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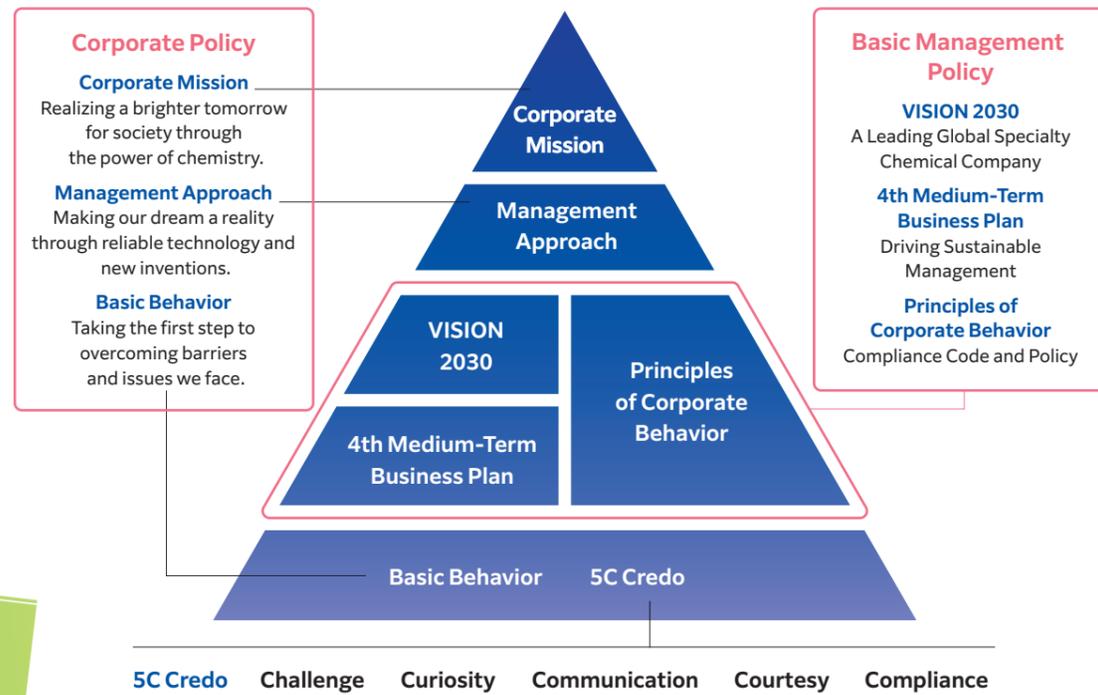
Creating a Sustainable Future

KH Neochem Report 2022

Corporate Mission

Realizing a brighter tomorrow for society through the power of chemistry.

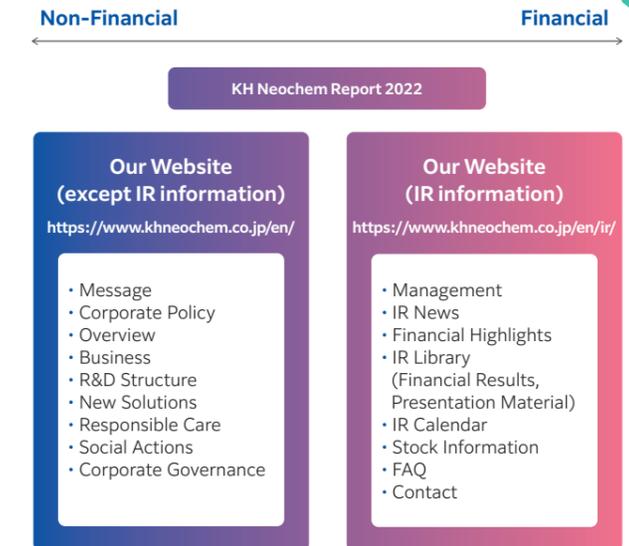
Our Basic Principles



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Information Disclosure System



Scope of Report

Reporting period: January 1, to December 31, 2021*
 *However, environmental report data and other statutory information is for the period from April 1, 2021 to March 31, 2022. Some portions of the report also include activities for 2022.
 Organization covered: KH Neochem Co., Ltd. (nonconsolidated) (Some portions also include consolidated information.)
 Date of publication: August 2022

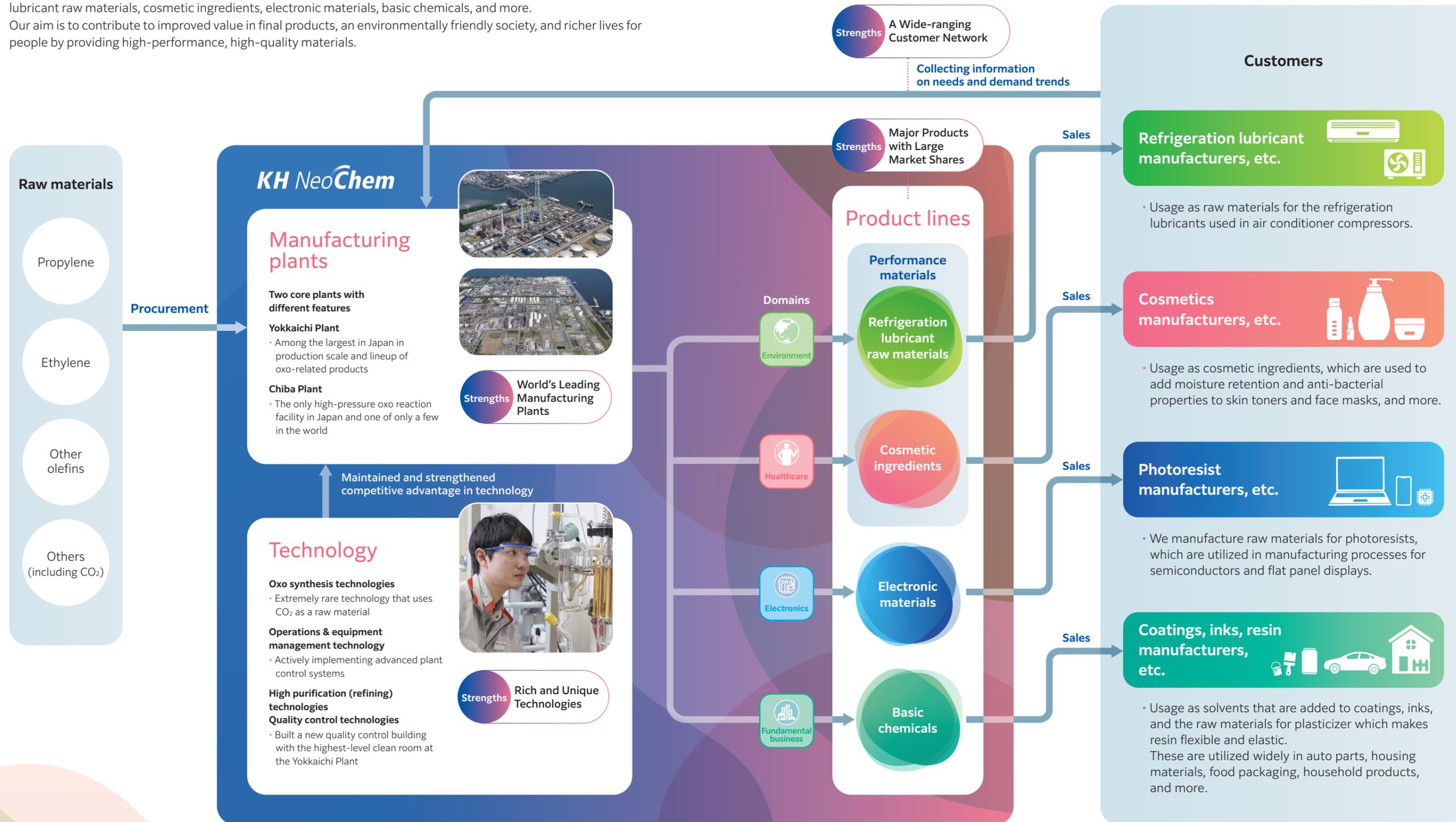
Note on Forecasts

Among the information contained in this report, information aside from historical facts includes forecasts that are based on certain assumptions and rely on judgments made by KH Neochem's management using the information available at that time.
 For this reason, actual business results may differ, depending on various factors.

Overall Image and Features of the Business

Leveraging expertise accumulated as a chemical material manufacturer to offer high-quality products in a variety of fields

We support various industrial fields by supplying an extensive catalog of various materials such as refrigeration lubricant raw materials, cosmetic ingredients, electronic materials, basic chemicals, and more. Our aim is to contribute to improved value in final products, an environmentally friendly society, and richer lives for people by providing high-performance, high-quality materials.



History and Strengths of KH Neochem

Utilizing strengths cultivated since our founding, we have continued growing to become a top global company in niche fields.

History of KH Neochem

- 1948** Established, began producing basic chemicals
Began offering products that are part of daily life, including in automotive, residential, and food packaging
- 1949** Kyowa Hakko Kogyo established
- 1961** Converted to petrochemical manufacturing methods
- 1963** Umaokoshi Plant completed at the Yokkaichi Plant
- 1966** Kyowa Yuka established (chemical manufacturing subsidiary)
- 1988** Took over operations of the Chiba Plant from Nissan Petrochemicals, establishing a two-plant system with the Yokkaichi and Chiba Plants
- 1990s** **Began selling refrigeration lubricant raw materials**
Launched raw materials for environmentally friendly air conditioners
- 2000s** **Began selling cosmetic ingredients**
Offering high-quality raw materials for skincare
- Began selling electronic materials**
Entered the field of cutting-edge electronics, where high purification is sought
- 2004** **Kyowa Yuka merged with the chemical division of Kyowa Hakko Kogyo, name changed to Kyowa Hakko Chemical**
- 2008** Yokkaichi Plant set a new record in its industry for the longest accident-free period of operation
- 2011** **Spun off as independent from Kyowa Hakko Kirin Group**
- 2012** **Changed name to KH Neochem**
- 2016** **Listed on the First Section of the Tokyo Stock Exchange***
- 2018** Formulated VISION 2030
- 2019** Established open innovation hub KH i-Lab
- 2022** Formulated the 4th Medium-Term Business Plan "Driving Sustainable Management"

*We moved to the Prime Market in April 2022 following the restructuring of the Tokyo Stock Exchange's market segments.

KH Neochem Strengths

In dealing with the dizzying pace of changes in the market, we have accumulated our own unique set of strengths. Harnessing synergies between our technological strengths, manufacturing plants, and customer network, we now have multiple products with top-level shares of the domestic market.

Strengths Rich and Unique Technologies

We have updated our production methods by continuously incorporating the latest technologies of the times. In addition to oxo reaction and other synthesis technologies we have also accumulated technologies for high purification, quality control, operations and equipment management, and more. Through combinations of various technologies, we have been able to manufacture high-quality products that gain a strong following both in Japan and around the world.



History of Technological Advancement

- 1948** Became the first in Japan to successfully mass produce acetone and butyl alcohol from molasses through fermentation
- 1961** Converted to petrochemical manufacturing methods (Wacker process)
- 1970** Introduced the high-pressure oxo process
- 1982** Introduced the low-pressure oxo process
- 2018** Began implementing advanced plant control system
- 2022** Established a new quality control building at the Kasumigaura Plant in Yokkaichi Plant

Strengths A Wide-ranging Customer Network

Since our founding, we have provided products to customers representing a broad range of industries and gained their trust.

We began producing high-purity solvent and refrigeration lubricant raw materials based on requests received from customers we were collaborating with, and these have grown to become our core products.

Having a large presence in niche fields, we often receive requests from customers to work on new trends and conduct joint development, which continually drives our further evolution.

Going forward, we will continue to further expand our sales and create new business by leveraging our customer network.

Strengths World's Leading Manufacturing Plants

KH Neochem is the only company in Japan that has both high-pressure and low-pressure oxo process facilities. The high-pressure facilities can synthesize a variety of raw materials, and the low-pressure facilities are superior in terms of both cost competitiveness and versatility. Utilizing each of their strengths to maximum effect allows us to meet highly specific customer needs and to offer an astonishingly vast selection of product types.

History of Expanding Our Manufacturing Plants

- 1970** Kasumigaura Plant completed at the Yokkaichi Plant, first oxo plant goes into operation
- 1988** Moved to a two-plant system in Yokkaichi and Chiba
- 2012** Made Kurogane Kasei into a subsidiary

Strengths Major Products with Large Market Shares

Leveraging each of our strengths in technologies, customer network, and manufacturing plants, we have been able to create numerous products with large market shares.

Since we manufacture raw materials that are essential in each respective industrial field, it is critically important to supply these products in a safe and stable manner. We will be expanding our production capacity appropriately while coordinating with our customers.

Products with Top-level Shares of the Domestic Market (In-house Estimates)



Business Overview

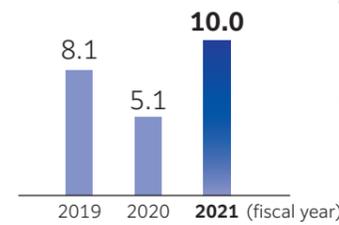
Performance Materials

We manufacture the raw materials for lubricants used mainly in air conditioners (refrigeration lubricant) and ingredients for cosmetics. Our refrigeration lubricant raw materials are used in refrigeration lubricants which are highly compatible with refrigerants having low global warming potential (GWP), thus contributing to global warming prevention.

Our cosmetic ingredients, used in high-end skincare cosmetics, also help to improve quality of life (QOL) for people all over the world.

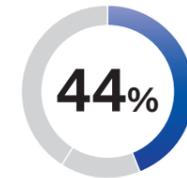
Operating income

(consolidated, bn yen)



Proportion of total operating income

(FY2021)



Note: When calculating "operating income" in results by business field, administrative expenses, etc., which are common to the entire company, are not allocated.

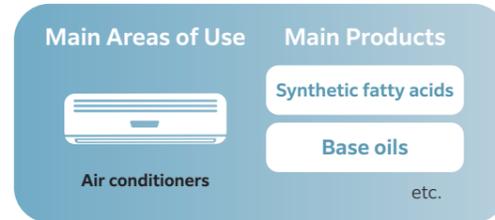
Refrigeration lubricant raw materials



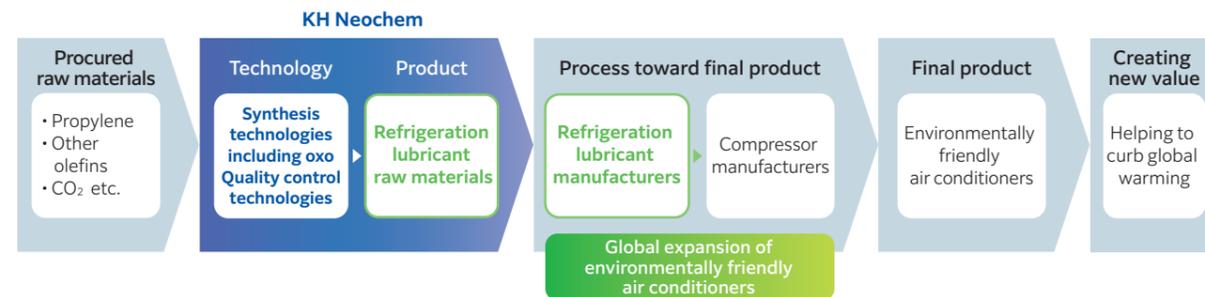
External Environment

Global expansion in the environmentally friendly air conditioner market

- Population growth in emerging nations
- Worldwide growth of the middle class
- Tightening international environmental regulations for refrigerants



Value chain example



Opportunities / Risks

- Continued growth in demand for air conditioners worldwide
- Regulations on refrigerants to reduce greenhouse gas and protect the ozone layer
- Structural changes to air conditioners for cars and transition in refrigerants due to the spread of EVs

Competitive Advantages

- The top global market share in refrigeration lubricant raw materials for environmentally friendly air conditioners
- Being located in Asia, the region with the most demand
- Customer collaboration marketing and R&D systems

Challenges

- Expanding supply capacity in a timely and appropriate manner according to demand growth
- Developing refrigeration lubricant raw materials compatible with next-generation refrigerants

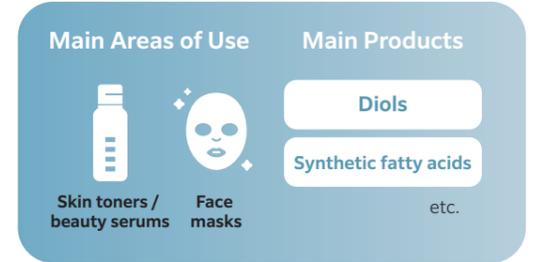
Cosmetic ingredients



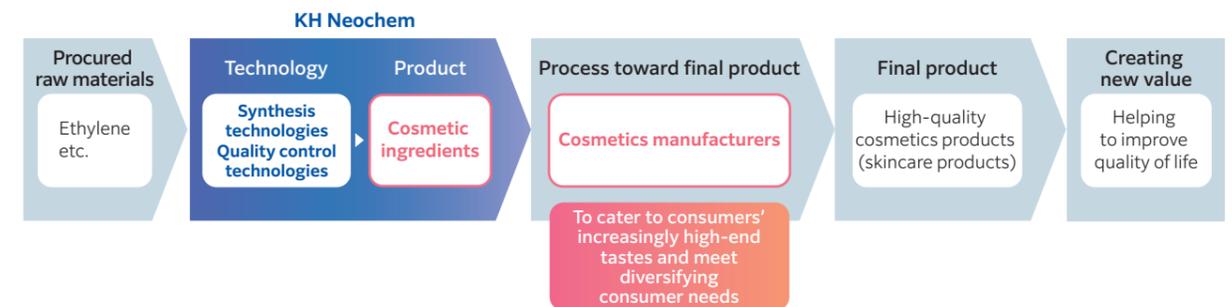
External Environment

Growth in the skincare market

- Worldwide growth of the middle class
- Spread of e-commerce
- Growth in the men's cosmetics market
- Increasing interest in high-end and natural products



Value chain example



Opportunities / Risks

- Growth of the middle class in emerging nations, primarily in Asia
- Facilities expansions among domestic cosmetics manufacturers
- Higher demand for quality
- Restrictions on movement and less appetite for spending due to the COVID-19 pandemic

Competitive Advantages

- Integrated in-house system for production starting from raw materials
- Located close to other growing Asian countries
- Near-odorless product technology

Challenges

- Expanding our product portfolio

Product info

What is 1,3-butylene glycol?

1,3-butylene glycol (1,3-BG) is a cosmetic ingredient that produces a moist texture when using products such as skin toners, face masks, or beauty serums. It is an indispensable ingredient for skincare products that come into direct contact with the skin due to its strong moisturizing properties and antibacterial

properties, as well as its reduced odor and amount of skin irritation.

In addition to Japan and South Korea where people have high awareness of beauty and skincare, we are actively selling it in markets such as China, Southeast Asia, and India where medium- to long-term demand is forecasted to increase.

Business Overview

Electronic Materials



We manufacture high-purity solvent, the raw material for photoresist which is used in manufacturing semiconductors and liquid crystal displays.

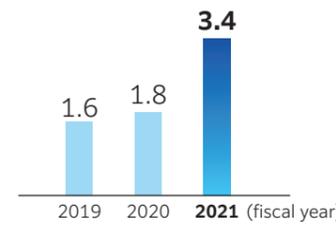
Our solvents are recognized for containing extremely low volumes of impurities (foreign matter and metals) through a fusion of high purification (distillation) technology and high quality control technology.

Also our group company Kurogane Kasei is engaged in various contract manufacturing businesses related to electronic materials, including in cutting-edge fields.

We contribute to an advanced information society by meeting needs in the field of electronic materials, which grows more sophisticated by the day.

Operating income

(consolidated, bn yen)



Proportion of total operating income

(FY2021)

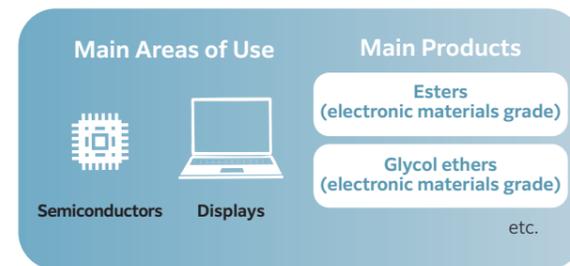


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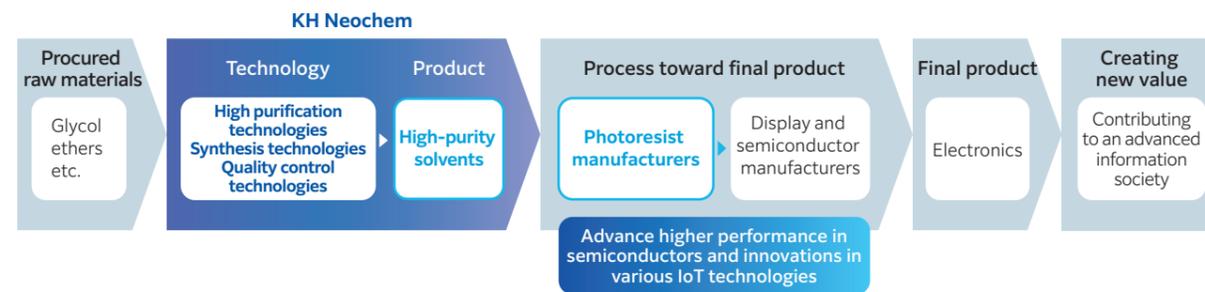
External Environment

Growth in the market for electronic materials as the IT and electronics industries develop

- Spread and development of AI & IoT
- Increased speed & functionality of electronics
- Increased demand for cutting-edge semiconductors due to the spread of 5G technologies



Value chain example



Opportunities / Risks

- Growth of global semiconductor demand and market expansion
- Increasing quality-related needs
- New cutting-edge semiconductor plants built in China
- Superiority of domestic semiconductor materials manufacturers

Competitive Advantages

- High purification technology built over the years
- Extensive product lineup and supply system
- Advanced quality control technologies to meet customers' needs
- Facilities for next-generation semiconductor materials belonging to Kurogane Kasei, contract manufacturer of electronic materials

Challenges

- Further strengthen our quality control system and increase supply capacity for next-generation semiconductors

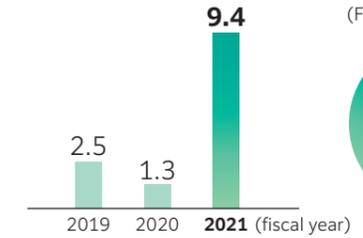
Basic Chemicals



We manufacture an extensive lineup of solvents and plasticizer raw materials. Our solvents are used in construction and automobiles, as well as in smartphone coatings, adhesives, cleaning agents, and more. Plasticizers are essential additives for making plastic products more flexible and easier to process. We have many products with top-level shares of the domestic market, as we contribute to everyday living in a variety of ways.

Operating income

(consolidated, bn yen)



Proportion of total operating income

(FY2021)

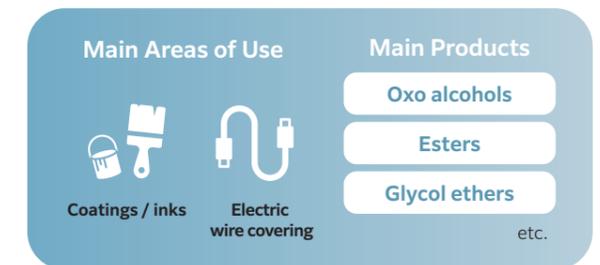


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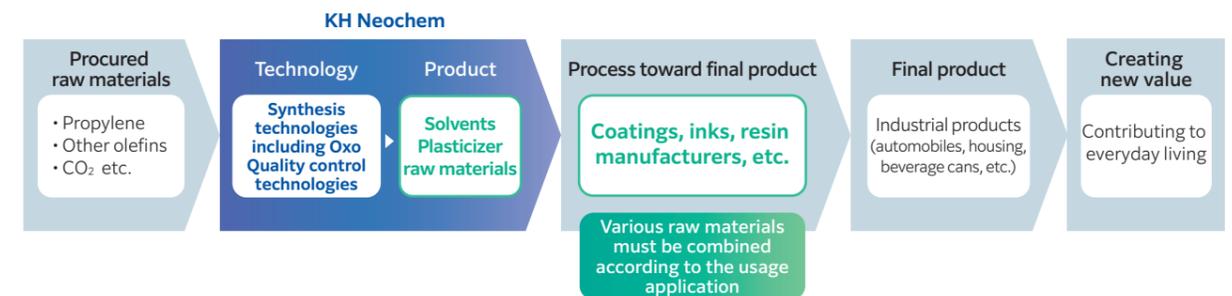
External Environment

Stabilized market in Japan and expanding market in the rest of Asia

- Stable domestic market
- Economic growth in nearby Asian countries
- Population growth in emerging nations



Value chain example



Opportunities / Risks

- Growing demand, primarily in Asia
- Competing manufacturers overseas could shut down production if they are unable to comply with environmental regulations
- Tightening balance of supply and demand for oxo alcohol in Asia
- High volatility due to economic fluctuations in Japan and in emerging nations
- Aged, deteriorating manufacturing and shipping equipment

Competitive Advantages

- Located close to Asian countries where population growth and infrastructure development are expected
- Largest oxo alcohol production capacity in Japan
- Extensive range of product lineup supported by offerings of derivatives
- Stable business and established trust with top manufacturers in each market

Challenges

- Further strengthening our cost competitiveness
- Build stable supply systems through better safety and preventative maintenance at production plants

Message from the President and CEO

Driving Sustainable Management and striving to create new value in order to look ahead to medium- to long-term growth

Michio Takahashi

KH Neochem Co., Ltd.
Representative Director, President & CEO



Contributing to society by creating new value

KH Neochem's Corporate Mission is "Realizing a brighter tomorrow for society through the power of chemistry." We have created new value with the power of chemistry and contributed to society, from providing our products such as refrigeration lubricant raw materials that contribute to the reduction of global warming, cosmetic ingredients used in skincare and electronic materials that are essential to improving the product quality of semiconductors. Looking back, I believe we were able to develop these businesses because we gathered our technological capabilities in the belief that we were contributing to an environmentally friendly society and rich lives for people. And we were only able to open up business opportunities this way because of the strong partnerships we had built with our customers, business partners and other stakeholders. We will continue to strengthen the customer networks we have built and utilize oxo and other unique technologies to expand existing businesses while creating new value and achieving sustainable growth.

KH Neochem's Sustainable Management and value creation

We published our very first integrated report last year. We had discussed anew actively with the executives for half a year about what we could provide and how we could

increase corporate value by 2030 and even beyond. As a result, we concluded that contributing to achieving a sustainable society by providing solutions through our business for global environmental and social issues, such as those outlined in the UN's SDGs, and sustainably improving our corporate value by providing value to society and our stakeholders, namely, driving "Sustainable Management," are important for us. By driving Sustainable Management, we concluded that the value we provide supports the development of an environmentally friendly society and richer lives for people based on the foundations of "safe, secure, and trustworthy." To provide that value, and to determine what was important in that process, we established Seven Promises to serve as detailed policies directing our initiatives (see p. 18 for details).

This year we held even deeper discussions and selected 16 materialities (key issues) linked to the Seven Promises. We identified these materialities by picturing what our aspirations for the Company would be in 2030 and working back towards to the present. We also established KPIs for those issues over the course of the 4th Medium-Term Business Plan. Naturally there was management discussion of these issues, and we also held workshops involving external experts on ESG and SDGs, and I believe this whole process helped us not only to determine the Company's vectors but also to foster a sense of unity.

