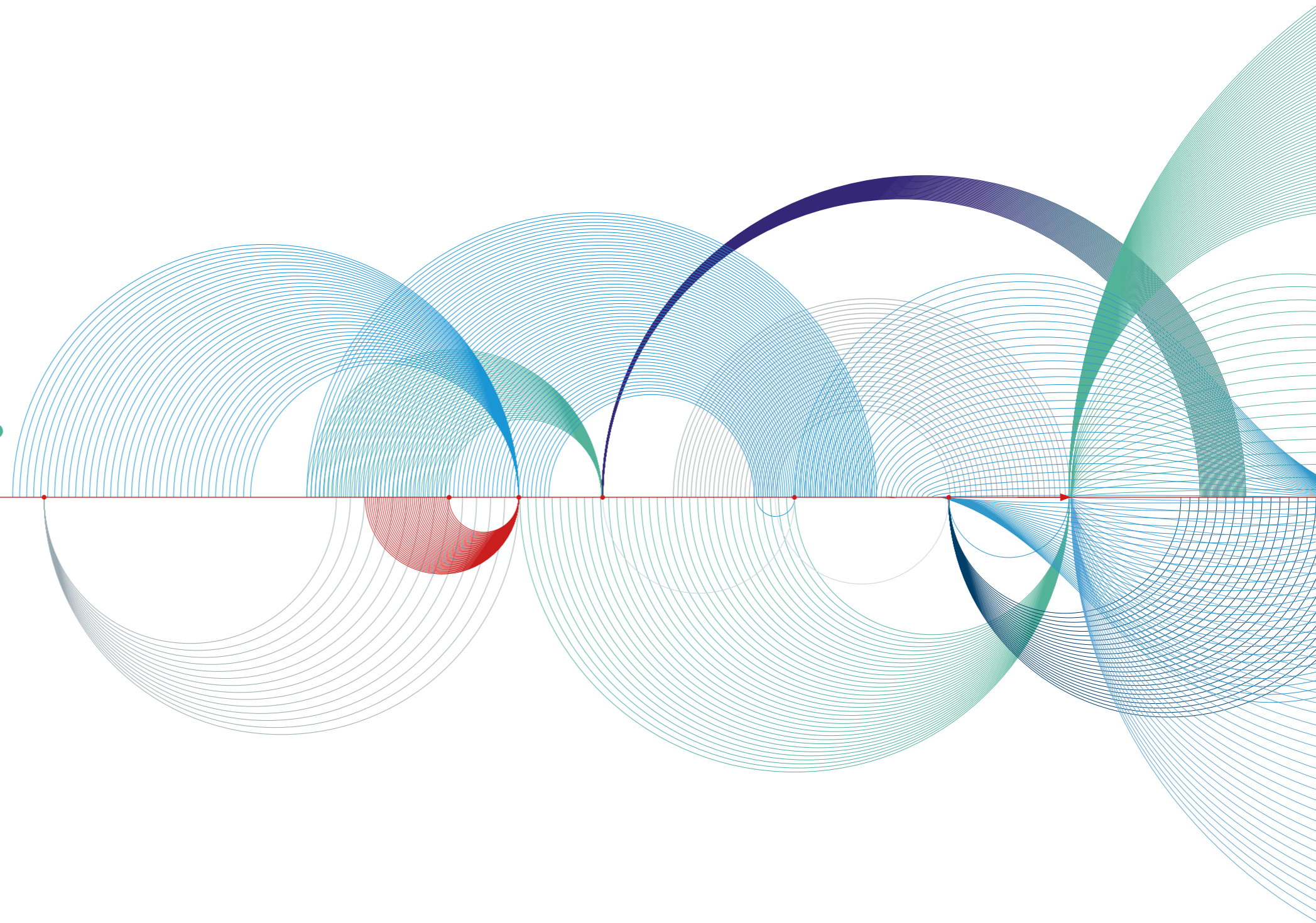


# NEW MOMENTUM.

Sustainability Report 2023



# NEXT MOVE BEYOND ESG TO . TO REAL WORLD IMPACT

Engaging with stakeholders cultivates sustainable innovation within a company and sets the stage for responsible growth. LOTTE Fine Chemical transparently discloses and actively shares its efforts and achievements with various stakeholders to create a better today and shape a sustainable tomorrow.

Since the publication of our first sustainability report in 2016, we have annually enhanced and deepened the scope of our reports. Last year, we introduced the "Sustainability Management QR Donation Campaign," transforming the publication of the report itself into a practical ESG initiative. For every person who scanned the QR code and accessed the sustainability report, a donation was made to Türkiye, which had suffered from an earthquake. As a result, 5,344 residents in Türkiye received livelihood support funds, educational materials, and hygiene kits.

The QR donation campaign is set to continue in 2024. Mongolia, a country severely affected by climate change, is experiencing desertification in 77% of its territory. Sandstorms arise, swiftly enveloping Korea in dust storms within two days, illustrating Mongolia's climate challenges directly impact on our atmospheric environment and health. LOTTE Fine Chemical therefore aims to plant trees in Bayankhangai, Mongolia, through the QR donation campaign for this year. Once abundant with wildflowers, this area now suffers from severe land degradation due to increased sandstorms influenced by the northwestern winds. 450 saplings donated by LOTTE Fine Chemical are envisioned to grow into a lush forest, bearing fruitful harvests, and we invite everyone to join us in this hopeful dream.

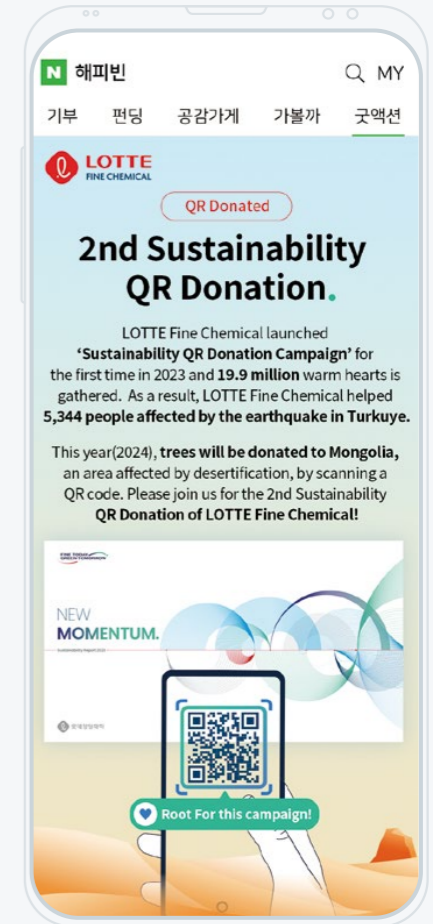
To jointly create a better today and achieve a sustainable tomorrow, LOTTE Fine Chemical plans to continue campaigns that promote stakeholder participation, aligned with the publication of our sustainability reports. A single scan of a QR code enables you to make a positive contribution to our society.

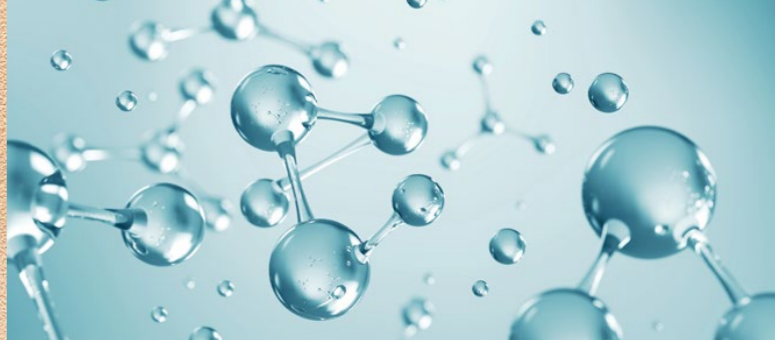
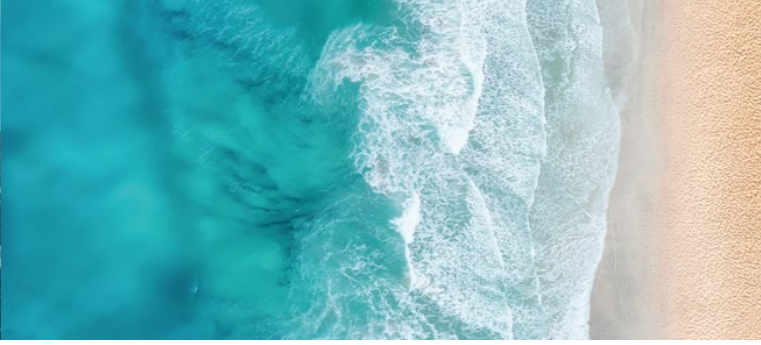
Moving forward, LOTTE Fine Chemical will continue to foster a culture of ESG action that involves the local community and considers the environment through our annual campaign aligned with the sustainability report publication.

Please refer to the "Corporate Responsibility: Green Reporting" part of this Report to find more information about the Sustainability Management QR Donation Campaign.



Simply scanning this QR code enables you to practice ESG. Please participate in LFC's Sustainability Management QR Donation Campaign.





# WELCOME TO

## LFC 2023 SUSTAINABILITY REPORT

Since the first publication of our Sustainability Report in 2016, LOTTE Fine Chemical (LFC) has been publishing the Report annually, disclosing the company's mid- to long-term strategies and goals, as well as the current status of its ESG (Environmental, Social, and Governance) management. Going forward, we will continue to transparently disclose key activities and achievements of our sustainability management through the Sustainability Report, thereby broadly communicating with stakeholders and enhancing trust.

### REPORTING CYCLE

LFC has been publishing a sustainability report every year since 2016, and the previous report was published in June 2023.

### REPORTING PERIOD

This report covers financial and non-financial performance undertaken from January 1st, 2023 to December 31st, 2023, including some ESG activities and performance conducted until April, 2024 to enhance information timeliness. As for quantitative performance, if the results need to be tracked continuously, we have used data for the past three years (2021-2023) and disclose them through the Sustainability Factbook.

### REPORTING SCOPE

Financial information is based on the Korean International Financial Reporting Standards (K-IFRS). Non-financial information is mainly on the economic, environmental, and social performance made by the company's worksite in Korea, including the Ulsan Complex, Seoul Office, and Incheon Plant. Some of the disclosed data includes the performance of overseas subsidiaries, direct subsidiaries, and supply chains.

### REPORTING PRINCIPLES AND REPORTING STANDARD

This report is in accordance with the Global Reporting Initiative (GRI) Standards 2021 and reflects The Ten Principles of UN Global Compact, a global initiative for business sustainability.

### THIRD PARTY ASSURANCE

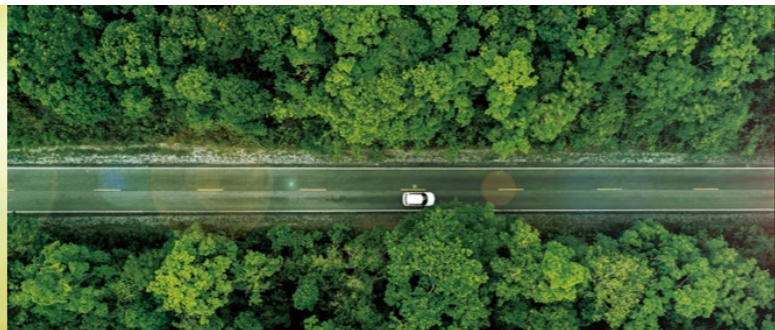
The financial information provided in this report has been audited by an independent auditor. Also, in order to ensure the objectivity and reliability of non-financial information, a third party assurance was undertaken in accordance with international AA1000AS v3 and AA1000AP (2018) by Korean Foundation for Quality (KFQ), and a separate assurance took place for greenhouse gas data.



## COVER STORY

LOTTE Fine Chemical is a specialty chemical company that delivers a significant impact on our daily lives and a sustainable future, using materials that are so small that they are not visible to the naked eye.

The "DOT" and "LINE" used for the design of this report's cover are based on our brand identity and symbolize our 60 years of innovation, created by each small chemical atom, and the dynamic future that LFC will shape. They also reflect LFC's commitment to ESG management, which seeks to expand positive impact through materials inspired by nature and technologies designed for humankind.



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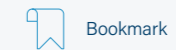
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### HOW TO USE THIS REPORT

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## CEO MESSAGE

Dear stakeholders, greetings.



This year, as LOTTE Fine Chemical marks its 60th anniversary, we are pleased to present our ninth sustainability report, which began to be published in 2016. I extend my gratitude for your unwavering interest and support.

Founded in 1964 with the mission to contribute to national economic development, LOTTE Fine Chemical has preemptively adapted to changes in the industrial environment and advanced its business structure to become a leading company in the specialty materials sector in Korea. Beyond the realm of chemicals, we are expanding into various high-growth fields such as specialty materials and eco-friendly energy. Moreover, we are establishing the groundwork for sustainable growth, embarking on a new journey that aims not just for 60 years, but towards 100 years and beyond.

Following the recent release of draft standards for the three major global disclosure standards, including the IFRS Sustainability Disclosure Standards, the EU CSRD and ESRS, and the U.S. SEC's climate disclosure rules, mandatory ESG disclosures are also being promoted in Korea, indicating that ESG practices have become essential for corporate sustainability. LOTTE Fine Chemical is proactively establishing a foundation for ESG management and practicing corporate social responsibility through a sustainable business framework. In 2023, in recognition of our efforts, we had the honor of being selected as the best company in the general listed company category at the "2023 ESG Excellence Awards" hosted by the KCGS (Korea Institute of Corporate Governance and Sustainability).

As we move into 2024, LOTTE Fine Chemical aims to enhance our ESG management by establishing an ESG management system and

strengthening the management and reliability of ESG data. In the environmental sector, we will lead the clean hydrogen and ammonia markets, with the goal of meeting our 2030 hydrogen growth roadmap targets, and pioneer the adoption of clean technologies. In the social sector, we will develop an ESG evaluation system for supply chain management and operate a site-specific safety and health system to ensure safe workplaces. Lastly, in terms of governance, we will strengthen the functions and activities of our BOD, internalize fair trade and compliance management, and promote transparency through the disclosure of corporate governance reports, in our efforts to realize transparent management.

### Beyond 60, New Green 100

As we lead market changes and practice ESG management, based on the capabilities and experiences accumulated over the past 60 years, I ask for your continued interest and support in LOTTE Fine Chemical's journey. On the back of your encouragement, we will pave the way and innovate towards becoming a sustainable 100-year company. Thank you.

June 2024

**Yong-Seok Kim**  
CEO, LOTTE Fine Chemical

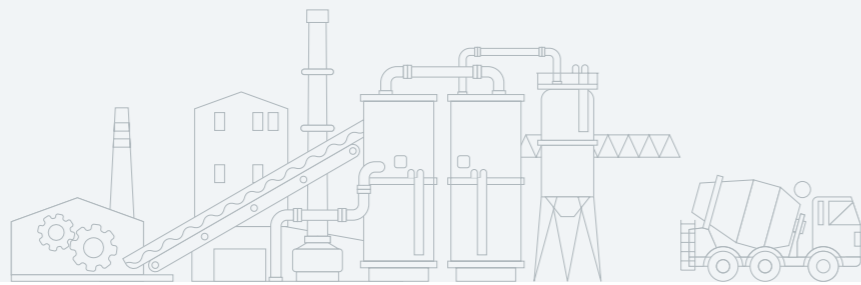
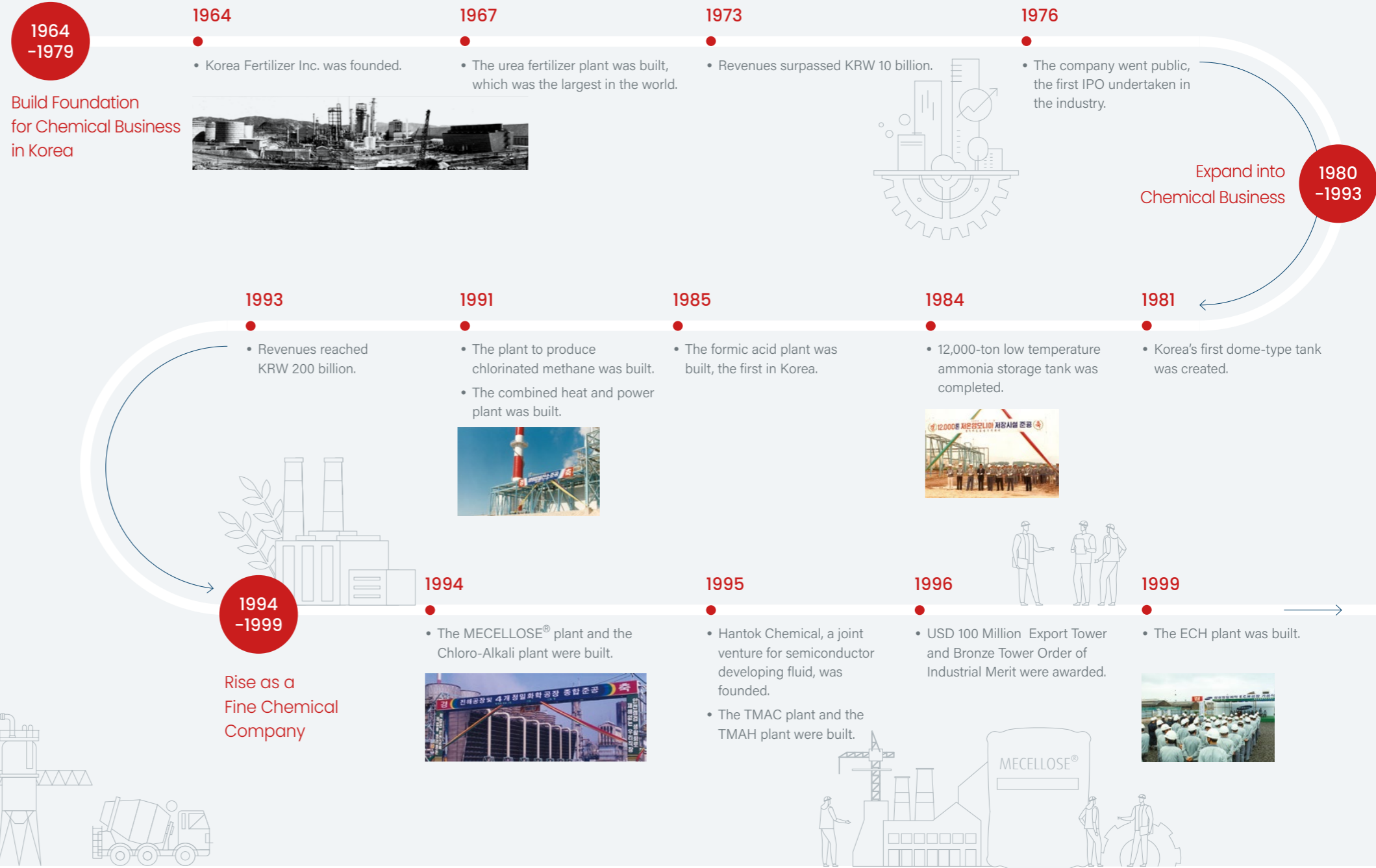
# MILESTONES

## Beyond 60, New Green 100

Since its foundation in 1964, LOTTE Fine Chemical has been playing a crucial role in developing the fine chemical industry into a key industry in Korea, significantly contributing to its growth. We established the Ulsan Plant at the start of our operations, bolstering the nation's economic development, have since then transformed into a leading "specialty chemical company" by investing in high value-added specialty materials with global competitiveness and enhancing ESG competitiveness, including proactive safety management.

In 2024, marking the 60th anniversary of its founding, LFC aims to increase the proportion of its high value-added specialty business and leap into becoming a "Global Top 10 Specialty Company" with a target sales of KRW 7 trillion by 2030. To this end, we are accelerating the expansion of facilities not only in the cellulose derivatives business but also in clean ammonia, TMAC, and other chemical and electronic materials sectors, exploring business expansion into future high-growth areas beyond chemicals, such as materials and energy.

LFC is poised to surpass 60 years on its journey toward becoming a century-old company. Based on the capabilities and experiences accumulated over the past 60 years, we will closely respond to market changes and precisely meet customer needs, thereby achieving sustainable innovation and growing into a global top-tier company that competes in a broader realm.



# MILESTONES

2000-2008

Strengthen the Global Competency with Value-Added Specialty Materials



2000

- The AnyCoat<sup>®</sup> plant was built.
- The enterprise anti-disaster center was opened.

2001

- The PTAC plant was built.

2005

- The company was appointed as Green Company by the Ministry of Environment.



2008

- The EUROX<sup>®</sup> plant was built.



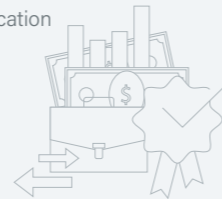
2009-2023

Lay Foundation for Sustainable Growth



2019

- The USD 600 Million Export Tower Order was received.
- The company was selected as an excellent CSR company.
- The Leisure-friendly Certification was received.



2016

- The company changed its name to LOTTE Fine Chemical.



2011

- The anhydrous HCL plant was built.
- The HECCELLOSE<sup>®</sup> plant was built.
- The company was appointed as Green Company.



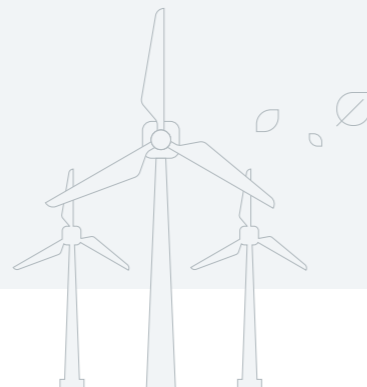
2009

- The Citation of the Minister of Knowledge Economy was received.
- The USD 300 Million Export Tower Order was received.
- AnyAddy<sup>®</sup> was released



2020

- The excellence in culture and art sponsorship was recognized.



2021

- Opened the Food and Pharmaceutical R&D Center in Magok, Seoul.
- Established the ESG Committee.
- Selected to participate in the national Technological Development of Reformed Hydrogen from Clean Ammonia Project.
- Received the Minister of Interior and Safety's Prize at the Korea Safety Award.



2022

- Established the India Branch.
- Commercially introduced blue ammonia for the first time in the world.

2023

- Received A+ rating in the KCGS ESG Evaluation, and selected as top-performing company.
- Received the Grand Award in the ARC Awards, an international sustainability report competition.



# NOW, NEW, NEXT

LOTTE Fine Chemical is opening a path towards a better today and sustainable tomorrow by realizing “Fine Today, Green Tomorrow” through both big and small innovations and continuous challenges. In 2023, LFC focused on eco-friendly green growth and corporate social responsibility in implementing its sustainability management, thereby completing the groundwork for a better world. Now, we are taking up a new challenge – marking our 60th anniversary in 2024 as a turning point, and using ESG as a driving force, we are embarking on a new history and accelerating sustainable growth.

## BUSINESS SUSTAINABILITY



### GREEN MATERIALS

We maintain solid growth momentum in the green materials which embrace nature, continuing stable growth.



### GREEN ENERGY

We accelerate the transition to a hydrogen economy by turning the possibility of clean hydrogen energy provided by nature into reality.



### GREEN EVOLUTION

We add evo-friendly value to our business in order to achieve nature-friendly and future-oriented green growth.

## CORPORATE RESPONSIBILITY



### GREEN REPORTING

LOTTE Fine Chemical strives to minimize the environmental footprint of publishing sustainability reports. In 2023, we introduced a virtuous cycle of “Return-to-Nature” structure to our sustainability reporting, setting new standards for green reporting.





BUSINESS SUSTAINABILITY

# Reaching New Heights

## GREEN MATERIALS

Cellulose is known to be the most abundant polymer material available from nature. LFC is adding better value to our daily lives by transforming the natural materials into specialty chemicals. Based on a clear understanding of market changes and customer needs, and by securing leading technology and making proactive investments, we are reaching new heights in green materials business, enhancing competitive edge in eco-friendliness.

## Green Materials Becomes the Growth Driver of LFC

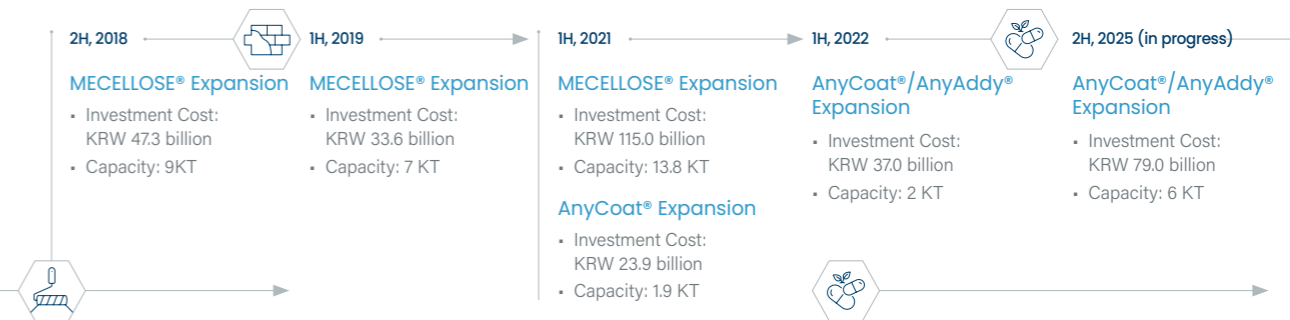
LFC initiated its green materials business in 1994 in line with its strategy to enter the high value-added specialty chemical industry. Supplying high-functional green material products made primarily from pulp derived from wood and cotton, and of late, the global trend towards eco-friendliness is driving robust and stable growth of green materials business. Our green materials sales recorded KRW 319.1 billion in 2019, and in 2020 despite the unprecedented pandemic hitting the world, we maintained growth trajectory with sales of KRW 345.7 billion during that year, achieving sales of KRW 494.6 billion in 2023.

The solid growth momentum in the green materials business at LFC is supported by leading technological capabilities and proactive investments. We are the only chemical company in Korea, and one of the few globally, that produces cellulose derivatives, including those for pharmaceutical and food applications. We have been pioneering the development of eco-friendly materials to address resource depletion and environmental issues stemming from the chemical industry, securing a unique technological competitiveness. Thanks to swiftly adapting to high value-added specialty products rather than generic ones, LFC has been able to generate a stable level of profits in green materials business.

Moreover, our determination to identify opportunities and to make bold invest has enabled us to establish leadership in the green materials market. Since 2020, over the past four years, we have invested more than 280 billion KRW to enhance the production capacity of green materials. Construction of the HECCELLOSE® Plant 3, with an annual production capacity of 10,000 tons, began in 2021, and was completed at the end of 2023, which was followed by commercial operations commenced in February 2024. We are also rapidly expanding the production of AnyCoat® and AnyAddy®, the world's leading plant-based capsule materials for pharmaceutical and food use, set to be completed in 2025. By then, LFC will possess the largest production capacity for food and pharmaceutical use cellulose derivatives in the world.

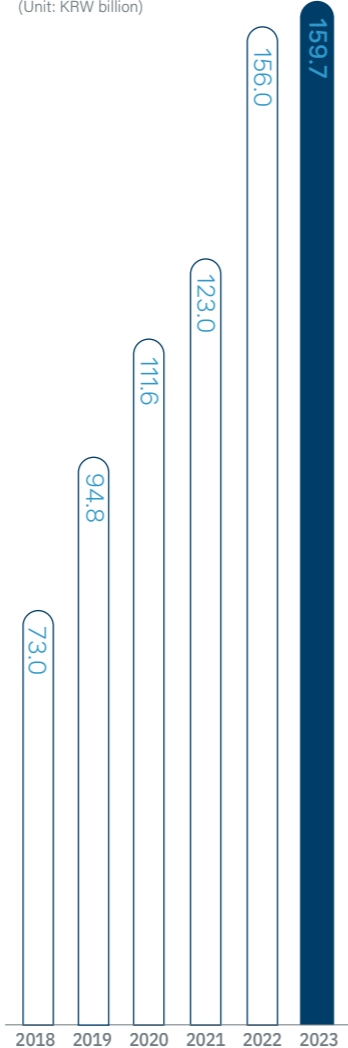
LFC is striving to secure a competitive edge in the green materials business by focusing on high value-added industries expected to grow in the future. Particularly, we are making concentrated efforts on the prevailing trends of eco-friendliness and health by initiating the development of applications based on eco-friendly pulp and promoting the commercialization of high value-added products. Under this growth strategy unique to LFC, we will remain competitive with continuous innovation and unwavering growth.

### Major Investment in Green Materials





**Sales of Food and Pharmaceutical Materials**  
(Unit: KRW billion)



**40% +**

Aim to achieve KRW 3 trillion of sales in green materials and sales portion of 40% by 2030

**KRW 50 billion +**

Amount of invest aimed at securing R&D infrastructure



### LFC Enhances Capabilities in Green Materials

LFC continues proactive expansion to secure an overwhelming global leadership in production capacity and is expanding its portfolio based on enhanced R&D, aiming to reach KRW 3 trillion in green materials sales and a sales portion of 40% by 2030. With the aging population and the rise in adult metabolic diseases such as diabetes and hypertension, coupled with increased health awareness following the COVID-19 pandemic, the plant-based capsule material market is growing rapidly. The excipient market for pharmaceuticals is expected to grow at a compound annual growth rate (CAGR) of 6.6% from 2022 to 2028, reaching a market size of USD 12.25 billion<sup>1)</sup>. Additionally, the demand for functional additives for alternative meats is also expected to continue to rise due to the increasing number of vegetarians and growing concerns about climate change and animal welfare.

LFC is continuously investing in the production lines of AnyCoat® and AnyAddy®, pharmaceutical and food additives, respectively. In May 2022, we completed the expansion of a 2,000-ton food and pharmaceutical production line at the Incheon Plant, thereby securing stable supply capabilities. Continuing our proactive and bold investments, we are planning further expansions, targeting commercial production in the second half of 2025.

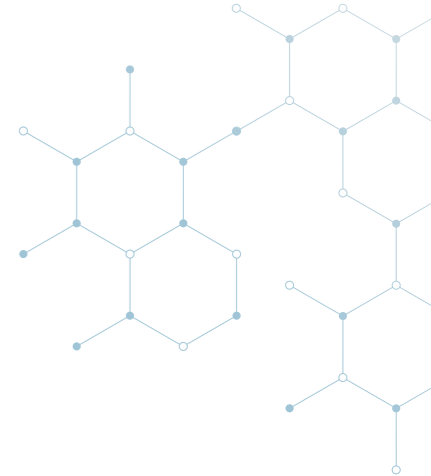
<sup>1)</sup> Source: Research & Market



LFC is also actively investing in research and development (R&D) to enhance the functionality and eco-friendliness of its green material products. In 2023, we purchased part of the LOTTE R&D Center in Magok-dong, Seoul, securing 5,289 square meters of research space and investing a total of KRW 50 billion by 2024 to build mid-to long-term research infrastructure. We also plan to continuously expand research personnel by 2030.

To secure top talent for R&D, LFC co-hosted the LOTTE Chemical HQ Integrated R&D Conference in 2023. We invited leading domestic graduate and doctoral candidates engaged in research related to our business fields to share insights on LFC's technological status and future vision, and to network. Additionally, an industry-academia scholarship program was introduced to support outstanding talents and provide employment opportunities after graduation. Furthermore, to attract international talent, we visited renowned universities in the U.S. and Germany to conduct recruitment briefings and meetings, which successfully resulted in actual hires.

Green materials are the driving force enabling LFC's future growth. To ensure this growth driver does not falter and operates more robustly in the long term, we continue to invest not only in expansions but also in people and future values, thereby enhancing the value of LFC's green materials.



# Expanding New Horizons

## GREEN ENERGY

Carbon neutrality is a challenge that humanity must solve together, and a strategy that businesses must pursue to achieve sustainable growth. Given the calls for a rapid transition to a decarbonized society, LFC is focusing on the potential of hydrogen. Leveraging experiences that we have accumulated in the ammonia business over the past 50 years, and on the back of our global-scale infrastructure, we are leaping forward to become "Asia's Clean Ammonia Hub." Moreover, we are preparing for new growth ahead by expanding collaboration with leading companies at home and abroad.



## Ammonia at the Heart of Realizing the Hydrogen Economy

The Intergovernmental Panel on Climate Change (IPCC) insisted that it is unequivocal that human influence has warmed the atmosphere, ocean and land through its Sixth Assessment Report. Considering that one of the main causes of climate change is greenhouse gas (GHG) emitted by human activities, the transition to a decarbonized society is urgent. As achieving carbon neutrality has emerged as a critical task of our time, hydrogen energy is increasingly gaining attention.

Alongside the rise of hydrogen energy, ammonia is gaining attention as a breakthrough solution for the storage and transportation issues of hydrogen. Instead of gaseous hydrogen, which is highly flammable, voluminous, and poses explosion risks making it difficult to transport, ammonia – a compound of hydrogen and nitrogen – is being reevaluated as a "hydrogen carrier." It is transported in the form of ammonia, and then the nitrogen is separated to extract hydrogen. LFC, with over 50 years of experience in the



KRW 1.4 trillion +  
Aim to achieve more than KRW 1.4 trillion in sales of clean ammonia by 2030



900,000 tons +  
Annual ammonia distribution volume handled by LFC – 3rd in the world and 1st in Asia

ammonia business and a global-scale infrastructure, is preparing to leap forward as the "Clean Ammonia Hub of Asia."

According to forecasts by the American financial institution S&P Global in 2023, hydrogen carriers, shipping fuels, and power plant co-firing will account for 15% of global ammonia demand by 2030. LFC has completed the purchase of ammonia transport vessels and the construction of re-export facilities in February 2024, to capture this market of nearly KRW 30 trillion, assuming a clean ammonia price of USD 600 per ton, in new demand opportunities. Moreover, in anticipation of implementing the Clean Hydrogen Energy Portfolio Standards (CHPS), we are establishing the entire value chain – including procurement, transportation, and storage – to ensure the stable supply of clean ammonia to major domestic power plants. Through these efforts, LFC is preparing ahead for the imminent era of hydrogen energy and aims to lead market changes.

## LFC at the Center of Building the Global Clean Ammonia Supply Chain

While achieving carbon neutrality is a challenge that requires substantial investment and alters the structure of industries and energy, it is also an opportunity for a new leap. Building on the know-how and infrastructure we have accumulated, LFC is actively cooperating with leading domestic and international companies to proactively prepare for future growth.

As the leading ammonia distributor in Asia, LFC owns the largest ammonia storage facility in Asia at Ulsan Port and is expanding collaboration to build ammonia bunkering infrastructure to help Korea grow as a bunkering hub during the forthcoming ship fuel transition period. A notable activity includes signing a memorandum of understanding (MOU) with the Dutch company OCI Global in March 2023 to jointly utilize ammonia storage infrastructure in Europe, the Middle East, and the Americas; and in December of the same year, we solidified this agreement with an MOU for ammonia bunkering cooperation. OCI Global, the largest ammonia producer in Europe, owns ammonia storage and distribution facilities in Rotterdam, the Netherlands; the Suez Canal, Egypt; and central U.S., among other locations. When ammonia-fueled ships commercialize, fuel supply will be necessary at major ports worldwide, and at that time, LFC aims to establish a global supply chain using OCI Global's ammonia storage infrastructure.

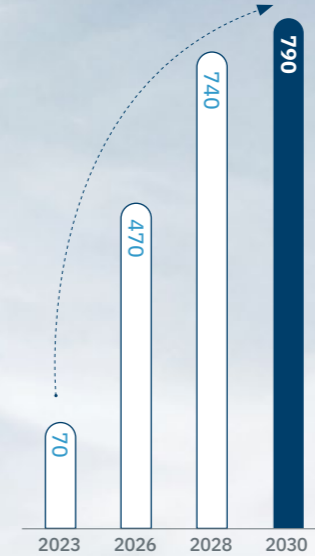
LFC has also formalized an MOU for carbon-neutral ammonia marine transport and bunkering with HMM, the largest shipping company in Korea, and has begun to fully establish global bunkering services. The two companies signed an MOU in 2021 for a green ammonia transport and bunkering consortium. With the increasing visibility of ammonia demand as ship fuel following HMM's introduction of eco-friendly ships, they signed an additional MOU in April 2023. This new agreement expands their business cooperation to include ammonia marine transport and methanol bunkering, and it aims to develop concrete cooperation strategies.

# Gaining New Traction

## GREEN EVOLUTION

With the changing times seeking green growth, there is a growing movement to find eco-friendly values in chemical products. LFC is making caustic soda, a basic raw material used in the chemical industry, into an eco-friendly, future-oriented chemical product, thereby securing new growth engines. In addition, we are proactively investing in the development of clean technologies and promoting innovations that are beneficial for both the natural environment and corporate value.

Caustic Soda Demand Outlook for Secondary Batteries in Korea  
(Unit: 1,000 tons)



Internal estimates of LFC

## New, Eco-Friendly Value of Specialty Chemicals

Caustic soda is a fundamental raw material used in various chemical industry sectors such as textiles, pharmaceuticals, paper, and detergents; and LFC produces it at a stable capacity of approximately 380,000 tons. Traditionally used across industries for cleaning and neutralizing in processes such as semiconductor manufacturing, textile dyeing, and aluminum refining, caustic soda is now also crucial in the precursor processing of cathode materials, one of the components of electric vehicle (EV) batteries, thereby gaining recognition as a chemical essential for eco-friendly and future-oriented industries.

According to energy market research firm SNE Research, the global demand for EV batteries is expected to reach 3,074 GWh by 2030, with caustic soda needed for battery production estimated at about 1.32 million tons. Considering the rapid replacement of internal combustion engines by EVs and the proactive domestic integration of precursor materials by Korean companies, the demand for caustic soda in the domestic market is expected to surge. LFC, the only caustic soda manufacturer in the Yeongnam region among domestic companies and uniquely positioned near Pohang – a hub of secondary battery production – is leveraging this proximity for a competitive advantage. However, LFC is considering the construction of overseas plants to scale up caustic soda sales in line with the growth of the electric vehicle market and to enhance its value and profitability as an eco-friendly product.

LFC's ability to make long-term investments in businesses where it has not yet a significant sales share is thanks to our stable financial soundness. As of the end of 2023, LFC's debt ratio stood at 12.6%, year-on-year decrease of 5.5%p, with cash and cash equivalents totaling KRW 460.9 billion. On the back of such robust financial soundness, we are expanding investment, embarking on an evolution towards becoming a "Global Top 10 Specialty Company."





To this end, LFC has set a mid-to long-term investment plan to invest more than KRW 160 billion<sup>1)</sup> by 2030 and has established the Clean Technology Adoption Roadmap, which was disclosed through its website in September 2022. According to the plan, LFC is currently developing and investing in certain areas of clean technology, with a total investment of KRW 36.6 billion<sup>1)</sup> in 2023. Detailed achievements include investing KRW 19.8 billion in reduction of GHG emissions (power savings, steam reduction, renewable energy adoption) and KRW 3.1 billion and KRW 13.7 billion, respectively in water resources management (reducing and recycling water and wastewater) and reduction of hazardous substances and wastes.

Thus, LFC is actively pursuing proactive investments in developing clean technologies, internalizing eco-friendly management practices. Such efforts allow us to reduce environmental burdens and contribute to environmental protection while securing innovative competitive advantages. Moving forward, we will continue investing in the future to ensure that clean technology becomes a sustainable competitive advantage for both the natural environment and corporate value.




<sup>1)</sup> On a cumulative basis

## LFC's Clean Technology to Enhance Eco-Friendly Value

LFC is continuously investing in clean technologies – alternative energy, energy efficiency, waste reuse/recycle, air pollution reduction – to achieve sustainable, eco-friendly, and future-oriented growth. In order to achieve “Establishing eco-friendly management,” one of our strategic directions for ESG management, we have established key environmental objectives including GHG reduction, water resource management, and the reduction of hazardous substances and waste. We have defined the essential technologies needed to achieve these objectives as our proprietary clean technologies and is focusing on the development and adoption of technologies that will enable sustainable green growth.



### 3 Key Tasks of LFC Clean Technologies

-  Reduction of GHG emissions
-  Water resources management
-  Reduction of hazardous substances and wastes

# NEW WAY OF SOWING SEEDS OF CHANGE

## GREEN REPORTING

Like specialty chemicals, which are too small to see, bring positive changes to our daily lives, everyday practices can shape the tomorrow we will face. LFC is creating a better today and a sustainable tomorrow by linking the publication of its sustainability report to daily ESG practices.

## Green Transformation in LFC's Sustainability Reporting

Green Transformation in LFC's Sustainability Reporting LFC is implementing sustainable management across all areas of business, considering ESG values to create a better today and move towards a sustainable tomorrow with technology that embraces humanity and products that encapsulate nature. We communicate with stakeholders by publishing sustainability reports that contain accomplishments in this process, systems supporting these, and plans for better outcomes.

Since publishing its first sustainability report in 2016, LFC has made various attempts to ensure the report goes beyond being just a disclosure document, becoming a genuine communication channel with stakeholders and connecting sustainable values to ESG actions. To minimize the environmental impact of report publishing, we have used eco-friendly paper and ink, and since the sixth report in 2020, we have switched to a digital report format in PDF to minimize paper usage. Moreover, with the publication of the 2022 sustainability report, we have once again reflected on the better

direction our ESG performance report should take, and thus initiated the "Sustainability Management QR Donation Campaign."

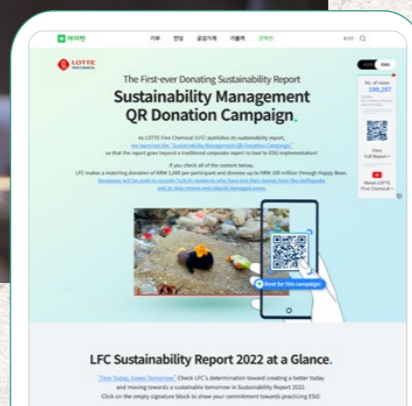
This campaign involves upcycling waste paper generated in-house to create eco-friendly seed paper embedding a QR code that accesses the report. For each QR code scan, a donation is made, contributing to solving various social issues. Particularly, the seed paper with QR coded returns to nature, sprouting and blooming, thus creating a resource recycling structure. In 2023, the first year of the Sustainability Management QR Donation Campaign, a total of 199,296 people participated, surpassing the target of 100,000 and early achieving a fundraising goal of KRW 100 million. The funds raised were used for earthquake relief in Türkiye.

LFC is connecting the publication of its sustainability report to sowing seeds for better change, developing a system that allows us all to realize sustainability in our daily lives.



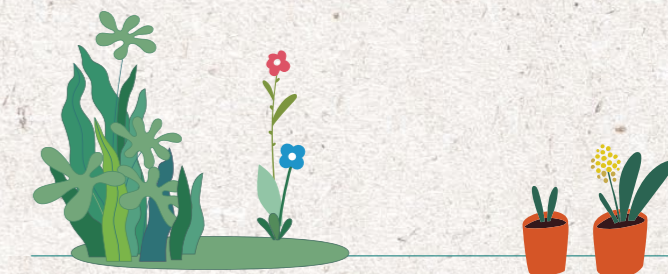
15,440 cases

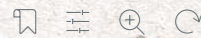
No. of supportive comments registered on the Happybean portal



199,296 persons

No. of participants in the Sustainability Management QR Donation Campaign





## Sustainability Management QR Donation Campaign

In June 2023, alongside the publication of its eighth sustainability report, LFC rolled out the Sustainability Management QR Donation Campaign, linking report reading to everyday donations. This campaign aimed to generate a maximum of KRW 100 million by matching KRW 1,000 per person, targeting 100,000 people.

"The idea of linking the report to donations is very fresh and appropriate," and "The campaign is meaningful at a time when the publication of corporate sustainability reports is becoming essential," were some of the 15,440 comments of encouragement received, and with 199,296 participants, the target of 100,000 was surpassed. LFC donated KRW 100 million raised through the Sustainability Management QR Donation Campaign to Happybean, and the funds were used to comfort and assist with the recovery and rebuilding of areas affected by the earthquake in Türkiye.



## "Return-to-Nature" Sustainability Report

In Korea, the annual per capita paper usage is 189.1kg, which translates to about 240 million trees<sup>1)</sup> used nationally. LFC has been making various efforts such as the Single-Use Zero Challenge (2023) and Paperless Campaign (2024) to reduce the use of disposable papers. In 2023, we created seed paper from waste paper generated in-house. Seed paper, containing seeds, sprouts when watered or planted in soil after being torn into small pieces.

Along with the publication of the sustainability report, the QR Donation Campaign was conducted using 1,000 pieces of seed paper (with QR codes) distributed during the "Urban Box Farming Campaign" in Ulsan in October 2023. Eliciting positive community responses such as, "Thank you for giving us the chance to participate in environmental protection and donation with our children" and "I really support this great campaign," we delivered a small yet significant impact to the local community.

<sup>1)</sup> As of 2021, Source: Korea Paper Association and Statistics Korea



## Urban Box Farming Campaign

Plants, as key components of the ecosystem that absorb carbon dioxide and produce oxygen, are vital for environmental protection and resource recycling. Simultaneously, as the term "companion plants" emerges, the act of growing plants provides emotional stability and a sense of achievement, thus benefiting people.

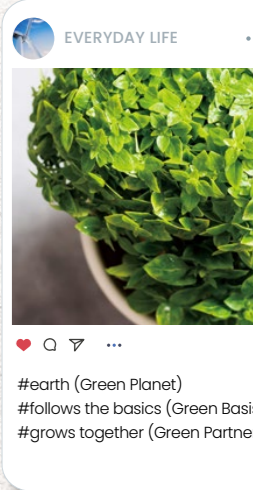
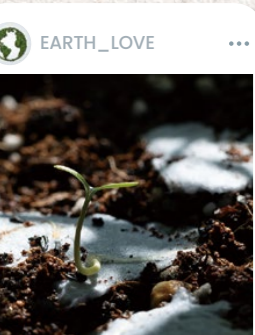
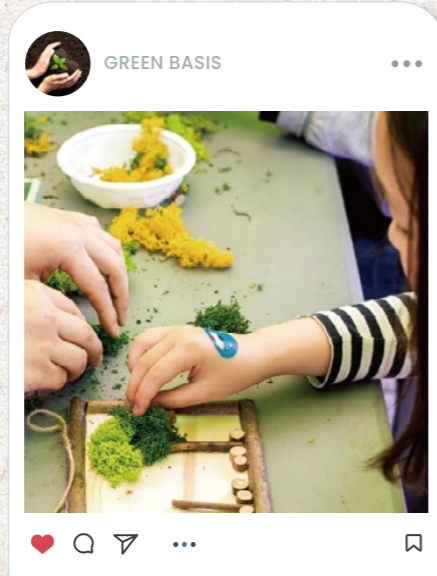
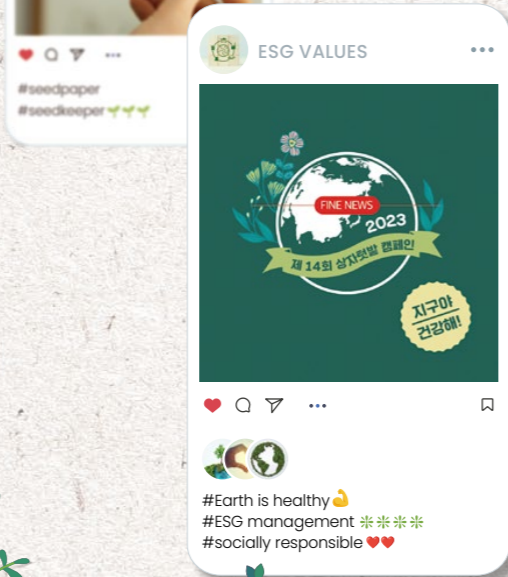
The "Urban Box Farming Campaign" is a leading eco-friendly social contribution program that LFC has been conducting since 2010. Over the past 14 years, with the participation of 45,000 people, a total of about 61,000 pots containing blueberries, figs, herbs, and rubber trees have been distributed, helping to green the urban landscape of Ulsan, where one of LFC's production plants is located. In 2023, pots of orange lemons and basil trees, which are excellent for air purification and easy to grow indoors, were distributed to 5,000 students across six elementary schools in Ulsan, along with seed papers linked to the Sustainability Management QR Donation Campaign, thereby promoting LFC's efforts for a sustainable future. A school official who received the pots expressed gratitude, saying, "Thank you for helping our children grow up healthy alongside nature." LFC will continue the Urban Box Farming Campaign to ensure that our future generations can grow up healthy with plants.

## Virtuous Cycle of the Return-to-Nature Sustainability Report



# MAKING ESG PART OF EVERYDAY LIFE.

Our Actions Today Shape Our Tomorrow.  
LFC supplies specialty material products used in everyday life, adding value to our daily lives. Going forward, we will continue to enhance ESG in everyone's lives, creating a better today and a better tomorrow together with various stakeholders.





# Next move towards the green innovator of tomorrow

ESG management stands as a cornerstone strategy for LFC's sustainable growth. Anchored by a systematic ESG implementation strategy, we have set our growth goals in a direction where we can all grow together by creating a better today and moving towards a sustainable tomorrow through technology and products of LFC, and by committing to adhering to the basics. And we will achieve this through innovation and challenges.

We invite more stakeholders to join us in our sustainable journey. We are creating a better today and moving towards a sustainable tomorrow as "The Green Innovator," championing human health and environmental enhancement.



