

UBE

UBE / UBE Corporation

Vision 2030

Transformation

—1st Stage

Management Overview Briefing

May 21, 2024

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President and Representative Director

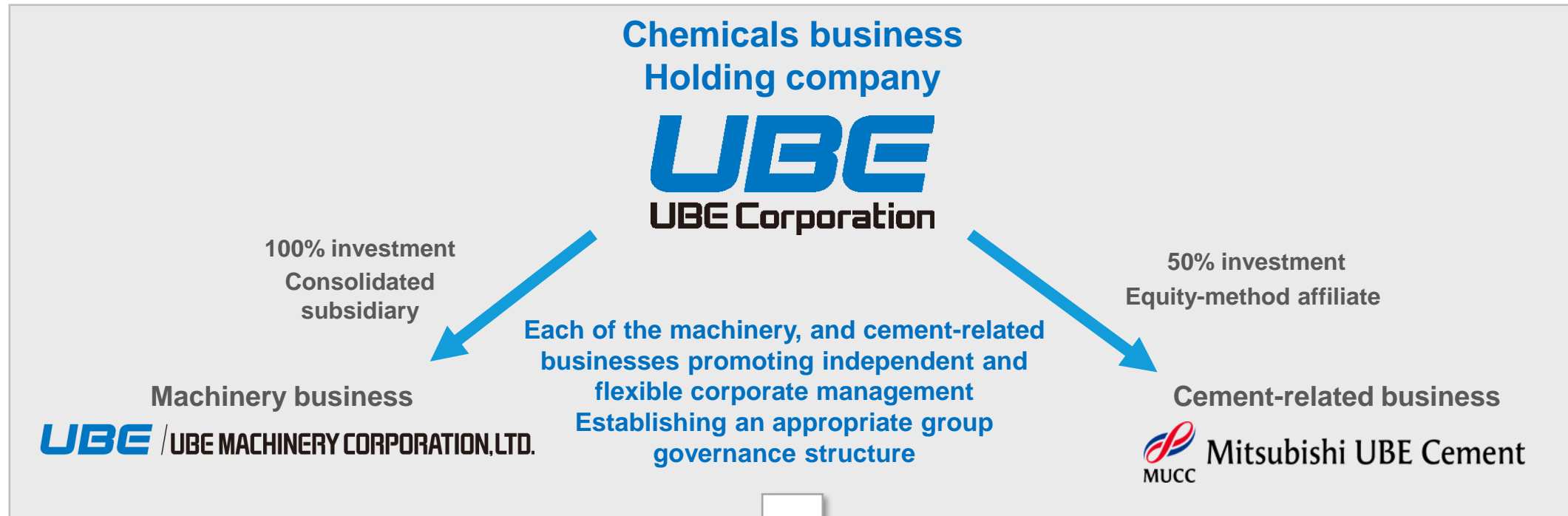
UBE Corporation

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**Long-Term Vision:
UBE Vision 2030 Transformation (Re-posted)**

- UBE Corporation is pursuing specialization as a chemicals company and ensuring proper governance of the machinery and cement companies under its umbrella.



Maximizing corporate value of the UBE Group as a whole

Founding Principles

“Coexistence and mutual prosperity”, “From finite mining to infinite industry”

UBE Corporate Philosophy

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

Purpose

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

UBE Management Principles

1. Ethics

Be highly ethical, comply with laws and regulations, and respect social norms

2. Safety and Security

Work to conserve the global environment and practice safe, secure manufacturing

3. Quality

Deliver quality that earns the trust of customers and society

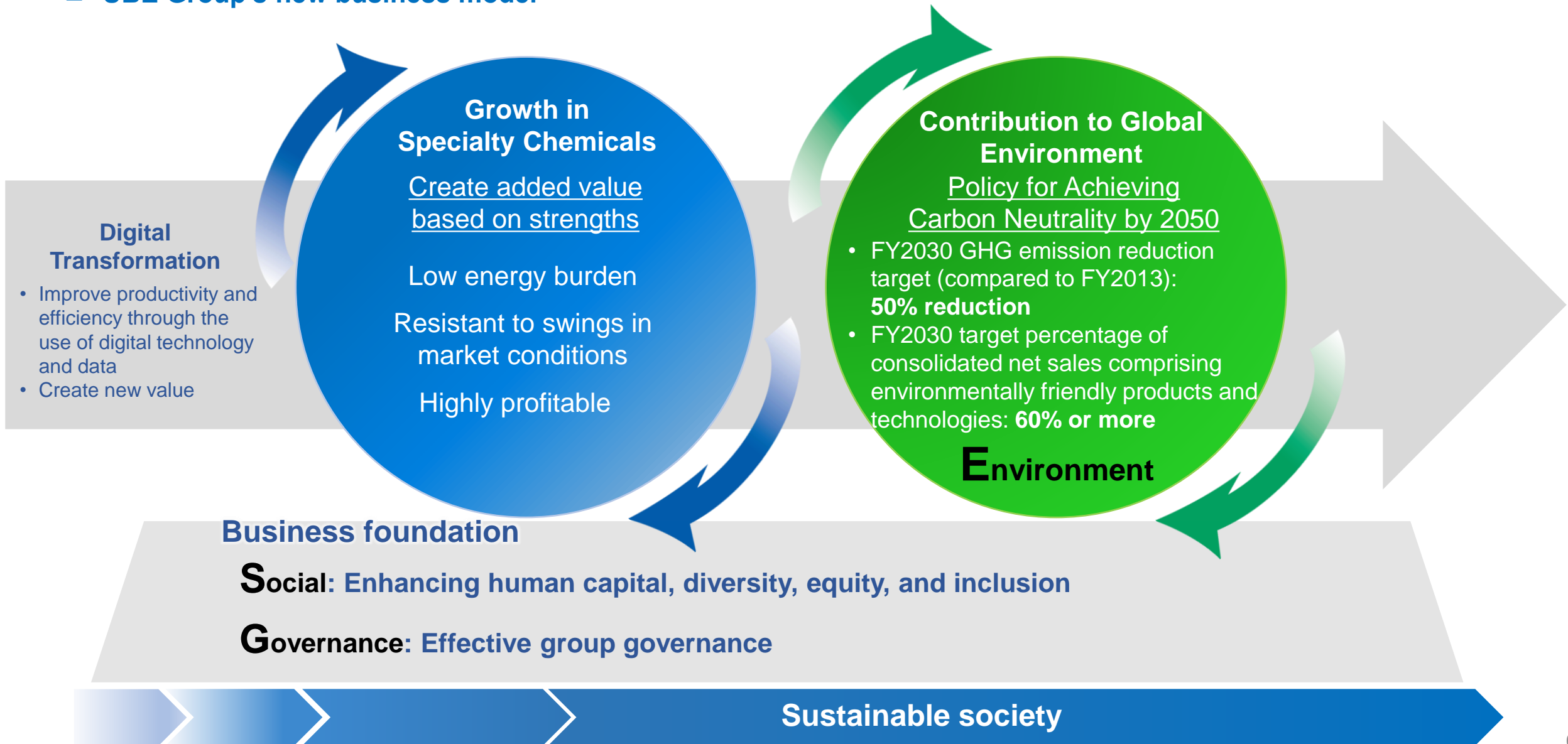
4. People

Respect individuality and diversity, and build healthy and comfortable workplaces

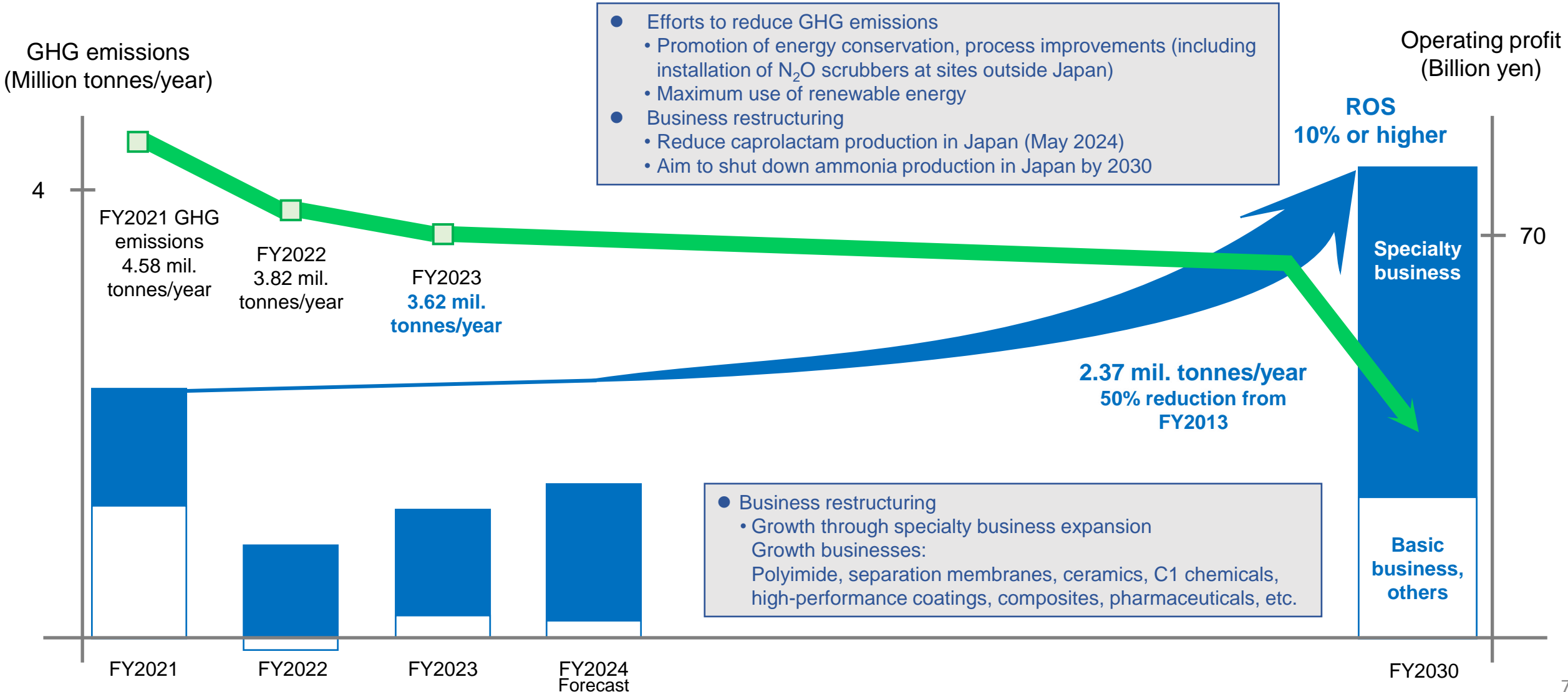
Vision for 2030 (Long-Term Vision)

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

■ UBE Group's new business model



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





FY2023 Business Results and FY2024 Forecast

(Billion yen)

		FY2022	FY2023	Difference
Key Figures	Operating profit	16.2	22.5	6.2
	Ordinary profit	(8.7)	36.3	45.1
	Profit attributable to owners of parent	(7.0)	29.0	36.0
Key Indicators	Return on sales (ROS)	3.3%	4.8%	1.5%
	Return on equity (ROE)	(1.9)%	7.5%	9.4%

■ FY2023 Performance — Compared to the Previous Fiscal Year

- Operating profit increased due to steady sales of separation membranes and after-sales servicing for machinery products, as well as an increase in royalty income from the pharmaceutical business.
- Ordinary profit and profit attributable to owners of parent increased significantly due to the increase in operating profit, as well as an improvement in equity method investment profits resulting from the progress of price adjustment in the cement-related business (equity-method affiliate).

■ Measures Taken in FY2023

- Business expansion and capacity increase
 - ✓ Started expanding the ceramics (silicon nitride) plant (+50%) in Japan
 - ✓ Commenced construction of a new R&D building at the Osaka Research & Development Center in Japan
 - ✓ Finished expanding the PCD manufacturing facilities (+4,000 tonnes) in Thailand
 - ✓ Decided to establish a new DMC/EMC plant (+100,000 tonnes) in the U.S.
- Alliances, mergers, acquisitions, and business restructuring
 - ✓ Decided to absorb API Corporation (planned for December 2024)
 - ✓ Converted UBE Scientific Analysis Laboratory, Inc. into a joint venture with Dai Nippon Printing Co., Ltd. (equity-method affiliate)

FY2024 Earnings Forecast: Key Figures

- Expecting increased revenues and profits by securing the recovery in the business environment.
- Although anticipating underachievement on the original medium-term management targets, intending to make aggressive investments for future growth while maintaining financial soundness.

(Billion yen)

Item	FY2022	FY2023	FY2024 (Forecast)	Difference	FY2024 (Original target)
Net sales	494.7	468.2	510.0	41.8	520.0
Operating profit	16.2	22.5	27.0	4.5	40.0
Ordinary profit (loss)	(8.7)	36.3	37.0	0.7	47.0
Profit (loss) attributable to owners of parent	(7.0)	29.0	29.5	0.5	33.0
Interest-bearing debt	218.1	213.4	269.0	55.6	189.0
Shareholders' equity	361.6	408.7	424.0	15.3	424.0
D/E ratio	0.60 times	0.52 times	0.63 times	0.11 times	0.45 times
Investments	39.7	39.7	81.0	41.3	56.0
Return on sales (ROS)	3.3%	4.8%	5.3%	0.5%	8%
Return on equity (ROE)	(1.9)%	7.5%	7.1%	(0.4)%	8%
Return on invested capital (ROIC)	(2.0)%	4.7%	4.8%	0.1%	(Reference) 6%
Share of profit (loss) of entities accounted for using equity method related to MUCC* ¹ Group	(24.6)	13.0	11.0	(2.0)	8.0* ²

FY2024 assumptions (business factors): Exchange rate at ¥150.0/USD Naphtha at US\$700.0/tonne (CIF) Australian coal at US\$168.0/tonne (CIF)

*¹ Mitsubishi UBE Cement Corporation

*² Provisional figure assumed prior to launch of the MUCC Group

FY2024 Earnings Forecast: Net Sales and Operating Profit by Segment

- Expecting the Specialty Products segment to grow almost as planned, driven by the expansion of separation membranes and ceramics.
- Anticipating the Polymers & Chemicals segment to improve compared to the previous fiscal year due to improvements in the business environment but to significantly underachieve the original target.
- Forecasting the Machinery segment to exceed the target.