Although we are already engaged in businesses that contribute to resolve social issues by providing unique products, we still have several other products that we can

expect organic growth from. Making timely necessary capital investments will be key to steadily capturing expanding markets and growing sustainably. In addition, it is also crucial for us to further deepen the trust from our customers and business partners through safe and stable operations. To that end, we will aggressively invest in enhancing our capacity while maintaining those facilities using digital technologies to the fullest.

We will also expand our business operations by creating new products and businesses that enable us to provide new value that contributes toward resolving social issues. To do that, we must first build up the human resources who will make innovations. We will also need to pursue close collaborations with attractive partners that share our beliefs, and continuously create synergy between our partners and our technological capabilities.

Through this value creation, we will contribute to an environmentally friendly society and richer lives for people. That, in my opinion, is the true meaning of KH Neochem's Corporate Mission of "Realizing a brighter tomorrow for society through the power of chemistry."

VISION 2030 Ambitions and targets

In 2011, KH Neochem became independent from what was then known as the Kyowa Hakko Kirin Group and was acquired by an investment fund. In 2016, we were listed in the First Section* of the Tokyo Stock Exchange.

I was appointed as a board director in 2013, the period from our independence to listing and even up until today which has been one of ceaseless upheaval, and I have been involved in many management decision-making processes. In the course of this, I have learned the importance of considering our shareholders, employees and all other stakeholders while taking a calm, top-down look at the Company as a whole when making decisions. I have also realized afresh that, due to the nature of our business as a company in the equipment industry, although short-term business results are important, it is even more vital to make capital investments with an eye on sustained growth in the medium- to long-term.

In VISION 2030, announced in November 2018, we stated our ambition of becoming a leading global specialty chemical company by 2030. We set specific numerical targets of 180.0 billion yen in net sales and over 25.0 billion yen in operating income. We identified Environment, Healthcare and Electronics as three strategic domains to specially focus our energies on, and we have positioned developing existing businesses, creating new ones from a medium- to long-term perspective and achieving sustainable growth as our aspiration for 2030. When we announced VISION 2030, I

sent a message to our employees in which I stated the following: "I do not believe in pursuing expansion for its own sake. Instead, I want us to develop many unique and highly competitive products and to manage the Company effectively by leveraging our strengths. That is what will lead us to sustainable growth while also contributing toward resolving social issues." And in the end, that mindset became the core concept of the Sustainable Management the Company is determined to practice.

*We moved to the Prime Market in April 2022 following the restructuring of the Tokyo Stock Exchange's market segments.

Results of the 3rd Medium-Term Business Plan

"Taking on New Challenges," the three-year 3rd Medium-Term Business Plan which started in 2019, was the first step towards the realization of VISION 2030. Over the course of the plan we were able to lay a solid foundation for medium- to long-term growth, and I will explain the strategic investments we made in detail.

In the environment domain, we completed a new production facility in early 2020 for refrigeration lubricant raw materials at the Yokkaichi Plant. We also made the decision in December 2021 to invest in a new facility to increase the production capacity at our Chiba Plant, which should be completed in mid-2024. With this, the groundwork has been laid for us to firmly meet rising demand as the top supplier of refrigeration lubricant raw materials. In the electronics domain, a new facility for materials for next-generation semiconductors started operations in fall 2020 at Kurogane Kasei, a consolidated subsidiary. We also completed the construction of a quality control building equipped with the world's highest-standard clean room at our Yokkaichi Plant in March 2022, boosting our quality control systems. Thanks to these initiatives, we are now well-positioned to serve the increasingly strict needs of our customers in the field of electronic materials. In addition to these measures, we also launched a serious effort to create new businesses in our strategic domains. For example, we actively participated in joint research with venture companies and universities at KH i-Lab, the open innovation hub established in 2019.

We also made progress on efforts to reduce our GHG emissions. In March 2021, we renewed the in-house power generation equipment at our Chiba Plant, reducing GHG emissions there by approximately 15%. Moreover, we are continually installing more and more advanced AI-driven plant control systems to help increase energy efficiency. Furthermore, we made steady progress in preparing business frameworks for the future through measures such as introducing a new personnel system (specified employment) for managers and improving the

Message from the President and CEO



working environment by relocating the headquarters and constructing a new office building for the Yokkaichi Plant.

During the 3rd Medium-Term Business Plan, there was a rapid change in the business environment due to the spread of COVID-19, which heavily affected our performance in fiscal year 2020. However in fiscal year 2021, the final year of the plan, the economy recovered from the coronavirus crisis and demand for refrigeration lubricant raw materials rose sharply. We implemented appropriate pricing policies after reassessing the market environment. These and other factors led to record high profits that significantly exceeded our previous high a consolidated operating income of 19.7 billion yen, and far outstripping the target of 13.5 billion yen we had set for the final year of the plan.

Policies and strategies of the 4th Medium-Term Business Plan

Driving Sustainable Management is the basic policy of our 4th Medium-Term Business Plan which began in 2022. Under this policy we will seek to contribute to achieving a sustainable society while further increasing corporate value through our business activities. For business in particular, successfully completing new facilities for refrigeration lubricant raw materials at our Chiba Plant that are currently under construction will be one of the biggest tasks of the 4th Medium-Term Business Plan.

Refrigeration lubricant raw materials are one of KH Neochem's major products. They are featured in environmentally friendly air conditioners and help to reduce global warming. Many air conditioner refrigerants have high global warming potential (GWP), and switching to those with lower GWP is a worldwide challenge on the way to fighting ever-worsening global warming. Refrigerants are said to contribute to over one billion tons in greenhouse gas emissions worldwide every year, equivalent to the yearly greenhouse gas emissions for Japan as a whole. The number of air conditioners in the world is expected to triple from the current figure by 2050, which makes it clear that greenhouse gas emissions will increase even further at this rate. Movements to restrict refrigerants are therefore gaining speed around the world. Refrigeration lubricant raw materials that are compatible with low GWP refrigerants performance-wise are extremely limited, and KH Neochem has the number one share in the world in that field. As demand is expected to rise, particularly in emerging nations, we will strengthen

the supply structure for those refrigeration lubricant raw materials so that we can contribute to preventing global warming while securing the Company's growth. The growth in the market for electronic vehicles (EVs) as the world moves towards carbon neutrality is another favorable development for KH Neochem as a supplier of refrigeration lubricant raw materials. Unlike air conditioners in gasoline vehicles, those fitted in EVs have a similar structure to air conditioners for home use, and we are determined to capture this new source of demand for refrigeration lubricant raw materials used in these air conditioners.

We will also engage in activities to create new businesses. In April this year, we invested in Ac-Planta Inc., an agri-bio business company. Through the synergy generated from their business and our chemical materials, we hope to create new value, trigger a shift to organic raw materials and ultimately help reduce the burden on the environment. By harnessing the power of open innovation, we hope to pursue potential solutions to a variety of societal ills, contribute to achieving a sustainable society and seek the sustainable growth of the Company.

Chemical. We are slowly but surely developing a corporate culture where people with different kinds of knowledge and experiences gather and consider matters from completely new viewpoints. If we can foster a corporate culture in the future which has more opportunities for success for human resources with diverse backgrounds, I believe that will become one of KH Neochem's strengths.

To our stakeholders

KH Neochem has created a tremendous amount of new value throughout its history. However, as I mentioned at the beginning of this message, none of this would have been possible without the strong partnerships we have built with our customers, business partners and all other stakeholders. These partnerships will be supremely valuable assets that will strengthen the Company as we seek to continuously increase corporate value in the future.

As a chemical manufacturer, we have the ability to contribute to sustainability throughout society in various areas through raw materials. In the coming years, as we drive Sustainable Management that both contributes to achieving a sustainable society and sustainably increases corporate value, we will maintain that sense of pride and responsibility as a company that provides things society cannot live without and that is helping to make this world a better place.

With COVID-19 and other threats still in the picture, it is hard to predict how the business environment will change in the future. Nevertheless, I remain persuaded that driving Sustainable Management is the key to achieving the lofty goals we have set in VISION 2030. To our valued investors and other stakeholders, thank you very much for your continued support over the medium- to long-term as we pursue sustainable growth.

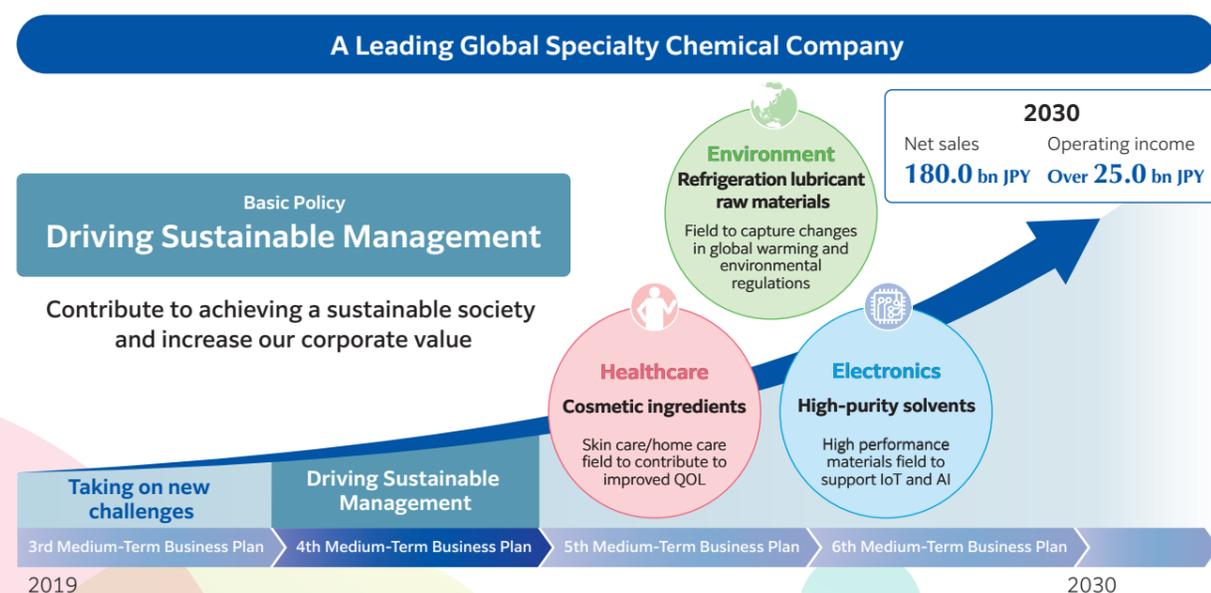
The driving force to realize VISION 2030 Initiatives to develop human resources

The ability to respond quickly to changing business circumstances and constantly transform ourselves will be essential to navigating the road to VISION 2030 and maintaining sustainable growth beyond that. To make that possible, I believe that developing human resources, one of the key drivers for realizing VISION 2030, will become extremely important.

It is no exaggeration to say that the future of KH Neochem depends on our human resources, so we need to survey the various divisions and age groups across the Group from above and continuously produce professionals who can take up the mantle as the next and following generations in this organization. To that end, we will actively invest in developing and strengthening human resources and in hiring personnel with highly specialized skills as mid-career recruits. We have trained personnel in various ways in the past, including providing training tailored to the employee's age group and using business schools to train management candidates. Going forward, however, we plan to upgrade our training systems even further and develop our human resources through even more practical training methods.

Diversity in human resources is important as well. 11 years have passed since KH Neochem became independent in 2011. Many new graduates have joined us and we have hired many mid-career employees, so that approximately half of our present employees have no personal experience of our days as Kyowa Hakko

Positioning the 4th Medium-Term Business Plan



The directors in charge will provide the specific details of each policy.

Overview of 4th Medium-Term Business Plan:
Tatsuhiro Matsuoka ▶ p. 21

Financial strategy:
Masaya Hamamoto ▶ p. 31

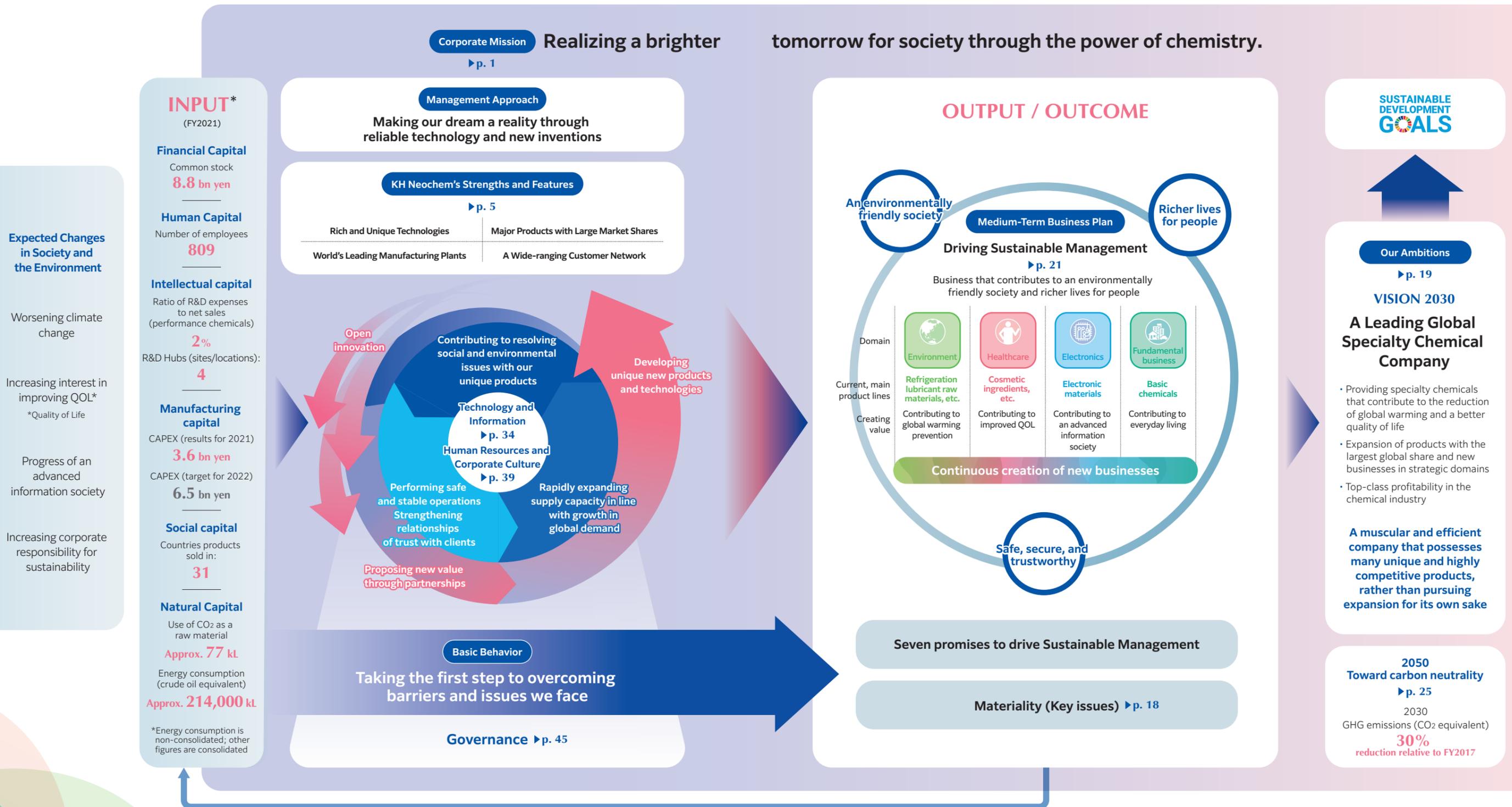
Technology and information, the drivers of value creation:
Toshihiro Matsuoka ▶ p. 33

Human resources and corporate culture:
Yukihiro Isogai ▶ p. 35

Value Creation Story

We will drive Sustainable Management and realize a brighter tomorrow for society through the power of chemistry.

Through our business, we will contribute to a sustainable world by providing value, on the basis of “safe, secure, and trustworthy,” for realizing an environmentally friendly society and richer lives for people, while also ensuring ongoing growth in our own corporate value.



Materiality and the Identification Process

Identifying Materiality to Achieve our Goals

We have summarized our management approach as “Sustainable Management” and drawn up Seven Promises to our stakeholders to put it into practice. In order to realize these seven promises, we have identified the discrepancies between our current position and the goals set forth in VISION 2030 from a long-term perspective, and have identified materiality (key issues) that will have a particularly large impact on our stakeholders and on the Company itself. Specific initiatives and milestones for this materiality during the period of the 4th Medium-Term Business Plan are designated as KPIs.

We will put our seven promises for driving Sustainable Management into practice by establishing KPIs for our materiality and working on them diligently. Progress on KPIs is regularly monitored by the Board of Directors, and measures will be taken if any are not met. We will disclose the progress of achievement of these KPIs on an ongoing basis and use this as a platform for enhancing constructive dialogue with our stakeholders.

The Identification Process

Developing our Value Creation Story and Seven Promises

(December 2020–July 2021)

About 10 discussions were held among the relevant executives, including all full-time directors, to develop our value creation story. Looking ahead to VISION 2030 and beyond, we visualized our strengths, business model, and the value we provide, taking into account anticipated changes in the social environment. Next, we defined “Sustainable Management” and the Seven Promises. These were brought together as our value creation story, and approved by the Board of Directors.

Step 1

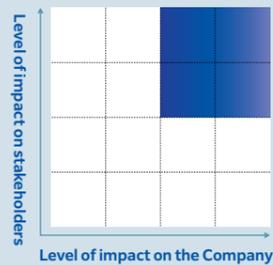
Selection of Materiality Candidates (April–July 2021)

During the discussions leading up to the development of our value creation story, we identified the discrepancies between our current position and the goals set out in VISION 2030 as issues in terms of putting our seven promises for driving Sustainable Management into practice. In addition, we conducted a comprehensive analysis of materiality candidates, including SDGs, international norms, evaluations by ESG assessment organizations, opinions obtained through dialogue with stakeholders, and issues identified by division heads from the perspective of the value chain.

Step 2

Identifying Our Materiality and Developing Corresponding KPIs (July–December 2021)

All full-time directors and relevant officers assessed impacts on stakeholders and the Company from a long-term perspective, then held internal discussions to identify our materiality — that is, key issues which have a particularly severe impact on both stakeholders and the Company — in light of the seven promises. Furthermore, from a medium-term perspective, specific milestones for materiality during the period of the 4th Medium-Term Business Plan were designated as KPIs.



Step 3

Approval by the Board of Directors (December 2021)

The 4th Medium-Term Business Plan, “Driving Sustainable Management,” which covers the three-year period from 2022 aimed at realizing VISION 2030, was approved by the Board of Directors after discussions by the Management Committee, along with the associated materiality and KPIs.

Seven Promises and Materialities

Seven Promises	Materialities
1 We will develop businesses that help resolve social issues	1 Expansion of social problem solving businesses centered on strategic domains 2 Promotion of innovation 3 Strengthening of intellectual property strategies to strengthen the foundation for growth
2 We will conduct business conscious of reducing our impact on the environment	4 Improvement of energy efficiency and reduction and management of CO ₂ and other emissions 5 Proper management of chemical substances
3 We will strive to secure trust through safe and stable operations	6 Safety and disaster prevention at plants with consideration of the local region 7 Responsible and stable supply to customers
4 We will practice management transparency with high ethical standards	8 Strengthening of corporate governance and risk management 9 Compliance 10 Transparent and responsible communication with stakeholders
5 We will provide a lively work environment that motivates and rewards diverse human resources	11 Health and safety of employees 12 Human Resource Development and Recruitment to support Sustainable Management 13 Improvement of employee engagement and creation of comfortable workplaces to improve productivity
6 We will promote responsible supply chain management	14 Promotion of Corporate Social Responsibility (CSR) procurement
7 We will strengthen our earning power	15 Optimization of business portfolio for stable profit generation 16 Pursuit of higher productivity and efficiency at plants

List of KPIs

KPIs for each materiality		Targets for 2024	Main relevant pages
1	Rate of increase in sales volume of refrigeration lubricants raw materials (compared to 2021)	over 17% increase	p. 23,27-28
2 3	Number of collaborations with external organizations in research and development	over 10 per year	p. 35-38
4	Greenhouse Gas (GHG) emissions (CO ₂ equivalent)	30% reduction from FY2017 level (2030 target)	p. 25-26,58
4	Energy intensity	1% or more improvement per year	p. 34,58
5	Volume of final landfill disposal of industrial waste	1% or less of waste generated	p. 58
6	Systematic introduction of Smart Industrial Safety	Production achieved as planned	p. 33-34
7	Production plan achievement status	Implementation as planned	p. 33-34
8	Identification of important risks by using risk maps and implementation of countermeasures	Implementation as planned	p. 51-52
9	Number of compliance education and training sessions at all sites	over 5 times per year	p. 54
10	Number of dialogues with investors	over 220 times per year	p. 60
11	Number of employee accidents resulting in lost workdays	0	p. 55-57
12	Ratio of female employees in managerial career track positions	over 15%	p. 40
12	Rate of recruited personnel leaving work (in less than 3 years)	less than 10%	p. 39-40
13	Engagement survey score	10% or more improvement	p. 39
13	Rate of taking of annual paid leave	over 80%	p. 40
14	Coverage ratio of Corporate Social Responsibility (CSR) questionnaire survey of main raw materials (based on purchase amount value)	over 70%	p. 30
15	Operating income of core products (performance materials + electronic materials)	over 14.1 bn yen	p. 7-9
15	ROE	over 15%	p. 32
16	Improvement of productivity through introduction of advanced control systems	Introduced as planned and productivity increased	p. 33-34
16	Status of progress in DX related installations	Implementation as planned	p. 33-34

Note: Materiality No. 15 is consolidated, while No. 1–14 and 16 are not consolidated. Operating profits in results by business field and administrative expenses common to the Group are not allocated upon calculation.

VISION 2030

Our Ambitions

A Leading Global Specialty Chemical Company

- Providing specialty chemicals that contribute to the reduction of global warming and a better quality of life
- Expansion of products with the largest global share and new businesses in three strategic domains
- Top-class profitability in the chemical industry

Financial Targets

Net sales
180.0 bn JPY

Corporate growth at 5% annually on average

Operating income
Over 25.0 bn JPY

Expansion of profits at 7% annually on average

ROE
Over 12%

Maintaining high capital efficiency

Equity ratio
50%

Construction of a financial structure that is immune to the external environment

Drivers for Growth

Technology and Information

Human Resources and Corporate Culture

Governance

Investment Plan and Strategy

Announced in 2018, VISION 2030 lays out our aspirations for continued creation of new value and sustainable growth while taking into account long-term changes in the external environment. We plan to invest a total amount of about 100 billion yen from 2019 to 2030, and will promote growth strategies for existing products and strategies for

the creation of new business, especially in strategic domains (environment, healthcare, and electronics) where we can fully leverage our strengths. We will also seek to achieve sustainable growth and increase corporate value by expanding overseas and strengthening our global alliances, both in our fundamental and strategic businesses.

Illustration of Operating Income Growth and Strategy

■ New businesses ■ Strategic businesses ■ Fundamental business



Initiatives in the Environmental Domain

Creation of New Business

- Promotion of green chemical materials

Growth of Existing Products

- Strategic investment in refrigeration lubricant raw materials
- Increase market share (60% in 2017*→ 75% in 2030)
- Response to next-generation refrigerant

* Estimate of the Company

Initiatives in the Healthcare Domain

Creation of New Business

- Expansion of our product line for personal care and detergent markets.

Growth of Existing Products

- Strategic investment in cosmetic ingredients

Initiatives in the Electronics Domain

Creation of New Business

- New development of materials relating to mobility (for sensors and lenses).

Growth of Existing Products

- Strategic investment in materials for displays and semiconductors

Review of the 3rd Medium-Term Business Plan

New challenges for realizing VISION 2030

Steadily implement strategies that lead to medium- to long-term growth in a rapidly changing business environment

The 3rd Medium-Term Business Plan, which was positioned as the new challenge of stepping onto a different growth stage to realize VISION 2030, was impacted significantly by the global economic downturn caused by the COVID-19 pandemic. However, fiscal year 2021, the final year of the plan, saw not only an economic recovery from the pandemic but also soaring overseas market prices, a revision of sales prices in Japan, and a sharp recovery in demand for refrigeration lubricant. This resulted in a significant increase in profits, setting a new record for a single year. In accordance with our basic strategy, we made proactive investments in both strategic investments and strengthening our foundations, steadily implementing measures that will lead to growth over the medium- to long-term.

With regard to Strategy I, "Profit Increase by New Facilities," demand for our refrigeration lubricant raw materials has been growing against the backdrop of global demand for air conditioners and the shift to environmentally friendly refrigerants. To meet this demand, construction of new facilities for refrigeration lubricant raw materials at the Yokkaichi Plant was completed on schedule in the first quarter of 2020, after which production began. In addition, in order to tap proactively into demand in the field of advanced electronics, we have laid the groundwork for future growth by putting materials facilities for next-generation semiconductors into operation in the 4th quarter of 2020.

With regard to Strategy II, "Active Investment for the Future Expansion of the Performance Chemical Business," in response to growing demand for refrigeration lubricant raw material, our mainstay product, we made the decision

in December 2021 to invest a total of 9.5 billion yen to enhance the facilities at our Chiba Plant. Furthermore, in October 2019, we launched the KH i-Lab as a new research base for new business creation, and in April 2021, we opened the Open Lab to step up technological collaboration with external institutions. With these and other initiatives, we hope to create new businesses via open innovation with companies and universities that hold promising technologies.

With regard to Strategy III, "Improvement of Business Frameworks," we have successively introduced advanced plant control systems based on AI and IoT as planned. These systems are aimed at conserving energy and reducing manufacturing costs, and are steadily showing positive effects. We have also made steady progress with measures such as the introduction of a job-based personnel system for managers to foster a spirit of challenge and professionalism, the establishment of a risk management system based on the development of a Business Continuity Plan (BCP) to strengthen corporate governance, and the publication of Integrated Reports.

FY2021 Single-year Results

	Plan	Actual results
Net sales	110.0 bn yen	117.1 bn yen
Operating income	13.5 bn yen	19.7 bn yen
ROE	18%	28%
Equity ratio	47%	45%

Main Results of the 3rd Medium-Term Management Plan

	Strategy I: Profit Increase by New Facilities	Strategy II: Active Investment for the Expansion of Performance Chemical Business	Strategy III: Improvement of business framework
Medium-term plan strategy	<ul style="list-style-type: none"> • Start up new facilities for refrigeration lubricant raw materials and marketing of new products • Operate new facilities for the next generation semiconductor materials 	<ul style="list-style-type: none"> • Further increase in production capacity for performance chemicals • Create new business through the new research hub 	<ul style="list-style-type: none"> • Further introduce facility control system with latest technologies (AI and IoT) • Improve work environment and encourage diverse work styles
Major achievements	<ul style="list-style-type: none"> • Started operating new facilities for refrigeration lubricants raw materials and manufacturing new products • Started operating equipment for next generation semiconductor materials 	<ul style="list-style-type: none"> • Decided to increase the production capacity of the entire Chiba Plant, mainly for refrigeration lubricants raw materials • Started up new research hub (KH i-Lab) and accelerated activities to create new business through open innovation 	<ul style="list-style-type: none"> • Introduced advanced plant control systems as planned • Introduced new personnel system for managers (specified employment) • Formulated and implemented the Business Continuity Plan (BCP) and issued an integrated report

The 4th Medium-Term Business Plan

We will drive Sustainable Management with the aim of both contributing to achieving a sustainable society and increasing our corporate value.

Tatsuro Niiya

Board Director, Senior Corporate Officer
Current responsibility: In charge of Corporate Strategy, Marketing, Sales, Logistics



In the 4th Medium-Term Business Plan, under the basic policy of “Driving Sustainable Management,” we will deploy three basic strategies to contribute to achieving a sustainable society and further increase our corporate value.

