropriate information disclosure, and maintain shareholder returns through stable, appropriate dividends and share buybacks | IR activities (results briefings, investor briefings, facility tours, etc.), the General Meeting of Shareholders, and providing information by various means (the UBE Group's website, the Integrated Report, and the UBE Business Report) |

## Corporate Governance Discussion

UBE transitioned from a Company with Board of Corporate Auditors to a Company with Audit & Supervisory Committee structure in keeping with an amendment of the Articles of Incorporation that was adopted at the Ordinary General Meeting of Shareholders held on June 27, 2019. Yuzuru Yamamoto, Chairman of the Board of Directors, and Seiichi Ochiai, an independent outside director and Chairman of the Audit & Supervisory Committee, and who is a commercial law researcher, discussed the purpose of the transition and the resulting changes.



Left

Yuzuru Yamamoto  
Chairman of the Board

Right

Seiichi Ochiai  
Outside Director  
Chairman of the Audit &  
Supervisory Committee

### We have shifted to a Company with Audit & Supervisory Committee structure. The UBE Group will pursue further growth through all employees being committed to doing things better.

#### How does a Company with Audit & Supervisory Committee differ from a Company with Board of Corporate Auditors or a Company with Nominating Committee?

**Ochiai:** The board of directors of a Company with Board of Corporate Auditors needs to decide by itself all important business matters. That tends to centralize management decision-making, and supervision of business implementation is often inadequate as a result.

There are therefore two organizational setups under the Companies Act to rectify such a situation. One is a Company with Nominating Committee. The other is a Company with Audit & Supervisory Committee. A Company with Nominating Committee enables the use of a monitoring model, with

executives looking after management and the board of directors overseeing management. A Company with Audit & Supervisory Committee is halfway between a Company with Board of Corporate Auditors and a Company with Nominating Committee. Its board of directors does not have statutory Nomination and Remuneration Committees, and this organizational setup makes it easy to transition from a Company with Board of Corporate Auditors. While a considerable number of listed companies have transitioned, a minority have Company with Nominating Committee setups.

●  
**Yamamoto:** A Company with Nominating Committee structure is basically a European or American approach. By clearly separating executive and supervisory roles, this organizational setup enables



companies to grow fast and increase corporate value. I understand that while there were moves in Japan to adopt such structures, there were unfortunately few outside directors to offer monitoring, so this structure was not widely adopted. It was thereafter considered easier to shift to a Company with Audit & Supervisory Committee structure, a halfway marker under the law, whose purpose is to improve corporate value.



Accelerating decision-making should improve growth rates.

#### Why did UBE transition to a Company with Audit & Supervisory Committee structure?

**Yamamoto:** We discussed the benefits and issues of the Audit & Supervisory Committee setup and the best deployment approaches since the revision of the Companies Act in 2014. UBE has long had numerous outside directors, and they have always felt free to air their views with others on the Board of Directors, and executives have been very responsive. So, because governance has functioned well, some said there was little need to shift to a Company with Audit & Supervisory Committee structure. But since a board makes all important business implementation decisions in a Company with Board of Corporate Auditors, there are issues of management agility. So, directors increasingly wanted to shift to a Company with Audit & Supervisory

Committee structure. Another consideration was the identifying of inappropriate quality inspections last year. On reflection, we realized that our corporate governance system needed more than a Company with Board of Corporate Auditors setup. We are also at a turning point this year, notably in terms of having a new President and CEO, reorganizing into a three-company operating structure, and having embarked on a new medium-term management plan. We therefore decided to adopt a Company with Audit & Supervisory Committee structure.

**Ochiai:** The Board of Directors has delegated important business implementation decisions to management. In this era of fast global changes, important management decisions are up to top executives rather than the Board. The President and CEO can act swiftly and boldly in keeping with the business climate and focus on improving corporate value. With management clearly in charge of implementation, with Board oversight, it is then possible to properly evaluate management's overall performance in attaining goals.

#### What is the scope of important business implementation decisions delegated to the CEO?

**Yamamoto:** If you adopt a Company with Audit & Supervisory Committee structure, you can delegate authority reasonably soon to executives to handle measures. For particularly important business implementation decisions, executives traditionally submit interim reports to the board and then explore final decisions in light of the board's views. By continuing that approach, the board can transfer authority and leave things up to management to make rapid progress.

**Ochiai:** Even if the board delegates decision-making to management, if management believes that it needs to seek opinions from third parties, including outside directors, it is free to explain that situation to the board. It is also possible for management to go back to the board to seek a decision on a matter, and there can even be a gradual delegation of authority in line with realities at a company, so delegation should be flexible.

#### How will the Company change with the focus of the Board of Directors shifting to management oversight?

**Yamamoto:** In a Company with Audit & Supervisory Committee, the board can flexibly determine

the extent to which it delegates important business implementation decisions to top management. The board's role is to use the new organizational setup to provide direction so executives autonomously improve their efforts. Executives can manage more flexibly and make faster decisions if a lot of authority is delegated to them. To that end, executives need to explain to the board that they are proceeding properly and steadily producing results.

**Ochiai:** It is important for the Board of Directors to carefully assess the UBE Group's situation and delegate authority to the proper extent. At the same time, executives need to explain to the Board how much freedom they need to fulfill management responsibilities, and have the Board sufficiently deliberate this. In other words, both sides likely need to move forward to complete the new organizational setup.

**Yamamoto:** Accelerating decision-making should improve growth rates. Even if goals remain the same, a nimbler management should deliver results faster. We can therefore anticipate results and take next steps more quickly.

**How will auditing change owing to the transition to a Company with Audit & Supervisory Committee structure? How will you ensure the effectiveness of the internal control systems you need?**

**Yamamoto:** To date, our auditing section has inspected business sites, while auditors have also assessed sites from their own perspectives, highlighting any areas needing improvement. Executives now handle such tasks and need to demonstrate to the Audit & Supervisory Committee that there are no issues. At around the same time as the shift to a Company with Audit & Supervisory Committee setup, we are changing the organization, appointing an executive officer to look after the Auditing Department and strengthen internal controls. There will be a framework for executives to improve governance.

**Ochiai:** Creating and running a solid internal control system will become an even more important management responsibility. With an executive officer put in charge of the Auditing Department, we anticipate a more robust internal control system. This should enable the management team to match or outperform other companies. I would like executives to step up their efforts in that regard. From

here on, we will rely on this internal control system while the Audit & Supervisory Committee checks whether our internal control system functions properly. It is also important to note that members of the Audit & Supervisory Committee are Board members with voting rights, unlike auditors, so they can be useful to improve the supervisory aspects of the Board. This is a major change in my view.



Members of the Audit & Supervisory Committee are Board members with voting rights, so they can be useful to improve the supervisory aspects of the Board.

**Finally, what is your current business situation?**

**Yamamoto:** We have updated our business philosophy. As well, we have shifted to a Company with Audit & Supervisory Committee structure and changed our management team. By reorganizing into a three-company operating structure, each company can become more agile and strengthen its defensive capabilities. We have also launched a new medium-term management plan. The UBE Group will pursue further growth through all employees being committed to doing things better.

**Ochiai:** We are steering our ship in exciting new directions, and I look forward to the voyage. I am convinced that we are well positioned to deliver solid corporate value over the medium and long terms.



**Corporate Governance Overview**

|   |   |
|---|---|
| Organizational structure  | Company with Audit & Supervisory Committee  |
| Chairman of the Board of Directors*   | Yuzuru Yamamoto   |
| Number of directors (excluding members of the Audit & Supervisory Committee)* | 6 (of which 2 are outside directors)  |
| Number of directors in the Audit & Supervisory Committee*                     | 3 (of which 2 are outside corporate auditors)   |
| Independent officers appointed*   | 4 outside directors   |
| Determination of compensation for each director                               | <ul style="list-style-type: none"> <li>• Compensation consists of base compensation and stock-based compensation.</li> <li>• Total compensation for the year ended March 31, 2019 (5 directors excluding independent directors): ¥253 million (base compensation: ¥116 million; performance-linked remuneration: ¥136 million)</li> </ul> |
| Determination of compensation for each corporate auditor                      | <ul style="list-style-type: none"> <li>• Compensation consists of base compensation.</li> <li>• Total compensation for the year ended March 31, 2019 (2 auditors excluding the independent auditors): ¥57 million (base compensation: ¥57 million)*</li> </ul>  |
| Outside officers (Independent officers)                                       | <ul style="list-style-type: none"> <li>• Compensation consists of base compensation and retirement benefits.</li> <li>• Total compensation for the year ended March 31, 2019 (6 officers): ¥68 million (base compensation: ¥68 million)</li> </ul>  |
| Outside officers (Independent officers)<br>Independent auditors               | Ernst & Young ShinNihon LLC   |

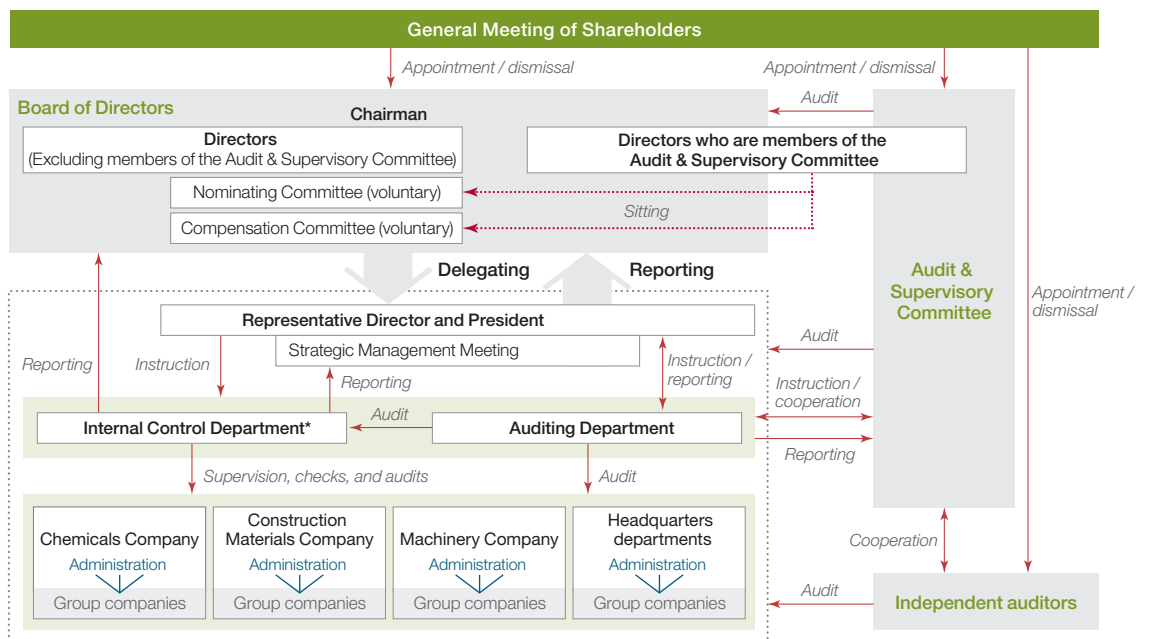
\* As of June 27, 2019

**Corporate Governance**

The UBE Group’s fundamental mission is to achieve sustainable growth and increase the corporate value of the Group over the long term. We have made the change from a Company with Board of Company Auditors to a Company with Audit & Supervisory Committee in accordance with a resolution adopted at the Ordinary General Meeting of Shareholders held on June 27, 2019. Going forward, we will more clearly separate supervisory functions and decision-making functions in management

and reinforce the Board of Directors’ function of supervising business execution while accelerating decision-making by delegating important decisions for business execution to the President and Representative Director. We consider it important to sustainably undertake suitable business activities and fulfill our duties toward and gain the trust of all stakeholders, including customers, business partners, employees, communities, as well as shareholders, by enhancing the effectiveness of corporate governance through these means.

