Mitsubishi Chemical Holdings Group Medium-Term Management Plan APTSIS 25, Step 1

Minutes of Investor Meeting

(Presentation + Q&As)

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Held as an online meeting

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Attendees from the Mitsubishi Chemical Holdings Group:

(Mitsubishi Chemical Holdings Corporation (MCHC))

President and Chief Executive Officer Hitoshi Ochi

Managing Corporate Executive Officer Yoshihiro Ikegawa

Managing Corporate Executive Officer, CFO Hidefumi Date

(Mitsubishi Chemical Corporation (MCC))

President & CEO Masayuki Waga

(Mitsubishi Tanabe Pharma Corporation (MTPC))

President & CEO Hiroaki Ueno

(Life Science Institute, Inc.(LSII))

President & CEO Seiichi Kiso

(Nippon Sanso Holdings Corporation (NSHD))

President & CEO Yujiro Ichihara

(Mitsubishi Chemical Holdings Corporation (MCHC))

Representative Senior Managing Corporate Executive Officer

Kazuyuki Ookubo

Managing Corporate Executive Officer Larry Meixner

Managing Corporate Executive Officer Ken Fujiwara

Corporate Executive Officer Shigeki Habuka

Presentation

President & CEO Ochi

Hello, everyone. It has been a long time since the last time. Last year, we formulated KAITEKI Vision 30 ("KV30"), and based on that, we have formulated the next medium-term management plan. Amid the uncertain outlook due to Covid-19, it is important to consider how to recover the business, how to build a resilient business foundation, and how to lay the groundwork for growth. Therefore, we have divided this plan into two steps. Today, I would like to explain Step 1 which outlines the plan with a focus on current issues.

P6 1. APTSIS 20 Review: Operating Results

Let us review the current medium-term management plan, APTSIS 20. In terms of operating results, we were able to achieve our initial core operating income target of 380 billion yen in 2017 through portfolio reforms and improved market conditions. After 2018, earnings worsened due to the lack of Gilenya™ royalties, the economic slowdown due to US-China trade friction, and a worse economic slump due to the Covid-19 pandemic than when Lehman Brothers collapsed. In light of these conditions, core operating income for fiscal 2020 is expected to be 153 billion yen. Due to losses on non-recurring items due to Medicago, ND0612, and the closure of the MMA Beaumont plant, we expect to post a net loss attributable

to owners of the parent.

P7 1. APTSIS 20 Review: Investment and Loan Plans

Capital expenditures and R&D expenses were mostly in line with our initial plan. Performance Products and Health Care have fallen short of investments and loans aimed at accelerating growth.

P8 1. Priority Management Measures under APTSIS 20

The priority management measures under APTSIS 20 include reinforcing business portfolio reforms in Performance Products to improve profitability and increase asset efficiency, reinforcing the business foundations to be not easily affected by market conditions in Industrial Materials for materials, and expanding business in the United States to counter the patent cliff and accelerating commercialization of regenerative medicine in Health Care. In addition, the priority measures were intended to generate synergy effects from Mitsubishi Chemical Corporation (MCC), which integrated the three companies, strengthen the global management system, swiftly commercialize next-generation businesses, deepen KAITEKI management and reform personnel systems, and strengthen business foundations such as accelerating digitization.

P9 1. APTSIS 20 Review: Performance Products

Although various measures have been taken for Performance Products, we could not achieve the core operating income target of 120 billion yen. This means that we must further accelerate growth measures, for which it is important to revitalize R&D, strengthen the ability to create new businesses, and make up for delays in digital R&D.

P10 1. APTSIS 20 Review: Industrial Materials

In Industrial Materials, we newly launched SAMAC in the Middle East to stabilize and expand revenues of the MMA business. However, our revenues have been significantly affected by the US-China trade conflict and Covid-19, and structural reforms are needed to further stabilize profitability. In addition, the supply-demand balance of metallurgical coke in Japan has collapsed due to the drastic slump in production in the Japanese steel industry, and we also need to urgently carry out structural reforms of the carbon business. In Industrial Gases, we were able to establish a global structure through business acquisitions from Linde and Praxair. We believe these marked a huge step forward.

P11 1. APTSIS 20 Review: Health Care

In Health Care, we launched Radicava™ in the United States, but demand is not growing as expected. Development of ND0612 and VLP influenza vaccines has been delayed, causing slower recovery of profits of Mitsubishi Tanabe Pharma Corporation (MTPC). With the acquisition of MTPC as a wholly owned subsidiary, it is necessary to take new measures and urgently rebuild the company. In particular, we need to reflect on and review the PMI and strengthening of governance after M&A of overseas

companies. A Muse cell-based formulation is progressing steadily in general, albeit with some delay.