For Strategy I, “Further Growth in the Strategic Domains,” in the Environmental Domain, we will implement a major CAPEX in the Chiba Plant which was approved at the end of 2021. This will allow us steadily capture the growing demand for our main product, isononanoic acid, a refrigeration lubricant raw material for refrigeration lubricant. In the healthcare domain, in addition to expanding sales of 1,3-butylene glycol (1,3-BG), a cosmetic ingredient we will promote the development of new products that have the potential to become new major sources of revenue and expand our lineup. In the electronics domain, we will make CAPEX in order to meet the increasingly sophisticated needs of our customers arising from the progress of an advanced information society. By steadily implementing these measures, we will achieve sustainable growth.

For Strategy II, “Medium- and Long-term Initiatives to Solve Social Issues,” we will focus on contributing to solving social issues from a medium- to long-term perspective by undertaking a variety of initiatives. We have committed ourselves to achieving carbon neutrality by 2050. As a milestone on that journey, we will reduce greenhouse gas (GHG) emissions by 30% by 2030 relative to FY2017 levels. To achieve this goal, we will work to reduce GHG emissions in our manufacturing processes. In addition, our core technology, oxo synthesis, consumes CO₂ as a raw material. In addition, we will further reduce GHG emissions by capturing and using CO₂ emitted as part of the production process. In the long term, we will expedite our efforts to reduce GHG emissions by using a variety of methods, such as switching to more environmentally friendly manufacturing methods and biological raw materials, as well as collaborating with neighboring companies in industrial complexes.

We will also harness open innovation to create new businesses that contribute to solving social issues in our strategic domains. In April 2022, we made our first investment in a start-up company, and we will continue to pursue M&A and business alliances to further speed up the creation of new businesses.

For Strategy III, “Improvement of Business Framework,” we will further consolidate the foundations of our business by steadily implementing various measures regarding the topics of “Technology and Information,” “Human Resources and Corporate Culture,” and “Governance,” which we have identified as the basis and drivers of value creation for realizing VISION 2030. In the area of Technology and Information, we will pursue digital transformation to ensure safe and stable operations and to improve productivity. In the area of Human Resources and Corporate Culture, following the review of the evaluation and compensation system for managers, which has already been implemented under the slogan of “reward those who take on challenges and perform,” we will be expanding the system to regular employees as well. In addition, we will continuously work to improve employee engagement through measures such as improving the workplace environment. In the area of Governance, we will strengthen risk management, pursue CSR procurement to improve sustainability throughout the supply chain, and further expand the provision of non-financial information in our IR and SR activities.

Since our business is affected by changes in the external environment and the implementation of major periodic maintenance every other year, we believe it is more important to achieve steady growth not only for any one year, but also over a three-year cumulative period. To this end, in the 4th Medium-Term Business Plan, we have set cumulative operating income of 48.6 billion yen and cumulative EBITDA of 63.5 billion yen over a three-year period as our key performance indicators.

Through the steady implementation of the basic strategies outlined here, we will strive to both contribute to achieving a sustainable society and increase our corporate value.

Basic Policy and Basic Strategy

Basic Policy: Driving Sustainable Management

Strategy I: Further Growth in the Strategic Domains

- Capturing steadily demand for refrigeration lubricants raw materials through the large-scale expansion and reinforcement of facilities
- Responding to increasingly sophisticated customer needs in the electronics domain
- Expanding the lineup in the healthcare domain

Strategy II: Medium and Long Term Initiatives to Resolve Social Issues

- Accelerating efforts toward carbon neutrality
- Creating early a new business through open innovation and M&A, etc.

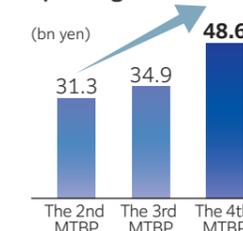
Strategy III: Improvement of Business Framework

- Improving productivity by utilizing the latest technologies, etc., as a driving force
- Creating a corporate culture in which diverse human resources play an active role and maximize results
- Strengthening of governance to enhance management transparency

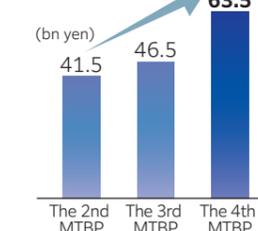
Numerical Management Targets

	The 4th Medium-term Business Plan (Fiscal year 2022 to 2024)
Accumulated consolidated operating income	48.6 bn yen
Accumulated consolidated EBITDA	63.5 bn yen
Return on Equity	Over 15%

Accumulated consolidated operating income



Accumulated consolidated EBITDA



Strategy I Further Growth in the Strategic Domains

In the strategic domains of Environment, Healthcare, and Electronics, the 4th Medium-Term Business Plan will aim to both increase profits and contribute to solving social issues by expanding our facilities and shifting to high-growth, high-earning products to meet growing global demand.

In the Environmental domain, as demand for air conditioners grows worldwide, we will aim to increase earnings in the air conditioner market through measures such as large-scale expansion of our facilities for refrigeration lubricant raw materials (for details, see p.27–28).

In the Healthcare domain, with the cosmetics market expected to see expansion over the medium to long term,

particularly in Southeast Asian countries, we will work to expand sales of 1,3-BG, our mainstay product in cosmetic ingredients. In addition, by harnessing open innovation and similar initiatives to develop new products, we will work to expand our product lineup.

Meanwhile, in the Electronics domain, the semiconductor market is expanding due to the spread of 5G, IoT, and AI. As such, we will capture demand in cutting-edge fields by accurately responding to increasingly sophisticated customer needs and investing proactively to anticipate next-generation demands.

Strategic Domains	Environment	Healthcare	Electronics
Field	Performance materials	Performance materials	Electronics materials
Main Products (Existing Products)	Refrigeration lubricant raw materials	Cosmetic ingredients	High-purity solvents
Priority measures in the 4th Medium-Term Business Plan	Increase profits through the large-scale expansion and reinforcement of facilities as a leading supplier	Capture growing demand, especially in emerging economies	Aim to increase added value mainly in the growing semiconductor market

The 4th Medium-Term Business Plan

Environmental Domain **Steadily capturing demand for refrigeration lubricant raw materials**

Market Environment

Global demand for air conditioners is expected to expand, especially in Asia, which continues to experience economic growth. Accordingly, sales volume is projected to reach 200 million units in 2030 (1.7 times the 2021 level). In addition, global refrigerant regulations will accelerate the shift to environmentally friendly air conditioners that use low GWP* refrigerants with lower environmental impact. Demand for the refrigeration lubricant raw materials we produce is expected to grow due to its compatibility with these refrigerants.

*GWP: Global Warming Potential is a numerical value that indicates the greenhouse effect of refrigerants, taking carbon dioxide as 1.

Measures

As a leading manufacturer of refrigeration lubricant raw materials, we will work to steadily capture demand through increased production capacity and other measures, thereby further enhancing our competitive advantage and increasing earnings.

Specifically, we decided to make major CAPEX at our Chiba Plant at the end of 2021, and plan to increase production capacity for isononanoic acid, a raw material for refrigeration lubricant, to more than 1.5 times the current level by 2024. We will also utilize the facilities at our Yokkaichi Plant, which expanded its production capacity in 2020, to steadily capture growing demand.

Air conditioner market*1

■ Synthetic oils (For HFC/Low GWP refrigerants) ■ Mineral oil (For HCFC)

(Million units)



*1 Source: estimates of the Company based on JARN and International Energy Agency (IEA), The Future of Cooling, excl. car air conditioner

*2 excl. Japan

Capturing demand for car air conditioners amid the shift to EVs

In line with worldwide movements toward decarbonization, there is a rapid shift to electric vehicles (EVs) underway worldwide, and the global EV fleet is expected to expand to 230 million units in 2030, more than 20 times the number in 2021.

Unlike gasoline-powered cars, the air conditioners installed in EVs use a heat pump air conditioning

system with an electric compressor, similar to that used in home air conditioners, and our refrigeration lubricant raw materials are beginning to be used in these vehicles. In addition to our existing markets, we aim to achieve further growth by steadily capturing this new demand for our materials.

Global EV fleet

(million units)



Source: Produced by KH Neochem based on the IEA Global EV Outlook 2021 Sustainable Development Scenario



Healthcare Domain **Expanding our lineup through open innovation**

Market Environment

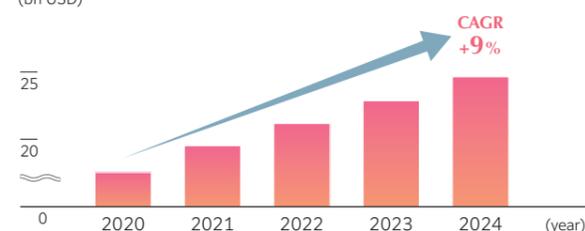
The overall cosmetics market was sluggish due to restrictions on movement caused by the COVID-19 pandemic and the resulting decline in demand from overseas tourists, while competitors expanded their facilities. This led to a somewhat difficult business climate for our cosmetic ingredient 1,3-BG, a mainstay of our lineup. In the medium- to long-term, however, demand is expected to increase as the cosmetics market expands due to the subsiding of the pandemic, population growth and rising income levels in Southeast Asian countries, among other factors.

Measures

We will pursue increased sales of 1,3-BG by capitalizing on the customer network that we have cultivated up to now. We will also engage proactively in open innovation to expand our lineup in the healthcare field, including the development of new high-grade alcohols that employ natural raw materials.

Asian Cosmetics market*

(bn USD)



*Research estimates by the Company



Electronics Domain **Responding to increasingly sophisticated customer needs**

Market Environment

With the increase in demand for semiconductors due to the spread of 5G, IoT, and AI combined with the drive for digital transformation, the photoresist market, in which our products are used, is also expected to grow steadily. In addition, although the absolute volume of Extreme Ultraviolet (EUV) resist, a material for cutting-edge semiconductors, is still small, the market for it is expected to expand rapidly in the future.

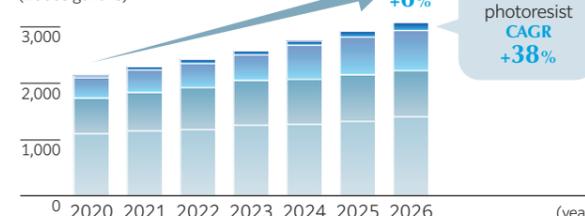
Measures

In March 2022, in order to respond to increasingly sophisticated customer needs, a new quality control building equipped with a state-of-the-art clean room was built at the Yokkaichi Plant, enhancing our quality control system. In addition, we will increase sales by expanding the supply infrastructure for high-purity solvents. Furthermore, Kurogane Kasei has made additional investments in its facilities for materials for next-generation semiconductors, newly built in 2020. By capturing demand in cutting-edge fields, we aim to further increase added value.

The Global Photoresist Market*

■ g/i line ■ KrF ■ ArF ■ EUV

(1000s gallons)



Source: Fuji Keizai, "2021 Overview of the Optical Functional Materials and Products Market."

*Values for 2021 and beyond are forecasts



Yokkaichi Plant Quality Control Building
Photo: Ena Mitsui (Kawasumi-Kobayashi Kenji Photograph Office)

The 4th Medium-Term Business Plan

Strategy II | Medium and Long Term Initiatives to Resolve Social Issues

KH Neochem is pursuing medium- and long-term initiatives aimed at using our business to help solve various social issues.

First, through further expansion of the supply of refrigeration lubricant raw materials, we will support the growth in demand for environmentally friendly air conditioners that use refrigerants with lower global warming impact and contribute to the reduction of GHG emissions in the supply chain (for details, see p. 27).

Moreover, in terms of reducing our own GHG emissions, we will further enhance energy conservation during production, which we have been working on in order to achieve carbon neutrality by 2050, and we will also present the use of CO₂ as a raw material for our

products as part of our efforts to become carbon neutral. In the long term, we will switch from petroleum-derived raw materials, develop new manufacturing methods and new energy-saving technologies, and build partnerships with other companies in the industrial complexes where our facilities are located.

In addition, by proactively engaging in open innovation, we will speed up the creation of new businesses that contribute to solving social issues, such as environmentally friendly materials, healthcare materials that help improve quality of life, and electronic materials that support the development of an advanced information society, thereby achieving sustainable enhancement of corporate value.

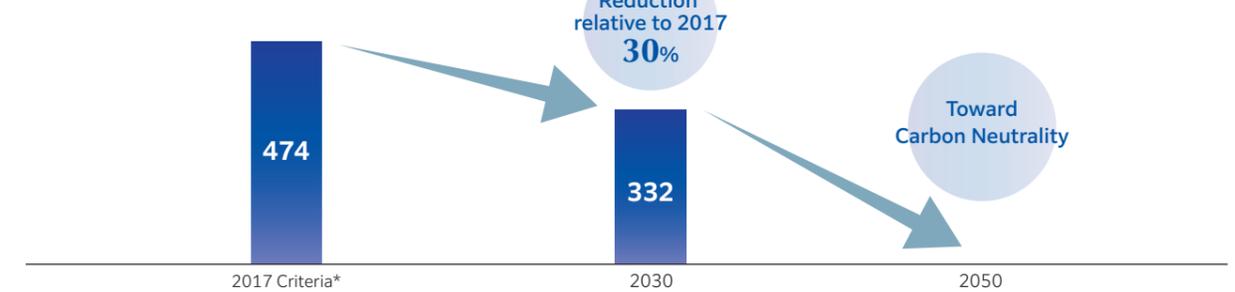
Enhancing our initiatives for carbon neutrality

As a milestone toward achieving carbon neutrality by 2050, we aim to reduce GHG emissions by 30% by 2030 relative to FY2017 levels. We have been improving energy efficiency through the introduction of advanced plant control systems, and have reduced CO₂ emissions by about 15% by starting operation of in-house power generation facilities at the Chiba Plant. As we move toward 2030, we aim to reduce GHG emissions by further expanding the introduction of advanced control systems, as well as pursuing CAPEX and new technologies that will

lead to energy savings. As a long-term initiative, meanwhile, we will work to achieve carbon neutrality, which is considered a major technological and financial hurdle in the materials industry, by shifting production methods and raw materials, developing new energy-saving technologies, and collaborating with other companies in the industrial complexes where our facilities are located.

Business	<ul style="list-style-type: none"> Contribute to an environmentally friendly society through the supply of refrigeration lubricants raw materials (p. 27) Consume CO₂ as a raw material for products
Energy conservation New technologies	<ul style="list-style-type: none"> Promote energy conservation by expanding the introduction of advanced plant control systems Shifts in manufacturing methods and raw materials
Innovation Corporate collaboration	<ul style="list-style-type: none"> Collaborate with industrial complex companies

Our GHG emissions (CO₂ equivalent)
(kilotons-CO₂)



*Reporting figures based on the Act on Rationalizing Energy Use (reporting period of April 1 to March 31)

CO₂ as a raw material for products

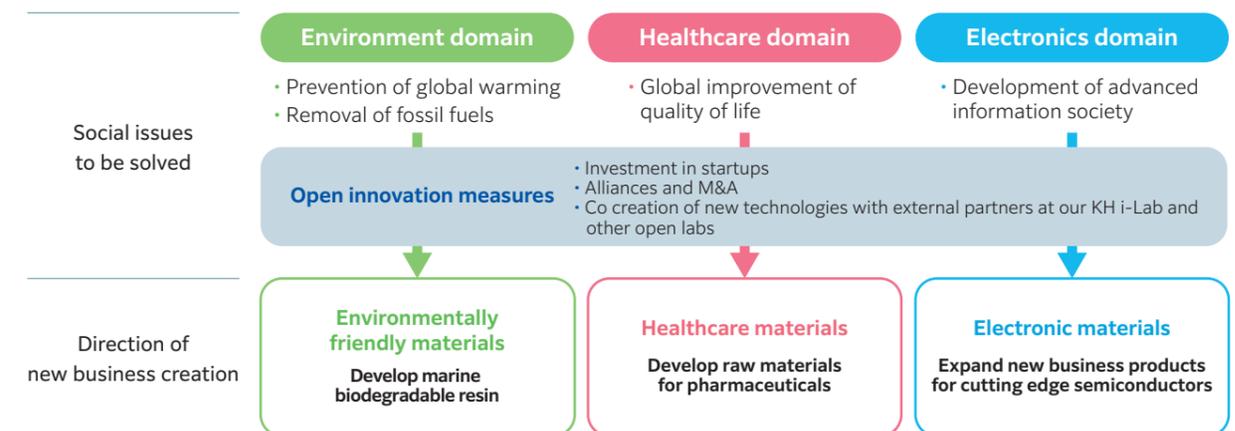
Also known as hydroformylation, our core technology, oxo synthesis, is a process where carbon monoxide and hydrogen react with raw materials, such as olefins, to synthesize aldehydes. This extremely rare technology uses carbon dioxide (CO₂) as a raw material to produce carbon monoxide and hydrogen. By using CO and H₂ as raw materials in the manufacturing process, we are contributing to the reduction of CO₂ emissions.



Quick creation of new businesses through open innovation

In our strategic domains, we are actively harnessing open innovation to create new businesses that contribute to solving social issues. In 2019, we launched a new research center, KH i-Lab, followed by an Open Lab in 2021. Under the 4th

Medium-Term Business Plan, starting with the KH i-Lab, we will speed up the creation of new businesses by using open innovation to collaborate with external parties in technology creation, with a view to investment in startups, M&A, and alliances.



The 4th Medium-Term Business Plan

Strategy II: Medium and Long Term Initiatives to Resolve Social Issues

Contributing to global warming mitigation through the supply of refrigeration lubricant raw materials

Functions of refrigeration lubricant

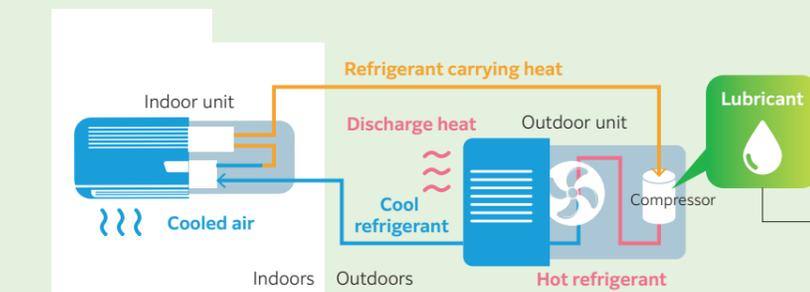
Air conditioners make rooms cool by taking in hot indoor air and moving the heat outside. Moving the heat to the outside is performed by a refrigerant, which functions by being compressed in a compressor inside an air conditioner's outdoor unit. The compressor needs a lubricant, specifically refrigeration lubricant raw materials to operate efficiently and smoothly, without breaking down over long-term usage.

Various types of gases are used as refrigerants, and

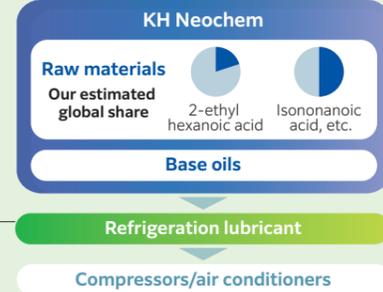
the type of refrigeration lubricant required depends on the type of refrigerant.

Currently, the shift toward environmentally friendly air conditioners is accelerating, and demand for refrigeration lubricant raw materials that are compatible with the refrigerants used in these air conditioners is also growing. KH Neochem holds the world's largest market share in the field of refrigeration lubricant raw material.

Air Conditioner Mechanism (For Cooling Operation)



Market Position of KH Neochem



Transition in refrigerants and refrigeration lubricants

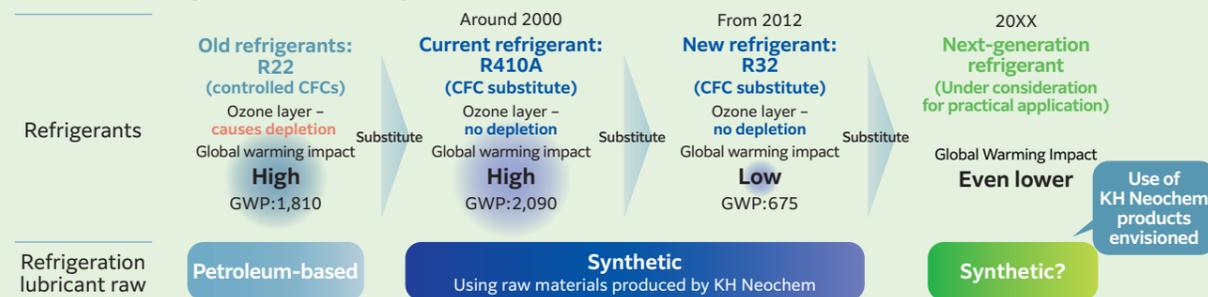
In the past, CFCs were used as refrigerants, but due to their contribution to the depletion of the ozone layer, the Montreal Protocol was adopted in 1987. This protocol stipulated regulatory measures such as the phased reduction and eventual elimination of controlled CFCs, and a shift to non-ozone-depleting CFC substitutes has been making rapid progress around the world since around 2000.

Since its adoption, the Montreal Protocol has been subject to occasional reviews. Under the 2016 Kigali Amendment, it was agreed to phase out refrigerants with high global warming potential (GWP) in order to

curb global warming. This move accelerated the shift to new refrigerants such as R32, an alternative CFC with low GWP.

In the future, it is expected that next-generation refrigerants with even lower global warming impact will be put to practical use, and we are conducting research on refrigeration lubricants compatible with next-generation refrigerants and looking into appropriate raw materials. We also envision that refrigeration lubricant made with our products can be applied to the most promising candidates for next-generation refrigerants.

Transition in Refrigerants and the Refrigeration Lubricant Raw Materials



Demand for air conditioning and refrigerant regulations

Reduction of GHG emissions from refrigerants

It is estimated that global greenhouse gas (GHG) emissions in 2019 amounted to approximately 57 billion tons of CO₂ equivalent, of which approximately 1 billion tons were caused by CFC substitutes. Of these, more than 90% were produced by HFCs, which are refrigerants used in air conditioners and other products.

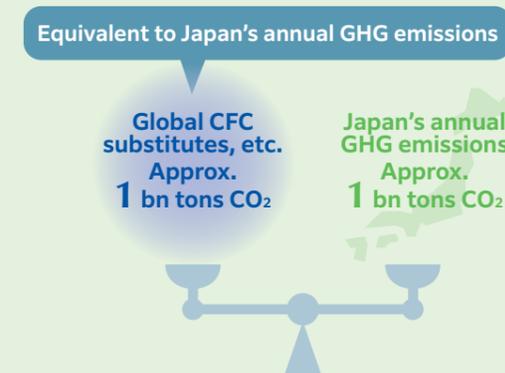
A study by the International Energy Agency (IEA) estimates that the number of air conditioners owned worldwide in 2050 will be three times the current number, and if this trend continues, GHG emissions could increase significantly. As such, it is essential that we shift to environmentally friendly refrigerants with lower GWP, and international regulations on refrigerants have been gaining momentum in recent years. In specific terms, the Kigali Amendment to the Montreal Protocol and U.S. Environmental Protection Agency (EPA) regulations have established a phased reduction schedule for HFCs in developed and emerging countries.

required from 2019 to 2036, with the ultimate target of an 85% reduction by 2036. As a result, this regulation is expected to further raise demand for air conditioners that use low GWP refrigerants, such as R32.

Emerging nations*³ are obliged to reduce the CO₂ equivalent value by 10% of the standard value by 2029. The regulations become stricter in steps, ultimately reaching the requirement for an 80% reduction by 2045. In addition to the above, we expect further growth in demand for more environmentally friendly air conditioners as the economies of developing nations strengthen and regulations against air conditioners with low energy efficiency come into effect in China.

As the global transition to low-GWP refrigerants continues, our raw materials are indispensable for the production of refrigeration lubricant that can support this transition, and as the leading company in the industry, we will continue to contribute to global warming mitigation by ensuring a stable supply of our products.

Global Annual GHG Emissions of CFC Substitutes, etc. (CO₂ Equivalent)



Source: Produced by KH Neochem based on "Trends in Global CO₂ and Total Greenhouse Gas Emissions," 2020 Report PBL Netherlands Environmental Assessment Agency

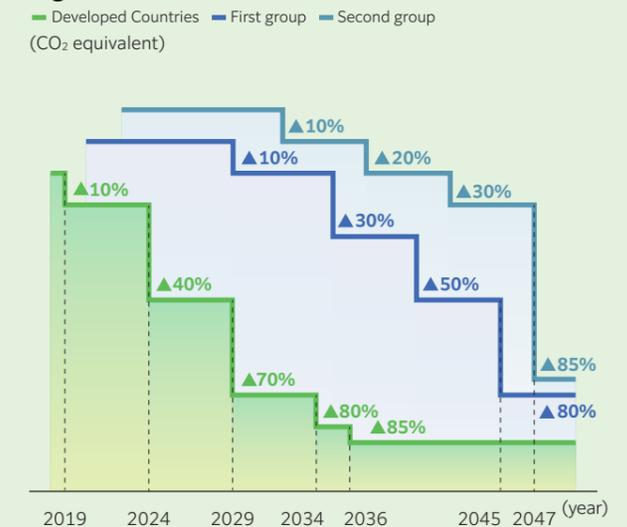
International refrigerant regulations (Kigali Amendment)

Under the Montreal Protocol, advanced nations are required to eliminate ozone layer-depleting controlled CFCs by 2020, while emerging nations are required to eliminate it by 2030. In addition, 18 CFC substitutes with high GWP were added to the list of controlled substances in the Kigali Amendment, which adopted a new proposal to make non-ozone-depleting CFC substitutes also subject to regulation under the Protocol, coming into effect in January 2019. A CO₂ equivalent value calculated by multiplying the quantity of CFC substitutes by their GWP has been adopted as an indicator for their phasing out, and the average value of production, consumption, etc. from 2011 to 2013 will be used as the reference value*¹.

For advanced nations, including Japan,*² a gradual reduction in CO₂ emissions from the standard values is

*1 For more details, please refer to the Montreal Protocol on Substances that Deplete the Ozone Layer on the website of the Ministry of Economy, Trade and Industry. (Japanese documents only) https://www.meti.go.jp/policy/chemical_management/ozone/law_ozone_laws.html
 *2 Regulatory measures differ in some advanced nations, such as Belarus and Russia.
 *3 Refers to the first group of emerging countries. The standard value is calculated based on the average values for production and consumption of CFC substitutes from 2020 to 2022, among other data. The schedule is more gradual in the second group of emerging countries. (India, Pakistan, Iran, Iraq, and the Gulf States.) For more detail, please see *1.

Kigali Amendment HFC Phase-down Schedule



The 4th Medium-Term Business Plan

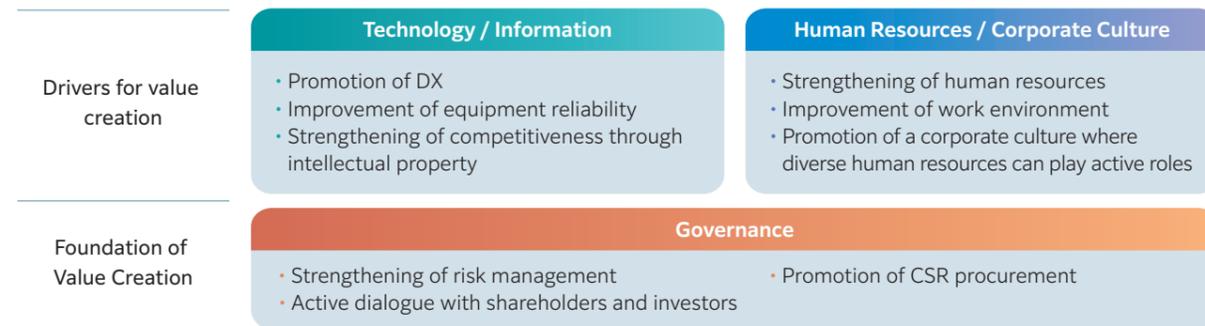
Strategy III | Improvement of Business Framework

In order to realize VISION 2030, we have been working to build a business foundation for creating new value. This involves strengthening our capabilities in “technology and information,” and “human resources and corporate culture,” which are the drivers behind

value creation, and “governance,” which forms its foundation.

