Mitsubishi Chemical Group

Business Strategy Briefing 2025

Q&A (Summary)

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The forward-looking statements are based largely on company expectations and information available as of the date hereof, and are subject to risks and uncertainties, which may be beyond company control.

The Group is engaged in a very diverse range of businesses, including various functional products, MMA, petrochemicals, carbon products, industrial gases, and pharmaceuticals, and its performance may be affected by domestic and international demand, exchange rates, prices and procurement volumes of raw materials and fuels such as naphtha and crude oil, product market trends, speed of technological innovation, NHI price revisions, product liability, litigation, legal regulations, etc. The Company's business performance may be affected by such factors. However, factors that may affect our business performance are not limited to these factors.

The term “the Mitsubishi Chemical Group” refers to Mitsubishi Chemical Group Corporation and its group companies.

Mitsubishi Chemical Group
Business Strategy Briefing 2025

➢ Attendees:

・Mitsubishi Chemical Group Corporation

Manabu Chikumoto, Representative Corporate Executive Officer, President & Chief Executive Officer

Minoru Kida, Executive Officer, Chief Financial Officer

Supervising – Finance and IR

・Mitsubishi Chemical Corporation

Yasuo Shimodaira, Representative Director of the Board, Managing Executive Officer, Head of Basic Materials & Polymers

Satoshi Kurokawa, Managing Executive Officer, Head of MMA & Derivatives

Yosuke Egawa, Managing Executive Officer, Head of Advanced Films & Polymers

Satoshi Wakabayashi, Executive Officer, Head of Advanced Solutions

Franck Ruel, Executive Officer, Head of Advanced Composites & Shapes

[Q&A (MMA & Derivatives)]

[Q&A 1]

Q1

Since MMA monomer is a single substance, it is basically difficult to differentiate the product. How do you differentiate it specifically?

A1 (Kurokawa)

As a chemical, it is 99.9% the same substance, so you are right. However, the customers we have been working with for many years, especially those in China, have a tremendous sense of trust. For example, when there was no trade friction between the U.S. and China, there was a shortage of MMA monomer in the U.S. and the market price rose. At that time, Chinese MMA monomer manufacturers increased their exports to the U.S., which led to a shortage of MMA monomer in China. However, we have always maintained a policy of never disappointing our customers who have friendly relationships with us, so we have brought MMA monomer from overseas to China and provided the product even at the cost of additional logistics. This long-term relationship has created a sense of trust and value for our customers. In addition, we communicate with our customers about delivery methods and safety, and we provide value that is different from other suppliers. New manufacturers sometimes offer lower prices, but our customers in China value the relationship with us. We have been able to differentiate ourselves from our competitors because of their trust in

Mitsubishi Chemical as a whole. Going forward, in order to compete with the delivery systems of our competitors, we will further differentiate ourselves by utilizing our technology to solve the problems of downstream customers. We also believe that we will be able to increase profit in line with the progress in our pricing policies. We will continue to build benchmarks and report progress.

[Q&A 2]
Q1
If your operating rate is about 70% and that of local manufacturers in China is around 50% to 60%, does that mean that the current capacity is about 6 million tons and the actual operating capacity is about 4 million tons? If that is correct, why is the market going down when the demand forecast is over 4 million tons in 2025? Also, what is the reason for the significant loss in the U.S. and Europe despite the fact that the cost formula had already been introduced? Also, what are the conditions for considering a new MMA monomer plant in the U.S. again?