**Overview of Corporate Governance and Internal Control**



\* Internal Control Department:  
 • Practical Operational Committees (Compliance, Regulated Cargo, Information Security, and Emergency Response)  
 • Headquarters Internal Control Departments

## Board of Directors

In principle, a director who does not serve concurrently as an executive officer serves as Chairman of the Board of Directors. The Board of Directors makes decisions about important management issues in accordance with laws, regulations, the Company's Articles of Incorporation, and the rules of the Board of Directors, and also supervises directors and executive officers to ensure they are performing their duties appropriately and efficiently. As a Company with Audit & Supervisory Committee, we will accelerate operational execution by delegating decision-making on important operations to the President and CEO while consistently reinforcing supervision.

## Audit & Supervisory Committee

The Audit & Supervisory Committee is responsible for auditing the execution of duties by directors and presenting opinions at the General Meetings of Shareholders concerning the nomination and compensation of directors other than members of the Audit & Supervisory Committee. The committee's operations are conducted based on audit policies and plans established each fiscal year. Committee members attend and express their opinions at important meetings, including Board of Directors' meetings, in order to understand the decision-making process of important decisions and the status of business execution, while examining important decision-making documents and receiving business reports from directors (excluding members of the Audit & Supervisory Committee), executive officers, and employees. They also hold periodic meetings with the President and Representative Director to confirm management policies and exchange opinions on key issues. The committee members are permitted to attend meetings

of the Nominating Committee and Compensation Committee, which reports to the Board of Directors, in order to supervise the appointment and compensation of directors (excluding members of the Audit & Supervisory Committee). The committee comprise three directors, including two outside directors, and is chaired by an outside director.

### Audit & Supervisory Committee:

Seiichi Ochiai (Chairman of the Audit & Supervisory Committee, Outside Director)  
Takashi Shoda (Outside Director)  
Atsushi Yamamoto (Director)

## Outside Directors

UBE has appointed outside directors to add independent, third-party viewpoints to the decision-making process and to the monitoring of management to ensure efficiency, transparency, and objectivity from June 2005. In addition, UBE employs a Nominating Committee and Compensation Committee that report to the Board of Directors. Each comprises three members—two outside directors (excluding members of the Audit & Supervisory Committee) and one non-executive director (Chairman of the Board)—and is chaired by an outside director.

### Nominating Committee:

Keikou Terui (Chairman of the Nominating Committee, Outside Director)  
Tetsuro Higashi (Outside Director)  
Yuzuru Yamamoto (Chairman of the Board)

### Compensation Committee:

Tetsuro Higashi (Chairman of the Compensation Committee, Outside Director)  
Keikou Terui (Outside Director)  
Yuzuru Yamamoto (Chairman of the Board)

## Directors' and Auditors' Attendance at Board Meetings

|                   | Name               | Attendance at meetings of the Board of Directors and Board of Corporate Auditors during fiscal 2018             |   |
|-------------------|--------------------|---|---|
| Directors         | Michio Takeshita   | 13/13 times (100%)  |   |
|                   | Yuzuru Yamamoto    | 13/13 times (100%)  |   |
|                   | Hideyuki Sugishita | 3/3 times (100%) Resigned on June 28, 2018  |   |
|                   | Tadashi Matsunami  | 13/13 times (100%)  |   |
|                   | Masato Izumihara   | 10/10 times (100%) Appointed on June 28, 2018   |   |
| Outside Directors | Takashi Kusama     | 12/13 times (92.3%)   |   |
|                   | Keikou Terui       | 12/13 times (92.3%)   |   |
|                   | Takashi Shoda      | 13/13 times (100%)  |   |
|                   | Mahito Kageyama    | 13/13 times (100%)  |   |
| Auditors          | Takanobu Kubota    | 13/13 times (100%) of Board of Directors' meetings<br>6/6 times (100%) of Board of Corporate Auditors' meetings |   |
|                   | Atsushi Yamamoto   | 13/13 times (100%) of Board of Directors' meetings<br>6/6 times (100%) of Board of Corporate Auditors' meetings |   |
|                   | Outside Auditors   | Seiichi Ochiai  | 13/13 times (100%) of Board of Directors' meetings<br>6/6 times (100%) of Board of Corporate Auditors' meetings |
|                   |                    | Miyako Suda   | 13/13 times (100%) of Board of Directors' meetings<br>6/6 times (100%) of Board of Corporate Auditors' meetings |



### Effectiveness Assessment of the Board of Directors\*

UBE convenes a regular Evaluation Meeting for Effectiveness of the Board of Directors composed of outside directors, outside corporate auditors,

*\* Results of effectiveness assessment conducted in fiscal 2018, when before the transition from a Company with Board of Corporate Auditors to a Company with Audit & Supervisory Committee structure.*

and non-executive directors to hold deliberations on evaluating the effectiveness of the Board of Directors, based on directors' and corporate auditors' self-assessment of the Board of Directors (to be obtained through questionnaire, etc.). The Board of Directors receives a report on these deliberations and conducts an evaluation of its effectiveness. As a result, the Board of Directors determined at a meeting held in June 2019 that the Board functioned effectively in fiscal 2018, as it found that the composition and operation of the



Takashi Shoda  
Outside Director  
Member of the Audit &  
Supervisory Committee

Seiichi Ochiai  
Outside Director  
Member of the Audit &  
Supervisory Committee

Atsushi Yamamoto  
Director  
Member of the Audit &  
Supervisory Committee

Makoto Koyama  
Representative Director

Yuzuru Yamamoto  
Director  
Chairman of the Board

Board were appropriate and that vigorous discussion and deliberation were conducted.

With the change to a Company with Audit & Supervisory Committee in mind, UBE views the following five issues as challenges and will pursue improvements going forward to enhance corporate value by reinforcing the supervisory functions of the Board of Directors: (1) broadening the scope of decision-making authority delegated to the President and Representative Director concerning important business execution; (2) investigating an ideal reporting method that contributes to the supervision of management and phased-in implementation; (3) monitoring business execution status relative to medium- and long-term

management plans; (4) monitoring the completeness and appropriateness of structured risk management using risk management systems; and (5) reinforcing and monitoring of the effectiveness of internal control systems.

#### **Director and Executive Officer Remuneration**

UBE revised its director and executive officer remuneration system effective April 1, 2019. The amount of remuneration for fiscal 2018 and for fiscal 2019 were determined based on the old system. The new system will be applied to the determination of the amount of remuneration starting in fiscal 2020.

The outline of the new system is stated below. The major differences from the old remuneration system include the simplification of various benchmarks to aid understanding, with the compensation ratio for performance-linked portions increasing.



Masato Izumihara  
President &  
Representative Director  
CEO

Masayuki Fujii  
Director  
CFO

Keikou Terui  
Outside Director

Tetsuro Higashi  
Outside Director



**A. Calculation method for determining director and executive officer remuneration**

- (a) The remuneration structure for directors (excluding directors who are also members of the Audit & Supervisory Committee and outside directors who are not members of the committee) and executive officers at UBE consists of (1) base compensation (fixed compensation), (2) an annual incentive (Companywide performance-linked compensation and annual individual target-based compensation), and (3) long-term incentives (medium-to-long term individual target-based compensation and stock options).
- (b) The ratios of base compensation and annual and long-term incentives are set to allocate about 50% for base compensation, 30% for annual incentives, and 20% for long-term incentives. 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.
- (c) Directors who are also members of the Audit & Supervisory Committee and outside directors who are not members of the committee receive fixed, base compensation only.
- (d) The objective validity of standards for director and executive officer remuneration is confirmed by constantly referring to remuneration

study data from external research institutes and by making comparisons with levels at major manufacturers of similar sizes and in comparable industries.

**B. Outline of procedure to determine director and executive officer remuneration**

The amount of compensation for each director (excluding members of the Audit & Supervisory Committee) and executive officer will be deliberated by the Compensation Committee, which reports to the Board of Directors and is chaired by an outside director and a majority of which is comprised of outside directors. After reviewing compensation, the committee forwards its recommendations and findings to the Board of Directors for a decision. The compensation of directors who are also members of the Audit & Supervisory Committee shall be decided through deliberations of members of the Audit & Supervisory Committee.

**C. Status for the year ended March 31, 2019**

The following remunerations were for the year ended March 31, 2019 based on the old remuneration system. The Company transitioned to a Company with Audit & Supervisory Committee structure as resolved at the General Meeting of Shareholders held on June 27, 2019. Accordingly, an auditor had not been appointed as of the issue date of this Integrated Report.

**Outside Directors**

| <i>Outside Director</i>  | <i>Outside Director</i>   | <i>Outside Director and Member of the Audit &amp; Supervisory Committee</i>  | <i>Outside Director and Member of the Audit &amp; Supervisory Committee</i>                                       |
|--|---|--|---|
| <b>Keikou Terui</b>  | <b>Tetsuro Higashi</b>  | <b>Seiichi Ochiai</b>  | <b>Takashi Shoda</b>  |
| <b>1979</b><br>Joined Ministry of International Trade and Industry (currently Ministry of Economy, Trade and Industry (METI))          | <b>1977</b><br>Joined Tokyo Electron Limited  | <b>1981</b><br>Professor, Seikei University Faculty of Law   | <b>1972</b><br>Joined Sankyo Co., Ltd.  |
| <b>2008</b><br>Director-General for Technology Policy Coordination, Minister's Secretariat, METI                                       | <b>1990</b><br>Director, Tokyo Electron Limited   | <b>1990</b><br>Professor, The University of Tokyo Graduate Schools for Law and Politics, and Faculty of Law  | <b>2001</b><br>Director, Sankyo Co., Ltd.   |
| <b>2011</b><br>Director-General, Kanto Bureau of Economy, Trade and Industry, METI   | <b>1996</b><br>Representative Director, President of Tokyo Electron Limited   | <b>2007</b><br>Professor, Chuo Law School Registered as an attorney (Dai-ichi Tokyo Bar Association)<br>Professor Emeritus, The University of Tokyo (current position) | <b>2003</b><br>President and Representative Director, Sankyo Co., Ltd.  |
| <b>2012</b><br>Director-General for Regional Economic and Industrial Policy, METI  | <b>2003</b><br>Representative Director, Chairman of the Board of Tokyo Electron Limited   | <b>2012</b><br>Outside Audit & Supervisory Board Member of Nippon Telegraph and Telephone Corporation  | <b>2005</b><br>President & CEO, and Representative Director, Daiichi Sankyo Co., Ltd.                             |
| <b>2013</b><br>President, Japan Utility Telemetering Association. Non-Profit Organization (current position)                           | <b>2012</b><br>Outside Director of the Company Resigned (June 2014)   | <b>2013</b><br>Outside Director of Meiji Yasuda Life Insurance Company (current position)  | <b>2010</b><br>Representative Director and Chairman, Daiichi Sankyo Co., Ltd.                                     |
| <b>2014</b><br>Outside Director of the Company (current position)  | <b>2013</b><br>Representative Director, Chairman and President of Tokyo Electron Limited  | <b>2013</b><br>Outside Auditor of the Company  | <b>2014</b><br>Senior Corporate Adviser, Daiichi Sankyo Co., Ltd.   |
| <b>2016</b><br>Outside Director, Bridgestone Corporation (current position)<br>Outside Director, Organo Corporation (current position) | <b>2018</b><br>Outside Director, Seven & i Holdings Co., Ltd. (current position)  | <b>2019</b><br>Outside Director and member of the Audit & Supervisory Committee of the Company (current position)  | <b>2015</b><br>Outside Director of the Company  |
|  | <b>2019</b><br>Outside Director, Nomura Real Estate Holdings, Inc. (current position)<br>Outside Director of the Company (current position) |  | <b>2017</b><br>Outside Director, Daito Trust Construction Co., Ltd. (current position)                            |
|  |   |  | <b>2019</b><br>Outside Director and member of the Audit & Supervisory Committee of the Company (current position) |

| Officer category  | Total remuneration<br>(millions of yen) | Total Remuneration by Category<br>(Millions of yen) |                                 | Number of<br>officers covered |
|-------------------|---|---|---------------------------------|-------------------------------|
|                   |   | Fixed compensation                                  | Performance-linked compensation |                               |
| Directors         | 253                                     | 116   | 136                             | 5                             |
| Auditors          | 57                                      | 57  | —                               | 2                             |
| Outside directors | 48                                      | 48  | —                               | 4                             |
| Outside auditors  | 20                                      | 20  | —                               | 2                             |

## Executive Officers

UBE has been using an executive officer system to separate supervision and business execution since June 2001. The President and CEO 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.