P12 1. APTSIS 20 Review: Reinforce Foundations

To reinforce foundations, we implemented business structural reforms of about 320 billion yen, above the target of 300 billion yen based on net sales. We achieved the reduction of subsidiaries and affiliates and a cost reduction of 22 billion yen through corporate rationalization, which exceeded initial targets. We have also been making steady progress in building a global management system, strengthening R&D, and promoting digital transformation.

P13 2. APTSIS 25 in View of Environmental Stance and the Pandemic

Reflecting on APTSIS 20, the next medium-term management plan APTSIS 25 was formulated. I will explain the concept of this plan.

P14 2. Major Global Socioeconomic Changes

The global landscape has been transformed drastically due to the collapse of the global economy, the rise of nationalism, the advance of global warming, tighter regulations on environmental and social issues, increased tendency to value safety and security due to Covid-19, expansion of virtual technology and remote working, progress in reforming work styles and boosting operational efficiency, and acceleration of green transformation (GX) and digital transformation (DX). These changes have had a major impact on various aspects such as global corporate management, business model reforms, global R&D systems, and portfolio reforms, and we will take measures accordingly.

P15 2. Global Economic Growth Outlook

As for the outlook for global economic growth, the economy has been recovering rapidly, especially in China and the United States, due to revitalization measures that incorporate the green policies of each country. It is inevitable that the recovery in Europe and Japan will be more moderate. The chemical industry has recovered to pre-Covid-19 levels. It is predicted that it will take until 2022-2023 to recover to the level prior to the outbreak of the US-China trade conflict. The production of automobiles, telecommunications equipment, and home appliances is recovering rapidly, reflecting market needs. As a result, semiconductor-related products are in full production. On the other hand, recovery has been delayed in the apparel, food services and transportation sectors. The degree of recovery varies among industries. Therefore, we must formulate the medium-term management plan in light of such facts.

P16 2. APTSIS 25 in View of Covid-19

Given the uncertain outlook, we have formulated APTSIS 25 by taking a two-step approach. Step 1 focuses on early business recovery, reinforcing business foundations, and securing a foothold for growth. Step 2 places full emphasis on accelerating growth.

P17 2. Principal Management Measures in APTSIS 25 Step 1

In Step 1, we are planning to implement the following principal management measures based on KV30. Measures for reinforcing management foundations include rationalization, human resources system and work style reforms, and organizational restructuring and the establishment of a global management system. Measures for reinforcing business foundations include business model reforms and strengthening next-generation business development. Measures for business strategies include business structural reforms and securing a foothold for growth businesses, and strengthening the healthcare business in particular. The other major initiative is the financial position improvements.

P18 3. APTSIS 25 Step 1, 3-1 Measures to Bolster Foundations, 3-1-1 Measures to Bolster Management Foundations

Now, I will explain our measures to bolster management foundations.

P19 3-1-1 Measures to Bolster Management Foundations: Rationalize and Reform Work Styles

It is important to bolster management foundations for profit recovery. Through rationalization, we will reduce costs by 22 billion yen over two years. Furthermore, we will pare assets by 180 billion yen through asset efficiency measures. We will save 15 billion yen over 10 years by consolidating decentralized offices based on the telework model introduced as a result of Covid-19. To improve efficiency through IT / digital technologies, we will make full use of IT and DX to strengthen supply chains, create smart factories, and boost R&D using material informatics and Al. MCC will invest about 47 billion yen in IT over the next five years and 24 billion yen in digital transformation over two years.

P20 3-1-1 Measures to Bolster Management Foundations: 1) MCC Business Process and Human Resources System Reforms

As for business process reforms, MCC has established the Transformation Management Office. We believe that we will be able to save 5.0 billion yen over two years by reforming the back-office, logistics and purchasing operations. We are planning to promote further rationalization in the next five years. Mitsubishi Chemical Holdings Corporation (MCHC) has been proceeding with business process reform projects. As for human resources system reforms, we will shift to a job-based arrangement, make work operations more fulfilling through engagement, and enhance skills education and recurrent education in response to technological innovations that will evolve in the future. Human resources are particularly important, and we intend to build human resources networks and actively promote the recruitment of a diverse workforce.

P21 3-1-1 Measures to Bolster Management Foundations: 2) Reorganize MCC

At MCC, we intend to consolidate the existing 10 MBUs and 25 divisions into 5 domains and 8 divisions to improve organizational productivity, further pursue synergies, and speed up decision-making.

P22 3-1-1 Measures to Bolster Management Foundations: 3) Reform Global Management at MCC

Regarding overseas businesses, there are various issues such as protectionism and trade barriers, especially the management of sensitive technologies, a carbon tax on GHG, and border taxes. We will take steps to establish a regional management system in the future by responding to these issues, expanding business in each region, addressing the need to strengthen governance, consolidating group companies within the region, strengthening RHQ functions, and developing and promoting human resources.