A1 (Kurokawa)
First, I would like to talk about the reason for the loss in the U.S. If we could have secured the production volume as expected, we would have been able to turn a profit, but production was often held up due to the occurrence of problems and force majeure. After setting up a new plant in Saudi Arabia, we established a system to provide a stable supply to the U.S. This allowed us to temporarily avoid force majeure, but to make a solid profit, stable production and safe delivery on the ground are essential, so we assigned technical experts to stabilize the Memphis plant. If this is successful, we will be able to make a profit for sure because the MMA monomer market price in the U.S. is high. We succeeded in turning a profit in fiscal 2024, but there are still areas for improvement, so we will continue to fix problems. In addition, it is essential that we obtain a firm business commitment from our customers in order for us to reconsider building a new MMA monomer plant in the U.S. If we can achieve carbon neutrality through new technology, we can invest in a risk-diversified manner. It is especially difficult to invest in the U.S., where inflation is high, but we will solve this problem by diversifying our risks. We are also considering upgrading our old facilities, and we need to finalize the timing of investment and financing options. In China, it is difficult to increase operating rates without various conditions, so Chinese manufacturers cannot increase operating rates beyond their capacity. Therefore, their operating rate in China remains around 60%. We are also working to secure raw materials and endeavor to increase operating rates. When demand is weak, MMA monomer market prices tend to be low, but we expect demand

to recover for the upcoming coating season.

[Q&A 3]
Q1
With regard to the current demand for MMA monomer, the 5% growth rate seems to be a little high compared to the past growth rate. Could you tell us what applications you expect to grow in particular? Is it possible to mention some specific applications such as paint, auto parts, signboards, and displays? Also, in terms of generating demand by yourself, what kind of alternatives are you considering to replace transparent resin in particular? For example, there are various options such as polycarbonate, COC, and COP. Could you tell us about your future demand outlook and strategy for exploring applications?

A1 (Kurokawa)
It is said that electric appliances and building materials will grow at the same level as GDP, but if we look at past results, we have a track record of 4% to 4.5% growth in paint applications in the U.S. even when the GDP growth in the U.S. was 2%. In addition, the demand for artificial marble is growing at a much higher level than GDP, and we have a strong track record with our customers, so we believe that by continuing our relationship with them, we will be able to capture more demand than GDP. The biggest new applications are glass substitutes and automobiles. Since PMMA can be recycled in Japan, it has been considered increasing the amount of PMMA used for automobiles, which had been only about 2 kg per vehicle in the past. It has also been considered practically using PMMA for headlamps and other parts. If the materials used for the outer panels of automobiles can be replaced with PMMA in particular, 50 kg to 100 kg of PMMA will be used per vehicle, making it extremely easier to recycle. The auto industry has started to look at PMMA, which is serving as a favorable tailwind. However, it takes about two years for Japanese manufacturers to incorporate it into their next models, so I think it will take a little longer. Chinese customers, on the other hand, will use the product immediately if they think it's good. Some local automakers in China are already using our acrylic sheets for outer panels and PMMA containing silicone modifiers in automobile parts. So, we are marketing our products in the belief that Chinese automotive-related applications in particular will pick up quickly.

Q2
Regarding the hybrid formula of raw materials and market prices, will the market-linked portion remain in the cost formula? For example, if the MMA monomer price moves 100 dollars per ton, how much will your core operating income be affected? Could you tell us

about the sensitivity?

A2 (Kurokawa)
Some customers depend entirely on market prices, and others prefer to create flooring and ceiling for the MMA monomer market price. Currently, about 70% of the total sales is based on a hybrid formula comprising "30% cost-linked pricing and 70% market-linked pricing," but we will increase the ratio of the cost-linked pricing formula in the future. We would like to refrain from disclosing market sensitivity.

[Q&A (Basic Materials & Polymers)]

[Q&A 1]
Q1
Could you explain the current status of the restructuring of West Japan cracker to the extent possible? Also, with regard to your plans for 2030, as the ethylene production facilities of each company are being shut down, I am concerned that domestic demand will decline further around March 2028, especially when Kawasaki Plant ceases to operate, and that the domestic supply and demand balance will not be able to keep up. Under such circumstances, is it necessary for you to take actions? Will your operations be in line with domestic demand in 2027 and 2028, as the current restructuring progresses? Do you also need to think about additional measures looking ahead to 2030?

A1 (Shimodaira)
I have nothing new to say about the current progress. We are promoting optimal production methods and greening while predicting demand trends around 2030. Currently, the three companies are cooperating with each other, and while you may feel that the progress is slow, we are thoroughly reviewing the steps through the secretariats. I hope to be able to share some progress with you by the end of fiscal 2025. As the restructuring of ethylene cracker progresses in Japan, domestic demand is expected to decline. However, Basic materials are very important materials for Japan, especially in the provision of green materials. We do not expect these materials to be replaced by imports or become unnecessary at all. It is crucial that business consolidation and greening will progress further. I believe that differentiated plants and products will survive.

