

Mitsubishi Chemical Group Corporation

# IR Day 2022

## Performance Products

– *value creation through profitability growth*

September 27, 2022

# KAITEKI Value for Tomorrow

The sustainable well-being of people,  
society and our planet Earth  
- we call it KAITEKI.

Through our core values of Sustainability, Health and Comfort,  
we create innovative solutions globally realizing KAITEKI.

Creating KAITEKI Value today  
we ensure a bright future for tomorrow.  
We are THE KAITEKI COMPANY.

# Today's agenda

**15:00 - 15:05**

**Opening remarks**

**Jean-Marc Gilson**

**Representative Corporate Executive Officer,  
President and Chief Executive Officer**

15:05 - 16:10

- i. Our starting point
- ii. Performance Products –  
spearhead of implementation
- iii. Key takeaways and outlook

Jean-Marc Gilson

Johei Takimoto

Executive Vice President, Head of Advanced Solutions

Hitoshi Sasaki

Executive Vice President, Head of Polymers &  
Compounds / MMA

16:10 - 16:20

Break

16:20 - 17:20

Q&A session

17:20 - 17:30

Closing remarks

Jean-Marc Gilson

# Opening remarks – what we will discuss today

- MCG’s starting position and **strengths lie in our unique product portfolio** which enables us to bring capabilities & innovation tailored to end-markets to our customers and service them better
- We have set ourselves the **vision of being one of the world's leading specialty materials & solutions provider**
- The launch and accelerated execution of the **“Forging the future” strategy deliver on that vision**
- **Our goal is value creation through profitable growth** – we will improve profitability and grow in areas where we have distinctive products & solutions for our customers while managing capital employed
- **Today, we will share our actions to strengthen profitability and share with you the impact on future growth of our Performance Products business** – as a teaser to the full investor presentation in February on MCG’s Forging the future journey

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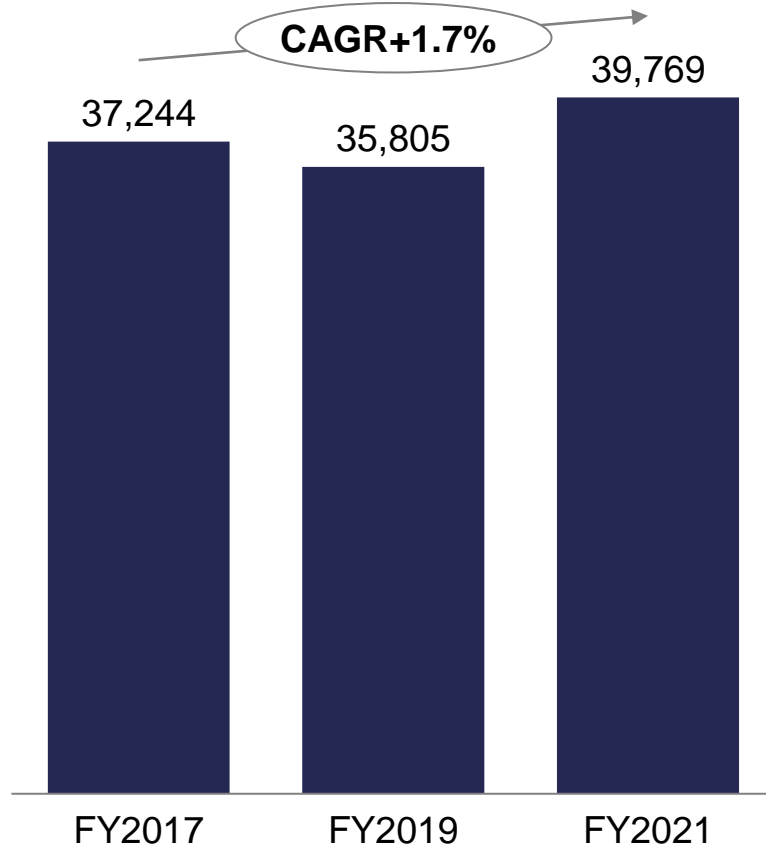
16:20 - 17:20      Q&A session

17:20 - 17:30      Closing remarks

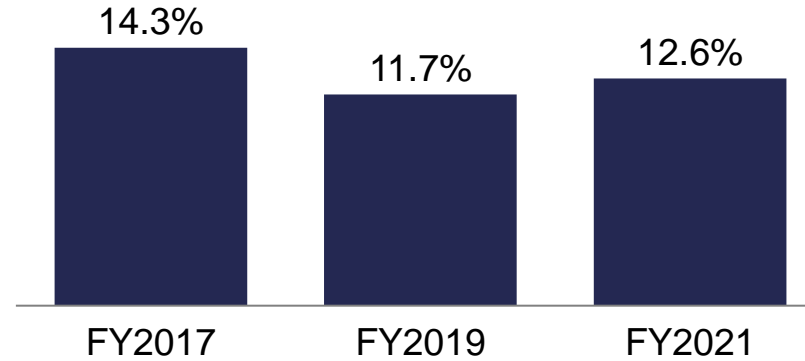
Jean-Marc Gilson

# MCG struggled to generate value for our shareholders in the past - along both growth and profitability

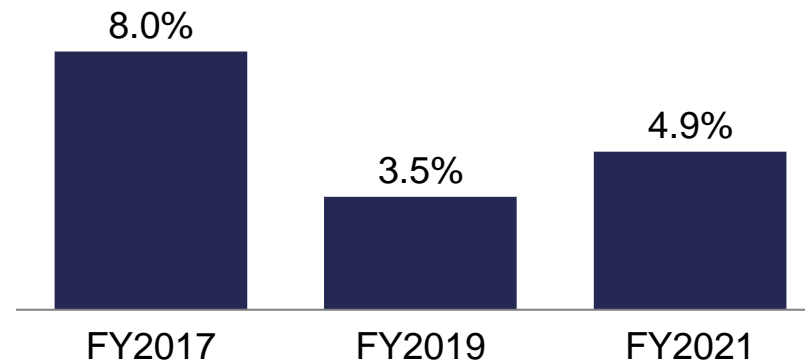
## Revenue<sup>1</sup>, oku yen



## EBITDA margin



## ROIC



## Takeaways

- **Stalling revenue growth (1.7% CAGR) over the last 4 years while market grew 3-4 % p.a.**
- **Significant profitability decline** between FY2017-19, only slow return to higher EBITDA & ROIC in FY2021

1. Adjusted Revenues to improve comparability

# We have identified the major challenges which limited creation of shareholder value in the past



**Complex product and business portfolio** – requires focus and simplification, leverage tailwinds in high-growing end-markets

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**Focus on domestic growth** – shift focus to global markets through tailored offerings for high growth regions

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**Existing cost structure** – transition to leaner cost positions with improvements in year-on-year productivity metrics

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**Past investments did not deliver expected returns** - need to improve capital allocation and manage working capital more stringently

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**Digital & process backbone** – advance systems and processes to enable quick fact-based decision making and a smooth customer experience

# To address these and become one of the world's leading specialty materials & solutions supplier, we launched the “Forging the future” strategy

## Forging the future Objectives:



Leaner Structure to Execute Strategy



Strategic Cost Transformation



Growth, Performance, and Sustainability



Business to Exit



Strategic Capital Allocation

## Forging the future mindset

*“bring re-focus”*

*“accelerate margin growth”*

*“drive company wide cost and cash excellence”*

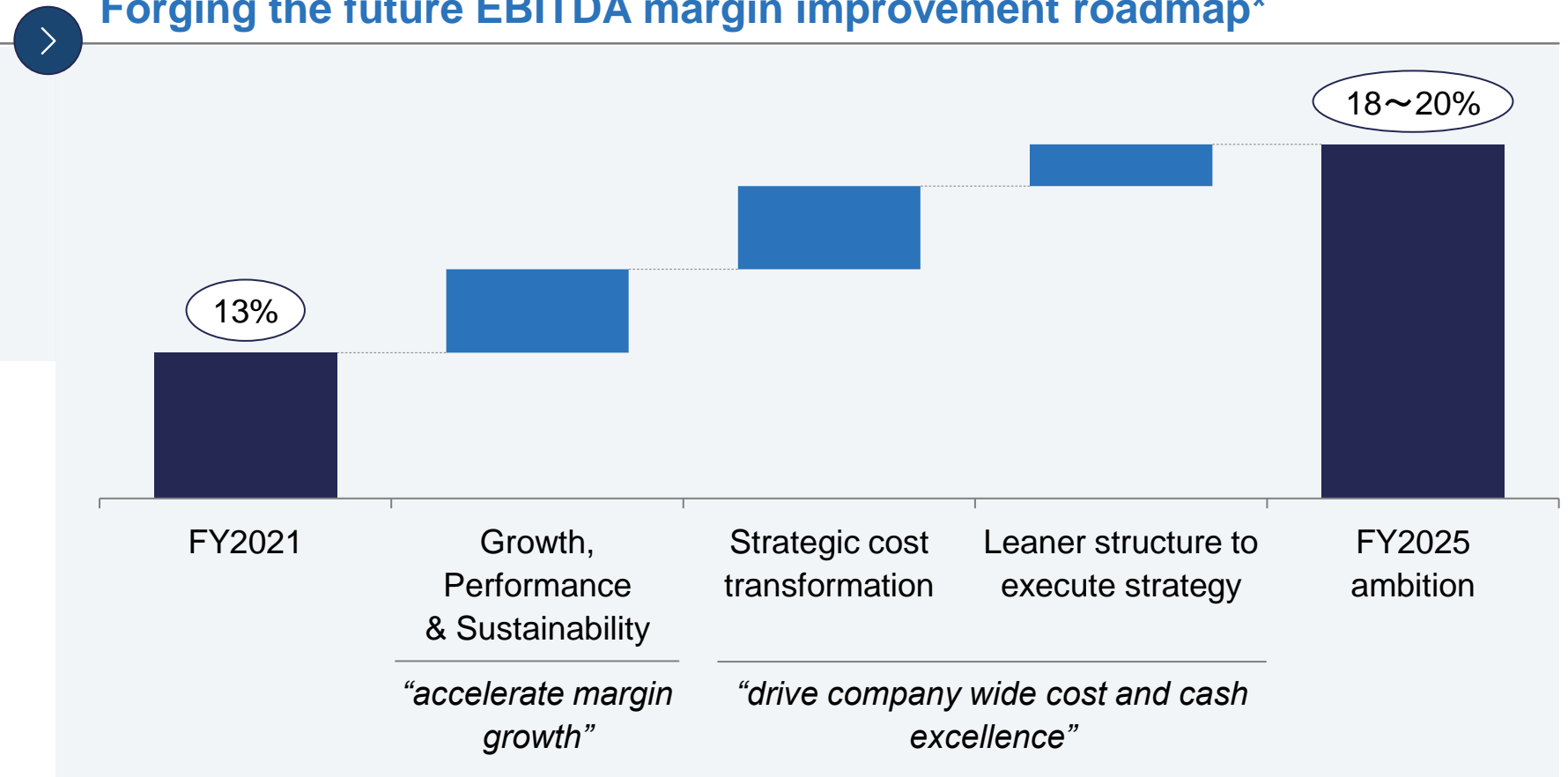


# Forging the future will result in margin & ROIC improvement

## Objectives

- The “accelerate margin growth” and “drive company wide cost and cash excellence initiatives of Forging the future directly impact EBITDA margin
- Remaining “bring re-focus” objectives will help drive ROIC:
- **Business to exit:** Pockets of business to divest, carve out and consolidate where MCG is not the natural owner
- **Strategic capital allocation**

## Forging the future EBITDA margin improvement roadmap\*



\* As presented in Forging the future, December 2021

# Turning Forging the future into action – we are changing the way MCG operates

## 1: Bring company wide re-focus

- Strategic capital allocation based on portfolio strategy and capex management thereafter
- Exit businesses where we are not natural owners
- Targeted M&A yielding aspirational returns
- Shift orientation to markets and focus on those with high-growth or distinctive products

## 2: Drive company wide cost and cash excellence

- Restructuring and cost eliminations (e.g., reductions in other fixed costs, improvement in productivity etc.)
- Working capital management (targeted at Accounts Receivable, Accounts Payable, and Inventories)
- Productivity improvement across manufacturing, supply chain, logistics, procurement

## 3: Accelerate margin growth

- Global markets and global commercial organization
- R&D aligned with business needs
- Optimal product portfolio mix
- Distinctive customer experience (CX)
- Commercial excellence (including Pricing)

Performance Products

Industrial Gases

Health Care

MMA

Petrochemicals

Carbon Products

## Enable the organization

- Empowered and value driven organization
- World-class business processes and digital infrastructure

# 1: Bring company wide re-focus

## From (FY2022)

### Capital allocation, business to exit, M&A levers

- Truly diversified portfolio with equal focus on non-core / low return markets and industries
- Little strategic capital allocation, investments rather made by businesses
- Current M&A process not focused on synergies hence leading to limited value creation so far



## To (FY2025)

✓ includes progress made so far

- **Refocus on key businesses** where we have capabilities, tailwinds, and product pipeline ✓
- Focus on products and markets where we are **natural owners and obtain leadership position**
  - **Several product segments already identified for divestitures**, in various stages of implementation ✓
- **Strategic capital allocation based on portfolio strategy**
  - Project kicked off to redefine our capital project selection and execution (to be implemented by 2022-year end) ✓
- **Best-in-class process for scouting, screening & diligence** of M&A opportunities
  - Adopted a **stricter stage gate M&A process** ✓
  - Installed **post acquisition integration planning** and reviews ✓

## 2: Company wide cost & cash excellence

### From (FY2022)

#### Re-structuring and cost eliminations

- Siloed organization between businesses in Japan and globally
- Complex matrix structures with many layers

#### Productivity improvement

- Y-o-Y productivity lagging versus best-in-class
- Continuously increasing costs for e.g., logistics, procurement not passed through sufficiently


#### Working capital management


- Investments in fixed and working capital not delivering required returns




### To (FY2025)

 includes progress made so far


- Efficiency and collaboration between businesses, **enabling servicing customers globally** 
- Support function consolidation & de-layering

- **Best-in-class design of indirect procurement processes and operating model** (incl. organization, key enablers and capability building), **identification of quick win levers** 

- Monitoring and continuous improvement mindset through **productivity control tower** 

- Approach defined to **tackle other productivity improvements** in manufacturing, logistics and supply chain

- **Governance mechanism for efficient capital management** 

- Deployment of **ERP based processes and AR & AP tracking** for efficient working capital management 

1. Includes potential from efficiency (FTE reduction), cashflow related (AR/AP) and inventory for Europe, NA and Japan

# Turning Forging the future into action – we are changing the way MCG operates

## 1: Bring company-wide re-focus

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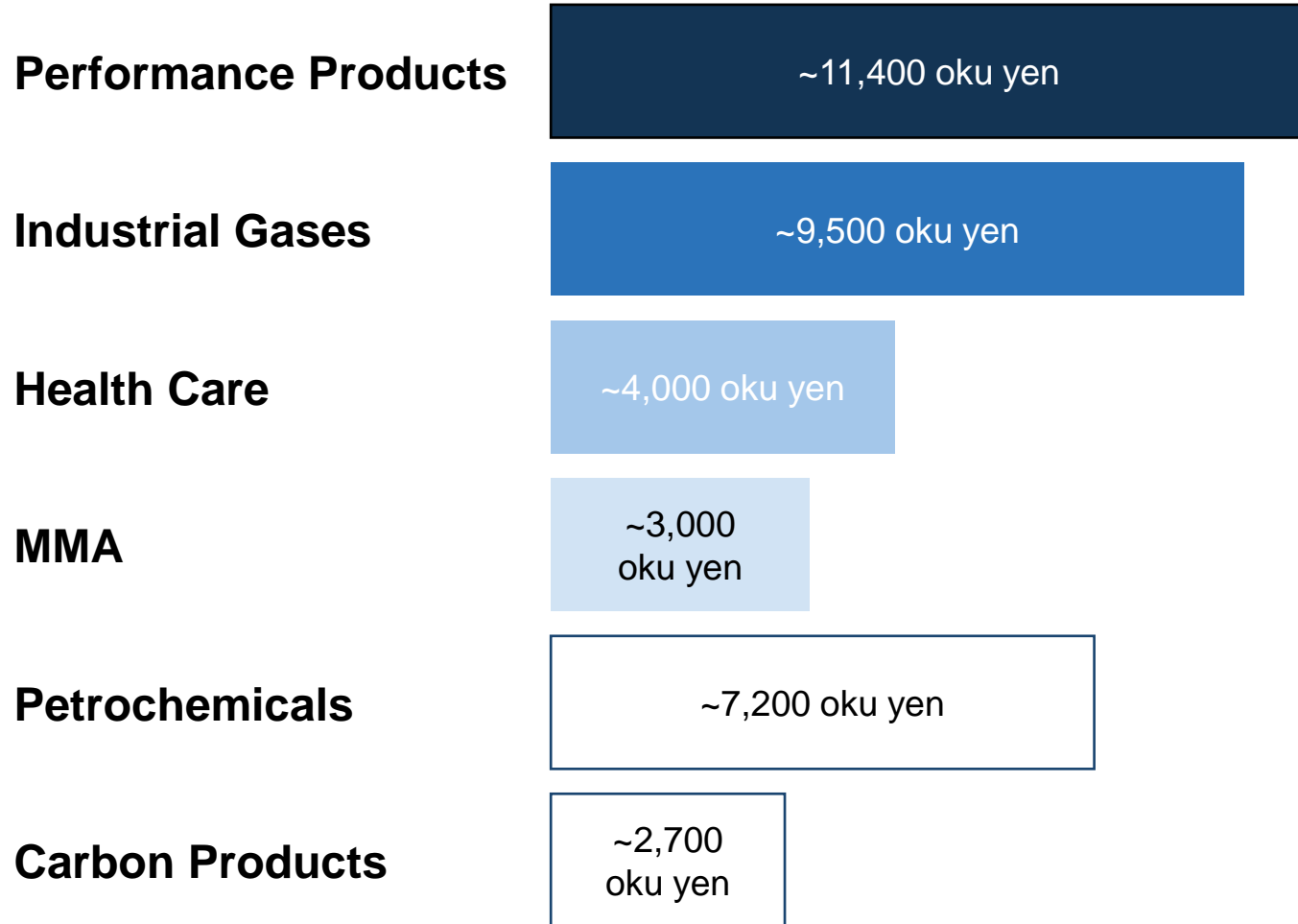


## Enable the organization

- Empowered and value driven organization
- World-class business processes and digital infrastructure

### 3: Accelerate margin growth: Performance Products is core to MCG

Scale of Segment Sales Revenue

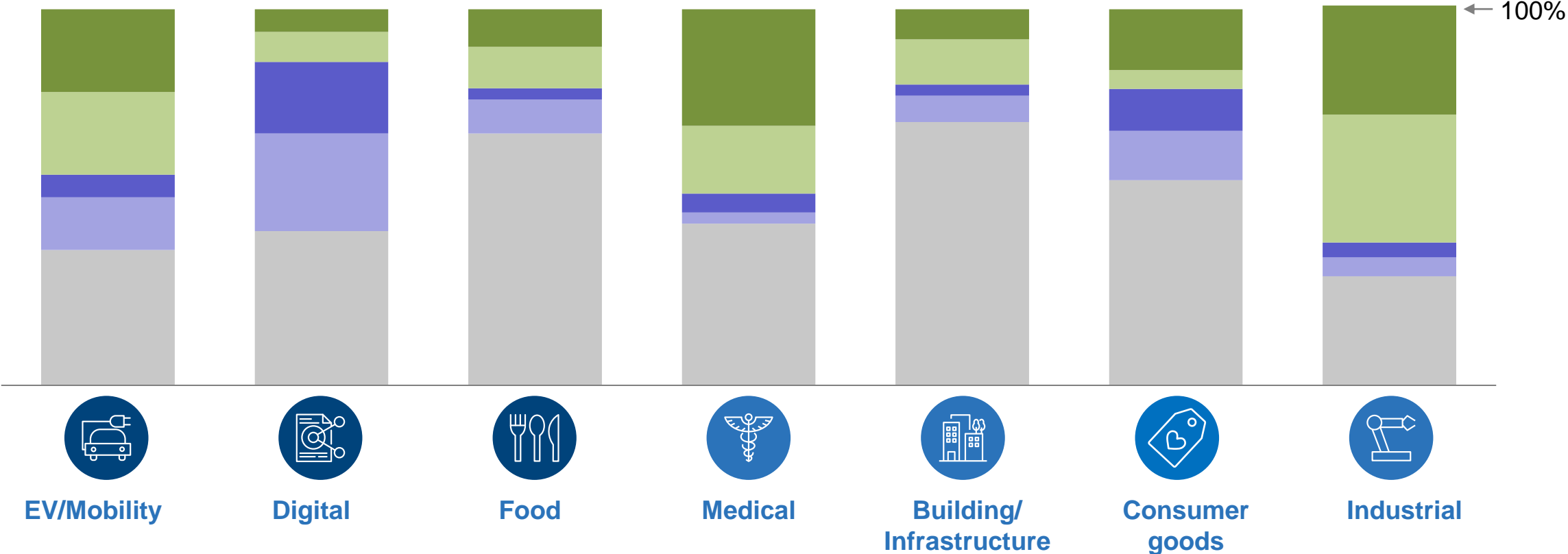


*“Performance Products offer distinctive technology products for Engineering applications in high-growth end-markets”*