# COMPANY OVERVIEW

## FINE TODAY, GREEN TOMORROW

Since its establishment in 1964, LOTTE Fine Chemical (LFC) has proactively responded to changes in the industrial environment and continuously advanced its business structure, thereby building the foundation of Korea's fine chemical, intermediate industry, and thus growing into a specialized company. Furthermore, it has established itself as a leading company in the value-added specialty materials sector in Korea.

We have built a balanced product portfolio in the Chemicals and Green Materials Business Divisions, maintaining stable growth. Our chemical products, which include chlorine and ammonia derivatives used in various applications in many aspects of our lives, and green materials products from the cellulose derivatives that enhance daily functionality, are value-added and high-functional materials contributing to the development of downstream industries, also serving as the driving force behind the sustainable growth of LFC.

Moving forward, LFC will leverage the technical expertise accumulated over the past 60 years to create new markets in the high value-added specialty green materials business. We will also focus our capabilities on renewable energy businesses such as clean hydrogen and ammonia, aspiring to leap forward as a "Global Specialty Company."

### COMPANY PROFILE

#### COMPANY NAME

LOTTE Fine Chemical 


#### CEO

Yong-Seok Kim 


#### ESTABLISHMENT

August 27, 1964 

#### HEADQUARTERS

19 Yecheon-ro 217beon-gil,  
Nam-gu, Ulsan, Korea 


#### KEY BUSINESS AREA

Specialty chemicals,  
construction and coating materials,  
pharmaceutical ingredients,  
food additives businesses 

#### CONSOLIDATED SUBSIDIARIES

LOTTE Fine Chemical  
Europe GmbH

LOTTE Fine Chemical  
Trading(Shanghai) Co., Ltd.

Skyscraper Long-term  
Strategic Private Equity Fund 

### VISION & STRATEGY

**Achieving Korea's No.1 M/S  
in the clean ammonia business**



**LOTTE Fine Chemical Europe GmbH**  
Germany




**LOTTE Fine Chemical America Office**  
U.S.


**LOTTE Fine Chemical Europe GmbH,  
Technical Service Center**  
Germany

**LOTTE Fine India Branch**  
India

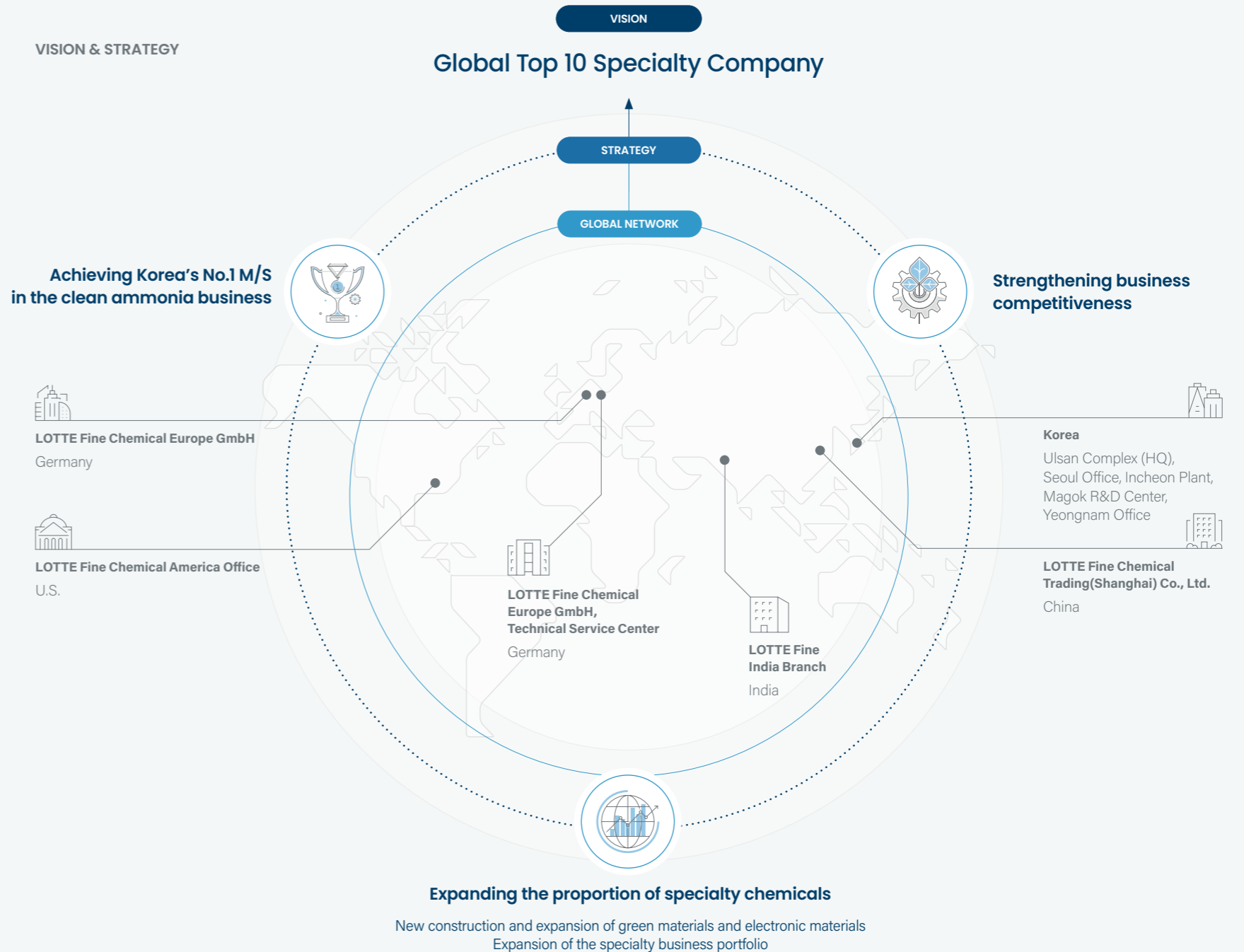
**Strengthening business competitiveness**

#### Korea

Ulsan Complex (HQ),  
Seoul Office, Incheon Plant,  
Magok R&D Center,  
Yeongnam Office 

**LOTTE Fine Chemical Trading(Shanghai) Co., Ltd.**  
China 

## Global Top 10 Specialty Company



# BUSINESS OVERVIEW



## CHEMICALS

### Chlorine Derivatives

Chlorine (Cl) is a halogen element widely distributed in nature and a major component of salt. It reacts with nearly all types of elements and particularly in its gaseous state, produces sterilizing, disinfecting, and bleaching effects when it encounters alkaline solutions. LFC produces various chlorine-based products needed across a wide range of industries, including ECH (epoxy resin raw material), caustic soda (basic chemical product raw material), and TMAC (semiconductor developer raw material).

Products: ECH, Caustic Soda, TMAC

### Ammonia Derivatives

Ammonia (NH<sub>3</sub>) is a compound composed of one nitrogen atom and three hydrogen atoms, providing the essential nitrogen required by plants for protein synthesis. Naturally occurring amounts are limited, and 80% of the ammonia produced industrially worldwide is used as fertilizer to increase food production. LFC began producing urea fertilizer using ammonia as a raw material in 1964 and has since expanded its range to include environmentally friendly products like EUROX® (urea solution), an ammonia-based product for reducing nitrogen oxides.

Products: Ammonia, EUROX®



## GREEN MATERIALS

### Cellulose Derivatives - Industrials

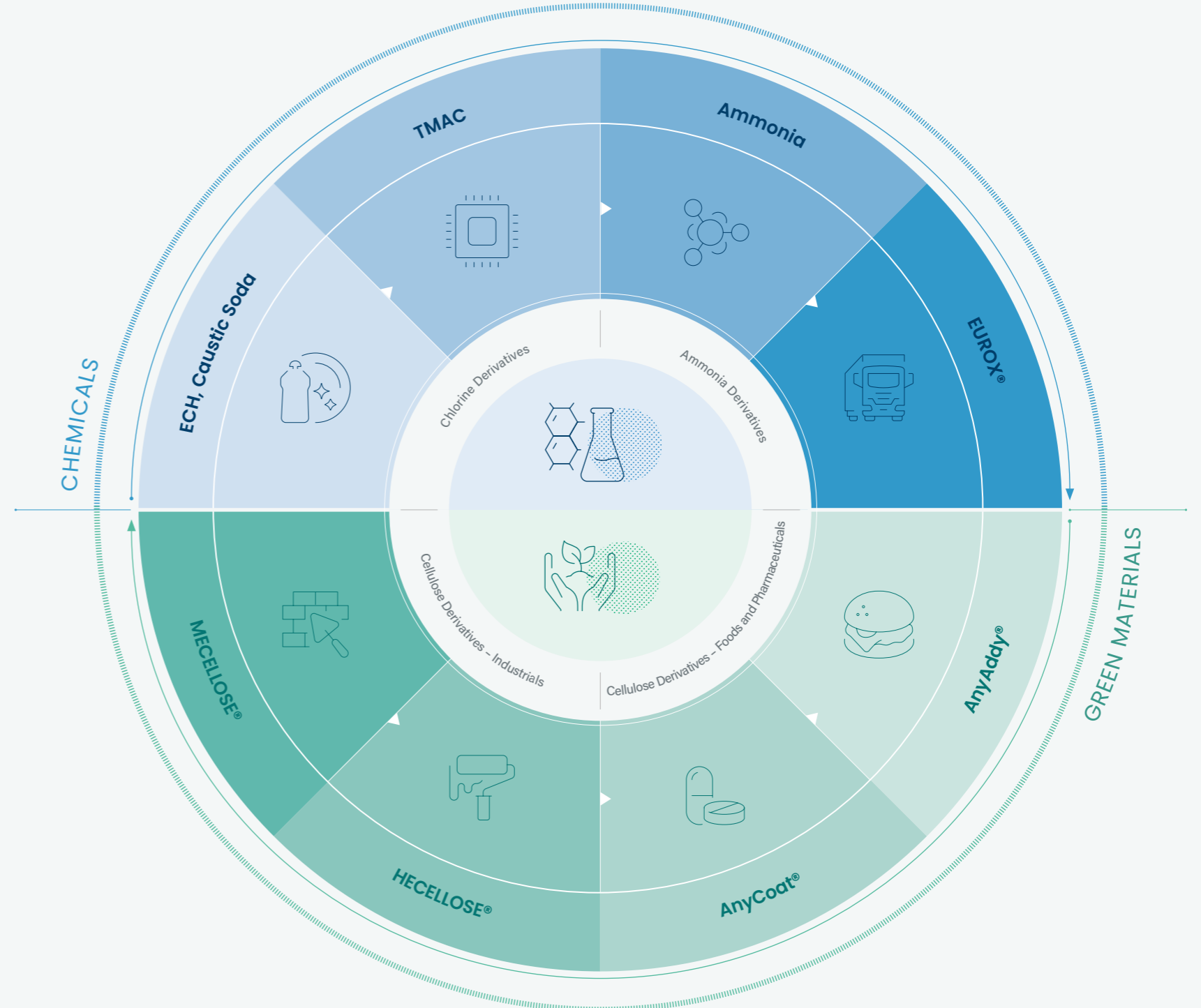
Cellulose ether enhances the properties of building materials such as cement, paint, and ceramics when combined with them. LFC's industrial cellulose products, such as MECELLOSE® for improving cement mortar properties and HECELLOSE® for water-soluble paint, are optimized for their intended uses and are used as intermediates like thickeners, moisturizers, lubricants, and stabilizers, energizing the materials market.

Products: MECELLOSE®, HECELLOSE®

### Cellulose Derivatives - Foods and Pharmaceuticals

Cellulose is a white, non-ionic powder that is odorless, tasteless, and does not cause any special chemical reactions, making it widely used in the food and pharmaceutical industries where direct absorption into the human body occurs. LFC's cellulose products for food and pharmaceuticals, such as pharmaceutical capsules, coating material AnyCoat®, and food texture enhancer AnyAddy®, continue to grow and pioneer markets amid increasing global trends of health and environmental consciousness.

Products: AnyCoat®, AnyAddy®



## CHEMICALS

The Chemicals Business Division, centered around chlorine derivatives and ammonia derivatives product groups, shows steady growth with expanding new demands in various industrial fields. The chlorine derivatives encompass ECH used in epoxy resins and caustic soda utilized in fibers, pharmaceuticals, paper, and detergents. Meanwhile, the ammonia derivatives feature ammonia, boasting Korea's largest facilities and excellent infrastructure, along with LFC's proprietary EUROX® brand. We supply high-quality chemical products produced through strict quality control to various fields, focusing on expanding the environmental friendliness of the products to enhance market competitiveness. In 2023, the Chemicals Business Division achieved sales of KRW 1,271.1 billion.



**No. 1** (60%)

Leading the domestic ammonia market with the highest market share

**No. 1**

Domestic market share of EUROX® (vehicle urea solution)

**No. 1**

Ranked first in the K-BPI (Korea Brand Power Index) in the urea solution category for 6 consecutive years

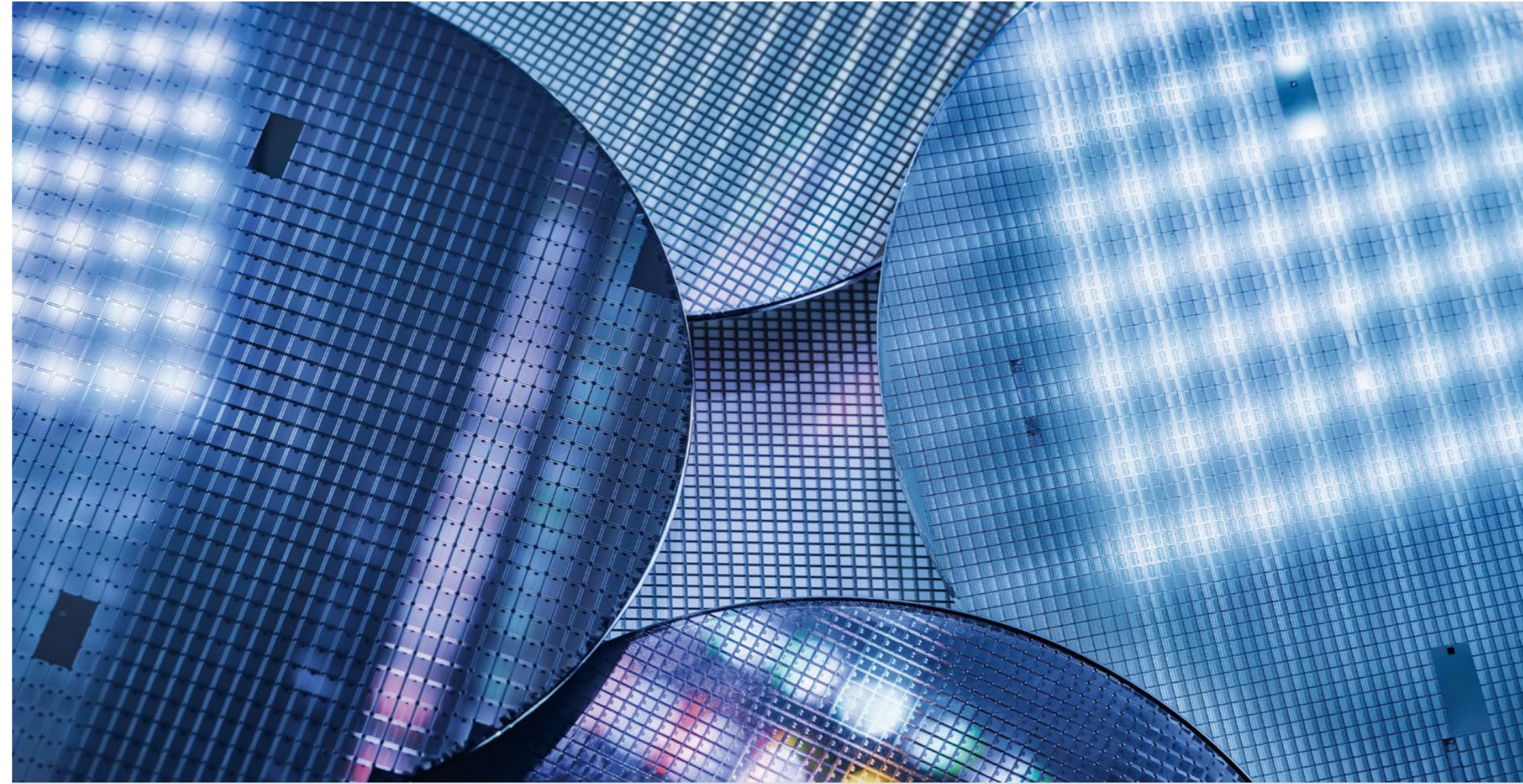
← Chemical Business

📄 Please refer to the "Strengthening R&D Capabilities: R&D Performance" part of this Report to find more information about the R&D activities of the Chemical Business.

## Chlorine Derivatives

One of LFC's main business segments is the chlorine derivatives, which include ECH (epoxy resin raw material), caustic soda (a basic chemical product raw material), TMAC (a semiconductor developer raw material), and PTAC<sup>1)</sup> (a reinforcing agent for paper). ECH, which is used as a primary raw material in waterproof and anti-rust paints, maintains steady growth due to continued demand in various industries such as construction and shipbuilding. Caustic soda, a byproduct of chlorine used in the production of ECH and PVC<sup>2)</sup>, is an essential basic raw material in the chemical industry. The demand for caustic soda is expected to grow steadily with the increasing demand for secondary batteries one the back of the development of electric vehicles, electronic devices, and telecommunications. Demand for ECH is also expected to continue rising with the expansion of renewable energy sources such as wind power. Accordingly, LFC aims to focus on securing new demand for caustic soda and ECH.

Despite the recent global economic downturn, LFC is strengthening its market competitiveness in 2024 by expanding the TMAC production plant and pursuing cost reductions.



### APPLICATION



#### ECH (Epichlorohydrin)

Epoxy resins, hydro treatment, etc.



#### Caustic soda

Secondary battery cathode materials, surfactant, etc.



#### TMAC (Tetramethyl Ammonium Chloride)

Colorless transparent liquid which is a raw material for TMAH used for semiconductors and LCD/OLED developing solution

<sup>1)</sup> 3-Chloro-2-hydroxypropyltrimethylammonium chloride

<sup>2)</sup> Polyvinyl Chloride

## Ammonia Derivatives

LFC's ammonia derivatives product group includes ammonia and EUROX®. Ammonia is a basic chemical substance used as a raw material in fertilizers, synthetic fibers like nylon, and ABS resin, and we maintain stable growth based on having the largest ammonia storage facilities in the country and excellent infrastructure. With the advent of the global carbon-neutral era, ammonia is gaining attention as a carrier for hydrogen, an eco-friendly energy source. LFC has achieved significant results in its ongoing efforts related to clean ammonia, including being the first in the world to import commercially produced clean ammonia. Moving forward, we aim to grow our ammonia business by establishing international sales channels beyond the domestic market in the short term. In the mid- to long-term, we plan to advance into new energy-related sectors, including supplying raw materials for power generation, ship fuel bunkering, and hydrogen production.

LFC's proprietary brand EUROX® is a catalytic reduction agent solution that reduces nitrogen oxides emitted from diesel engines. We are strengthening our market dominance with an increase in sales volume on the back the growing urea solution market, and being supported by stringent quality control.



### APPLICATION



#### Ammonia, Anhydrous

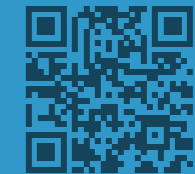
Raw materials for nitrogen-based fertilizer (urea, ammonium sulfate, ammonium chloride, and ammonium nitrate), raw materials for nitric acid, rayon, nylon, acrylonitrile, hydrazine, etc.



#### EUROX®

Catalyst reducing solution which reduces the amount of nitrogen oxide discharged from diesel engines

### OFFICIAL WEBSITE



Official Website of EUROX®

## GREEN MATERIALS

The cellulose derivatives of LFC's Green Materials Business Division are functional additives made from pulp derived from trees or cotton. These materials enhance the viscosity, water solubility, and water retention of the raw materials, thereby adding value to the products they are used in. The industrial product lines include MECELLOSE® and HECELLOSE®, and the food and pharmaceutical product lines feature AnyCoat® and AnyAddy®. These products are high value-added, high-functional items designed to improve the performance and utility of various applications. MECELLOSE® and HECELLOSE® are increasing market share and enhancing brand image by launching various new specifications that meet customer needs. AnyCoat® and AnyAddy® are continuing their growth by steadily supplying high-quality products and quickly responding to the global trends of increasing health consciousness and growth in the food and pharmaceutical markets.

In 2023, LFC's Green Materials Business Division achieved sales of KRW 497.5 billion. Moving forward, we aim to further enhance our profitability and secure the long-term growth potential of our green materials business as our flagship growth sector based on continuous and close cooperation with our clients. In addition, we will strive to become a global leader in the cellulose market through ongoing investments and business expansion.

📍 Green Materials Business

📖 Please refer to the "Strengthening R&D Capabilities: R&D Performance" part of this Report to find more information about the R&D activities of the Green Materials Business.



**10,000 tons** ↑

Increased production capacity for HECELLOSE® following expansion (as of January 2024)

**No. 1**

Market share of AnyCoat®, leading the global market in the plant-based capsule materials sector

# Cellulose Derivatives – Industrials

## MECELLOSE®, HECCELLOSE®

MECELLOSE® is used as an additive in various building applications such as cement mortar and tile cement, and as a high-functionality additive in a wide range of upstream industries for applications such as ceramic filters and polymerization. HECCELLOSE® is a key additive that enhances the viscosity, water retention, lubrication, and stability of water-soluble paints and is also used in personal care and home care products and for special purposes like oil drilling.

LFC is actively responding to customer needs by introducing various specifications of MECELLOSE® and HECCELLOSE®. This approach is focused on expanding market share and enhancing the brand image, thereby sustaining our growth momentum.



### APPLICATION



#### MECELLOSE®

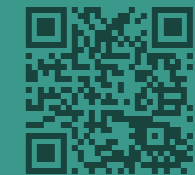
Cement mortar, tile cement, ceramic extrusion, polymers, etc.



#### HECELLOSE®

Paint, personal care, home care, oil drilling, etc.

### BROCHURE DOWNLOAD



MECELLOSE®



HECELLOSE®



# Cellulose Derivatives – Foods and Pharmaceuticals

## AnyCoat®, AnyAddy®

AnyCoat® is used as a coating material for pharmaceutical capsules and tablets, enhancing the drug delivery function, while AnyAddy® is used as a food additive to improve the texture, formability, and stability of food products. Through continuous quality improvement and development of new applications, the company is steadily increasing its market share worldwide, maintaining a robust growth trend thanks to excellent quality, supply stability, and enhanced technical support services.

In response to the expansion of high value-added sustained-release tablet sales and the growth of the food market, including gluten-free and alternative meat products, LFC completed the capacity expansion of AnyCoat® in 2022 and starting commercial production in May. Furthermore, to expand our food and pharmaceutical business, we purchased a new site for our Incheon Plant and the capacity expansion is underway for food and pharmaceutical production lines, targeting operation by 2025. Moving forward, LFC aims to achieve continuous growth by proactively responding from a customer-oriented perspective and making bold investments, based on our world-leading production capacity of cellulose derivatives for food and pharmaceutical use.



### APPLICATION



#### AnyCoat®

Capsules, tablet coatings  
(for stomach and intestines), etc.



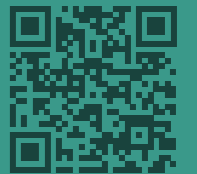
#### AnyAddy®

Food additive, health functional food coatings,  
gluten-free additive, etc.

### BROCHURE DOWNLOAD



AnyCoat®

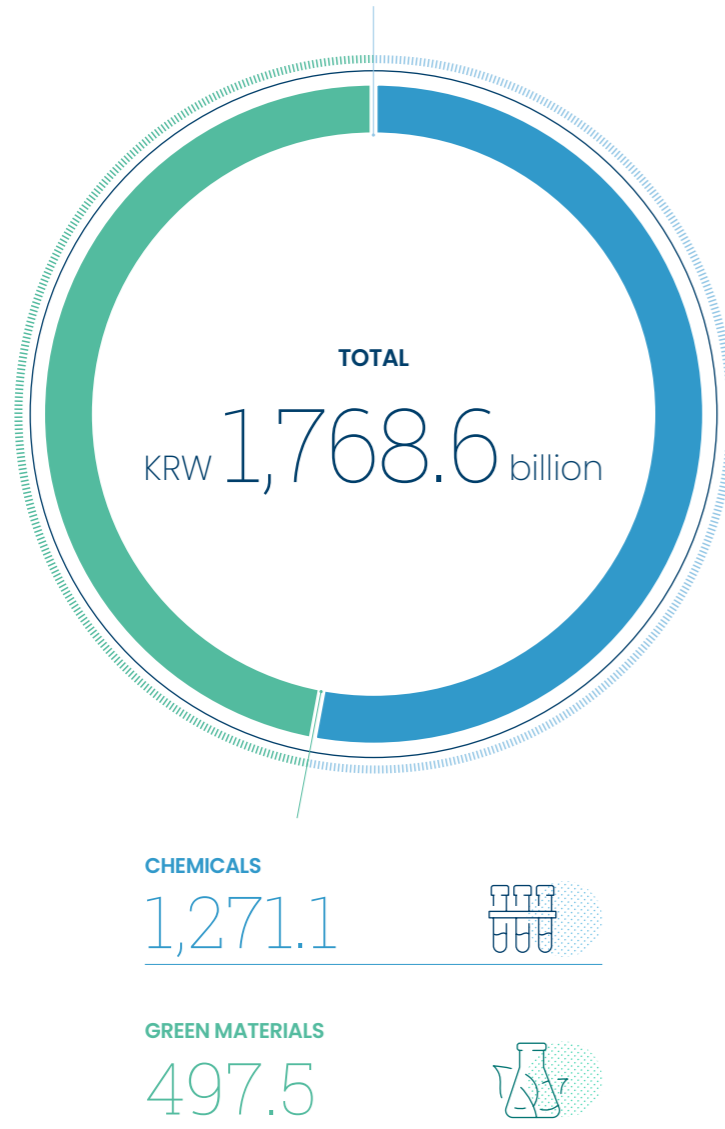


AnyAddy®

# FINANCIAL PERFORMANCE


## SALES BY BUSINESS IN 2023

(Unit: KRW billion)




## FINANCIAL HIGHLIGHTS

**SALES**  
  
 KRW 1,768.6 billion

**OPERATING PROFIT**  
  
 KRW 154.8 billion

**DEBT RATIO**  
  
 12.6%  
 (Year-on-year decrease of 5.5%p)

**DIVIDEND PER SHARE**  
  
 KRW 2,000

## KEY FIGURES

Classification	Unit	2021	2022	2023
<b>FINANCIAL POSITION</b>				
Total assets	KRW million	2,723,454	2,709,846	2,682,930
Total liabilities	KRW million	524,824	415,628	299,724
Total equity	KRW million	2,198,630	2,294,218	2,383,206
<b>INCOME</b>				
Sales	KRW million	1,780,293	2,463,759	1,768,621
Operating profit	KRW million	244,514	404,311	154,778
Net income	KRW million	585,458	146,159	182,032
<b>KEY RATIOS</b>				
Operating profit margin	%	13.7	16.4	8.8
Debt ratio	%	23.9	18.1	12.6
ROE	%	30.4	6.5	7.8

\* Based on consolidated financial statements

→ Financial Information

→ 2023 Consolidates Financial Statements

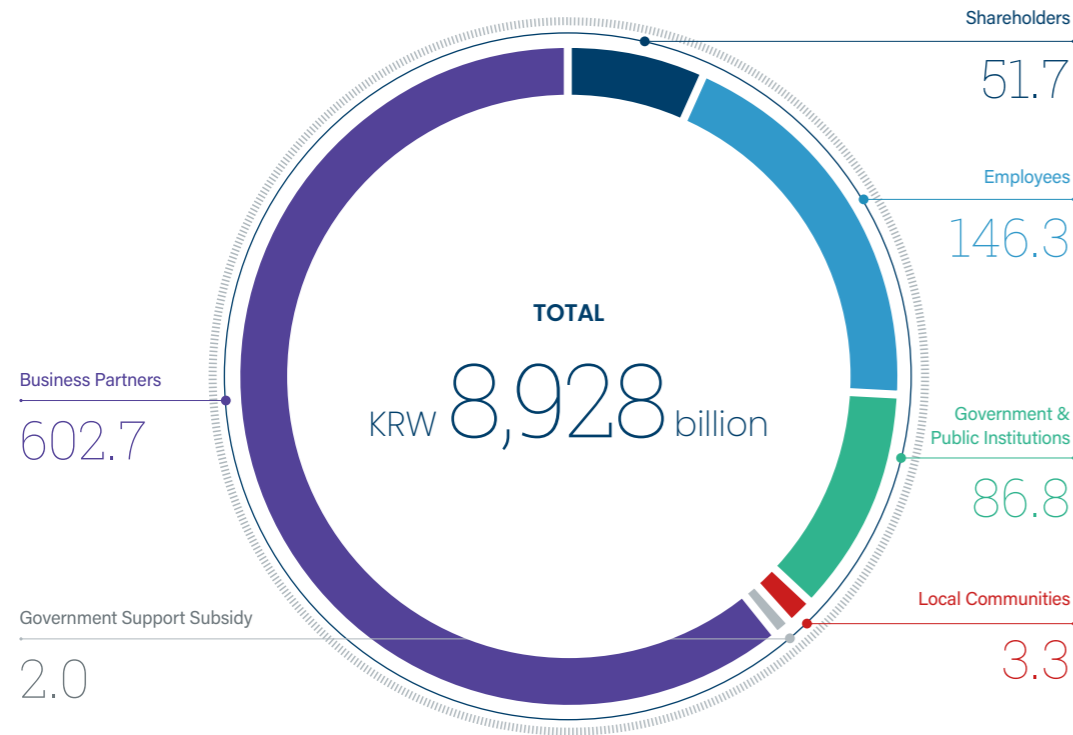
📄 Financial & Non-Financial Performance Summary - Financial Performance

\* As of December 31, 2023; and based on consolidated financial statements

# ESG PERFORMANCE

## DISTRIBUTION OF ECONOMIC VALUE IN 2023

(Unit: KRW billion)



## ESG RATINGS



Overall **A+**  
(2023)



**BBB** Rating  
(2024)



Climate Change & Water Security  
**B** Rating for each  
(2023)



**Gold** Medal  
(2023)

## KEY FIGURES

Classification	Unit	2021	2022	2023
<b>ENVIRONMENTAL</b>				
Energy consumption intensity	TJ/ Sales-KRW billion	8.97	6.09	<b>9.10</b>
GHG emissions intensity	tCO <sub>2</sub> eq/ Sales-KRW billion	386.27	261.07	<b>394.44</b>
Water reuse (Recycling + Reuse)	Ton	165,526,451	159,910,283	<b>157,234,513</b>
Waste recycling rate	%	93	91	<b>97</b>
Environmental investment	KRW billion	12.06	6.28	<b>9.23</b>
<b>SOCIAL</b>				
No. of employees	Person	885	941	<b>968</b>
No. of female managers	Person	36	41	<b>44</b>
Average length of continuous service	Year	15.9	15.7	<b>15.9</b>
LTIR (Lost Time Injured Rate)	%	0.21	0.61	<b>0.29</b>
Employee participation rate in anti-corruption education	%	100	100	<b>100</b>
Partner company purchase (Amount)	KRW billion	392.9	470.4	<b>462.4</b>
Customer data breach and theft	Case	0	0	<b>0</b>

## ESG HIGHLIGHTS

<p>GHG Emissions Reduction</p> <p><b>56,733</b> tCO<sub>2</sub>eq</p> <p>(Additional reduction of 52,795tCO<sub>2</sub>eq compared to the previous year)</p>	<p>Water Reuse Rate</p> <p><b>92.6%</b></p> <p>(Maintaining a water reuse rate of over 90% for 3 consecutive years)</p>	<p>LTIR (LOST TIME INJURED RATE)</p> <p><b>0.29</b></p> <p>(Improved by 0.32 compared to the previous year)</p>	<p>Anti-corruption Education</p> <p><b>100%</b></p> <p>(Completed by all employees)</p>
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→ ESG Data

📄 Financial & Non-Financial Performance Summary - Non-financial Performance

# ESG

# PROGRESS & PROSPECTS

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# ESG MANAGEMENT FRAMEWORK

## ESG Management System

### ESG MANAGEMENT ROADMAP

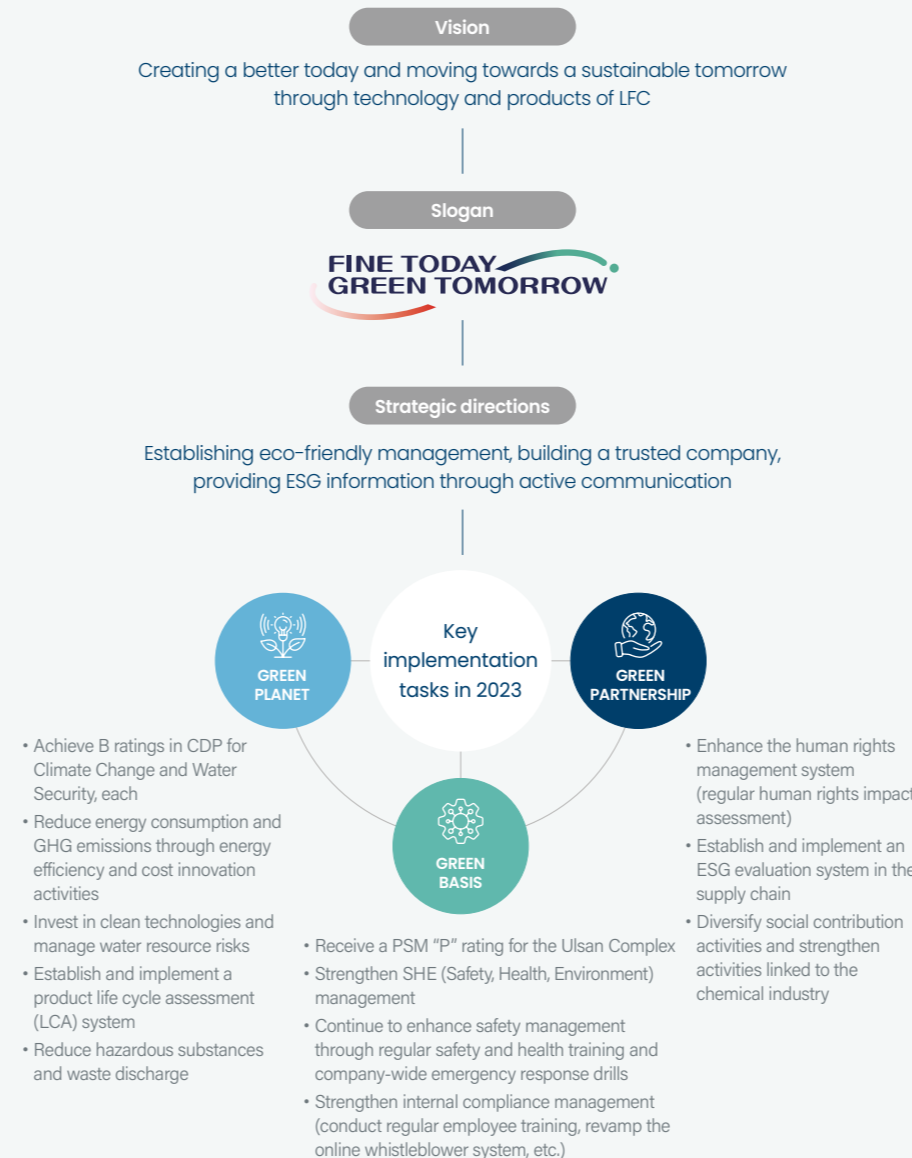
At LFC, ESG management is a core strategy for achieving sustainable growth and establishing ourselves as a chemical company that builds a better tomorrow. In our business operations, we prioritize sustainable management by integrating environmental considerations into our products and technologies, adhering to fundamental principles, while striving for strong financial performance. Moreover, we are advancing our mid- to long-term ESG management roadmap to respond more proactively to the diverse needs of our stakeholders and social demands.

Designating 2021 as the inaugural year for promoting ESG management, LFC established the ESG Committee and ESG Management Team under the Board of Directors (BOD) to build a foundation for ESG implementation. In 2022, we established various implementation strategies and executed detailed tasks across the company, laying the groundwork for sustainable growth for both the company and our stakeholders. Entering the completion phase of ESG management in 2023, we established and implemented detailed measures to enhance ESG management with the goal of achieving carbon-neutral growth. In 2024, we plan to complete the foundation of ESG management through performance management and improvement of execution tasks.

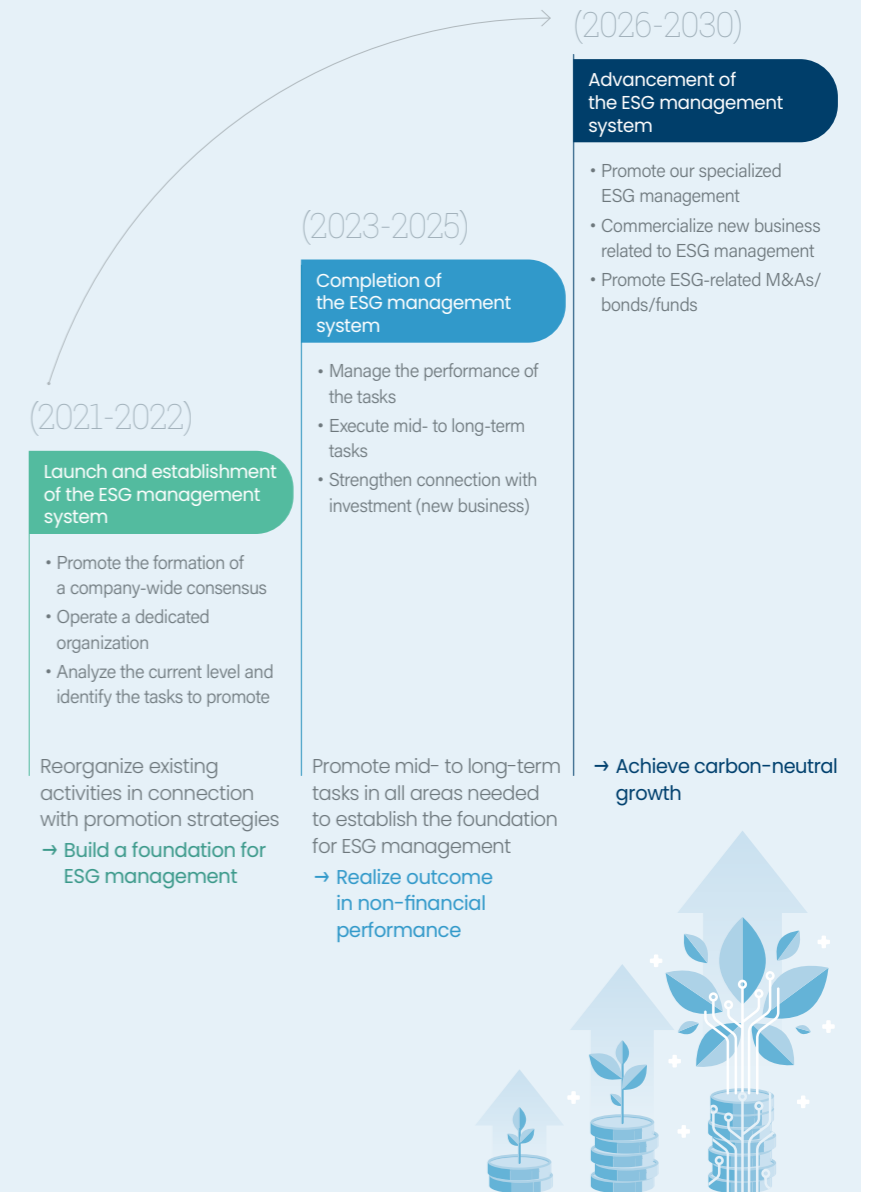
### ESG MANAGEMENT STRATEGY

In 2022, LOTTE Fine Chemicals upgraded the existing sustainable management framework based on recent ESG issues and internal status to establish an "ESG Management Strategy System." Subsequently, specific tasks for each strategy were identified and are being implemented in stages from 2023

### ESG Management Strategy System



### Mid- to Long-term Roadmap for ESG Management



# ESG MANAGEMENT FRAMEWORK

## ESG Management Governance

### ESG COMMITTEE

LOTTE Fine Chemicals established the ESG Committee under the BOD in July 2021 to manage ESG initiatives at the company level and enhance the efficiency and transparency of ESG implementation. The ESG Committee acts as the highest authority for ESG management, ensuring that sustainability is integrated into the company's decision-making processes. It oversees environmental, social, and governance risks and opportunities, aiming to enhance corporate value and provide strategic guidance for ESG management. To ensure the independence of the ESG Committee, an independent director serves as the chair, and the ESG Management Team supports the smooth operation of the committee by acting as the secretariat. The Team also provides the ESG Committee with information on external ESG policies and trends and reviews internalization strategies. LFC transparently discloses ESG activities and outcomes, conducted under this systematic ESG governance, through sustainability reports, the company website, etc. in a timely manner.

In 2023, a total of 17 issues, including greenhouse gas reduction (GHG) strategies, product sustainability, supply chain risk management, and the enhancement of human rights management, were reported to the ESG Committee. These addressed policies from LOTTE Corporation and Chemicals HQ of LOTTE Group, responses to committee inquiries, and concerns raised by stakeholders.

### ESG MANAGEMENT ORGANIZATION

LFC has set in place the ESG-dedicated organization, ESG Management Team, to manage ESG management activities at an enterprise level. However, recognizing that ESG implementation requires collaboration across various teams, LFC has instituted a system for ongoing communication between the ESG Management Team and relevant departments, including the Communication Team, SH&E Management Team, Environmental Team, Safety & Health Management Team, Business Marketing Team, and Technical Engineering Team, each playing pivotal roles within their domains. The teams closely work together and report major issues to the ESG Committee.

### ESG MANAGEMENT CONSULTATIVE GROUP

LFC is a key participant of the LOTTE Chemicals HQ's working-level ESG consultative group and shares ESG performance with other chemical companies of the Group, including LOTTE Chemical. Efforts are made to understand each company's status within the same industry and to seek improvements. Since 2022, in collaboration with LOTTE Chemical, we have established a non-financial metrics management system and disseminated it to the Group affiliates in the Chemicals HQ in 2023, strengthening cooperation to expand the adoption of renewable energy with the goal of reducing GHG emissions.

ESG Management Organization Chart



Agenda Items of ESG Committee in 2023

- 1<sup>st</sup>
  - Establishment of a human rights management system
  - Establishment of a life cycle assessment (LCA) system
- 2<sup>nd</sup>
  - Appointment of the chairperson
  - Results of the regular human rights impact assessment
  - Establishment of a non-financial metrics management system
- 3<sup>rd</sup>
  - Implementation of ESG evaluation in the supply chain
  - Publication of the sustainability report
  - Transition to alternative substances for high-risk chemicals
  - Status of investment in clean technology
  - GHG emissions performance
- 4<sup>th</sup>
  - Establishment of an LCA operation system (product-specific carbon footprint)
  - Response to water resource risks
  - Reduction of hazardous chemical emissions
  - Improvement of the human rights management system
- 5<sup>th</sup>
  - GHG reduction and renewable energy adoption plans
  - Advancement of Scope 3 and CDP disclosure
  - Reporting of supply chain ESG evaluation results



# STAKEHOLDER ENGAGEMENT

To promote stakeholder engagement in creating sustainable value, LFC identifies its key stakeholders as customers, shareholders, investors, business partners, employees, government, and local community. These stakeholders directly or indirectly influence the company's management activities, and in turn, are influenced by them. We operate various communication channels, and the insights gathered through these channels are incorporated into our core business and management decisions. LFC consistently announces major news about its ESG strategies and activities through the ESG information and ESG data platform on its website, and discloses non-financial quantitative data. Furthermore, the content of board meetings and the activities of committees within the board, such as the ESG Committee, Audit Committee, and Transparent Management Committee, are transparently disclosed through the website, practicing responsible management. In 2024, marking the 60th anniversary of its founding, LFC built a website for an online history museum and a history book covering 60 years to communicate more actively with stakeholders. Moving forward, we will continue to strengthen stakeholder communication, listening to their diverse opinions, in our efforts to change and grow in better directions.

## Stakeholder Communication and Engagement

Communication Frequency: ● Year-round ● Quarterly ■ Once a year

Stakeholder group	Communication channel		Stakeholder opinion		LFC's response & actions	
<b>Customers</b> (Individual customers, Corporate customers)	<ul style="list-style-type: none"> <li>● Customer meeting</li> <li>● Product seminar</li> <li>● Voice of customers (website)</li> <li>● Homepage and social media</li> </ul>	<ul style="list-style-type: none"> <li>● Onsite visit by the Technology Department</li> <li>■ Customer satisfaction survey</li> <li>■ Sustainability report</li> </ul>	<ul style="list-style-type: none"> <li>• Secure new growth engines</li> <li>• Strengthen R&amp;D</li> <li>• Manage product-related risks</li> <li>• Disclose the company's major performance</li> </ul>	<ul style="list-style-type: none"> <li>• Increase customer satisfaction</li> <li>• Actively respond to customers</li> <li>• Sharing ESG management performance</li> </ul>	<ul style="list-style-type: none"> <li>• Conduct market analysis and constant monitoring of customer needs</li> <li>• Discover new markets and develop new products</li> <li>• Operate the research center (in Magok) and make new facility investments</li> <li>• Manage the company's major news and notices</li> </ul>	<ul style="list-style-type: none"> <li>• Constantly respond to complaints related to product quality and shipping</li> <li>• Designate staff responsible for providing responses in relation to products, and regularly/frequently make onsite visits and provide training in relation to products</li> <li>• Establish an ESG data platform and disclose performance</li> </ul>
<b>Shareholders &amp; Investors</b>	<ul style="list-style-type: none"> <li>■ Annual general meeting</li> <li>■ Corporate briefing</li> <li>■ Business report</li> <li>■ Sustainability report</li> <li>■ Corporate governance report</li> </ul>	<ul style="list-style-type: none"> <li>● Results announcement</li> <li>● NDR</li> <li>● Conference call and meetings</li> <li>■ CEO IR DAY</li> </ul>	<ul style="list-style-type: none"> <li>• Innovate in areas of infrastructure, costs, etc.</li> <li>• Increase dividends and investments for new growth engines</li> <li>• Establish transparent governance</li> <li>• Expand IR activities</li> </ul>		<ul style="list-style-type: none"> <li>• Strive to maximize shareholder value</li> <li>• Establish systems to enhance soundness of governance</li> <li>• Increase transparency of company operations</li> <li>• Maximize shareholder value through management performance distribution strategies, including dividends</li> </ul>	
<b>Partner Companies</b> (Contractors, Material suppliers, Product OEMs)	<ul style="list-style-type: none"> <li>● Online Shinmungo</li> <li>● Training for partner companies</li> <li>■ Meetings with partner companies</li> </ul>		<ul style="list-style-type: none"> <li>• Ensure fairness in selecting partner companies</li> <li>• Provide benefits to excellent partner companies</li> <li>• Manage supply chain risks</li> </ul>		<ul style="list-style-type: none"> <li>• Expand support for partner companies regarding technology and personnel</li> <li>• Establish a process to respond to supply chain risks</li> <li>• Provide training related to safety and subcontracting transactions, and implement an internal incentive system</li> <li>• Provide support for technology development and protection, and dispatch experts</li> </ul>	
<b>Employees</b> (Including employees' families)	<ul style="list-style-type: none"> <li>● On-site communication system</li> <li>● Communication portal (Intranet)</li> <li>● Whistle LFC</li> <li>● Labor-Management Council</li> </ul>	<ul style="list-style-type: none"> <li>● Industrial Safety and Health Committee</li> <li>● Compliance management portal</li> </ul>	<ul style="list-style-type: none"> <li>• Share internal news and issues</li> <li>• Strengthen training on job capability, leadership, ethics, human rights, and safety</li> <li>• Improve the working environment</li> <li>• Respect labor-management agreements</li> </ul>		<ul style="list-style-type: none"> <li>• Establish a frequent bi-directional communication system</li> <li>• Implement activities to ensure the right balance between work and personal life</li> <li>• Develop capability-strengthening programs</li> <li>• Promote the company-wide internal reporting system</li> </ul>	<ul style="list-style-type: none"> <li>• Expand welfare benefits for employees</li> <li>• Strive to improve the working environment</li> <li>• Adopt a training system that is in line with the trend</li> </ul>
<b>Local Community &amp; Environment</b> (Government agencies and local governments, Local residents, NGOs)	<ul style="list-style-type: none"> <li>● Government hearings</li> <li>● Social contribution programs</li> <li>● Social contribution proposals</li> <li>● Participation in local councils</li> </ul>	<ul style="list-style-type: none"> <li>● Key association membership</li> </ul>	<ul style="list-style-type: none"> <li>• Participate in government policy</li> <li>• Expand social contribution programs</li> <li>• Increase investments for eco-friendly management</li> <li>• Strengthen ESG management</li> </ul>		<ul style="list-style-type: none"> <li>• Participate in national projects led by the government</li> <li>• Diversify areas of social contributions and related programs</li> <li>• Conduct continuous social contribution activities that leverage the company's expertise</li> </ul>	<ul style="list-style-type: none"> <li>• Run environmental conservation programs (Urban Box Farming Campaign, etc.)</li> <li>• Invest in eco-friendly process facilities</li> <li>• Join major associations, including UNGC, and manage ESG evaluation</li> </ul>

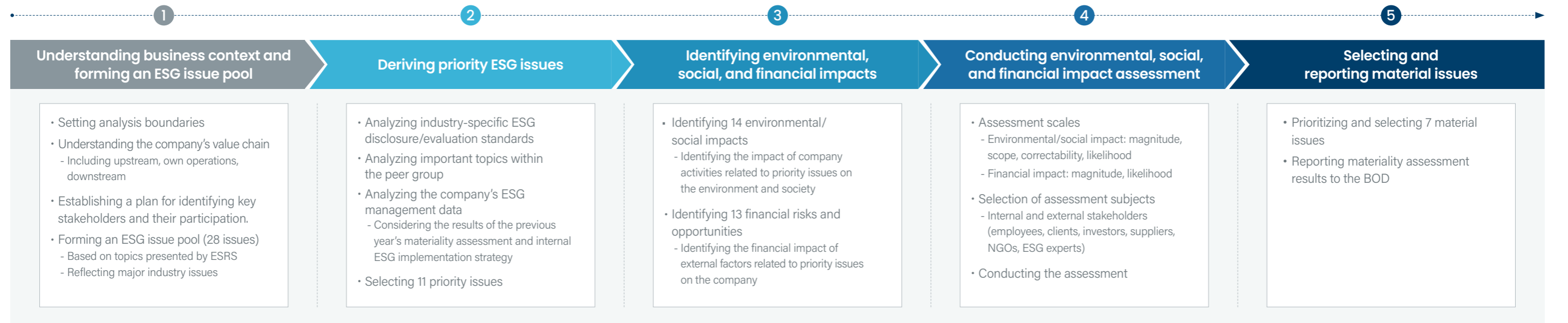
# MATERIAL ESG ISSUES

## Double Materiality Assessment

### ASSESSMENT PROCESS

LFC has applied the principles of GRI Standards and the concept of materiality to conduct a double materiality assessment to identify significant issues that affect corporate management and stakeholder interests. The double materiality assessment is a concept that considers both inward and outward perspectives, including the external environmental and social factors that have inward impact on the financial status of the company as well as the outward impact of the company's management activities on the external environment. This enables us to derive material ESG issues by considering the diverse opinions of stakeholders and environmental, social, and financial impacts. We also have strived to faithfully disclose information on the background, activities, and performance of key issues derived from the double materiality assessment.

