

# VISION 2030

## Business Strategy Presentation

<b>Life &amp; Healthcare Solutions</b>	Business Sector President <b>TANAKA Hisayoshi</b>
<b>Mobility Solutions</b>	Business Sector President <b>KOMORIYA Atsushi</b>
<b>ICT Solutions</b>	Business Sector President <b>HIRAHARA Akio</b>
<b>Basic &amp; Green Materials</b>	Business Sector President <b>YOSHIZUMI Fumio</b>

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# **VISION 2030**

## **Business Strategy Presentation**

### **Life & Healthcare Solutions**

**TANAKA Hisayoshi**

田中 久義

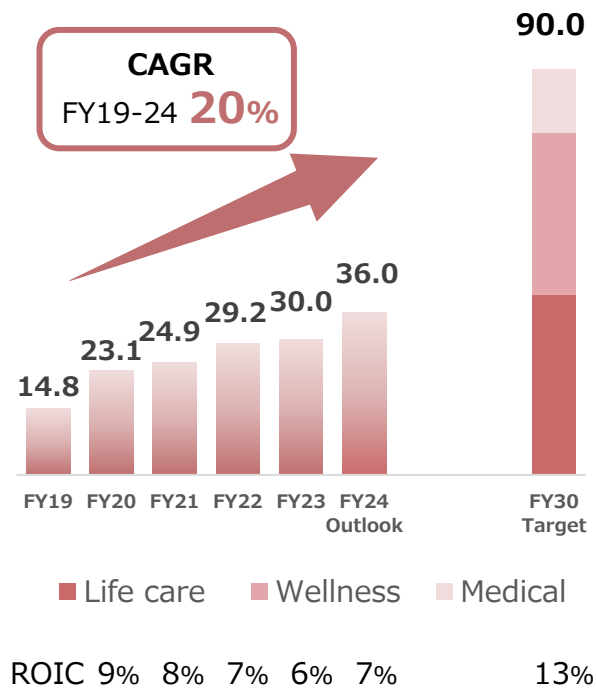
Managing Executive Officer,  
Business Sector President, Life & Healthcare Solutions Business Sector

June 14, 2024



## Providing solutions that contribute to life, health and comfortable lifestyles as our first pillar of earnings

(JPY bn)



**Rose Value™**

FY24 **76%** → FY30 **85%**

### Current state of businesses toward achieving VISION 2030 goals

#### Vision care

Stable business growth; increased MR™ capacity; expanded portfolio via the acquisition of Coburn

#### Oral care

Delayed business growth

#### Agrochemical products

Expanded pipeline via the acquisition of Meiji Seika Pharma's agrochemicals business  
Expanding overseas business for growth drivers

#### Nonwovens

Established Mitsui Chemicals Asahi Life Materials

#### Underlined :

Explained in CEO presentation

**Blue: Covered today**

### Environmental changes

**Overall: Stable market growth due to population growth and aging, greater health consciousness and demand for a stable food supply**

**Nonwovens:** Worsening competitive environment for hygiene materials and sluggish ICT-related demand

### Key priorities/direction

### Speeding up growth by investing further resources in growth businesses and turning around low-profitability businesses

**Vision care:** Accelerating business growth in key markets and pursuing next phase of capacity increase / Expanding the coating materials and equipment business

**Agrochemical products:** Expanding business by registering growth driver products in more countries and leveraging our active ingredients

**Oral care:** Drastically strengthening Kulzer's profitability

Growing sales of new products in key markets (Europe, Japan, U.S.) through further collaboration among Group companies

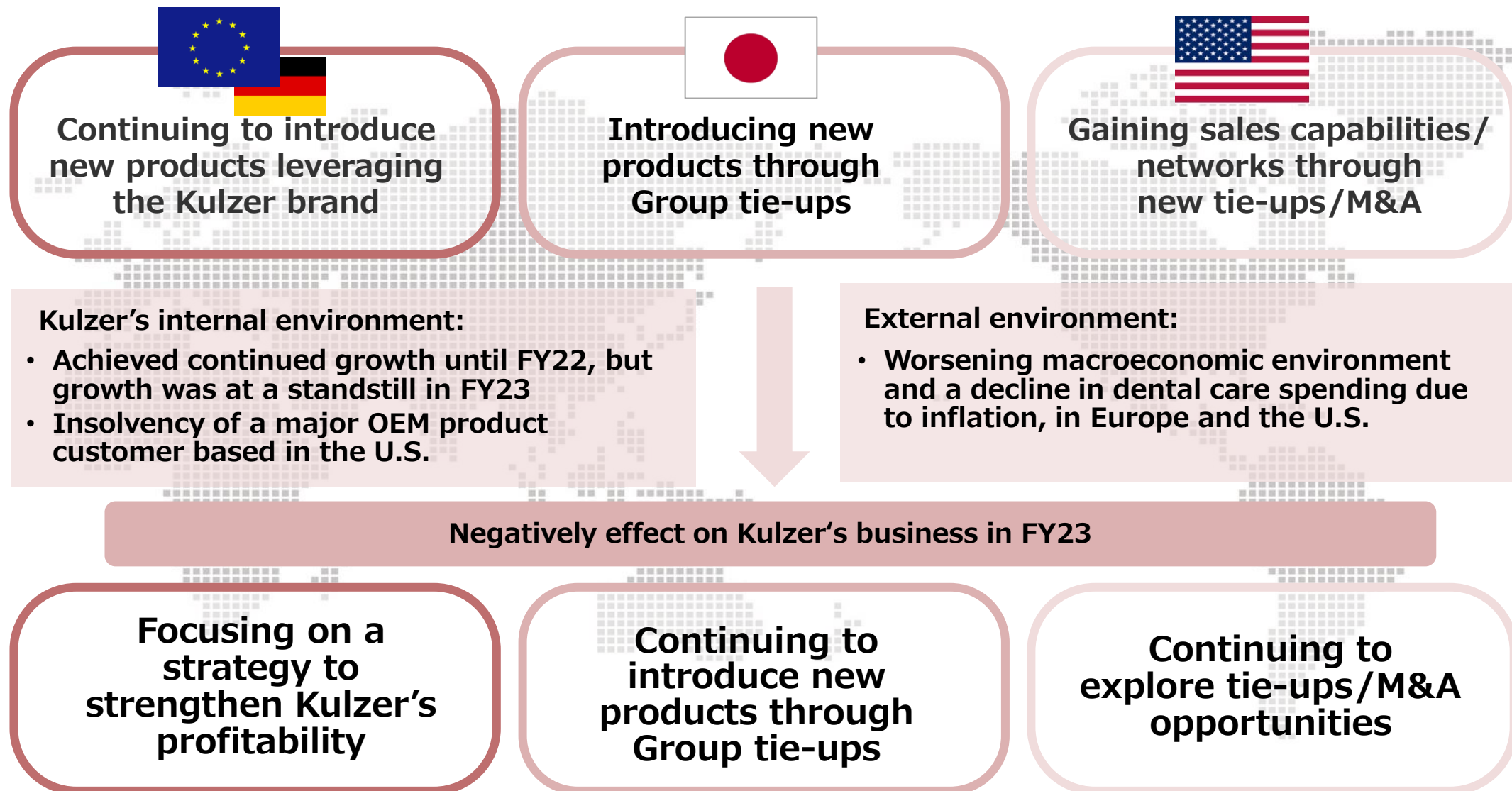
**Nonwovens:** Pursuing synergies from integration by bolstering and expanding industrial materials, as well as by optimizing production setups

**Personal care:** Bolstering the biochemicals business

**Medical business:** Promoting collaboration and strengthening partnerships with our investee and partner companies in the orthopedic surgery, examination and diagnosis sectors

