

# SK materials

## SUSTAINABILITY REPORT 2023



# About This Report

Overview	This is the first Sustainability Report to include SK Inc. materials' seven key subsidiaries: SK specialty, SK materials airplus, SK trichem, SK Resonac, SK materials performance, SK materials JNC, and SK materials Group14 (hereinafter, "SK materials"). This report presents key sustainability performances and plans in environmental, social, and governance (ESG) sectors of SK materials in accordance with the Global Reporting Initiative (GRI) Standards. We will continue publishing Sustainability Reports regularly to communicate with various stakeholders.
Reporting Period	The reporting period covers January 1 to December 31, 2022. However, certain significant performances extend up to June 2023. For easier understanding of the trend, non-financial performances include data from the recent three years (2020 to 2022). Any discrepancies in the reporting period are noted in the footnotes.
Reporting Scope	This report provides sustainability management strategy, promotion system, and execution performance of SK materials.
Reporting Principles and Standards	This report was prepared in accordance with the GRI Standards 2021. It abides by the disclosure guidelines offered by the Sustainability Accounting Standards Board (SASB) and the Task Force on Climate-related Financial Disclosures (TCFD). SK specialty, as a member of United Nations Global Compact (UNGC), includes its activities and performances in accordance with the Ten Principles of the UNGC. Any discrepancies in the reporting scope and/or data are separately noted in the footnotes.
Report Assurance	The contents and data in this report were assured by an independent assurance agency, KCI (Korea Compliance Initiative), to secure transparency and credibility. The independent assurance statement is included.

Contact Us	
Location	22F Gran Seoul Tower 1 Jong-ro 33, Jongno-gu, Seoul
Contact	Tel. +82-2-728-0910 / Fax. +82-2-728-0998 Email. mina1222@sk.com
Website	www.sk-materials.com
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### Interactive User Guide

SK materials Sustainability Report 2023 was developed in interactive PDF, which enables easier navigation to each relevant information for better understanding of readers.  
You may navigate to your desired page when you click on relevant icons at the top of each page.


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# Overview

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SK Inc. materials CEO & President  
Lee Yong-wook *Lee Y. W.*

### Dear valued stakeholders,

We appreciate your support us during the challenging market environment. Over the past few years, SK materials has strived to adhere to global ESG standards and strengthen ESG management of its subsidiaries. It is a privilege to publish this year's sustainability report that reflects our efforts and performances. SK materials aims to maximize the satisfaction of all stakeholders, including customers, investors, suppliers, community, and employees, based on a Double Bottom Line (DBL) Management that pursues both economic and social values.

### First, let me share our efforts in creating economic value.

SK materials has achieved continual growth since it was incorporated to SK Group in 2016. We started our business focusing on specialty gases, such as nitrogen trifluoride (NF<sub>3</sub>), tungsten hexafluoride (WF<sub>6</sub>), silane (SiH<sub>4</sub>), and disilane (Si<sub>2</sub>H<sub>6</sub>). Through M&A and collaborations with global tech companies, we became an integrated semiconductor materials company by expanding our business portfolio to all semiconductor materials including industrial gases, precursors, etching gases, and photoresist (PR). These efforts led us to generate KRW 1.5302 trillion in sales and KRW 378.9 billion in operating profits in 2022. Compared to 2015, sales increased by KRW 1.1922 trillion (+353%) and operating profits by 266.1 billion (+236%). Based on the capacity in the materials business, SK materials is continually innovating its business model by expanding portfolio to areas of battery and display materials, as well as carbon capture, utilization, and storage (CCUS). We were able to strengthen the CCUS business capacity through our recent joint venture with a U.S.-based CCUS solutions provider, 8 Rivers, which specializes in blue hydrogen and clean energy. We began mass production of the next generation anodes and expect to generate outcomes in the near future. Economic values created from these efforts will be a foundation for enhancing stakeholders' satisfaction.

### We are also creating social values.

In the environmental sector, SK materials aims to contribute to global carbon reduction efforts. In 2020, we announced the global renewable energy initiative, RE100, and we are implementing a roadmap for achieving Net Zero by 2030, which is 20 years sooner than the global coalition. We also established the "Environmental Strategy 2030" to create eco-friendly worksites based on the 3 Core Tasks: reducing GHG, enhancing wastewater recycling, and increasing wastes recycling rate. From a social perspective, SK materials is pursuing collective growth with its stakeholders. We are developing products to meet customer needs and enhancing customer value by strengthening quality management. Moreover, we provide assessment and corrective action programs to improve the ESG management of our suppliers, and we strengthen the materials ecosystem by expanding the collaboration network and joint research. For social contribution activities, we foster talents in the materials area and establishing the Safety Net. We are also promoting the "STAXX Project" for nurturing social ventures, as a means to facilitating the local economy of Yeongju, Gyeongsangbukdo. Additionally, we offer unique opportunities and unparalleled compensations for our employees to become "global integrated materials experts," as well as providing an innovative, safe, and healthy work environment. In terms of governance, we discuss ESG-related agendas in our board of directors' meetings. When making decisions on key agendas, such as investments and new businesses, we reflect ESG assessments. Furthermore, we regularly hold ESG meetings to enhance our subsidiaries' ESG management and performance.

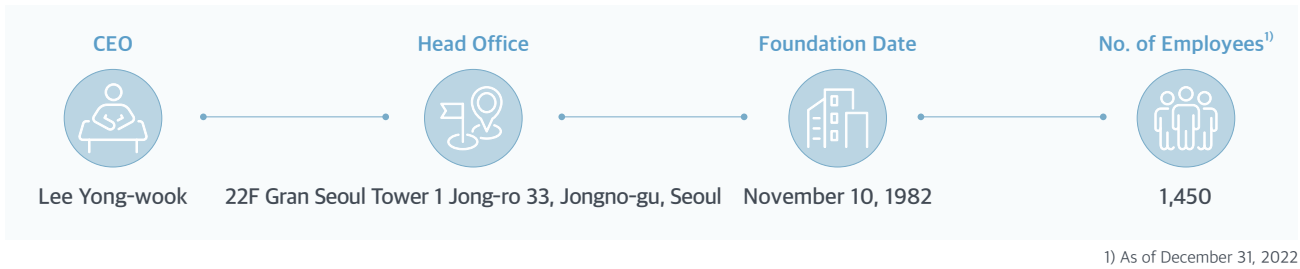
SK materials believes that it is vital to pursue "maximizing stakeholders' satisfaction" for sustainable growth of the company. Thus, we will fortify our ESG management standard based on active communication with stakeholders and innovate our business model to become "a global leader of materials technology".

I kindly request your unwavering support and continued interest in our endeavors.

# About SK materials

SK materials is dedicated to continuous innovation with the aim of becoming a global leader in materials technology. Our journey began with the significant achievement of being the first in South Korea to domestically produce nitrogen trifluoride (NF3) in 2001. Since then, we have fortified our expertise in specialty gases, including tungsten hexafluoride (WF6), silane (SiH4), and disilane (Si2H6). Since our incorporation to SK Group in 2016, we have actively pursued mergers and acquisitions, as well as collaborations with global partners, augmenting our business portfolio in semiconductor materials including industrial gases, precursors, etching gases, and photoresist (PR). Drawing upon our proficiency in semiconductor materials, we are now expanding our scope to include battery and display materials.

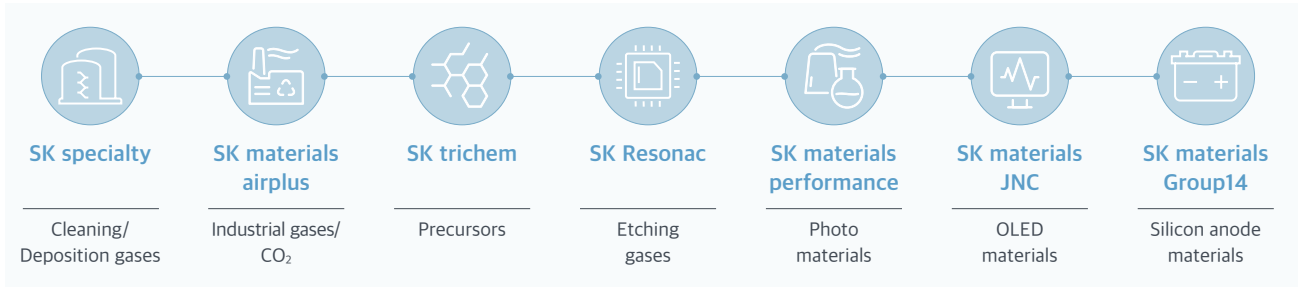
## Company Overview



## Financial Overview<sup>1)</sup>



## Key Subsidiaries



## Business Overview

SK materials produces materials for semiconductor production, including cleaning gases, deposition gases, precursors, etching gases, photo materials, and industrial gases. We also produce silicon anode materials in the battery materials sector and OLED materials in the display sector. Recently, we started the CCUS business by securing technologies for clean power generation and blue hydrogen.

		Areas	Key Products/Technologies
Semiconductor Materials	Cleaning Gases	Materials for removing residues and contaminants from semiconductor wafers in the deposition chamber	NF3, LCO2
	Deposition Gases/Precursors	Materials used for coating thin films on wafers	WF6, SiH4, Si2H6, CpHf, CpZr
	Etching Gases	Materials for etching or removing byproducts for the formation of semiconductor patterns	CH3F, HBr
	Photo Materials	Materials used in the photolithography process for creating circuit patterns on the semiconductor wafers	i-line/KrF/ArF/EUV PR
	Industrial Gases	High-purity gases used in various semiconductor manufacturing processes	N2, O2
	Adv. Package Materials	Materials used to enhance insulation and thermal management between chips to create 3D semiconductor chip structure	LMC, Flux, TIM
Battery Materials	Silicon Anode Materials	A next generation material with superior battery capacity and recharge speed compared to conventional graphite anodes	SiC anodes
Display Materials	OLED Materials	An organic material that produces blue light emission upon the flow of electric current	Blue Dopant
CCUS Business		Clean power generation, Blue hydrogen/Blue ammonia, CO <sub>2</sub> capture	



## Eco-friendly Specialty Gas & Chemical Provider

SK specialty produces industrial specialty gases (e.g., NF<sub>3</sub>, WF<sub>6</sub>, SiH<sub>4</sub>) used for manufacturing semiconductors and displays. Under our belief that materials are the future of leading technology, we have achieved a global top standard in materials technology. This includes producing the world's leading nitrogen trifluoride (NF<sub>3</sub>) and tungsten hexafluoride (WF<sub>6</sub>), a result of our relentless innovation and technology sophistication. We are committed to becoming the Global No.1 Eco-friendly Specialty Gas & Chemical Tech Company by also offering the world's highest quality products and services in the specialty gases, wet chemicals, and eco-friendly materials sectors.

CEO	Lee Kyu-won
Head Office	59-33 Gaheunggongdan-ro, Yeongju, Gyeongsangbukdo
Foundation Date	November 10, 1982
No. of Employees <sup>1)</sup>	851

1) As of December 31, 2022



## ESG STORY



Over the past three years, the global pandemic, geopolitical issues, and evolving stakeholder needs have raised expectations for corporations to play larger roles. In response, SK specialty, which adopted its new name in 2022, aims to actively and proactively address these needs. We strive to maximize our competitiveness by seeking economic and social value, aligning with SK Group's Double Bottom Line (DBL) Management approach.

In 2022, we achieved KRW 842.4 billion in sales and KRW 228.2 billion in operating profits, maintaining our market-leading position in key products such as nitrogen trifluoride (NF<sub>3</sub>) and tungsten hexafluoride (WF<sub>6</sub>). We also bolstered our competence in silicon deposition gases by expanding our customer base and increasing sales.

Additionally, we are driving social values through robust ESG Management. In 2021, we became the first Korean materials company to commit to Net Zero/RE100. The following year, we increased our use of renewable energy through the Power Purchase Agreement (PPA), obtained the Carbon Footprint "measurement" and "reduction" certification for tungsten hexafluoride (WF<sub>6</sub>), and acquired grades of CDP Climate Change (CC) and Water Security (WS). These accomplishments signify significant progress in eco-friendly management. Our future goals include commercializing recovery/disposal technologies for NF<sub>3</sub>, a high global warming potential (GWP) product, achieving Zero Waste to Landfill (ZWTL) Gold level certification by 2023, and realizing a 100% wastewater recycling rate by 2025.

To enhance customer value, we are diversifying our supply chain for raw materials and addressing one of the key concerns for our customers - supply chain risk. We're strengthening the stability and competence of our material supply to meet customer needs, through localizing materials and improving quality management. In pursuit of these goals, we have established a shared ecosystem with our suppliers, providing support to enhance their competitiveness. In 2022, we adopted a Governance Charter which outlines the governance principles centered on a responsible, board-led management approach and we are reinforcing managerial transparency through a more sophisticated ethical management system.

SK specialty is actively striving to set a global standard for sustainable management performance. We are committed to evolving into a Sustainability Management Specialist that our stakeholders can trust and depend on.





## Total Air Solution Provider Leading the Industrial Gas Market

SK materials airplus produces industrial gases vital to the semiconductor and petrochemical industries by separating and re-fining nitrogen, oxygen, and argon through the ultra-low temperature cooling of air using an air separation unit (ASU). In April 2023, we integrated with SK materials renewtech, enhancing our eco-friendly capabilities to manufacture ultra-pure carbon dioxide gases and dry ice utilizing CO<sub>2</sub>. Our goal is to position ourselves as a Total Air Solution Provider, leading the way towards carbon neutrality based on our eco-friendly business competencies.

CEO	Oh Jong-jin
Head Office	255, Yongjam-ro, Nam-gu, Ulsan
Foundation Date	June 25, 2007
No. of Employees <sup>1)</sup>	217

1) As of December 31, 2022

### ESG STORY



SK materials airplus is an eco-friendly company producing industrial gases derived from air and CO<sub>2</sub>. We strive to become a leading Green Company that places emphasis on environmental care and safety, underpinned by reliable products and a stable supply chain.

In our pursuit of Net Zero/RE100, we are implementing measures to reduce GHG emissions, including the deployment of high-efficiency facilities that optimize electricity usage. Additionally, we are exploring various business models and acquiring technologies to make our foray into the CCUS business.

Beyond that, we aim to become an ESG leader that enhances the well-being of various stakeholders. To this end, we are improving employee safety and supply chain management through the implementation of our Workplace Smart Safety Platform and Process Safety Management (PSM) strategies, along with fostering collaborative relationships with our suppliers.







## Precursor Specialist with the Highest Quality Technology and Production Capacity

SK trichem was established as a joint venture with Tri Chemical Laboratories Inc. of Japan in 2016. By leveraging the technological and production capacities of both companies, we have grown into South Korea's leading Precursor Specialist with a diverse portfolio of semiconductor precursor products. Furthermore, we're bolstering our competency in the development of new materials through collaborative R&D with clients and academic institutions. Expanding our business areas to displays based on semiconductor material technology, we are on the path to becoming a Global Top Precursor Company.

CEO	Oh Jong-jin
Head Office	110-5, Myeonghaksandan-ro, Yeondong-myeon, Sejong
Foundation Date	July 27, 2016
No. of Employees <sup>1)</sup>	163

1) As of December 31, 2022

### ESG STORY



“ESG Management” is not just a prerequisite for survival, but it is integral to building a sustainable company.

Under the vision of becoming a “Global Top-tier Precursor Company,” SK trichem has formally initiated its ESG Management journey since 2022. This process involves active participation from all our employees and executives as we strive to become a sustainable company that enriches human life.

From an environmental perspective, our goal is to achieve “Net Zero” by 2026. We aim to do this by reducing carbon emissions from our manufacturing processes through process innovation and productivity enhancements. Furthermore, we plan to actively expand into eco-friendly businesses, such as low-energy, low-carbon displays, leveraging our precursor technology.







## Etching Gas Industry Leader and Provider

SK Resonac, established as a joint venture with Resonac of Japan in 2017, specializes in the localization of etching gases, leveraging the combined technologies and competences of both companies. We are the only Korean company equipped with the facilities necessary to synthesize fluoromethane (CH<sub>3</sub>F) and produce hydrogen bromide (HBr), a critical etching gas for the next generation. Through this, we ensure a stable supply of ultra-pure etching gases. By bolstering the technological independence of domestic materials technology, we aim to build a secure supply system for semiconductor materials.

CEO	Kim Young-min
Head Office	71, Gaheunggongdan-ro, Yeongju, Gyeongsangbukdo
Foundation Date	June 1, 2017
No. of Employees <sup>1)</sup>	19

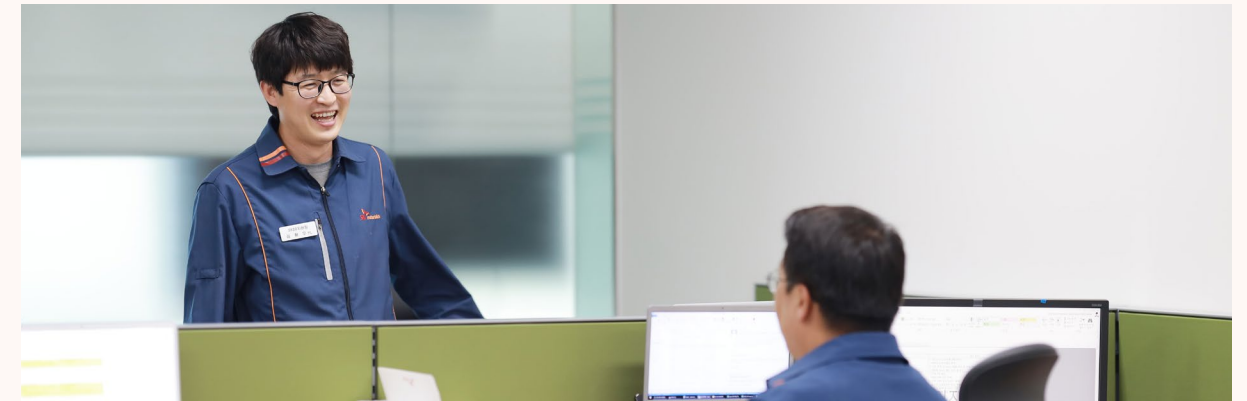
1) As of December 31, 2022

## ESG STORY



SK Resonac, boasting the world's largest production capacity of CH<sub>3</sub>F, is asserting its leadership in the global semiconductor etching gas market. We are strengthening our market position with the completion of our HBr production facilities in 2022 and the commencement of production in 2023.

Moreover, we are committed to enhancing our ESG Management standards. We will persistently implement specific action plans aimed at our medium to long-term goals, which include achieving Net Zero/RE100 by 2030 and creating eco-friendly work environments through GHG reduction. In addition to this, we aim to promote win-win cooperation with our stakeholders, by amplifying our interaction with customers and providing support to local communities. In the area of governance, we are fostering performance by encouraging discussions related to ESG topics during Board of Directors' meetings.



# SK materials performance

## Polymer Materials Research Company Specialized in Photo Materials

Based on its high-end R&D capacity, SK materials performance excels in producing essential photo materials for semiconductor manufacturing. Photo processing, a core factor influencing semiconductor efficiency, involves forming ultra-fine circuits on wafers by reacting to light. To meet the demand for next-generation materials, balanced product quality, and stable materials supply, SK materials performance continually invests in R&D, aiming to enhance technological competitiveness. Addressing customer needs, SK materials performance expands its R&D efforts to encompass materials for displays and image sensors, thereby transitioning towards a portfolio of high-value-added materials.

CEO	Ha Jung-hwan
Head Office	130, Myeonghaksandan-ro, Yeondong-myeon, Sejong
Foundation Date	February 10, 2020
No. of Employees <sup>1)</sup>	99

1) As of December 31, 2022

### ESG STORY



Under the vision of becoming a “Global Electronic Materials Total Solution Company,” SK materials performance is experiencing growth by internally embracing the ESG management. This approach includes fostering technological exchange with customers to enhance materials technology competitiveness and establishing an Eco-System within the domestic materials industry in collaboration with suppliers.

In pursuit of sustainability, SK materials performance is taking specific actions to achieve the Net Zero/RE100 by 2026. Efforts include reducing GHG and pollutant emissions through improvements in the production process, as well as creating eco-friendly workplaces by increasing the use of eco-friendly energy sources and implementing waste and water recycling initiatives.

Furthermore, SK materials performance is actively seeking innovation in its business portfolio and enhancing its financial story. We aims to augment corporate values and establish a foundation for sustainable management by maintaining open communication with all stakeholders.







## Global OLED Industry Leader with Core Technologies

SK materials JNC is a joint venture with Japan's JNC, combining SK materials' expertise in business development, production/quality, and marketing with Japan JNC's cutting-edge technology. The joint venture specializes in the manufacturing of blue dopants, which are considered the most advanced light-emitting materials for OLED. R&D personnel from both Korean and Japanese R&D centers collaborate closely in developing OLED materials and have established an organic operations system encompassing prior studies, production, analysis, device evaluation, and quality management. By expanding the business portfolio to include OLED common layers (HTL, ETL) and providing integrated solutions to customers, we aim to lead the global materials market and further strengthen our position in the OLED industry.

CEO	Kim Soo-hyun / Ha Jung-hwan
Head Office	11F 560, Dongtangiheung-ro, Hwaseong, Gyeonggido
Foundation Date	December 28, 2020
No. of Employees <sup>1)</sup>	33

1) As of December 31, 2022

### ESG STORY



SK materials JNC is a specialized OLED materials provider that enhances the technological competitiveness of the Korean display industry through collaborative R&D with customers.

Leveraging our expertise in OLED materials, we are pursuing an eco-friendly business strategy by developing low energy high-efficiency OLED blue dopants. This effort aims to reduce power consumption in displays and lower carbon emissions during the manufacturing process.

To further promote sustainability, we have established the "Green Triangle SCM" with customers and suppliers, aiming to achieve Net Zero/RE100 by 2024. Additionally, we strive to create value for stakeholders by positioning ourselves as an "Eco-friendly Company with High-end Display Materials Technology". By embracing eco-friendly practices and cutting-edge technology, SK materials JNC solidifies its commitment to both environmental responsibility and technological excellence in the display materials industry.







## Global Leader in Battery Materials with Silicon Anode Technology Competitiveness

SK materials Group14 was established in 2021 as a joint venture with “Group14 Technologies,” focuses on research, development, and production of silicon anode materials, recognized as vital components for next-generation batteries due to their higher capacity and faster recharge capabilities compared to conventional graphite anodes. Commencing mass production of silicon anode materials in 2023 marks our initial stride towards market leadership, laying the groundwork for future growth as a prominent global battery materials company.

CEO	Park Ki-sun
Head Office	80-16, Magonggongdan-ro, Cheongni-myeon, Sangju, Gyeongsangbukdo
Foundation Date	October 15, 2021
No. of Employees <sup>1)</sup>	68

1) As of December 31, 2022

### ESG STORY



SK materials Group14 envisions becoming a leading global battery materials company with an eco-friendly focus, leveraging its expertise in the silicon anode materials business. Silicon anode materials are poised to drive the eco-friendly e-mobility industry forward, offering significant enhancements in battery capacity and lifespan.

To actively contribute to environmental responsibility, SK materials Group14 has outlined specific execution strategies aimed at achieving Net Zero/RE100 by 2030. This commitment reflects a conscientious approach to safeguarding the future environment.

Adhering to the ESG management, SK materials Group14 prioritizes sustainable growth while engaging all stakeholders, including customers and the broader society, to enhance value and foster positive impacts. We endeavor to lead the way towards a more sustainable and eco-friendly future.



# Global Network

SK materials operates worksites in South Korea, including Yeongju, Sejong, Ulsan, and Sangju, as well as overseas locations in China, Japan, and Taiwan, through its seven subsidiaries. In Zhenjiang, China, SK specialty operates a manufacturing corporation dedicated to producing the key product NF3 and four sales corporations in Xi'an, Shanghai, China, and in Japan and Taiwan.



## Domestic Operations

Subsidiary Name	Location
SK specialty	Seoul, Yeongju, Sejong, Dongtan, Ulsan
SK materials airplus	Icheon, Ulsan, Cheongju, Yeongju, Gumi
SK trichem	Sejong
SK Resonac	Yeongju
SK materials performance	Sejong
SK materials JNC	Dongtan, Pyeongtaek
SK materials Group14	Sangju

## Overseas Operations

Worksite Name	Location	Business Type
SK specialty Jiangsu Co., Ltd.	Zhenjiang, China	Production
SK specialty Xian Co., Ltd.	Xi'an, China	Sales
SK specialty Shanghai Co., Ltd.	Shanghai, China	Sales
SK MG14 Shanghai Co., Ltd.	Shanghai, China	Sales
SK specialty Japan Co., Ltd.	Yokkaichi, Japan	Sales
SK specialty Taiwan Co., Ltd.	Taichung, Taiwan	Sales

## Global Customer Network

Location	Key Customers
South Korea	Samsung Electronics, SK hynix Samsung Display, LG Display
China	SK hynix, Hejian, SMIC Samsung Display, LG Display, BOE
Taiwan	TSMC, UMC, Micron, PSC AUO, Innolux, CPT, HannStar
Japan	KIOXIA, SONY, Micron Japan Sharp, Japan Display, PLD

## Regional Sales<sup>1)</sup>

Category	Sales	Sales Portion
South Korea	11,376	74.3
Asia	3,921	25.6
- China	2,414	15.8
- Taiwan	925	6
- Japan	461	3
- Singapore	119	0.8
- Hong Kong	2	0.0001
Others (U.S., Europe)	5	0.0003
Total	15,302	100

1) December 31, 2022, Consolidated (Unit : KRW 100 million, %)

# Sustainability Management

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## We are creating happiness of stakeholders through sustainability management.

SK materials drives business model innovation based on its sustainability management strategy, which creates economic value and social value. Strengthening sustainability management, we integrate ESG impact considerations into decision-making processes for new business development and investments. By 2024, we aim to implement an Internal Carbon Price Scheme to accelerate our journey towards achieving Net Zero.

Operating under the Sustainability Department, our company-wide ESG lead organization, the ESG Synergy Group is actively enhancing ESG capacity across all subsidiaries. Additionally, we respond proactively to ESG-related needs from stakeholders by implementing an integrated performance management system for core ESG indicators.

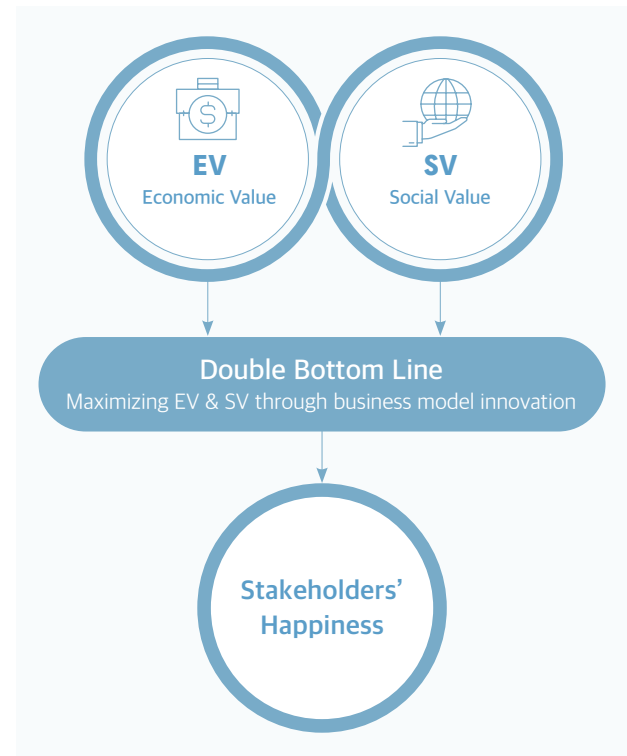
Through these initiatives, we are committed to enhancing stakeholders' happiness and evolving into a sustainable "Global Top Materials Technology Specialist" through our ESG Management-based business model innovation.



# SK materials' Sustainability Management

## Sustainability Management Philosophy

SK Group embraces the Double Bottom Line (DBL) Management, seeking to generate both economic value (EV) and social value (SV) across its overall management activities. SK's SV revolves around "all values creating stakeholders' happiness". By continuously innovating its business model and adopting sustainability management practices, SK endeavors to maximize both EV and SV, ultimately leading to an enhanced sense of happiness among its stakeholders.



## Sustainability Management Strategy

SK materials, driven by its vision to become a "Global Top Materials Technology Specialist," implements a sustainability management strategy to enhance the happiness of diverse stakeholders, including customers, suppliers, shareholders, and the community.

From an investor's perspective, SK materials focuses on increasing corporate values through sustainable growth. Leveraging its comprehensive business portfolio spanning semiconductor materials, display/battery materials, and CCUS, the company aims to achieve long-term success and positive social impact. To meet customer demands, SK materials ensures a stable supply system by developing cutting-edge materials technology solutions. Additionally, the company strengthens the materials ecosystem by engaging in partnerships with raw materials suppliers, contributing positively to the community through value creation and local mutual growth, and working towards achieving Net Zero goals. Emphasizing employee well-being and growth, SK materials prioritizes safety and happiness for all employees, fostering a workplace where employees can thrive and contribute to the company's overall success.





## Sustainability Management Implementation System

To enhance the ESG management standard across all subsidiaries, SK materials has implemented the Sustainability Management Implementation System, mainly operated by the ESG Synergy Group. This system facilitates integrated management of company-wide ESG performance. We have extended the scope of ESG disclosure to include all subsidiaries, as demonstrated in this Sustainability Report. Looking ahead, we aim to broaden the scope of information disclosure to encompass overseas operations and new joint ventures in the future.

### ESG Synergy Group

The ESG Synergy Group is a collaborative forum comprising company-wide ESG organizations, including subsidiaries, that convene to share implementation tasks and key issues related to ESG initiatives on an organizational level. Discussions within the group revolve around ESG agendas concerning climate change, supply chain, and local community engagement. Additionally, the ESG Synergy Group manages performances relevant to ESG strategies. The Sustainability Department plays a proactive role in developing the company-wide ESG strategy and provides support to ensure the successful execution of ESG tasks throughout the organization.



Sustainability Management Performance Management System

Key ESG Indices Management

SK materials diligently measures its ESG performance and implements corrective action plans. This is achieved by assessing key ESG indices that take into account the diverse needs of various stakeholders, including financial institutions, ESG disclosure organizations, ESG assessment institutions, and industry-specific characteristics. Continuously refining these indices, we incorporate insights from global ESG trends and stakeholders' feedback. In 2023, we introduced two new indices, namely clean technology and fair appraisal and compensation, while enhancing 12 existing indices, such as total energy consumption and NOx emissions. The management of key ESG indices is systematically conducted through the Social Value Management System. Each subsidiary reports its annual plans and performances to the executive management and Board of Directors, ensuring transparent and accountable ESG practices.

Environmental		
Index (12)	Essential Disclosure Items (49)	
	Disclosure (31)	Assessment (18)
Energy Consumption	<ul style="list-style-type: none"><li>Total Energy Consumption</li><li>Direct Energy Consumption by Source</li><li>Indirect Energy Consumption by Source</li></ul>	<ul style="list-style-type: none"><li>Total Energy Consumption (intensity)</li></ul>
Renewable Energy (RE) Consumption	<ul style="list-style-type: none"><li>Total Power Consumption</li><li>Total RE Consumption</li><li>RE Consumption by Source</li><li>RE Consumption by Procurement Means</li></ul>	<ul style="list-style-type: none"><li>RE Usage Ratio</li></ul>
GHG Emissions	<ul style="list-style-type: none"><li>Target GHG Emissions</li><li>GHG Reduction</li><li>Total GHG Emissions</li><li>Scope 1 Emissions</li><li>Scope 2 Emissions</li><li>Scope 3 Emissions</li></ul>	<ul style="list-style-type: none"><li>Relevant Policies, Goals, Achievements</li><li>GHG Reduction Goal Achievement (%)</li><li>Total GHG Emissions (intensity)</li></ul>
Climate Change Response (TCFD Disclosure)		<ul style="list-style-type: none"><li>Relevant Policies, Goals, Achievements</li></ul>
Air Pollutant Emissions	<ul style="list-style-type: none"><li>NOx Emissions</li><li>SOx Emissions</li><li>Dust Emissions</li><li>VOC Emissions</li></ul>	<ul style="list-style-type: none"><li>NOx Emissions (intensity)</li><li>SOx Emissions (intensity)</li><li>Dust Emissions (intensity)</li><li>VOC Emissions (intensity)</li></ul>
Waste Generation	<ul style="list-style-type: none"><li>Total Waste Generation</li><li>Waste Generation by Waste Composition</li></ul>	<ul style="list-style-type: none"><li>Total Waste Generation (intensity)</li></ul>
Waste Recycling	<ul style="list-style-type: none"><li>Total Waste Recycled</li></ul>	<ul style="list-style-type: none"><li>Waste Recycling Rate</li></ul>
Water Consumption	<ul style="list-style-type: none"><li>Total Water Withdrawal</li><li>Water Withdrawal by Source</li><li>Water Withdrawal from Areas with Water Stress</li></ul>	<ul style="list-style-type: none"><li>Total Water Withdrawal (intensity)</li></ul>
Water Recycling	<ul style="list-style-type: none"><li>Total Water Consumption</li><li>Total Water Recycled</li></ul>	<ul style="list-style-type: none"><li>Water Recycling Rate</li></ul>
Water Pollutant Discharge	<ul style="list-style-type: none"><li>COD Discharge</li><li>BOD Discharge</li><li>T-N Discharge</li></ul>	<ul style="list-style-type: none"><li>COD Discharge (intensity)</li><li>BOD Discharge (intensity)</li><li>T-N Discharge (intensity)</li></ul>
Environmental Pollution Prevention	<ul style="list-style-type: none"><li>Environmental Pollutant Treatment Facility and Monitoring System</li><li>Environmental Technology and Training Support</li><li>Environmental Regulation Violation</li></ul>	
Clean Technology		<ul style="list-style-type: none"><li>Relevant Policies, Goals, Achievements</li></ul>

Social		
Index (14)	Essential Disclosure Items (34)	
	Disclosure (20)	Assessment (14)
Employees	<ul style="list-style-type: none"><li>Total Number of Employees</li><li>Employee Ratio<ul style="list-style-type: none"><li>Gender, Age, Permanent/Temporary</li></ul></li><li>Number of New Hires</li><li>Number of Employees with Disability</li><li>Female Executives Ratio</li><li>Number of Female Executives</li></ul>	<ul style="list-style-type: none"><li>Ratio of Disabled Employees</li></ul>
Employee Safety	<ul style="list-style-type: none"><li>Lost Time Injury Rate (LTIR) by Employee Type<ul style="list-style-type: none"><li>Employees &amp; Suppliers</li></ul></li><li>Number of LTI<ul style="list-style-type: none"><li>Employees &amp; Suppliers</li></ul></li><li>Rate of Fatalities</li><li>Number of Fatalities</li></ul>	<ul style="list-style-type: none"><li>Relevant Policies, Goals, Achievements</li><li>LTIR</li></ul>
Employee Health	<ul style="list-style-type: none"><li>Occupational Illness Frequency Rate (OIFR)</li><li>Number of OIF</li></ul>	<ul style="list-style-type: none"><li>Relevant Policies, Goals, Achievements</li></ul>
Human Rights		<ul style="list-style-type: none"><li>Relevant Policies, Goals, Achievements</li></ul>
Upgrading Employee Skills	<ul style="list-style-type: none"><li>Employee Training Hours (HRD)</li></ul>	<ul style="list-style-type: none"><li>Relevant Policies, Goals, Achievements</li></ul>
Work-Life Balance		<ul style="list-style-type: none"><li>Relevant Policies, Goals, Achievements</li></ul>
Product/Service SV		<ul style="list-style-type: none"><li>Amount of SV Created by Products/Services</li></ul>
Product/Service Safety & Quality	<ul style="list-style-type: none"><li>Number of Violations of Laws related to Product/Service Safety</li></ul>	<ul style="list-style-type: none"><li>Relevant Policies, Goals, Achievements</li></ul>
Company Data & Customer Information Protection	<ul style="list-style-type: none"><li>Number of Corporate Data and Customer Data Leakage Incidents</li></ul>	<ul style="list-style-type: none"><li>Relevant Policies, Goals, Achievements</li></ul>
Support for Mutual Growth with Business Partners	<ul style="list-style-type: none"><li>Number of Business Partners Assessing ESG Risks</li></ul>	<ul style="list-style-type: none"><li>Relevant Policies, Goals, Achievements</li></ul>
Support for Local Communities	<ul style="list-style-type: none"><li>Ratio of Employees who Participate in Volunteer Activities</li></ul>	<ul style="list-style-type: none"><li>Relevant Policies, Goals, Achievements</li></ul>
Support for the SE Ecosystem		<ul style="list-style-type: none"><li>Relevant Policies, Goals, Achievements</li></ul>
Fair Appraisal and Compensation	<ul style="list-style-type: none"><li>Policies related to Employee Appraisal and Compensation</li><li>Performance Appraisal and Feedback Process</li></ul>	

Governance		
Index (9)	Essential Disclosure Items (20)	
	Disclosure (9)	Assessment (11)
Performance Evaluation on the Executive Management and Compensation	<ul style="list-style-type: none"><li>Installation of the Compensation Committee and Operating Status</li></ul>	<ul style="list-style-type: none"><li>ESG-based Performance Evaluation on Policy/Goal/Performance Related to the Executive Management /Compensation System</li></ul>
Identification of the ESG Needs of Stakeholders		<ul style="list-style-type: none"><li>Relevant Policies, Goals, Achievements</li></ul>
ESG-based Business Portfolio Strategies and Processes		<ul style="list-style-type: none"><li>Policy/Goal/Performance Incorporating ESG Standards for New Businesses/Investments</li></ul>
Composition and Operation of the Board of Directors	<ul style="list-style-type: none"><li>Operating Status of the Board of Directors</li><li>Compensation Policy for the Board of Directors</li><li>Evaluation Status of the Board of Directors</li><li>Installation/Operating Status of the Independent Director Candidate Recommendation Committee</li></ul>	<ul style="list-style-type: none"><li>Policy/Goal/Performance regarding the Diversity/Expertise/Independence of the Board of Directors</li><li>Ratio of Female Directors</li><li>ESG-related Policy/Goal/Performance within the Board of Directors</li></ul>
Operation of the Audit Committee	<ul style="list-style-type: none"><li>Installation/Operating Status of the Audit Committee</li></ul>	
Enhancement of Shareholder Values	<ul style="list-style-type: none"><li>Policy to Protect the Rights of Shareholders</li><li>Policy to Return to Shareholders</li></ul>	
Anti-corruption Management	<ul style="list-style-type: none"><li>Number of Violations of Anti-corruption Regulations</li></ul>	<ul style="list-style-type: none"><li>Anti-corruption Policy/Goal/Performance</li><li>Anti-corruption Education Policy/Goal/Performance for Employees</li></ul>
Disclosure of ESG Information		<ul style="list-style-type: none"><li>Core Indicator Disclosure Rate</li><li>ESG Management of Subsidiaries/Grandchild Subsidiaries</li></ul>
Participation in Global Partnerships		<ul style="list-style-type: none"><li>ESG-related Global Partnership</li><li>Policy/Goal/Performance</li></ul>

New Advanced

Social Value Measurement

SK Group utilizes its proprietary indices to measure social values, assessing both indirect economic contributions and ESG performances. Since 2018, SK materials has been measuring social values generated from all managerial activities, quantifying them in currency units, following SK Group’s social value measurement methodology. The outcomes of these measurements are disclosed in the Sustainability Report and on our official homepage. Furthermore, SK materials continually identifies new indices that align with its business characteristics and incorporates them into the social value measurement system.