At the General Meeting of Shareholders held on June 28, 2018, a total of 15,340 shareholders exercised their voting rights (including 14,412 shareholders who exercised voting rights in writing and via the internet), representing 77.1% of total voting rights.

## Engagement with Shareholders

### Two-Way Communication through IR Activities

Principal IR activities in fiscal 2018 are listed below. The UBE Group conducts IR activities with the goal of timely, accurate, and fair disclosure, and believes that proactive communication and engagement with investors enhances corporate value.

- Earnings briefing for institutional investors and securities analysts (after main briefing)
- Telephone conference for institutional investors and securities analysts (held quarterly)
- Overseas IR (visits with overseas investors, a total of three times yearly, in Europe, the United States, and Asia)
- Small meetings by the President and CEO (four times yearly)
- Individual meetings with institutional investors and securities analysts (about 200 times per year)

## Directors, Auditors, and Executive Officers (As of June 27, 2019)

### Directors

|  |                           |
|--|---------------------------|
|  | Yuzuru Yamamoto           |
| <i>Representative Director</i>                         | Masato Izumihara          |
| <i>Representative Director</i>                         | Makoto Koyama             |
|  | Masayuki Fujii            |
|  | Keikou Terui *            |
|  | Tetsuro Higashi *         |
| <i>Member of the Audit &amp; Supervisory Committee</i> | Atsushi Yamamoto          |
| <i>Member of the Audit &amp; Supervisory Committee</i> | Seiichi Ochiai *          |
| <i>Member of the Audit &amp; Supervisory Committee</i> | Takashi Shoda *           |
|  | * Outside and independent |

### Executive Officers

|                                    |                           |
|------------------------------------|---------------------------|
| President & Executive Officer      | Masato Izumihara          |
| Senior Managing Executive Officers | Tokuhiisa Okada           |
|                                    | Makoto Koyama             |
| Managing Executive Officers        | Masahiko Nojima           |
|                                    | Yukio Hisatsugu           |
|                                    | Hideo Tamada              |
|                                    | Genji Koga                |
|                                    | Masayuki Fujii            |
|                                    | Yuki Nishida              |
| Senior Executive Officers          | Makoto Aikawa             |
|                                    | Hiroshi Nishida           |
|                                    | Hidetsune Miura           |
|                                    | Yoshiaki Ito              |
|                                    | Yuzo Hanamoto             |
|                                    | Hisaaki Yokoo             |
|                                    | Masayoshi Oota            |
|                                    | Keiichi Nagata            |
| Executive Officers                 | Masaro Suehiro            |
|                                    | Bruno de Bièvre           |
|                                    | Shigeru Ouchi             |
|                                    | Mitsuo Ono                |
|                                    | Toshiyuki Mineishi        |
|                                    | Hironori Miyauchi         |
|                                    | Watchara Pattanajirundorn |
|                                    | Hiroaki Kojima            |
|                                    | Yoichi Funayama           |



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

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



### Internal Control System

The Board of Directors has resolved the basic policies for the configuration of the UBE Group's internal control system.

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

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



### Compliance

UBE established the UBE 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 appoints a Compliance Officer for the UBE Group and maintains the UBE Group Compliance Committee including general counsels as an advisory body. Within the committee, it set up the UBE Group Competition Law Compliance Committee to prevent acts that impede fair competition and to ensure the soundness of business operations. It additionally set up the UBE Group Restricted Cargo and Export Management Committee to increase awareness within the Group of the need to prevent the unauthorized export or provision of goods and technology that are restricted under export control laws and regulations designed to maintain international peace and stability.

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 compliance issues. By providing compliance-related information, e-learning, team coaching, and other programs, UBE continuously educates and enlightens its employees.

In fiscal 2018, UBE conducted internal training and education on laws and regulations such as the Anti-Monopoly Act, Subcontract Act, and Unfair Competition Prevention Act.

The Company trained instructors for general compliance education at each office and facility to cultivate capabilities based in workplaces. Training extends over cycles of three years. From fiscal 2015 through 2017, approximately 10,800 employees took courses. In the first year of the fiscal 2018 to 2020 cycle, roughly 1,700 employees attended courses.

### Thorough Procurement in Line with Basic Purchasing Policies (Supply Chain Management)

The UBE Group endeavors to build fair and honest business relationships. We purchase in line with the Basic Purchasing Policies—Fair Transactions, Objective Selection of Suppliers, Compliance with Laws and Regulations and Confidentiality, Green Purchasing, and CSR 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-ind.co.jp/ube/en/koubai/index.html>



### CSR Procurement

The UBE Group prepared CSR Procurement Policies and CSR Procurement Guidelines that encompass respecting human rights, complying with laws and social norms such as eliminating anti-social forces, and safeguarding the environment to foster CSR procurement that boosts standards across the entire supply chain.

In fiscal 2018, we conducted a third survey of 277 major business partners accounting for 90% of our procurement costs for materials, construction, packaging materials, and fuel oil.

### Addressing Quality Issues

We sincerely regret quality check improprieties that came to light last year, and formulated and implemented measures to prevent recurrences. In line with recurrence prevention efforts, we have constantly improved quality systems to make them more appropriate, including by closely matching customer agreements with our actual operations. As part of these efforts, we are responding appropriately in collaboration with customers where we find amendments necessary in keeping with the revised response rules. We are continuously implementing recurrence prevention measures to improve Group governance and enhancing our quality management systems to regain stakeholder trust.

| Recurrence Prevention Measure   | Fiscal 2018   |   | After fiscal 2019                                      |
|---|---|---|--|
|   | 1H  | 2H  |  |
| <b>I. Reinforce Board of Directors' Governance</b>  |   |   |  |
| Timely reporting to the Board of Directors  | Evaluate progress and effectiveness and reinforce Group quality assurance structure by providing necessary instructions                             |   | Report appropriately                                   |
| <b>II. Management team's awareness reform</b>   |   |   |  |
| 1) Prepare the Group management policy  | Formulate management policy that clearly reflects quality management stance   |   | Inform consistently                                    |
| 2) Constantly communicate top messages  | Clarify top-down quality management and communicate internally and externally   |   | Communicate consistently                               |
| 3) Educate directors by external specialists  | Conduct quality training (in first and second halves), the themes being to reform awarenesses and deepen understanding about quality                |   | Keep conducting training to boost skills               |
| <b>III. Culture and awareness reforms</b>   |   |   |  |
| 1) Disseminate Group management policy and revise and educate on the UBE Action Guidelines                          | Set up UBE Action Guidelines Revision Working Group to deliberate   | Revise UBE Action Guidelines<br>Formulate Group quality policy in line with Group management policy | Disseminate consistently                               |
| 2) Improve compliance awareness   | Enhance courses by incorporating quality information and providing Companywide compliance training  |   | Implement consistently                                 |
|   | Include punitive provisions in labor contracts and work regulations   |   |  |
| 3) Enhance quality education activities   | Plan and roll out quality education activities  |   | Foster awareness of quality consistently               |
|   | Subscribe and show quality slogans (Quality Month)  |   |  |
| 4) Align and implement a quality education system   | Prepare educational plans by positions and job classifications in accordance with operations  |   | Educate consistently                                   |
|   | Provide practical education   |   |  |
| 5) Conduct planned training   | Formulate human resources measures to secure people to oversee quality operations   |   | Implement measures and rotate people                   |
| <b>IV. Organizational restructuring and system review</b>   |   |   |  |
| 1) Appoint vice president (director) in charge of Group quality management and set up quality management department | Appoint director<br>Establish quality management department   |   | Reliable operation                                     |
| 2) Establish a Group quality committee  | Draw up the committee   | Hold  |  |
|   | Formulate Group quality management system regulations   |   | Management system operations                           |
| 3) Review organizational structure  | Segregate quality management and quality assurance<br>Set up a quality assurance management department reporting directly to the company president  |   | Confirm operational situation and consistently improve |
| 4) Improve target management effectiveness  | Rebuild quality management system and its operation   |   |  |
| 5) Strengthen quality audits  | Under instructions from external consultant, draw up audits of quality management department  | Prepare auditing regulations<br>Produce auditing plan   | Quality management department auditing                 |
| 6) Develop reporting and communication structure  | Prepare communication rules for when quality issues arise and implement reporting system  | Operation   | Implement consistently                                 |
| 7) Control Group company management   | Identify situations with oversight by quality assurance management departments of relevant Group companies and reinforce management and supervision |   | Strengthen controls                                    |
| <b>V. Strengthening foundations</b>   |   |   |  |
| 1) Measures to properly allocate resources to quality areas   | Prepare regulations regarding validity assessments of management resources and survey progress  | Add people and improve skillsets in quality division and reallocate personnel                       | Rotate and train people                                |
| 2) Transition to a quality system that excludes human involvement   | Study and assess required systems, such as for recording inspection results online  | Prepare and partially implement capital investment plan   | Implement plan   |



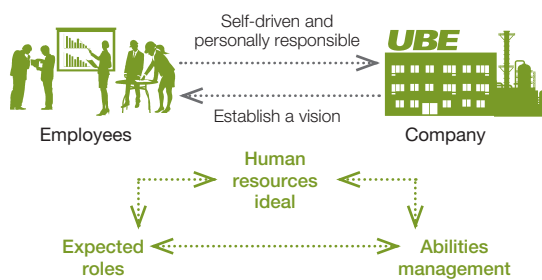
## Human Resources



At the UBE Group, we consider employees our most important resource for creating value and supporting sustainable growth. We therefore devote considerable attention to human resources development and endeavor to enhance our programs to ensure that all employees can lead fulfilling lives.

### Personnel System

UBE maintains a personnel system in which it clarifies what it expects of employees and impartially evaluates individual effort. We seek to ensure that employees therefore fully understand what they need to do and create workplaces that are challenging and motivating for all our employees.



### Human Resources Development

We augment on-the-job training, workshops and other off-the-job training, and self-improvement support programs with systems that empower our employees to perform at their best in an array of businesses and in an increasingly global operating climate. A good example is the Career Development Sheets that employees prepare every year, based on which they can discuss their prospects with supervisors. We rotate employees through posts to broaden their perspectives and expertise. We upgrade off-the-job training, including workshops, in keeping with specific business needs to keep pace with changes in the operating climate.

### Respect for Human Rights

The UBE Group Action Guidelines for Business Conduct state our commitment to respecting individuals while fostering mutual understanding and eliminating discrimination. We established the Human Rights Education Committee, which offers executive training and training opportunities to employees by business site and job classification and draws on e-learning tools in its programs. All members of the Group endeavor to fully respect human rights in every aspect of our operations.

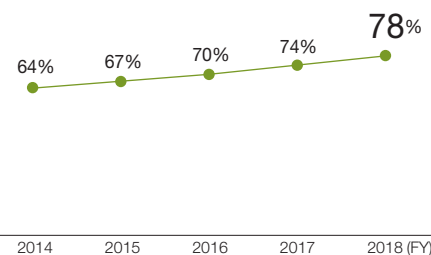
### Enhancing Work Style Reform

Work style reform is an important management priority. We are accordingly reviewing Company-wide approaches to ensure high productivity and enhance the skills of all employees. We have implemented programs and develop the working environment that allow employees to work with flexibility as part of our commitment to encouraging a healthy work-life balance for our employees.