The assessment methodology was enhanced by expanding the analysis scope compared to the previous year and by incorporating global ESG disclosure standards to analyze the impact pathway. Additionally, stakeholder participation was expanded from internal to external. Based on this, we identified and assessed the environmental, social, and financial impacts of LFC, resulting in a total of seven key issues (an increase of two environmental issues compared to the previous year).



### Enhancing assessment methodology compared to previous year

#### Expanded analysis scope

➔ Expansion of analysis scope to include not only own operations but also supply chain (upstream and downstream)

#### Detailed analysis of the impact pathway

➔ Detailed description of business activities related to ESG issues, external factors, and their impact paths

#### Incorporation of Global ESG disclosure standards

➔ Design of assessment scales based on ESRS established in July 2023

#### Expanded stakeholder engagement

➔ Collection of stakeholder opinions during the identification and assessment process



# MATERIAL ESG ISSUES

## ASSESSMENT RESULTS

Material issues are identified based on meeting either the environmental/social impact assessment values, the financial impact assessment values, or both, reaching the materiality threshold criteria. Based on this double materiality assessment, issues such as climate change, energy, hazardous chemicals, product environmental impacts, transition to a low-carbon industry, employee and process safety, and compliance have been identified as the seven material issues for LFC's sustainable growth and social value creation.

● (0-0.2) ●● (0.2-0.4) ●●● (0.4-0.6) ●●●● (0.6-0.8) ●●●●● (0.8-)  
 Environmental/Social Impact Threshold 0.4 | Financial Impact Threshold 0.6

ESG Issue	Environmental/Social Impact	Environmental/Social Impact Level	Financial Impact	Financial Impact Level
Climate Change	• GHG emissions from fuel and power usage in production facilities, causing climate change	●●●●	• Deterioration of raw materials (cotton, pulp) quality due to climate change, leading to decreased product quality and sales	●
	• GHG emissions in the production/sourcing of main raw materials, leading to climate change	●●●●●	• Increase in emissions reduction requirements and additional costs for purchasing emission rights due to stricter GHG regulations	●●●
Energy	• Scope 2 GHG emissions from the use of fossil fuel-based energy sources, causing climate change	●●●●	• Increased energy supply insecurity for the company due to rising global energy supply instability, leading to increased energy purchasing and procurement costs	●●●●●
Hazardous Chemicals	• Accidents involving hazardous chemicals during product production pose risks to worker safety and degrade the health of local communities and ecosystems.	●●	• Due to stricter domestic and international regulations on hazardous chemicals, incidents involving hazardous chemical leaks lead to increased legal costs and higher safety equipment investment costs to enhance chemical management.	●●●●●
Product Environmental Impact	• GHG emissions throughout the product lifecycle, from raw material procurement to manufacturing, distribution, use, and disposal, causing climate change.	●●●●●	• Increased demand for eco-friendly products and external demands for performing product LCA enhance the competitiveness of LFC's products undergoing LCA, leading to increased sales and capital inflow	●
Transition to Low-Carbon Industry	• Contribution to a low-carbon industry ecosystem through transitions to eco-friendly portfolios such as commercialization of clean ammonia and hydrogen	●●●●●	• Enhanced business competitiveness and business growth on the back of government policies on hydrogen economy activation, leading to increased investments in clean hydrogen/ammonia technologies and business development	●●●●●
	• Reduction in deforestation during the production of traditional cellulose-based raw materials (wood, cotton) when transitioning to natural material-based raw materials (citrus, legumes, seaweed)	●●●●	• Increased sales and capital inflow on the back of diversified business portfolios related to low-carbon clean technologies amid rising external demands for eco-friendly industry transitions	●●●●●
Employee and Process Safety	• Physical harm and social losses to employees and workers of partner companies due to safety accidents	●●●	• Legal costs (fines, penalties) and non-operational costs (compensation expenses) arising from occupational accidents within the company and supply chain due to stricter safety and health regulations	●●
Compliance	• Social conflicts arising from non-compliance with ESG regulations	●●●	• Disruptions in business operations and damage to company reputation due to partner's violation of ESG regulations, leading to decreased sales and capital inflow	●●
Pollutants (Air/Water/Soil)	• Destruction of local ecosystems and deterioration of community health due to excessive emissions of air, water, and soil pollutants during product production	●	• Increased management and investment costs due to enhanced air pollution control regulations and administrative measures	●
Water Resources	• Intensification of water stress and shortage of living water in local communities due to water usage in business operations, leading to insufficient water sources	●	• Decline in sales due to failure to secure stable water resources amid global rainfall imbalances and water scarcity, leading to business operation interruptions	●●●
Waste and Resource Recycling	• Landfill/incineration of waste generated during the product production process, resulting in large quantities of pollutants and air pollution, worsening the health of local residents	●	• Increase in costs for waste-related research and development and infrastructure enhancement due to strengthened social awareness of resource recycling and rising external stakeholder demands	●●●
	• Climate change due to GHG emissions from landfill/incineration of waste generated during the product production process	●●		
Code of Ethics	• Damage to the overall soundness of social transactions due to unethical and corrupt practices	●●	• Decline in sales and capital inflow due to disruptions in business operations and damage to company reputation from partner's violation of ESG regulations	●●

# MATERIAL ESG ISSUES

## Management of Material Issues

### MATERIAL ESG ISSUES

Issue	LFC's response and management	GRI Standards	Page
Climate Change	<ul style="list-style-type: none"> <li>Examine the direction of climate change response and its integration with the overall corporate strategy, reflecting climate change considerations in all business plans and management decisions</li> <li>Establish and implement a long-term roadmap aimed at achieving carbon neutrality, focusing on securing global energy competitiveness</li> <li>Established mid-to-long-term strategies to enhance technological competitiveness and facilitate energy transition, focusing on climate change response and GHG reduction, in 2022; and implement such activities as upgrading GHG emission management, analyzing future emission projections, and developing an eco-friendly portfolio, etc. as part of a systematic and feasible approach to achieving carbon neutrality</li> </ul>	2-23, 3-1, 3-2, 3-3, 302-1, 302-4, 305-1, 305-2	13, 27, 29-30, 35-36, 39, 45, 49
Energy	<ul style="list-style-type: none"> <li>Establish a specialized organization for energy efficiency and define annual energy usage targets, along with implementing performance management</li> <li>Set and manage energy efficiency and cost reduction as key performance indicators (KPIs) for the production department, managing energy efficiency and costs as key indicators at production sites, and identify and implement energy-saving measures annually, such as equipment improvements</li> <li>Identify and implement 44 energy-saving measures in 2023, taking into account the characteristics of the workplace and manufacturing processes</li> </ul>	2-23, 3-1, 3-2, 3-3, 302-1, 302-2, 302-3, 302-4, 302-5	13, 27, 29-30, 35-36, 39, 45, 49
Hazardous Chemicals	<ul style="list-style-type: none"> <li>Manage and control all chemical substances from raw materials to finished products through the LCMS (LOTTE Chemical Management System), improving job consistency and efficiency</li> <li>Consolidated the task execution system for responding to domestic regulations (Act on the Registration and Evaluation, etc. of Chemical Substances, Consumer Chemical Products And Biocides Safety Control Act) and international regulations (EU REACH, etc.) under the SH&amp;E Management Team in August 2023</li> <li>For domestic operations, proceed with pre-registration and main registration for substances subject to registration under the Act on the Registration and Evaluation, etc. of Chemical Substances</li> <li>For international operations, complete pre-registrations and continue to respond according to the main registration schedule for chemical regulations in countries/regions such as Türkiye, Eurasia, and UK</li> </ul>	2-23, 3-1, 3-2, 3-3	30, 40, 48, 50-51, 64
Product Environmental Impact	<ul style="list-style-type: none"> <li>Establish a life cycle assessment (LCA) system based on ISO 14040 and ISO 14044 (Life Cycle Assessment – Requirements and Guidelines), and evaluate and analyze the environmental impact per product</li> <li>Conduct LCAs and calculate the carbon footprint per product for major products and intermediates in the Chemicals and Green Materials Business Divisions</li> </ul>	3-1, 3-2, 3-3	47
Transition to Low-Carbon Industry	<ul style="list-style-type: none"> <li>Flexibly respond to changes in the business environment, such as carbon neutrality and expansion of the eco-friendly product market, based on a balanced product portfolio and continuously pursue business strategies</li> <li>Expand the green materials business (food, pharmaceuticals, and functional materials), where the company has strengths, under a continuous collaboration system with field staff and experts</li> <li>Continue to pursue the green ammonia business, enhancing competitiveness in the hydrogen energy ecosystem based on existing ammonia business experience and technology</li> </ul>	3-1, 3-2, 3-3, 305-1, 305-2, 305-3, 305-4, 305-5	7, 11, 18, 22, 36
Employee and Process Safety	<ul style="list-style-type: none"> <li>Promote various safety management activities across the value chain with the goal of zero accidents within the workplace, including in-house partners, based on the ISO 45001 occupational health and safety management system</li> <li>Appoint a Chief Safety Officer (CSO) directly under the CEO to establish and promote corporate safety and environmental policies, form a dedicated safety and health organization, enhance safety and health management capabilities, and effectively respond to safety-related laws such as the Serious Accident Punishment Act</li> <li>Established and implemented key safety and health strategies focusing on improving safety culture and awareness, enhancing workplace execution, and establishing accident prevention systems in 2023</li> <li>Develop open work management solutions for managing frequent types of major accidents, implement the "Safety STOP" system for high-risk operations, certify "safety managers" for partner companies, apply new technologies for smart routine maintenance, and promote various initiatives such as real-time work safety monitoring</li> </ul>	3-1, 3-2, 3-3, 403-1, 403-3, 403-4, 403-5, 403-6, 403-7, 403-8	29, 35, 40, 54, 61-65
Compliance	<ul style="list-style-type: none"> <li>Annually select key compliance-related risks that could arise during the company's management process and assess the level of risk based on the likelihood of occurrence and impact</li> <li>Appoint a Compliance Officer at the executive level to oversee the overall direction of compliance management and ensure the implementation of compliance management strategies</li> <li>Conduct various compliance management training programs to build a consensus on compliance awareness among employees and promote its practice during work. In 2023, all employees participated in company-wide compliance management training.</li> <li>Have been operating a fair trade compliance program since 2006 to enhance voluntary compliance with fair trade regulations, prevent unfair trading practices, and establish a culture of fair trade</li> </ul>	2-9~21, 2-22-30, 3-1, 3-2, 3-3, 205-2, 205-3, 206-1	27, 35, 41, 77-86

**ESG FOCUS AREAS**

# ESG IN ACTION

The ESG management promoted by LOTTE Fine Chemical is completed through action. Based on a systematic ESG promotion strategy that considers both financial and non-financial values, LOTTE Fine Chemical plans and executes sustainable innovations that have a positive impact on the economy, society, and the environment.



## GREEN PLANET

**We care about the planet.**

To lead humanity and the global environment in a sustainable direction, LFC strives to minimize the overall environmental impact of its corporate management processes based on a firm commitment to environmental management. To this end, we are focused on achieving carbon neutrality, sustainably managing water resources, and minimizing the environmental impacts of our products.

Establishing eco-friendly management



## GREEN BASIS

**We adhere to the basics.**

LFC has established a safety management system to ensure that our employees and partners can work in a pleasant and safe environment, and engages in various activities to achieve zero safety accidents. In addition, based on a global-level compliance management system, we are striving to build an organizational culture with transparency and integrity.

Building a trusted company



## GREEN PARTNERSHIP

**We grow together with all.**

LFC aims to grow together with all of its stakeholders, in its efforts to protect and promote their human rights, while also striving to establish a culture of fair trade. Furthermore, based on transparent and professional decision-making system centered on the BOD, we are establishing advanced governance to pursue responsible management.

Providing ESG information through active communication

ESG FOCUS AREAS

# GREEN PLANET

Establishing eco-friendly management



**WHY IT MATTERS**

Addressing climate change is a challenge that the entire world must solve together, and it requires a strategy that must be pursued for the sustainable growth of businesses. At the UN Climate Change Conference (COP 27) held in 2022, around 200 participating countries discussed the climate crisis and agreed to establish a fund to compensate for the losses and damages of developing countries caused by climate change. On the back of these movements, international organizations are demanding that nations and corporations actively respond to climate change and disclose relevant information. Climate-related legislation and systems are being actively introduced, particularly in developed countries, including the EU Carbon Border Adjustment Mechanism (CBAM) and the U.S. Inflation Reduction Act (IRA). Failure to respond to these trends with agility may place businesses at a disadvantage in the global supply chain.

LFC is currently not directly affected by this legislation but is analyzing climate change risks and exploring response measures with future applicability in mind.



**HOW WE RESPOND**

## Enhancing Climate Change and Water Resource Risk Management

**CLIMATE CHANGE RISK MANAGEMENT**

The increase in abnormal weather conditions and water scarcity due to climate change has made managing climate risks and establishing proactive response strategies a crucial element for corporate competitiveness. LFC identifies risks and opportunities based on a climate change risk management process, reviews response directions and company-wide strategy linkage plans, and reflects them in business plans. Additionally, climate change issues are considered in all management decision-making processes. We are also reviewing the establishment of monitoring and evaluation systems to efficiently manage the impacts of climate risks and opportunities, which is reflected in KPIs and organizational performance.

**FINANCIAL IMPACT AND RESPONSE STRATEGIES BY RISK**

LFC has qualitatively assessed the potential financial impacts of each factor through risk analysis and opportunity review in accordance with TCFD guidelines and has established strategies to address them. Moving forward, we plan to sequentially quantify the potential financial impacts starting from the most critical factors.

Classification	TCFD type	No.	Risks and potential financial impacts	Response strategy	Timing of risk/opportunity manifestation		
					Short-term (-'25)	Mid-term (-'30)	Long-term (-'50)
Physical Risks	Acute	1	Increased risk of storms due to rising amounts of water vapor from global warming leading to unstable supply of raw materials (naphtha, LPG, etc.) and operational disruptions, resulting in decreased production stability and sales	Regular response activities at each business site, flood damage diagnosis, and implementation of preventive measures Establishing various emergency response training scenarios related to flood damage and conducting training		○	○
		2	Increased risk of coastal flood due to climate change leading to increased safety management and operating costs	Analyzing factors that could pose long-term threats due to the location characteristics of each business site and performing continuous monitoring.		○	○
	Transition Risks	Policy and Regulation	3	Increased costs of emission rights due to strengthened emission trading schemes	Analyzing the impact of global carbon tariff regulations on the company and reflecting it in marketing strategies	○	○
4			Increased costs for energy transition to achieve net zero	Minimizing electricity price volatility and securing renewable energy sources through solar power generation and PPA agreements	○	○	○
Market		5	Additional costs incurred during the transition to low-carbon transportation of products	Achieving carbon reduction performance through the transition to low-carbon fuels		○	○
		6	Decreased revenue due to strengthened global carbon tariff regulations	Implementing detailed tasks of the Scope 1 & 2 and net zero roadmap to reduce emissions	○	○	○
Transition Opportunities	Products and Services	7	Increased prices of primary raw materials due to carbon regulations and carbon tax burden in the supply chain leading to decline in revenue	Continuous monitoring of carbon risks by key raw material suppliers		○	○
		8	Promoting clean ammonia business	Entering the ammonia bunkering market leveraging Asia's leading infrastructure Entering the domestic ammonia co-firing power generation market (predicted demand of 4.79 million tons by 2030) Producing clean hydrogen through ammonia cracking Aiming to achieve sales of KRW 1.4 trillion by 2030	○	○	○
	9	Increase in revenue on the back of growth in the green materials for food and pharmaceuticals	Efforts to reduce greenhouse gases (such as methane) generated during animal husbandry, along with the increase in animal welfare and vegetarianism, are expected to lead to high growth in the alternative meat market and the market for plant-based medicinal capsules (as substitutes for gelatin capsules). Accordingly, the company is expanding production capacity and promoting sales growth through investment in green materials for food and pharmaceuticals.	○	○	○	
Energy Sources		10	Cost reduction through the introduction of clean technologies to achieve a systematized green management system	Clean technology consists of nine technologies across four areas (alternative energy, energy efficiency, waste reuse/recycle, air pollution reduction), including clean hydrogen production, low-electricity electrolyzer, wastewater reuse, and CCUS, implementing cost savings through operational efficiency improvements	○	○	○

## ESG FOCUS AREAS

### Climate Change Risk Management Process



## ESG FOCUS AREAS

### WATER RESOURCES RISK MANAGEMENT

Due to climate change, the increase in abnormal weather conditions is exacerbating the imbalance in precipitation, making it difficult to ensure a stable supply of water resources. Ulsan Complex, which uses a large amount of industrial water, may face such challenges as factory shutdowns due to water shortages, and the wastewater discharged from the Ulsan and Incheon plants could potentially negatively affect the local ecosystem. As the importance of water resource management grows, LFC conducted a water resource risk analysis for the Ulsan and Incheon plants in 2022, disclosed the results on our website, and updated the WRI risk analysis results in 2023.

**Identification of Risks and Opportunities** The water resource risk analysis was conducted in accordance with international standards, utilizing the World Resources Institute (WRI)'s Aqueduct Water Risk Atlas and the World Wide Fund for Nature (WWF)'s Water Risk Filter. The analysis results are used as basic data for establishing plans to mitigate and respond to water resource risks at each site, and we are identifying and advancing projects to improve areas with high risks.

### Mitigating and Responding to Water Resource Risks

Risk	Ulsan Complex	Incheon Plant
	Implementation of flood preparedness activities	
<b>Flooding</b> Riverine flooding Coastal flooding	<ul style="list-style-type: none"> <li>Irregularly: Gutter and PIT maintenance, Special gutter/drain inspection during the rainy season</li> <li>Regularly: Inspect gutters across the company, check and take measures for regularly flooded areas, inspect and repair building water leaks</li> <li>(Incheon) Review of installing flood barriers and drainage pumps for heavy rainfall preparedness (2023)</li> </ul>	
	Basin/natural environment restoration, compliance with effluent quality standards (2022-)	
<b>Biodiversity</b> Biodiversity potential	<ul style="list-style-type: none"> <li>Diversifying activities, including 1 Company-1 Stream Activity (Ulsan) and Incheon New Port Environmental Purification Activity (Incheon)</li> <li>In line with strengthening legal regulations, achieve around 50-80% against emissions standard (every year)</li> </ul>	
<b>Drought</b>	Continue to review drought/water outage response scenarios	
<b>No sanitation</b>	Strengthen WASH (WATER, Sanitation and Hygiene) services	-
<b>Conflict</b>	Strengthen ties with local communities, comply with environmental regulations (around the clock)	-
<b>Quality</b>	-	Maintenance of water treatment facilities, strengthening of chemicals management (2023)

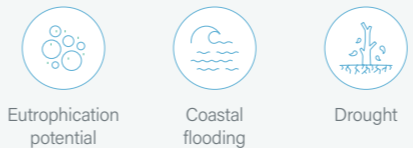
### Analysis results of water risks

#### WRI: Aqueduct Water Risk Atlas

##### Ulsan Plant



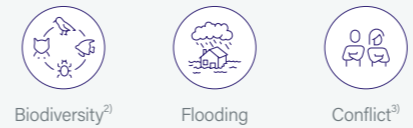
##### Incheon Plant



<sup>1)</sup> Sanitation risk: Ratio of population that processes sewage/refuse in nature

#### WWF: Water Risk Filter

##### Ulsan Plant



##### Incheon Plant



<sup>2)</sup> Biodiversity: A region with many indigenous fish species or a high level of biodiversity has a higher risk

<sup>3)</sup> Conflict: Evaluated based on the number and records of negative incidents, criticisms, and controversies that occurred in the region in relation to water resources. Higher figures mean higher risks.



## ESG FOCUS AREAS

### Adoption of Renewable Energy

LFC has set a strategy and tasks to achieve carbon neutrality by 2050 and is actively considering the adoption of renewable energy, one of the most effective reduction solutions that has been commercialized. Initially, we procured sites for installing our own power generation facilities to produce renewable energy and then planned to utilize systems related to renewable energy such as power purchase agreement (PPA) and renewable energy certificate (REC), with the goal of introducing 35MW of renewable energy by 2030.

The Ulsan Complex completed site selection reviews for renewable energy adoption and a solar power introduction contract was signed in February 2024, with plans to operate a 1MW solar power facility starting in the third quarter of 2024. The Incheon Plant completed the first review of potential sites for renewable energy adoption in 2023, installed a 30kW solar power facility on the rooftop of the support building in December, and began power generation in April 2024. Additional sites at the Ulsan and Incheon plants are being continually sought, with current considerations for installing solar power facilities on the rooftops of control buildings, wastewater recycling facilities, and parking lots.

### Reduction of Carbon Emissions

In 2023, LFC identified 44 tasks for GHG reduction and carried out reduction activities, decreasing emissions by 56,733 tCO<sub>2</sub>-eq. In 2024, we aim to reduce approximately 49,000 tCO<sub>2</sub>-eq of GHG, establishing and implementing plans for energy efficiency improvements, renewable energy adoption, and low-carbon energy transition.

#### Achievements in Implementing GHG Reduction Projects in 2023

Category	No. of projects	GHG reduction amount (tCO <sub>2</sub> -eq)
Replacement of aging equipment	11	30,746
Operational efficiency improvement	30	23,278
Low-carbon energy	1	1,905
Others	2	804
<b>Total</b>	<b>44</b>	<b>56,733</b>

### Establishment of LCA System

LFC has developed the life cycle assessment (LCA) system to minimize the environmental impact from product development through production and disposal in consideration of environmental aspects throughout the life cycle of our products. When building this system, internal supply chain relationships and internal/external usage plans were taken into account, and key products and intermediate process goods were selected from the Chemicals and Green Materials Divisions for LCA. Based on this, we plan to continuously expand research and development and production of goods with reduced environmental impact.

 Please refer to "Strengthening Environmental Management: Life Cycle Assessment" of this Report to find more information about the establishment of LCA system.

### Reduction of Environmentally Hazardous Substances Emissions

Given the rising prominence of ESG management as a key social issue and the trend of strengthening environmental policies and regulations, LFC established a "reduction of environmentally hazardous substances emissions target" in 2022. The main goal is to reduce the emissions of environmentally hazardous substances (wastewater, waste, air pollutants) by 50% by 2030 compared to 2019 levels. To this end, we have identified short-term and mid-to-long-term implementation tasks.

The first phase aims to establish pollution reduction plans by 2025 and expand related activities, with the second phase planning to gradually reduce pollutants through the introduction and development of new technologies by 2030. Notably, a three-phase project to recycle 12,500 tons/day of wastewater from treatment plants is underway, aimed at reducing wastewater. The first and second phases, with an investment of KRW 29.5 billion commenced in September 2023, are projected to be completed by 2025 and 2026, respectively.

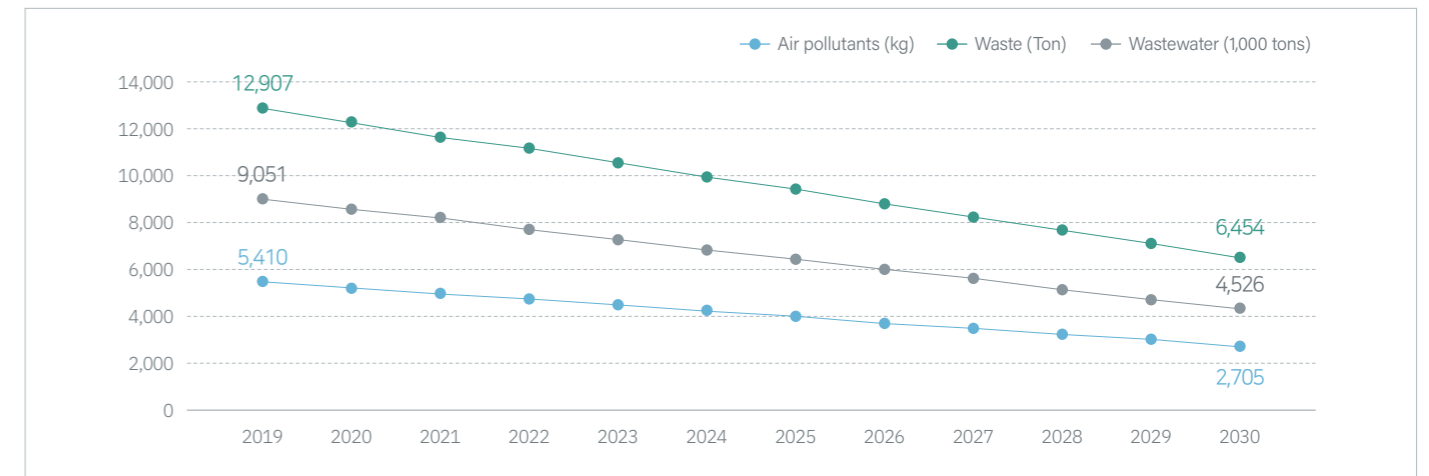
The targets for reducing environmentally hazardous substances are transparently disclosed through the website and sustainability reports, with plans to continually manage reduction performance annually. Moving forward, we will make continuous efforts to minimize the environmental impact of our business operations through systematic and continuous management of environmental impact substances, working towards establishing a green workplace.

#### Targets and Performance of Environmentally Hazardous Substances Emissions

Classification	Unit	2019	2023			2024 Target	2025 Target <sup>1)</sup>	2030 Target <sup>1)</sup>
			Target	Performance	Reduction rate			
Wastewater	1,000 tons	9,051	7,406	9,585	-29.4%	6,994	6,583 (27%▼)	4,526 (50%▼)
Waste (Incineration + Landfill)	Ton	12,907	10,560	3,077	70.9%	9,974	9,387 (27%▼)	6,454 (50%▼)
Air pollutants	kg	5,410	4,427	1,127	74.5%	4,181	3,935 (27%▼)	2,705 (50%▼)

\* Based on the Ulsan Complex

<sup>1)</sup> Compared to 2019



#### Strategies for reducing environmentally hazardous substances

##### 1<sup>st</sup> Plan (- 2025)

##### Reinforcement and expansion of pollutant reduction activities

- Reduce wastewater discharge through wastewater reuse (10,000 m<sup>3</sup>/day)
- Minimize pollutant emissions by improving air quality management facilities
- Minimize landfill/incineration treatment by continually expanding waste reuse

##### 2<sup>nd</sup> Plan (- 2030)

##### Introduction and development of new technologies

- Develop and introduce new technology for wastewater reduction processes
- Review the adoption of NO<sub>x</sub> (nitrogen oxide) treatment facility
- Review waste reduction process improvement

ESG FOCUS AREAS

# GREEN BASIS

Building a trusted company

**WHY IT MATTERS**

A safe and healthy working environment and sound and transparent governance are fundamental to corporate management and are crucial elements in fulfilling corporate social responsibility. Companies are establishing management systems for the prevention of safety and health risks with the goal of enhancing safety at the workplace and are deploying various activities to raise awareness. Additionally, governments are continually strengthening regulations related to occupational safety and health to protect the lives and health of workers and, further, to enhance the safety of the community. The government is also operating the Corporate Governance Reporting System, targeting listed companies to lead the establishment of advanced governance structures.

Having recognized that the sound growth of a company is a key element for the sustainable development of a nation and society, LFC operates business based on correct decision-making that adheres to fundamentals and principles. In particular, we strive to create an environment where the main drivers of growth – our employees and partners – can work safely, adhere to the core principles of governance, and enhance management transparency to increase corporate value.



**HOW WE RESPOND**

### Substitution of High-risk Chemicals

“High-risk chemicals” refers to substances that include toxic, accident-prone, or restricted materials according to the Chemical Substances Control Law, as well as those newly designated as such due to changes in domestic and international regulations and notifications. In 2022, LFC comprehensively reviewed the toxicity and regulatory issues of chemicals used internally and designated and managed high-risk chemicals on our own. A total of 14 initially designated high-risk chemicals are planned and being transitioned to less harmful substitutes.

In 2023, one type of high-risk chemical was transitioned to a less harmful substitute, and one review (including investment) was conducted for replacement. Through such activities, two out of the 14 designated high-risk chemicals have been substituted, and we plan to continue expanding substitutions and transitions.

### Operation of Site-Specific Safety and Health Strategy Systems

LFC has established and is implementing a sustainable development plan that prioritizes safety and health for human respect and an eco-friendly production system. We have established our vision of achieving a “zero accidents, zero pollution, and zero diseases” workplace in the safety and health fields and set up our safety, health, and environmental management policy. We have also established the Safety & Health Golden Rules, which must be specifically practiced and adhered to on-site. The safety and health management policy and principles contain the core details of LFC’s safety management standards, and employees and partners prioritize these principles in their work processes to foster a safe site culture.

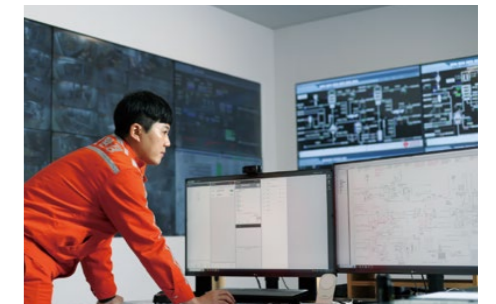
LFC operates a site-specific safety and health management system based on the ISO 45001 occupational health and management system, aiming to build a safe and pleasant workplace and proactively respond to safety and health-related risks. A Chief Safety Officer (CSO) is appointed directly under the CEO to lead and establish the company-wide safety and environmental policy, and the highest decision-making body of the company, the board of directors, approves major safety and health-related issues, thus strengthening the level of safety and health management at the governance level.

Additionally, the Safety and Health Management Committee, which includes external experts, was formed to carry out checks and strengthen the implementation system of occupational safety and health.

To strengthen site safety management, monthly safety-focused themes are selected for intensive inspection, and unsafe behaviors during operations are made a focal area for safety inspections. In line with the Smart Safety direction pursued at the group level, digital technologies such as smart gas detectors, safety black boxes, portable body cams for real-time monitoring of high-risk tasks, and AI-based human detection (object distinction) 4-channel wide-angle cameras for preventing forklift accidents have been applied. Furthermore, various training sessions aimed at improving safety are being conducted to cultivate safety management leadership and promote a company-wide interest in safety, and relevant information is being disseminated through the internal communication system “Soh-tong Nuri.”

Efforts are also being made to manage the safety and health of partner companies to minimize accidents within the workplace. As a result of supporting the establishment of occupational safety and health management systems for resident partner companies since 2014, a total of 19 partner companies had established KOSHA-MS by 2023. In 2024, we will continue providing certification support for the safety and health systems for existing and new partner companies.

 Please refer to “Integrated Health and Safety Management” of this Report to find more information about the operation of on-site integrated safety and health strategy system.





## ESG FOCUS AREAS

### Disclosure of Corporate Governance Report

In May 2023, LFC disclose the Corporate Governance Report, hereby enhancing the transparency of its management and governance. The Report includes the compliance status of key principles (a total of 10), reasons for non-compliance, and the compliance status of key indicators to shareholders, BOD, and audit organizations. In addition, as a voluntary disclosure, we publish our Sustainability Report to fairly and transparently inform stakeholders of our ESG management status.

In October 2023, the Financial Services Commission revised the Corporate Governance Report Guidelines to reflect changes in related laws and recent issues. Future disclosure of LFC's Corporate Governance Report will therefore include key amendments such as providing predictability of dividends, ensuring gender diversity in the board of directors, and restrictions on the appointment of long-serving independent directors, and these will enhance the consistency and accuracy of the content in line with the exchange's maintenance issues.

[Corporate Governance Report](#)


➔ DART

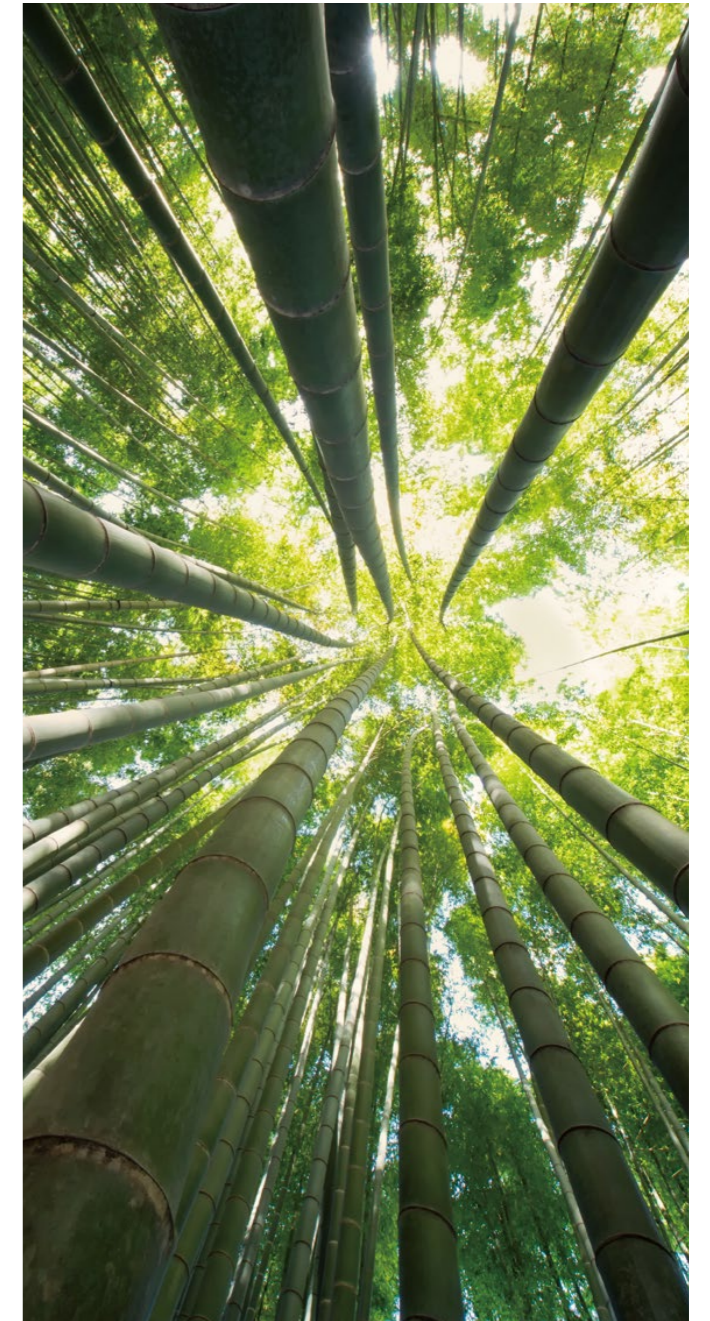


### Internalizing Compliance Management

LFC set in place a systematic compliance management system and a compliance management charter to prevent potential risks related to compliance and has established various systems to internalize compliance awareness among all employees. To improve our expertise in compliance management, the Legal&Compliance Division was established directly under the CEO, and a Compliance Officer at the executive level has been appointed to oversee the overall direction of compliance management. Departments responsible for compliance management, such as the Compliance Management Team and Ethics Management Team under the Legal&Compliance Division, prevent unethical behavior and promote compliance awareness among employees through monitoring the status of compliance management practices and conducting compliance management training.

LFC aims to promote compliance management among its partner companies by specifying adherence to domestic and international anti-corruption laws in the standard subcontracting contract, and by receiving an agreement to practice compliance management, which includes commitments to engage in compliance management practices. Moreover, we have established the Code of Conduct for Partner Companies that requests compliance from suppliers and partners in terms of environmental protection, human rights respect, safety management, quality control, compliance and ethical management, and management systems and demands their participation in ESG management alongside LFC.

 Please refer to "Cultivating a Culture of Ethics and Compliance: Internalizing Compliance Management" of this Report to find more information about the internalization of compliance management.



ESG FOCUS AREAS

# GREEN PARTNERSHIP



Providing ESG information through active communication

**WHY IT MATTERS**

Since the adoption of the U.N. Guiding Principles on Business and Human Rights by the UN Human Rights Council in June 2011, there has been growing recognition that companies, as members of society, have a responsibility to respect the human rights of various stakeholders surrounding them, and if human rights violations occur due to business activities, they should compensate the victims. Along with economic growth, as the social impact and responsibilities of companies expand, social interest in human rights management is increasing. Moreover, for sustainable corporate value creation, building a stable supply chain through mutual cooperation and support with partners is essential, which requires appropriate responses to supply chain ESG issues and active disclosure of information.

LOTTE Fine Chemical is implementing various activities to build and internalize a human rights management system, aiming to achieve the value of growth together. Furthermore, by establishing and strategically managing a supply chain ESG management system, we are strengthening sustainable competitiveness while creating social value.



**HOW WE RESPOND**

**Establishment of a Human Rights Management System**

LFC is promoting human rights management that respects each employee in accordance with its human-centered management philosophy and the fundamental rights to dignity and value as stipulated in the Constitution. In July 2022, to clearly articulate and formalize our commitment to human rights management, we established and enforced the Human Rights Management Statement. With this as a starting point, we went on to reorganize our management system to prioritize respect for human rights by establishing a company-wide human rights management system and processes based on global human rights management guidelines and principles. By regularly conducting self-assessments on human rights impacts and obtaining external verification to share and improve results, we are continuing to enhance our human rights management.

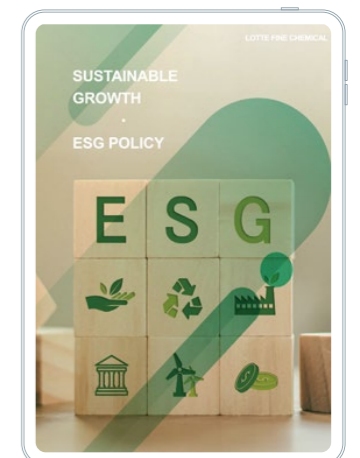
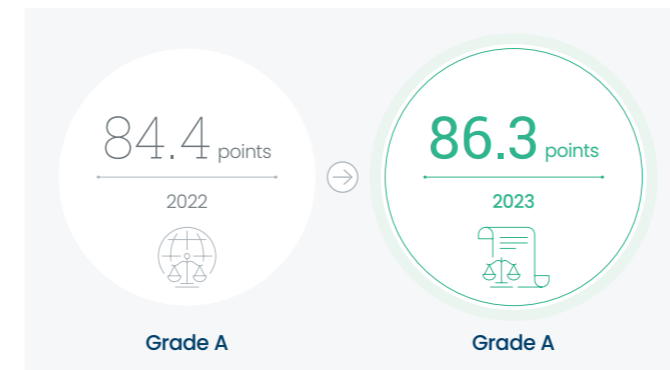
LFC conducts human rights impact assessments to identify human rights risks that may arise during company operations and to improve our human rights management system. Based on the results of these assessments, we identify areas for improvement and implement them. Following the second evaluation in April 2023, following the first on in August 2022, the level of human rights management was found to have improved from 84.4 points (Grade A) to 86.3 points (Grade A). We plan to regularly assess our human rights impact and continuously enhance our human rights management to achieve the medium-to-long-term human rights management goal of Grade S (Excellent) in the human rights impact assessment by 2025.

Please refer to "Advancing Human Rights Management" of this Report to find more information about the establishment of a human rights management system.

**Publication of an ESG Policy Book**

LFC released its ESG Policy Book, which comprehensively summarizes its ESG policies and guidelines, including environmental, human rights, safety and health declarations, information protection, and corporate governance charters. Centered around major ESG risk items, the ESG Policy Book outlines LFC's direction in ESG management and has established internal standards and management guidelines linked to this.

Human Rights Impact Assessment Results



ESG Policy Book

## ESG FOCUS AREAS

### Establishment of a Supply Chain ESG Evaluation System

LFC is expanding its scope for sustainable growth to the entire supply chain and seeking ways to coexist with its partners. As part of this, we conduct supply chain ESG evaluations targeting raw material, equipment, and service supply partners to identify ESG risks within the supply chain and continuously manage supply chain risks by making improvements for high-risk partner companies.

In 2022, through the disclosure of the Code of Conduct for Partner Companies, LFC laid the groundwork for building an evaluation system by sharing the importance of ESG management with partners. In 2023, evaluations began for 17 partner companies, marking the formal operation of the supply chain evaluation system. Starting in 2024, the number of evaluated partners will be gradually expanded, and improvements will be supported for high-risk partner companies to enhance the evaluation system and minimize supply chain ESG risks. Notably, improvement measures will be derived and discussed for suppliers identified as needing improvement based on evaluation results, which is expected to lead to substantial improvements.

Please refer to "Creating a Sustainable Supply Chain: Supply Chain ESG Management" of this Report to find more information about the establishment of a supply chain ESG evaluation system.

### Internalization of Fair Trade Culture

Since 2006, LFC has been operating a unique Compliance Program (CP) aimed at encouraging autonomous compliance with fair trade regulations among employees, preventing unfair trade practices, and establishing a fair trade culture. The Legal Compliance Team, serving as the central department, collaborates with compliance officers from various departments to systematically advance this CP, conducting internal diagnostics to proactively check for potential violations of regulations. Every year, major compliance-related risks that could arise during our management process are identified. The level of risk, considering the likelihood of occurrence and the impact if a given problem does occur, is evaluated and managed by categorizing the risks into different areas. In particular, the compliance requirements are inspected and results are reported to management in CP high-risk departments such as sales and subcontracting departments to enhance awareness among those responsible and ensure the timely correction of any issues.

To strengthen our fair trade capabilities, systematic CP training is conducted for fair trade and subcontracting officers, and regular training for operational departments is carried out to share updates on related legal amendments. In addition, to ensure that all employees are familiar with and comply with fair trade laws and regulations, and to externally promote and encourage free and fair competition in the market, we have posted the Fair Trade Compliance Handbook on the company's website.

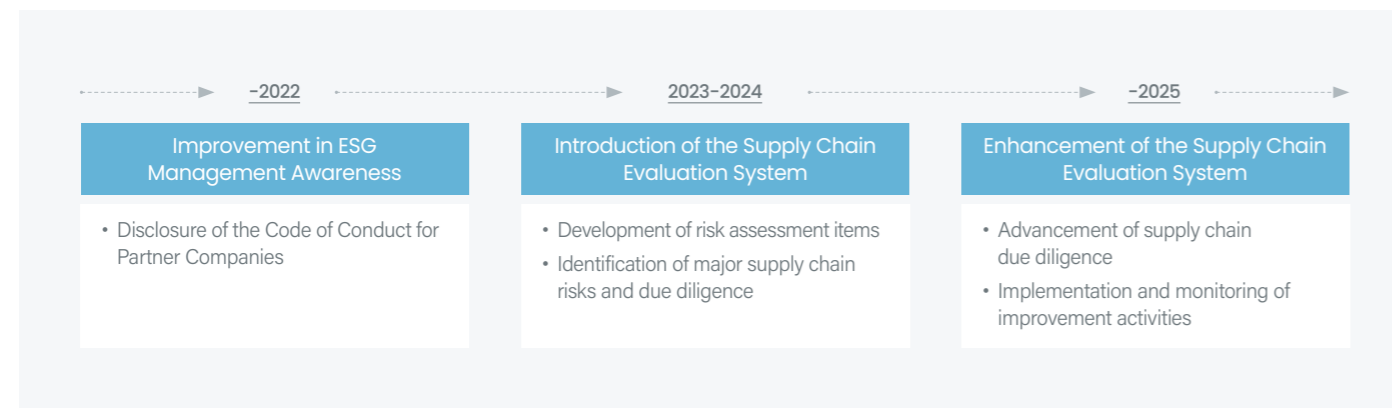
Please refer to "Cultivating a Culture of Ethics and Compliance: Establishing a Culture of Fair Trade" of this Report to find more information about the internalization of a fair trade culture.

### Establishment of a Non-Financial Indicator

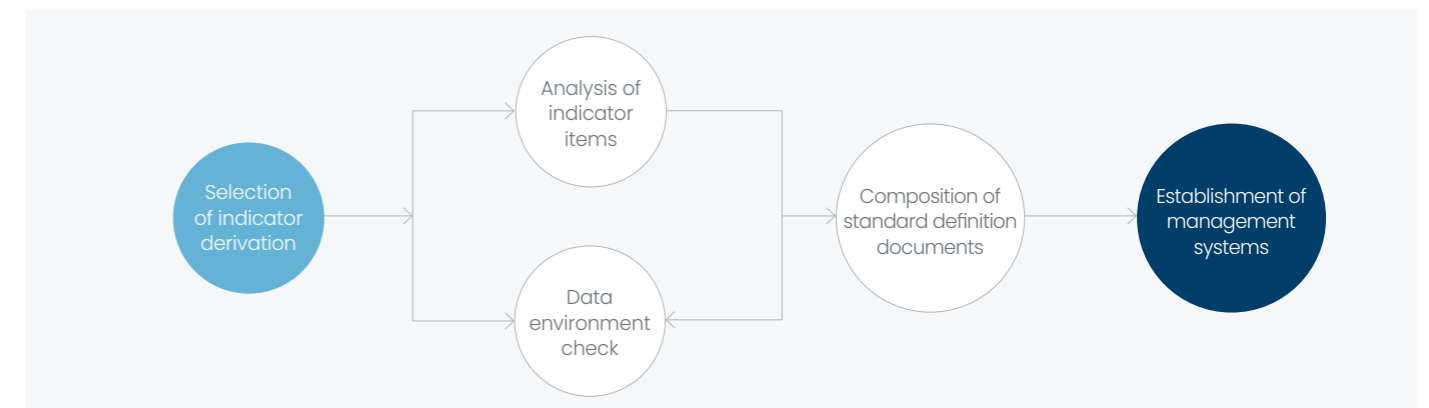
With the legalization of ESG disclosures according to the global ISSB (International Sustainability Standards Board) and European ESRS (European Sustainability Reporting Standards), non-financial indicators verified for consistency in the same manner as financial indicators are required to be disclosed sequentially starting in 2025. To systematically address these changes, LFC is building a non-financial indicator management system and is preparing in phases.

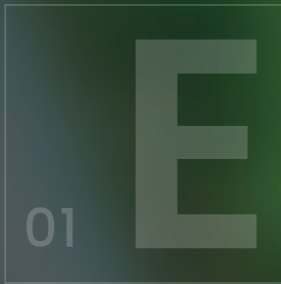
We selected global evaluation agencies and initiatives; identified ESG management indicators in the areas of environment, society, and governance; created a non-financial indicator standard definition; and thus established a non-financial indicator management system, based on which we plan to disclose reliable and consistent data. Moving forward, by building an ESG disclosure system, the reliability of disclosure indicators will be enhanced, and a unified disclosure management system based on the consolidated standards of subsidiaries will be established to improve the completeness of the disclosed information.

#### Supply Chain ESG Evaluation Roadmap



#### Non-Financial-Indicator Management Process





# ENVIRONMENTAL

LFC aims to enhance people’s lives through improved products. Furthermore, our goal is to generate positive value for both humanity and the natural environment across all stages of our product lifecycle – from production and usage to disposal. LFC is committed to proactive eco-friendly initiatives, including addressing climate change, promoting a sustainable ecosystem, and increasing resource recycling. We strive to reduce our environmental footprint by running eco-conscious facilities supported by a structured environmental management system.