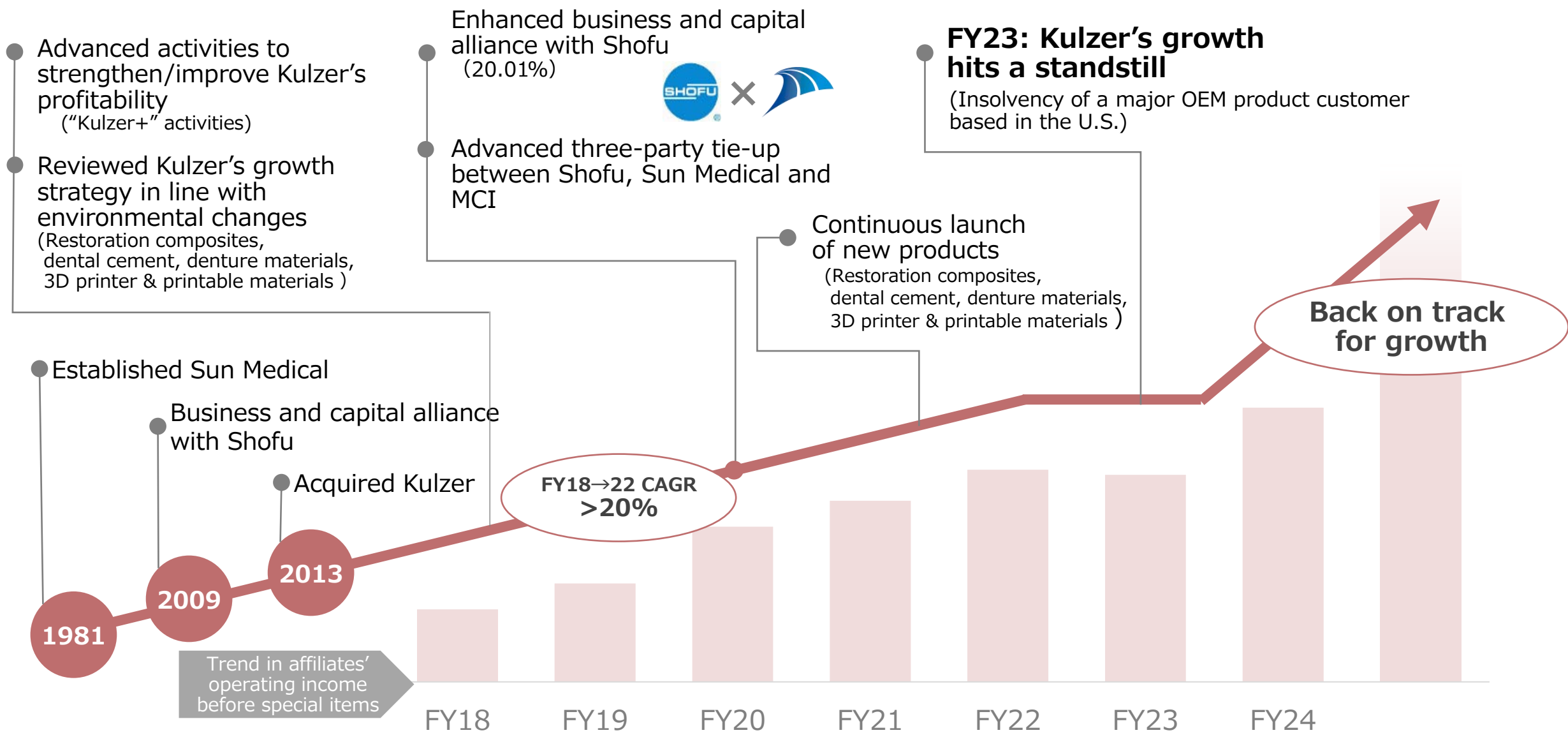


## Focusing on a strategy to strengthen Kulzer's profitability based on the current business environment





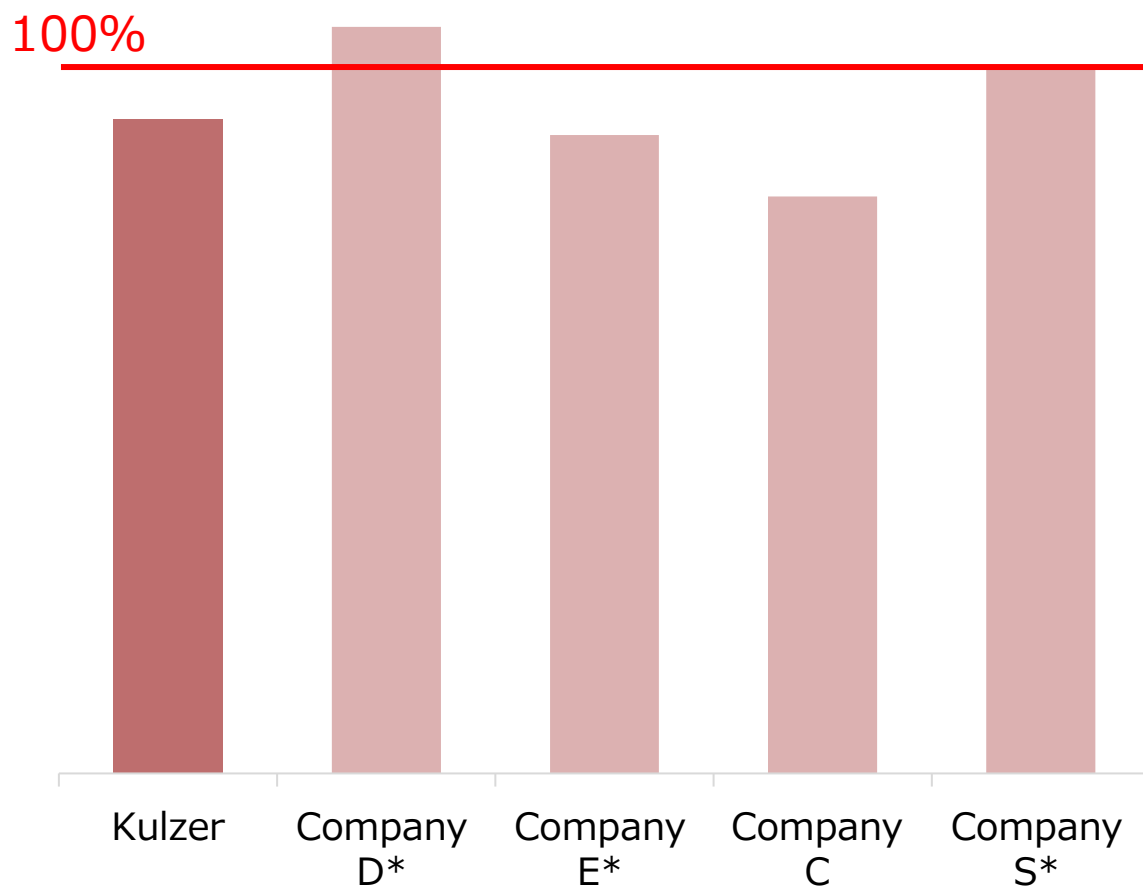
While our affiliates have been steadily increasing operating income before special items, growth is currently at a standstill





Dental material manufacturers across the board faced a growth standstill as a result of the external business environment in FY23

## YoY revenue growth rate of major Western dental material manufacturers (2023)



\*Revenue growth rate of division handling dental preservation products

**Dental care spending down in Europe and the U.S. due to the impact of inflation**

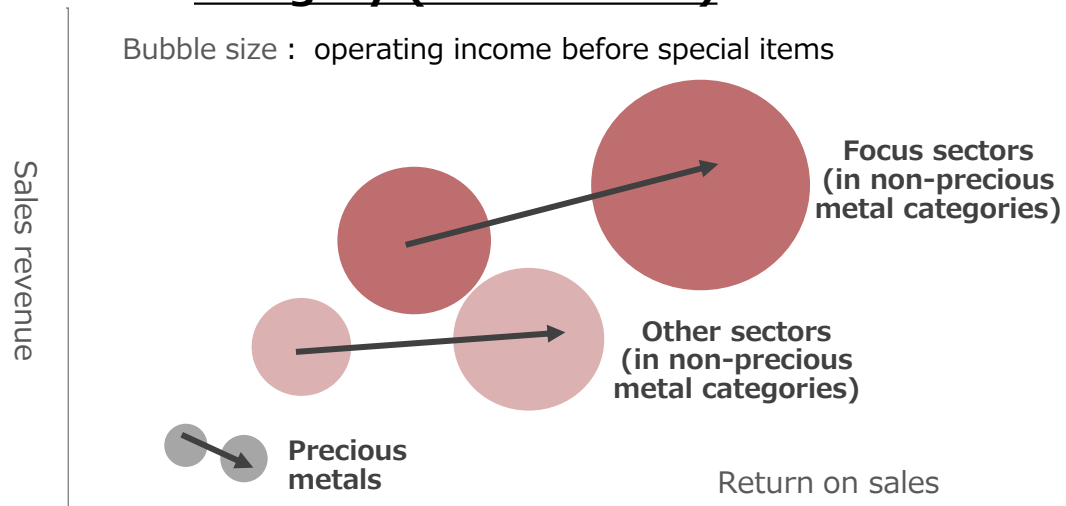
**Limited new investments in dental clinics in Europe and the U.S. due to worsened macroeconomic conditions**

**Companies' revenue impacted by cybersecurity issue at major global distributor of dental materials**

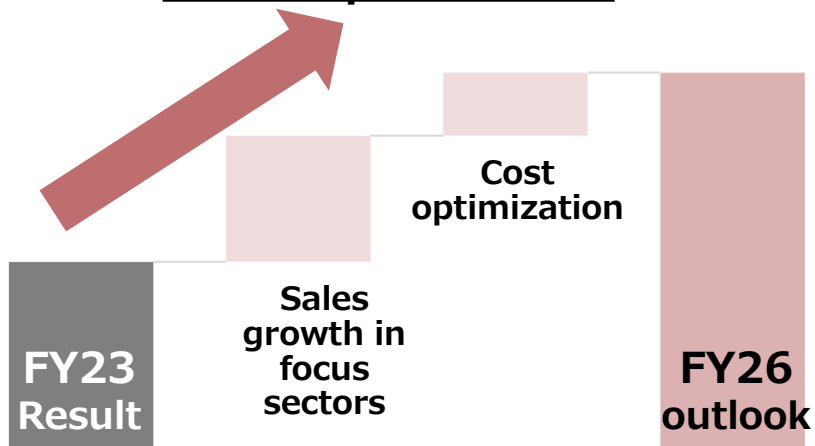


Drastically strengthening profitability by growing sales in focus sectors and optimizing costs