#### Usage of Main Work-Life Balance System (Fiscal 2018)

| System                 | Description   | Number of Employees Who Used It |
|------------------------|---|---------------------------------|
| Childbirth leave       | Employees whose spouses have given birth can take four days of paid leave.  | 92<br>80.0% of those eligible   |
| Childcare leave        | Leave can be taken until the day before the child's first birthday (or the child's second birthday, in certain circumstances).<br><br>The first seven days of leave are fully paid.   | 72<br>including 69 men          |
| Family nursing leave   | Employees can take leave to provide nursing care for family members (up to a total of 365 days).  | 0                               |
| Child nursing leave    | Employees can take leave to nurse children in the third grade of elementary school or younger. (Five days per child can be taken each year, up to a maximum of 10 days a year.)   | 4<br>including 1 man            |
| Shortened working time | The working hours of employees caring for children in the third grade of elementary school or younger, nursing family members, seeing a doctor, and going to school can be shortened by up to two hours per day on request. | 25<br>including 1 man           |

#### Annual Paid Vacation Usage



## Diversity Initiatives

Diversity is a key priority for UBE's management. We accordingly seek to build a corporate culture that respects individuality and broad perspectives and treasures creativity and ambition.

We endeavor to attract and retain diverse talent as part of efforts to overcome the looming challenges of a declining labor force and a changing business climate.

We recruit people from a wide range of backgrounds without regard to such factors as nationality or gender and provide work environments in which they can fulfill their potential.

### Hiring Breakdown

| Fiscal Year                                 | Number of People |         |        |
|---|------------------|---------|--------|
|   | 2016             | 2017    | 2018   |
| New graduate hires (generalist positions)   | 42 (9)           | 46 (10) | 37 (9) |
| New graduate hires (key employee positions) | 43 (5)           | 63 (9)  | 30 (2) |
| Mid-career hires                            | 34 (2)           | 12 (1)  | 57 (3) |
| Hires with disabilities                     | 2 (0)            | 2 (1)   | 2 (0)  |
| Hires of non-Japanese nationals             | 1 (1)            | 2 (2)   | 1 (1)  |

Numbers in parentheses are the number of female hires.

### Employee Turnover in First Three Years

|                      |    |
|----------------------|----|
| Joined in April 2014 | 4% |
| Joined in April 2015 | 3% |
| Joined in April 2016 | 6% |

## Employing Non-Japanese Nationals

Our domestic employees need to engage increasingly with their overseas colleagues amid the increasingly global nature of our business, and we accordingly hire foreign nationals to work in Japan so Japanese can acquaint themselves with different business and cultural practices.

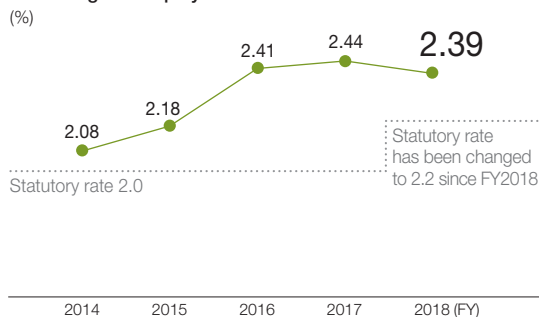
## Rehiring Retirees

We are making our workplaces more conducive to rehiring employees as seniors or managers who have reached the standard retirement age so they can continue to share their experience and skills. We rehired 90.7% of new retirees in fiscal 2018.

## Recruiting People with Disabilities

We do much to foster the employment of people with disabilities, and maintain the UBE Group Support Network for Employment of People with Disabilities. Through it, we place individuals within the Group through Libertas Ube, Ltd., a special-purpose subsidiary that we established in 1991.

## Percentage of Employees with Disabilities



A workshop for learning about the employment of people with disabilities

## Addressing the Gender Gap

As of March 31, 2019, 7.5% of parent company employees were women, up from 7.3% a year earlier. Females represented 2.4% of our management pool, up from 1.5% a year earlier. In fiscal 2019, we launched a three-year action plan based on the Act on Promotion of Women's Participation and Advancement in the Workplace. The plan encompasses the following three benchmarks to realize more flexible working styles and provide greater opportunities for female employees.

- (1) A paid vacation usage rate of 80% or more
- (2) At least 70% of eligible male employees taking childcare leave
- (3) Women representing at least 20% of new graduate hires for generalist positions

As part of our efforts to be more inclusive for women, we have increased the number of female employees at our factories and overseas. Women are increasingly vital to our operations.



A female employee checking the facility inspection at the Chiba Factory





The UBE Group engages in social contribution initiatives that contribute to local progress in keeping with the spirit of coexistence and mutual prosperity that is the basis of its CSR activities and management philosophy and in line with an awareness that close ties with communities are essential for corporate activities.

**Responsible Care (RC)\* Local Dialogue Meetings**

Our chemical factories are members of the Japan Chemical Industry Association (JCIA) RC Committee in the western Yamaguchi, Sakai/Senboku, and Chiba regions. JCIA member companies hold biennial RC Local Dialogue Meetings in each of the committee's regions to deepen mutual understanding with local residents about such RC activities as environmental preservation, process safety and disaster prevention, and occupational safety. The 12th RC Local Dialogue Meeting was held in the Chiba region in fiscal 2018. After reviewing their activities throughout the year, member companies exchanged views with residents on the topic of corporate environmental preservation and process safety and disaster

prevention. There was also a lecture by the Fire Prevention and Management Division of Chiba Prefecture's Disaster Crisis Management Division about the prefecture's readiness for major disasters.

To create a significant opportunity each year for engagement between industry, government, academia, and local residents, JCIA member companies in the city of Ube, which is home to UBE's principal production facilities, hold dialogue forums for the Ube district in years in which they are not convening RC Local Dialogue Meetings in the western Yamaguchi region. The 15th RC Dialogue Forum in November 2018 featured explanations of the activities of member companies in Ube City and exchanges of views with participants regarding chemical substance management and zero waste emissions. The JCIA RC Committee lectured on RC activities and communication initiatives, while the Ube City Environmental Policy Office discussed municipal environmental initiatives.

We will continue to focus on local dialogue and maintain RC activities to foster coexistence and mutual prosperity with communities.



The 12th RC Local Dialogue Meeting in the Chiba region



The 15th RC Dialogue Forum in the Ube district

**Support for Culture and the Arts in Japan**

UBE provides financial and personnel support for the activities of the UBE Foundation and the Watanabe Memorial Culture Association. Since fiscal 2008, we have invited the Japan Philharmonic Orchestra to perform in the UBE Group Charity Concert in Ube City. We have taken advantage of these visits to hold small performances at hospitals in the city.

All proceeds from the concert are used to purchase and donate musical instruments to junior high schools and local music organizations.



11th annual UBE Group Charity Concert performance at the Watanabe Memorial Hall

**Glossary**

\* Responsible Care (RC): Under RC, corporations that handle chemical substances voluntarily preserve the environment, safety, and health throughout product lifecycles, from the development of chemicals through their manufacture, distribution, use, and final consumption to disposal and/or recycling, and communicate and engage with society by disclosing activity outcomes.

## Corporate Citizenship

*UBE Corporation Europe, S.A. Unipersonal (UCE) in Spain*

This past year we celebrated the 50th anniversary of our caprolactam plant in Castellón and significantly developed the activities of the Volunteer Promotion Group.

To help commemorate the anniversary, we organized “Conversations with Good Chemistry” in June to discuss the future of our sector with the Rector of Castellón University, the President of the Valencia Region, the UBE Chairman, and the UCE President. In addition, in November we participated in the “Hafu festival,” which was held in the open area of Castellón Port. The festival was open to the general public, and we offered such activities as workshops for children and culinary exhibits. Also, we conducted a bus tour of the plant for 35 external visitors from five civil associations in Castellón. We concluded the celebration with a free concert by the flamenco singer Estrella Morente.

The Volunteer Promotion Group organized a Tree Planting Campaign and supported the International Trail Course Race, a Toy Collection Campaign, the third Charity Race against Cancer, and a visit to the Red Cross Warehouse.



*“Conversations with Good Chemistry” during the 50th anniversary of the caprolactam plant in Spain*



*Flamenco singer Estrella Morente performs as the final event of the 50th anniversary*

## Corporate Citizenship

*UBE Group in Thailand (See note)*

CSR activities of the UBE Group in Thailand are guided by a commitment to being a good corporate citizen with continuous emphasis on social responsibility. Its initiatives center on maintaining occupational safety and health, protecting the environment, ensuring compliance, and engaging with communities.

In December 2018, we achieved a record of 40 million hours free of accidents requiring time off from work. This was the fruit of ongoing efforts to maintain occupational safety and health. We commemorated this milestone by distributing sphygmomanometers to encourage employees to manage their health. Since 2014, we have pursued ongoing efforts to protect the region’s environment. Our fourth initiative was to build a dam on February 16 and 17, 2019, in Khao Chamao-Khao Wong National Park in Rayong to improve the habitat for wildlife.

We will continue to undertake initiatives in keeping with activity guidelines in our drive to become a better corporate citizen.

*Note: UBE Chemicals (Asia) Public Company Limited  
THAI SYNTHETIC RUBBERS COMPANY LIMITED  
UBE Fine Chemicals (Asia) Co., Ltd.  
UBE Technical Center (Asia) Limited  
RAYONG FERTILIZER TRADING CO., LTD.  
UBE (Thailand) Co., Ltd.*



*Presentation to employees to commemorate 40 million hours free of accidents requiring time off from work*




*Participants building a dam at Khao Chamao-Khao Wong National Park*





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 our Environmental and Safety Guidelines to reflect the activities of business sites and partner companies.



## UBE Environmental and Safety Guidelines

We will make it our shared value to prioritize safety in everything we do, realizing safety and security in the workplace and 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 practice recycling and suitably dispose of waste.
- (4) We will voluntarily and continuously work to address global warming 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.

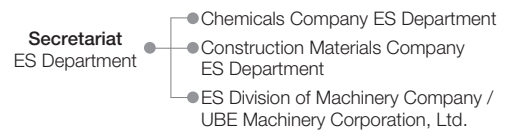
Published on April 1, 2019

### Environmental and Safety Organization

The President and CEO chairs the Strategic Management Meeting, whose agenda encompasses discussing and determining environmental and safety policies and measures (occupational safety and health, process safety and disaster prevention, and environmental prevention). The Group High-Pressure Gas Safety (HPGS) Committee functions in lockstep with the Strategic Management Meeting, discussing and determining key process safety management issues at certified sites for high-pressure gas, and serves as the process safety headquarters prescribed in a ministerial order relating to HPGS.

Structure of Environment and Safety-Related Meetings and Committees

#### Strategic Management Meeting (Environment and Safety) *Chairman: President and CEO*



#### Group HPGS Committee *Chairman: President and CEO*



### Environmental Safety Measures

We engage in RC\* activities through plan-do-check-act (PDCA) cycles in all businesses to drive continual improvements in areas related to occupational safety and health, process safety and disaster prevention, and environmental preservation.

**Plan**  
*Policy deliberations and decisions:* The Strategic Management Meeting discusses and determines Companywide measures, based on which each Company formulates annual activity goals and schedules.

**Check**  
*Review:* We improve areas in which we have identified issues and reflect progress with improvements in measures for the following fiscal year.

**Act**  
*Check:* We audit and inspect activity progress and identify concerns.



**Implementation:**  
 Each Company and offices and facilities undertake activities as scheduled.

Responsible Care Activities Plans and Achievements  
 Pages 1-2 of the 2019 Integrated Report Supplementary Information (Environment and Safety) presents activities plans and results for fiscal 2018.



#### Glossary

\* Responsible Care (RC): Please see the glossary on page 52.

## Process Safety and Disaster Prevention



We endeavor to eliminate process accidents through initiatives that ensure that our facilities are safe and secure. We also undertake activities to minimize damage in the event of large earthquakes. In fiscal 2018, we focused on reducing risks to eliminate process accidents, improving safety at certified high-pressure gas sites, and implementing earthquake and tsunami measures.