Under the 4th Medium-Term Business Plan, we will further solidify our business foundation by steadily implementing various measures in these three areas.

Main Initiatives for Strengthening our Business Foundation



Technology / Information | Improve productivity by utilizing latest and emerging technologies

As a company with many products that have large market shares, safe and stable production and improved productivity are among our top priorities, and we are taking a variety of measures to achieve these goals. Specifically, we will further expand the roll-out of advanced plant control systems and implement smart security, including the introduction of tablets and similar IT tools at manufacturing sites to computerize maintenance patrols and operation management.

We also plan to introduce a new predictive diagnostic system to effectively repair and renew facilities as they deteriorate over time. In order to prevent

equipment problems and improve equipment reliability, we will use risk assessment to prioritize preventive maintenance for each individual piece of equipment.

In addition, we will develop “technology platforms” of intellectual property to promote the visualization of intangible assets, which will lead to the creation of new businesses through initiatives including internal innovation and open innovation. Intellectual property rights necessary to maintain and enhance our corporate competitiveness will be identified and rights will be strategically secured.

Main Initiatives

Promotion of DX

- 1 Improvement of safety and productivity through Smart Industrial Safety
- 2 Introduction of a predictive diagnosis system to detect faults due to plant apparatus aging before they occur
- 3 Introduction of a shipping system

Improvement of equipment reliability

- 4 Restructuring of preventive maintenance process based on risk assessment

Strengthening of competitiveness through intellectual property

- 5 Promotion of innovation through the development of “technology platforms”
- 6 Maintenance and strengthening of corporate competitiveness through strategic patent filings

Human Resources / Corporate Culture

Create a corporate culture where diverse human resources can play active roles and maximize their performance

In the 3rd Medium-Term Business Plan, we introduced a job-based personnel system for management positions, and in the 4th Medium-Term Business Plan, we will expand the system to non-managerial position employees as well. In addition, through enhanced employee training and proactive mid-career hiring, we will develop professional human resources, select outstanding young talent, and facilitate the advancement of female staff to create a corporate culture in which

employees enjoy a sense of responsibility and fulfillment, and where a diverse range of human resources can play an active role to maximize results.

We will also work to improve the workplace environment for our employees, improve occupational health and safety, enhance productivity, and implement work style reforms, thereby ensuring that we can attract the most talented personnel.

Main Initiatives

Strengthening of human resources and creating a corporate culture

- 1 Introduction of a new personnel system (specified employment) for non-managerial position employees
- 2 Securing of diverse human resources and promotion of employees
- 3 Improvement of employee engagement

Improvement of work environment

- 4 Establishment of new Quality Control Building
- 5 Improvement of workplace safety and productivity, promotion of work style reform through systematic renewal of plant office buildings

Governance

Strengthen corporate governance to enhance management transparency

In order to enhance risk management, we will implement a PDCA (Plan, Do, Check, and Action) cycle using a risk map based on newly formulated risk evaluation criteria, position risk management as one of our key management strategies, and build a system in which management is more committed than ever to mitigating material risks.

In addition, in order to achieve social responsibility in the supply chain alongside our suppliers, we have established CSR Procurement Guidelines and are conducting initiatives such as CSR surveys of our suppliers.

As a company listed on the Tokyo Stock Exchange Prime Market, KH Neochem will work to further strengthen governance and ensure diversity, as well as practicing transparent management with high ethical standards. In our IR/SR activities, in addition to business performance and strategies, we will improve disclosure of climate change risks and other ESG-related non-financial information, as well as engaging in active dialogue with shareholders and investors.

Main Initiatives

Strengthening of risk management

- 1 Identification of important risks by using risk maps and implementation of countermeasures

Promotion of CSR procurement

- 2 Enhancing supply chain management through CSR surveys

Active dialogue with shareholders and investors

- 3 Proper disclosure of information requested by the Prime Market of the Tokyo Stock Exchange
- 4 Promotion of IR and SR activities with expanded coverage of non-financial information such as ESG, in addition to business performance and strategies

Message from the CFO

We will aim to achieve sustainable increases in corporate value by enhancing our ability to generate cash flow, further strengthening our financial foundation, and proactively investing in growth.

Masaya Hamamoto

KH Neochem Co., Ltd.
Board Director, Senior Corporate Officer
Current responsibility: In charge of Accounting and Finance, Investor Relations, Public Relations, General Affairs, Legal and Compliance, Internal Audit, Risk Management, and Promotion of ESG



Policy for the 4th Medium-Term Business Plan

Under the 4th Medium-Term Business Plan, 46% of generated cash will be allocated to strategic investments in domains such as Environment, Healthcare, and Electronics.

In the refrigeration lubricant raw material sector, which contributes to solving global environmental issues and is expected to enjoy a growing market, we are working to increase production capacity at our Chiba Plant toward 2024, following the construction of a new facility at our Yokkaichi Plant in 2020. We will also make systematic investments in electronic materials to reinforce our dominant market position and develop more value-added, cutting-edge products.

In April 2022, we made our first capital participation in a start-up company. Going forward, we will not limit our investment to existing businesses, but also actively accelerate open innovation and make use of M&A.

For investments above a certain amount, a committee composed of full-time directors and corporate officers make rigorous decisions on investment profitability based on the cost of capital, and also verify investment performance after the fact, striving constantly to improve investment efficiency.

Capital allocation

Generated cash	3rd Medium-Term Business Plan	4th Medium-Term Business Plan
Operating cashflow	35.3 bn yen	47.7 bn yen
Strategic investments	10.2 bn yen	22 bn yen
Business infrastructure investments	6.4 bn yen	10 bn yen
Workplace environment improvements	0.7 bn yen	3.7 bn yen
Shareholder returns	6.6 bn yen	10 bn yen
Repayments and others	11.4 bn yen	2 bn yen

Operating cashflow increased by 12.4 bn yen from the 3rd Medium-Term Business Plan

Allocate capital more aggressively to strategic investments

3rd Medium-Term Business Plan 29%

4th Medium-Term Business Plan 46%



Made capital participation in AC-Planta, a developer of biostimulant materials that increase plant tolerance to high temperatures and drought. Photo for illustrative purposes only.

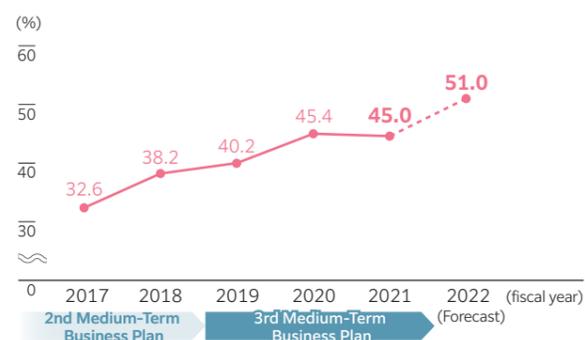
Review of the 3rd Medium-Term Business Plan

In order to realize our VISION 2030, we aim to build a well-balanced financial structure that is less susceptible to changes in the external environment while maintaining a high level of capital efficiency.

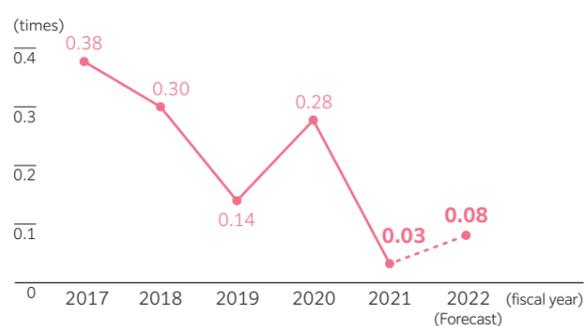
Looking back on the 3rd Medium-Term Business Plan (FY2019–FY2021), despite a challenging business environment resulting from the COVID-19 pandemic and trade friction between the U.S. and China, we were able to expand our growth businesses, such as performance materials, while maintaining sound financial discipline. Meanwhile, our equity ratio stood at 38.2% in 2018, before we started the 3rd Medium-Term Business Plan, and improved to 45.0% by 2021. The Company's financial position also improved substantially in terms of net interest-bearing debt, which stood at 10.9 billion yen in 2018 and 1.5 billion yen in 2021, a fall in net debt-to-equity ratio from 0.3 to 0.03.

In light of this situation, we launched the 4th Medium-Term Business Plan (FY2022–FY2024) in order to further shift capital allocation to growth investments aimed at achieving VISION 2030 while keeping in mind the need to maintain and reinforce a stable financial foundation.

Equity ratio



Net D/E ratio



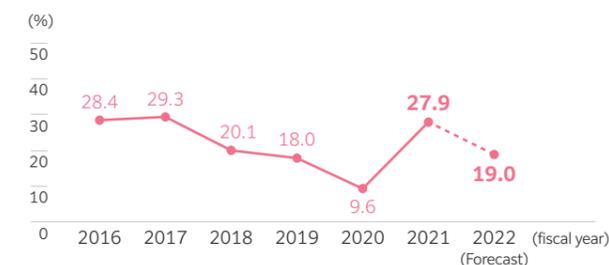
Financial Strategy and Capital Policy

Under the 4th Medium-Term Business Plan, we will aggressively allocate capital to growth investments. In that case, our policy for the funds needed is to give priority to cash flow generated from operations and cash on hand, and to use debt financing for any excess over this amount. In April 2022, our long-term credit rating (R&I) was upgraded from BBB+ to A- and our short-term credit rating was upgraded from a-2 to a-1. We will continue to aim for a high level of ROE through a financing strategy that places an emphasis on the cost of capital, while further improving profitability and financial soundness.

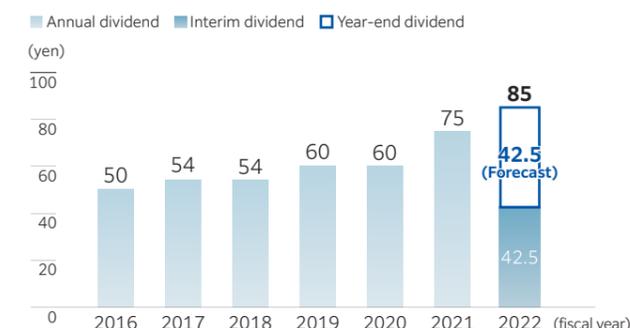
We also recognize that shareholder return is one of the most important management issues, and our basic policy is to pay stable dividends and commensurate with growth in profits. Under the 4th Medium-Term Business Plan, we are targeting a guideline payout ratio of 30%, with an 85-yen lower limit for dividend per share as in the 2022 forecast. As such, we plan to flexibly increase shareholder returns as our financial foundation strengthens.

We appreciate your continued support for our Group.

ROE



Dividend per share



*The year-end dividend for 2022 will be proposed to the general meeting of shareholders in March 2023.

Message from the Board Director in Charge of Production Planning and Engineering

Drawing on new technologies and insights to further enhance our production system

Toshihiro Matsuoka

Board Director and Senior Corporate Officer
Current responsibility: In charge of Procurement, Production Planning and Engineering, and Environment, Safety, and Quality Assurance



Enhancing the value of production sites through improvements in technology and information

We have identified technology and information as key drivers for achieving the goals set out in VISION 2030. As such, it is essential that we further enhance our capabilities in these areas. By taking the personnel development that enables this as a foundation, we will establish a corporate culture that recognizes a diverse range of skills and values while working to deliver the best results.

As a materials manufacturer that supports manufacturing around the world with many high market-share products, safe and stable operations are extremely important to us. Many of our products undergo extensive processing, and our operators acquire high-level skills through daily experience. As such, their accumulated expertise serves as a source of support for safe and stable operations.

However, for sustainable growth, it is important not to be satisfied with the status quo, but to aim for improvement. When I was a plant manager, I introduced improvement initiatives aimed at increasing the value of the production sites, but in today's rapidly changing world, I believe that radical reforms are necessary. As such, I will work to introduce new technologies and systems while taking care not to be constrained by precedent.

Systematizing technology through the application of AI and IoT, and improving equipment reliability and safety awareness

Our current focus is on measures to use digital technology to systematize the intangible assets represented by the skills of individual operators. Our advanced plant control system, which uses AI and IoT to automatically adjust operating conditions, has already been installed in approximately 60% of our plants, and we are aiming to further increase uptake. By doing this, we aim to ensure that all operators can perform their duties at a high level, thereby increasing productivity and enhancing a site's intangible assets.

Appropriate updating and maintenance of equipment

is also essential for safe and efficient operation. Factors such as aging facilities have led to the occurrence of some problems in production. To improve this situation, we are restructuring our business processes in equipment management and other areas, and will also introduce a predictive diagnostic system to detect problems before they occur. In addition, we will enhance safety management and technical training, as well as using tablets and similar devices to computerize security patrols and operational management.

We are pursuing these initiatives not only by drawing on our own expertise, but also by recruiting highly specialized personnel with production site experience at other companies to verify our equipment in terms of safety and efficiency. I believe that incorporating the perspectives of outside personnel has prompted a reevaluation of conventional ways of doing things, leading to progress in digital transformation and more advanced facilities.

What must not be forgotten is the need to raise awareness of safety among employees. To this end, it is vital that each employee involved in a task works to prevent occupational accidents and helps correct others' mistakes, and that efforts are made to foster a culture of mutual support. Going forward, we will conduct further activities to promote a "safety first" mindset by reviewing our safety code of conduct and holding ongoing dialog and meetings on safety between plant managers, section and division heads, and employees.

Enhancing production sites to generate growth for the Company as a whole

The majority of our employees are involved in production, and they form the basis of how we create value. As such, technical capabilities on the frontlines constitute intangible assets directly linked to the growth of the Company as a whole.

By enhancing our production facilities and systems, and by recruiting and training a diverse range of human resources to support them in an integrated manner, we aim to further improve the functionality of our plants and make VISION 2030 a reality.

Technology and Information (Production and Engineering)

Pursuing Digital Transformation in Production

Wider installation of the Advanced Plant Control System

A chemical plant is a maze of pipework, and during operation, continual, precise adjustments are made to the flow rates of raw materials and products. It takes a great deal of experience and advanced expertise to master plant operations, and the losses that occur as a result of manually adjusting flow rates presented a significant problem.

In response, we are introducing advanced plant control systems to systematize and reproduce the skills of skilled operators by harnessing AI and other cutting-edge technologies. This state-of-the-art system uses AI to control the plant by automatically estimating the appropriate settings in response to temperature, pressure, and other conditions. Installing this system will minimize production losses due to flow rate adjustments, as well as allowing for more efficient use of energy. Also, by reducing operators' workload and stabilizing quality, it can also help resolve manufacturing issues.

As of the end of 2021, about 60% of our plants have already introduced the advanced control system, and we plan to have it installed in about 80% of all plants by 2023.

Improving safety and productivity through smart security

In order to maintain safe and stable production, we must continue security activities while addressing issues such as shortages of human resources and the handing down of skills from one generation to another. As a company with many products that have large market shares, one of our most important tasks is to ensure problem-free production.

As a solution to this issue, we are also planning to introduce a predictive diagnostic system to minimize missed manufacturing opportunities and streamline maintenance costs by constantly monitoring operating conditions and detecting signs of problems such as equipment failures.

In addition, in order to strengthen autonomous safety capabilities and improve productivity at manufacturing sites, we will promote smart security through AI and IoT by distributing tablets and computerizing maintenance patrols, inspection results, and operational management tasks. Our goal is that these measures will be introduced to all manufacturing sections during the period of the 4th Medium-Term Business Plan.

Improving Equipment Reliability

Redesigning preventive maintenance and establishing a framework for equipment management education

The Equipment Management Division supports stable operations by effectively repairing and updating aging plants and equipment. In order to prevent potential drops in the quality of equipment management work as veteran employees retire and other generational changes take place, we have been working since the term of the previous medium-term business plan to review our business processes relating to equipment management.

One of the measures we are implementing to address this is preventive maintenance, which involves anticipating the frequency and impact of breakdowns in advance based on the results of risk assessments and working out the necessary countermeasures before an event that could affect stable production occurs. Having completed regular maintenance in 2022, we are now implementing redesigned operational processes. These processes include developing maintenance and testing plans, making repairs and updates, and evaluating maintenance results.

We are also working to create an education system that will enable younger employees to do the same work as veterans by improving their technical skills and standardizing operations. Consultant services, including those from outside experts, will be provided to support

young engineers who have no experience of major incidents, so that they too can make appropriate decisions in response to day-to-day problems. Through these activities, we aim to effectively direct our limited management resources (human and financial), helping to ensure stable supply and reduce missed manufacturing opportunities as much as possible.



Message from the Board Director in Charge of R&D and Human Resources

Fostering a corporate culture that empowers a diverse range of human resources and maximizes results

Yukihiro Isogai

Board Director and Senior Corporate Officer
Current responsibility: In charge of HR, IT Strategy, R&D, Intellectual Property, and Information Security



The human resources and corporate culture that will drive the realization of VISION 2030

We have grown by accurately identifying the growing markets for products such as refrigeration lubricant raw materials, cosmetic ingredients, and electronic materials. In addition to capitalizing on these strengths, the tangible and intangible assets that have supported our growth thus far, we will create value by developing new businesses and expanding the scope of our existing businesses through collaborative creation activities based on open innovation. In order to achieve sustainable growth in corporate value, it is essential to energize (speed up) this value creation process, and we are focusing on strengthening our R&D capabilities in this area.

We will also work to increase the diversity of our human resources, who form the foundation of our corporate activities, not only in R&D, but throughout the Company. By fostering a corporate culture in which human resources with various specialties and values can flourish, we have set the strengthening of our business foundation as a basic strategy of the 4th Medium-Term Business Plan and are working toward this goal accordingly. In terms of enhancing our human resources, it is also important for each employee to approach social issues with a sense of personal involvement, and I believe that we must have the systems, structures, and culture in place to support this. In addition to building a human resource system and putting efforts into human resource development, we must foster a corporate culture that supports the success of a diverse range of personnel. In response to a constantly changing business environment, we will strive to develop human resources and a corporate culture that will serve as powerful drivers for making VISION 2030 a reality.

Enhancing R&D capabilities and energizing the innovation cycle

I believe that our three missions in R&D are (1) to create new businesses and develop new products and technologies, (2) to pursue productivity and efficiency in the manufacturing process for existing products, and (3) to broaden our intellectual property portfolio as a foundation for growth. In order to create new businesses and develop new products and technologies, it is important to identify the seeds of ideas from various perspectives, and to repeat the innovation cycle of hypothesis testing and commercialization in an effective and efficient manner. We will speed up this innovation cycle by promoting a culture of taking on as many challenges as possible — without being afraid to make mistakes — then sharing and drawing on the experience and expertise produced.

In addition, to enhance the competitiveness of our existing products, we are constantly working to improve our manufacturing processes, and by combining improvements in productivity and efficiency with stable and safe operations, we will help create richer lives for people and strengthen our earning power.

The new techniques and expertise we gain from these value creation initiatives will be stored in our “Technology Platform” as important intellectual property assets, then used as a foundation for the Company’s growth.

We are confident that by fulfilling these three missions and energizing the innovation cycle, we will enhance our R&D capabilities to create new businesses and achieve sustainable growth for existing businesses. In addition, in the 4th Medium-Term Business Plan, we have established a KPI for the number of collaborative and cooperative creations aimed at acquiring new technologies and markets, including the use of the “Open Lab” at KH i-Lab, which was established for collaborative creation with third parties, as well as joint research with external research institutions such as universities. This is to be used as a KPI for the level of activity in the value creation process, and we are aiming for 10 or more such projects in each fiscal year.

Achieving the “ideal type of person for 2030” set out in VISION 2030

To achieve the challenging goals set out in VISION 2030, we must dramatically improve productivity, and the foundation for doing that is our human resources. Driven by the belief that we must foster a corporate culture that empowers a diverse workforce and maximizes results, we are committed to implementing a variety of human resource policies and corporate culture reforms. Furthermore, we expect our employees to be professionals with a deep understanding of their own roles, focused on producing results, and always conscious of their own growth.

Throughout the course of business activities based on safe and stable operations, we have cultivated the strengths of our human resources: high analytical ability, a strong sense of responsibility, and high spirit of cooperation. On the other hand, in times of rapid change, it is necessary to further improve aspects such as taking on new challenges, speed, and specialization, with each and every employee taking an active role as a professional. This is what the “ideal type of person for 2030” set forth in VISION 2030 represents. In order to facilitate the active involvement of these professional human resources, we are introducing frameworks that allow each employee to proactively think about his or her career and develop his or her abilities, as well as merit-based allocation of human resources and a personnel system that places the right people in the right positions.

The ideal type of person for 2030:

- “Speed” in outperforming competitors
- “Innovations” responding to changes in the environment
- “Professionalism” to gain competitive advantage
- “Networking” to further develop strengths

Creating an organization where a diverse range of human resources can flourish and enhancing corporate value

Having spun off as an independent operating company from the then Kyowa Hakko Kirin Group in 2011, we were faced with the urgent task of strengthening the functionality of our administrative divisions. As we took steps to become independent and go public, we began hiring mid-career personnel with a wealth of experience in administrative divisions, and today there are many organizations where these personnel are in core positions, such as division managers. The Company as a whole has made considerable progress in diversifying its human resources, and we are now in the process of creating an organizational culture in which a diverse range of personnel can play an active role.

In addition, making use of team members with a wide range of backgrounds, skills, and experience will not only

compensate for labor shortages, but will also inject new perspectives not present in the company into the knowledge and experience we have cultivated so far, thereby facilitating the transition to an organizational culture that is responsive to change and maximizes results. For example, the contributions of these team members form the basis of efforts to use AI and IoT to systematize skills and expertise in production technology, which previously relied on individual craftsmanship, as well of efforts to take on more advanced research. I believe that an organizational climate in which all kinds of people can flourish is an indispensable driver for increasing corporate value.

Toward a strong corporate structure resilient in the face of change

In the past, KH Neochem’s various personnel systems and policies have been developed mainly by the Human Resources Division. However, in order to respond flexibly to new developments in this era of volatility and create an organization that is resilient in the face of change, it is important for personnel policies to be considered not just by Human Resources, but for the heads of each division to think independently about human resource strategies that relate to issues in their own division and to implement them in cooperation with HR. To this end, since 2020, the Company has been holding “personnel meetings” to discuss succession plans for division heads and other core positions. Until last year, discussions were led by full-time directors, but from this year, division heads will take the lead in discussing management development and issues to strengthen the organizational functions of their own divisions, and for positions where there are perceived deficiencies, they will formulate and implement training and hiring plans. By discussing various issues related to human resources, such as the development of future executive candidates, we hope to make the challenges faced by each division clearer, and by sharing these challenges, we hope to encourage division heads to think more broadly and deeply, elevating them into issues not only for their own divisions but also for the Company as a whole.

I also believe that by having our employees think and act on their own initiative, fully demonstrate their strengths, and play an active role in the Company, we can become a strong organization able to cope with any environment.

Technology and Information (R&D)

Energizing the Innovation Cycle

In order to achieve VISION 2030, we aim to energize the innovation cycle by undertaking the following three missions: (1) to create new businesses and develop new products and technologies, (2) to pursue productivity and efficiency in the manufacturing process for existing products, and (3) to broaden our intellectual property portfolio as a foundation for growth.

Our R&D Division employs a system to create new value by setting R&D goals based on issues identified at manufacturing sites and the research stage, customer

requests received during sales activities, and social issues identified through engagement with stakeholders. The R&D Center, which draws on external input to link the oxo technologies, refining technologies, and high-quality manufacturing expertise we have amassed over the years to new value, and the Innovation Strategy Division, which addresses social issues through technological collaboration with outside organizations based on open innovation, make use of this system in their research and development activities.



Value Creation using the Stage-Gate System

The Stage-Gate System is a framework for managing ideas from creation to commercialization. It begins with exploratory activities based on business issues and employee interest, divides the R&D process into multiple phases, establishes gates to evaluate ideas, and proceeds with commercialization of ideas that pass through the gates.

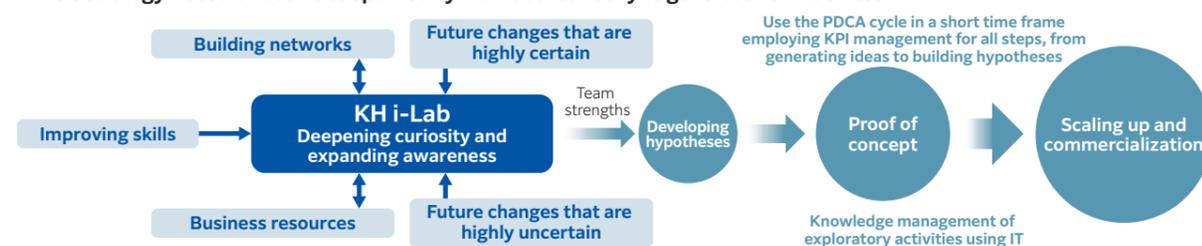
Taking the strengths of our existing businesses as a basis, the R&D Center works closely with individual divisions and collaborates extensively with external ventures, universities, and other organizations to research and develop new products and technologies. For example, we are actively promoting the development of new products in strategic domains by combining production technologies for existing products with a variety of evaluation techniques. We are also working to create new value from the so-called “seeds” represented by our proprietary technologies, intermediate materials, and

products, engaging in commissioned and joint research with other companies and universities to that end.

At our Innovation Strategy Division, we are pursuing a research program named the Wide Range Operation with Curiosity (WROC) strategy. This program categorizes and targets social issues that could arise in the future, from global-scale issues (megatrends) to niche issues faced by customers and consumers. Conducting in-depth investigations of phenomena that combine the interests of every team member, the strategy is intended to inspire free thinking not bound by rigid assumptions and a sense of ownership on the part of each individual.

In order to broaden our exploratory horizons, we are also actively engaged in activities outside the Company, such as taking advantage of the geographical location of the KH i-Lab to participate in the Kawasaki Deep Tech Accelerator, a support initiative for R&D startups in Kawasaki City, as well as interacting with startups in different fields.

WROC strategy: research activities sparked by individual curiosity to generate new business



Continuous innovation in manufacturing technology

In addition to supporting the stable operation of manufacturing facilities at the Yokkaichi and Chiba plants, the R&D Center also verifies technologies for new capital investment and develops technologies aimed at cost savings and carbon neutrality. In particular, it conducts ongoing efforts to strengthen the competitiveness of our existing products by improving productivity, upgrading production processes, and researching new manufacturing methods, as well as developing technologies for producing higher quality products. In increasing production capacity for our mainstay product, refrigeration lubricant raw materials, it has developed technology to improve its productivity. Moreover, in order to acquire new technologies and develop new products that take advantage of our existing technologies and facilities, it is working to improve our technical capabilities by expanding joint research and technical verification efforts with external parties. For example, it is developing new technologies that can handle a variety of raw materials, including those of natural origin.

An intellectual property strategy to strengthen our foundation for growth

Over the years, KH Neochem has amassed technologies in synthesis, high purification, plant operation, and equipment management, and our research and development has yielded new insights. We are now working to make these intangible assets visible, and one of the ways we are doing this is through our Technology Platform, a database systematizing our manufacturing technologies, accumulated expertise, and other intellectual property. In addition, by using information technology to facilitate access to past technical reports and other information, we will work to establish an environment that allows intellectual property to be readily used, and to harness these visualized intangible assets through internal innovation, open innovation, and other means.