## Growth Image by Kulzer product category (FY23→FY26)



## Kulzer operating income before special items



## Strategy to strengthen Kulzer's profitability

### Sales growth in focus sectors

- Launching new products with high return on sales
- Concentrating investment of R&D resources & further collaboration among Group companies to speed up launch new products onto the market

### Product launches in FY23

- Restoration composites launched in European & U.S. markets
- Dental cement & bonding launched in Japanese market
- Increased sales of 3D printers & printable materials through business partnership with Japan's leading comprehensive dental care trading company

### Cost optimization through structural improvement

- Reducing costs via e.g. manufacturing process rationalization
- Further rationalization by reducing number of products

\* Focus sectors :  
Restoration composites, dental cement, denture materials, 3D printer & printable materials





## Some of our new product launches in focus sectors (for 2023)

### Europe/U.S.

#### Venus Pearl PURE (restoration composites)



Enables color matching with a patient's teeth using only a limited number of colors to make for more convenient treatment



2020



2022

Continuous development and European/U.S. market launches of new products leveraging the Kulzer brand

### Japan

#### ZEN Universal Cement & Bond (dental cement)



A user-friendly product that meets the needs of dentists by providing improved adhesive strength and a reduction in the number of tasks required during procedures



Joint development by  
Mitsui Chemicals  
Dental Group

Group-wide product development making use of MCI's monomer design and development technology, Sun Medical's product development capabilities and Kulzer's brand

#### Accuprint 3D 4.0 Pro/ 3D materials (3D printer & printable materials)



A specialized intelligent printer designed for the swift, easy creation of dental products

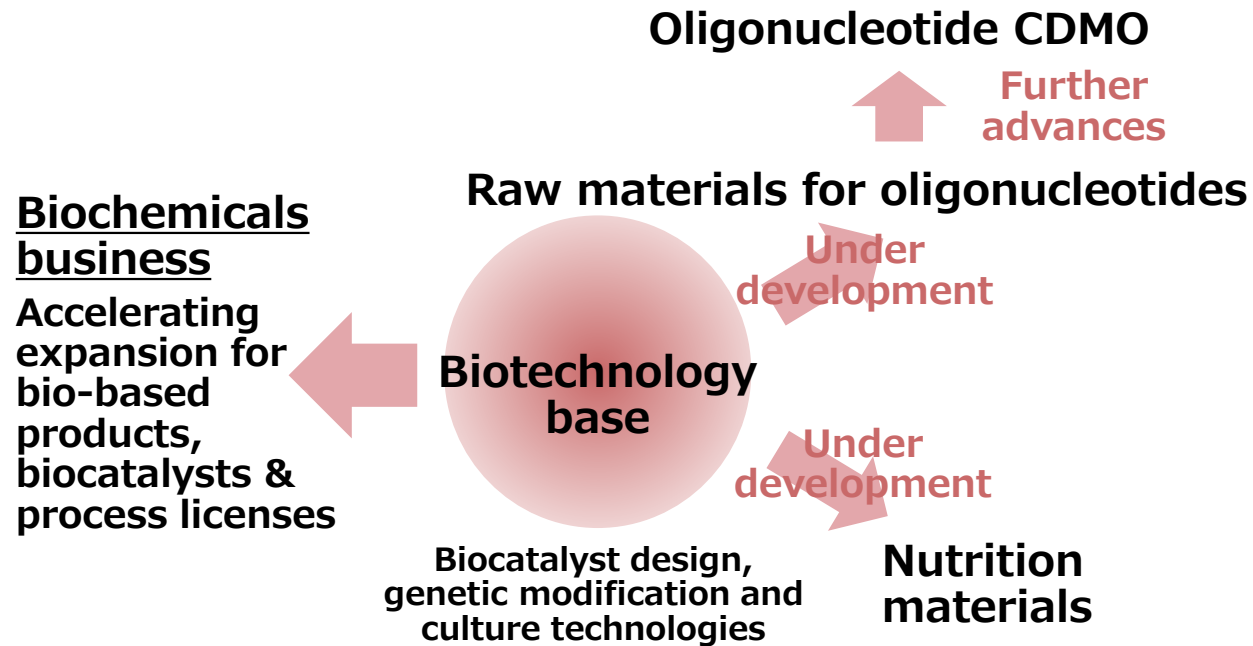


Increased sales of 3D printers & printable materials through business partnership with Japan's leading comprehensive dental care trading company

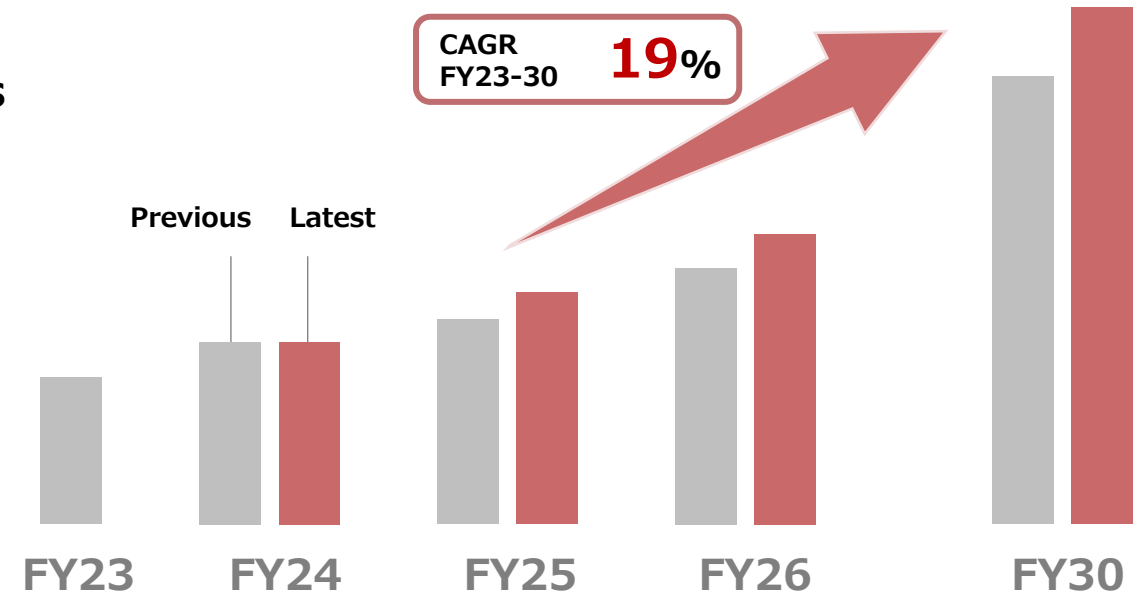




## Using our biotechnology base to accelerate the growth of our biochemicals business



### Biochemicals business sales revenue



#### Basic strategy

- Strengthening and expanding a biochemicals business primarily focusing on acrylamide
- Advancing into nutrition materials and raw materials for oligonucleotides

- Globally expanding licensing and biocatalyst sales for acrylamide, with a particular focus on growing oil & gas applications
- Expanding bio-based production sites (securing a site in India)
- Accelerating sales expansion via new biocatalyst development

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**VISION 2030**  
**Business Strategy Presentation**  
**Mobility Solutions**

**KOMORIYA Atsushi**

小守谷 敦

Managing Executive Officer

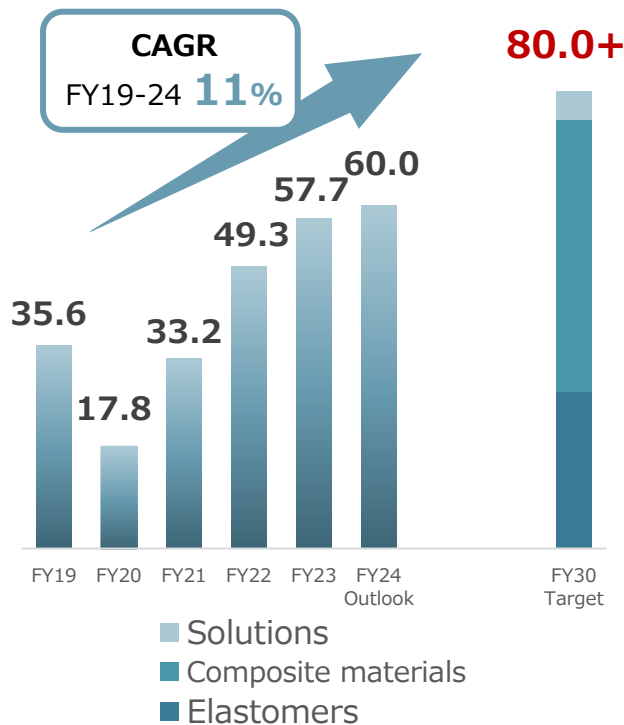
Business Sector President, Mobility Solutions Business Sector

June 14, 2024



## Providing unique materials, features and services to help solve social challenges and let us achieve sustainable business growth

(JPY bn)



ROIC 4% 8% 11% 12% 11% 15%

### Current state of businesses toward achieving VISION 2030 goals

#### TAFMER™ & compound products

Sales transition to a focus on growth markets and differentiation

#### Steady and timely investment in growth fields

TAFMER™, PP compounds, ADMER™, LUCANT™, MILASTOMER™, etc.

