Mitsui Chemicals

Dec. 10, 2024

Business Strategy Presentation

- Mobility Solutions Business
- ICT Solutions Business

0→1 MAKE IT HAPPEN

Mitsui Chemicals Group

Business Strategy Presentation
Mobility Solutions

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Dec. 10, 2024

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Mobility Solutions Business Strategy for VISION 2030

This is a summary of the strategy for Mobility Solutions formulated in VISION 2030.

By developing two businesses, materials business and solutions business, we aim to contribute to solving social challenges and achieve sustainable growth.

As shown in the graph, our initial plan calls for operating income before special items to reach 60 billion yen around fiscal 2025 and 80 billion yen by fiscal 2030.

Our basic business strategy remains unchanged, but we have made some revisions in light of past performance and changes in the business environment.

In the materials business, we are engaged in growth markets, and our policy of concentrating resources on segments where we can differentiate ourselves remains unchanged. However, we are reviewing the sales portfolio of our elastomer product group due to changes in the environment for solar cell encapsulant applications, one of the applications of TAFMER™, which is included in the elastomer product group.

In the solutions business, there is no change to our policy of launching and nurturing new business models. However, as profits from ARRK, the core company providing development and support functions, has fallen short of expectations, we have added accelerating the company's transformation and implementing growth policies as areas of emphasis.

Since the COVID-19 pandemic in 2020, ARRK's top line has declined and its performance has deteriorated.

We have pushed forward with transformation, such as divestment of some businesses, and have been turning a profit since last fiscal year, but we have not yet reached the profitability level we initially expected.

Going forward, we will accelerate ARRK's growth strategy in a manner that is consistent with Mobility Solutions business strategy.

Operating income before special items for fiscal 2024 is expected to be 55 billion yen, and the targets have been revised upward from the initial plan to 72 billion yen in fiscal 2028 and 93 billion yen in fiscal 2030.

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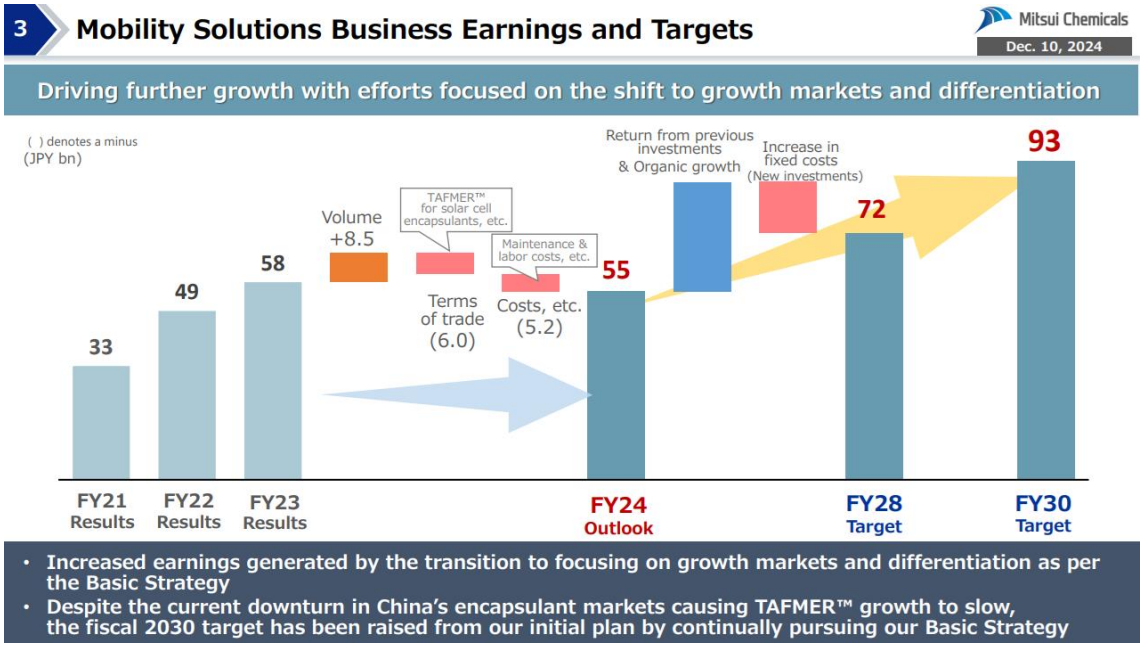
Mobility Solutions Business Earnings and Targets



The forecast for operating income before special items for fiscal 2024 is 55 billion yen. The volume difference is expected to be plus 8.5 billion yen compared to the previous fiscal year, while terms of trade is expected to be minus 6 billion yen year-on-year due to factors such as a deterioration in terms of trade for TAFMER™ for solar cell encapsulant applications, and fixed costs and others are expected to be minus 5 billion yen year-on-year due to increased costs such as rising repair and maintenance costs, labor costs, and domestic logistics costs.

From fiscal 2024 to fiscal 2028, there are multiple capacity expansion projects under construction, which will result in increased fixed costs such as depreciation expenses and labor costs. However, by achieving business expansion that exceeds the increase in fixed costs, we are aiming for operating income before special items of 72 billion yen in fiscal 2028 and 93 billion yen in fiscal 2030.

Looking back at the past, the two years from fiscal 2022 to fiscal 2023 included a temporary improvement in terms of trade due to the rapid expansion of demand for TAFMER™ for solar cell encapsulant applications, mainly in China, but this has been resolved in fiscal 2024.

Even excluding the impact of solar cell encapsulant applications in China, the CAGR is growing at approximately 18% from fiscal 2021 to fiscal 2024.

We believe that by continuing to grow at an average rate of around 10% going forward, we can fully achieve our targets for fiscal 2028 and fiscal 2030.