# 3: Accelerate margin growth - Taking our existing products to high growth markets outside of Japan

Regional sales by market, %

Americas EMEA APAC & Others China Japan



# 3: Accelerate margin growth: shifting to a market-facing organization with focus on 7 key markets to best leverage our core products

Product-focused organization



Market-oriented commercial organization



EV/Mobility



Digital



Food



Medical



Building/  
Infrastructure



Consumer  
goods



Industrial

## Growth

- Develop and scale new business in new high growth markets (EV/Mobility, Digital, Food)
- Grow in existing markets through an integrated offer by end-application



## Performance

- Enable synergies between businesses and regions
- Tailored business operations and margin management as per different needs of the markets



## Customer experience

- Move into solution offering by market to address customers' needs in respective markets
- Enable better cross-functional collaboration and one face to the customer



# 3: Accelerate margin growth: Performance Products serves end-markets with high growth tailwinds and has unique capabilities to address them



## EV/Mobility

- Electro-mobility
- Light-weighting
- Appearance



## Digital

- Smart homes & applications
- Performance
- Miniaturization



## Food

- Nutrition & health
- Durability
- Processability



## Medical

- Durability and longevity
- Tailored implants
- Health effects



## Building/ Infrastructure

- Energy efficiency
- Modular construction
- Insulation



## Consumer goods

- Personalization
- Sustainability
- Renewable resources



## Industrial

- Smart materials
- Water treatment
- Energy efficiency

### Key trends



### MCG capabilities



- Battery materials
- Composite materials
- Specialty Polymer compounds

- Semiconductor materials, equipment and components
- Fab cleaning services
- Display films & materials

- Emulsifiers
- Vitamins
- Gas barrier function
- Probiotics

- Implantable polymers
- Silicone hydrogels for contact lenses
- Dental mold compounds

- Façade design materials
- Additives for adhesives and coatings
- Construction materials

- Carbon fiber composites
- Water soluble polymers
- High-performance water filtration

- Industrial processing films
- Functional separation membranes
- Engineering Plastic parts

# 3: Accelerating margin growth

✓ includes progress made so far

▭ Detailed next

## From (FY2022)

### Growth focused levers

- Lack of globalization, over-reliance on businesses in Japan
- Product push
- Cross-divisional key account management missing
- Lack of lead generation and funnel management engine
- Cost plus (mark up-based) pricing model
- Insufficient results from innovation (including R&D) to drive business growth

## To (FY2025)

- **Growth of the businesses across the globe** by bringing Japanese excellence to global markets tailoring to local environments ✓
- **Application pull and understanding of market needs** ✓
- **Key account management (KAM)** for strategic accounts, tailored offerings and solution selling, higher win/rate of concrete opportunities ✓
- **Best-in-class lead and opportunity management** process, implementation ongoing in Europe and North America ✓
- **Value-based dynamic pricing:** Plan to scale further in Advanced Solutions and other businesses ✓
- **Integrated innovation strategies** that optimally deploy internal R&D and open innovation based on the specific nature of each growth market ✓

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<b>15:05 - 16:10</b>	<ul style="list-style-type: none"><li>i. Our starting point</li><li><b>ii. Performance Products – spearhead of implementation</b></li><li>iii. Key takeaways and outlook</li></ul>	Jean-Marc Gilson <b>Johei Takimoto</b> Executive Vice President, Head of Advanced Solutions <b>Hitoshi Sasaki</b> Executive Vice President, Head of Polymers & Compounds / MMA
16:10 - 16:20	Break	
16:20 - 17:20	Q&A session	
17:20 - 17:30	Closing remarks	Jean-Marc Gilson

# Our Performance Products business leaders will tell you about how we will create value in key growth markets and some exciting products

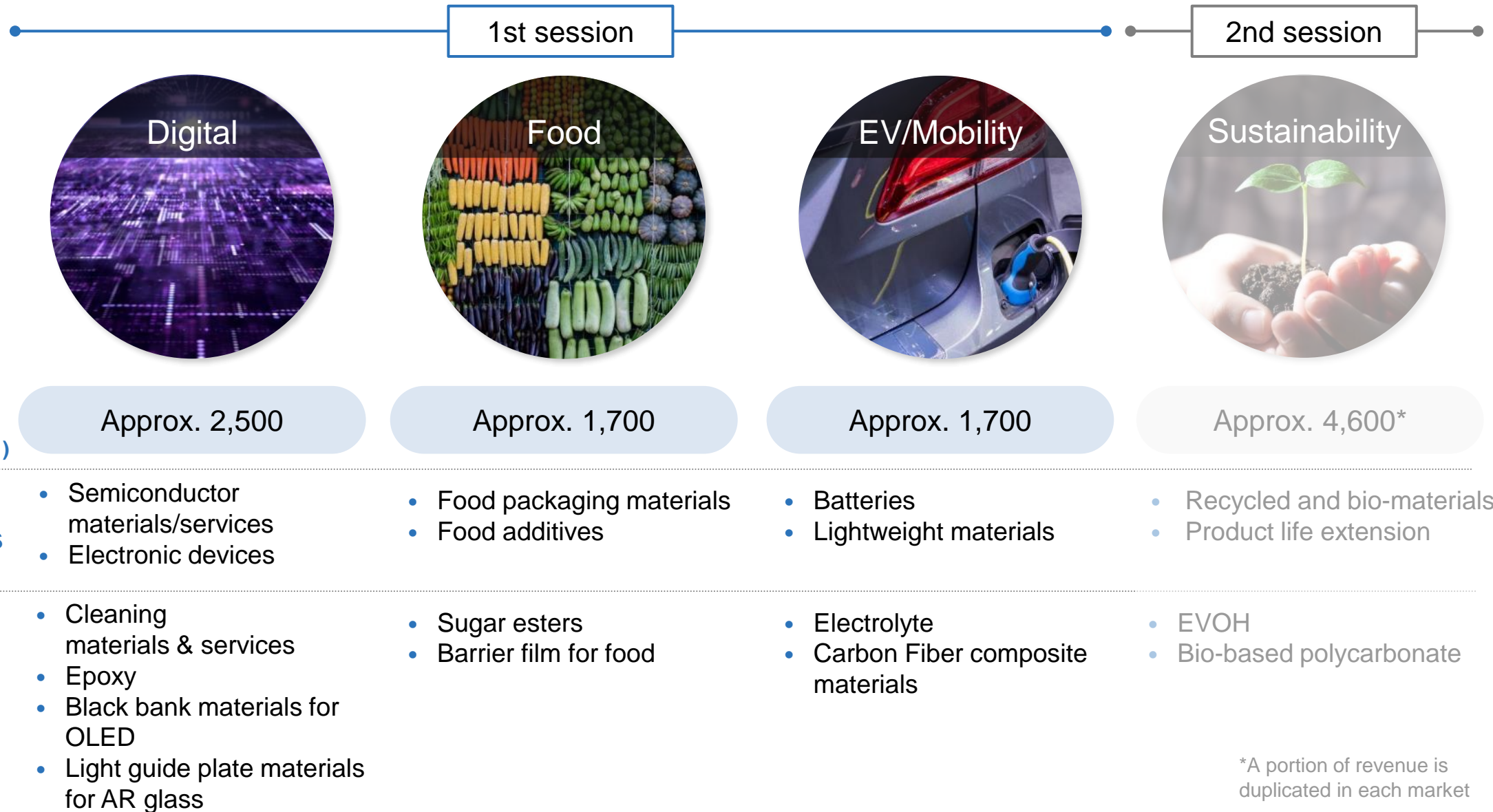


**Perspective on PP** - Takimoto Johei,  
Executive Vice President,  
Head of Advanced Solutions



**Perspective on sustainability** – Sasaki Hitoshi,  
Executive Vice President,  
Head of Polymers & Compounds / MMA

# Our focus markets in Performance Products



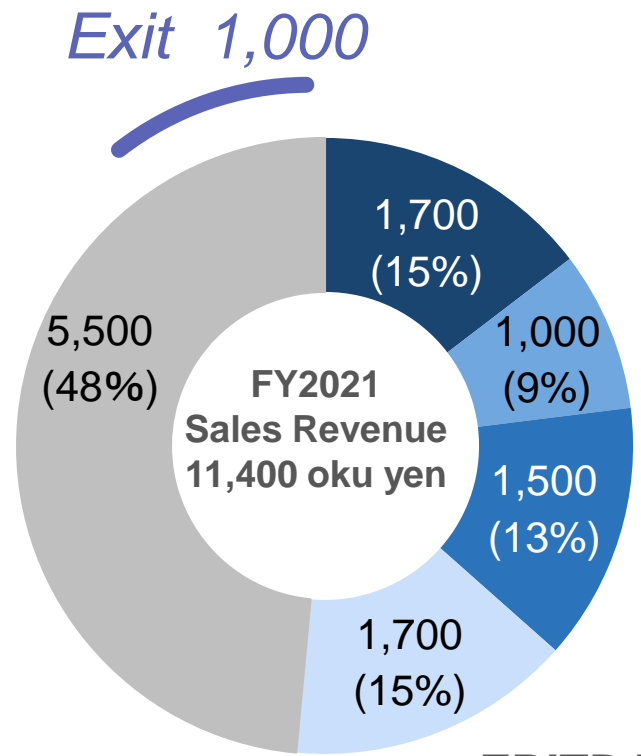
\*A portion of revenue is duplicated in each market

# Portfolio transformation in Performance Products

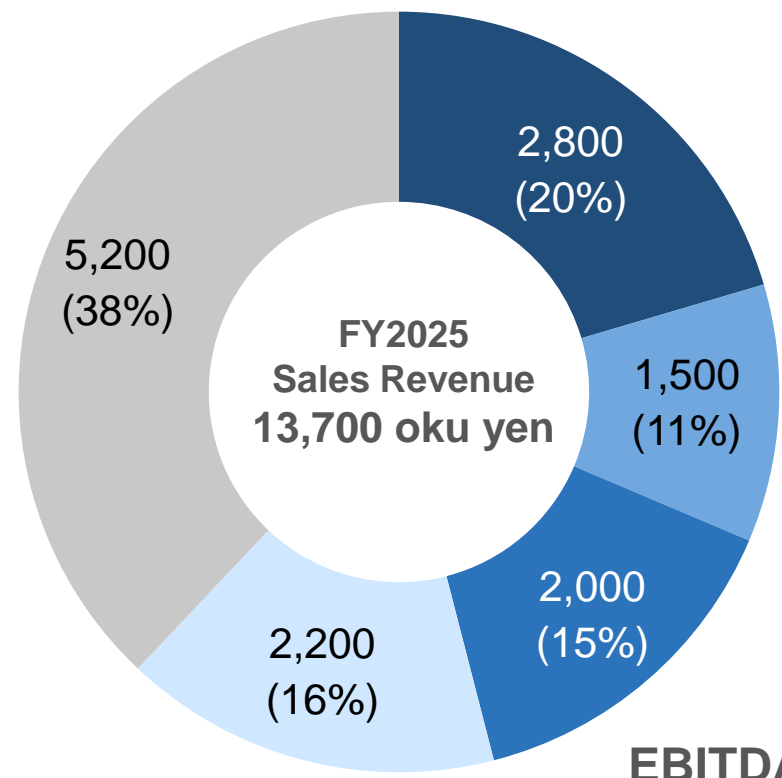
FY2021 Actual

FY2025 Target

- Strategic focus market
- : EV/Mobility
  - : Digital | Semiconductors
  - : Digital | Electronics
  - : Food
  - : Industrial, Medical Consumer goods Building & Construction etc.
  - : Divestiture Candidates



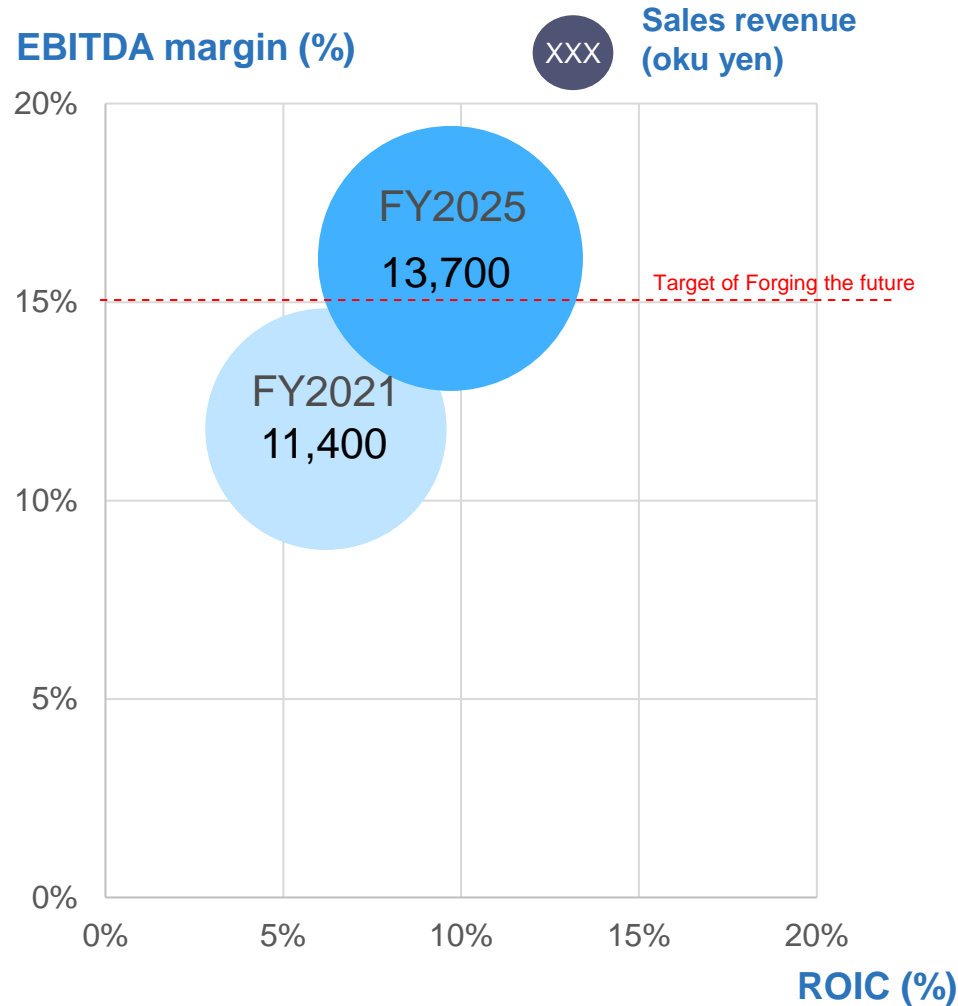
EBITDA >11%



EBITDA >16%

# Sales Revenue/EBITDA targets for Performance Products Segment

## Performance Products Segment



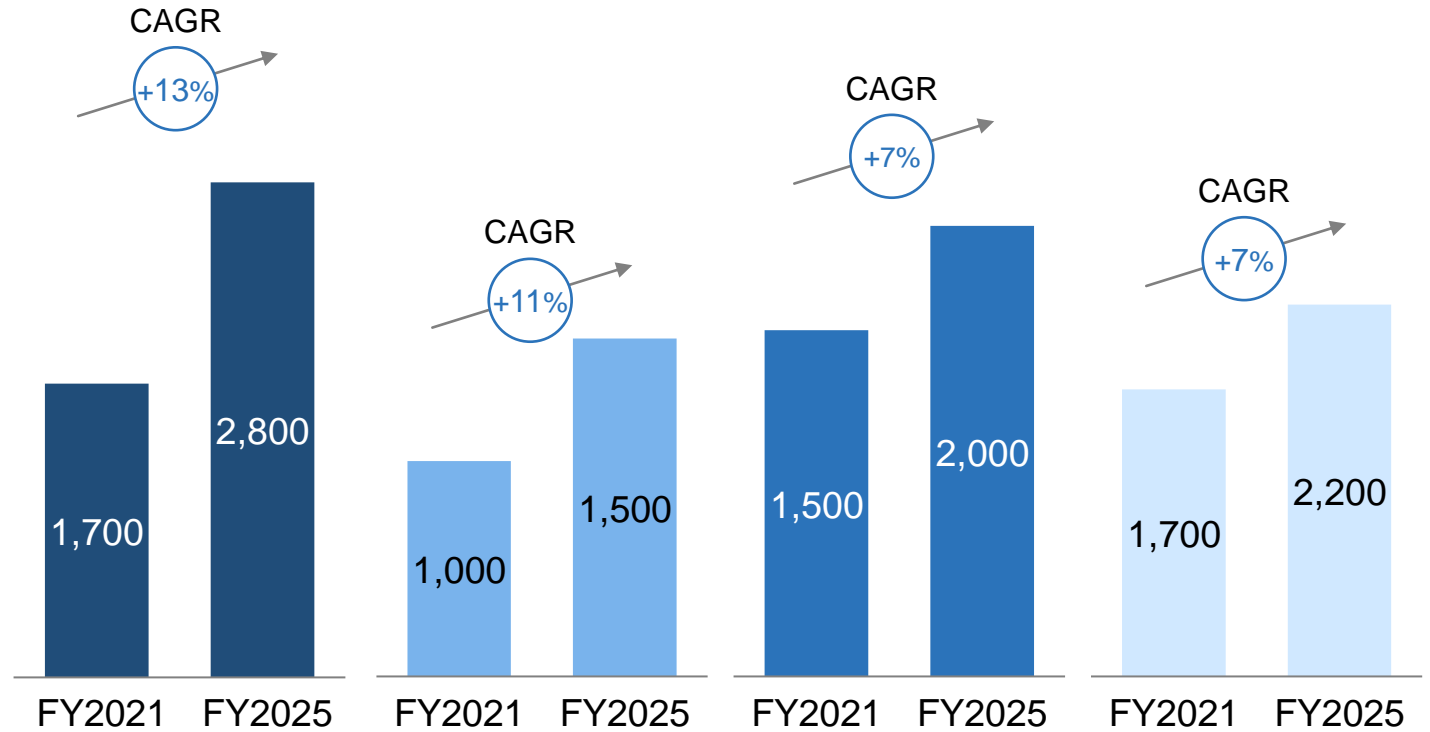
## Sales Revenue by Focus Markets (oku yen)

### EV/Mobility

### Digital

### Food

### Semiconductors Electronics





# Basic Strategy of the Performance Products Segment

## Aspiration

Achieve strong position **by continuous differentiation** that cannot be easily challenged  
 → Realize highly profitable businesses (**EBITDA > 15%**)

### Transform to Market-oriented org.

Early and deep understanding of the most advanced market change

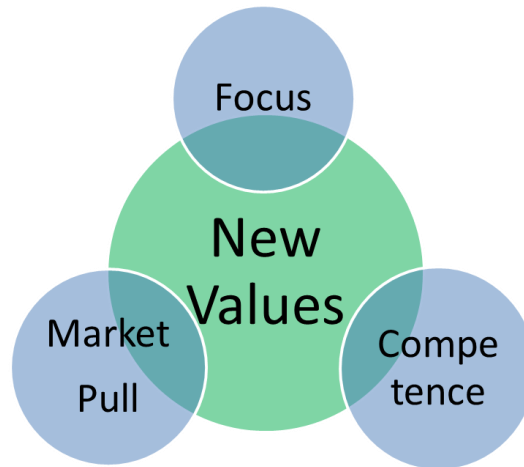
#### Org. structure



#### Behavior pattern

- Strengthening marketing function
- Intensifying regional operation
- Speed up development  
~ proposition cycle

Our Philosophy :  
**“New Value Daily”**



### Sharpening our competence that enables innovation

Provide unique & high-level solution which enables the market transformation, in a timely manner.