Q2
Looking ahead to 2030, is the ease of greening the most important point?

A2 (Shimodaira)
We expect greening to progress during the period between 2030 and 2035. We do not think that greening and facility shutdown will necessarily proceed at the same time. We believe that restructuring will happen at each site with a view to future greening.

[Q&A 2]
Q1
On page 10, you mentioned a sales increase of 15 billion yen and an investment benefit of 8 billion yen. Are you planning to proactively gain market share to expand sales of polymers and compounds and high-performance polyolefins rather than relying on the market expansion? If so, can you tell us what makes you superior to your competitors in terms of products and supply capacity?

A1 (Shimodaira)
It is crucial that we can differentiate our product performance. We believe that such differentiation is possible for these two products. With regard to compounds and high-performance polyolefins, we need to restructure the supply-demand balance, including price. It is also important to gain market share. We need to meet customer demand by increasing the market share of existing products and shifting from general-purpose products to high-performance products. The difference between the two is due to the difference between existing facilities and new facilities to be built in the future.

Q2
I think competitors are thinking about the same thing. What are the specific measures?

A2 (Shimodaira)
The integration of compounds business and the change in behavior and mindset to integrate development, production, and sales and to move quickly are very important. There is still room for improvement in this regard. By strengthening our basic operations of production and R&D in response to local customer requests, we believe that we will be able to achieve the approximately 3% growth target in the mobility sector.

[Q&A 3]
Q1
Regarding the Materials & Polymers business, could you tell us more details about the profitability of each product? For example, whether you are making profit in raw material

sales for PVC and upstream businesses such as EO but not so much in downstream businesses such as polymers. Or, whether you are making profit in PP compounds but not so much in polymers. Also, whether or not the olefin business is profitable on the whole. Could you tell us which products you think will grow significantly?

A1 (Shimodaira)
It is difficult to give specific figures, but polymers are one area where we can differentiate. High-performance polymers are a pillar of our earnings, and we plan to steadily grow this product. We also have a challenge in pushing forward with restructuring of some unprofitable monomer business areas, especially ethylene plus one and propylene plus one. We will improve our earnings through this restructuring. In addition to carbon, there are some petrochemical products for which significant losses have been posted.

Q2
Is it correct to understand that there are not many products for which significant losses have been posted because you have already carried out a lot of structural reforms?

A2 (Shimodaira)
One example is phenol, but we aim to make it profitable by downsizing.

[Q&A (Advanced Films & Polymers)]

[Q&A 1]
Q1
I would like to ask a question about OPL film. I think your market share was a little over 20% about 15 years ago, at the time of the former Nippon Synthetic Chemical Industry Co., Ltd. However, according to this document, your market share has increased to 35%. What is the reason for this increase and what is the background? Can you also tell us whether you are aiming for a market share of over 50% in the future and about your direction? In addition, can you tell us how you currently evaluate your decision in the past to make Nippon Synthetic Chemical Co., Ltd. a wholly owned subsidiary? Do you think it was the right decision?

A1 (Egawa)
There is something that I feel as I work with our team. This applies to other products, but the first company to enter the market is strong. The reason is that the film that we make is processed as part of our customers' products. In order to process, our customers need to adjust the equipment, and they need to adjust the conditions. Therefore, they need to make

