VISION 2030
Business Strategy Presentation
Mobility Solutions

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Mobility Solutions Business Strategy for VISION 2030

Overview of the Mobility Solutions Business

Market Environment

Growth Strategy in line with Expanding EV Demand
Mobility Solutions Business Strategy for VISION 2030
Mobility Solutions Business Strategy for VISION 2030

Ideal vision

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

Helping solve social challenges through materials

Materials business
- Elastomers
- Composite materials

Offering solutions that combine materials with services

Solutions business
- Business focused on offering modular components
- Business based on providing services

Progress

Toward our targets for 2030 and 2025, we are promoting our strategies for both “materials” and “solutions” businesses, and will enhance our initiatives quickly.

Sustainability

CASE MaaS

Blue Value™
FY30 80%
Overview of the Mobility Solutions Business
Through capturing high growth and high-value-added products’ demand in automotive and related applications, we are achieving profit growth outpacing the increase of global automotive production in 2022–2023.
Market Environment
While the total number of units produced is expected to show only a slow growth rate over the long term, the powertrain composition of this total is set to change in a major way. BEVs in particular are set for a surge in popularity, with projections being that they will comprise about half the total by 2030.

*BEVs are expected to comprise about half of all production by 2030.*
Growth Strategy in line with Expanding EV Demand

(1) Changes resulting from shift to EVs
(2) Providing materials & solutions
(3) Supporting sustainability
(4) Initiatives for industry change
# Growth Strategy in line with Expanding EV Demand

## (1) Changes resulting from shift to EVs

<table>
<thead>
<tr>
<th>Changes of powertrains (batteries, motors, etc.)</th>
<th>Exterior</th>
<th>Interior</th>
<th>Drive system</th>
<th>Battery</th>
<th>Wiring system</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extended cruising range (improved electric mileage; increased battery capacity)</td>
<td>Bumpers, liftgates, trunks, etc.</td>
<td>Instrument panels, seats, upholstery, etc.</td>
<td>Motors, inverters, cooling systems, etc.</td>
<td>Batteries, cases, cooling systems, etc.</td>
<td>Wire harnesses, connectors, busbars, etc.</td>
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<td>Limiting heat generation while driving</td>
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<tr>
<td>Fast charging</td>
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<td>Effective use of the engine compartment</td>
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<tr>
<td>Extra trunk (frunk)</td>
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<td>Higher added value in EVs</td>
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<td>More pleasant passenger cabins</td>
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<tr>
<td>Reduced environmental burden</td>
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<table>
<thead>
<tr>
<th>Changes resulting from shift to EVs</th>
<th>Lightweighting</th>
<th>Improved aerodynamics</th>
<th>Miniaturization</th>
<th>Space-saving</th>
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<tbody>
<tr>
<td>Improved aerodynamics (design)</td>
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<td>Improved aerodynamics (underbody)</td>
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<tr>
<td>Miniaturation</td>
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<td>Increased capacity (increased size)</td>
<td>Space-saving</td>
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<tr>
<td>Heat management</td>
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<td>Heat management</td>
<td>High voltage</td>
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<td>High voltage</td>
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- Limiting heat generation while driving
- Fast charging
- Effective use of the engine compartment
- Extra trunk (frunk)
- More pleasant passenger cabins
- Reduced environmental burden
- Use of recycled/bio-based materials
- Eco-friendly, animal-free leather

**New needs born from the shift to EVs are offering new opportunities for materials as well**
We will continue to focus on developing materials and solutions that can capture EV-specific needs.
As EVs become more widespread, supporting sustainability is increasingly important. Focusing on expanding and deploying measures that meet sustainability requirements.

**Encapsulant sheets for solar cells TAFMER™**

- Increasing production capacity in view of the growing renewable energy market

**New plant in Singapore**
**Construction to be completed in FY24**

**Solar power market projections**

**Internal & external parts for EVs**
**Mechanically recycled PP compounds**

- Recycled material containing 30-50% post-consumer material

Adopted and utilized in mass production by North America OEMs. Global rollout now being considered.

**Growth Strategy in line with Expanding EV Demand**

(3) **Supporting sustainability**

Source: RTS Corporation (February 2023 forecast)

CAGR 10%
Focusing on providing not only materials supply and development proposals for existing OEMs but also support for startups.