#### Our Strengths



- Technology/Material platform
- Best-in-class Quality Management
- Trusting relationship with innovation leaders

**Sharpen up** aligning with the market change direction

\* Examples to be explained later

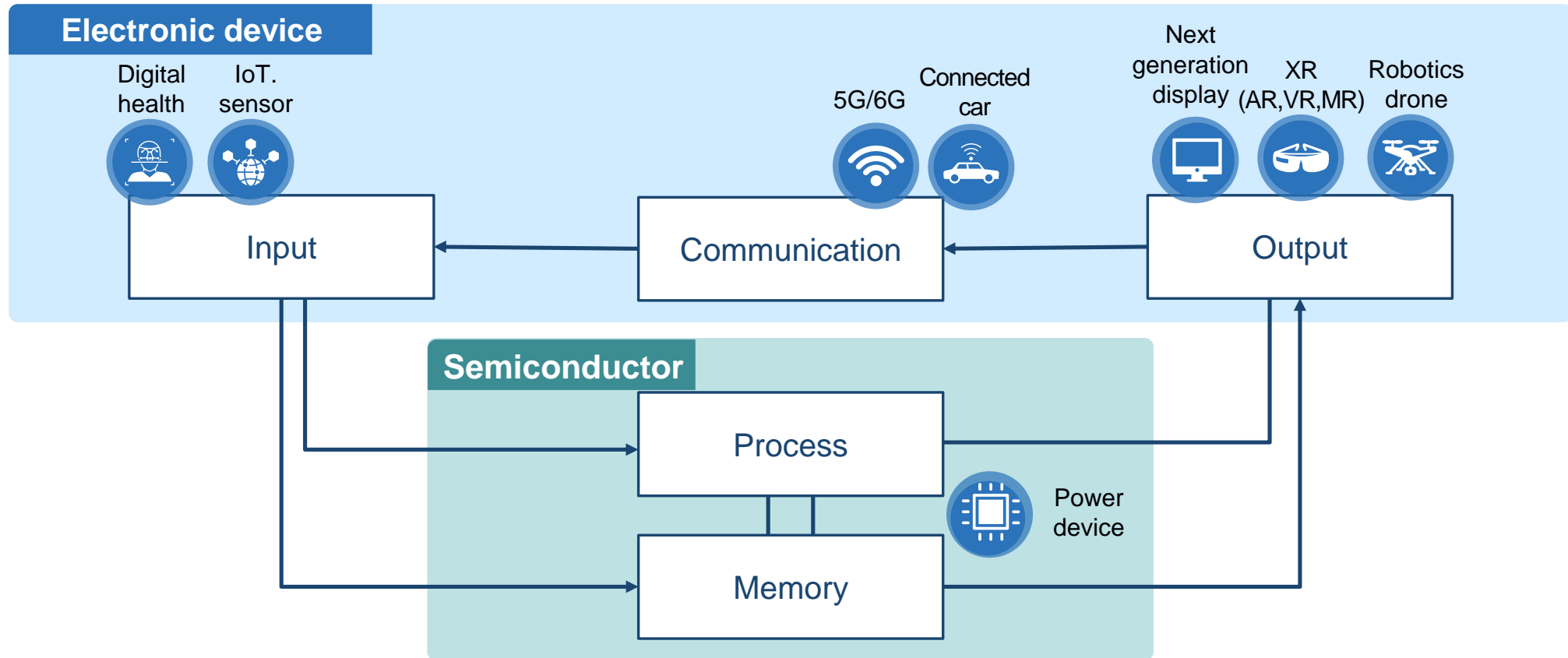
### Disciplined Portfolio Strategy

Focus on products & markets where we are natural owners and obtain leadership position.  
 Business operation based on strict criteria :  
 [Dynamically changing markets] x [Our unique capabilities]





# **Digital Semiconductors & Electronics**



## Seamless Interface

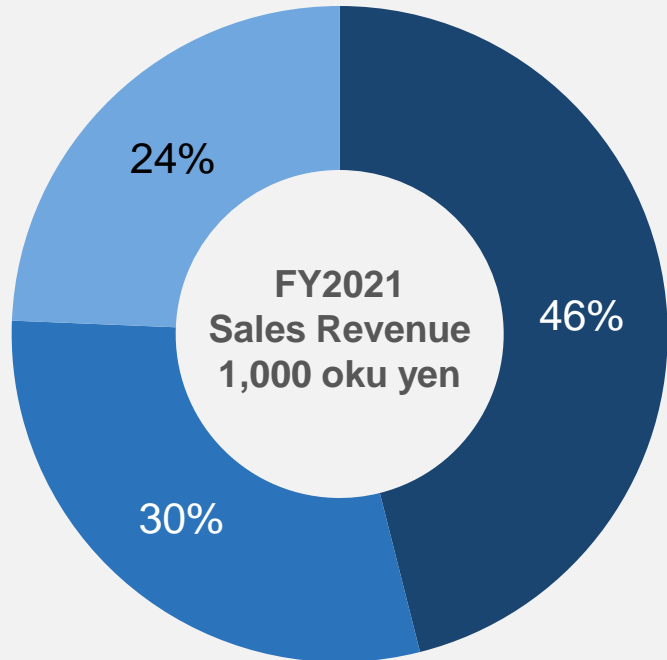
Real ↔ Virtual

Human ↔ Products

- The amount, type, and accuracy of information that comes and goes dramatically evolved
- Rise of various emerging markets

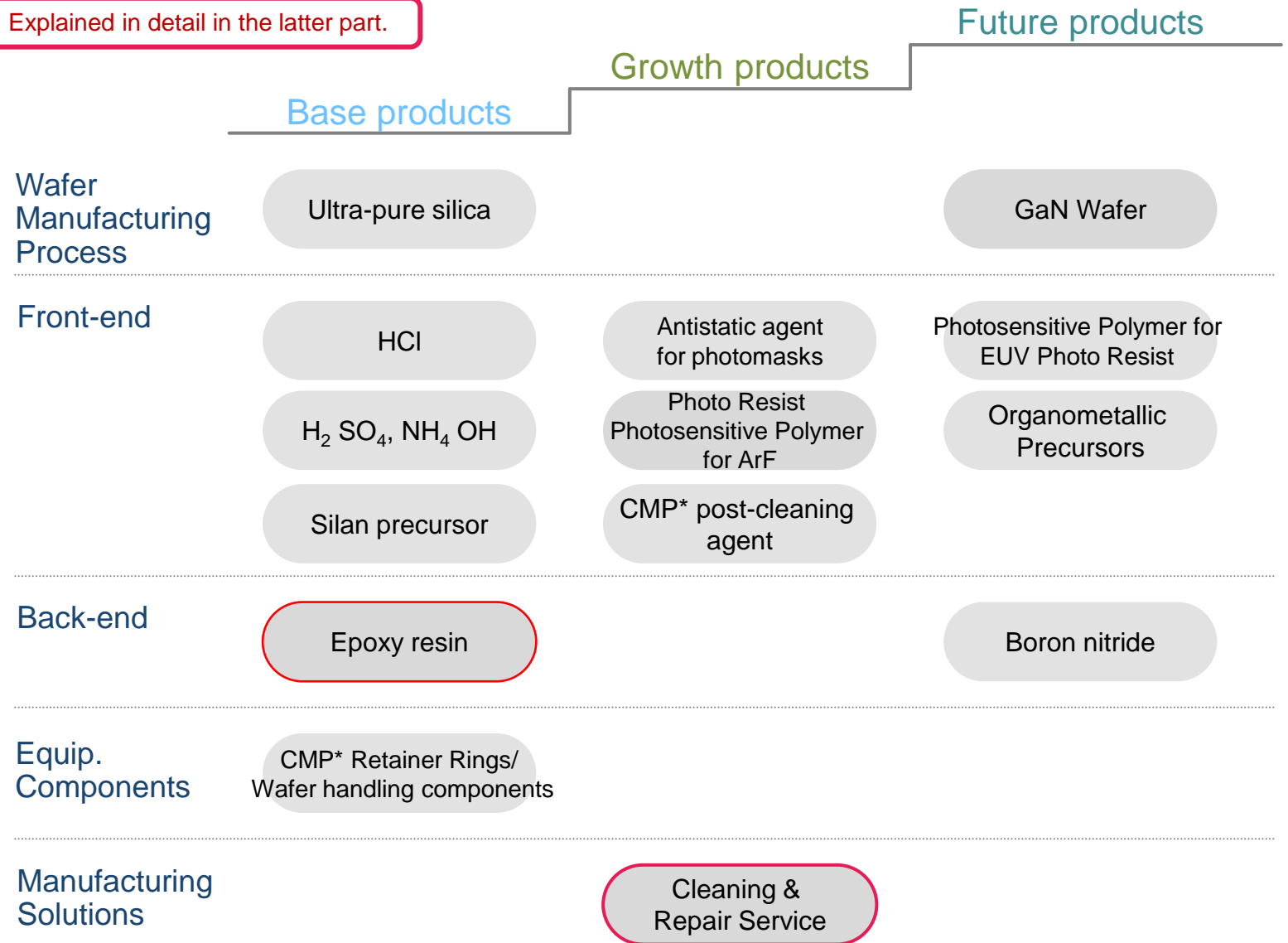
# Digital 1 | Semiconductor-related Businesses | Overview

Sales revenue by product in the semiconductor businesses



- Semiconductor materials
- Semiconductor solutions
- Semiconductor equipment components

Explained in detail in the latter part.

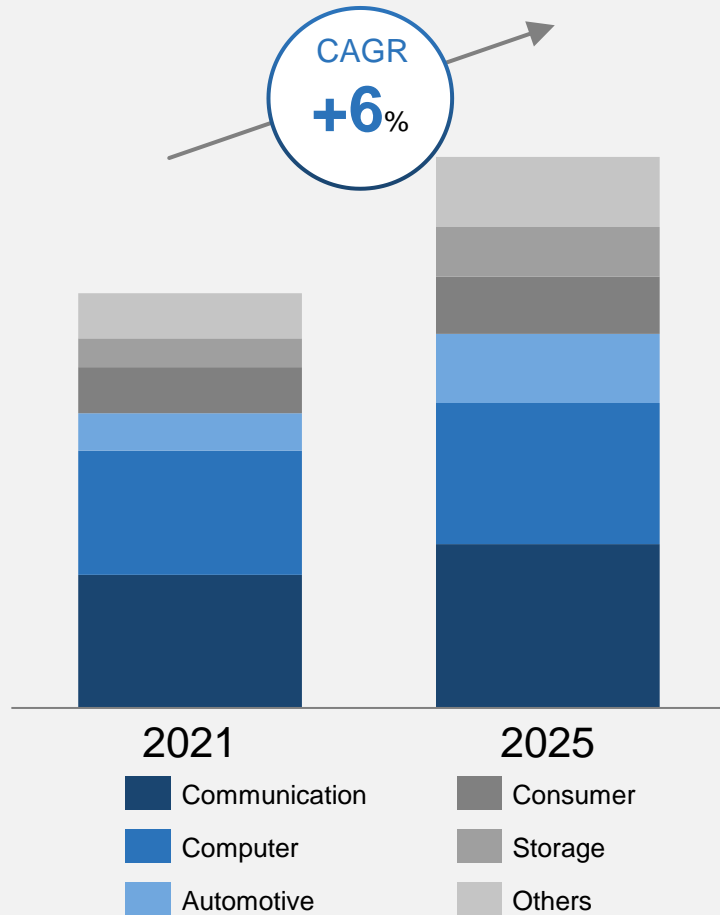


\*Chemical Mechanical Polishing

# Market Trend | Rapid growth in each application area and device demand drive the overall market

## Global Semiconductor Market Trend

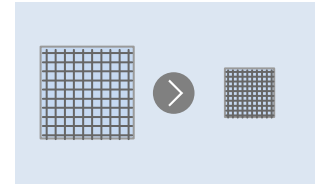
Semiconductor Sales by End Market  
(amount-based)



## Technology Trends

More Moore  
(miniaturization,  
high integration)

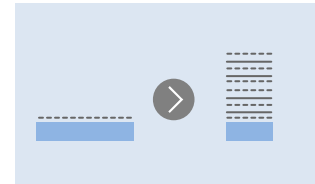
Process  
miniaturization



- Precursor materials
- Etching gas
- CMP related materials

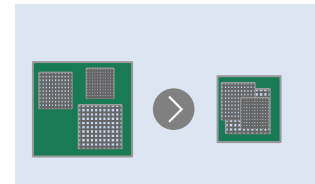
More than  
Moore  
(high density)

Chip  
multilayer



- CMP related materials
- Films, adhesive materials

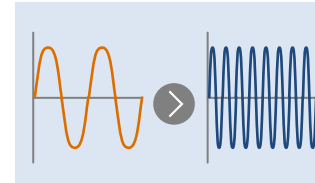
Chip  
densification



- Advanced resin materials
- High performance filler
- Low melting point solder materials

The rise of  
power  
electronics

High  
frequency  
support,  
High  
withstand  
voltage



- Compound semiconductor substrates
- Thermal management materials

# Our Advantage | Unique products and capabilities to meet increasingly sophisticated customer needs



**1**



**Lineup of high-purity products for a wide range of customer requirements**

**2**



**Global footprint of cleaning services**

19 locations

Cleanpart Group  
U.S.(4 locations), Europe(5 locations)

Precision Cleaning Business location  
Japan(7 locations), Taiwan, China, Korea


Locations marked on map: Santa Clara(CA), Southbridge(MA), Phoenix(AZ), Richardson(TX), Thalheim(DE), Dresden(DE), Asperg(DE), Seyssinet (FR), Rousset(FR)

**3**



**Strong relationship and channel network with equipment manufacturers**

**4**

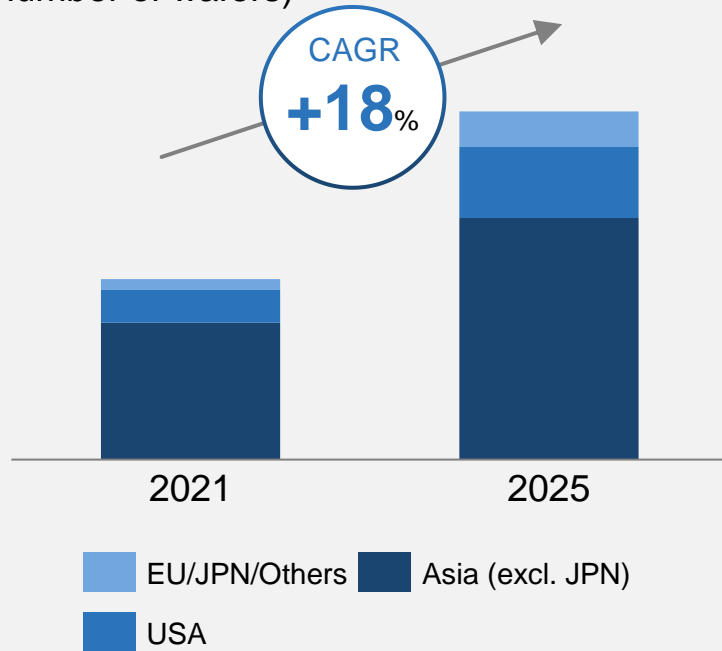


**R&D and technology for sustainable innovation**

# Cleaning Services | Strong Global Position

## Logic Semiconductor Production by Region

Advanced node production capacity of 10nm and below (200nm wafer equivalent, based on number of wafers)



**Semiconductor production volume is growing at a rapid pace**

**Increased regional decentralization**

## MCG's Strengths

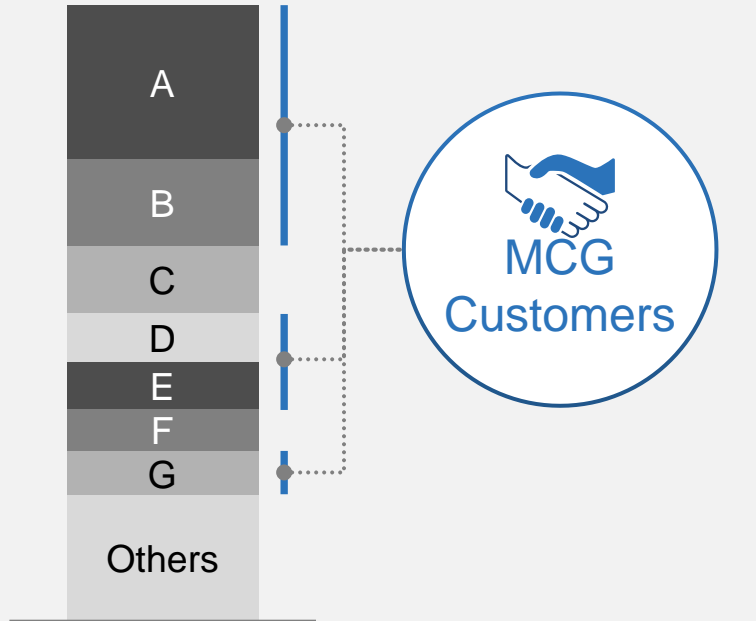
- Equipment-friendly, contamination-free cleaning technology that supports high productivity in evolving semiconductor manufacturing processes.
- Global footprint, regional coverage and regional strategies.



- Expand market share for new cutting-edge fabs by horizontally deploying cutting-edge technologies
- Maintain No. 1 market share as power semiconductor companies continue to invest in expansion
- Japan: Our factories are operating at full capacity and expanding profitability as fabs and OEMs increase their investments
- Taiwan, South Korea: Enhanced cleaning for cutting-edge applications

# Epoxy | High Adaptability to Cutting-Edge IC Trends Maintains High Market Share

## Our share of the sealing materials market

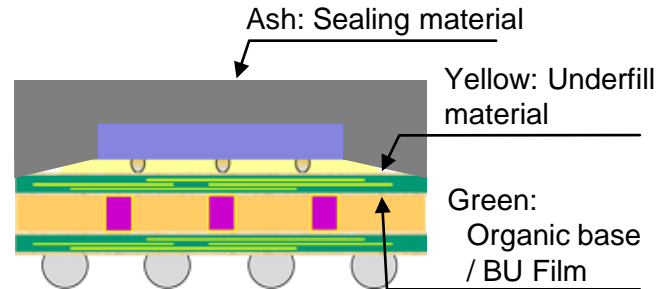


**Building strong customer relationships  
with top players  
in semiconductor sealing materials**

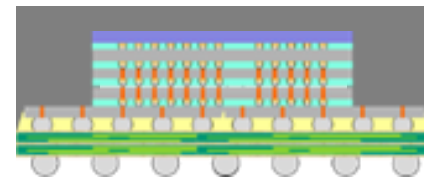
## Customer needs

More complex semiconductor chip structures require higher-performance resins.