sure that our film matches their equipment. If the film does not match the equipment, our customers cannot use it. But I think that the presence has increased from about 20% to 35% because our engineers have been in the field and working with our customers to adjust the conditions. In addition, thin film technology has been a factor to boost our market share. We are also working with our customers to adjust the conditions for thin films. I think it is difficult for our competitors to make the same adjustments. It is important to establish a de facto standard, which establishes our position in the market. Based on the fact that we have come this far in 15 years, we are determined to continue to grow in the future with the aim of establishing de facto standards. I am also glad that we made the former Nippon Synthetic Chemical Industry Co., Ltd., a wholly owned subsidiary. We had polymer and film technologies at the time of the former Nippon Synthetic Chemical Co., Ltd., but there were many areas in the film business that needed to be improved. For example, there are many areas where efficiency can be further improved in terms of the setting of production conditions, setup changes at the production site, and the concept of scheduled maintenance and repair. These improvements can often be found only if you are familiar with the film business. Therefore, it was very good for the company to join us as we have film technology. Also, within the Mitsubishi Chemical Group, there are many people with extensive knowledge and know-how on polymers. I think it was very good that we were able to achieve stable and safe operations and manage the polymer plant efficiently. Of course, there are challenges such as high shared costs, but I feel it was very good that we were able to achieve product competitiveness.

[Q&A 2]
Q1
While Soarnol and OPL film are quite profitable, I feel that PET film, although large in scale, has not been very profitable. Therefore, I would like to ask you whether the effect of asset optimization will be only 5 billion yen. Also, please explain how you think about the significant impairment risk in the future and how you will increase profitability of PET film.

A1 (Egawa)
First of all, regarding our profits from PET film, we had very good results in 2021. This was mainly due to an increase in demand and a decline in raw material prices. However, from 2021 to 2023, a rise in raw material prices and a decline in demand necessitated restructuring in 2024. Despite that, we believe that our profitability is relatively good compared to other PET film manufacturers. We do not currently see any impairment risk. For future growth, it is important to proceed with asset optimization, and we believe that the effects of this will

amount to billions of yen. In addition, it is necessary to quickly discover products with high added value that can replace LCD. With the strengthening of our marketing team, we are seeing an increase in the number of items for which we can expect an increase in profitability. In Europe, PET film manufacturers are struggling, but with the introduction of a new production line in Germany, we are seeing promising items. Our capacity in the U.S. is currently well balanced. However, if there is a shortage in the U.S., we will need to transport products from Europe to the U.S. In that case, we will be affected by the Trump tariffs, but we plan to promote capacity-light of well-balanced products in order to achieve the level of profitability in 2021. We believe this is feasible.

Q2
Can you explain why you think your profitability is higher than that of your competitors?

A2 (Egawa)
This is because we understand that we are expanding our market share in Europe and South Korea.

[Q&A 3]
Q1
I would like to know more about the competition with regard to OPL film and Soarnol. I understand that you can increase market share for OPL film with 45-micron thin film. Please also tell us how you plan to increase market share for Soarnol. You mentioned differentiation in compatibilizer, but it seems that competitors are also considering launching products made from 100% biomass, so I think that the competition will be quite tough. I would like to know more about how you feel about increasing market share for Soarnol. In addition, gaining market share in terms of volume is important, but I think margin is also important. Regarding margin, I recognize that your competitors have a little higher margin, but I would like to ask about your perception and the room for improvement. If your current margin is low, what are the factors, and do you think there is some room for improvement?

A1 (Egawa)
Regarding the 100% bio-based product announced by our competitor, I think that such demand is not zero. In fact, we also use it in some products, and I think that we have the technology basically. However, in Europe, recycling is now considered more valuable than growing demand for biomass. Rather than shifting completely to biomass, it is important to increase our presence and market share by obtaining recyclability certification. Also, if the

prices are the same, production costs will affect the spread. Therefore, we would like to take advantage of Mitsubishi Chemical's comprehensive capabilities to reduce costs. While taking advantage of the combined capabilities of film technology and polymer technology, we would like to reduce costs through yield management and other measures and realize a scenario in which we can expand spreads while increasing volume. By leveraging these synergies, we will secure our presence and profitability.

[Q&A 4]
Q1
I understand that the timing of your investment in Soarnol and OPL film has been delayed, ending up with the similar timing as your competitors. I would like to know about your confidence that you will be able to promote value added in your products without pushing yourself too hard and avoid underselling in this situation. Also, regarding the investment in compounds, I understand that you do not need to make a big investment because it is an asset-light operation. Could you confirm this as well?