**Underlined :**

Explained in CEO presentation

**Blue: Covered today**

### Environmental changes

Recovery in automotive production volumes

Rise of Chinese OEM companies

Renewable energy market growth

Competitors opening new & additional facilities

Key priorities/direction

### Aiming to exceed our targets by steadily implementing our basic strategy while deftly navigating environmental changes

#### Pursuing expansion of our strong materials business

Further speeding up our sales transition to a focus on growth markets and differentiation

Making full use of PP compound production sites and strengthening collaborative efforts leveraging them

Cultivating new products and next-gen pillars of earnings

#### Strengthening our solutions business

Setting up new business models without delay

Stabilizing and further boosting earnings at ARRK

The growing trend toward EVs is expected to drive an increase in the use of plastic products

## Changes in plastic products amid the trend toward EVs

### ● Exterior

Lightweighting,  
improved textural qualities,  
aerodynamic characteristics

### ● Interior

Lightweighting,  
improved textural qualities,  
low odor, quietness



### ● Engine parts

### ● Combustion parts

### ● Electrical & drive systems

Fast charging & improved  
insulation

### ● Cooling system

Long-term reliability

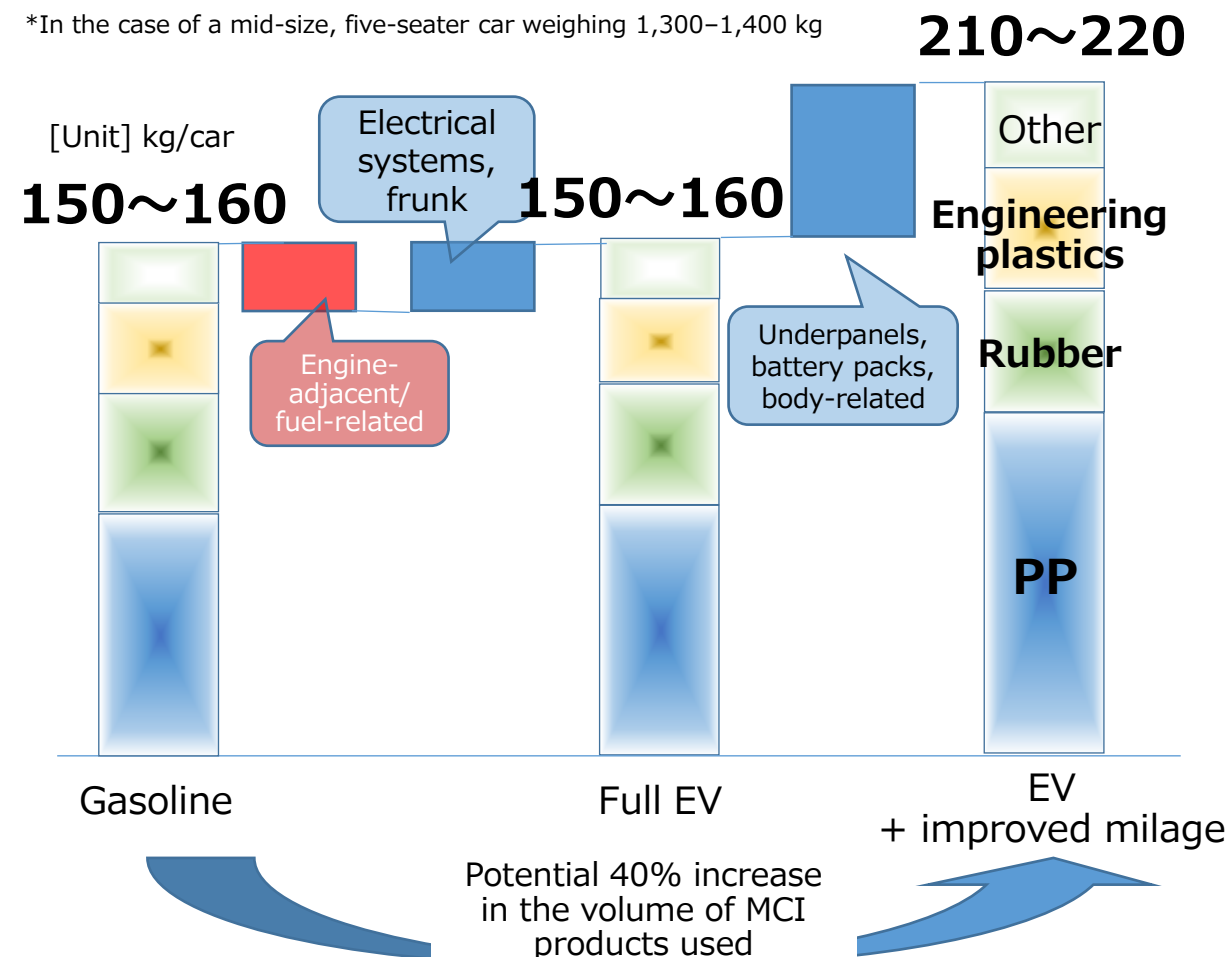
### ● Battery housing

Long-term reliability

### ● Frunk (front trunk)

## Plastic consumption by powertrain type

\*In the case of a mid-size, five-seater car weighing 1,300–1,400 kg



Focus on developing materials and solutions that can capture EV-specific needs

## Development structure

Differentiated products



Offering concepts



- Elastomers
- Composite materials
- New products  
(New composite materials,  
Carbon fiber-products)



## Production network

Full utilization of our production sites



### Battery packs

Flame-retardant PP-GF

### Cooling system

Performance compounds  
(ADMER™ etc)

- Lightweighting
- Reduced CO<sub>2</sub> emissions



### Plastic underpanels

PP resin, PP-GF

- Lightweighting



### Drive system

### xEV motor parts

- High heat resistance
- High voltage

Engineering plastics

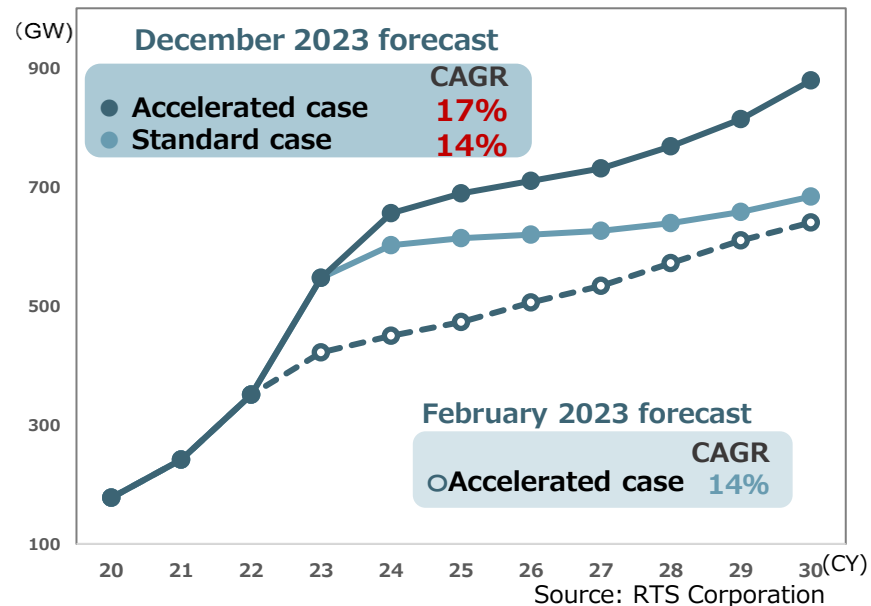


Examples

Making full use of MCI's assets in an effort to expand offerings for EVs



## Production volume of solar power modules



Significant growth in module production volume

## Measures going forward

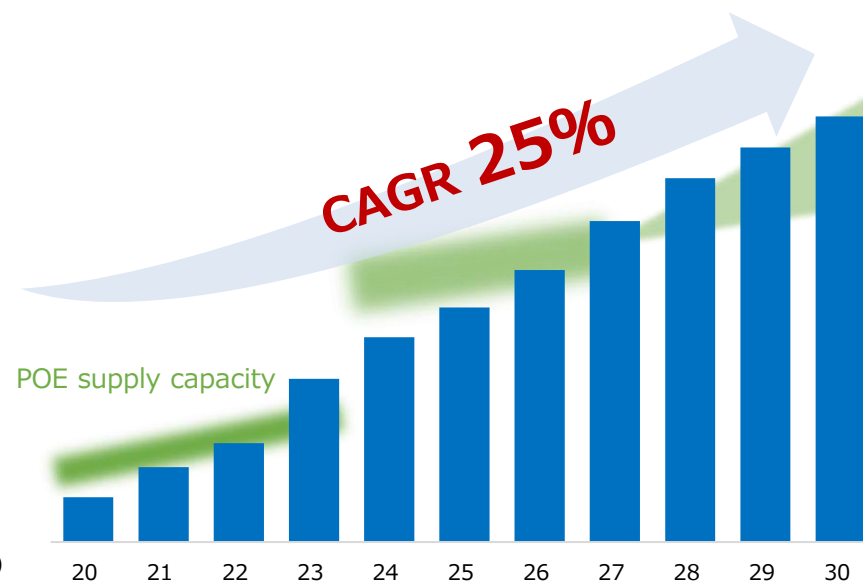
### Sales

- Efforts to locally produce modules for local consumption (India, the West)
- Building relationships and growing sales via joint development with customers and end users (battery manufacturers, power generation companies, etc.)
- Securing MCI rights that make use of intellectual property rights

### Development

- Development of differentiated grades (improved productivity, better sealant performance, etc.)