Efforts to reduce risks to eliminate process accidents focus on comprehensively identifying risks, emphasizing employee education, sharing

internal and external accident cases, providing proposals on close-calls, and harnessing new technical knowledge. We also address identified risks by systematically formulating drastic measures and thereby building business sites that are impervious to accidents.

For certified high-pressure gas sites, we obtain regular assessments from the Japan Safety Competency Center, undertaking ongoing efforts to enhance safety at these facilities in light of findings from such evaluations.

Earthquake and tsunami measures encompass enhancing responsiveness by formulating and executing emergency plans. We also respond to the Industrial Process Safety Action Plan of the Japan Petrochemical Industry Association.

## Occupational Safety and Health



### Measures to Prevent Occupational Accidents

#### Fostering a Safety-Driven Corporate Culture

To make existing safety activities more comprehensive and effective, in fiscal 2016 we launched initiatives aimed at fostering a safety-driven corporate culture, encompassing eight elements. These are organizational governance, positive involvement, resource management, work management, motivation, learning and knowledge transmission, risk perception, and mutual understanding. We are examining existing activities in light of these elements, and are stepping up efforts to tackle and overcome weak areas.

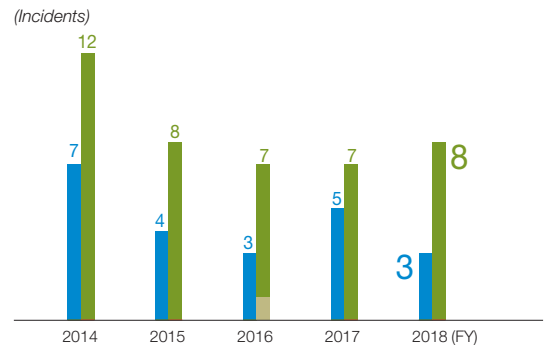
#### Eliminating Major Disasters

We have undertaken a range of activities to prevent occupational accidents. In fiscal 2018, we initiated efforts that centered on eliminating major incidents. We conduct risk assessments of work in which people might fall, be caught or entangled in machinery, or come into contact with hazardous materials. We implement systematic risk reduction measures and endeavor to make operations inherently safe.

We investigate the causes of all incidents regardless of whether they result in lost time, striving to prevent similar incidents by assessing and rolling out measures.

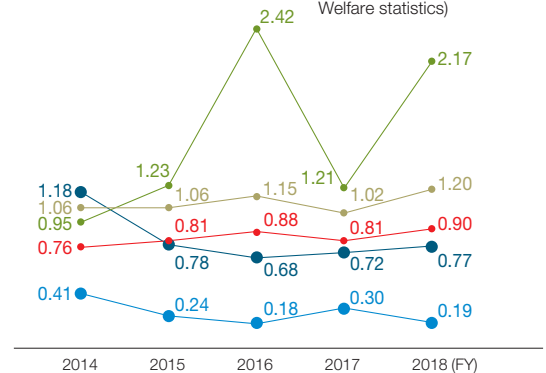
#### Number of Fatal and Lost-Time Incidents among Domestic Operations

Number of Lost-Time Incidents  
 ■ UBE Group employees  
 ■ Employees of partner companies of UBE Group  
 ■ Number of fatal incidents



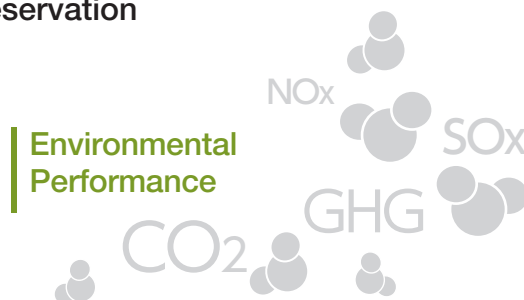
#### Lost-Time Injury Frequency Rate

● UBE Group employees  
 ● Employees of partner companies of UBE Group  
 ● Cement industry and cement manufacturers  
 ● Chemical industry  
 ● Manufacturing industry (Ministry of Health, Labour and Welfare statistics)





## Environmental Preservation



The UBE Group believes that tackling environmental issues to ensure sustainable social progress and fostering stakeholder trust by announcing outcomes are vital for sustainable corporate growth.

### Overview of Group Environmental Impact (Fiscal 2014 through 2018)

|   |              | 2014   | 2015   | 2016   | 2017   | Input<br>2018 |
|---|--------------|--------|--------|--------|--------|---------------|
| Total energy (thousands of kl)            | As crude oil | 2,382  | 2,634  | 2,543  | 2,536  | 2,488         |
| Total raw materials (thousands of tons)   |              | 16,990 | 16,810 | 16,210 | 16,360 | 16,380        |
| Water resources (million m <sup>3</sup> ) | Water used   | 209    | 212    | 204    | 209    | 198           |

#### Water Resource Usage

Page 8 of the 2019 Integrated Report Supplementary Information (Environment and Safety) details water resource usage by source.



|                            |                                      | 2014    | 2015    | 2016    | 2017    | Output<br>2018 |
|----------------------------|--------------------------------------|---------|---------|---------|---------|----------------|
| Airborne emissions         | GHG (1,000t - CO <sub>2</sub> e)     | 12,300  | 12,600  | 12,300  | 12,300  | 12,000         |
|                            | SO <sub>x</sub> * <sup>1</sup> (t)   | 3,010   | 2,850   | 3,000   | 2,840   | 2,870          |
|                            | NO <sub>x</sub> * <sup>2</sup> (t)   | 16,280  | 15,910  | 14,860  | 14,970  | 16,170         |
|                            | Dust (t)                             | 462     | 409     | 393     | 341     | 356            |
|                            | PRTR substances* <sup>3</sup> (t)    | 166     | 173     | 179     | 204     | 252            |
| Soil emissions             | PRTR substances (t)                  | 0       | 0       | 0       | 0       |                |
| Waterborne emissions       | Wastewater (million m <sup>3</sup> ) | 172     | 164     | 156     | 162     | 147            |
|                            | COD* <sup>4</sup> (t)                | 779     | 737     | 724     | 747     | 642            |
|                            | Total phosphorus (t)                 | 17      | 12      | 10      | 11      | 9              |
|                            | Total nitrogen (t)                   | 591     | 554     | 500     | 519     | 468            |
|                            | PRTR substances (t)                  | 100     | 98      | 122     | 119     | 97             |
| Industrial waste emissions | Off-site disposal volume (t)         | 11,000  | 7,190   | 6,130   | 5,190   | 4,970          |
|                            | Recycled volume (t)                  | 379,210 | 417,020 | 421,290 | 386,640 | 370,450        |

#### Emissions Data by Facility

Page 6 of the 2019 Integrated Report Supplementary Information (Environment and Safety) presents facility-specific emissions of SO<sub>x</sub>, NO<sub>x</sub>, dust, COD, total phosphorus, and total nitrogen.



We endeavor to safeguard the environment and comply with levels set through agreements with government bodies or with voluntary standards by constantly stabilizing plant operations and by extensively controlling air and water emissions of pollutants. We also undertake ongoing environmental impact reduction activities. Each plant manages water consumption

and discharges to ensure effective usage of this resource.

We will continue to engage in business activities that contribute to a recycling-based economy as part of environmental management, such as by preventing global warming, reducing and recycling industrial waste, and lowering chemical substance emissions.

Scope of environmental presentation data: Ube Industries, Ltd., and Group companies covered in environmental performance data reporting<sup>\*5</sup>

#### Glossary

\*1 Sulfur oxides (SO<sub>x</sub>) originate in the sulfur (S) component of fuels. Boilers are our main source of these oxides.

\*2 Nitrogen oxides (NO<sub>x</sub>) stem from fuel combustion, primarily from Group boilers and cement kilns.

\*3 Pollutant Release and Transfer Register (PRTR) Law: This legislation requires companies to identify business site chemical substance emissions and transfer volumes and report to the government. The Ministry of the Environment discloses the submitted information on its website. Such disclosure is designed to encourage voluntary efforts to improve chemical substance management.

\*4 Chemical Oxygen Demand (COD): This is an indicator of water pollution by organic substances and represents the amount of oxygen consumed in the chemical oxidation of organic matter.

\*5 For Group companies covered in environmental performance data reporting, please see page 10 of the 2019 Integrated Report Supplementary Information (Environment and Safety).

## Addressing Environmental Issues / Biodiversity



### Preventing Global Warming

#### Policy on Addressing Global Warming

The UBE Group contributes to sustainable economic development by cutting greenhouse gas emissions and by creating and expanding technologies and products that help lower environmental impact.

#### Medium-Term Management Plan: Helping Tackle Resource, Energy, and Environmental Issues

We will undertake initiatives based on the following three key policies:

**(1) Attain fiscal 2021 goals and formulate new targets toward 2030**

The UBE Group's greenhouse gas emissions reduction target for fiscal 2021: Domestic and key Group business sites overseas seek to reduce greenhouse gas emissions by 15% from the fiscal 2005 level by fiscal 2021.

**(2) Lower environmental impact across the supply chain**

Reduce greenhouse gas emissions by using less energy and recycling more waste

**(3) Create and expand new technologies and products that help reduce environmental impact**

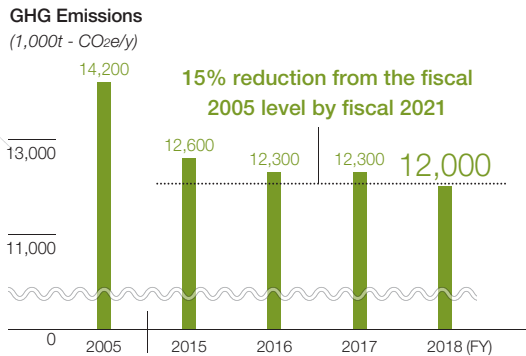
We look for such products and technologies to represent at least 30% of net sales by fiscal 2021.

#### Structure to Address Global Warming

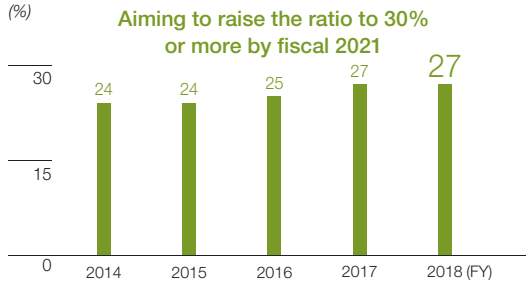
- Strategic Management Meeting (Resolution)
- Headquarters Management Meeting (Deliberation)
- Global Warming Response Meeting
  - Agenda: Share environmental and industry trends in and outside Japan  
Initiatives and target setting of the UBE Group
  - Secretariat: ES Department, Global Warming Responsive Initiative Promotion Group
  - Members: Three companies  
(Chemicals, Construction Materials, Machinery)  
Headquarters departments  
(Corporate Planning, Finance & Investor Relations, CSR & General Affairs, Logistics)
- UBE Group Environmental Preservation Promotion Committee
  - Agenda: Introduction of environmental and industry trends in and outside Japan  
Introduction of on-site energy-conservation initiatives
  - Secretariat: ES Department, Global Warming Responsive Initiative Promotion Group
  - Members: Each office and facility of the UBE Group

### Initiatives to Reduce Greenhouse Gas Emissions

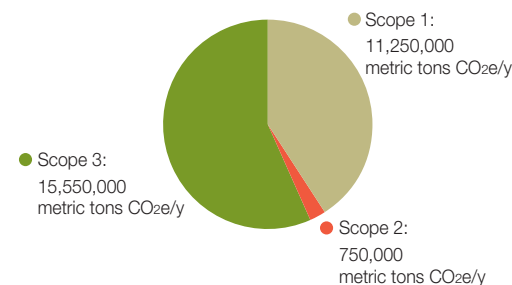
Progress toward Greenhouse Gas Emissions Reduction Targets



Progress in Creating and Expanding Our Lineup of Environmentally Friendly Products and Technologies (%)



#### Emissions by Scope in Fiscal 2018



### Biodiversity

#### Private Business Partnership to Preserve Biodiversity

We support the Declaration of Biodiversity by Keidanren (Japan Business Federation) and take part in a related private business partnership.