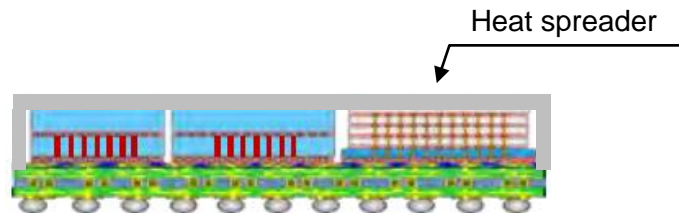
Conventional type 2D-IC



Evolutionary type 3D-IC



Composite type 3D-IC



## MCG's Strengths

**Heat-resisting property**

Increased heat generation due to next-generation devices and high integration

**Low viscosity**

Contribution to improvement of formability in thin-walled parts

**Low warp**

Retention and reliability with board connection surface

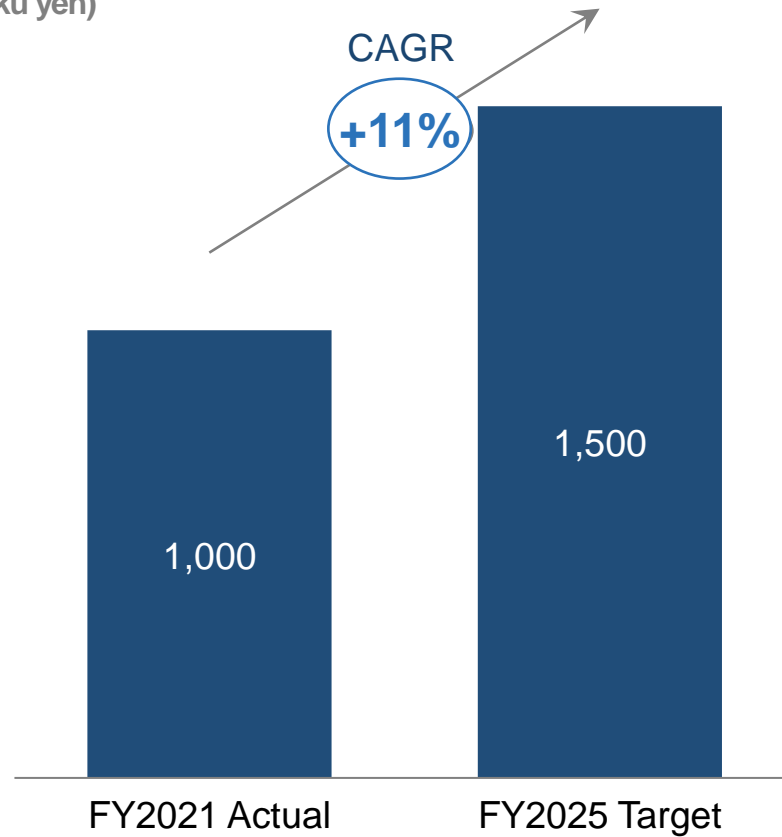


# Semiconductor Business Indicators Summary



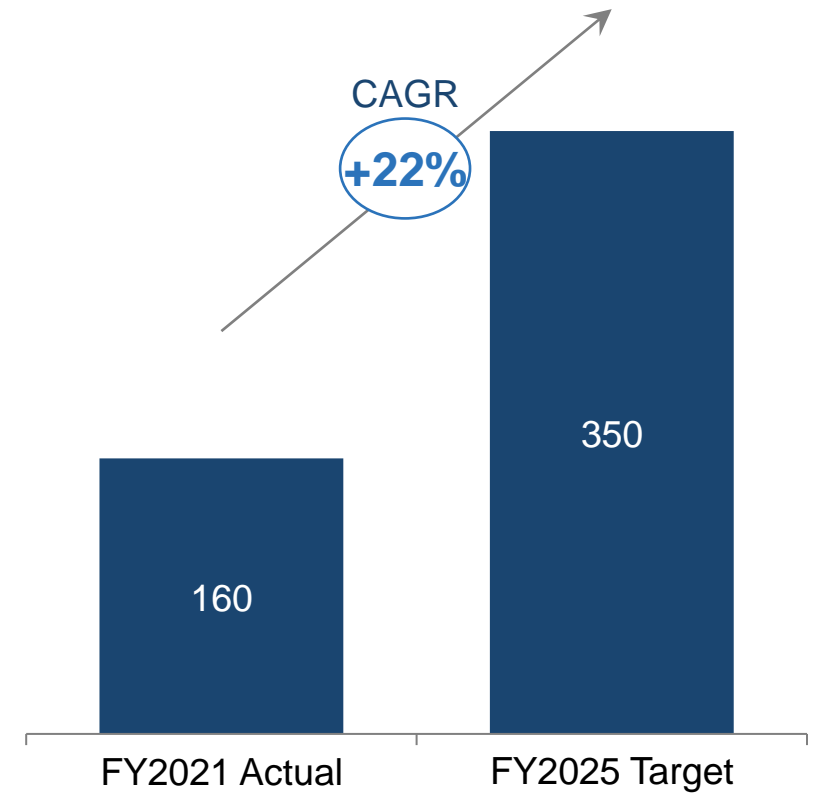
## Sales Revenue

(oku yen)



## EBITDA

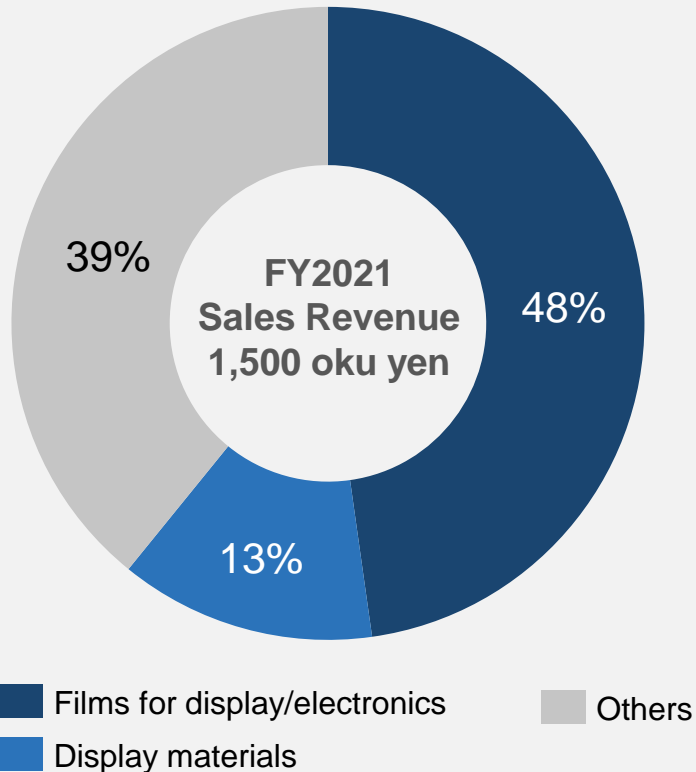
(oku yen)



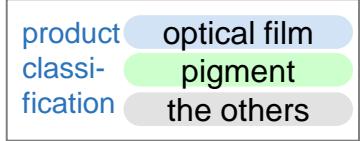


# Digital 2 | Electronics Businesses | Overview

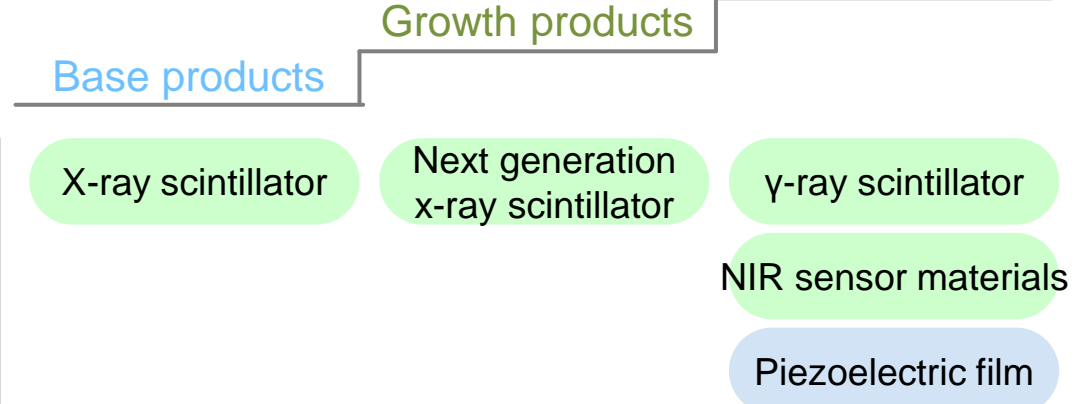
Breakdown by product in the electronics businesses



Explained in detail in the latter part.

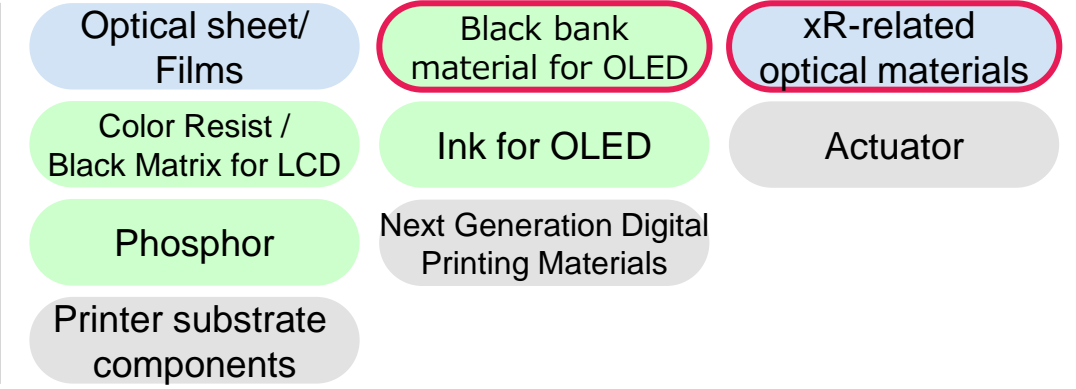


Input

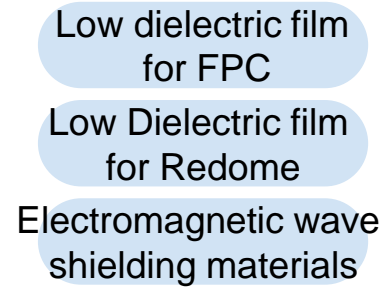


Future products

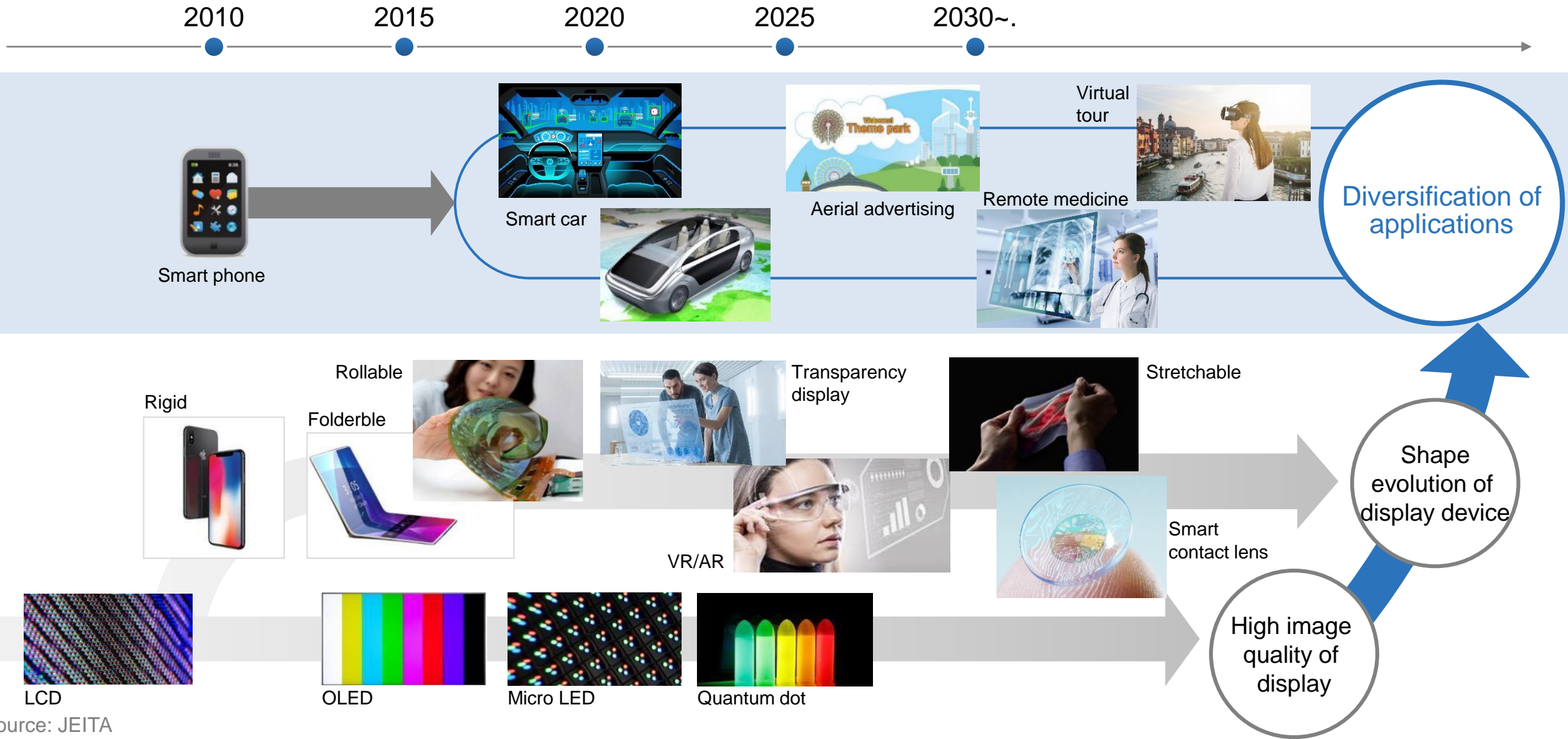
Output



Communication



# Next Generation Display Market Trends



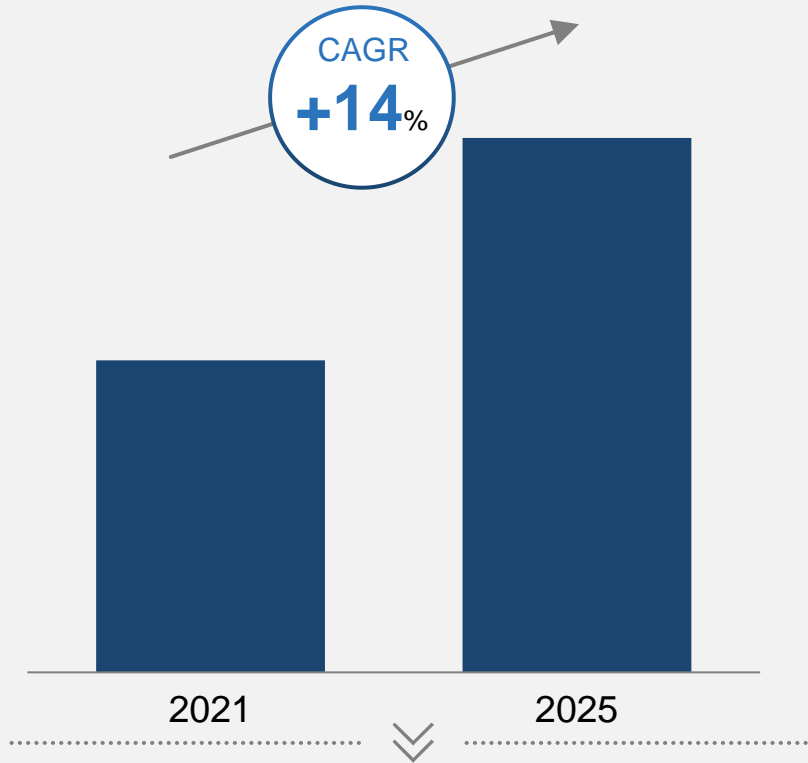
Source: JEITA

# Black Bank Materials for OLED |

Building a leading position in the OLED market by applying color resist materials and technology

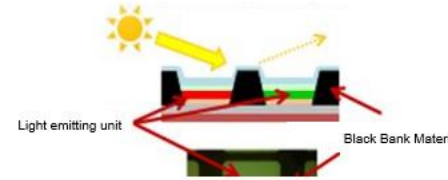
## Global OLED Market Trend

(based on number of units)



The OLED market is in a growth phase.  
Further improvement of image quality is required.

## MCG's Strengths



Technology cultivated in the color resist business and Responding to the need for even higher image quality by leveraging leading position in the industry

- World's first BM\* resist launched in 2003
- BM/BCS\*\* No.1 share as of 2021

\*\*Black Matrix \*\*Black Column Spacer



Our Colors resist technology

### Pigment dispersion technology

#### Ink component

Pigments, Carbon black, Dispersing agents, Dispersing resins



Materials & Dispersion Technology

Enables wider selection of pigment types that can penetrate UV light even under thick films

High image quality is realized by blackening Bank materials

### Resist design technology

#### Resist component

Photosensitive resin, Photoinitiator, various additives



Materials & Design Technology

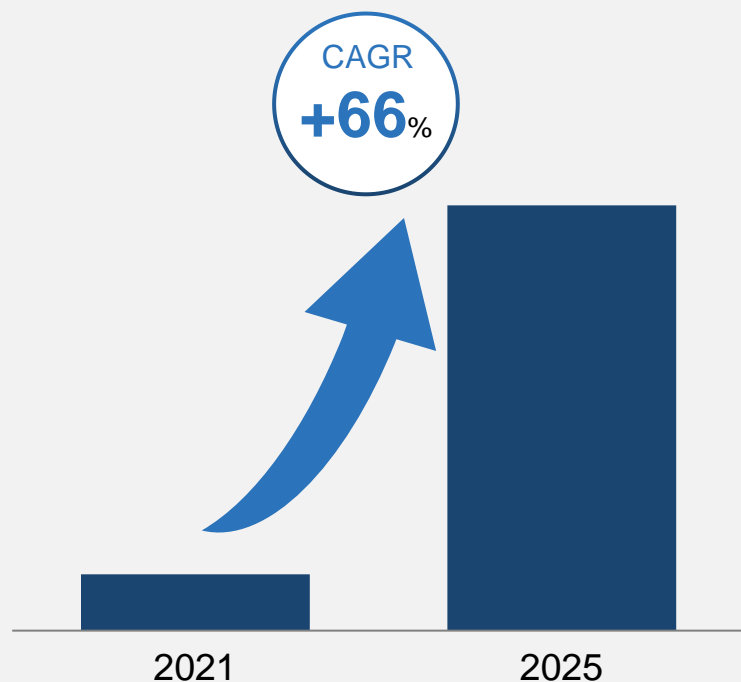
Enables detailed arrangements for film thickness, etc.

# Light Guide Plate Materials for AR Glass (xR-related Optical Materials)

Expanding business in the growing market for AR glasses by leveraging our capabilities in optical control technology

## Global xR Hardware Market Trends

(amount-based)



xR market expected to expand rapidly in the future

## Customer Needs and MCG's Strengths

### Customer needs

### MCG's Strengths

Light guide plate  
(Substrate)

Improvement of weight reduction, safety, which are the challenges for conventional glass substrates

- Achieves transparency and smoothness beyond that of optical glass by utilizing our superior molding technology for transparent polymer materials.