## Supply & demand over time for POE used as an encapsulant material



POE, which exhibits high generation efficiency, is exceeding the growth rate for module production volume

## Supply-side trends

Until approx. 2023:

Supply unable to keep up with surging demand, resulting in a shortage

Medium term (2024–2026):

New facilities from various companies leading to a surge in supply capacity

MCI: 2025 operational launch

Korean/Chinese manufacturers: Operational launches starting 2024

Long term:

Enough supply for growing demand

Temporary oversupply beginning 2024



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**Mitsui Chemicals**  
Group

**VISION 2030**  
**Business Strategy Presentation**  
**ICT Solutions**

**HIRAHARA Akio**

平原 彰男

Senior Managing Executive Officer

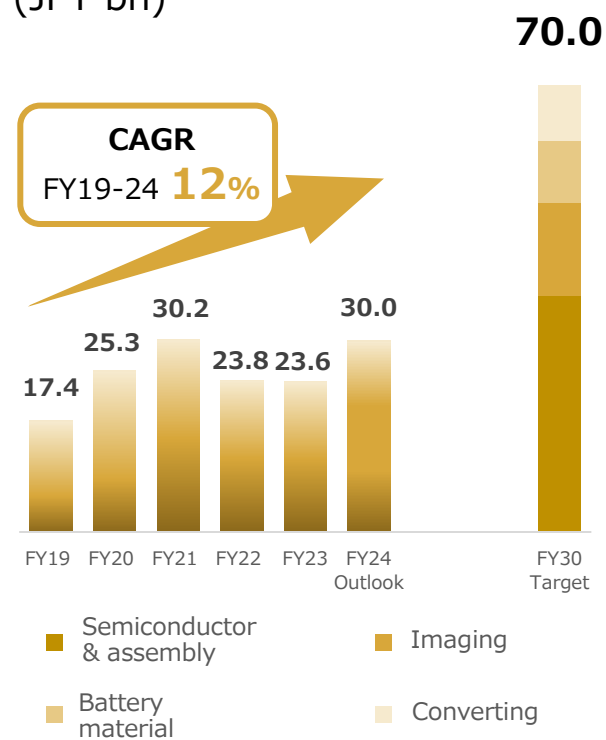
Business Sector President, ICT Solutions Business Sector

June 14, 2024



# Creating and growing a “unique” ICT Solutions business to grow operations here into our third pillar of earnings

(JPY bn)



ROIC 13% 14% 9% 8% 9% 13%

**Rose Value™**  
FY24 **38%** → FY30 **60%**

**Blue Value™**  
FY24 **31%** → FY30 **56%**

## Current state of businesses toward achieving VISION 2030 goals

**Underlined :**  
Explained in CEO presentation  
**Blue: Covered today**

### Pellicle business

Aiming to commercialize CNT pellicles to be used in next-gen EUV lithography  
Established Mitsui Chemicals EMS

### ICROS™ Tape business

Operations started at new facility in Taiwan  
Established Mitsui Chemicals ICT Materia; focus on the ICT business

### Coating & engineering materials

Business expansion that taps into environmental needs  
Capacity expansion XDI, PUD

### Environmental changes

Semiconductor market is recovering from its downturn  
Smartphone and XR markets are seeing low growth following a downturn

Growing demand for new technologies due to widespread use of generative AI, etc.

### Key priorities/direction

## Steadily tapping into growing semiconductor demand, and proactively investing resources in rollout of products into multiple applications and next-gen development, to speed up growth

**Semiconductor & assembly:** Keeping a firm hold on No. 1 position in pellicle market

Augmenting the portfolio of ICROS™ Tape in new areas

Speeding up next-gen materials development by pursuing synergies with SHINKO ELECTRIC INDUSTRIES / Pursuing synergies with Honshu Chemical Industry

**Imaging:**

Expanding APEL™ into multiple applications

Launching Diffra™, a new material for XR applications

**Battery material:**

Promoting the development of new materials for LiBs

**Converting solutions:**

**Addressing demand for eco-friendly products**



## Exposure

## Front-end

## Back-end

## Assembly

### Investment in next-gen EUV pellicle manufacturing facility

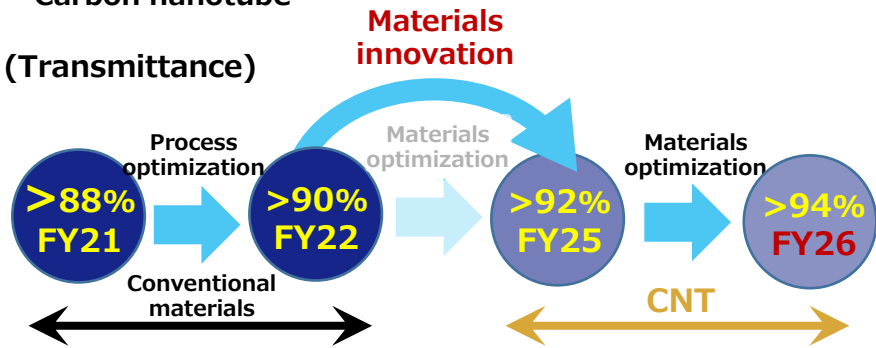
For completion in 2025 (at Iwakuni-Ohtake Works)

### CNT\* pellicles

Facilitating prompt commercialization by accelerating materials innovation

\*Carbon nanotube

(Transmittance)



Strengthening collaboration between the three companies



World's only manufacturer of EUV lithography equipment



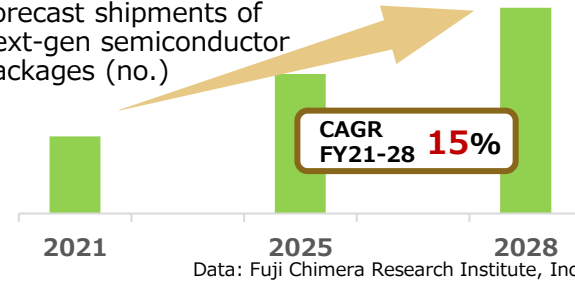
World's top pellicle manufacturer  
Ability to develop CNT pellicle technology



International semiconductor research institution  
Research leader in the field of CNT pellicles

### Investment in SHINKO ELECTRIC INDUSTRIES

Forecast shipments of next-gen semiconductor packages (no.)

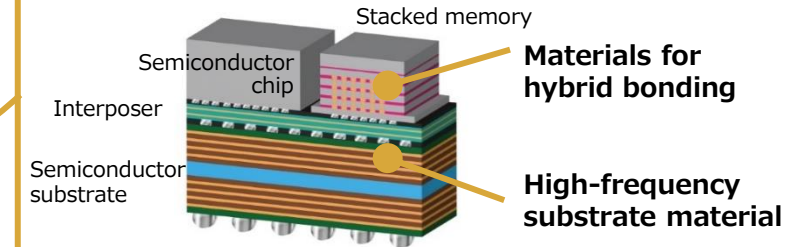


### Acquisition of process compatibility evaluation capabilities

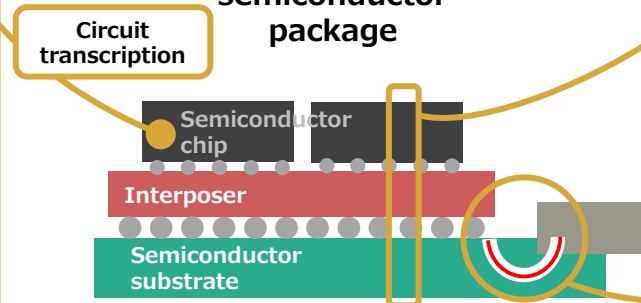
Helping to achieve higher speeds and lower power consumption by accelerating development of materials for next-gen semiconductor packages