Social Value Measurement Indices

Indirect Economic Contributions E

Values indirectly contributing to economy through business activities

Employment

Dividends

Taxation

Environmental Performance E

Environmental impacts from development, production, and sales of products

Product/Service

Process

Resource Consumption

Environmental Pollution

Social Performance S

The values created from product sales that improve the quality of life and business activities toward employees, suppliers, and the local community

Product/Service

Process

Social Contribution

Quality of Life

Consumer Protection

Labor

Mutual Growth

Social Contribution Activities

Donation

Volunteering

Governance Performance<sup>1)</sup> G

Efforts for transparent and responsible decision-making for various stakeholders

Governance Innovation Focused on the Board of Directors

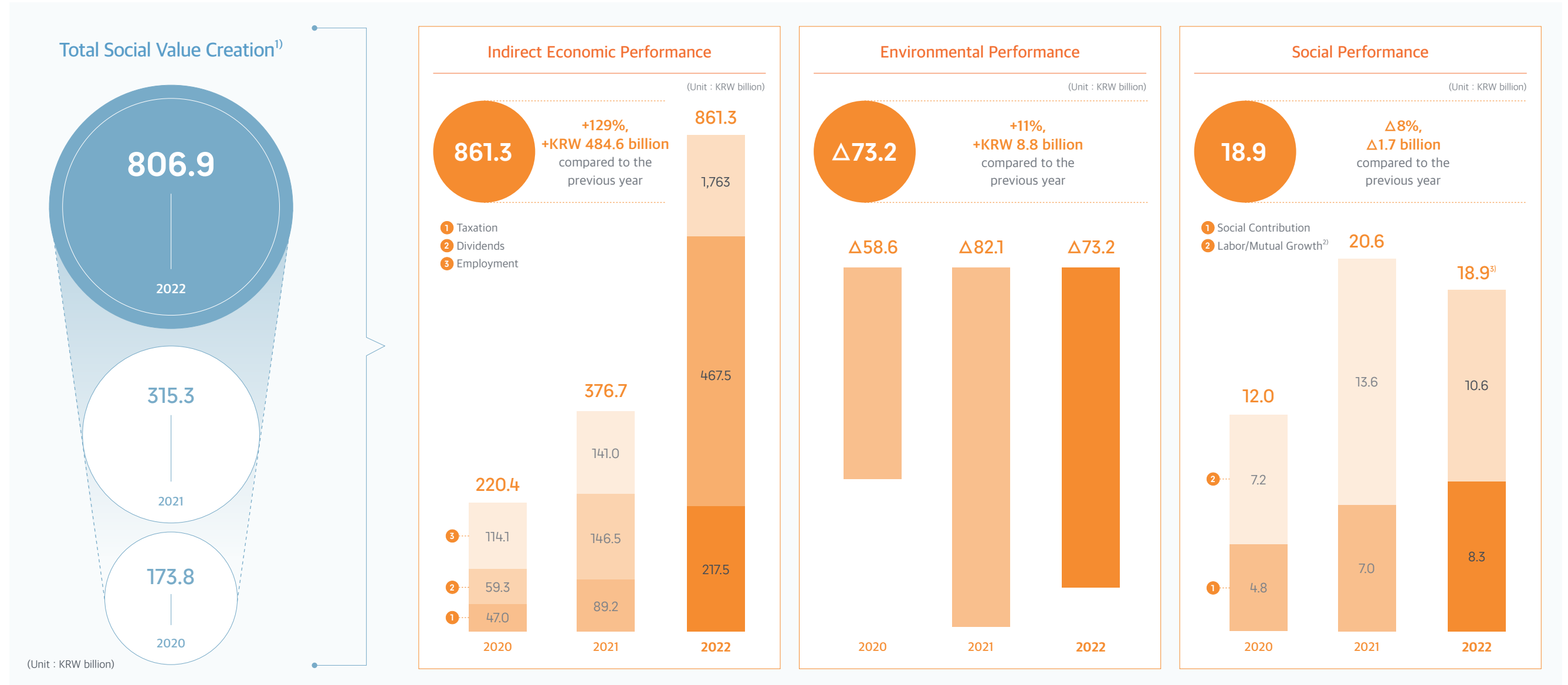
Management of Key Governance Indices

1) Non-currency-based performance derived from governance activities will be announced



## Social Value Performance

In 2022, SK materials made significant strides in improving its environmental performance, achieving reductions in greenhouse gas (GHG) emissions and hazardous substances. Additionally, the company enhanced indirect economic contributions, including new recruitment and employee benefits, leading to an increase in operating profits. As a result of these efforts, SK materials created a total of KRW 806.9 billion worth of social values, representing a remarkable 2.5 times increase compared to the previous year.



1) The social value measurement encompasses all subsidiaries, overseas operations, and Happy Companion, with the exception of SK materials Group14 (which will be included starting in 2023)

2) Products and services were included

3) One-time product and service performances in 2021 were excluded

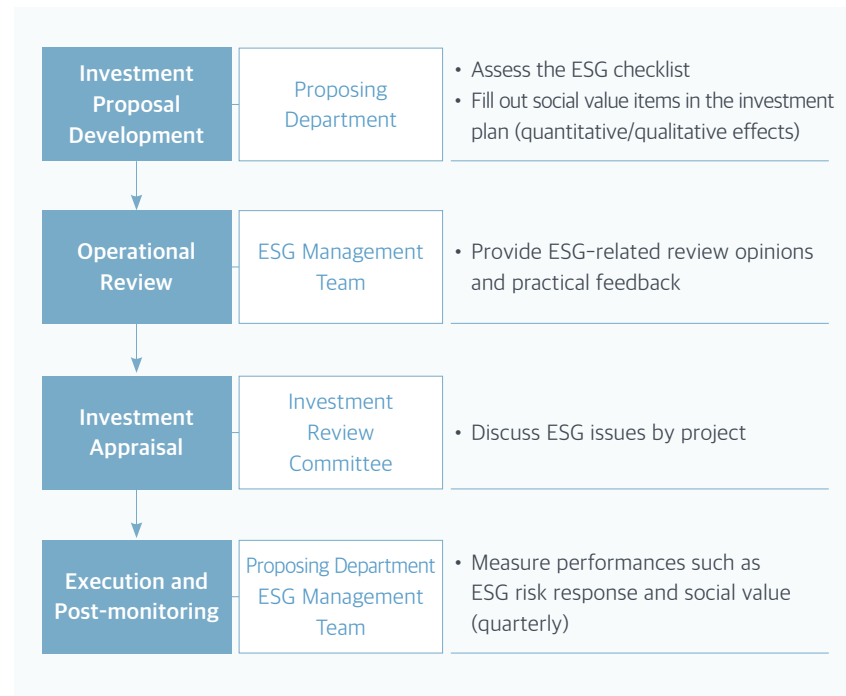
## Sustainable New Business & Investment

### ESG-connected Investment Review & Management Process

SK materials has established ESG as the primary strategy for its business management and incorporates ESG evaluation throughout the entire process of new business development and investment.

Departments submitting investment plans review their proposals using an ESG checklist and receive a preemptive review from the ESG Management Team, which serves as the ESG responsible department. Throughout the investment deliberation process, response plans for ESG-related issues are thoroughly discussed and considered. Following the investment, the ESG risk response status is closely monitored and inspected, while the social values created from the investment are carefully measured.

#### Investment Review & Management Process

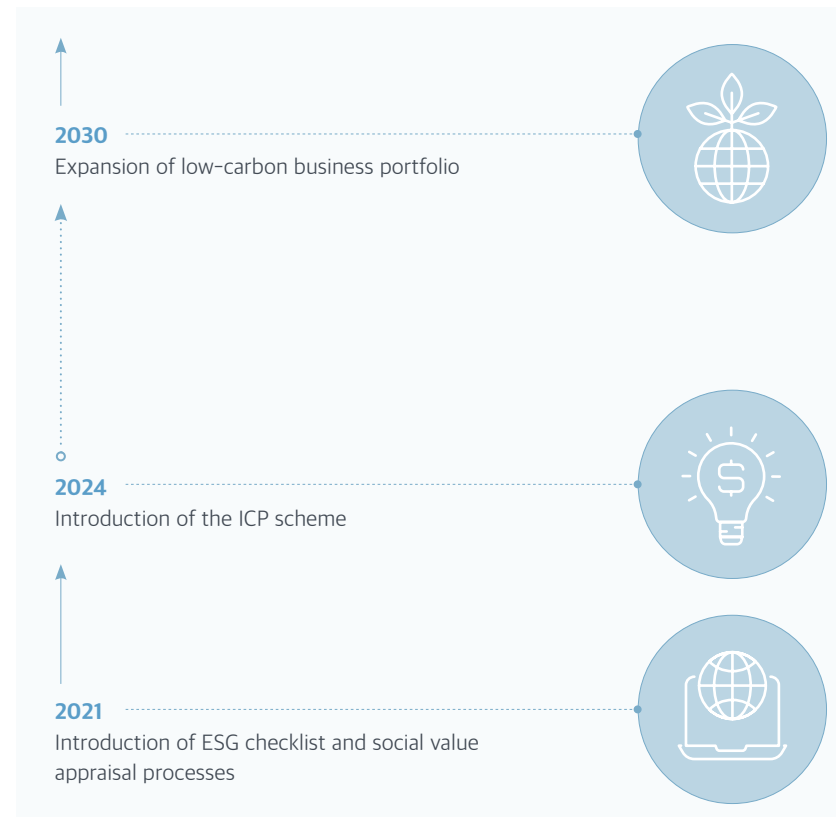


### Internal Carbon Price<sup>1)</sup>

SK materials plans to introduce the Internal Carbon Price (ICP) scheme in 2024 to accelerate achieving Net Zero by 2030, which is 20 years sooner than the global target. The ICP will be considered when reviewing investments, reducing GHG emissions and expanding low-carbon business in the mid-to-long-term perspective.

1) Internal Carbon Price (ICP) : Values given by a company to carbon emissions in order to internalize economic costs of GHG emissions

#### Status & Target of Sophistication of ESG-related Investment and Management



## Enhancing Employees' ESG Awareness

SK materials conducts ESG training programs to raise awareness among employees about environmental, social, and governance (ESG) principles. Additionally, the company initiates ESG practice campaigns, such as "1 Person 1 SV," to actively involve employees in sustainable practices. The company ensures consistent communication with employees regarding these ESG activities through channels such as the ESG Letter and in-house broadcasting (gbs).



### Employee SV and ESG Training

SK materials utilizes the SK Group's education platform, mySUNI, to educate all employees on social value (SV) and ESG concepts, ESG strategies, and key activities, enhancing their awareness of social value and ESG management. In 2023, team-level ESG workshops will be conducted to share ESG management directions, goals, execution strategies, and specific tasks.

## Employee Campaigns

### In-life SV Implementation App, “Haenggarae (Tomorrow with Added Happiness)”

SK materials has launched and operated the app “Haenggarae” since 2020, where its employees can directly participate in solving social issues and accumulate points for various activities. Through this app, employees earn SV reward points for their activities, which can be utilized for purchasing products from social enterprises, vacation coupons, donations, and more.

In 2022, we expanded our initiatives to include tasks such as recycling old mobile phones, carpooling, using reusable containers, and promoting waste separation, in addition to our existing daily life practices and social contribution activities. In total, we conducted 19 programs. In 2023, we plan to launch the “1 Person 1 SV” campaign using Haenggarae, aiming to reduce 160kg of CO<sub>2</sub> per person annually.

### Eco-Friendly Campaign, “ERT Challenge”

SK materials actively participates in the Entrepreneurship Round Table (ERT) Challenge organized by the Korea Chamber of Commerce and Industry to embody the Spirit of New Entrepreneurship<sup>1)</sup>. In 2022, we took part in initiatives such as “Reducing Carbon, Recycling Resources,” “Reviving Local Communities, Preserving the Environment,” and “Zero Waste Day,” where employees engaged in eco-friendly activities in their daily lives, such as using reusable cups, picking up trash, going paperless, and minimizing food waste.

In particular, the “Reducing Carbon, Recycling Resources” campaign encouraged many employees to participate in carbon reduction and resource cycling activities, such as using stairs, cycling to work, and printing on both sides of paper. This campaign was integrated with the Haenggarae app, resulting in 702 employees participating and creating a social value worth KRW 16.67 million.

1) Spirit of New Entrepreneurship : A new role for resolving social issues, such as climate change, digital transformation, and pandemic

## Social Contribution Idea Contest

To encourage continuous interest and participation in addressing local community issues, SK materials organized the “SV, Try Yourself” contest. Adopted ideas from employees, such as enhancing career experience education, undergo review and are implemented as actual social contribution activities.



Haenggarae App



ERT Challenge, “Reducing Carbon, Recycling Resources”

## Employee Communication

To enhance employees’ understanding of ESG, we strengthen communication through in-house broadcasting (gbs), ESG Letter distribution, and operating a YouTube channel.

In 2022, in-house broadcasting shared key ESG-related activities, including the Net Zero report publication and the urban regeneration project “STAXX”. Through the ESG Letter, we delivered ESG trends and issues, such as resource recycling, water resource management, and SK’s ESG practices, in a total of four editions. Additionally, we designed a quiz event with added fun elements to increase employees’ participation in the programs.



ESG Letter



SK materials YouTube Channel

## gbs Activities

Category		Contents
Environment		<ul style="list-style-type: none"> <li>Net Zero Report Publication</li> <li>EM Brick-Making Volunteering Activity</li> <li>ERT Joint Challenge “Reviving Local Communities, Preserving the Environment”</li> <li>Hydrogen Gas Upcycling MOU Signing</li> <li>SK Inc. materials and CCUS Technology Collaboration</li> <li>CDP Water Management Excellent Company Selection (SK specialty)</li> </ul>
Social	Customers	<ul style="list-style-type: none"> <li>EUV PR Localization (SK materials performance)</li> </ul>
	Safety	<ul style="list-style-type: none"> <li>Second Half of the Year Company-Wide Emergency Drill (SK specialty)</li> <li>Excellent Safety Zone Certification in Safety Management (SK specialty)</li> </ul>
	Quality	<ul style="list-style-type: none"> <li>IATF 16949 Certification Ceremony (SK specialty, SK trichem)</li> <li>Quality Golden Rules (QGR) Campaign</li> </ul>
	Employees	<ul style="list-style-type: none"> <li>Organizational Culture Meeting (SK materials airplus)</li> <li>Employees’ Happiness Event (SK materials JNC)</li> <li>CEO Financial Story Communication Day</li> </ul>
	Suppliers	<ul style="list-style-type: none"> <li>Mutual Growth Council Meeting</li> <li>Suppliers Partner’s Day (SK materials airplus)</li> </ul>
Local Community		<ul style="list-style-type: none"> <li>STAXX Project</li> <li>SK Pro Bono Activities (SK materials Group14)</li> <li>Winter Supplies Donation (SK materials airplus)</li> <li>Support for Vulnerable Children’s Donation (SK Resonac)</li> </ul>

# Stakeholder Communication

SK materials defines investors, customers, suppliers, the local community, and employees as the key stakeholders and performs active communication with them. We conduct the Materiality Assessment of stakeholders' needs to enhance our business model and develop sustainable strategies. The outcomes of these efforts are transparently disclosed in our Sustainability Report.

## Stakeholder Communication Channel

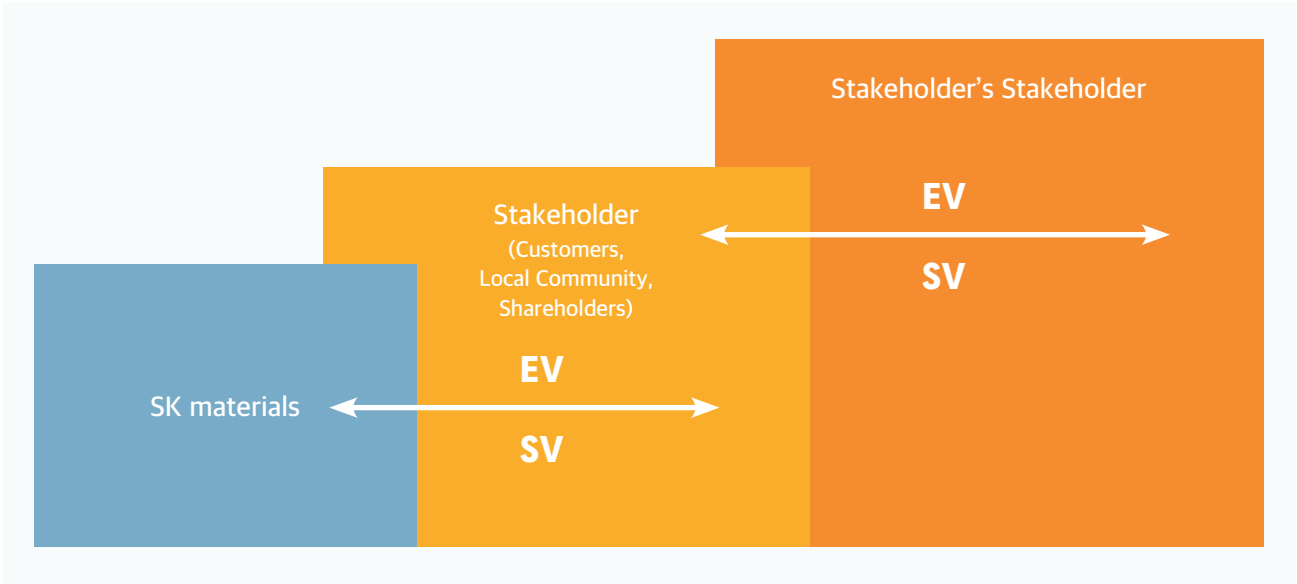
SK materials runs various communication channels to identify needs of its stakeholders.

Stakeholders		Key Issues	Communication Channels (Frequency)
Investors		<ul style="list-style-type: none"><li>Economic Value Creation</li><li>Protection of Shareholder Rights</li><li>Sound Corporate Governance</li></ul>	<ul style="list-style-type: none"><li>Annual Shareholders' Meeting (Once a Year)</li><li>Website and Social Media (Ongoing)</li></ul>
Customers		<ul style="list-style-type: none"><li>Enhancing Price and Product Quality Competitiveness</li><li>Ensuring Product Safety</li><li>Reducing Product Environmental Impact</li><li>Carbon Reduction</li><li>Expanding SV Performance</li></ul>	<ul style="list-style-type: none"><li>Annual Customer Satisfaction Survey (Once a Year)</li><li>Customer Exchange Meetings (Quarterly)</li><li>Technical Meeting (Monthly/Quarterly)</li><li>Listening to VOC (Ongoing)</li><li>Responding to Customer ESG Requests (As Needed)</li><li>Stakeholder Account (As Needed)</li><li>Website and Social Media (Ongoing)</li></ul>
Society	Suppliers	<ul style="list-style-type: none"><li>Support for Mutual Growth</li><li>Creating a Fair Trade Environment</li><li>Improving Working Conditions</li><li>ESG Evaluation and Improvement Support</li><li>Joint R&amp;D</li></ul>	<ul style="list-style-type: none"><li>Purchase Information System (Ongoing)</li><li>Mutual Growth Council Meetings (Once a Year)</li><li>Business Site Visits (As Needed)</li><li>ESG Workshop (Once a Year)</li><li>Technology Exchange Meetings (Once a Year)</li></ul>
	Local Community	<ul style="list-style-type: none"><li>Solving Social Issues</li><li>Promoting Local Community Economic Activities</li><li>Preventing Accidents and Minimizing Damages in the Community</li></ul>	<ul style="list-style-type: none"><li>Local Institutions and Organizations (Ongoing)</li><li>Resident Meetings (Ongoing)</li><li>Local Community-Government Civilian Consultation Committee (Ongoing)</li></ul>
Employees		<ul style="list-style-type: none"><li>Work-Life Balance</li><li>Support for Capacity Enhancement</li><li>Fair Performance Evaluation and Compensation</li><li>Respect for Human Rights and Diversity</li><li>Strengthening Workplace Safety</li></ul>	<ul style="list-style-type: none"><li>Happiness Meetings (Quarterly)</li><li>Intranet Homepage Bulletin Board (Ongoing)</li><li>CEO "Financial Story" Comm. Day (Once or Twice a Year)</li><li>Recruitment Homepage</li></ul>

## Stakeholder Account

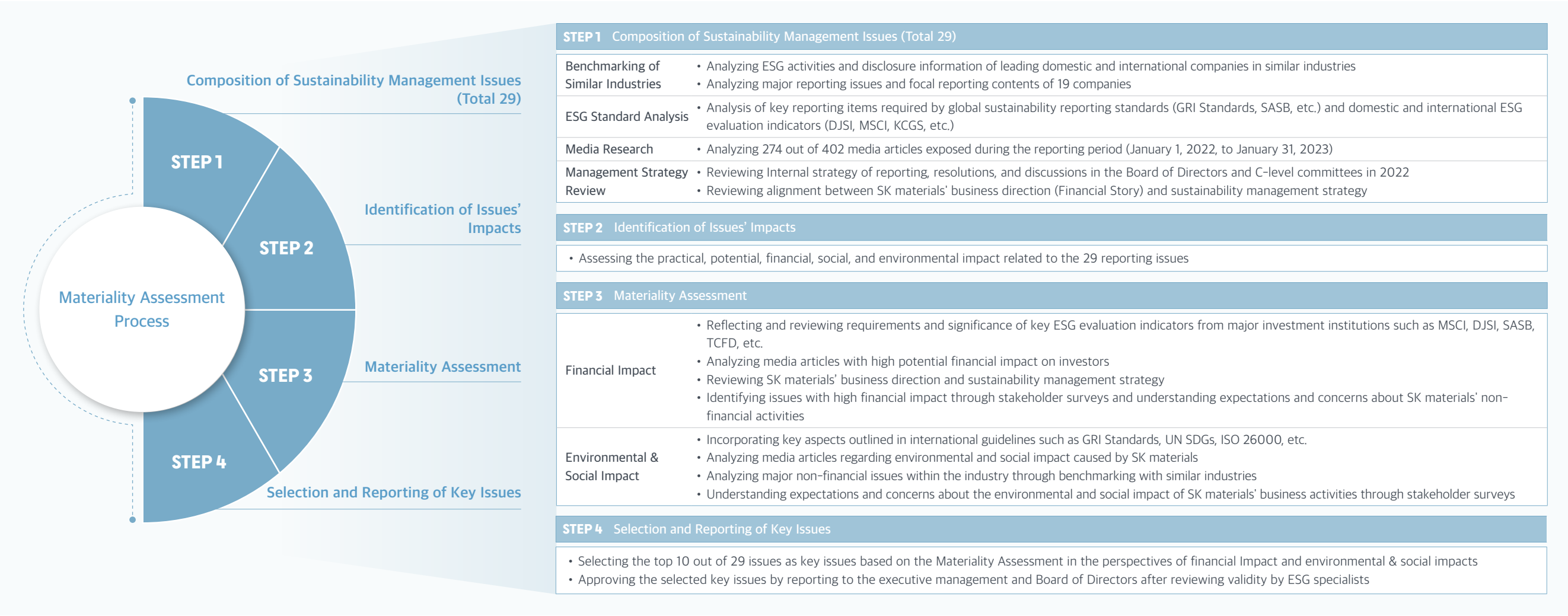
Stakeholder Account is a management methodology that measures and manages the EV and SV generated by the company's business activities in relation to stakeholders. SK materials utilizes the Stakeholder Account methodology to enhance mutual understanding and trust with stakeholders. In 2022, the company analyzed pain points and needs through communication with specific customers and identified detailed execution tasks in four areas, including enhancing material supply stability/competitiveness, strengthening quality management capabilities, developing high-performance next-generation materials, and enhancing related customers' ESG performance. The result of EV and SV measurements will be shared with customers. Going forward, SK materials plans to further enhance the Stakeholder Account measurement methodology and gradually expand the scope of stakeholders involved.

### Directions for Stakeholder's Pursuit of Value



# Materiality Assessment

SK materials identifies the key interests of internal and external stakeholders and selects issues that require focused management during business activities through materiality assessment. These selected issues are then reflected in the Sustainability Report. Following the materiality assessment process, each issue is evaluated considering both its financial impact on the company and its environmental and social Impacts on the environment and society.

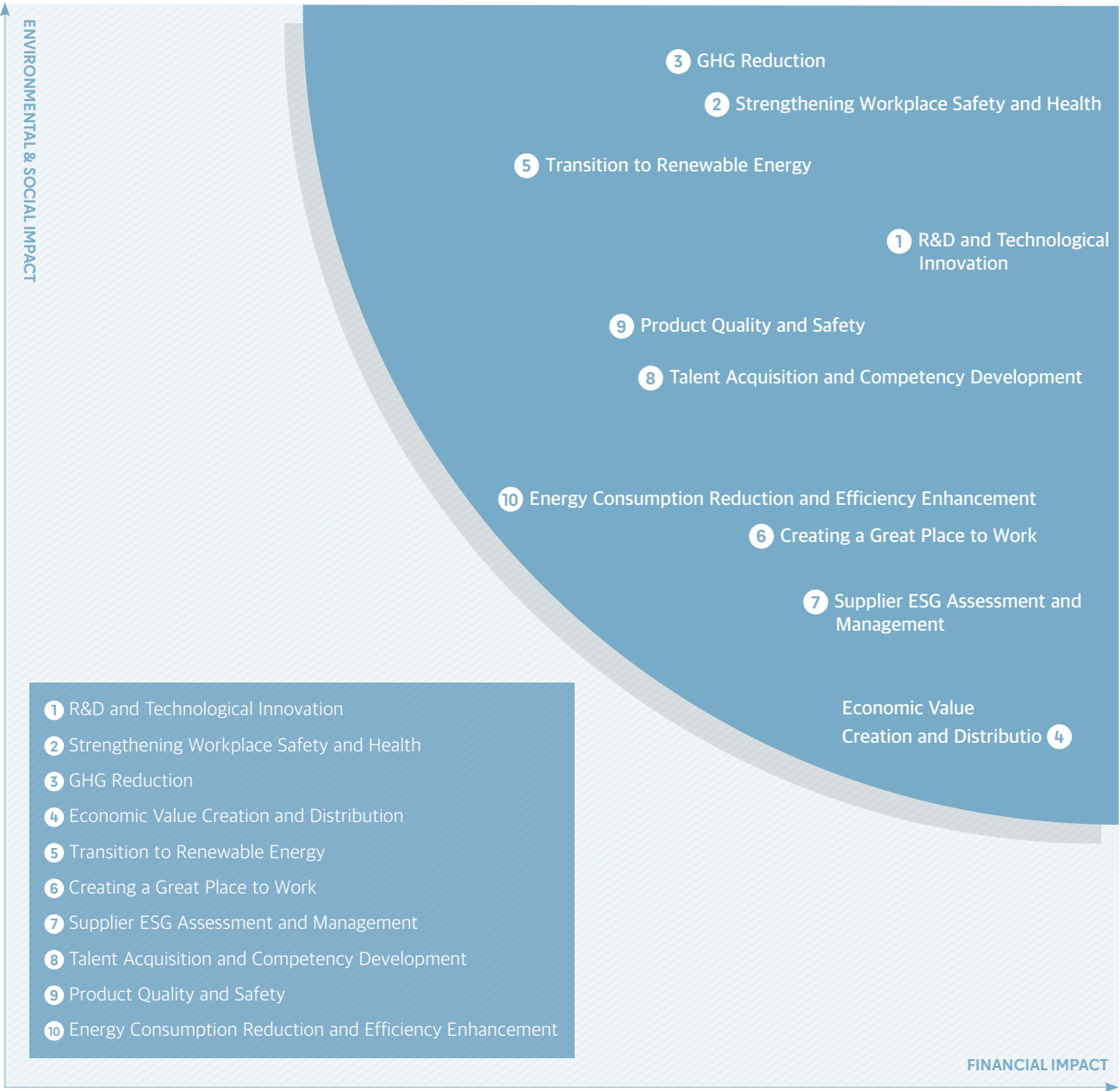


Materiality Assessment Results

In 2023, we derived a total of 29 issues through benchmarking with leading companies in the same industry and media research. Finally, 10 key issues were selected based on the Materiality Assessment. In the financial perspective, Economic Value Creation and Distribution, R&D and Technological Innovation, and Supplier ESG Assessment and Management were selected as top issues. In the environmental and social perspectives, GHG Reduction, Strengthening Workplace Safety and Health, and Transition to Renewable Energy were selected.

These 10 key issues were categorized into four “Priority Areas”: Climate Change Response, Enhancing Customer Value, Creating a Great Place to Work, and Building a Win-win Cooperation Ecosystem. Relevant activities and performances of 19 general issues are reported in the environment, social, and governance areas in the “ESG Factbook”.

Priority Area	Priority	Key Issues	Relevant GRI	Financial Impact	Environmental & Social Impact	Reporting Pages
Climate Change Response	3	GHG Reduction	GRI 305: Emissions	8	1	30~37
	5	Transition to Renewable Energy	GRI 302: Energy	13	4	36
	10	Energy Consumption Reduction and Efficiency Enhancement	GRI 302: Energy	15	12	37
Enhancing Customer Value	1	R&D and Technological Innovation	Non-GRI	2	5	42~44, 48~49
	4	Economic Value Creation and Distribution	GRI 201: Economic Performance	1	20	41, 50
	9	Product Quality and Safety	GRI 416: Customer Health and Safety GRI 417: Marketing and Labeling	10	10	45~47
Creating a Great Place to Work	2	Strengthening Workplace Safety and Health	GRI 403: Occupational Health and Safety	6	2	54~62
	6	Creating a Great Place to Work	GRI 402: Labor/Management Relations GRI 407: Freedom of Association and Collective Bargaining	4	13	63~65
	8	Talent Acquisition and Competency Development	GRI 401: Employment GRI 404: Training and Education GRI 405: Diversity and Equal Opportunity	9	11	66~68
Building a Win-win Cooperation Ecosystem	7	Supplier ESG Assessment and Management	GRI 308: Supplier Environmental Assessment GRI 414: Supplier Social Assessment	3	18	73~78





# Priority Area

Climate Change Response	28
Enhancing Customer Value	38
Creating a Great Place to Work	51
Building a Win-win Cooperation Ecosystem	69

# Climate Change Response

Environmental Strategy & Goals	30
Climate Change Governance	31
2030 Net Zero/RE100 Implementation Plan	32
Net Zero/RE100 Implementation Strategy & Activities	36



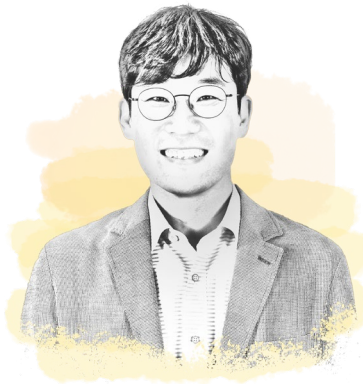
SK specialty  
 Head of Production Division  
**Gwak Gi-seop**

We are growing into a sustainable Green Company by minimizing environmental impacts.

SK materials aims to become a global top-level Green Company by formulating the “Environmental Strategy 2030” and implementing three key tasks to achieve this goal.

In pursuit of “Greenhouse Gas Emission Reduction,” we have derived and implemented process efficiency improvement tasks for each subsidiary. Notably, SK specialty actively promotes direct greenhouse gas reduction by developing NF3 recovery and disposal technologies. Regarding “Water Usage Reduction and Expansion of Recycling,” we monitor and manage risks at every stage of water sourcing, consumption, and wastewater treatment. It also plans to improve waste recycling rates and achieve the ZWTL Gold level by 2030.

Furthermore, SK materials continuously executes various environmental tasks, generating results to minimize environmental impacts and create an environmentally-friendly workplace.



SK Inc. materials  
 Head of SHE Management Department  
**Park Jong-bok**

By 2030, we will achieve Net Zero/RE100 ahead of schedule.

SK materials takes proactive measures to address climate change, declaring its commitment to achieving Net Zero by 2030, 20 years ahead of the global target.

We have established a response process centered around the Climate Change Task Force to systematically manage climate change risks and related agendas. In 2022, we published the Net Zero Report to share our determination and accomplishments in pursuing Net Zero/RE100, including detailed reduction plans and implementation strategies for each subsidiary, to our shareholders, customers, and suppliers.

Moving forward, we will actively execute greenhouse gas reduction strategies, such as expanding the use of renewable energy, improving energy efficiency through process enhancements, and directly reducing GHG emissions through NF3 recovery and disposal.



# Climate Change Response

[Link to SDGs](#)


## GLOBAL TREND

According to the 6th Assessment Report (AR6) approved by the Intergovernmental Panel on Climate Change (IPCC) in 2023, the average global temperature has already risen by 1.1°C compared to pre-industrial levels, primarily due to GHG emissions. It is projected that this trend will continue, and the global average temperature could rise up to 1.5°C in the near future. In response to this alarming situation, the European Union (EU) has officially approved the Carbon Border Adjustment Mechanism (CBAM) legislation, preparing to implement carbon border adjustments. Similarly, South Korea is making significant efforts, with the announcement of national carbon neutrality and green growth plans. The global demand for climate action from companies has intensified, requiring them to take strong measures to address climate change.

## OUR APPROACH

SK materials is committed to minimizing the impact of climate change and establishing a sustainable Green Company through the formulation of the “Environmental Strategy 2030”. We evaluate the progress of each task annually and transparently disclose the results to stakeholders. Moreover, to achieve Net Zero and RE100 by 2030, specific targets and action plans have been developed for each subsidiary. These plans encompass expanding the use of renewable energy, improving energy efficiency, and developing eco-friendly products through technological innovations. In line with our dedication to addressing climate change, we are continuously enhancing our GHG reduction efforts. Not only do we manage emissions under Scopes 1 and 2, but we are also progressively expanding our scope to include Scope 3 emissions. SK materials JNC aims to achieve Net Zero and RE100 by 2024, followed by SK trichem and SK materials performance in 2026. Finally, SK specialty, SK Resonac, and SK materials Group14 have set their target year for Net Zero/RE100 as 2030<sup>1)</sup>.

1) SK materials airplus set its goal to 2045

2) Power Purchase Agreement (PPA) : A system in which electricity consumers (corporations) can purchase renewable energy from renewable energy generators

## 2022 HIGHLIGHTS



Early Achievement of  
2030 Net Zero/RE100  
by All Subsidiaries



First publication of  
Net Zero Report  
2022



GHG Emissions  
Reduction  
39,642 tCO<sub>2</sub>eq



Large-scale  
(50MW)  
PPA<sup>2)</sup> Contract

## KEY STAKEHOLDER



Customers



Employees



Community



Suppliers

# Environmental Strategy & Goals

SK materials has declared the environmental vision of becoming a sustainable Green Company co-created with stakeholders. To minimize the environmental impact at our facilities, we have formulated the “Environmental Strategy 2030”. We are actively pursuing four key tasks, including Net Zero/RE100 initiatives, improvement in wastewater recycling rates, enhancement of waste recycling rates, and the promotion of eco-friendly initiatives. We are committed to executing these tasks in line with the “Net Zero Report” and various environmental initiatives such as CDP and TCFD. Through transparent disclosures, we share the progress and outcomes of our efforts towards achieving Net Zero/RE100 goals.

Building upon the foundation of “Environmental Strategy 2030,” SK materials is determined to address diverse environmental challenges across the organization and emerge as a globally recognized environmentally friendly company by 2030.



1) Net Zero : Achieving a balance between GHG emissions and absorptions to reduce the net carbon emissions to zero

2) RE100 : An abbreviation for Renewable Energy 100%, it refers to the commitment of companies to procure 100% of their electricity from renewable energy sources

3) SK trichem aims to achieve 30%, while SK materials performance aims for 80% of their targets

4) ZWTL : An abbreviation for Zero Waste to Landfill, it assesses how waste is managed and processed, excluding landfill disposal. Different grades such as Platinum (100% recycling rate), Gold (95-99%), Silver (90-94%), etc., are assigned based on waste disposal methods

5) SK trichem aims to achieve 95%

# Climate Change Governance

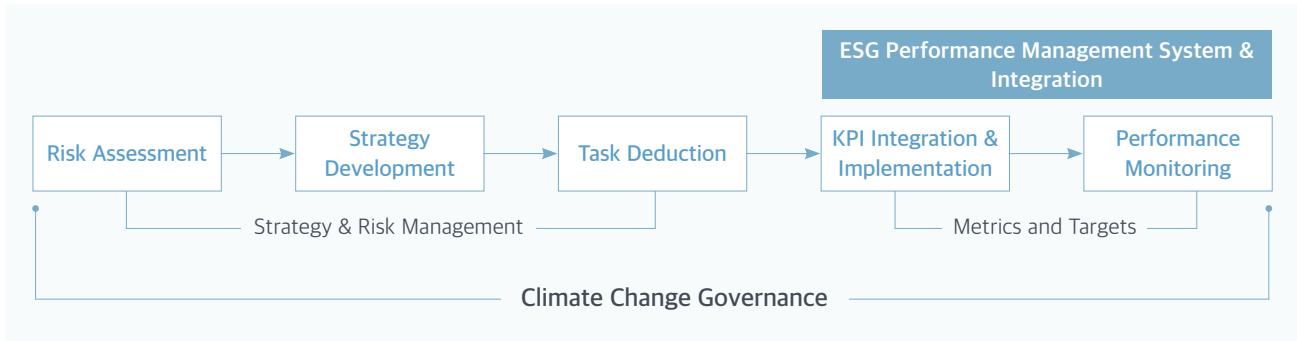
## Climate Change Response Organization & System

### Roles of the Board of Directors and Executive Management

	Roles	Key Actions
Board of Directors	<ul style="list-style-type: none"><li>Climate Change Issue Response Management and Supervision</li><li>Awareness and Control of Risks Posed by Climate Change and their Impacts on Business</li></ul>	<ul style="list-style-type: none"><li>Regular Review and Approval of Critical Climate Change Issues and Response Measures ("Net Zero/RE100 Declaration," "Direct PPA," etc.)</li></ul>
Executive Management	<ul style="list-style-type: none"><li>Climate Change Response Promotion</li><li>Comprehensive Decision-making on Climate Change Matters</li></ul>	<ul style="list-style-type: none"><li>Internal/External Consultation and Decision-making on Climate Change Response Measures</li><li>Implementation of Climate Change Response Measures</li><li>KPI Evaluation Linked to Carbon Reduction Performance (Incentives for All Employees)</li></ul>

## Climate Change Response Process

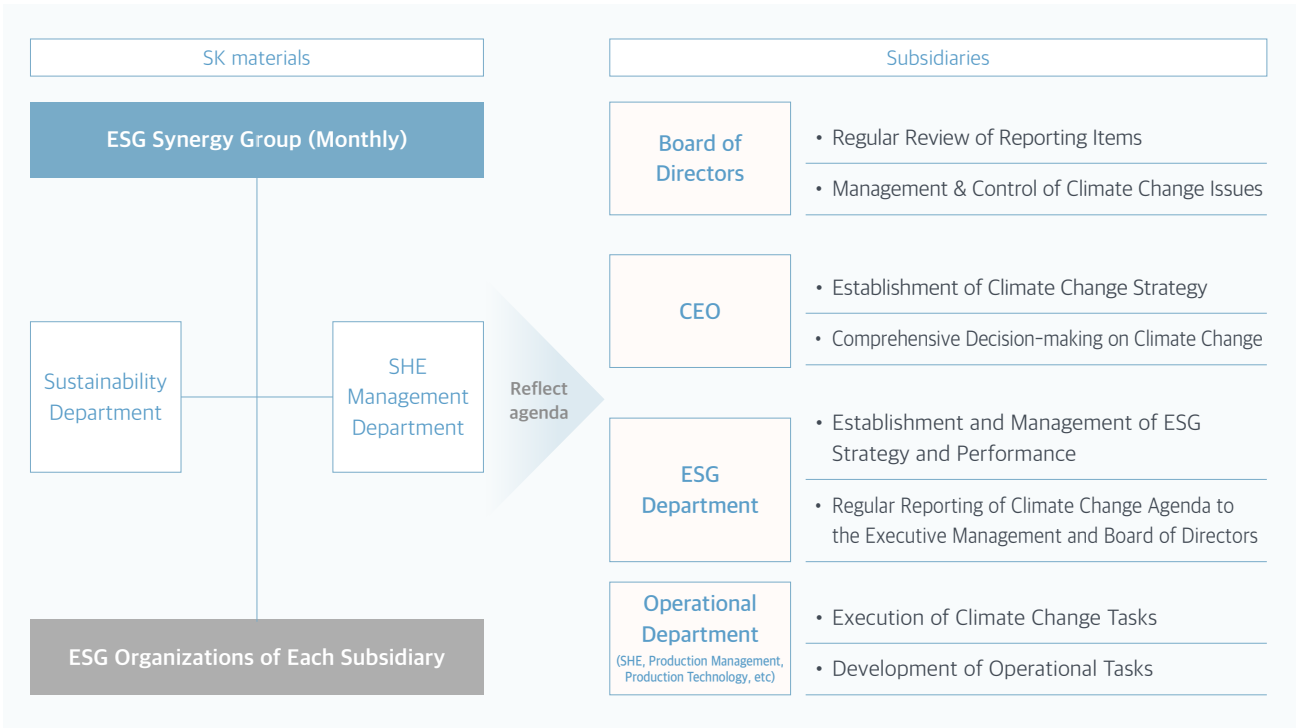
We operate a company-wide process for identifying and assessing climate change risks and opportunities to proactively address potential climate change risks. Through this process, we derive detailed response strategies and tasks for each identified risk and link them to KPIs to monitor progress regularly. The climate change response performance is integrated into the overall ESG performance management system.



## Climate Change Agenda and Performance Management System

ESG activities of SK materials are managed mainly by the CEO and Board of Directors of each subsidiary. The CEO takes the lead in making key decisions related to climate change and reports them to the Board of Directors. The Board of Directors regularly reviews the reporting items to supervise and manage climate change responses.