In order to ensure freedom while maintaining and enhancing our competitiveness in the strategic domains of the environment, healthcare, electronics and new businesses, we are strategically securing intellectual property rights to some of our accumulated intangible assets.

TOPICS

Initiatives for New Business Creation

We are stepping up our activities by increasing the number of projects and collaborations with business and venture companies in different industries, with our KH i-Lab open lab taking the lead in these efforts.

In April 2022, we invested in an agri-biotech venture, Ac-Planta, Inc. Biostimulant materials, one of the products developed by Ac-Planta, are effective in increasing plants' tolerance to high temperatures and drought, and they are finding an increasing number of users in the agricultural sector. We expect that our work with Ac-Planta will contribute to the expansion of our business in the development of chemicals made from raw biomass materials.

Meanwhile, in the marine biodegradable resin market, we are working with a venture company on R&D aimed at developing bio-derived products and have begun sample evaluation aimed at attracting potential customers.



Left: Jong-Myong Kim, CEO, Ac-Planta
Right: Kohei Ito, Innovation Strategy Division, KH Neochem

Training through personnel exchanges with other companies

In order to foster innovators and facilitate collaborative projects, in 2020 we began an exchange of manager-level personnel for learning innovation mechanisms in different industries with NGK Spark Plug Co., Ltd. From fiscal year 2022, in order to develop the program into collaborative innovation aimed at solving more specific social issues, we are expanding the scope of the personnel exchange to include young researchers.

As part of our efforts to create synergies within the group, we are developing personnel through secondments, mainly from back offices, to Kurogane Kasei, which is engaged in the contracted development of electronic materials and other products.

Establishing an intellectual property governance structure and conducting activities

The Company has established an Intellectual Property Policy and a framework for conducting intellectual property activities aimed at sustainable growth, consisting of two meeting bodies. The first is the Intellectual Property Promotion Council, which determines and monitors activity policies at the company-wide level. The second is the Invention Advisory Committee, where the planning, sales, R&D, and production divisions work together to take decisions on intellectual property strategies.

Under these bodies, related divisions work together on intellectual property activities, discovering inventions and filing patent applications in line with business strategies and R&D, as well as responding to intellectual property risks.

Human Resources and Corporate Culture

Enhancing Our Human Resources

Personnel evaluation system/ Human resource development system

KH Neochem has introduced various personnel systems and measures aimed at “fostering a corporate culture that empowers a diverse range of human resources and that maximizes results.”

In terms of personnel evaluation, we identified issues such as seniority-based promotion and advancement, ambiguous evaluation standards, and lack of all-round balance in evaluations. To resolve these issues and achieve fair and credible evaluations and incentives based on employees’ duties and performance, in 2020 we introduced a “job-based” personnel system for managers under the slogan of “an evaluation and incentive system that rewards employees who take on challenges and perform.” In January 2023, we plan to expand the system to include general employment positions. By determining compensation based on duties and roles, and through early selection of outstanding young personnel, we will establish a merit-based system that employees can have confidence in.

In recent years, we have also focused on expanding our training programs, including targeted training for next-generation management candidates (graduate school program and GLOBIS Management School), management skills development training for managers (understanding the basics and roles of management), worker-manager training to promote self-awareness and growth among management candidates (assessment-method), and specialty-specific training to further increase the expertise required for different job categories.

In conjunction with the introduction of the new personnel system, we will continue to foster a sense of career ownership among employees and support them in their individual efforts and growth. This will be achieved through career development support (in which employees set medium-term career goals in consultation with their supervisors and act proactively in their daily work to achieve them) and the widespread adoption of 1-on-1 meetings between supervisors and subordinates.

We aim to achieve sustainable growth by creating an environment in which a diverse range of employees can fully demonstrate their abilities and flourish.

Education System

Position	Position-specific			Specialized skills training	On-the-job training and career development	Language training
	Management skills	Human skills	Solution skills			
Managers	Executive candidate fostering Management skills New managers				Human development meeting Skills development Workshop for new employees/trainers	Self-development support system Language training and learning support for instructor/dispatch
Leaders		Management candidate fostering (via assessments)		R&D Production technologies, engineering Sales Planning and management		
Mid-level employees	Required training Advanced Required training Fundamental	Leadership Mentoring	Presentations (advanced) Problem-solving knowledge Logical thinking Presentations (basic)			
Young employees	Required training Basic		Logical writing Objective thinking New employee		New employees' trainer system	

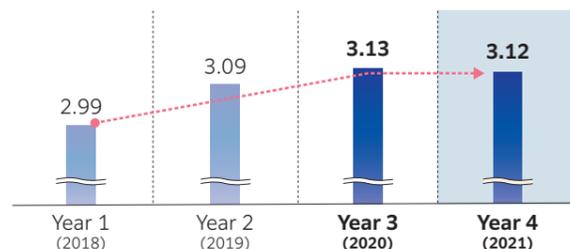
Reforming our Corporate Culture and Improving Engagement

Since 2018, we have conducted an engagement survey of all employees and implemented measures to improve engagement in order to increase productivity in the workplace. These include training and meetings for managers to improve team engagement and the “One Word Makes a Difference” campaign to invigorate day-to-day communication.

The fourth annual engagement survey in fiscal year 2021 showed an improvement in company-wide engagement levels compared to the first year, but it remained almost unchanged compared to the previous year. Some departments have seen a decline in

engagement scores from the previous year, and we will investigate the cause and implement countermeasures for improvement. Interviews were conducted with employees in departments with low scores to clarify issues and to develop measures to address each of them.

Engagement survey results



Promoting diversity

In accordance with our belief that the success of human resources with a diverse range of values is essential for the sustainable growth of a company, we have been actively recruiting mid-career professionals over the past several years. We feel that recently, the participation and collaboration of many people with various different backgrounds, experiences, and skills has generated a wide range of ideas and options within the company, and that we are now creating ways to speed up innovation and growth. In 2021, mid-career hires made up 67% of the total number of those joining the company. We are also taking measures in relation to the Act on Advancement of Measures to Support Raising Next-Generation Children and the Act on the Promotion of Female Participation and Career Advancement in the Workplace. In addition to making efforts to actively identify and recruit women managers and candidates in order to encourage the participation and advancement of female employees, we have also set out five goals in our Plan of Action for General Employers.

In order to achieve these goals, we hold Diversity & Inclusion Lectures for directors and division heads to raise awareness that diversity is an issue that affects us all. We will continue to develop new systems and other

measures to support flexible work styles for different life stages and to help employees balance work with childcare, nursing care, and medical treatment.

Furthermore, we will undertake a wide range of activities aimed at fostering a corporate culture in which each and every employee recognizes each other’s varied values, and where everyone can play an active role regardless of their gender or lifestyle.

Plan of Action for General Employers – Targets

- 1 At least 9% of management positions held by women
- 2 At least 15% of career-track positions held by women
- 3 100% of female employees to take maternity leave, and at least 20% of male employees to take paternity leave
- 4 Establish systems to ensure long-term, stable employment
- 5 At least 80% of annual paid leave taken (Plan period: April 2022 – December 2024)

Improving the Working Environment

Creating workplaces where it is easy to work

KH Neochem is committed to creating comfortable workplaces that respect each individual’s work-life balance.

We have various systems in place to allow employees to work flexibly to suit their life stages, including regular leave days, a flextime system, a paid leave system that allows employees to take paid leave in half-day increments, and a work-from-home system for employees who need to look after children or care for family members.

In addition, in terms of countermeasures against COVID-19, the Company has implemented and maintained looser restrictions on working from home, temporary elimination of core hours, effective use of web conferencing, as well as encouraging staggered work schedules. We will continue to give maximum consideration to preventing the spread of disease and act flexibly in light of social conditions.

In order to establish appropriate and positive labor-management relations, a Management Council consisting of management and labor union representatives has been established at each workplace, meeting regularly to discuss management conditions, company policies, and other issues.

Other initiatives include mental health care, including stress checks and interviews with occupational physicians, and safety activities, such as the thorough implementation of pointing and calling in plants and hazard prediction activities, and through these, we hope

to create an environment where all employees can work in good health and peace of mind.

Improving the working environment by upgrading office buildings

In March 2022, we completed an addition to the Kasumigaura Manufacturing Office at our Yokkaichi Plant. In addition to creating a comfortable working environment for employees, we have taken effective countermeasures against natural disasters such as earthquakes and tsunamis. We are also working to strengthen our quality system by installing a clean room of the highest standard at our facility. (see p.24)

Our Head Office moved to its current building in 2019 to improve the work environment, and we are working on various measures to provide a better working environment at our other locations as well.



Yokkaichi Kasumigaura Manufacturing Office
Photo: Ena Mitsui (Kawasumi · Kobayashi Kenji Photograph Office)

Roundtable Discussion with Outside Directors

The Role of Corporate Governance in Sustainable Management

In 2021, we continued to enhance our corporate governance through measures such as clarifying the roles of execution and supervision. We invited our independent outside directors for a discussion on the corporate governance needed to drive Sustainable Management, one of the goals of our 4th Medium-Term Business Plan.



Yuji Kikuchi

Independent Outside Director

Appointed in March 2020. Attorney. He has experience working for the Securities and Exchange Surveillance Commission and expertise in corporate law and corporate governance.

Sayoko Miyairi

Independent Outside Director

Appointed in March 2019. Based on her work experience as an executive at a consulting firm and her extensive experience and insight as a university professor, she provides opinions and recommendations, especially for human resource development and ways to improve organizational culture and engagement.

Jun Tsuchiya

Independent Outside Director

Appointed in March 2020. He has management know-how cultivated at global companies and advanced technical knowledge in the chemical industry.

Did the separation of execution and supervision in April 2021 change the Board of Directors in any way?

Miyairi Over a year has passed since we clearly separated the execution and supervision functions, and I can feel things starting to come together. The directors see things from a higher viewpoint now and at the Board of Directors' meetings we are able to discuss issues that concern the whole Company from a broad, medium- to long-term perspective. The executive officers have also begun providing explanations that show an awareness of their executive responsibilities.

Tsuchiya My impression of discussions at Board of Directors' meetings is that they are comprehensive and well organized. I also think we hold enough discussions on finances and other quantitative matters. The next challenge is to objectively discuss non-financial issues

that are difficult to quantify. When it comes to that, we outside directors have a vital role to play in suggesting alternative ways of thinking to President Takahashi. Furthermore, in this age when the chemical industry is facing major upheavals, companies on the scale of KH Neochem must also change in order to stand firm and maintain or increase share value and continue their business. I hope we can discuss how to evolve the business model and similar matters at the Board of Directors' meeting and other fora. I would honestly welcome it if KH Neochem was determined to squeeze every last drop of value out of us outside directors.

Kikuchi Increasing the effectiveness of the Board of Directors is directly linked to making KH Neochem a good company, or in other words, to increase corporate value, and I think the current Board of Directors is devoting a considerable amount of brainpower to that issue. For the sake of the Company's medium and long-term strategy, it is essential for us to slowly but surely organize our

thoughts and hold repeated discussions while sharing ideas. If we give up on doing that, we will not grow, but I think we are having some very meaningful discussions on that issue. The strength of this Company's Board of Directors that I really appreciate is that they still ask for opinions from outside the Company for topics that have already been thoroughly debated by Company executives, and they respond to those opinions with sincerity.

Miyairi It is an opportunity for the Board of Directors to reconsider issues from scratch even if they have been fully discussed internally. On such occasions, the Company does not hesitate to explain matters afresh, and there have been cases where President Takahashi himself re-explained an issue we were having a hard time grasping. This attitude really shows the Company's seriousness.

Apart from the Board of Directors, have there been any new governance-related initiatives?

Miyairi We three outside directors interviewed division heads in the last fiscal year. The catalyst for this was the Nomination and Compensation Advisory Committee that Mr. Kikuchi chairs. When officers are nominated, it is impossible for us to determine whether they are capable of addressing the issues they are faced with just by having a list of candidates thrust on us and hearing an explanation. That is why we held remote interviews with all the division heads, who will be the candidates for the next generation of management. We invited the division heads to tell us about themselves, and we also asked them their thoughts and attitudes towards the 4th Medium-Term Business Plan, which was almost fully written at the point, as well as any problems they sensed with it. This gave us the chance to know everyone's faces and personalities, so it was a very effective initiative.

Tsuchiya Doing it remotely was a great move. If it had been in person, they may have been intimidated by being surrounded by three outside directors. Ms. Miyairi had a calming effect on the meetings, so we were able to have relaxed discussions with everyone.

Miyairi In the interviews, we got to hear their frank thoughts and feelings about their daily duties and discussed how to make improvements. We learned about the circumstances executives are in and were able to communicate with each other, and we are putting these things to good use in monitoring. The Nomination and Compensation Advisory Committee was also able to have several discussions based on the information gained from the division head interviews, which will help us evaluate officers properly. We are in a position of accountability, and I am confident that management is being carried out satisfactorily in that regard.

Kikuchi It takes a lot of time and effort to interview division heads so this initiative hardly ever takes place at other companies, but we really treasure these opportunities to get to know the people in the next generation. Furthermore, the Nomination and Compensation Advisory Committee at KH Neochem meets more frequently than those at other companies. One of the things we considered last year was a revision to executive compensation, and we discussed the matter until the committee as a whole was in agreement. I think our discussions are very effective.

How do you evaluate the materiality and KPIs that were newly formulated in line with the Seven Promises?

Tsuchiya First of all, I think expressing our promises to stakeholders in writing last year through the Seven Promises was an excellent idea. All seven promises are qualitative, and the Company has expressed how it intends to approach Sustainable Management in clear, simple language instead of with numbers. I am sure it is easy for employees to understand as well. At the same time, KH Neochem has also set the materiality and KPIs for the duration of its 4th Medium-Term Business Plan as quantitative targets. Setting KPIs allows the executives to manage the numerical values, so it will be critical for the Board of Directors to focus on and supervise the essential aspects of the Seven Promises going forward.

Kikuchi That is true. Setting KPIs makes it easy for everyone to evaluate progress on targets, but in my opinion, we must focus on the circumstances and purposes hidden behind the KPI numbers. In other words, we should always be thinking beyond KPIs. In line with the introduction of the Corporate Governance Code, I think it is good that the Company's governance can be visualized thanks to KPIs, but the crucial thing is what lies beyond.



Roundtable Discussion with Outside Directors

Miyairi In the first place, things like standards are a means to measure your target object. It is not enough to meet your KPI target values: you must ensure that you have actually achieved your real objective. When it comes to actual work, if we become obsessed with making the KPI targets progress the way we want to, we may end up with the very opposite result from our original aim, so we need to be careful.

Tsuchiya Yes, it is true that the executives can manage the quantitative aspects of the KPIs. They can manage progress, analyze the reasons behind the results and formulate countermeasures, but judging quality is much harder. This is particularly important from the perspective of whether they are linked to Sustainable Management or not. I have three standards for determining whether management is sustainable. First, is it constantly creating jobs? Second, is it ceaselessly striving to create new businesses? That is, does it put in the work necessary to change? Third, is there ultimately satisfaction with the results? When it comes to change, it is not enough to boldly declare all the wonderful things you plan to do. It must be accompanied by leadership and the stakeholders must be satisfied and in agreement, or no one will follow you. A company that can meet all three standards is a good one. I hope we can ensure that we are doing these things as we progress.

Kikuchi That would certainly be the focus point that everyone can agree on. You might call it the viewpoint from behind the KPIs, or even from the undercurrent beneath them.

Tsuchiya Along with that, I have been recommending the creation of a system that supports risk-taking since last year. An example would be a management exercise involving a simulation of an M&A or investment. If there's a missing piece in terms of management, they can consider an imaginary company that could fill that gap and calculate it from the point of view of an M&A. That would be an opportunity to think about management and may even lead to changes.



Miyairi Right now the Company is seriously engaged in creating new businesses, but when it comes to risk-taking, it is not enough to merely promote the idea of trying new things. We also need a company culture that naturally accepts risk-taking and thanks people for the attempt even if they do not succeed. It is essential for that culture and value system to be clear from the words and attitude of management so that the Company as a whole can take risks without fear.

What are your thoughts on employee awareness of risk management and compliance?

Kikuchi Due to the nature of my work, I am often involved in preparing for all kinds of problems and setting various rules. However making rules stricter and checking thoroughly to ensure there are no mistakes does not necessarily mean there will be no slips or errors.

I believe that shipping out high-quality goods continuously and making customers happy is a manufacturer's reason for being. It may be paradoxical from my standpoint as an attorney, but I think that instead of setting detailed and specific rules, it is more meaningful for every employee to regard themselves as a professional, to think proactively and to act independently. It is one of management's responsibilities to ensure that this mindset and behavior thoroughly permeates the Company. It would be best if the president and the rest of the management team went to offices and factories and spoke with employees directly, but depending on the situation, it might be good if we outside directors had the chance to discuss matters with frontline staff as well.

Tsuchiya I have been involved in the chemical industry for many years, and I have realized that the state of employee awareness changes as the times do. When they are taught things, not only must they understand them logically and emotionally, but they must also be convinced of them. For example, the philosopher Aristotle is known for proposing the concept of the logos (logic), pathos (passion) and ethos (trust). Out of those three, I think ethos is the most essential. Logos is basically logic and does not change much with the times. On the other hand, in the 70s and 80s, you would have supervisors frequently inviting their subordinates out for drinks and cautioning them about mistakes to avoid as they drank. That is pathos. Employees saying things in unison at morning gatherings, such as "No workplace accidents for XX days!" is also pathos, and it is also important. In the world today, however, logos and pathos are not enough for effective management. You must have ethos. That is conviction, and trust. In the 2020s, we must be able to discuss calmly matters like "What would best in this situation?" without drinking anything.

Miyairi I must say I'm impressed by Mr. Tsuchiya's fervor (haha). Based on my past consulting experience, I can say

that problems and misconduct can still occur even if you prepare lists and meticulously check items off. Moreover, not everything can be converted to rules or written in a manual. Not just that, but as soon as you set a boundary of "assumptions" through rules and manuals, the category of "outside assumptions" appears as well, and you create an escape route that allows people to claim that they were simply following orders or obeying the rules. What really matters is the sensitivity to realize on one's own that events you have never experienced and that are not written in checklists and manuals may occur. We need to create an organization with human resources that can always detect both small daily changes and the possibility of once-a-century events no one has ever experienced, and it must be an organization with management that can draw out and apply the opinions of such people. The way we communicate will be crucial to achieving that.

Tsuchiya It is vital to evaluate employees positively for being able to do what is expected of them. In the past, just seeing the smile on your scary boss's face when you did what was expected might have been enough to let a subordinate know that he or she was doing well. Right now, however, you will need a clearer and more specific evaluation method to convey the message.

Miyairi Instead of evaluating people by deducting points, it is better to add points for things they achieved. Instead of enumerating the things they could not do, thinking about why they succeeded will help them understand why they are doing what they are doing and why it matters.

Tsuchiya It all boils down to conviction in the end. Ethos. In this day and age, athletes like Shohei Ohtani approach their sports with ethos (conviction) as well as pathos (passion), and in my opinion, that is why they perform so outstandingly. The same applies to everyday work.

What are the challenges to raising corporate value in the medium to long term?

Kikuchi There is no doubt that KH Neochem's products are highly beneficial and useful to society. I think the Company has promoted that fact sufficiently until now, but the fact is that the specifics they are promoting will lose appeal over time. Figuring out how to keep and increase interest in the medium and long term will be a challenge.

Tsuchiya What I think will be a challenge is how management and the Company will respond to drastic changes in a world where the external environment changes with dizzying speed. That is something only experience can teach. Certainly the Company has weathered many changes since it became independent



and before and after it was listed on the stock exchange, but the number of employees who personally experienced those periods will gradually reduce, so we need to consider how to respond to changes that may occur in the future.

Miyairi My biggest concern is people. Human resources. The Company has set improving employee engagement as a KPI, and since KH Neochem is in the manufacturing industry, it needs to improve practical work skills in order for its business to grow. This is directly connected to the awareness and ambition of the employees working in the factories. Although the Company is recruiting more mid-career workers and increasing diversity, I believe that by actively accepting diverse personnel in the factories and other places, they will be able to foster a mindset of taking a personal interest in external changes and encouraging transformation.

Additionally, investing in equipment is just as vital as human resources. Trying to start new businesses is definitely important, but making the capital investments needed to increase the productivity of the main businesses is of chief importance. We will work hard to help investors understand that such investments will lead to a stable supply of products with market value in the medium to long term. For the issue of increasing the practical abilities of the workforce, which cannot necessarily be measured quantitatively with KPIs, we outside directors will provide enthusiastic support for finding a solution and approach the matter from a medium- to long-term viewpoint with the Seven Promises ever in mind.

Corporate Governance

Basic Conceptual Approach

Guided by the Corporate Mission “Realizing a brighter tomorrow for society through the power of chemistry,” the KH Neochem Group is committed to realizing sustained growth; medium- to long-term increases in corporate value; and sound management that assures transparency and fairness. To achieve these goals, we are building and improving a corporate governance structure that reflects the points outlined below.

- To strive for substantive assurance of the rights and equality of our shareholders and engage in constructive dialogue with them.
- To disclose accurate financial information and non-financial information that is useful in constructive dialogues with our shareholders and other similar purposes, with appropriate timing and in a readily understandable format.
- To strive toward appropriate cooperation with stakeholders other than our shareholders.
- For corporate executives and the Board of Directors to provide leadership for building a corporate culture of respect for the rights and perspectives of our various stakeholders and for ethics in business activities.
- For the Board of Directors to fulfill its responsibility to exercise effective supervision from an independent perspective over the execution of duties by corporate executives, to make every effort to develop an environment that supports corporate management risk-taking, and so on.

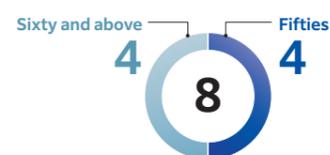
History of Strengthening Governance

■ Full-time director and outside officer (male)
 ■ Independent outside officer (male)
 ■ Independent outside officer (female)

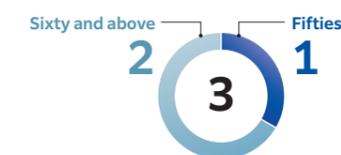
(The term “officer” as used in this chart refers to board directors and corporate auditors)

Year	Key Events	Directors	Audit & Supervisory Board member	Ratio of independent outside directors	Ratio of independent outside officers	Ratio of female officers
2013	Introduced Corporate Officer system	8	2	0%	0%	0%
2014	Established an optional Compensation Committee	8	2	0%	0%	0%
2016	Established the Corporate Policy Established an optional Nomination & Compensation Advisory Committee Appointed one independent outside director Appointed two independent outside audit & supervisory board members Listed on the First Section of the Tokyo Stock Exchange Published a corporate governance report	9	3	14.3%	30.0%	0%
2017	Started the evaluation of effectiveness of the Board of Directors Added one independent outside director	10	3	22.2%	33.3%	0%
2018	Terminated the retirement benefit plan for board members Introduced performance-linked stock compensation system	10	3	22.2%	33.3%	0%
2019	Appointed one independent outside director (female)	11	3	28.6%	40.0%	10.0%
2020	Added one independent outside director Appointed one independent outside audit & supervisory board member (female) Established the Compliance Code	12	4	33.3%	45.0%	12.5%
2021	Expanded the transfer of operational execution authority Operation of performance-linked stock compensation system Established various policies (refer to page 54)	13	4	37.5%	45.5%	18.2%
2022	Revised the Basic Policy for the Internal Control System Moved to the Tokyo Stock Exchange Prime Market	13	4	37.5%	45.5%	18.2%

Age composition of the Board of Directors



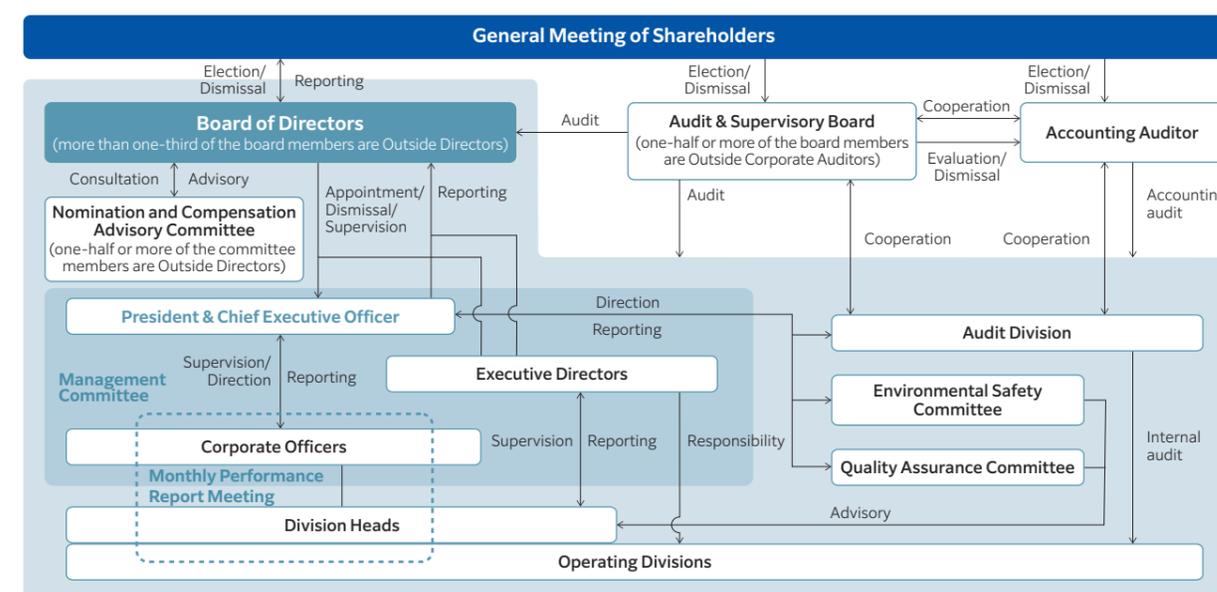
Age composition of the Audit & Supervisory Board



Composition of the discretionary Nomination and Compensation Committee (Chair: outside director)



Overview of Corporate Governance Structure



(Currently reviewing the organization including committees and meetings toward driving an effective sustainable management.)

Board of Directors

The Board of Directors of KH Neochem promotes sustainable growth and improvement of medium- to long-term corporate value and works to build and operate an appropriate corporate governance structure while functioning as an operational decision-making body on items in laws, regulations, and the Articles of Incorporation, as well as important management matters. It also functions as a supervisory body over the execution of duties by the executive directors. It consists of eight directors, including three outside directors. As a rule, the Board of Directors meets regularly (once a month). Extraordinary meetings of the Board of Directors can be convened as necessary to deal with urgent management issues.

Audit & Supervisory Board and Audit & Supervisory Board Members

Audit & Supervisory Board members meet with the Board of Directors, Management Committee, and other

Main agenda items for Board of Directors meetings in 2021

Management strategy	<ul style="list-style-type: none"> • The 4th Medium-Term Business Plan • Value creation story
Governance	<ul style="list-style-type: none"> • Evaluation of the effectiveness of the Board of Directors (Discussion of open issues and action plan) • Activity report of the Nomination and Compensation Advisory Committee • Compliance with the revised Corporate Governance Code • Response to the reorganization of the Tokyo Stock Exchange Markets • Establishment, revision, or termination of various policies, rules, and regulations
Business and other	<ul style="list-style-type: none"> • Fiscal year budget and investment plan • Capital investment projects for performance materials • Response to COVID-19

important committees, where they audit the execution of duties by executive directors with the performance, including, but not limited to, stating their views as required, examining important documents under consideration for approval. They also take steps for mutual coordination with the Audit Division and accounting auditors by regularly exchanging views and information, holding discussions with them, and so on. The KH Neochem Audit & Supervisory Board has three members, including two outside members. As a rule, the Audit & Supervisory Board holds regular meetings once a month and also holds extraordinary meetings as necessary. Audit & Supervisory Board members coordinate with each other, formulating auditing plans, examining audit implementation status and audit results, and engaging in related activities.