(Billion yen)

Segment	Net sales						Operating profit						FY2024 forecast ROIC (%)
	FY2023		FY2024		Difference		FY2023		FY2024		Difference		
	Original target	Results ^{*1} (A)	Original target (B)	Forecast (C)	(C) – (A)	(C) – (B)	Original target	Results ^{*1} (A)	Original target (B)	Forecast (C)	(C) – (A)	(C) – (B)	
Specialty Products	70.0	63.8	75.0	70.0	6.3	(5.0)	12.5	12.1	13.0	12.5	0.4	(0.5)	11.6% ^{*3}
Polymers & Chemicals	320.0	258.6	316.0	288.0	29.4	(28.0)	24.0	2.5	22.0	9.5	7.0	(12.5)	2.7% ^{*3}
Machinery	98.0	96.9	100.0	104.0	7.1	4.0	5.5	7.2	6.0	7.0	(0.2)	1.0	7.5% ^{*3}
Others	57.0	74.5	54.0	72.0	(2.5)	18.0	3.5	4.5	4.0	2.0	(2.5)	(2.0)	–%
Adjustment ^{*2}	(25.0)	(25.4)	(25.0)	(24.0)	1.4	1.0	(4.5)	(3.8)	(5.0)	(4.0)	(0.2)	1.0	–%
Total	520.0	468.2	520.0	510.0	41.8	(10.0)	41.0	22.5	40.0	27.0	4.5	(13.0)	4.8%

^{*1} UBE America Inc. and UBE CORPORATION AMERICA INC. will be reclassified from the “Others” segment to the “Polymers & Chemicals” segment from FY2024. The results for FY2023 are reference figures reflecting the segment reclassification.

^{*2} Adjustment includes elimination of inter-segment transactions..

^{*3} The ROIC for the Specialty Products, Polymers & Chemicals, and Machinery segments is calculated based on business assets that can be managed by each business (working capital, fixed assets), and the calculation method differs from the company-wide ROIC.



Medium-Term Management Plan Progress and Key Measures

Medium-Term Management Plan: Deviation from Original Target

(Billion yen)

Business portfolio	Net sales									Operating profit								
	FY2022			FY2023			FY2024			FY2022			FY2023			FY2024		
	Original target	Results	Difference	Original target	Results	Difference	Original target	Forecast	Difference	Original target	Results	Difference	Original target	Results	Difference	Original target	Forecast	Difference
Specialty	143.5	138.2	(5.4)	149.0	152.9	3.9	162.0	172.5	10.5	23.5	18.3	(5.2)	24.5	18.6	(5.9)	24.0	24.0	–
Basic	238.5	236.9	(1.6)	252.0	201.0	(51.0)	240.0	217.5	(22.5)	11.0	(3.4)	(14.4)	16.5	0.1	(16.4)	15.5	1.0	(14.5)
Machinery	106.0	96.9	(9.1)	98.0	96.9	(1.1)	100.0	104.0	4.0	5.0	5.2	0.2	5.5	7.2	1.7	6.0	7.0	1.0
Other* (incl. adjustment)	22.0	22.8	0.8	21.0	17.4	(3.6)	18.0	16.0	(2.0)	(5.0)	(4.0)	1.0	(5.5)	(3.4)	2.2	(5.5)	(5.0)	0.5
Total	510.0	494.7	(15.3)	520.0	468.2	(51.8)	520.0	510.0	(10.0)	34.5	16.2	(18.3)	41.0	22.5	(18.5)	40.0	27.0	(13.0)

*Adjustment includes elimination of inter-portfolio transactions.

➤ **Overall performance will fall short of the final year target of the medium-term plan due to the deterioration of basic businesses. However, specialty businesses are expected to achieve the targets.**

● **Basic business**

Heavily impacted by factors such as the stagnation in China's economy, achieving the original medium-term management target is difficult. The performance of caprolactam and nylon polymers has fallen significantly below expectations due to sluggish sales volumes and declining sales prices. The industrial chemicals is also affected by the slow demand for ammonia in industrial applications in Japan and the falling international ammonia market prices.

● **Specialty business**

Although some products were affected by inventory adjustments, the steady growth of separation membranes, ceramics, and high-performance coatings has supported the overall business, and it is expected to catch up with the original target in the final year.

● **Machinery segment**

Both machinery products and after-sales servicing have been relatively strong, and the segment is expected to exceed the original target.

In the current medium-term management plan, many growth investments have been decided and implemented in specialty businesses. This will lead to profit growth during the next medium-term management plan and beyond.

Polyimide

- New facilities for films and BPDA anticipated to go into operation in the second half of FY2024
- Meeting increasing demand associated with the growth and sophistication of digital devices

Separators

- Capacity expansion decided, with operation anticipated in FY2026
- Meeting increasing demand associated with the electrification of automobiles

Separation membranes

- Capacity expansion decided ahead of schedule, with operation anticipated in the first half of FY2025
- Additional expansion under consideration in response to strong demand
- Pioneering the next-generation environmental and energy markets

C1 chemicals High-performance coatings

- Establishment of a new DMC/EMC facility in the US decided, with operation anticipated in November 2026
- In Thailand, expansion of PCD completed in FY2023

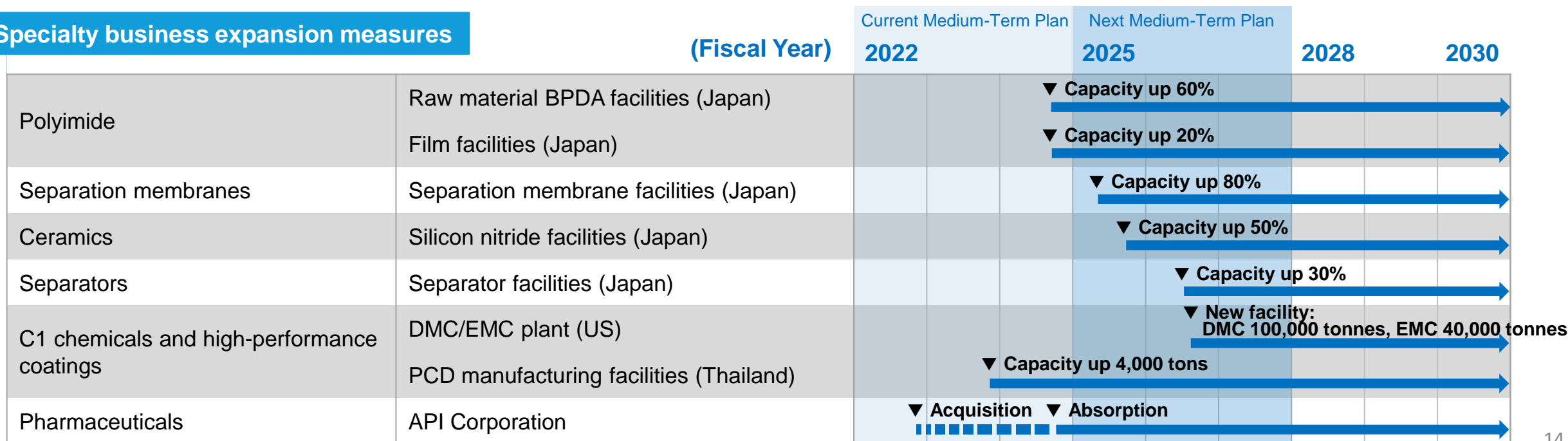
Ceramics

- Capacity expansion decided ahead of schedule, with operation anticipated in the second half of FY2025
- Meeting rapidly growing demand associated with the electrification of automobiles

Pharmaceuticals

- API Corporation acquired in 2022, and its absorption scheduled for December 2024
- Aiming to enhance presence and further development in the CDMO industry

Specialty business expansion measures

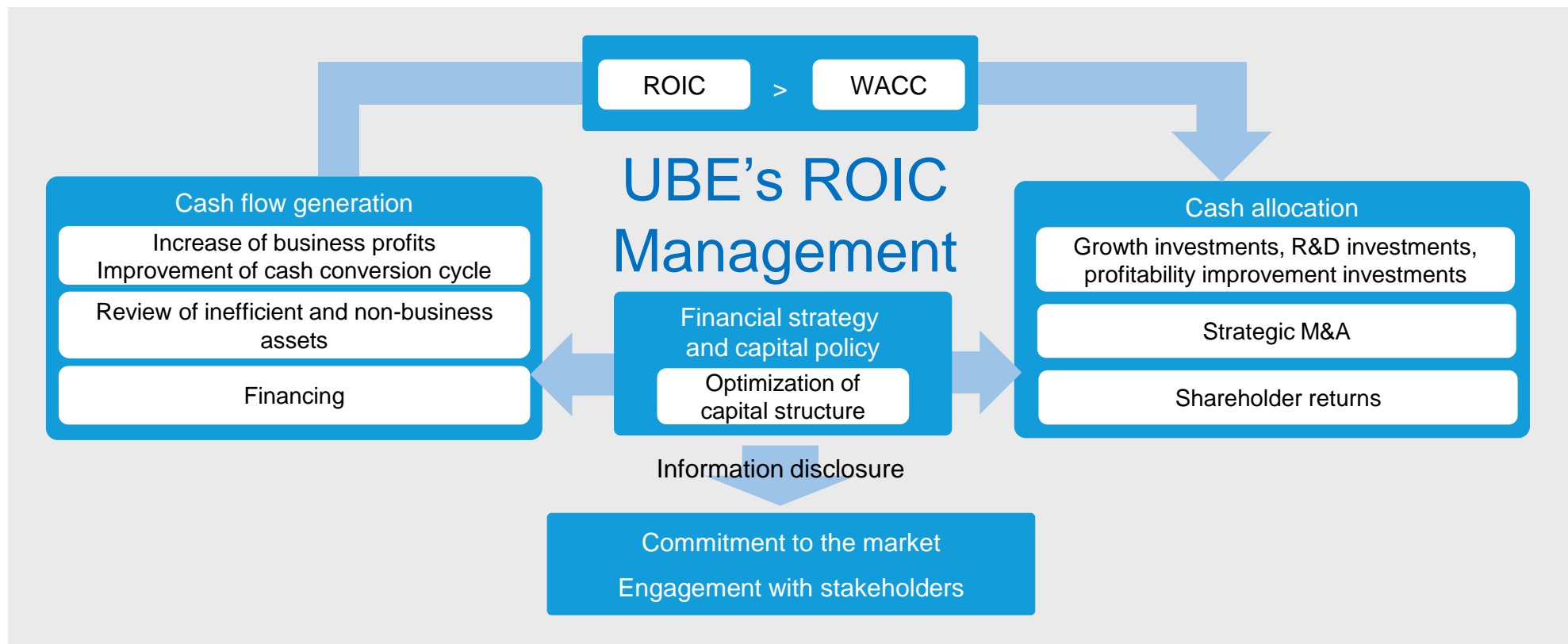


- **Promoting business structural reforms in Japan. Accelerating the review of restructuring for businesses outside Japan as well.**
- Controlling performance fluctuations (volatility) through structural reforms of the nylon and caprolactam chain
 - ✓ Nylon polymers: Transferred the production of copolymerization grades from Japan to Thailand in FY2023 to optimize the production system in Asia.
 - ✓ Caprolactam: In line with the reduction of nylon polymer production capacity in Japan, **caprolactam production in Japan will be reduced by 40% in FY2024.**
 - ✓ Ammonium sulfate: Although the production of ammonium sulfate, a by-product of caprolactam, will also decrease, **the production ratio of large-grain ammonium sulfate will be increased.** The export volume of medium-grain ammonium sulfate, which faces intense competition, will be reduced.
- Efforts toward ceasing ammonia production in 2030
 - ✓ **Considering bringing forward the timing of the cessation**, given shrinking demand in Japan, increasing repair costs due to aging equipment, and the risk of increasing environmental costs such as GX-ETS (Japanese emission trading scheme) and levies.
 - ✓ **Withdrawing from** unprofitable downstream products (oxalic acid, 1,6-HDL, sodium nitrate, etc.). Steadily restructuring related businesses.
- Business outside Japan
 - ✓ Thailand: As competitors, mainly from China, continue to increase production, we will **review our production system for caprolactam and nylon polymers in Thailand**, which is susceptible to market fluctuations. **Details will be examined in FY2024 in preparation for the next medium-term management plan.**
 - ✓ Spain: In Europe, where environmental regulations are being tightened, we will **pursue carbon neutrality** of caprolactam production and aim for differentiation through environmental measures.

Restructuring of basic businesses		(Fiscal Year)		Current Medium-Term Plan	Next Medium-Term Plan	2028	2030
		2022	2025	2025	2028	2030	
Caprolactam	Production cutback (Japan)				▼ Production reduction by 40% (May 2024)		
Nylon polymers	Transfer of high value-added grades from Japan to Thailand			▼ Start of production (Thailand)			
Ammonia	Production cessation (under consideration)					Production cessation (under consideration)	

■ Promoting ROIC management to raise the level of profitability and accelerate portfolio reforms.