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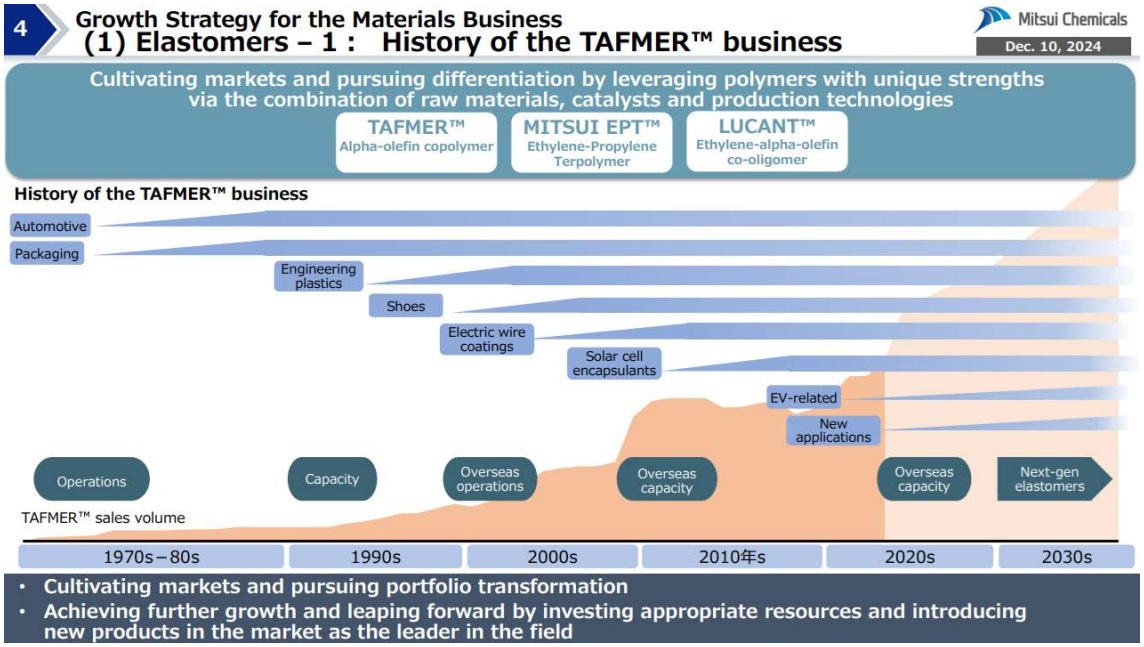
Growth Strategy for the Materials Business



First, I would like to introduce the history of TAFMER™ business, a representative product in the elastomer product group of our materials business.

TAFMER™ was launched on the market in 1970, initially used to modify polyolefins, such as PP compounds for automobiles and packaging materials.

Since then, its use has expanded to include modifying non-polyolefin engineering plastics, as a base material for shoe midsoles, and as electrical wire coating, and around 2010 its use as a solar cell encapsulant began to take off.

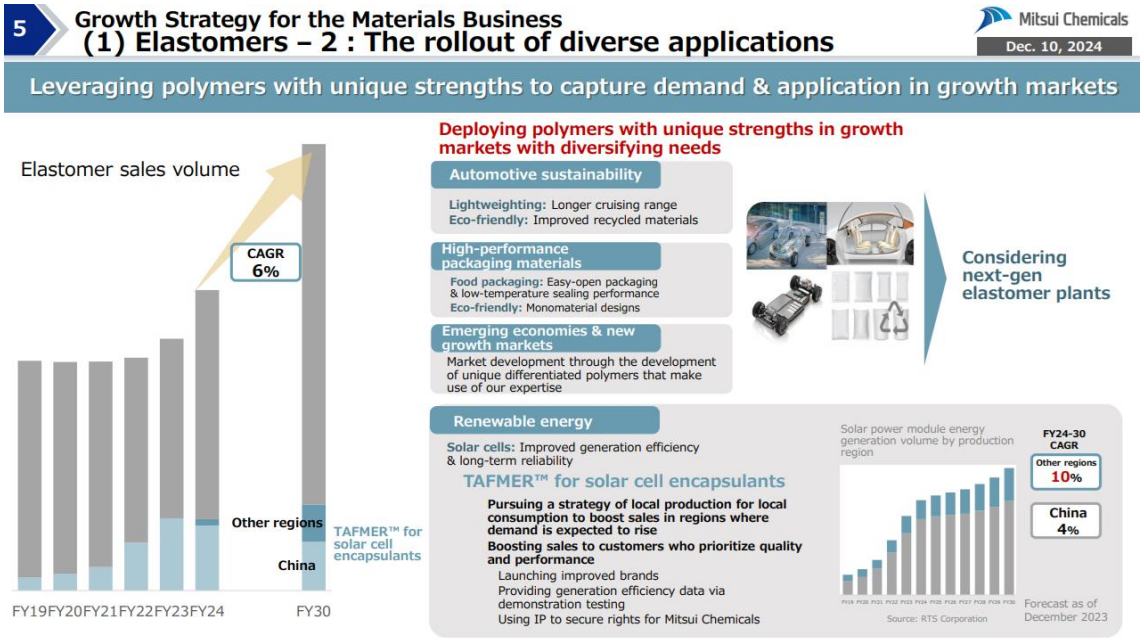
In recent years, we have been focusing on capturing new demand related to EVs and developing other new applications that will lead the future.

The scale of our business was still small in the 1970s, but in order to meet growing demand, we built new plants in Japan and increased our production capacity from the 1980s to the 1990s.

In 2002, we started up the first line at our large plant in Singapore, and in 2010, we started up the second line.

The third line is currently under construction and is scheduled for completion at the end of the year.

In addition to simply increasing production capacity, we are also looking ahead to the future and are promoting catalytic conversion and the development of new polymers in our elastomer product group. In order to bring these next generation elastomers to market, we aim to build a new plant around 2030.



In addition to the wide range of applications of elastomers in the automotive and high-performance packaging fields, we are also working on the development of new products and new applications, as well as market development in emerging countries.

The graph on the bottom right shows the actual solar power generation volume and future forecasts. The market has grown significantly over the past two years.

From fiscal 2024 onwards, the growth is expected to be around 4% in China, which is currently the center of the supply chain, but around 10% in other regions such as North America, India, and the Middle East due to the trend towards local production for local consumption.

In the past two years, sales of TAFMER™ have also generated high profits as a result of the rapid expansion in demand for solar cell encapsulant applications, and by raising the priority of solar cell encapsulant applications within the sales portfolio of the elastomer product group.

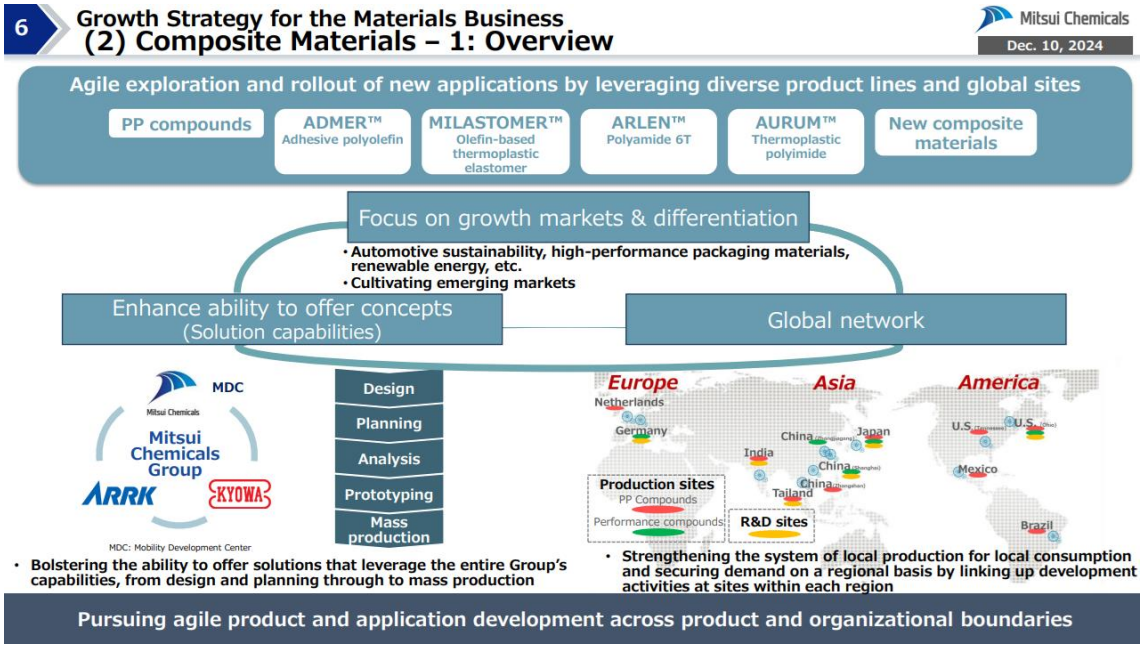
However, due to overproduction of solar panels in the Chinese market, both panel production volume and prices fell in the first half of this year, which in turn led to a decline in raw material prices.