Examples of materials for next-gen semiconductor packages

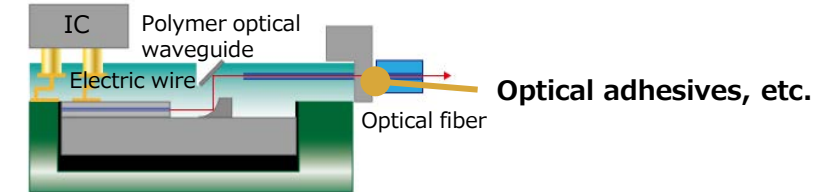
#### Materials for 3D assemblies



#### Illustration of semiconductor package



#### Assembly materials for co-packing optics





## Increasing profit by means of capacity expansion and sales transition to sectors where we can differentiate ourselves

### 20% boost to XDI\* production capacity

Starting September 2025 at Omuta Works

\*Meta-xylylene diisocyanate

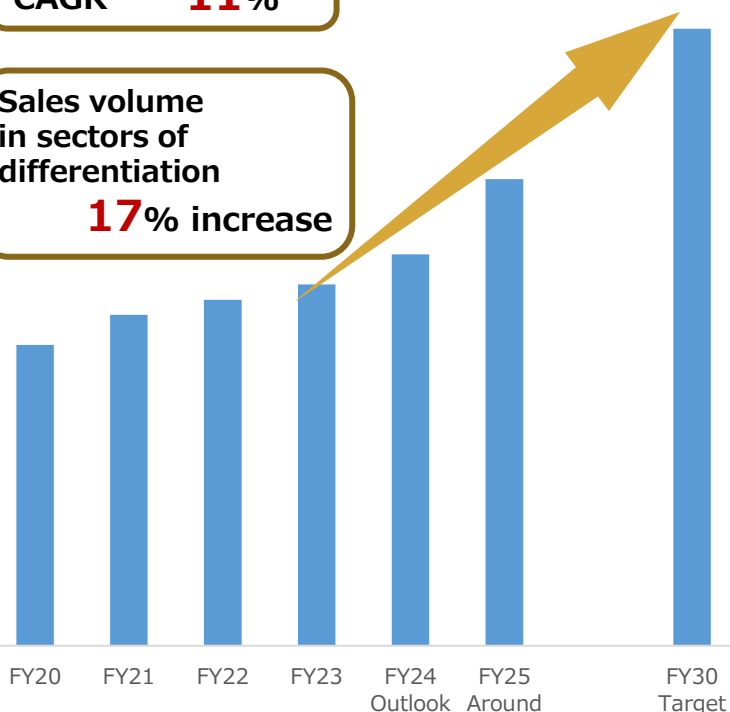
Coating and functional material with outstanding resistance to yellowing and quick-curing properties

FY23-30

CAGR **11%**

Sales volume  
in sectors of  
differentiation

**17%** increase



Trends in XDI operating income

### Food packaging

#### Sectors of differentiation

#### Properties required

#### Market growth CAGR

##### Gas barrier for flexible packaging



Excellent gas barrier performance  
Reduced thickness

**19%**

##### Packaging adhesives



Hygienic properties  
Quick-curing properties

**7%**

### Coating materials

##### Solar cell backsheets



Resistance to yellowing  
Quick-curing properties

**35%**

##### Screen inks



Resistance to yellowing  
Quick-curing properties

**3%**



## Developing CNT pellicles to be used in next-gen lithography

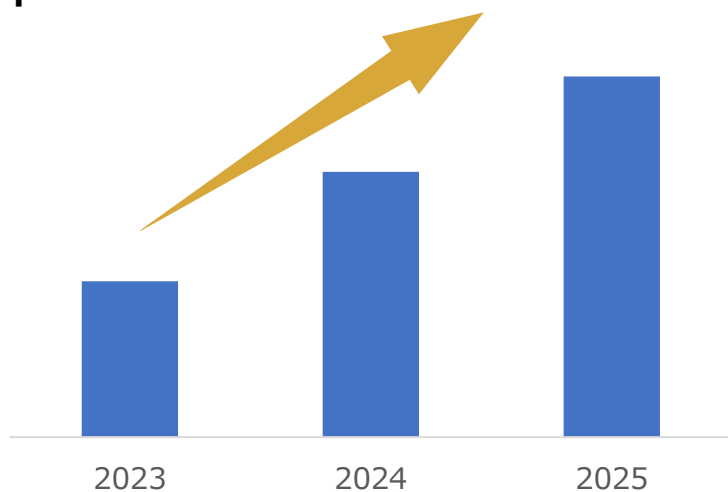
Semiconductor trends:  
High-speed processing, low power consumption, improved productivity

↓  
Ultrafine circuit widths  
↓

Pellicle needs:

**High transmittance & ability to withstand harsh lithography environments**

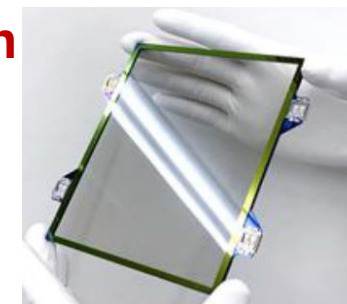
EUV pellicle sales volume



silicon-based membrane

**Materials innovation**

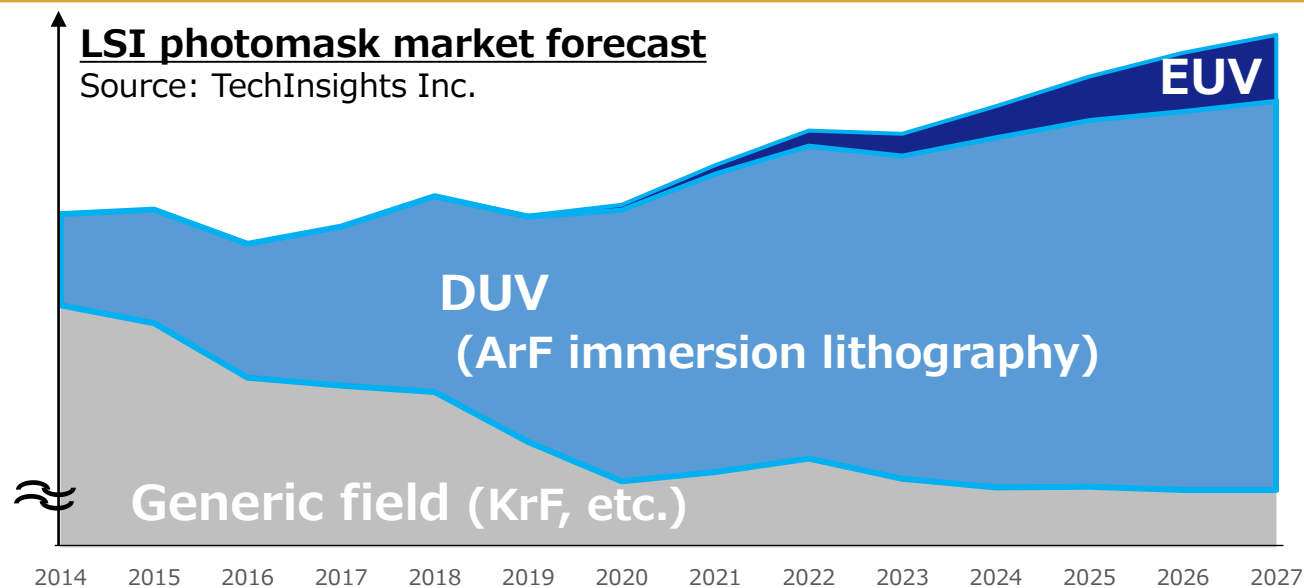
→  
Transmittance  $\geq 92\%$   
Light resistance  
for exposure output  
of over 1 kW



CNT membrane

**LSI photomask market forecast**

Source: TechInsights Inc.





Expanding the scope of our business by strengthening our ability to offer solutions to customers in the semiconductor & assembly field

## Expanding the scope of business for ICROS™ TAPE

- Optimizing design & production for substrate film and adhesives
- Enabling low contamination for wafer surfaces
- Leveraging precise control over tape thickness to enhance our ability to offer solutions to customers

### Back grinding

### Dicing

### Molding



## Expanding supply capacity for ICROS™ TAPE

- Carrying out factory expansions in response to market growth and increased demand



Nagoya



Taiwan  
(Operational launch:  
January 2020)



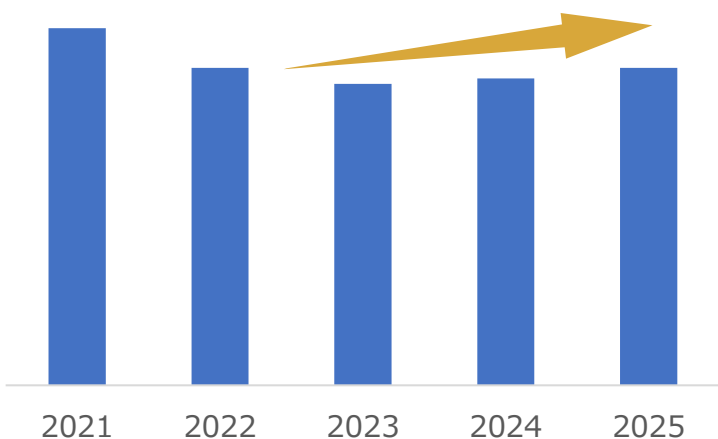
Taiwan (second term)  
(Operational launch:  
FY24)





## Speeding up development for new applications to advance business restructuring

### Smartphone market: Gradual recovery



Source: Techno Systems Research

### Smartphone camera lenses

Multi-lens designs trending downward after peaking in 2021

→ Dual- and triple-lens designs the norm since 2022

Further growth in the high-resolution camera market amid trends to wide-angle and long-distance photography