Nomination and Compensation Advisory Committee

KH Neochem has established a discretionary Nomination and Compensation Advisory Committee with an outside director as the chair and more than half of the members are outside directors. This committee acts as an advisory body to the Board of Directors to reinforce the independence, objectivity, and transparency of directors' actions and deliberations on the nomination and compensation of executive directors and executive officers.

Main agenda items for the Nomination and Compensation Advisory Committee in 2021

- Conducting interviews with division heads for succession planning and next-generation talent development
- Reviewing the budget for compensation for Directors
- Evaluation of Corporate Officers

Corporate Governance

Evaluation of Effectiveness of the Board of Directors

The effectiveness of the Board of Directors is evaluated once a year with advice from an external agency. The members of the Board of Directors consider specific improvements based on the results, and ongoing efforts are made to improve the functioning of the Board by implementing those measures.

To date, the effectiveness of the Board of Directors as a whole has been recognized as being secured, as the role, composition, and operation, etc. of the Board of Directors have all received positive evaluations in the effectiveness evaluation.

Initiatives to date

- 2018** From the viewpoint of separation of management and execution, matters to be reported and matters to be resolved shall be limited to important matters related to management decisions.
Discussions that do not require a resolution are held to further enhance discussions at Board of Directors meetings.
- 2019** In order to enhance discussions on subjects such as strengthening the supervisory function and medium- and long-term management strategies, key initiatives will be monitored and resolutions that are formalities will be reviewed.
- 2020** The agenda will be set to enhance discussions on important issues such as basic management policies and sustainable improvement of corporate value.
Roles will be clarified and executive training provided using the skills matrix to further leverage the strengths of the Board of Directors.

2021 Evaluation of Effectiveness

- Implementation period: Sep to Nov 2021
- Method of evaluation of effectiveness: survey by outside party (multiple choice/descriptive) (third party used to ensure anonymity)
- Target: 11 persons total (8 directors, 3 Audit & Supervisory Board members)
- Main topics of the survey:
 - basic points regarding the functions, composition, and operation of the Board of Directors
 - Status of improvement on issues from previous year
 - Items on sustainability

Results of evaluation of effectiveness

The effectiveness of the Board of Directors as a whole was deemed to have been ensured. There was also some improvement in the survey item that received a low evaluation last year (enhanced discussion on basic management policies and important issues). The analysis also noted as strengths the fact that there is free and constructive exchange of opinions in the Board meetings, and that the Board of Directors has a sufficient balance, diversity, and size in terms of the knowledge, experience, and abilities necessary to formulate management policies and supervise the Company.

Issues

Various discussions from a medium- to long-term perspective are even more necessary for "Sustainable Management." Effective KPIs and appropriate monitoring are necessary to achieve the 4th Medium-Term Business Plan.

Improvement initiatives for 2022

- 1 Set agendas for Sustainable Management and medium- to long-term growth strategy
- 2 Conduct free discussion outside of Board meetings
- 3 Enhance executive training and conduct KPI monitoring

State of initiatives in 2022

- 1 Set agendas for key themes (Medium-Term Business Plan, climate change, etc.) and conducted discussions.
- 2 Conduct free discussions (get-togethers) after Board meetings, and plan to hold offsite meetings to further deepen discussions.
- 3 Hold mutual training sessions for directors, set the materiality and KPIs for the Medium-Term Business Plan, and monitor them on a quarterly basis.

Support System for Outside Directors and Outside Audit & Supervisory Board Members

Agenda items and important information to be discussed at the Board of Directors meetings are distributed to outside directors and outside Audit & Supervisory Board members in advance, and explanations are provided in advance by the secretariat and the division making the proposal. For newly appointed outside directors and Audit & Supervisory Board members, we strive to deepen their understanding of our Group by providing them with materials and information and arranging briefing sessions. We also provide opportunities for tours of our plants and subsidiaries, and opportunities for interaction and dialogue with employees on the front lines.

Executive Training

We have invited experts, lawyers, and other professionals to provide ongoing training opportunities for management. In 2021, various study sessions were held under the main themes of "corporate value," "sustainability," and "internal control and risk management." In addition, we have been conducting executive training by Professor Emeritus Kunio Ito of Hitotsubashi University since 2019. In 2021 he gave a lecture on the theme of "corporate value management" and on "human capital management" in 2022, and engaged in a lively exchange of views.



Executive training by Professor Emeritus Kunio Ito of Hitotsubashi University

Executive Compensation, etc.

Compensation for directors consists of monetary compensation made up of fixed compensation and performance-linked compensation, as well as performance-linked stock compensation. Outside directors and Audit & Supervisory Board members are compensated in cash (consisting solely of a fixed monthly amount).

In determining compensation, a discretionary Nomination and Compensation Advisory Committee has been established to ensure the appropriateness and transparency of the level of compensation for directors. The Committee deliberates on policies and levels of compensation for directors and Audit & Supervisory Board members, and even confirms the results of calculations of individual compensation for each director and Audit & Supervisory Board member.

The basic policy regarding the compensation for directors (excluding outside directors) is as follows:

- Provides sufficient incentive to improve performance and increase corporate value over the medium to long term
- Has a competitive edge in attracting diverse and superior talent
- Shares interests with shareholders and other stakeholders

Monetary Compensation

Around 30% of all monetary compensation is performance linked, and it is calculated using the rate at which planned earnings are achieved and the average achievement rate over the past five years.

Performance-linked, Share-based Compensation

Performance-linked, share-based compensation is calculated using the rate at which planned earnings are achieved on the condition that consolidated operating income is in the black. While putting more priority on performance, this compensation system clarifies the link with the stock price, providing directors with both benefit from increases in the stock price and the risk of decreases in the stock price with shareholders, thereby increasing awareness of contributing to improvement of medium- to long-term performance and increasing of corporate value.

Performance-linked Compensation Indicators

The evaluation index used for performance-linked compensation (both monetary compensation and share-based compensation) is EBITDA* (consolidated), taking into account the characteristics of the Company's business and other factors. Because the Company owns a large number of facilities, it considers EBITDA, which includes depreciation and amortization in its calculations, to be a useful indicator.

*EBITDA is calculated using the following formula: EBITDA = Operating income + depreciation and amortization + amortization of goodwill (the amount from the consolidated statement of income is used for operating income, while the amounts from the consolidated statement of cash flows are used for depreciation and amortization and amortization of goodwill).

Total Amount of Compensation by Officer Classification, Total Amount of Compensation by Category, and Number of Officers Subject to Compensation (2021)

Officer classification	Total amount of compensation (million yen)	Total amount of compensation by category (million yen)			Number of officers subject to compensation
		Monetary compensation		Share-based compensation	
		Fixed	Performance-linked	Performance-linked	
Directors (excluding outside directors)	168	104	29	34	5
Audit & Supervisory Board members (excluding outside members)	21	21	-	-	1
Outside directors	25	25	-	-	3
Outside Audit & Supervisory Board members	14	14	-	-	2

Cross Shareholdings

To improve corporate value, KH Neochem owns shares in companies considered important for maintaining medium- and long-term business connections and synergies that are based on an understanding of the importance of each other's management policies, business lines, and business dealings.

Approximately 50% of investment shares on the balance sheet are unlisted shares, of these approximately 90% are shares in affiliated companies acquired through joint investments in key materials manufacturers and in management companies for joint industrial complexes. Thus, these holdings truly are business investments.

For shares in listed companies, KH Neochem reviews the rationale for each shareholding, including appraisal losses and gains, compliance status, and business dealings with the Company. Decisions are made based on an effective balance between the cost of capital and contributions to KH Neochem earnings, or from comprehensive and medium- or long-term perspectives, including access to market information or R&D initiatives.

Verification is conducted annually by the Board of Directors, and during 2022, we plan to reduce the amount of listed stocks held as of the end of the previous fiscal year by approximately 10% of the amount recorded on the balance sheet.

Corporate Governance

Members of the Board

Directors



Michio Takahashi

Representative Director President & CEO
Chief Executive Officer

Apr. 1987 Joined Kyowa Hako Kogyo Co., Ltd.
July 2011 General Manager of Basic Chemicals Division of Kyowa Hako Chemical Co., Ltd. (now the Company)
Mar. 2013 Director and Executive Officer of the Company
Mar. 2016 Managing Director and Executive Officer of the Company
Mar. 2017 Executive Vice President & Executive Officer of the Company
Mar. 2019 Representative Director, President and Executive Officer of the Company
Mar. 2020 Representative Director, President and Chief Executive Officer of the Company (to present)



Masaya Hamamoto

Board Director
Senior Corporate Officer

Apr. 1985 Joined The Industrial Bank of Japan, Limited. (now Mizuho Bank, Ltd.)
Apr. 2011 General Manager of Osaka Corporate Banking Division No. 1 of Mizuho Corporate Bank, Ltd. (now Mizuho Bank, Ltd.)
Apr. 2014 Executive Officer and General Manager of Corporate Banking Division No. 5 of Mizuho Bank, Ltd. (retired in March 2015)
Apr. 2015 Executive Officer of IBJ Leasing Company, Limited. (now Mizuho Leasing Company, Limited)
June 2015 Director, Executive Officer and General Manager of Corporate Planning Department of IBJ Leasing Company, Limited.
Apr. 2016 Managing Director, Managing Executive Officer and General Manager of Corporate Planning Department of IBJ Leasing Company, Limited. (retired in May 2019)
June 2019 Joined the Company
Sept. 2019 Senior Executive Officer of the Company
Mar. 2020 Board Director & Senior Corporate Officer & Chief Financial Officer of the Company (to present)



Sayoko Miyairi

Independent Outside Director

Apr. 1979 Joined Hitachi, Ltd.
July 1982 Joined Bank of America, N.A., Asia Headquarters
Mar. 1986 Joined Pasona Inc. and seconded and then transferred to Edu Consult Co., Ltd. (now Scholar Consult Co., Ltd.)
Apr. 2000 Partner of Scholar Consult Co., Ltd. (to present)
Apr. 2000 Assistant Professor of Nihonbashi Gakkan University
Jan. 2005 Director of Scholar Consult Co., Ltd.
Apr. 2008 Professor of Nihonbashi Gakkan University (now Kaichi International University)
Mar. 2019 Outside Director of the Company (to present)
Aug. 2020 Outside Director of Toyo Engineering Corporation (to present)
Apr. 2022 Emerita and Guest Professor of Kaichi International University (to present)
Jun. 2022 Outside Director of NIHON SEIKAN K.K. (to present)



Toshihiro Matsuoka

Board Director
Senior Corporate Officer

Apr. 1987 Joined Kyowa Hako Kogyo Co., Ltd.
Apr. 2008 General Manager of Production Administration Division of Kyowa Hako Chemical Co., Ltd. (now the Company)
June 2011 General Manager of Yokkaichi Plant of the Company
Apr. 2013 Executive Officer of the Company
Mar. 2014 Director and Executive Officer of the Company
Mar. 2018 Managing Director and Executive Officer of the Company
Mar. 2020 Board Director & Senior Corporate Officer of the Company (to present)



Yukihiro Isogai

Board Director
Senior Corporate Officer

Apr. 1987 Joined Toaboshoku Co., Ltd.
Aug. 2000 Joined YIC Co., Ltd.
Oct. 2001 Joined Kyowa Hako Kogyo Co., Ltd.
Jan. 2016 General Manager of Yokkaichi Research Laboratories, R&D Office of the Company
Dec. 2017 General Manager of R&D Office and General Manager of Yokkaichi Research Laboratories, R&D Office of the Company
Jan. 2018 Executive Officer of the Company
Mar. 2019 Director & Executive Officer of the Company
Mar. 2022 Board Director and Senior Corporate Officer of the Company (to present)



Jun Tsuchiya

Independent Outside Director

Apr. 1981 Joined Argonne National Laboratory, U.S.A.
May 1983 Joined Lawrence Berkeley National Laboratory, U.S.A.
Feb. 1984 Joined Mitsubishi Chemical Industries Limited (now Mitsubishi Chemical Corporation)
Jan. 1999 Seconded as President to Verbatim Corporation, U.S.A. subsidiary of Mitsubishi Chemical Limited
Apr. 2001 General Manager of Corporate Planning Office of Mitsubishi Chemical Industries Limited (retired in January 2002)
Feb. 2002 Director of Rohm & Haas Japan K.K. (now Dow Chemical Japan Limited)
Jan. 2007 Representative Director and President of Heraeus K.K.
Oct. 2018 CEO of Tsuchiya International Consulting Corp. (to present)
June 2019 Outside Director of Soken Chemical & Engineering Co., Ltd. (to present)
Mar. 2020 Outside Director of the Company (to present)



Tatsuro Niiya

Board Director
Senior Corporate Officer

Apr. 1988 Joined Kyowa Hako Kogyo Co., Ltd.
July 2013 General Manager of Chemical Sales & Marketing Division, Business Headquarters Office of the Company
Jan. 2016 Executive Officer of the Company
Mar. 2017 Director & Executive Officer of the Company
Mar. 2019 Managing Director & Executive Officer of the Company
Mar. 2020 Board Director & Senior Corporate Officer of the Company (to present)



Yuji Kikuchi

Independent Outside Director

Apr. 1992 Registered as an attorney at law, Entered Sakano, Seo & Hashimoto Law Office (now Tokyo Hatchobori Law Office)
Apr. 2002 Partner of Tokyo Hatchobori Law Office
Mar. 2003 Joined the Securities and Exchange Surveillance Commission (Coordination and Inspection Division, Executive Bureau)
Mar. 2005 Returned to being a partner at Tokyo Hatchobori Law Office (to present)
June 2010 Outside Audit & Supervisory Board Member of Inui Warehouse Co., Ltd. (now Inui Global Logistics Co., Ltd.)
June 2014 Outside Audit & Supervisory Board Member of NEC Networks & System Integration Corporation
Mar. 2020 Outside Director of the Company (to present)

Audit & Supervisory Board Members

Tokuo Odo

Audit & Supervisory Board Member

Kazuhiro Kawai

Outside Audit & Supervisory Board Member
(Independent Auditor)

Keiko Tamura

Outside Audit & Supervisory Board Member
(Independent Auditor)

Corporate Officers

Seiji Saito

General Manager, Yokkaichi Plant

Toshiaki Ogata

President of Kurogane Kasei Co., Ltd.

Akio Nakahashi

General Manager, Chiba Plant

Yoshiaki Kondo

Head of Environment, Safety and Quality Assurance

Hideki Shimizu

Head of Corporate Planning

Isao Takahashi

Head of Corporate Administration, Public Relations, Legal and Compliance

Akira Kamimura

Head of Accounting, FP&A, Finance and IR

Atsushi Tokumitsu

Head of Procurement

Katsunori Sato

Head of Sales & Marketing

Hideo Kurokawa

Head of Production Planning and Engineering

Board of Director Members (Board Director/Audit & Supervisory Board Member)									Skill matrix						
	Titles	Number of years in office	Independency	Female	Board of Directors	Number of board meetings attended	Audit & Supervisory Board	Nomination and Compensation Advisory Committee	Corporate management	Knowledge of the industry	Production Research & Development Innovation	Finance and accounting	Sales and marketing	Governance and compliance Risk management	Human resource development Diversity
Michio Takahashi	Representative Director President & CEO	9 Years			○ Chairperson	16 of 16		○	●	●		●	●	●	
Toshihiro Matsuoka	Director	8 Years			○	16 of 16			●	●	●				
Tatsuro Niiya	Director	5 Years			○	16 of 16			●	●			●		
Masaya Hamamoto	Director	2 Years			○	16 of 16			●			●		●	
Yukihiro Isogai	Director	3 Years			○	16 of 16			●	●	●				●
Sayoko Miyairi	Outside Director	3 Years	○	○	○	16 of 16		○	●						●
Jun Tsuchiya	Outside Director	2 Years	○		○	16 of 16		○	●	●	●		●		
Yuji Kikuchi	Outside Director	2 Years	○		○	16 of 16		○ Chairperson						●	
Tokuo Odo	Audit & Supervisory Board Member	5 Years				16 of 16	○ Chairperson					●		●	
Kazuhiro Kawai	Outside Audit & Supervisory Board Member	2 Years	○			16 of 16	○		●			●		●	
Keiko Tamura	Outside Audit & Supervisory Board Member	2 Years	○	○		16 of 16	○							●	

Risk Management

Risk Management System

In order to achieve sustainable growth, we have established a Risk Management Committee to identify risks that have the potential to disrupt our business activities, as well as implement preventive countermeasures. In addition, we are bolstering our risk management to enable us to take appropriate measures to minimize damage and prevent recurrence in the event that risks do materialize. More specifically, each division identifies individual risks, quantifies and evaluates their impact, and implements countermeasures in response to the evaluation, thereby preventing risks from materializing. Furthermore, we are continually carrying out risk assessments, such as by preparing responses for when these risks do emerge.

With regard to company-wide, material risks, the Board of Directors supervises whether these risks are adequately and continuously controlled in a systematic

way by monitoring the risk evaluations, the proposed countermeasures, and the implementation status of the countermeasures.

Material Risk Identification Flow

We define risks that have the potential to significantly impact our management or business activities as “material risks.” Material risk levels are calculated by combining the division-level risks into risk scenarios for the whole Company, and then evaluating both the impact and probability that these risks will materialize. These levels are mapped, candidates are selected based on relative evaluations, and the appropriate risks are identified as material risks, with the confirmation of the Board of Directors.

Major Material Risks and Their Countermeasures

	Examples	Countermeasures
Equipment and production risks	Prolonged shutdowns due to equipment damage Shutdowns due to mistakes in operation	Training, development and implementation of maintenance plans according to equipment importance, etc.
Compliance risks	Loss of public trust due to legal or contractual violations Compensation paid to employees for harassment or overwork, loss of public trust	Enhancement of the compliance system, education, etc.
HR risks	Personnel shortages, delayed training Degradation of management	Enhanced training and education, measures to boost engagement, improvement of the workplace environment, etc.
Business continuity risks	Accidents and explosions / natural disasters / infectious diseases / long-term shutdowns due to difficulties procuring raw materials Delayed deliveries due to logistical issues	Promotion of business continuity management (BCM), thorough infection control measures, etc.
Information security risks	Suspension of business due to computer viruses or cyber attacks Reduced competitiveness and loss of public trust due to information leaks	Ongoing implementation of countermeasures utilizing external security assessments
Climate change risks	See the table “KH Neochem’s Climate Change-Related Risks and Opportunities”	See the table “KH Neochem’s Climate Change-Related Risks and Opportunities”

Business Continuity Management (BCM)

We supply many customers with products that are essential for both the social lives of its citizens and production in a wide range of industries. For that reason, we believe that we have an extremely important responsibility to maintain and continue our business activities and achieve an early recovery in the event of a large-scale disaster. To this end, we have established a business continuity plan (BCP) at each of our workplaces. In 2021, we held drills in a workshop format to verify the effectiveness of our BCPs for the first time.

The drills simulated the initial response period on the day of a disaster to verify whether the executives and division heads who are members of the response headquarters can smoothly implement the initial response based on their roles. Several issues and points requiring correction were identified as a result, leading to reviews of the BCPs to improve their effectiveness.

In order that the BCPs will function in the event of an emergency, we will continue to measure their effectiveness in drills, verify them, and review them, as part of our continual efforts in BCM.

Climate-Related Disclosures Based on TCFD Recommendations

The business environment surrounding KH Neochem is growing increasingly uncertain as cases of heat stroke and natural disasters rise due to climate change, and voices calling for decarbonization and carbon neutrality grow louder and more numerous.

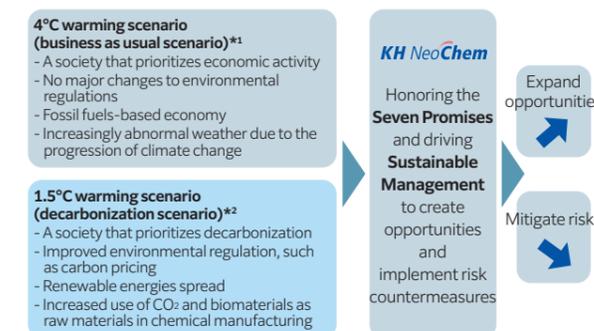
In January 2022, we declared our endorsement of the Task Force on Climate-Related Financial Disclosures (TCFD) Recommendations and have been proceeding with climate-related disclosures ever since.

Governance and Risk Management

We identify material risks according to the material risk identification flow as shown previously. The risks arising from climate change have been identified as material risks to our business due to the significant impact they are expected to have on KH Neochem in the future. In addition, we are taking measures to prevent climate change-related risks from materializing and reduce their impact by continuously conducting risk assessments based on our risk management system and monitoring them at board meetings when necessary.

Strategy

We identify risks and opportunities related to climate change and analyzes scenarios based on warming of 4°C and 1.5°C, respectively, to assess the impact of future risks and opportunities heading toward 2030. By engaging in the Seven Promises and driving Sustainable Management, we seek to expand the climate change-related opportunities while mitigating the risks, thereby increasing our corporate value.



*1 See the RCP 8.5 scenario of the Intergovernmental Panel on Climate Change (IPCC).

*2 See the NZE 2050 scenario of the International Energy Agency (IEA).

KH Neochem’s Climate Change-Related Risks and Opportunities

Risks and opportunities with an extremely high potential impact on KH Neochem

Category	Risks/Opportunities		Key Countermeasures
Physical risks (4°C warming scenario)	Impact on operations due to abnormal weather	There is a risk of an increasing impact on operations from increasingly frequent abnormal weather events resulting from climate change, such as high tides, heavy rain, floods, and typhoons.	• Conducting drills to increase understanding and improve effectiveness of BCM/BCPs
Transition risks (1.5°C warming scenario)	Introduction of carbon pricing	There is a risk of an increasing financial burden from the introduction of carbon taxes and other carbon pricing. Assuming CO ₂ emissions on the same level as 2021 (approx. 422 kt) and a carbon tax of 130 USD/ton in 2030 (1 USD = 130 yen), the financial burden could increase by 7.13 bn yen per year.	• Promoting energy-saving and the introduction of new technologies to achieve carbon neutrality by 2050 • Achieving the target of reducing greenhouse gas emissions by 30% by 2030 (compared to 2017) • Using CO ₂ as a raw material for products
	Problems procuring certain raw materials	There is a risk to the procurement of raw materials from oil refineries as oil refiners reduce the number of refineries in response to decarbonization trends.	• Promoting purchasing from multiple suppliers
	Impact of switching to raw materials obtained from biomass	There is a risk of quality problems and increased procurement costs due to switching from oil-based to biomass-based raw materials.	• Maintaining and improving quality assurance
Opportunities (4°C warming scenario)	Delayed response to ESG investment	There is a risk of divestments and falling share prices due to increasing criticism received for using large quantities of fossil fuels.	• Promoting energy-saving and the introduction of new technologies to achieve carbon neutrality by 2050 • Achieving the target of reducing greenhouse gas emissions by 30% by 2030 (compared to 2017)
	Increased need for adaptive products	There is a possibility that the increasingly negative effects of climate change will cause rising demand for products that can mitigate those effects (such as heat stroke) and help people adapt to climate change.	• Supplying more refrigeration lubricant raw materials, which are indispensable for heat stroke-preventing air conditioners
Opportunities (1.5°C warming scenario)	Increased need for decarbonizing products	As people become increasingly environmentally conscious, there is a possibility of rising demand for products with a smaller carbon footprint.	• As the transition toward environmentally friendly air conditioners accelerates across the world, expanding the provision of refrigeration lubricant raw materials compatible with the refrigerants used in such air conditioners • Using CO ₂ as a raw material for products

Compliance

Our Code of Conduct: The Compliance Code

The KH Neochem Group believes that in order to “realize a brighter tomorrow for society through the power of chemistry” and achieve sustainable growth, it is necessary to uphold high ethical standards, meet the demands and expectations of all stakeholders, and proactively contribute to society. In order to clarify this stance even more, we have formulated our Compliance

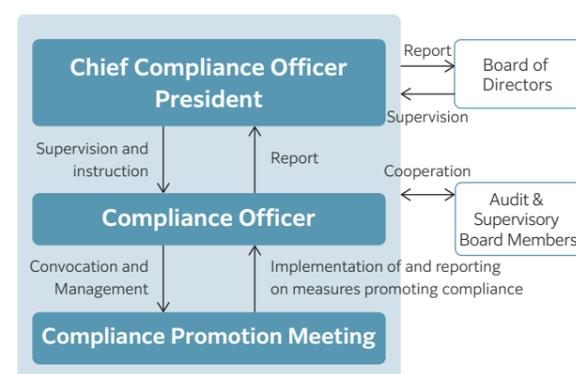
Code, a code of conduct to be held in common across the KH Neochem Group. Each and every member of the Group is expected to faithfully put the Compliance Code into practice by continuously asking themselves, “is my conduct correct?” and “can I speak about this with pride to others?” as they act.

Compliance Code



Compliance Structure

In order to put our Compliance Code into practice and further promote compliance, compliance officers work under the direction of the President, who is the Chief Compliance Officer, to swiftly investigate compliance issues and prepare appropriate countermeasures. Each division head (including heads of operating facilities) is responsible for promoting compliance and compliance measures within his or her division. We hold compliance promotion meetings as part of our efforts to continuously strengthen our compliance structure, developing a cycle in which we check the progress and results of compliance measures, identify current issues, and decide on plans for implementing further measures.



Compliance Hotlines

We have established the “KH Neochem Hotline” as a whistleblowing channel for people to report corruption, bribery, and other legal violations, improper or illegal conduct, and other breaches or suspected breaches of compliance.

The KH Neochem Hotline consists of three internal points of contact, namely the Compliance Hotline, Compliance Officer Hotline, and the Full-time Corporate Auditor Hotline, as well as the Attorney Hotline consisting of lawyers not involved in the execution of the business. People who work for KH Neochem (including those who have left the Company within the last year) can use any of these hotlines, while the Attorney Hotline is also available for our customers and business partners and has been publicized on our website. Through regulations and training, we have maintained confidentiality for all callers to these hotlines. In response to the Amended Whistleblower Protection Act, come into force in June 2022, we take further measures to ensure the anonymity of callers.

We will analyze the trends in whistleblowing reports and consultation calls made to the KH Neochem Hotline and apply our findings to the compliance measures of the next fiscal year. In fiscal year 2021, the KH Neochem Hotline received three calls, none of which concerned any matter serious enough to require public disclosure.

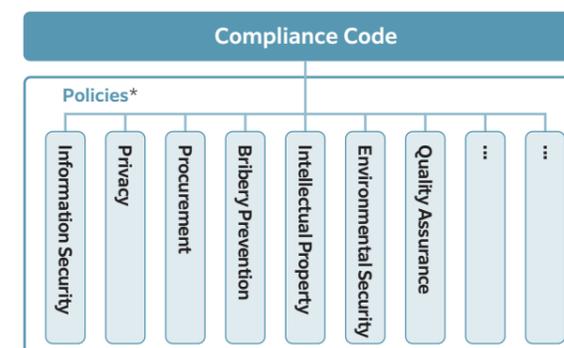
Compliance Promotion Activities

We hold compliance promotion meetings to plan compliance measures, check the status of these measures, and discuss issues. In fiscal year 2021, we emphasized putting the Compliance Code into practice, focusing on the proper handling of personal information and ensuring psychological safety in each workplace. We implemented the following activities.