To strengthen the performance management system for climate change response, SK materials fosters active discussions on climate change issues among its subsidiaries through the ESG Synergy Group. This initiative enhances cooperation and improves the capabilities of relevant organizations in addressing climate change challenges. The Sustainability Department and SHE Management Department formulate SK materials' ESG strategy and manage objectives and performance related to various climate change issues. Additionally, each subsidiary's ESG department regularly checks the progress of ESG tasks and engages in discussions related to climate change through the ESG Synergy Group. Decisions made by the ESG Synergy Group are implemented based on the respective ESG promotion systems of each subsidiary.





# 2030 Net Zero / RE100 Implementation Plan

## Climate Change Global Activities & Plans

The Paris Climate Agreement aims to limit the global average temperature rise to below 1.5°C compared to pre-industrial levels and set a goal to achieve Net Zero by 2050. In response to the Paris Agreement, SK materials actively commits to achieving Net Zero and RE100 early by 2030. We have developed specific action plans and are diligently implementing them. SK materials demonstrates a strong commitment to carbon neutrality and transparently discloses our efforts to stakeholders through CDP (Carbon Disclosure Project) assessments. We publish reports that align with international standards, including the Task Force on Climate-related Financial Disclosures (TCFD). Furthermore, as part of our commitment to achieving the goals of the Paris Agreement, we are preparing to join the Science Based Targets initiative (SBTi) by 2024.

## Net Zero RE100



SK specialty

SK materials airplus,  
SK trichem,  
SK materials performance

SK materials JNC,  
SK materials Group14


SK specialty

SK materials airplus, SK trichem, SK Resonac, SK materials performance,  
SK materials JNC, SK materials Group14

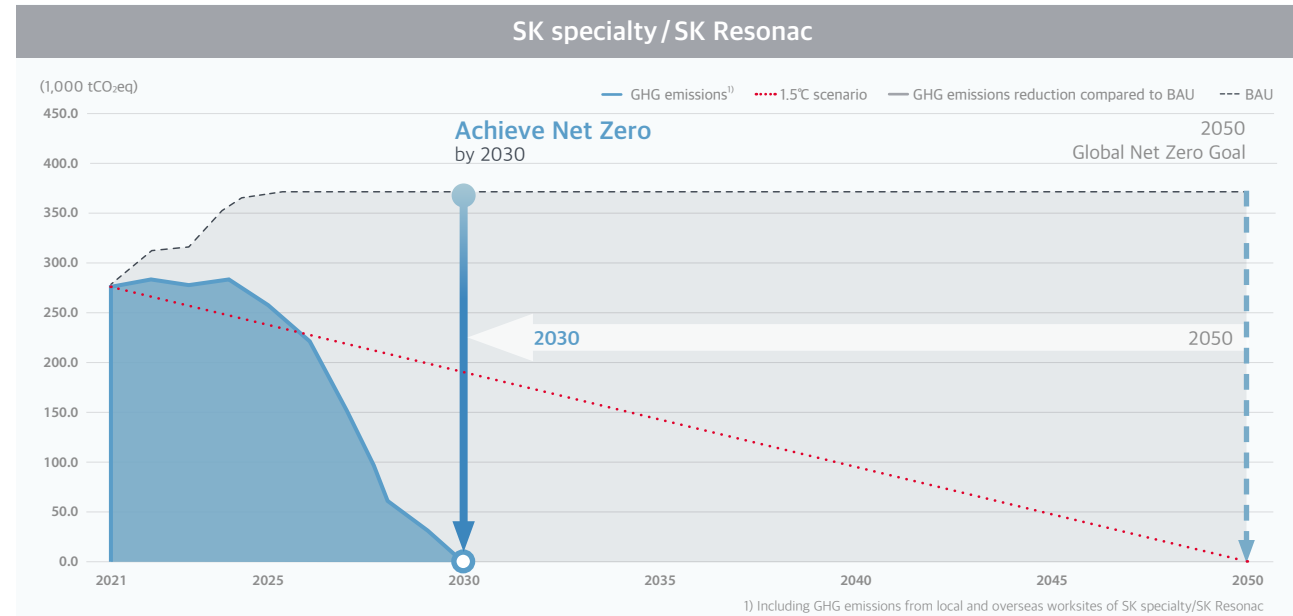

SK specialty

SK materials airplus, SK trichem, SK materials performance,  
SK materials Group14


SK specialty

## Subsidiaries' Detailed Reduction Plans

SK materials' subsidiaries are actively responding to climate change with the goal of achieving Net Zero and RE100 ahead of schedule. In particular, SK materials JNC aims to achieve carbon neutrality by 2024, while SK trichem and SK materials performance target 2026. SK specialty, SK Resonac, and SK materials Group14 are striving to attain carbon neutrality by 2030. By accomplishing these goals, we aim to provide customers with low-carbon value and secure a competitive edge.



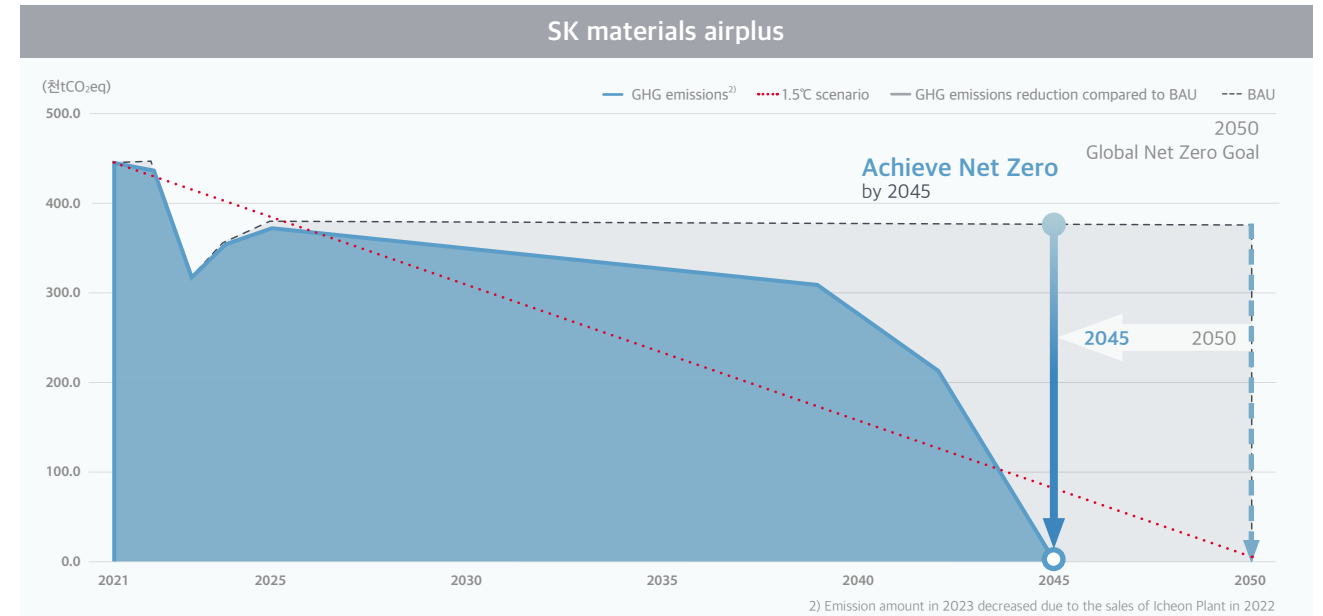
### Net Zero/RE100 Goal : 2030

SK specialty and SK Resonac produce specialty gases necessary for the semiconductor, display, and solar cell industries. In June 2021, we declared their commitment to Net Zero by setting a target to offset all GHG emissions generated from our business activities by 2030.

We are continuously reducing GHG emissions while striving to achieve their Net Zero and RE100 goals by 2030. Thus, we aim to provide carbon-neutral value to their customers and become the Global No. 1 Eco-friendly Specialty Gas & Chemical Tech Company.

### Net Zero/RE100 Implementation Strategy

SK specialty and SK Resonac are actively reducing GHG emissions by improving processes to minimize electricity consumption. We have participated in the Green Premium system in 2021 and signed a large-scale solar power PPA in 2022 to increase the use of renewable energy. By 2024, we plan to convert approximately 9% of their electricity consumption to renewable energy sources. We will continue their relentless efforts to achieve Net Zero and RE100.



### Net Zero/RE100 Goal : 2045

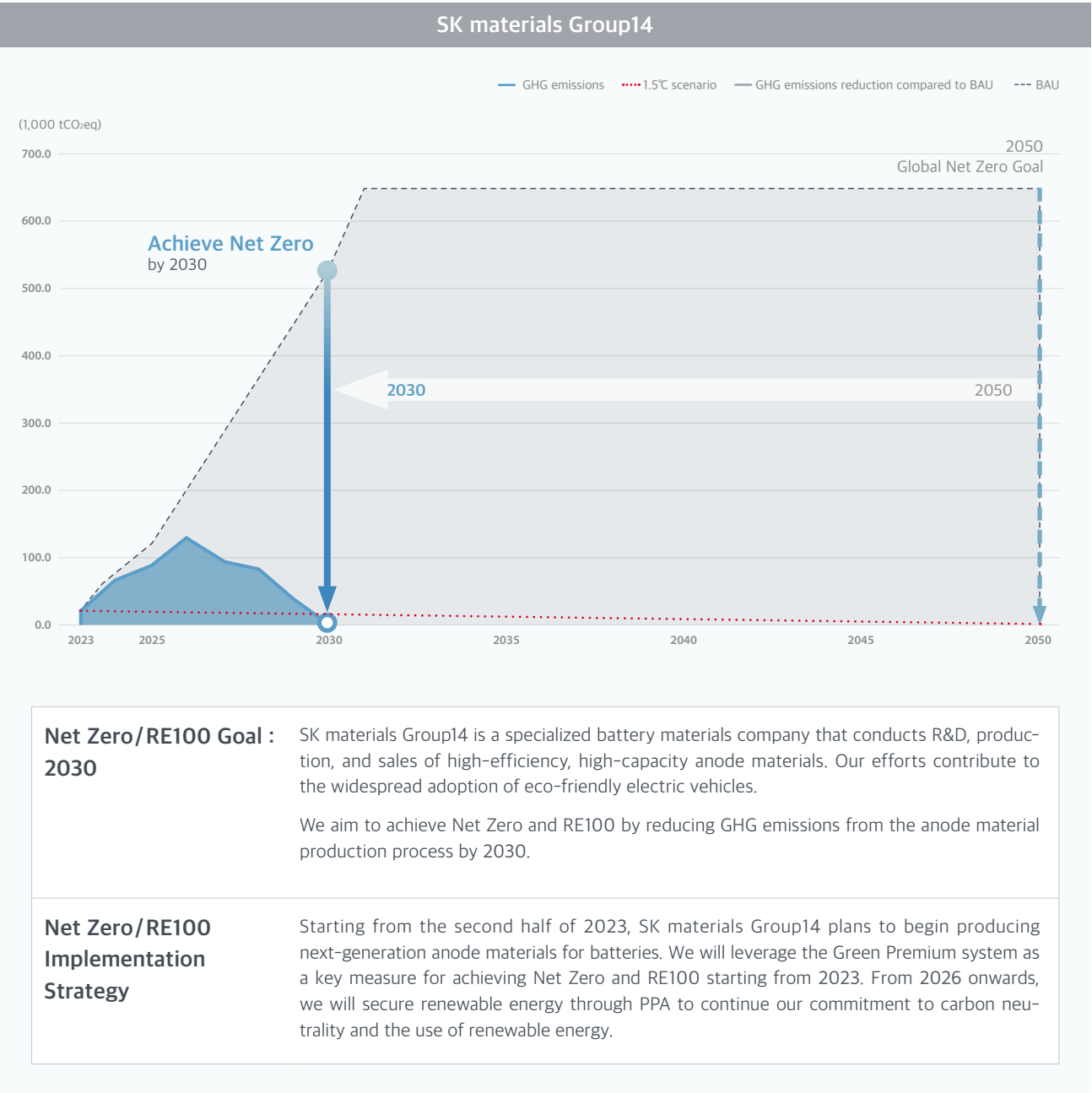
SK materials airplus utilizes Air Separation Unit (ASU) to produce industrial gases such as oxygen, nitrogen, and argon from the air. After a recent merger, the Renewtech business unit captures CO<sub>2</sub> emitted from petrochemical processes and uses it to produce ultra-high-purity liquefied carbon dioxide gas for semiconductor manufacturing and fresh logistics dry ice.

SK materials airplus is committed to achieving Net Zero and RE100 by 2045 through the use of renewable energy and reduction of electricity consumption.

### Net Zero/RE100 Implementation Strategy

Starting in 2022, SK materials airplus actively leverages the Green Premium system to expand the use of renewable energy. We aim to reduce electricity consumption through process optimization and equipment upgrades while implementing eco-friendly technologies to minimize carbon emissions. By establishing a CO<sub>2</sub> circulation system, we are dedicated to achieving Net Zero and RE100 goals.





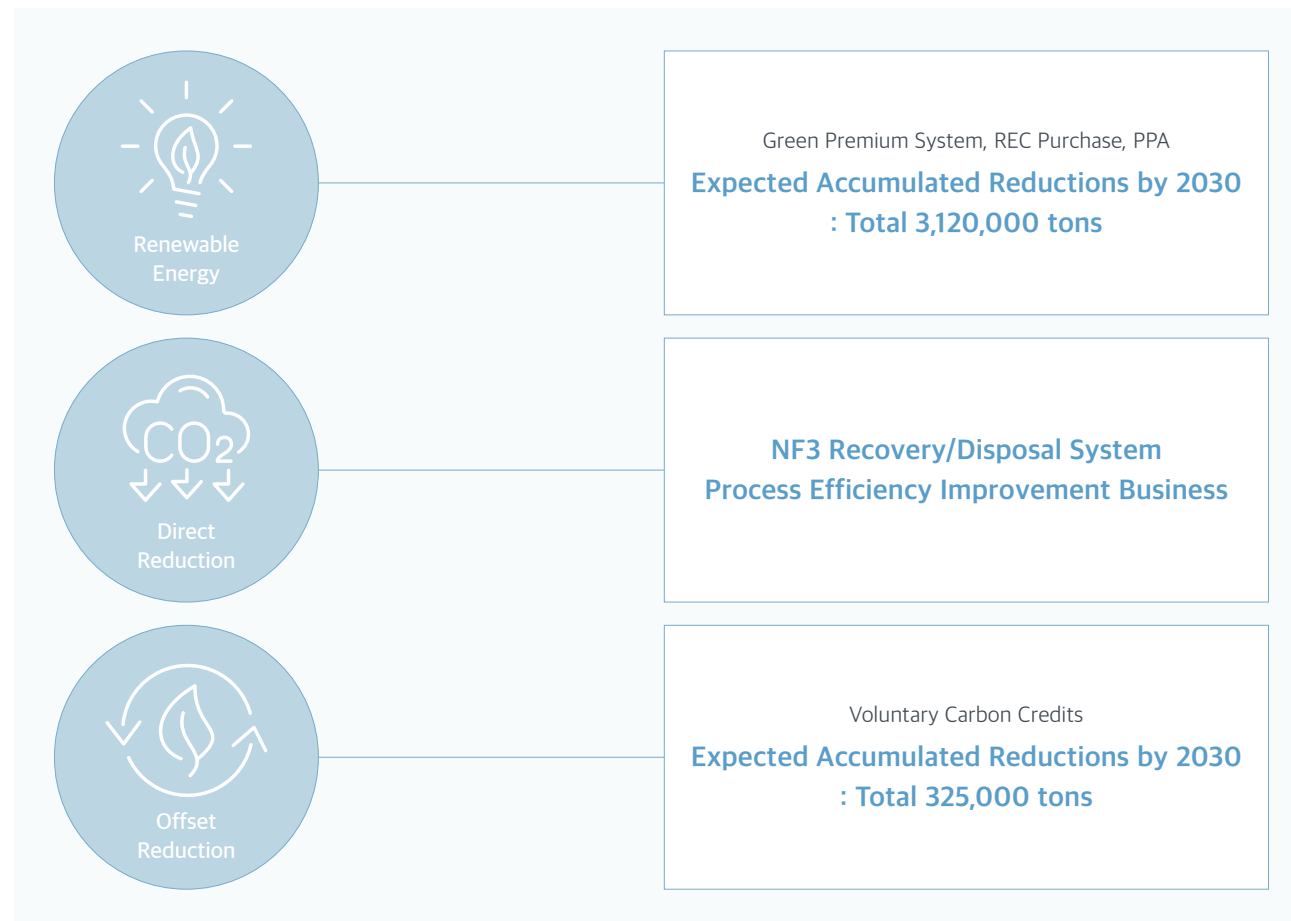


# Net Zero/RE100 Implementation Strategy and Activities

## Implementation Strategy

SK materials aims to achieve Net Zero and RE100 through the expansion of renewable energy usage and direct or offset GHG reductions. We secure renewable energy using the Green Premium system, REC purchases, and PPA. For reducing direct GHG emissions, we have developed NF3 recovery and disposal technologies and optimized our facilities using DT<sup>1)</sup> to improve process efficiency. Furthermore, we have obtained voluntary carbon offset credits to achieve reduction targets.

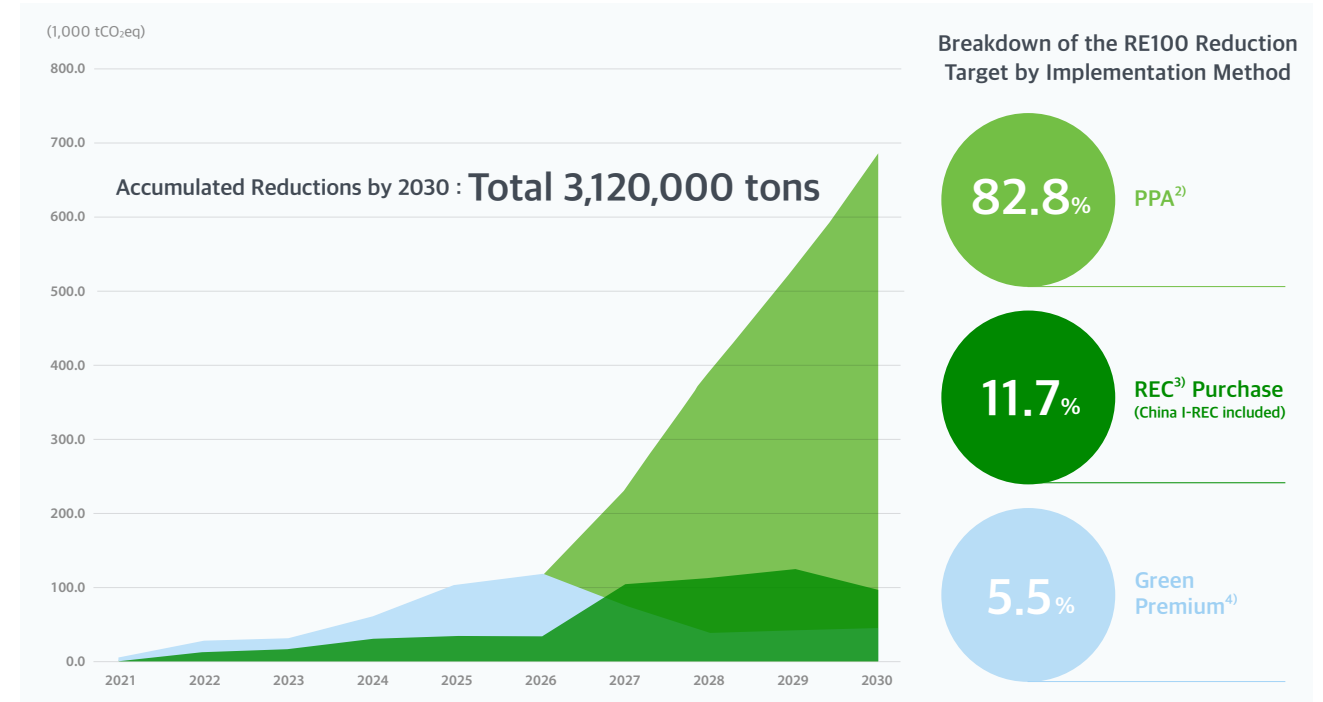
1) Digital Transformation (DT) : A fundamental innovation in the business process using new digital technologies



## Expanding the Use of Renewable Energy

SK materials accounts for over 95%<sup>1)</sup> of its total GHG emissions due to electricity consumption. To achieve Net Zero/RE100, we are optimizing processes and improving efficiency in equipment to minimize electricity consumption. Since 2021, we have been securing renewable energy through the Green Premium system, and starting from 2024, we plan to increase the use of renewable energy with a focus on PPA. We expect to reduce a total of 3,120 thousand metric tons of CO<sub>2</sub> equivalent in GHG emissions by 2030.

### PPA-centered Renewable Energy Transition Plan



1) NF3 emissions are excluded from the calculation as a part of the ongoing efforts to establish a measurement system

2) Power Purchase Agreements (PPA) : A system where electricity users (corporations) can purchase renewable energy directly from renewable energy generators

3) Renewable Energy Certificates (REC) : When a corporation or institution purchases RECs sold by renewable energy generators, each REC represents the supply of 1 MWh of renewable energy.

4) Green Premium : A system where electricity users who wish to consume renewable energy voluntarily commit to paying an agreed-upon amount and add a separate premium to their existing electricity bills to purchase certified renewable electricity.



Direct Reduction

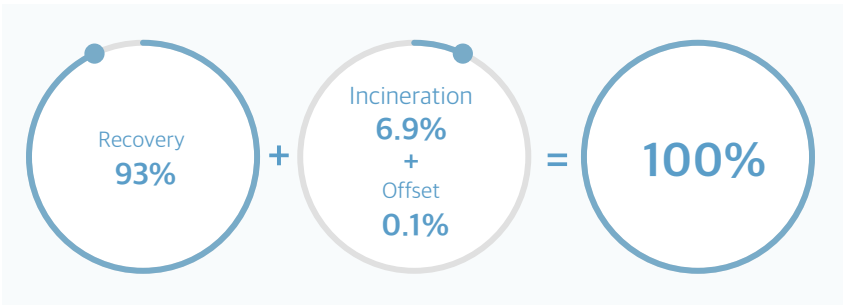
NF3 Recovery & Disposal

Nitrogen trifluoride (NF3) is one of the essential specialty gases used in semiconductor and display processes, manufactured by SK specialty. While NF3 is not currently subject to domestic GHG regulations, it is classified as one of the seven major GHG internationally and has a high Global Warming Potential (GWP<sup>1)</sup>) of 17,400 (AR6, 6th Assessment Report, IPCC), requiring proactive reduction efforts.

SK specialty includes NF3-related GHG reduction in its Net Zero implementation plan and is actively pursuing the technology development and facility establishment for NF3 recovery and disposal.

Recent lab tests of our self-developed NF3 recovery and disposal technology have demonstrated a 93% recovery rate of NF3 vented into the air, with the remaining amount incinerated, resulting in a 99.9% removal of total emissions. Currently, we are conducting tests to directly apply this technology to our production facilities. In 2023, we plan to invest in NF3 recovery and disposal facilities and begin full-scale operation from 2024. We will implement this technology sequentially at our Yeongju Plant (South Korea) and Jinjang Plant (China).

Recovery & Disposal Plans of Vented NF3



1) Global Warming Potential (GWP) : A numerical representation of the relative contribution of GHG to global warming. It is expressed relative to carbon dioxide (CO2) as a reference gas and measures the infrared absorption capacity (heating effect) of 1 kg of a greenhouse gas over a certain period (typically 100 years) compared to the impact of 1 kg of carbon dioxide.

Process Efficiency Improvement

For reducing energy consumption, SK materials is actively pursuing process efficiency improvements, such as equipment performance enhancement and operational condition changes. In 2022, these efforts resulted in a total reduction of 2,426 tCO<sub>2</sub>eq in GHG emissions.

SK specialty is focusing on power-saving initiatives, such as improving the time sequence of process operations and replacing fluorescent lamps in cell rooms with LED lights. We are also continuously exploring energy-saving tasks, including boiler optimization to reduce LNG consumption. Additionally, we conduct cost-saving and energy reduction idea competitions, allowing employees to present their ideas and contribute to process efficiency improvement projects.

SK materials airplus established an Advanced Process Control (APC) system based on process analysis models in 2022, resulting in improved productivity for LAr (liquid argon) production. We also optimized the usage of Clean Dry Air (CDA) compressors to operate factory equipment according to customer demand, achieving a cost reduction of KRW 452 million in energy expenses.

At SK trichem, an automatic control system was implemented for the Electric Heat Tracing (EHT) system within the workplace, it operates only when temperatures are below 5°C and automatically turns off when unnecessary. We optimized the operation of the local exhaust system<sup>1)</sup>, resulting in reduced power consumption. These efforts have led to increased operational efficiency and savings in electricity costs.

Process Efficiency Improvement Results in 2022<sup>2)</sup>

Emission Reduction	
Electricity	2,425.62 tCO <sub>2</sub> eq
LNG	0.63 tCO <sub>2</sub> eq
Total	2,426.25 tCO <sub>2</sub> eq

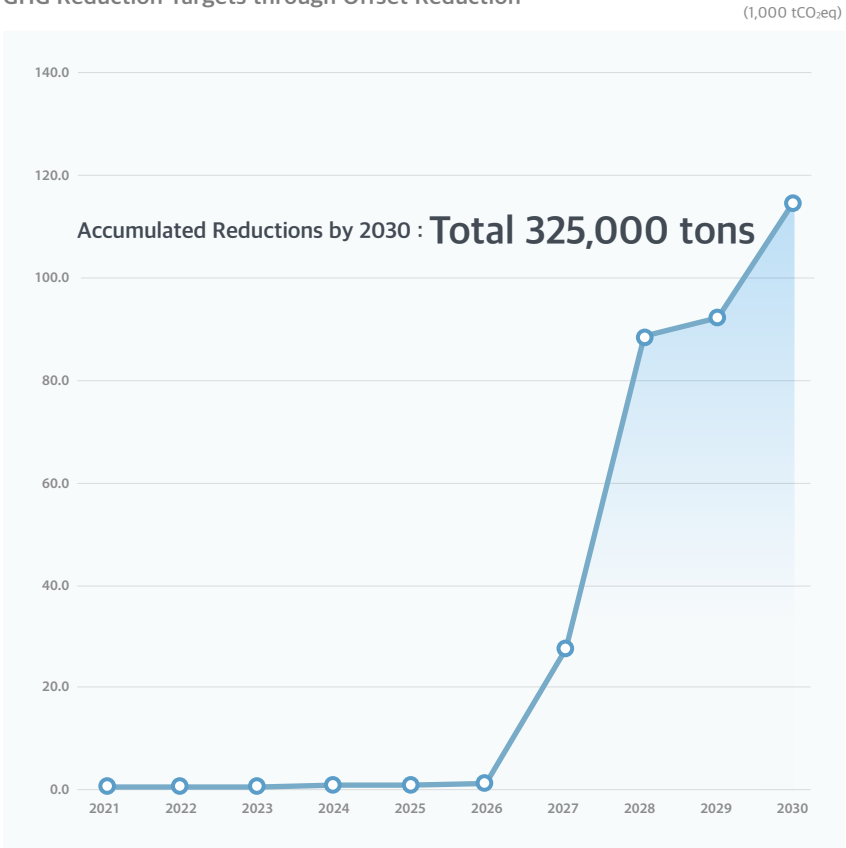
1) Local Exhaust : The process of capturing, removing, and discharging harmful substances before they spread into the workplace or the environment.  
2) Based on SK specialty, SK materials airplus, and SK materials performance criteria.

Offset Reduction<sup>1)</sup>

SK materials is actively pursuing offset using carbon credits, in addition to renewable energy usage and direct emissions reductions. The target is to maintain offset contributions at less than 10% of the total emissions.

To achieve the target, the company has secured a total of 100,000 tons of Verified Carbon Units (VCU) through overseas afforestation projects. Moreover, SK materials plans to obtain additional carbon credits by certifying the carbon reduction effects of eco-friendly products and services.

GHG Reduction Targets through Offset Reduction



1) Offset Reduction : A system in which a company utilizes GHG reductions certified by external project operators to achieve its own GHG reduction targets

# Enhancing Customer Value

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SK Inc. materials  
Head of Global Tech Center / CTO  
**Ha Jung-hwan**

We are committed to enhancing our R&D capacity to secure future growth opportunities.

With the aim of becoming a global leader in materials technology, SK materials established the Sejong Campus for High-tech Materials in 2022. This campus serves as an infrastructure to maximize the results of our R&D efforts. Building on this foundation, we are increasing R&D investments and implementing diverse programs to enhance our capabilities, ensuring momentum for future growth.

A key focus area is the enhancement of our R&D capabilities at the Global Tech Center. This involves developing proprietary technologies and innovative materials to enhance our product competitiveness. In 2022, we introduced the Intellectual Property Management System (IPMS) to standardize patent processes across subsidiaries, further strengthening our intellectual property management.

Through these R&D capability enhancements, our goal is to drive technological advancements in the materials industry, establishing a robust growth platform.



SK Inc. materials  
Head of Quality/Analysis Center  
**Kang Sun-young**

We ensure the highest quality through proactive quality management and advanced analytic technology in the entire value chain.

SK materials aims to secure the global top-tier quality in semiconductor, display, and battery materials, as well as eco-friendly areas. We continuously execute our quality strategy and maximize quality by applying sophisticated analytic technology.

Based on the Quality Synergy Group, we developed the integrated quality system that employs a “Shift-Left” approach to prevent quality risks in the overall stages from raw materials, product development, manufacturing, to shipping. To proactively respond to customer needs and technological advances, we established the advanced analytic technology platform. Moreover, we are expanding technological collaboration with suppliers and customers.

As we progress, we will not only enhance our technological edge through active quality management and innovation but also increase customer satisfaction by delivering greater value.





SK Inc. materials Head of Business  
Development Center

**Park Gi-sun**

We are expanding investments and collaborations for the development of eco-friendly materials and technologies to drive sustainable growth.

SK materials is strategically increasing investments in eco-friendly and high-value domains like CCUS and rare gas upcycling.

We recently acquired managerial rights of 8 Rivers, known for blue hydrogen and clean energy tech, boosting CCUS capabilities. An MOU with Exxon Mobil furthers our presence in clean energy through joint blue ammonia production. Our investment in ION Clean Energy for cutting-edge carbon capture strengthens our portfolio. A joint venture agreement (JVA) with Arencibia emphasizes our commitment to rare gas upcycling.

These initiatives establish a robust foundation for eco-friendly ventures as we persist in expanding investments, aiming for an early Net Zero/RE100 achievement and a sustainable business model.



SK specialty  
Head of Sales Division

**Kim Young-min**

We identify optimal solutions through customer communication.

SK materials has established a distinctive customer collaboration system to proactively understand customer needs and offer products and services that meet their satisfaction.

We engage in regular and ongoing exchanges with customers, gather their requirements, and then execute joint R&D based on these insights. We operate a Stakeholder Account to measure and evaluate the outcomes of these efforts, thereby enhancing trust with our customers.

Moving forward, we will continue to actively communicate with our customers, closely understand their pain points and needs, and provide optimal solutions to enhance customer value.





# Enhancing Customer Value

[Link to SDGs](#)


## GLOBAL TREND

Since Japan's 2019 export restrictions on key semiconductor materials, domestic companies have aimed to localize materials and diversify supply chains for stable raw material provision. The 2022 Russia-Ukraine war underscored the need for such diversification.

With Japan easing export restrictions in 2023, global supply chain stabilization has gained importance. This led to the inaugural Chip 4 alliance meeting involving South Korea, the U.S., Japan, and Taiwan. Moreover, the EU has heightened regulations on carbon emissions from manufacturing, making eco-friendly products essential for business operations. Hence, companies worldwide must swiftly adapt to changing landscapes by meeting customer demands through sustainable innovations like material localization, supply chain diversification, and eco-friendly material development.

## OUR APPROACH

SK materials is actively engaged in various activities to enhance customer value, respond swiftly to changes in the market environment, and provide differentiated products and services to our customers. Through customer communication activities such as Stakeholder Account and customer exchange meetings, we analyze customer needs, derive key action items, and secure the infrastructure and capabilities necessary for achieving our goals by continuously investing in the R&D sector.

Furthermore, we prioritize “customer safety” and “product quality” throughout the entire process from production to usage, ensuring that customers can use our products with confidence. We are also actively investing in and developing technologies such as CCUS and low-carbon products, aiming to minimize environmental impact.

## 2022 HIGHLIGHTS



2022  
KRW 44.7 billion  
R&D Investment



2022  
149 cases  
Patent Applications



IPMS  
Newly  
Introduced  
\* IP Management System, IPMS



Eco-friendly Business  
Investment and  
Collaboration Expansion  
\* CCUS, CO<sub>2</sub> Capture, Rare Gas Upcycling

## KEY STAKEHOLDER



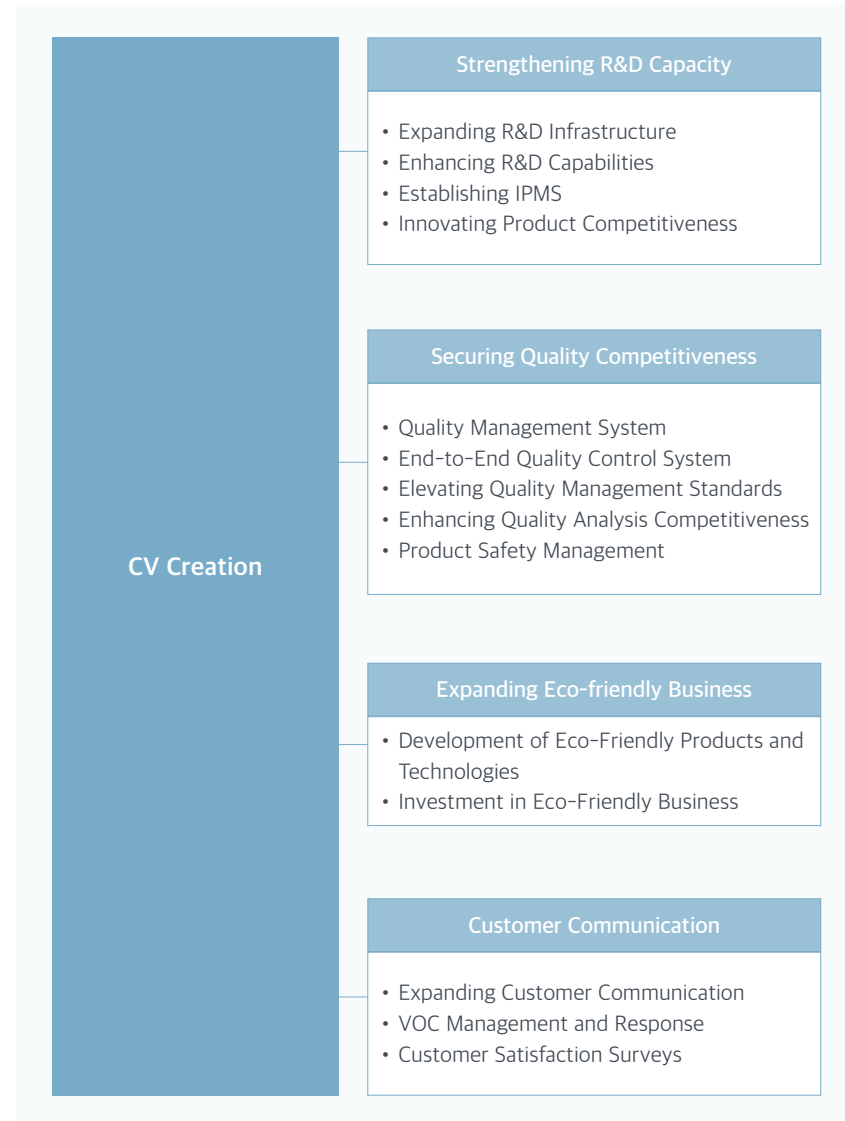
Customers



Suppliers

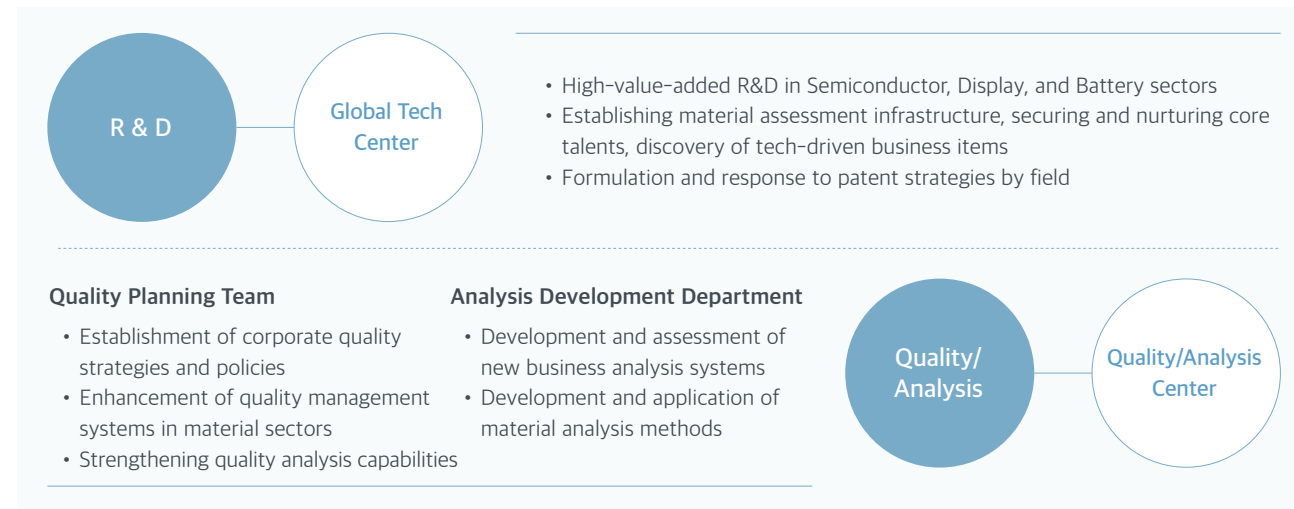
# CV Creation Directions & Management System

## Direction for CV Creation



## Management System

Since establishing the Sejong Campus for High-tech Materials in 2022, centered around the Global Tech Center and Quality/Analysis Center, SK materials has been focusing on high-value-added high-tech materials, advanced research, product development, and quality analysis to enhance competitiveness. The Global Tech Center is dedicated to new product development and localization of materials based on its research and technological capabilities in the high-tech materials field. The Quality/Analysis Center is divided into Quality Planning Team and Analysis Development Department, working to advance the overall quality management and analysis systems.



SK materials is dedicated to offering solutions that contribute to our customers' carbon reduction goals by investing in eco-friendly business. This commitment includes the development of eco-friendly products and technologies, such as CCUS and next-generation battery anodes, as well as acquiring management rights and forming strategic alliances with top global eco-friendly technology companies. Moreover, we maintain various communication channels and gauge our performance through customer surveys in order to identify customer needs, develop suitable solutions, and promptly address any concerns.

Additionally, issues that could impact quality and safety are reported to the executive management through CEO-led meetings, where response plans are devised and then communicated to relevant subsidiaries and departments for resolution. Furthermore, a Quality Synergy Group, attended by quality managers from each subsidiary, is conducted monthly to discuss matters pertaining to quality improvement and customer safety.



# Strengthening R&D Capacity

## Expanding R&D Infrastructure

In 2022, SK materials established the Sejong Campus for High-tech Materials to integrate high-tech material research capabilities and become a global materials company.

The Sejong Campus houses R&D and quality management/analysis organizations, such as the Global Tech Center and the Quality/Analysis Center, and SK specialty, SK trichem, and SK materials performance. These entities collaborate to enhance quality. Particularly, the sharing of various research infrastructures such as deposition equipment, synthesis facilities, and analytical tools is expected to further improve R&D capabilities and efficiency.

SK trichem has established the Advanced R&D Lab for developing next-generation precursor materials and introduced specialized equipment for new material measurements. We are equipped with the necessary infrastructure for various stages of development, including R&D, property evaluation, and deposition assessment.



## Enhancing R&D Capacity

SK materials actively invests in R&D to strengthen its business portfolio and secure future growth drivers. To enhance its in-house R&D capabilities, SK materials is increasing R&D specialized personnel and expanding R&D infrastructure. We are also establishing a material management database to respond to various customer demands. By 2025, the plan is to increase the size of R&D personnel to 300 and expand R&D investment to 3% of revenue.

SK trichem operates an R&D specialized organization focused on next-generation material development and establishes R&D roadmaps to address customer needs for high-performance precursors.

SK materials performance adjusts the proportion of different raw materials for each product category through the product development design process to secure specific properties. We are also strengthening our R&D system by obtaining certifications such as the Corporate Research Institute and Certification of Excellent Laboratory for Safety Management.

## Enhancing Simulation Capacity

Molecular simulation is a crucial capability for developing new materials, as it involves computing the electronic structure of atoms and the behavior of molecules to explain or predict material properties and reaction mechanisms.