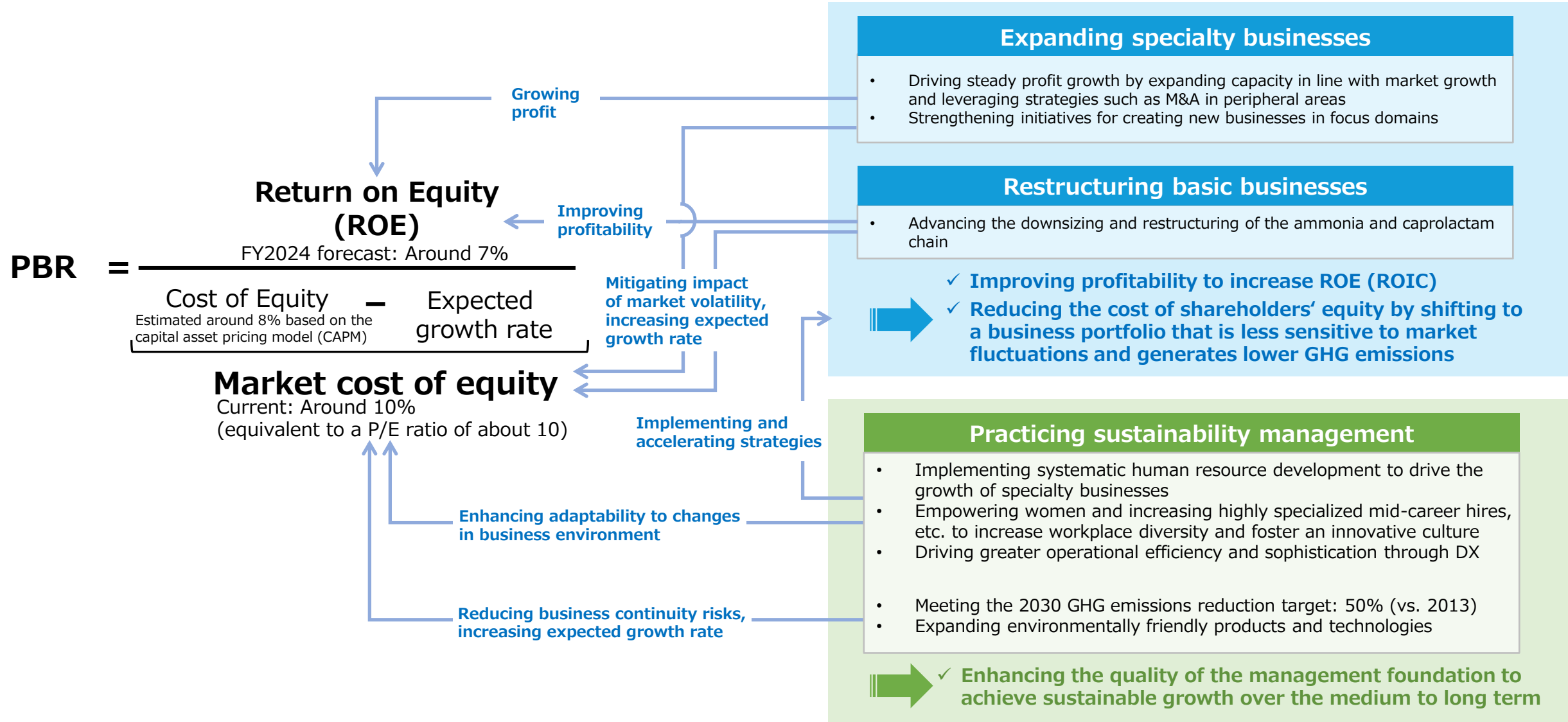
- ROIC* has been used for investment decisions and monitoring investment efficiency by portfolio, but further improvement in capital efficiency is necessary.
- We aim to further strengthen profitability by instilling business management that is more conscious of the cost of capital throughout the company.



$$* \text{ ROIC} = \frac{\text{Net operating profit after tax (NOPAT)} + \text{Equity method investment profit}}{\text{Interest-bearing liabilities} + \text{Shareholders' equity}}$$

Initiatives to Realize Management that Considers Capital Cost and Stock Price

- Improving PBR through the expansion of specialty businesses and structural reforms in basic businesses.



The background features a complex network of light blue lines and nodes, resembling a molecular structure or a data network, set against a gradient blue background. The lines are thin and connect various points, creating a web-like pattern that is more prominent in the foreground and fades into the background.

IV

Capital Policy (Cash Allocation)

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

(Billion yen)

3-year cumulative cash-in	
Operating cash flow ^{*1}	
(182.0) ^{*2}	144.0
Sale of assets, etc.	
(15.0)	15.0
Debt financing	
(0)	62.0

Cash on March 31, 2022	
Cash	
(35.0)	35.0 ^{*3}

Total available for distribution
¥256.0 billion
 (¥232.0 billion)

(Billion yen)

3-year cumulative cash-out	
Investments	
(130.0)	160.0
R&D	
(32.0)	31.0
Debt repayment	
(12.0)	0
Shareholder returns	Total returns
(29.0)	30.0

Cash on March 31, 2025	
Cash	
(29.0)	35.0

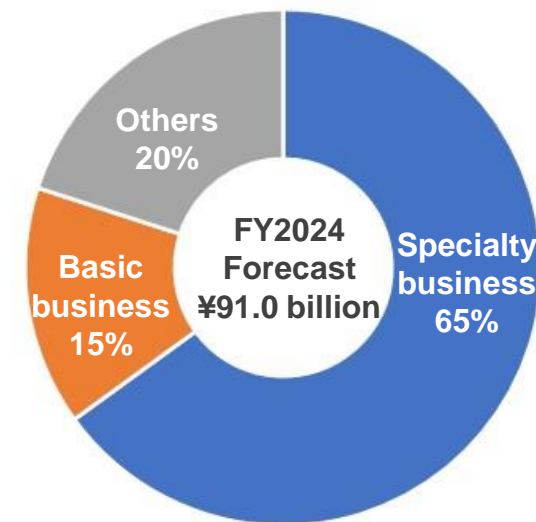
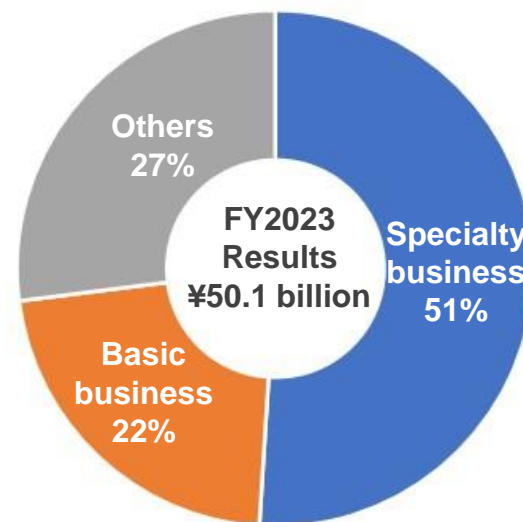
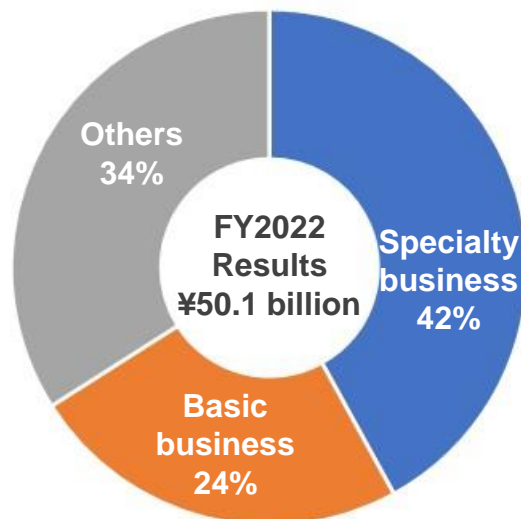
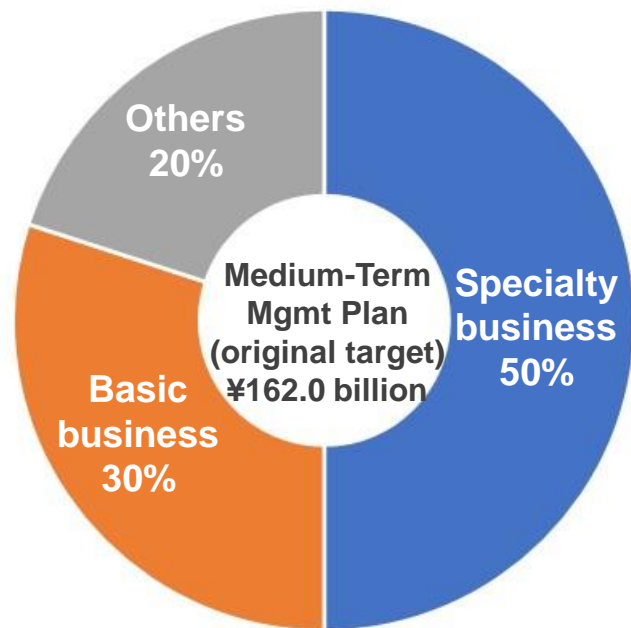
*1 Operating cash flow before R&D investment.

*2 The figures in parentheses are the initial targets in the medium-term management plan.

*3 Excludes the cash and deposits transferred to Mitsubishi UBE Cement Corporation as of April 1, 2022.

Business Resources Allocation Plan by Portfolio Segmentation and Progress

- Growth investments in specialty businesses, such as accelerated investments in separation membranes and ceramics, and the expansion of C1 chemicals in North America, have increased compared to the current medium-term management plan.

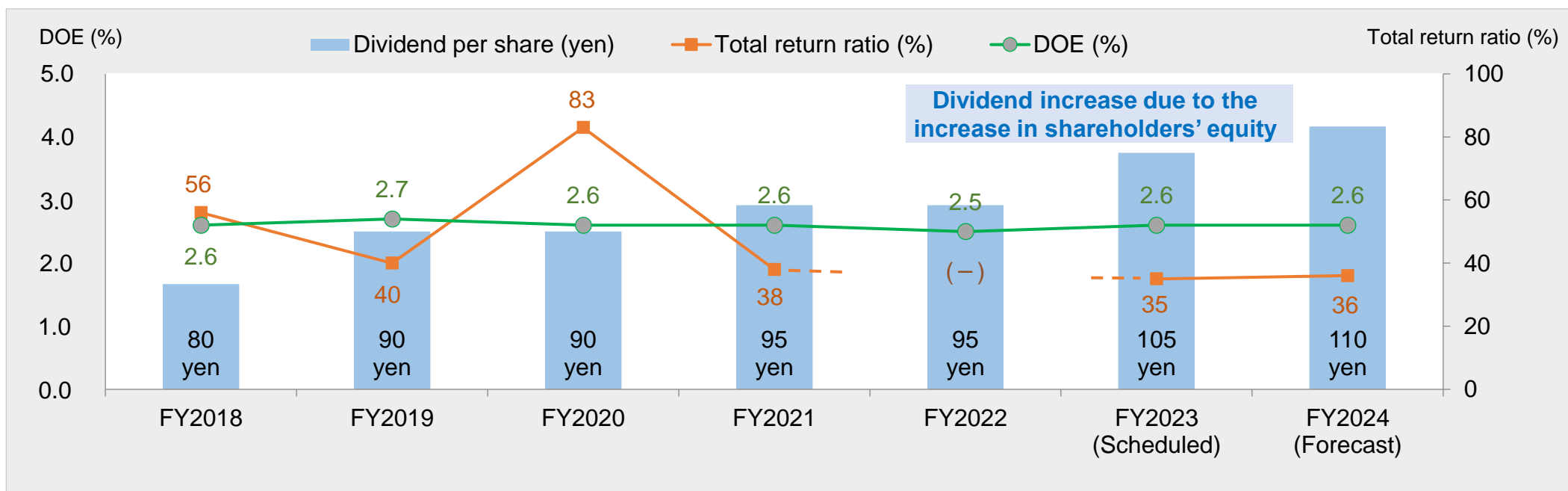


(Billion yen)

	Medium-Term Mgmt Plan (original target)	FY2022 Results	FY2023 Results	FY2024 Forecast
Capital investment	110.0	29.3	36.1	81.0
Other investment (incl. M&A)	20.0	10.4	3.7	0
Research and development	32.0	10.4	10.3	10.0
Total	162.0	50.1	50.1	91.0

- UBE's basic policy is to continue to pay consistent dividends.
- UBE strives to further enhance shareholder returns, while growing profits and shareholders' equity through aggressive capital investment.

Dividend on equity (DOE) 2.5% or above
Consolidated total return ratio 30% or higher (average over three years)



*Total return ratio: Includes share repurchases (¥10 billion in FY2018 and ¥10 billion in FY2020, implemented in FY2021).



Growth Strategy in Specialty Chemicals

Polyimide Chain (Polyimide and Separation Membranes),
Ceramics, Expansion of C1 Chemicals in North America

- Steadily capturing the recovery in demand and expanding sales through the start-up of new facilities for raw material BPDA and films.

Product Characteristics and Strengths

- Polyimide, a high-strength and heat-resistant resin, is used in a wide range of fields from smartphones, televisions, and automobiles to aerospace.
- Integrated production from polyimide raw material BPDA to varnishes, films, and powders.
- Providing distinctive BPDA-based polyimide products differentiated by UBE's own raw material and proprietary molding and processing technologies.

Business Conditions in FY2023

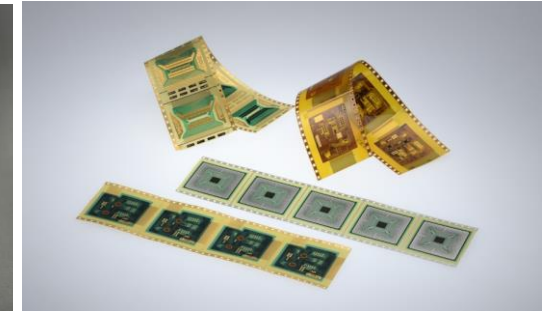
- End products such as smartphones and televisions are experiencing sluggish demand.
- Chinese LCD panel manufacturers are making long-term operational adjustments.
- The trend in China of shifting to domestic production is expanding for varnishes for flexible OLED substrates.
- Demand for OLED panels is gaining momentum for smartphones and other IT applications such as tablets and PCs, as well as for in-vehicle applications.
- Increasing environmental awareness among customers and supply chains.