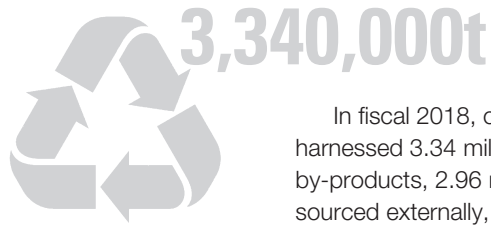
#### Forest Conservation Initiatives

In fiscal 2018, 107 employees took part in the 11th Forest Creation Experiential Activity for Water Conservation. The Mine City Office of Yamaguchi Prefecture's Agriculture, Forestry & Fisheries Department sponsors this annual initiative. The employees thinned and logged around two hectares of bamboo.



Employees participating in the 11th Forest Creation Experiential Activity for Water Conservation





## Using Resources Effectively

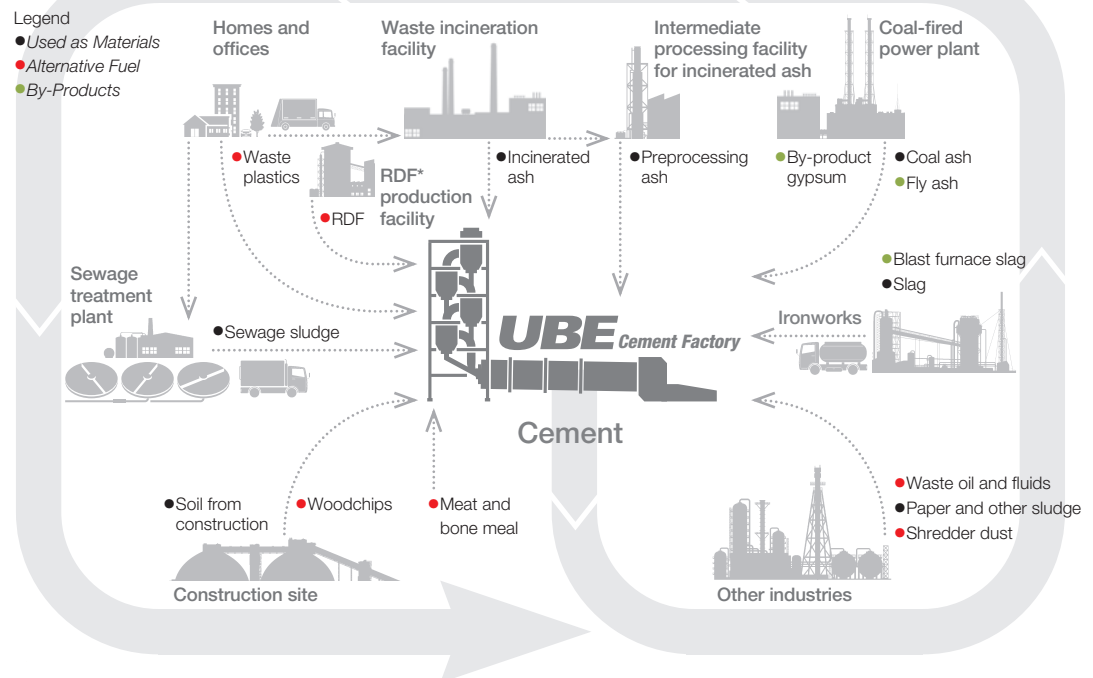
Our cement factories recycle diverse waste and by-products as raw materials (material recycling) and alternative fuels (thermal recycling). Our cement kilns operate at up to 1,450°C, so they can burn and detoxify substances that conventional counterparts could not handle. They can also process large waste volumes. It is also possible to use ash from incineration as an alternative to the clay used in cement, thereby eliminating the need to maintain final disposal sites.

In fiscal 2018, our three cement factories harnessed 3.34 million metric tons of waste and by-products, 2.96 million metric tons of which we sourced externally, contributing considerably to a recycling-oriented society.

We are developing new businesses to use waste materials in applications other than as materials for cement. In fiscal 2017, for example, we began recycling plasterboard, for which we expect demand to increase. We will continue to boost our capacity for handling various waste as part of efforts to expand our recycling business.

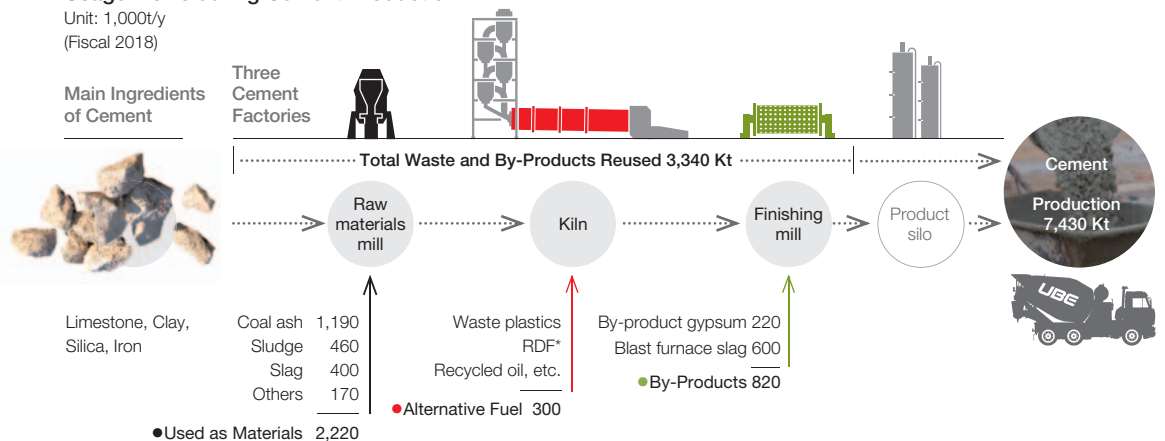
Please see Non-Financial Highlights on page 11 for details of our usage of waste substances and by-products.

### Cement Factory Resource Recycling



### Overview of Waste and By-Products Usage Flows during Cement Production

Unit: 1,000t/y  
(Fiscal 2018)



#### Glossary

\* Refuse-derived fuel (RDF): A solidified fuel made of waste plastic, woodchips, and household waste.

## Reducing Industrial Waste and Chemical Substance Emissions

### Industrial Waste Reductions

The Keidanren (Japan Business Federation) Voluntary Action Plan on the Environment targets a 70% reduction in the final disposal volume of industrial waste from the fiscal 2000 level by fiscal 2020. We strive through industry-led initiatives to recycle industrial waste and reduce final disposal waste to contribute to a recycling-based economy.

### Industrial Waste Recycling

Our chemical factories, in-house power stations, machinery factories, and other facilities generate an array of industrial waste. We recycle most of this material at cement factories and other Group facilities.

### Industrial Waste for External Final Disposal

In fiscal 2018, we lowered such waste by 85% from the fiscal 2000 level. We will keep endeavoring to cut volumes from fiscal 2019.

### Reducing Chemical Substance Emissions

The Japanese government is driving efforts to cut chemical substance emissions through a combination of legislation and voluntary initiatives. Voluntary efforts include industry initiatives to constrain emissions of VOCs\*1 and a system to disclose substances based on the PRTR Law\*2.

In terms of the UBE Group's activities, 20 substances\*3, which it emits in relatively large amounts, were voluntarily selected from substances subject to the PRTR Law as well as VOCs. We will focus on the Group's emissions of these substances and strive to reduce them.

### Minimizing VOC Emissions

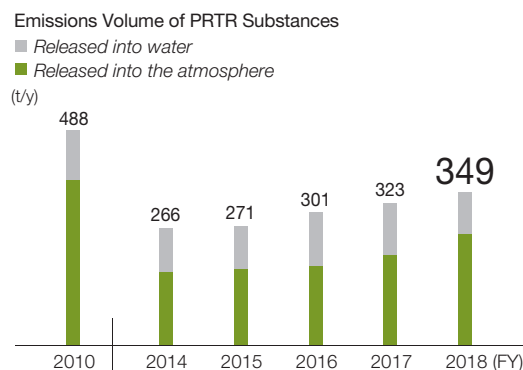
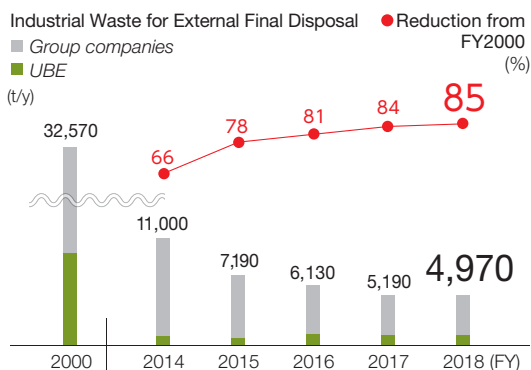
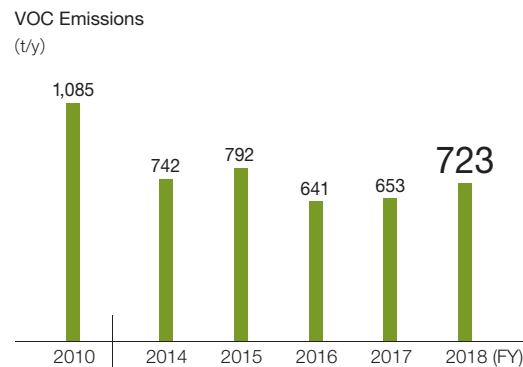
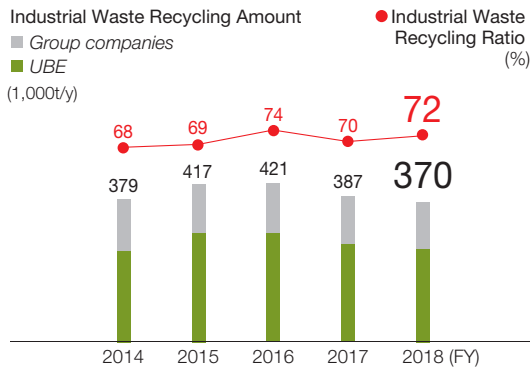
The UBE Group's VOC emissions in fiscal 2018 were 33% lower than those in fiscal 2010.

### Reducing PRTR Substances

We handle 68 of the 462 substances subject to the PRTR Law. Our emissions of these substances in fiscal 2018 were down 28% from fiscal 2010.

#### PRTR Substances

Page 7 of the 2019 Integrated Report Supplementary Information (Environment and Safety) presents emissions and transfer volumes and other data on the top 10 substances in terms of emissions volume.



#### Glossary

\*1 Volatile organic compounds (VOCs): These organic chemicals evaporate or sublime easily, entering the atmosphere as gases. They are factors in the forming of suspended particulate matter (PM) and photochemical oxidant pollution.

\*2 Pollutant Release and Transfer Register (PRTR) Law: Please see the glossary on page 56.

\*3 UBE Group's 20 voluntarily selected chemical substances: Please see page 2 of the 2019 Integrated Report Supplementary Information (Environment and Safety).



## Product Safety Initiatives



We comply strictly with the chemical laws and regulations of Japan and the other countries in which we operate. Our stewardship of chemical substances encompasses health, safety, and environmental perspectives. We carefully manage the distribution of chemical substances and extensively disclose safety information about our chemical products.

### Complying with Chemical Substances Laws and Regulations

We are digitizing our systems to handle chemical substances laws and regulations. As well, we have constructed a domestic and overseas compliance structure that encompasses an SDS\*1 production support system; in-house-developed chemical safety information; and U-CHRIP, a comprehensive database for managing safety and regulatory information about chemical substances. We accordingly seek to replace manual processes and a reliance on individual skills in handling compliance.