P23 3-1-1 Measures to Bolster Management Foundations: 4) Strengthen Global Management at NSHD

As for NSHD, a global management system has already been established following corporate acquisitions last year. Going forward, we will further strengthen group governance, speed up decision-making, and create synergy effects.

P24 3-1-2 DX Strategies

Now, let me explain our DX strategies.

P25 3-1-2 DX Strategies: Grand Design for DX

Digital technologies are important to support the management and business foundations. As they are applied to various aspects, we need to make significant progress in digital R&D, smart factories, strengthening the supply chain with customers, and reforming business models. We launched a digital team in 2017. We have focused on disseminating technologies and enhancing systems, and more than 200 projects are currently underway. In order to strongly promote these efforts, we have been strengthening the cooperation between MCHC and operating companies and accelerating the implementation of projects since fiscal 2020. In the future, MCC will invest about 24 billion yen to produce an effect of about 9 billion yen. The employee education system has also been enhanced, and advanced, intermediate and beginner training sessions have been offered. Several thousand employees have taken basic courses, and about 1,500 employees have taken data science courses. There has been considerable progress in nurturing employees with knowledge of digital technology.

P26 3-1-3 Measures to Bolster Business Foundations: Business Model Reforms

The global business environment has changed drastically, and business model reforms are critical for strengthening the business foundation. In the past, supplying raw materials was a major role of the chemical industry, but a wide range of reforms are now required in order to provide more advanced solutions and make social contributions.

P27 3-1-3 Measures to Bolster Business Foundations: Business Model Reforms: 1) Strengthen the Solution Provision Structure

This page outlines our carbon fiber business. We have shifted focus from the provision of conventional materials and partially processed products to the provision of component solutions. Furthermore, it is necessary to transform our business into the circular economy-based model by combining it with social systems through the collection and recycling of carbon fiber. In order to achieve this, we will urgently build the business model using the technologies of acquired operating companies.

P28 3-1-3 Measures to Bolster Business Foundations: Business Model Reforms: 2) Chemical and Material Recycling

Efforts to recycle plastics packaging materials, triggered by ocean plastic pollution, will significantly change the business model. In Japan, it is required to recycle 60% of packaging materials by 2030. In order to promote the recycling of packaging materials, it is necessary to work on resin design such as simple monomaterial films to produce the required functions by using materials informatics and AI technology. Accordingly, we will transform our business model while combining it effectively with social systems. We will actively promote these initiatives.

P29 3-1-3 Measures to Bolster Business Foundations: Business Model Reforms: 3) Intelligent Gas Supply System (IGSS)

This is NSHD's gas supply system. We will accelerate the development of network businesses, including smart factories, orders from customers, and cylinder management. We intend to aggressively develop these business model reforms, especially in Step 2.

P30 3-1-4 Measures to Bolster Business Foundations: R&D Initiatives for Next-generation Businesses and CVC Strategies

It is important to specify the direction of next-generation business development and the strengthening of R&D in order to transform business models and provide new solutions.

P31 3-1-4 Measures to Bolster Business Foundations: R&D Initiatives for Next-generation Businesses

As we explained the next-generation businesses in KV30, social and environmental issues present significant opportunities as well as significant risks. Therefore, we need to shift from the conventional approach of focusing on major markets to the approach of strengthening our business by identifying key areas according to what kind of solutions society and the environment require. We will focus on these six priority areas, from GHG reduction, the carbon cycle to medical advances, in order to accelerate business growth.

P32 3-1-4 Streamlining R&D with Digital Technology and Open Innovation

Business development requires not only materials development, but also the provision of solutions as a system and the development of business models by incorporating them into supply chains and social systems. First, we will promote cultural and awareness reforms by revitalizing R&D personnel, reforming the human resources system, and the 10% Rule. Based on the accumulated data, processes, knowledge, and experience that have produced many functions, we will improve the technology of materials informatics, develop a wide range of solutions together with users, and speed up development. For this reason, the research building of the Science Innovation Center (SIC) will be renewed to build a system that can fully utilize AI and big data, and provide a place for communication to create new solutions together with the supply chains and other companies. In addition to revitalizing our own R&D for solutions development, we will strengthen corporate venture capital (CVC), collaborate with startups, and actively carry out joint research with external parties such as universities.

P33 3-1-4 Measures to Bolster Business Foundations: CVC Strategy

As for CVC, we have already invested 30 million dollars over a three-year period to search for new technologies. As a result, more than 4,200 research projects have been conducted, 850 referral projects have been listed, and 150 collaborative projects have emerged. In order to continue to promote our CVC strategy, we plan a 10-year, \$150 million fund for existing businesses and a 10-year, \$50 million fund for new businesses.