Initiatives in FY2023

- Film for COF used in large displays: Maintained a high market share.
- Varnishes for flexible OLED substrates: Maintained the position as standard materials in high-end smartphones.



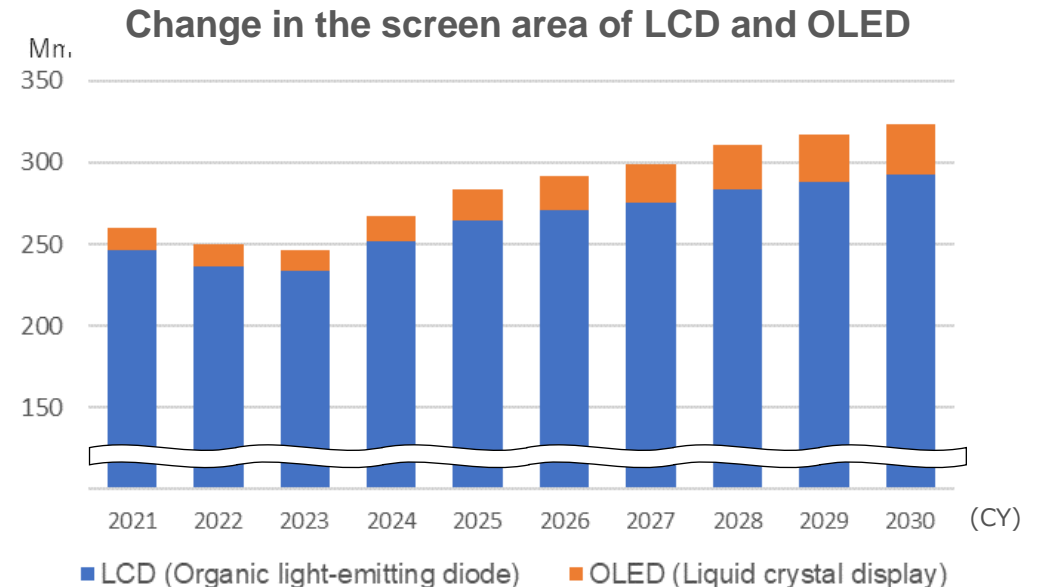
Polyimide varnish



COF*

Leveraging its characteristics, UBE's polyimide is used for the substrate of flexible OLED and COF for large displays.

*Chip-On-Film: Mounting driver ICs on polyimide film wiring circuit boards.



Note: Estimates by UBE based on various data

■ Creating new demand with innovative new polyimide products.

Outlook for FY2024 and Beyond, and Vision for 2030

Outlook for FY2024 and Beyond

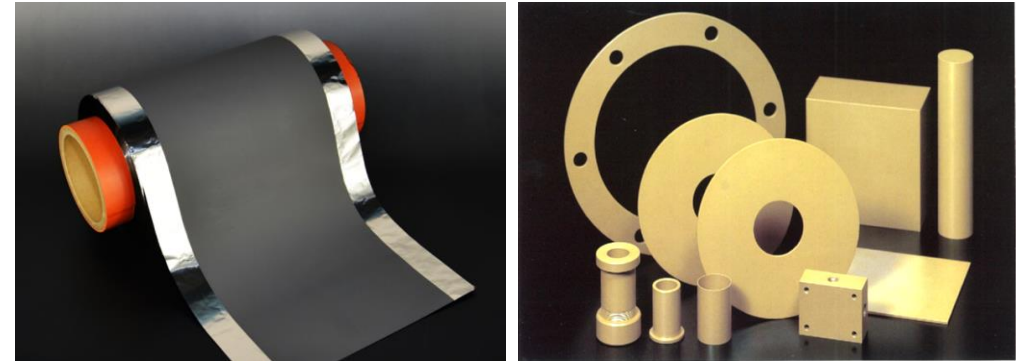
- Sales in FY2024 are expected to be at the same level as FY2023.
- Demand for COF films will recover slightly from FY2023 but will not reach the peak level.
- The trend in China of shifting to domestic production will continue for varnishes for flexible OLED substrates.
- Polyimide powder will capture the recovery in demand for semiconductor materials in the second half of FY2024.

Vision for 2030

- Leveraging the strengths of BPDA, films, and varnishes to maintain and expand a high share in niche markets.

Future Strategies

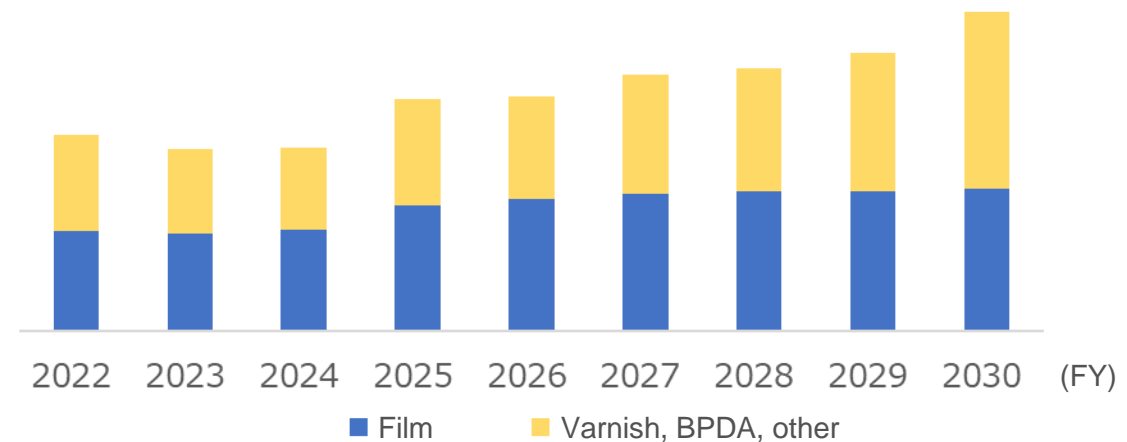
- Expansion of the varnish business through the development of innovative polyimide varnishes.
- Business expansion in mobility and semiconductor applications in addition to displays applications.
- Business expansion with environmentally friendly products such as water-based polyimide varnishes.



(Left) Example of application for new varnish. As a binder for silicon-based anodes in lithium-ion batteries, it suppresses electrode expansion.

(Right) Examples of powder application: Used in molding parts for heat-resistant components in semiconductor manufacturing equipment and precision insulating components in semiconductor inspection equipment.

Net sales



■ Continuing strong demand for CO₂ separation membranes for biomethane production.

Product Characteristics and Strengths

- Efficient separation of specific gases from mixed gases.
- Wide range of uses such as CO₂ separation, nitrogen enrichment, dehumidification, H₂ separation, alcohol dehydration, etc.
- Excellent durability, gas permeation, and separation due to unique polyimide technology.

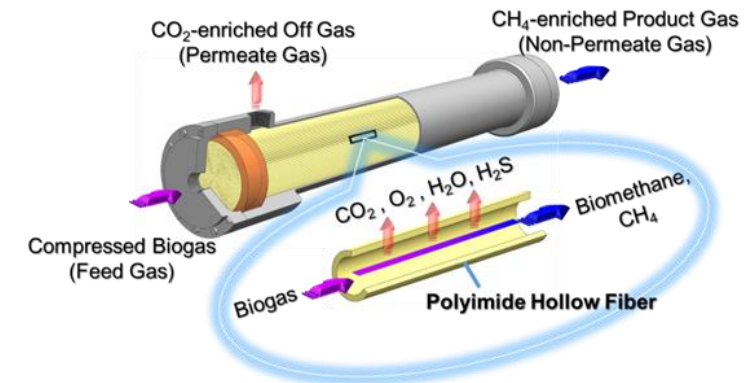
Business Conditions in FY2023

- Increased orders, far exceeding the medium-term management plan.
- Continuing strong demand for CO₂ separation membranes for biomethane production in particular.
- Growing momentum for the use of non-fossil raw materials and energy. Alcohol dehydration is gradually growing.

Initiatives in FY2023

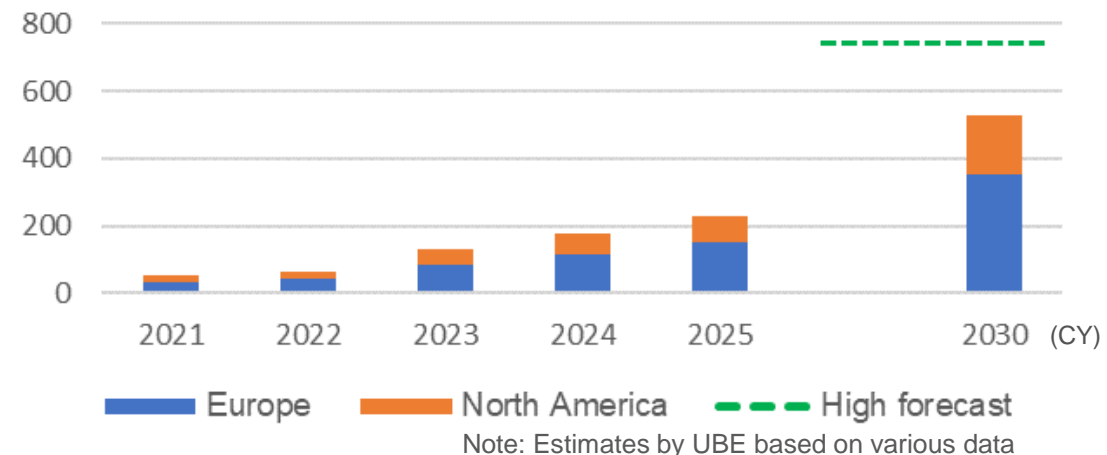
- Cultivated the biomethane markets in South America and Asia, which are expected to grow following Europe and North America.
- Increased production capacity by addressing bottlenecks.
- Conducted marketing in association with the upcoming manufacturing facilities for polyimide hollow fiber membranes (Ube) and for separation membrane modules (Sakai), both scheduled to go online in the first half of FY2025.

CO₂ separation membranes for biomethane production



A separation membrane module consisting of bundles of polyimide hollow fiber membranes. CO₂ separation membranes concentrate methane by separating and removing CO₂ in biogas. The concentrated biomethane is used as renewable energy.

Biomethane production (billion m³)



■ Steadily promoting capacity expansion and seizing growth opportunities for environmentally friendly products.

Outlook for FY2024 and Beyond, and Vision for 2030

Outlook for FY2024 and Beyond

- Continuing strong demand for CO₂ separation membranes for biomethane production.
- Following the growth of alcohol dehydration, increasing demand for hydrogen separation membranes for H₂ recovery and effective utilization in sustainable aviation fuel (SAF) and chemical production.
- Planning new investments following the manufacturing facilities scheduled to go online in the first half of FY2025.

Vision for 2030

- Secure the biomethane demand predicted to grow several times in both Europe and North America.
- Environmentally friendly products such as CO₂ separation, H₂ separation, and alcohol dehydration will increase approximately three-fold (compared to FY2023).
- Flexible production facility operation capable of meeting rapid increases in demand.

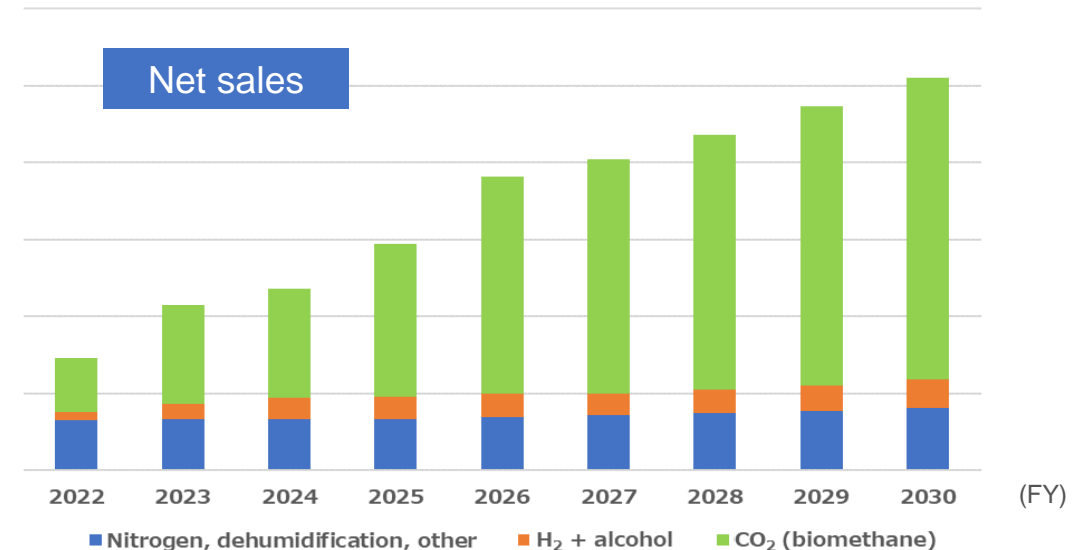
Future Strategies

- Strengthen product capabilities and marketing centered on the environment and energy field.
- Promote the development of highly-durable products that contribute to waste reduction in addition to aim carbon neutrality by gas separation which generate renewable energy.



(Left) Example of H₂ separation in a chemical plant.

(Right) Example of generating biomethane from a landfill site.



Note: The above figures include prototype sales

■ Leveraging UBE's strengths to meet the rapidly expanding demand for xEV applications.

Product Characteristics and Strengths

- Silicon nitride is a high-strength ceramic with excellent fracture toughness, wear resistance, and thermal shock resistance.
- UBE manufactures high-quality silicon nitride powders using the imide-decomposition process.
- UBE's product offers uniform grain size, low impurities, and microstructure that can be controlled.
- UBE's silicon nitride is highly regarded as a global standard.