## IN THIS SECTION

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Minimizing Negative Environmental Impacts	50



# Our Journey toward Green Growth

LFC is leading the journey towards a carbon-neutral era and preparing for a new future through green growth.

## REDUCTION TARGET FOR ENVIRONMENTALLY HAZARDOUS SUBSTANCES

50%

- Aim to reduce the emissions of environmentally hazardous substances (wastewater, waste, and air pollutants) by 50% compared to 2019 levels by 2030
- Derived implementation tasks to achieve the goal and proceed with the related investment



## LIFE CYCLE ASSESSMENT (LCA)

### Calculation of product carbon footprint

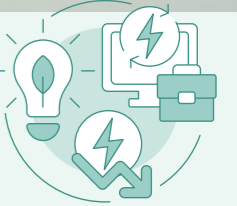
- Established a system for LCA as a key strategic initiative for embedding eco-friendly management
- Calculated product carbon footprint of major products and intermediate process materials in the Chemicals and Green Materials Business Divisions in 2023



## ENERGY AND GHG

Reduction of energy usage by 1,248 TJ

Reduction of energy usage by 56,733 tCO<sub>2</sub>-eq



## WASTEWATER RECYCLING TARGET

42%

- Explored ways to expand wastewater recycling, such as projects for recycling effluent from wastewater treatment plants, and proceeded with related investment to efficiently utilize water resource
- Aim to recycle 42% of the wastewater discharged to sewage treatment plants by 2025



## WASTE RECYCLING ACHIEVEMENT

97%

- Establish annual waste emission targets, improve processes and make investments, and carry out efforts such as task force activities to reduce waste generation



# STRENGTHENING ENVIRONMENTAL MANAGEMENT

## Environmental Management System

**ENVIRONMENTAL MANAGEMENT STATEMENT** In December 2022, LFC established and declared the Environmental Management Statement, which contains the principles of environmental management and the standards of behavior and value judgment that all employees must adhere to during management activities and business execution. The Statement reflects domestic environmental regulations, international environmental convention guidelines, and environmental management practices of employees. Based on the Environmental Management Statement, we aim to achieve regional development and enhance corporate value through advanced environmental management and control of environmental impact materials.

**ENVIRONMENTAL MANAGEMENT IMPLEMENTATION ORGANIZATION** LFC has appointed a Chief Safety Officer (CSO) directly under the CEO for systematic decision-making and swift execution regarding environment and safety. Under the CSO, the SH&E Management Team was formed to oversee the development and implementation of company-wide safety and environmental policies. In addition, we established the Environmental Team within the Safety & Environment Division under the Manufacturing Group to plan eco-friendly management systems, oversee external affairs, and advance eco-friendly initiatives aimed at reducing factory pollutants. The Technical Engineering Team is implementing carbon management by reducing greenhouse gas (GHG) emissions and energy consumption, and actively addressing environmental and climate change issues. Furthermore, significant environmental issues arising in the course of company management are reported to the ESG Committee, which reviews, approves, and supervises these issues. At the ESG Committee meeting held in 2023, reports were made on the establishment of the life cycle assessment (LCA) system, investment status in clean technologies, response to water resource risks, plans for GHG reduction, and renewable energy adoption.

**ENVIRONMENTAL PERFORMANCE MANAGEMENT** LFC annually monitors its environmental management status and performance based on LOTTE Group's sustainability growth indicators. We manage environmental performance using indicators that include the operation of environmental management organizations, establishment and implementation of environmental objectives, pollution control achievements, and progression of environmental education. Through this process, we identify areas for improvement, develops corrective strategies, and continuously implement these to enhance our environmental management activities.

**ENVIRONMENTAL MANAGEMENT STATUS CHECK** For overseeing the environmental management system, annual site inspections are conducted among the Group affiliates to check for environmental management risks and to address problems or necessary actions. A system has been established to gather monthly data on the discharge performance of water quality, air, and waste, as well as water usage, and report it internally. This system helps in early detection of abnormalities in processes and in devising appropriate countermeasures. Additionally, an internal inspection system for environmental tasks has been established, allowing for annual evaluations of environmental management activities by sector to facilitate improvements in processes.

**ENVIRONMENTAL MANAGEMENT SYSTEM CERTIFICATION** Since the Ulsan Complex first obtained the ISO 14001 environmental management system certification in 1996, LFC has expanded the scope of certification to include the entire company, including the Incheon Plant. Over the past 27 years, we have the certification and developed our environmental management system through annual audits. In 2023, a renewal audit, which occurs every three years, was conducted, and the certification was successfully renewed. Plans are in place to continue diligent participation in audits to maintain the certification, and to promote systematic environmental management based on ISO 14001 throughout all processes of business operations from product development, production, to disposal, in order to minimize environmental impacts.

## Environmental Goals and Implementation Status

Classification	Goal	Plan	Outcome	Achievement status	Due
2023 Performance	Investment in wastewater discharge recycling	Investment approval	Investment execution approved	Completed	Nov. 2023
	Response to the Act on The Integrated Control of Pollutant-discharging Facilities	Establishment of a post-management system	System establishment completed	Completed	Feb. 2024
	Establishment of the LDAR <sup>1)</sup> inventory monitoring system	Establishment of an inventory and a system	Inventory and system establishment completed (100,000 points)	Completed	Dec. 2023
	Monitoring and response to the designation of hazardous substances	Compliance management for legal permits	Compliance with material-specific grace periods	Completed	Dec. 2023 (Varies by material)
Goals for 2024	Investment in wastewater discharge recycling	Construction commencement	Contractor selection	In progress	Sep. 2026
	Stabilization of the integrated environmental permit, LDAR system	Consolidation of management system	System data verification	In progress	Dec. 2024
	Inspection of compliance with the chemical accident prevention management plan	Internal compliance check	Internal compliance check completed Institutional site inspection completed	Completed	Mar. 2024
	Chemical substance registration under K-REACH (100-1,000 tons)	Registration/exemption of 5 types of substances (Minimize registration costs)	Data acquisition (purchasing) in progress	In progress	Dec. 2024
	Designation and monitoring of hazardous substances	Compliance management for legal permits	Compliance with material-specific grace periods	Completed	Dec. 2024.12 (Varies by material)

<sup>1)</sup> Leak Detection and Repair, arsenic acid emissions management

# STRENGTHENING ENVIRONMENTAL MANAGEMENT

## Life Cycle Assessment

LFC has set the establishment of an LCA system as a key strategic initiative for embedding eco-friendly management, based on which we evaluate and analyze the environmental impacts of products through LCA. The LCA calculation standards are based on ISO 14040 (Life Cycle Assessment – Principles and Framework) and ISO 14044 (Life Cycle Assessment – Requirements and Guidelines), and the domestic and overseas Product Category Rules (PCR) of Environmental Product Declarations (EPD).

To meet the demands of global customers for a quantitative assessment of environmental impacts throughout the product production process and to address regulations on product carbon footprints, major products and intermediate process materials in the Chemicals and Green Materials Business Divisions were selected as targets for LCA. In 2023, the carbon footprints of these products were initially calculated, and in 2024, efforts were made to enhance the precision of the LCA methodology. Additionally, Environmental Product Declarations were acquired for products like ECH, TMAC58%. Moving forward, we plan to utilize the environmental impact results obtained through continuous LCA in various decision-making processes for environmental management, including climate change response. We also aim to expand the R&D and production of products with reduced environmental impact.


## Environmental Investment

LFC is actively investing in the environmental sector for process improvements, efficiency, and optimization of unit processes at each plant, moving beyond regulatory compliance towards continuous environmental improvement, including the reduction of pollutants. From 2021 to 2022, emissions of air pollutants were reduced through the installation of incinerators, and investments were considered for wastewater recycling technologies to reduce water usage and wastewater, and pilot tests were promoted to establish the foundation for environmentally friendly business sites.

In 2023, we began full-scale investment in mass production for the recycling of wastewater effluent. Additionally, based on data from the IoT unmanned odor monitoring system, we initiated investments in the installation of additional scrubbers to improve air odor and additional prevention facilities at the wastewater treatment plant. Also, as a condition of the integrated environmental permit, we secured additional pollution prevention facilities by constructing an additional incinerator, and continued factory operations without any disruptions. This ensures backup pollution prevention facilities are in place, guaranteeing continuous factory operations without interruption. In 2024, we plan to proceed with the investment in wastewater recycling, additional installations of odor control facilities at wastewater treatment plants, construction of backup incinerators, and reduction of hazardous substances and waste emissions, aimed at creating a green ecosystem

## Green Purchasing

LFC is purchasing eco-friendly, high-quality products at optimal prices in accordance with its green purchasing policy. For wood pulp, a key raw material in our green products, we aim to reduce environmental impact by sourcing from suppliers certified by FSC (Forest Stewardship Council) and PEFC (Programme for Endorsement of Forest Certification). These certifications ensure sustainable wood production with minimal environmental impact. Furthermore, to promote green purchasing, the purchasing regulations have been formalized to include the practice of environmental management vision and policies through the purchase of green products, and to fulfill corporate social responsibility by preventing waste of resources and environmental pollution. The performance of green purchasing is continuously monitored.



**GREEN PURCHASING PERFORMANCE FOR 2023**

KRW **9,606** million

Purchase of products with environmental labels such as polyaluminum chloride (PAC), LED fixtures with environmental and green technology certifications, and high-quality recycled compressed pallets

### Environmental Investments in 2023

(Unit: KRW million)

Investment	Total investment cost	Investment performance in 2023	Purpose	Effects
Establish a green material scrubber	8,000	3,206	Improve air discharge facilities	Reduction of emissions of environmentally hazardous substances
Additional installation of backup incinerator	19,000	2,939	Compliance with integrated environmental permit conditions	Stable production operation through redundancy of prevention facilities
Environmental improvement of methylene chloride plant	3,550	1,127	Facility improvement	Prevention of environmental pollution
Replacement of multi media filter (MMF) piping at wastewater treatment plant	650	630	Improvement of piping material	Prevention of environmental pollution
Establishment of integrated environmental management system	400	191	Compliance with regulations	Reduction of regulatory risk
Establishment of LDAR inventory system	996	325	Management of fugitive emission facilities	Prevention of environmental pollution

<sup>1)</sup> Multi Media Filter

### Green Purchasing Policy

#### Purpose of Green Purchasing

- We fulfill our environmental management vision and policy as well as corporate social responsibility by prioritizing and promoting green purchasing to prevent resource wastage and environmental pollution and to contribute to creating an eco-friendly, happy life for humankind.

#### Criteria for Green Purchasing

01. Products that have received green product certification from the government or a certification body
02. Domestic and overseas eco-label certified products
03. Products produced using eco-friendly raw materials
04. Products produced by companies with an "excellent" ESG management rating
05. Products that relatively reduce environmental pollution and energy consumption when used for the same purpose



# STRENGTHENING ENVIRONMENTAL MANAGEMENT

## Environmental Training

LOTTE Group conducts online training every quarter for all its companies on topics such as ESG trends, carbon neutrality, and eco-friendly strategies. In 2023, environmental management personnel were trained to effectively respond to ESG activities, and the environmental managers of LFC completed this training.

LFC regularly conducts training and education to prevent chemical accidents and minimize damage in case of an incident. We provide safety education to managers, handlers, and workers dealing with hazardous chemicals as per the Chemical Substances Control Act, while also conducting environmental and safety training for all employees. Furthermore, we also extend educational opportunities to internal suppliers and other members who might easily be overlooked in environmental education, collaborating to create an eco-friendly workplace. In 2023, safety training on hazardous substances was provided to 514 individuals, comprising 280 employees and 234 staff members from resident subcontracting companies.

## Biodiversity Conservation

Biodiversity is rapidly declining due to factors such as habitat loss, pollution, and climate change. As a result, biodiversity conservation has become crucial for sustainable ecosystems, reliable food supplies, and the well-being and survival of humanity, marking it as a critical responsibility for the future.

LFC has expanded its biodiversity conservation efforts, including annual conservation activities at the Taehwa River Simnidae Bamboo Grove in Ulsan and marine cleaning activities in Incheon. Newly hired employees participate in creating pop-up books featuring endangered animals, which are then donated to local "Small Libraries" to raise awareness of the importance of biodiversity conservation. Additionally, in collaboration with the Incheon Port Authority (IPA), LFC has conducted biodiversity protection activities, including planting chrysanthemums to prevent the spread of harmful plants and throwing EM<sup>1)</sup> mud balls in the Seunggi Stream area of Yeonsu District, Incheon. We are also hosting the Eco-Friendly Environmental Improvement Idea Contest that includes biodiversity protection activities, and plan to implement the selected ideas from the Contest in 2024 and to further refine these initiatives in 2025.

<sup>1)</sup> EM (Effective Micro-organisms, beneficial microbes) balls made from a mixture of EM solution and loess clay are highly effective for water purification, odor removal, and the fermentation and decomposition of organic matter.

## Employee Suggestions System

Since its inception in 1968, LFC has operated a suggestion system to manage ideas and achievements of its employees, aiming for smooth workplace operations. Through this system, employees can freely propose ideas related to optimizing factory operations, enhancing the environment, and reducing raw and ancillary materials. We select proposals that yield significant results and award them to encourage active participation in the system.



**PERFORMANCE OF THE EMPLOYEE SUGGESTION SYSTEM FOR 2023**

**5,836** ideas proposed

Achieved a product cost improvement effect of KRW 3 billion through productivity enhancement and raw material savings.



Newly hired employees, creating pop-up books featuring endangered animals



Throwing EM (Effective Micro-organisms) mud balls activity by the Incheon Plant



Planting chrysanthemums to prevent the spread of harmful plants



Poster for Eco-Friendly Environmental Improvement Idea Contest for college students





# RESPONDING TO CLIMATE CHANGE

## Climate Change Response Strategy

The acceleration of abnormal weather, water shortages, and the reduction of biodiversity due to climate change are frequently occurring, causing unforeseen damage to nations and businesses. In response to this climate crisis, major countries around the world, including the Republic of Korea, and international organizations have declared goals to achieve carbon neutrality by 2050 and are strengthening related regulations. Stakeholders are demanding that companies take more proactive measures in reducing greenhouse gases and responding to climate change, including disclosing related information. Leading companies are managing GHG emissions across their value chains and implementing climate change response strategies to achieve carbon neutrality.

LFC has also established a long-term roadmap aimed at securing global energy competitiveness to achieve carbon neutrality, complying with related regulations including the GHG emissions trading scheme, and proactively responding to climate change. We are particularly focusing on internal reduction activities and establishing trading mechanisms by setting reduction targets for production departments to meet the emission allowances of the GHG emissions trading scheme. In 2022, we established mid-to-long-term strategies for responding to climate change and reducing GHG from perspectives of enhancing technological competitiveness and energy transition, based on which we have been managing GHG emissions more sophisticatedly, analyzing future emission estimations, deriving an eco-friendly portfolio to achieve carbon neutrality, and implementing other systematic and feasible response activities. Based on these climate change response strategies and performance, we responded to the Carbon Disclosure Project (CDP) and achieved B ratings in both Climate Change & Water Security sectors.

## Energy Efficiency Management

LFC has formed a dedicated organization for energy efficiency and set energy efficiency and cost reduction as core indicators (KPIs) for production departments, establishing annual energy usage targets and managing performance. Additionally, as part of the company-wide integrated innovation program, we operate a knowledge suggestion system and derive energy efficiency improvement items to discover creative ideas from employees and reward excellent ideas, thereby promoting energy innovation activities.

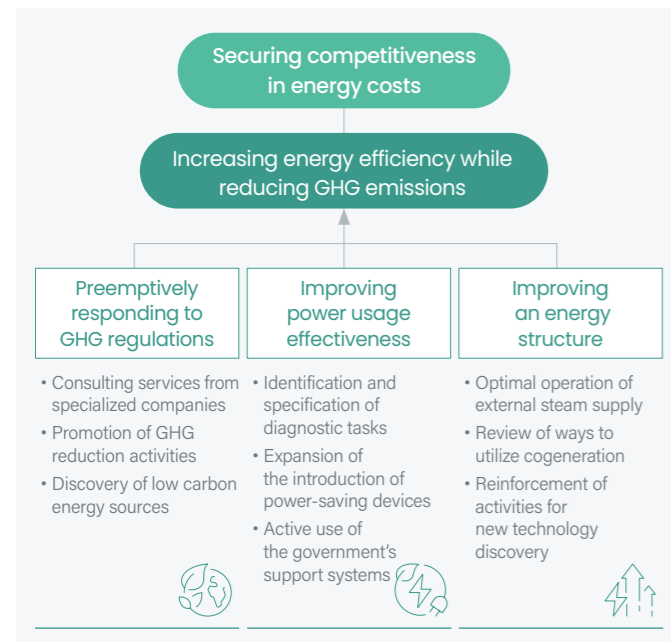
In 2023, we identified and applied 44 energy-saving items considering the characteristics of our business sites and manufacturing processes, resulting in a total energy conservation of 1,248 TJ. For 2024, we aim to save 165 TJ of energy and are currently implementing 28 energy-saving tasks, including reducing operating costs for organic incinerators, improving the efficiency of waste heat boilers in incinerators, and reducing power consumption of electrolyzer.

## GHG Reduction Activities

LFC is enhancing company-wide technological competitiveness and promoting GHG reduction activities from an energy transition perspective to improve our competitiveness in responding to climate change. We have supplemented internal regulations in accordance with the GHG and Energy Target Management Scheme and the Energy Use Rationalization Act, aiming to strengthen the MRV (Measure, Reporting, Verification) system for real-time management systems and measuring devices for greenhouse gases and energy. We are also identifying and promoting energy consumption and GHG emissions reduction tasks centered around each production department.

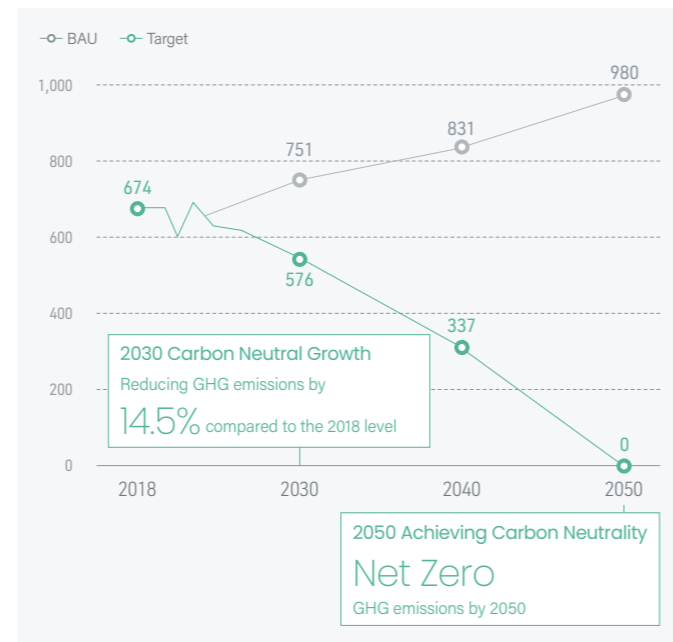
In addition, we are promoting the adoption of renewable energy within our business sites. Since April 2024, the Incheon Plant has been operating a 30kW-scale solar power generation system, while the Ulsan Complex has finalized a contract for the construction of a 1MW-scale solar power generation system, set to commence operation in the fourth quarter of 2024.

### Directions to Secure Competitiveness in Response to Global Climate Change



### Mid-to Long-term Roadmap to Achieve Carbon Neutrality

(Scope 1+2, Unit: 1,000 tons)



### Energy Consumption Target

Classification	Unit	2023		2024 Target
		Target	Performance	
Energy consumption	TJ	17,136	16,090	16,409

### Energy Conservation and GHG Reduction Performance in 2023

Project name	No. of projects	Reduction of energy consumption (TJ)		GHG reduction amount (tCO <sub>2</sub> -eq)	
		Target	Performance	Target	Performance
Replacement of aging equipment	11				
Operational efficiency improvement	30				
Low-carbon energy	1	270	1,248	8,199	56,733
Others	2				

# MINIMIZING NEGATIVE ENVIRONMENTAL IMPACTS

## Advancing Chemical Substance Management

### MANAGEMENT OF CHEMICAL SUBSTANCES

**Chemical Substance Management System** | LFC has established and implemented a comprehensive Chemical Substance Management System covering all stages including research and development, production, and sales, to comply with chemical-related regulations and ensure safe management.

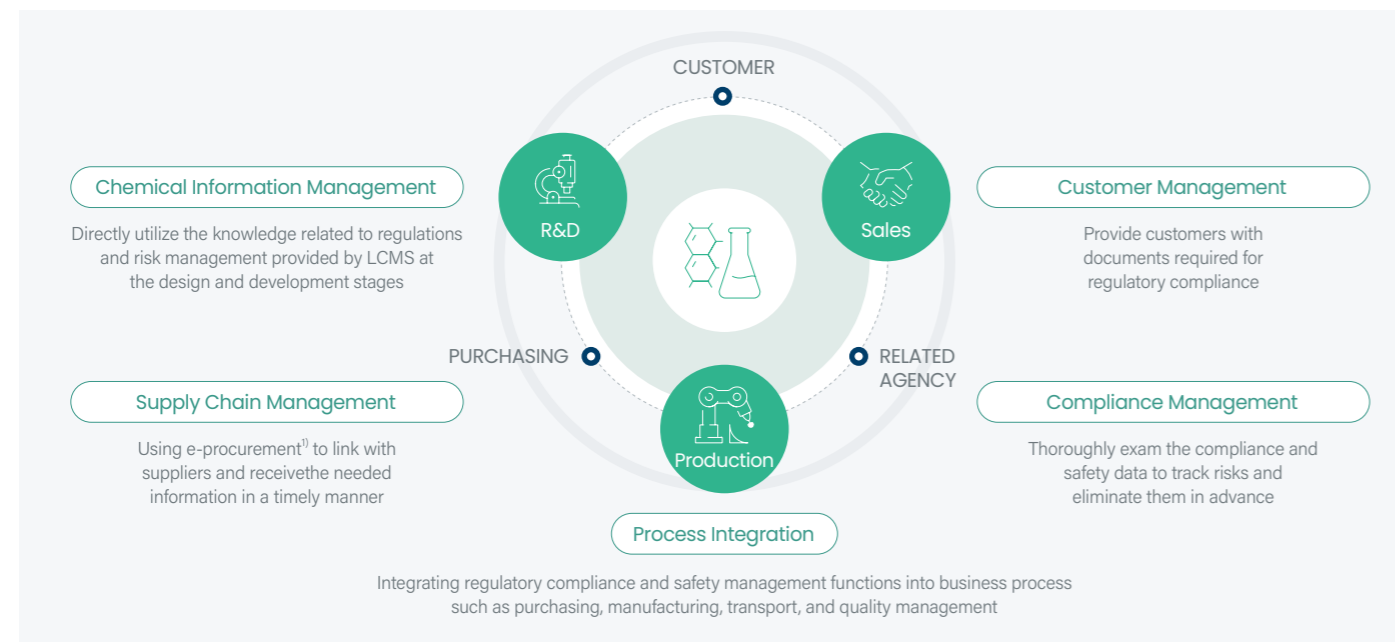
**Chemical Registration and Reporting** | Under the Act on the Registration and Evaluation, etc. of Chemical Substances (K-REACH), LFC registered 13 existing chemical substances with the relevant authorities (Ministry of Environment) in 2018, and following the amendment of K-REACH in 2019, completed preliminary reporting for 50 existing chemical substances manufactured or imported in quantities of 1 ton or more, thereby managing them under registration deferral.

In 2021, seven substances over 1,000 tons were registered, and preparations are ongoing from 2022 for the registration of seven substances between 100-1,000 tons, targeted for completion in 2024. Among these seven substances, we are acting as consortium representatives for three and as subsequent registrants for four. One of the substances, where we are representing, confirmed polymer exemption in 2023, and two are undergoing direct registration by importers, in accordance with substance-specific regulations. According to this regulatory timeline, we plan to sequentially register 17 substances of 10-100 tons by 2027 and 11 substances of 1-10 tons by 2030.

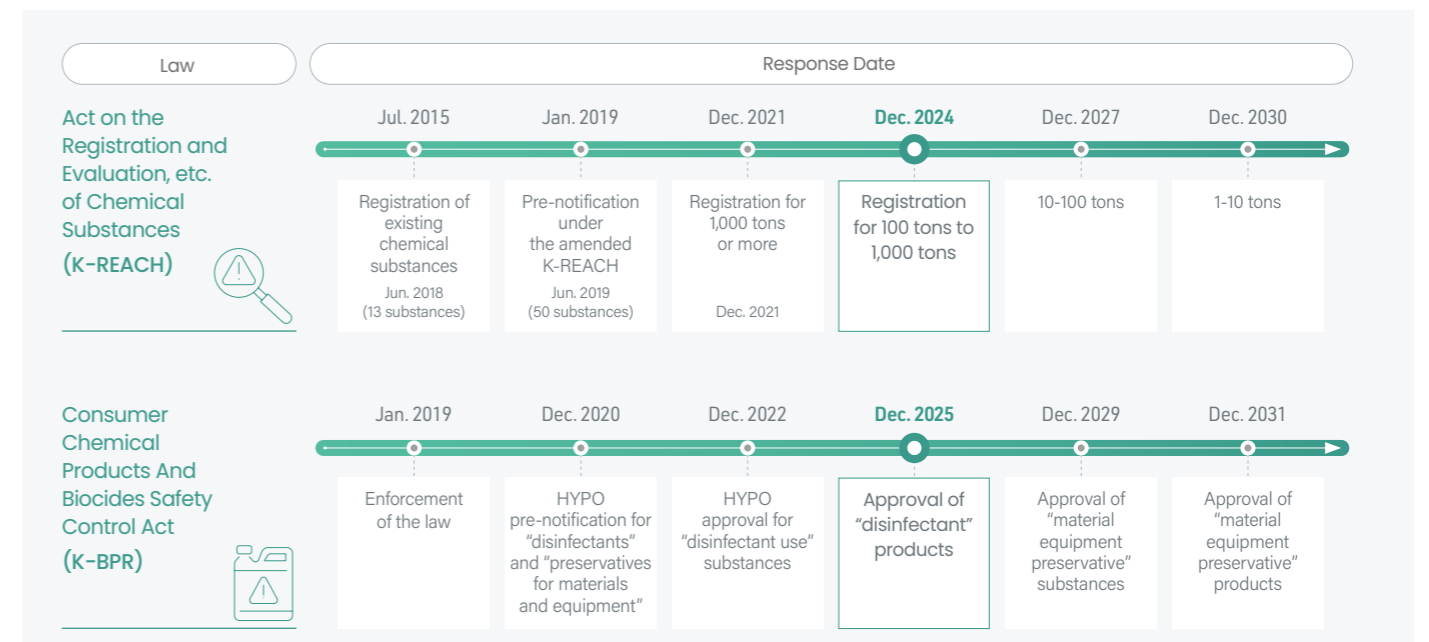
Under the Consumer Chemical Products And Biocides Safety Control Act (K-BPR), LFC completed existing biocidal substance reporting for sodium hypochlorite (NaOCl, abbreviated as HYPO) by 2020 for use as disinfectants and preservatives for materials and equipment, and completed biocidal substance approval for disinfectant purposes according to the grace period by 2022. We are preparing to ensure compliance with related laws and aim to complete product approval for disinfectant purpose by 2025, and for material and equipment preservative purpose by 2029.



### Chemical Substance Management System



### Domestic Chemical Regulation Compliance Schedule



<sup>1)</sup> In-house supply chain system

# MINIMIZING NEGATIVE ENVIRONMENTAL IMPACTS

**Chemical Management Organization I** In August 2023, to further solidify a stable operational foundation in the face of newly established and strengthened domestic and overseas environmental regulations and penalties, LFC unified the execution systems for handling domestic regulations (K-REACH, K-BPR) and international regulations (EU REACH, etc.). To this end, we consolidated the previously separate Environment Team (Ulsan Complex) and ESG Team (Seoul Office). Additionally, the responsibilities of the external business interface, including LOTTE Group environmental management inspections and interactions with government agencies, corporations, and associations, were centralized under the dedicated SH&E Management Team (Seoul Office) to enhance the consistency and expertise in chemical regulatory response.

**Chemical Management System I** LFC operates the LCMS (LOTTE Chemical Management System), collecting and managing information about all chemicals from raw materials to finished products to improve work alignment and efficiency.

**Chemical Management Activities I** LFC is continually advancing activities to enhance the safety of chemical management. In accordance with the Act on the Registration and Evaluation, etc. of Chemical Substances (K-REACH), we have continuously improved facilities handling hazardous chemicals, receiving "Conformity" grade from annual inspections, and regularly inspecting, improving, and managing these facilities to preemptively prevent chemical leaks and accidents. Since 2020, the Incheon Plant has been involved in activities such as establishing and maintaining chemical inventories, implementing strategies to minimize and handle hazardous chemicals, conducting annual checks and reports on hazardous chemical usage, and conducting chemical statistical surveys and reports biennially. To ensure the objectivity and appropriateness of our management levels, we undergo annual evaluations by the Korea Gas Safety Corporation, a certified external agency, and consistently maintain passing scores.

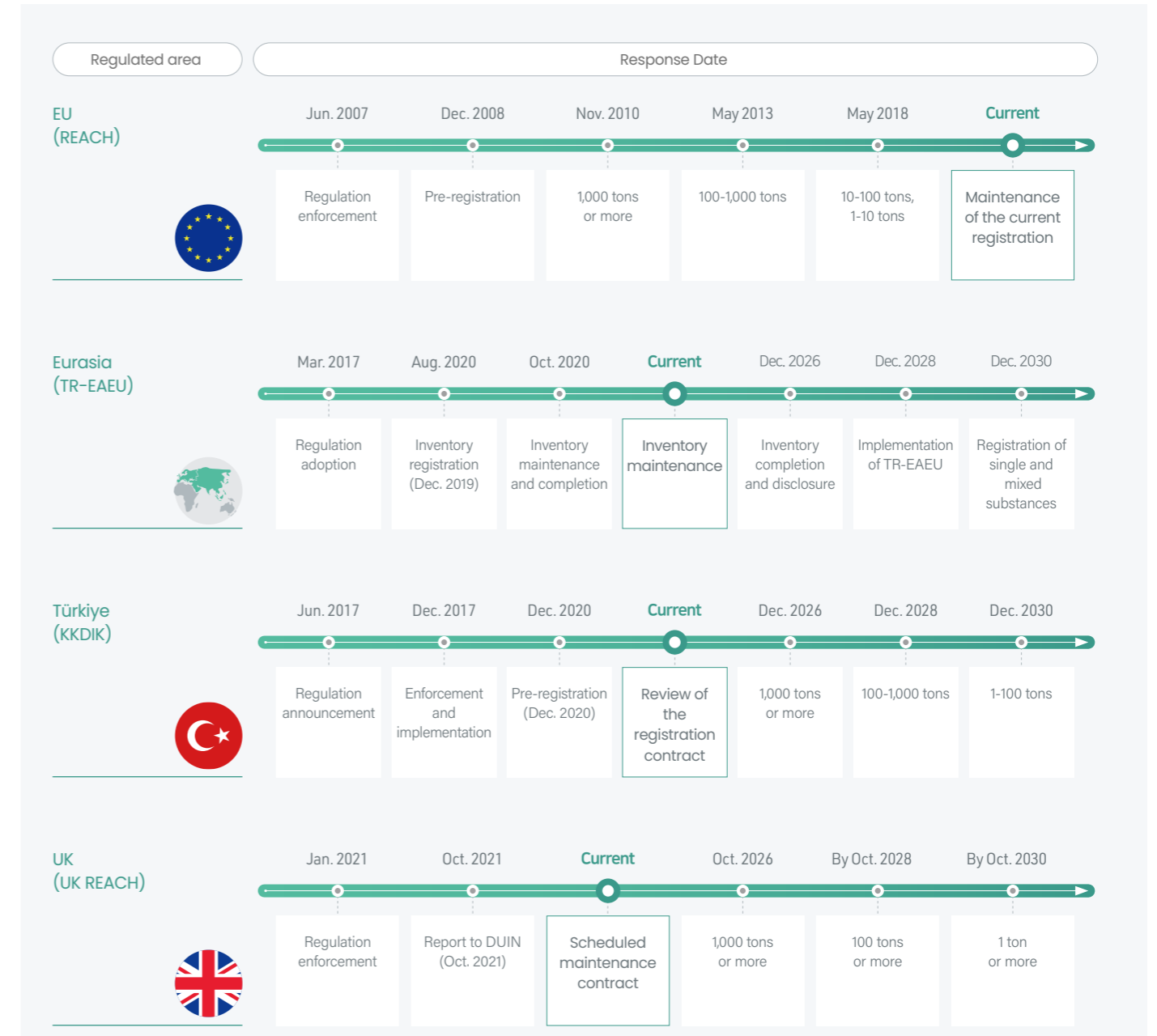
In 2023, we created and registered the MSDS (Material Safety Data Sheet) for a new product, PEG, and produced an MSDS in French for the AnyCoat® overseas customers. In 2024, we plan to revise existing MSDS and carry out chemical verification, labeling, and reporting for acetic acid, newly designated under the K-REACH.

**REACH RESPONSE STRATEGY** Globally influential environmental regulations, including REACH<sup>1)</sup>, which affects companies both inside the EU and outside the region that export chemicals to the EU, are being expanded and strengthened in various regions. To respond to chemical regulations being strengthened in different countries and regions, such as Türkiye's KKDIK, the UK's UK-REACH, and Eurasia's TR-EAEU, LFC has unified its domestic and international chemical regulation response organization as of August 2023, and, together with relevant departments such as sales, marketing, and purchasing, is identifying export substances by region and proceeding with material registrations according to each country's regulations. Following this registration, we continue to register new substances as export volumes increase under REACH and maintain supply chain management and maintenance work annually.

LFC has completed pre-registrations for country-specific and regional chemical regulations in Türkiye, Eurasia, and the UK, and is actively monitoring the registration schedules to ensure compliance. The company plans to finalize the principal registration for Türkiye's KKDIK, adhering to tonnage-specific grace periods, and will proceed with principal registrations for TR-EAEU and UK-REACH according to their respective future schedules.

<sup>1)</sup> Registration, Evaluation, Authorization, and Restriction of Chemicals. A regulatory framework mandating the registration, evaluation, authorization, or approval of chemical substances manufactured or imported in quantities of one ton or more within the EU.

## Overseas Chemical Regulation Response Schedule



# MINIMIZING NEGATIVE ENVIRONMENTAL IMPACTS

## Workplace Environmental Management

**WATER RESOURCE MANAGEMENT** At LFC facilities, water is sourced through regional intakes that meet usage adequacy standards. Under the management of the utility departments at each business site, we aim to optimize water consumption and related costs through process improvements. We also operate our own wastewater treatment plants, monitoring the discharge volume from each plant in real-time.

For wastewater discharged into coastal areas, it undergoes advanced treatment including physical and chemical processes followed by filtration to remove pollutants as much as possible before direct discharge. For parts processed in conjunction with municipal sewage treatment plants, physical, chemical, and biological treatments are applied to remove most suspended solids and dissolved organics. We have set our internal standards for water pollutant discharge at 80% of the legal limit. To monitor discharge levels, we perform daily internal analyses in accordance with standard water pollution testing methods, supplemented by bi-monthly assessments from an external measurement agency to ensure compliance with emission standards. Additionally, due to the increasing load on our wastewater treatment facilities, we are considering expanding these facilities and introducing new equipment for temperature control to more effectively manage the wastewater load.

At the Incheon Plant, we identified the source concentration of wastewater at each generation point to minimize water quality impact and stabilize the operation of the wastewater treatment plan. In 2023, we reviewed and adopted a method of separating some highly contaminated wastewater and outsourcing it to specialized treatment companies. Construction of pipelines for contracted treatment starting in 2024 is underway, with a commitment to minimize environmental impact despite the cost of contracted processing.

### Water Consumption Targets and Performance in 2023

Classification	Unit	Target	Performance
Water Consumption	Ton	14,400,000	12,547,963

**Wastewater Recycling** | LFC is exploring ways to expand wastewater recycling for more efficient use of water resources. Using advanced technologies like ultra filter (UF) and reverse osmosis (RO), we conducted pilot tests in two stages to recycle discarded discharge water for industrial use, based on which we are progressing with investments in wastewater recycling facilities. The wastewater recycling project at the treatment plants are planned to be implemented in three phases totaling 12,500 tons. Accordingly, investments for the first (6,000 tons) and second phases (4,000 tons) amounting to KRW 29.5 billion started in September 2023, with phase one set to be completed in 2025 and phase two in 2026.

**WASTE MANAGEMENT** LFC manages all waste disposal processes internally through the Ministry of Environment's online comprehensive waste management system, "Allbaro." We also check MSDS immediately upon waste generation, comply toxicity information, and conduct component analyses based on waste process test methods at least once a year to ensure safe waste management and disposal. Moreover, efforts are made annually to set waste discharge targets and promote process improvements, investments, and task force (TF) activities to reduce waste generation. Moreover, the recycling rate, which was only 84% in 2019, has been maintained at over 90% since 2020, and reached 97% in 2023.

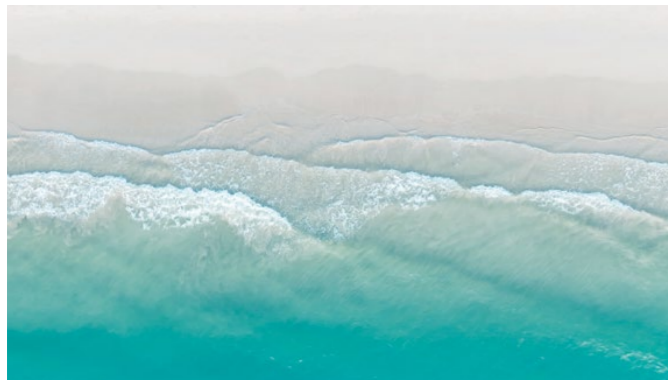
### Volume of Waste Generated & Recycling Rate

Classification	Unit	2021	2022	2023
Waste volume	Ton	82,919	91,325	103,513
Recycling rate	%	93	91	97

**AIR POLLUTION MANAGEMENT** To ensure stable factory operations, tele monitoring system (TMS)<sup>1)</sup> is installed within process equipment to continuously measure and manage the emission of air pollutants. We periodically conduct a leak detection and repair (LDAR) inspection for non-point pollution source and arsenic acid leakage facilities that have a possibility of leakage to minimize air pollutant emissions. Moving forward, we plan to expand this system to include non-hazardous air pollutants and is improving phased pollutant processing.

**SOIL AND ENVIRONMENT CONSERVATION** To prevent soil contamination resulting from factory operations, regular soil contamination tests are conducted at facilities designated under the Soil Environment Conservation Act. These tests are carried out in collaboration with companies accredited by the Ministry of Environment as specialized soil contamination institutions. The results are then disclosed through the Environmental Information Disclosure System.

<sup>1)</sup> A system that takes real-time measurements of air pollutants that are discharged from business site smokestacks using an automatic smokestack measuring device, and sends this information online to the Korea Environment Corporation and handles real-time management of the discharge status



### WASTEWATER RECYCLING TARGET

42%  
(10,000 tons/day)

Wastewater discharged to sewage treatment plants by 2025



### 2023 WASTEWATER RECYCLING PERFORMANCE

1,452,013 tons  
(YoY increase of 2.7%)

\* Attributable to fluctuations in generation volume, not a result of expanding recycling

# 02 S

## SOCIAL

LFC operates under the management philosophy of “respect for humanity,” pursuing innovation that is beneficial to all. We strive to enhance the value of our employees, who are both the main drivers and the driving force behind our growth, especially focusing on creating a workplace with no accidents, no pollution, and no illnesses. In addition, we are expanding the scope of sustainable growth across the entire supply chain by seeking ways to coexist with partners who will share in future growth. Moreover, LFC continuously innovates to provide differentiated value to our customers, who are the reason for our existence, thereby seeking new growth opportunities.

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# Our Path to Sustainable Inclusive Growth

LFC serves as a good partner for a sustainable future, conveying beneficial values and leading the way to sustainable growth for all.

- Conduct ESG evaluation to identify and improve internal risks with the goal of establishing a sustainable supply chain
- Identify improvement items and support their implementation for partners that need improvement based on the evaluation results

## SUPPLY CHAIN ESG EVALUATION

17 partner companies



## HUMAN RIGHTS IMPACT ASSESSMENT

86.3 points



- Have been conducting human rights impact assessment since 2022 with the goal of identifying human rights risks and establishing a human rights management system; identify and implement improvement items
- According to the results of the second assessment in 2023, the human rights management level improved from 84.4 points (Grade A) to 86.3 points (Grade A)

## LTIR (LOST TIME INJURY RATE)

0.29

- Operate an on-site occupational health and safety management system based on ISO 45001 in order to respond to occupational health and safety risks
- Conduct safety inspections and apply new digital technologies to enhance on-site safety management; conduct training to strengthen workers' safety competencies



- Have been supporting the establishment of the occupational health and safety management system, KOSHA-MS, of in-house partner companies since 214 to achieve a zero accident workplace in cooperation with partner companies

## PARTNER COMPANY KOSHA-MS SUPPORT

19

(cumulative from 2014 to 2023)



## CUSTOMER INFORMATION LEAKAGE INCIDENTS

0%

- Operate an integrated log management system and conduct security solution monitoring to prevent the leakage, falsification, or alteration of personal information
- In the event of an information leakage incident, immediately notify the customers and establish and implement response measures to minimize related damages



# ADVANCING HUMAN RIGHTS MANAGEMENT

## Human Rights Management System

### HUMAN RIGHTS POLICY AND HUMAN RIGHTS MANAGEMENT STATEMENT

**Human Rights Management Statement** | LFC established and declared the "Human Rights Management Statement," which presents criteria for right behavior and value judgment that all employees must observe in the process of executing management activities and business, in July 2022. This Statement is based on international human rights principles and standards, including the Universal Declaration of Human Rights, UN Guiding Principles on Business and Human Rights, OECD Guidelines for Multinational Enterprises, and UN Convention on the Rights of the Child. We pledge to faithfully abide by and practice the Human Rights Management Statement, and protect and promote stakeholders' human rights in the overall business value chain.

### HUMAN RIGHTS MANAGEMENT SYSTEM

LFC prohibits forced and child labor, complies with the laws governing minimum wages and overtime pay, and adheres to the Labor Standards Act, strictly prohibiting discrimination based on education, place of origin, gender, age, religion, race, and other factors. The company ensures fair treatment in all HR and welfare systems, from recruitment to placement, promotion, salary, education, and retirement. To advance human rights management more systematically, we established a human rights management charter and rules in 2022, and revised the rules concerning the prevention and handling of human rights violations, sexual harassment, and workplace bullying.

We also regularly conduct internal checks on human rights impacts and receive external verifications, sharing the results and deriving improvements, thereby continuously enhancing our human rights management. As a result of these efforts, there were no cases of discrimination in 2023, we do not hold any business areas that may infringe on the freedom of collective bargaining.

### HUMAN RIGHTS MANAGEMENT CERTIFICATION

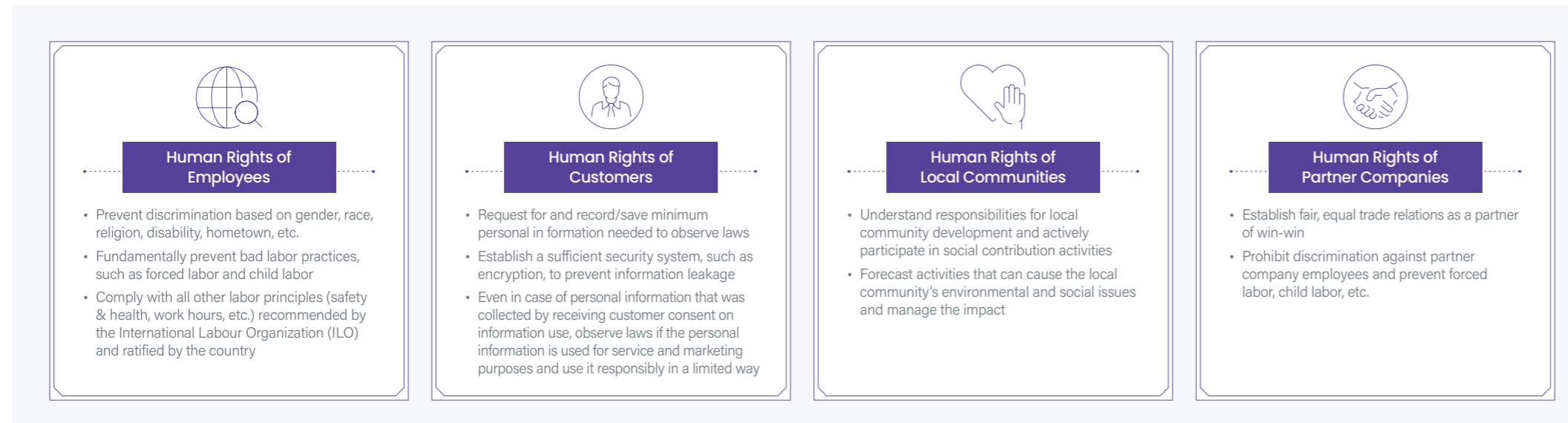
Based on the requirements of global human rights management guidelines, LFC established a company-wide human rights management system and processes, obtaining a human rights management certification in 2022 for the production and servicing of fine chemicals and electronic materials, which is renewed annually.

## Human Rights Impact Assessment

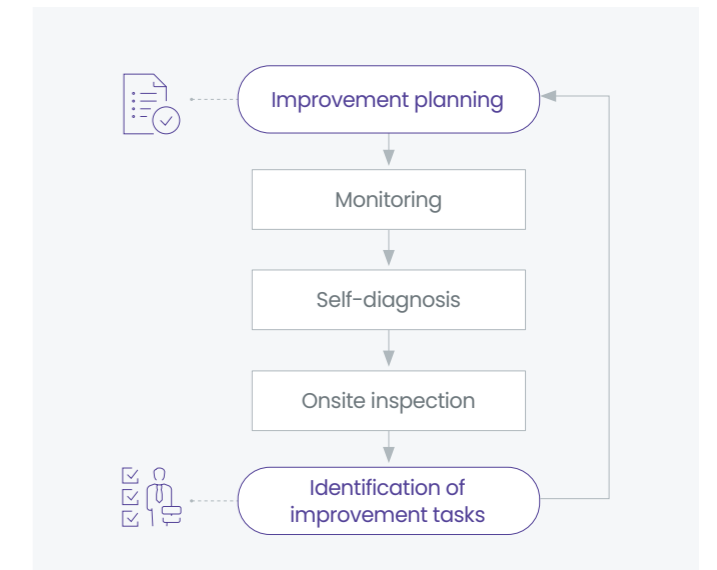
To identify human rights risks and establish a human rights management system, LFC underwent its first external and independent human rights impact assessment in August 2022, followed by a second assessment in April 2023. The 2022 assessment resulted in an overall score of 84.4 points (Grade A), indicating the company's compliance with the human rights management regulations and implementation of the necessary measures. In 2023, our score stood at 86.3 points (Grade A), proving that our human rights management system is well-established and improving. Furthermore, we are constructing a supply chain assessment system and conducting additional improvements to meet elevated human rights requirements in the supply chain.

Moving forward, we will conduct human rights impact assessments on a regular basis, publish the related information on our website, and continuously enhance human rights management, aiming to achieve a mid-to long-term goal of Grade S (very excellent) in the human rights impact assessment by 2025.