P34 3-2 Basic Portfolio Reform Policies

Regarding business portfolio reforms, we have been working on reforming the petrochemical and inorganic chemicals businesses as well as withdrawing from unprofitable businesses in Performance Products. On the other hand, we expanded the Performance Products and gas businesses. Environmental and social problems are becoming more serious in the world. It is necessary to reform our business portfolios from a new perspective with an eye on all stakeholders.

P35 3-2 Basic Portfolio Reform Policies

In the portfolio reforms under APTSIS 20, we worked on quadrant portfolio management with a main focus on financial indicators. As evaluated in KV30, environmental and social issues and the evolution of science and technology are predicted to have a risk impact of 1 trillion yen on the MCHC Group. Therefore, in APTSIS 25, we have changed our evaluation criteria through comprehensive evaluation by taking into account not only MOE indices but also MOS and MOT indices, as well as business portfolio reforms from the perspective of ambidexterity, risk and opportunity evaluation, and ownership excellence.

P36 3-3 Overhaul of Key Businesses

Now, I would like to introduce the structural reforms that are being promoted in Step 1 of APTSIS 25 in light of the seriousness of social and environmental issues and changes in the industrial structure.

P37 3-3 Overhaul of Key Businesses: Carbon Chemicals (Strengthen Petroleum Refinery Alliances)

Petroleum refining and petrochemicals are core industries that support Japan's industrial structure and provide materials that produce various functional products. On the other hand, these industries are facing risks such as global warming and waste plastics. Olefin production using green hydrogen and recovered CO₂ is expected to be commercialized over time until around 2035. During the transition period until then, we must take various actions. It is necessary to reduce the environmental load through joint efforts by the petroleum refining and petrochemicals businesses. In addition, while most of the waste plastics are thermally recovered, we will need to shift toward the conversion of waste plastics into materials and chemical recycling of waste plastics. In that sense, collaboration between petroleum refining and petrochemicals businesses is necessary. Therefore, we are proceeding with collaboration between Kashima Oil and MCC's Ibaraki Plant, and have begun discussing what we should do and what kind of social contribution we can make.

P38 3-3 Overhaul of Key Businesses: Coke

The business environment has changed significantly due to the US-China trade conflict and Covid-19. The carbon business has been affected the most. Crude steel production is 1.86 billion tons worldwide, but about 1.05 billion tons are produced in China and production there is growing by 5% annually. It is reported that Japan's crude steel production decreased from 100 million tons in the past to 80 million tons in 2020, and Nippon Steel is seeking further shutdowns of blast furnaces. In our coke business, a business model for supplying coke to Japanese steel companies has been established. However, since the situation has changed significantly, it is necessary to switch to an export-oriented model. Hydrogen reduction steelmaking will be commercialized by around 2040, but until then, the current crude steel production using blast furnaces will continue. In particular, Chinese and Indian companies are seeing new growth. While taking into account global environmental protection, we will also seek alliances with these companies for new business models.

P39 3-3 Overhaul of Key Businesses: MMA

MMA has a global share of about 40%, but amid the changes in market demand, troubles due to aging platforms and fluctuations in profits due to equipment that is not price competitive have become major issues. In response, we will close down the operations of our Beaumont Plant in the United States in March 2021, and focus on rationalization by utilizing digital technologies and AI in order to respond to fluctuations in raw material prices and market conditions, and by starting up the global supply chain management system. In addition, preparations are underway to construct a 350,000-ton Alpha technology-based plant in the United States. This plant has high margins and competitiveness and is expected to greatly contribute to stable revenues. In Step 1, we will actively promote these structural reforms as well as small and medium-sized structural reforms.

P40 3-4 Strategies for Growth Business Areas

Now, I will explain the growth business areas specified under KV30.

P41 3-4 Growth Business Areas under KV30

While measures such as actively promoting lighter mobility are specified under KV30, various products are required to be developed newly or ahead of schedule due to Covid-19. The yellow boxes on this page are the fields where development has been promoted ahead of schedule. In terms of GHG reduction, the spread of EVs is accelerating due to green policies in Europe and other regions, and there is a need to increase the production and performance of LiB. The development of next-generation batteries is also accelerating. In terms of the carbon cycle, we are preparing for the medical use of single A, the development of biomass cutlery and drink bottles as well as biomass smartphone covers to reduce the environmental load, and hydrogen station deployment for next-generation automobiles. In terms of food and water supply, there is a growing need for reducing food waste and improving safety due to Covid-19, and for high-barrier, lightweight, and easy-to-use products. In terms of digital society infrastructure, we will continue to respond to the rapid recovery in semiconductor demand and product development, while providing GaN substrates for new high-frequency devices. In terms of the human interface, there is a growing need for antimicrobial and antiviral materials in response to Covid-19, as well as for high-frequency control with the evolution of automobiles such as EVs. We will proactively respond to such new needs.