Business Conditions in FY2023

- For bearing and substrate applications for the xEV market, downstream customers are planning to increase production, accelerating demand growth.
- Demand-supply balance has become very tight, making productivity improvement essential.

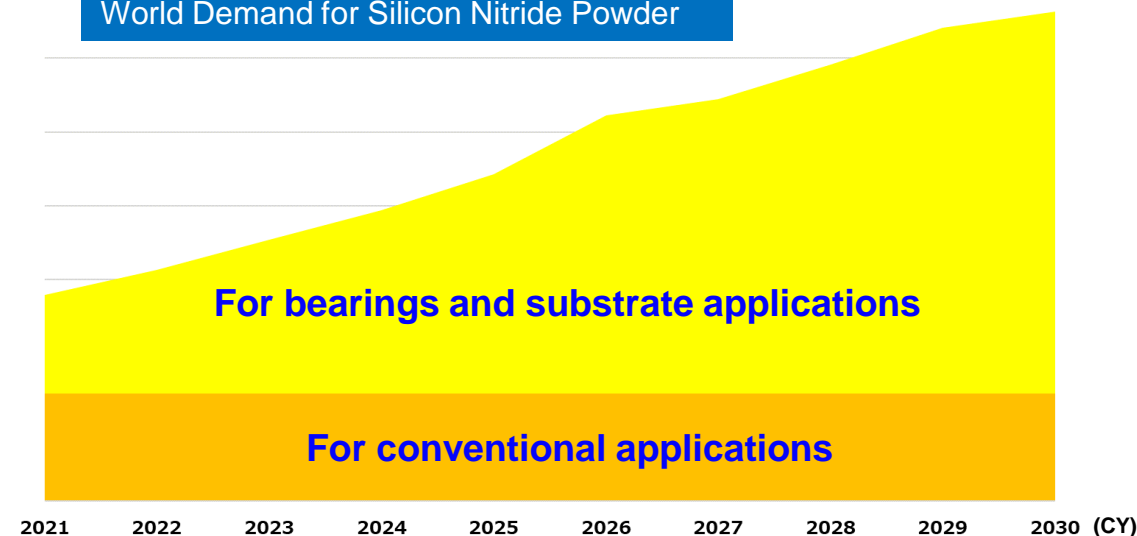
Initiatives in FY2023

- Decided to expand silicon nitride production facilities to meet surging demand. Expanded facilities are scheduled to go online in the second half of FY2025, increasing production capacity by about 1.5 times.



The extremely high-purity silicon nitride produced by UBE's proprietary manufacturing process is used to realize high-precision and high-durability ceramic products, which support the electrification of vehicles as bearing balls, etc.

World Demand for Silicon Nitride Powder



Note: Estimates by UBE based on various data

Steadily advancing capacity expansion and seizing future growth opportunities.

Outlook for FY2024 and Beyond, and Vision for 2030

Outlook for FY2024 and Beyond

- Although the growth of the xEV market is slowing down slightly, there is strong interest in UBE's silicon nitride powder.
- For bearing applications, the need for silicon nitride balls is increasing, mainly for high-end vehicles.
- For substrate applications, high-strength silicon nitride that can withstand thermal stress and enable thin designs is essential due to the rise in operating temperatures of power semiconductors.

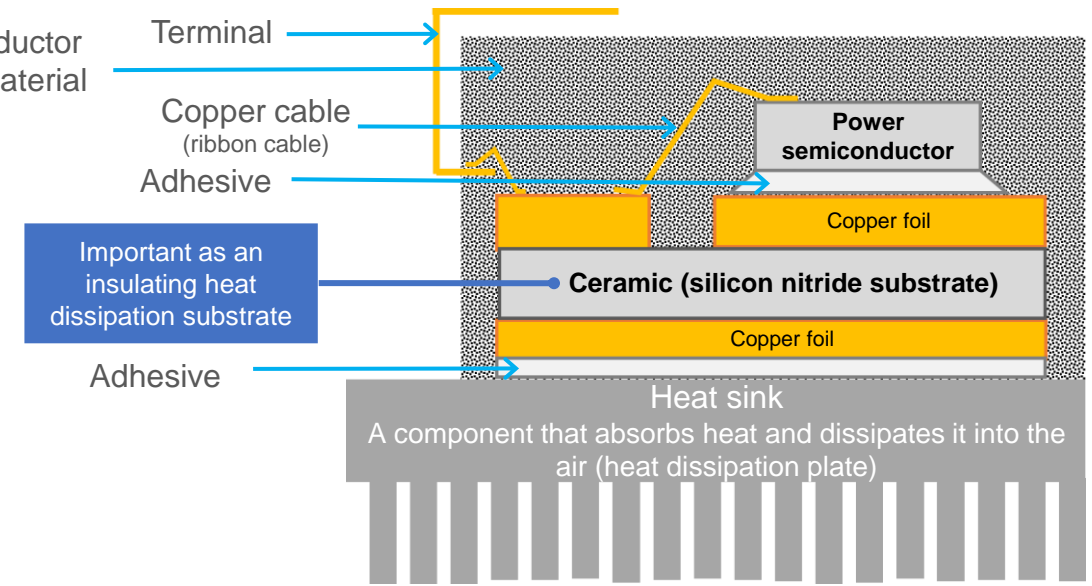
Vision for 2030

- Securing the strong demand expected for bearing and substrate applications in line with the growth of the xEV market.
- Meeting the expanding demand through appropriate production facility planning.
- Environmentally friendly products will increase by approximately three-fold (compared to FY2023).

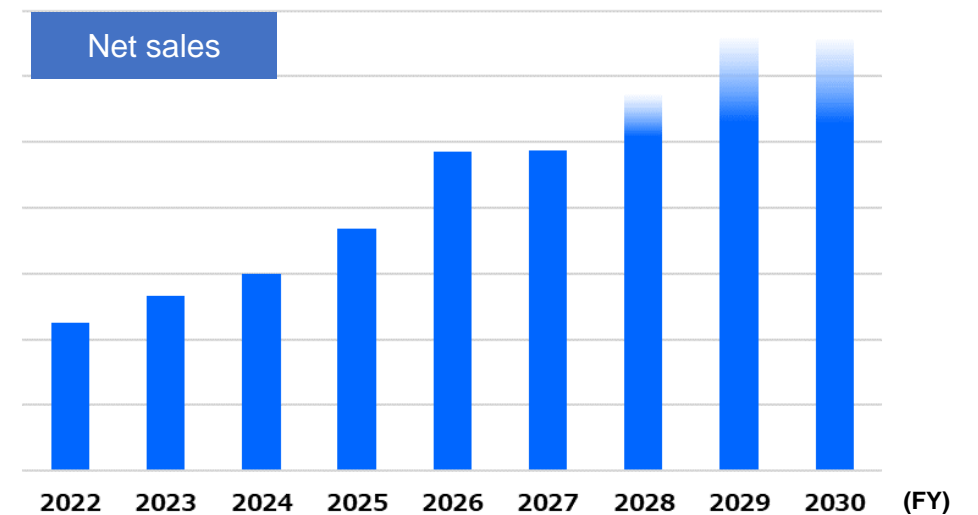
Future Strategies

- Maximize the productivity of existing facilities, focus supplies to the expanding bearing and substrate applications, and connect to the production increase (second plant) in the second half of FY2025.
- Even after the production increase, UBE is planning further increases in line with demand to satisfy market requirements.

Semiconductor sealing material



Application example of ceramic (silicon nitride) substrates in xEV power semiconductor modules



Specialty Business Strategy

Expansion of C1 Chemicals in North America

- Decided to construct a DMC/EMC plant in the U.S. as a new base that drives the UBE Group's global growth.

Project Overview

- Construct a DMC/EMC plant in Louisiana, USA, which will be the country's first, with an annual production capacity of 100,000 tonnes of DMC and 40,000 tonnes of EMC, derived from DMC.
- The total capital investment will be approximately USD 500 million, with completion of construction scheduled for July 2026 and operations expected to begin in November 2026.
- Strengthen cost competitiveness by manufacturing CO inhouse from inexpensive natural gas and maximizing the utilization of U.S. investment promotion policies.
- DMC and EMC are key components in lithium-ion batteries electrolyte solvents. DMC is also used as a developing solution in semiconductor manufacturing processes and low environmental impact solvent.

The U.S. manufacturing and marketing company

UBE C1 Chemicals America, Inc. (Established in November 2023)

Location: Near New Orleans, Louisiana

Capital: USD 200 million (planned)

Shareholder: UBE CORPORATION AMERICA INC. 100%
(U.S. holding company wholly owned by UBE)

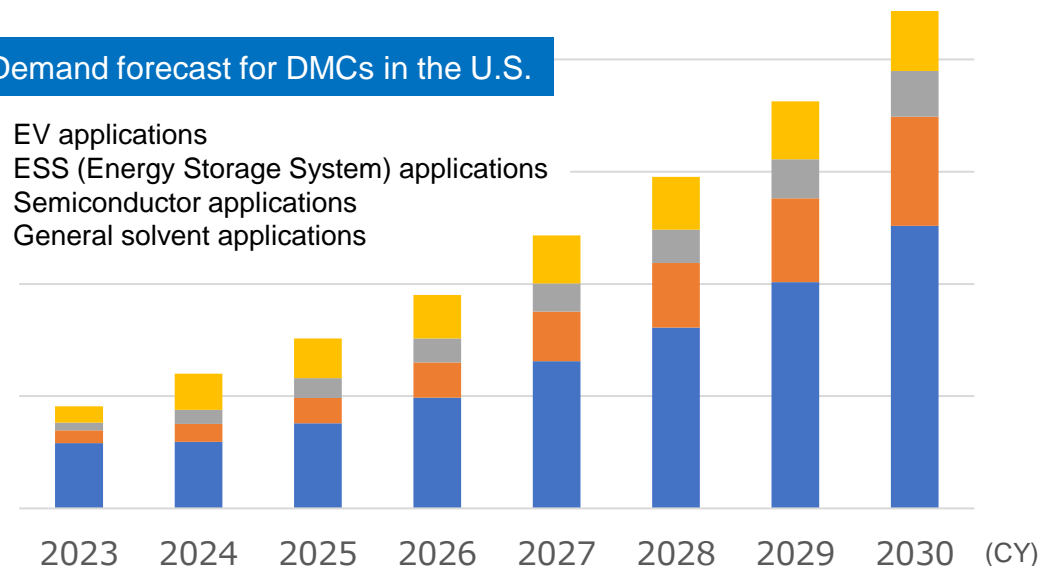
Number of employees (at operation): Approximately 60



Louisiana offers good access to U.S. electrolyte manufacturers. The new plant will benefit from inexpensive natural gas, services from the industrial park, and riverboat and rail transportation networks.

Demand forecast for DMCs in the U.S.

- EV applications
- ESS (Energy Storage System) applications
- Semiconductor applications
- General solvent applications



Note: Estimates by UBE based on various data

Strategy toward 2030

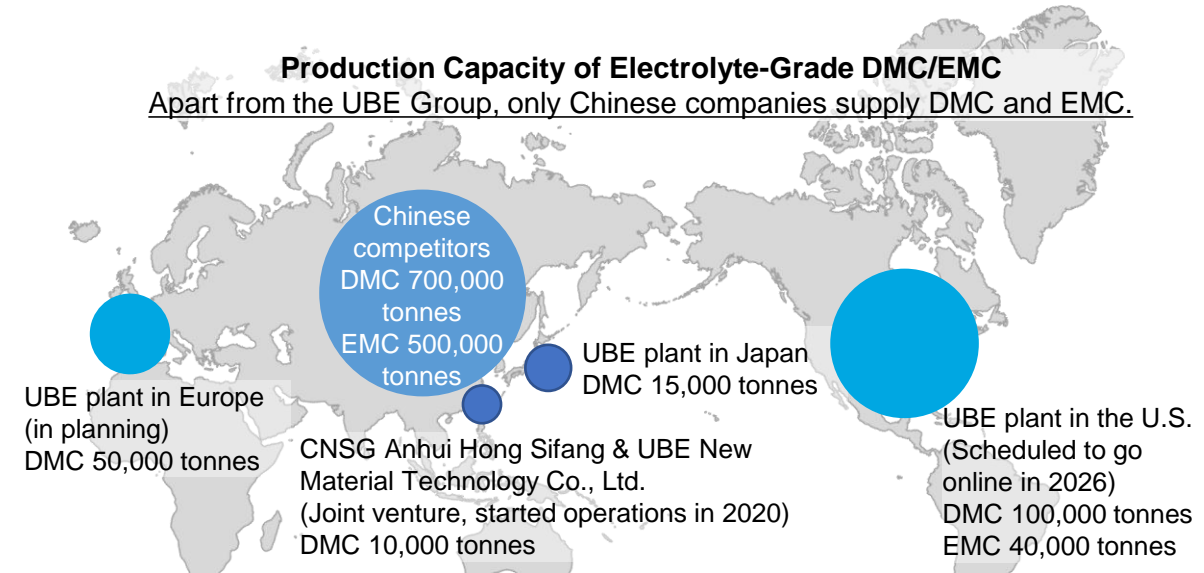
- Secure a market leader position as the only DMC/EMC supplier in the U.S.
- In the future, plan to construct a polycarbonate diol (PCD) plant, positioning it as a manufacturing and technical service base for the high-performance coatings business in North America.
- Following North America, consider constructing a DMC 50,000-tonne facility in Europe. Responding to customers' local production needs, establish a supply system at three bases in Asia, North America, and Europe.
- In China, expand the licensing business for DMC and EMC, following the licensing business for DMO and MEG.
- The outlook for the entire C1 chemical chain, including the high-performance coatings business, is net sales of ¥60-80 billion in FY2030.