→ **APEL™'s low birefringence helping out**

### Smartphone



### VR devices

Development speeding up amid device popularization

### automotive devices

New needs driven by the increasing number of sensors, cameras and displays

→ **Speeding up the marketing of new products**

### VR/AR devices



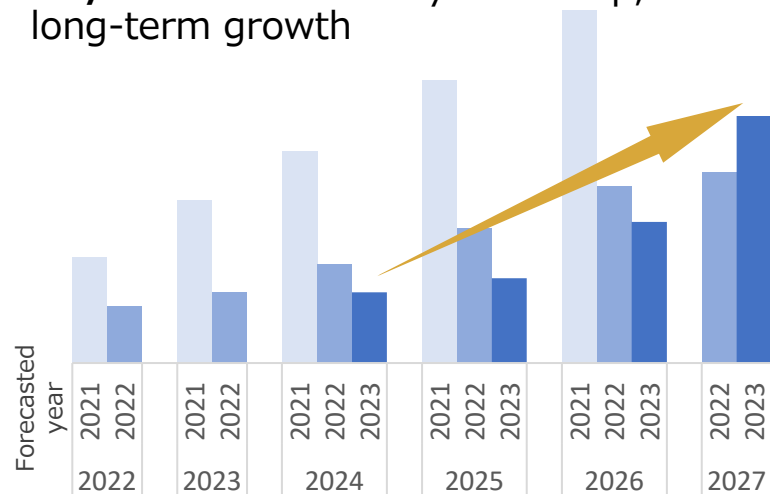
### Heads-up displays (HUD)



### automotive camera lenses



### VR/AR market: Delayed startup, but long-term growth



(Forecast of VR/AR headset shipments)

Source: International Data Corporation Japan

7

# Imaging Solutions

# Diffra™

Mitsui Chemicals  
June 14, 2024

## Novel optical polymer wafer Diffra™ developed for growing AR market

- Helping give users of AR glasses a wide field of view and clear images by offering a wafer with excellent optical properties such as ① a high refractive index (>1.63) and ② an exceptionally flat surface
- Contributing to the safety (impact resistance) and lightweighting of AR glasses

- Lineup: 3—8 inches
- World's first 8-inch optical polymer wafer made for AR glasses

3-inch 6-inch 8-inch

### AR glasses market

Full-fledged growth in 2027

FY27-30  
CAGR **35%**

Year	Market Size (Relative)
2023	Low
2024	Low-Mid
2025	Mid
2026	Mid-High
2027	High
2028	Very High
2029	Extremely High
2030	Peak

Optical waveguide

① High refractive index  
Helps give images on AR glasses a wide field of view

② Exceptional flatness  
Helps make images on AR glasses clear

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# **VISION 2030**

## **Business Strategy Presentation**

### **Basic & Green Materials**

**IZAWA Kazumasa**

伊澤 一雅

Senior Managing Executive Officer

Business Sector President, Basic & Green Materials Business Sector

June 14, 2024

- ▶ **FY24 Basic Policies for Achieving VISION 2030**
- ▶ **Second Phase of Restructuring**
  - Optimization of the Phenol Business
  - Narrowing Down to Competitive Derivatives
  - Collaborating With Other Companies on Crackers
- ▶ **Approach to Reforming Our Product Portfolio**



- As part of our push for portfolio reform, we are aiming to **further reduce volatility** by accelerating our **second-phase restructuring efforts**, including the creation of an optimal production setup for our crackers.

## Reducing volatility: profitability in FY24

Operating income before special items (JPY bn)

△ 11.6

Improved by 15.6

4

+15

△ 3.4

△ 3

- +: ① Effect of restructuring  
② Effect of investments  
-: ③ Repair costs, etc.

- Prices raised on 15 products
- Resolution of e.g. inventory valuation losses from previous financial year

- Cracker operation rate same as 2023
- Facility issues resolved, etc.

H1

△ 8.7

H1

△ 3

H2

△ 2.9

FY24

FY23

Volume

Terms of trade

Other

## Second Phase of Restructuring

Second phase progressing steadily

External environment

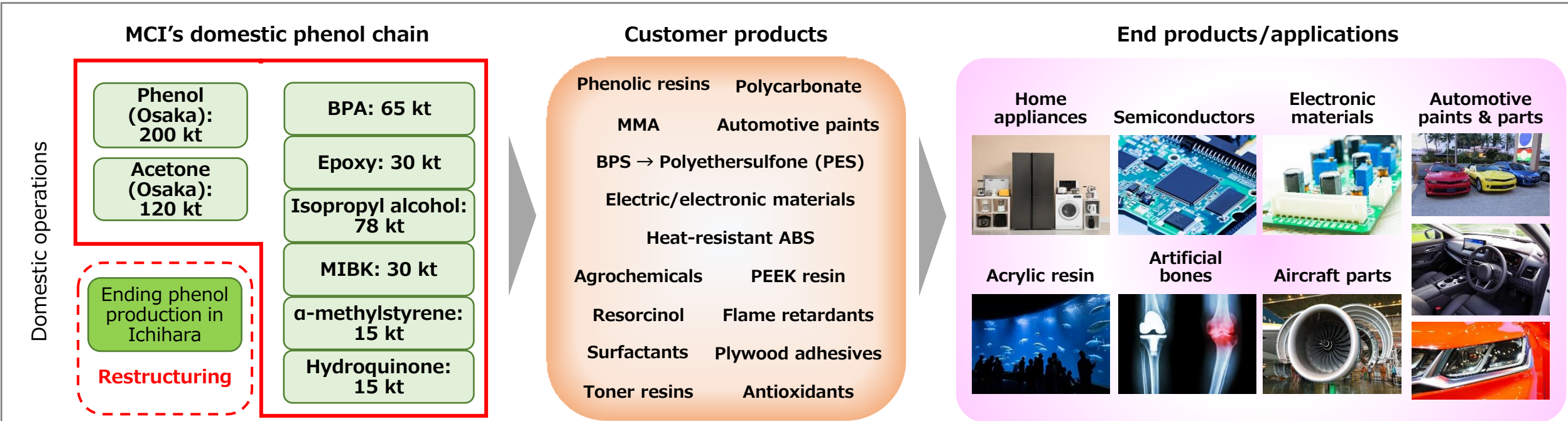
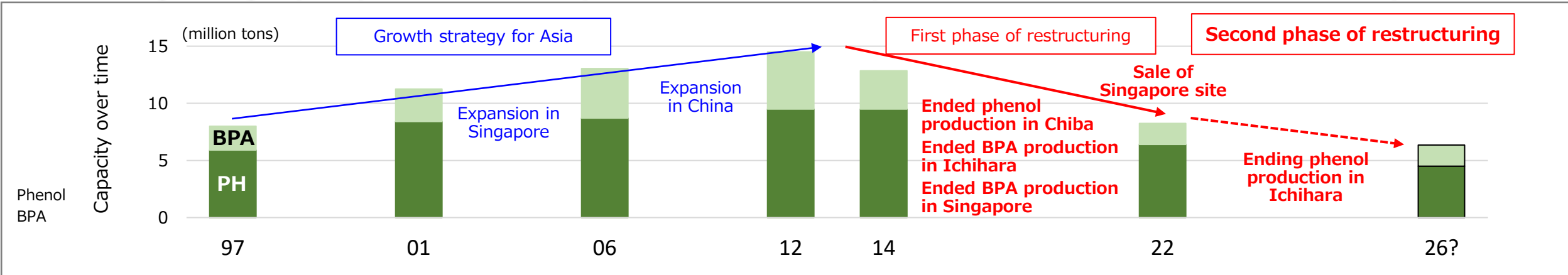
PH (Japan)	Changes in Japanese market (Business withdrawal by clients)	Downsizing by FY2026
PET (Japan)	Influx of products from abroad	Closure October 2024
PE/PP	Stagnating Chinese economy Influx of products from abroad	Mulling optimization
Crackers	Dwindling derivatives demand	Mulling Anesaki closure Three-company collaborations in E & W Japan
PTA (Japan)	Dwindling domestic demand	Shutdown completed August 2023
TDI (Japan)	Continued global oversupply	Downsizing July 2025





# Optimization of the Phenol Business

- Restructuring has been ongoing since 2014, but our second phase of restructuring will see us **close a phenol plant in Ichihara by 2026**, going down to one domestic phenol plant.
- Building a **highly capital-efficient phenol chain** that provides essential materials at optimal scale.







- High-performance products (already invested): **high-performance PP** (high rigidity, high fluidity), **high-performance MDI** (for limiting vibration, noise etc. in EVs)
- Also evaluating the future potential of other derivatives based on **ROIC, economic security and synergy with other products**

## Capital efficiency

### Licensing & catalyst businesses

Securing rising demand from developing and other nations to make for businesses with long-term stability

#### Licensing business

- HDPE: 50 deals
- PP: 25 deals



Long-term license revenue

Customer producing PP/PE



#### Catalyst business

- Iwakuni-Ohtake Works
- Plant of LOTTE MITSUI CHEMICALS



Regular catalyst sales

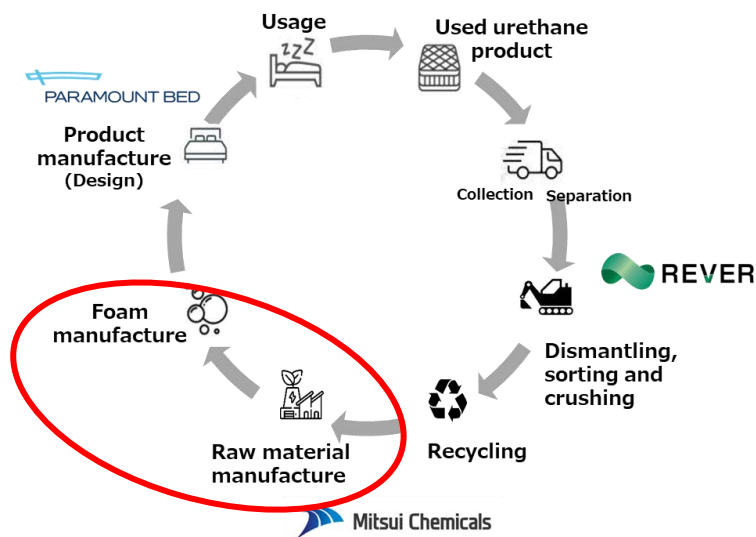
Polymer science  
Catalyst technology

## Environmental value

### Polyurethane recycling business

Monetizing economic value via the implementation of chemical recycling technology in society

Chemical recycling of bed mattresses  
(a demonstration project under the Ministry of the Environment)



## Economic security

### Urea → AdBlue™

An essential material for the maintenance of domestic logistics infrastructure

AdBlue™: An advanced urea solution for selective catalytic reduction. Breaks down NOx emitted by diesel engines into hydrogen and water.