## Human Rights Policy



## Working Condition and Human Rights Risk Management Process



# ADVANCING HUMAN RIGHTS MANAGEMENT

## Results of Human Rights Impact Assessment in 2023

Item	Assessment score	Major reasons for assessment	Improvement measures
Establishing human rights management system	<p>53.6 (2022) / 73.8 (2023)</p>	Improvement: Establishment of a human rights management system and improvement of remedial procedures (Grievance Committee member and accessibility) needed	Improvement of remedy procedures (reporting channels)
Non-discrimination in employment	<p>91.3 (2022) / 91.3 (2023)</p>	Operation of various anti-discrimination policies	-
Guarantee of freedom of association and collective bargaining	<p>97.3 (2022) / 97.3 (2023)</p>	Support for establishment and activities of labor unions, implementation of regular collective bargaining	-
Prohibition of forced labor	<p>66.7 (2022) / 66.7 (2023)</p>	Lack of policies prohibiting forced labor in the supply chain and inadequate human rights risk monitoring	Establishment of supply chain evaluation system
Prohibition of child labor	<p>100.0 (2022) / 100.0 (2023)</p>	Prohibition of hiring minors and measures according to laws and standards	-
Ensuring industrial safety	<p>95.0 (2022) / 95.0 (2023)</p>	Operation of safety and health management system, conducting risk assessments	-
Responsible supply chain management	<p>50.0 (2022) / 43.3 (2023)</p>	Deterioration: Increase in risk items for security personnel, lack of supply chain management system	Establishment of supply chain evaluation system
Protection of local residents' human rights	<p>100.0 (2022) / 100.0 (2023)</p>	Implementation of activities for local residents	-
Guarantee of environmental rights	<p>92.0 (2022) / 96.0 (2023)</p>	Improvement: Periodic execution of company-wide emergency response training	-
Protection of customer rights	<p>97.8 (2022) / 100.0 (2023)</p>	Improvement: Disclosure of information protection policies and responsible personnel	-

## Human Rights Education

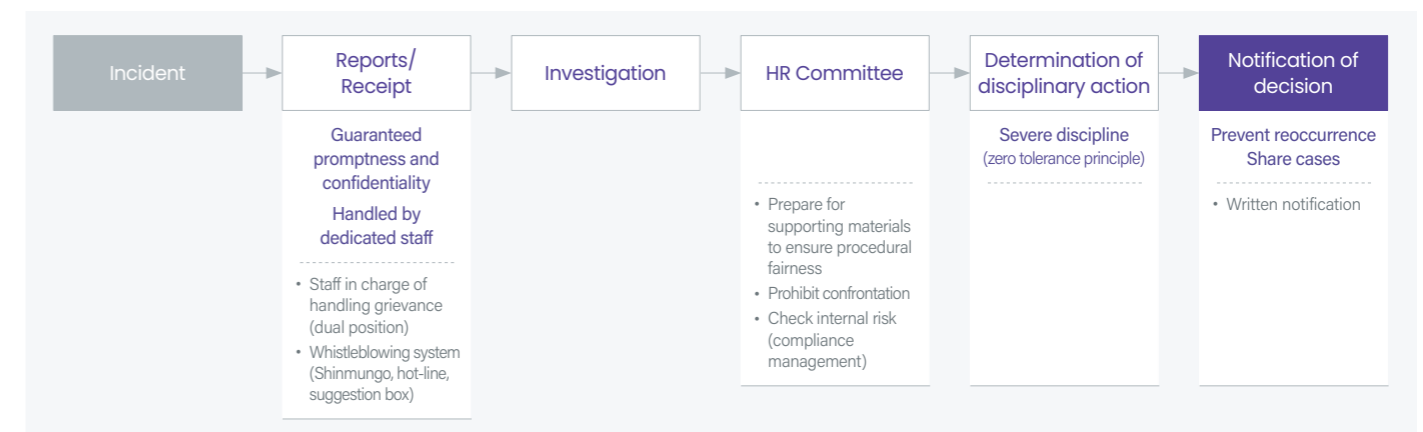
To raise awareness about human rights, LFC has professional instructors conduct mandatory annual training on preventing verbal abuse and harassment in the workplace for all employees. In 2023, the CEO personally conducted training sessions on respecting human rights for all employees, emphasizing the internalization of human rights management.

## Grievance Handling

LFC set in place various on/offline grievance receipt and reporting channels to receive reports on and resolve various types of grievances, including violation of employees' human rights, workplace harassment, and discrimination. A grievance counselor is assigned to each business site to ensure a prompt and active response to all reports of grievances. We keep the identity of whistleblowers strictly anonymous to protect them from possible disadvantages such as secondary damages. In 2023, LFC established the "Regulations on the Operation of the Whistleblower System" to ensure a more transparent and independent grievance handling system, and operated specific procedures for the investigation and handling of such cases through the Grievance Committee.



## Grievance/Sexual Harassment Prevention & Handling Process





# IMPROVING EMPLOYEE VALUE

## Human Resources Management

**RECRUITING TALENTS** LFC operates a fair and transparent recruitment process to provide quality jobs to members of society and support the growth of its employees alongside the company's development. The previous method of remote recruitment has been replaced with face-to-face methods since the end of the COVID-19 pandemic, and the recruitment processes are carried out throughout the year according to the needs of each position.

**RESPECTING DIVERSITY** To nurture female talents, LFC has been hosting the "WOW Forum" for female leaders since 2016, supporting their self-development and providing networking opportunities. Since 2022, the audience of the forum has been increased and its scope has been expanded and restructured into the "Diversity Forum," which is held annually with the goal of raising awareness and spreading a culture of respecting diversity. Conducted either face-to-face or online in real time, the forum features employee lectures, discussions, and open chats to share and discuss various issues related to generations, genders, global perspectives, and disabilities. Going forward, we will continue hold the Diversity Forum on a regular basis.

In addition, to support the development of female talents, LFC runs such programs as remote work for pregnant women, mentoring for employees returning from parental leave, optional parental leave beyond the statutory requirement, and parental leave for elementary school needs. Furthermore, we actively encourage all employees, regardless of gender, to freely take parental leave, ensuring that both female and male employees can benefit equally from these policies.

LFC aims to ensure that talented individuals with physical limitations are not hindered in demonstrating their capabilities. We will continue striving to meet the legal disability employment rate of 3.1% in 2024, just as it did in 2023, and it is pursuing various strategies to expand the employment of people with disabilities. Furthermore, we will make continuous efforts to foster an organizational culture in which all members recognize and respect each other's differences.

**NURTURING TALENTS** LFC operates various talent development programs and systems aimed at nurturing employees as business leaders and specialists who will grow with the company, with the focus on enhancing their job expertise, global competencies, and general knowledge.

**Strengthening Job Expertise** | LFC offers internal training programs, such as in-house MBA programs for outstanding employees, to equip them with the professional knowledge and skills required to fulfill their roles. We also support the completion of external professional training and the acquisition of job-related certifications. We continuously train in-house job experts, conduct engineering training using in-house instructors, and offer systematic on-site training through the technical academy to ensure safety and enhance manufacturing competitiveness. We also run a vocational training course for new field workers.

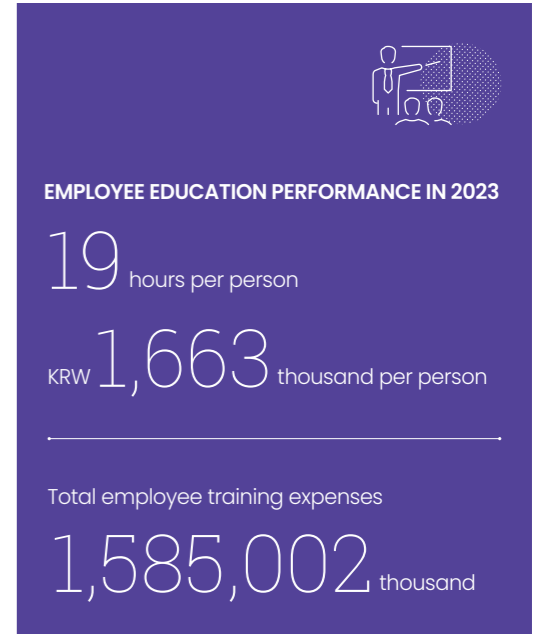
**Enhancing Global Competencies** | We run various internal/external language courses and pay employees' foreign language evaluation test fees to help them enhance their global competencies. We operate various in-house language courses, including one-on-one language coaching and group language classes, to build a learning atmosphere, while offering a short-term intensive language course for employees who will be expatriates. Any employee can freely take an online English course and telephone foreign language course, and we also have set in place a system through which tuition fee support is provided to employees who need to attend an external language institute.

**Developing Knowledge** | To ensure that our employees acquire the basic attitude and knowledge required as members of LFC, we provide training on the company's key values, anti-corruption training, sexual harassment prevention training, training to improve their perceptions of the disabled, and training to prevent harassment. In 2022, we newly adopted human rights education targeting all employees.

In terms of enhancing leadership capabilities, programs such as the ACP (Advanced executive Capability Development Program) and the ECP (Executive Capability development Program) are offered for executives. This includes courses on leadership diagnostics and SERICEO, training for new team leaders, and promotion training courses. Additionally, all team leaders and employees in leadership positions receive annual leadership training to improve leadership competencies across the company.

### People of LFC

<p><b>Challenger</b></p> 	<ul style="list-style-type: none"> <li>• Top talents with executive ability</li> <li>• Top talents in their respective field who challenge themselves to take on new opportunities and difficult tasks with initiative and passion</li> </ul>
<p><b>Harmonizer</b></p> 	<ul style="list-style-type: none"> <li>• Talents who respect diversity and harmonize</li> <li>• Talents who recognize the value that different perspectives and cultures give to the organization and who cooperate from a balanced point of view</li> </ul>
<p><b>Expert</b></p> 	<ul style="list-style-type: none"> <li>• Talents who understand the heritage of LFC and thinks strategically</li> <li>• Talents who predict future potential and strategically makes judgments based on market and business knowledge to achieve organizational goals</li> </ul>
<p><b>Motivator</b></p> 	<ul style="list-style-type: none"> <li>• Self-driven talents who have a sense of responsibility and motivate themselves</li> <li>• Talents who make utmost efforts to achieve organizational goals with a sense of responsibility based on ownership</li> </ul>



# IMPROVING EMPLOYEE VALUE

**Fine Company Program I** To build an organizational culture of integrity, we operate the "Fine Company" program that includes statutory training content for LFC employees and major in-house partner company employees. The Fine Company program consists of prevention of sexual harassment in the workplace, which is statutory training, prevention of workplace harassment, improved perception towards the disabled in the workplace, information security related to ESG management, and compliance management and compliance training.

**FAIR EVALUATION AND COMPENSATION** LFC encourage its employees to be motivated and delivers fair feedback through a transparent and fair performance management system. In addition, we have put in place systems designed to ensure that fair compensation is provided according to individual and organizational evaluations. Fairness is guaranteed through a system that allows employees to raise objections about their performance compensation. In 2023, we further systematized performance-based employee compensation by establishing and operating a task force team (TFT) to improve the evaluation system at the level of LOTTE Group and the Chemicals HQ.

Executive compensation levels are determined through the Compensation Committee, which is a BOD sub-committee, to ensure objectivity and transparency. Even in case of high-level officials, LFC fairly distributes performance and compensation through transparent, fair evaluations based on remuneration regulations.

## Major Human Resources Development Programs

	Associate	Senior Associate	Manager	Senior Manager	Executive
Common knowledge training	Fine Company Prevention of sexual harassment, Prevention of harassment, Compliance, Information security program, Safety training				
	Support for online program learning				
	Organizational revitalization PG				
Class training	Introductory training				
	Mentoring	Promotion training Grade program			Executive program
	Training for employees subject to promotion				
				Leadership assessment/training	
Support for key talents' degree course					
Job training	Learning support for an external job program				
	Support for obtaining a job certificate				
	Job qualification certification system		Finance, Purchase		
	Technology Academy				
	Digital transformation training				
Global training	In-house language course				
	Tuition support system for external language institutes				
	Expatriate-nurturing PG		Preliminary/returning to post		

## Building a Great Workplace

**INNOVATING THE WAY OF WORKING** LFC operates various business innovation measures such as smart factories and robotic process automation (RPA) to support the growth of its members and enhance work efficiency based on digital innovation. Going forward, we aim to enhance our digital competitiveness by expanding successful cases utilizing these digital technologies and responding agilely to changes in the business environment based on continuous change management.

**Establishment of Smart Factories I** LFC is focused on improving infrastructure for data collection and management to establish smart factories. As a part of these efforts, we are promoting the introduction of a 5G wireless environment and the automation of our data collection process, while automating and upgrading production lines and creating a non-face-to-face shipping system.

**Expanded RPA Application I** To improve our employees' work efficiency and increase added value by having them focus on their work itself, we actively discover standardized and repetitive tasks and apply RPA technology to them. This has enabled us to automate automating our employees' manual work, thereby increasing their work efficiency.

**Customer Relationship Management Platform I** LFC adopted a customer relationship management (CRM) platform as a way to allow its marketing and sales part to improve sales capability based on customer-oriented data management and analysis. Through CRM, we immediately record all information generated by our sales activities on the spot, and then analyze the accumulated information in real time to identify our sales trends and establish strategies for improving our work performance and customer service lead time.

**Free Seating System I** In order to create a flexible and open organizational culture, we have introduced a free seating system at our Seoul Office. Employees change seats every day and choose to work freely at their desired location, without any barriers between departments.

**IMPROVING CORPORATE CULTURE** LFC operates the Corporate Culture TFT with the aim of deriving and implementing initiatives for innovating the corporate culture and of fostering the growth of both the company and its individual employees. Following the appointment of the CEO as the leader of the TFT, we are actively managing the "Junior Board" to foster a better organizational culture and build trust between management and employees, thereby enhancing the effectiveness of the Corporate Culture TFT. Composed of young working-level employees, the Junior Board contributes to the creation of a rational and progressive corporate culture aligned with current trends. It also serves as a hotline to relay vivid and honest feedback from the field to the CEO, thereby fostering open communication. As a result of these efforts, meaningful changes such as the provision of breakfast services, the relaxation of club activity standards, and the expansion of business trip accommodation support have been swiftly implemented, contributing to the increased job satisfaction of our members. The Junior Board, moving beyond a mere communication channel, proposes various ideas to improve inefficiencies within the organization and leads changes that break the conventional mold, aiming to create a desirable workplace.

Furthermore, in 2023, LFC selected influential key talents internally to form the Organizational Culture TFT. This team identified areas needing improvement based on an analysis of the results of the value creation culture diagnosis, and established and executed specific change-oriented tasks, including the introduction of a job posting system, significantly influencing the development of an advanced corporate culture within the company. Additionally, the CEO's clear messages, named "Leaders' Messages," are delivered to employees, contributing to building trust between employees and management.



# IMPROVING EMPLOYEE VALUE

## ESTABLISHING A HAPPY ORGANIZATIONAL CULTURE

**Maternity Care System** | LFC is expanding the parental leave system and institutionalizing child-rearing support programs to ensure long-term work conditions for competent female employees and a healthy work-family balance for married male employees, thereby reducing the burden on parents and contributing to resolving the urgent social issue of the low birthrate. Female employees can use an additional parental leave of up to one year in addition to the one-year statutory parental leave. In addition, we institutionalized male employees' parental leave, making it mandatory for male employees to take a statutory parental leave of at least one month within a year of the birth of their child. In addition, we allow female employees with a child who is about to enter elementary school to use the leave of absence system designed to take care of children entering school for up to one year. In this way, female employees can help their child adapt to school life, while LFC strives to prevent career disruption of female talents. In addition, we provide online "EZ Learning" training even during an employee's period of leave to promote self-development, in addition to offering "Working Mom One-on-One Mentoring" and psychological counseling so that employees can quickly adapt to work after returning from their leave.

Furthermore, we provide support to female employees so that they can work two hours less a day during the pregnancy risk period (less than 12 weeks, after 36 weeks) for a safe and healthy pregnancy and childbirth. We also operate the "checkup time system" so that the health status of the fetus can be examined during pregnancy. For employees with infertility, we cover the cost of a procedure and provide a leave for a procedure. LFC is thus making diverse efforts to guarantee that there is no disadvantage or discrimination regarding employment, salary, and career path due to pregnancy and childbirth.



## Family-Friendly Systems

**Workplace Daycare Center** | To create a work environment in which working parents can work free from worry, we established a workplace daycare center in 2017. Our workplace daycare center's operation is entrusted to the Puruni Childcare Support Foundation, a specialized support organization for workplace daycare centers. As of 2023, the daycare center is caring for a total of 34 children aged 1-3 years old. We hold regular Daycare Management Committee meetings to listen to and reflect parental requirements.

**Certified as a Family-Friendly Company** | LFC has established a wide range of systems to help its employees strike the right balance between work and family life. We also run various programs for employee families, such as giving children of employees opportunities to participate in volunteer activities, helping employees send their parents on a tour, and holding an employee children's camp, the One Mind Festival, and sports events. In recognition of these efforts, LFC was recertified in 2021 as a family-friendly company by the Ministry of Gender Equality and Family.

## Leisure-Friendly Systems

**Flexible Working System** | LFC has put in place a flexible working-hours system that enables employees to adapt their work schedules to their childcare hours and self-development needs, thereby increasing their job satisfaction while boosting their work efficiency. Furthermore, we adopted the PC-off system in January 2019 to comply with the Labor Standards Act and to increase efficiency during work hours, and also operate an attendance management system to manage the 52-hour workweek system more effectively.

**Certified as a Leisure-Friendly Company** | In recognition of its efforts to maintain a balance between work and life and to improve working conditions, LFC was re-selected as a leisure-friendly company in 2022, an accolade jointly overseen by the Ministry of Culture, Sports and Tourism and the Regional Culture Promotion Agency, thereby maintaining its recognized company status.

**Support for Club Operations** | LFC is boosting employees' satisfaction with life at the company through its cultural life support system. Employees can freely create their own clubs, and the company provides financial support to cover club activity costs and cultural life costs to clubs that meet its internal criteria. As of 2023, there were 21 clubs in total, including those for recreation and sports, sports events and cultural performances, football, bowling, mountain climbing, and Korean traditional percussion music (Pungmul). Approximately KRW 27 million has been provided to support their activity expenses.

**Encouraging Employees to Take Time Off** | To foster an organizational atmosphere that encourages employees to freely use their vacation time, LFC designates weekdays between weekends and public holidays as company-mandated vacation days. This enables employees to take extended breaks according to their personal preferences. If an employee takes annual leave for five or more consecutive days, a "refresh vacation" subsidy is provided twice a year. The company introduced a new accommodation subsidy system in 2022, partially supporting accommodation expenses for both domestic and overseas stays during annual leave. Moreover, through the annual leave promotion system, all employees are encouraged to plan their vacations and take adequate rest.

**Support for Condos and Summer Resorts** | We manage a welfare system that guarantees practical benefits to all employees by offering them stays in condominiums and summer resorts every year. As of 2023, we have 18 condos nationwide, and are striving to provide benefits to all our employees by offering them a combined total of 1,854 nights of holiday accommodation. In addition, we supported our employees' summer vacations by offering them accommodation in five hotel and residence accommodation facilities in Korea for 700 nights during the peak vacation season.

## Others

**Outplacement Program** | LFC runs an outplacement program that provides support in various areas – including life planning, work competency, life management, and future planning – in conjunction with specialized education companies in order to strengthen the psychological stability and reemployment capacity of employees who have retired from our company. In addition, we provided support for taking career consulting classes which have been newly introduced on LOTTE Group's online paid lecture site and also expanded the scope of employees subject to the program so as to broaden access to career change support training and enable more employees to design their post-retirement life.

**Family Sports Festival** | To enhance organizational vitality and employee satisfaction, LFC held a "Family Sports Festival" with the participation of approximately 800 employees and their families in May 2023. Featuring a variety of activities, experience booths, food, and souvenirs suitable for all generations, the event was successfully concluded, boosting satisfaction and drawing positive responses from the participants. Moving forward, we plan to continue activating various programs that can enhance employees' pride in and loyalty towards the company.

## Major Welfare Systems

System	Main Support Details
Housing-related loan support	Providing housing-related loan support for a stable residential environment
Lodging support for single employees	Providing lodging for single employees who are working outside their hometown
Support for family events	Providing a family occasion leave and funds for such family occasions as a wedding, childbirth, and funeral. Funeral support services are provided in case of funerals
Support for medical expenses	Providing support to cover an employee's and spouse's medical expenses, prosthodontics expenses, and hospitalization and medical treatment expenses
Support for health checkup	Providing support for health checkups of employees and their spouses for health management
Support for bringing up children	Providing support, for two years, for some of the kindergarten expenses of preschool children
Child tuition support	Providing support for a child's college entrance fee, college fees, and tuition
Welfare point	Providing welfare points that can be used for leisure life and self-development on an annual basis
LOTTE employee discount	Providing discounts at LOTTE Group affiliates through an employee certification or employee-only card

# IMPROVING EMPLOYEE VALUE

## Trust-based Labor-Management Culture

### IMPROVING EMPLOYEE COMMUNICATION

**Mentoring Program** | LFC runs an in-house mentoring program for new recruits to help them adapt to the organization as quickly as possible. The four-month program is designed to deepen new recruits' understanding of the company and their duties through various experiences in and outside the company with the mentors, who are chosen in consideration of the characteristics of the new recruits' work and job positions.

**In-house Communication Portal** | LFC operates an online internal communication portal called "Soh-tong Insight" to share management and company news, useful life information, and notifications about congratulatory and condolatory events and club activities. In particular, the "Soh-tong Avatar," an anonymous forum, allows employees to communicate candidly with the company and address grievances. In February 2023, to enhance communication with field employees, the company established a field communication system called "Soh-tong Nuri" that allows automatic playback and manual querying of images and videos related to management messages, safety and environmental news, and lifestyle information on touchscreens. In June, a promotional hall was opened at the Ulsan Complex to facilitate both internal and external communication. LFC is dedicated to improving communication with its employees, suppliers, and customers.

**LFC DAY** | LFC operates "LFC DAY," a program designed to support employees wishing to step away from work and recharge themselves through seasonal one-day classes such as making personalized tea, terrarium crafting, custom perfume, and making Christmas ornaments. This has enabled the company to foster communication within the organization, while also helping employees to manage their emotions.

### BUILDING A WIN-WIN LABOR-MANAGEMENT RELATIONSHIP

**Labor Union** | Under the vision of "Creative Partnership," LFC operates various joint labor-management programs designed to foster cooperative labor-management relations. Established in 1971 to foster mutual trust between labor and management, the labor union allows any employee up to the assistant manager level to freely join or leave according to the collective agreement. As a result of these efforts and mutual understanding, labor and management quickly agreed on wage and collective negotiations in 2023, achieving a settlement within the year. In early 2024, the company held the Labor-Management Cooperation Declaration Ceremony attended by approximately 80 labor and management representatives, with the aim of promoting the implementation of ESG management practices and the development of a positive labor-management culture. During the ceremony, both labor and management reaffirmed their commitment to work together towards sustainable corporate development through ESG practices. Moving forward, LFC's labor and management will continue to dedicate themselves to building a win-win labor-management relationship grounded in mutual trust and solidarity.

**Labor-Management Council Meetings** | LFC holds quarterly labor-management council meetings as a regular communication channel to foster co-growth through trust and cooperation between labor and management. The council, consisting of ten representatives from each of the company management and the employees, contributes to building an advanced labor-management relationship and fostering a clean and healthy organizational culture. In 2023, the labor-management council discussed a total of seventeen official items of agenda and several operational issues, and follow-up procedures are currently underway. Additionally, ongoing communication and consultation among working-level employees are being maximized to ensure that voices from the field are reflected in company management as much as possible.

**Manufacturing Group Cultural Improvement In-house Council** | Established in 2022, the "Manufacturing Group Cultural Improvement In-house Council" has been serving as a regular communication channel with non-union job categories. The council is dedicated to attentively listening to even the smallest concerns of employees, aiming for comprehensive improvements in the organizational culture. As of 2023, it has addressed a total of 44 suggestions in such areas as welfare, enhancement of the organizational culture, work efficiency, and system recommendations. Starting in 2024, the Council plans to diversify by splitting into rank-specific groups to better capture diverse voices across different layers of the organization.



2023 LFC Day



# INTEGRATED HEALTH AND SAFETY MANAGEMENT

## Health and Safety Management

**SAFETY AND HEALTH VISION AND POLICY** LFC recognizes the health and safety of its employees as the highest priority in corporate management. In 2016, with the goal of achieving a workplace free of accidents, pollution, and diseases, the company established and declared a "Safety, Health, and Environmental Management Policy." This policy also embodies its commitment to fulfilling its social responsibilities towards nearby companies, local communities, customers, and shareholders. Furthermore, to implement this management policy throughout its operations, the company has established the "Safety & Health Golden Rules" which all employees are required to actively follow and uphold on-site. These policies and principles are prominently displayed throughout the entire workplace, including offices and meeting rooms, in order to emphasize them continuously to all stakeholders, including employees and partners.

**SAFETY AND HEALTH MANAGEMENT SYSTEM** To establish safe, pleasant workplaces and preemptively respond to health and safety-related risks, we operate a field-centered health and safety management system that is based on a global-level health and safety management system. We have acquired the ISO 45001, and operate our safety management system in accordance with international standards. In this respect, we are striving to realize a workplace that is free of accidents, pollution, and illness by introducing and implementing a clear and transparent process for dealing with the causes of occupational accidents.

As industrial safety laws have become stricter and corporate responsibility for safety has increased, LFC has developed an annual health and safety plan for approval by the company's highest decision-making body, the Board of Directors, thus strengthening the governance of health and safety management.

Following the enactment of the Serious Accident Punishment Act, in 2023 LFC established its safety and health priority strategy on "improving safety culture and awareness, enhancing execution at workplaces, and establishing accident prevention systems." Key initiatives included developing open-type work management plans to handle frequently occurring severe accidents, implementing a "Safety STOP" system for high-risk operations, introducing a safety manager certification for partner companies, applying new technologies for smart maintenance, and conducting real-time safety monitoring of various tasks.

In 2024, we have defined our priority keywords for health and safety management systems as "Rule & Safety (safety and health), Green & ESG (environment), Compass & Practice (safety management)," and are advancing our safety management operations. We are operating a focused inspection system for high-risk tasks during daily operations, and we continuously conduct participatory safety events such as fire-fighting competitions, safety UCC contests, and experiential safety training through regular safety and health emphasis weeks.

Additionally, we have strengthened our fire response capabilities through the replacement of old fire pipes and regular joint fire drills. We are also pursuing various safety and health initiatives, including safety training for employees and partners beyond the legally required education, and supporting the safety management systems of our partners. Moreover, to achieve each task, we have subdivided the dedicated organization, the SH&E(Safety and Health, Environment) Division, by function to enhance expertise in their respective duties, as well as to strengthen communication and close management with the field. As a result of these activities, we have been able to prevent major accidents, including serious industrial accidents and civil disasters. Moving forward, LFC will continue to develop and enhance its health and safety management system, thereby establishing a workplace that meets the highest global safety standards.

### Safety, Health, and Environmental Management Policy and Safety and Health Principles



### Key Health & Safety Tasks for 2024



# INTEGRATED HEALTH AND SAFETY MANAGEMENT

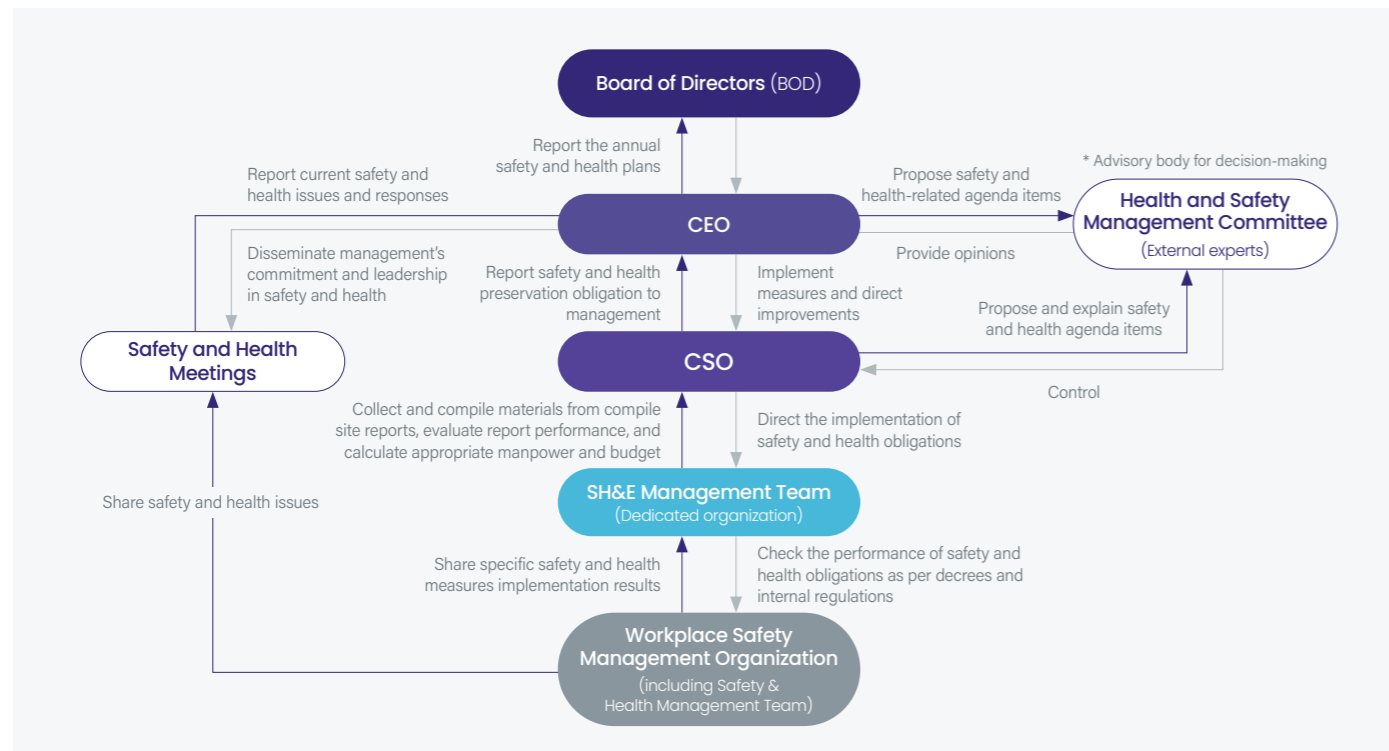
**HEALTH AND SAFETY MANAGEMENT ORGANIZATIONS** In 2021, LFC appointed a Chief Safety Officer (CSO) directly under the CEO to establish and promote company-wide safety and environmental policies, and created the SH&E Management Team under the CSO for company-wide safety and environmental management. With SH&E Management Team performing central roles, we are responding to strengthening safety-related laws, including the Serious Accident Punishment Act, and continually advancing health and safety management. In the factory sites, separate organizations for safety and environment have been established. The Ulsan Complex has the Safety and Health Team and PSM(Process Safety Management) Team while the Incheon Plant has organized the SHE(Safety, Health, Environment) & Technology Team to perform specialized and systematic onsite safety and health management tasks, reflecting the characteristics and harmful and hazardous factors of each site.

In promoting safety and health management, the Health and Safety Management Committee involving external experts operates to ensure more objective and rational decision-making. This committee is responsible for fundamental responses to prevent serious accidents and checking and strengthening the safety and health obligation systems of management. Furthermore, together with the Health and Safety Management Committee, management teams actively disseminate their commitment and leadership in safety and health by holding Safety and Health Meetings quarterly to respond timely to current safety and health issues.

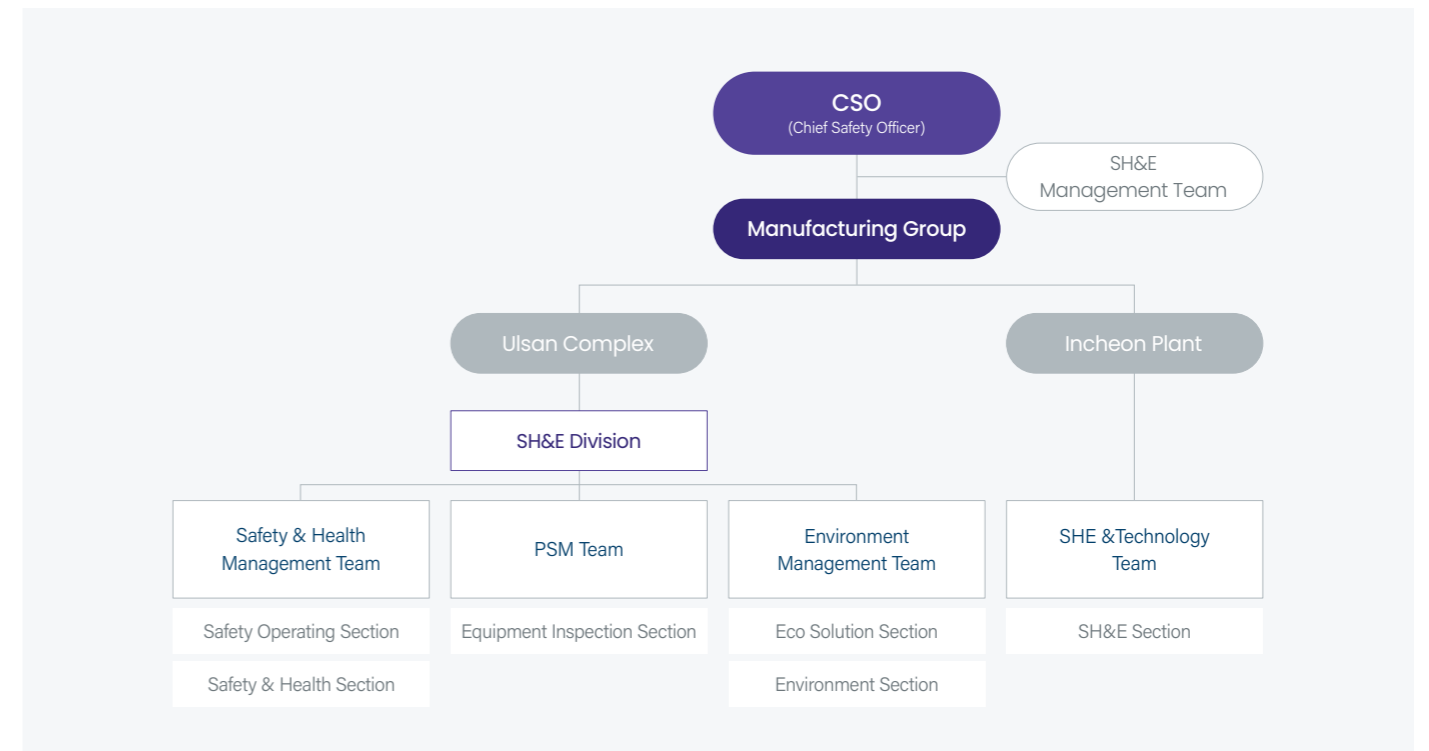
**HEALTH AND SAFETY MANAGEMENT SYSTEM CERTIFICATION** LFC transitioned from the OHSAS 18001 to the ISO 45001 safety and health management system in 2020 and obtained its first certification for the 2018 version of ISO 45001. Since then, we have conducted annual internal and follow-up audits to maintain the certification and strengthen trust with customers. In 2023, we underwent the renewal audit that occurs every three years and received a favorable assessment for our management system certification. In 2024, we plan to continue promoting safety and health management based on ISO 45001 through internal and follow-up audits.



Health and Safety Management Implementation System



SH&E Division Organization Chart



# INTEGRATED HEALTH AND SAFETY MANAGEMENT

## Strengthening Onsite Safety Management

**SAFETY INSPECTION THEMES** LFC selects monthly safety-focused inspection themes and conducts intensive inspections. In 2023, the company distributed the “SHE Guide (Workplace Safety Standard)” and operated a safety, environmental, and health theme inspection team for five key inspection items each month, driving guidance activities. In 2024, the company plans to implement an intensive inspection system for high-risk tasks, reviewing preparations and observing workers’ behaviors in light of the severity of potential accidents, to preemptively eliminate risks and prevent accidents.

LFC shares the results of its safety-focused inspection activities through the company’s internal communication system, Soh-tong Nuri, and disseminates information through regular safety and health education and emails, promoting a company-wide interest in safety. Additionally, the company sets and implements a detailed annual plan for safety-related themes and activities at its workplaces each month, and also conducts theme education on the next month’s activities during regular safety training sessions to increase engagement and participation.

### SAFETY MANAGEMENT FOCUSING ON BEHAVIOR DURING TASKS

LFC adopted work performance (unsafe behavior) as our key area of safety management and conduct safety inspections during work. To raise the level of work management and prevent safety issues, we check the status before, during, and after work for focused management. To minimize the risk of serious occupational accidents, we operate a safety patrol and clarified and simplified our standards for safety gear. To preemptively identify and respond to risk factors that exist in workplaces, we re-identify potential risk factors, review the appropriateness of risk assessments, and are establishing a safe work environment.

### FULL ESTABLISHMENT OF THE PROCESS SAFETY MANAGEMENT SYSTEM

LFC is conducting safety capability training to cultivate safety management leadership and enhance engineers’ expertise in process safety management. We also carry out quantitative risk assessments to strengthen onsite operators’ safety capabilities and to assess the risks associated with leaks and fire or explosion accidents. Through these efforts, LFC has internalized its PSM (Process Safety Management)<sup>1)</sup> activities, preemptively identifying and eliminating major risks, and systematically managing processes to maintain the highest PSM implementation rating, “P grade.” Furthermore, in 2024, we plan to rigorously perform internal audits and continue educational training programs to enhance employees’ safety awareness and professionalism, aiming to further improve the level of process safety management and sustain a safe workplace.

### OPERATION OF SAFETY SYSTEM

Aligned with the Group-wide “Smart Safety” initiative, LFC is utilizing new digital technologies like smart gas detectors and safety black boxes to prevent safety accidents. During regular maintenance periods, we use smart gas detectors to prevent major accidents like asphyxiation in confined spaces. Smart gas detectors installed in confined spaces continuously measure harmful gas concentrations during operations. If an abnormal situation arises, these devices send alerts to the smartphones of leaders and supervisors, enabling real-time situation assessment and swift response. We also have introduced safety black boxes to strengthen high-risk work and site control, preventing accidents due to workers’ carelessness. These are installed in high-risk work areas and CCTV blind spots to monitor unsafe worker behaviors such as non-compliance with work standards, unauthorized use of passages, and failure to wear safety gear, requesting immediate improvements when unsafe actions are observed.

In 2023, the Incheon Plant introduced new devices, including portable bodycams for real-time monitoring of high-risk tasks and AI-based human detection 4-channel wide-angle cameras, to prevent forklift accidents.

### REGULAR EXCHANGE MEETINGS AMONG THREE CHEMICAL COMPANIES IN ULSAN

Societal demands for enhanced corporate safety and environmental management are growing following the enforcement of the Serious Accident Punishment Act and the spread of ESG management. Such domestic and international trends increased the need for Lotte Group’s chemical subsidiaries to create synergistic effects through joint response. Consequently, three LOTTE chemical companies located in Ulsan (LFC, LOTTE CHEMICAL’s Basic Chemicals Business, LOTTE INEOS CHEMICA) have regularized exchange meetings since February 2023. Through industry-focused exchanges such as inspections, evaluations, and diagnostics, these companies are enhancing the effectiveness of related tasks. Particularly, they are upgrading management levels by sharing safety and environmental management know-how, exemplary practices, and through cross-checking. They plan to expand the scope of these exchange meetings to include manufacturing and production management in the future.



<sup>1)</sup> A system that requires the preparation and submission of process safety reports for review and verification to prevent major industrial accidents caused by leaks of hazardous materials, fires, and explosions.

# INTEGRATED HEALTH AND SAFETY MANAGEMENT

## Building Safety Culture

### ASSESSMENT OF THE STATUS OF RESPONDING TO SERIOUS ACCIDENTS

Before the enforcement of the Serious Accident Punishment Act in January 2022, LFC conducted compliance consulting in 2021 with a law firm to review and supplement the comprehensive response status to prevent serious accidents and comply with the law. As a result of the consulting, about 20 improvement tasks (such as appointing a CSO, defining the duties and responsibilities of management, establishing and operating a dedicated safety and health organization, checking compliance with safety and health-related laws, and verifying safety and health procedures with partner companies) were identified. By completing these improvements in 2022, LFC not only established a safety and health management system as required by the Serious Accident Punishment Act but also laid the foundation to achieve the ultimate goal of preventing serious accidents.

Since 2022, we have been checking compliance with the Serious Accident Punishment Act and other safety and health-related laws every half-year. In the first half of the year, self-inspections are conducted, and in the second half, inspections are entrusted to external professional institutions to ensure objectivity and effectiveness. As a result, a safety and health management system has been established to prevent serious accidents, and no serious accidents have occurred since the implementation of the Act.

With the application of the Serious Accident Punishment Act to businesses and workplaces with five or more regular workers starting from January 2024, LFC is checking and supporting the improvement of the safety and health management system for all partner companies to thoroughly prevent serious accidents. In 2024, we plan to identify all harmful and hazardous factors to prevent all types of accidents. To this end, we will establish risk assessment methods through external consulting for non-manufacturing areas such as offices and laboratories, and implement corresponding measures to enhance safety.

### SAFETY PRINCIPLES

Given the nature of chemical plants where minor errors can lead to major accidents, LFC has established the "Safety Golden Rules," eight key principles of onsite safety management. These rules aim to enhance the level of safety management throughout the company and among its partner companies, taking into account the current conditions and specific characteristics of the workplaces. The Safety Golden Rules at LFC are not unilaterally imposed safety regulations dictated by the company's policy or safety department. Instead, they are rules chosen and decided by the employees themselves, fostering a safety culture that is actively and collaboratively practiced. These safety principles are conveyed through pictograms and keywords, which ensure excellent visibility and clarity. They are prominently displayed throughout the company, including in its communication systems, serving as a constant reminder that small mistakes can lead to major accidents.

### SAFETY EDUCATION AND TRAINING

**Safety Education** | LFC conducts regular safety training sessions reflecting monthly themes to enhance employees' safety awareness and promote autonomous safety management. In 2023, we implemented regular occupational health and safety training for all employees (24 hours per person annually), along with supervisor training for 104 supervisors (16 hours per person annually). Additionally, specialized training courses such as new employee occupational health and safety training, special safety and health training for work permit holders, special safety training for regular maintenance, and confined space monitor training were intermittently conducted. In March 2023, with support from the Ulsan Fire Department, the company provided emergency first aid training for its employees and those of its partner companies. During this training, a CPR competition was held, and gifts were given to the participants.

Through our internal communication channels, we send notices to employees about health, safety, and environmental issues, as well as sharing and disseminating information on equipment maintenance and personal/public health so that they can respond promptly in the event of an accident. We will continue to implement safety education and promote information sharing in order to fully establish a safety culture and minimize the occurrence of accidents.

**Emergency Drills** | LFC has established a three-tiered response system consisting of a unit plant, business site, and local community based on various scenarios such as fire, explosion, and toxic gas leaks to minimize human and material damage through swift and accurate responses in emergency situations. Based on the system, we conduct regular emergency response drills annually. Joint government training on hazardous chemical leaks and fires is also conducted with related institutions such as local governments, Southern Fire Department, and Ulsan Joint Chemical Disaster Prevention Center. After the drills, the results are evaluated and analyzed to identify and address issues. In 2023, the Incheon Plant conducted an unscripted firefighting drill with local authorities and the Incheon Industrial Complex Fire Department, where limited information was shared, and messages for firefighting and rescue were delivered in real-time by the situation command.

**HEALTH & SAFETY WEEK** | LFC designates an annual "Health & Safety Week," conducting various events and programs to spread safety culture. The 2023 Health & Safety Emphasis Weeks took place over two weeks in June and November, respectively, featuring events such as the LFC Surprise Quiz, Safety UCC Competition, Occupational Health and Safety Photo Exhibition, Firefighting Competition, and safety experience education, as well as promotional activities like safety campaigns during commuting, safety observation system, and intensive management of the seven most common accident items.



Emergency drills

### Major Safety Training in 2023

Training	Target	Frequency	Main content	No. of trainees
Regular health & safety training (Ulsan Complex)	All employees	Monthly (2 hours)	Matters related to industrial safety and accident prevention	707 persons
Training for managing supervisors (Ulsan Complex)	Managing supervisors	Annually (16 hours)	Training on the duties and roles of supervisors	95 persons
First aid training (Ulsan Complex)	All employees	Annually (2 hours)	First aid training	707 persons
Regular health & safety training (Incheon Plant)	All employees	Monthly (2 hours)	Matters related to industrial safety and accident prevention	30 persons
Training for managing supervisors (Incheon Plant)	Managing supervisors	Annually (16 hours)	Training on the duties and roles of supervisors	9 persons
First aid training (Incheon Plant)	All employees	Annually (2 hours)	First aid training	30 persons



# INTEGRATED HEALTH AND SAFETY MANAGEMENT

## Supporting Partners' H&S Management

### SUPPORT FOR ESTABLISHING A HEALTH & SAFETY MANAGEMENT SYSTEM

LFC has been therefore supporting the establishment of the health and safety management system (KOSHA MS) at our in-house partner companies since 2014, with the goal of achieving accident-free business sites through win-win cooperation. The KOSHA MS health and safety management system enables the employees and teams of our partner companies to assess risks according to the scope and content of their work, to voluntarily establish and execute measures for reducing risks, and to examine their effectiveness using the "Plan-Do-Check-Action" cycle.

From 2014 to 2023, we supported the establishment of health and safety management systems for 19 partner companies. We also help newly contracted partners acquire certifications of their health and safety management systems, while supporting follow-up and renewable evaluations to maintain certifications. In 2023, we supported new KOSHA MS certification, extension, and follow-up evaluation for 10 in-house partner companies. We plan to provide support for health and safety system certification to existing and new partner companies in 2024.

### H&S MANAGEMENT OF PARTNER COMPANIES

In relation to expansion of health and safety management of partner companies that is emphasized in relevant laws, including the Serious Accident Punishment Act, LFC improved the health and safety management process by August 2023, including a prior evaluation on the vendor list<sup>1)</sup>, bidding/contract, onsite examination, and inspection/follow-up evaluation. Major improvement items include separate evaluation of safety items and participation by the safety & health management department during prior and follow-up evaluations of partner companies, quantitative evaluation using a checklist, and onsite inspection by the safety management department when the construction project is of a certain size. For in-house partner companies, we helped them nurture safety management personnel and obtain KOSHA-MS certification for health and safety management systems. We will continue to manage and support partner companies' health and safety using standards that are identical to ours.

### PARTNER COMPANY SAFETY AND HEALTH INSPECTION

To further encourage partner companies to focus on safety and health management, LFC conducts inspections of partner companies and provides incentives to excellent partners. In 2023, quarterly partner company inspections were conducted, and four outstanding partner companies were selected to receive incentives such as movie tickets to Lotte Cinema. Partner company safety and health inspections will continue in 2024.

### SAFETY MANAGER TRAINING

To support the enhancement of safety managers' capabilities, LFC established the Safety Manager Certification System in 2021 and began its full implementation in 2022. This system provides safety education and assessments for partner company safety managers, granting qualifications to perform safety management tasks only to those who attain a certain level. As of April 2024, the system has been expanded to include all partner companies involved in the consultative group, and work safety manager certification is currently being conducted for companies involved in regular maintenance.

### PARTNER COMPANY SAFETY AND HEALTH COMMUNICATION

LFC provides safety and health information during the monthly partner company development consultative group meetings, receives suggestions from partner companies, and actively addresses these suggestions. Semi-annually, the company rapidly addresses and mitigates risk factors identified from the risk assessments of partner companies. This proactive approach helps build a safe workplace founded on robust and trust-based collaboration.

## Promoting Employee Health

### WORKING ENVIRONMENT MANAGEMENT

LFC conducts biannual assessments of the workplace environment for 67 hazardous factors through an external professional institution, to understand and manage the extent of workers' exposure to harmful agents. Moreover, we have set our own standards that are 30% stricter than those required by law. If the results of the workplace environment measurements do not meet these internal standards, improvements are made to the equipment or changes are implemented in work methods. Moving forward, we will continue to measure the workplace environment and inspect local exhaust ventilation systems, and systematically and swiftly improve any unreasonable conditions to create a more comfortable working environment.

### HEALTH MANAGEMENT SUPPORT

LFC carries out diverse activities to prevent employee illness and support employees' healthy lives. We provide flu shots every year, and support comprehensive health check-ups for employees over the age of 30 and their spouses to help them detect diseases early (by allowing special tests to be added to suit their health status in addition to the basic test items). For employees with a serious illness, we cover all relevant medical expenses. We have also improved the flexibility of our health support system so that our employees can opt either for case-by-case settlement or a semi-annual compensation system to further boost their satisfaction with the system.

The Ulsan Complex operates a health management office staffed with a nurse, providing wound care, first aid medications, measurements of blood sugar, blood pressure, cholesterol levels, and body composition analysis to enable employees to regularly check and consult on their health. Based on the results of health diagnostics, individual health information is provided.

In 2023, industrial physicians and nurses visited the Incheon Plant to provide health consultations to individuals with abnormal health diagnostic results, conduct disease prevention education, and assess job suitability. During health consultations, if further tests or detailed examinations are needed, referrals are made to specialist institutions for treatment. In 2024, one industrial physician (once per semester) and one nurse (once per month) will visit to provide health consultations and departmental training.

### PSYCHOLOGICAL COUNSELING CENTER

For employees' mental health, we operate the "Do Dream" psychological counseling center at our Ulsan Complex to help employees effectively manage, with the help of an expert, the various types of stress that can arise in their daily life both at work and home. Staffed by a professional counselor, the center not only offers psychological counseling but also conducts various types of psychological tests and runs organizational communication activation programs, meditation programs, and book rentals with the aim of supporting our employees' mental health.

To ensure no gaps in mental health support, regular visits are made to the Seoul, Incheon, and Magok business sites to provide counseling, and a comprehensive, company-wide service is offered that includes psychological testing and counseling programs for employees' families upon request. A teleconferencing-based psychological counseling program has been introduced to enable counseling without physical and time constraints. If medication is necessary, referrals are made to nearby psychiatric services for treatment, and additional helpful resources and books are provided. Moreover, mental health information is disseminated monthly through internal emails and online bulletin boards.

<sup>1)</sup> Partner companies that can carry out subcontracted work, consigned work, and service in line with the company's internal standards

**ACHIEVEMENTS IN SUPPORTING THE ESTABLISHMENT OF PARTNER COMPANIES' SAFETY AND HEALTH MANAGEMENT SYSTEM (KOSHA-MS)**

19 partner companies  
(Cumulative from 2014 to 2023)

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**SAFETY MANAGER CERTIFICATION SYSTEM PERFORMANCE IN 2023**

9 companies, 71 persons



LFC health management office

# CREATING A SUSTAINABLE SUPPLY CHAIN

## Pursuing Win-Win Growth

LFC is enhancing its suppliers' capabilities through support measures such as the establishment of an online academy for suppliers, centered around five main mutual growth strategies: "improving work processes, strengthening personnel capabilities, improving quality, reducing costs, and strengthening market sensing." We also continue to promote ongoing communication by holding supplier council meetings. Moving forward, we plan to continue implementing a sustainable growth strategy together with our suppliers by supporting various programs designed to enhance their capabilities and promote win-win growth.