Advantages of UBE's DMC

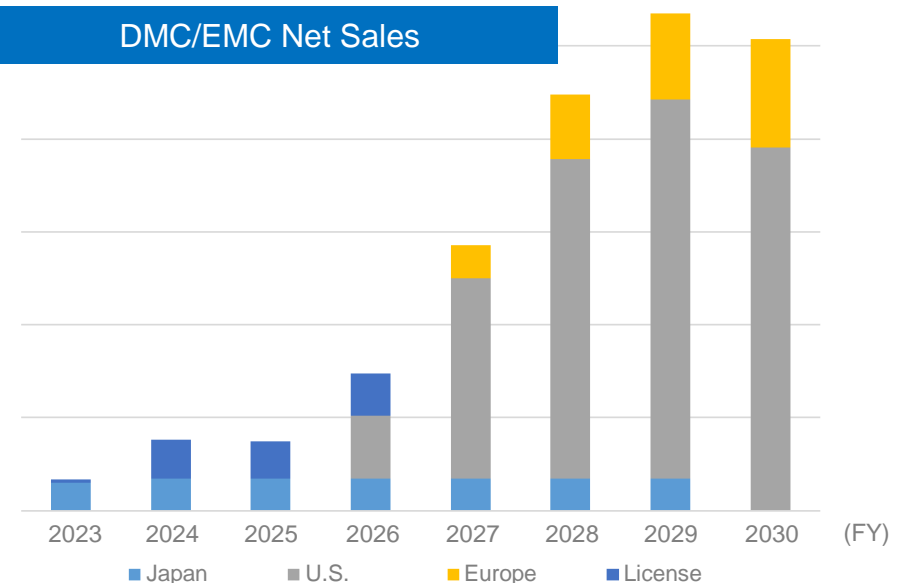
- Unlike competitors' manufacturing processes that use ethylene-derived raw materials (dependent on naphtha crackers), UBE's process uses CO and methanol as the main raw materials. This allows for greater freedom in plant location and the ability to obtain DMC as the sole target product.
- High-purity DMC suitable for electrolyte and semiconductor applications can be obtained.
- Carbon neutrality will be possible in the future by utilizing bio-methanol, green methanol, etc.

Production Capacity of Electrolyte-Grade DMC/EMC

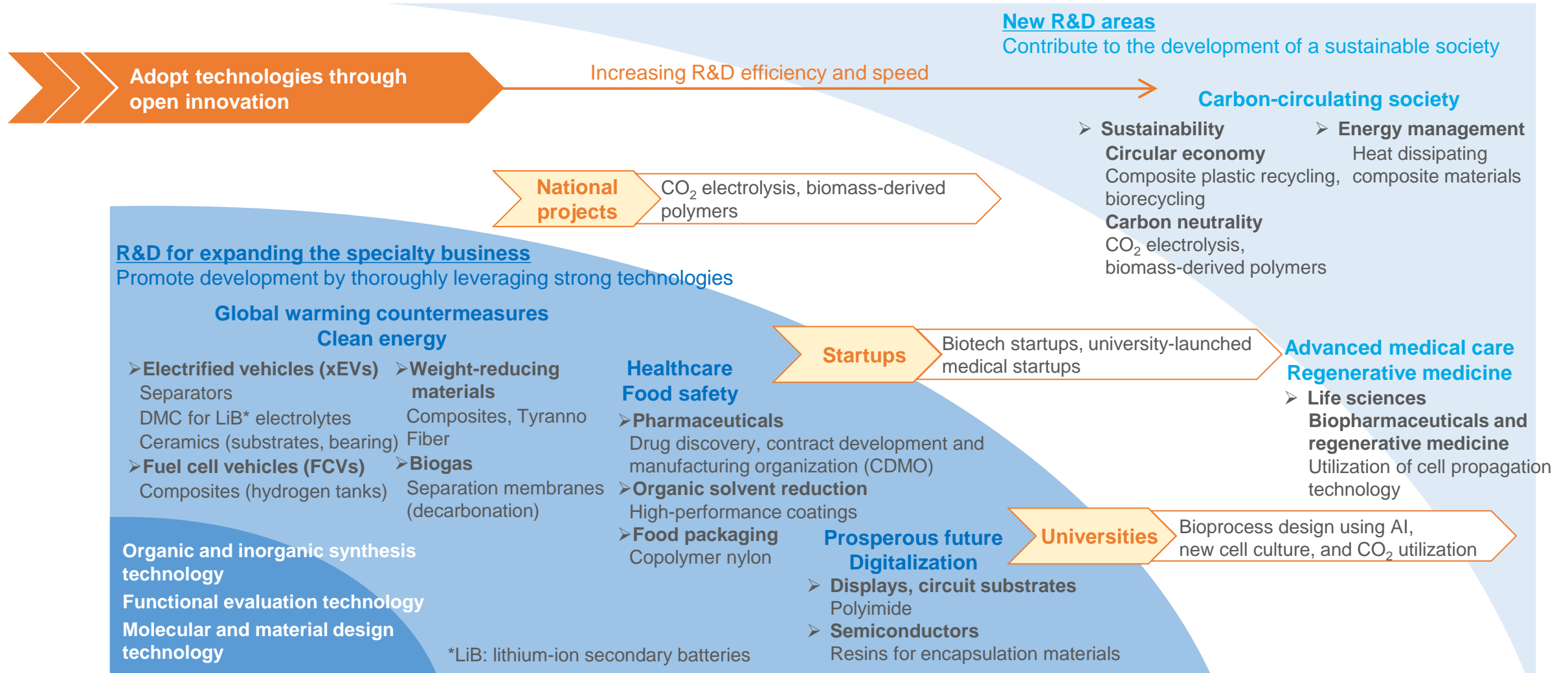
Apart from the UBE Group, only Chinese companies supply DMC and EMC.



DMC/EMC Net Sales



- Focusing on creating new core competencies to support sustainable growth.
- Consolidating research themes in areas where differentiation can be expected and establishing strong competitive advantages through sufficient technological enhancement.
- Setting technology development pipelines based on forecasts from current businesses and backcasting from the future.





ESG and Digital Transformation (DX) Initiatives

Steadily implement strategies in three priority areas

Numerical Targets	GHG emissions (compared to FY2013)	FY2030 target: 50% reduction	FY2023 results: 23% reduction
	Percentage of net sales comprising environmentally friendly products and technologies	FY2030 target: 60% or more	FY2023 results: 47%

1. Addressing climate change (carbon neutrality)

UBE Group's GHG reduction target by FY2030 was approved by SBTi (November 2023)

Scopes 1 and 2 FY2030 target: 45% reduction (compared to FY2021)
Scope 3 FY2030 target: 25% reduction (compared to FY2021)

The U-BE-INFINITY™ environmentally friendly product brand released (April 2024)

The brand represents environmentally friendly products and technologies developed by the UBE Group that demonstrate particularly outstanding positive environmental impacts to deliver added value.



Logistics Initiatives

- Promoting modal shift
- Obtained Eco-Rail Mark certification on November 10, 2023

2. Contributing to a circular society (circular economy)

Four UBE Group companies obtained ISCC PLUS certification

The following Group companies, which have obtained certification, are working on the production and early sale of certified products using circular and biomass raw materials, as determined by the mass-balance method.*1

UBE CORPORATION EUROPE S.A.U., UBE Elastomer Co. Ltd. (Head Office and Chiba Factory), THAI SYNTHETIC RUBBERS COMPANY LIMITED (Rayong Factory), UBE Taiwan Co., Ltd.*2

*1 Mass balancing is a chain of custody option in which certified and non-certified materials are mixed physically, but kept separate on a bookkeeping basis. It allows the attribution of the circular and/or biomass raw material to the final products via verifiable bookkeeping and ensures the full traceability through the entire supply chain.

*2 Obtaining trader certification enables handling of all products recognized by ISCC PLUS.

Launch composite products made with recycled carbon fibers

Decided to invest in *amu* Inc. which develops upcycled products from waste fishing nets

Repol S.L.U. obtained recycled content certification for a polyamide grade

3. Contributing to nature conservation and restoration (Nature Positive)

Reduce emissions of chemical substances and external landfill disposal

Install equipment to prevent wastewater runoff and enhance wastewater monitoring equipment

Conduct initiatives for reducing water consumption per unit of production (at key business sites outside Japan)

Conduct engagement with primary suppliers

Conduct initiatives for recycling waste plastics at business sites

Exterminate designated invasive species at business sites

Social Initiatives to Support Growth

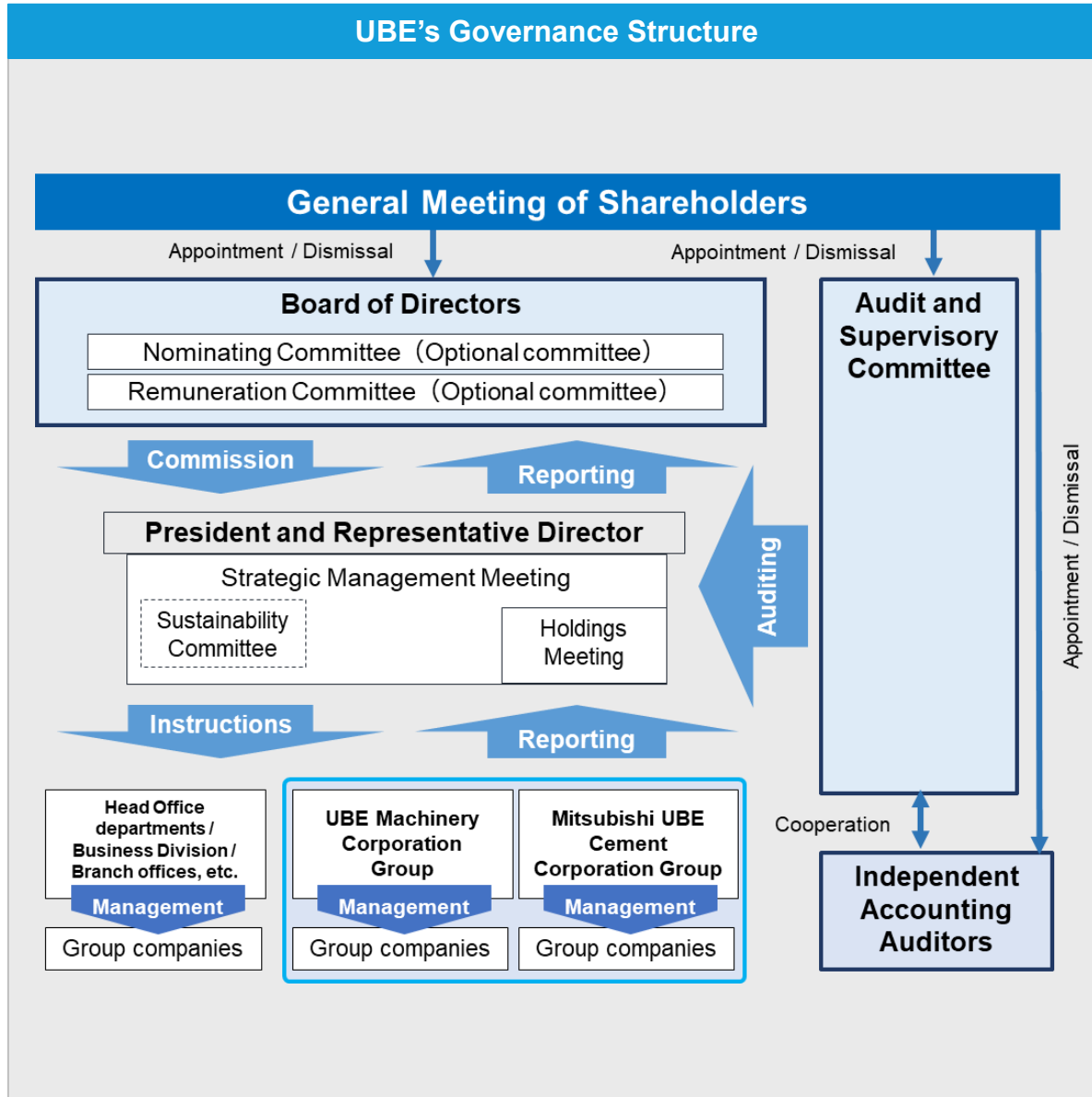
Enhancing Human Capital for Sustainable Growth

■ Addressing diversity, equity, and inclusion as a top priority issue to enhance human capital