A1 (Egawa)
The compounds business is extremely asset-light. Conversely, polymer plants and film production lines have heavy assets, but that can be a barrier to entry. Compounds have light assets, and anyone can enter, so it is important to refine the formulation design and compound technology. We have worked out the terms with our customers, and we think we are in a good position where we are not required to sell at a discount thanks to the long-term commitment of both our customers and ourselves.

Q2
If so, I think your profit level should be a little higher. Your competitors seem to be more profitable both in compounds and films. Is it possible to improve profitability by strictly applying the "Three disciplined approaches in business operations"?

A2 (Egawa)
Our competitors have a higher market share, resulting in higher profit, but it is possible to narrow the market share gap. By applying the "Three disciplined approaches in business operations," I think we can get much closer to our competitors. It is important to show results. We also have to aim for number one. We are in that position both in compounds and films, so the mindset is also important. Over the past year, we have seen a significant change in the mindset of our team members.

[Q&A (Advanced Solutions)]

[Q&A 1]

Q1

For semiconductors on page 24, core operating income in fiscal 2024 was 2 billion yen, and is expected to increase to 8 billion yen in fiscal 2026. Could you explain the specific items that will contribute to this increase in income?

A1 (Wakabayashi)

This relates to all semiconductor products included in the investment effects of the core operating income growth plan on page 25. It is focused on synthetic silica, in particular. If the growth of the semiconductor market is in line with current projections, we believe that related products will also grow accordingly.

Q2

I understand that the pricing policy has already been implemented as a measure, but are its effects included in this 1 billion yen?

A2 (Wakabayashi)

We have been selling our semiconductor-related products to customers at prices that are recognized as valuable. In addition, we have many unique products, and we have secured funds to increase production in the future after consulting with customers. Therefore, the profit increase of 1 billion yen as a result of the pricing policy is not related to semiconductor-related products.

Q3

Does the investment effect of 6 billion yen for batteries consist mostly of low-expansion natural anode materials?

A3 (Wakabayashi)

Yes, low-expansion natural anode materials account for the significant portion.

[Q&A 2]

Q1

Please explain about the FY2024 core operating income forecast for Semiconductor. Also, can you explain why the profitability of Life Solutions is so low? Specifically, is a loss from

GaN substrates included in the FY2024 core operating income forecast for “Semiconductor” of 2 billion yen, or is the loss from GaN substrates included in the loss of 5 billion yen for “Other”? What is the reason for the low profitability? Also, please tell us about the current situation of the overseas business that you acquired a few years ago. I think the current situation of this business is quite severe. Please explain how to improve profitability.

A1 (Wakabayashi)
The FY2029 target for “Other” is a loss of 7 billion yen. This is related to R&D expenses for the business group on the whole. GaN substrates were partially included. However, about 2/3 of GaN substrates are included in Semiconductor. R&D expenses for GaN substrates are one of the factors behind the difficult situation for Semiconductor in fiscal 2024. Next, in Semiconductor, we acquired Cleanpart in 2018. Originally, we had bases covering Asia (Japan, Taiwan, South Korea, and China), and we acquired this company in order to establish bases in the U.S. and Europe. However, there were four plants in the U.S., and three of them were in very difficult conditions. Recently, an advanced technology plant in the U.S. started operating, but until then, there were only old plants, and their main job was cleaning general parts rather than cleaning cutting-edge semiconductor parts. We have addressed this problem in fiscal 2024 and expect a positive impact in fiscal 2025 and beyond. The focus products on page 24 are especially contributing to profit.

[Q&A 3]
Q1
Why is Sugar Ester unprofitable despite such a high market share? Are there many businesses that are not profitable, such as the polysaccharide thickener business that you announced to withdraw from? Can you tell us about the room for improvement? In addition, BASF sold its emulsifier and other food ingredients business at the end of 2024. As you are looking to expand sales overseas, I think that business was an appropriate target for M&A. What do you think?