## Supply Chain ESG Management

**CODE OF CONDUCT FOR PARTNER COMPANIES** In 2022, LFC established the Code of Conduct for Partner Companies, which outlines the expectations for suppliers and partner companies in terms of ESG aspects, including environmental protection, respect for human rights, safety management, and ethical and legal compliance. The Code is based on global standards such as the UN Universal Declaration of Human Rights, UN Guiding Principles on Business and Human Rights, OECD Guidelines for Multinational Enterprises, UN Convention on the Rights of the Child, ILO core conventions, and the Responsible Business Alliance (RBA) Code of Conduct. LFC expects all partner companies in the lower supply chain, including those who provide various components, raw and subsidiary materials, and services such as packaging, toll processing, and transport, to adhere to this Code of Conduct and join us in ESG management to achieve sustainable development. To enhance its effectiveness, we are preparing various support and cooperation measures for our partners, including the compliance agreement for the Code of Conduct. Additionally, we are encouraging active participation by sending letters on ethical and compliance management related to the compliance behavior standards to our partners.

### SUPPLY CHAIN EVALUATION

**Supply Chain ESG Evaluation I** In 2023, LFC introduced a supply chain ESG evaluation system targeting suppliers of raw materials, equipment, and services across ESG aspects with a total of 22 items. The evaluation aims to assess the risk levels within the supply chain from an ESG perspective, negotiate improvements with high-risk suppliers, continuously manage and improve supply chain risks, and incorporate these results into the purchasing policy to build a sustainable supply chain. The 2023 supply chain evaluation was conducted for 17 suppliers, categorizing 14 as stable and 3 as requiring improvement. For those requiring improvement, we plan to induce improvements through consultations and reflect the results in our purchasing policy in the future. Starting in 2024, LFC intends to progressively expand the number of evaluated suppliers and refine the evaluation system to minimize ESG risks in the supply chain.

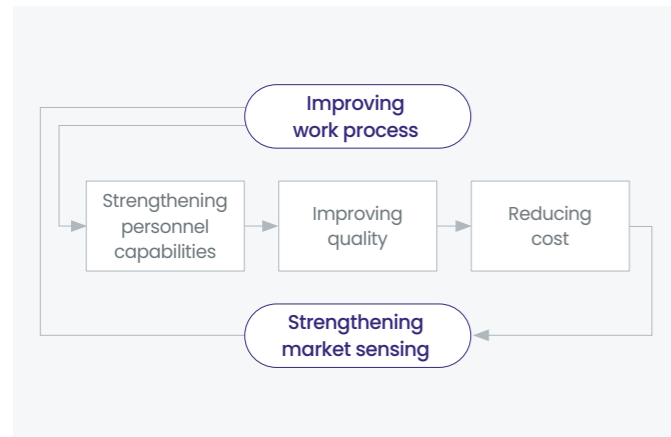
**Post Evaluation of Partner Companies I** LFC is annually assessing the job capabilities of its suppliers through the Post Evaluation of Suppliers system, which includes job performance, environmental safety, and cooperation. By customizing evaluation items and scoring based on the characteristics of each company, fairness is enhanced. Based on these results, selected outstanding suppliers are offered contract extensions or renewal priorities and financial incentives, thereby encouraging voluntary capability enhancement and securing long-term partnerships while managing supply chain risks.

### Items for Post Evaluation of Partner Companies

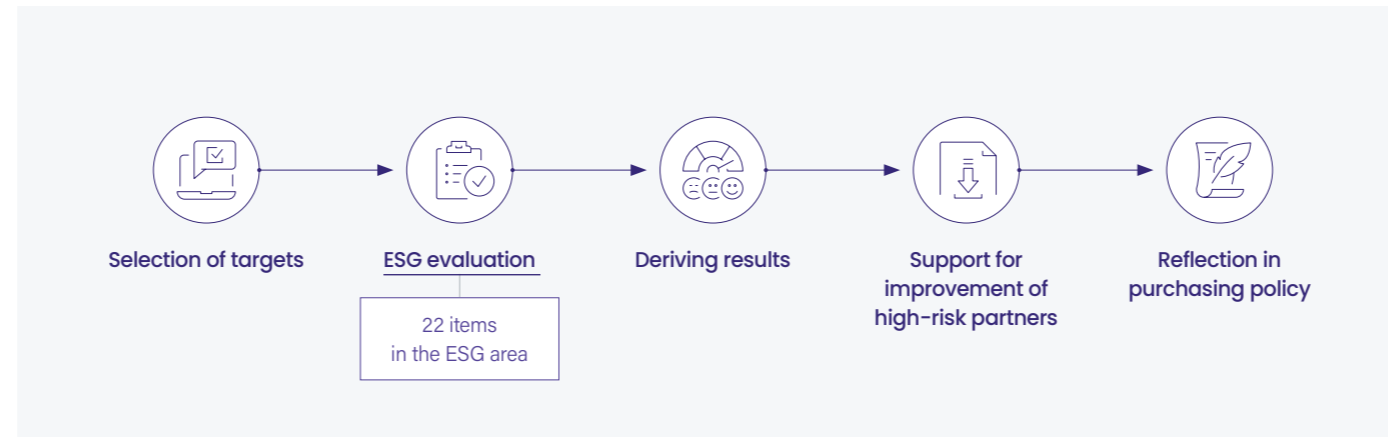
Category	Detailed evaluation items
Work performance	<ul style="list-style-type: none"> <li>No. of process and product issues</li> <li>Level of productivity (yield)</li> <li>Innovation efforts</li> </ul>
Environment and safety	<ul style="list-style-type: none"> <li>Mandatory health and safety education</li> <li>Emergency drills and preventive measures</li> <li>Safety self-inspection and activities</li> <li>Performance in environmental impact assessment</li> </ul>
Cooperation	<ul style="list-style-type: none"> <li>Compliance with the settlement process</li> <li>Cost reduction proposals</li> </ul>

**Environment and Safety Assessments of Partner Companies I** LFC conducts environmental impact assessments for in-house and outsourcing suppliers working on its premises, based on contractual obligations. Based on the results, the company selects excellent suppliers to provide contract priority and various incentives, and in cases of significant violations causing environmental impacts, immediate improvement and management plans are established to prevent and mitigate environmental impacts.

Win-win Growth Strategies



Supply Chain ESG Evaluation System





**RESULTS OF 2023 SUPPLY CHAIN ESG EVALUATION**

Evaluation conducted for

**17** partner companies

14 companies found stable, 3 companies requiring improvement in governance, etc.

# CREATING A SUSTAINABLE SUPPLY CHAIN

## Partner Company Support Programs

### FINANCIAL SUPPORT

**Payment Principle** | LFC ensures the prompt payment of transaction amounts to small and medium-sized suppliers by eliminating bills and paying entirely in cash. Moreover, payments are completed within 15 days after invoice closing for small businesses.

**Early Payment System** | LFC operates a system to make early payments to suppliers in urgent need of funds during holiday seasons. In 2023, in response to these needs during the holidays, we preemptively paid KRW 3.9 billion to 162 suppliers.

**Win-win Cooperation Fund** | Since 2020, in collaboration with Woori Bank, LFC has been operating a “Win-Win Cooperation Fund” worth KRW 7 billion to support the financial needs of small and medium-sized suppliers, allowing them to secure operational and equipment investment funds at interest rates lower than the market.

### TECHNOLOGY AND TRAINING SUPPORT

**Support for Capacity Building** | LFC supports the identification and improvement of risk factors at supplies and conducts safety, environmental, and health training aimed at preventing serious accidents before they occur. Through these efforts, the company actively shares best practices to help establish safe workplaces throughout the supply chain and supports internal improvements and innovations. Additionally, since 2021, the company has operated the Win-Win Growth Academy, an ongoing online education program for suppliers that enhances the capabilities of their employees in various areas including general management, leadership, language skills, and job-specific advanced training.

**Industry Transformation Joint Training Center** | In July 2022, LFC was chosen as a new organization for the “Industry Transformation Joint Training Center” that is organized by the Ministry of Employment and Labor and Human Resources Development Service of Korea and participated by a total of 15 organizations in such areas as energy, automobile, chemistry, and shipbuilding. This large company-SME win-win program has the mid- to long-term goal of “nurturing professionals to transition to a future, eco-friendly chemical industry and promoting sustainable growth by jointly enhancing technological competitiveness with companies with which agreements were signed.” To this end, it reorganizes the industrial structure of member companies through job training and consulting, in response to industrial structure changes, while also providing preemptive and comprehensive support for workers’ job transition.

After being selected as a participant in the Industrial Transition Training Center, LFC has established a dedicated training center equipped with various experiential and practical devices. The company has conducted training for employees of partnering companies on topics including safety, environmental issues, renewable energy, and low-carbon business initiatives.

In its second year of participation in 2023, LFC pursued both quantitative and qualitative growth of its programs, signing industrial transition agreements with 20 enterprises and achieving a three-fold increase in training performance, with 326 participants compared to the previous year. Additionally, we support the comprehensive development of new industrial ecosystems through the strengthening of training programs, job design for partner companies, and concurrent consulting on industry transition responses.

**MOU on Jointly Practicing ESG** | In August 2022, LFC signed an MOU on Jointly Practicing ESG with Incheon Port Authority and the Korea Environmental Industry & Technology Institute to spread ESG management and support technological growth of SMEs. We, along with the participating organizations, are actively pursuing projects such as ESG open innovation, supporting technological growth of exemplary environmental SMEs, spreading ESG management to local SMEs, and fostering win-win growth between large corporations and SMEs. The first project under this agreement was the “ESG Open Innovation” initiative, a collaborative win-win growth project between public institutions and large corporations, which resulted in the development of eco-friendly recycled pallets in January 2023. We also conducted a pilot project for fire-prevention paint and thermal barrier coatings, completing applications on designated waste storage facilities and forklift charging stations.

### INCREASING COMMUNICATION

**Win-Win Growth Meetings** | In pursuit of strengthening communication with suppliers as part of its ESG initiatives, since 2021, LFC has been hosting regular meetings with suppliers involved in packaging, production, and maintenance to listen to their concerns and immediately address them, thereby building mutual trust. Through these meetings, the company shares accident cases by job type and operation, spreads excellent safety culture practices, and continuously communicates with suppliers, sharing key company statuses and issues to solidify partnerships.

**Grievance Handling for Partner Companies** | LFC collects partner companies’ grievances through the “Shinmungo” online reporting system and takes measures according to a grievance-handling process. We guarantee the confidentiality of user’s identity and reporting content, so that they can express their opinions without fear of disadvantages.

**EARLY PAYMENT PERFORMANCE IN 2023**

162 companies, KRW 3.9 billion

**OUTCOME OF WIN-WIN COOPERATION FUND OPERATION IN 2023**

Deposit KRW 7 billion

Total ceiling for loan support KRW 7 billion

Support ceiling per company KRW 1 billion

Interest rate support per company 3.6%

**LFC'S ACHIEVEMENTS IN THE "INDUSTRY TRANSFORMATION JOINT TRAINING CENTER" PROJECT**

Year	Number of companies with agreements signed	Number of participants in education and training
2022	15 companies	102 persons
2023	20 companies	326 persons

# PRODUCT QUALITY AND TECHNOLOGICAL INNOVATION

## Quality Management System

**QUALITY MANAGEMENT STRATEGIES** LFC strives to enhance product competitiveness by ensuring the highest quality at all stages, including production, management, and packaging. The company is dedicated to establishing a quality management process, building a quality assurance (QA) system, deriving cases for quality improvement, and strengthening its quality management infrastructure and capabilities. It also focuses on maintaining and expanding certifications from both domestic and internationally accredited institutions. Furthermore, LFC is pushing forward with continuous quality improvement and customer-centered communication through enhanced inspection and quality management of raw and subsidiary materials, reviewing measures to prevent recurring customer complaints, step-by-step process control based on systems and data, and quality process audits for customer satisfaction and quality enhancement.

In 2023, intensive efforts were made to validate the mass production capabilities of the HECCELLOSE® Yeosu Plant, prevent customer complaints, and improve external certification grades. To prevent and mitigate the recurrence of customer complaints, a checklist based on improvement measures from the past five years was created, and a total of 14 unscheduled and regular inspections were conducted. In addition, the highest Kosher<sup>1)</sup> rating, Passover<sup>2)</sup>, was obtained for ECH products, and thorough validation was conducted from trial runs to mass production to establish and secure the quality infrastructure of the newly established HECCELLOSE® Yeosu Plant.

In 2024, we aim to enhance customer satisfaction by strengthening raw and subsidiary material management and internal process inspections, and plans to establish a market expansion base by securing early stabilization of mass production quality of HECCELLOSE® products produced at the new Yeosu Plant and pursuing additional Halal<sup>3)</sup> certification.

**QUALITY MANAGEMENT ORGANIZATION** As the business importance of B2C products such as urea solution and toner is increasing, there is a demand for specialized quality management and rapid, accurate responses to customer feedback. To enhance the efficiency of quality control and assurance tailored to each product, LFC has restructured its Quality Management Team, and established two specialized divisions – Chemicals Quality Section which oversees chemical products and toners, and Green Materials Quality Section dedicated to green material products.<sup>4)</sup> LFC continues to use the expertise of this newly established quality organization to strive for customer satisfaction and trust from the customer’s perspective.

<sup>1)</sup> A generic term for products that are strictly produced according to Islamic law and allowed to be consumed by Muslims  
<sup>2)</sup> Jewish Passover certification. This highest Kosher grade certification is to certify that grains that ferment (alcohol) are not contained.  
<sup>3)</sup> Certification for verification of ingredients, products, distribution, and storage processes permitted under Islamic law  
<sup>4)</sup> After the establishment of the Quality Assurance Section in February 2023, the organization evolved into Chemicals Quality Section in February 2024. The Green Materials Quality Section was also established in February 2024.

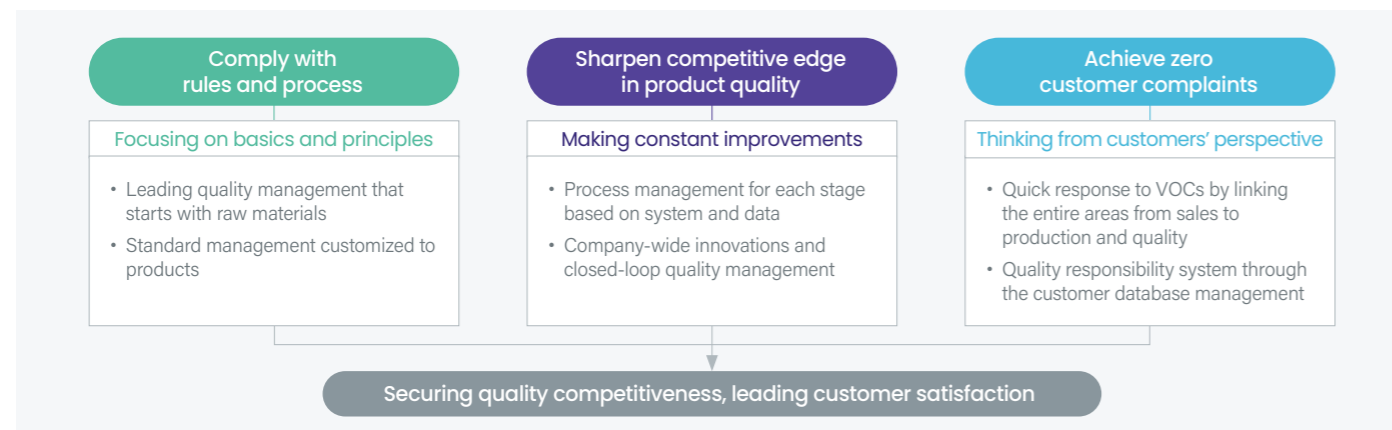
## Quality Assurance Activities

**QUALITY PROCESS AUDITS** LFC conducts quality process audits to continuously improve product non-conformities and customer complaints. We conduct inspections on the implementation of quality assurance processes, including quality management systems, to ensure that production-related processes, inspections, and operations are effectively executed. Additionally, we verify the reliability of the products and services provided to customers.

In 2023, 14 quality process audits were conducted across eight departments related to production and shipping. These audits identified a total of 40 points for improvement and quality enhancement, and corrective actions were taken. Measures were also developed to prevent the recurrence of customer complaints, with a focus on managing manufacturing processes and improving non-conformities. LFC will continue to improve quality through rigorous process audits.

**RAW & SUBSIDIARY MATERIALS QUALITY MANAGEMENT** Each business unit of LFC manages quality based on the characteristics of key raw and subsidiary materials, chemicals, and catalysts. In 2023, we focused on activities to enhance the incoming quality of green raw and subsidiary materials, aiming to strengthen the establishment of the raw and subsidiary material management system. A total of 34 types of raw and subsidiary materials with a high impact on process and product quality were selected for priority management, and inspections on these raw and subsidiary materials were conducted, with an extended storage period for material samples and prioritized supplier audits. Additionally, a total of 22 supplier audits (13 face-to-face and 9 written) were conducted with the aim of strengthening supplier management. In 2024, LFC will continue to conduct thorough inspections of production processes and quality management systems for selected priority raw and subsidiary materials. We will also select priority materials for chemicals and toner raw materials to enhance overall material management and improve product quality.

### Strategic Direction for Quality Management



### Directions to Ensure Quality

2021	Strengthening of on-site quality control for quality improvement	<ul style="list-style-type: none"> <li>Improvement of the process/product quality check checklist and unannounced/planned inspections</li> <li>Operate a regular consultative body to improve the results of on-site inspections</li> </ul>
2022	Strengthening improvement activities to achieve "zero" customer complaints	<ul style="list-style-type: none"> <li>Strengthen internal audits and expand targets</li> <li>Increase the frequency (1 time/year → 2 times/year)</li> <li>Conduct quality management of areas outside the company for urea solutions and add internal audits</li> </ul>
2023	Enhance external certifications and validate the mass production capabilities of the newly established HECCELLOSE® plant.	<ul style="list-style-type: none"> <li>Upgrade the Kosher certification level for ECH products</li> <li>Achieve the highest "Passover" certification for ECH products</li> <li>Validate the mass production capabilities of the newly established HECCELLOSE® plant in Yeosu</li> <li>Secure quality analysis infrastructure and complete validation from trial runs to mass production</li> </ul>

# PRODUCT QUALITY AND TECHNOLOGICAL INNOVATION

**PROCESS INSPECTION AND QUALITY MANAGEMENT** In 2023, LFC improved the accuracy and reliability of process inspection analyses by checking the condition of outdated analytical instruments through the Analytical Instrument Replacement Indicators and investing in the modernization of a total of four outdated instruments. In 2024, we will continue to check the condition of analytical instruments and perform reliability evaluations to ensure that products of uniform quality are delivered to customers.

**ACQUISITION OF GLOBAL QUALITY CERTIFICATIONS** LFC has maintained the Quality Management System ISO 9001 (2015 revision) certification since its first accreditation in 1996. In 2023, we successfully completed the triennial renewal audit to maintain the certification and conduct annual internal and follow-up audits. In 2024, internal and follow-up audits will continue to be successfully conducted to pursue quality management based on ISO 9001.

Halal and Kosher certifications are essential for selling products to countries and consumers of the Islamic and Jewish faiths, indicating that the products are manufactured with ingredients suitable for these religions. LFC utilizes these certifications in promotions targeted at Muslim and Jewish markets. As of 2023, LFC maintains Halal certification for eight chemical and six green material products based on Muslim consumption principles, Kosher certification for eight chemical and four green material products according to Jewish law, and FSSC 22000 certification for two types of green material (food additives). In 2023, we also achieved the highest Kosher grade, "Passover."

In 2024, additional Halal certification will be pursued for products from the newly established HECCELLOSE® plant in Yeosu. This certification is expected to contribute to the sales of products produced at the new plant. Additionally, plans are underway to obtain the EXCiPACT certification, a third-party GMP (Good Manufacturing Practice) for pharmaceutical excipients, for the Incheon Plant. Obtaining the GMP certification EXCiPACT for pharmaceutical excipients is expected to objectively demonstrate the excellent quality management level of the Incheon Plant to clients. This is expected to contribute to enhancing customer trust and expanding market share in the green materials business.

## Strengthening R&D Capabilities

**R&D STRATEGY** LFC organizes research and development as a competitive business area, along with production and supply, and focuses on enhancing technology platform-based R&D capabilities to secure competitiveness in existing businesses and execution in new businesses. In particular, we have established a focused strategy aimed at differentiated "R&D for eco-friendly high value-added specialty materials," enhancing external research activity networks to discover future growth engines, develop specialty products, and strengthen the competitiveness of existing businesses.

### R&D Direction

		
<p>R&amp;D that enhances today's competitiveness</p>	<p>R&amp;D that leads tomorrow's market</p>	<p>R&amp;D that raises everyone's efficiency</p>
<p>LFC's R&amp;D develops new products and manufacturing technologies, improves the manufacturing costs of products that are currently produced, and strengthens the competitiveness of existing businesses by discovering more effective manufacturing technologies.</p>	<p>LFC's R&amp;D continually examines market demands and the market environment and performs a key role in developing next-generation technologies and new products that are suitable for the demands and environment.</p>	<p>LFC's R&amp;D establishes an outstanding technology platform based on active networking activities to raise executive ability of internal businesses and increase efficiency of the external research infrastructure.</p>



# PRODUCT QUALITY AND TECHNOLOGICAL INNOVATION

**R&D ORGANIZATION** The R&D Division of LFC consists of four research teams dedicated to industrial, food, and pharmaceutical cellulose ether polymers and other specialty chemical fields, along with a research strategy team responsible for research planning, support, and analytical tasks. As a breeding ground for next-generation technology development, the R&D Division is committed to developing specialty products in areas such as cellulose derivatives, food and pharmaceutical materials, and eco-friendly fields. This commitment aims to realize the company's vision by promoting technological innovations and securing sustainable growth engines. Particularly, the division focuses on maximizing revenue through existing capabilities and developing new products, playing a central role in LFC's leap to become a global specialty company contributing to human happiness.

LFC recognizes the importance of strengthening related organizations, recruiting and retaining top talent to secure global-level R&D capabilities. To this end, we are seeking to expand and systematize our organization to enhance the capability to manage and perform research tasks. This includes focusing on setting detailed organizational structures, specializing roles within the organization, building infrastructure suitable for the organizational size and circumstances, and proactively securing key talent for future business preparations. Various efforts are also being made to recruit outstanding key talents by targeting necessary personnel based on new business plans and diversifying recruitment methods. To attract excellent R&D personnel, LFC participated in the Group Chemicals HQ R&D Conference in 2023 to share technological status and future visions. We visited 14 renowned universities in the Americas and Europe to conduct recruitment presentations, striving to recruit upstream industry experts and experienced professionals.

## R&D PERFORMANCE

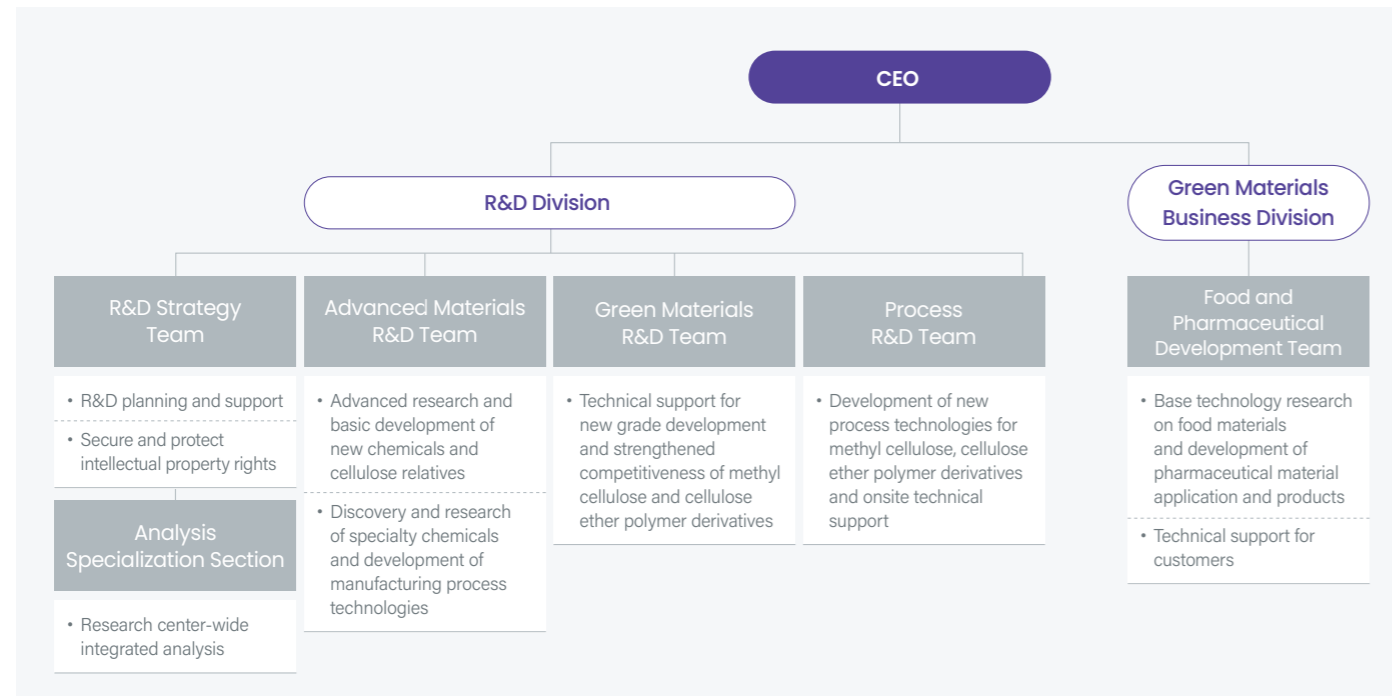
**Research on Eco-friendly Specialty Chemicals** | LFC is focusing on strengthening its research and development capabilities for eco-friendly materials, in response to the expanding eco-friendly industry and the strengthening of related policies, such as the transition to eco-friendly products from petrochemicals, the RE100 initiative, and climate change response. The eco-friendly specialty chemical materials currently under development include new cellulose derivatives based on precision chemical production technology and core competencies, as well as eco-friendly superabsorbent resins, thermoplastic resins, and biodegradable coatings derived from these derivatives. These materials are currently in the initial performance verification or core performance evaluation stages in the laboratory. However, through continuous research, development, and investment, the goal is to commercialize them as soon as possible. In addition, we are accelerating our R&D efforts to provide solutions to various environmental problems, such as microplastics caused by petroleum-based plastics, while also supplying functionally superior products.

**Research on Cellulose Derivatives** | LFC is continuously deepening its research to enhance the competitiveness of cellulose derivatives water-soluble polymer products, which are used across a broad range of industries. Especially considering the increasingly specialized and specific demands of customers, we are expanding specifications and focusing on the development of high-efficiency new processes and productization to enhance manufacturing competitiveness. Representative activities include research on new cellulose derivatives widely used in the construction industry and the development of new specifications for construction-use MECELLOSE®, as well as the development of new specifications for HECELLOSE® that improve paint workability and efficiency. We are also focusing on the development of new high-quality, high value-added derivatives for food and pharmaceutical use that meet customer requirements and reflect market trends, as well as developing high-efficiency new processes to enhance the competitiveness of existing industrial cellulose-based water-soluble polymer products.

**Research on Pharmaceutical and Food Materials** | LFC is dedicated to developing high value-added pharmaceutical materials using diversified cellulose derivatives polymers and exploring new market trends in food and applied technologies. Given that pharmaceutical and food materials are directly absorbed by the human body, safety is a top priority in research activities, and the company seeks ways to benefit human life by reflecting social demands for environmentally friendly consumption. The main research area involves developing highly stable pharmaceutical excipients to diversify and expand the range of food and pharmaceutical products, synergizing with cellulose-based products. Current pilot-scale performance verification is complete, and the company aims to commercialize these through ongoing research and development.



## R&D Organization



# ENHANCING CUSTOMER VALUE

## Customer Response System

LFC has established a customer response system that integrates departments such as sales, production, quality, and research to swiftly address customer needs. This system allows for detailed status checks and analyses of customer requirements, enabling the identification and application of improvement methods. In 2023, LFC enhanced the checklist items for improvement measures based on client-raised claims over the past five years. Following this enhancement, we conducted a total of 14 scheduled and unscheduled inspections across eight departments related to production and shipping, to verify the implementation of improvements. Additionally, we added regular inspections and process stage check sheets for five external urea solution tanks to address customer feedback more effectively and boost customer satisfaction.

These initiatives significantly reduced the number of customer claims, decreasing from 11 cases in 2020 to two in 2021 and maintaining this level through 2022 and 2023. In 2024, LFC will further strengthen process inspections related to production and shipping and will proactively address customer feedback to strive for zero customer complaints. Furthermore, by adopting a GMP (Good Manufacturing Practice) computerized quality management system comparable to those of finished drug product pharmaceutical companies, LFC plans not only to meet increasingly stringent international pharmaceutical regulations but also to enhance customer satisfaction.

## Responding to Voice of Customers

The Incheon Plant has established and is applying a system capable of addressing customer opinions and requests in accordance with domestic and international standards such as Good Manufacturing Practice (GMP), the International Council for Harmonisation of Technical Requirements for Pharmaceuticals for Human Use (ICH), and the International Pharmaceutical Excipients Council (IPEC). In 2023, the Plant received high evaluations from international clients specifically for its rapid response tailored to various types of customer support and complaint scenarios, demonstrating its commitment to excellent customer service.

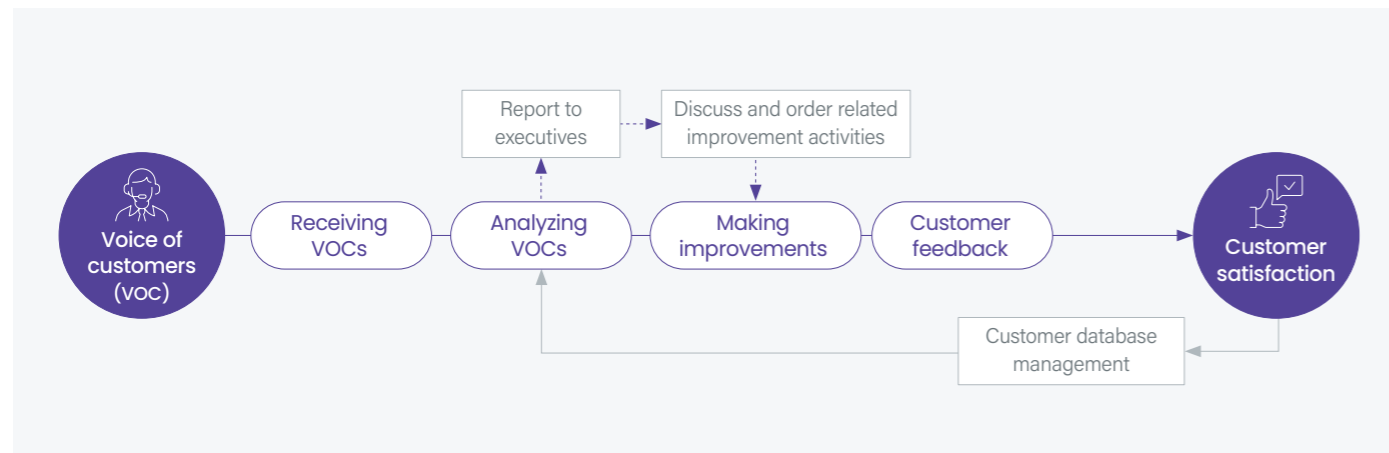
A significant portion of EUROX® consumer inquiries pertained to vehicle warning lights and urea bulk injectors (EBD). To improve this, starting in 2022, LFC expanded its quality control points for urea solutions to external tanks and EBD manufacturers, enhancing its ability to immediately address external quality issues. These efforts led to a 17% reduction in inquiries related to vehicle warning lights and EBD in 2023 compared to 2021.

In response to urea import issues from China in 2023, the sales division diversified supply lines, the production division optimized efficiency, and the quality division intensified scrutiny on incoming and outgoing inspections to ensure timely urea delivery and prevent customer inconvenience. In 2024, the organization dedicated to chemical product quality control, the Chemicals Quality Section will leverage its expertise to promptly address customer quality issues, continuing to strive for higher customer satisfaction.

### BETTER RESPONSE TO CUSTOMER FEEDBACK ON EUROX®

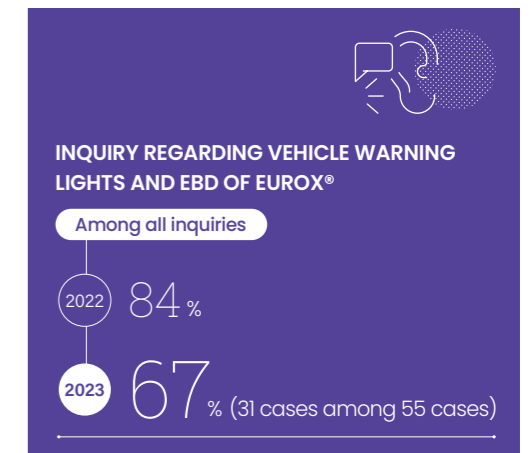
LFC's vehicular catalyst brand, EUROX®, systematically manages customer feedback received through the product website, phone, and other systems via the EUROX Order Management System. Furthermore, to promptly address issues received, not only are sales representatives involved, but dedicated technical support (TS) personnel are also appointed to continually enhance our service.

### VOC Response System



### VOC Status by Product in 2023

Classification	Unit	2021	2022	2023
Toner	Case	10	16	10
Green materials	Case	46	73	105
Incheon Plant (AnyCoat®)	Case	320	384	412
Chemicals	Case	260	267	335
<b>Total</b>	<b>Case</b>	<b>636</b>	<b>740</b>	<b>862</b>



# ENHANCING CUSTOMER VALUE

## Customer Data Protection

**INFORMATION PROTECTION SYSTEM** As digital transformation increasingly influences corporate competitiveness and the threat of cyberattacks grows, the enforcement of regulations concerning information security and personal data protection is being strengthened, alongside increasing corporate responsibilities. LFC has established and strictly enforces a robust information security policy and system that exceeds legal requirements to prevent the external leakage and misuse of corporate and customer information. All employees adhere to this policy and system.

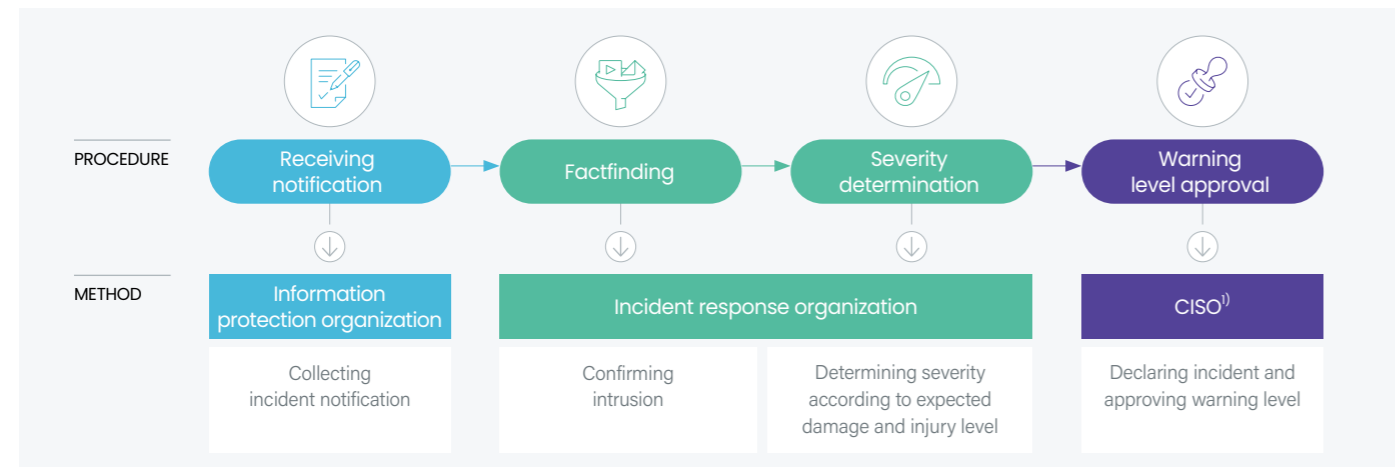
The company's information security management system encompasses all security management domains—administrative, physical, technical, and personal data protection. It sets forth fundamental principles and detailed guidelines for protecting information for employees and stakeholders, which are widely disseminated. LFC has formed a specialized organization dedicated to information protection that implements the highest level of protective measures in accordance with laws such as the Personal Information Protection Act. Furthermore, this organization operates a system that can respond quickly and accurately to information security issues, using the LOTTE Group's integrated control system as its foundation.

Moreover, in 2017, LFC obtained the ISO 27001 certification, an international standard for information security management systems, as part of establishing an advanced information protection system. We have continued to maintain this certification up to April 2024. To prevent information security incidents and enhance security management quality, LFC performs an annual LOTTE Group information security level assessment, which enables us to periodically review and enhance our information security management system. We conduct annual IT vulnerability assessments on our website and existing systems to check for any information security vulnerabilities. When necessary, we take appropriate measures to ensure comprehensive information security management.

**MONITORING OF INFORMATION LEAKAGE** To prevent the leakage and tampering of personal information, LFC established an integrated log management system in 2022, which monitors not only handlers of personal information but also security solutions. Despite these efforts, if an information leak occurs, we immediately notify customers, and then establish and implement an incident response plan to minimize related damage. In accordance with the personal information damage compensation liability system enacted in 2019, we annually renew our personal information liability insurance to respond to personal information incidents and protect the rights of data subjects. As a result of these efforts, there were no incidents or accidents related to customer information leakage in 2023.

**INTERNALIZING INFORMATION SECURITY** LFC conducts rigorous management and supervision to securely manage personal information and provides related training to enhance employee awareness of information security. We hold the Clean Office Day quarterly to conduct physical security inspections, such as securing documents and facilities, thereby promoting habitual security practices among employees. We also conduct mock virus email training quarterly to preemptively mitigate risks associated with viruses. Furthermore, to prevent trade fraud attacks between LFC and our partners, we send an official letter to them twice a year to inform them of our account registration and change policies, striving to prevent financial losses due to trade fraud. Every first Monday of the month is designated as the Information Security Day, where we share details of various information security incidents and accidents through the internal communication portal and company-wide emails. Going forward, we will continue to promote the internalization of information security activities and steadfastly maintain "zero information security-related incidents."

### Response Process to Information Breach



<sup>1)</sup> Chief Information Security Officer

### Major Information Security Training in 2023

Training	Target	Frequency	Type	Main content	No. of trainees
Information security training	All employees	Once a year	Online	Information security and personal data protection	947
Simulated virus infection improvement training	All employees	When it occurs	Offline	Ransomware cases and precautions	354
Personal information handler training	Employees handling personal information	Once a year	Online	Key amendments to personal data protection laws	66
Information security training for new and experienced personnel	New and experienced personnel	When it occurs	Offline	Incident cases and information security guide	50
Information security training for overseas subsidiaries	Employees of subsidiaries	Twice a year	Offline	Global information security trends	25



# CONTRIBUTING TO LOCAL COMMUNITIES

## CSR System

**CSR POLICY AND GOAL** LFC is operating community development programs at all domestic business sites based on the social contribution vision and promotion strategy of being a “Good Partner Making a Sustainable Future,” aiming to coexist with local communities and stakeholders and contribute to the creation of social value. To this end, LFC has established the slogan “Fine Today, Green Tomorrow” and planned customized support programs for each of the five key focus areas – Fine Dream (children, youth, and women), Fine Society (local communities), Fine Eco (local environment), Fine Chemi (linked to the chemical industry), and Fine Synergy (group and related organizations), to carry out systematic social contribution activities.

In particular, the Seoul, Ulsan, and Incheon business sites have set a goal to implement at least one program that allows for community participation in their respective local communities by 2023, and we have achieved this goal 100%. By 2024, the goal is to implement at least two, and by 2026, at least three, while publicly disclosing annual community participation activities.

**CSR IMPLEMENTATION ORGANIZATION** LFC establishes strategies for social contribution, manages funds, and operates specialized volunteer teams for each program at business sites, effectively promoting social contribution activities, with the CSR Secretary playing a central role.

**CSR ACTIVITY SUGGESTION SYSTEM** In 2022, LFC newly introduced the CSR Activity Suggestion System, allowing anyone interested in social contribution activities to participate via the website. In 2023, two proposals were received and reviewed, and going forward, we will continue to utilize our resources and capabilities to implement ideas that benefit society and spread a positive influence in the community.

**SOCIAL CONTRIBUTION FUND** LFC has established three types of social contribution funds, used for various social contribution activities. These include employee donations with an equivalent company match, known as “matching grants,” and other company contributions supporting national disaster relief and community development projects.

## CSR Activities

FINE Dream

### “L-ARTTI” Program to Support Youths’ Independence

Every year, around 2,600 young adults who turn 24 must leave care facilities. To support their stable transition to independent living, LFC, in collaboration with the Korea Welfare Services, launched the L-ARTTI<sup>1)</sup> project in May 2022. This initiative, based on a metaverse campus, aims to help these young adults navigate the complexities of entering society on their own. Considering the familiarity of Generation Z with IT technology and trends, as well as the privacy needs of these young adults preparing for independence, the metaverse space has been established as the L-ARTTI online campus. This platform offers virtual life experiences, professional psychological counseling, and career planning consultations to assist them with the challenges of housing, psychological anxiety, employment, and further education.

By 2023, a cumulative total of 210 young adults had participated, with a re-participation intention rate of 100%, indicating high satisfaction with the program. The support program was further enhanced in 2023, culminating in the first offline workshop held in August. During the workshop, activities were conducted to strengthen bonds and communication among participants, including mentoring sessions with a youth who became a social enterprise representative, metaverse construction practice, and DIY Farm&Gardening therapy. In December, scholarships totaling KRW 13 million were awarded to 34 outstanding participants.

<sup>1)</sup> Compound word of “L” that symbolizes LOTTE and “Artti” that means a close friend

#### Book Donations

To improve the reading environment for children and promote a reading culture, we donated basic chemistry books, desired learning collections, and humanities books to elementary and middle schools, local children's centers, National Center for the Rights of the Child, and social welfare organizations in the Ulsan area; we also held book concerts aimed at encouraging more reading.

#### SUPPORT

- Donated approximately 14,000 books, worth of KRW 140 million, to 22 schools and institutions from 2017 to 2023

#### Happy Love House

To support children in living in a cleaner and safer environment, LFC employees engage in housing improvement activities in collaboration with MICOS Children’s Center in Ulsan, where our business site is located. Each year, they select one low-income household and repair wallpaper, outdated electrical systems, and fixtures, as well as purchase and assemble furniture.

#### SUPPORT IN 2023

- Conducted improvement activities for the living environment of a 9-year-old girl

#### Sponsorship for Ulsan Swings

LFC established “Ulsan Swings,” a multicultural little league baseball club, in 2014 in partnership with the Ulsan Nam-gu Social Welfare Center and Ulsan Metropolitan Police so that children from multicultural families can interact through baseball and plan for their future full of hopes and dreams.

#### SUPPORT

- Supported approximately 220 multicultural children from 2014 to 2023
- Conduct comprehensive baseball education through training on baseball theory and game rules, basic physical fitness, and position-specific skills such as hitting and fielding; host friendly baseball games with local Little League teams; invite participants to watch professional baseball games of the LOTTE Giants, etc.



1 L-ARTTI offline workshop  
2 L-ARTTI scholarship award ceremony

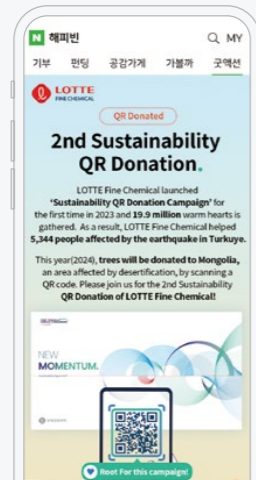
# CONTRIBUTING TO LOCAL COMMUNITIES

## CSR Activities

### FINE Society

#### Sustainability Management QR Donation Campaign

In June 2023, LFC launched the “Sustainability Management QR Donation Campaign,” involving the general public along with the publication of the report, ensuring that the sustainability report is not just a document but leads to ESG actions. We donated KRW 100 million to Happybean, matching KRW 1,000 per person based on the total number of QR code accesses. These funds were specifically allocated to aid the recovery and rebuilding efforts following the earthquake in Türkiye. Moving forward, we will continue this campaign annually, aligning with the release of the sustainability report to promote a culture of ESG practices that prioritizes environmental consideration and community involvement.



Please refer to “Cover Story: Green Reporting” of this Report to find more information about the Sustainability Management QR Donation Campaign.

#### Fire Safety in Local Communities

In collaboration with fire agencies located in Ulsan and Incheon, LFC undertakes social contribution activities to enhance community safety.

##### SUPPORT IN 2023

- The Incheon Plant collaborated with the Incheon Gongdan Fire Station to conduct a winter fire safety campaign, focusing on the safe usage of heating equipment.

#### Hands On Activities

Since 2015, employees have been utilizing their personal leisure time to engage in “Hands-On” volunteer activities, creating and donating items to support local children, the elderly, and disabled individuals.

##### SUPPORT IN 2023

- Creation of dementia prevention memory box kits: Approximately 100 employees and their families participated in crafting 200 customized handcraft kits for dementia prevention, known as “memory box kits.” These kits were used to support dementia prevention education for the elderly at local dementia relief centers.
- Outcome: The sponsorship activity is estimated to have generated a financial value of approximately KRW 6.3 million for 200 beneficiaries, based on the typical costs of purchasing similar dementia prevention educational tools.

#### Dietary Support for Low-income People with Disabilities

Since 2016, LFC, in cooperation with the Ulsan 2nd Disabled Gymnasium, has held an annual ginseng chicken soup sharing event for people with disabilities to help them combat the hot summer.

##### SUPPORT IN 2023

- Supported the summer health of 300 elderly people with disabilities in August through special meal kits (soybean noodle kits), movie screenings, and rehabilitation exercise assistance activities
- Outcome: It is estimated that each beneficiary received a financial value of KRW 15,000, based on the typical costs of the sponsored food and discounted movie tickets for the disabled (5,000 won per ticket).

#### Holiday and Year-end Hope Sharing Activities

Each year during the Lunar New Year, Chuseok, and the end of the year, LFC carries out hope sharing activities, targeting volunteer sites in Ulsan and Incheon where the business sites are located.

##### SUPPORT IN 2023

- Delivered goods (holiday food kits, winter clothing, snack gift sets, etc.) to marginalized groups in the community, including children, women, people with disabilities, and the elderly

### FINE Eco

#### Urban Box Farming Campaign

Since 2010, LFC has been conducting the “Urban Box Farming Campaign” to promote urban greening in the industrial city of Ulsan and to raise awareness of the importance of a green environment among local residents. For the past 14 years, we have delivered about 61,000 box gardens containing blueberry and fig saplings, herb seedlings, and rubber trees to the citizens of Ulsan.

In 2023, we delivered orange lemon and basil tree pots, which are plants known for their excellent air purification abilities and ease of indoor cultivation, to 5,000 students at six elementary schools in Ulsan. This initiative was part of our efforts to practice sustainable management and encourage participation in charitable activities.



Please refer to “Cover Story: Green Reporting” of this Report to find more information about the Urban Box Farming Campaign.

#### Incheon Coastal Clean-up Volunteer Activities

LFC continuously promotes coastal cleanup activities in the Incheon area, including beach combing on nearby beaches, and collaborates with the IPA (Incheon Port Authority) to implement the “Save Our Local Streams” initiative.

##### SUPPORT IN 2023

- Conducted beach cleanup and environmental purification activities at Incheon New Port Bridge, Eulwang-ri, Oido, and other coastal areas
- Conducted activities such as planting chrysanthemums to prevent harmful plants around Seunggi Stream, collecting underwater trash, and throwing EM mud balls

#### Ulsan Complex's Bamboo Shoot Protection Campaign for the Taehwa River Simni Bamboo Grove

Since 2005, LFC has engaged in biodiversity and environmental protection activities, managing and safeguarding the Simni Bamboo Grove of the Taehwa River National Garden in Ulsan to prevent damage to the bamboo shoots.

##### SUPPORT IN 2023

- In celebration of Environment Month, conducted activities in collaboration with the Simni Bamboo Grove Protection Volunteer Group, including bamboo shoot protection patrols, environmental cleanup, and providing information on the usefulness of bamboo shoots and bamboo (to prevent damage and unauthorized harvesting), along with plogging activities to protect the environment for the Earth

#### “DO! Fine Walk” – Walk Fundraising Campaign

Since 2022, we have organized an annual walk fundraising campaign, enabling employees to promote health and engage in philanthropy through their everyday activities. When the target number of steps is reached, funds are allocated to support various charitable activities, including environmental protection, each year.