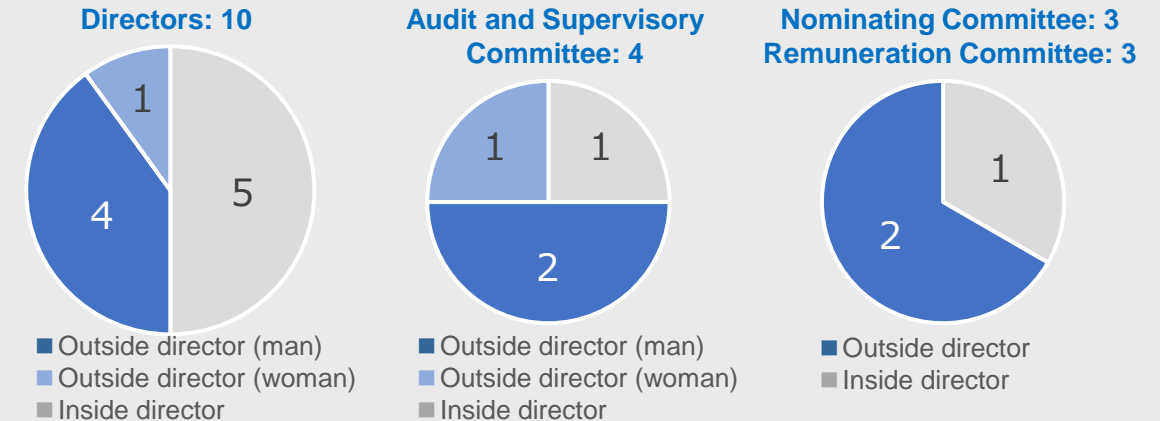
FY2023 Initiatives and Results	FY2024 Targets	FY2030
<p>1. Providing greater opportunities for women (On consolidated basis in Japan)</p> <p>Percentage of women in the workforce 15.0%</p> <p>Percentage of women in management positions 4.6%</p>	<p>18%^{*1}</p> <p>6%</p>	<p>Providing greater opportunities for women (On consolidated basis in Japan)</p> <p>Percentage of women in the workforce: 30%</p> <p>Percentage of women in management positions: 10%</p>
<p>2. Mid-career hires and non-Japanese recruits (On consolidated basis in Japan, generalist positions)</p> <p>Percentage of mid-career recruitment in the workforce 36.1%</p> <p>Number of non-Japanese recruits 7</p>	<p>50% or higher</p> <p>Multiple people</p>	<p>Continuing active recruitment of mid-career and non-Japanese employees, diverse human resources including specialists and rehired retirees play active roles</p>
<p>3. Enhancing measures for specialists and rehired retirees</p> <p>Increased timely recruitment of highly skilled and work-ready personnel in line with business strategy, and revised reemployment system for rehired retirees.</p>	<p>Enhancing specialist system, increasing highly specialized mid-career hires, and improving measures for rehired retirees</p>	
<p>4. Creating comfortable and motivating workplaces and increasing employee satisfaction</p> <p>(Figures are on consolidated basis, measures are on non-consolidated basis)</p> <p>Percentage of eligible men taking child-care leave 99%</p> <p>Percentage of eligible employees taking annual leave 81%</p> <ul style="list-style-type: none"> Expanded internal recruitment system, started considering an in-house side job system Established life event support leave and a career consultation office <p>Using the Health and Productivity Management Questionnaire</p> <p>Promoting DX in HR</p>	<p>Improving employee satisfaction (in-house side job system, etc.)</p> <p>Improving work engagement</p> <p>Improving the workplace through the use of stress check results, etc.</p>	<p>Human resources function enhancement</p> <ul style="list-style-type: none"> Promoting career ownership initiatives Visualizing talent portfolio Reskilling to cultivate digital expertise Organizational performance optimization Global talent management
<p>5. New initiatives for creating innovative corporate culture</p> <ul style="list-style-type: none"> Implemented measures to improve understanding of diversity, equity, and inclusion for Group companies Improved working conditions for rehired retirees Prepared a personnel system booklet 	<ul style="list-style-type: none"> Enhancement of human resources related to R&D and intellectual property Personnel system reform, introduction of talent management system 	<p>Vision for 2030</p> <p>Fusion of diverse technologies, knowledge, and perspectives</p> <p>Creation of innovation</p>

*1 Revised from the previous target of 15%

UBE's Governance Structure



Composition of the Board of Directors and Committees (as planned after this year's General Meeting of Shareholders)



*The Chair of the Board of Directors is a non-executive inside director, and the chair of each committee is an outside director.

*All outside directors are designated as independent directors.

Key Issues and Initiatives in FY2023

Issues

- Enhancing monitoring of the implementation status of key management issues and promoting initiatives with a sense of speed.
- Continuously improving the internal control and risk management systems of the entire group and strengthening supervision.
- Strengthening supervision of the operation of governance systems for the machinery business and cement-related business.

Initiatives

- Strengthened prior explanations and provision of summaries on important matters to ensure efficient and effective discussions at Board of Directors meetings.
- Conducted accurate supervision based on periodic reports on (1) internal control and risk management, including compliance and information security, and (2) the current status and measures of the machinery and cement-related businesses.

DX to Drive Growth

Enhancing Corporate Value and Creating Customer Value by Promoting DX **UBE** / UBE Corporation

- Increasing theme areas and utilizing digital technologies to develop company-wide business reform and value creation promotion activities.

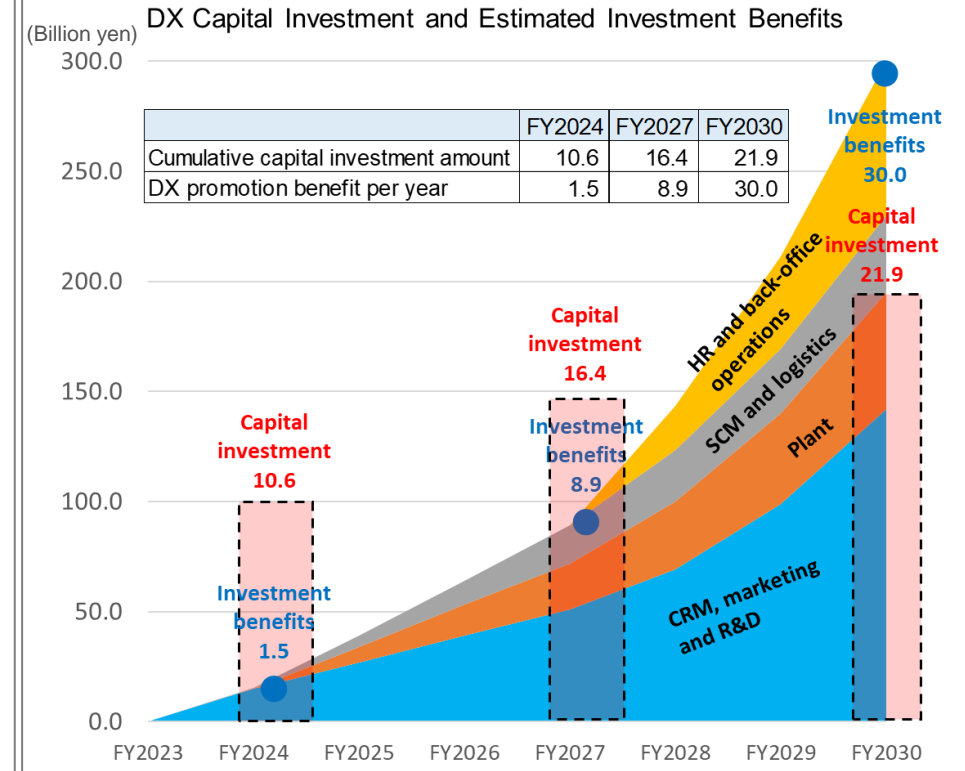
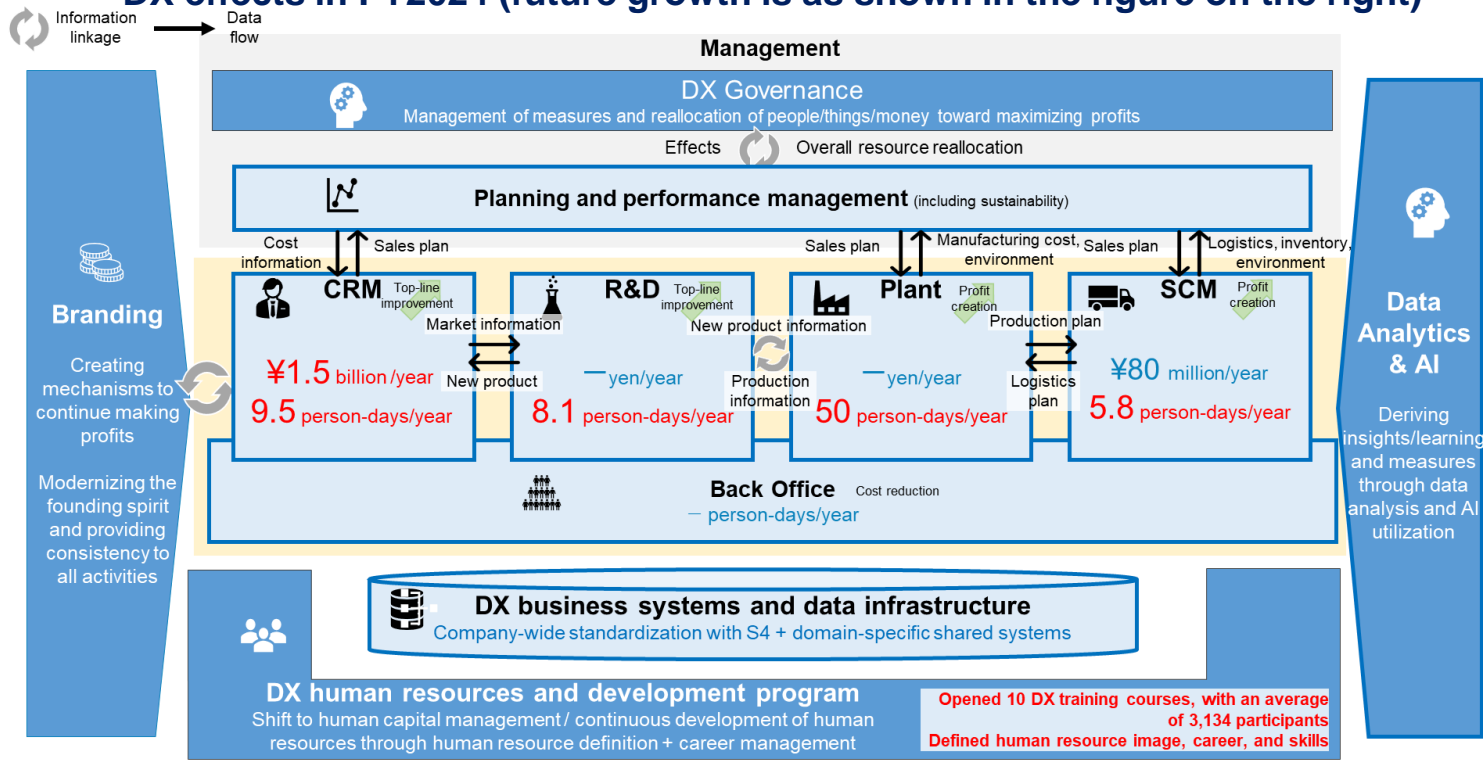
Digital Transformation in the UBE Group

Business Transformation with Digital

10 DX Themes

- Smart Factory, 2. Digital Marketing, 3. Velocity R&D, 4. Digital Management, 5. Digital SCM, 6. Digital ESG, 7. Digital Back Office, 8. Digital HR, 9. Branding, and 10. Data Analytics & AI

DX effects in FY2024 (future growth is as shown in the figure on the right)



Investment amount from FY2022 to FY2030: Approx. ¥22 billion, including ERP (S/4) renewal

→ Estimated profit contribution from DX investment (return): Approx. ¥30 billion/year in FY2030

The background features a complex network diagram with numerous nodes and connecting lines, rendered in a light blue color against a gradient background. The nodes are small circles, and the lines are thin, creating a web-like structure that suggests connectivity and data flow.

VII

Growth Strategy by Business

- **Separators: Expand sales by strengthening competitiveness in xEV applications and expand into non-vehicle applications where the characteristics of dry-type separators can be leveraged.**

Business Conditions and Initiatives in FY2023

Business Conditions

- The global trend toward decarbonization has prompted the electrification of automobiles and a growing need for energy storage systems (ESS) due to the widespread adoption of renewable energy generation.
- The shortage of components such as semiconductors has been resolved, and xEV markets are steadily recovering.

Initiatives

- Expanded sales by securing orders from existing customers for HEV applications and acquiring new projects.
- Consolidated into cost-competitive large-scale production lines and pursued quality improvements.

Future Strategies

FY2024 Strategies

- Ensure the successful launch of newly acquired projects for HEV and non-vehicle applications.
- Start construction of new facilities and pursue further quality improvements.

Strategies for FY2025 and Beyond

- Increase production volume by putting new facilities into operation and expand sales through further cost reduction.
- Accelerate the development of applications in the next-generation xEV and non-vehicle markets by developing new products leveraging the characteristics of dry-type separators, aiming for business expansion.

- **Composites: Aim to enhancement as specialty business and expand globally through the development of new composite fields.**

Business Conditions and Initiatives in FY2023

Business Conditions

- Demand for automotive applications gradually recovered after bottoming out in the first half of FY2023.
- Demand for plastic magnets and building material applications remained sluggish due to the stagnation of China's economy.
- The need for environmentally friendly products increased.

Initiatives

- Installed equipment for the 4th compounding machine in Thailand.
- Entered the recycling business by taking a stake in a venture company (*amu Inc.*) that recovers discarded fishing nets.

Future Strategies

FY2024 Strategies

- Accelerate the shift to growth areas (xEV, environmental plastics) and develop new value-added products.
- Promote global expansion and local production for local consumption of existing value-added products, including the vertical start-up of the 4th compounding machine in Thailand.
- Develop and launch environmentally friendly products utilizing biomass-derived nylon and discarded fishing nets.
- Develop new products and grades with an expanded resin lineup and expand the business.

Strategies for FY2025 and Beyond

- Strengthen the market-in approach through further capacity expansion and development function enhancement at global locations.

- **High-performance coatings: Increase capacity in line with market expansion. Promote marketing through the development of environmentally friendly products.**

Business Conditions and Initiatives in FY2023

Business Conditions

- PCD: Europe and Japan are mature markets, but Asia continued to grow, and North, Central, and South America are developing markets.
- PUD: The shift toward environmental compliance, such as increased demand for water-based and solvent-free paints due to stricter regulations on VOCs, etc., mainly in China, continued. The PUD market expanded.

Initiatives

- PCD: Completed capacity expansion of PCD in Thailand (+4,000 tonnes) and started commercial operation in 2023. Expanded product grades to meet needs and established a sales expansion system in the Asian market.
- PUD: Development and sales expansion of printing ink applications utilizing a development lab base in China.

Future Strategies

FY2024 Strategies

- PCD: Achieve full operation of all three PCD manufacturing lines in Thailand. Continue to expand sales of PCD in the North, Central, and South American markets.
- PUD: Existing capacity is full due to expanding demand, mainly in Asia. Planning to increase production by 700 tonnes through debottlenecking in Japan. As a first step, execute a 200-tonne production increase in FY2024. Continue to develop high-performance grades that are solvent-free and do not contain regulated substances (pyrrolidone, organotin).