SK specialty is enhancing its molecular simulation capabilities by building high-performance clusters and software, securing specialized personnel, and implementing AI, with the aim to understand material characteristics in-depth and reduce development time and resources. This is used to provide more efficient and eco-friendly manufacturing methods, design materials at the molecular level to meet customer needs. In 2023, we began actively conducting research on mechanism identification of catalytic reactions in production processes, predicting eco-friendly etching and cleaning materials, and AI-based new material development.

SK trichem has introduced simulation tools to obtain detailed information about precursors and incorporate them into the design and development of new materials. We also provide continuous simulation training to researchers to increase the utility of these tools.

SK materials airplus has established an Operator Training System (OTS) to improve operator emergency response capabilities and operational skills. This system is applied to the Ichon Plant, utilizing process simulation equipment that replicates the same environment as the operational plant. By repeatedly conducting emergency response scenarios and training, we have enhanced our emergency response capabilities within a short period.

R&D Capability Enhancement Programs in 2022

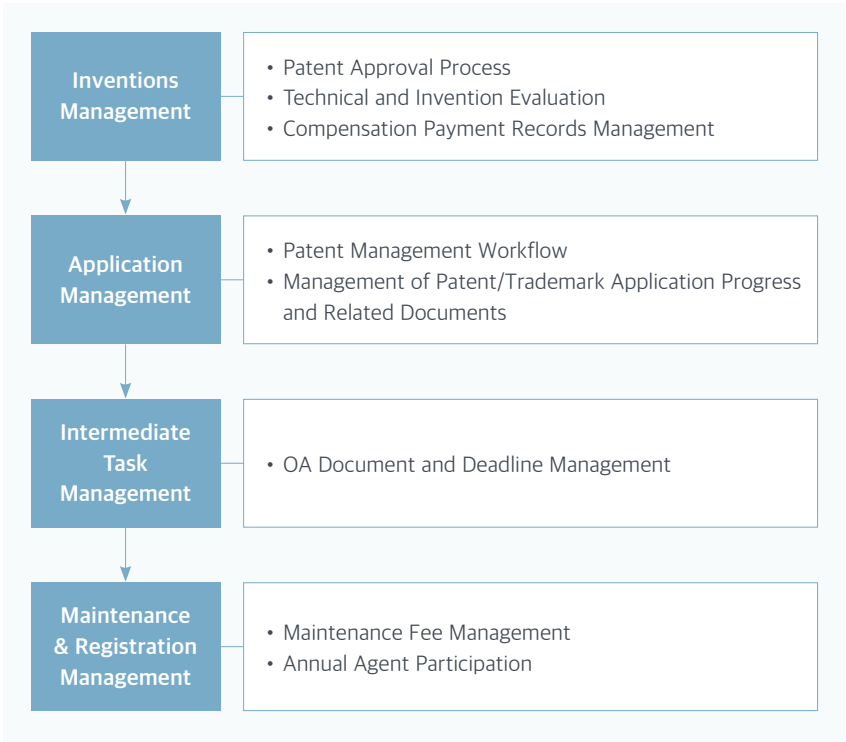
Category	Programs	Details	
Seminar	Deposition/ Etching Materials Seminar	<ul style="list-style-type: none"><li>Atomic Layer Etching Technology and Plasma Monitoring</li><li>Area Selective Atomic Layer Deposition toward Complementary Bottom-up Patterning</li><li>Introduction of Major Dry Etching Methods and Development of Copper Thin film Dry Etching Process</li></ul>	
	Expert Invited Seminar	<ul style="list-style-type: none"><li>Structure and Thermal Management System of Electric Vehicle Battery Systems</li><li>Overview of Atomic Layer Patterning Process</li><li>Core of Science and Technology/Measurement and Analysis Science</li><li>Introduction to Photolithography Technology and EUV Resist Research Trends</li><li>Battery Technology Overview</li><li>Current status and future prospects of OLED materials</li><li>NMR(Nuclear Magnetic Resonance Spectroscopy) Analysis Technology</li></ul>	<ul style="list-style-type: none"><li>ICP(Inductively Coupled Plasma) Analysis Technology</li><li>LC-MS(Liquid Chromatography-Mass Spectrometry) Analysis Technology</li><li>Seminar on Plasma Simulation for Semiconductor Process Applications</li><li>Seminar on Thermal Adhesives and Materials Development for EV Batteries</li><li>Seminar on EV Battery Structure and Thermal Management</li><li>Seminar on Structure and Thermal Management System of Electric Vehicle Battery Systems</li><li>Seminar on Artificial Intelligence-Based Advanced Material Development</li></ul>
	Semiconductor and Display Conference	<ul style="list-style-type: none"><li>Semicon Japan 2022</li><li>SMC(Strategic Materials Conference) Korea 2022</li><li>IMID(International Meeting on Information Display)</li><li>Semi Conference</li></ul>	
Methodology & Process	Simulation Training	<ul style="list-style-type: none"><li>Overall Response Mechanism of 3D V-NAND Thin Film</li><li>Simulation, Data, and Machine Learning</li></ul>	
Education	Equipment Training	<ul style="list-style-type: none"><li>Analytic Tool Training<ul style="list-style-type: none"><li>Ellipsometer</li><li>FE-SEM(Field-Emission Scanning Electron Microscope) Training</li><li>ICP-QQQ(Triple Quadrupole ICP-MS)</li><li>HPLC(High-Performance Liquid Chromatography)</li><li>GPC(Gel Permeation Chromatography)</li><li>IC(Ion Chromatography)</li></ul></li></ul>	<ul style="list-style-type: none"><li>Deposition Equipment Training</li><li>Other Training<ul style="list-style-type: none"><li>Uncertainty Assessment and Analytical Method Validation</li></ul></li></ul>

Establishment of IPMS

In recognition of the importance of intellectual property, SK materials introduced the Intellectual Property Management System (IPMS) in 2022 to strategically manage intellectual property. Utilizing this system, we standardized the patent application and registration process for filing, intermediate events, registration, maintenance, litigation, and examination, enhancing the efficiency and convenience of IP-related work. Additionally, to strengthen the IP management capabilities of personnel involved in IP-related tasks, we conduct IPMS training for inventors by visiting various business sites such as Dongtan, Sejong, and Yeongju.

As of the end of 2022, a cumulative total of 1,209 patents were filed domestically and internationally, and all patents are managed through the IPMS from application to maintenance.

IPMS Process





## Product Competitiveness Innovation

### Securing In-House Core Technologies

SK materials actively invests to enhance competitiveness, stabilize customers' material supply chains, and expand market dominance. We collaborate with global technology companies and expand in-house R&D to secure top-tier technologies.

SK material performance fosters innovation within the material ecosystem. We share production equipment and process technology through R&D groups involving customers and suppliers. Collaborative R&D with customers and robust raw material supply chain management through suppliers are pursued. We successfully developed global-standard extreme ultraviolet photoresists (EUV PR) in 2022, demonstrating our ongoing commitment to investment and innovation for a stable domestic material supply.

SK specialty develops high-value-added materials using electrochemical fluorination (ECF) technology. The fluorinated insulation fluid, crucial in semiconductor and display etching equipment as a chiller heat transfer fluid, holds high-importance due to import reliance and supply chain stability. Collaborating with the Korea Research Institute of Chemical Technology (KRICT) from 2020 to 2022 resulted in rapid synthesis, purification, and analysis technologies development. This yielded exceptional product quality and substantial yields, surpassing existing standards. We confirmed equivalence to existing products in the evaluation of self-manufactured insulation fluid (Perfluoro Tripropyl Amine, PFTPA) samples. Using PFTPA manufacturing technology, we explore various business opportunities and research low GWP insulation products.

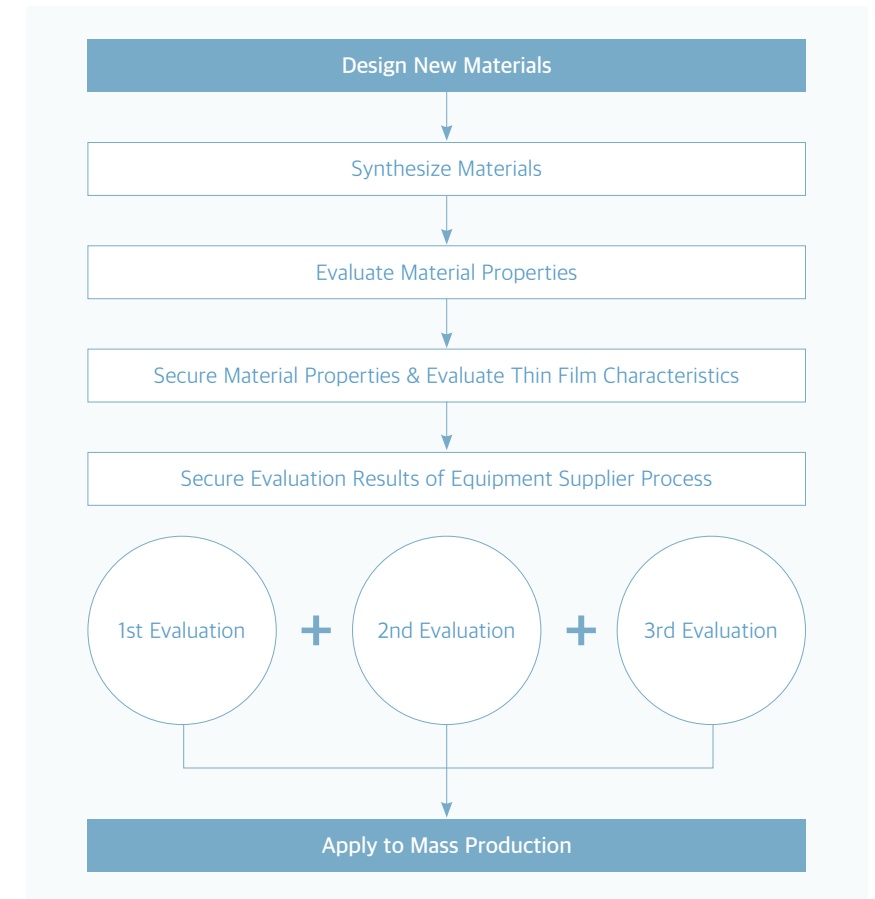
### New Materials Development

SK materials is establishing a new growth base, centered around the Global Tech Center established in December 2021. In the field of semiconductor materials, the company is expanding its portfolio from front-end process materials to back-end process materials such as testing and packaging. Moreover, we are developing next-generation materials for displays and batteries. We are also enhancing the domestic material ecosystem by localizing critical raw materials.

SK trichem is expanding its product portfolio through the development of new materials. In 2022, we independently developed three High-k dielectric materials for the next-generation DRAM capacitors, securing world-class properties. We also collaborated with customers to develop two Si materials for the Low-k layer of next-generation DRAM, achieving film requirement characteristics. We are currently undergoing evaluations by equipment manufacturers and customers and plan to commercialize in alignment with customers' mass production schedules.

Moving forward, SK materials aims to develop new materials through common elemental technologies (Material Topology) and supply chain management innovation (Supply Innovation). The company will create a virtuous cycle structure in the material industry, leading technological change and innovation.

### Product Development Process



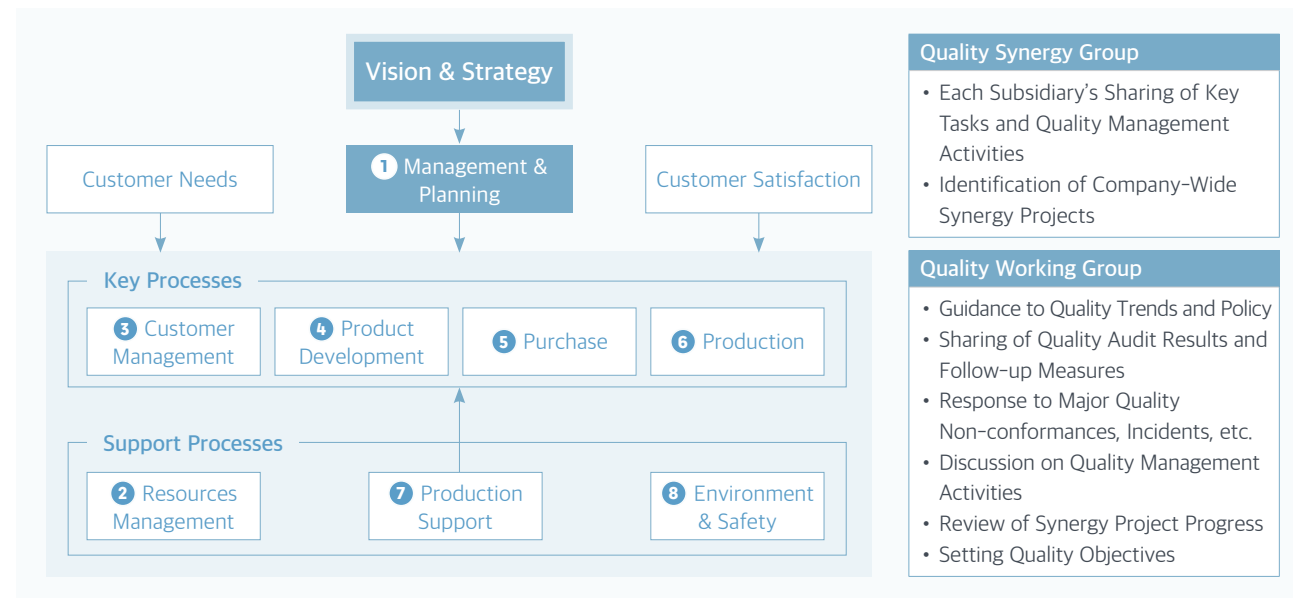
# Securing Quality Competitiveness

## Quality Management System

SK materials has acquired international quality certifications, including ISO 9001 and IATF 16949, to ensure adherence to global quality standards and elevate quality management throughout the value chain. Each subsidiary operates under company-wide quality management policies driven by the pursuit of customer satisfaction through quality assurance. In 2022, a comprehensive quality diagnosis was executed across the value chain to unearth root causes of issues and chart a long-term improvement roadmap. We have actively advanced the establishment of quality variation management and accident prevention systems. Furthermore, we're enhancing AI and DT-based quality management systems. The introduction of the Quality Cost (Q-Cost) management system optimizes quality management expenses.

To raise integrated quality management levels across the organization, we are standardizing quality terms within key processes. Moreover, we are augmenting the quality management standard by integrating data collection and statistical process control systems for optimal process quality assurance. The formation of the Quality Synergy Group, comprising quality units from each subsidiary, has enabled the exchange of critical challenges and quality management initiatives. This cultivates a collaborative and unified quality management approach. Through organization-wide involvement, shared challenges are identified and resolved, fostering improvements in the quality culture throughout the company.

### Quality Management Process



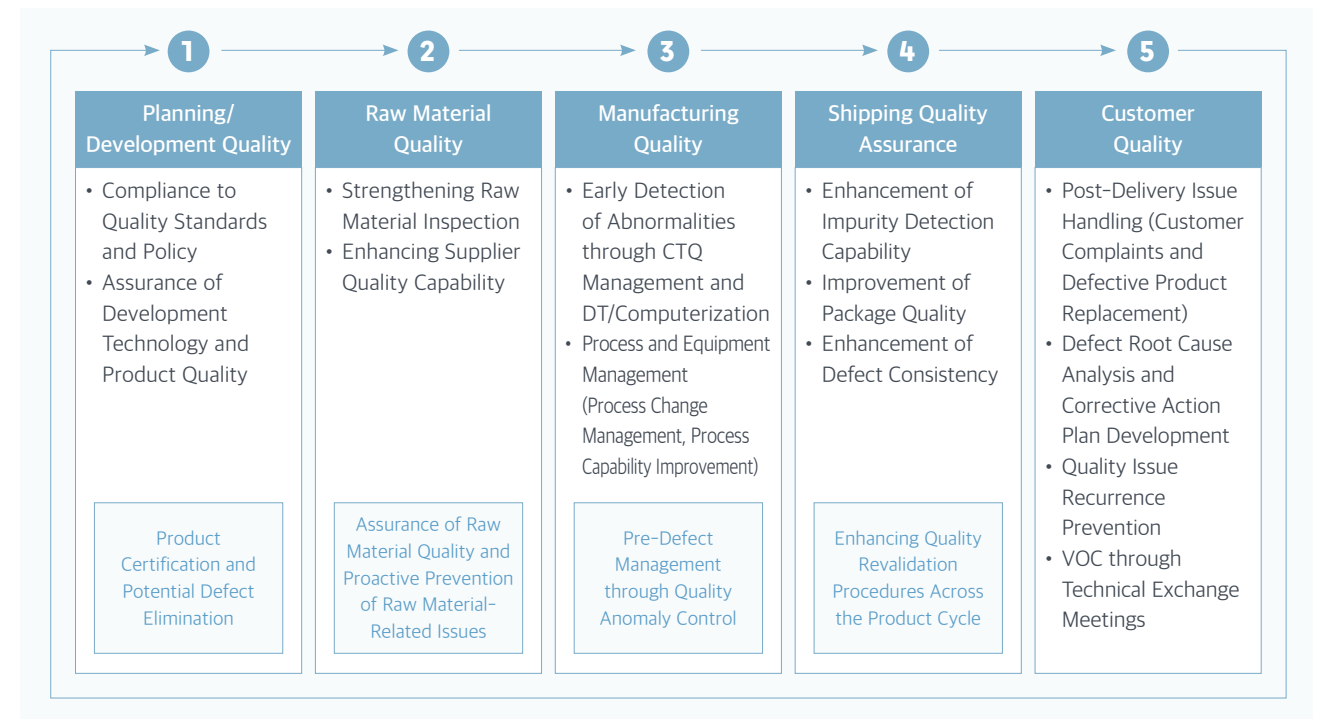
## End-to-End Quality Management System

SK materials customizes its quality management system according to the attributes of each material. For continuous process- es, SK specialty and SK materials airplus have established real-time quality inspection and proactive response management systems. Conversely, batch processes by SK trichem, SK materials performance, SK materials JNC, and mass production by SK materials Group14 are supported by prevention-based quality management systems rooted in analysis and assessment.

The Quality Planning Team orchestrates and manages quality systems, accounting for individual subsidiary business traits. This effort advances subsidiary-level quality management by fostering a cross-functional collaboration framework.

### Quality Management System (QMS)

SK materials is strengthening the quality management system throughout the value chain, from research and development stages to the final product reaching the customer. Continuous efforts are being made to enhance SK materials' quality system through cross-deployment and mutual benchmarking activities among subsidiaries and processes.



### Advanced Quality Management Process

Starting in 2023, SK materials began establishing a development quality management process for securing advanced quality assurance in the development and improvement of new products. This aims to ensure stable production transition and enhance customer satisfaction with product quality.

A process framework based on Advanced Product Quality Planning (APQP) has been implemented. Through design reviews tailored to each product and organizational characteristic, we are executing a proactive quality management process. Moreover, considering diverse customer needs and issues due to customer diversification, a review system is being restructured to reflect business characteristics. Additionally, we aim to obtain proactive customer qualification approvals for newly developed and upcoming products in the market.

### Sophisticating Quality Management Standard

#### Quality Innovation Activities

##### Virtual Measurement Solution

SK materials performance has developed a virtual measurement model and implemented it on-site. Utilizing Optical Character Recognition (OCR) technology, inspection data is automatically collected. This data is then analyzed to create predictive models, which, when fed with operational conditions, forecast product quality. By utilizing the virtual measurement model to determine raw material inputs, we have reduced the time required for quality adjustment.

##### Analysis Solution

SK specialty has developed an in-house data analysis solution that comprehensively analyzes critical information from various systems including production, quality, and equipment. This solution traces and manages all quality issues arising from the production process. Thus, we strengthened proactive capabilities against quality risks, enhanced productivity, and plan to expand application of the solution across the organization and all products.

### Advanced Process Control Solution

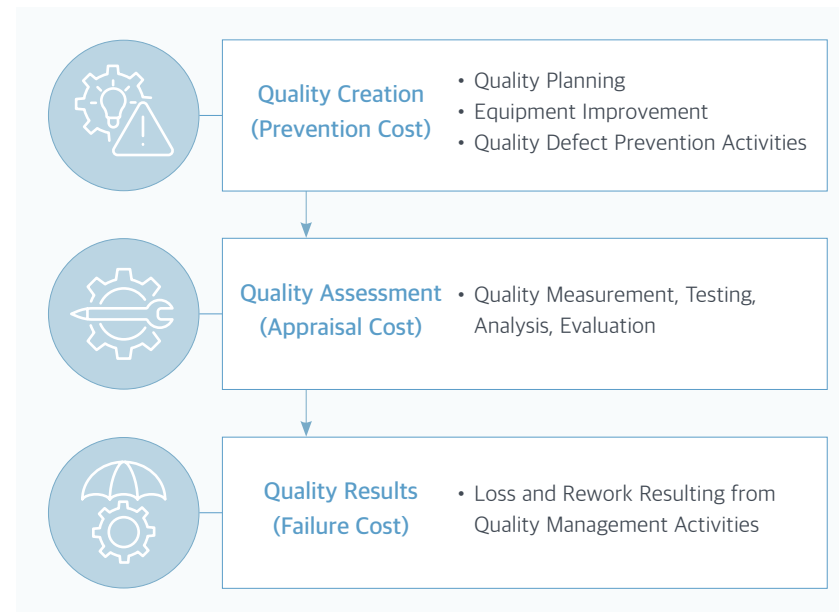
SK specialty operates a pre-detection system for process abnormalities. When irregular patterns in the process are detected, alarms are triggered to prevent quality issues.

SK trichem is increasing automation levels in equipment operation for efficient quality management. In 2022, we automated the operation of key product lines, leading to enhanced productivity and generating over 2 billion KRW in increased profits.

### Quality Cost Management System

To meet customer quality requirements while optimizing quality management costs, SK materials introduced the Quality Cost (Q-Cost) management system in 2022. Following the process of Quality Generation - Quality Assessment - Quality Results, Q-Cost is measured, analyzed, and evaluated. This allows for the assessment of the effectiveness of quality management activities and the implementation of corrective action plans.

#### Q-Cost Process



### Quality Awareness Enhancement Activities

To enhance the existing quality culture and drive enhancements, SK materials executed a Quality Culture Survey among its employees. Drawing from the survey outcomes, the “Quality Golden Rules” (QGR) were formulated. These principles stand as essential tenets binding all employees to reinforce material quality. QGR encapsulates foundational directives, obligatory for on-site personnel. SK materials further cultivates awareness regarding quality culture by conducting the QGR Best Practice competition, encouraging the dissemination of exemplary instances. Additionally, the elevation of quality culture awareness occurs through the distribution of Quality Letters and monthly Quality Magazines.

Quality Golden Rules	
1	Adhere to standards and procedures in all tasks and maintain records.
2	Verify and execute quality inspection items during start-up and restart operations.
3	Implement changes only after obtaining prior approval.
4	Report anomalies and non-conformities immediately.
5	Address all quality issues from root cause analysis to prevention of recurrence.

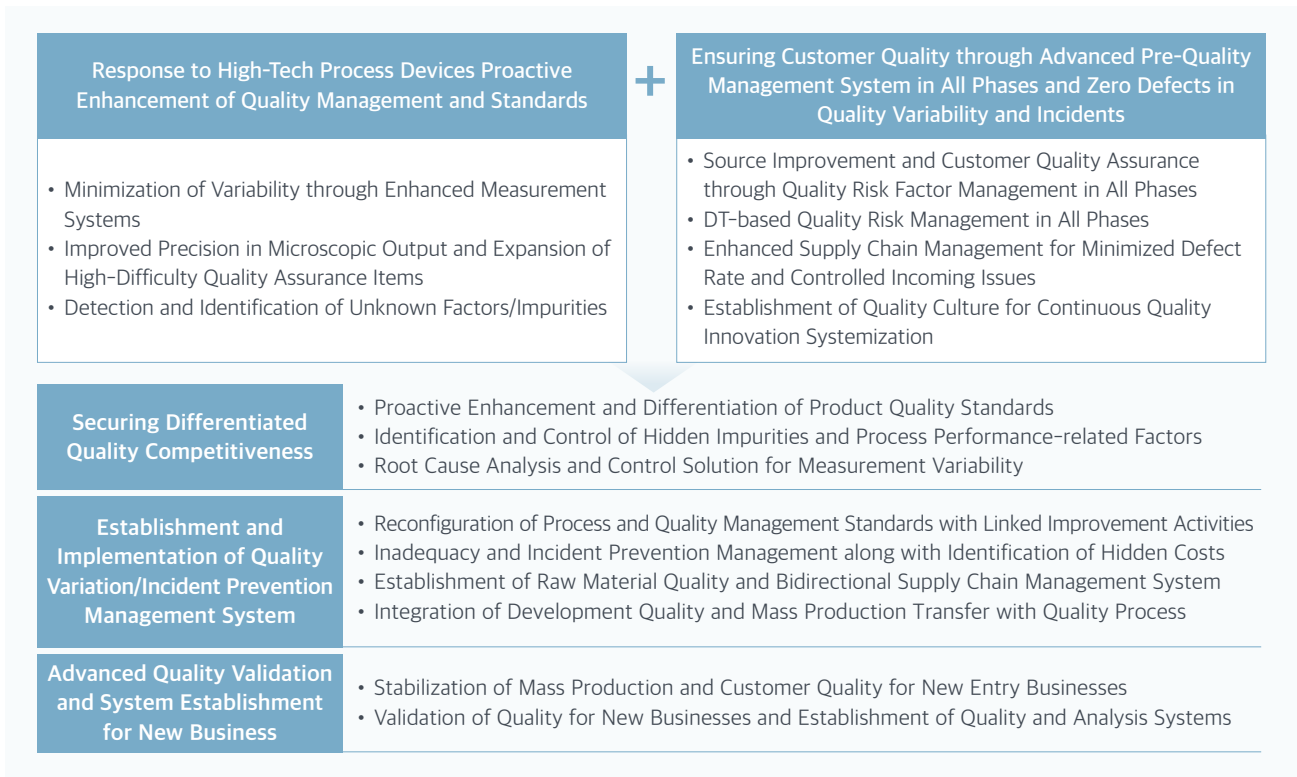
Enhancing Quality Analysis Competitiveness

SK materials is establishing platforms for necessary analytical technologies for each material type to meet customer needs and strengthen quality capabilities. Additionally, we provide quality analysis consulting and transfer analysis technologies to our suppliers, enhancing the quality management level throughout the supply chain. Each subsidiary is also fostering collaboration networks among customers and suppliers to enhance analytical capabilities.

SK materials performance has established a photoresist (PR) raw material quality value chain with customers and suppliers. To stabilize the quality of PR materials, we are working on introducing a data-linked analysis system with customers, which is expected to be completed by 2023.

SK trichem provided approximately 100 real-time analysis support activities in 2022 for suppliers that have difficulty acquiring analytical equipment. This initiative has led to improved production yield and quality for suppliers, ultimately enhancing product competitiveness and technological capabilities.

Directions and Plans for Strengthening Quality Analysis Competitiveness



Enhancing Quality Management Competency

SK materials conducts various training programs to enhance its employees' quality management competencies. In 2022, we provided the internal auditor training for ISO 9001 certification and the core technique and tools training for IATF 16949 to foster individuals for certification and maintenance of the quality management system. To improve understanding and expertise in quality management, we held seminars and workshops, such as the Quality Core Tool Training, 8D, APQP, and technical meetings. For the Analysis Academy, we expanded the scope of participants to suppliers. Moreover, we are making joint efforts with suppliers to set quality directions and achieve goals through regular communication.

Product Safety Management

Through the Chemical Substance Management System, SK materials manages the legality of chemical substances, overseeing a safety evaluation and management process in the entire cycle from production to usage. The safety management process establishes standards for hazardous and regulated substances. We implement these standards rigorously during the manufacturing and sales stages through a dedicated product hazard evaluation process. We prioritize safety throughout the entire process, conducting regular safety inspections and implementing emergency response procedures for transportation incidents. Upon customers' request, we review threshold limits for hazardous chemicals specified in chemical safety certifications such as RoHS<sup>1)</sup>, REACH<sup>2)</sup>, and GHS<sup>3)</sup> and provide documents including ingredient specifications and safety manuals.

1) RoHS : Restriction of Hazardous Substances  
2) REACH : Registration, Evaluation, Authorization and Restriction of Chemical  
3) GHS : Globally Harmonized System of Classification and Labelling of Chemicals

End-to-End Management of Product and Service Safety





# Expanding Eco-friendly Business

## Eco-friendly Product and Technology Development

SK materials actively engages in the development of eco-friendly materials and technologies. Through efforts such as developing alternative gases and obtaining carbon footprint certifications, we aim to minimize environmental impact. Simultaneously, we strive to secure CCUS technology and low-carbon material technology to achieve sustainable growth.

### CCUS

SK materials leverages CCUS technology, utilizing its expertise in plant operation and gas refining gained through semiconductor material business to provide eco-friendly value.

We have acquired blue hydrogen production technology that cools and separates CO<sub>2</sub> at low temperatures and high-efficiency supercritical CO<sub>2</sub> power generation technology that ensures economic viability. Additionally, we have secured next-generation capture technology that economically captures CO<sub>2</sub> from facilities such as power plants, steel, and cement production facilities that use fossil fuels.

Through these initiatives, SK materials aims to collaborate with companies possessing CCUS technology, build technological partnerships, and provide carbon reduction solutions to contribute to global Net Zero goals.

### Next-generation Anode Materials for Batteries

SK materials Group14 aims to produce high-efficiency, high-capacity anode materials for electric vehicle batteries with over five times the electrical capacity of conventional graphite. By 2030, we plan to supply our silicon-based anode material to approximately 950,000 electric vehicle batteries, which is expected to reduce approximately 24,000 tCO<sub>2</sub>eq of GHG emissions.

As the disclosure of carbon footprint for all batteries sold in Europe becomes mandatory from 2024, SK materials Group14 is striving to quantify the environmental impact throughout the product life cycle, from raw material extraction to manufacturing, usage, disposal, and transportation. We aim to identify vulnerable areas and establish a low-carbon management system.

## OLED Blue Dopants

SK materials JNC is developing and producing OLED blue dopants with minimal optical losses. These dopants allow for easier adjustment of emission wavelengths, minimizing optical losses and efficiently extracting light to reduce power consumption in displays. Through these efforts, SK materials JNC predicts a reduction of approximately 10,000 tCO<sub>2</sub>eq of greenhouse gas emissions by 2030.

### Alternative Materials for PFC

As the demand for alternatives to high-GWP<sup>1)</sup> Perfluoro Compounds (PFCs; CF<sub>4</sub>, SF<sub>6</sub>, etc.) increases, SK specialty is conducting research with the goal of developing eco-friendly alternative gases with a GWP of less than 150 in the medium to long term. Collaborating with government agencies, academia, and industry to address the relatively low technological maturity of low GWP materials worldwide, we are not only strengthening industrial competitiveness in the domestic semiconductor and display industries, but also securing global competitiveness, thus directly contributing to carbon neutrality goals.

1) GWP (Global Warming Potential): A numerical value representing the extent of a GHG's contribution to global warming, measured relative to CO<sub>2</sub> as the reference gas. It is typically expressed over a specific time period (usually 100 years) and quantifies the ratio of the heat-trapping ability (warming effect) of 1 kg of a GHG to the warming effect of 1 kg of CO<sub>2</sub>.

## Eco-friendly Packaging Materials

SK materials airplus Renewtech division produces dry ice by purifying and compressing CO<sub>2</sub> recovered from petrochemical processes. Since 2020, the demand for dry ice has increased due to the rapid delivery of fresh goods in the era of new distribution brought about by COVID-19. To address environmental issues arising from the distribution process of dry ice, the Renewtech division has been using recycled plastic materials instead of conventional nonwoven fabrics for packaging materials since February 2023. This initiative aims to promote resource recycling, reduce packaging material usage by over 40% compared to conventional methods, and minimize environmental impact.

## WF6 Carbon Reduction

SK specialty calculates GHG emissions throughout the entire lifecycle of WF6 (tungsten hexafluoride), from production to disposal. In 2021, we achieved a 5% carbon reduction compared to 2020, becoming the first in the specialty gas industry to simultaneously acquire carbon footprint “measurement” and “reduction” certifications”. To enhance environmental competitiveness, we plan to expand the range of products with carbon footprint certification and aims to achieve “carbon neutrality” product certification by 2030.



Carbon Trust Carbon Footprint Certificates

## Eco-friendly Business Investment

To contribute to SK Group's goal of reducing 200 million tons of the world's GHG emissions, equivalent to 1% of 21 billion tons<sup>1)</sup>, by 2030, SK materials is enhancing investments and collaborations in eco-friendly and high-value-added sectors.

### Clean Energy Generation & Blue Hydrogen/Blue Ammonia

In March 2022, SK materials invested USD 100 million (12% stake) in 8 Rivers, a company pioneering next-gen CCUS technology. Subsequently, an additional USD 300 million was invested in 2023, securing controlling ownership. 8 Rivers possesses technology to capture and separate CO<sub>2</sub> from hydrogen production processes at low temperatures. This approach offers simplicity and up to 99% capture efficiency compared to conventional methods. Additionally, the supercritical CO<sub>2</sub> power generation technology outperforms steam and gas turbines in efficiency. It captures CO<sub>2</sub> during power generation sans extra equipment, rendering it more economically viable than separate carbon capture facilities required for natural gas and coal power generation. SK materials intends to blend its 40-year materials business experience and refining technology with 8 Rivers' CCUS technology to develop clean energy and blue hydrogen enterprises domestically and globally.

In February 2023, SK materials signed a Heads of Agreement (HoA) with global energy company Exxon Mobil for a collaborative blue ammonia (NH<sub>3</sub>) production venture utilizing next-gen carbon capture tech. In April, an MOU for the same objective was signed. Blue ammonia, generated using carbon-free blue hydrogen, entails no carbon emissions during high-temperature decomposition. SK materials envisions introducing blue ammonia domestically as a power generation fuel, supporting the nation's shift to eco-friendly energy sources in the coal power generation sector.

1) Source : IEA, Net Zero by 2050 Report (2021)



SK materials - 8 Rivers Investment Agreement



SK materials - Exxon Mobil HoA

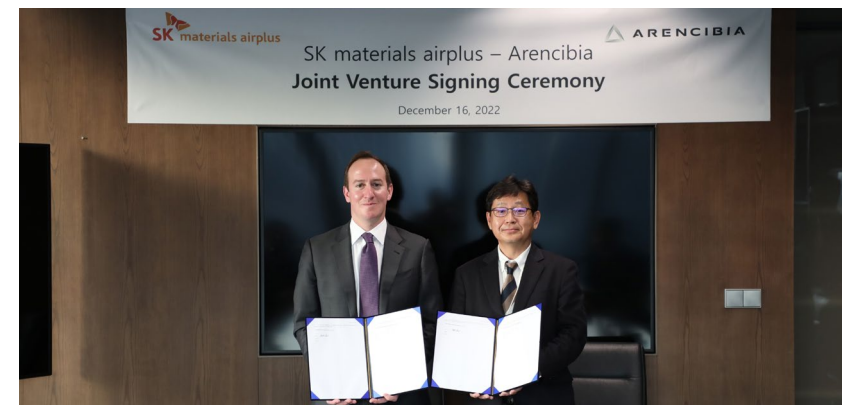
## CO<sub>2</sub> Capture

SK materials has forged a strategic partnership with ION Clean Energy, a company armed with pivotal technologies in next-gen CO<sub>2</sub> capture absorbents for power plants, steel mills, cement production units, and CO<sub>2</sub> capture plant design expertise. This collaborative venture encompasses fundamental CCUS technologies.

ION's technology boasts swifter CO<sub>2</sub> capture rates and lower energy consumption during plant operation compared to traditional CO<sub>2</sub> capture methods. This results in diminished investment and operating expenses for CO<sub>2</sub> capture. SK materials envisions diverse business collaborations encompassing technology commercialization and project development alongside ION Clean Energy. Our intention is to broaden related investments.

### Promoting Rare Gas Upcycling Business

In December 2022, SK materials airplus and Arencibia entered a joint venture agreement (JVA) to spearhead rare gas upcycling endeavors. Arencibia's technology entails real-time monitoring and exhaust gas analysis within industrial gas processes. This method selectively recycles essential rare gases, effectively reducing carbon emissions associated with their production. By harnessing Arencibia's industrial gas upcycling solution and SK materials airplus' high-purity industrial gas supply network, the JV targets rare gas supply stabilization and reduction of price fluctuations. This undertaking significantly advances domestic rare gas supply and aligns with carbon reduction initiatives.



SK materials airplus - Arencibia JVA



# Customer Communication

## Expanding Customer Communication

### Customer Communication Channel

SK materials strengthens customer communication through a range of communication avenues.

Periodic technical meetings connect us with global semiconductor firms in East Asia and North America, fostering mutual understanding, solution discussions, and refinement. Embracing the SK Group’s “Together Apart” framework, group exchange meetings promote objectives like domestic material production and diversified raw material supply chains. These steps ensure supply stability and cost-effectiveness. Furthermore, we share quality enhancement plans and accomplishments, spanning analysis pre-screening, CoA improvements, micro changes management, and the pursuit of Net Zero/RE100 for GHG reduction.

SK specialty hosts quarterly exchange meetings with customers, focusing on specific requirements like supply chain management, inventory system evaluations for raw materials, and the procurement of essential authenticity certificates. This collaborative dialogue among affiliates amplifies synergy, broadens shared quality and analysis infrastructure, and culminates in supply steadiness and financial gains.

SK trichem orchestrates technical exchange meetings with a diverse clientele, including semiconductor and display manufacturers, equipment and material firms. Through shared technical resources and attentive consideration of customer needs, we foster stronger relationships and uncover novel business prospects.

### Joint R&D

SK materials is committed to developing materials and processes that align with customer requisites, engaging in collaborative R&D endeavors with our customers.

In routine technology meetings, we deliberate on strategies to stabilize raw material supply, counter supply chain vulnerabilities, share material-specific technology blueprints, establish development delivery timelines, and offer robust evaluation support. These discussions culminate in joint R&D pathways and collaborations that target customer demands. In 2022, we embarked on joint R&D initiatives concerning next-gen photo materials for DRAM, Low-k materials, ALC materials, and organic-inorganic hybrid Metal Hard Mask (MHM) within the semiconductor materials realm. In the display materials arena, our joint R&D spanned next-gen OLED organic luminescent materials and functional color PR materials. Looking ahead, we are poised to proactively identify collaborative projects, nurture strong ties with customer entities, and continuously generate enduring customer value.

### Stakeholder Account

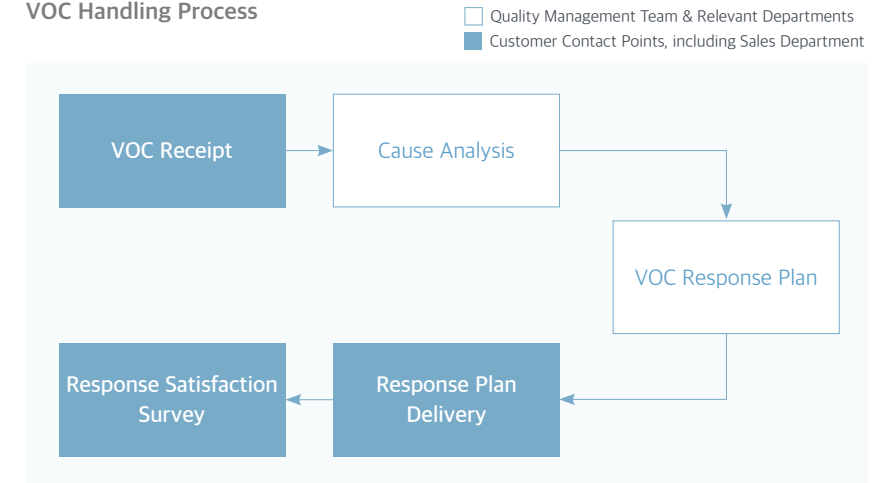
SK materials utilizes the Stakeholder Account methodology to establish mutual understanding and trust with customers. Based on customer needs collected through various communication channels, we identify tasks and measure generated Economic Value (EV) and Social Value (SV) to share with target customers.

In 2022, we discovered and executed 15 key tasks related to ensuring material supply stability and enhancing competitiveness, strengthening material and management capabilities, developing high-performance next-generation materials, and enhancing customer ESG for key customer companies. In the future, we plan to further improve, supplement, and expand these efforts.

## VOC Management and Response

SK materials operates a Voice of Customer (VOC) management process to accurately capture and promptly respond to customer requirements related to product quality and services, aiming to enhance customer satisfaction. The VOC management department conducts root cause analysis and develops improvement measures in response to customer complaints. To prevent recurring issues and related problems, standardized corrective action plans are formulated based on customer feedback and applied to products.