Policy Formulation

In order to ensure the implementation of the Compliance Code, we have formulated policies to clarify in concrete terms what kind of conduct is expected in each field.

We had previously established policies on privacy and information security, and in 2021 we formulated a new policy on bribery prevention. The policies we have established can be viewed on our website.



*Policies will be developed in due course.

Policies



<https://www.khneochem.co.jp/en/company/philosophy/principles/>

Workshops

We held compliance workshops at each of our workplaces to discuss the Compliance Code’s theme of the “maintenance and improvement of a comfortable workplace environment.” In the compliance awareness survey conducted after the workshops, improvements were seen in the result of questions related to psychological safety, which is a priority issue, compared to the figures up to fiscal year 2020. We therefore plan to continue holding such workshops in the future.



Education and Training

The proper handling of personal information was a key topic for fiscal year 2021, and we held e-learning sessions to re-learn and confirm basic knowledge on privacy. In addition, we established a “Privacy Manual” to provide simple explanations on the key points related to handling personal information and implemented “Personal Information Checks” based on this manual to confirm whether personal information is being handled appropriately in each division. If we find, based on these checks, that a division requires further review, we hold detailed interviews, propose corrective measures, and follow up to ensure implementation. Furthermore, when these checks identify certain points as areas for improvement, we take up those points as training themes for the following fiscal year.

Main Compliance Promotion Activities

General compliance	Compliance promotion meetings Legal Compliance Week Compliance workshops to discuss the Compliance Code at each workplace Compliance awareness surveys
Education and training	(Training 3x/year at all operating facilities) • e-learning on personal information • Training on the Industrial Safety and Health Act • Training on basic knowledge related to contracts Other training programs for new employees
Other	Posting of information on the KH Neochem Hotline on the intranet and posters to ensure awareness

Security, Safety, and Environmental Conservation Activities

Environmental Safety Policy

KH Neochem believes that the thorough implementation of security, safety, and environmental conservation – in our business activities and based on our Compliance Code – is critical not only for the sustainable improvement of our corporate value but also for us to fulfill our social responsibilities. We have therefore established our Environmental Safety Policy to ensure security, safety, and environmental conservation.

Responsible Care (RC)

We engage in the following responsible care (“RC”) in good faith to comply with Environmental Security Policy.

① Maintaining and improving safe and stable operations

We are constantly aware of sources of danger, eliminate any risk, maintain safe and stable operations, as well as striving for further improvement and aiming for no accidents and no incidents, to thereby strive to ensure the safety, comfort and health of the local community and All Executives and Employees*.

② Contributing to society and environmental conservation

We strive to realize a sustainable society and environment through corporate activities, gather updated safety information regarding the chemical substances and products to be handled, and provide customers, distribution-related parties and All Executives and Employees with appropriate information, thereby striving to reduce the security, safety and environmental burdens in the entire process from product development through to the disposal thereof.

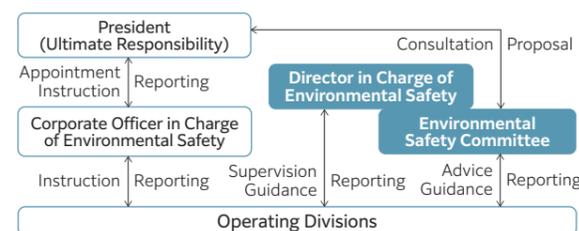
③ Contributing to the local community

Through dialogue and communication activities with the local community regarding security, safety, environmental conservation and health, we cooperate with the local community and thereby contribute to its development.

*“All executives and employees” collectively refers to KH Neochem’s directors, officers, regular employees, contract employees, and dispatch employees.

Management System

KH Neochem has granted ultimate responsibility on matters concerning security, safety, and environmental conservation to the Company President. In accordance



with our Environmental Safety Policy, the president has established the Environmental and Safety Committee to act as an advisory body on priority measures to ensure security, safety, and environmental conservation, with the director in charge of environmental safety as its chair. The president makes the decisions on the matters discussed and reported by the committee. The priority measures of the fiscal year, as decided by the president, are communicated to every division. Progress on the fiscal year’s priority measures is confirmed through environment safety inspections conducted periodically by the head office.

Status of Certification Acquisition

The Yokkaichi Plant and the Chiba Plant have acquired certifications for quality management systems (ISO 9001) and environmental management systems (ISO 14001). These plants are maintaining their certification and promoting RC activities in line with those systems.

Plant	Certification acquired	Current certification body
Yokkaichi Plant	ISO 9001 January 1999	Japan Chemical Quality Assurance Ltd.
	ISO 14001 July 2000	
Chiba Plant	ISO 9001 December 1998	
	ISO 14001 November 2000	

*100% of production sites have acquired certifications

Inspections and Audits

Environment safety inspections and quality audits

Under the direction of the executive officer in charge of environmental safety, KH Neochem conducts environment safety inspections to check the progress of the fiscal year’s priority measures in RC activities, the suitability of safety management activities, and the proper implementation of environmental management activities in each division.

Likewise, under the direction of the executive officer in charge of quality assurance, we also carry out quality assurance audits of the divisions working on quality control in order to check the progress of the fiscal year’s priority measures in quality control and to confirm whether quality control is being properly carried out.

Plant audits

The Yokkaichi Plant and the Chiba Plant conduct internal audits for ISO 9001 and ISO 14001 as well as for accreditation as high-pressure gas inspection executors (completion inspection and safety inspection) based on safety management systems.

In addition, they also undergo external audits based on ISO 9001 and ISO 14001 (maintenance and renewal audits), through which they maintain their certifications.

Fiscal Year 2021 Priority Measures (Numerical Targets) and Results, Together with Fiscal Year 2022 Priority Measures (Numerical Targets)

◎:Achieved △:Unachieved

RC code	Fiscal year 2021			Fiscal year 2022
	Objective	Actual results	Evaluation	Objective
Environmental conservation	• Environmental accidents: 0	• Environmental accidents: 0	◎	• Environmental accidents: 0
Safety and disaster prevention	• Safety-related accidents: 0	• Safety-related accidents: 7	△	• Safety-related accidents: 0
Occupational safety and health	• Work-related accidents: 0	• Employee accidents resulting in lost workdays: 1 (Chiba Plant) • Employee accidents not resulting in lost workdays: 4 (Yokkaichi Plant and Chiba Plant) • Accidents at cooperating companies resulting in lost workdays: 2 (Yokkaichi Plant) • Accidents at cooperating companies not resulting in lost workdays: 1 (Yokkaichi Plant)	△	• Accidents resulting in lost workdays: 0 • Work-related accidents: 7 or fewer (At or below the average of the latest five years)

*Action plans related to industrial safety and data related to Responsible Care at our plants can be seen from our website (<https://www.khneochem.co.jp/en/csr/rc/>).

Safety and Disaster Prevention

Safety and disaster prevention measures

In accordance with the Environmental Safety Policy (see p. 55), the Yokkaichi Plant and Chiba Plant have formulated their safety management policies. They are actively engaged in efforts to ensure that all employees are aware of the policies and carrying out safety and prevention activities based on the policies.

Safety Environmental Assessment (SEA)

At KH Neochem, we conduct an SEA (Safety Environmental Assessment) in advance to assess the impact on security, safety, environmental safety, and health impact when introducing new technology, new processes, new facilities, new machinery, and new chemical substances. By using the SEA results for feedback, we make every effort to heighten the safety of processes and equipment.

Emergency training

KH Neochem conducts periodic comprehensive disaster prevention drill for emergency scenarios, as well as training in initial firefighting response and emergency reporting. We prepare so that we can respond promptly and appropriately in the event of an emergency.

Accreditation as high pressure gas inspection executors (for both completion inspection and safety inspection)

This system, instituted by the High Pressure Gas Safety Act, enables companies that are recognized to have high standards for safety management, operations management, and equipment management, to conduct their own completion inspections and safety inspections in accordance with the High Pressure Gas Safety Act.

The Yokkaichi Plant has acquired this accreditation for six manufacturing facilities and the Chiba Plant has acquired it for one manufacturing facility. Both plants take steps for continuing improvement by implementing the plan-do-check-action (PDCA) cycle.



1. Scene from the comprehensive disaster prevention drill at Umaokoshi Plant, Yokkaichi Plant



2. Scene from the same comprehensive disaster prevention drill

Security, Safety, and Environmental Conservation Activities

Occupational Safety and Health

Occupational safety and health-related initiatives

KH Neochem conducts education based on the Industrial Safety and Health Act in order to assure the safety of employees and others working at our plants. In addition, we also take preventive actions against disasters, such as risk assessments*1, risk prediction activities using *hiyari hatto* (close call recognition) and *kigakari memo* (notes on matters of concern), improvement suggestion programs, and other everyday health and safety activities.

A revision of the Industrial Safety and Health Act has also made it mandatory to conduct risk assessments*2 of chemical substances. We began administration of these assessments when the amended law went into effect on June 1, 2016.

For projects defined under the regulations as high risk, if any of these assessments reveal a risk, measures to manage the risk are decided through discussions between workers and management at Health and Safety Committee meetings.

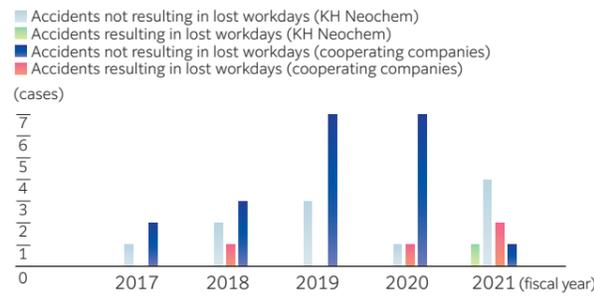
*1 Risk assessment: This refers to a series of techniques for identifying the risks and hazards in work, determining the seriousness and likelihood of work-related accidents arising from them, combining that information to estimate the risks, deciding on a priority for countermeasures based on the magnitude of those risks, studying measures to eliminate or reduce the risks, and keeping a record of the results.

*2 Chemical risk assessment: This refers to the identification of the risks and hazards of chemical substances and products, estimation of the likelihood of risk to workers or damage to their health, and studying measures to reduce the risks.

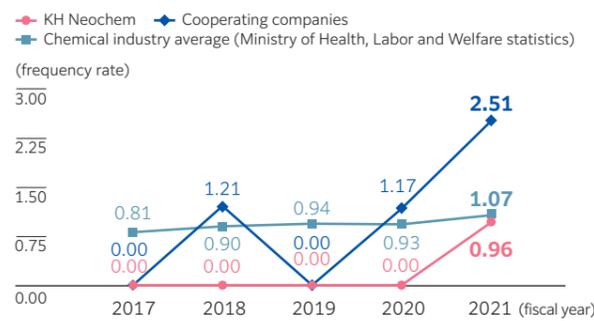
Status of work-related accidents

In fiscal year 2021, there was one accident resulting in lost employee workdays on May 12 at the Chiba Plant. The number of accidents not resulting in lost workdays increased from one in fiscal year 2020 to four in fiscal year 2021. In order to prevent similar occupational accidents from happening again, we promptly carried out investigations to ascertain the causes of the accidents, formulated measures to prevent their recurrence, and ensured that personnel were informed, not only at the operating facilities involved but at other operating facilities as well.

Number of work-related accidents



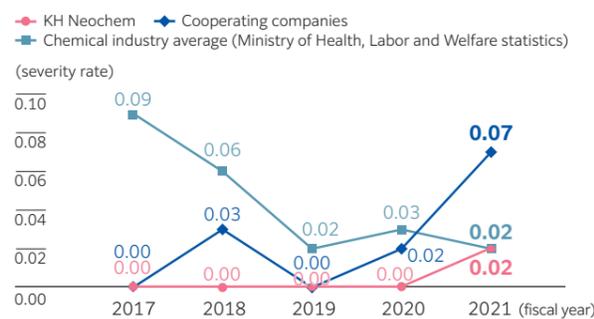
Frequency rate (accidents resulting in lost workdays)



Frequency rate: Indicator of the frequency of accident occurrence

$$\frac{\text{Number of fatalities and injuries}}{(\text{Cumulative number of actual work hours}) \times 1,000,000}$$

Severity rate



Severity rate: Indicator of the seriousness of an accident

$$\frac{\text{Cumulative number of lost work days}}{(\text{Cumulative number of actual work hours}) \times 1,000}$$

* Graphs of the frequency rate (accidents resulting in lost workdays) and the severity rate are shown below.
 Scope of aggregation: Yokkaichi Plant, Chiba Plant
 Period covered: January 1 to December 31

Special Note: Fatal Accident Involving a Fall at Yokkaichi Plant and Initiatives to Prevent Its Recurrence

On April 4, 2022 at around 9:00 AM, a fatal accident occurred in which a KH Neochem employee fell from a height at Yokkaichi Plant. We sincerely pray for the repose of the soul of the employee who passed away and extend our deepest condolences to the bereaved family.

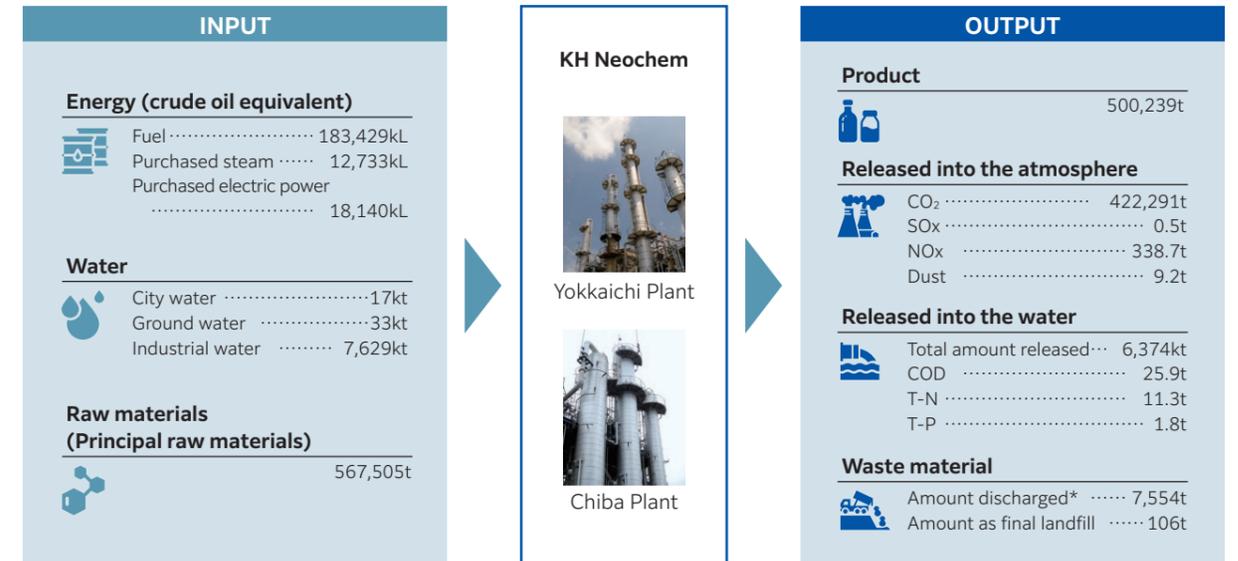
We established an accident investigation committee chaired by the Yokkaichi Plant manager to investigate the background and causes of the accident, as well as to consider measures to prevent

its recurrence. We also established an accident investigation committee at the Company headquarters, chaired by the director in charge of environment and safety to consider fundamental countermeasures.

Going forward, we will continue to take company-wide measures to prevent such serious accidents from ever occurring again, and endeavor to reform our plants to further improve their safety.

Environmental Conservation

Flow of Environmental Impact Results



*In the past, the amount of waste generated at production plants was listed as "amount generated." However, starting from this fiscal year and in order to conform to the main purpose of the Flow of Environmental Impact Results, the amount of waste discharged by production plants will be shown under "amount discharged," and will reflect the amount after internal reduction.

Scope of aggregation: Yokkaichi Plant and Chiba Plant
 Period covered: April 1, 2021 to March 31, 2022

Global warming prevention

As a designated business operator under the Act on the Rational Use of Energy*1, KH Neochem makes every effort to promote rational uses of energy. As a specified emitter under the Act on Promotion of Global Warming Countermeasures*2, we are also working diligently to reduce greenhouse gas (GHG) emissions. Energy consumption and GHG emissions*3 *4 in fiscal year 2021 increased to 110.4% and 104.5% YoY, but this was due to the recovery in production following the impact of the COVID-19 pandemic in fiscal year 2020. Energy intensity, meanwhile, improved to 92.1% YoY. We will continue with energy conservation promotion, CAPEX, and considering the introduction of new technologies as we aim to reduce GHG emissions by 30% by 2030 (compared to fiscal 2017 levels) and achieve carbon neutrality by 2050.

*1 Act on the Rational Use of Energy: the law covering the rational usage of energy

*2 Act on Promotion of Global Warming Countermeasures: the law covering the promotion of initiatives taken the measure against global warming

*3 Figures reported based on the Act on the Rational Use of Energy

*4 Starting in fiscal year 2021, we have been deducting the amount of CO₂ that was generated in our production processes, captured, and used as raw materials from our GHG emissions. We have confirmed this with the government's office for reporting GHG emissions.

Air pollution prevention

For the sulfur oxides (SO_x), nitrogen oxides (NO_x), and dust discharged from boilers, liquid waste incinerators, sludge incinerators, and other such equipment, KH Neochem of course complies with emissions standards based on the Air Pollution Control Act, and we additionally comply with levels that have been agreed upon with local communities.

Water pollution prevention

KH Neochem complies with emissions levels based on the Water Pollution Prevention Act as well as with levels agreed upon with local communities for chemical oxygen demand (COD), total nitrogen (T-N), and total phosphorus (T-P) in wastewater.

Waste reduction

KH Neochem implements thoroughgoing separation of waste materials and engages in the 3Rs of waste management: reduce, reuse, and recycle. We are moving forward to reuse acid waste and alkaline waste in our plants as well as to reduce their volume, to contract recycling treatment of waste catalysts, and to reuse incinerator waste as aggregate. We are working to reduce the "amount as final landfill" to keep it at 1% or less of the amount of waste generated, as is the target for 2024 in the 4th Medium-Term Business Plan.

*All environmental performance data can be seen on P62 and on our website. (<https://www.khneochem.co.jp/en/csr/rc/>).

Stakeholder Relations

Major Stakeholder Engagement

KH Neochem has pledged to practice transparent management with a high ethical standard. We strive to communicate with our stakeholders through various opportunities and are committed to embodying their valuable opinions in our corporate activities.

*Information on our relationships with our stakeholders is posted on our website.



<https://www.khneochem.co.jp/en/csr/>

Contribute to Local Community

KH Neochem is working to contribute to society for the sustainable development of society. We are strengthening our approach to community service by emphasizing activities with deep local roots in Yokkaichi City, Mie Prefecture and Ichihara City, Chiba Prefecture in particular, where our plants are located.

Five Guidelines for Social Contribution Activities

- Activities that will be welcomed in local communities
- Activities that employees can actively participate in
- Activities that can continue
- Activities that will provide opportunities to learn about KH Neochem
- Activities that relate to our business operations

Strengthening Social Contributions

Fiscal year 2017 • Conducted in-house questionnaire for all employees regarding social contribution activities
*573 responded, approximately 90% of employees (non-consolidated)

- Decided on substance of social activities after reviews and discussions that included management based on the results of the employee survey
- Touched up paint at a sports field in Yokkaichi City, Mie Prefecture

Fiscal year 2018 • Touched up paint at a sports field in Ichihara City, Chiba Prefecture

Fiscal year 2019 • Touched up paint at a General Athletic Playground in Yokkaichi City, Mie Prefecture

Fiscal year 2020 • Donated and painted benches at a sports field in Ichihara City, Chiba Prefecture
• Touched up paint on benches at the multipurpose sports fields in Yokkaichi City, Mie Prefecture

Fiscal year 2021 • Installed and painted benches at a site near our manufacturing plant (Yokkaichi City, Mie Prefecture)
• Activities at operating facilities

PICK UP!

Installed and painted benches at a site near our manufacturing plant (Yokkaichi City, Mie Prefecture)

As a chemical material manufacturer that supports manufacturing around the world, we once again used paint, as it closely related to our business operations. We donated wooden benches to Kasumigaura Ryokuchi Park in Yokkaichi City, Mie Prefecture, where our Yokkaichi Plant is located, and also painted existing benches in the park.

To prevent the spread of COVID-19 at the event, only people working at the head office or the Yokkaichi Plant were allowed to participate. A total of 50 employees and executives joined in the event.

As we were painting, we received advice on the colors from children who were playing in the park, making for a friendly environment in which we could work while interacting with local citizens. Tomohiro Mori, the mayor of Yokkaichi City, stopped by to express his gratitude and give the team a letter of appreciation.

Kasumigaura Ryokuchi Park has several sports facilities attached to it and is beloved by the people of Yokkaichi. We would be greatly honored if the benches we donated could be of use to the many people who frequent this place.

We plan to repeat this activity next year and beyond, and we hope to continue to contribute to the lives of all of our stakeholders, starting with the members of our local communities.



Visit from Mayor Tomohiro Mori of Yokkaichi City

Activities at operating facilities

Children are the future, and we are actively sponsoring children's sports tournaments in order for the children in the communities around our manufacturing plants to flourish. We are also continuing our work with local cleanup drives, plant tours for local educational institutions, and cooperation with NPOs.



Ichihara City Friendly Baseball Tournament

Yokkaichi Plant

- Yokkaichi City U-10 Soccer Tournament (KH Neochem Cup)

Chiba Plant

- Ichihara City Friendly Baseball Tournament (KH Neochem Cup)

Dialogue with Shareholders and Investors

IR Activities in 2021

Month	February	March	May	August	September	November
Activities	2020 results briefing	Overseas institutional investors conference	2021 1Q results briefing (conference call)	2021 1H results briefing (conference call)	Overseas institutional investors conference	2021 3Q results briefing (conference call)

Communication with Shareholders and Investors

In addition to disclosing financial results and the status of business activities to our shareholders and investors in a timely and appropriate manner, the KH Neochem Group is committed to proactive and constructive communication led by top management. Not only do we provide information on the latest business results and current business environment, we also proactively disclose information that is important to our business, such as our strategy and progress on our long-term vision "VISION 2030" and our Medium-Term Business Plan, as well as regulatory trends such as those surrounding refrigerants for air conditioners. By doing so, we endeavor to share the direction, shape, and path that the Group is aiming for in the medium- to long-term with our shareholders and investors.

In 2021 we had approximately 170 direct dialogues with shareholders and investors. The valuable insights, requests, and other information from shareholders and investors have been shared with the Board of Directors and top management, and we have utilized them to discuss what is expected of the Group and on what we should focus.

As in previous years, the General Meeting of Shareholders in 2022 was held while taking appropriate measures to prevent the spread of COVID-19. Going forward, we will continue to cherish such opportunities for direct dialogue with our shareholders and strive to actively communicate with them.



General Meeting of Shareholders

Selected as Constituent of Various Indexes / Winner of an EcoVadis Gold Medal for the Second Year Running

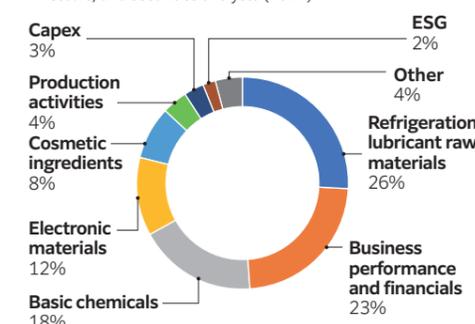
The KH Neochem Group has been selected as a constituent of JPX-Nikkei Index 400, the MSCI Japan Empowering Women Index (WIN), and the Somo Sustainability Index. In addition, for the second year running, we received a gold medal (5th percentile) in the sustainability survey run by EcoVadis, the French ESG evaluating organization. We are determined to further enhance our corporate value in order to meet the expectations of our investors and shareholders.

* The inclusion of KH Neochem Co., Ltd. in any MSCI index, and the use of MSCI logos, trademarks, service marks or index names herein, do not constitute a sponsorship, endorsement or promotion of KH Neochem Co., Ltd. by MSCI or any of its affiliates. The MSCI indexes are the exclusive property of MSCI. MSCI and the MSCI index names and logos are trademarks or service marks of MSCI or its affiliates.