Strategies for FY2025 and Beyond

- PCD: Further expand capacity in Thailand to align with the growth of the Asian market and plan for a new plant in North America in conjunction with the expansion of the North American C1 business. Ensure UBE's top world market share through global capacity expansion.
- PUD: In addition to the 500-tonne debottlenecking in Japan, consider establishing a new plant in Thailand.

- **Pharmaceuticals: Establish a highly profitable structure by improving profitability in the small molecule domain and acquiring new modalities such as nucleic acid drugs.**

Business Conditions and Initiatives in FY2023

Business Conditions

- While small molecule therapeutic drugs are growing gradually, new modalities (treatment methods), such as nucleic acid drugs, gene therapy, and cell therapy, are emerging.
- Cost increases due to sustained high raw material and fuel prices caused by international political instability, and the weak yen.

Initiatives

- Deepening collaboration with API Corporation in manufacturing, marketing, and engineering.
- Started Phase 1 clinical trial for SSAO/VAP-1 selective inhibitor licensed exclusively to Novo Nordisk.

Future Strategies

FY2024 Strategies

- Maximize revenues from the fifth pharmaceutical plant, a manufacturing facility for low-volume, high-potency active pharmaceutical ingredients.
- Achieve complete integration and improve business operation efficiency through the absorption of API Corporation.

Strategies for FY2025 and Beyond

- Continue the early licensing model and steadily obtain milestones.
- Launch a nucleic acid pilot facility (first half of FY2025) and start contract manufacturing of developed products.
- Enter new business areas in the life science field based on polyimide porous membrane technology.

Nylon Polymer Business Strategy

Caprolactam and Industrial Chemical Business Strategy

- **Nylon polymers: Develop and launch environmentally friendly products and optimize the Asian production system.**

Business Conditions and Initiatives in FY2023

Business Conditions

- Demand for food packaging film applications in Japan continued to stagnate.
- Price competition with Chinese products continued in the global market for general-purpose grades.
- Sales volume was supported by strong demand in emerging countries, particularly in South Asia.

Initiatives

- The transfer of production of copolymerization grades to Thailand progressed as planned.
- Improved profitability by optimizing the production system in Asia.
- Expanded sales in emerging markets with strong demand, such as India and Central and South America.

Future Strategies

FY2024 Strategies

- Strengthen cost competitiveness of copolymerization grades in Thailand and Spain and expand high value-added grades by diversifying raw material procurement sources.
- Launch environmentally friendly products (recycled and biomass raw materials, etc.).
- Develop the post-industrial recycling (PIR) business recovering remnant materials in the film sector in the European market.

Strategies for FY2025 and Beyond

- Continue specialization that is not exposed to price competition, with a focus on high value-added grades and environmentally friendly products.

- **Caprolactam: Reduce the impact of market conditions on profits and losses by shutting down key manufacturing lines.**
- **Industrial chemicals: Promote specialization through restructuring.**

Business Conditions and Initiatives in FY2023

Business Conditions

- Caprolactam and ammonium sulfate faced a challenging business environment due to fluctuations in raw material prices, oversupply mainly from China, and sluggish downstream demand.
- Demand for ammonia in downstream products in Japan remained sluggish. There is a global surplus trend, and market prices are returning to levels before the invasion of Ukraine.

Initiatives

- Further prepared to increase production of value-added ammonium sulfate in Spain.
- Expanded sales to existing customers and acquired new customers in western Japan for ammonia.
- Commenced capacity expansion of high-purity nitric acid plant. Withdrew from the sodium nitrate business.

Future Strategies

FY2024 Strategies

- Reduce exposure to market conditions by reducing caprolactam production in Japan.
- Improve the ratio of high value-added products by improving production efficiency in Japan of large-grain ammonium sulfate.
- Complete capacity expansion of high-purity nitric acid and start commercial operation. Consider further expansion investment.
- Formulate a procurement plan for stable supply of clean ammonia in conjunction with studying early shutdown of ammonia production.

Strategies for FY2025 and Beyond

- Expand the business of high value-added products by increasing production of large-grain ammonium sulfate.
- Expand the high-purity chemical solution business and promote specialization using high-purity nitric acid and high-purity aqueous ammonia as leverage.
- Install N₂O emission reduction equipment in Spain.

- **Elastomers: Speed up decision-making and implementation of measures through integration of manufacturing, marketing, and engineering.**

Business Conditions and Initiatives in FY2023

Business Conditions

- The supply and demand of raw material butadiene (BD) were tight due to low cracker operation rates, and BD market prices rose significantly in Q4.
- Demand for tires and resins, the main applications for BR, was sluggish.
- Various costs rose across the board due to the weak yen and high prices.

Initiatives

- Optimal production and optimal marketing through collaboration between plants.
- Obtained ISCC PLUS certification and started production of bio-based BR.
- Reopened the Malaysian plant (April 2023).

Future Strategies

- Continue safe and stable production.
- Minimize cost increases and secure profitability.
- Focus on specialization.
- Address global environmental issues.

- **Machinery**
Molding machines: Address equipment upsizing to meet the shift to xEV.
Industrial machines: Enter new environmental markets.

Business Conditions and Initiatives in FY2023

Business Conditions

- Molding machines: Capital investment in the automotive-related market increased due to the shift to xEV. Investment by Japanese companies was in full swing in the U.S., while China emphasized low prices and short delivery times.
- Industrial machines: Development and consideration of capital investment for carbon neutrality were in full swing. Biomass fuel transport equipment has run its course.

Initiatives

- Molding machines: Established a production system that keeps pace with the shift to xEV. Started integrated after-sales servicing for die casting machines, injection molding machines, and extrusion presses.
- Industrial machines: Took on the challenge of expanding markets, such as ammonia and offshore wind power, and built a track record. Increased profits through cost reduction.

Future Strategies

FY2024 Strategies

- Molding machines: Increase orders and production capacity for ultra-large die casting machine for Giga casting. Promote cost reduction and shorter delivery times, address recycling, and expand after-sales servicing business.
- Industrial machines: Strengthen after-sales servicing business by enhancing solutions-based offerings and providing support for third-party products. Secure orders by capturing spot projects using subsidies, etc.

Strategies for FY2025 and Beyond

- Molding machines: Deploy optimal production machines for the shift to xEV and create new products. Establish a system for maximum efficiency and higher sales and improve after-sales servicing quality.
- Industrial machines: Secure orders by capturing capital investment related to carbon neutrality. Further expand the after-sales servicing business.

Die Casting Machine Market

In recent years, EV manufacturers outside Japan have chosen die casting for the integrated molding of EV underbodies.

Purpose:

- Reduce manufacturing costs.
- Increase component rigidity with the three-dimensional structure characteristic of die-cast parts.

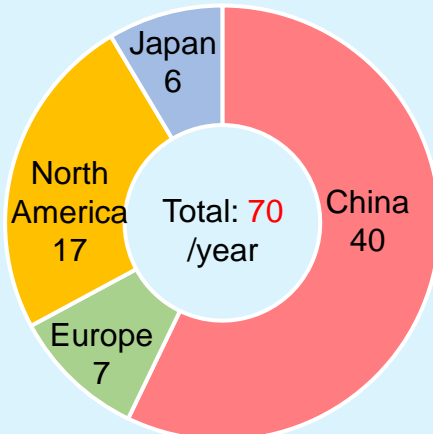
A European competitor took the lead, followed by European and Chinese manufacturers. The Giga die casting machine market has been formed.

Order Information of Leading Companies

Orders: Approximately 100 units worldwide; approximately 15 units are mass-producing auto parts (estimated by UBE Machinery)

Market Outlook

Forecast for FY2024 and Beyond (Estimated by UBE Machinery)



UBE Machinery targets mainly Japanese manufacturers and aims for a market size of 20 units/year.

(Reference) Changes in parts produced by die casting for Giga casting

For front underbody and rear underbody parts of the vehicle:

Number of parts	177 → 2
Manufacturing process	Press + Welding → Integrated die casting
Number of processes	84 → 2

Sales Strategy

● Strengths/Aims of UBE Machinery's Machines

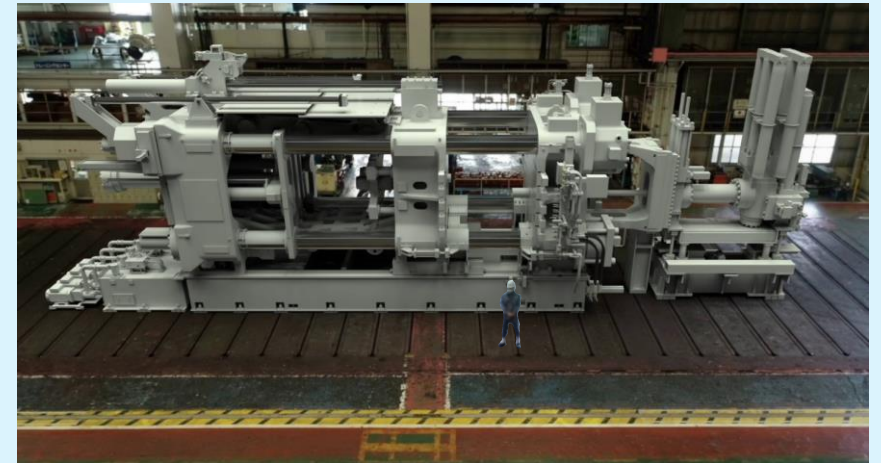
- ✓ Achieves high speed, high filling, and fast start-up with a proprietary injection mechanism.
- ✓ Offers reduced customers' cost of production calculated based on cycle time, operating rate, yield rate, and maintenance, in addition to reasonable initial investment.

● Inquiries/Order Status

- ✓ In negotiations with automobile manufacturers in and outside Japan and Tier 1 suppliers.

● Future Development Direction and Capacity Expansion Policy

- ✓ Planning large machines with a clamping force exceeding 6,500 tonnes.
- ✓ Decided to introduce machining equipment for in-house production of large parts.



In-factory assembly simulation

- In FY2024, the business will take steps to improve competitiveness, create new businesses, and strengthen efforts toward carbon neutrality.

Summary of FY2023 Performance

- Compared to FY2022, which posted a final loss due to cost increases caused by soaring energy prices and other factors both in and outside Japan, as well as a review of the production system, FY2023 achieved profitability (V-shaped recovery).
- The business in Japan saw a recovery in performance in the cement business due to the completion of a 5,000-yen price increase announced in response to rising costs such as soaring energy prices, and the effects of improvements such as the increased use of low-cost thermal energy.
- Business outside Japan saw a significant increase in profits year on year, mainly due to the smooth implementation of price increases in the U.S. ready-mixed concrete business.

FY2024 Performance Forecast

- **Business in Japan**
The company anticipates some factors that will reduce profits, such as rising logistics and material costs in the cement business and a decrease in electricity sales in the environmental energy business. However, overall operating profit from business in Japan is expected to remain at the FY2023 level due to the contribution of cement price increases throughout the year and further expansion of low-cost thermal energy use.
- **Business outside Japan**
Despite higher material prices and labor costs, the U.S. cement and ready-mixed concrete business expects operating profit at the same level as the previous year due to higher sales volume resulting from a recovery in demand in the Southern California region and further price increases. On the other hand, the profit of the Australian coal business is expected to decrease. As a result, overall operating profit from business outside Japan is expected to decline compared to FY2023.

Carbon Neutrality / Circular Economy Initiatives

- Promoting initiatives to achieve carbon neutrality by 2050 and the interim target of a 40% reduction in CO₂ emissions by 2030 (vs. 2013).
- Began the world's first ammonia co-combustion test with actual equipment in the cement manufacturing process.
(Adopted as a project to promote the construction of a carbon-neutral industrial complex in Yamaguchi Prefecture in FY2023)
- Began studying CO₂ storage and reuse from the cement manufacturing process with Osaka Gas Co., Ltd., and joint studies for CCS between Malaysia and Japan with Mitsui & Co., Ltd.

Mitsubishi UBE Cement Corporation Performance

(Billion yen)

Item	FY2022	FY2023	FY2024 (forecast)
Net sales	576.3	585.3	605.0
Of which, business outside Japan	140.1	178.1	195.0
Operating profit (loss)	(28.4)	45.7	43.0
Of which, business outside Japan	8.0	30.7	28.0
Ordinary profit (loss)	(25.8)	47.7	42.0
Profit (loss) attributable to owners of parent	(47.3)	24.6	21.0
Total demand for cement in Japan (million tons)	37.24	34.58	35.00
Coal price (USD/tonne)	356	142	180

*The above coal prices are reference indices and differ from actual procurement prices.

UBE *Transform Tomorrow Today*

The forecasts contained in this presentation are based on certain assumptions judged to be reasonable by the Company when preparing this report. Actual results can vary significantly from forecasts, due to changes in a wide range of conditions. These conditions can include the economic status of major markets, demand and supply of products, prices for raw materials and fuel, interest and foreign exchange rates, and other prevailing conditions that can impact the business results of the Company. ©2024 UBE Corporation. All Rights Reserved. Duplication or reuse of any of part of this document is expressly forbidden without the written consent of UBE Corporation.

Business Portfolio Segmentation	Target Businesses
<p>Specialty business Aim for further growth and expansion in business that can create added value and achieve high profitability based on the Group's core technologies capabilities and strengths in the value chain</p>	<p>Polyimide, separation membranes, ceramics, semiconductor gases, separators, composites, C1 chemicals, high-performance coatings, pharmaceuticals, phenolic resin</p>
<p>Basic business Aim to steadily improve and add to profits</p>	<p>Nylon polymers, caprolactam, ammonium sulfate, industrial chemicals, elastomers, polyethylene films, processed resin products</p>

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