Super transparency

Super smoothness

Light Diffractive Materials

Improved immersion feeling

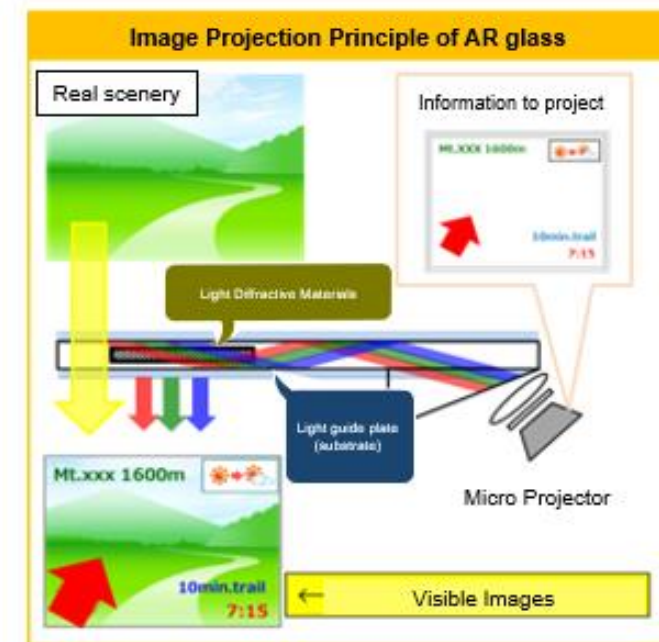
- Achieves higher performance than other methods using technology cultivated through research and development of hologram memory
- We have a full range of in-house capabilities, from materials to evaluation technology. (Our unique strength)

Viewing angle improvement

Brightness improvement

Image quality improvement

Weight reduction  
Thinning

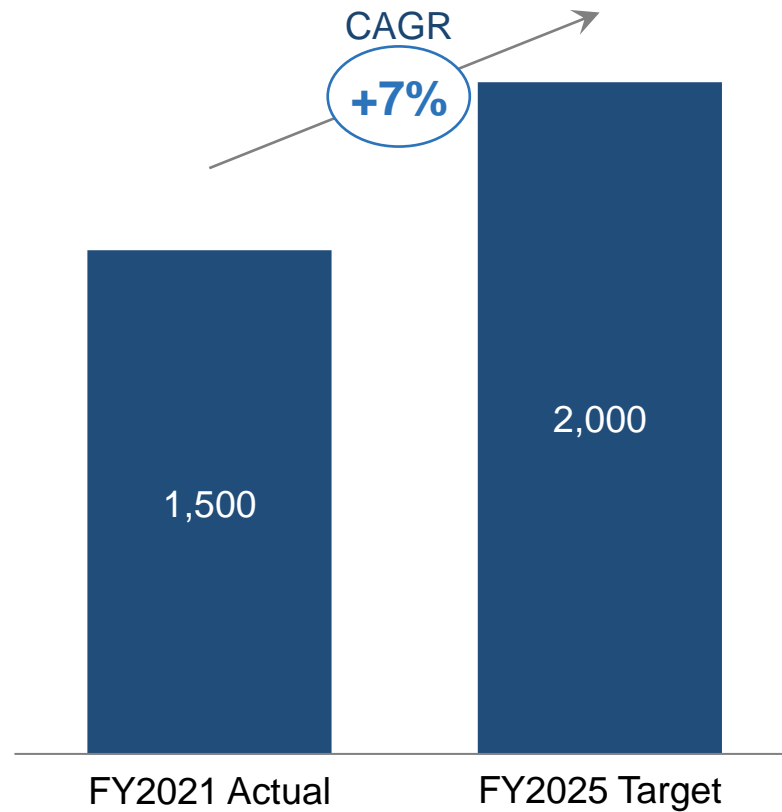


# Electronics Business Indicators Summary



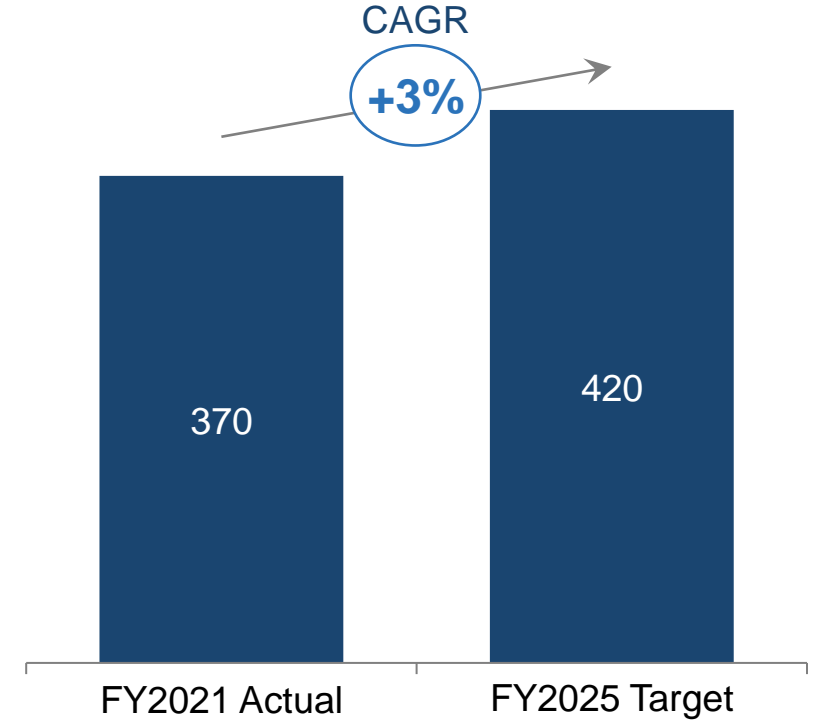
## Sales Revenue

(oku yen)



## EBITDA

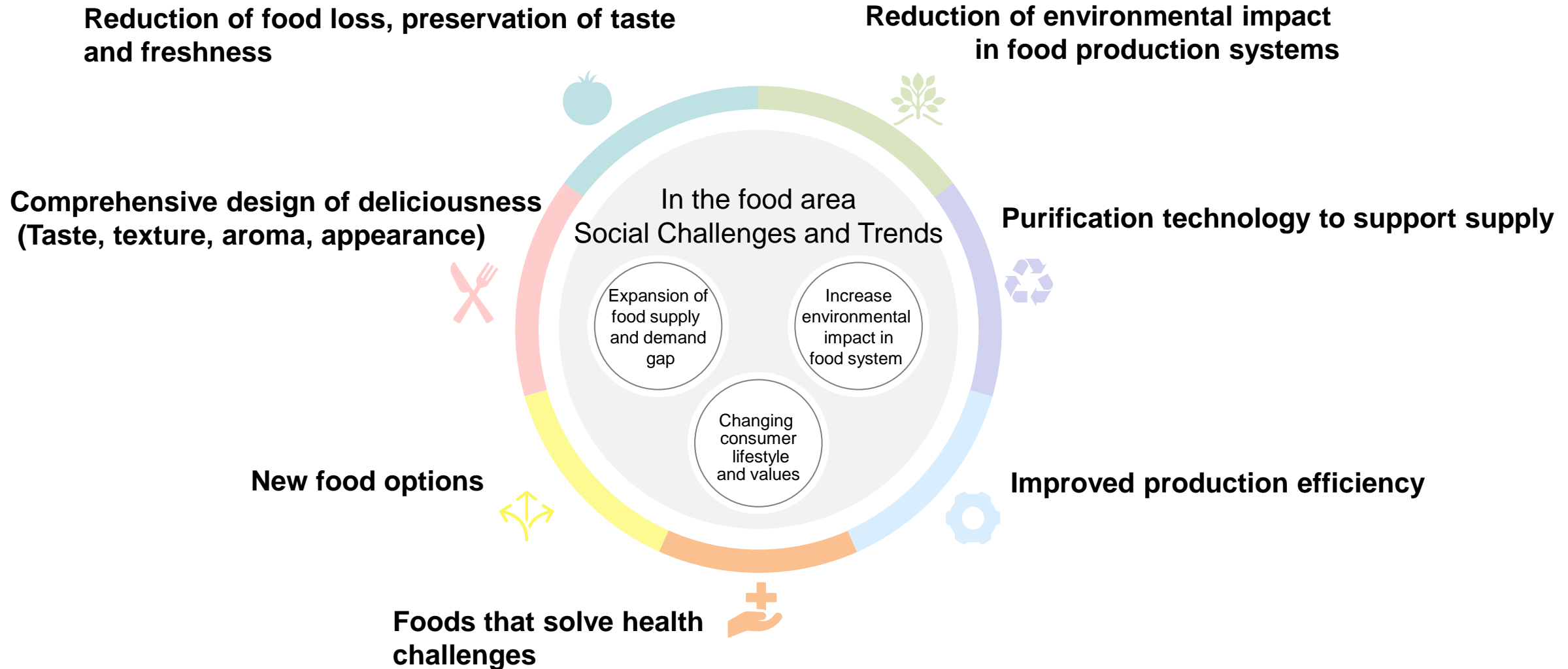
(oku yen)





**Food**

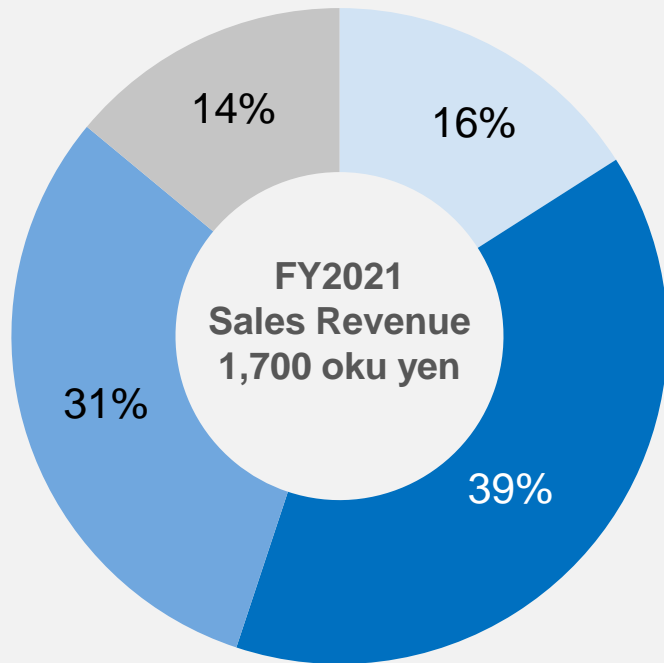
# Food Market Trends | MCG Solutions and Products



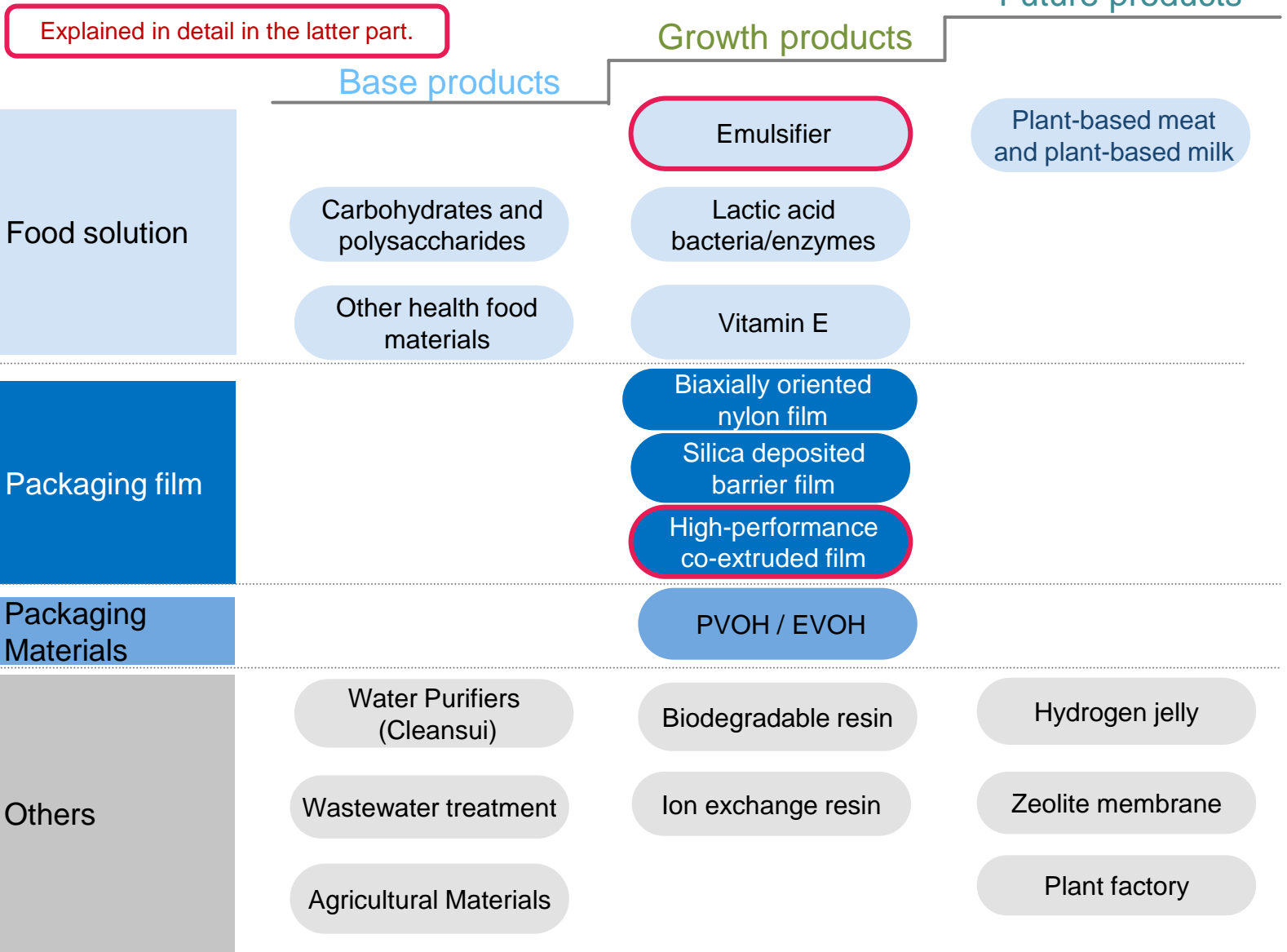


# Food-related Businesses | Overview

Sales by product in the food businesses



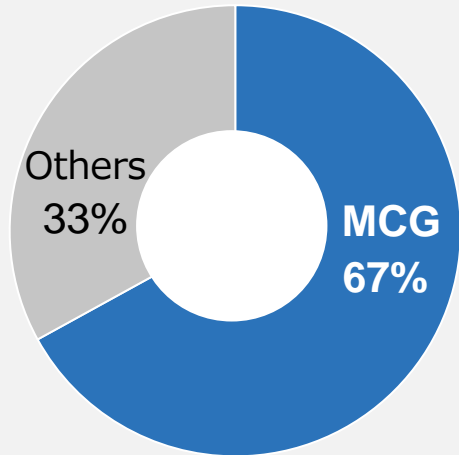
■ Food solution     ■ Packaging materials  
■ Packaging film     ■ Others





# Emulsifiers | Maintain and strengthen the No. 1 global market share of sugar esters

## Breakdown of Sugar Esters' Global Share

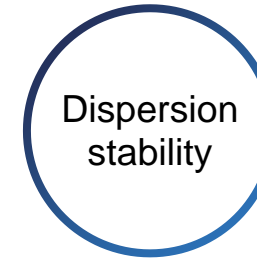


No. 1 global market share and a dominant position accounting for approx. 70% of the total

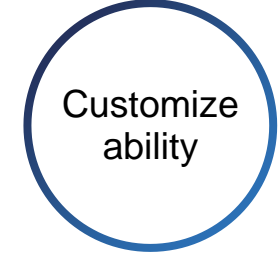
## MCG's value proposition in the emulsifier business (Sugar Esters)



Application range



Dispersion stability



Customize ability

Improves texture and taste by easily maintaining the emulsified structure of various food ingredients.  
Optimize composition according to customer needs

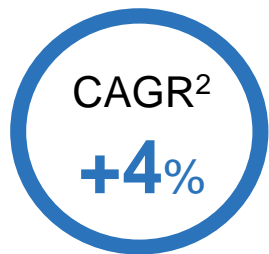


### Tea Demand (APAC)



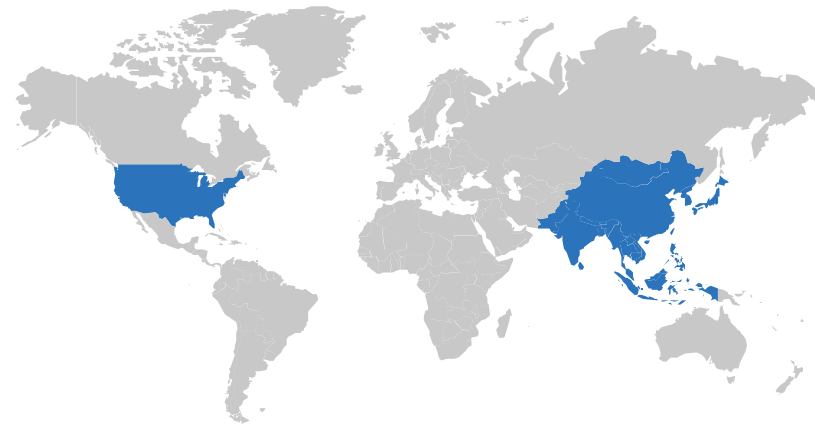
Ready-to-Drink Demand Rises as Incomes Rise in Emerging Asian Countries

### Coffee Demand (APAC)



Increased demand due to lifestyle changes (e.g., remote working) as a result of the COVID-19.

## Regional expansion



**Beverage**  
Business expansion in Asia (China)



**Chocolate**  
Business expansion in Asia (China) and USA

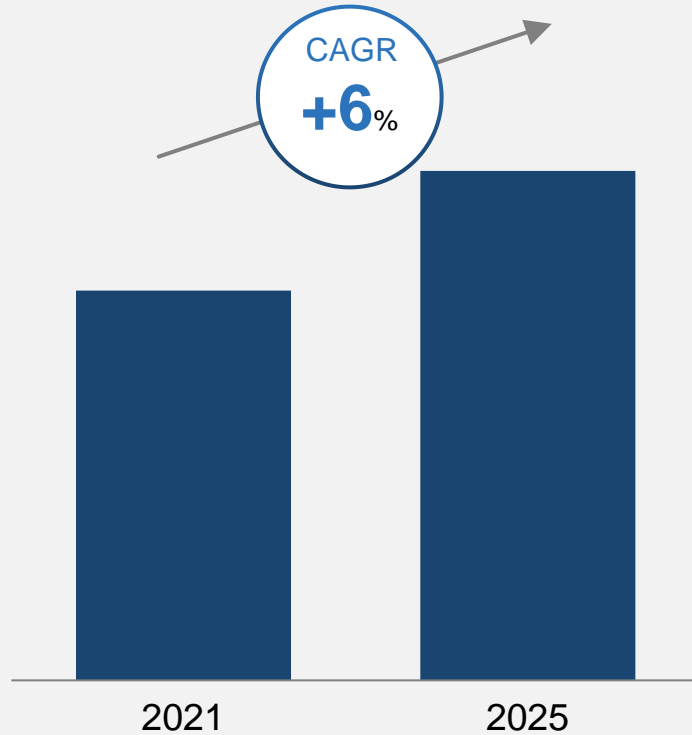
1. growth rate of Tea RTD market (APAC) during 2020-25; 2. growth rate of Coffee RTD market (APAC) during 2022-27  
Source: Mordor Intelligence

# Food packaging materials |

Appealing to the food needs of Asian countries such as Thailand with the No.1 track record in Japan

## Global Food Packaging Market Trends

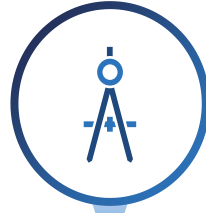
Barrier Film Market (amount-based)



⌵  
**Growing demand for food loss reduction and QOL improvement will drive future growth, especially in Asia**

## MCG's Strengths

Design and film deposition technology



High quality stable supply



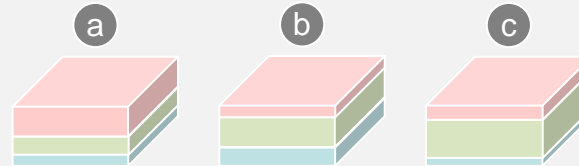
Multilayer co-extruded film for deep drawing packaging  
No.1 share of the domestic market



Approx. **65%**

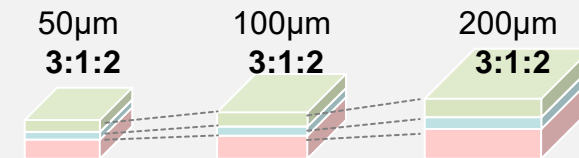


MCG  
DIAMIRON  
Co-  
Extrusion  
Technology



- Unique technology allows for a high degree of freedom in setting the layer thickness ratio. The thickness of each layer can be changed.
- Various functions such as design, barrier property, pinhole property, etc. can be added.