##### SUPPORT IN 2023

- Expanded the scale by including partners along with employees, with a total of 375 participants. Achieved the goal of 40 million steps ahead of schedule over the two months of October and November. Donated 30 million KRW to the MIRAL Welfare Foundation
- Hosted an eco-friendly environmental improvement idea contest in collaboration with the MIRAL Welfare Foundation to discover and promote new activities related to our business characteristics, such as environmental campaigns and biodiversity protection activities



# CONTRIBUTING TO LOCAL COMMUNITIES

## CSR Activities

FINE Chemi

FINE Synergy

### Contribution to the Agricultural and Fishing Villages Collaborative Cooperation Fund

LFC contributed an additional fund to the Agricultural and Fishing Villages Collaborative Cooperation Fund in 2022 and 2023, following its contributions in 2019, bringing the total donation to KRW 1 billion. Using wood (pulp) as a raw material for our green materials business, we aim to give back to society by utilizing the fund to establish smart nurseries in rural areas and create local forests using the seedlings from these nurseries. We are also considering a project to revitalize vacant houses in rural areas using products from our green materials business, such as MECELLOSE® (used in tile adhesives) and HECELLOSE® (used in paints)."



Signing ceremony for the Agricultural and Fishing Villages Collaborative Cooperation Fund

#### In-kind Donation of Urea Solution to Rural Areas

As part of its corporate social responsibility linked to its business, LFCs has been donating its urea solution product, EUROX®, as in-kind contributions to rural areas since 2020.

#### SUPPORT

- Have donated 94,600 liters of EUROX® to 135 health centers and agricultural machinery rental centers in the Gyeongbuk, Jeonbuk, and Jeonnam regions since 2020



#### Program to Nurture Chemistry Talents

In collaboration with UNIST (Ulsan National Institute of Science and Technology), LFC supports chemical engineering students to foster future talents in the chemical industry and encourage the dreams of economically disadvantaged students.

#### SUPPORT

- Provided scholarships and eco-friendly research funds to a cumulative total of 114 students majoring in chemical fields by 2022

#### Establishment of the LOTTE-KAIST "R&D Center & Design Center"

In August 2022, along with LOTTE Group, LFCs donated funds to KAIST for the establishment of an R&D Center & Design Center.

Scheduled for completion in the second half of 2025, the R&D Center is intended to be a collaborative research cluster aimed at addressing climate change and carbon neutrality. It will focus on sustainable biosolutions, carbon-neutral materials and energy, nutrition, healthcare, and more, encompassing comprehensive research in systemic metabolic engineering, biofuels and plastics, green hydrogen, renewable energy, and batteries. The Design Center plans to conduct research and development in zero-waste design to minimize waste output and develop future-oriented products and services that integrate virtual and real-world environments.



### FINE-Package in Partnership with LOTTE Medical Foundation

Since 2020, LFCs has been conducting the "FINE-Trip" project in collaboration with the Bobath Memorial Hospital and Bobath Children's Hospital under the LOTTE Medical Foundation. This initiative is designed to provide financial assistance for medical expenses to families of children with severe disabilities, considering their economic hardships and the challenges siblings face in receiving adequate care or enjoying family trips. By supporting the travel expenses of these families, the project offers them a chance to recharge and create lasting memories together. In 2023, rehabilitation expenses were supported for five families over four months, and a one-night, two-day family trip was given to 15 families, with a total of 56 families and 226 individuals supported by the end of 2023.

“ I was truly happy to be able to give our child, who has spent entire life in the hospital, the gift of a trip. It was a healing time for the whole family to take a short break. ”

“ Although my daughter is separated from her mother due to her brother's hospitalization, she has been patiently waiting. I am glad that she now has hope and joy to of being able to run and play with her brother. ”

### "2023 Bettering the World Week" – Resource Circulation and Ecological Protection Campaign

In collaboration with the LOTTE Group's Chemicals HQ, LFC conducted the "2023 Bettering the World Week" campaign in a relay participation format by employees to mark Environment Day (June 5). Aimed at social carbon reduction and local community ecological protection through resource circulation and ecological protection initiatives, the campaign consists of two activities – "Recycling for New Resources" for resource circulation and "Better Environment" for ecological protection. "Recycling for New Resources" involved employees at the company's Seoul business site collecting and sorting used PET bottles and cups over one week, with the Seoul Office employees gathering a total of 640 PET bottles. In the "Better Environment" initiative, protection efforts for bamboo shoots were conducted at the Simni Bamboo Grove in Taehwa River National Garden, located in Ulsan.

#### Firefighter Family Cultural Event of the LOTTE Chemicals HQ

Since 2019, LFCs and the Chemicals HQ have sponsored cultural and arts performances for firefighters' families. Starting in 2022, LOTTE Corporation have joined in, elevating the initiative to a group-wide social contribution program.

#### SUPPORT IN 2023

- Invited approximately 350 families (1,350 people) of current firefighters and families of fallen or injured firefighters to a "Family Concert" planned by LFC as a gift for the whole family to enjoy a variety of music genres together

#### Support for LOTTE Foundation for Arts

Since 2018, LFC has been sponsoring the LOTTE Foundation for Arts to promote the domestic culture and arts industry and contribute to LOTTE Group's commitment to create social value. Our efforts to support culture and arts have been positively evaluated, and we were first selected as an Excellent Company for Cultural and Arts Sponsorship by the Ministry of Culture, Sports and Tourism in 2021. After passing the re-evaluation, which occurs every three years, we completed our re-certification in 2023."

#### SUPPORT IN 2023

- Provided a total of KRW 1.2 billion in sponsorship funds, thereby expanding cultural enjoyment opportunities for citizens: elevated the level by inviting world-class artists and hosting the first exhibition in Korea of legendary designer Margiela; and supported programs that offer performance opportunities to emerging artists

#### Support for the Korea Ski Association

To enhance the support environment for less popular domestic winter sports and aid the growth and development of future promising athletes, LFCs has continued its donation activities to the Korea Ski Association, in collaboration with other LOTTE Group affiliates.

#### SUPPORT

- Won the first-ever World Championship Gold Medal in winter sports (Snowboard Halfpipe) and an X-Game Gold Medal (Snowboard Superpipe)



# GOVERNANCE

LFC is increasing its corporate value by strengthening its frameworks with stakeholders through trust-based relationships, supported by advanced governance structure. Amidst a crisis characterized by prolonged instability and uncertainty, we are safeguarding our corporate value from internal factors and external impact by establishing a comprehensive risk response process, managing both financial and non-financial risks in an integrated and systematic way, while also operating an internal control system. Additionally, LFC rigorously adheres to anti-corruption laws required of corporations, promotes activities to enhance ethical consciousness, and practices transparent management from a long-term perspective.

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# Our Way forward Responsible Growth

LFC has established a transparent and sound governance structure centered around the Board of Directors, based on which we practice responsible management and strive to achieve sustainable growth.



## Board Independence

Composed of a majority of outside directors

- Compose the BOD with a majority of outside directors to ensure the substantial board independence from the management and controlling shareholders and to perform its functions



## Board Diversity

50% of the outside directors composed of women

- In accordance with the company bylaws, the BOD is not constituted based on a specific gender, ensuring gender diversity by having 50% of outside directors as female.



## Ethical management violations

Zero cases

- Operate the "Online Shinmungo" to collect diverse opinions from employees and business partners regarding unfair business practices, unethical issues, and areas needing improvement
- No ethics management violations reported to the Online Shinmungo System in 2023



## Ethical management training

100% completion by all employees

- Conduct continuous ethical management training based on the LOTTE Personnel Code of Conduct and implementation guideline to establish an ethical culture



## Compliance management training

100% completion by all employees

- Conduct company-wide compliance management training, including fair trade and anti-corruption education, to foster a shared understanding of compliance awareness among employees and to encourage its practice in the workplace.
- Conduct intensive training for relevant departments on the Fair Transactions in Subcontracting Act and the Act on the Promotion of Collaborative Cooperation between Large Enterprises and Small and Medium Enterprises



# CORPORATE GOVERNANCE

## Corporate Governance Principle

In April 2022, LFC established the Corporate Governance Charter to build a fair and transparent governance structure, the foundation for sustainable growth, and became a trusted corporation sharing corporate value with various stakeholders. This charter was made public through its website. Additionally, in May 2022, we disclosed the Corporate Governance Report, which documents the status of compliance with 10 key principles concerning shareholders, the BOD, and audit bodies, as well as reasons for non-compliance and compliance status of key indicators, to enhance the transparency of management and governance. We will make continuous efforts to improve governance centered around these key principles.

- [Corporate Governance Charter](#)
- [Corporate Governance Report](#)

## Enhancement of Shareholder Value

**SHAREHOLDER AND CAPITAL COMPOSITION** Pursuant to LFC's Articles of Incorporation, the total number of shares that can be issued is 50,000,000 (face value per share: KRW 5,000). As of the end of December 2023, the total number of shares issued was 25,800,000. All of them are common shares, and equitable voting rights are assigned according to the number of shares held.

**SHAREHOLDER-FRIENDLY SYSTEM** LFC makes decisions in the direction of guaranteeing, as much as possible, shareholders' rights on matters that bring about significant changes to the company's existence and shareholder rights, while also actively improving policies and expanding various support activities to enhance shareholder value. To expand shareholder participation in voting and improve convenience, LFC approved a comprehensive resolution to implement electronic voting during the board meeting in February 2022, subsequently integrating it into the company's Articles of Incorporation. Consequently, starting from the 59th annual general meeting (AGM) held on March 22, 2023, shareholders can exercise their voting rights electronically without attending the meeting in person.

LFC continues to pay dividends as part of its shareholder return policy. The dividends are determined considering the stability of shareholder dividends, investment for the company's continuous growth, management performance, and cash flow situation. All shareholders are granted equitable voting rights according to the number of shares they hold.

**ANNUAL GENERAL MEETING** LFC is committed to protecting shareholder rights and enhancing shareholder value in various ways. In response to financial authorities' request to decentralize the scheduling of AGM to ensure quorum and facilitate the exercise of voting rights, we have been holding an AGM on days other than the concentrated annual general meeting day since implementing the decentralized program.

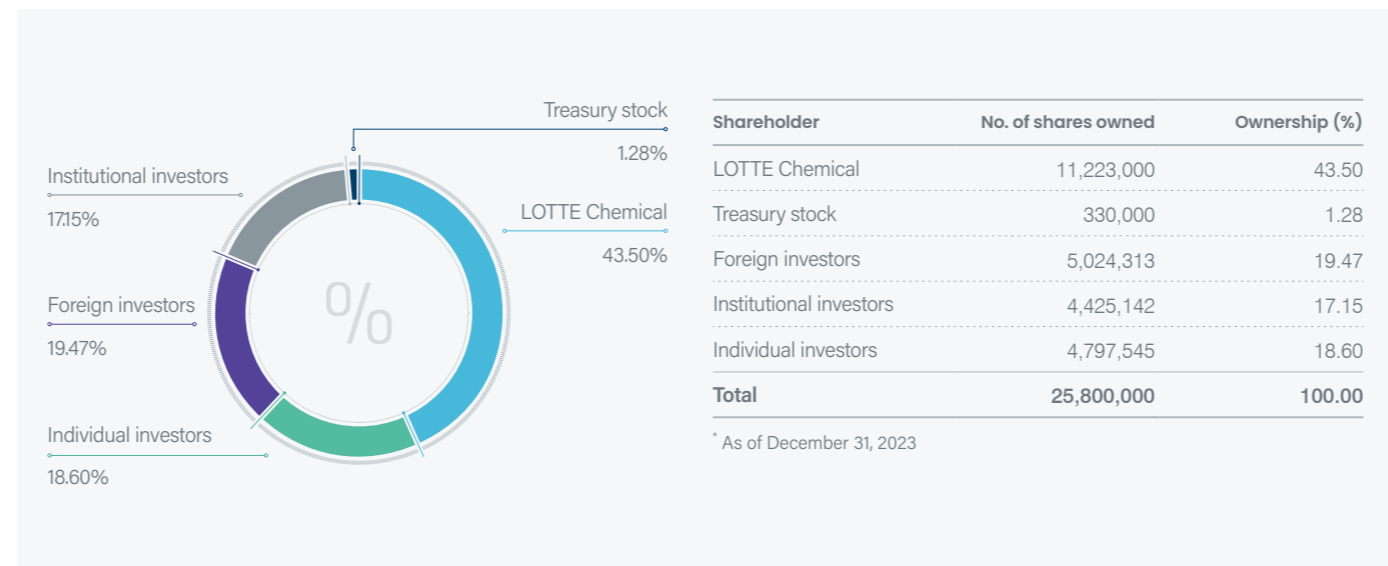
Furthermore, to give shareholders ample time to deliberate on the agenda items, we announce the convening of the AGM approximately three weeks in advance – one week earlier than the minimum two-week requirement. We also provide information on the date, location, and agenda of the AGM. Shareholders can exercise their right to propose by submitting written or electronic documents about certain matters to be discussed at the AGM up to six weeks in advance.

**DISCLOSURE OF CORPORATE INFORMATION** LFC aims to enhance understanding of the company and strengthen trust relationships by providing in-depth investor relations (IR) materials in both Korean and English to domestic and foreign shareholders. We hold regular conference calls or face-to-face meetings with overseas institutional investors in conjunction with our quarterly earnings announcements.

## Stock Information

Number of shares issued	25,800,000 shares
Paid-in capital	KRW 129.0 billion
Share price	KRW 58,000
Market capitalization	KRW 1,496,400,000,000

## Shareholder



## Dividend per Share

Classification	Unit	2021	2022	2023
Dividend per share	KRW	2,300	3,500	2,000
Total dividends	KRW million	58,581	89,145	50,940
Dividend payout ratio	%	22.1	23.1	30.6

# CORPORATE GOVERNANCE

## Board of Directors

**COMPOSITION OF THE BOD** The Board of Directors (BOD) serves as the highest decision-making body responsible for the management and supervisory functions of the company's operations, possessing comprehensive authority over the company's management. LFC operates its BOD transparently, conducting management activities based on checks and balances.

LFC ensures that the BOD maintains substantial independence from the management and controlling shareholders by composing a majority of the board with outside directors. Outside directors, based on their independence, provide professional opinions in major decision-making from a sustainable management perspective and perform evaluations and reviews of the company's performance. As of March 2024, the BOD of LFC is composed of seven experts in various fields, including three inside directors and four outside directors.

The BOD meets regularly according to the annual operating plan, and an extraordinary meeting can be convened if urgent decisions are necessary. During the board resolutions, to prevent conflicts of interest, the voting rights of those with a conflict of interest are restricted in accordance with the Commercial Law and the BOD Regulations.

**TRANSPARENCY AND INDEPENDENCE OF THE BOD** Directors must meet the qualification standards set by relevant laws and the company's Articles of Incorporation, possessing integrity, a sound ethical consciousness, and a proper professional attitude, and must represent the long-term and balanced interests of shareholders and stakeholders. Accordingly, LFC does not appoint anyone responsible for damaging corporate value or infringing shareholder rights as a director and appoints outside directors who are independent and can make independent decisions.

Although LFC is not obligated to establish an independent director recommendation committee, it has operated such a committee since February 2022 to enhance the fairness and independence of its governance structure. At the AGM held in 2024, outside director candidates were recommended by the committee and appointed as directors through the resolution of the shareholders' meeting.

### BOD Composition

Classification	Name	Gender	Key profile	Position and committee activity	Date of appointment or reappointment	BOD Attendance rate in 2023
Inside Directors	Yong-Seok Kim	Male	(Former) CEO, LOTTE INEOS Chemical	CEO, BOD Chair, Management Committee (Chairperson)	Reappointed on Mar. 21, 2024	100%
	Woo-Chan Kim	Male	Head of the ESG Management Group, LOTTE Fine Chemical	Management Committee, Transparent Management Committee, ESG Committee, Independent Director Recommendation Committee	Reappointed on Mar. 22, 2023	100%
	Sang-won Kim	Male	Head of the Corporate Planning Division, LOTTE Fine Chemical	Management Committee, ESG Committee	Appointed on Mar. 21, 2024	N/A (Newly appointed in Mar. 2024)
Outside Directors	Kyu-seon Yoon	Male	(Former) CEO, Hana Capital Advisor, Hyundai Rental Service	Audit Committee (Chairperson), Transparent Management Committee, Independent Director Recommendation Committee (Chairperson)	Appointed on Mar. 22, 2023	100%
	Mi-young Kim	Female	Professor, Department of Materials Science and Engineering, Seoul National University	Compensation Committee (Chairperson), Audit Committee, ESG Committee	Reappointed on Mar. 21, 2024	100%
	Hye-jung Youn	Female	Professor, Program in Environmental Materials Science, College of Agriculture and Life Sciences, Seoul National University	ESG Committee (Chairperson), Audit Committee, Compensation Committee	Appointed on Mar. 22, 2023	100%
	Wook Bong	Male	(Former) Deputy Chief Prosecutor, Supreme Prosecutors' Office Attorney, Kim & Chang Law Firm	Audit Committee, Transparent Management Committee, Compensation Committee, Independent Director Recommendation Committee	Appointed on Mar. 21, 2024	N/A (Newly appointed in Mar. 2024)

\* As of March 2024

\*\* A director's tenure is until the end of an AGM regarding the final settlement term within two years.

\*\*\* A directors and officers insurance policy was purchased for all directors (compensation limit: KRW 20 billion).

# CORPORATE GOVERNANCE

**EXPERTISE AND DIVERSITY OF THE BOD** LFC is advancing the diversity of its board composition to effectively adapt to evolving management environments, leveraging varied perspectives and experiences. In appointing directors, there is no discrimination based on factors such as gender or age, ensuring diversity and expertise so that directors can equitably represent the interests of shareholders and stakeholders. Additionally, directors, as experts rich in knowledge and experience in management, economics, accounting, law, and technology, provide opinions in their respective areas and support rational decision-making.

LFC, in accordance with its Articles of Incorporation, does not constitute the BOD based on a specific gender. At the AGM held in March 2023, a female outside director was newly appointed, and in the AGM in March 2024, an existing female director was reappointed, thus constituting 50% of the outside directors as female, ensuring gender diversity. Our female directors include Director Mi-young Kim, who has been an outside director since 2022, and Professor Hye-jung Youn has been serving as an outside director since 2023.

Moreover, Professor Hye-jung Youn, an expert in the cellulose field highly related to our Green Materials Business Division, was reappointed as an outside director, and Wook Bong, an outside director with diverse legal experience, was newly appointed at the AGM in March 2024, thereby enhancing the expertise of the board.

LFC conducts at least one training program for external directors annually, such as site visits to business locations. External directors can request the provision of information necessary for their duties, and if necessary, they may receive support for consulting fees from the company by appropriate procedures and obtain external experts' counseling.

**Board Skill Matrix** | LFC forms its BOD by considering the directors' expertise and diversity, facilitated through the Independent Director Recommendation Committee during the appointment process. To measure and assess the board's competency and suitability, evaluations are conducted based on the Board Skills Matrix (BSM). In terms of competencies, our BOD is composed of members with expertise in various areas, including leadership, industry and technology, business and accounting, finance and risk management, legal and policy, global, and ESG.

## Outside Director Training in 2023

Date	Provided by	Main training content
Apr. 28	LFC	[Introduction to LFC Magok R&D Center] • Explanation of company management performance and prospects • Introduction to the company's food and pharmaceutical business and products
May 29	Samjong KPMG Academy	• Financial Reporting Supervision Part 3 – Fraud investigation and reporting obligations and 1 other
Jun. 20	Samjong KPMG Academy	• Corporate Governance Part 1 – Understanding corporate governance and 2 more
Jun. 28	Samjong KPMG Academy	• Audit Committee Activity Plans – External communication and 6 more
Jun. 05	Samjong KPMG Academy	• Financial Reporting Supervision Part 3 – Fraud investigation and reporting obligations and 1 other
Sep. 01	EY Hanyoung	[Accounting Transparency Seminar] • Improvements and supervision direction of the Act on External Audit of Stock Companies and 2 more
Nov. 24	LOTTE Corporation	• Understanding and cases of the Group accounting audits • Sustainability reporting standards (focused on IFRS S1, S2)

## Board Skill Matrix

BSM	Yong-Seok Kim	Woo-Chan Kim	Sang-won Kim	Kyu-seon Yoon	Mi-young Kim	Hye-jung Youn	Wook Bong	
Leadership	●	●		●	●	●	●	
Industry & Technology	●	●	●		●	●		
Business & Accounting	●	●	●	●			●	
Finance & Risk Management	●	●	●	●			●	
Legal & Policy							●	
Global	●		●	●	●	●	●	
ESG	●	●	●	●	●	●	●	
Diversity Index	Year of appointment	2022	2021	2024	2023	2022	2023	2024
	Gender	Male	Male	Male	Male	Female	Female	Male
	Age	61	58	55	64	55	52	58



# CORPORATE GOVERNANCE

**BOD ACTIVITIES** The BOD conducts monthly regular meetings, which are held only if there are agenda items for deliberation or reporting. Additionally, extraordinary board meetings are convened as necessary to discuss and decide on significant management matters in accordance with applicable laws, the company's Articles of Incorporation and the BOD Regulations. The BOD is convened by the chairperson or a director designated by the BOD, and notices of meetings are issued at least seven days before the meeting. Directors can participate in board meetings using remote communication tools. Resolutions are made by the attendance of a majority of the directors and the approval of a majority of the directors present, unless otherwise stipulated by relevant laws and regulations.

LFC transparently discloses comprehensive information about the BOD and its committees, including their composition, meeting records, and key resolutions, via the company website. We also promptly and accurately disclose the information required by law and any matters that may significantly impact shareholders and stakeholders through business reports and other means. In 2023, the LFC Board of Directors convened 11 times, addressing a total of 30 agenda items. The overall attendance rate for both inside and outside directors was 99%, with the noted exceptions being due to directors' resignations.

**SUB-COMMITTEES OF THE BOD** LFC has established and operates six committees within the BOD for rapid and efficient decision-making, each performing specific functions and roles. The composition, operation, and authority of these committees are determined according to each committee's regulations, and the company supports the effective performance of the committees with sufficient resources.

**BOD EVALUATION AND REMUNERATION PRINCIPLE** LFC fairly evaluates its board's management activities and appropriately reflects the results in their compensation. To this end, an independent evaluation of activities and performance is regularly conducted at the end of a director's term, and the results are considered in reappointment decisions. Directors' compensation is executed within the total directors' compensation limit approved by the AGM. The compensation for inside directors is calculated based on the value of their job performance, and performance compensation is paid based on a comprehensive evaluation of quantitative indicators such as sales volume and qualitative indicators including key project evaluations and the degree of implementation of mid-to long-term expectations. Outside directors receive equal compensation within the total directors' compensation limit approved at the AGM. The individual remuneration of directors and auditors exceeding KRW 500 million is disclosed in the business report in accordance with relevant laws and regulations.



➔ Please refer to our website (Board of Directors under Governance) to find more information about the BOD meetings.

## Composition of the Sub-committees

Committee	Roles and responsibilities	No. of meetings held in 2023	Chairperson: ● Committee Member: ○						
			Yong-Seok Kim (Inside Director)	Woo-Chan Kim (Inside Director)	Sang-won Kim (Inside Director)	Kyu-seon Yoon (Outside Director)	Mi-young Kim (Outside Director)	Hye-jung Yoon (Outside Director)	Wook Bong (Outside Director)
Management Committee	<ul style="list-style-type: none"> <li>Improve efficiency of management and operation</li> <li>Resolve matters delegated by the BOD</li> </ul>	11	●	○	○				
Audit Committee	<ul style="list-style-type: none"> <li>Ensure the transparency and management efficiency of the company</li> </ul>	6				●	○	○	○
Transparent Management Committee <sup>1)</sup>	<ul style="list-style-type: none"> <li>Secure transparency in managing the company by establishing the fair trade compliance system</li> </ul>	2		○		○			○
Compensation Committee	<ul style="list-style-type: none"> <li>Secure objectivity and transparency in calculating the remuneration of directors</li> <li>Determine the limit on the remuneration of registered directors to be submitted to the AGM</li> <li>Other matters as delegated by the BOD</li> </ul>	2					●	○	○
ESG Committee	<ul style="list-style-type: none"> <li>Set company-wide ESG management strategies and plans and make decisions on implementation matters</li> <li>Make decisions to maximize ESG-based business opportunities and minimize risks</li> </ul>	5		○	○		○	●	
Independent Director Recommendation Committee	<ul style="list-style-type: none"> <li>Recommend candidates for outside director at AGM</li> </ul>	1		○		●			○

<sup>1)</sup> Due to the resignation of the former chairperson (March 2024), the position of chairperson is currently vacant. The chairperson is expected to be appointed at the 2024 Transparent Management Committee meeting.

## Major Agenda Items of BOD Sub-committees in 2023

Committee	Major agenda
Management Committee	<ul style="list-style-type: none"> <li>Wastewater treatment plant investment, research lab infrastructure investment, etc.</li> </ul>
Audit Committee	<ul style="list-style-type: none"> <li>Approval of the audit report for the 2022 fiscal year's accounting and operations</li> <li>Post-evaluation of audit fees, timing, and staffing for 2022</li> </ul>
Transparent Management Committee	<ul style="list-style-type: none"> <li>Agreement on loan contracts, purchase of real estate shares in the LOTTE Consortium Research Complex, etc.</li> </ul>
Compensation Committee	<ul style="list-style-type: none"> <li>Payment of management performance bonuses to registered directors, individual compensation decisions for registered directors, etc.</li> </ul>
ESG Committee	<ul style="list-style-type: none"> <li>Implementation of ESG evaluations in the supply chain, plans for reducing GHG and introducing renewable energy, etc.</li> </ul>
Independent Director Recommendation Committee	<ul style="list-style-type: none"> <li>Recommendation of outside director candidates</li> </ul>

# STRENGTHENING RISK MANAGEMENT

## Integrated Management of Financial and Non-Financial Risks

**IDENTIFYING AND RESPONDING TO RISKS** LFC identifies potential financial and non-financial risks across the entire value chain in advance to prevent crises and enhance the stability of business operations. We categorize financial risks into four types – exchange rate, liquidity, interest rate, and credit. Non-financial risks are classified into seven types – human resources and labor, procurement, safety and health, environment, ethics and compliance, security, and public relations. We have set in place response measures for each risk type to ensure thorough risk management.

In 2022, we collected preliminary risk data, and based on the collected data, we conducted water resources and climate change risk analysis in 2023. Building on these findings, we are advancing risk management in 2024.

### 2023 Water Resource and Climate Change Risk Analysis

As climate change and water scarcity intensify, various risks and changes are emerging. LFC recognizes the importance of corporate roles in responding to climate change and the importance of water resources as a shared resource. We therefore conducted water resource and climate change risk analysis in accordance with international standards. The analysis results are used as foundational data for establishing site-specific water resource and climate change risk mitigation and response plans.

LFC has established and is implementing a climate change risk management process to ensure that climate change issues are considered in all management decisions. We identify climate change risks and opportunities, review directional responses and integration strategies with corporate strategy, and reflect these in the corporate business plan. We are also reviewing a monitoring and evaluation system to efficiently manage the impacts of climate change risks and opportunities across the company, and incorporating these into KPIs and organizational performance.



Please refer to "ESG Focus Area: Green Planet" of this Report to find more information about the water resource and climate change risk analysis.

### Risk Management Areas

Risk type		Response measures	
Financial	Exchange rate	Risk of loss due to a sharp fluctuation in the exchange rate	<ul style="list-style-type: none"> <li>In case of current transactions and fund transactions, transactions are made in the local currency, or the currency of deposit and expenditure is matched to suppress the occurrence of exchange position</li> <li>Active exchanges of opinions with domestic financial institutions on foreign exchange risk management</li> <li>Realization of a sound, stable financial structure by establishing a foreign exchange management system that prohibits speculative foreign exchange transactions</li> </ul>
	Liquidity	Risk of loss due to liquidity management failures	<ul style="list-style-type: none"> <li>Liquidity risk management and maintenance of proper liquidity level through periodic fund balance forecasting and adjustment</li> <li>Prediction and monitoring of liquidity at all times to maintain an appropriate level of unused borrowing limits and meet the demand for operating funds</li> <li>Flexible maintenance of funding capacity within the credit limit through active sales activities</li> </ul>
	Interest rate	Risk of loss due to volatility of interest rates	<ul style="list-style-type: none"> <li>Reduction of interest rate uncertainty and minimization of financial costs through reduction of high interest rate borrowings and improvement of long/short-term borrowing structure</li> <li>Interest rate risk management through constant monitoring of domestic and international interest rate trends and establishment of countermeasures</li> </ul>
	Credit	Risk of non-compliance with the contractual terms of the counterparty and financial institution	<ul style="list-style-type: none"> <li>Credit risk management by systematically evaluating the financial credit rating of counterparties</li> <li>Maintenance of appropriate collateral for counterparties</li> <li>Report on the monthly collection delay status and countermeasures for financial assets whose collection has been delayed</li> <li>Adherence to the principle of working with banks that have high international credit ratings</li> </ul>
Non-financial	Personnel and labor	Collapse of collaborative labor-management relations due to personnel/labor issues	<ul style="list-style-type: none"> <li>Promotion of corporate culture improvement activities and implementation of programs to increase employee satisfaction</li> <li>Establishment of cooperative labor-management relations through regular labor-management consultations and communication channels</li> </ul>
	Purchasing	Loss in sales/production due to failure in the supply and demand for raw and subsidiary materials	<ul style="list-style-type: none"> <li>Monitoring of international price trends of raw and subsidiary materials and operation of a flexible inventory</li> <li>Engagement in activities designed to foster friendly and cooperative relationships with suppliers and monitoring of supply chain trends at all times</li> <li>Diversification of supply chain to improve supply and demand stability</li> </ul>
	Health and safety	Property damage and personal injury, suspension of business, and decline of corporate image due to industrial accidents and disasters	<ul style="list-style-type: none"> <li>Development of the ability to cope with similar situations by providing regular training for each situation in preparation for environmental disasters and factory accidents</li> <li>Compliance with the safety-related laws and regulations; and cooperation with external professional institutions to detect risk factors beforehand and implement improvement activities</li> </ul>
	Environment	Sanctions on production and decline of corporate image due to non-compliance with the environmental regulations and resulting in environmental pollution	<ul style="list-style-type: none"> <li>Minimization of risks through regular implementation of legal and regulatory environmental risk assessment</li> <li>Establishment of environmental targets and execution of plans that exceed internal and external environmental management thresholds</li> </ul>
	Ethics and compliance	Risk of external sanctions for violations of ethics regulations and laws	<ul style="list-style-type: none"> <li>Provision of information on laws and regulations, such as corporate legislation trends and corporate-related legislation issues, to employees as needed</li> <li>Prevention of possible legal violations through regular compliance training and frequent monitoring of compliance</li> <li>Establishment of a strict reporting process through permanent operation of the ethical management violation reporting system</li> </ul>
	Security	Business disruption and financial loss due to information security incidents	<ul style="list-style-type: none"> <li>Provision of security training and constant monitoring under the supervision of a dedicated information protection organization</li> <li>Prevention of leakages of important company information with the introduction of an information protection program</li> </ul>
	Public relations	Deterioration of company's reputation due to negative media coverage	<ul style="list-style-type: none"> <li>Sharing of company-related issues with employees and conduct of activities aimed at halting the spread of rumors</li> <li>Regular monitoring of company- and product-related media coverage and active response to negative reports</li> </ul>

**RISK RESPONSE PROCESS** As the uncertainty in the business environment surrounding the company increases, LFC has established and is operating a response process based on the risk levels of financial and non-financial risks for effective risk mitigation. High-risk levels A and B involve convening the Risk Management Committee for a company-wide response, while lower-risk level C involves quick responses by the executive in charge followed by a post-report to the Risk Management Committee. This systematic risk management procedure allows the company to promptly respond to various risks that could impair corporate value, cause economic losses, or tarnish the reputation.

**RISK MANAGEMENT ORGANIZATION** LFC effectively manages risks at the company-wide level based on BOD Operation Regulations and each BOD sub-committee's operating rules, with central roles performed by the six BOD sub-committees (Management Committee, Audit Committee, Transparent Management Committee, Compensation Committee, ESG Committee, Independent Director Recommendation Committee).

### Risk Response Process



# STRENGTHENING RISK MANAGEMENT

## Tax Policy

LFC contributes to national and local government finances by complying with tax laws, fulfilling its obligations for honest tax reporting and payment, and practicing contributions to the community.

**CONTRIBUTING TO LOCAL COMMUNITIES** LFC faithfully fulfills its role as a responsible taxpayer and investor in the community. We contribute to local employment creation and energizes the local economy by maximizing the use of its products. We diligently report and pay national taxes such as corporate tax, value-added tax, withholding tax, and local taxes including corporate local income tax, acquisition tax, property tax to a total of four local governments, including Ulsan, thereby contributing to community development.

**TAX RISK EVALUATION AND MANAGEMENT** LFC strives to prevent all tax risks that could arise during business activities such as enhancing competitiveness of existing businesses, transactions related to goods and services, new business initiatives, and changes in transaction structures. In the process of tax risk management, we make final decisions based on thorough internal reviews and, when necessary, consultations with external experts and tax authorities. Any issues that arise are promptly addressed and improved.

## Enhancing Internal Control

**ESTABLISHMENT OF AN INTERNAL CONTROL SYSTEM** LFC continuously promotes the establishment of internal accounting management regulations and system maintenance, proactive audits, and investigations based on the operation of the internal control system to enhance corporate value from a long-term perspective. We are also operating specific internal control regulations to establish internal control mechanisms that prevent insider trading and self-dealing by management or controlling shareholders for personal gain. Additionally, we have implemented a process through the compliance management portal system that mandates the prior review of external business contracts and agreements.

**ADVANCEMENT OF AN INTERNAL CONTROL SYSTEM** Since 2020, LFC has been operating an internal accounting control system, conducting periodic business process inspections, improving shortcomings, and managing changes to update the management system. Starting in 2023, the construction of the consolidated internal accounting control system and mandatory external audits have been expanded to subsidiary companies for companies with assets over KRW 2 trillion.

LFC performs annual inspections on the effectiveness of the internal accounting control system and reports the operational status of the system to the Audit Committee, the Board of Directors, and the annual general meetings of shareholders. Furthermore, the Audit Committee independently evaluates the reported operational status, and the external auditor audits the internal accounting control system and expresses an audit opinion.

Since the implementation of the system, LFC has received an unqualified opinion for four consecutive years, and our internal accounting management system is considered to be effectively designed and operated from a materiality perspective. Moving forward, we will continue to seek improvements in accounting transparency and financial statement reliability through continuous process improvements and management enhancement.

**ENHANCEMENT OF AN ADVANCED AUDIT SYSTEM** To supplement internal regulations related to audit tasks, LFC continuously revises and updates regulations such as those concerning the handling of public interest reports and the protection of reporters, internal audit rules, etc. The regulations concerning the handling of public interest reports include exceptions to public interest reporting and disadvantageous actions, and the implementation of protection and support policies for public interest reporters.

In the internal audit regulations, we have added the Audit Committee to the authority for conducting audits, formalized the qualifications for audit department members, and standardized the audit procedures to ensure fair and efficient audit operations. In 2023, the Audit Committee held a total of six meetings, which were transparently disclosed on the website.

LFC is improving unreasonable practices through theme audits linked to Group policies and collaborations among group companies. Additionally, by strengthening the preventive audit system, the company blocks potential risks in corruption-prone areas in advance and will build an advanced audit operation system by enhancing the expertise of audit personnel through external expert training and external communications.

## Tax Management Policy

- Employees in charge of taxes at LFC and subsidiaries comply with each country's tax laws in accordance with our tax strategy and carry out work based on the principle of maintaining transparent relations with taxation authorities.
- LFC does not abuse the international tax system and conduct transactions that transfer income between countries. LFC faithfully fulfills tax payment obligations in compliance with tax laws.
- We conduct prior reviews of various tax risks that arise in the business process to comply with current tax laws. When we review risks, we make decisions based on advice from outside tax experts and taxation authorities.

## Tax Risk Evaluation Steps



# CULTIVATING A CULTURE OF ETHICS AND COMPLIANCE

## Advancing Ethical Management

**ETHICAL MANAGEMENT SYSTEM** Employees at LFC perform their duties transparently and fairly based on the Code of Conduct and internal regulations, without seeking undue personal gain or giving or receiving inappropriate gifts or entertainment. They also respect and comply with anti-corruption laws applicable to their business activities in the regions where they operate.

LFC has established and is advancing an ethical management system that includes both pre- and post-management systems, outlining essential procedures and standards to follow in business operations. These systems aim to integrate ethical management into business processes and solidify it within the organizational culture. Furthermore, we expect our diverse business partners, including suppliers, to comply with standards comparable to our own code of conduct. Compliance with these standards is a crucial consideration in determining whether to continue collaborations with these organizations. Moving forward, we will continue to prevent unfair business practices and unethical issues based on a robust ethical management system, identify and manage areas needing improvement, and solidify ethical management as part of our organizational culture.

→ [LOTTE Personnel Code of Conduct](#)

### ETHICAL MANAGEMENT CONSULTING AND REPORTING CHANNEL

**Online Shinmungo** | LFC operates an online whistleblowing portal called "Online Shinmungo" to collect various opinions on unfair business practices, unethical issues, and areas needing improvement from employees and subcontractor representatives. Reports received through this portal are investigated according to the handling process, and if misconduct is confirmed, disciplinary actions, process improvements, and ethical management training are implemented as preventive measures. If the reported misconduct involves the whistleblower, they may be eligible for reduced or waived penalties.

To safeguard whistleblowers from potential disadvantages, the identity of the whistleblower and the details of the report are strictly confidential and will not be disclosed without the whistleblower's consent. The same level of protection is extended to others who may have contributed by providing statements, materials, or other assistance related to the disclosure. We take all necessary measures, such as disciplinary action, in accordance with related laws as well as Article 13 "Obligation to Guarantee Confidentiality of Public Interest Whistleblowers, etc." of the company's Public Interest Reporting

Regulations that meets the legal standards, in the event of a violation of the whistleblower's protection. In 2023, out of 13 reports made through the Online Shinmungo, none involved violations of ethical management.

→ [Online Sinmungo](#)

**Whistle LFC** | In 2022, LFC introduced "Whistle LFC," a mobile whistleblowing channel, to foster a clean and healthy organizational culture through the activation of internal reporting. Whistle LFC, which receives reports on ethical management violations anonymously via a KakaoTalk 1:1 open chat room, improves anonymity and expedites the receipt and processing of reports. To raise awareness of Whistle LFC among internal employees and encourage reporting, LFC regularly provides guidance about this channel. In 2023, there were no reports made through Whistle LFC.




**PARTICIPATION IN ANTI-CORRUPTION PLEDGE** After joining the UNGC (UN Global Compact) in 2020, LFC participates in the Business Integrity Society (BIS) pledge as part of its member activities. BIS is a global anti-corruption project launched in cooperation with the UNGC Korea Association and the Korea Social Responsibility Investment Forum (KoSIF). It aims to encourage collective efforts to prevent corruption and proposes improvements to corporate anti-corruption systems and policies through cooperation with the National Assembly and government agencies, supporting the enhancement of corporate capabilities to foster transparency in business activities and establish a fair market environment. Building on its commitment to the pledge, LFC is actively working to eradicate corruption to enhance corporate competitiveness, and is proactively enhancing its anti-corruption policies and systems. Furthermore, we will strive to enhance corporate operational transparency by managing ethical and compliance risks based on ESG management and building trust with stakeholders.

## Reported Matters

### Reported Matters

- 01 Corrupt behavior, such as embezzlement, dereliction of duty, bribery, improper solicitation, and provision of benefits to a third party
- 02 Accounting fraud, such as violation of internal accounting control regulations
- 03 Human rights violation, such as workplace harassment and sexual harassment
- 04 Illegal or illicit act in relation to the environment, such as environmental infringement
- 05 Unfair handling of business or fair trade violation
- 06 Unfair stake participation in unlisted trading companies
- 07 Dual employment
- 08 Other matters that go against laws, company rules, internal standards, or Code of Conduct

### Reporting Channels

-  **Phone**  
+82-2-6974- 6524
-  **Email**  
lfcaudit@lotte.net
-  **Fax**  
+82-52-270-6129

## Report Handling Procedure



\* If an accusation is found to be unfounded, the relevant incident ends with a report on the investigation results.

# CULTIVATING A CULTURE OF ETHICS AND COMPLIANCE

**FULL ESTABLISHMENT OF ETHICAL MANAGEMENT CULTURE** LFC continuously conducts ethical management training based on the LOTTE Code of Conduct and practical guidelines to establish an ethical culture. In 2023, we enhanced compliance and ethical management awareness among our employees through collective and online ethics and compliance training, and conducted risk prevention activities.

Additionally, to foster a culture of transparent transactions, a letter from the CEO expressing the commitment to ethical management is sent twice a year to all suppliers and partner companies.

Classification	Program	Training phase	Content
Legal, Ethical, and Human Rights Management	CEO compliance	1	<ul style="list-style-type: none"> <li>Human Rights Management Statement</li> <li>Code of Conduct for Partner Companies</li> <li>Compliance and whistleblowing guidelines</li> <li>Safety, Environment, and Health Management Policy</li> </ul>
	Compliance management training	1	<ul style="list-style-type: none"> <li>Anti-corruption, whistleblowing channel guidelines</li> <li>The Act on the Promotion of Collaborative Cooperation between Large Enterprises and Small and Medium Enterprises; fair trade</li> <li>Understanding of the Improper Solicitation and Graft Act; preventing improper solicitations</li> <li>Protecting trade secrets, etc.</li> </ul>
Prevention of Workplace Harassment	Workplace harassment prevention training	2	<ul style="list-style-type: none"> <li>Understanding workplace harassment</li> <li>Preventing workplace harassment</li> </ul>
Sexual Harassment Prevention	S.M.I.L.E. (Self-Opening Workplace Creation): Workplace sexual harassment prevention training	2	<ul style="list-style-type: none"> <li>Understanding and judging sexual harassment</li> <li>Responding to and preventing sexual harassment</li> </ul>
Disability Awareness Improvement	S.M.I.L.E. (Self-Opening Workplace Creation): Workplace disability awareness training	2	<ul style="list-style-type: none"> <li>Understanding disabilities</li> <li>Employment and systems for people with disabilities</li> </ul>
Information Security	[Smart Legal] Personal Information Protection	2	<ul style="list-style-type: none"> <li>What is personal information?</li> <li>User's personal information</li> <li>Personal information protection measures</li> </ul>



**Ethical Management Education in 2023**

**100%** completion  
(targeting all 947 employees)

---

1 session for new employees and 4 sessions for experienced employees, with 6 online training sessions conducted

## Internalizing Compliance Management

### COMPLIANCE MANAGEMENT SYSTEM

**Compliance Management Charter** | Based on the mission, "We enrich people's lives by providing superior products and services," LFC seeks to grow into a company that is loved by citizens and that fulfills social responsibilities, and pledges to comply with the Compliance Charter, which can be found at the link below.

[Compliance Charter](#)

**Compliance Management Execution Organization** | To enhance compliance management-related work expertise and to practice a compliance mindset that befits a global company, LFC appointed a Head of the Legal&Compliance Division directly under the CEO who oversees the Compliance Management Team, Ethics Management Team, and Internal Accounting Management Division. The Compliance Officer was appointed as an executive in charge of presenting the overall direction of compliance management, such as establishing and implementing LFC's compliance management strategies. Specialized departments constantly monitor the status of our compliance management to prevent unethical conduct in advance. They also carry out various activities to raise employee awareness of compliance.

### ENHANCING EMPLOYEES' COMPLIANCE MINDSET

**CEO Compliance Message** | LFC preemptively identifies potential risk factors related to compliance to prevent risks and operates various systems to internalize compliance awareness among all employees. We continuously share updates on the enactment and revision of relevant laws, including the Fair Trade Act. To encourage continuous interest and practice in compliance management among employees, the "CEO Compliance Message" is communicated biannually, and in 2023 it was announced company-wide in April and July.

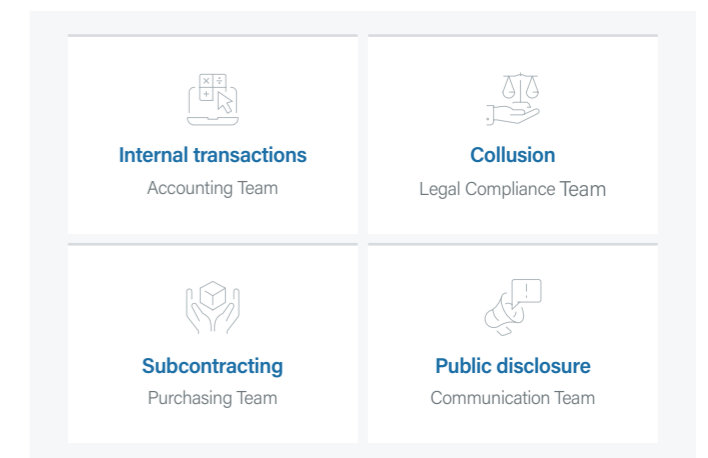


CEO Compliance Message – Regulatory Compliance

### Compliance Management Vision



### Compliance Management Organization by Task



# CULTIVATING A CULTURE OF ETHICS AND COMPLIANCE

**Compliance Training** | Including mandatory training on compliance and ethical management for newly hired employees, LFC conducts various compliance management training sessions, forming a consensus on compliance awareness among employees and leading them to practice it in their duties. In 2023, online compliance training was conducted for all employees, with everyone participating 100% in company-wide compliance management training, including fair trade and anti-corruption education. Additionally, focused training sessions on the in Subcontracting Act and the Act on the Promotion of Collaborative Cooperation between Large Enterprises and Small and Medium Enterprises were conducted for relevant departments, enhancing participation, interest, and expertise among employees.

**DISSEMINATING COMPLIANCE MANAGEMENT AMONG PARTNER COMPANIES** LFC includes clauses in its subcontracting standard contracts that require compliance with domestic and international anti-corruption laws throughout the contract period. These include the Improper Solicitation and Graft Act, the Act on Combatting Bribery of Foreign Public Officials in International Business Transactions, the U.S. Foreign Corrupt Practices Act, and the U.K. Bribery Act. Additionally, to ensure fair trade compliance and the eradication of corrupt practices by our partners, we receive a “compliance management agreement” during the signing of all subcontract agreements. This agreement states that both parties will not engage in any unfair trade practices or fraudulent activities and will participate in the practice of compliance management.

To raise awareness about the importance of compliance management, LFC has published and distributed the Conduct for Partner Companies on its website. This code specifies requests to suppliers and partner companies regarding environmental, safety, human rights, and compliance management, aligning with ESG aspects.



Conduct for Partner Companies

## Establishing a Culture of Fair Trade

**OPERATING THE COMPLIANCE PROGRAM** Since 2006, LFC has been operating a Compliance Program (CP) to enhance voluntary compliance with fair trade regulations and prevent unfair trade practices, thereby building a fair-trade culture. The Compliance Management Team, the central department for fair trade-related affairs, collaborates with compliance officers from various divisions to systematically advance the CP. We conduct internal diagnostics on major business units and set in place an internal system that allows for pre-review by in-house fair trade experts on new businesses, sales, and purchasing to prevent and inspect potential violations of regulations.

To strengthen fair trade capabilities, we provide systematic CP training to fair trade officers and subcontracting officers by job function. We also conduct regular training for operational departments and share updates on relevant legal amendments. In 2023, various programs including online and offline training and post-training tests were conducted to enhance the training effects. Furthermore, departments with high CP risks such as sales and subcontracting departments are monitored for compliance, and findings are reported to management to heighten awareness among the responsible personnel. Issues identified are promptly corrected to ensure compliance.

**EVALUATION OF COMPLIANCE RISK AREAS** Every year, LFC selects major compliance-related risks that could arise in the management process, assesses the likelihood of occurrence and impact, and manages these risks by category. Based on this risk analysis data, we plan and implement annual compliance activities including training and monitoring.

**LOTTE GROUP'S COMPLIANCE ASSESSMENT** LOTTE Group conducts compliance diagnostics to assess the overall compliance status of its subsidiaries. These diagnostics consist of a “Practice Index” that checks for violations of specific Code of Conduct themes required in the execution of tasks, and a “Foundation Index” that measures the level and state of the company’s organizational culture preparedness, including aspects such as commitment, strategy, cultural integration, and systems. In 2023, LFC received a favorable assessment of its compliance status with a composite score of 95. Based on the diagnostic results, we aim to enhance the level of compliance by deriving improvement measures and taking necessary actions.

**TRAINING AND INSPECTIONS RELATED TO THE AMENDED LAWS, INCLUDING THE DELIVERY PRICE INDEXATION SYSTEM** The Delivery Price Indexation System was implemented from October 2023, following the revision of the Subcontracting Act and the Act on the Promotion of Collaborative Cooperation between Large Enterprises and Small and Medium Enterprises. In order to prevent any violations of the related laws, we have conducted training and inspections for the relevant departments. In addition, we have continuously monitored and conducted training for the responsible personnel regarding the mandatory disclosure of subcontract payment terms, which has been in effect since the first half of 2023.