A1 (Wakabayashi)
The revenue of Life Solutions is the sum of Gelest, which we acquired in 2020, and the food business, mainly Sugar Ester. Currently, Gelest is dragging our feet. In the future, we plan to utilize R&D, which is the strength of Gelest, in other fields. However, at present, R&D is a negative factor, and when combined, the FY2024 core operating income forecast is almost zero. In the food business, food quality assurance is an important pillar from the perspective of M&A. While strengthening emulsifiers is part of this effort, we aim to provide solutions

throughout the supply chain that do not degrade the quality of processed foods. We have a number of related businesses within the MCG Group, and this is what we consider when looking for M&A candidates.

[Q&A 4]
Q1
I understand that Advanced Solutions is a market-oriented organization rather than product synergy. The theme of the current Medium-Term Management Plan is “Connect.” What kind of synergy can we expect from having these business portfolios under one business unit? If there is synergy, the profit increase effect from asset optimization seems too low. Increased sales as an effect of investments are simply based on the idea of investing in each product to earn an n-fold profit. However, this theme of "Connect" does not seem to be generating synergy. Could you explain why we do not see the effect of asset optimization during the five years under the Medium-Term Management Plan?

A1 (Wakabayashi)
We feel a lot of synergy now, and we expect to create new solutions by collaborating with top companies in each industry. For example, in the field of synthetic silica, we used to only talk with specific crucible manufacturers, but now we have more opportunities to talk with purchasing managers of semiconductor manufacturers. This allows us to discuss not only volume and price, but also future trends. By talking with top semiconductor manufacturers and semiconductor equipment manufacturers, we can communicate how our products can help, and we expect to see new programs emerge. Also, since we are based on a market-oriented organization, there is little synergy in product orientation, but we understand that effective volume increases will result in a positive effect of connect. In the future, it will be possible to analyze how this effect has increased through our annual activities.

[Q&A 5]
Q1
What strategy do you have to grow Lithomax as a focus product? Photoresist manufacturers are on the rise in China, with about 10 companies. Are these Chinese photoresist manufacturers your customers? Also, are you planning to increase sales volume to Chinese photoresist manufacturers in the medium term?

A1 (Wakabayashi)
Lithomax is a photoresist that uses superior polymers. In fact, customer communication is

very important, and it is somewhat difficult to give you a specific strategy. However, demand for polymers is expected to increase in the future, so if we offer our polymers to customers for their new resist programs and lock them in, we can expect further expansion. Amid an increasing number of inquiries from China, we frequently meet with customers. However, we recognize that at this point, Chinese photoresist manufacturers have not reached the stage where they can mass-produce ArF generation photoresists. The polymers that we have strength for are basically those of the generation after ArF, so at this stage, we are not yet fully engaged in business in that market. We will continue to focus on expanding demand for Lithomax.

[Q&A 6]
Q1
At present, with the sale of Mitsubishi Tanabe Pharma, you have more leeway in how to spend funds. I believe that the semiconductor-related field is an area where you should strategically invest in. Could you tell us your thoughts on how to fill the gaps and accelerate growth?

A1 (Wakabayashi)
I would like to talk from a supply chain perspective. At present, many of our products are located a little further inside the Tier1 category. For these products, there are two perspectives: Is it better to go downstream and expand further, or is it better to go back upstream and strengthen the core technology that can be used in more products to strengthen the overall capability? There is a perspective of strengthening the core technology or going downstream to increase sales. We are also considering several items from a strategic viewpoint and listing them, while we cannot disclose the details at this time.

[Q&A 7]
Q1
What do you think China is doing in the 300mm wafer industry?

A1 (Wakabayashi)
In the past, Japan had been the main player, but recently I feel that the situation has changed a little. I can't give you any more details, but that’s my understanding.

[Q&A 8]
Q1

Basic upfront investment is extremely important in the semiconductor-related business. What is your policy on how to make upfront investment, how to stop it if it is wrong, and how to implement uncertain investments?