Other company



- Each layer thickness tends to be in the same ratio
- Surface roughness occurs when changing layer thickness

## Expansion into Asia

Responding to customer needs specific to Thailand and other Asian countries

### Chilled needs



➔ Responding to demand such as change from frozen to refrigerated for export

### Color needs



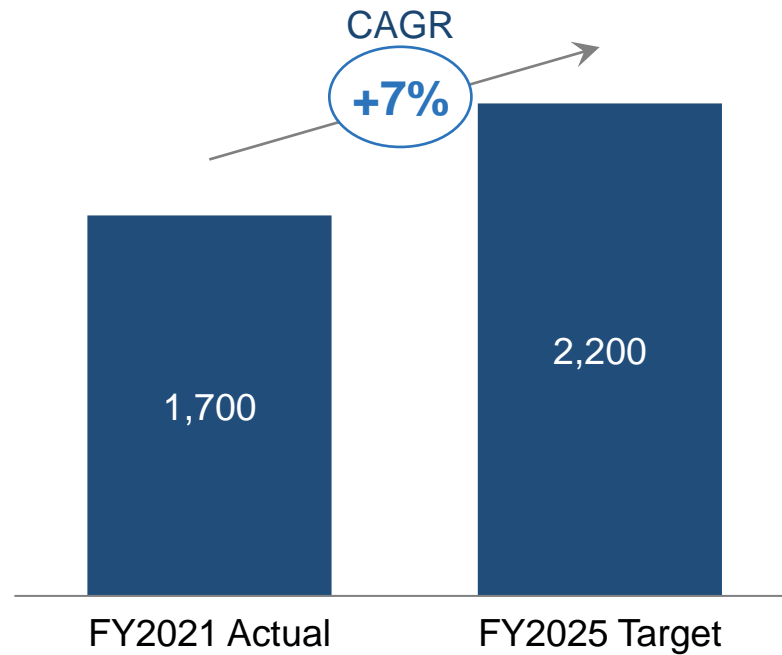
Expressing the colors that are unique to the region and desired by the customers

# Food Business Indicators Summary



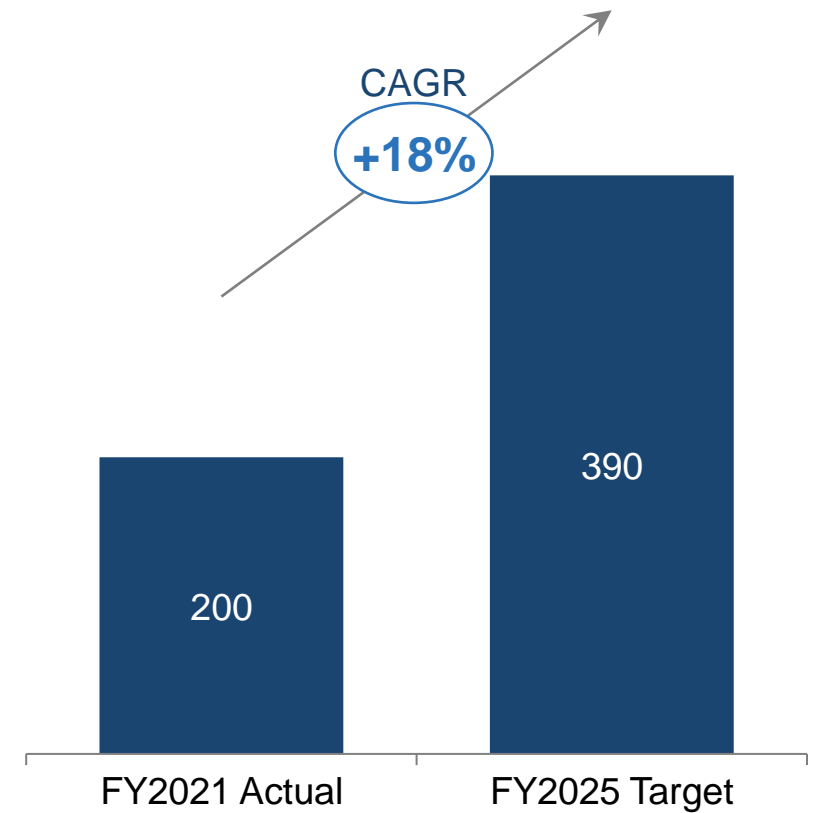
## Sales Revenue

(oku yen)



## EBITDA

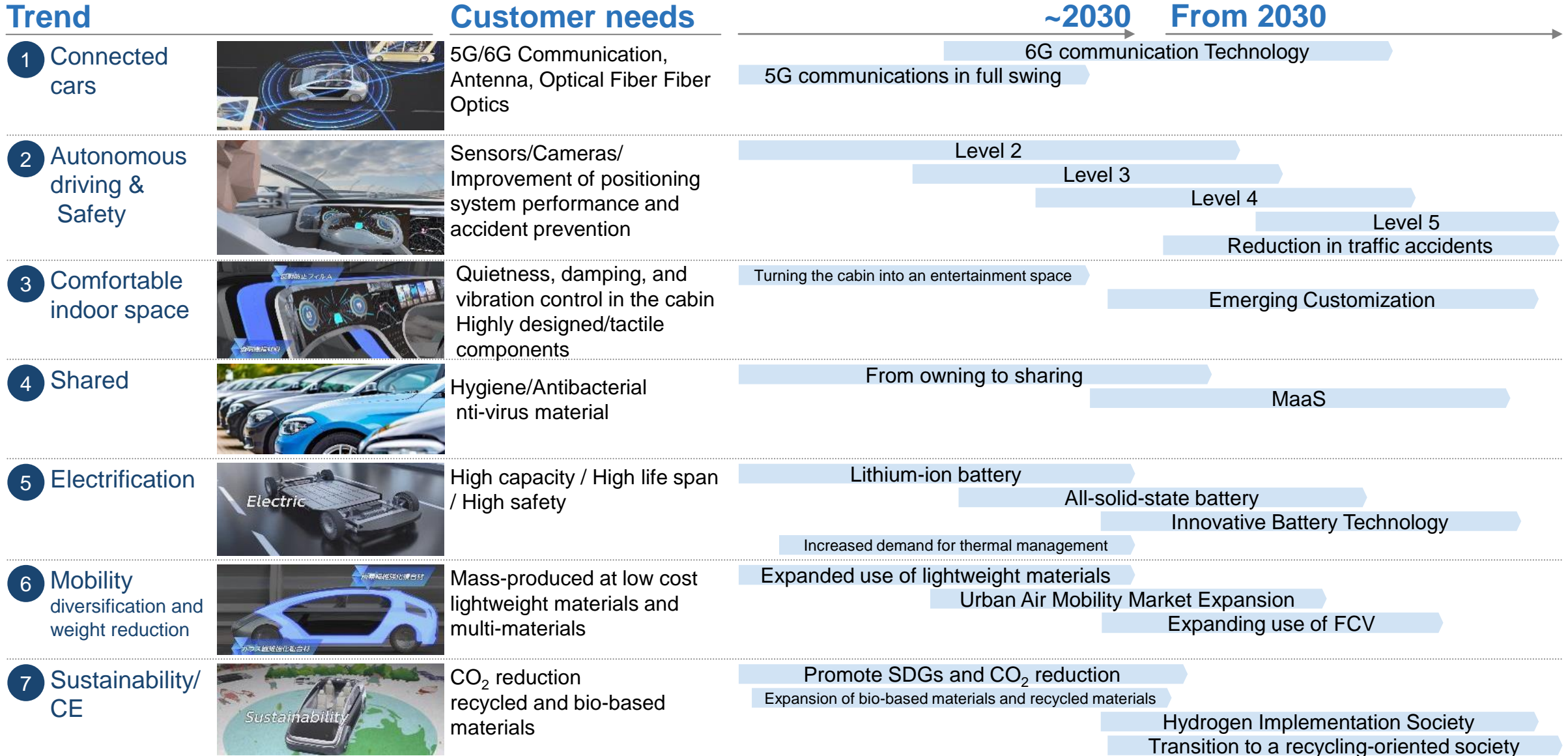
(oku yen)





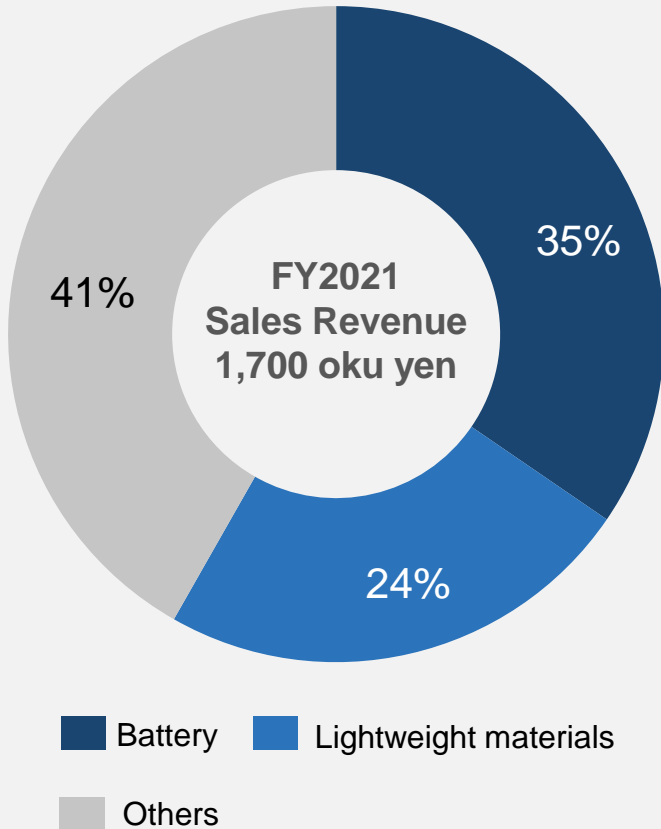
# EV / Mobility

# Megatrends | Mobility Trends Drive New Product Needs

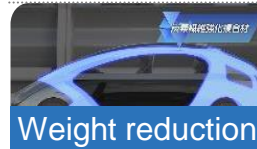
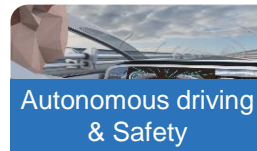


# EV/Mobility-related Businesses | Overview

Sales by product in the EV/Mobility businesses



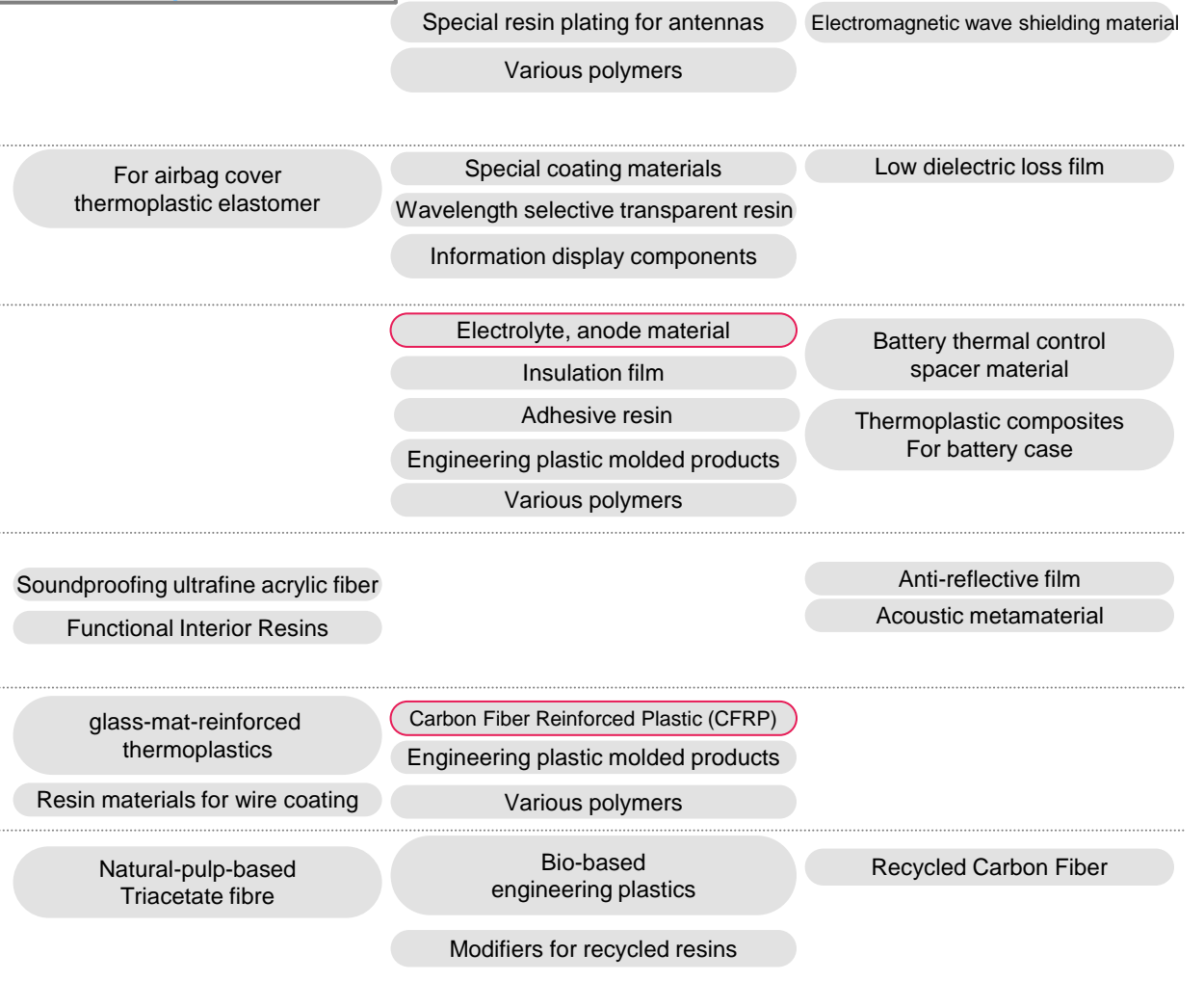
Explained in detail in the latter part.



## Base products

## Growth products

## Future products

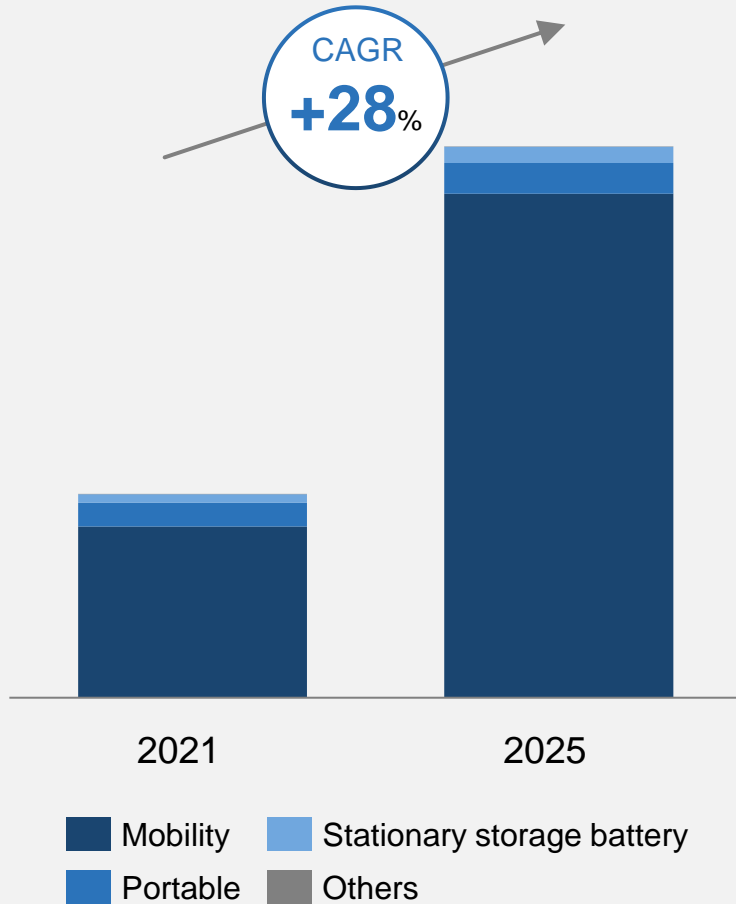




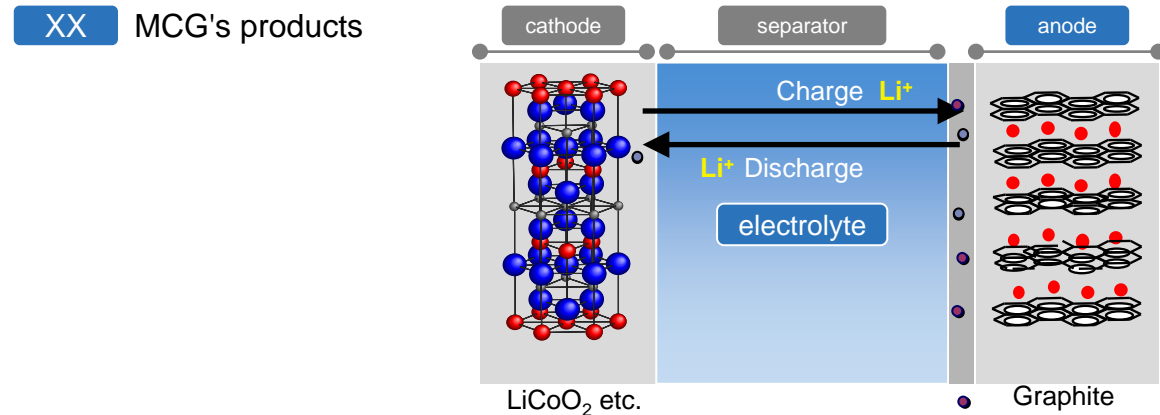
# Battery Materials | Battery-related Materials Market Expands through EV Growth

## Global LiB Market Trend

(based on battery capacity, GWh)



## Key LiB Components and Needs

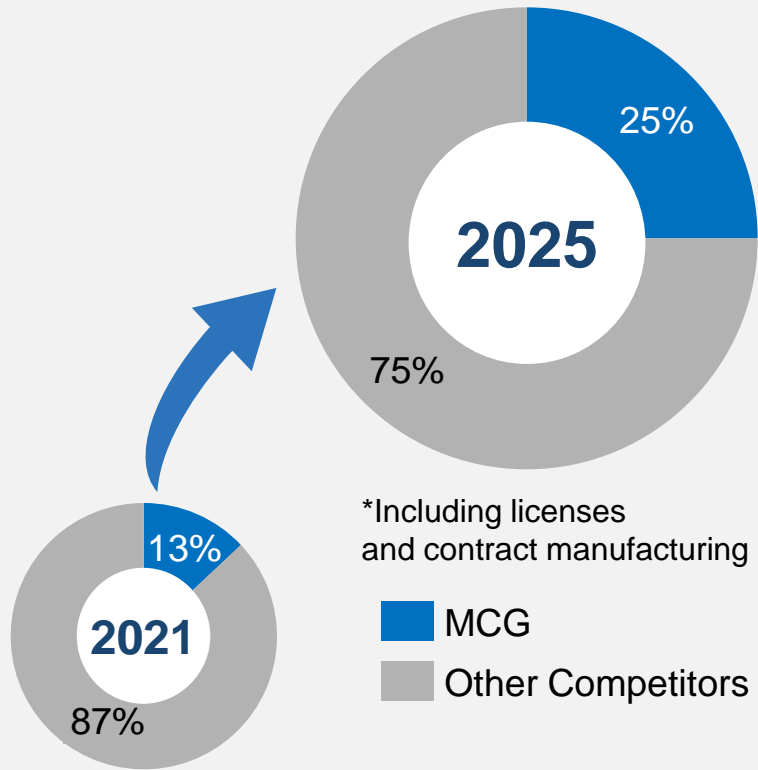


### Main components

Component	Description	Customer needs
<b>Electrolyte</b>	Solution with electrical conductivity	<ul style="list-style-type: none"> <li>High Power</li> <li>Durability, long life, high safety</li> <li>Control of side reactions at the electrode</li> </ul>
<b>Anode material</b>	Accepts lithium during charging to determine battery capacity and power	<ul style="list-style-type: none"> <li>High capacity, long life</li> <li>Stable supply</li> <li>Materials with low environmental impact amid increasingly strict environmental regulations</li> </ul>
<b>Cathode material</b>	Source of lithium ion. Determines battery capacity, power and average voltage	
<b>Separator</b>	Isolates the positive and negative electrodes while maintaining ionic conductivity	