We also recognize that the priority of the Chinese market should be reconsidered as local suppliers of polyolefin elastomers are emerging.

In light of these changes in the environment, we have decided to review our sales portfolio, which had been shifting toward solar cell encapsulant applications, and return it to its previous policy of multiple applications.

Additionally, we will focus on solar cell encapsulant applications outside of China, and we believe that our group's intellectual property rights can be effectively utilized in regions such as North America.

In China, where the market remains large, we will partner with power generation companies, panel manufacturers, etc. to demonstrate the superiority of TAFMER™ over EVA and will proceed with demonstration experiments. At the same time, we will focus on developing areas of differentiation, such as improving TAFMER™ to enhance processability and productivity for customers, thereby adopting a strategy of not competing with new local suppliers.



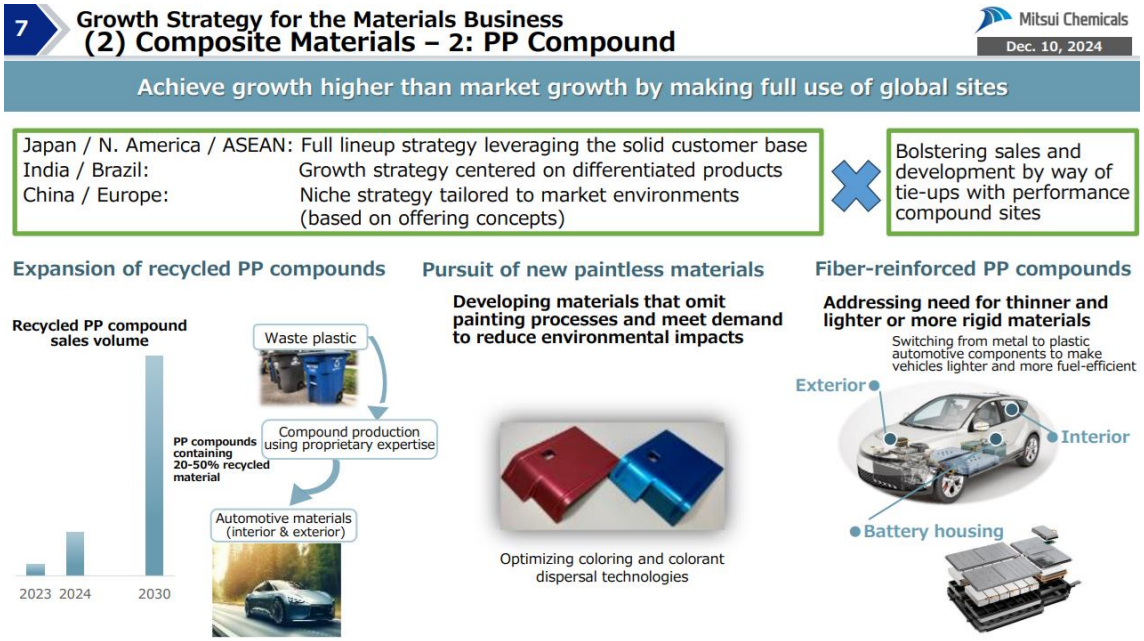
Representative products in the composite material product group include PP compounds, ADMER™, MILASTOMER™, ARLEN™, and AURUM™. Although they differ from elastomers in that they are locally produced and consumed businesses, they share the same policy of concentrating resources on growth markets and segments where our strengths can be utilized.

We develop, produce, and sell products locally at our regional bases, and by utilizing our global network, we can, for example, roll out products adopted in North America to Europe and Asia.

Previously, products such as PP compounds, ADMER™, and MILASTOMER™ were developed, produced, and sold at separate locations, but we are now strengthening collaboration and unifying operations between each location.

In addition, in order to enhance our ability to offer concepts within our solution capabilities, in light of the mid- to long-term trend towards EVs, we are developing services that propose concepts for new modules and parts, rather than just putting the emphasis on materials, and provide a package of the necessary design, molding, molds, materials, etc. to realize these concepts.

We hope that as concepts like this are adopted, demand for composite materials will expand.



The PP compound business is based on the growth of automobile production volumes, but we aim to expand at a rate that exceeds the growth of the automobile market.

Our position varies by region, but globally, our group and one other company have shared market share to date, and we recognize that we have been able to maintain our position as a top runner.

We will utilize our market leadership position in Japan, North America, and ASEAN to expand our business with a full lineup, taking advantage of the cost competitiveness and product development capabilities that come from our business scale.

Although markets in India and Brazil are still not large, they are growing, and we would like to capture the expanding demand by developing differentiated products.

As our position in China and Europe is not strong, we will work to expand sales of our products, such as our fiber-reinforced PP compounds MOSDIO™, by developing niche products and services that leverage the Group's strengths and switching from metal to plastic automotive components through concept proposal activities.

One of the products we are currently focusing on is recycled PP compounds, which have already been launched as a business in North America and are being adopted by multiple customers.