MCI's offering here has a low level of impurities, minimizing engine clogging.



\*AdBlue is a trademark of the VDA (Verband der Automobilindustrie).

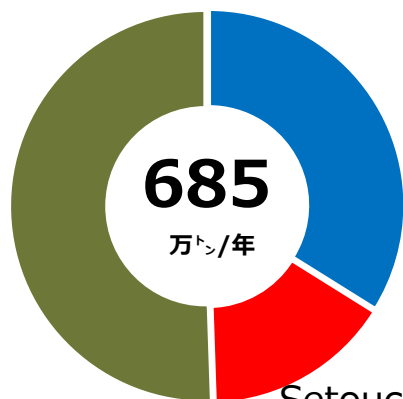
Derivatives that create no added value and are exposed to price competition from imports are considered as targets for MCI's move to a more asset-light structure over time



- Aiming to **get ahead of the rest of the world by creating new carbon-neutral crackers** through alliances with other companies
- Pursuing three projects as we look to settle on **a grand design for the future of our crackers in 2024–2025**

## Cracker alliances

Japan's ethylene production capacity



Keiyo region

Setouchi region

**West Japan: 1.07M tons**

**Three-company alliance in Setouchi**

Collaboration with Asahi Kasei & Mitsubishi Chemical

Greener feedstocks and fuels, promotion of recycling

Mulling optimized future production setup

**East Japan: 2.32M tons**

**Three-company alliance in Keiyo**

Collaboration with Sumitomo Chemical & Maruzen Petrochemical

Greener feedstocks and fuels, promotion of recycling

**LLP with Idemitsu Kosan**

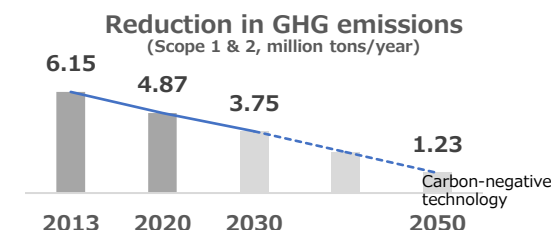
Mulling optimization of cracker production

Capacity figures listed are values from years without scheduled maintenance

## The significance of carbon-neutral crackers

### ● Ensuring we fulfill our Carbon Neutrality Declaration

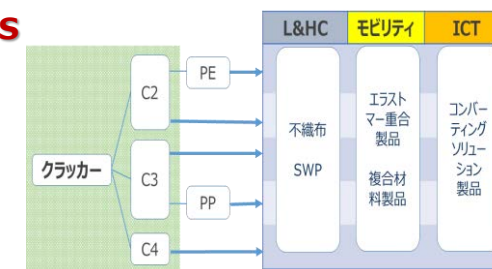
Greenhouse gas emissions from crackers account for **approximately 25% of MCI's total** greenhouse gas emissions (as of FY22)



### ● Pursuing green chemicals

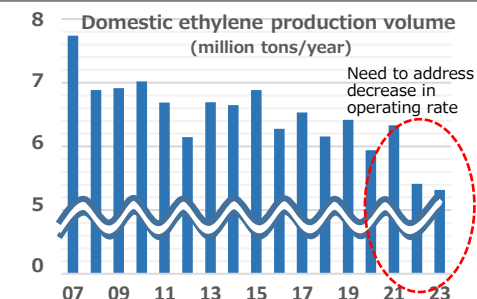
**Going green right from crackers,** which sit at the top of the chain

e.g. pursuing growth for mass balance derivatives that utilize bio-based hydrocarbons and pyrolysis oil



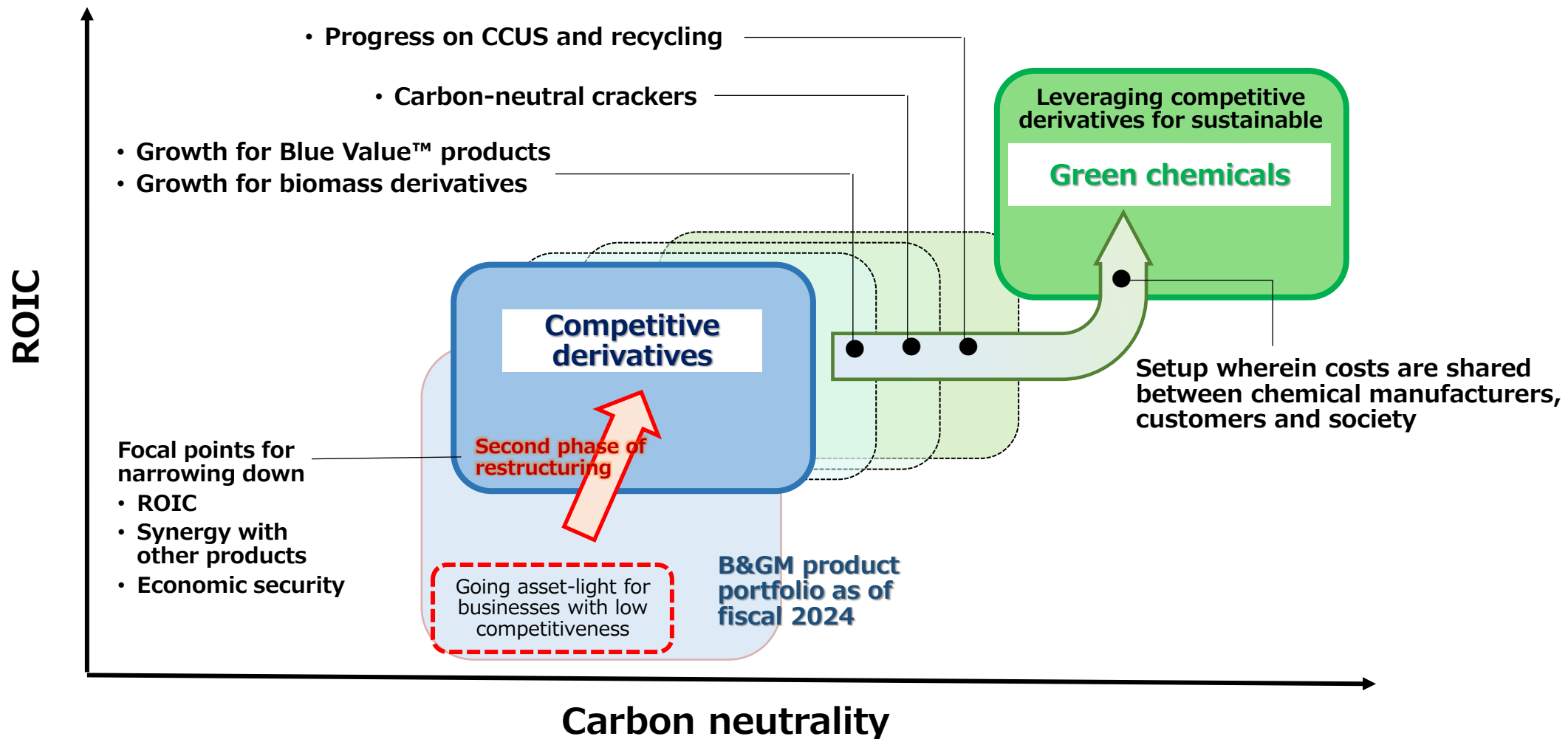
### ● Optimizing facilities and production to create competitive crackers

- Improving costs by **increasing operating rates**
- Collaborating with other companies to **share the risks of major investments**





- Pursuing stakeholder appreciation of our purpose and value, and transitioning to a highly capital-efficient business setup, as we strive for a sustainable **green chemicals business** centered around competitive derivatives
- Aiming to get core operating income before special items into the black for fiscal 2024 before targeting 20 billion yen as the next step



A blue sky with white clouds and a sunburst effect, with a large blue arrow pointing right.

A global solutions company that  
leads change and contributes to a sustainable future

0→1 MAKE IT HAPPEN

Chemistry for Sustainable World



**Mitsui Chemicals**

*Challenge Diversity One Team*

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