For existing OEMs
- Supplying differentiated materials
- Proposing modular concepts

For startups
- Providing “One-stop development support” from design, evaluation to low-volume production

*Shift to EVs is opening the way for new players to enter into various mobility businesses

Growth Strategy in line with Expanding EV Demand
(4) Initiatives for Industry Change

Responding to changes which is expected in the automotive industry’s supply chain
Strengthening and pursuing three approaches for an EV society

1. Providing materials & solutions
   - Quickly developing and offering competitive products and solutions

2. Supporting sustainability
   - Pursuing efforts for sustainability to meet requirements from society and customers

3. Initiatives for industry change
   - Focusing on both existing OEMs and startups

Through steadily capturing the new business opportunities resulting from the shift to EVs, we’ll continue to move forward to achieve our VISION 2030.
VISION 2030
Business Strategy Presentation
ICT Solutions

HIRAHARA Akio
平原 彰男
Senior Managing Executive Officer
Business Sector President, ICT Solutions Business Sector
Our Targets for 2030

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

Continuing to boost capacity and develop products focused on new needs in the interests of medium-to long-term growth, despite sluggish markets for semiconductors, smartphones and the like

Strategies for reaching our VISION 2030 targets

Boosting our competitiveness in the areas of semiconductor & assembly solutions and imaging solutions

ICROS™ Tape: Expanding production capacity and augmenting our product portfolio in new areas

Pellicles: Reaching the No. 1 position by strengthening our EUV business and leveraging our acquisition of Asahi Kasei’s business

APEL™, etc.: Introducing new materials to capture the demand of the growing XR market

Addressing demand for eco-friendly products in the area of converting solutions

Strengthening our PUD*/POD** supply network

* Polyurethane dispersions / For monomaterial packaging
** Polyolefin dispersions / Heat-sealable coatings to be used on paper-based packaging
Medium-term growth in the semiconductor market

Global semiconductor market scale

(USD bn)

Source: WSTS (figures for 2022 and 2023 are estimates)

Contributing to the advance of CASE

Connected: More advanced communications and 5G/6G-compatible materials
- Gigafreq™ Resins for high frequency printed circuit board material

Autonomous: Materials relating to autonomous driving technology
- APEL™ Resins for automotive camera lenses

Electric: LiB materials
- HI-ZEX MILLION™ Resins for separators
- BONRON™ Heat resistant coating for separators
- MILLET™ Electrolyte

Semiconductors: Improvements & production increases
- MITSUI PELLICLE™ Dust cover for photomasks
- ICROS™ Tape Tape for the semiconductor manufacturing process

Following our plans for development & increased production capacity in pursuit of market recovery & expansion
Expanding the business by responding to technological innovation and diverse customer needs

Establishment of Mitsui Chemicals EMS (July 2023)

Aiming to be the world’s No. 1 diversified pellicle manufacturer
  - Top supply capability worldwide
  - World’s most advanced product technology & process development capability
  - Industry No. 1 for sales, purchasing and logistics networks

EUV
Using first-mover advantage to expand our business and maintain our leading position

DUV (ArF immersion lithography)
Capturing the No. 1 position via acquisition of Asahi Kasei’s business

FPD
Maintaining the top market share held by Asahi Kasei’s business

Improved EUV transmittance helps improve customer productivity

> 88% FY21
> 90% FY22
> 92% FY25
> 94% FY27

Leveraging tech synergies for business expansion

Source: TechInsights Inc.

LSI photomask market forecast
Market growth (CAGR) in core market (EUV + ArF immersion lithography)
2019-2027: 9%
Pursuing further growth via enhanced marketing and increased supply capacity

ICROS™ TAPE

Enhanced marketing
Taipei office
ICT Business Planning Office

Back grinding
Capacity expansion: Nagoya
Start of operation: November 2008

Dicing
Next-gen dicing tape

Expansion of business areas

Taiwan
Capacity expansion: January 2020
Start of operation: February 2023

Bolstering technical support capabilities

3D integration

MintRow™
Double-sided adhesive tape
PIVAR™ Adhesive material for hybrid bonding

Expanding our business scope from primarily the wafer backgrinding process to other processes
Forging ahead with product development to help bring about more advanced semiconductors

**Miniaturization & 3D designs**

- **Film formation**
  - Developed a manufacturing process for **higher silane**
  - Used higher-density Si bonding to improve deposition accuracy/performance
  - Developed low-temperature process

- **Cleaning**
  - Anthraquinone capacity boost
    - (from April 2025)
    - Catalyst used in hydrogen peroxide production

- **Thinning and 3D designs**
  - ("More than Moore")