A1 (Wakabayashi)
First, we clarify the purpose of upfront investment and set criteria for evaluating the results. From a risk management perspective, it is important to regularly monitor the progress of investment and revise our strategy, as necessary. With regard to uncertain investments, we strive to gain understanding and cooperation within the company by thoroughly analyzing the risks and clearly explaining the benefits of investment. Through close communication with the relevant parties, including the president, we build a cooperative structure to achieve common goals. Next, on the issue of production capacity, we have the option of having our own production capacity or not. There are many interesting products that we have covered today from the perspective of comprehensive range of chemical solutions. In particular, there are many products that demonstrate strengths because they have been made in-house, and manufacturing know-how is very important. We need to use this know-how to continuously win while maintaining quality. For example, we are considering responding to demand in markets around the world. Currently, we are developing products for which we do not have raw materials through licenses, and cooperation with Taiwan is part of this. We provide sulfuric acid, which is used by top manufacturers, through licenses according to local demand. As for organic products, manufacturing know-how is very important, and we cannot easily provide them to outside the Group. Therefore, we are increasing production in-house. We are proceeding carefully, including capital investment necessary for quality assurance.

Q2
Is it correct to understand that you are confident in mass production?

A2 (Wakabayashi)
The so-called Tier1 photoresist will be provided directly to semiconductor manufacturers. Therefore, customer support is very important. It is necessary for us to have the same inspection equipment as our customers, and if there is a problem, we have to create the silicon wafer ourselves and provide the solution. Our chemical materials are measured to ensure quality. So, there is a big difference from traditional methods. As we increase the production of semiconductor materials in the future, it will involve new development. However, we have not yet reached the stage where we need an incredible inspection equipment.

[Q&A (Advanced Composites & Shapes)]

[Q&A 1]

Q1

Regarding page 33, operating income is expected to improve by 29 billion yen as a result of the expansion of the volume of mobility and aircraft. I would like to know the breakdown of new applications and mobility. In the case of mobility, it takes about 2 to 3 years to obtain certification. Therefore, I think you are quite confident in expanding the volume. Can you tell us how confident you are in expanding the volume and how you plan to invest to achieve it?

A1 (Ruel)

As you mentioned, it will take at least 3 to 5 years for the development related to aircraft applications to have an impact, but we think this is an important milestone. The volume expansion is all related to next-generation mobility, and we already have projects such as A, B, and C. We have received interest from the automotive industry as well as funding from our customers for equipment and molds related to them. One of the projects, Aptera Motors, is a new concept car powered by 100% solar cells based in California. We are working closely with CPC to design parts for this vehicle. About 80-90% of the volume expansion is related to next-generation mobility. We are confident that we will expand our sales volume, and as you can see on page 39, we already have three projects in progress for which we had received orders.

[Q&A 2]

Q1

Two weeks ago, the EU published an amendment to the ELV directive. What are your views on the regulation on carbon fiber for automotive applications and its impact on the CPC?

A1 (Ruel)

Two weeks ago, the amendment was published, and carbon fiber was listed as a substance of concern in Article 5. Since then, we have been lobbying with relevant parties in Japan as well as in Europe to address these concerns. We aim to clarify what was raised as a concern with carbon fiber and that it cannot be considered a substance of concern. We will continue to lobby carefully as it is ongoing, and some progress has been made. The other two provisions specifically relate to thermoplastics and thermosets and relate to recycling at the time of disposal of vehicles. Because thermosets are not considered recyclable, thermoplastics are more suitable for aircraft. So, we see growth opportunities for mobility.

Q2
According to industry news, carbon fiber companies are lobbying. How are you involved?

A2 (Ruel)
We are working with various European and national associations such as ISO, the German Association of the Automotive Industry (VDA) and the Composite Association. We are also lobbying with Japanese associations and exchanging information with key players in the carbon fiber industry. This activity is ongoing, and it will likely have an impact in the future, but we will continue to monitor this amendment carefully.

Q3
Is approximately 30% of your carbon fiber and composites business related to automotive applications?

A3 (Ruel)
Approximately 30% of our carbon fiber and composites business is related to automotive applications. We would like to further increase our sales to ultra-luxury car manufacturers, but the ultra-luxury market has very limited production. CPC's new pilot assembly plant will improve our ability for mass production, allowing us to increase production to dozens of vehicles a day from only one vehicle a week by hand.