The electrical and electronic device and automotive sectors are leading the way in green procurement\*2, and as a supplier of raw and other materials we carefully monitor our offerings for harmful substances.

### Stepping Up Chemicals Management

We supply local-language versions of SDSs and product labels for all products, complying with regulations in Europe, the United States, and around Asia to ensure the safe use of chemical products throughout the supply chain, and maintain websites for key product SDSs. We also extensively supply safety information for testing and research applications, and have secured safe R&D environments at universities and other research institutions.

Our sales and technical personnel obtain hazardous substances information on products through our SDS database to get handling and disposal information that they convey as needed to customers.

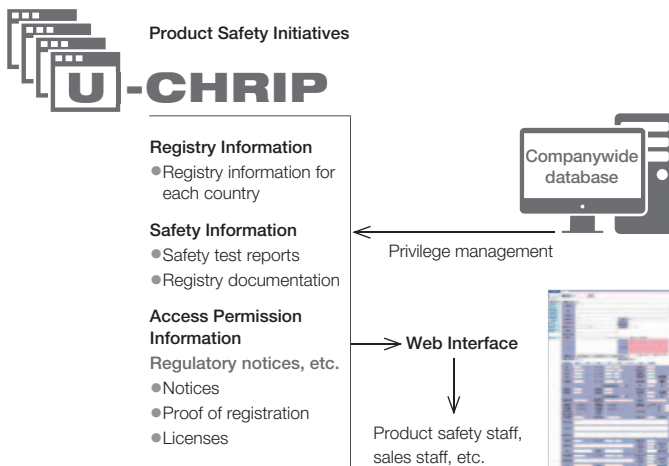
### Extensively Disclosing Safety Information

We have amassed and extensively share safety information about our products, taking part in a program of the International Council of Chemical Associations (ICCA) and the Japan Challenge Program. Since fiscal 2011, we have participated in the Japan Chemical Industry Association (JCIA)'s voluntary chemical substance risk management activities while gathering and disseminating hazard information\*3 and risk assessments.

We participate in the ICCA's voluntary Long-Range Research Initiative, which focuses on the effects of chemical substances on human health and the environment. We thereby support research at universities and other research institutions that includes developing new risk assessment methods and studying the safety of chemical substances for infants and the elderly.

### Transportation Safety

We ensure the safe distribution of chemical substances by preparing information that transportation companies and their drivers can use in the unlikely event of an accident and by endeavoring to prevent such incidents and improve distribution quality.



U-CHRIP: UBE-Chemical Regulation Information Platform

#### Glossary

\*1 Safety Data Sheet (SDS): Documentation containing hazard and toxicity information about chemical substances that manufacturers disclose when supplying chemical substances and products incorporating them.

\*2 Green procurement: Corporate purchases of raw materials, parts, and manufacturing facilities with minimal environmental footprints.

\*3 Hazard information: Information on the inherent risks of chemical substances.

# AS9100 | ISO9001 QMS IATF16949

## Quality Assurance

The UBE Group's diverse businesses in Japan and overseas include chemicals, pharmaceuticals, construction materials, and machinery. Each undertakes quality assurance initiatives in line with its specific business needs to serve the needs of customers and to ensure safe and reliable supplies. Under the supervision of a director in charge, the Quality Management Department internally oversees the quality assurance operations of these businesses, thereby establishing a corporate internal control system.

### ●Chemicals Company

#### **Regaining Trust by Steadily Implementing Measures to Prevent Issues from Recurring**

We rolled out our unified quality management system (QMS) in fiscal 2016. This had previously been overseen separately at three divisions and four domestic chemical factories. We also formulated and implemented measures to prevent quality check improprieties experienced in fiscal 2018 from recurring. We changed consciences among managers and employees, changed our organizational structure, increased the number of inspectors, and reviewed internal rules. We will steadily implement measures to drive ongoing improvements and thereby regain stakeholder trust. The temporary termination of the overall scope of our ISO 9001 : 2015 certification was rescinded in October 2018, and we regained certification for the Chiba area (Chiba Petrochemical Factory and UBE-MARUZEN POLYETHYLENE Co., Ltd.) in July 2019.

In fiscal 2019, the Chemicals Company integrated the Pharmaceutical Division. To meet quality requirements specific to pharmaceuticals, we will remain committed to our Pharmaceutical Quality Policy through our proprietary pharmaceutical quality system.

We will continue creating unique customer value while constantly improving our capabilities in keeping with a high awareness of quality assurance among all employees.

### ●Construction Materials Company

#### **Maintaining Safe and Reliable Product Supplies**

This company looks after many of the Group's companies. As well as engaging in cement, resource recycling, and energy businesses, it supplies a range of social infrastructure products in Japan and overseas, including ready-mixed concrete, magnesia and calcia, and construction material products.

This company's Quality Assurance Department handles product quality assurance and safety and pursues manufacturing from customer perspectives to maintain safe and reliable product supplies.

The Company Quality Committee endeavors to prevent improper quality inspection practices from recurring by disseminating corporate quality measures to all divisions and Group companies, overseeing progress. Quality and product safety audits at Company business sites and Group companies confirm that everything is working well. It is through such efforts that we constantly strive to improve quality and product safety systems and build trust with customers and society.

### ●Machinery Company

#### **Providing Products and Services That Satisfy Customers and Build Trust**

This business develops a diverse lineup of products from a customer-centric perspective. We provide products and services across various fields, both in Japan and overseas, including molding machines, industrial machinery, and bridges. While pursuing technological innovation, we are determined to consistently provide safe and reliable products and services that satisfy customers and build trust. At the same time, we will continue to strengthen our quality management system through efforts to cultivate people who can ensure compliance with business-related laws, regulations, and standards.

#### Quality Policies

Page 9 of the 2019 Integrated Report Supplementary Information (Environment and Safety) presents the quality policies of our in-house companies.



## Consolidated 10-Year Financial Summary

Ube Industries, Ltd. and Consolidated Subsidiaries  
For the years ended March 31

### Results of Operations

(Millions of yen)

#### Breakdown of Net Sales by Reportable Segments

|             | Chemicals <sup>1</sup> | (Chemicals & Plastics) | (Specialty Chemicals & Products) | Pharmaceutical | Construction Materials | Machinery <sup>2</sup> | Energy & Environment | Other        | Adjustment      |
|-------------|------------------------|------------------------|----------------------------------|----------------|------------------------|------------------------|----------------------|--------------|-----------------|
| 2010        | ¥ —                    | ¥165,098               | ¥60,374                          | ¥ 9,994        | ¥188,396               | ¥81,750                | ¥54,155              | ¥19,096      | ¥(29,307)       |
| 2011        | —                      | 204,516                | 68,777                           | 8,853          | 200,470                | 83,433                 | 59,145               | 26,852       | (35,984)        |
| 2012        | —                      | 231,026                | 64,368                           | 11,186         | 209,155                | 72,575                 | 62,518               | 25,911       | (38,086)        |
| 2013        | —                      | 219,368                | 61,111                           | 11,452         | 208,364                | 71,310                 | 68,769               | 25,294       | (39,646)        |
| 2014        | —                      | 230,585                | 63,160                           | 9,706          | 223,513                | 75,511                 | 59,073               | 28,816       | (39,854)        |
| 2015        | —                      | 215,419                | 63,288                           | 7,819          | 222,419                | 78,956                 | 66,771               | 33,242       | (46,155)        |
| 2016        | 266,736                | —                      | —                                | 9,280          | 237,343                | 73,435                 | 69,066               | 16,792       | (30,902)        |
| 2017        | 258,364                | —                      | —                                | 10,975         | 227,236                | 71,668                 | 59,782               | 12,520       | (23,982)        |
| 2018        | 305,432                | —                      | —                                | 10,213         | 238,854                | 90,140                 | 71,361               | 4,797        | (25,223)        |
| <b>2019</b> | <b>314,984</b>         | <b>—</b>               | <b>—</b>                         | <b>10,129</b>  | <b>250,250</b>         | <b>97,264</b>          | <b>75,853</b>        | <b>4,935</b> | <b>(23,258)</b> |

| (Millions of yen) | Net sales      | Cost of sales  | Selling, general and administrative expenses | Operating profit | Non-operating income <sup>3</sup> | Ordinary profit <sup>3</sup> | Extraordinary items <sup>3</sup> | Profit before income taxes | Profit attributable to owners of parent |
|-------------------|----------------|----------------|--|------------------|-----------------------------------|------------------------------|----------------------------------|----------------------------|---|
| 2010              | ¥549,556       | ¥448,328       | ¥73,633                                      | ¥27,595          | ¥(8,600)                          | ¥18,995                      | ¥ (3,403)                        | ¥15,592                    | ¥ 8,217                                 |
| 2011              | 616,062        | 494,046        | 77,653                                       | 44,363           | (5,263)                           | 39,100                       | (10,353)                         | 28,747                     | 17,267                                  |
| 2012              | 638,653        | 512,447        | 80,200                                       | 46,006           | (5,198)                           | 40,808                       | (3,213)                          | 37,595                     | 22,969                                  |
| 2013              | 626,022        | 517,769        | 78,291                                       | 29,962           | (1,917)                           | 28,045                       | (12,203)                         | 15,842                     | 8,265                                   |
| 2014              | 650,510        | 546,340        | 79,757                                       | 24,413           | (5,722)                           | 18,691                       | 975                              | 19,666                     | 12,623                                  |
| 2015              | 641,759        | 538,983        | 78,629                                       | 24,147           | (919)                             | 23,228                       | (4,737)                          | 18,491                     | 14,649                                  |
| 2016              | 641,750        | 519,960        | 80,382                                       | 41,408           | (1,788)                           | 39,620                       | (11,967)                         | 27,653                     | 19,111                                  |
| 2017              | 616,563        | 500,642        | 80,961                                       | 34,960           | (1,612)                           | 33,348                       | (415)                            | 32,933                     | 24,185                                  |
| 2018              | 695,574        | 560,100        | 85,224                                       | 50,250           | 478                               | 50,728                       | (5,728)                          | 45,000                     | 31,680                                  |
| <b>2019</b>       | <b>730,157</b> | <b>600,301</b> | <b>85,305</b>                                | <b>44,551</b>    | <b>3,302</b>                      | <b>47,853</b>                | <b>(3,175)</b>                   | <b>44,678</b>              | <b>32,499</b>                           |

Notes: 1. The Chemicals & Plastics segment and the Specialty Chemicals & Products segment were integrated into the Chemicals segment on April 1, 2015.