P42 3-4 Strategies for Growth Business Areas: Strengthen Pipeline

In Health Care, while accelerating the development of products for amyotrophic lateral sclerosis and Parkinson's disease in North America, which we are currently working on, we will accelerate drug discovery by combining the research infrastructure for the central nervous system and immuno-inflammation, in which we specialize, and new modalities. For this reason, we intend to accelerate development by gradually shifting the allocation of R&D expenses to precision medicine, in addition to our ongoing joint research projects with outside parties.

P43 3-4 Strategies for Growth Business Areas: Regenerative Medicine

We are conducting various clinical trials on Muse cell-based regenerative medicine products, which will play a central role in the future of the Health Care business. We hope to obtain approval for the ischemic stroke product in fiscal 2022 and accelerate business growth. For this reason, we are expanding production capacity and improving productivity, and in the United States, where there is strong demand for regenerative medicine, we are considering clinical trials with the U.S. authorities, with the aim of accelerating commercialization both in Japan and the United States in parallel.

P44 3-4 Strategies for Growth Business Areas: Progress in Vaccine Business

Preventive medicine is another part of the Health Care business. Regarding vaccines, we will expand collaboration with the BIKEN Group in Japan. The VLP vaccine is being developed for Covid-19, and we would like to complete P3 and launch the product in the summer of 2021. Although we stopped developing

the seasonal flu VLP vaccine once, we would like to work on developing the product again. We aim to generate 100 billion yen in sales from the vaccine business by fiscal 2025. In line with the conversion of MTPC to a wholly-owned subsidiary, MCC and LSII will collaborate to create synergies by formulating various plans for the development of new healthcare businesses.

P45 3-4 Performance Products and Health Care Growth Business Expansion Goals

Through these efforts, we aim to increase the sales revenue of Performance Products by 100 billion yen and Health Care by 50 billion yen by fiscal 2022, and accelerate efforts to achieve further growth by fiscal 2025.

P46 3-5 Financial Strategies

Now, let me explain our financial strategies.

P47 3-5 Financial Strategies

The basic policy of our financial strategies is to increase corporate value by balancing returns to shareholders, improvements in financial position, and investments in growth business. Despite the significant impact of Covid-19, we are aiming for an ROE of at least 8%. Through such efforts, we plan to secure an annual dividend of 24 yen.

P48 3-5 Measures to Improve Financial Position

There is an urgent need to achieve a net reduction in the debt-to-equity ratio. Under APTSIS 20, we improved asset efficiency by 690 billion yen. Through further efforts, we intend to improve asset efficiency by 180 billion yen by the end of fiscal 2022.

P49 3-5 Financial Target

Amid intense uncertainty owing to Covid-19, we will endeavor to generate 250 billion yen in core operating income, 120 billion yen in net income attributable to owners of the parent, and achieve an ROE of 10% as targets rather than commitments.

P50 3-5 Resource Allocation Policy

As for resource allocation, we plan to allocate 450 billion yen for capital expenditures, 100 billion yen for investments and loans, and 300 billion yen for R&D investment over two years.

P51 3-6 Sustainability Management

Finally, I would like to explain about sustainability management.

P52 3-6 Strengthen Sustainability Management to Achieve KV30 Targets

The goal of KV30 is to achieve carbon neutrality by 2050. We will actively tackle environmental and

social issues. Accordingly, we would like to introduce in-house carbon pricing and actively work to reduce GHG emissions. The establishment of a carbon cycle based on the reduction of GHG emissions and effective use of CO₂ is key to addressing environmental and social issues. We will focus on securing biodiversity through measures such as plastic circulation based on bioplastics and chemical and material recycling, and water resource circulation based on advanced water recycling.

P53 3-6 Initiatives to Cut GHG Emissions by Fiscal 2030

The reduction of GHG emissions must be made on a global scale. COP26 will be held and new 2030 reduction targets are expected to be set by countries around the world. At our factories in each country, we will formulate and implement action plans in the future according to the targets in each country. The new medium-term management plan is based on the current target of Japan in 2030, and we will strive to reduce emissions by 26%, which is the same as the national target. If the emissions target changes, we will take various measures accordingly. We believe that a major improvement will be to switch fuels used by in-house generators and boiler facilities from coal to natural gas. We will tackle these issues through further cooperation within the refinery and cooperation between cities, in line with the national policy. We will also respond to the development of products and processes with low GHG emissions by designing new resins and products using materials informatics and developing new processes using AI.

P54 3-6 Identification of Materiality

Various problems faced by society, the environment, and people pose risks in conducting business, affect the environment and society through business, and could become existential issues and material business portfolio issues. After evaluating these, the items shown on this page have been identified as being material. The businesses with GHG emissions, for which future business continuity will be difficult, are subject to portfolio transformation. It is indispensable to develop solutions for a company to grow, and the cultivation of human resources and diversity and inclusion are material issues. We will take thorough measures by setting KPIs for these issues.