**Wafer processing**

- **ICROS™ Tape**
  - Capacity boost (from 2H/FY2023)
  - Backgrinding tape
  - Technology development
    - Functional dicing tape
    - Thermal release adhesive tape
  - Portfolio expansion in new areas

**Assembly**

- Participating in IMEC’s co-creation program
  - Belgian semiconductor research institution
    - (from April 2023)
  - Speeding up R&D of organic materials for cutting-edge next-gen semiconductor manufacturing processes

**Higher speeds and lower power consumption**

- Assembly materials for next-generation semiconductor packages
  - (3D assembly/co-packaged optics technology)

**Low-temperature bonding material**

- for hybrid bonding

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**Related Product Development**

- Mitsui Chemicals
  - June 14, 2023
Adding functionality to enable a wider range of applications

**XR lenses**
- Improved transparency
- Improved birefringence

**, Source: IDC**

**Number of XR devices shipped**
- CAGR 30% (2022⇒2025)

**Automotive camera lenses**
- Heat resistance
- Improved long-term reliability

**Number of automotive camera lens modules shipped**
- CAGR 10% (2022⇒2025)

**Smartphone camera lenses**
- High refractive index
- Low birefringence
- Low water absorption

**Giving existing brands new functionality to allow for their adoption in XR devices and automotive cameras**
Aiding the Shift to EVs

Speeding up development of materials for EV applications

**Electrolytes**
- **MILLET™**
  - Electrolyte
  - Compatible with next-gen high-capacity batteries

**Cell packages**
- **UNISTOLE™**
  - Adhesive for pouch
  - Highly adhesive and workable

**Separators**
- **HI-ZEX MILLION™**
  - Resins for separators
  - A separator substrate material with high strength and precision
- **BONRON™**
  - Heat resistant coating for separators
  - Ceramic coating binder

Providing materials and solutions in line with changes to battery technology
Eco-Friendly Packaging Materials

Rising needs and growing demand for sustainability

Focusing our global production network* toward performance improvements for functional materials and coatings.

Sites:
- India
- China
- Thailand
- Malaysia
- U.S.
* Including sites for materials other than PUD/POD

Bolstering our production capacity globally to meet rising demand

**TAKELAC™ WPB**

- **PUD**: Rising demand for barrier coatings to be used on monomaterial packaging
  *Polyurethane dispersions*

  Example of use with monomaterial barrier-coated packaging:
  - Aluminum deposition: <0.1μm
  - PUD: 0.1μm
  - Film (BOPP): 16μm

  Reducing thickness to help meet European guidelines*  
  *PP, PE > 90%*

**CHEMIPEARL™ S**

- **POD**: Rising demand for heat-sealable coatings usable amid the shift to paper-based packaging
  *Polyolefin dispersions*

  Example of use with paper cups:
  - POD: 5μm
  - Paper: 80μm

  Compared to PE laminate (15μm), PODs allow for thinner films, helping to minimize plastic use

Sales volume for PUD

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<thead>
<tr>
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<th>FY22</th>
<th>FY23</th>
<th>FY24</th>
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<tr>
<td>PUD</td>
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Material Recycling of Packaging Materials

Building a business model that allows materials to be horizontally recycled into food packaging

Recovering plastic film scraps that are currently treated as waste from the film-making and printing processes, and turning these scraps into pellets that can be used to produce food packaging.

Recovering and recycling rolls of monolayer PP and PE film for use with food.

Providing value by:
- Minimizing plastic waste
- Minimizing the use of fossil resources
- Supplying high-quality, recyclable, recycled materials for use in food packaging

Enhancing collaborative efforts with film manufacturers and converters in pursuit of material recycling for packaging materials.
Bolstering R&D Capabilities

Consolidating our R&D capabilities in the field of ICT to establish a new facility for co-creation with customers

Innovative Solutions Center for Information & Communication Technology (Opened in fiscal 2022)

- Consolidating our products and technologies relating to the field of ICT
- Technology for molecular design & synthesis
- Technologies for evaluating compatibility with customer processes

ICT research building in Nagoya (Opened in fiscal 2023)

- Making use of technologies like VR to keep distant customers & researchers in the loop about test progress
- Testing space
  - Clean room
  - Facilities for evaluating compatibility with customer processes

- Able to facilitate stays from multiple customers at once

Number of research personnel

- FY22
- FY23

Strengthening relationships with customers by speeding up development and proposing solutions
A global solutions company that leads change and contributes to a sustainable future
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