### VOC Handling Process



## Customer Satisfaction Survey

As part of customer-centric management, SK materials conducts annual satisfaction surveys targeting customers who use the company’s products or distribute them. Through these surveys, satisfaction scores and reasons for dissatisfaction are collected for various aspects such as product quality, customer responsiveness, and improvement efforts. This also includes evaluating customer demands and responses related to strengthening ESG activities.



# Creating a Great Place to Work

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SK specialty  
Corporate Relations Team  
**Kim Su-an PL**

As a member of SK materials,  
I take pride in my work.

The enchanting scenery that unfolded around me when I was first assigned to Yeongju remains vivid in my memory.

Due to regional restrictions, there isn't a coffee shop right by the company's doors. However, I kick-start my day with a cup of coffee from the self-service café within the office. During inclement weather like heavy rain, snow, or typhoons, thoughtful messages remind me to commute safely. Engaging in various in-house health campaigns, I thrive in a caring environment that prioritizes my safety and well-being.

Our strong teamwork thrives on a corporate culture founded on trust and mutual assistance, coupled with a gratifying work atmosphere. As I tackle tasks and contribute to social value, I actively support local development, playing my part in enhancing Yeongju's already charming allure.



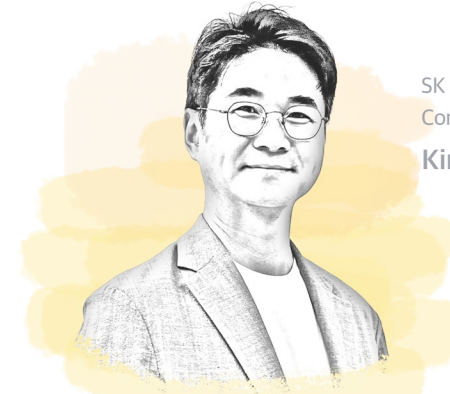
SK Inc. materials  
Portfolio Mgmt. Department  
**Oh Jung-hun PL**

I am growing further within  
SK materials.

From semiconductor materials to expanding into display and battery materials, and even venturing into eco-friendly endeavors like CCUS, I take immense pride in being a part of SK materials—a swiftly evolving company that actively contributes to its advancement.

As the company progresses, so do its employees. Through diverse experiences, our job skills flourish, and we access further growth avenues through programs like mySUNI.

As a member of the Happiness Committee, I also find great fulfillment in actively participating in fostering a positive work environment and boosting the well-being of our colleagues. Our aspiration is to contribute to a happier SK materials.



SK Inc. materials Head of  
Corporate HR Department  
**Kim Hwa-gyun**

We create a healthy workplace to grow  
together with our employees based on  
the Happiness Management System.

Under the belief that "Sustainable Growth is Driven by Employees," SK materials has set four core tasks for creating a good place to work: "Safe Work Environment," "Healthy Workplace," "Happy Employees," and "Differentiated Growth Opportunities". For creating a "Safe Work Environment," we established the SHE management system run by the Board of Directors. We are reinforcing the system to achieve zero incidents in personal & process safety and legal compliance.

To build a "Healthy workplace," we operate health management programs for our employees and suppliers. The Happiness Committee is run to achieve "Happy Employees" by sharing opinions of individuals including the executive management and labor representatives and by providing tailored happiness design programs. Moreover, we offer our employees "Differentiated Growth Opportunities" through the Happiness Management System which is optimized for growth of the company and our talents.



# Creating a Great Place to Work

[Link to SDGs](#)


## GLOBAL TREND

According to the Serious Accidents Punishment Act, the executive management's accountability for safety and health management of industrial incidents has been reinforced. The occurrence of serious accidents and improvement of risk factors in the workplace are used as assessment indicators of corporate value by stakeholders. By 2024, the scope of the Serious Accidents Punishment Act will be expanded from workplaces with 50 or more regular employees to 5 or more employees. Therefore, companies must design their safety & health management system tailored to their industry and size.

Following the advancement of digital technology, companies have expedited their Digital Transformation (DT) to maximize productivity and work efficiency. Moreover, to achieve sustainable growth, companies need to secure top-tier talents and establish HR systems that assist employees to harness their potential and competencies.

## OUR APPROACH

As a response to the strengthened safety/health regulations, SK materials has established a SHE<sup>1)</sup> policy and enhanced the company-wide Safety & Health Management based on a mid-to-long-term SHE roadmap. We also operate a SHE management system and the SHE Synergy Group, run by the Board of Directors. Through innovative safety technologies driven by DT solutions, we are building a proactive incident prevention/response system and implementing various RPA programs for employees' work efficiency.

The "Happiness Management System" was established to create optimized work environment and provide differentiated growth opportunities and compensation. To create a good place to work, we have formed the Happiness Committee for happiness and welfare of our employees and expanded the scope of safety/health training and wellness programs to suppliers.

## 2022 HIGHLIGHTS



All Subsidiaries  
ISO 45001  
Acquisition/Re-certification



Occupational Accident of  
Employee  
ZERO



OIFR<sup>2)</sup> 0  
Maintained for  
3 Consecutive Years



2022 Total Employee  
Training Hours  
81,576

1) SHE : Safety, Health, Environment

2) OIFR : Occupational Illness Frequency Rate, (Number of Occupational Illness Cases) / (Total Work Hours) × 200,000

## KEY STAKEHOLDER



Employees



Community



Suppliers

# Strategy for Creating a Great Place to Work



## SAFETY

### Safe Working Environment

- Spreading Autonomous Safety Culture
- Establishing and Enforcing PSM<sup>1)</sup> Operation
- Strengthening Safety Management System through DT Solution
- Mutual Growth with Suppliers in SHE
- Expansion of SHE Competency Enhancement Programs



## HEALTH

### Healthy Workplace

- Creating Human-Centered Work Environment
- Identifying and Improving Potential Health Hazards
- Prevention and Management of Occupational Diseases
- Risk Assessment for Chemicals
- Expansion of Health Support for Suppliers



## HAPPINESS

### Happy Employees

- Operating Employee Communication-Based Happiness Committee
- Improving Welfare Benefits System
- Establishing Work Automation System
- Conducting Mental Well-being Hub, "RUOK Survey"
- Running Customized Happiness Design Programs



## TRAINING

### Differentiated Growth Opportunities

- Running Leadership Competency Building Programs
- Internalization of DT Expertise
- Role-Level Customized Job Training
- Skill and Performance-Based Appraisal, Promotion, Compensation
- Conducting Communication and Feedback-Based People Sessions



1) PSM : Process Safety Management

# Safe Working Environment

## Safety & Health Management

### Safety & Health Strategy Roadmap

SK materials is measuring and improving each subsidiary’s SHE performance based on a medium-to-long-term SHE roadmap. Alongside setting medium-term targets for Lost-Time Injury Rate (LTIR)<sup>1)</sup> and Occupational Illness Frequency Rate (OIFR)<sup>2)</sup>, we are pursuing organization-wide SHE performance management by establishing each subsidiary’s goals for various international standards such as PSM evaluation, ISO 45001<sup>3)</sup>, ISO 14001<sup>4)</sup>, and ISO 50001<sup>5)</sup>.

Area	Category	2022	2023	2025	2030
Safety	LTIR (Company-wide)	0.141	0.127	0.103	0.061
Health	OIFR (Company-wide)	0	0	0	0
Certification	ISO 45001 (Company-wide)	Completed Certification	Maintain Certification	Maintain Certification	Maintain Certification
	ISO 14001 (Company-wide)	Completed Certification	Maintain Certification	Maintain Certification	Maintain Certification
	ISO 50001 (Company-wide)	SK specialty SK materials airplus	SK materials performance	Completed Certification	Maintain Certification

1) LTIR : Lost-Time Injury Rate, (Number of work-related injuries resulting in lost time) / (Total work hours) × 200,000  
2) OIFR : Occupational Illness Frequency Rate, (Number of work-related illnesses) / (Total work hours) × 200,000  
3) ISO 45001 : International standard for Occupational Health and Safety Management Systems  
4) ISO 14001 : International standard for Environmental Management Systems  
5) ISO 50001 : International standard for Energy Management Systems

### Safety & Health Management System

SK materials has established the Occupational Safety & Health Management Systems run by each subsidiary’s Board of Directors. We manage key safety/health tasks, regularly report them to the CEO, and key issues are deliberated in the BOD meeting. As a SHE control center, the SHE Management Department discusses and manages safety/health issues with SHE departments of each subsidiary to enhance the SHE management standard. Additionally, the “SHE Synergy Group,” attended by SHE leaders of each subsidiary, is held monthly to share plans, achievements, and best practices of each subsidiary and workplace for expanding benchmarking and communications. In 2023, we expanded the scope of the SHE Synergy Group to overseas subsidiaries to build a regular communication system and improve their SHE management capabilities.

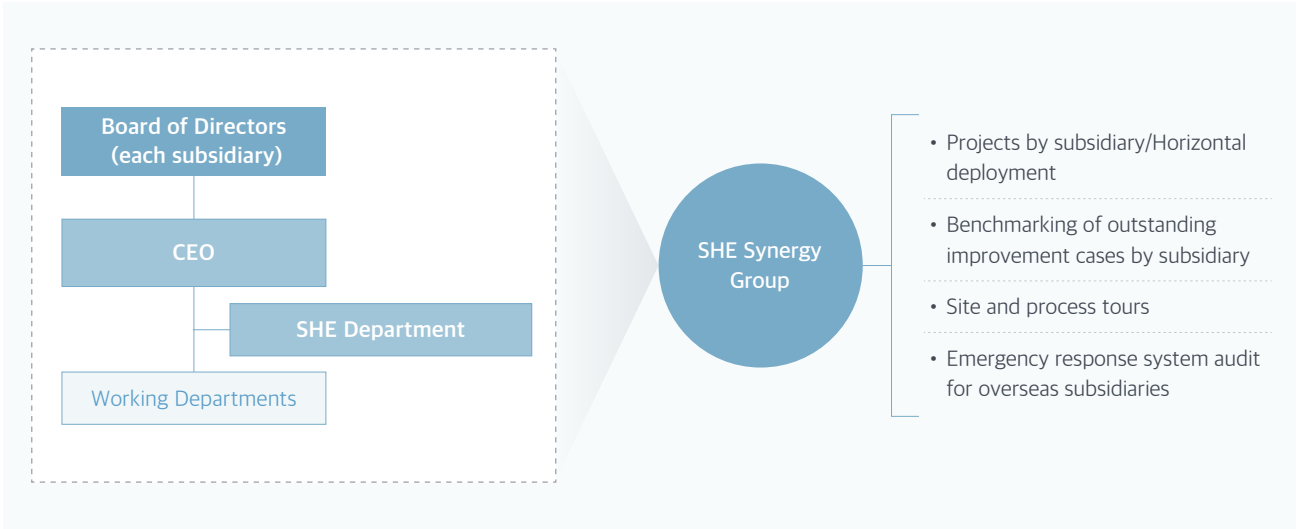
SK materials has achieved and maintained certification for Occupational Health and Safety Management System (ISO 45001) according to international standards for all seven subsidiaries, strengthening our safety and health management system. Furthermore, in January 2023, SK specialty achieved the highest grade, “P” (Progressive), in PSM<sup>1)</sup>, demonstrating the operation of a systematic process safety management system. Additionally, SK specialty obtained “Safety Zone Certification<sup>2)</sup>,” an official certification for the safety of process facilities and safety systems from the Korea Institute of Safety Certification.

SK materials airplus has established a voluntary risk assessment-centered safety and health management system, and was recognized as a “Distinguished Workplace in Risk Assessment” by the Korea Occupational Safety and Health Agency in 2022.

SK materials monitors major issues during the implementation and operation process of the SHE operational plan established at the beginning of the year. We continuously identify and improve tasks. Additionally, to achieve SHE operational goals, we conduct periodic Management Reviews.

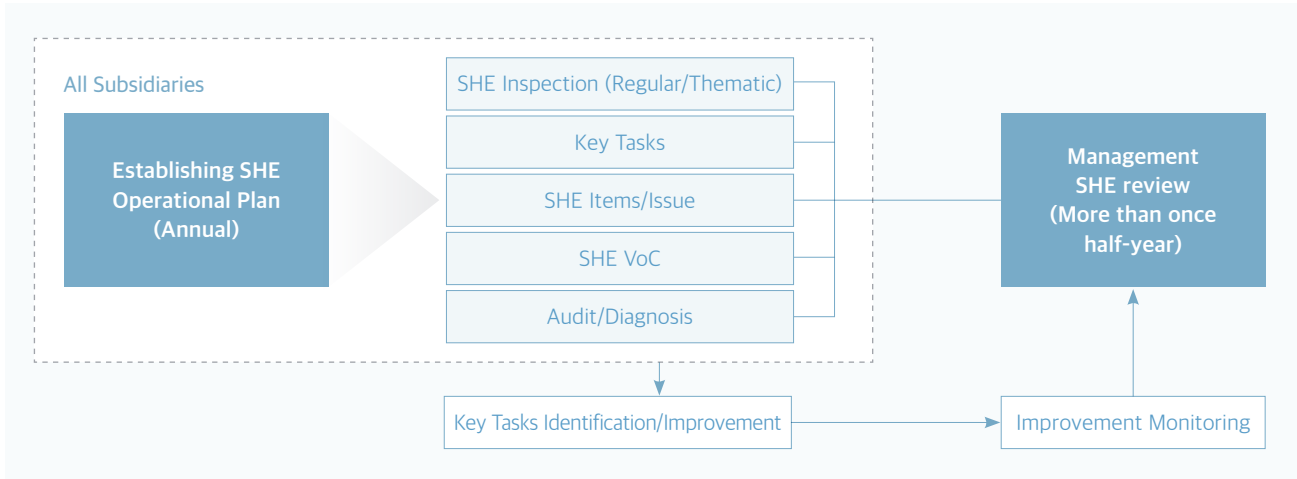
1) PSM : Process Safety Management  
2) Safety Zone Certification : A unique domestic voluntary safety assessment system for companies, administered by the Korea Institute of Safety Certification and supervised by the National Fire Agency

### Safety & Health Management Governance





SHE Operational Capacity Internalization



Enhancing Safety & Health Management System

Advancing Safety & Health Management System	We have strengthened our safety and health management system under the leadership of the executive management by establishing dedicated safety and health organizations directly under the CEOs of each subsidiary. Additionally, we have implemented an integrated SHE system to enhance operational efficiency.
Board-centered Safety & Health Management System	We have established a Board-centered SHE Management System to fulfill our obligation to ensure safety and health. The SHE organization constantly monitors the status of safety and health implementation, establishes improvement plans based on risks and their severity through third-party diagnosis. Additionally, the SHE Management Committee operates on a quarterly basis to discuss key trends and issues related to safety and health. Significant issues are reported to the Board of Directors for review and approval. Each subsidiary reports its annual SHE operational plan to the Board of Directors for approval.
Strengthening Compliance Management	We are enhancing the SHE self-audit at each subsidiary to comply with SHE regulations, company rules, and stakeholder requirements. Particularly, we have appointed more safety managers than the legal requirements, thereby reinforcing compliance management in safety and health practices.
Reinforcing Safety & Health of Project Construction	We have established a project construction safety management guide and strengthened safety management by utilizing safety checklists. Furthermore, we identify hazardous risks at construction sites and collaborate extensively with suppliers to improve safety conditions and proactively eliminate potential risks.
Enhancing Safety Management Standard of Laboratory	By obtaining the “Excellent Safety Management Laboratory Certification,” we have demonstrated the autonomous safety management capabilities of our research labs. A total of 16 laboratories at the Sejong Campus for High-tech Materials have received certification, and we plan to continuously increase the number of certified labs.

Safety & Health Management (SHE) Policy

SK materials prioritizes the establishment of safe and healthy workplaces as a core value and explicitly states this commitment in its Safety, Health, and Environment (SHE) policy. We aim to share this commitment to safety and health management not only with our employees but also with stakeholders such as local communities, customers, and suppliers.

SHE Policy	SK materials pursues the protection of human beings and the environment as the foremost value in all stages of its business operations. To secure the trust of employees and stakeholders and achieve sustainable SHE management, SK materials actively practices the following:
1. Establishment of Safe and Healthy Workplaces	Through SHE-centered management, SK materials continuously strives to establish safe and healthy workplaces that all stakeholders, including employees, local communities, customers, and suppliers, can trust.
2. Pursuit of an Eco-Friendly Corporate Culture	By implementing environmentally friendly designs, efficient resource usage, and introducing optimal pollution prevention facilities, SK materials minimizes pollutant emissions and protects the environment of the workplace and local community. Systematic management of hazardous chemicals and transparent information disclosure further contribute to this endeavor.
3. Building Trust Through Compliance Management	SK materials rigorously complies with safety, health, and environmental regulations and meets the demands of stakeholders. By establishing a top-tier SHE management system and transparently disclosing it, the company aims to secure the trust of its stakeholders.
4. Participation of Employees	All employees recognize the enhancement of SHE values as a core management task and continuously strive towards achieving the objectives.

Safety & Health KPI Management

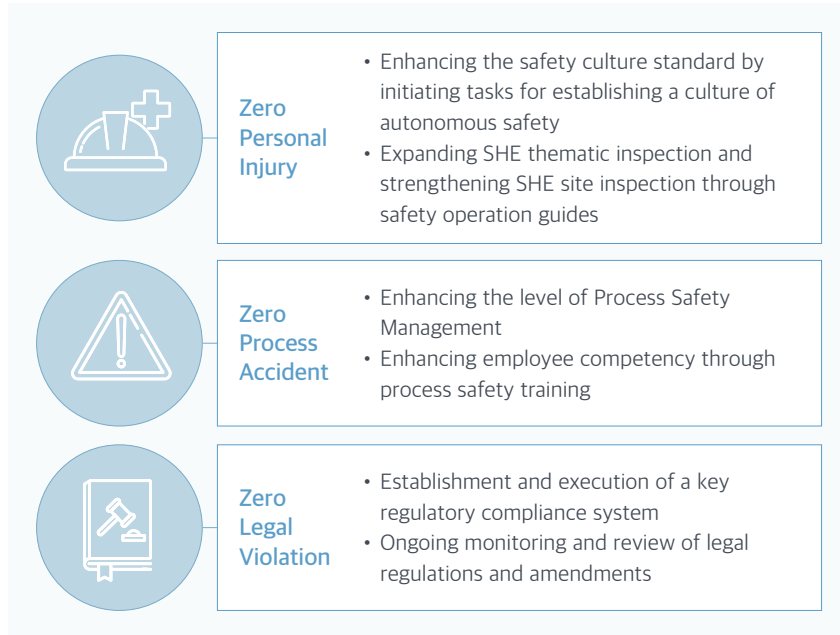
We manage annual outcomes and take corrective actions for key performance indicators (KPIs) of Lost Time Injury Rate (LTIR)<sup>1)</sup>, Occupational Illness Frequency Rate (OIFR)<sup>2)</sup>, and Total Recordable Incident Rate (TRIR)<sup>3)</sup>. We set mid-to-long-term LTIR goals for all subsidiaries and expanded the scope of KPIs to suppliers’ occupational safety indicators to strengthen the supply chain safety and health management system. We integrated achievements of these efforts into performance appraisal and compensation of the CEO, executives, each organization and employee to put safety and health first during work processes.

In 2022, SK materials achieved an LTIR of 0.141. We aim to maintain a low incident rate by reducing this to 0.127 by 2023 and further to 0.061 by 2030. We also plan to expand the scope of KPIs related to safety and health.

1) LTIR : Lost-Time Injury Rate, (Number of lost-time injury incidents) / (Total work hours) × 200,000  
2) OIFR : Occupational Illness Frequency Rate, (Number of occupational illness incidents) / (Total work hours) × 200,000  
3) TRIR : Total Recordable Incident Rate, (Number of recordable injury incidents) / (Total work hours) × 200,000

## Establishing a Safe Working Environment

### Three Goals for Zero Accident



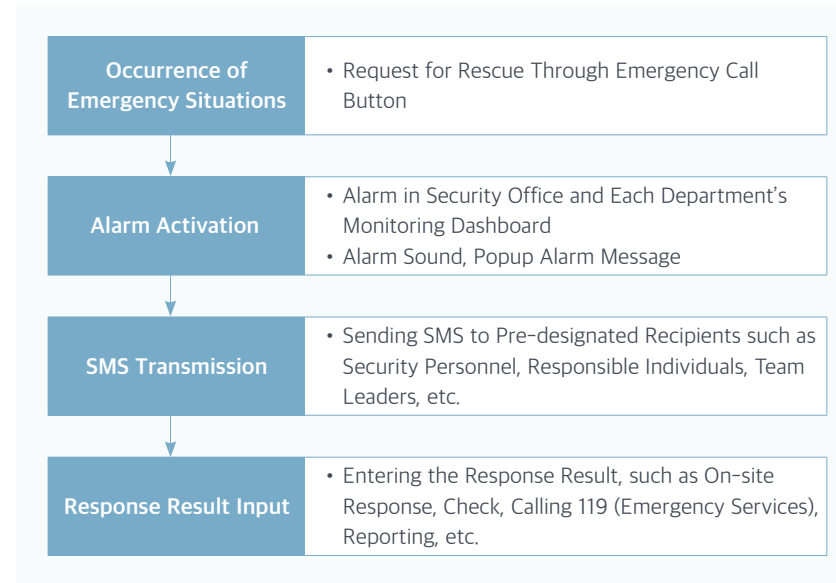
### Prevention of On-site Accidents

#### Building Emergency Call System

SK materials has established a location-based emergency call system at Sejong Campus for High-tech Materials, SK specialty, SK Resonac, and SK materials performance sites. This system is designed to swiftly issue emergency alerts and implement safety measures during critical situations, aiming to prevent the escalation of emergencies. Additionally, the alarm is sent to not only SHE personnel but also security and managers, ensuring rapid responses even when employees are working alone. The system utilizes BLE AP1 within research facilities, in conjunction with entry tags, enabling real-time entry information management for researchers and visitors. In the event of an incident, this system identifies the incident area and personnel present on-site.

1) BLE AP : Bluetooth Access Point, A device that receives signals from tags using Bluetooth technology

#### Emergency Call System Operating Process

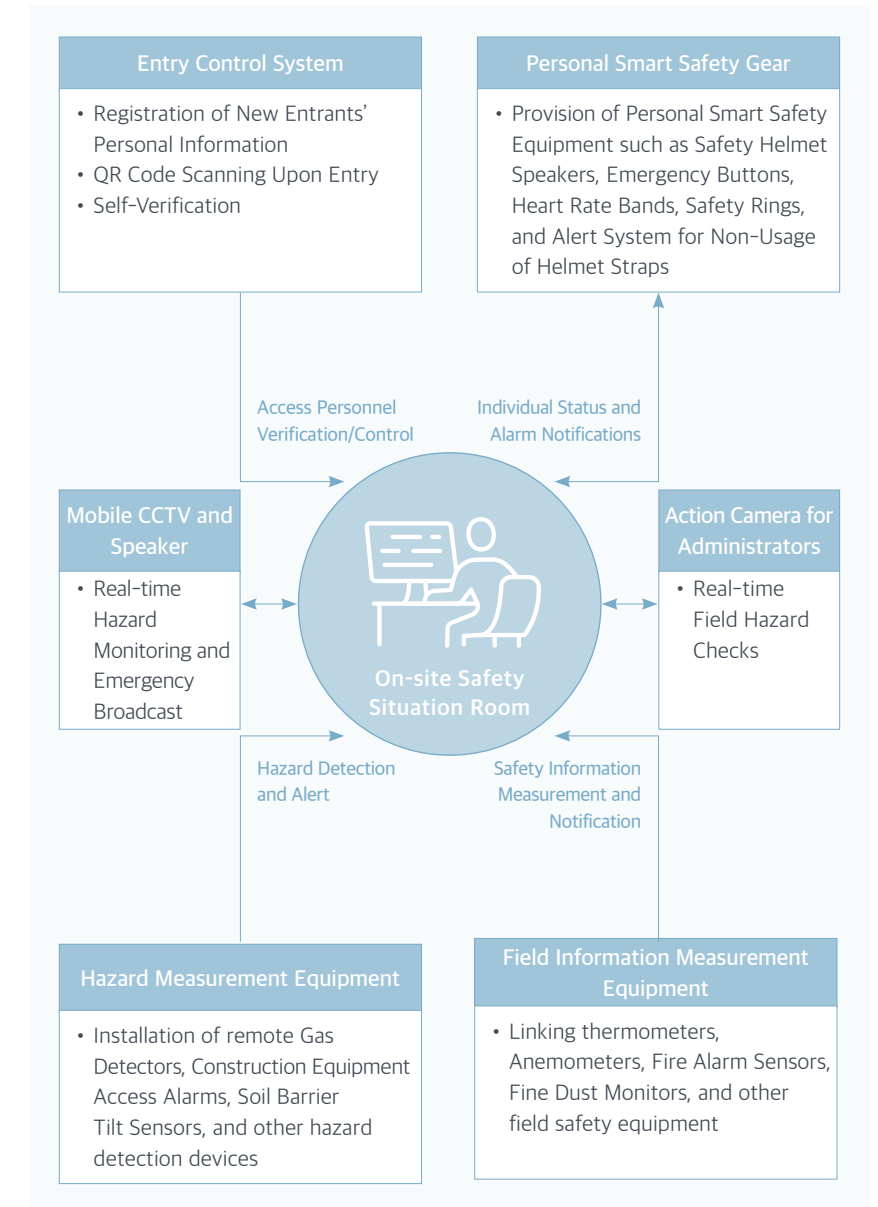


#### Establishing a Smart Safety Platform

SK materials has implemented a Smart Safety Platform that utilizes the smart safety equipment and technology to prevent serious accidents by eliminating risk factors in workplaces. Based on the AI/DT technologies, this platform is a safety management system that monitors workers and workplaces using smart safety equipment such as individual safety gears, risk factor detection tools, and on-site information measurement tools. Moreover, we use the access control system to restrict unauthorized personnel's access to the processing sites. For the authorized personnel, we provide individual smart safety gears, such as emergency buttons and heart rate monitors to constantly check their health information and location. These gears are connected to the on-site safety facility to broadcast emergency alerts and potential risk factors.

The Smart Safety Platform is operated in workplaces and project sites of SK materials airplus, SK trichem, and SK materials Group14, and it will be expanded to future project sites.

#### Smart Safety Platform Model



### Upgrading Access Control System for High-Risk Process Area

SK specialty and SK Resonac operate the IoT-based Access Control System to manage personnel authorization in all processing sites for NF3 in which hazardous chemical substances are handled. This system is equipped with a web-based access control software with the database of authorized personnel and hazardous areas, and it can monitor workers' location and chemical-resistant clothing by connecting their ID cards to APs<sup>1)</sup>. In cases of unauthorized access, such as individuals without chemical-resistant clothing or temporary suspension due to failure to complete safety training, supervisors of the control room and the emergency center are notified to take appropriate actions. In 2022, we added an emergency call function to ID cards to transmit location and identification of workers in case of an emergency. We installed emergency call systems in 12 analysis rooms designated for single-person occupancy to promptly identify emergencies and initiate appropriate responses.

1) AP : Access Point, A device that receives signals from tags

### 360° Around-View Installation for Forklifts

SK materials performance has installed 360° Around-View systems in forklifts to ensure the driver's visibility and prevent major accidents caused by blind spots during operation. In addition to basic safety measures and compliance with safety rules during forklift operation, 360° Around-View systems were installed in two forklifts in 2022 to provide drivers with views of the front, rear, and sides. As soon as the forklift is started, drivers can view the Around-View images on the monitor installed in the driver's seat. The system also automatically records the video during operation, for later review of the situation. We plan to continuously improve safety measures, such as adding rear-view cameras to stand-up forklifts in the future.

### Real-time Detection System Operation

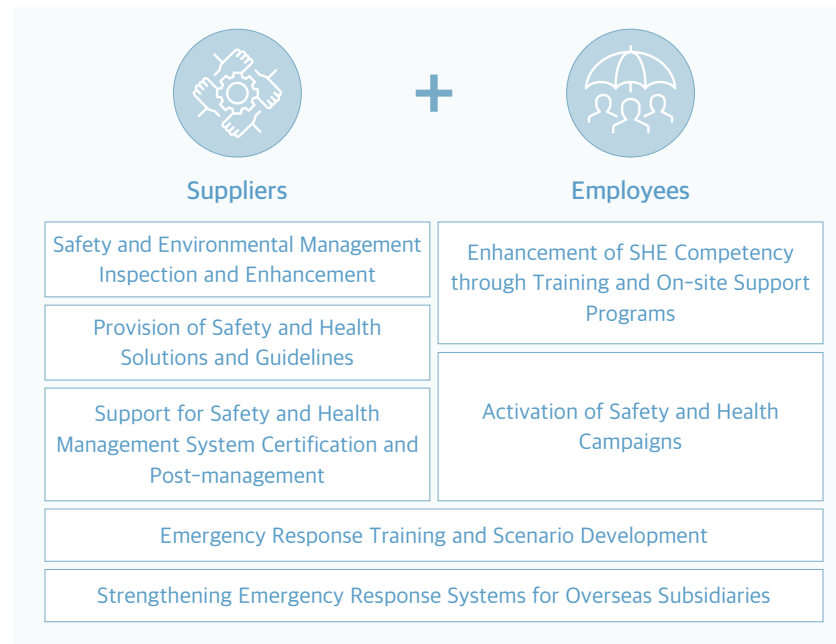
SK specialty has implemented leakage detectors surrounding the 55% hydrogen fluoride (HF) tank to swiftly identify and respond to potential hazardous chemical leaks. In the event of a leak of 55% HF, the control box triggers on-site alarm devices and simultaneously notifies the control room to prevent the spread of the leak.

Furthermore, ensuring the secure operation of substation/transformer equipment at the Yeongju plant, a comprehensive power monitoring system has been established. The SCADA<sup>1)</sup> system, gathers, processes, and evaluates data from the 154kV substation/transformer equipment. This real-time monitoring facilitates the assessment of power quality and the early detection of power-related incidents, with a strong emphasis on prevention of trouble.

1) SCADA : Supervisory Control And Data Acquisition, A centralized remote monitoring and control system

## Strengthening Safety & Health Capabilities

### Direction for Strengthening Safety & Health Capabilities



### Enhancing Accident Response Capabilities

SK materials conducts emergency response and firefighting training according to planned schedules across all of its facilities. In addition to joint emergency response drills, individual organizational scenario-based response drills are also conducted.

For instance, SK materials airplus developed 12 process-specific accident scenarios in 2022, conducting a total of 48 monthly emergency response drills throughout the year. We also conduct firefighting theory and practical training biannually for all employees, covering topics such as fire suppression and emergency evacuation.

In 2023, as part of the expansion of the SHE Synergy Group's scope to include overseas subsidiaries, we will implement inspection and improvement of the emergency response systems at overseas sites to strengthen accident response capabilities across both domestic and overseas facilities.

### Enhancing Suppliers' Safety & Health Management Standard

#### Regular SHE Assessment

SK materials regularly evaluates the safety and environmental management standard of suppliers and request improvements or provides compensation based on the result.

SK specialty and SK Resonac select new suppliers who meet the safety requirements in the supplier qualification assessment. For constructions over KRW 20 million, we review the safe environment management plans prepared by the suppliers and hold a SHE Kick Off Meeting to eliminate any potential risks during the project. In 2022, we reviewed a total of 163 plans. In the process of constructions, we inspect SHE compliance, and after completing the constructions, we conduct final assessments and request corrective action plans if necessary to prevent recurrence of violation. Through this process, we select "Excellent Suppliers" and "Excellent Safety Professionals" monthly and offer rewards.

SK materials airplus implements pre-assessment of project suppliers' SHE capabilities. After the project is completed, we conduct SHE performance evaluation. Incentives and penalties are given according to the suitability of the safety & health management plans and performance of safety & health practices. By restricting bidding by the suppliers who are "not qualified" in the assessment, we are actively executing the selection and management of qualified suppliers.

### Providing Safety & Health Guidelines

SK specialty and SK Resonac introduced the “Stop & Go” system in April 2022, where work is halted (Stop) immediately upon identifying hazards at the site and resumed (Go) only after the hazards are completely eliminated. We have also distributed 51 types of safety work guides for achieving accident-free workplaces, and provided training to suppliers.

SK materials airplus distributed an “Integrated Safety and Health Guide” targeting its suppliers in 2022. This guide covers topics such as hazardous and risky operations, temporary facility safety technology, safety standards for hazardous and risky machinery, equipment safety standards, and common standards. Suppliers must comply essential safety standards and procedures at work sites, which aligns with SK materials airplus’ SHE management policy.

### Enhancing Safety & Health Capabilities of Suppliers

SK materials enhances the safety and health competence of suppliers’ employees through additional training programs beyond legal safety and health training. We provide specialized safety trainings tailored to specific roles, such as supervisory personnel, chemical handlers, fire monitors, and confined space standby personnel.

SK specialty and SK Resonac conducted special safety training for a total of 68 individuals in 2022, covering topics such as suppliers’ director training, Tool Box Meetings (TBM) operating procedures, and revised safety and environmental management procedures. Starting from 2023, we plan to establish a training infrastructure for suppliers by providing resources such as training venues and facilitating access to training materials. Our goal is to empower suppliers to autonomously strengthen their SHE management capabilities.

In 2022, SK trichem provided external expert safety and health training on mental health management and musculoskeletal disorders prevention for three suppliers through the Supplier SHE Partnership Program. From 2023 onwards, support will be provided for the recognition of risk assessment procedures and methods for suppliers. This includes conducting actual risk assessments and introducing incentives such as granting bonus points and rewards for suppliers recognized as excellent.

Starting in 2023, SK materials JNC plans to conduct training on risk assessment, work permits, and safety operation guidelines for small-scale construction suppliers.

### Facilitating SHE Communication

SK materials conducts monthly Safety & Health Meetings with suppliers to discuss safety-related matters and gather opinions. Joint inspections are conducted quarterly to prevent industrial accidents. Additionally, we established a communication channel for two-way communication with suppliers to address SHE-related issues in real-time.

Since 2022, SK specialty and SK Resonac have opened webpage for communication with suppliers. Through this channel, we provided training materials to enhance supplier SHE capabilities, including safety operation guides, Material Safety Data Sheets (MSDS), and safety management procedures. Special SHE training, safety education for chemicals, and supervisor training for suppliers are managed and integrated on this platform. Moreover, SHE plans and safety management cost performance are collected via the webpage to efficiently assess the status of supplier SHE management. A dedicated forum is available to gather feedback and suggestions from suppliers. Additionally, SK specialty has been conducting regular CEO meetings with suppliers since 2023 to foster consistent communication.

### **Promotion of Safety Management Culture**

#### Expanding SHE Communication Channel

SK materials employs a range of SHE communication channels for effective engagement.

These encompass quarterly Industrial Safety and Health Committee, the “SHE Bulletin Board,” “SHE Proposal System,” and “Safety Talk System” to interact with employees. Additionally, communication extends to employees, suppliers, and visitors via “SHE Box,” “SHE Opinion Collection Box,” and the “KakaoTalk Safety Reporting Channel”.

SK specialty utilizes the “SHE Bulletin Board” to share legal trends, safety incident cases, and more. The “SHE Box” gathers safety-related suggestions and inquiries. The “Safety Talk System” encourages safety discussions before meetings, with 364 sessions held in 2022. SK Resonac, SK trichem, and SK materials airplus also embraced the Safety Talk System for internal SHE communication. Meanwhile, SK materials performance aims to introduce the Safety Talk System in H2 2023.

SK materials airplus and SK materials JNC have “SHE Opinion Collection Boxes,” while SK materials performance operates the “SHE Proposal System”. SK trichem expands communication via the “SHE Box” and “KakaoTalk Safety Reporting Channel”.

### Operating SHE Capability Building Programs

SK materials strengthens its employees’ safety and health capabilities by operating proprietary training programs, in addition to legally obligated training such as regular safety/health training and administrator training. In H1 2022, we conducted 3 sessions of SHE compliance training for construction projects and established the safety/health compliance guideline. In H2 2022, we performed 2 sessions of the construction expert thematic training.

Starting in 2023, the SHE competence program will encompass construction safety and government approvals. Role-specific SHE competence enhancement initiatives are planned, encompassing SHE leadership education for executives, SHE compliance education for SHE organizations, and SHE Mind Set education for supervisors and SHE personnel.

SK specialty and SK Resonac conducted additional competence enhancement and evaluation preparation courses for PSM in 2022, complementing legal PSM-related training with a total of 76 participants. Construction and operational safety courses were also administered for supervisors and SHE personnel, involving 20 participants.

Commencing in 2022, SK materials airplus engaged external expert training to fortify PSM execution capability of 50 participants. In 2023, PSM Auditors will undergo specialized education among SHE, production, and administrative staff. Both internal and external education will be expanded to heighten awareness of PSM components.

From 2023, SK trichem is operating its own education program to enhance PSM execution competence for working-level staffs, including education on the 12 major PSM action items and strengthening the competence of key PSM personnel.

SK materials performance and SK materials Group14 are also conducting internal PSM education programs.



### Strengthening Self-Inspection for SHE

SK specialty conducts monthly SHE thematic inspections with the aim of enhancing capabilities for preventing major accidents. Supervisors and SHE departments of each organization lead these inspections, and the inspection status and improvement results are registered and managed in the integrated SHE system. Inspections are tailored to the characteristics of each facility, covering key areas such as chemicals, hazardous materials, transportation vehicles, and safety checks for High place working benches. Considering the seasons, we carry out facility checks against heavy rain, typhoons, and floods, as well as freeze-prevention safety inspections.

### Enhancing Safety Culture Awareness

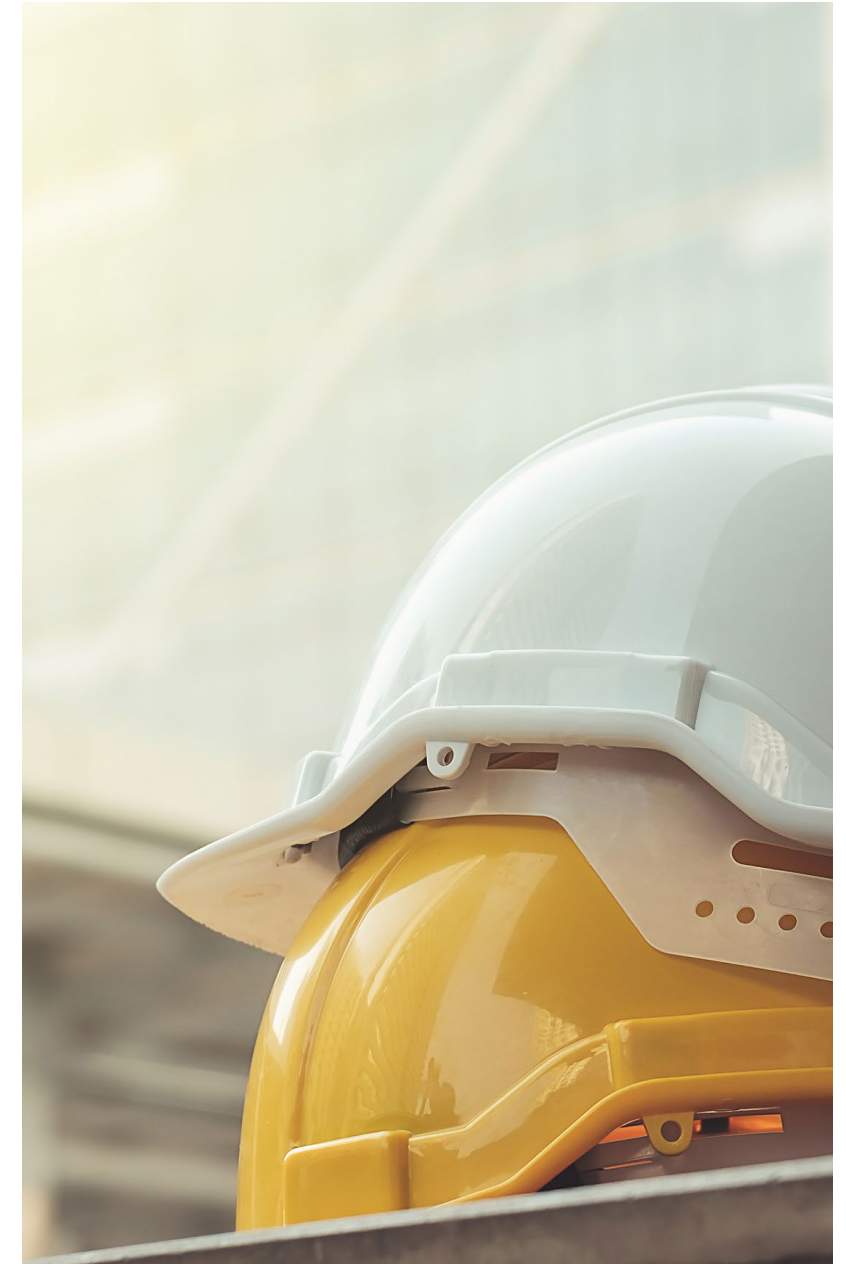
In 2022, both SK specialty and SK Resonac orchestrated a “Safety Slogan Contest,” involving all employees. The outcome yielded five exceptional slogans, which were transformed into banners and prominently displayed on the premises. The “Safety Praise Challenge” campaign was also launched to promote safety best practices, employing a relay-style format that engaged a total of nine participants. To further heighten safety awareness among both employees and supplier personnel, we acknowledge and reward outstanding safety initiatives. Additionally, summer and winter safety campaigns encompass various promotional activities, such as the distribution of safety guideline pickets during commuting hours, showcasing safety accident photos, providing cooling towels, and furnishing cold weather gear. Diverse initiatives include a firefighting competition to enhance emergency response capabilities, safety quizzes to raise safety consciousness, and campaigns focused on chemical safety awareness.