# Electrolyte | Aiming to expand market share by leveraging our industry presence, proprietary additives and high design capability

## Breakdown of global electrolyte market share



Aiming for growth up to 25% of overall market share by 2025

## MCG's Strengths

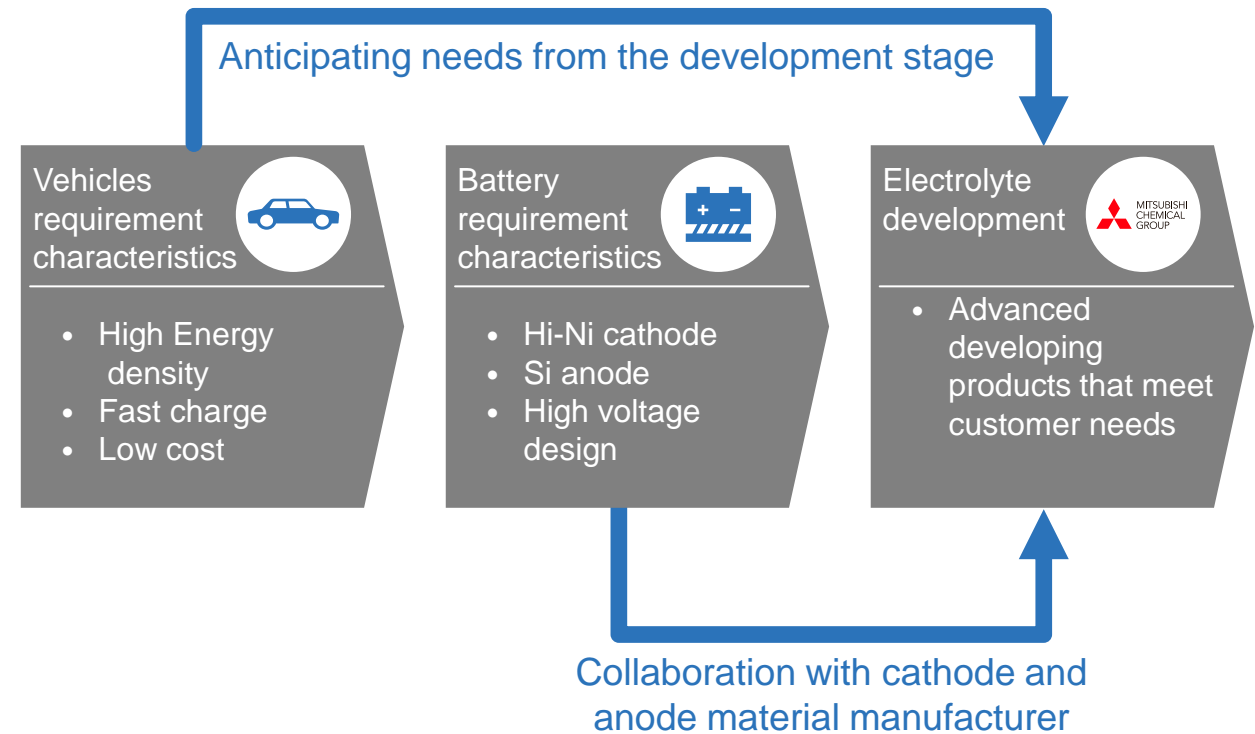
Possession of competitive additives

High performance additives with a strong patent network

Electrolyte design capability to meet customer needs

Design capability to combine various raw materials to achieve the battery characteristics required by our customers.

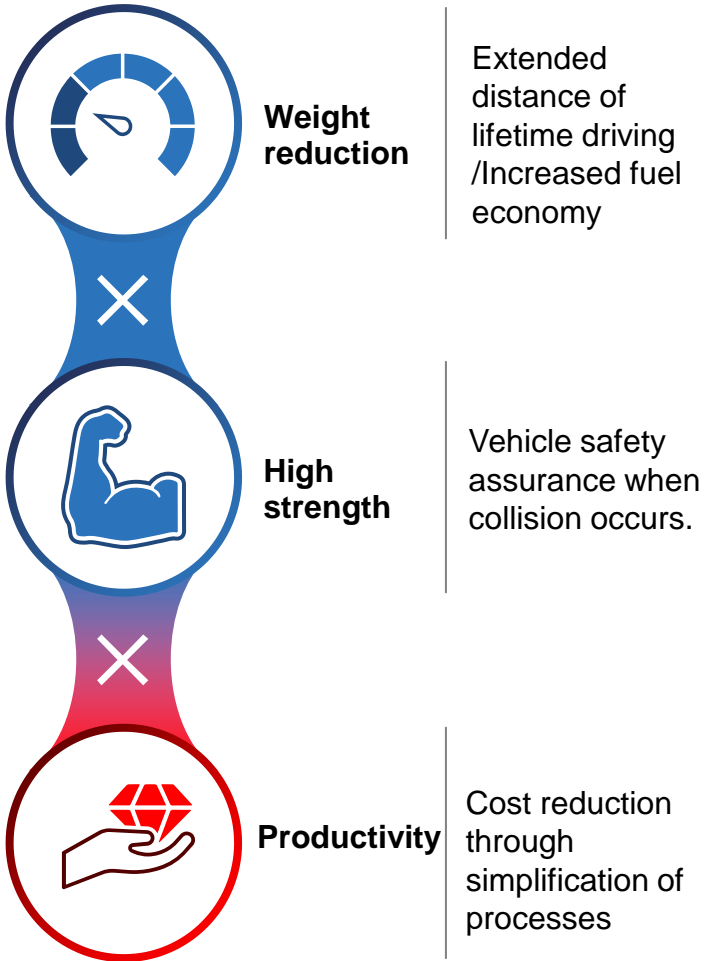
Customer relations for capturing the innovation cycle



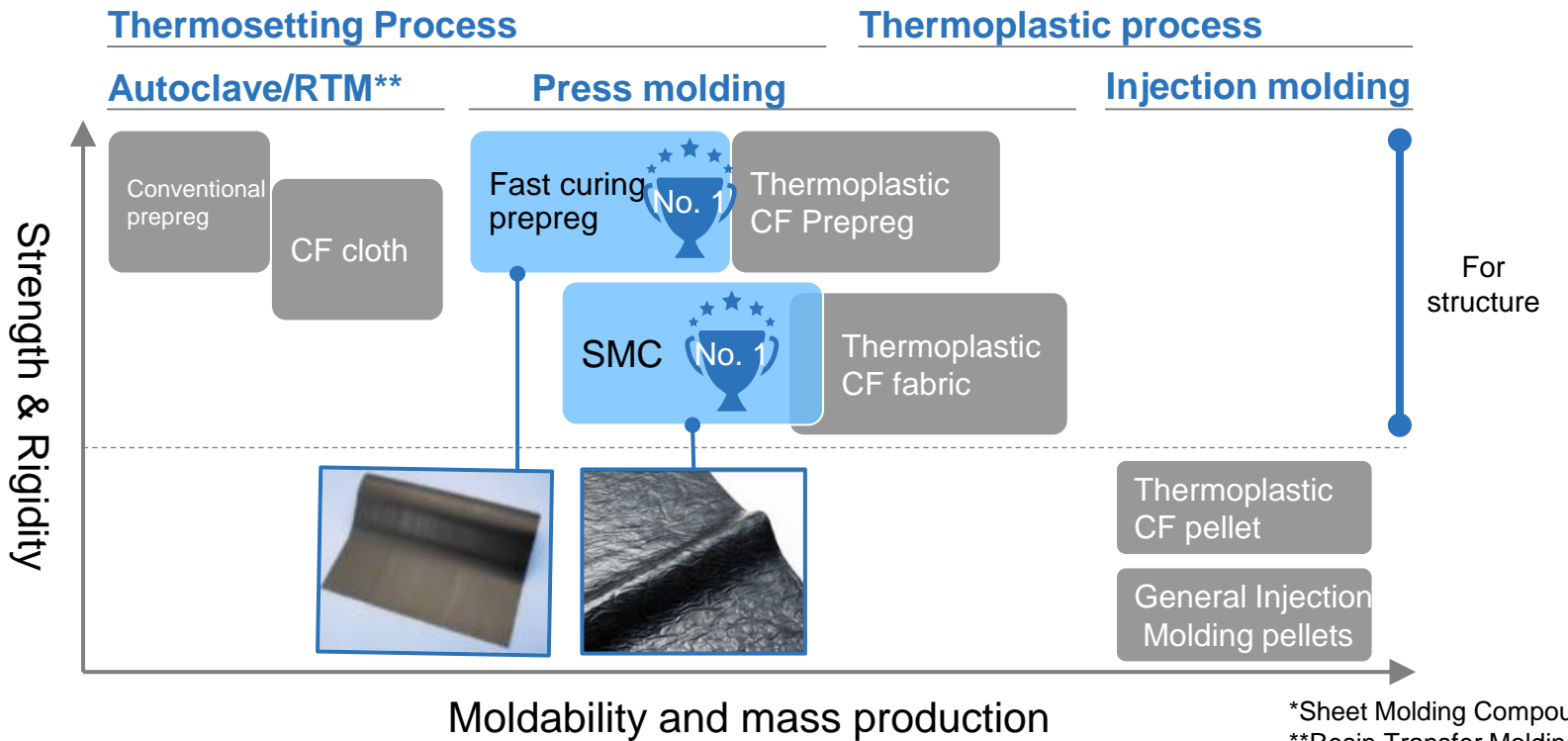


# Carbon Fiber Composite Materials | Entering Target Markets with Unique Materials that Combine Lightness and Strength with Productivity

## Customer needs



## MCG's Strengths



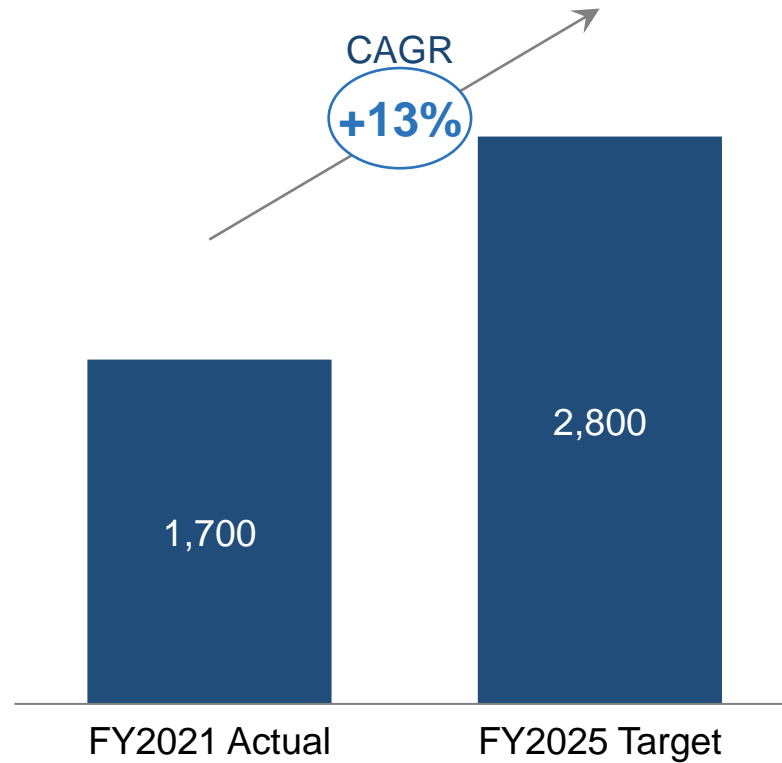
\*Sheet Molding Compound  
\*\*Resin Transfer Molding

# EV/Mobility Business Indicators Summary



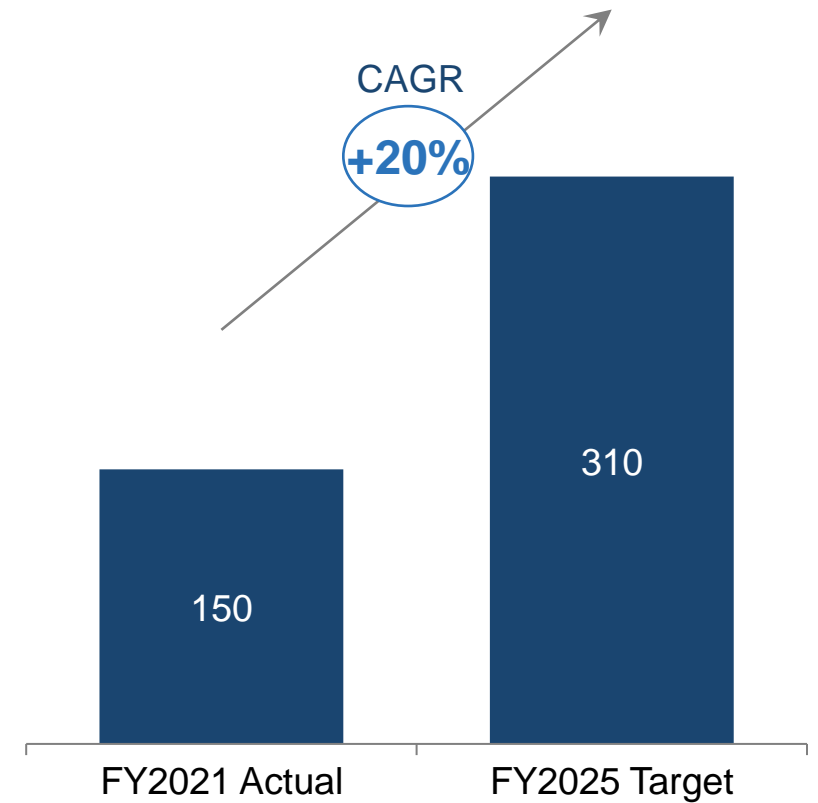
## Sales Revenue

(oku yen)



## EBITDA

(oku yen)

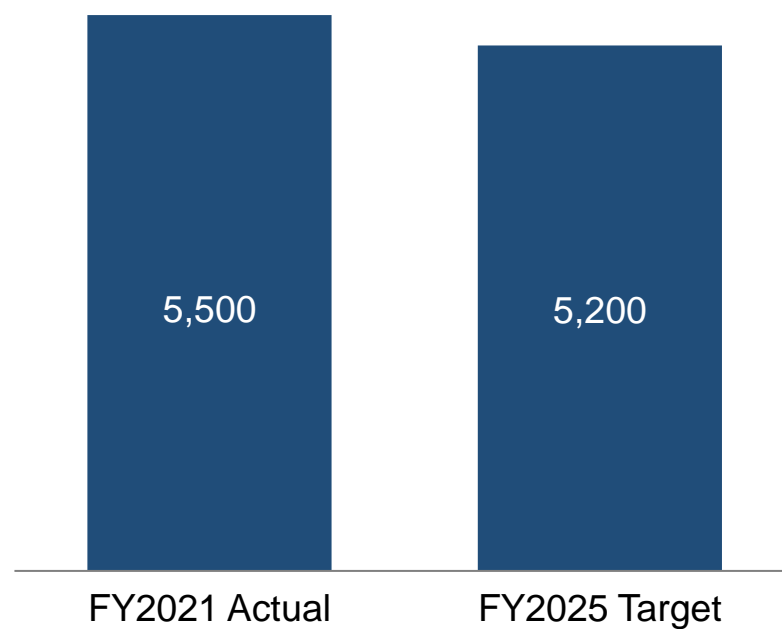


# Industrial, Medical, Consumer goods, Building & Construction etc. Business Indicators Summary



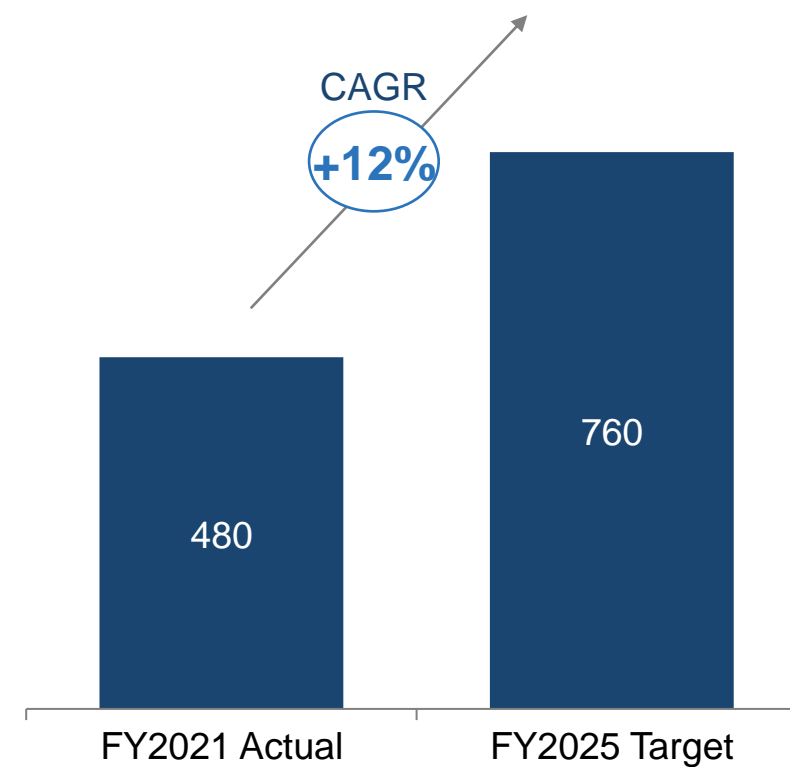
## Sales Revenue

(oku yen)



## EBITDA

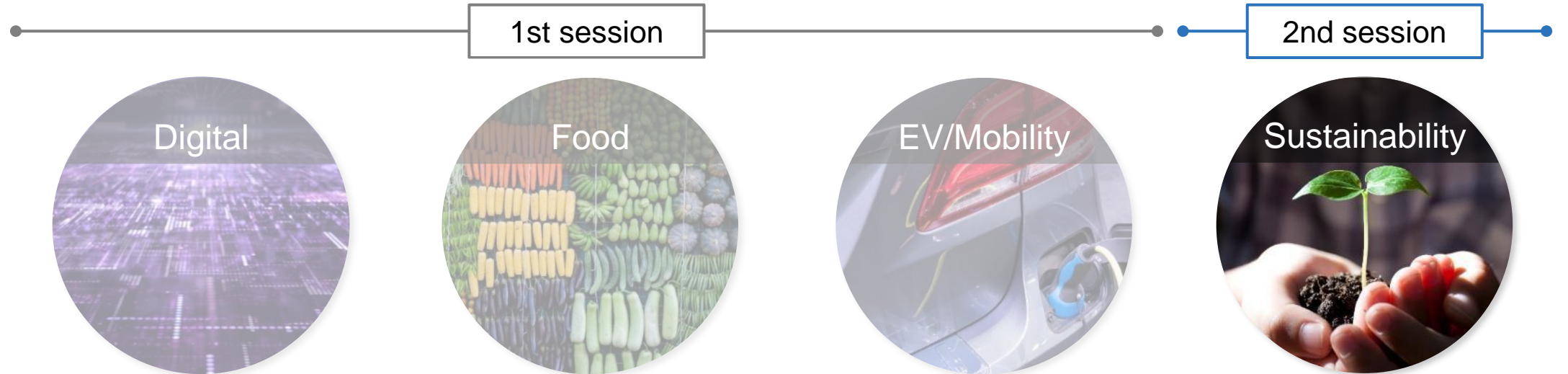
(oku yen)





# Sustainability

# Our focus markets in Performance Products



**Sales Revenue**  
(oku yen, FY2021)

Approx. 2,500

Approx. 1,700

Approx. 1,700

Approx. 4,600\*

**Key Businesses**

- Semiconductor materials/services
- Electronic devices

- Food packaging materials
- Food additives

- Batteries
- Lightweight materials

- Recycled and bio-materials
- Product life extension

**Products to be introduced today**

- Cleaning materials & services
- Epoxy
- Black bank materials for OLED
- Light guide plate materials for AR glass