P55 3-6 Maintaining and Enhancing Corporate ESG Assessment

Proactively disclosing information and understanding how external stakeholders evaluate our efforts and actions are important perspectives in implementing the PDCA cycle. We think that the evaluation results of the Dow Jones Sustainability Indices and winning the annual report award for our KAITEKI Report are particularly important. We will continue to work on medium- to long-term directions and initiatives with an emphasis on proactive information disclosure of activity results and communication with stakeholders.

Q&A

Questioner 1

Mr. Gilson will become CEO from April. Why did you formulate the medium-term management plan at this time? As someone with an unknown track record will take over the running of a big company, will transformation be possible, how will the management transition be performed, and what can we expect? Will there be a big change in the plan?

A1 (President & CEO Ochi)

We believe it is very important to lay the framework for the new medium-term plan that will commence from the next fiscal year during the current fiscal year, and to make a plan and execute it accordingly. As we believe it is essential to present the framework before the start of the new fiscal year, we have done so during the current fiscal year. Amid the Covid-19 pandemic, it is important to clearly indicate the direction of business recovery and growth while taking into account our priority issues as a chemical company. The new medium-term management plan has been divided into two phases: Step 1 and Step 2. Step 1 focuses on securing a foothold in business recovery, reinforcing the foundation and accelerating growth. As we have clearly indicated our directions, we think investors will understand it. Although Mr. Gilson was not involved in drawing up this medium-term management plan, we will ensure he receives various essential information on our business strategy and business management to ensure he has a good understanding. If any revisions are needed in the future, we will act accordingly. I spoke with Mr. Gilson last week, but he does not yet know the details of our businesses. While we will endeavor to expand our business toward APTSIS 25, we have also been focusing on major themes such as cost reduction initiatives, measures to reinforce foundations and the revitalization of human resources. His key task will be how to grow our businesses in Step 2, while the execution of measures in Step 1 is also important. It is important to consider the perspectives and kinds of businesses to focus on in order to transform our business models. He will be tasked with generating new measures for Performance Products and Health Care during 2021 and 2022 toward Step 2 which will start in 2023. I don't think there will be a significant impact on Step 1.

Q2

While core operating income of Performance Products has reached 100 billion yen before, there has been no significant improvement even after the integration of the three companies. Although you have acquired semiconductor materials companies, new GaN substrates products have not been launched. How will you grow the business in the future? Also, taking into account the profitability of Performance Products, a margin of about 15% is necessary. How do you plan to achieve that?

A2 (MCC President & CEO Waga)

Although Performance Products are not as volatile as Carbon Chemicals and their revenue has been relatively stable, profitability has not grown as much as expected. We predict that semiconductor-related products will be promising in the future, and that the quality required by customers will become more

sophisticated beyond the boundaries of organic chemistry and inorganic chemistry, so we decided to focus on hybrid chemicals. We have been focusing on PMI by acquiring Gelest to fill in a missing piece of technology. By integrating in-house and external technologies, we will create a foundation for fine chemicals and specialty chemicals. In terms of GaN substrates, for which we have been promoting R&D internally, a mass production system for low-defect, high-quality products will be established soon. We can also see that the number of users is increasing thanks to the synergies of integrating the three companies. We would like to further boost profitability by increasing the number of sales channels, introducing technologies from the outside, and fostering technologies internally.

Q3

This question is about Health Care. I heard that you are aiming to obtain approval for Muse cell-based products for ischemic stroke in fiscal 2022. What is the schedule for myocardial infarction and the business scale in the future? In addition, you said you are aiming to generate sales of 100 billion yen in the vaccine business. Can you explain why the profit target remains at this level despite the expansion of production capacity of the VLP vaccine for Covid-19 to 1 billion doses? What are your assumptions?

A3 (LSII President & CEO Kiso)

The confirmatory trial of our Muse cell-based product for myocardial infarction in Japan is near the final stage. The entry will be finalized soon. We are ahead of schedule on the whole. The entry for ischemic stroke is over and the interim analysis has been completed. Full data will come out soon. The clinical trial is proceeding without any problems toward application in fiscal 2021 and approval in fiscal 2022. In terms of scale, we think this business will grow to 100 billion yen in sales in 10 years after product launch. Going forward, we plan to add applications gradually. Currently, we are conducting clinical trials for six diseases, including clinical trials led by doctors. With the accumulation of applications, we will be able to achieve sales of 100 billion yen in 10 years' time.

A3 (MTPC President & CEO Ueno)

There are two main components of the 100 billion yen in sales from the vaccine business. The first one is the vaccine business in collaboration with the BIKEN Group in Japan. It is an important business and we expect future growth. The second one is Medicago's VLP vaccine. We have great expectations for the VLP vaccine for Covid-19 as the clinical trial moves from Phase II to Phase III. On the other hand, some Covid-19 vaccines have already been approved, and vaccination is underway around the world. There are various uncertainties such as how Covid-19 will change from being a pandemic to being endemic in the future, how basal vaccines will be disseminated, and how the VLP vaccine will be differentiated, but there is a possibility of growth of the vaccine business. It is difficult to give a concrete breakdown of the 100 billion yen in sales, but we will leverage those with high potential.