Extract from the 2021 first half-year financial results presentation material

Breakdown of viewpoints and questions from shareholders, investors, and securities analysts (2021)



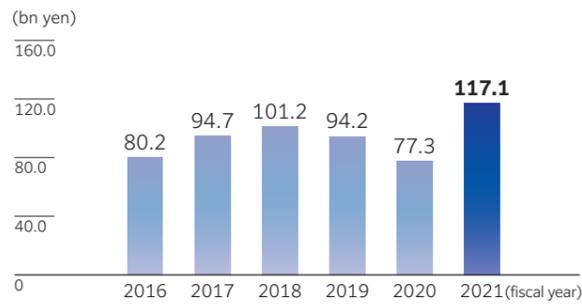
2022 CONSTITUENT MSCI JAPAN EMPOWERING WOMEN INDEX (WIN)



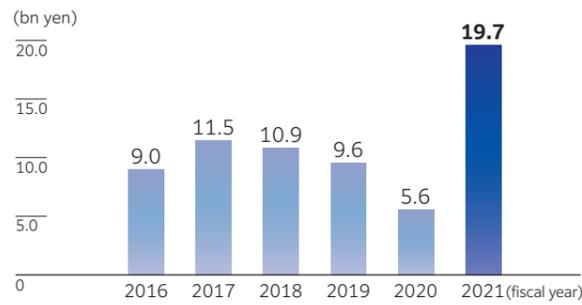
Somo Sustainability Index

Financial Highlights (Consolidated)

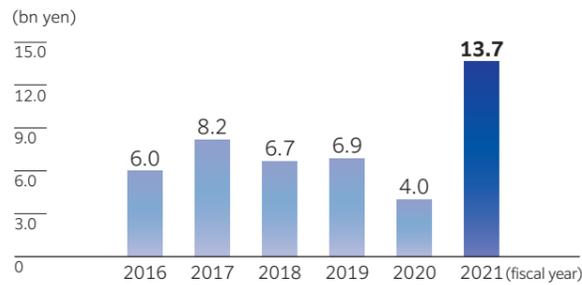
Net sales



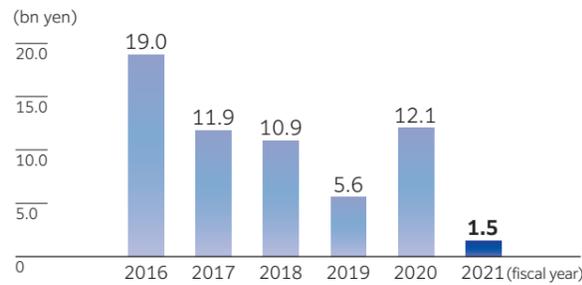
Operating income



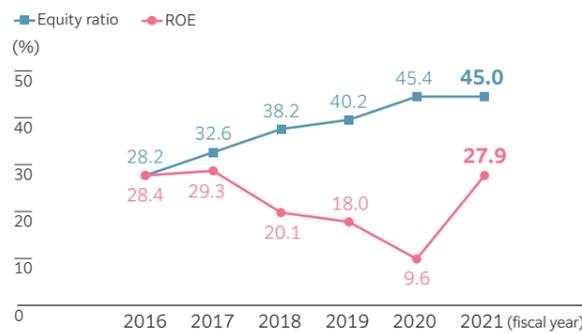
Profit attributable to owners of parent



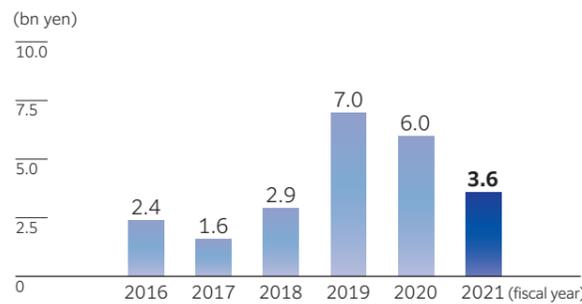
Net interest-bearing debt (except lease obligations)



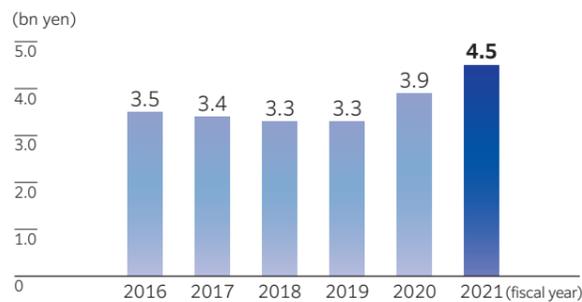
Equity ratio/ROE



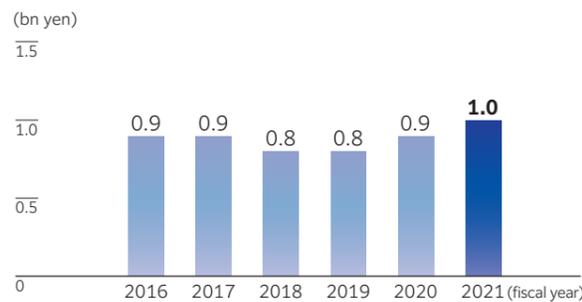
CAPEX



Depreciation

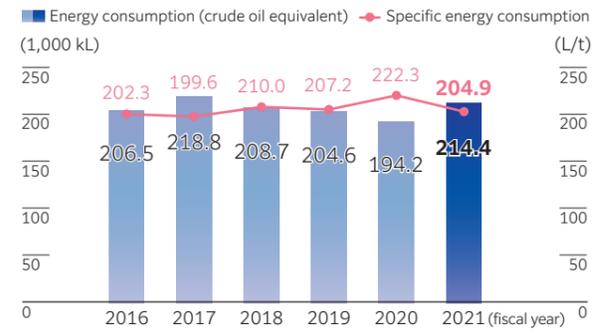


R&D expenses



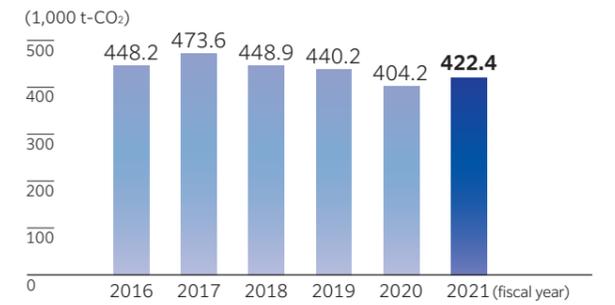
Non-Financial Highlights (Non-Consolidated)

Energy consumption and specific consumption



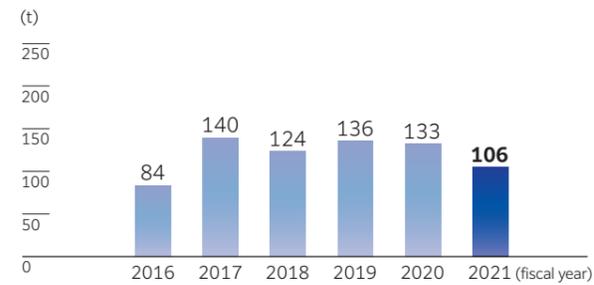
(Note 1) April 1 to March 31, each year
 (Note 2) Due to a change in the method of rounding decimals starting in the current fiscal year, there are slight differences from the figures shown in the previous report.

Greenhouse Gas (GHG) amount released



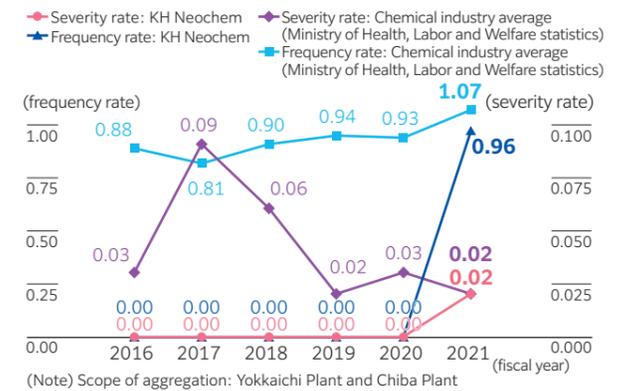
(Note 1) April 1 to March 31, each year. Figures reported based on the Act on the Rational Use of Energy.
 (Note 2) Starting in fiscal year 2021, we have been deducting the amount of CO₂ that was generated in our production processes, captured, and used as raw materials from our GHG emissions. We have confirmed this with the government's office for reporting GHG emissions.

Disposed of as landfill



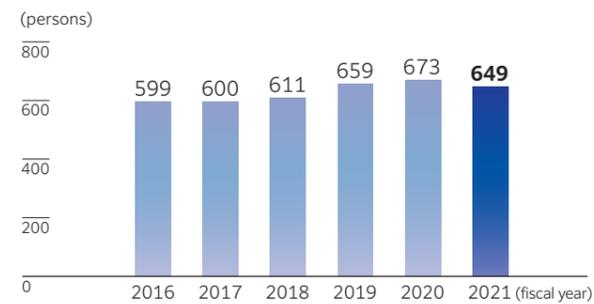
(Note) April 1 to March 31, each year

Frequency rate (accidents resulting in lost workdays)/Severity rate



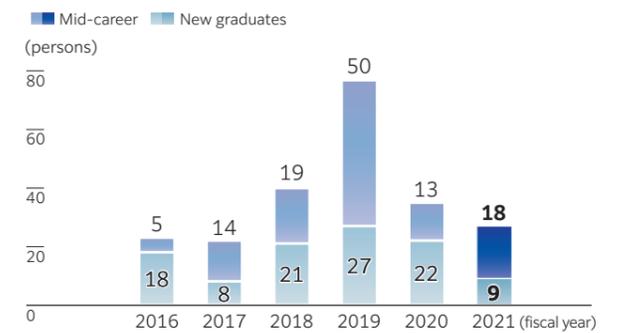
(Note) Scope of aggregation: Yokkaichi Plant and Chiba Plant

Number of employees



(Note) As of December 31, each year

Number of new employees



(Note) Only workers who have signed a labor contract with no fixed term

New female employees



*Only full-time workers

Years of service and gender differences

(fiscal year)	2016	2017	2018	2019	2020	2021	2022
Years of service (male)	17.1	16.5	16.0	14.6	13.5	13.7	14.0
Years of service (female)	16.9	16.9	16.3	14.3	14.3	15.0	15.3
Difference (female - male)	-0.2	0.4	0.3	-0.3	0.8	1.3	1.3

(Note) Only full-time workers, As of April 1, each year

Management's Discussion and Analysis (Fiscal Year 2021)

Operating Results

* The current fiscal year means the current consolidated fiscal year (fiscal year 2021), while the previous fiscal year means the previous consolidated fiscal year (fiscal year 2020).

During the fiscal year, the Japanese economy was characterized by the prolongation of constraints on economic activity in response to the continued spread of COVID-19, such as people refraining from going out and reductions in opening times for restaurants and other establishments, which resulted in weak personal spending. On the other hand, following progress made in vaccination, restrictions on behavior were gradually lifted and economic activity began to normalize, while new demand was generated by advances in technology and quality in cutting-edge areas making use of 5G, AI and so on, as well as by the emergence of products and services to address changes and diversification in both work styles and lifestyles.

In the manufacturing industry, demand recovery centered on automobiles, semiconductors, and electronic components had been observable since the start of the year, but mainly due to the impact of semiconductor shortages, soaring commodity prices, and supply chain tightness, supply remained insufficient to meet strong demand.

Under these circumstances, the Group has stably managed to sustain its business activities at its plants and other operations, while also implementing exhaustive infection control measures. The Group has been taking further steps to secure earnings, such as ensuring that production and inventory levels are appropriate and aligned with demand by reinforcing cooperation with suppliers regarding raw material procurement. It has also involved revising prices in accordance with volatility in crude oil and naphtha prices and the balance of supply and demand for products.

In terms of initiatives pursued under the strategies of its 3rd Medium-Term Business Plan, the Group has made steady progress in capturing growth in demand, such as by opening new facilities for refrigeration lubricant raw materials and next generation semiconductor materials, and worked to expand earnings. The Group also made the decision of approximately ¥9.5 billion capital investments to increase production capacity for refrigeration lubricant raw materials and other products at the Chiba Plant. In addition, we established an "Open Lab" at the KH i-Lab open innovation hub, and are accelerating initiatives for creating new businesses through such measures as promoting joint testing in other fields. Moreover, as well as taking steps to reduce environmental impacts, including installing new in-house power generation equipment that is expected to reduce CO₂ emissions at our Chiba Plant, we have been steadily promoting measures aimed at improving the business framework, such as by enhancing disclosure of non-financial information through the publication of our integrated report.

Accordingly, the Group's results for the fiscal year under review included increases in both revenue and income, with net sales of ¥117,110 million (up 51.4% year on year). Operating income was ¥19,685 million (up 248.9%), ordinary income was ¥19,809 million (up 252.0%), and net income attributable to owners of parent was ¥13,691 million (up 238.3%), all of which represented new records.

Results by Business Field

Performance Materials

Sales of the Company's refrigeration lubricant raw materials were strong throughout the fiscal year, driven by increases in production and sales of environmentally friendly air conditioners in China and elsewhere. In cosmetic ingredients, domestic demand was weak due to demand related to inbound tourism did not recover, but certain overseas markets saw a recovery in demand. As a result, net sales was ¥44,248 million (up 45.3% year on year) and operating income was ¥9,976 million (up 94.5%).

Electronic Materials

Strong demand from the previous fiscal year, primarily related to semiconductors, continued during the fiscal year. Rising prices caused by the tightening of supply

relative to demand, soaring raw material prices and growing needs for high quality, resulted in net sales of ¥14,390 million (up 25.1% year on year), and operating income of ¥3,418 million (up 91.7%).

Basic Chemicals

Strong demand for both solvents and plasticizer raw materials continued throughout the fiscal year under review. The tightening of supply relative to demand led to soaring prices in the overseas market and a significant improvement in the profitability of exports, in addition to which there was a contribution from price revisions in the domestic market. As a result, net sales came to ¥57,801 million (up 68.1% year on year), and operating income of ¥9,355 million (up 597.1%).

Others

In the Others segment, net sales was ¥669 million (down 32.5% year on year) and operating income was ¥108 million (down 50.1%).

Note: "Operating income" shown above in each business segment, does not include allocation of administrative expenses, etc., which are common to the entire company.

Financial Position

Assets

Current assets at the end of the current fiscal year were ¥70,291 million, an increase of ¥26,352 million from the end of the previous fiscal year. This was mainly due to increases in cash and deposits by ¥7,868 million, notes and accounts receivable – trade by ¥11,128 million, and inventories by ¥7,164 million, respectively.

Non-current assets totaled ¥51,778 million, up ¥207 million from the end of the previous fiscal year. This was mainly due to a decrease of ¥458 million in buildings and structures and ¥1,801 million in machinery, equipment and vehicles, but an increase of ¥1,268 million in leased assets and ¥1,112 million in construction in progress, respectively.

As a result, total assets amounted to ¥122,069 million, up ¥26,560 million from the end of the previous fiscal year.

Liabilities

Current liabilities at the end of the current fiscal year were ¥53,276 million, an increase of ¥18,070 million from the end of the previous fiscal year. This was mainly due to increases in notes and accounts payable

– trade by ¥11,377 million, current portion of long-term debt by ¥850 million, income taxes payable by ¥5,564 million, and provision for repairs by ¥1,773 million, despite decreases in short-term bank loans by ¥340 million and accounts payable-other by ¥1,499 million.

Long-term liabilities amounted to ¥11,288 million, down ¥3,129 million from the end of the previous fiscal year. This was mainly due to decreases of ¥3,250 million in long-term debt, ¥499 million in deferred tax liabilities, and ¥659 million in provision for repairs, despite an increase of ¥1,346 million in long-term lease obligations.

As a result, total liabilities amounted to ¥64,564 million, up ¥14,940 million from the end of the previous fiscal year.

Net Assets

Total net assets at the end of the current fiscal year were ¥57,505 million, an increase of ¥11,620 million from the end of the previous fiscal year. This was mainly due to net income attributable to owners of the parent of ¥13,691 million and Cash dividends of surplus of ¥2,228 million.

Cash Flows

Cash and cash equivalents (hereinafter referred to as "cash") at the end of the current fiscal year increased ¥7,868 million from the end of the previous fiscal year to ¥16,934 million.

The details of cash flows and their factors during the current fiscal year are as follows.

Operating Activities

Cash provided by operating activities amounted to ¥17,402 million (¥6,931 million provided in the previous fiscal year). This was mainly due to an increase in cash due to income before income taxes of 19,788 million yen, depreciation of ¥4,369 million, an increase in provision for repairs of ¥1,114 million, and an increase in notes and accounts payable of ¥11,256 million, despite a decrease in cash due to an increase in notes and accounts receivable of ¥11,089 million, an increase in inventories of ¥7,076 million, and income taxes paid of ¥1,155 million.

Management's Discussion and Analysis (Fiscal Year 2021)

Investing Activities

Cash used in investing activities totaled ¥4,395 million (¥11,182 million used in the previous fiscal year). This was mainly due to the purchase of property, plant and equipment of ¥4,044 million.

Financing Activities

Cash used in financing activities totaled ¥5,168 million (compared to ¥4,530 million used in the previous fiscal year). This was mainly due to repayment of long-term bank loans of ¥2,400 million and dividends paid of ¥2,229 million.

Business Risks

Below is a list of the main risks that the management team recognizes as having the potential to significantly impact our financial position, business result, and cash flows. However, the listed items below

notes only some of the main risks of the KH Neochem Group. These do not represent a comprehensive list of all the risks to the Group and there could be unforeseeable risks besides these.

1. Changes in the economic environment and market circumstances
2. Changes in raw material prices
3. Foreign exchange fluctuations
4. Climate change
5. Raw materials procurement
6. Overseas businesses
7. Accidents or disasters
8. Infectious diseases
9. Human resources
10. Product quality assurance and Product liability
11. Legal regulations and compliance
12. Intellectual property
13. Information security
14. Losses on valuation of securities

 Please refer to the Annual Securities Report for more details (in Japanese only).
<https://www.khneochem.co.jp/ir/securities/>

Consolidated Financial Statements

Consolidated Balance Sheet

	(Millions of yen)	
	As of December 31, 2020	As of December 31, 2021
Assets		
Current Assets		
Cash and deposits	9,066	16,934
Notes and accounts receivable - trade	22,058	33,186
Merchandise and finished products	8,278	14,562
Work in process	309	413
Raw materials and supplies	2,133	2,909
Other	2,098	2,288
Allowance for doubtful accounts	(6)	(4)
Total current assets	43,938	70,291
Non-current Assets		
Property, plant and equipment		
Buildings and structures	31,594	31,704
Accumulated depreciation and impairment	(25,254)	(25,823)
Buildings and structures, net	6,339	5,881
Machinery, equipment and vehicles	97,653	97,790
Accumulated depreciation and impairment	(85,328)	(87,267)
Machinery, equipment and vehicles, net	12,324	10,523
Land	17,549	17,549
Leased assets	221	1,573
Accumulated depreciation	(6)	(89)
Leased assets, net	215	1,484
Construction in progress	848	1,960
Other	6,402	6,442
Accumulated depreciation and impairment	(4,642)	(4,670)
Other, net	1,760	1,772
Net property, plant and equipment	39,037	39,170
Intangible assets		
Goodwill	1,378	1,243
Other	535	581
Total intangible assets	1,913	1,825
Investments and other assets		
Investment securities	8,292	8,176
Assets for retirement benefits	1,523	1,929
Deferred tax assets	109	185
Other	696	493
Allowance for doubtful accounts	(1)	(1)
Total investments and other assets	10,620	10,782
Total non-current assets	51,570	51,778
Total Assets	95,508	122,069

	(Millions of yen)	
	As of December 31, 2020	As of December 31, 2021
Liabilities		
Current Liabilities		
Notes and accounts payable - trade	14,263	25,640
Short-term bank loans	10,550	10,210
Current portion of long-term debt	2,400	3,250
Current portion of long-term lease obligations	4	91
Accounts payable - other	6,215	4,716
Income taxes payable	650	6,214
Provision for repairs	528	2,302
Other	594	850
Total current liabilities	35,206	53,276
Long-term Liabilities		
Corporate bonds	5,000	5,000
Long-term debt	3,250	-
Long-term lease obligations	259	1,606
Deferred tax liabilities	2,422	1,922
Liability for retirement benefits	2,568	2,526
Provision for repairs	659	-
Other	258	232
Total long-term liabilities	14,418	11,288
Total Liabilities	49,624	64,564
Net Assets		
Shareholders' equity		
Common stock	8,855	8,855
Capital surplus	6,140	6,186
Retained earnings	27,379	38,841
Treasury stock	(69)	(132)
Total shareholders' equity	42,305	53,751
Accumulated Other Comprehensive Income		
Unrealized gain on available-for-sale securities	1,162	1,022
Deferred gains or losses on hedges	0	(0)
Foreign currency translation adjustments	70	42
Defined retirement benefit plans	(158)	102
Total accumulated other comprehensive income	1,074	1,166
Non-controlling Interests	2,504	2,587
Total Net Assets	45,884	57,505
Total Liabilities and Net Assets	95,508	122,069

Consolidated Financial Statements

Consolidated Statement of Income

(Millions of yen)

	Fiscal year ended December 31, 2020	Fiscal year ended December 31, 2021
Net Sales	77,332	117,110
Cost of Sales	61,187	84,876
Gross Profit	16,144	32,233
Selling, General and Administrative Expenses		
Freight	3,416	4,469
Container packaging	1,095	1,420
Salary	1,241	1,230
Other	4,748	5,427
Total selling, general and administrative expenses	10,501	12,547
Operating Income	5,642	19,685
Non-operating Income		
Interest and dividend income	168	136
Equity in earnings of associated company	132	258
Subsidy income	-	77
Compensation income	143	-
Reversal of provision for environmental measures	94	-
Other	257	213
Total non-operating income	795	686
Non-operating Expenses		
Interest expenses	80	102
Loss on disposal of non-current assets	534	385
Extra retirement payments	106	-
Other	90	74
Total non-operating expenses	811	562
Ordinary Income	5,627	19,809
Extraordinary income		
Gain on reversal of foreign currency translation adjustments resulting from liquidation of a foreign subsidiary	-	89
Total extraordinary income	-	89
Extraordinary losses		
Impairment losses	-	111
Total extraordinary losses	-	111
Income before Income Taxes	5,627	19,788
Income taxes - current	1,074	6,523
Income taxes - deferred	406	(599)
Total income taxes	1,481	5,924
Net Income	4,145	13,864
Net Income Attributable to Non-controlling Interests	99	173
Net Income Attributable to Owners of the Parent	4,046	13,691

Consolidated Statement of Comprehensive Income

(Millions of yen)

	Fiscal year ended December 31, 2020	Fiscal year ended December 31, 2021
Net Income	4,145	13,864
Other Comprehensive Income		
Unrealized gain (loss) on available-for-sale securities	571	(139)
Deferred gains or losses on hedges	0	(1)
Foreign currency translation adjustments	(43)	(27)
Defined retirement benefit plans	(88)	260
Total other comprehensive income	440	91
Comprehensive Income	4,586	13,955
Comprehensive Income Attributable to		
Owners of the parent	4,487	13,782
Non-controlling interests	99	173

Consolidated Statement of Changes in Equity

(Millions of yen)

	Shareholders' equity				
	Common stock	Capital surplus	Retained earnings	Treasury stock	Total shareholders' equity
Balance, Jan. 1, 2020	8,822	6,107	25,557	(36)	40,450
Changes during period					
Issuance of stock (Exercise of share option)	33	33			66
Cash dividends of surplus			(2,224)		(2,224)
Net income attributable to owners of the parent			4,046		4,046
Purchase of treasury stock				(38)	(38)
Disposal of treasury stock				5	5
Net changes in items other than shareholders' equity					
Total changes during period	33	33	1,821	(32)	1,855
Balance, Dec. 31, 2020	8,855	6,140	27,379	(69)	42,305

	Accumulated other comprehensive income						Non-controlling interests	Total net assets
	Unrealized gain (loss) on available-for-sale securities	Deferred gains or losses on hedges	Foreign currency translation adjustments	Remeasurements of defined benefit plans	Total accumulated other comprehensive income			
Balance, Jan. 1, 2020	590	0	113	(69)	634	2,438	43,522	
Changes during period								
Issuance of stock (Exercise of share option)							66	
Cash dividends of surplus							(2,224)	
Net income attributable to owners of the parent							4,046	
Purchase of treasury stock							(38)	
Disposal of treasury stock							5	
Net changes in items other than shareholders' equity	571	0	(43)	(88)	440	65	506	
Total changes during period	571	0	(43)	(88)	440	65	2,361	
Balance, Dec. 31, 2020	1,162	0	70	(158)	1,074	2,504	45,884	

(Millions of yen)

	Shareholders' equity				
	Common stock	Capital surplus	Retained earnings	Treasury stock	Total shareholders' equity
Balance, Jan. 1, 2021	8,855	6,140	27,379	(69)	42,305
Changes during period					
Cash dividends of surplus			(2,228)		(2,228)
Net income attributable to owners of the parent			13,691		13,691
Purchase of treasury stock				(62)	(62)
Change in the parent's ownership interest due to transactions with non-controlling interests		46			46
Net changes in items other than shareholders' equity					
Total changes during period	-	46	11,462	(62)	11,445
Balance, Dec. 31, 2021	8,855	6,186	38,841	(132)	53,751

	Accumulated other comprehensive income						Non-controlling interests	Total net assets
	Unrealized gain (loss) on available-for-sale securities	Deferred gains or losses on hedges	Foreign currency translation adjustments	Remeasurements of defined benefit plans	Total accumulated other comprehensive income			
Balance, Jan. 1, 2021	1,162	0	70	(158)	1,074	2,504	45,884	
Changes during period								
Cash dividends of surplus							(2,228)	
Net income attributable to owners of the parent							13,691	
Purchase of treasury stock							(62)	
Change in the parent's ownership interest due to transactions with non-controlling interests							46	
Net changes in items other than shareholders' equity	(139)	(1)	(27)	260	91	83	174	
Total changes during period	(139)	(1)	(27)	260	91	83	11,620	
Balance, Dec. 31, 2021	1,022	(0)	42	102	1,166	2,587	57,505	

Consolidated Financial Statements

Consolidated Statement of Cash Flows

	(Millions of yen)	
	Fiscal year ended December 31, 2020	Fiscal year ended December 31, 2021
Operating Activities		
Income before income taxes	5,627	19,788
Depreciation	3,737	4,369
Impairment losses	-	111
Amortization of goodwill	134	134
Increase (decrease) in liability for retirement benefits	128	17
Decrease (increase) in assets for retirement benefits	(114)	(92)
Increase (decrease) in provision for repairs	(1,058)	1,114
Interest and dividend income	(168)	(136)
Interest expenses	80	102
Equity in (earnings) of associated company	(132)	(258)
Gain on reversal of foreign currency translation adjustments resulting from liquidation of a foreign subsidiary	-	(89)
Decrease (increase) in notes and accounts receivable	556	(11,089)
Decrease (increase) in inventories	1,931	(7,076)
Increase (decrease) in notes and accounts payable	(3,197)	11,256
Decrease (increase) in other current assets	(262)	(132)
Increase (decrease) in other current liabilities	1,577	(248)
Other	92	602
Subtotal	8,933	18,370
Interest and dividends received	382	286
Interest paid	(82)	(98)
Income taxes paid	(2,302)	(1,155)
Net cash provided by operating activities	6,931	17,402
Investing Activities		
Purchase of property, plant and equipment	(10,885)	(4,044)
Purchase of intangible assets	(247)	(360)
Purchase of investment securities	(11)	(11)
Other	(38)	21
Net cash (used in) investing activities	(11,182)	(4,395)
Financing Activities		
Increase (decrease) in short-term bank loans & borrowings-net	109	(340)
Repayments of bank loans	(2,400)	(2,400)
Proceeds from stock issuance (exercise of share option)	66	-
Purchase of treasury stock	(38)	(62)
Dividends paid	(2,230)	(2,229)
Dividends paid to non-controlling interests	(33)	(28)
Payment from purchase of investment in subsidiaries that do not result in change in scope of consolidation	-	(15)
Other	(4)	(92)
Net cash (used in) financing activities	(4,530)	(5,168)
Foreign Currency Translation Adjustments on Cash and Cash Equivalents	(19)	29
Net Increase (Decrease) in Cash and Cash Equivalents	(8,801)	7,868
Cash and Cash Equivalents, Beginning of Year	17,867	9,066
Cash and Cash Equivalents, End of Year	9,066	16,934

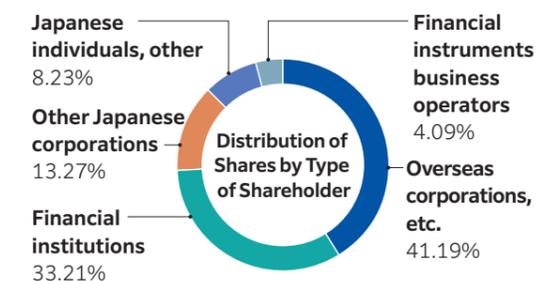
Corporate Overview

Corporate Overview (as of June 30, 2022)

Establishment	December 2010 (Our predecessor Kyowa Yuka, was established in November 1966)
Capital	8.8 bn JPY
Corporate Headquarters Head Office	2-3-1, Nihonbashi-Muromachi, Chuo-ku, Tokyo 103-0022, Japan
Group companies and affiliated companies	Kurogane Kasei Co., Ltd. Kurogane Fines Inc. KH Neochem Americas, Inc. Shanghai Seika Trading Co., Ltd. J-Plus Co., Ltd.* <small>*Joint venture with Mitsubishi Chemical Corporation</small>

Stock Overview (as of June 30, 2022)

Total number of shares authorized to be issued	136,200,000
Total number of issued shares	37,149,400
Number of shareholders	5,445



Global Network*



*Only headquarter locations are provided for Group companies and affiliates

Sponsorship of Speed Skaters

The Company has sponsored short track speed skater Moemi Kikuchi since 2018. And in April 2022, the Company also signed a sponsorship agreement with speed skater Rin Kosaka. As “a leading global specialty chemical company” that shares the enthusiasm of these athletes to pursue their dreams, we will do our utmost to support both athletes so that they can shine on the world stage.



Moemi Kikuchi

Rin Kosaka Profile

Birthday
December 19, 2001 (Age 20)
Birthplace
Koshimizu-cho, Shari-gun, Hokkaido
History

Yamagata Chuo High School – Mie
Amateur Sports Association – KH Neochem Rin Kosaka

2017/2018
National High School Skating Championships 1000m, 1500m champion
2018/2019
ISU Junior World Cup (Italy), 1500m, 3000m champion
World Junior Championships, team pursuit champion
2019/2020
Junior World Cup (Norway), 3000m Second place
2020/2021
All Japan Junior Championships 1000m, Overall Champion (new Japan Junior record)
2021/2022
All Japan Distance Championships, Mass start Champion
Beijing Olympics Japan National Team (Mass Start)



photo: Aflo Sport