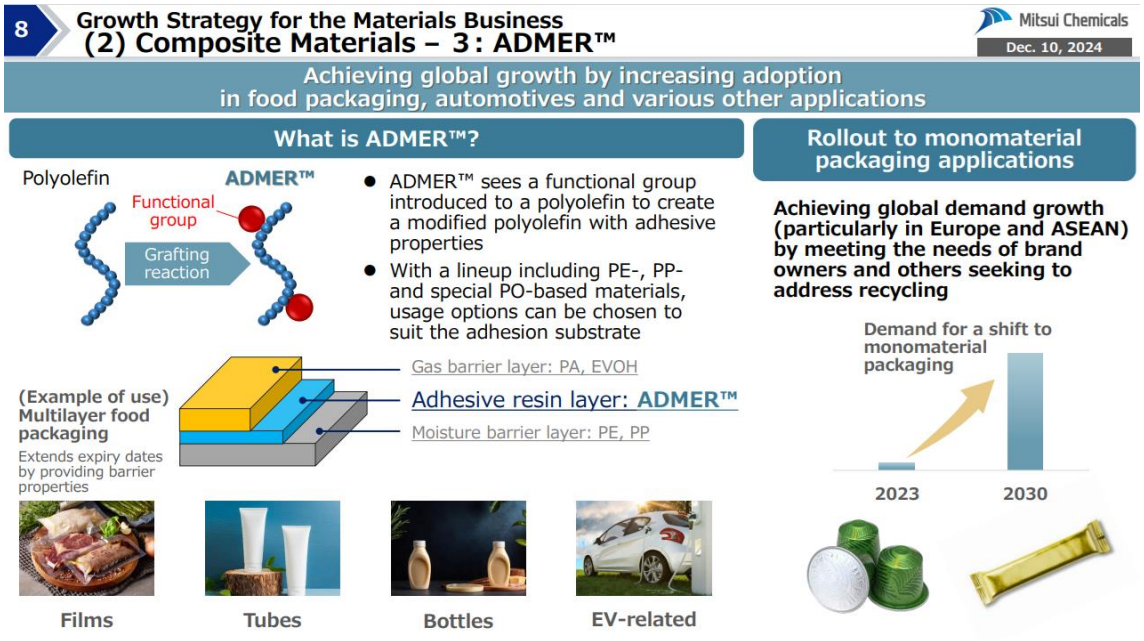
We have now launched in China, and will expand to Japan, ASEAN, and Europe.

Other products that we are currently focusing on are new paintless materials which are compound materials that can give a painted-like shine without the need for painting.

It is expected to have the effect of reducing the number of coating processes that emit a large amount of GHG in the automobile production process.

MOSDIO™, our fiber-reinforced PP compounds, is being promoted for adoption in rear doors as a concept proposal business, and mass production is progressing ahead of schedule from the originally planned fiscal 2027 to fiscal 2026.

In addition to the second and third generation rear doors, we are also currently working on concept proposals in Japan and China for battery-related modules and new EV-related parts.



ADMER™ is an adhesive resin in which functional groups have been introduced into polyolefin and is used in containers and packaging-related applications such as films, tubes, and bottles, as well as EV-related applications.

The strength of ADMER™ is that it is manufactured based on our wide range of polyolefins, allowing for a wide range of combinations and formulations.

This makes it possible to realize physical properties tailored to customer needs, which vary for each application.

Recently, demand for ADMER™ has been growing in response to the increasing demand for monomaterial packaging in Europe and ASEAN, and we recognize that we are in the number one position globally.

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Growth Strategy for the Solutions Business

I will introduce some of the themes and projects we are working on. They all have one thing in common: they can contribute to solving social challenges, and because we cannot achieve them alone, we aim to commercialize them in collaboration with external partners.

By utilizing the functions of ARRK, a development support company, as well as MDC (Mobility Development Center) in the engineering field and mold-making company Kyowa Industrial, we will establish new businesses that will contribute to the diversification of automobiles, such as LVP (Low Volume Production), and the realization of a wide variety of products in small quantities, in addition to new transportation systems and drones.

We are also working to achieve significant GHG reductions through a carbon fiber production process that utilizes microwaves as an innovative material.

Each has a different timeline, but LVP is the earliest, aiming to launch in Thailand next year.

We aim to commercialize carbon fiber around 2027.

We are considering commercializing the new transportation system in Japan and Asia, and are working to launch the first project around 2030.

We are working under the belief that by making effective use of our solution capabilities, we can also contribute to the development of our materials business.

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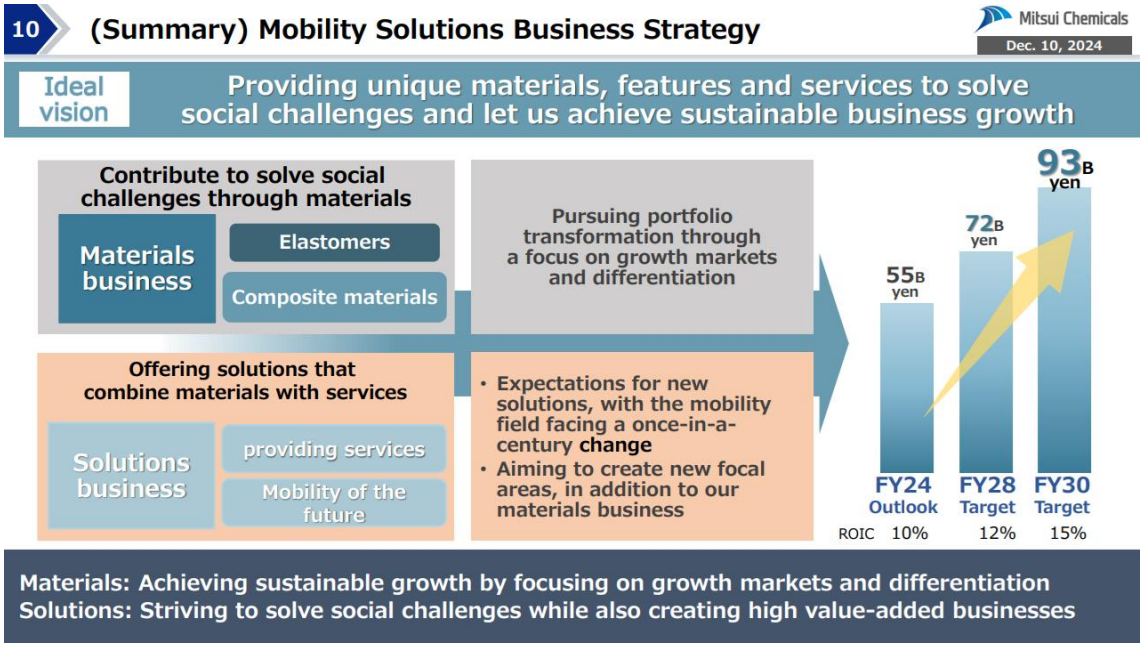
(Summary)
Mobility Solutions Business Strategy



In our materials business, we will continue to grow our business by shifting our sales portfolio and focusing on growth markets and areas where we have a competitive advantage while responding appropriately to changes in the environment.

In our solutions business, we will strive to contribute to solving social challenges and realize high-value-added businesses.

Through these two developments, we will continue to expand and grow our business, aiming to achieve specific targets of operating income before special items of 72 billion yen and ROIC of 12% in fiscal 2028, and operating income before special items of 93 billion yen and ROIC of 15% in fiscal 2030.