SK materials airplus annually nominates and rewards departments and employees with exceptional safety performance. This is used to promote efforts and accomplishments for zero accidents and motivate employees to actively engage in safety endeavors. To enhance safety awareness of employees, we hold “Safety Contests” biannually to reward selected contributions.

### Creation of Mobile App “SHE Handbook”

In 2022, SK materials airplus developed a mobile app called “SHE Handbook,” containing safety information such as SHE standards and on-site work precautions. This app was distributed to both employees and suppliers. Through this app, individuals can easily access the necessary SHE-related information without constraints of time and location. The SHE Handbook is structured with sections that include company-wide common topics and site-specific tailored content. The company-wide common topics encompass information like SHE policies, Safety Golden Rule, rights for suspension of work, safety standards, and safety education for entering and exiting the workplace. On the other hand, the worksite-specific sections provide details on emergency contact for each factory, information on hazardous chemicals, emergency evacuation procedures, protective equipment, and emergency gear. Particularly, the “One Call” feature in the factory-specific emergency contact enhanced convenience. Users can instantly make a direct call by clicking on the designated contact person’s information.

#### SHE handbook



Strengthening Risk Assessment

SK materials conducts risk assessments for processes, operations, and chemicals within the workplace at least twice a year. This practice aims to identify and address hazardous risk factors within the facility, enhancing overall workplace safety.

Risk Assessment Results and Improvement Measures

Subsidiary	Hazardous or Risk Factors	Improvement Measures	Schemes to Prevent Recurrence of Accidents
SK specialty	<ul style="list-style-type: none"><li>Inhaling Hazardous Gases Remaining Inside Equipment During Turn-around</li><li>Chemical Contact Injuries Resulting from Leaks in Chemical Handling Equipment</li></ul>	<ul style="list-style-type: none"><li>Preparation for Emergency Situations by Wearing Personal Protective Equipment (e.g., Respirators) and Managing Entry into Confined Spaces</li><li>Wearing Chemical-Resistant Protective Gear (Chemical-resistant Clothing/Boots/Gloves, Full-Face Masks) When Entering the Process Area</li></ul>	<ul style="list-style-type: none"><li>Implementation of a Checklist to Verify Residual Hazardous Gas and Internal Drainage and Purge Status before Equipment Entry</li><li>Establishment of a Micro Leak Detection System (Application of Chemical-resistant Tape, Leak Discoloration Tape to Flanges Prone to Leaks)</li></ul>
SK materials airplus	<ul style="list-style-type: none"><li>Risk of Fire or Explosion Due to Static Electricity During Trailer Operations</li></ul>	<ul style="list-style-type: none"><li>Installation of Anti-Static Pads and Grounding Equipment for Trailers</li></ul>	<ul style="list-style-type: none"><li>Inclusion of Precautions Against Electrostatic Discharge During Trailer Operations in the Work Procedures</li></ul>
SK trichem	<ul style="list-style-type: none"><li>Confusion During Emergencies due to Different Operating Procedures of Fire Alarm Receivers of Different Manufacturer</li></ul>	<ul style="list-style-type: none"><li>Installation of a Unified Junction Box for Existing P-type Receivers to Eliminate Confusion by Integrating Receivers</li></ul>	<ul style="list-style-type: none"><li>Application of R-type Receivers in New Facilities to Enable Comprehensive Integrated Management</li></ul>
SK Resonac	<ul style="list-style-type: none"><li>Concerns of Harmful Chemical Leakage During Purge Operations in Refining Processes</li></ul>	<ul style="list-style-type: none"><li>Installation of Portable Local Exhaust Systems before Detaching Caps</li></ul>	<ul style="list-style-type: none"><li>Incorporation of Installation of Portable Local Exhaust Systems before Detaching Caps into Work Standards for Strengthened Compliance</li></ul>
SK materials performance	<ul style="list-style-type: none"><li>Exposure to Chemical Vapors Injected Through Tubes Connected to Equipment (Top Inlet of Containers)</li><li>Slip Resulting from Condensation on the Floor of the Hazardous Material in Storage Area</li></ul>	<ul style="list-style-type: none"><li>Prevention of Chemical Vapor Dispersion by Applying Safety Caps to Chemical Containers</li><li>Application of Non-Slip Paint to Prevent Slipping</li></ul>	<ul style="list-style-type: none"><li>Application of Safety Caps to All Chemical Containers Connected to Equipment and Annual Replacement of Caps</li><li>Daily Inspection of Non-Slip Paint Condition through Hazardous Materials Storage Area Checks</li></ul>
SK materials JNC	<ul style="list-style-type: none"><li>Fire Incidents Resulting from Vapor Residence of Flammable Liquids Inside the Cleaning Room</li><li>Leakage from Reagent Containers Due to Fall of Containers During Storage</li></ul>	<ul style="list-style-type: none"><li>Installation of Flammable Gas Detectors for Early Detection of Explosive Atmospheres</li><li>Installation of Dedicated Trays Inside Reagent Storage Cabinets to Prevent Spreading in Case of Leakage</li></ul>	<ul style="list-style-type: none"><li>Inclusion of Flammable Gas Detectors in Specifications for Expansion of the Cleaning Room</li><li>Conversion of All Reagent Cabinets in the Facility to Cabinets Dedicated to Flammable Liquids and Application of Leak-Prevention Trays</li></ul>
SK materials Group14	<ul style="list-style-type: none"><li>Delays in Evacuation Due to Complex Escape Routes During Emergency Situations in the Office Building</li></ul>	<ul style="list-style-type: none"><li>Initiation and Training for Emergency Evacuation Routes</li><li>Conducting Emergency Evacuation Drills</li></ul>	<ul style="list-style-type: none"><li>Enhancement of Evacuation Route Signage, Emergency Evacuation Lighting</li><li>Conducting Periodic Joint Emergency Response Training for Suppliers within the Facility</li></ul>

# Healthy Workplace

## Health Management for Employees

SK materials considers the distinctive characteristics of the industry to identify potential health risks and devises health support programs to prevent illnesses and promote employee well-being.

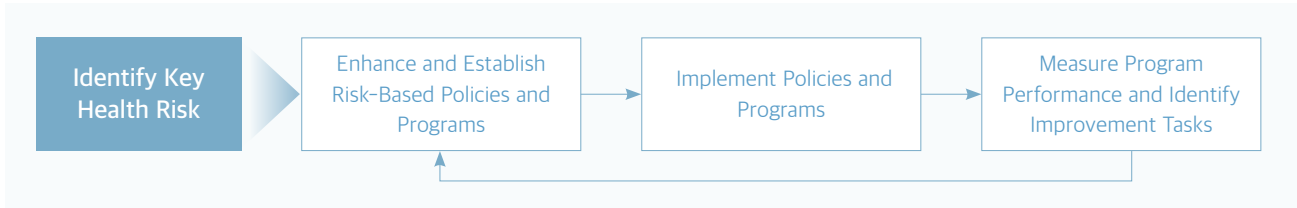
Regular health check-ups, encompassing general, comprehensive, and specialized examinations, are conducted for all employees, including contract and dispatched workers. These examinations are implemented to prevent occupational diseases such as musculoskeletal disorders and cardio-cerebrovascular conditions arising from personal habits. If medical opinions were given to one, subsidiary-specific programs are given to one with post management, individual consultations, and external expert-led education. Additionally, we regularly evaluate cardio-cerebrovascular disease risks and analyze risk factors for musculoskeletal disorders. These efforts seek to prevent diseases linked to repetitive tasks. SK trichem discovered high-risk tasks by identifying risk factors for musculoskeletal disorders. Consequently, eight assistive suits and lift tables were provided to employees engaged in these tasks.

Furthermore, we monitor work environment and examine ventilation system to prevent occupational diseases, such as noise-induced deafness and pneumoconiosis<sup>1)</sup>. In 2023, SK specialty plans to conduct specialized auditory health assessments and inspections on noise protection devices. Custom earplugs will be supplied based on individual hearing evaluations. Moreover, including analysis on cooling tower water samples for Legionella bacteria, we will further reinforce our workplace management plan to achieve zero occupational diseases under the Serious Accidents Punishment Act.

In addition to focusing on occupational diseases, a variety of employee health support programs are available. SK specialty and SK Resonac offer body composition improvement program, SK trichem provides weight loss programs, and SK materials JNC operates an in-house fitness center to enhance physical well-being. Hearing conservation programs are provided at SK materials airplus, while SK materials performance conducts cardiopulmonary resuscitation (CPR) training. Smoking cessation clinics are administered by SK materials Group<sup>14</sup>. Our subsidiary-specific programs also support employees' mental health, such as counselling for stress at work.

1) Pneumoconiosis : A lung disease caused by inhaling dust (particles) composed of substances that damage the lungs

### Safety & Health Risk Management Process



## Healthcare Program for Employees<sup>1)</sup>

Work Environment	Work Environment Monitoring (Common)	<ul style="list-style-type: none"><li>• Management of Chemical Usage Status by Factory with MSDS (Material Safety Data Sheet)</li><li>• Regular Work Environment Monitoring</li><li>• Hazard Risk Assessment of Chemical Substances (Annual)</li><li>• Precise Safety Diagnosis of Laboratories (SK materials performance)</li></ul>
	Ventilation System	<ul style="list-style-type: none"><li>• Safety Inspection of Local Ventilation Equipment (Annual)</li><li>• Office Air Quality Evaluation (Annual)</li></ul>
	Work Environment Improvement	<ul style="list-style-type: none"><li>• Improvement of Working Conditions during Hot Weather<ul style="list-style-type: none"><li>- Support for Cooling Equipment (SK specialty, SK materials performance, SK trichem)</li><li>- Provision of Foldable Canopies for Worker Rest Areas</li></ul></li></ul>
Disease Prevention	Prevention of Noise-induced Deafness	<ul style="list-style-type: none"><li>• Hearing Seal Inspection (Annual)</li><li>• Diversification of Hearing Protection Equipment Standards</li><li>• Education and Post-Monitoring Counseling for Prevention of Noise-induced Deafness</li></ul>
	Prevention of Musculoskeletal Disorders	<ul style="list-style-type: none"><li>• Regular Musculoskeletal Hazard Assessment (Triennial)</li><li>• Classification of Targeted Individuals and External Expert Instructor Training (Stretching, Tapping)</li></ul>
	Prevention of Cardio-cerebrovascular Diseases	<ul style="list-style-type: none"><li>• Education for Prevention and Management of Cardio-cerebrovascular Diseases (Annual)</li><li>• CPR training and On-site AED Installation</li><li>• Management Program for Employee with Medical Opinion</li></ul>
Health Diagnostics	Legal Examinations	<ul style="list-style-type: none"><li>• General and Special Health Check-up (Annual)</li><li>• Pre- and Post-Placement Health Examinations (When necessary)</li><li>• Job Stress Assessment</li><li>• Evaluation of Risk for Cardio-cerebrovascular Diseases</li><li>• Follow Up Test on Post Management</li><li>• Management Program for with Medical Opinions or Needing Medical Observation</li></ul>
	Employee Welfare (Common)	<ul style="list-style-type: none"><li>• Support for Influenza Vaccination Costs</li><li>• Comprehensive Health Examinations for Employees' Spouses (Annual, Biennial Examinations for Spouses of Employees aged 36 and older)</li><li>• Physical Support for COVID-19 Prevention</li></ul>
Health Promotion	Health Support Center Operation	<ul style="list-style-type: none"><li>• Deployment of Medical Professionals (Nurses)</li><li>• Operation of Physical Therapy and Exercise Guidance Rooms</li><li>• First Aid/Medication/On-site First Aid Kit Management</li><li>• Simplified Examinations and Health Counseling</li></ul>
	Health Promotion Programs	<ul style="list-style-type: none"><li>• Smoking Cessation Clinic</li><li>• 10,000 Steps Walking Challenge</li><li>• Body Composition Improvement Program</li><li>• Outreach Psychological Support Services</li></ul>

1) The list is based on SK specialty's programs; however, common activities and certain subsidiaries' programs are noted separately

## Health Management for Suppliers

SK materials has expanded the target of health promotion programs to include suppliers within the entire supply chain, aiming to manage health comprehensively. We conduct general and specific health check-ups as well as work environment monitoring to prevent the occurrence of occupational diseases among suppliers' employees. In 2022, external specialists were invited to provide preventive education on cardio-cerebrovascular diseases, Musculoskeletal Disorders, and chronic conditions (such as hypertension and diabetes) for both employees and suppliers.

Notably, SK specialty collaborated with the Yeongju City Health Center to offer specialized CPR training and free smoking cessation clinics for all, including suppliers. SK trichem, through its SHE Partnership Program, provided Musculoskeletal Disorder prevention and mental health education to suppliers.

### Healthcare Program for Suppliers<sup>1)</sup>

Work Environment	Work Environment Monitoring	<ul style="list-style-type: none"> <li>Regular Work Environment Monitoring (Biannual)</li> </ul>
Disease Prevention	Musculoskeletal Disorder Prevention	<ul style="list-style-type: none"> <li>External Specialist Training</li> </ul>
	Cardio-cerebrovascular Diseases Prevention	<ul style="list-style-type: none"> <li>Preventive Education on Cardio-cerebrovascular Diseases (Annual)</li> <li>Specialized CPR Training and Certificate Issuance</li> </ul>
Health Enhancement	Health Support Office Operation	<ul style="list-style-type: none"> <li>Medical Supplies Support (In case of emergency)</li> </ul>
	Health Enhancement Program	<ul style="list-style-type: none"> <li>Smoking Cessation Clinic</li> <li>Outreach Psychological Support Services</li> </ul>

1) The list is based on SK specialty's programs

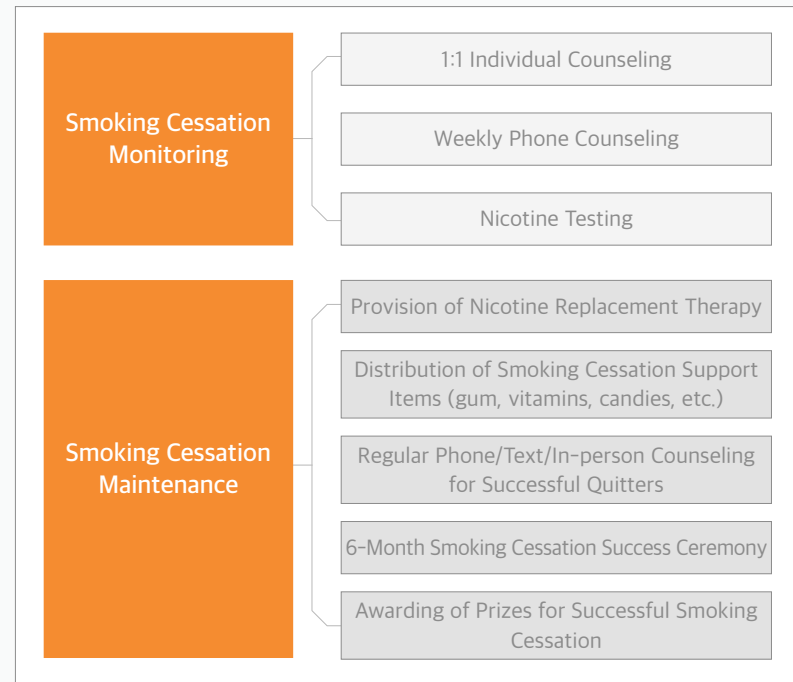
## CASE

### Smoking Cessation Clinic

SK materials has established regulations for smoking areas to prevent fire accidents while operating free smoking cessation clinics to encourage a smoke-free environment and promote health.

SK specialty, SK Resonac, and SK trichem have implemented smoking cessation support programs targeting willing participants among smokers. Successful participants receive rewards, certificates, and ongoing support to help them maintain their smoking cessation journey. Starting from 2022, the smoking cessation clinic program has been extended to include employees of suppliers as part of the health support program.

### Smoking Cessation Support Program



### Body Composition Improvement Program

SK specialty and SK Resonac operate a body composition measurement and counseling program targeting all employees to overcome obesity, a major cause of cardiovascular and cerebrovascular diseases, and to improve lifestyle habits. Employees who receive a warning for being overweight based on their health check-up results are given extra points to encourage participation. Each month, the reduction rate of body fat percentage is measured, and employees who achieve outstanding results in reducing body fat are rewarded. In the first half of 2022, 15 employees, and in the second half, 12 employees were recognized as "Health Champions" and received rewards of up to 400,000 KRW.



Health Champion Recognition and Rewards



# Happy Employees

## Happiness Committee

SK materials emphasizes the core goal of labor-management committee as “happiness,” seeking to minimize confrontational dynamics between labor and management. To achieve this, we adapted a new name, “Happiness Committee” in 2022.

The Happiness Committee meets quarterly, facilitating dialogue among the executive management and employee representatives. During these sessions, crucial topics and enhancements in the work environment are discussed. Additionally, the Labor-Management Practical Affairs Committee precedes the regular Happiness Committee, where labor representatives and dedicated personnel engage to ensure thorough consideration of vital matters. In 2022, the Happiness Committee addressed around 150 issues, resulting in varied agreements to improve the work environment. These agreements included supporting duties of the employee representatives, introducing holiday work allowances, and incorporating extra rest spaces within the workplace. Parallely, SK specialty established a labor union in 2021, with membership tallying 479 participants as of May 2023.

Through continuous communication between labor and management, SK materials will continue to establish a progressive labor-management relationship founded on mutual trust.

## Employee Welfare

SK materials has established diverse employee welfare systems to enhance individual well-being, work engagement, and job satisfaction. Through mechanisms like the Happiness Committee, employee opinions are actively sought to continually improve work conditions and policies.

These systems encompass comprehensive health check-ups for employees and families, along with group accident insurance. To bolster housing stability, home loan programs and housing support are offered to local employees. Paid leave and celebration funds mark celebratory events, while scholarships support children’s

education. We also aid club activities, resort expenses, mobile phone bills, and acknowledge long-term service through initiatives like “Happiness Points”.

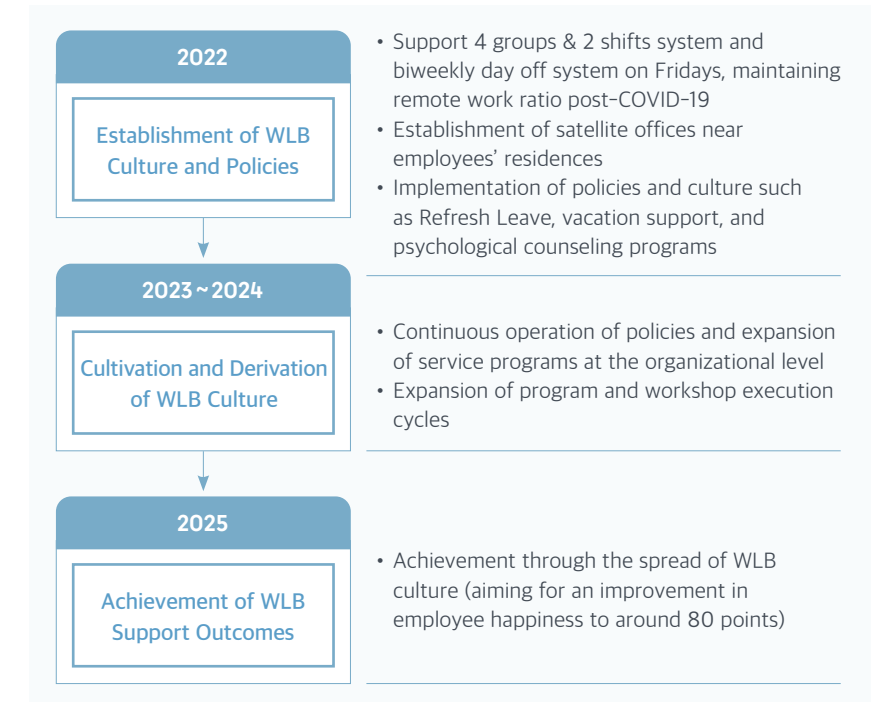
In 2022, a 24-hour chatbot was introduced, delivering real-time information on employee welfare benefits, ensuring swift responses and detailed program insights.

### Key Employee Welfare Benefits



## Work-Life Balance

### WLB(Work-Life Balance) Roadmap



SK materials, based on the firm motto “Employee Happiness Drives Company Growth,” has established a medium to long-term roadmap for achieving work-life balance and is implementing related policies and programs. and spreading a work-life balance culture. With the goal of “Enhancing Happiness through the Spread of Work-Life Balance Culture” by 2025, we have introduced a bi-weekly day-off system, designating the second and fourth Fridays of each month as non-working days. Additionally, we have transitioned to a 4 groups & 2 shifts system and are working to enhance work efficiency through the implementation of Robotic Process Automation (RPA), with the aim of establishing.

### Various Systems for Spreading WLB Culture

<b>Selective Working Hours System</b> <ul style="list-style-type: none"> <li>Employees can adjust their working hours outside of standard working hours</li> </ul>	<b>Flexible Work System</b> <ul style="list-style-type: none"> <li>Introducing various work formats that suit employees' characteristics beyond typical working hours/days</li> </ul>	<b>Monitoring of Overtime Hours</b> <ul style="list-style-type: none"> <li>Monitoring overtime hours and managing monthly work hours through team leaders for employees working overtime</li> </ul>
<b>Transition to 4 Groups &amp; 2 Shifts System</b> <ul style="list-style-type: none"> <li>Guaranteeing maximum employees' right to rest by reducing annual working days compared to the 4 groups &amp; 3 shifts system</li> </ul>	<b>Bi-weekly Friday Off System</b> <ul style="list-style-type: none"> <li>Designating Fridays of the second and fourth weeks as days off</li> </ul>	<b>Extended Long Leave</b> <ul style="list-style-type: none"> <li>Providing summer vacation (5 days)</li> <li>Recommending year-end extended leave</li> <li>Recommending bridge holiday extended leave</li> <li>Encouraging the use of at least 50% of annual leave</li> </ul>
<b>Education for Supervisors</b> <ul style="list-style-type: none"> <li>Targeting departments with excessive overtime</li> <li>Establishing a culture of performance-based evaluation rather than evaluating solely based on working hours</li> </ul>	<b>Automation of Tasks</b> <ul style="list-style-type: none"> <li>Data-driven HR management (recruitment, promotion, attendance management, etc.)</li> <li>Standardizing work processes</li> </ul>	<b>Expansion of Pregnancy leave (up to 10 days)</b>
		<b>Reduction of Work Hours during Childcare Period (maximum of 35 hours per week)</b>

### Customized Happiness Design

SK materials prioritizes mental health alongside physical well-being, fostering a happy work environment through comprehensive support. In 2022, the "RUOK Survey" gauged stress levels and identified factors affecting mental health. Reports were shared for personal insights and happier daily routines.

Furthermore, various happiness-related programs, including EAP<sup>1)</sup> services, are offered to help employees manage stress both within and outside the company and reflect on their well-being. EAP services provide tailored emotional management programs, including stress diagnosis and 1:1 counseling by professional counselors, offering comprehensive assistance for psychological stability and increased work productivity. Additionally, we deliver "Happiness-Sympathy Weekly Letter" to share contents that help employees' mental health management.

SK materials offers a participatory program for employees, Happiness on Air "Talk Concert - Let's Live Well". Reflecting the needs of the MZ generation that makes up 75% of employees, economic and psychological lectures are provided. In 2022, a total of 7 sessions were held, with significant participation from around 1,291 employees. In 2023, the talk concert will continue with themes such as travel plans, physical health management, self-awareness, and understanding others.

1) EAP : Employee Assistance Program, A comprehensive service involving experts to help employees perform their duties efficiently, by solving various work-related stress



Talk Concert - Let's Live Well

### Direction of Employee Happiness Design





## CASE

### Improvement of Employee Happiness through the Production Division Forum

SK specialty operates a Happiness Forum within the Production Division with the goal of enhancing employee happiness. The Happiness Forum consists of members from 6 departments and 19 teams. In 2022, a total of 57 initiatives were carried out in the areas of communication, active participation, and enhancing a sense of achievement. Activities such as sports events to promote communication and camaraderie among employees, a Communication Day for interactions between the executive management and employees, and movie screenings for employees' families and friends were organized to encourage active participation from employees.



Production Division Sports Event



Communication Day

### Sejong Campus for High-tech Materials “Happy Zone”

Established in April 2022, the Sejong Campus for High-tech Materials serves as a collaborative workspace for SK materials employees, including the Global Tech Center, Quality Analysis Center, SK specialty, SK trichem, and SK materials performance. Within the Sejong Campus, the “Happy Zone” is a welfare space with various facilities such as a cafeteria, cafe, fitness center, and a screen golf facility. This space is designed to facilitate communication and provide a comfortable resting place for all employees.



Happy Zone Facilities

### Happiness Self-Design by “Happiness Leaders”

SK trichem and SK materials performance select one member as the “Happiness Leader” for each department. These leaders play a proactive role in sharing the direction of the organizational culture and driving happiness initiatives within their respective teams. Under the guidance of the annual Happiness Leader, each team conducts a self-assessment (Self Survey) of their organizational culture to identify issues and their underlying causes. They then formulate strategies to enhance the happiness of team members. The Happiness Leaders hold regular meetings to monitor progress, continuously identify improvement opportunities, and ensure the implementation of happiness initiatives.



Happiness Initiatives at SK trichem - Outdoor Activity



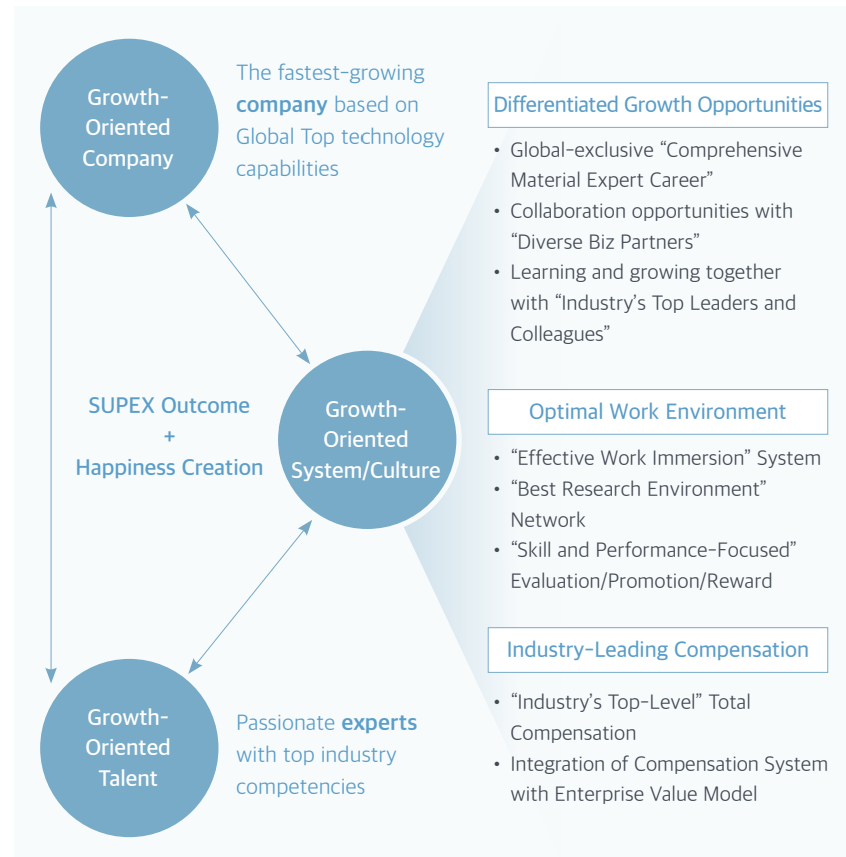
Happiness Initiatives at SK materials performance - Sports Activities in the Happy Zone

# Differentiated Growth Opportunities

## Growth-oriented Talent and HR Culture/System

SK materials offers its employees unique growth opportunities based on HR systems and culture optimized for the growth of both the company and individuals. We create an optimal work environment to enhance employee engagement and have established and operate a “Happiness Management System” that provides industry-leading compensation.

### Employee Growth through the Operation of the Happiness Management System



## Talent Acquisition

### SK materials Talent Philosophy

Confidence in Management Philosophy	Realization of stakeholder happiness through VWBE <sup>1)</sup> to cultivate a culture of pursuing SUPEX <sup>2)</sup>
Pae-gi	Challenging high goals through self-motivation, daring execution that breaks existing frameworks, and developing the required competencies in the process while demonstrating teamwork.

1) VWBE : Voluntarily, Willingly, Brain Engagement

2) SUPEX : The highest level achievable through human capabilities, Super Excellent level

SK materials employs a rigorous recruitment system that evaluates candidates on their cognitive, execution, and in-depth capabilities. We seek “individuals who actively and enthusiastically embody our SUPEX philosophy, delving deeply into their work and addressing challenges proactively”. To align with our growth-focused organizational structure, we have broadened our internal talent recommendation system, allowing current employees to identify potential talent.

Our employment regulations underscore that we do not discriminate based on gender, age, religion, social status, or national origin. Beyond this, in our endeavor to fulfill our social responsibilities, we extend special considerations to socially vulnerable groups, including individuals with disabilities and those with national merits. To aid potential candidates, we offer comprehensive employment information through our portal. This includes job descriptions, insights into our businesses, the working environment, and details about employee benefits and welfare systems. For those joining our team, we have instituted the 100-day On-boarding Program.

This program equips new hires with a handbook, assigns them a 'buddy' to ease their transition, and provides opportunities for internal networking. Throughout this program, we closely monitor the adaptability of our new employees, offering support to ensure they can effectively integrate and deliver exceptional SUPEX performance swiftly.

## Systematic Talent Development

### Direction of Talent Development

SK materials aims to foster “Global Top Material Experts” by providing systematic support for leadership and job-related skills enhancement. Following the Materials Talent Development System, tailored education programs are offered to individuals based on their roles. Employees participate in education according to their own career paths.

In 2023, we have restructured our overall Talent Development System to enhance competencies in line with changes in business environments and trends, in addition to job-specific expertise. With this revamped system, it is expected that the competitiveness of each employee will significantly improve.

### Talent Development System

	Key Value	Common Competences	Functional Competences
Executives	New Recruit Programs	<ul style="list-style-type: none"> <li>Executive Leadership Program</li> <li>ELP</li> </ul>	
Team Leaders	New Employee Programs	<ul style="list-style-type: none"> <li>Team Leader Leadership</li> <li>FLP</li> <li>HLP</li> </ul>	Company-wide Common Programs - Role-Level Programs - mySUNI Courses
Office Workers	SKMS Workshop - Management 2.0 Dissemination - ESG Training	<ul style="list-style-type: none"> <li>DT Capability Internalization</li> <li>Onboarding Education</li> <li>FLP</li> </ul>	M(Marketing) / P(Production) R(Research & Development) / S(Staff)
Technical Workers		<ul style="list-style-type: none"> <li>Frontline Manager Leadership Program</li> <li>New Team Leader/ Boardman Courses</li> </ul>	Technical Roles Competency Programs

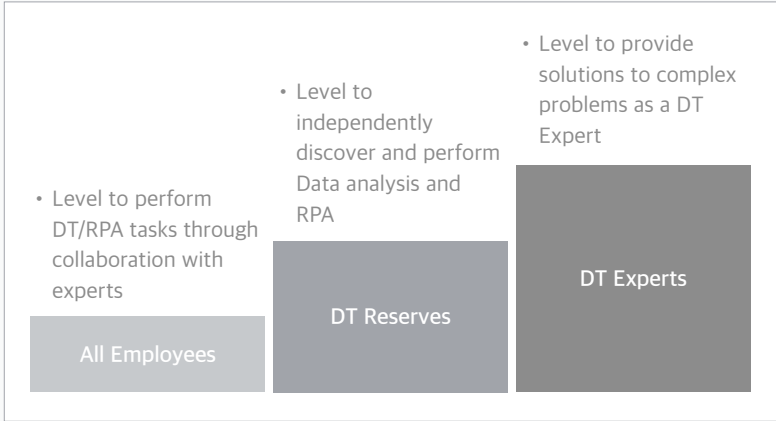


CASE

DT Expert Development Program

Since 2021, SK materials has been establishing a DT competency development system to enhance employees' AI and DT capabilities. The DT competency levels are categorized into three: All Employees, DT Reserves, and DT Experts. Even employees not directly involved in DT tasks are provided with education to reach a level where they can independently perform tasks. We are conducting a DT competency enhancement program with the goal of securing over 5 DT Experts and over 30 DT Reserves by 2024, and over 10 DT Experts and over 50 DT Reserves by 2025. Additionally, alongside this effort, educational programs are being conducted to cultivate DT Literacy for all employees, aiming to secure talents suitable for the Digital Transformation era.

DT Competency Development System



Talent Development Programs

In response to contemporary demands, SK materials is cultivating a self-directed e-Learning culture through the SK Group's online education platform, "mySUNI".

We offer diverse competency development opportunities to employees in alignment with business changes and to boost future capabilities. Our focus includes AI·DT Literacy, basic semiconductor knowledge, and ESG awareness for office technology and research staff. Essential courses, Role-Level programs, and job-specific competency courses are offered, allowing for optional self-directed learning based on individual needs.

Role-Level Courses are categorized by levels and cover essential skills like report writing, problem-solving, communication, and leadership. Specifically for new team leaders, we provide leadership-focused enhancement, featuring CEO leadership lectures, coaching skills, and practical 1-on-1 insights. Job-specific competency courses are tailored for roles in Marketing, Production, R&D, and Staff. Technical positions are supported with distinct competency programs within each subsidiary. SK specialty, SK materials airplus, SK trichem, and SK materials Group14 systematically foster field experts through job interviews, competency assessments, and targeted enhancement initiatives.

Education Programs

SK Values	New Executive/Team Leader Training	<ul style="list-style-type: none"><li>Enhanced training in leadership and management skills to drive change</li><li>Training for potential future executives</li></ul>
	New Recruit Training	<ul style="list-style-type: none"><li>Training to establish a sense of belonging and identity within the group</li></ul>
	SKMS <sup>1)</sup> Workshop	<ul style="list-style-type: none"><li>Enhancing understanding and execution of SKMS</li></ul>
	Management 2.0 <sup>2)</sup> Propagation	<ul style="list-style-type: none"><li>Propagation activities to enhance understanding of Financial Story based on Mgmt. 2.0</li></ul>
	Introductory Training	<ul style="list-style-type: none"><li>Understanding of the company and Soft Landing program</li></ul>
Leadership	Leadership Programs	<ul style="list-style-type: none"><li>ELP (Executive Leadership Program)</li><li>FLP (Future Leadership Program)</li><li>HLP (HIPO<sup>3)</sup> Team Leader Program)</li><li>Enhanced leadership competency for newly appointed team leaders</li></ul>
	Workshops	<ul style="list-style-type: none"><li>Executive Workshops</li><li>Team Leader Workshops</li><li>Supervisor Workshops</li></ul>
DT	DT Competency Training	<ul style="list-style-type: none"><li>Course for all employees</li><li>Course for DT reserves</li><li>Course for DT experts</li></ul>
Business Understanding	Onboarding Training	<ul style="list-style-type: none"><li>Enhancing understanding of business for new employees</li><li>Enhancing understanding of business for new hires</li></ul>
Job Competency	Company-wide Common Training	<ul style="list-style-type: none"><li>CEO lectures</li><li>AI/DT Literacy</li><li>Understanding of ESG</li><li>Fundamental semiconductor knowledge</li><li>SK and SKMS Overview</li></ul>
	Role-Level Specialized Courses	<ul style="list-style-type: none"><li>Leadership preparatory courses</li><li>Communication courses</li><li>Problem-solving courses</li><li>Report writing skills</li></ul>
	Job-Specific Courses	<ul style="list-style-type: none"><li>Job training for Marketing, Production, R&amp;D, Staff roles</li></ul>
	Technical and Job Competency Training	<ul style="list-style-type: none"><li>Engineering Expert Program</li><li>Technical field expert program for technical positions</li><li>Job-specific training for each organization</li></ul>

1) SKMS : SK Management System  
2) Management 2.0 : SK materials' business strategy  
3) HIPO : High Potential

## Fair Evaluation and Compensation

### Evaluation Process

SK materials upholds a commitment to equitable evaluation rooted in performance.

This assessment process comprises achievement and competency evaluation. At the onset of each year, employees establish individual job objectives through dialogues with their supervisors, maintaining ongoing feedback throughout the year to bolster goal realization. Both organizational and individual performance are overseen, with goal adjustments or additional responsibilities assigned as necessary to drive optimal performance.

In 2022, the “First Half People Session” was introduced to inculcate a “communication/feedback” centered approach to work. This session incorporates stages such as Work Review – Peer Review – 1on1 with Team Leader – People Session. During this forum, secondary evaluators, including department heads, provide not only work-related feedback but also engage in discussions encompassing career growth, training, happiness, and mental well-being of all employees. While the mid-year feedback primarily centered on performance management, the First Half People Session seeks to elevate individual career achievements and happiness, alongside performance management.

End-of-year evaluations entail conducting a People Session led by a divisional CEO or an executive to enhance evaluation fairness. The HR organization conducts evaluation audits to ensure adherence to evaluation criteria and processes. After reviewing evaluation result, each employee undergoes a final feedback interview discussing next year's targets and garnering support for their accomplishment. If an employee contests the results or feedback rationale, they can request an interview for further discussion. The final evaluation outcomes inform decisions regarding promotions, training, compensation, etc.

### Compensation System

SK materials operates a fair compensation system based on the performance-based evaluation process without discrimination based on gender, age, education, etc. Compensation consists of a fixed salary determined by an individual's position, role, and task performance, and a variable salary determined by the company's business performance and evaluation results. SK materials is building a compensation process that not only rewards skills and performance but also considers future growth.

### Incorporating Social Values and ESG Performance

When setting KPIs for CEOs, executives, and each organization, we allocate a minimum of 10% to a maximum of 50% of the weight to ESG-related tasks. These are managed and linked to compensation.

Environmental tasks such as Net Zero/RE100 implementation, waste and water recycling, social tasks such as safety, supplier ESG risk management, community support, and governance tasks like strengthening board responsibility are reflected in performance evaluations and incentives. In organizations where safety, health, and environmental management are crucial due to the nature of their work, ESG performance is linked to compensation at a higher level.

In 2022, according to the ESG performance improvement roadmap, SK materials expanded the scope and targets of ESG tasks. Moving forward, we plan to further enhance and expand the application of ESG performance evaluation in areas such as climate change, supply chain, diversity, and beyond.





# Building a Win-win Cooperation Ecosystem

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SK Inc. materials  
Head of Sustainability Department  
**Cho Hyeon-chul**

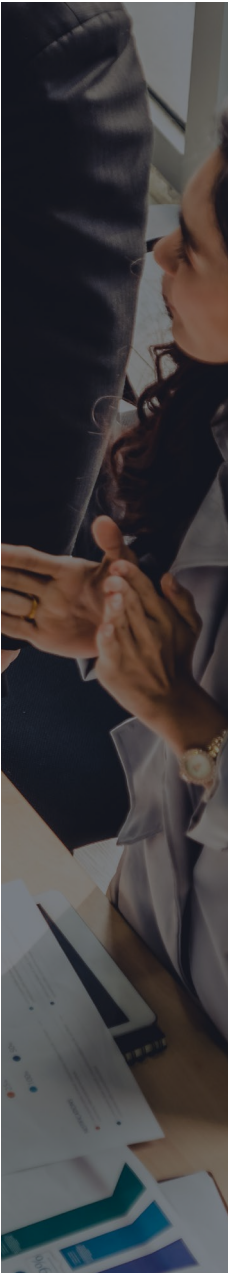
We are dedicated to creating “Win-win Cooperation Ecosystem,” fostering both establishment of material ecosystems with our suppliers and activation of local economies.

SK materials is actively constructing a Win-win Cooperation Ecosystem that everyone, including the local community and our suppliers, can thrive and grow together.

We are driving technology collaboration and R&D support, while expanding ESG evaluation and support for our suppliers to internalize ESG values. Also, we promote a culture of mutual growth by broadening ESG risk improvement activities and operating mutual growth programs.