Questioner 2

You aim to achieve core operating income of 250 billion yen in fiscal 2022. That means you will need to increase core operating income of Performance Products from 50 billion yen in this fiscal year to about 100 billion yen. The operating margin is estimated to be 5% for the current fiscal year and 6% for the second half alone. If the operating margin of Performance Products is about 10% to 15%, do you think you will be able to achieve core operating income of 100 billion yen based on the current level of sales? Is this profit level based on a thorough rationalization of existing products, or based on the combination with portfolio reforms?

A1 (President & CEO Ochi)

It is correct that we are trying to increase the core operating income of Performance Products close to 100 billion yen. There has been a considerable recovery in volume. In particular, demand for information electronics, flat panels, coatings, foods, and films is increasing in various areas. We believe that the volume will continue to recover in the future. In addition, new needs related to Covid-19 will increase profitability. The business portfolio reforms we have implemented under APTSIS 20 are necessary to bolster profitability. Therefore, we will continue to implement them steadily.

Q2

KV30 specifies your plan to achieve sales exceeding 4 trillion yen in the six growth business areas in 2030. Regarding the process of growing sales from 1 trillion yen in 2018, what are the target sales in the six business areas during Step 1 and Step 2?

A2 (President & CEO Ochi)

KV30 sets out the basic policy for our vision and goals for 2030 by backcasting from those for 2050. The action plan of the medium-term management plan is intended to achieve the basic policy. The medium-term management plan has been divided into two phases: Step 1 and Step 2, and the plans for Step 2 are yet to be formulated. Managing Corporate Executive Officer Ikegawa will explain the concept.

A2 (Managing Corporate Executive Officer Ikegawa)

This medium-term management plan covers only two years. We have not finalized the official figures for Step 2 yet. During the process of formulating the plan for Step 1, we have calculated estimates for the next three years. The growth business areas specified in KV30 will account for less than 30% in 2022, and we would like to raise the share to about 40% in 2025. KV30 covers the period through 2030, and we believe we will be able to make great progress during the period. KV30 was formulated before the Covid-19 pandemic struck. Although it was factored in that infectious diseases could be a social risk, we only incorporated preventive medicine as a relevant business area. We could not anticipate such a significant negative impact. We regard the two years of Step 1 as the restoration period.

There is strong demand for carbon fiber for wind power generation. While your carbon fiber business is going well in the auto industry, Large Tow (LT) for wind power generation seems promising in the future. What are the utilization rate and capacity for LT and Regular Tow (RT)? Can you grow the capacity in the next 2-3 years?

A3 (MCC President & CEO Waga)

We cannot provide specific utilization rates. It is true that demand of LT for wind power generation has been growing. Demand of LT for cylinders such as pressure vessels is also increasing. Demand related to aircraft has been sluggish, but demand for other general industrial applications and automobile-related products has been growing considerably. There has been solid growth for general industrial use, sports and leisure. We will continue to sell products with specifications that meet the needs of our customers. While we believe that auto-related demand will grow, the collection of carbon fiber will be an integral part. We will build a business model by considering how to reuse and recycle used carbon fiber, along with the sales of virgin carbon fiber. Until now, we have been expanding our business widely except for aircraft, so we regard it as an extension of that.

Questioner 3

Q1

Regarding portfolio reforms, I understand you place great emphasis on MOS and MOT indices. This suggests you will cut projects with high volatility, high environmental load, and slow technological innovation. Looking at the business portfolio reforms of other companies, BASF, which is focused on chemicals, has the highest market capitalization. Can you explain your thoughts on business portfolio reforms?

A1 (Managing Corporate Executive Officer Ikegawa)

The first one is companies' view of sustainability, for which social demand has been increasing. Furthermore, with regard to technological innovation, organizations such as TCFD have stated that they would go to check the pipelines of companies that are developing environmental technologies. Without technological innovation, carbon neutrality and other targets cannot be achieved. We will improve existing technologies and carry out technological reforms that create a platform for business model transformation. We will determine the seeds of technology for future innovation and consider the positioning in the portfolio. This is what we mean by placing great emphasis on MOS and MOT indices. From a MOS perspective, reducing GHG emissions is a major issue. Various tools such as LCA guidelines will be required. Businesses that cannot control GHG emissions and have no room for technological innovation will be positioned as "struggling businesses." In terms of risk and opportunity, Covid-19 has greatly disrupted our customers' businesses. For example, semiconductor-related businesses have been performing very well, while steel-related businesses have been sluggish. We will also examine such

business risks and incorporate them into our portfolio management. This is what we mean by "check the time axis and change axis." In the past, MOE criteria were set as an ROIC of 8% for Performance Products and Health Care, and 5% for Materials, but we will review them according to the situation. Regarding GHG emissions for each product, we must proceed with establishing LCA while considering the reduction targets. The overall policy of GHG reduction is to curb emissions in line with the reduction targets in each country and region.