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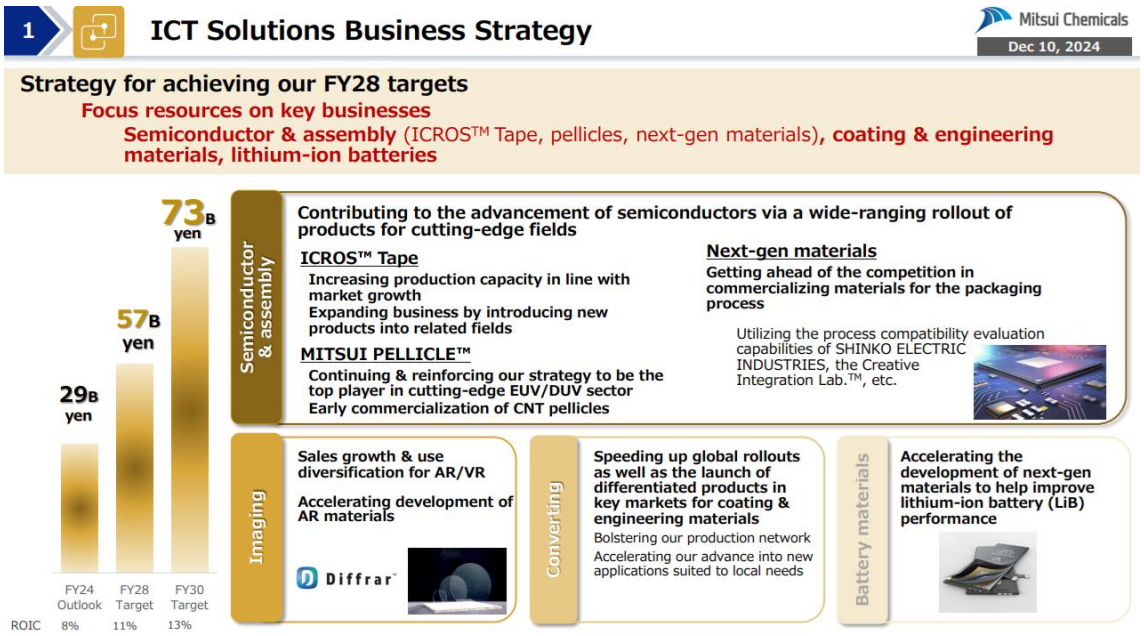
Mitsui Chemicals Group

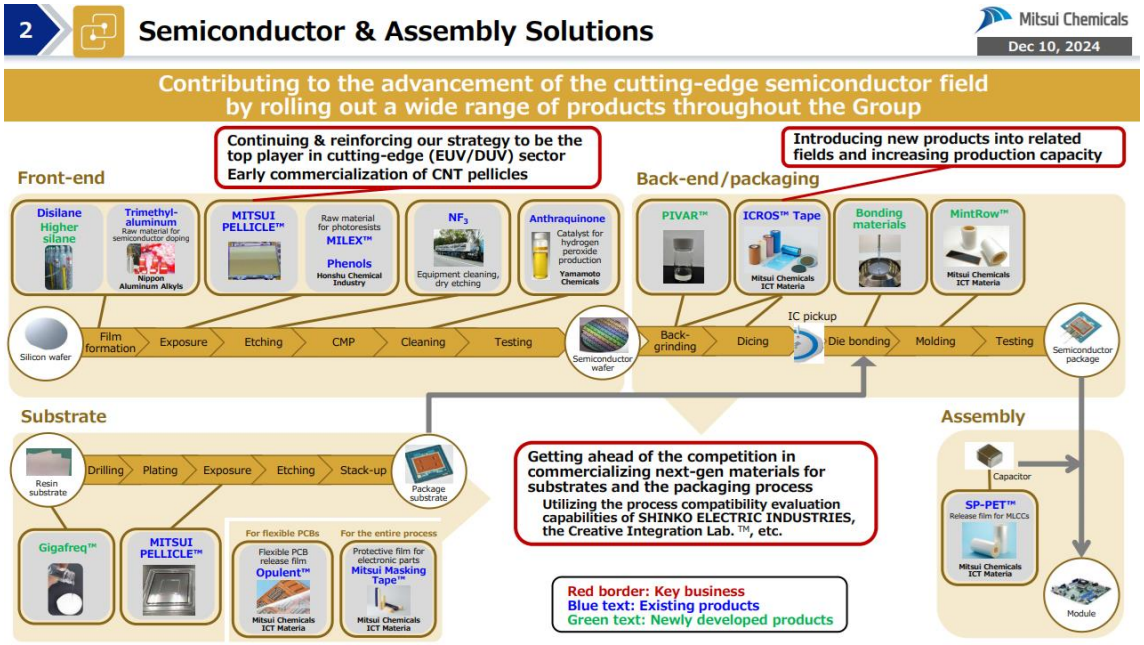
Business Strategy Presentation
ICT Solutions

HIRAHARA Akio
平原　彰男
Senior Managing Executive Officer
Business Sector President, ICT Solutions Business Sector

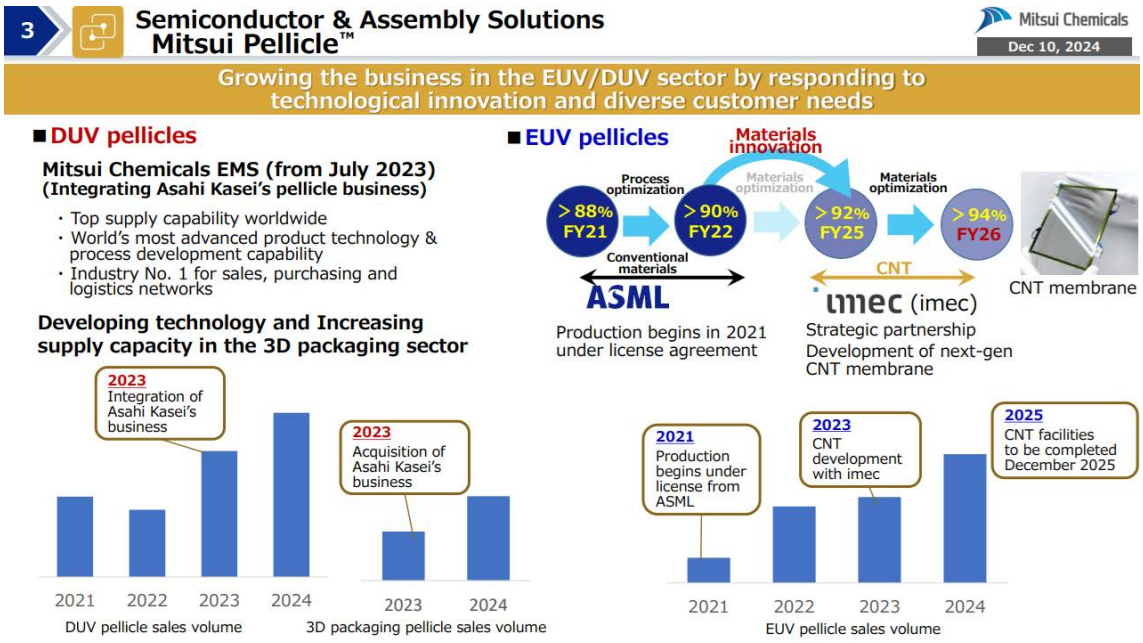
Dec. 10, 2024



From fiscal 2022 onwards, we have been expanding our business in four areas: "Semiconductor & assembly," "Imaging," "Converting," and "Battery materials," and we are concentrating resources on key businesses.