In Yeongju, we are leading the urban regeneration project “STAXX” to invigorate the local economy. Through four key initiatives—“Social Venture Discovery and Cultivation,” “Entrepreneur Education and Networking,” “Central Interaction Space Establishment,” and “Investment Fund Creation”—we are building an entrepreneurial ecosystem for social ventures to grow. This endeavor not only contributes to the growth of social ventures but also addresses societal issues and achieves co-prosperity with the local community.

In pursuit of SK materials’ management goal of “stakeholder happiness,” we are committed to promoting mutual growth with our suppliers and stimulating local economies, embodying a co-prosperity management approach in collaboration with our stakeholders.



# Building a Win-win Cooperation Ecosystem

[Link to SDGs](#)


## GLOBAL TREND

With the “EU Supply Chain Due Diligence Legislation” fully implemented in 2023, the importance of ESG management has intensified for both EU companies and their suppliers. Addressing ESG within supply chains is now crucial for global competitiveness and sustainable growth. Companies must establish robust ESG management systems, support various ESG activities, and enhance supplier competitiveness. This calls for collaborative frameworks between companies and suppliers.

Moreover, sustainable growth requires companies to engage in social participation activities that prioritize stakeholder well-being beyond pursuing profits. Corporate social responsibility is fulfilled through initiatives like community partnerships, recognizing stakeholder happiness as crucial as profitability.

## OUR APPROACH

SK materials aims to foster a Win-win Cooperation Ecosystem that promotes mutual growth with key stakeholders by elevating supplier ESG levels and participating in local community initiatives.

To build this ecosystem, SK materials initiates technology collaborations through R&D from the business development stage. In 2022, an IT-based platform was introduced to comprehensively assess supplier ESG performance, augmenting mutual growth programs and refining supplier management systems.

Additionally, SK materials is spearheading the “STAXX” urban regeneration project in its Yeongju location. This project seeks to address local community challenges like population decline and economic struggles while fostering joint growth with the local communities.

## 2022 HIGHLIGHTS



29 Suppliers  
ESG Risk Assessment



2022 Supplier Support Amount  
KRW 628 million



Local Mutual Growth Project  
KRW 5 billion Donated  
\* Local Mutual Growth Project “STAXX”



“STAXX”  
Central Interaction  
Space Completion

## KEY STAKEHOLDER



Local Community



Suppliers



# Strategic Direction of Mutual Collaboration

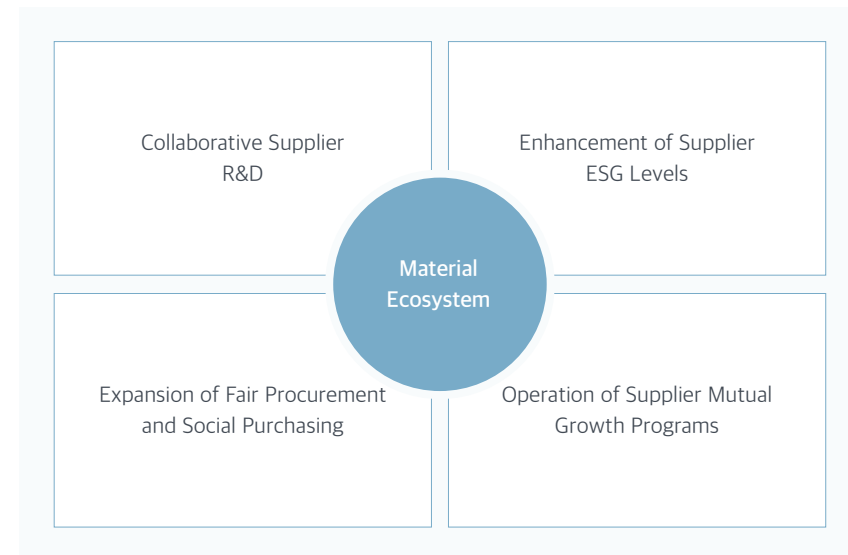
SK materials aims to build a material ecosystem and revitalize local economies to create a Win-win Cooperation Ecosystem.

## Establishment and Enhancement of Material Ecosystem

SK materials manages ESG risks and enhances its ESG level by evaluating the ESG management level of its suppliers. We also strengthen our partnerships with suppliers in the long term through collaborative R&D.

SK materials is fulfilling the environmental and social responsibilities in the supply chain through fair procurement of raw and auxiliary materials and enhancement of social purchasing. Furthermore, we operate various mutual growth programs to strengthen the management competency of suppliers.

### Tasks for Establishment and Enhancement of Material Ecosystem



SK specialty  
Supplier KBM Inc. CEO

**Yoo Byung-il**

Building upon SK materials' ESG support and mutual growth programs, we are committed to elevating our levels of sustainable management.

SK materials' determination and drive in trading with its suppliers, providing ESG support, and fostering mutual growth are unparalleled, setting us ahead of any other company.

In particular, SK materials' mutual growth program includes the latest educational courses, including those related to ESG. This initiative greatly enhances the capabilities of the suppliers. For instance, the recent non-face-to-face AI-generated ChatGPT lecture was both timely and insightful, allowing us to sense the changes of the era. We are actively exploring ways to incorporate these advancements within our company as well.

Observing how SK materials expands sustainable management to encompass not only shareholders but also the environment, employees, and suppliers, we have gained insights to enhance our understanding of ESG. We are committed to continuous efforts in implementing these principles, both to improve our practices and contribute to the wider community.



SK materials performance  
Supplier Loum Hitech Inc. CEO

**Park Ju-hyun**

We strive for a business management approach that contributes to future industries through collaborative development and mutual growth.

The importance of research and development (R&D) is increasing due to intensifying global competition in advanced technology. Additionally, social demand for pursuing ESG management is growing everyday.

SK materials' mutual growth program and ESG support program created the foundation to address these changing business environments. Through collaborative development, we are achieving early commercialization and enhancing capabilities in technology development, eco-friendly management, and expanding our sales. This positions us to seize opportunities to become a sustainable growth-oriented company.

In the future, we also aspire to grow as a company that contributes to the future generation through various technological collaborations and the promotion of ESG management with SK materials.

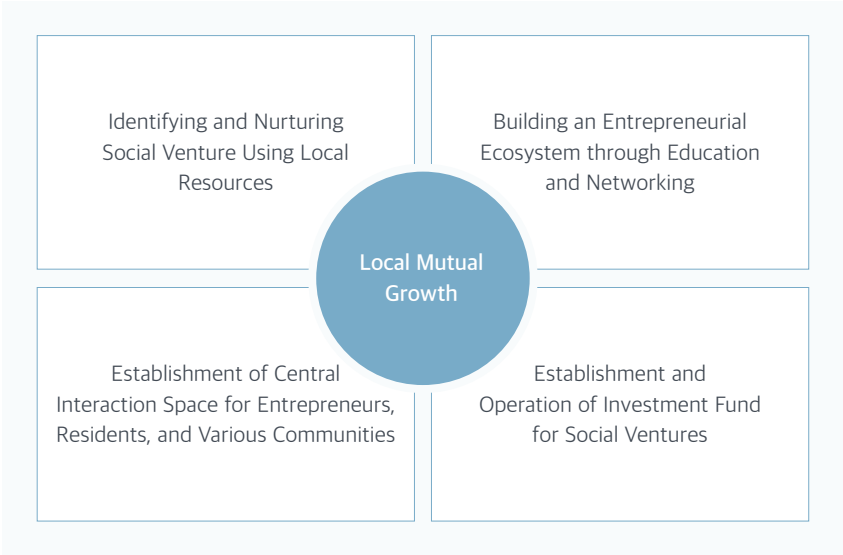
### Vitalization of Local Economy

Along with Gyeongsangbukdo, Yeongju, and Impact Square, SK materials is implementing the “STAXX” project to identify and nurture social ventures utilizing local resources in Yeongju.

We are building an entrepreneurial ecosystem through education and networking, and have established a Central Interaction Space for various communities, including entrepreneurs and residents. We also operate an investment fund to foster social ventures.

Through the “STAXX” project, SK materials aims to address economic and social challenges in the Yeongju region, and create an exemplary model for local mutual growth.

#### Tasks for Local Mutual Growth Project (STAXX)



Blank CEO  
**Moon Seung-gyu**

We will join hands with STAXX to contribute to urban and regional regeneration through space revitalization.

Blank takes dormant spaces (vacant houses) in the region and transforms them into spaces for the local community. Through this, we aim to evolve into a company that contributes to regional rejuvenation, space revitalization, and ultimately addresses the issue of depopulation.

Through STAXX, we intend to identify and address the concerns of Yeongju, fostering mutual growth. While no single company can solve all of the region’s issues, projects like STAXX show that by uniting the efforts of various companies and public institutions towards a common goal, we can bring about change in the region. Furthermore, we believe that the solutions for depopulation and the challenges of a low-growth era lie within small and medium-sized cities.

Blank, in collaboration with SK materials, aspires to grow into a company that creates value in space revitalization and regional rejuvenation, proposing new ways of living for Yeongju.



Decant CEO  
**Kim Sang-wook**

We will collaborate with STAXX to discover new value from local farms.

Decant has set the mission of transforming negative elements within the agricultural distribution cycle, such as surplus, leftovers, and non-saleable products, into valuable resources. To achieve this, we are developing cosmetics and functional foods utilizing various agricultural byproducts, including wine.

With Yeongju, a major origin of diverse agricultural products, as our base, we can generate unique local value. The STAXX program was exceptionally appealing in this regard. Furthermore, through comprehensive support from SK Group that is aligned with the STAXX program, our capabilities as a social venture have been greatly enhanced across all aspects of business operations.

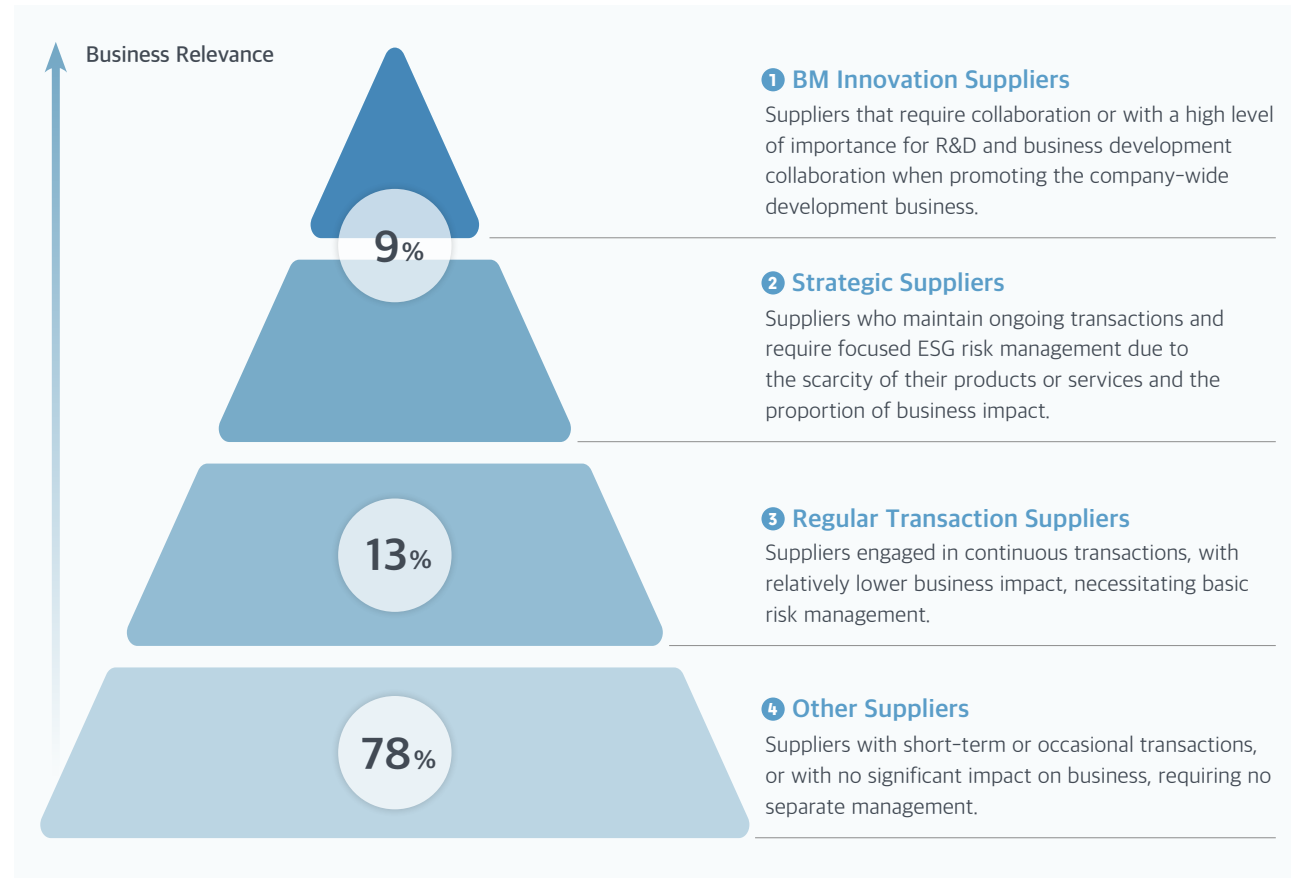
Decant aims to grow alongside STAXX, actively contributing to the stabilization of local farm businesses as an agriculture-friendly enterprise.

# Establishment and Enhancement of Material Ecosystem

## Supplier Categorization System

SK materials aims to become a “Global Top Material Technology Specialist Company”. Starting from the business development phase, we seek to establish a long-term collaborative ecosystem with our suppliers through R&D cooperation. In pursuit of this goal, in 2023, we have restructured our internal supplier categorization system, focusing on “Biz. Relevance,” considering the business impact and supplier functions. Suppliers are now classified into four types: BM<sup>1)</sup> Innovation Suppliers, Strategic Suppliers, Regular Transaction Suppliers, and Other Suppliers.

1) BM : Business Model

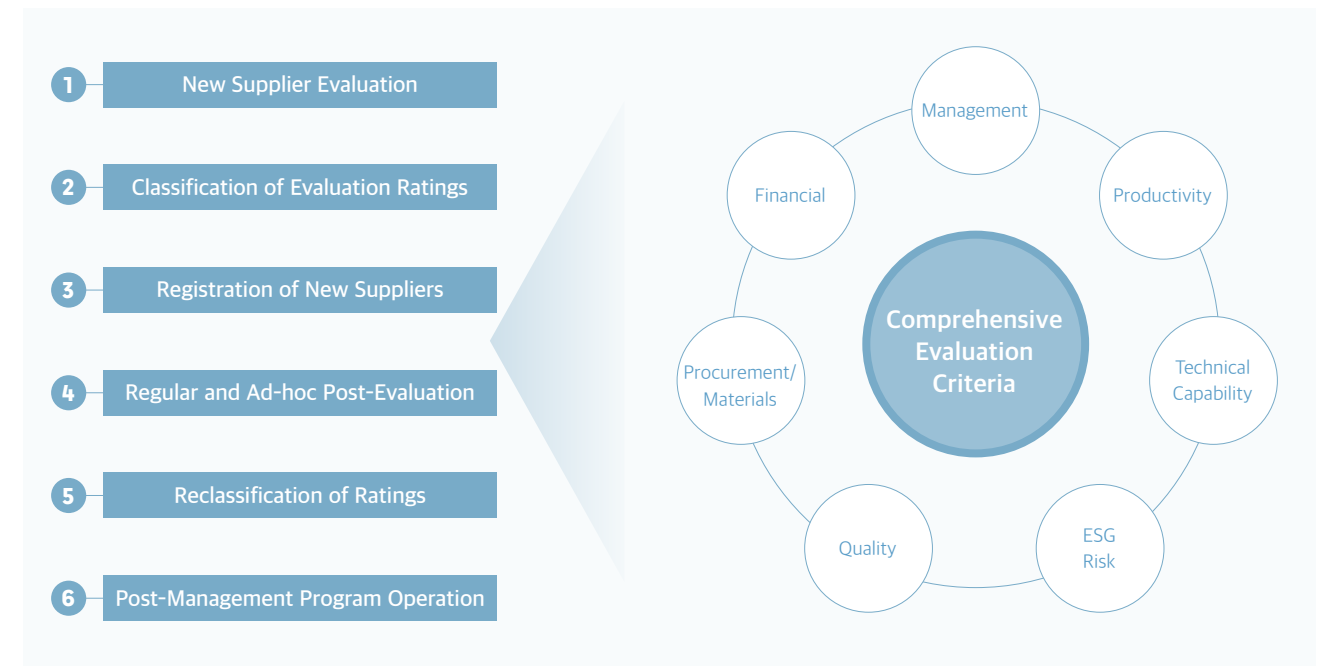


## Supplier Management

### New Registration and Re-evaluation of Suppliers

When registering new suppliers, SK materials reviews their eligibility through comprehensive assessments considering financial and managerial status, technical and quality capabilities, as well as ESG risks including environmental, safety, and health factors. An initial evaluation is conducted before registering new suppliers, selecting companies that meet the assessment criteria. After registration, a regular post-evaluation is conducted every two years. The evaluation is primarily based on on-site inspections following the supplier evaluation report and checklist. However, for suppliers that achieve the highest rating, a written assessment may suffice. In the case of existing suppliers undergoing post-evaluation, if they do not meet the eligibility criteria for qualified suppliers, they are categorized as ineligible suppliers and may face measures such as registration cancellation or transaction suspension.

### Comprehensive Evaluation Process and Criteria<sup>1)</sup>



1) The comprehensive evaluation process and criteria are based on SK specialty standards; however, certain criteria may vary by subsidiary



## CASE

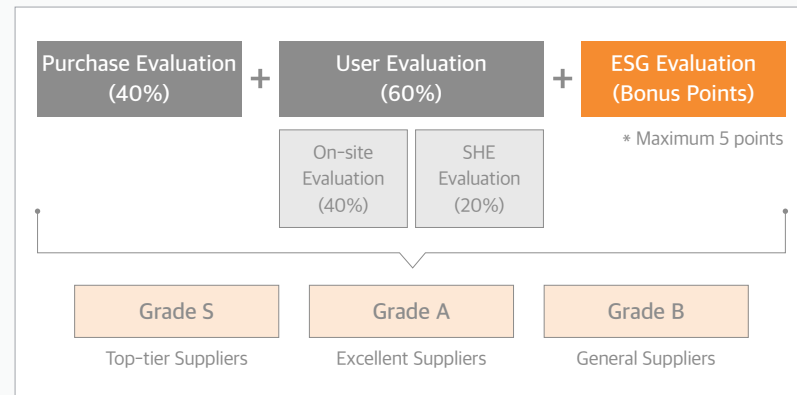
### Supplier AVL<sup>1)</sup> Operation Evaluation

SK materials airplus has implemented the “Supplier AVL Management System,” focusing on evaluating procurement suppliers to ensure efficient project execution for new initiatives. Each year, procurement, user, and ESG evaluations are conducted for project and maintenance suppliers. Based on these assessments, suppliers are categorized into AVL grades (S/A/B). S and A grades receive incentives, while B grade suppliers maintain regular cooperative relationships.

In 2022, objectivity was improved by revising evaluation criteria using credit rating agency databases. New transaction indicators were introduced to tailor evaluations and quantify mutual growth and partnership levels with suppliers. Additionally, a scoring system based on SK materials’ ESG evaluation index was introduced to encourage suppliers to participate in ESG diagnosis and improvement, thereby expanding ESG support. Looking ahead, SK materials airplus plans to enhance supplier evaluations further, offering incentives based on grades, such as improved contract conditions, eased performance guarantees, and opportunities for ESG activities and mutual growth participation.

1) AVL : Approved Vendor List, A list of approved suppliers by category

#### AVL Evaluation Process



### Monitoring Performance of Raw Material Supplier

SK specialty employs a performance monitoring procedure using a management checklist for new and current suppliers of raw materials. The Procurement Department evaluates risk levels for criteria like supplier delivery compliance, quality, occurrences of environmental and safety incidents, and disruptions in customer production due to quality or delivery concerns. Based on these evaluations, the department reports to team leaders or executives. If noteworthy issues arise, such as supply unavailability, reports are escalated to the CEO for appropriate actions.

#### Supplier Risk Escalation Process



### Supply Chain Diversification

SK materials is actively diversifying its supply chain for raw materials with high overseas dependence to enhance stability. This involves strengthening partnerships with suppliers through new contracts and securing stable supply routes. To mitigate geopolitical risks, potential suppliers are being explored for geographic and product diversification. Additionally, we are striving to build a diversified supply chain structure from a medium to long-term perspective, considering environmental impacts and cost analysis to reduce reliance on scarce resources.

### Supplier ESG Management

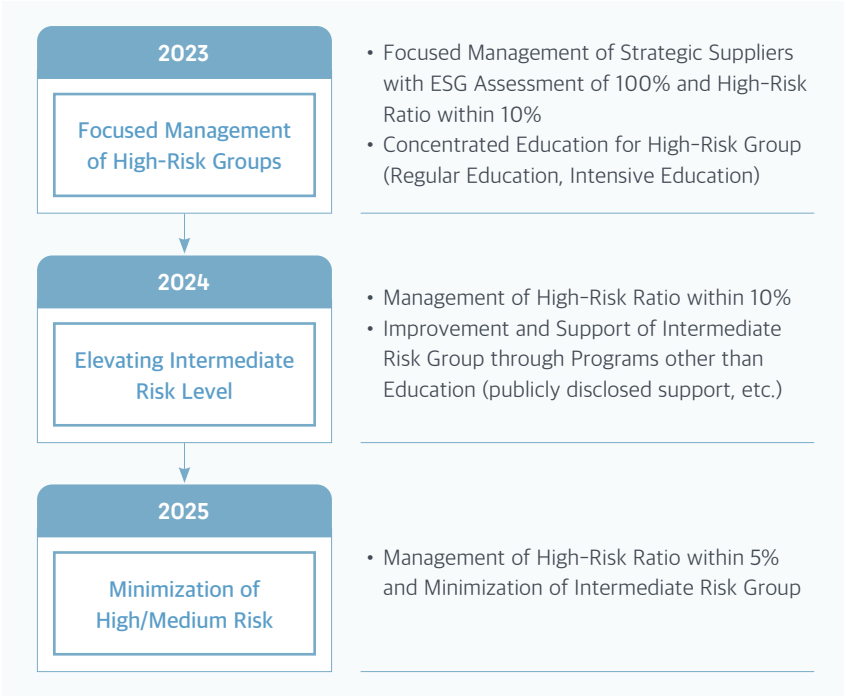
#### Supplier ESG Management System

SK materials categorizes suppliers into four groups based on “Business Relevance,” taking into account their business impact and capabilities. Suppliers crucial to “Corporate Growth Business Promotion” are labeled as “BM Innovation Suppliers”. These suppliers engage in R&D collaboration for technical advancements and joint development during the launch of new business ventures. This collaboration extends to securing core technology for localizing and diversifying raw materials with high overseas dependence. A pre-evaluation risk model has been established for BM Innovation Suppliers, with implementation planned from 2023. This model covers general management, quality, supply, and ESG aspects, identifying and addressing ESG-related issues during development and testing stages.

“Strategic Suppliers” are those whose products or services are scarce and have significant business impact, necessitating continuous trading. These suppliers are focused on bolstering ESG risk management and capabilities through support and improvements.

In 2022, the “Click ESG” platform was introduced for Strategic Suppliers, partnering with specialized assessment institutions for ESG risk evaluations. Based on the outcome, an improvement program prioritizes high-risk suppliers.

Supplier ESG Management Roadmap



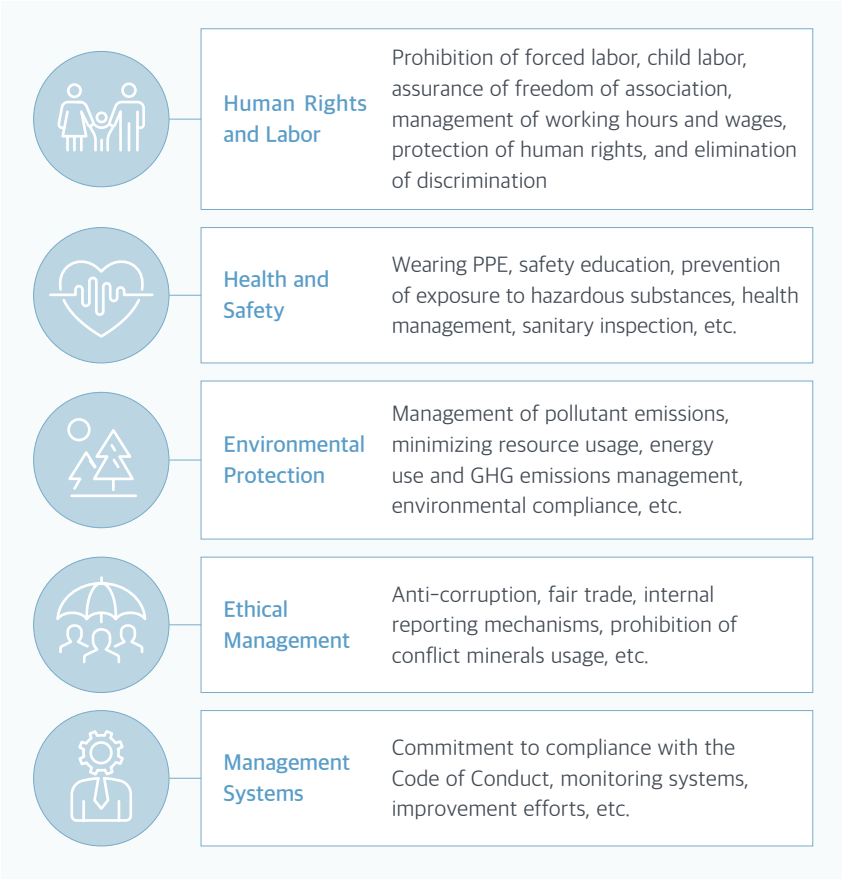
Supplier Code of Conduct

In December 2020, SK materials established a Supplier Code of Conduct reflecting the RBA<sup>1)</sup> Code of Conduct Version 7.0. The Supplier Code of Conduct includes key recommendations necessary for creating a sustainable industrial ecosystem, encompassing areas such as human rights and labor, safety and health, environmental protection, and ethical management.

In 2022, consent forms for the Code of Conduct were obtained from a total of 64 suppliers, and starting from 2023, the scope of obtaining consent forms will be expanded to encompass all new suppliers across the entire organization. Additionally, we will continuously conduct compliance checks for suppliers who have pledged to adhere to the Code of Conduct. Plans include ongoing improvements in response to identified or potential ESG risks, thereby enhancing the supplier ESG risk management system.

1) RBA(Responsible Business Alliance) : The world's largest industry coalition formed to promote corporate social responsibility

Items in the Supplier Code of Conduct



Supplier ESG Risk Assessment

SK materials conducts an annual ESG Risk Assessment to evaluate and manage ESG risks of the Strategic Suppliers. Suppliers scoring below a certain threshold (3 points) in the assessment are identified as “High Risk” and receive further inspection and support for improvement.

In 2022, the “Click ESG” IT-based platform was introduced for ESG assessment. It evaluates 66 indicators aligned with RBA and EcoVadis<sup>1)</sup> requirements. Using this platform, ESG risk assessments were performed for 29 suppliers. Common areas

for improvement, especially in environmental aspects like GHG emissions and raw material management, were identified. SK materials provided tailored improvement plans and a best practices handbook to address these areas.

For “High Risk” suppliers, on-site inspections and enhanced ESG education were conducted to improve understanding and capabilities. Improvement plans were formulated, and ongoing progress was monitored. In 2023, proactive ESG best practices and education will precede the assessment for “High Risk” suppliers to encourage internal efforts. Strengthened education and inspections are planned for those scoring below 1 point. Customized ESG consulting, support programs, and incentives for notable improvements will be enhanced to provide comprehensive supplier support.

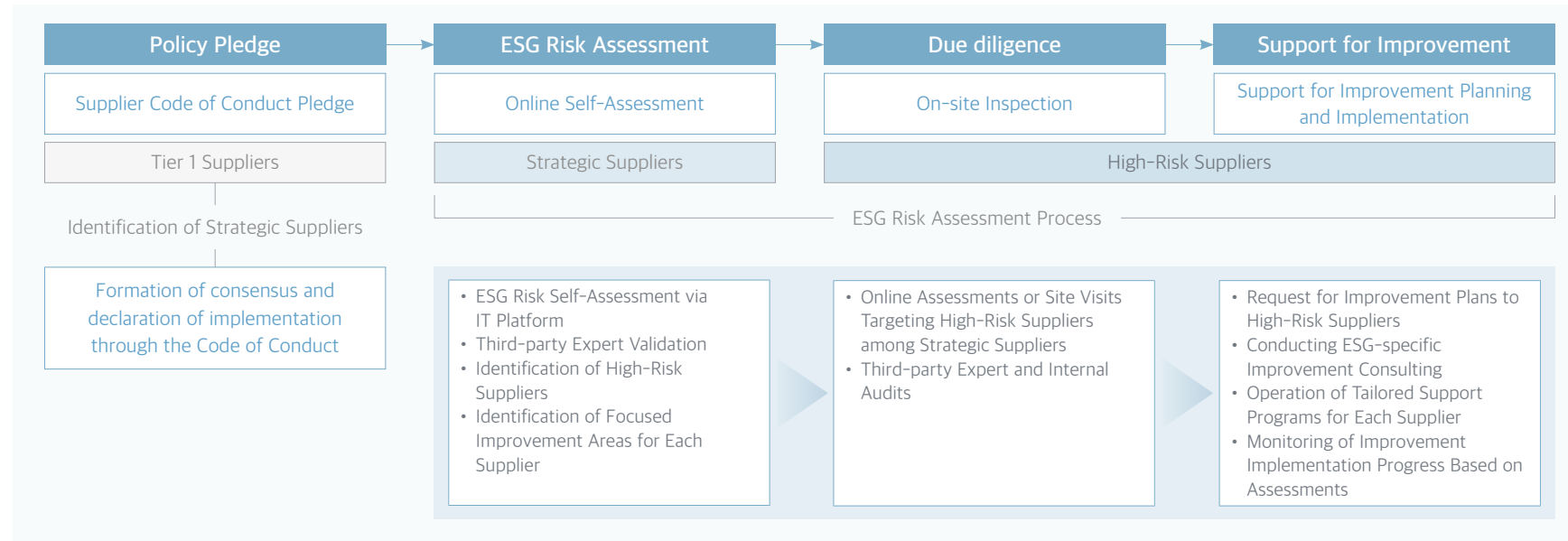
1) EcoVadis : A global ESG assessment platform that evaluates sustainability practices of suppliers

Supplier ESG Improvement Initiatives

SK materials actively promotes Mutual Growth Programs and ESG improvement initiatives to engage and raise awareness among suppliers. In 2022, ethics management education sessions were conducted for key suppliers’ CEOs and staff, focusing on ethical risks like Code of Ethics, fair trade, and anti-corruption. New ECO-training sessions were introduced, enhancing environmental capabilities in areas like GHG, water usage, and waste management. To achieve long-term environmental improvement, one supplier underwent in-depth eco-consulting, including GHG inventories and reduction assessments, in partnership with a consulting agency. This initiative will expand to more suppliers in the future.

Suppliers excelling in ESG diagnostics receive incentives like additional points for the “Best Supplier of the Year” award, priority access to growth programs, mutual growth MBA courses, and ECO consulting. The “ESG Excellent Supplier Mutual Growth Loan Program” supports suppliers with practical assistance such as vehicle loans, fostering tangible growth.

## Supplier ESG Risk Management Process



## Responsible Procurement

### Fair Procurement of Raw Materials

SK materials reflects the principle of prohibiting conflict minerals usage in its purchasing regulations and strives to comply with this principle alongside its suppliers. This effort aims to prevent potential environmental and social issues in the supply chain of raw materials and minimize negative impacts. Furthermore, within the commitment letter of the code of conduct, the prohibition of conflict minerals usage is included, and cooperation with this principle is demanded from our suppliers. It is explicitly stated that failure to comply with this commitment may result in the termination of transactions.

#### Purchasing Regulations Chapter 1, Article 6 (General Procurement Principles)

##### © Prohibition of Conflict Minerals Usage

In accordance with international standards regulating conflict minerals, SK materials prohibits, the purchase and usage of conflict minerals in its products, aiming to uphold social responsibility and protect human rights in the Democratic Republic of Congo and neighboring countries.

### Expansion of Social Procurement

SK materials adheres to the Green Procurement Principle and the principle of purchasing products and services that can create social value, as specified in its purchasing regulations. Moreover, we strive to increase the proportion of relevant purchases.

SK specialty has institutionalized the preference for green products in subcontracted material purchases, starting from the bidding phase. We designate a green procurement officer and manage items that can be replaced with green products separately. SK specialty enforces Green Procurement Principle, by favoring the purchase of products with green certifications, such as High Energy Efficiency Appliance Test, and granting bonus points during regular evaluations to suppliers delivering green-certified products. Additionally, we actively promote social procurement by expanding the proportion of orders placed with social enterprises certified by the Ministry of Employment and Labor.

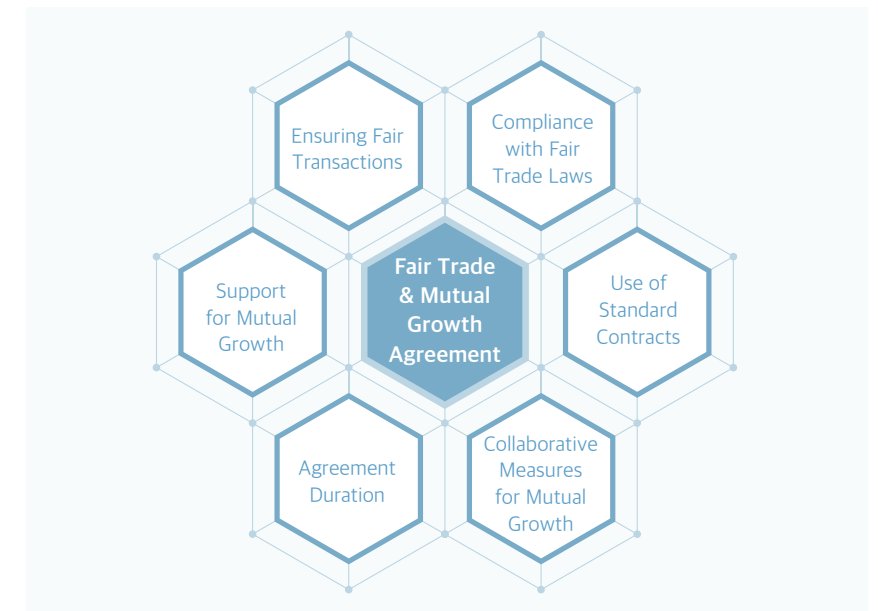
## Mutual Growth with Suppliers

### Fair Trade and Mutual Growth Agreement

SK materials signs fair trade and mutual growth agreements with suppliers to comply with fair trade regulations and enhance mutual competitiveness through collaboration and support in various areas. The agreements encompass compliance with fair trade laws and regulations, ensuring fair trade, and supporting mutual growth. In 2022, we signed these agreements with 22 suppliers.

To promote a culture of mutual growth among suppliers, SK materials operates a system that awards bonus points to suppliers who create exemplary cases of mutual growth. By the end of 2022, a total of 15 suppliers guaranteed fair trade among suppliers in their mutual growth agreement, laying the groundwork for the culture of mutual growth to spread to sub-tier suppliers. In 2023, the company plans to sign new agreements with a total of 35 suppliers and continue providing support to further expand the culture of mutual growth, even to sub-tier suppliers.

### Fair Trade and Mutual Growth Agreement Items



Mutual Growth Program

SK materials drives the Mutual Growth Program through five subcommittees: Overall Mutual Growth, Management Support, SHE, Quality, and ECO. Under these, 15 departments oversee diverse initiatives. Since 2021, we’ve integrated ESG risk improvement with the program, expanding ESG capacity through SHE (Safety, Health, Environment) and ECO (Climate Change Response and Environmental Impact Reduction) consulting and training.

In 2022, the ECO subcommittee led activities to enhance suppliers’ environmental management. This included ECO training on carbon regulations and water risk, and consulting for GHG inventory and reduction.

Our future plans involve broadening supplier participation and devising tailored support based on industry and size. In 2023, the new BM subcommittee will identify business opportunities with BM Innovation Suppliers through collaborative R&D, fostering sustainable mutual growth.

2022 Mutual Growth Programs

Subcommittees	Programs	Contents
Overall Mutual Growth	Mutual Growth Council Meeting	<ul style="list-style-type: none"><li>• Introduction of Mutual Growth Program Operation Results and ESG Incentive System</li><li>• Recognition of Top Suppliers and Explanation of 2023 Operation Plans</li></ul>
	ESG Workshop	<ul style="list-style-type: none"><li>• Focused Training for Suppliers</li><li>• Importance of Supply Chain ESG Management, Compliance Guidelines, Supplier Evaluation Principles</li></ul>
	ESG Risk Assessment	<ul style="list-style-type: none"><li>• Establishment of ESG Evaluation System Based on Online Evaluation Platform</li><li>• Implementation of ESG Risk Assessment and Management of Improvement Based on Evaluation</li></ul>
	SK Group Mutual Growth Program	<ul style="list-style-type: none"><li>• CEO Seminar, Mutual Growth Academy, and other Management Competency Enhancement Programs</li></ul>
	Fair Trade and Mutual Growth Agreement	<ul style="list-style-type: none"><li>• Signing of Agreement between SK materials and Tier 1 Suppliers</li><li>• Signing of Agreement between Tier 1 and Tier 2 Suppliers</li></ul>
Management Support	Ethical Management Session Education	<ul style="list-style-type: none"><li>• Risk Management Education in Ethical Management (Code of Ethics, Fair Trade, Anti-Corruption, etc.)</li></ul>
SHE	Yeongju Plant Supplier Program (SK specialty)	<ul style="list-style-type: none"><li>• Support for Environmental Management System (ISO 14001) Certification</li><li>• Education for Improvement of Hazardous and Risky Tasks and Reduction of Accident Factors</li><li>• Education of Risk Assessment &amp; Corrective Actions for CEO &amp; Employees</li><li>• Prevention of Major Accidents and Strengthening of Safety Activities</li><li>• One-Point Lessons for Hazard Assessment Risk Assessment</li><li>• Safety Council Meeting with Suppliers</li></ul>
Quality	Intensive Quality Management Education	<ul style="list-style-type: none"><li>• Key Quality Tools, Internal ISO Auditors Training, Certification Support, Sharing of Quality Trends and Issues</li></ul>
	Capacity Enhancement for Construction/Contract Work	<ul style="list-style-type: none"><li>• Distribution of Quality Manual, Work Standards, and Quality Implementation Criteria, Training of Quality Experts, Education on Work Standards and Quality Criteria</li></ul>
ECO	ECO Session Education	<ul style="list-style-type: none"><li>• Education on GHG (Supply Chain Carbon Regulation Trends and Response), Water Risk Management, and Waste Management</li></ul>
	ECO Consulting	<ul style="list-style-type: none"><li>• Carbon Neutrality Response (Greenhouse Gas Inventory Building, Potential Reduction Assessment) Capacity Enhancement Consulting</li></ul>



## Supplier Certification Support

SK materials provides group training and individual coaching to suppliers to support acquisition of the Environmental Management System (ISO 14001). Through these efforts, a total of 5 suppliers obtained ISO 14001 transition and new certifications in 2022. For newly certified suppliers, SK materials conducts follow-up audits to continuously monitor the suitability of their environmental management systems. We also conducted joint internal audits with external experts to enhance the capabilities of internal audit personnel and suppliers themselves.

## Enhancing Supplier Communication

Since its establishment in 2020, the Mutual Growth Council has served as a robust platform for SK materials to enhance supplier engagement and responsiveness. Annual Mutual Growth Council meetings facilitate two-way communication, addressing supplier concerns and needs effectively. Regular meetings provide updates on mutual growth achievements and plans, and feedback from supplier surveys helps shape education and programs. Recognition is given to top-performing suppliers based on ESG, mutual growth culture, and ECO collaboration index<sup>1)</sup>.

In November 2022, we held a meeting with 37 member companies of Mutual Growth Council, highlighting achievements in ESG-enhancement activities and supplier-focused efforts. The introduction of ESG risk assessments with external experts and the establishment of ECO subcommittee for supplier environmental consulting and education were notable outcomes. Two exceptional suppliers were awarded.

Future plans include expanding the Mutual Growth Council's reach, prioritizing strong communication with member companies. Continued support for diverse issues, including ESG, will contribute to a sustainable supply chain management system fostering growth with suppliers.