2. The Machinery & Metal Products segment changed its name to the Machinery segment on April 1, 2016.

3. Based on Japanese GAAP



## Financial Position

(Millions of yen)

|                   | Assets               |  |                                    |                | Liabilities and Net Assets |                             |                             |                  |
|-------------------|----------------------|--|------------------------------------|----------------|----------------------------|-----------------------------|-----------------------------|------------------|
|                   | Total current assets | Total property, plant and equipment, net | Total investments and other assets | Total assets   | Total current liabilities  | Total long-term liabilities | (Non-controlling interests) | Total net assets |
| 2010              | ¥261,587             | ¥324,732                                 | ¥68,474                            | ¥654,793       | ¥246,473                   | ¥206,130                    | ¥23,033                     | ¥202,190         |
| 2011              | 281,701              | 313,945                                  | 65,866                             | 661,512        | 249,701                    | 200,362                     | 24,048                      | 211,449          |
| 2012              | 284,417              | 313,949                                  | 66,599                             | 664,965        | 267,391                    | 173,167                     | 24,472                      | 224,407          |
| 2013              | 287,399              | 323,717                                  | 74,768                             | 685,884        | 250,936                    | 184,195                     | 34,736                      | 250,753          |
| 2014              | 296,538              | 332,416                                  | 71,761                             | 700,715        | 257,958                    | 177,402                     | 23,077                      | 265,355          |
| 2015              | 282,816              | 347,438                                  | 81,292                             | 711,546        | 239,500                    | 182,436                     | 25,718                      | 289,610          |
| 2016              | 276,925              | 323,800                                  | 79,058                             | 679,783        | 233,256                    | 156,905                     | 22,463                      | 289,622          |
| 2017              | 295,041              | 331,443                                  | 82,895                             | 709,379        | 245,828                    | 153,150                     | 23,179                      | 310,401          |
| 2018 <sup>7</sup> | 316,876              | 334,262                                  | 91,307                             | 742,445        | 253,098                    | 152,486                     | 20,837                      | 336,861          |
| <b>2019</b>       | <b>315,699</b>       | <b>331,316</b>                           | <b>93,271</b>                      | <b>740,286</b> | <b>226,063</b>             | <b>159,671</b>              | <b>24,406</b>               | <b>354,552</b>   |

## General

|             | Per Share Data <sup>4</sup> (Yen) |   |                 | Other Data                |   |   |  |                                     |   |                     |
|-------------|-----------------------------------|---|-----------------|---------------------------|---|---|--|-------------------------------------|---|---------------------|
|             | Net income, primary               | Cash dividends applicable to the period | Net assets      | Return on sales (ROS) (%) | Return on assets (ROA) <sup>5</sup> (%) | Return on equity (ROE) <sup>6</sup> (%) | Shares of common stock issued <sup>4</sup> (thousands) | Number of consolidated subsidiaries | Number of shareholders with voting rights | Number of employees |
| 2010        | ¥ 8.17                            | ¥ 4.00                                  | ¥ 177.88        | 5.0                       | 4.4                                     | 4.7                                     | 1,009,165  | 67                                  | 59,232                                    | 11,108              |
| 2011        | 17.18                             | 5.00                                    | 186.02          | 7.2                       | 7.2                                     | 9.4                                     | 1,009,165  | 66                                  | 57,537                                    | 11,026              |
| 2012        | 22.85                             | 5.00                                    | 198.41          | 7.2                       | 7.2                                     | 11.9                                    | 1,009,165  | 67                                  | 55,407                                    | 11,081              |
| 2013        | 8.22                              | 5.00                                    | 214.35          | 4.8                       | 4.8                                     | 4.0                                     | 1,009,165  | 67                                  | 57,243                                    | 11,090              |
| 2014        | 12.16                             | 5.00                                    | 228.51          | 3.8                       | 3.6                                     | 5.5                                     | 1,062,001  | 65                                  | 58,873                                    | 11,225              |
| 2015        | 13.85                             | 5.00                                    | 248.89          | 3.8                       | 3.8                                     | 5.8                                     | 1,062,001  | 71                                  | 64,449                                    | 10,702              |
| 2016        | 18.06                             | 5.00                                    | 251.90          | 6.5                       | 6.5                                     | 7.2                                     | 1,062,001  | 68                                  | 52,977                                    | 10,764              |
| 2017        | 22.85                             | 6.00                                    | 270.76          | 5.7                       | 5.5                                     | 8.7                                     | 1,062,001  | 70                                  | 51,769                                    | 10,928              |
| 2018        | 301.65                            | 75.00                                   | 3,002.86        | 7.2                       | 7.6                                     | 10.5                                    | 106,200  | 70                                  | 56,754                                    | 10,799              |
| <b>2019</b> | <b>312.36</b>                     | <b>80.00</b>                            | <b>3,261.23</b> | <b>6.1</b>                | <b>6.9</b>                              | <b>10.1</b>                             | <b>106,200</b>   | <b>71</b>                           | <b>54,748</b>                             | <b>11,010</b>       |

Notes: 4. The Company consolidated every 10 shares into one share, effective October 1, 2017.

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. We have restated financial position numbers for fiscal 2017 in line with a change in accounting standards.

## Network

(As of March 31, 2019)

### Overseas Offices

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#### UBE INDUSTRIES INDIA PRIVATE LIMITED

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Phone: +91-124-422-7801-03

#### UBE Latin America Servicios Ltda.

Rua Iguatemi, 192-13th Floor, Room 134, CEP 01451-010, Itaim Bibi, São Paulo, SP, Brazil  
Phone: +55-11-3078-5424

### Major Consolidated Subsidiaries

| Company Name  | Business   | Country  | Currency    | Net Sales |        |        |
|---|--|----------|-------------|-----------|--------|--------|
|   |  |          |             | 2017/3    | 2018/3 | 2019/3 |
| UBE Corporation Europe, S.A. Unipersonal                | Manufacture and sales of caprolactam, ammonium sulfate, nylon, and fine chemical products                | Spain    | EUR million | 314.6     | 332.2  | 382.9  |
| UBE Chemicals (Asia) Public Company Limited             | Manufacture and sales of caprolactam, ammonium sulfate, and nylon  | Thailand | THB billion | 11.6      | 12.6   | 13.3   |
| THAI SYNTHETIC RUBBERS COMPANY LIMITED                  | Manufacture and sales of polybutadiene rubber  | Thailand | THB billion | 4.3       | 4.7    | 4.6    |
| UBE Fine Chemicals (Asia) Co.,Ltd.                      | Manufacture and sales of 1,6-Hexanediol (HDL) and 1,5-Pentanediol (PDL)                                  | Thailand | THB billion | 0.9       | 1.1    | 1.1    |
| UBE Ammonia Industry, Ltd.                              | Manufacture and sales of ammonia and industrial gases  | Japan    | JPY billion | 13.7      | 13.7   | 16.0   |
| UBE Film, Ltd.  | Manufacture and sales of plastic film products   | Japan    | JPY billion | 9.5       | 9.7    | 9.8    |
| UBE EXSYMO CO., LTD.                                    | Manufacture and sales of polypropylene molded products, fibers, and fiber-reinforced plastics            | Japan    | JPY billion | 12.7      | 13.3   | 13.5   |
| UBE Material Industries, Ltd.                           | Manufacture and sales of magnesia clinker, quicklime, slaked lime, etc.                                  | Japan    | JPY billion | 44.1      | 45.5   | 49.9   |
| UBE Shipping & Logistics, Ltd.                          | Domestic shipping, harbor transportation, shipping-agent services, and customs clearing                  | Japan    | JPY billion | 20.6      | 18.8   | 18.7   |
| UBE Construction Materials Sales Co., Ltd.              | Sales of cement, ready-mixed concrete, building materials, etc.  | Japan    | JPY billion | 55.9      | 59.6   | 63.8   |
| Sanshin Tsusho Co., Ltd.                                | Sales of building materials, public works materials, etc.  | Japan    | JPY billion | 17.4      | 23.0   | 23.6   |
| Kanto Ube Holdings Co., Ltd. (And 4 Other Subsidiaries) | Manufacture and sales of ready-mixed concrete  | Japan    | JPY billion | 12.7      | 14.8   | 13.0   |
| UBE Construction Materials Co., Ltd.                    | Manufacture, sales, and construction of construction materials   | Japan    | JPY billion | —         | —      | 10.6   |
| UBE Machinery Corporation, Ltd.                         | Manufacture and sales of and services for molding machines, industrial machinery, and bridges, etc.      | Japan    | JPY billion | 40.6      | 44.1   | 44.8   |
| UBE Steel Co., Ltd.                                     | Manufacture and sales of cast iron and steel products and rolled steel billets                           | Japan    | JPY billion | 17.4      | 21.2   | 23.6   |
| UBE Machinery Inc.                                      | Manufacture and sales of and services for molding machines   | U.S.A.   | USD million | 60.0      | 69.0   | 71.0   |
| UBE Machinery (Shanghai) Ltd.                           | Manufacture of molding machines, and sales of and services for molding machines and industrial machinery | China    | RMB million | 120.3     | 124.9  | 177.2  |
| UBE COAL TRADING, LTD.                                  | Sales of imported coal from Australia, Indonesia, and Russia   | Japan    | JPY billion | 23.5      | 28.8   | 31.8   |

### Major Equity-Method Affiliates

| Company Name                              | Business  | Country  |
|---|---|----------|
| Techno-UMG Co., Ltd.                      | Business pertaining to ABS resin and ABS polymer alloy products               | Japan    |
| UBE-MARUZEN POLYETHYLENE Co., Ltd.        | Development, manufacture, and sales of low-density polyethylene and HAO-LLDPE | Japan    |
| Chiba Butadiene Industry Company, Limited | Manufacture and sales of butadiene  | Japan    |
| Lotte Ube Synthetic Rubber SDN. BHD.      | Manufacture and sales of polybutadiene rubber (synthetic rubber)              | Malaysia |
| SUMaterials Co., Ltd.                     | Production of polyimide for substrates to be used in next-generation displays | Korea    |
| UBE-MITSUBISHI CEMENT CORPORATION         | Sales of cement, soil-stabilizing cement, slag, etc.                          | Japan    |

# Investor Information

(As of March 31, 2019)

## Ube Industries, Ltd.

|   |   |  |
|---|---|--|
| Head Office                               | <i>Tokyo Head Office</i>  | Seavans North Bldg., 1-2-1, Shibaura, Minato-ku, Tokyo 105-8449, Japan<br>Phone: +81-3-5419-6110<br>Fax: +81-3-5419-6230 |
|   | <i>Ube Head Office</i>  | 1978-96, Kogushi, Ube, Yamaguchi 755-8633, Japan<br>Phone: +81-836-31-2111<br>Fax: +81-836-21-2252                       |
| Establishment                             | 1897  |  |
| Consolidated Companies                    | 96 (71 consolidated subsidiaries and 25 equity-method affiliates)                                     |  |
| Fiscal Year                               | April 1 to March 31   |  |
| Common Stock                              | Outstanding: 106,200,107 shares   |  |
| Paid-in Capital                           | ¥58.4 billion   |  |
| Number of Shareholders with Voting Rights | 54,748  |  |
| Annual General Shareholders' Meeting      | June  |  |
| Stock Exchange Listings                   | Tokyo Stock Exchange (Code: 4208) Fukuoka Stock Exchange  |  |
| Transfer Agent and Share Registrar        | Mitsubishi UFJ Trust and Banking Corporation,<br>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 (%) |
|--|-------------------|---------------------------------|
| The Master Trust Bank of Japan, Ltd. (Trust Account)                   | 7,872,300         | 7.77                            |
| Japan Trustee Services Bank, Ltd. (Trust Account)                      | 6,710,474         | 6.63                            |
| BBH BOSTON CUSTODIAN FOR BLACKROCK GLOBAL ALLOCATION FUND, INC. 620313 | 2,150,450         | 2.12                            |
| SUMITOMO LIFE INSURANCE COMPANY  | 2,000,000         | 1.98                            |
| Japan Trustee Services Bank, Ltd. (Trust Account 5)                    | 1,945,100         | 1.92                            |
| JP MORGAN CHASE BANK 385151  | 1,623,693         | 1.60                            |
| Nippon Life Insurance Company  | 1,600,009         | 1.58                            |
| THE YAMAGUCHI BANK, Ltd.   | 1,548,264         | 1.53                            |
| Japan Trustee Services Bank, Ltd. (Trust Account 4)                    | 1,528,200         | 1.51                            |
| Japan Trustee Services Bank, Ltd. (Trust Account 7)                    | 1,515,200         | 1.50                            |

## Shareholder Composition



The UBE Group publishes information for its stakeholders on its website.

Please refer to the websites on the right for additional data and information on activities and products not covered in this report.



Corporate Information <https://www.ube-ind.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-ind.co.jp/ube/en/ir/>

### Product Information

UBE Group product information is available in the Products section of the UBE Group's website:

<https://www.ube.com/contents/en/>

### CSR / Environment and Safety

Information regarding CSR initiatives, environmental and safety initiatives, contributions, compliance, and corporate governance are available in the CSR Activities section of the UBE Group's website:

<https://www.ube-ind.co.jp/ube/en/csr/>





# UBE INDUSTRIES,LTD.

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