- Sugar esters
- Barrier film for food

- Electrolyte
- Carbon Fiber composite materials

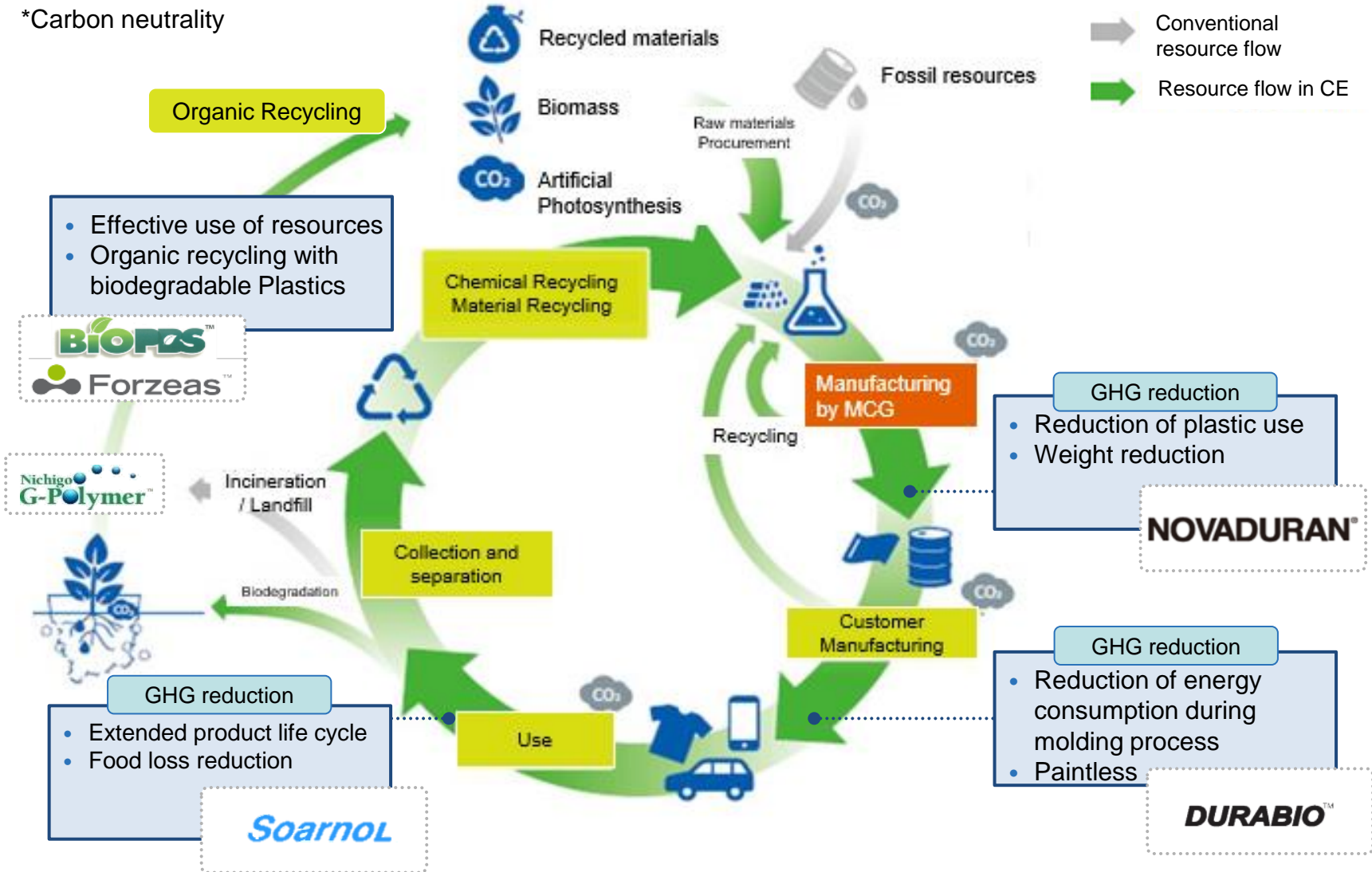
- EVOH
- Bio-based polycarbonate

\*A portion of revenue is duplicated in each market

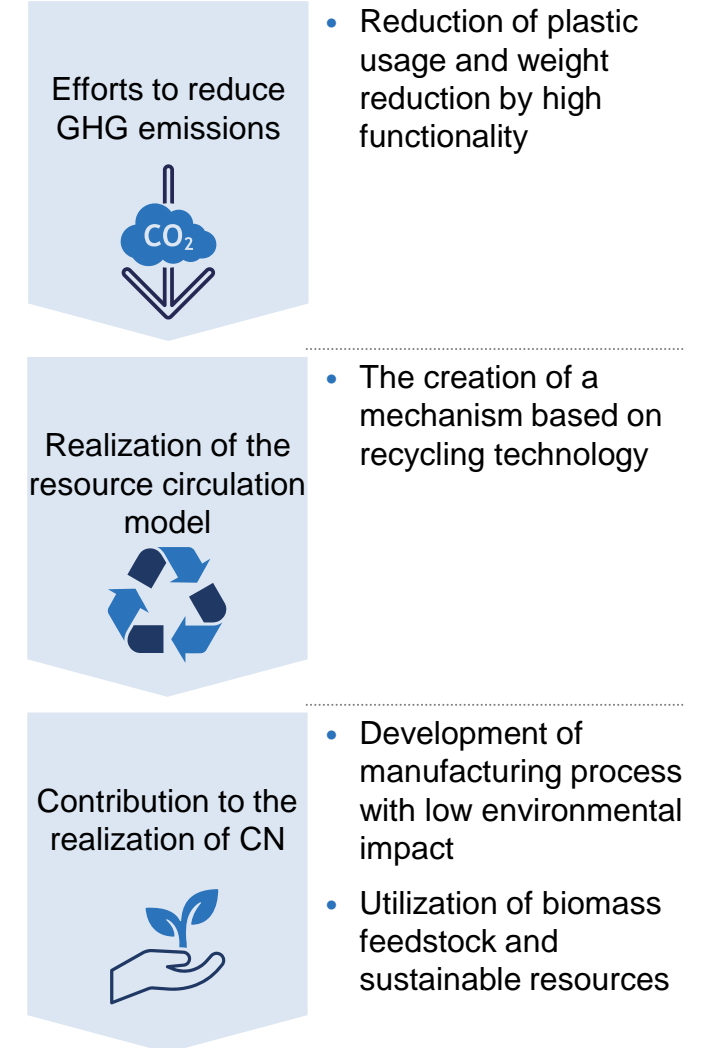
# MCG Solutions | Creating a Larger Recycling Loop

## Flow of initiatives to realize CN\*

\*Carbon neutrality



## Steps to realize CN\*

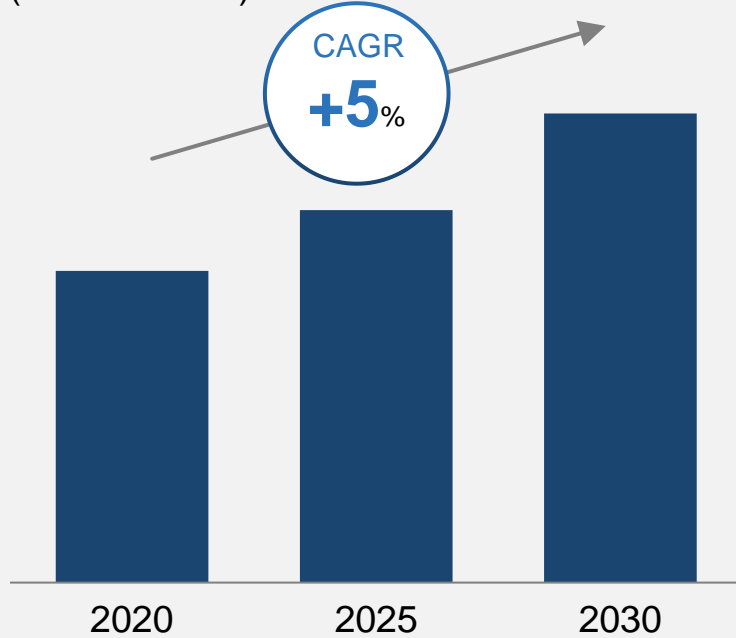


# EVOH's Perceptions of the Market Environment |

In addition to population growth and growing awareness of food loss reduction, packaging materials are also required to contribute to GHG reduction

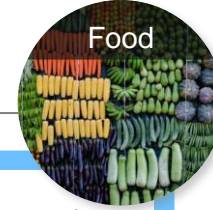
## Global Market Trend of EVOH

(volume basis)



Further growth is expected in the future by contributing to the circular economy.

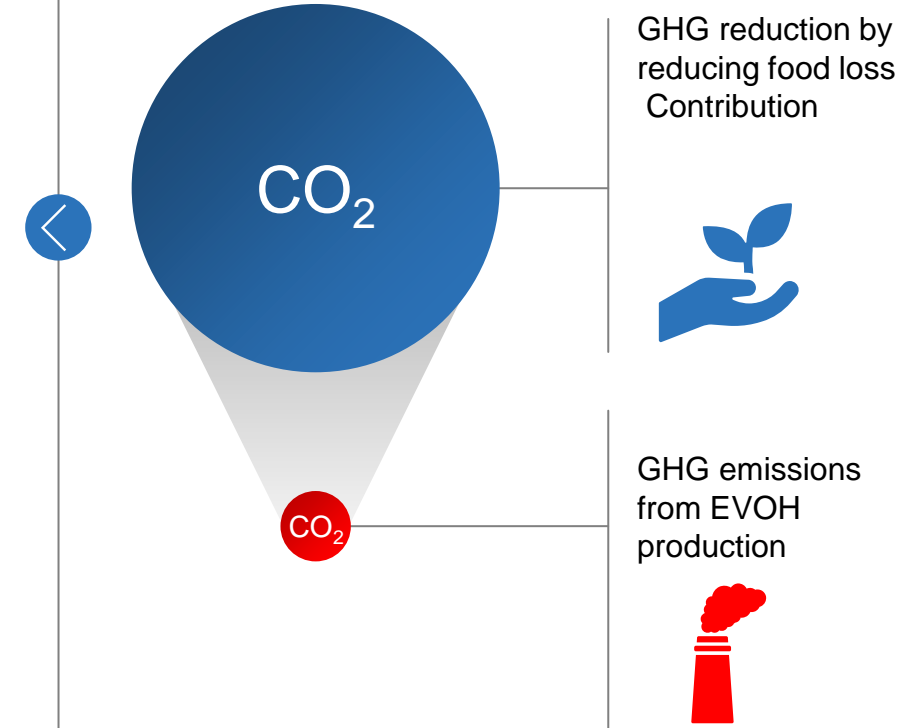
## Market Trends



-  Acceleration of individual packaging and processed foods
-  Extending expiration dates to reduce food loss
-  More sophisticated freshness-retaining packaging materials

## EVOH's contribution to carbon neutrality

The food loss reduction effect of EVOH is dozens of times greater than GHG emissions from resin production (our estimate).

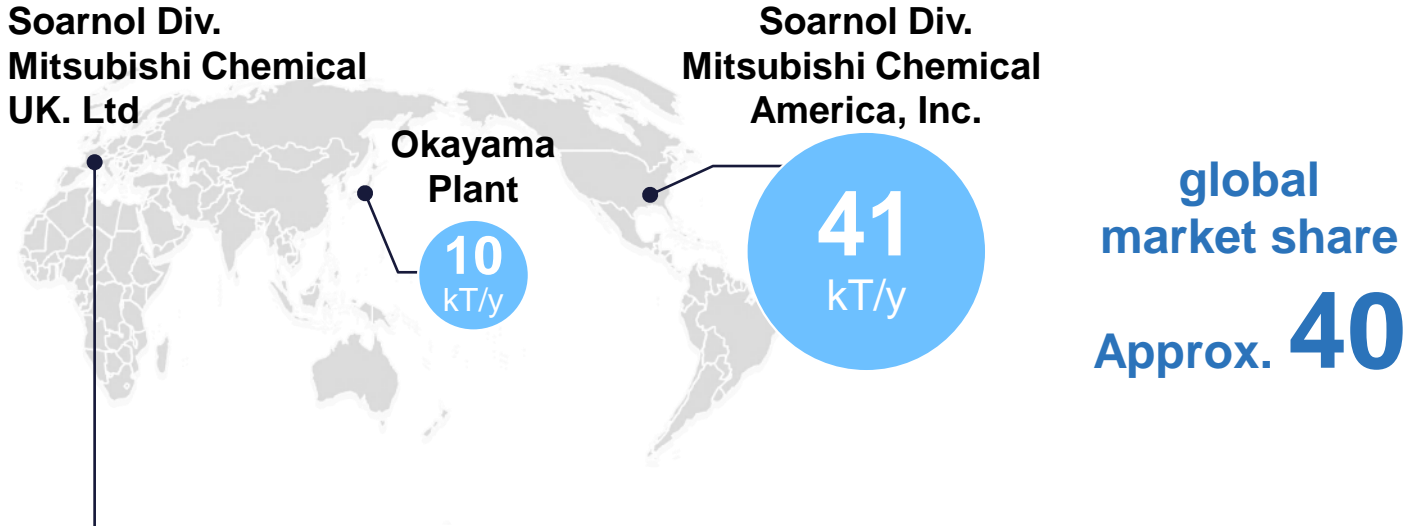




# EVOH | Maintain and enhance global presence by expanding production capacity in Europe

## MCG's supply system

Establish a global 90,000-ton production system in 2025



## Soarnol™



Extrudable Gas barrier material

## MCG's Strengths




- Molecular and formulation design technology for compatibilization
- Recycled certified by European institutions
  - Multilayer olefin film containing the recycling aid Soaresin™ added to Soarnol™.
  - Institute Cycle-HTP GmbH Recycle Certification from Cycle-HTP GmbH



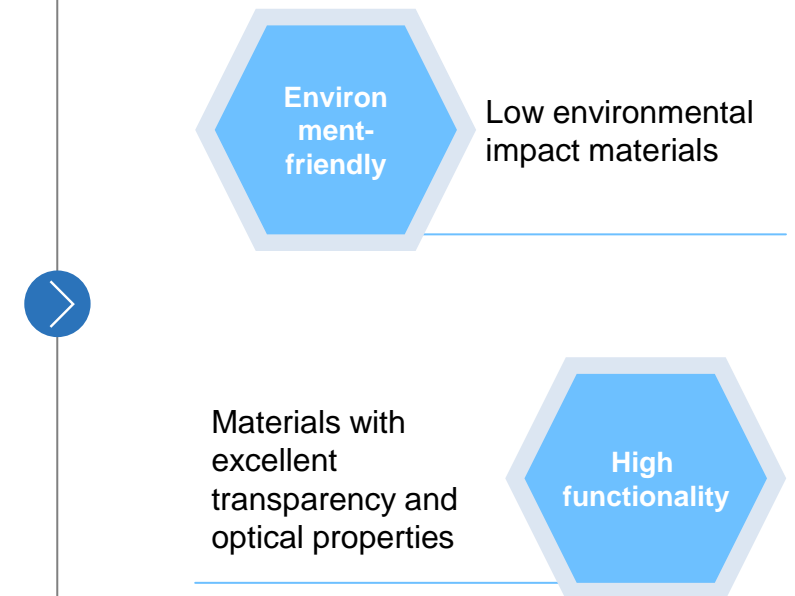


# Biopolycarbonate Market Trends

## Customer Industry Trends and Needs

 <p>EV/Mobility</p>	Conversion to EV	Weight reduction, battery technology, changes in required SPEC
	Autonomous driving	Camera and sensor technology, millimeter wave radar, LiDAR
	Connected	Larger in-vehicle displays and integration with interiors
 <p>Digital</p>	Folderble	Thinner technology, durability
	High-definition	Spread of 4K/8K broadcasting
	High speed and high capacity	Terminal and base station upgrading, 5G
	Cashless	Terminal, sensor and authentication technologies
 <p>Sustainability</p>	Energy-saving	High-insulation building materials (plastic), lightweight solar cells
	SDGs	LCA

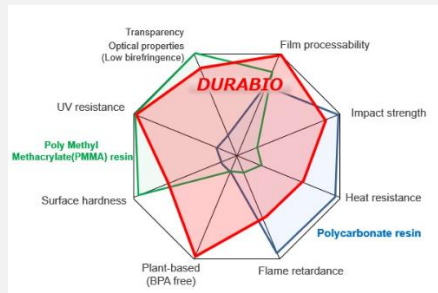
## Polycarbonate Needs



# Biobased Polycarbonate

Paint-free production streamlines customer manufacturing processes, improves fuel efficiency, and promotes material recycling.

## DURABIO™



- Transparent engineering plastics used for high performance plant-derived material developed by our company
- It has excellent optical properties, lightfastness and surface properties, and can be used as a substitute for glass.

## MCG's Strengths

Demand for reduced VOC and GHG emissions due to lighter vehicle bodies and paint-free paint

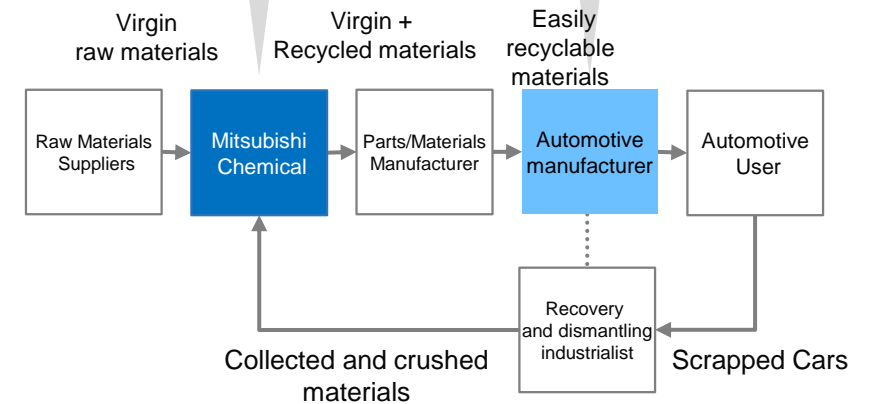


DURABIO's paint-free production promotes material recycling

- Eliminates the negative effects of the paint layer

- Production of virgin materials
- Manufacturing of recycled materials
- Recycling quality control and assurance

- Providing sustainable car



# Today's agenda

15:00 - 15:05      Opening remarks

Jean-Marc Gilson  
Representative Corporate Executive Officer,  
President and Chief Executive Officer

- 15:05 - 16:10
- i. Our starting point
  - ii. Performance Products –  
spearhead of implementation
  - iii. Key takeaways and outlook**

**Jean-Marc Gilson**

Johei Takimoto  
Executive Vice President, Head of Advanced Solutions

Hitoshi Sasaki  
Executive Vice President, Head of Polymers &  
Compounds / MMA

16:10 - 16:20      Break

16:20 - 17:20      Q&A session

17:20 - 17:30      Closing remarks

Jean-Marc Gilson

# Key messages of today's perspective on Performance Products

## Change is happening

- Driving the changes outlined on bring re-focus, accelerate margin growth and cost & cash excellence
- Already seeing successes of our efforts with increased speed after organizational changes have settled

## Speed of execution is accelerating

- Set up an Office of Strategic Project Management to drive, track and accelerate the Forging the future transformation
- Bankable plan in development and quick wins identified

## Growing profitability first

- Focusing on accelerating top-line growth – but will grow our profitability first
- Will grow absolute EBITDA and margin to create value for our shareholders

## Driving the change sustainably

- Pursuing change management and capability building throughout the organization

# Outlook – what we will show in February 2023

- Comprehensive Forging the future implementation roadmap along the key strategic priorities for MCG overall
- Holistic financial performance view on MCG and all businesses
- Detailed bankable plan for productivity improvements and cost reductions
- Quick wins already implemented
- Description of cultural shift under way