### Compliance Training in 2023

Name	Target	Frequency	Content	Completion
Fine Company Training	All employees	Annual	Anti-corruption, fair trading, information protection, human rights, ethics, and compliance management	100% (947 persons)
New Employee Training	New and experienced employees	As needed	Anti-corruption, fair trading, information protection, human rights, ethics, and compliance management	100% (71 persons)
Role-specific Advanced Training	Employees in relevant roles	As needed	Trade secret protection training, subcontracting law training, win-win growth law training	100% (74 persons)

# SUSTAINABILITY **FACTBOOK**

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# FINANCIAL & NON-FINANCIAL PERFORMANCE SUMMARY

## Financial Performance

### Summarized Financial Statements

Classification	Unit	2021	2022	2023
Current assets	KRW million	866,863	1,316,299	1,346,558
Cash and cash equivalents	KRW million	228,813	577,991	460,888
Short-term financial instruments	KRW million	7,657	8,964	7,667
Financial assets at fair value through profit or loss	KRW million	64,480	132,404	-
Accounts receivable	KRW million	306,123	293,556	247,482
Other current financial assets	KRW million	2,827	1,162	304,173
Other current assets	KRW million	12,462	15,949	20,457
Inventories	KRW million	244,501	286,273	305,891
Non-current assets	KRW million	1,856,591	1,393,547	1,336,372
Long-term financial assets	KRW million	20	20	20
Financial assets at fair value through profit or loss	KRW million	690,135	136,974	95,040
Financial assets at fair value through other comprehensive income	KRW million	9,221	11,436	10,043
Other non-current financial assets	KRW million	1,860	1,915	2,051
Investment in associates and joint ventures	KRW million	335,538	331,637	325,561
Property, plant and equipment	KRW million	765,767	798,600	784,123
Investment properties, net	KRW million	3,332	5,069	4,961
Right-of-use assets	KRW million	22,482	22,578	23,165
Intangible assets, net	KRW million	20,382	22,605	20,519
Defined benefit asset, net	KRW million	7,813	33,647	25,890
Other non-current assets	KRW million	41	30	433
Deferred tax assets	KRW million	-	29,036	44,566
<b>Total assets</b>	<b>KRW million</b>	<b>2,723,454</b>	<b>2,709,846</b>	<b>2,682,930</b>
Current liabilities	KRW million	309,017	397,001	282,045
Non-current liabilities	KRW million	215,807	18,627	17,679
<b>Total liabilities</b>	<b>KRW million</b>	<b>524,824</b>	<b>415,628</b>	<b>299,724</b>

Classification	Unit	2021	2022	2023	
Equity attributable to owners of the parent	KRW million	2,198,630	2,294,218	2,383,206	
Capital stock	KRW million	129,000	129,000	129,000	
Capital surplus	KRW million	302,905	302,905	302,905	
Other components of equity	KRW million	18,802	18,802	18,802	
Accumulated other comprehensive income	KRW million	(20,552)	(18,977)	(19,868)	
Retained earnings	KRW million	1,768,475	1,862,488	1,952,367	
Non-controlling shareholders' equity	KRW million	-	-	-	
<b>Total equity</b>	<b>KRW million</b>	<b>2,198,630</b>	<b>2,294,218</b>	<b>2,383,206</b>	
Sales	KRW million	1,780,293	2,463,759	1,768,621	
Operating profit	KRW million	244,514	404,311	154,778	
Net profit	KRW million	585,458	146,159	182,032	
Profit attributable to owners of the parent	KRW million	585,458	146,159	182,032	
Non controlling interest	KRW million	-	-	-	
Earnings per share	KRW	22,986	5,738	7,147	
Number of entities included in consolidation	Company	3	3	3	
Operating profit margin	%	13.73	16.4	8.8	
Debt ratio	%	23.9	18.1	12.6	
ROE	%	30.4	6.5	7.8	
CAPEX	KRW billion	1,195	1,432	1,000	
Sales portion by business	Chemical Business	%	77.5	79.9	71.9
	Green Material Business	%	22.5	20.1	28.1
Sales by business	Chemical Business	KRW billion	13,804	19,682	12,711
	Green Material Business	KRW billion	3,999	4,956	4,975
Portion of exports	Domestic sales	%	61	61	58
	Exports	%	39	39	42



# FINANCIAL & NON-FINANCIAL PERFORMANCE SUMMARY

## Financial Performance

### Summarized Financial Statements

Classification	Unit	2021	2022	2023
Number of shares issued	Share	25,800,000	25,800,000	25,800,000
Net profits	KRW billion	5,855	1,462	1,820
Capital ratio	%	80.7	84.7	88.8
R&D investment	KRW billion	13.2	14.6	17.2
Fixed income securities	KRW billion	-	-	-

\* As of 2023 year-end; based on consolidated financial statements

### Distribution of Economic Value

	Classification	Unit	2021	2022	2023
Shareholders	Dividend	KRW million	58,581	89,145	50,940
	Interest expense	KRW million	331	531	780
	Sub total		58,912	89,676	51,720
Employees	Salaries & bonus	KRW million	101,106	107,588	108,713
	Employee benefits	KRW million	18,419	19,882 <sup>1)</sup>	30,394
	Severance benefits	KRW million	8,248	7,367	5,599
	Training expenses	KRW million	699	990	1,585
	Sub total		128,472	135,830	146,291
Government & public institutions	Corporate tax and other taxes	KRW million	86,757	145,861	86,790
	Sub total		86,757	145,861	86,790
Local communities	Expenditures in social contributions	KRW million	1,764	5,045	2,884
	Membership fee	KRW million	259	301	423
	Sub total		2,023	5,346	3,307
Government support subsidy	Research project support fund <sup>2)</sup>	KRW million	-	912	1,948
	Sub total		-	912	1,948
Business partners	Facility investment	KRW million	117,719	142,025	103,978
	Subcontracting costs	KRW million	25,606	28,396	31,873
	Purchasing costs	KRW million	392,885	470,385	462,398
	Advertising expense	KRW million	3,491	4,160	4,417
	Sub total		539,701	644,966	602,723
<b>Total</b>			<b>815,865</b>	<b>1,022,591</b>	<b>892,779</b>

<sup>1)</sup> Correction due to aggregation error in the previous year

<sup>2)</sup> Began to collect data in 2022

# FINANCIAL & NON-FINANCIAL PERFORMANCE SUMMARY

## Non-Financial Performance

### Environmental Performance

Classification	Content		Unit	2021	2022	2023		
Energy	Total energy consumption <sup>1)</sup>	Domestic	Gasoline	TJ	1	1	1	
			Diesel	TJ	1	2	1	
			Non-renewable energy	LNG	TJ	372	346	256
				Electricity	TJ	12,427	11,610	12,782
			Renewable energy	Steam	TJ	1,718	1,629	1,616
				Steam	TJ	1,457	1,417	1,436
	Total <sup>2)</sup>		TJ	15,975	15,005	16,090		
	Direct energy consumption		TJ	375	349	258		
	Indirect energy consumption		TJ	15,603	14,657	15,832		
	Energy consumption intensity		TJ/ Sales-KRW billion	8.97	6.09	9.10		
Reduction by executing tasks to reduce energy consumption		TJ	73	100	1,248			
Water <sup>3)</sup>	Water intake	Ulsan Complex	Industrial water	Ton	13,070,185	12,720,635	12,479,966	
		Incheon Plant	Industrial water	Ton	69,091	69,489	67,997	
		Total		Ton	13,139,276	12,790,124	12,547,963	
	Total water consumption	Ulsan Complex	Industrial water	Ton	13,070,185	12,720,635	12,479,966	
		Incheon Plant	Industrial water	Ton	69,091	69,489	67,997	
		Total		Ton	13,139,276	12,790,124	12,547,963	
	Water consumption intensity		TJ/ Sales-KRW billion	7,380.4	5,191.3	7,094.8		
	Water recycle <sup>4)</sup>		Ton	1,374,451	1,413,283	1,452,013		
	Water reuse <sup>5)</sup>		Ton	164,152,000	158,497,000	155,782,500		
	Water reuse rate <sup>6)</sup>		%	92.6%	92.6%	92.6%		

Classification	Content		Unit	2021	2022	2023
Wastewater <sup>3)</sup>	Total weight of wastewater	Ulsan Complex	Ton	10,250,285	9,731,433	9,585,486
		Incheon Plant	Ton	47,120	53,893	45,788
		Total		Ton	10,297,405	9,785,326
	Total wastewater final discharge volume		Ton	10,297,405	9,785,326	9,631,274
	Wastewater discharge intensity		Ton/ Sales-KRW billion	5,784.1	3,971.7	5,445.6
Other air pollutants	NOx emissions		Ton	11.55	11.57	10.24
	Legal limit of NOx emissions		ppm	60	60	42
	SOx emissions		Ton	1.9	2.0	0.6
	Legal limit of SOx emissions		ppm	70	70	49
	Dust emissions		Ton	9.4	6.1	6.1
	Legal limit of dust emissions		ppm	15	15	30

\* Due to the schedule for adjusting system indicator values and the difference in report publication dates, some data variations may occur annually for the indicators managed through the Environmental Information Disclosure System. From 2023, the emission/discharge intensity was uniformly applied based on the sales of the main financial statements.

<sup>1)</sup> Total consumption is a numerical value based on the report, with a rounding difference

<sup>2)</sup> The figures for 2021 have been revised based on the Report on GHG Emissions and Energy Consumption. The figures for 2023 are based on the third-party verification and the content of the report, but the final figures are subject to change.

<sup>3)</sup> Based on domestic business sites

<sup>4)</sup> Reused after physical/chemical treatment. Recycle includes Ulsan Complex only.

<sup>5)</sup> Water is reused for the same purpose

<sup>6)</sup> The calculation formula for the reuse rate: (Recycled amount + reused amount)/(Recycled amount + reused amount + used amount)

# FINANCIAL & NON-FINANCIAL PERFORMANCE SUMMARY

## Non-Financial Performance

### Environmental Performance

Classification	Content	Unit	2021	2022	2023	
	Total emissions (Scope 1+2) <sup>7)</sup>	tCO <sub>2</sub> eq	687,673	643,202	697,615	
	Direct emissions (Scope 1)	tCO <sub>2</sub> eq	65,017	60,533	61,505	
	Indirect emissions (Scope 2)	tCO <sub>2</sub> eq	622,658	582,671	636,112	
	GHG emissions intensity	tCO <sub>2</sub> eq/ Sales-KRW billion	386.27	261.07	394.44	
	Reduction of GHG emissions	tCO <sub>2</sub> eq	1,887	3,938	56,733	
	Total emissions (Scope 3)	tCO <sub>2</sub> eq	4,434,070	4,060,722	3,490,328	
Greenhouse Gas (GHG)	Upstream	Purchased goods and services	tCO <sub>2</sub> eq	3,954,504	3,622,254	3,065,040
		Capital goods	tCO <sub>2</sub> eq	44,297	30,647	19,596
		Fuel- and energy-related activities that do are not include in Scope 1 and 2	tCO <sub>2</sub> eq	92,471	86,446	83,851
	Upstream	Upstream transportation and distribution	tCO <sub>2</sub> eq	108,402	100,486	94,450
		Waste generated in operations	tCO <sub>2</sub> eq	13,845	14,058	14,887
		Indirect emissions (Scope 3) <sup>8)</sup>				
	Indirect emissions (Scope 3) <sup>8)</sup>	Business travel	tCO <sub>2</sub> eq	4	17	11
		Employee commuting	tCO <sub>2</sub> eq	497	541	569
	Down stream	Upstream leased assets	tCO <sub>2</sub> eq	37,587	32,421	32,061
		Downstream transportation and distribution	tCO <sub>2</sub> eq	11,192	10,407	11,655
		Use of sold products	tCO <sub>2</sub> eq	34,076	29,916	33,663
		End-of-life treatment of sold products	tCO <sub>2</sub> eq	4,601	3,725	4,608
		Downstream leased assets	tCO <sub>2</sub> eq	622	487	632
Investments		tCO <sub>2</sub> eq	131,972	129,317	129,305	

<sup>7)</sup> There is no renewable energy usage amount. Total emissions amount is a numerical value based on the report, with a rounding difference. The calculation criterion is the Guidelines on Emission Reporting and Certification under the GHG emissions trading system. The figures for 2021 have been revised based on the Report on GHG Emissions and Energy Consumption. The figures for 2023 are based on the third-party verification and the content of the report, but the final figures are subject to change.

<sup>8)</sup> The sum of the calculated values for 13 out of the total 15 categories of Scope 3, and third-party verification has been completed for the all items of 2023 emissions only. Scope 3 emissions for 2021 and 2022 have been recalculated using the 2023 calculation criteria.

Classification	Content	Unit	2021	2022	2023	
Water pollutants	TOC discharge <sup>9)</sup>	Ton	335	254	265	
	TOC discharge intensity <sup>10)</sup>	Ton/ Sales-KRW billion	0.19	0.10	0.15	
	Legal limit of TOC discharge		Linked treatment (90ppm) Direct discharge (40ppm)	Linked treatment (50ppm) Direct discharge (25ppm)	Linked treatment (120ppm) Direct discharge (25ppm)	
	BOD discharge	Ton	66.09	26.05	27.18	
	BOD discharge intensity	Ton/ Sales-KRW billion	0.04	0.01	0.02	
	Legal limit of BOD discharge		Linked treatment (80ppm) Direct discharge (10ppm)	Linked treatment (80ppm) Direct discharge (10ppm)	Linked treatment (75ppm) Direct discharge (10ppm)	
	SS discharge	Ton	178.89	91.41	103.39	
	SS discharge intensity	Ton/ Sales-KRW billion	0.10	0.04	0.06	
	Legal limit of SS discharge		Linked treatment (80ppm) Direct discharge (10ppm)	Linked treatment (80ppm) Direct discharge (10ppm)	Linked treatment (120ppm) Direct discharge (10ppm)	
	Total weight of waste	Ulsan Complex	Ton	82,589	91,022	103,122
		Incheon Plant	Ton	331	303	390
		Total	Ton	82,919	91,325	103,513
	General waste		Ton	82,268	90,683	103,079
Landfill		Ton	4,824	6,438	2,389	
Incineration		Ton	603	1,175	545	
Recycling		Ton	76,841	83,070	100,145	
Specified waste		Ton	651	642	434	
Others		Ton	260	158	164	
Waste	Landfill	Ton	6	2	0	
	Incineration	Ton	316	445	230	
	Recycling	Ton	69	37	40	
Recycling rate	%	93	91	97		

<sup>9)</sup> Based on COD for 2021. Changed the measurement method to be indicated as TOC in 2022

<sup>10)</sup> In 2022, there were 2 violations of the Malodor Prevention Act (administrative action: "improvement order")

# FINANCIAL & NON-FINANCIAL PERFORMANCE SUMMARY

## Non-Financial Performance

### Environmental Performance

Classification	Content	Unit	2021	2022	2023
Hazardous chemicals	Discharge of hazardous chemicals	Ton	63	62	20
	Total	KRW million	12,059	6,277	9,230
Environmental investment <sup>1)</sup>	Chemical substance	KRW million	2,454	2,375	319
	Energy	KRW million	-	-	-
	Water quality	KRW million	347	1,347	2,200
	Air quality (including odor)	KRW million	9,258	2,554	6,711
Green procurements	Amount of green procurement	KRW million	8,190	10,765 <sup>12)</sup>	9,606
Environmental law violations	No. of violations <sup>13)</sup>	Case	0	2	1
	Payment of fines, etc. <sup>14)</sup>	KRW million	-	-	3.36

<sup>1)</sup> Notice of data changes due to adjustment of calculation scope

<sup>12)</sup> Correction due to aggregation error in the previous year

<sup>13), 14)</sup> 1 case for the Incheon Plant

### Social Performance

Classification	Content	Unit	2021	2022	2023		
Employment	Total number of employees <sup>1)</sup>		Person	885	941	968	
	By gender	Male	Person	767	813	833	
		Female	Person	118	128	135	
	By employment type	Full-time	Person	869	916	937	
		Contract	Person	16	25	31	
	By position	Executives and above	Person	14	16	17	
		Managers and above	Person	264	276	275	
		Senior assistants and below	Person	607	649	676	
	Number of employees by business site						
	Current employee status	Total number of employees		Person	671	719	739
Ulsan		By gender	Male	Person	621	664	681
		Female	Person	50	55	58	
By employment type		Full-time	Person	666	705	722	
		Part-time <sup>2)</sup>	Person	5	14	17	
Total number of employees		Person	184	193	198		
Seoul		By gender	Male	Person	122	125	106
		Female	Person	62	68	64	
By employment type		Full-time	Person	175	184	186	
		Part-time <sup>2)</sup>	Person	9	9	12	
Total number of employees		Person	30	29	31		
Incheon	By gender	Male	Person	24	24	26	
	Female	Person	6	5	5		
By employment type	Full-time	Person	28	27	29		
	Part-time <sup>2)</sup>	Person	2	2	2		

\* The revised calculation criteria of 2023 was uniformly to employee-related data (such as current employees, employment, diversity, etc.)

<sup>1)</sup> Including all employees at domestic workplaces, contract workers (excluding expatriates), employees on leave of absence, and advisors/counselors

<sup>2)</sup> Including short-time working workers

# FINANCIAL & NON-FINANCIAL PERFORMANCE SUMMARY

## Non-Financial Performance

### Social Performance

Classification		Content	Unit	2021	2022	2023
New employee hires	Total number of employees			42	103	76
	By gender	Male	Person	29	78	57
		Female	Person	13	25	19
Employee turnover	Total number of employees			28	48	38
	By gender	Male	Person	17	38	28
		Female	Person	11	10	10
New employee hires	No. of newly hired employees	Person	42	103	76	
Employee turnover <sup>3)</sup>	Voluntary employee turnover rate	%	2.1	4.0	3.4	
	Employee turnover rate <sup>4)</sup>	%	3.2	5.1	3.9%	
Employment	Childcare leave	No. of employees eligible for childcare leave (Male)	Person	55	36	25
		No. of employees eligible for childcare leave (Female)	Person	24	24	20
		No. of employees on childcare leave (Male)	Person	33	27	16
	No. of employees on childcare leave (Female)	Person	24	25	20	
	Childcare leave rate (Male)	%	60	75	64	
	Childcare leave rate (Female)	%	1.00	1.04	100	
	Number of employees returning from parental leave (Male)	Person	30	23	17	
	Number of employees returning from parental leave (Female)	Person	11	16	8	
	No. of employees returned to work after parental leave (Male)	Person	30	23	16	
	No. of employees returned to work after parental leave (Female)	Person	11	15	8	
	Return-to-work rate (Male)	%	100	100	94	
	Return-to-work rate (Female)	%	100	94	100	
	No. of employees who did not remain employed for 12 months after returning from parental leave (Male)	Person	0	0	0	
	No. of employees who did not remain employed for 12 months after returning from parental leave (Female)	Person	0	1	0	
	Retention rate after childcare leave (Male) <sup>5)</sup>	%	100	100	100	
Retention rate after childcare leave (Female) <sup>5)</sup>	%	100	93	100		

Classification		Content	Unit	2021	2022	2023
Occupational accident (LFC)	No. of occupational accidents		Case	1	6	3
	Occupational accident rate		%	0.1	0.6	0.3
	Loss time injury frequency rate (LTIR) <sup>6)</sup>		-	0.21	0.61	0.29
Occupational accident (Suppliers)	No. of occupational accidents		Case	2	4	6
	Occupational accident rate		%	0.3	0.6	0.9
	Loss time injury frequency rate (LTIR) <sup>6)</sup>		-	0.78	0.61	0.89
Employment	Employee education and training	Total hours of employee education/training	Hour	24,299	37,294	37,948
		Hours of education/training per person	Hour	29	41	39
	Expenditures in education/training per person		KRW 10,000	83	108	164
Employee evaluation	No. of employees who conducted 360-degree evaluations		Person	-	-	56
	No. of employees who conducted MBO evaluations		Person	-	-	457
Length of service	Average length of continuous service		Year	15.9	15.7	15.9
	Average length of continuous service (Male)		Year	17.1	17.0	17.0
	Average length of continuous service (Female)		Year	8.1	8.0	8.3
Wages and benefits	Equal salary	Average wages for workers (women's wages as a percentage of men's wages) <sup>7)</sup>	%	100	100	100
	Employee benefits	Percentage of welfare cost to sales	%	1.0	0.8	1.7
Diversity	Female	No. of female leaders (Managers and above)	Person	36	41	44
		Proportion of female employees among full-time workers	%	12.1	12.6	12.8
	Proportion of female employees among contract workers		%	81.3	52.0	48.4
Minority groups	Persons with disabilities		Person	25	27	31
	Recipients of patriots & veterans benefits		Person	43	45	45
	Foreigners		Person	1	1	1

<sup>3)</sup> Excluding those whose contracts were terminated, other part-time workers, and advisors

<sup>4)</sup> Excluding employees who are transferred to the Group companies/affiliates or employees who have left the company for childcare

<sup>5)</sup> Based on those who have worked for the company for more than 12 months after returning to work from parental leave

<sup>6)</sup> Workers who are not employees as defined in LTIR are in-house partner company workers. Combining workers at the Ulsan Complex and Incheon Plant totals 686persons. Due to changes in the calculation formula, there are differences in the figures compared to the previous year's data.

<sup>7)</sup> There is no difference in the same job group.

# FINANCIAL & NON-FINANCIAL PERFORMANCE SUMMARY

## Non-Financial Performance

### Social Performance

Classification		Content	Unit	2021	2022	2023
Human rights	Human rights training <sup>8)</sup>	Hours of human rights training	Hour	-	1	1
		Percentage of employees having received human rights training	%	-	100	100
	Human rights impact assessment	No. of business sites that conducted human rights impact assessment (Risk identification)	Business site	-	4	4
		No. of business sites that implemented measures to improve the identified human right risk	Business site	-	5	5
Ethical management	Internal reporting channel	No. of reporting received	Case	32	9	12
		No. of reporting handled	Case	32	9	12
Anti-corruption	Anti-corruption training	Percentage of executives having received anti-corruption training	%	100	100	100
		Percentage of employees having received anti-corruption training	%	100	100	100
	Incidents of corruption and actions taken	No. of cases of corruption	Case	0	1	0
		No. of disciplinary actions or dismissals due to corruption	Case	0	1	0
		No. of contracts terminated, or not renewed due to corruption	Case	0	1	0
		No. of lawsuit against the company or its employees	Case	0	0	0
Safety & health	Safety & health assessment	Percentage of product/service categories having received industrial safety assessment	%	100	100	100
	Regulatory compliance	Fines for violation of industrial safety regulation	KRW million	14.7	0.0	0.08
	Occupational safety and health management system	No. of ISO 45001-certified business sites	Business Site	2	2	2
Percentage of employees to whom the Industrial Safety and Health Committee is applied		%	100	100	100	
Marketing communication	Regulatory compliance	Fines for non-compliance with regulations concerning marketing, including advertising and promotion	KRW million	-	-	-
		Incidents of non-compliance with regulations concerning marketing, including advertising and promotion	Case	0	0	0

<sup>8)</sup> Began human rights education in 2022

Classification		Content	Unit	2021	2022	2023
Customer satisfaction	Complaints	Complaints received from the external agency or government concerning leakage of customer privacy	Case	0	0	0
		No. of identified leaks, thefts, or losses of customer data	Case	0	0	0
		No. of information security officers within the executive management	Person	1	1	1
		Frequency of cyber attack response system checks	Time	4	4	15
		Frequency of information security policy/system audits	Case	2	2	2
PSM rating	Ulsan Complex		Rating	S	P	P
	Incheon Plant		Rating	S	S	S
Labor union <sup>9)</sup>		No. of labor union members	Person	440	443	442
		No. of employees eligible for union membership	Person	562	565	622
		Percentage of union members compared to employees eligible for union membership	%	78	78	71
		No. of full-time union members	Person	3	3	3
		Number/percentage of employees covered by collective agreements	Person (%)	100.0	100.0	100.0
Social contributions		Employee volunteer hours per person <sup>10)</sup>	Hour	1.3	3.2	4.5
		Charitable donation	KRW million	423	507	755
		Investment in social welfare (other than Charitable donation)	KRW million	1,386	4,538	2,129
Supply chain management	Partner company purchase <sup>11)</sup>	Amount of purchase	KRW billion	392.9	470.4	462.4
		Procurement costs spent on local suppliers out of the total purchase amount	KRW billion	189.4	204.1	205.9
	Supply chain evaluation	No. of partner companies conducting supply chain evaluation	Company	-	-	17
		No. of suppliers conducting training related to sustainable procurement	Company	-	-	15
LCA		No. of products that have undergone LCA	Product	-	-	28
Patent		Acquisition of lean technology patents	Patent	17	18	20

<sup>9)</sup> The calculation criteria have been changed to be based on whether union dues are paid.

<sup>10)</sup> Correction of 2021 and 2022 data due to changes in the calculation criteria

<sup>11)</sup> Percentage of purchase from partner companies in 2023: Domestic (44.5%), Overseas (55.5%)

# GLOBAL INITIATIVES

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# GLOBAL INITIATIVES

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		305-4	GHG emissions intensity	91
		305-5	Reduction of GHG emissions	27, 39, 91
		305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	90
		GRI 306: Waste 2020	Waste	306-1
306-2	Management of significant waste-related impacts			52
306-3	Waste generated			52
306-4	Waste diverted from disposal			52
306-5	Waste directed to disposal			91

TOPIC-SPECIFIC STANDARDS _ SOCIAL PERFORMANCE (GRI 400)				
	GRI STANDARD	Disclosure		Page
		No.	Title	
GRI 401: Employment 2016	Employment	401-1	New employee hires and employee turnover	93
		401-3	Parental leave	93
GRI 402: Labor/Management Relations 2016	Labor/Management Relations	402-1	Minimum notice periods regarding operational changes	At least 30 days in advance

TOPIC-SPECIFIC STANDARDS _ SOCIAL PERFORMANCE (GRI 400)				
	GRI STANDARD	Disclosure		Page
		No.	Title	
GRI 403: Occupational Health and Safety 2018	Occupational Health and Safety	403-1	Occupational health and safety management system	61-62
		403-2	Hazard identification, risk assessment, and incident investigation	61-64
		403-3	Occupational health services	61-65
		403-4	Worker participation, consultation, and communication on occupational health and safety	62-64
		403-5	Worker training on occupational health and safety	64-65
		403-6	Promotion of worker health	65
		403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	65
		403-8	Workers covered by an occupational health and safety management system	94
		403-9	Work-related injuries	93
GRI 404: Training and Education 2016	Training and Education	404-1	Average hours of training per year per employee	57-58, 93
		404-2	Programs for upgrading employee skills and transition assistance programs	57-58
GRI 405: Diversity and Equal Opportunity 2016	Diversity and Equal Opportunity	405-1	Diversity of governance bodies and employees	93
		405-2	Ratio of basic salary and remuneration of women to men	93
GRI 406: Non-discrimination 2016	Non-discrimination	406-1	Incidents of discrimination and corrective actions taken	56
GRI 411: Rights of Indigenous People 2016	Rights of Indigenous People	411-1	Incidents of violations involving rights of indigenous peoples	No incidents of violations
		413-1	Operations with local community engagement, impact assessments, and development programs	73-75
GRI 413: Local Communities 2016	Local Communities	413-2	Operations with significant actual and potential negative impacts on local communities	No such site
		GRI 415: Public Policy 2016	Public Policy	415-1
GRI 416: Customer Health and Safety 2016	Customer Health and Safety	416-1	Assessment of the health and safety impacts of product and service categories	94
		416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	94
GRI 417: Marketing and Labeling 2016	Marketing and Labeling	417-1	Requirements for product and service information and labeling	50-51
		417-2	Incidents of non-compliance concerning product and service information and labeling	No violation related to product offering
		417-3	Incidents of non-compliance concerning marketing communications	94
GRI 418: Customer Privacy 2016	Customer Privacy	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	72



# GLOBAL INITIATIVES

## UN Global Compact

UN calls for precipitating in supporting The Ten Principles of the UN Global Compact (UNGC), composed of Human Rights, Labour, Environment, and Anti-Corruption; as well as 17 Sustainable Development Goals to solve the economic, environmental, and social problems facing humanity. LFC joined the UNGC in December 2020, has been making continuous efforts to comply with the Ten Principles, and discloses its performance. As a global corporate citizen, LFC also aims to contribute to the achievement of the UN SDGs through its business operations.



### UN GLOBAL COMPACT – TEN PRINCIPLES

Principles	Page
<b>Human Rights</b> 1. Businesses should support and respect the protection of internationally proclaimed human rights; and ..... 2. Make sure that they are not complicit in human rights abuses.	42, 55-56, 66, 85, Financial & Non-Financial Performance Summary (Human Rights)
<b>Labour</b> 3. Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining; ..... 4. The elimination of all forms of forced and compulsory labour; ..... 5. The effective abolition of child labour; and ..... 6. The elimination of discrimination in respect of employment and occupation.	55-56, 57-59, 60, Financial & Non-Financial Performance Summary (Diversity, Labor Union)
<b>Environment</b> 7. Businesses should support a precautionary approach to environmental challenges; ..... 8. Undertake initiatives to promote greater environmental responsibility; and ..... 9. Encourage the development and diffusion of environmentally friendly technologies	36-39, 44-52, Financial & Non-Financial Performance Summary (Environmental Performance)
<b>Anti-Corruption</b> 10. Businesses should work against corruption in all its forms, including extortion and bribery.	41, 66, 84-886, Financial & Non-Financial Performance Summary (Ethical Management, Anti-corruption)

# GHG VERIFICATION STATEMENT

This Assurance Statement has been prepared for LOTTE Fine Chemical Co., Ltd.

## Terms of Engagement

LRQA was commissioned by LOTTE Fine Chemical Co., Ltd. (LOTTE Fine Chemical) to provide independent assurance on its Greenhouse Gas (GHG) Inventory Report for the calendar year 2023 (the report) against “the guidelines on emission reporting and certification under the GHG emissions trading system” and the monitoring plan for the calendar year 2023 using “the verification guidelines for GHG emissions trading system”.

The report relates to direct GHG emissions and energy indirect GHG emissions.

## Management Responsibility

LRQA's responsibility is only to LOTTE Fine Chemical. LRQA disclaims any liability or responsibility to others as explained in the end footnote. The management of LOTTE Fine Chemical is responsible for preparing the report and for maintaining effective internal controls over all the data and information within the report. Ultimately, the report has been approved by, and remains the responsibility of LOTTE Fine Chemical.

## LRQA's Approach

LRQA's assurance engagement has been carried out in accordance with our verification procedure using “the verification guidelines for GHG emissions trading system” to reasonable level of assurance.

The following tasks were undertaken as part of the evidence gathering process for this assurance engagement:

- Visiting sites and auditing management system to control the data and records regarding GHG emissions and energy uses
- Interviewing the relevant persons responsible for managing and maintaining data and associated records
- Reviewing the historical data and information back to source for the calendar year 2023.

## Level of Assurance & Materiality

The opinion expressed in this Assurance Statement has been formed on the basis of a reasonable level of assurance, and at the materiality of the professional judgement of the verifier and at the materiality level of 2.5%.

## LRQA's Opinion

Based on LRQA's approach, we believe that the report is prepared in accordance with “the guidelines on emission reporting and certification under the GHG emissions trading system” and the monitoring plan for the calendar year 2023 using “the verification guidelines for GHG emissions trading system” and the GHG emissions data in the Table 1 is materially correct.

Dated: 29 March 2024



### Il-Hyoung Lee

LRQA

2nd Floor, T Tower, 30, Sowol-ro 2-gil, Jung-gu, Seoul, Republic of Korea

LRQA Reference: SEO6019655

## Table 1. Summary of GHG emissions

	(Unit: tCO <sub>2</sub> eq)
Scope of GHG emissions	2023
Direct GHG Emissions	61,504.82
Energy Indirect GHG Emission	636,112.001
<b>Total GHG Emissions</b>	<b>697,615</b>

\* These GHG emissions are based on the baseline year emission calculation standards for the third phase of the Emission Trading System in Korea (2017-2019).

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# GHG VERIFICATION STATEMENT

## GHG Emissions

LOTTE Fine Chemical Co.,Ltd.

### Verification Target

Korean Foundation for Quality (hereinafter 'KFQ') has conducted a verification of Scope 3 Greenhouse Gas Emissions (hereinafter 'GHG emissions') LOTTE Fine Chemical Co.,Ltd. (hereinafter 'Company') for 2023.

### Verification Scope

The verification Scope covered the emission categories selected by the company and the emissions between January 1st, 2023 to December 31st, 2023.

### Verification Criteria

The following criteria and coefficients used by the company were applied.

- **Criteria**
    - WBCSD/WRI, Corporate Value Chain (Scope 3) Accounting and Reporting Standard
    - ISO14064-1:2018, ISO 14064-3:2019
    - GHG Protocol Corporate Standard
    - Rule for emission reporting and certification of greenhouse gas emission trading Scheme<sup>1)</sup>
- <sup>1)</sup> Notification No. 2023-221 of Ministry of Environment

- **Coefficient**
  - Environmental Product Declaration evaluation coefficient (2021)
  - Ecoinvent database 3.9.1, Ecoinvent database 3.10

### Level of Assurance

The verification was performed in accordance with the procedures specified in ISO14064-3 and the assurance level of the verification was performed to satisfy the limited assurance level.

### Verification Limitation

GHG emissions verification involves inherent limitations that may arise depending on the organization's data characteristics, calculations and estimates, sampling method, and limited assurance level. Additionally, this verification does not include responsibility for the accuracy of the original data provided by the company.

### Verification Opinions

Through the verification process according to the 'ISO14064-3:2006' KFQ could obtain reasonable basis to express following conclusion on the Greenhouse Gas Emission Report.

- 1) GHG emissions for 2023 of Company were properly calculated according to the verification standards.
- 2) For GHG emissions, no material errors or omissions were found, except for emissions information not considered within the selected category range.
- 3) The criteria and process established or estimated/assumed by the company to calculate GHG emissions were transparently reflected in the internal calculation process.

## Appendix A. Summary of Scope3 GHG Emission Results

May 29th, 2024



CEO Ji-Young Song  
Korean Foundation for Quality



### Organization

LOTTE Fine Chemical Co.,Ltd.

### Emission calculation period

The emission calculation period is from January 1st to December 31st, 2023.

### Company Scope 3 Emissions verification Results

(Unit: tCO<sub>2</sub>eq)

Category	Scope 3 Emissions
1 Purchased goods & services	3,065,040
2 Capital goods	19,596
3 Fuel and Energy-Related Activities Not Included in Scope 1 or Scope 2	83,851
4 Upstream Transportation and Distribution	94,450
5 Waste Generated in Operations	14,887
6 Business Travel	11
7 Employee Commuting	569
8 Downstream Transportation and Distribution	32,061
9 Downstream Transportation and Distribution	11,655
11 Use of Sold Products	33,663
12 End of Life Treatment of Sold Products	4,608
13 Downstream Leased Assets	632
15 Investments	129,305
<b>Total</b>	<b>3,490,328</b>

# INDEPENDENT ASSURANCE STATEMENT

## Dear Stakeholders of LOTTE FINE CHEMICAL,

Korean Foundation for Quality (further 'KFQ') has been requested by LOTTE FINE CHEMICAL to conduct an independent assurance on the 2023 Sustainability Report for LOTTE FINE CHEMICAL (further the 'Report'). KFQ has responsibility to provide an independent assurance statement in accordance with the standards and scope of assurance as specified below. LOTTE FINE CHEMICAL has sole responsibility for the preparation of the Report.

### Standards and Scope of Assurance

- **Verification Criteria**  
AA1000AS(v3) and AA1000AP (2018)
- **Verification Type**  
Type 2 [Verification of compliance of four reporting principles (Inclusivity, Materiality, Responsiveness, Impact) and data reliability]
- **Verification Level**  
Moderate [Verification based on limited evidence collected]
- **Verification boundary**  
The performance and reporting practices of subsidiaries, related companies, business partners and third parties beyond the scope of this verification specified in the report are not included.
- **Verification Scope**  
Compliance with the 4 reporting principles according to AA1000AP and the GRI Standards 2021 reporting requirements  
- GRI Standards (2021) Reporting Principles  
- Universal Standards  
Reporting in accordance with GRI Standards (2021), compliance with the following requirements

Requirements	Compliance	Page
1. Reporting principles	○	-
2. General Disclosures	○	18, 3
3. Determine material topics	○	32-34
4. Report the disclosures in GRI 3: Material Topics 2021	○	32-34
5. Report disclosures from the GRI Topic Standards for each material topic	○	34
6. Provide reasons for omission	○	Reflecting all requirements
7. Publish a GRI content index	○	95
8. Provide a statement of use	○	3
9. Notify GRI	○	Completed

- Topic Standards

Requirements	GRI Standards/Topic Disclosure
Reporting material issues according to the GRI Topic Standards	• GRI 201: Economic Performance 201-1, 201-4
	• GRI 204: Procurement Practices 204-1
	• GRI 205: Anti-Corruption 205-2, 205-3
	• GRI 206: Anti-Competitive Behavior 206-1
	• GRI 207: Tax 207-1 ~ 3
	• GRI 302: Energy 302-1 ~ 4
	• GRI 303: Water and Effluents 303-1, 3, 4, 5
	• GRI 305: Emissions 305-1 ~ 5, 7
	• GRI 306: Effluents and Waste 306-1 ~ 5
	• GRI 401: Employment 401-1, 3
	• GRI 402: Labor/Management Relations 402-1
	• GRI 403: Occupational Health and Safety 403-1 ~ 9
	• GRI 404: Training and Education 404-1, 2
	• GRI 405: Diversity and Equal Opportunity 405-1, 2
• GRI 406: Non-Discrimination 406-1	
• GRI 411: Right of Indigenous People 411-1	
• GRI 413: Local Communities 413-1, 2	
• GRI 415: Public Policy 415-1	
• GRI 416: Customer Health and Safety 416-1, 2	
• GRI 417: Marketing and Labeling 417-1 ~ 3	
• GRI 418: Customer Privacy 418-1	

### Methodology

In order to assess the reliability of the sustainability performance in the Report against above mentioned criteria, the audit team reviewed sustainability-related processes, systems, internal control procedures, and available performance data. The documentation the audit team reviewed during the verification includes:

- Non-financial information e.g., data provided to us by LOTTE FINE CHEMICAL, the Report, and information obtained from media and/or the internet; and
- Financial information i.e., Data disclosed in the electronic disclosure system (dart.fss.or.kr) of the Financial Supervisory Service and data posted on the homepage were used, but these contents are not included in the scope of verification.

The assessment was performed by document review and interviews person in charge including on-site assessment. The validity of the materiality assessment process in the Report and the material issues selection considering stakeholders, data collecting & management, and validity of the report preparation procedures as well as the description in the Report were assessed, but external stakeholder interviews were not conducted. Afterwards, it was confirmed that some errors, inappropriate information and misstatement found in the above steps were appropriately revised before publishing the Report.

# INDEPENDENT ASSURANCE STATEMENT

## Competency and independence

The audit team was organized in accordance with KFQ's internal regulations. KFQ has no conflict of to the LOTTE FINE CHEMICAL's business which could threaten the impartiality of verification, other than providing third-party verification services.

## Limitations

The completeness and responsiveness of sustainability performance represented in the Report have inherent limitations due to its nature and the methodology used to determine, calculate, and estimate its performance. In accordance with the terms of the contract, the audit team assessed the information and evidence provided by LOTTE FINE CHEMICAL. The audit team did not perform any further assessment procedures on raw data.

## Findings and Conclusions

As a result of the verification, the Report was prepared in accordance with the requirements for ' in accordance with GRI standard 2021' and the audit team found reasonable objectives to guarantee the AA1000AS(V3) Type 2 assurance level. The audit team also found no significant errors or inadequacies in the report regarding compliance with reporting principles.

## INCLUSIVITY

LOTTE FINE CHEMICAL is gathering opinions from various stakeholders including customers, shareholders and investors, partner companies, local communities through communication channels such as Voice of Customers, product seminars, the internal communication channel with employees, and social contribution activities. Nothing came to the assurance team's attention to suggest that the mail stakeholders are not stated in the Report.

## MATERIALITY

LOTTE FINE CHEMICAL identifies important issues by prioritizing them after conducting a criticality assessment of related issues according to social (stakeholder) interest and business impact. The audit team confirmed that the identified material issues were given more weight in this Report and that the material issues identified in the materiality assessment process were reported without omissions.

## RESPONSIVENESS

LOTTE FINE CHEMICAL consistently engages with stakeholders to respond to the needs and key concerns gathered from stakeholders. Nothing came to the audit team's attention to suggest that its responses and performances are inappropriately described in the Report.

## IMPACT

We found that LOTTE FINE CHEMICAL is identifying and monitoring impacts relating to stakeholders and reporting them to the extent possible. Nothing came to the assurance team's attention to suggest that it does not properly assess and report impacts relating to material issues.

## RELIABILITY AND QUALITY OF DISCLOSED INFORMATION ON SUSTAINABILITY PERFORMANCE

The audit team assessed the reliability of specified environmental and social performance data related to sustainability. The audit team conducted interviews with managers responsible for the Report preparation, where the team reviewed internal data on a sample basis and publicly available documentation, and confirmed the reliability of the processes for collating qualitative and quantitative sustainability data described in the Report. Nothing came to the audit team's attention to suggest that intentional misstatements and/or material non-conformities in data are presented during the assessment.

## Recommendation for improvement

KFQ recommends following developmental approaches in order to systematize sustainability management in the future and to disclose the results of the report effectively.

- KFQ expects that ESG performance evaluation and improvement activities will be carried out continuously as performance evaluations and improvement activities are carried out based on the results of ESG management internalization in the 2023 report.
- With the establishment of a new ESG management system in 2023, systematic and time-series management of quantitative ESG indicators has become possible. KFQ expects that the new system will be operated and managed continuously.
- As environmental impacts account for four of the seven important issues identified through the 2023 materiality assessment, KFQ expects to see internalization results for environmental policies in 2024.



July 2024  
Seoul, Korea  
Ji Young Song, CEO  
Korean Foundation for Quality (KFQ)

# PRODUCT LIST

## Chemicals (Chlorine & Ammonia Derivatives)

Category	Product Name	Abbreviation	Chemical Formula	CAS No.	Characteristic / Purity	Packing	Application	Others
Chlorine Derivatives	Sodium Hydroxide	-	NaOH	1310-73-2	Liquid, 25%, 50% ap. solution	Tank lorry, bulk vessel, pipe	Chemical solvents, secondary battery materials	-
	Sodium Hypochlorite	HYPO	NaOCl	7681-52-9	Colorless or slightly yellow liquid, 12% ap. solution	Tank lorry	Bleaching agent, disinfectant	Domestic only
	Hydrogen	-	H <sub>2</sub>	1333-74-0	Gas, 99.99%	Pipe	Hydrogen peroxide raw material, hydrodesulfurization	Domestic only
	Hydrochloric Acid	-	HCl	7467-01-0	Colorless, 35% ap. solution	Tank lorry	Agrochemicals, pharmaceuticals	Domestic only
	Methyl Chloride	MC (Methyl Chloride)	CH <sub>3</sub> Cl	74-87-3	Colorless, liquefied gas, 99.9% min.	940kg cylinder	Agrochemicals, organic synthesis, quaternary ammonium salt	Domestic only
	Methylene Chloride	MCL	CH <sub>2</sub> Cl <sub>2</sub>	75-09-2	Colorless, clear, volatile liquid, 99.9% min.	250kg steel drum, ISO-tank, tank lorry, bulk vessel	Electric material solvents, pharmaceutical synthesis solvents, flexible polyurethane foams	EU REACH registered
	Chloroform	CFM	CHCl <sub>3</sub>	67-66-3	Colorless, clear, volatile liquid, 99.9% min.	250kg steel drum, ISO-tank, tank lorry, bulk vessel	Pharmaceuticals, solvents, fluorocarbon refrigerants (R-22)	-
	Methaclean	Methaclean	CH <sub>2</sub> Cl <sub>2</sub> +α	75-09-2	Colorless, clear, volatile liquid	250kg steel drum, tank lorry	Cleaning agents, foaming agents, drying agents	
	Epichlorohydrin	ECH	C <sub>3</sub> H <sub>5</sub> OCl	106-89-8	Colorless liquid, 99.9% min.	240kg steel drum, ISO-tank, tank lorry, bulk vessel	Epoxy resin, water treatment chemicals	EU REACH registered
S-Quata® (3-chloro-2-hydroxy PropylTrimethyl Ammonium Chloride)	PTAC	C <sub>6</sub> H <sub>15</sub> Cl <sub>2</sub> NO	3327-22-8	Colorless liquid, 65% min. (S-Quata 885), 69% min. (S-Quata 889)	230kg PE drum, 1.1MT IBC, flexibag, tank lorry, ISO-tank	Additives for starch, high-quality pulp, surface active agent	EU REACH registered	
Ammonia Derivatives	Monomethylamine	MMA	CH <sub>3</sub> NH <sub>2</sub>	74-89-5	Colorless liquid, 40% ap. solution	170kg steel drum, 20MT ISO-tank, tank lorry	Herbicide, pesticide, pharmaceuticals, alkylalkanolamines (MDEA)	
	Dimethylamine	DMA	(CH <sub>3</sub> ) <sub>2</sub> NH	124-40-3	Colorless, 50%, 60% ap. solution, 99.8% gas	160kg steel drum, 19MT ISO-tank, tank lorry, high-pressure ISO tank	Surface active agent, herbicide, pesticide, Epoxy curing accelerator, water treatment	EU REACH registered
	Trimethylamine	TMA	(CH <sub>3</sub> ) <sub>3</sub> N	75-50-3	Colorless, 30% ap. solution	Tank lorry, ISO-tank	Anion exchange resin, TMAC raw material	
	Trimethylamine-HCL	TMA-HCL	(CH <sub>3</sub> ) <sub>3</sub> NHCl	593-81-7	57% ap. solution	Tank lorry	Animal feed additives	
	EUROX®	-	(NH <sub>2</sub> ) <sub>2</sub> CO	57-13-6	Colorless urea solution, 32.5%, 40%	10L PET, EBD V1.5, bulk vessel, tank lorry, IBC, Flexibag, PE drum	Selective catalytic reduction (De-Nox) in diesel engine (32.5% for automobile, 40% for industry)	
	Ammonia	-	NH <sub>3</sub>	7664-41-7	Colorless, 99.5%	Tank lorry, pipe	Acrylonitrile, nitric acid, hydrazine	
	Tetramethyl Ammonium Chloride	TMAC	(CH <sub>3</sub> ) <sub>4</sub> NCl	75-57-0	Colorless, 58% ap. solution	20MT ISO-tank, tank lorry	TMAH raw material	

# PRODUCT LIST

## Green Materials (Cellulose Derivatives)

Category	Product Name	Abbreviation	Chemical Formula	CAS No.	Characteristic / Purity	Packing	Application	Others
Cellulose Derivatives		MC (Methyl Cellulose)	-	9004-67-5		20kg: Paper bag with PE inner liner 350kg: PP Jumbo bag with PE inner liner	Construction, paints, ceramic extrusion	-
	MECELLOSE®	HPMC	-	9004-65-3		-	-	-
		HEMC	-	9032-42-4		-	-	-
	HECELLOSE®	HEC	-	9004-62-0		25kg: Paper bag with PE inner liner 450kg: PP Jumbo bag with PE inner liner	Paints, household goods, construction, oil field	-
		HPMC	-	9004-65-3	White or yellowish powder	20kg, 25kg: Fiber drum with PE double inner bag or paper bag with PE inner liner	Tablet coating, capsule making	Certificate: Kosher, ISO 9001, DMF
	AnyCoat®	HPMC-P	-	9050-31-1		-	Enteric coating	-
		HPMC	-	9004-65-3		20kg, 25kg: Fiber drum with PE double inner bag or paper bag with PE inner liner	Foods, dietary supplements	Certificate: FSSC 22000 (GFSI)
	AnyAddy®	MC	-	9004-67-5		15kg, 20kg, 25kg: Fiber drum with PE double inner bag or paper bag with PE inner liner	Foods	

## MEMBERSHIP

Southern Fire Safety Promotion Council	Incheon Environmental Engineering Association
Korean Nurses Association	The Federation of Korean Industries
Korea Industrial Safety Association	KISANHYUP
Ulsan Branch of the Emergency Plan Council	National Emergency Plan Association
Korea Association of Occupational Health Nurses	Clean Ammonia Council
Yeocheon Industrial Complex Plant Head Council	Korea Economic Research Institute
Reserve Forces Commander Council	Fair Competition Federation
Ulsan Plant Head Council	Korea Customs Logistics Association
Environmental Protection Council of the Ulsan Prosecutor's Office	Korea Management Association
Ulsan Chamber of Commerce and Industry	Korea International Trade Association
Ulsan Safety Communication Committee	Korea Industrial Technology Association
Ulsan Yangsan Enterprises Federation	Korea Listed Companies Association
Ulsan Yecheon Safety Association	Korea Fire Safety Institution
Ulsan Electric Association	Korea Hydrogen Industry Association
General Affairs Department Association of Major Large Enterprises in Ulsan	Korea Electric Engineers Association
Ulsan Civil Defense Working Council	Korea Specialty Chemical Industry Association
Ulsan R&D Head Council	Korea Chlor Alkali Industry Association
Ulsan Environmental Engineering Association	Korea Chemicals Management Association
Ulsan Shipper Logistics Council	Volunteer Fire Department Specializing in Chemicals
Global Compact Network Korea	Ammonia Energy Association
Incheon Environmental Volunteer Association	Drymix. Info

\* As of 2023 year-end

## TASK FORCE MEMBERS FOR THE 2023 LOTTE FINE CHEMICAL SUSTAINABILITY REPORT

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