Our group as a whole handles a wide range of products for semiconductors, but I will mainly explain how we are reinforcing our strategy to be the top player for pellicles in the front-end process, how we are introducing new ICROS™ tape related products and expanding our production capacity in the back-end process, and how we are developing next generation materials as a new business in the substrates and packaging process.



In the pellicle business, we are committed to our strategy to be the top player and are focused on maintaining and strengthening our leading position.

Regarding DUV pellicles, we integrated Asahi Kasei's pellicle business in July 2023 and have been operating as Mitsui Chemicals EMS in Nobeoka, and synergies are being realized and the business is expanding smoothly.

Sales volume grew significantly in fiscal 2023 due to the integration, and we expect steady growth in fiscal 2024 as well.

Pellicles from Nobeoka have begun to be used in 3D packaging, and the business is growing steadily.

We are expanding the DUV pellicle business smoothly, utilizing our world-leading supply capacity.

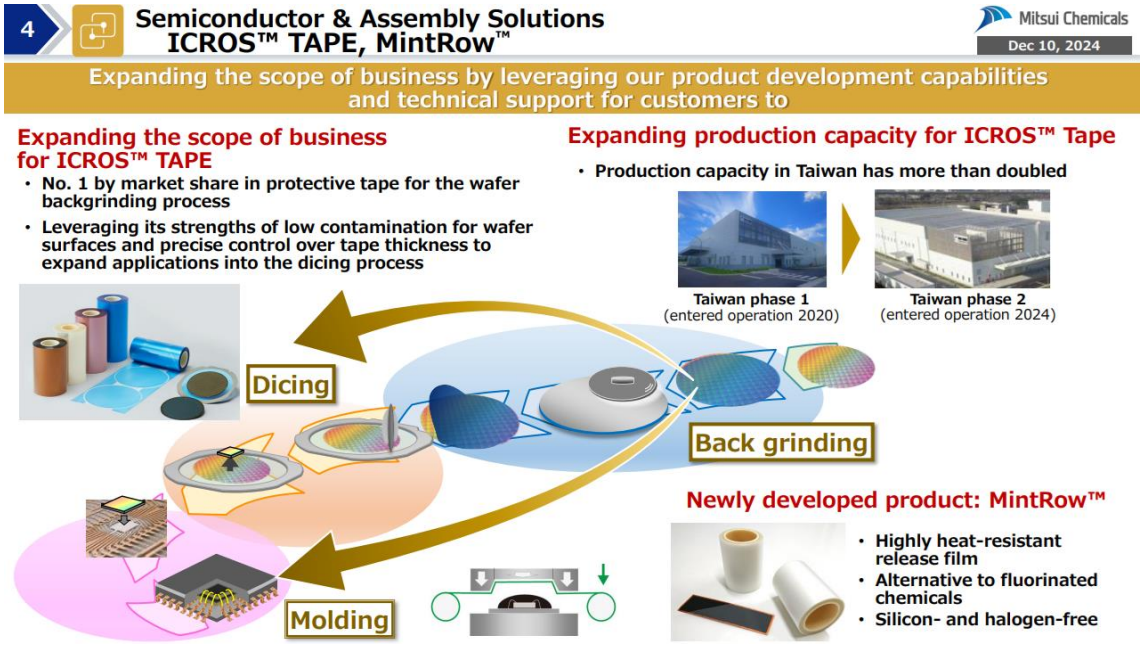
As for EUV pellicles, the business has been expanding steadily since production began under license from ASML in 2021, and in terms of sales volume, it has shown particularly significant growth from fiscal 2023 to fiscal 2024.

At present, we expect further growth in fiscal 2025.

For EUV pellicles, we expect the number of CNT-based products to increase in addition to the current silicon-based products from around 2026, and in fiscal 2023 we signed a strategic partnership agreement with imec to begin developing the next generation CNT-based products.

The decision has already been made to make capital investments in the development of CNT-based products, with construction scheduled for completion in December 2025.

By proactively investing ahead of the times in this field, we aim to secure a position as the industry standard for CNT-based products as well.

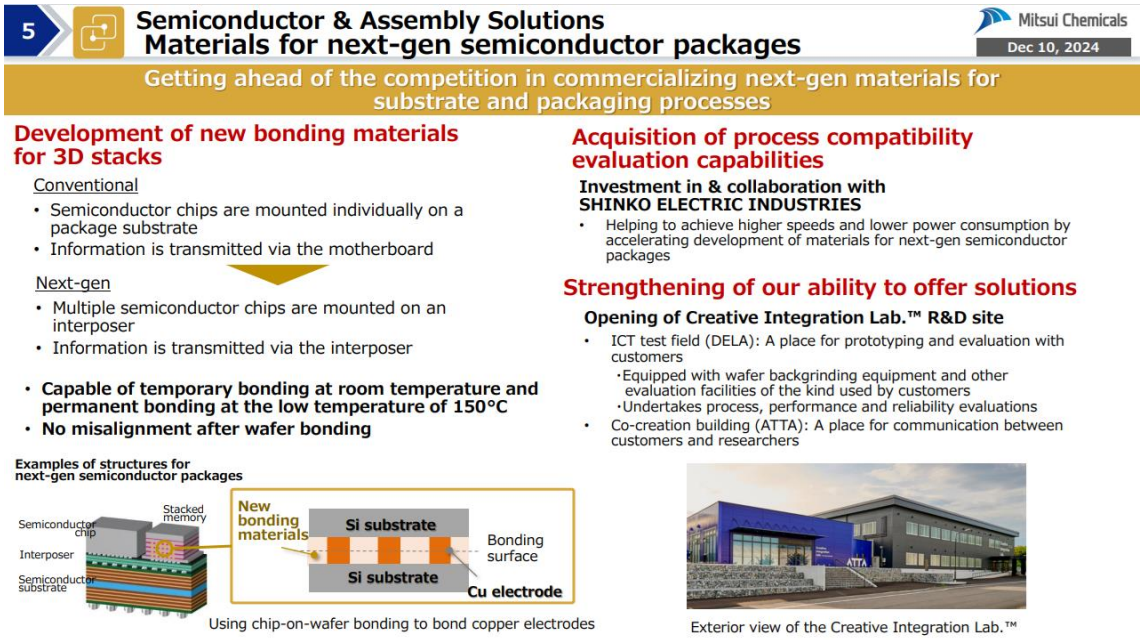


ICROS™ Tape is our main product for back-end process, but by horizontally deploying the technology for protective tape use in the current back grinding process, we are expanding our product range into the dicing area.

In addition, in fiscal 2024, new facilities began operations in Taiwan to increase capacity, giving us production capacity in Taiwan equivalent to that of Nagoya, so we believe we have created a foundation for business expansion.