Q2

Do you aim to achieve the sales target of 100 billion yen for Muse cell products in the domestic market targeting the three diseases including myocardial infarction and ischemic stroke, for which clinical trials are currently underway, or are other diseases included as targets? Also, have you started clinical trials for amyotrophic lateral sclerosis based on feedback on the results of clinical trials on ischemic stroke?

A2 (LSII President & CEO Kiso)

The sales target of 100 billion yen has been calculated based on both clinical trials to be conducted and clinical trials currently being conducted, and the scope is not limited to the three diseases. It is calculated as a realistic number by multiplying a limited number of segments within the larger segments by a certain percentage that indicates doctors' willingness to use our product. We started clinical trials for amyotrophic lateral sclerosis since the data for ischemic stroke suggest efficacy in humans. In addition, the effect was confirmed through an experiment using animal models conducted by the research group led by Professor Abe of Okayama University, who is an expert in amyotrophic lateral sclerosis. We decided to start the clinical trial for amyotrophic lateral sclerosis based on these results.

Q3

I think it will take more than five years before the net debt-to-equity ratio is restored to the 1x level based on an asset efficiency improvement of 180 billion yen. Are you thinking about any other measures? I think business opportunities cannot be grasped unless there are sufficient funds for the growth strategy of NSHD and the overseas expansion of Muse cell products. What is your view?

A3 (CFO Date)

NSHD has made a financial plan to avoid an interest rate rise in accordance with the terms of hybrid financing for acquisitions in Europe and the United States, and steady progress has been made. It will be difficult to generate cash this year. Last year, we set the target of restoring the net debt-to-equity ratio to the x1 level within three years. However, as we lost this year with zero improvement, we will strive to achieve this target in the next three years. The targets for capital expenditure and investments and loans for the next two years are based on past figures, so the feasibility of the plan is not in doubt. We will continue to improve asset efficiency. Regarding the balance among shareholder returns, interest-bearing debt reduction, and growth investment, we continued to pay dividends to shareholders even when a loss

was posted. Shareholder returns are higher priority than the other two. Other than that, we will try to maintain the balance. Even if huge sums of money are required to invest in a growth business, we will take financial measures to ensure a balance while considering a timeframe of several years. We will pursue opportunities while managing finance so as to avoid a crisis.

Questioner 4

Q1

There are few explanations about Industrial Gases, but I think it is one of the core businesses. What is the position of this business in the medium-term management plan?

A1 (President & CEO Ochi)

Since Europe and the United States have been greatly impacted by Covid-19, we have suspended drawing up the Step 1 plan for Industrial Gases. This medium-term plan has been formulated for MCC, MTPC, and LSII. As for Industrial Gases, we will take a rolling approach based on the current plan. In the new fiscal year, the President and CEO is expected to come up with a new plan. As for Industrial Gases, we could not fully examine the business for Step 1 and have suspended the formulation of the medium-term management plan for a year. We will consider measures on the whole including those for Step 2 going forward. We will do that together with drawing up the Step 2 plan for the remaining three companies. There were no special circumstances.

Q2

Is there a risk that new business development by the new president will be tied up by this medium-term management plan? Can the new president change the medium-term management plan drastically, or will the management plan be executed steadily despite the change in president? What is the position of the medium-term management plan?

A2 (President & CEO Ochi)

The main focus of Step 1 is how to recover business performance, reinforce our business foundations, and how to respond quickly to growing needs. We will discuss how to achieve major growth for Performance Products and Health Care as part of Step 2. What the new president will think about is actually included in Step 2, so there should be no significant issues. I think he will come to Japan soon, and once he is here, we will discuss the plan and make revisions as necessary. His ideas will not be constrained by the fact the medium-term management plan has been decided.

Questioner 5

Q1

The Nominating Committee has mentioned the need to improve portfolios. Does the current management share the same awareness? Some things may not work well for a large company or a

company with a long history, but does the current management have such an awareness?

A1 (President & CEO Ochi)

We have been striving to reform our portfolios for many years. We have focused on how to improve the efficiency of assets and achieve growth. We have also undertaken restructuring such as transferring businesses and acquiring new ones. The three chemical companies have also been integrated to take a step toward growth. Our profitability has increased as a result, but the market capitalization has not risen. The Board of Directors and corporate executive officers are discussing portfolio reforms and corporate value. We have formulated the medium-term management plan with a solid common understanding. There is no difference in understanding.

End