[Q&A 3]
Q1
Regarding the chart on the left side of page 38, can you tell us if you intend to replace the materials used in current aircraft with your materials and if you can find profitable items for semi-structural parts? In addition, regarding the chart on the right side, can you tell us if you intend to market thermoplastics as primary structural materials for new projects in the future? Please also comment on your competitiveness in CFRTP in comparison with the two Japanese competitors.

A1 (Ruel)
The chart on the right shows the current market share of thermoplastics and thermosets. The key is to improve the cycle time, but it is expected to grow as the recyclability at the end of aircraft production contributes to the increased use of thermoplastics. Our first target area is aircraft interiors, and we are already working on many projects. We also believe it can replace aluminum and titanium parts using our technology, which has been developed through the

integration with high-performance engineering plastics. We are also starting to apply it for aircraft engine parts, which has created new growth opportunities. Filaments and thermosets currently account for the majority of aerostructures, but we have not entered this market and have no intention to enter it. As for the chart on the left, it is important to note that CPC's strength will be demonstrated when large parts are manufactured. CPC has the technology for press molding large parts. We are currently press-molding prepreg SMCs and plan to use this technology to produce thermoplastic sheets in the future.

[Q&A 4]
Q1
Could you tell us about the scale of Projects A, B and C and why you were able to win these projects?

A1 (Ruel)
First of all, one of CPC's key strengths is its ability to manufacture large parts. In addition to our technological capabilities to manufacture large parts, CPC has 3,000- 5,000 ton press machines, one of the largest in the world. This allows to integrate many functions into parts, which is a huge advantage. As you saw in the video, we can integrate into less than 10 parts at most. By manufacturing large parts and integrating different designs, we can create innovative new mobility designs. CPC also has close relationships with customers in Europe and the U.S., especially ultra-luxury car manufacturers. Our current goal is to attract new mobility-related businesses, including Robotaxis and other distinctive mobility devices, and provide promising opportunities to accelerate growth.

A1 (Supplementary comments by Shindo Ebihara, Director, Business Strategy Div., Advanced Composites & Shapes)
We cannot disclose the scale of Project A, B, and C, but Project A is relatively large. Regarding ELV regulation in the EU, ELV is a regulation that applies to automobiles sold in the EU. For example, luxury cars, which are manufactured by CPC's customers, are mainly sold in the Middle East, the U.S., and China rather than in the EU, so ELV regulation does not necessarily apply to those countries. The real risk is that it will be applied to aircraft, but we do not think it will be applied to Europe where Airbus is located. In terms of health hazards, carbon fibers do not enter fine particles such as asbestos, which is specified by the WHO. There is academic evidence that they do not break when crushed, and we believe that a position paper on such facts will come out from industry groups.

[Q&A 5]

Q1

In five years, the effect of volume expansion will amount to about 30 billion yen, while sales revenues are expected to increase by 90 billion yen. So, I estimate that fixed costs will increase by about 20 billion yen. If this is correct, are they mainly due to the expansion of carbon fiber and CFRTP?

A1 (Ruel)

You are right about the need for fixed costs to support the growth of CPC. We are starting to increase productivity and hire the necessary personnel as we ramp up, and we need several months of training for the production of composites. Controlling fixed costs is one of the challenges we need to address.

Q2

Can you give us an estimate of how much the increase in fixed costs will be? Is it correct to understand that there will be a certain amount of depreciation even as automation progresses?

A2 (Ruel)

We can't disclose the amount. You probably understand that it is quite automated and not labor intensive, but depreciation is necessary. You will understand more if you visit our production site. We will show you not only the pilot assembly plant, but also the building construction and investment in new equipment currently in progress, but it's capital intensive. For the next-generation mobility, we're going to use more autoclave prepregs, so less labor is required compared to the manual labor necessary for luxury cars. Press molding and more automation will become possible, resulting in less labor required. Because of the different part sizes, manpower is still required, but the amount of manual labor is much less than the production of luxury cars.

Q3

Do you plan to expand your carbon fiber production facilities?

A3 (Ruel)

No, we don’t.

End