As a new product, we are also working hard to develop MintRow™, a highly heat-resistant release film for the molding process, in an effort to expand our new business.

As for the ICROS™ business as a whole, we will continue to work to maintain our top market share and achieve steady growth.



We are currently developing new bonding materials for 3D stacks.

The material can be temporarily bonded at room temperature and permanently bonded at the low temperature of 150°C. We have already received many inquiries and hope to start selling the material as early as fiscal 2025.

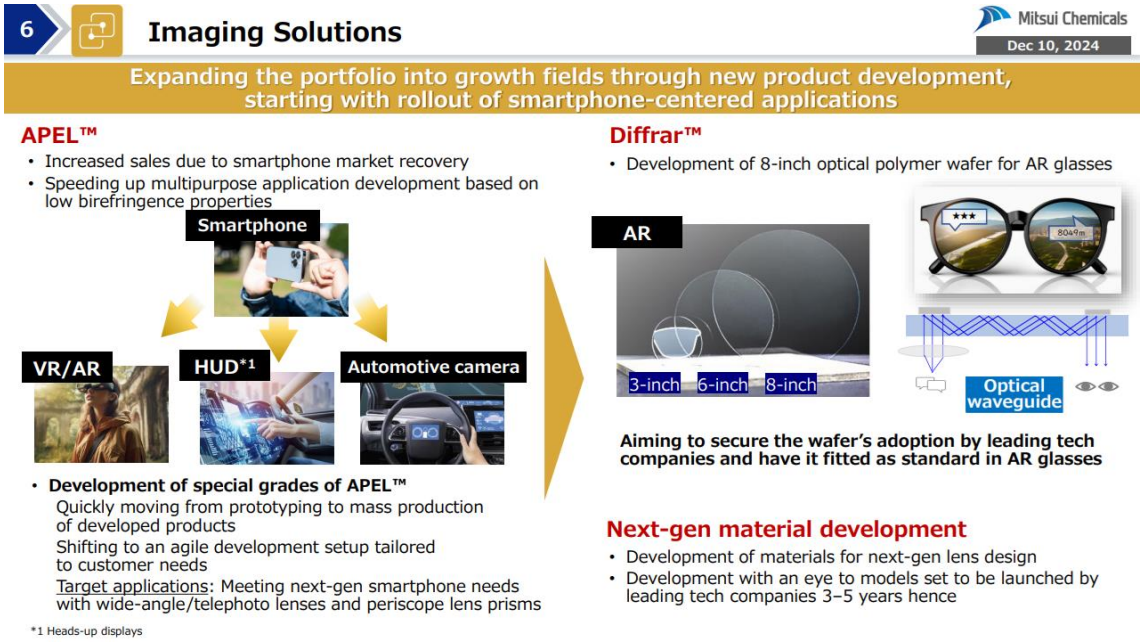
Additionally, we plan to invest in Shinko Electric Industries in order to acquire process compatibility evaluation capabilities and promote understanding of how our products are used in customer processes. However, due to a pending antitrust review, the TOB has not yet commenced and is scheduled for the beginning of the next year.

Once the final decision is made and the TOB is carried out, we will then get to work on the project in earnest.

In order to strengthen our ability to propose solutions, we opened Creative Integration Lab™, an ICT research facility, which is equipped with evaluation facilities of the kind used by customers at our Nagoya Works in fiscal 2024.

We have set up a clean room and installed wafer back grinding equipment and other facilities of the kind used by our customers.

We have also set up a Co-creation building adjacent to Creative Integration Lab™, which we hope to use as a place for communication between customers and researchers.



Regarding imaging solutions, after APEL™'s third line in Osaka started operations, we struggled for a while due to a decline in demand for smartphones and excess inventory at customers, but this fiscal year the smartphone market has been recovering, and sales are gradually recovering accordingly.

APEL™ is also actively expanding beyond its focus on smartphones to other uses.

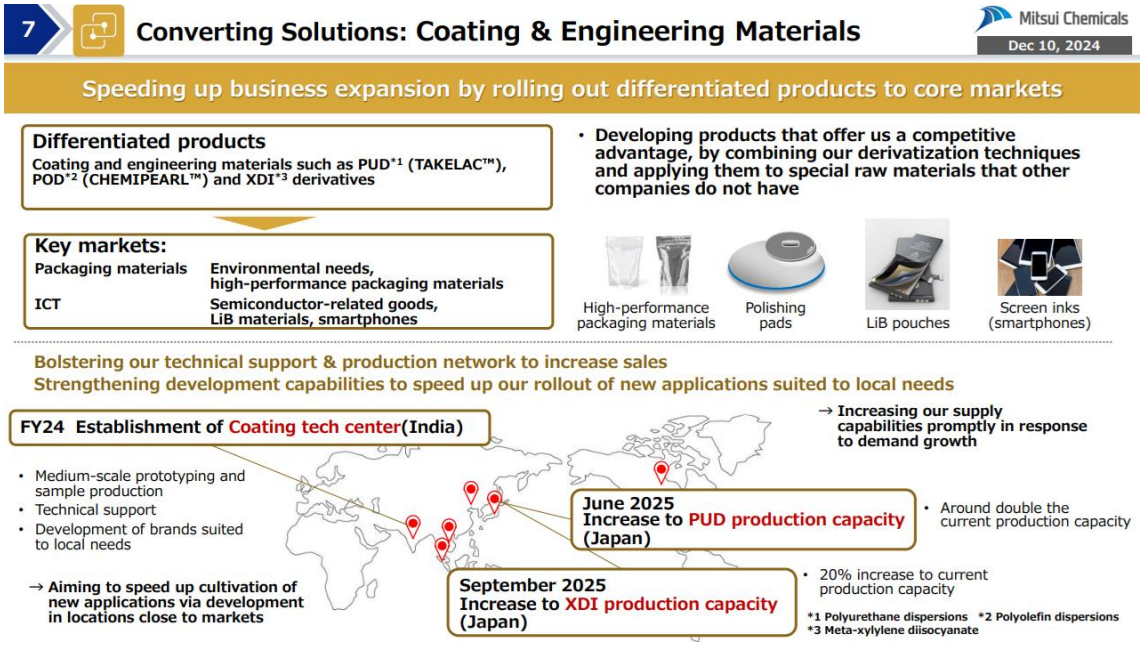
Although we have high hopes for VR/AR applications due to their high added value, the market for goggle-type VR has not grown as much as we had anticipated.

We are currently developing special grades of APEL™. From fiscal 2025, we will establish a system to supply prototypes of new grades of APEL™, with the aim of expanding the range of applications to meet new smartphone needs with wide-angle and telephoto lenses, etc.

Our new product, Diffrar™, is an optical polymer wafer for AR glasses, and we are currently developing it to provide as a wafer rather than simply selling the polymer.

The larger the size, the more difficult it becomes technically to maintain a smooth and distortion-free surface, but we are currently working on developing an 8-inch product, the largest possible size, and are working with major technology companies to make this standard feature on AR glasses.

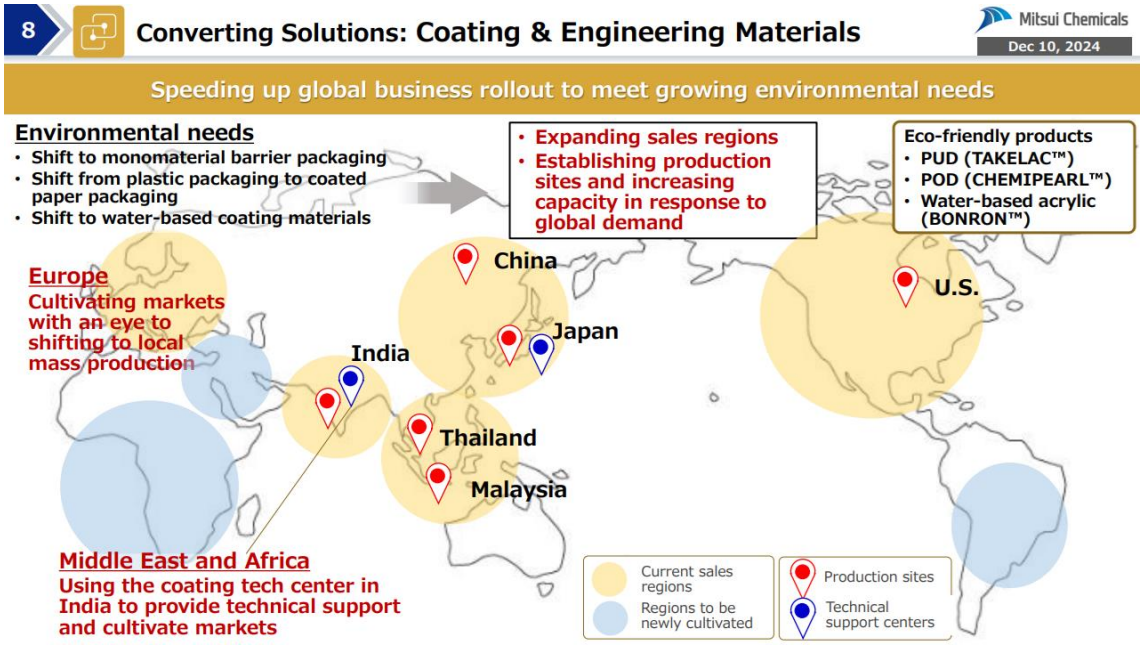
Furthermore, we are also developing APEL™'s next generation materials, and are proceeding with mid- to long-term development with an eye on models three to five years from now, while receiving evaluations of materials in line with the roadmaps of customers with whom we have strong relationships.



We use special urethane-based materials to develop distinctive products, and in the packaging material field we supply products for environmentally friendly packaging applications, and in the ICT field we supply products for semiconductor and smartphone-related applications.

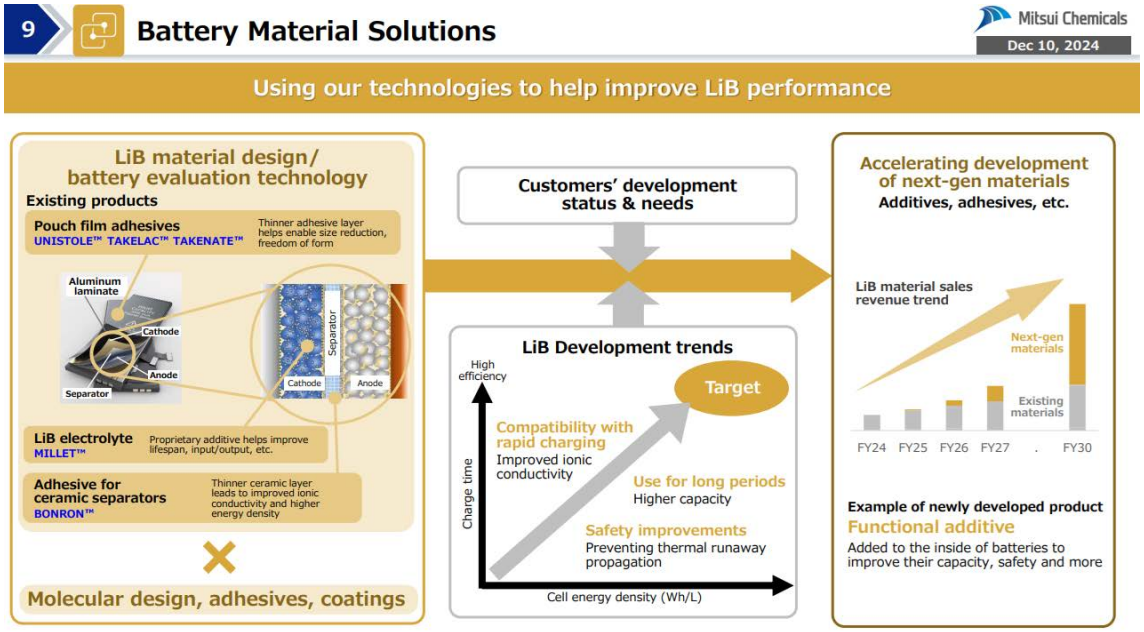
We aim to expand sales by strengthening our production system and technical services, and in fiscal 2024 we established a coating tech center on the outskirts of Delhi, India, to establish a system that will enable us to provide technical services directly to meet local needs.

Additionally, we are also proceeding with the increased production of PUD at the Shimizu Works and XDI at the Omuta Works, for which decisions have already been made, and are steadily increasing our production capacity.



Currently, sales are centered in Asia, the United States and Europe but in line with the expansion of global demand, we plan to actively conduct marketing activities in emerging countries as well, and we are considering expanding into the Middle East, Africa, and South America, providing technical services and developing these markets.

Furthermore, in Europe, as the need for environmentally friendly products is growing, we are currently exploring the market and conducting studies with a view to local production.



At the last CEO presentation in November, we were asked whether we were entering the red ocean, but we already offer a wide range of products for LiBs, and our existing products include UNISTOLE™, TAKELAC™, and TAKENATE™, which are adhesives for pouch films, MILLET™, an electrolyte for LiBs, and BONRON™, an adhesive for ceramic separators, as well as HI-ZEX MILLION™, an ultra-high molecular weight polyethylene, which we supply as a separator material.

The performance requirements for LiBs are becoming more sophisticated day by day. There are five major needs: rapid charging, higher capacity, improved safety, longer life, and low cost, and materials with the performance to meet these needs are in demand.

Our group plans to respond to this demand based on the technology we have cultivated primarily in the areas of coatings and engineering materials.

Rather than achieving our next generation materials sales revenue target with just one product, we aim to achieve it through an accumulation of small products.

In addition, since the materials are mainly coating and engineering materials, we believe that the investment per project is not very large, and that we can invest and recover resources with a sense of speed.


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