1) ECO Collaboration Index : This index assesses the participation and performance in environmental initiatives, including the evaluation scores for EV/SV collaboration, ECO consulting, and ECO session education, reflecting engagement and accomplishments in environmental tasks

## CASE

### Partner's Day

Since 2021, SK materials airplus has been organizing "Partner's Day" in collaboration with suppliers to share purchasing performance, policies, and future vision. This event also acknowledges and rewards outstanding suppliers involved in the mutual growth program.

In February 2023, ESG performance evaluation based on credible indicators resulted in the selection of five best partners and six excellent partners. These selected suppliers are entitled to diverse incentives, such as monetary rewards, mutual growth council participation, full cash payment for transactions, exemption from guarantees and insurance, and reduced delay damages. Partner's Day featured informative sessions on the Serious Accidents Punishment Act, ESG, and effective communication with Millennial and Z generations. These programs enhance communication with suppliers and contribute to their competitiveness.

SK materials airplus remains committed to expanding communication channels with suppliers through initiatives like Partner's Day. We will continue to prioritize building collaborative relationships, including joint social contribution activities.



2023 Partner's Day

### SK materials airplus - Joint Donation with Outstanding Suppliers

In 2022, SK materials airplus, along with three outstanding suppliers, made a donation worth KRW 10 million to the Ansan Hospital operated by the Korea Workers' Compensation & Welfare Service (COMWEL). The donation was made from proceeds generated by utilizing scrap materials, such as scrap iron and waste wire, resulting from the business with suppliers. The donated funds will be used for activities related to preventing industrial accidents and providing treatment for industrial accident patients. Through this joint contribution with suppliers, SK materials airplus aims to go beyond simple donation and contribute to spreading a safety-centric culture throughout various industrial fields.



Donation Ceremony to Ansan Hospital by Korea Workers' Compensation & Welfare Service

# Vitalization of Local Economy

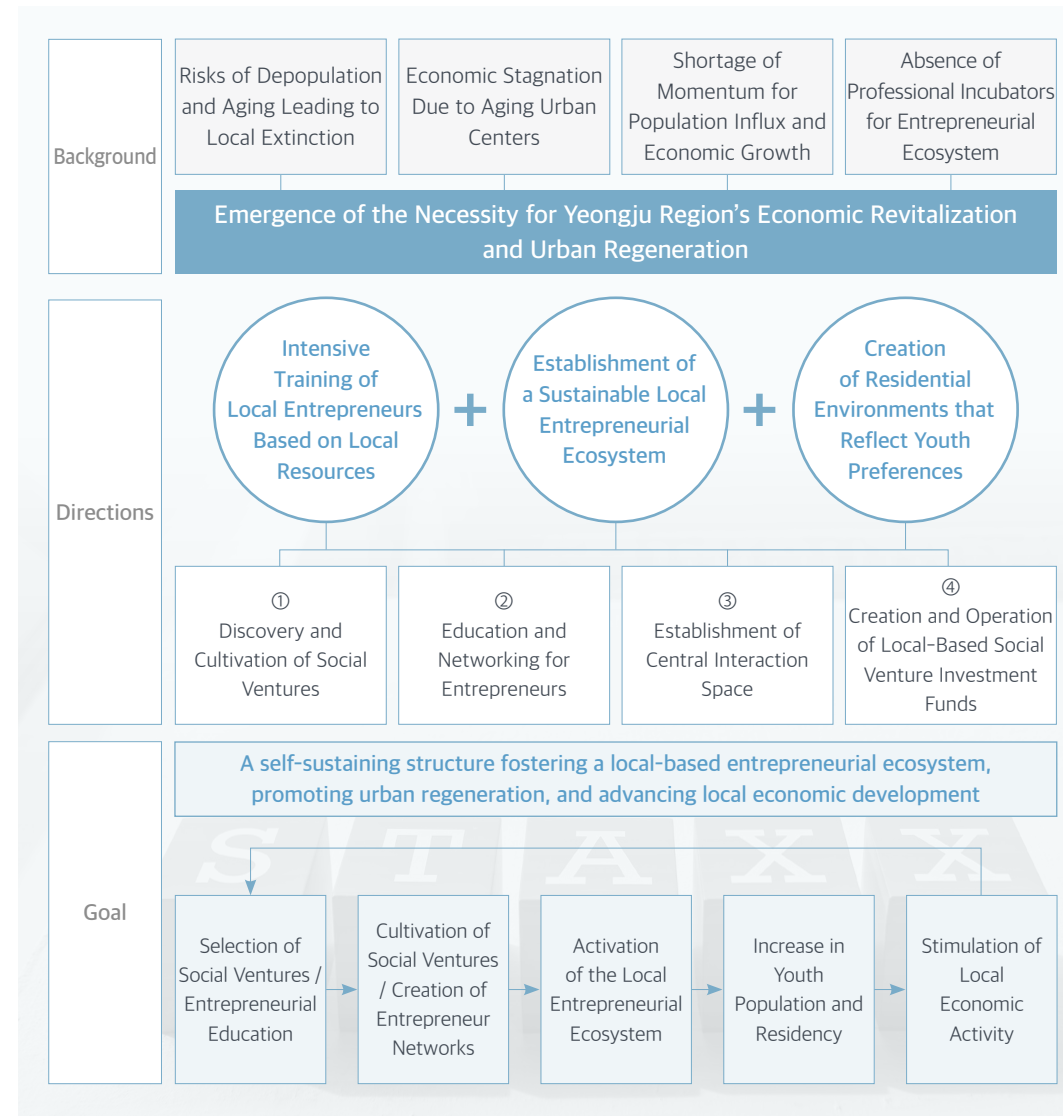
## Local Mutual Growth Project STAXX<sup>1)</sup>

SK materials is driving the “STAXX” project as part of its urban regeneration initiative to address economic and social challenges in the Yeongju, where SK materials’ specialty gas facility is located. The “STAXX” project aims to harness local resources to establish a business model for social ventures, nurture startups, and create an entrepreneurial ecosystem. The project is designed to revitalize the economy, mitigate population decline, and address regional economic downturns faced by Yeongju. To achieve these goals, SK materials made a business agreement in December 2021 with Gyeongsangbukdo, Yeongju, and Impact Square (a specialist social venture nurturing company). Based on a 5 billion KRW donation from SK materials, the project focuses on four core initiatives: ① Discover and cultivate social ventures, ② Provide entrepreneurial education and networking, ③ Establish Central Interaction Space, ④ Create and operate social venture investment fund. Notably, we selected eight social ventures to vitalize Yeongju’s economy through the STAXX project. SK materials, along with SK Group, Gyeongsangbukdo, and Yeongju, is providing support across various fields such as marketing, procurement, distribution, and infrastructure to ensure the sustainable growth of these ventures.

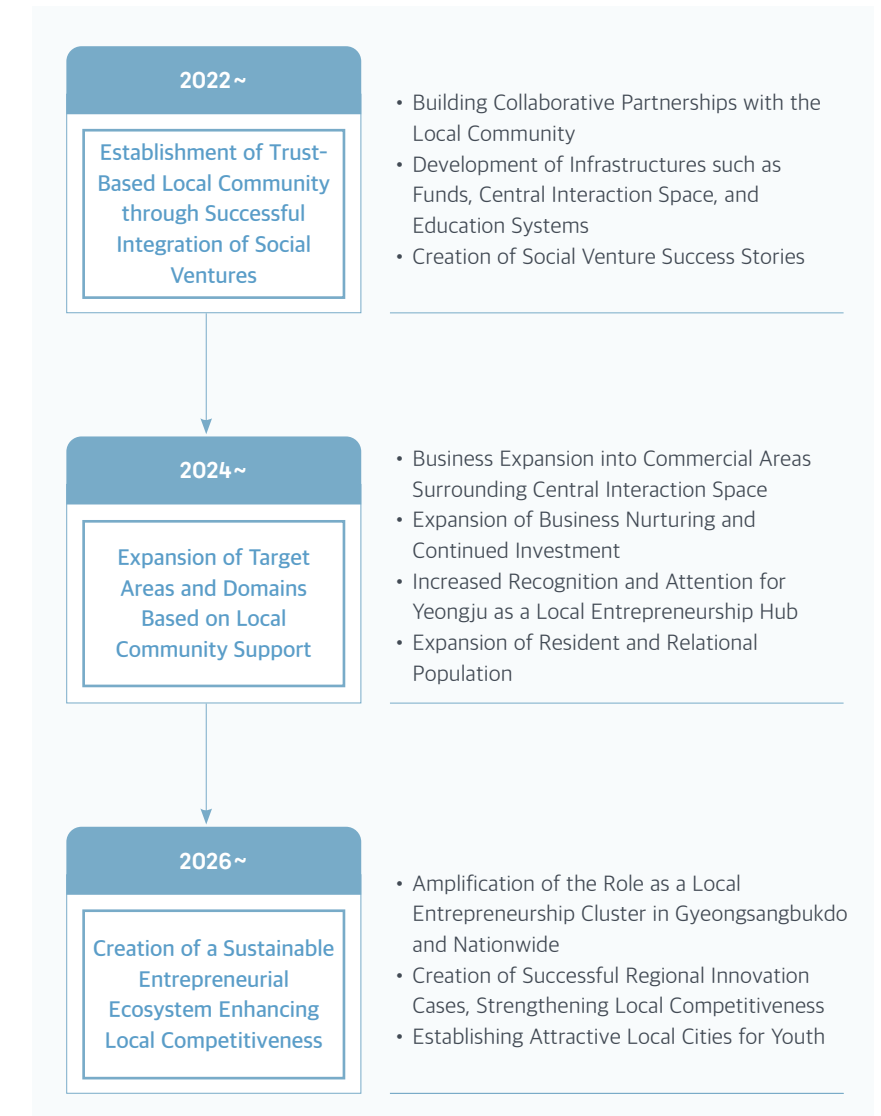
Through the STAXX project, SK materials aims to nurture social ventures, generate success stories, and create a self-sustaining cycle where more young entrepreneurs are attracted to Yeongju, thereby revitalizing the local economy.

1) STAXX : STAXX is a compound word formed by combining “Stack,” which signifies accumulation, collection, and filling, and “X,” representing exchange. It symbolizes the continuous accumulation and evolution of various people, organizations, and experiences that bring about change.

### STAXX System



### STAXX Project Roadmap



Identifying and Nurturing Social Venture Using Local Resources

STAXX is a project aimed at identifying and nurturing social ventures, as well as creating an entrepreneurial ecosystem to address the social and economic challenges faced by Yeongju. In October 2022, we meticulously selected 8 social ventures that harness local resources, in alignment with STAXX’s core objective of revitalizing the local economy through resource utilization.

To ensure the successful growth of these chosen ventures, SK materials partnered with Impact Square, a specialized social venture incubator. Impact Square offers tailored nurturing programs like mentoring and office hours, facilitating exploration of new business opportunities and enhancement of business models. Furthermore, leveraging the 5 billion KRW donation by SK materials for the STAXX project, an initial investment of 1.45 billion KRW was injected into these ventures from a dedicated fund. In May 2023, we held a Midterm Sharing Event, “STAXX REPORT,” where we assess ventures’ business performance and discuss pathways for further advancement.

SK materials, alongside SK Group, extends diverse support encompassing marketing, purchasing, distribution, and infrastructure, ensuring the sustainable expansion of these social ventures. Administrative assistance from Gyeongsangbukdo and Yeongju, involving securing raw materials and facility equipment, furthers their growth. Regular consultations involving SK materials, Yeongju, and Impact Square are held to closely monitor business progress and devise growth strategies. We plan to identify two additional social ventures and secure additional investment to continue leading the transformation and development of Yeongju.

STAXX Committee Operation

SK materials operates a council in collaboration with key stakeholders such as Yeongju and Impact Square to promote the sustainable growth of STAXX social ventures. This committee reviews the business status of the social ventures and seeks solutions to their challenges and suggestions, playing a crucial role as a stepping stone for the growth of these ventures.

Category	Internal Council	External Council
Target	SK materials, Impact Square	SK materials, Impact Square, Yeongju
Implementation	Twice a month	Once a month
Key Items	<ul style="list-style-type: none"><li>• STAXX Project Achievements and Progress Update</li><li>• Sharing Social Venture Cultivation and Growth Status, Exploring Support Measures</li></ul>	<ul style="list-style-type: none"><li>• Sharing Key Achievements and Progress</li><li>• Exploring Support Measures by Supporting Entities for Social Ventures</li><li>• Sharing Challenges and Suggestions from Social Ventures</li></ul>

SK materials/SK Group/Yeongju Support Activities

Category	Marketing	Procurement	Distribution Support	Infrastructure
SK materials	<ul style="list-style-type: none"><li>• Utilize internal broadcasts and bulletin boards for employee promotion</li><li>• Utilize internal events to enhance the awareness of the social venture</li></ul>	<ul style="list-style-type: none"><li>• Purchase products for employee gifts<ul style="list-style-type: none"><li>– gift cards and cosmetics</li></ul></li><li>• Purchase snacks and beverages for employees</li><li>• Utilize STAXX products and spaces during internal and external events</li></ul>	<ul style="list-style-type: none"><li>• Conduct live social commerce<ul style="list-style-type: none"><li>– Support product sales through STAXX account</li></ul></li></ul>	<ul style="list-style-type: none"><li>• Utilize employee networks to gather information for social ventures</li></ul>
SK Group	<ul style="list-style-type: none"><li>• Use group broadcasts, bulletin boards, and blogs for promoting among members</li></ul>	<ul style="list-style-type: none"><li>• Purchase and support socially responsible products for vulnerable groups.</li><li>• Facilitate registration and purchase of snacks on SK Group’s employee welfare platform</li></ul>	<ul style="list-style-type: none"><li>• Collaborate with SK Group’s distribution platforms<ul style="list-style-type: none"><li>– SK Store, 11st, and SK M&amp;S (BenePia)</li></ul></li></ul>	<ul style="list-style-type: none"><li>• Secure funding from SK Group for social enterprises</li><li>• Provide management consulting through SK Pro Bono<sup>1)</sup></li><li>• Engage in SOVAC<sup>2)</sup></li></ul>
Local Government	<ul style="list-style-type: none"><li>• Partner with Yeongju-operated shopping mall<ul style="list-style-type: none"><li>– “Yeongju Market”</li></ul></li><li>• Utilize Yeongju’s promotional channels<ul style="list-style-type: none"><li>– Youtube, Facebook, Instagram</li></ul></li></ul>	<ul style="list-style-type: none"><li>• Purchase products for Yeongju<ul style="list-style-type: none"><li>– Snacks for MOU, training sessions</li></ul></li><li>• Register gifts for “Love for Hometown” donation program<ul style="list-style-type: none"><li>– Offering benefits to donors</li></ul></li></ul>	<ul style="list-style-type: none"><li>• Obtain and provide information about the distribution of Yeongju’s agricultural and livestock products<ul style="list-style-type: none"><li>– Agricultural and Livestock Distribution Center and Agricultural Technology Center</li></ul></li></ul>	<ul style="list-style-type: none"><li>• Provide administrative support in Yeongju<ul style="list-style-type: none"><li>– Various permit procedures</li></ul></li><li>• Participate in local youth support programs<ul style="list-style-type: none"><li>– Youth Entrepreneurship Program and Youth Startup Level Up, supported by the local government</li></ul></li></ul>

1) Pro Bono : Voluntary provision of professional knowledge or services by experts to society without compensation  
2) SOVAC : The largest domestic social value platform where businesses, non-profit organizations, and social enterprises collaborate to pursue Environmental, Social, and Governance (ESG) and Social Value (SV) initiatives for solving social issues



## STAXX Social Ventures

<p><b>Backpackers Planet</b></p>	<p>Operates a platform that connects unique unused spaces with backpacking users</p> <p>Developing unused spaces in Yeongju into eco-friendly backpacking sites and contribute to local economy and tourism activation</p>
<p><b>Blank</b></p>	<p>Renovates derelict houses to provide accommodation and workspace</p> <p>Utilizing vacant homes in Yeongju as a business model to address urbanization issues and contribute to local economic activation through long-term accommodation facilities</p>
<p><b>El Ground</b></p>	<p>Operates a social media-based direct trade platform for agricultural and seafood products called “ROOUT”</p> <p>Connecting agricultural products from Yeongju and Gyeongsangbukdo with consumers to increase farm income and create economic benefits</p>
<p><b>Decant</b></p>	<p>Develops and sells eco-friendly functional cosmetics made from surplus wine and agriculture byproducts</p> <p>Producing cosmetics using surplus agricultural products from Yeongju to increase farm income</p>
<p><b>Pinogen</b></p>	<p>Develops and sells eco-friendly cosmetic ingredients made from pine tree byproducts</p> <p>Developing and supplying cosmetic ingredients derived from pine needle extracts from Yeongju's poplar cultivation site to enhance the eco-friendly image of the city</p>
<p><b>Beenest</b></p>	<p>Develops and sells food and beverages made from agricultural products</p> <p>Producing beverages using surplus agricultural products such as apples from Yeongju to increase farm income</p>
<p><b>Picky Child Company</b></p>	<p>Operates specialty restaurants and cafes with local themes</p> <p>Operating BBQ dining “Meatfield” and dessert cafe “Sweet Town” in Yeongju</p> <p>Strengthen their role as a STAXX anchor company and contribute to local economy, by creating continuous local and external visitors</p>
<p><b>Liquor Square</b></p>	<p>Develops and sells specialty local beverages</p> <p>Establishing a distillery in Yeongju's traditional market and promoting its utilization as a tourist resource to activate the traditional market, thereby contributing to local economy and tourism activation</p>

## Building an Entrepreneurial Ecosystem through Education and Networking

Commencing with the “Impact Bridge” in July 2022, a cornerstone competency education initiative for social ventures, STAXX has orchestrated a spectrum of entrepreneurship development programs.

SK materials is committed to expanding the program's scope, extending beyond social venture practitioners to encompass social entrepreneurs, budding innovators, and local university students. This strategic expansion aspires to nurture a dynamic entrepreneurship community where knowledge exchange and mutual growth thrive. In 2022, we successfully conducted 7 entrepreneur development programs, drawing the active participation of more than 150 students.

Moving forward, to establish a sustainable entrepreneurial ecosystem in Yeongju, SK materials will collaborate with local organizations and entrepreneurship experts to enhance the entrepreneur education curriculum. This will be a pivotal step in fostering a thriving entrepreneurial community in the region.

### Entrepreneur Nurturing Program

Curriculum	Program	Details
Sophisticating Business	Impact Bridge	<ul style="list-style-type: none"> <li>Impact Business Education</li> <li>IR Strategy Lecture</li> <li>1:1 Diagnostic Mentoring</li> <li>Speech Workshop</li> </ul>
	School of Impact Business in Yeongju	<ul style="list-style-type: none"> <li>Understanding Trends in Domestic Economy</li> <li>Social Economy Lecture</li> <li>Networking Program</li> </ul>
	IMPACT ROUND (2023)	<ul style="list-style-type: none"> <li>Financial Support Available for Companies</li> <li>Communication and Document Writing Methods for Attracting Investment</li> </ul>
Strengthening Network	STAXX Salon	<ul style="list-style-type: none"> <li>Sharing Experiences of Local Entrepreneurs in Gyeongsangbukdo</li> <li>Exploring New Collaboration Opportunities and Various Prospects</li> </ul>
	ZOOM IN : Gangneung & Sokcho (Twice)	<ul style="list-style-type: none"> <li>Interact with Entrepreneurs from Other Regions</li> </ul>
	Localer (2023)	<ul style="list-style-type: none"> <li>Local Lifestyle Exhibition</li> </ul>

## Establishment of Central Interaction Space for Entrepreneurs, Residents, and Various Communities

In September 2022, SK materials transformed the former Shin Young Nursing School building in the heart of Yeongju's old town, into the dynamic space known as “STAXX”. This rejuvenated venue seamlessly fuses three decades of history and tradition with the vibrant ethos inherent to social ventures, creating a harmony.

Spanning three floors, STAXX boasts a diverse range of offerings. The ground floor accommodates the “Meatfield” family dining restaurant and “Sweet Town” dessert café, operated by the STAXX social venture “Picky Child Company”. The BBQ-specialized restaurant “Meatfield” has attracted external visitors, serving as an anchor store that not only enriches Yeongju but also stimulates the local economy.

The second floor serves as a collaborative shared office space, fostering cooperative efforts, mentoring sessions, and acceleration programs among social ventures. This contributes to regional development and generates synergies for mutual growth.

On the third floor, residential quarters and a communal lounge are tailored for social venture members and visitors. The lounge serves as a hub for meetings, discussions, and diverse programs, supporting local entrepreneurship. The residential quarters offer workation opportunities and novel lifestyle experiences.

The courtyard and rooftop host cultural events and exhibitions, fostering interaction between local residents and social ventures. These initiatives firmly establish STAXX as a versatile community nucleus that embodies Yeongju's essence.



STAXX Scenery



Lounge on 3rd Floor

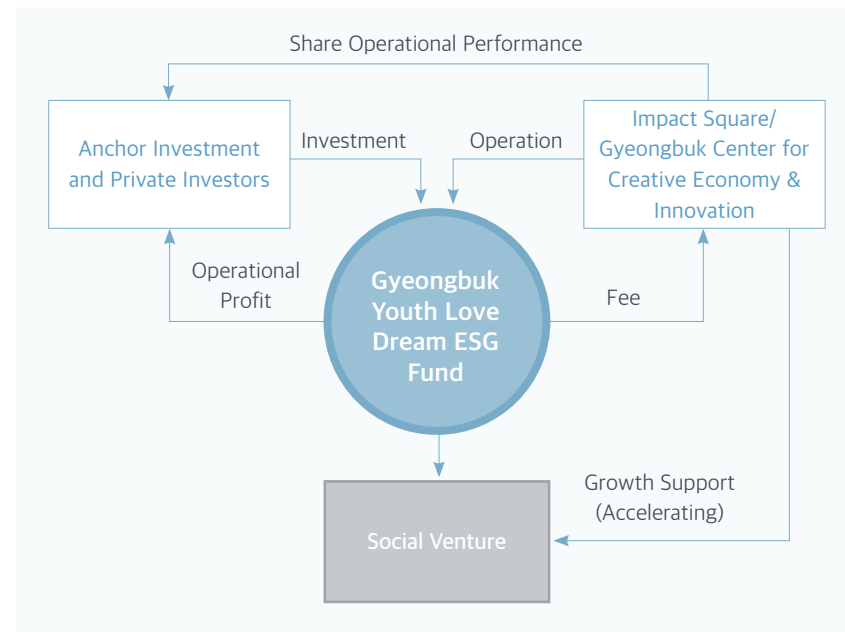


## Establishment and Operation of Investment Fund for Social Ventures

Utilizing KRW 2.85 billion from SK materials' donation, STAXX established the "Gyeongbuk Youth Love Dream ESG Fund" in November 2022. Collaborating with Impact Square and Gyeongbuk Center for Creative Economy & Innovation, we raised KRW 5 billion by May 2023 from individual and corporate investors. This fund serves as seed money for Yeongju's economic development-focused social ventures. In 2022, KRW 1.45 billion supported STAXX-selected ventures for acceleration and operations, covering facility establishment, staffing, raw materials, and office leases.

As Gyeongsangbukdo's first privately-led fund, it addresses regional entrepreneurial ecosystem imbalances, fosters local economic growth, and invests in promising companies. STAXX plans to expand eligibility to Gyeongsangbukdo's ventures, leveraging SK materials' expertise for further support.

### Operational Structure of "Gyeongbuk Youth Love Dream ESG Fund"



## STAXX Key Milestones



## 2022 Key Performance



# ESG Factbook

Environment	84
Social	91
Governance	104



# Environment

SK materials is monitoring its progress and achievements of the Environmental Management Promotion System to leap forward as a “Global Top-Level Green Company”.



# Environmental Management

## Environmental Management Governance

### Environmental Management System

Following the formulation of a SHE policy, SK materials continues to implement initiatives that foster safe workplaces, eco-friendly corporate culture, compliance management, and employee engagement. Striving for a “Global Top-Level Green Company,” we have devised the “Environmental Strategy 2030,” with goals including Net Zero/RE100, 100% wastewater recycling, and 95% or higher waste recycling rate (ZWTL Gold).

Under the direct purview of the CEO, the SHE Management Department is responsible for driving environmental strategies. Subsidiaries collaborate via the ESG synergy committee, establishing a company-wide environmental management system with individual roadmaps and performance tracking.

Monthly CEO-level environmental meetings make decisions, while quarterly Board of Directors meetings address major environmental issues. The Environmental and ESG Management Teams work in tandem to manage and support company-wide environmental strategies.

The 2022 establishment of the ESG Synergy Group, focused on climate change, enhances environmental management performance efficiency across subsidiaries. Collaborative efforts encompass Net Zero/RE100, climate change response, and pollutant management. Site-specific SHE/Environment departments also partner to bolster environmental tasks.

### Environmental Management Decision-making System



## Environmental Management Performance Monitoring

### Environmental Performance Evaluation Framework

SK materials integrates ESG concerns, including environmental issues, into its KPIs to gauge performance. In 2022, “Achievement of ESG Key Performance Indicators” and “Net Zero Implementation” were set as KPIs, guiding organizational tasks and evaluations. Departments central to environmental performance were especially focused on achieving environmental objectives. Evaluation outcomes serve as a basis for employee compensation, including management positions.

1) According to SK Inc. materials criteria

### Environmental Audit System

SK materials maintains rigorous adherence to internal environmental regulations and the operational status of the Environmental Management System through regular internal and external audits. Internal audits are performed by certified environmental management system auditors annually, while external audits by external organizations are conducted every 3 years to validate system suitability and performance.

Moreover, annual SHE regular and special audits are carried out to ensure compliance with legal environmental requirements and internal regulations concerning waste, chemicals, air, water, soil, etc. In 2022, the regular audit protocol was expanded from 23 to 25 categories.

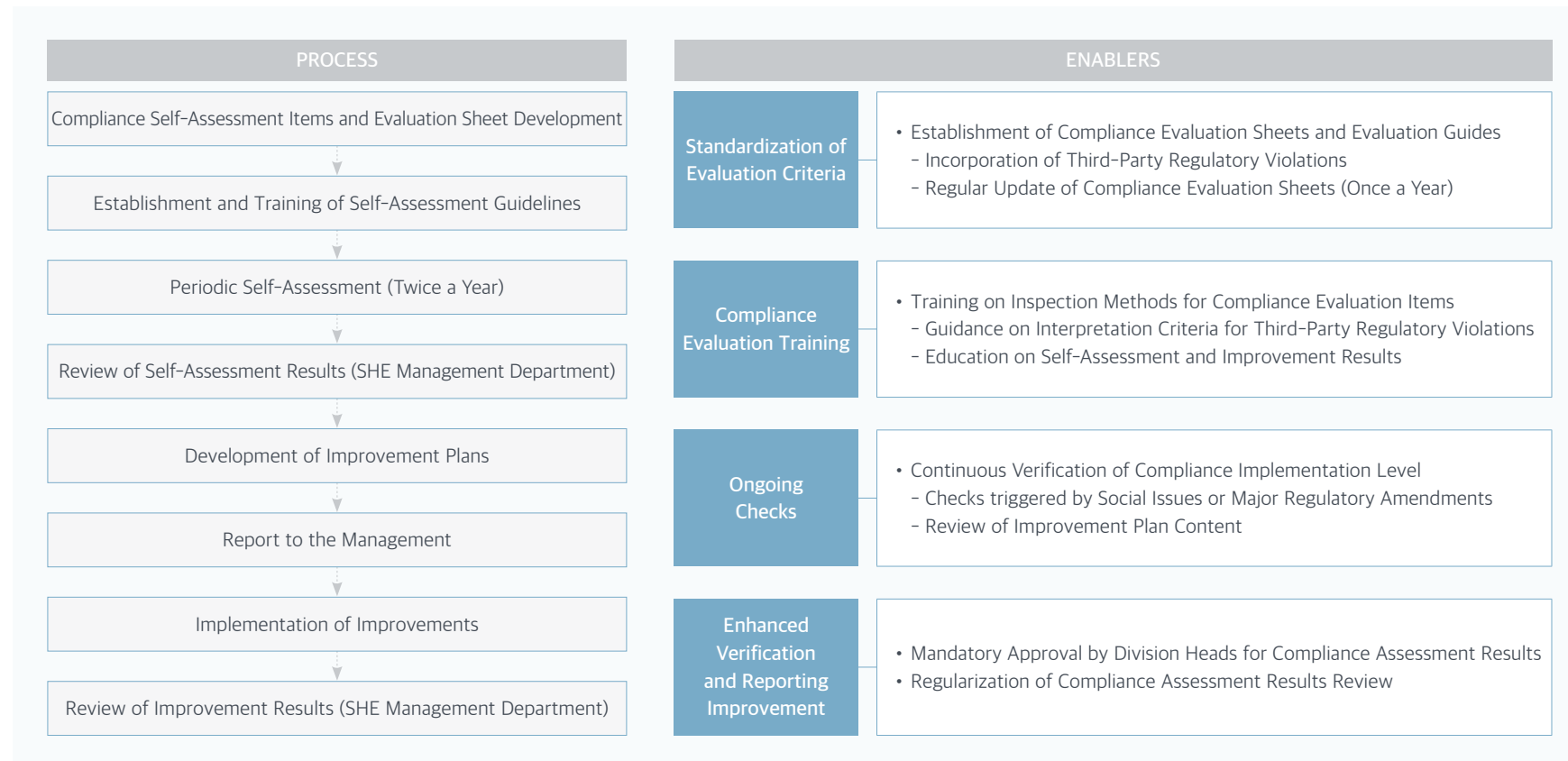


## Environmental Compliance Monitoring

SK materials employs a systematic approach to quantify its management activities' environmental impacts and uphold environmental compliance. This involves monitoring air and water quality, chemicals, waste, and other relevant areas through established internal procedures. Environmental impact assessments are conducted to preemptively address potential issues arising from business operations.

To bolster environmental compliance management, external experts are engaged to provide training on regulations and permits to environmental practitioners. Internal audit guidelines have been formulated for self-assessments within each subsidiary. The SHE Management Department evaluates and devises improvement strategies based on results from these self-assessments, which involve on-site inspections. In 2022, 14 areas for enhancement and improvement were identified.

### Environmental Compliance Monitoring and Feedback System



## Enhancing Environmental Management Capabilities

### Environmental Education

SK materials ensures the competency of designated environmental engineers by providing mandatory external legal education on air and wastewater discharge facility operation, inspection, and regulatory compliance in alignment with the Clean Air Conservation Act and Water Conservation Act. Similarly, personnel under the Toxic Chemicals Control Act undergo mandatory external legal education for handling, management, transportation, and inspection of hazardous chemicals. All employees receive education on hazardous chemical risks and corresponding response measures. Internal training programs cover topics including GHG policies, environmental incident strategies, and performance management to enhance employee environmental management skills. A dedicated “Health, Safety, and Environment” bulletin board shares legal trends, environmental updates, and expert lectures to promote eco-friendly awareness.

Moreover, SK specialty, SK Resonac, and SK materials Group14 conduct ISO International Auditor Training (ISO 14001) to ensure the competence of internal auditors for environmental management system certification audits.

### CASE

#### 2022 Sejong Campus Eco-friendly Story, “Embracing Coexistence with the Earth”

Sejong Campus for High-tech Materials conducted a special lecture titled “Embracing Coexistence with the Earth” Eco-Friendly Story in 2022 for the employees of SK specialty, SK trichem, and SK materials performance. The aim was to enhance interest and participation among employees in eco-friendly activities through a lecture by a renowned environmental influencer and activist. A total of 53 employees participated in the lecture. We plan to design and implement various educational programs to further enhance employees' eco-friendly awareness in the future.



Water Management

SK materials identifies and rigorously manages risks across all stages of water resource utilization, including water intake, consumption, wastewater treatment, and recycling. As a significant portion of water usage occurs in production processes, we focus on activities to enhance water usage efficiency within our processes and improve wastewater recycling rates. We have established a Wastewater Recycling Master Plan to achieve a 100%1) wastewater recycling rate by 2030, and are working on various company-wide improvement activities.

Starting in 2021, SK specialty began assessing water and wastewater usage across its factories for recycling plans. In 2022, a 18% wastewater recycling rate was achieved. To accurately measure recycling rates, cumulative flow meters were installed at 40 locations. In 2023, 15 more meters will be added, targeting a 28% recycling rate to minimize water risk.

SK materials airplus has continuously improved wastewater treatment methods since 2020 by reusing clean water alongside rainwater and dirty water. This treated water is sent to treatment facilities, ensuring compliance with legal requirements and preventing pollution of nearby rivers.

In 2023, SK trichem established a wastewater filtration system, recovering and treating used wastewater for recycling. This system reuses RO concentrated water and cooling tower wastewater, reducing water consumption and minimizing emissions.

1) SK trichem aims for 30% and SK materials performance aims for 80% recycling rate  
2) Improvements completed for Cheongju Plant 2 in 2021, Yeongju Plant in 2022, and Cheongju Plant 1 in 2023

Wastewater Recycling Master Plan

(Unit : %)

	2022	2023	2025	2030
SK specialty · SK Resonac	18	28	100	100
SK materials airplus	-	20	75	100
SK trichem	-	30	30	30
SK materials performance	-	-	80	80
SK materials JNC	-	-	50	100
SK materials Group14	-	-	18	100

Water Resource Risk Management

In 2022, SK specialty utilized the WRI Aqueduct Water Risk Atlas, a vital water resource risk analysis tool, to assess both short- and long-term quantity and quality risks. This annual assessment encompassed regulatory and reputational risks stemming from climate change and physical factors. The findings highlighted that the Yeongju Plant faces a relatively low-medium level of total water resource risk, while the China Zhenjiang Plant encounters a high level of water resource risk due to heightened risk factors. Considering factors such as revenue and production volume, SK specialty is strategically focusing on water resource risk management at the Yeongju Plant. The insights gained from this management will later be extended and applied to the Zhenjiang Plant. The Yeongju Plant draws river water through two intakes from the Seocheon River. While water scarcity concerns were not observed until 2022, measures are being taken to reduce water dependency through consumption reduction and recycling. Furthermore, SK specialty assesses water resource risks for key suppliers, incorporating the outcomes into the ESG evaluations of these suppliers, thus ensuring ongoing risk management practices.

Water Resource Risk Analysis Method

Analysis Scenarios

- Time Frame: Baseline and Future (2030, 2040)
- Physical Scope: SK specialty domestic and overseas facilities, key suppliers, and customer sites (total of 24 sites)
  - SK specialty: Seoul Office, Yeongju Plant, China Zhenjiang Plant
  - Supply Chain: 16 sites from 13 suppliers
  - Customers: 5 sites from 5 customer companies
- Baseline Indicators: Physical Quantity Risk, Physical Water Quality Risk, Regulatory and Reputational Risk
- Future Scenarios: Pessimistic, Business as Usual, Optimistic
- Future Risk Measurement Unit: Absolute values, change relative to baseline

Water Resource Risk Analysis Results

Levels by Risk	Yeongju	Zhenjiang
Physical Risk Quantity	Medium-High	High
Physical Risk Quality	Low	High
Regulatory and Reputational Risk	Low-Medium	Medium-High
Projected Change in Water Stress 2040 Pessimistic Scenario	Medium-High	Low

Overall Water Risk

Yeongju, South Korea  
Low-Medium

Zhenjiang, China  
High

Low

Low-Medium

Medium-High

High

Extremely High

Waste Discharge Management

SK materials sets waste management standards for each subsidiary, ensuring proper disposal of general and designated waste according to procedures. The entire process, from generation to disposal, is rigorously managed. SK specialty and SK Resonac define supplier responsibilities in waste management, expanding the scope to include suppliers. They also conduct waste type analysis support and discharge inspections.

To elevate waste management, SK materials established a Waste Recycling Master Plan, targeting ZWTL<sup>1)</sup> Gold by 2030. Each subsidiary sets annual ZWTL certification goals and develops plans to achieve them.

Waste Recycling Master Plan



(Unit : %)

SK specialty	Validation	ZWTL Gold	Gold	Gold
SK materials airplus	85	Silver	Gold	Gold
SK trichem	89	90 <sup>2)</sup>	95	95
SK materials performance	-	-	Gold	Gold
SK materials JNC	-	50	Gold	Gold
SK materials Group14	-	-	Silver	Gold

1) ZWTL : An abbreviation for "Zero Waste to Landfill". It verifies how waste is being treated, aside from landfilling, among the waste generated each year, and assigns grades such as Platinum (recycling rate 100%), Gold (95-99%) and Silver (90-94%)

2) Obtained recycling rate certification (Validation) which is not a ZWTL grade acquisition

Reducing Waste Discharge

SK specialty is testing a decanter for internal sludge operations in the NF3 Cell, aiming to enhance waste separation efficiency. We expect the decanter to reduce sludge volume by 30%. Additionally, we aim to recycle the Ni component in the sludge to diminish waste generation and lower disposal costs.

The SK materials airplus Renewtech business unit, due to the characteristics of dry ice processes, has been entrusting the collection of water and oil that gather in the trench to designated waste disposal companies. Since 2022, it has established a water-oil separation system to minimize the generation of designated waste by separating and processing water and oil.

Improving Waste Recycling Rate

Starting from 2022, SK specialty has transformed silicon dioxide (SiO<sub>2</sub>) waste from powder to pellet form using an in-house compaction facility. This enables recycling as raw materials for steelmaking. Also, we have improved our wastewater treatment system to recycle wastewater sludge as cement raw materials. In 2022, an extra 545 tons of silicon dioxide waste and 2,113 tons of wastewater sludge were recycled, contributing to a total of 18,288 tons of recycled materials, alongside the existing 15,630 tons.

SK trichem partners with waste recycling companies to repurpose sludge from the manufacturing process into materials like lithium carbonate, aiming for a 90% waste recycling rate by 2023.

SK materials performance implements equipment to reprocess waste wafers generated in the product evaluation process, increasing wafer reuse and reducing waste.

Improving Wastewater Treatment Systems

Since 2022, SK specialty has introduced a pre-stripper in the wastewater treatment process to recover ammonia (NH<sub>3</sub>) from wastewater for reuse as raw materials and recycle sludge as raw materials for cement production. Through this, an additional 2,113 tons of wastewater sludge has been recycled, reducing sulfuric acid (H<sub>2</sub>SO<sub>4</sub>) usage in wastewater treatment by 30%.

Pollutant Management

SK materials applies internal management regulations that are stricter than legal standards to minimize the emission of water and air pollutants and consistently makes efforts to reduce intensity emissions of major pollutants.

Water Pollutant Management

Starting from 2021, SK materials enforces stricter internal standards for water pollutants like Total Organic Carbon (TOC) and Total Nitrogen (T-N) compared to the discharge permit standards set by the Water Conservation Act.

SK specialty manages water pollutant concentrations at 50% (some at 70%) of the legal discharge permit standards. To minimize pollutant discharge, facility water undergoes internal treatment before release into the Seocheon River. Rainwater is treated through detention basins and non-point pollution reduction facilities, with regular water quality assessments. Water pollutant concentrations in discharged water are measured daily, and related facilities like detention basins and wastewater treatment systems are inspected. In 2022, SK specialty upgraded the wireless detection system for storm sewer pollutants to a real-time monitoring system with year-round functionality, expanded to 16 locations around the factory. This contributes to more efficient water quality management, aiming for "Zero Water Quality-Related Environmental Accidents".

Air Pollutant Management

SK materials ensures compliance with legal standards for air pollutants, conducting regular air pollutant emission measurements and additional assessments when necessary. If emissions surpass internal standards or exceedances are anticipated, a pollutant management process is followed to identify causes and implement corrective measures.

Starting in 2022, SK materials performance strengthened internal standards for air pollutants like Total Hydrocarbons (THC) and dust to 50% (some to 80%) of the legal discharge permit standards. We also pre-screen emissions of restricted air pollutants in the industrial complex.

SK trichem manages air pollutants at 30% (some at 80%) of the legal discharge permit standards and has enhanced emission efficiency through improvements in air pollution prevention facilities.

## Hazardous Chemical Substance Management

SK materials strictly complies with chemical-related regulations, establishes a system to ensure safety throughout the entire process from the introduction, storage, use, transportation, and disposal of hazardous chemical substances, and aims to prevent accidents caused by the release of hazardous chemical substances.

When introducing chemical substances, SK materials verifies the composition before registration and establishes facility safety and handling standards. During the usage process, all facilities handling chemical substances conduct regular inspections to manage potential risk factors. Improvement measures for reducing emissions of hazardous chemical substances are developed and implemented. Additionally, we provide safety usage information to customers to enhance the safety of chemical substance use.

### Operation of Chemical Substance Management System

SK specialty mitigates the environmental impact of hazardous chemical substances within its products through an internal chemical substance management system, adhering to legal and internal regulations. The system's reach extends to suppliers, ensuring that only substances verified by the Environmental Management Team through the Material Safety Data Sheet (MSDS) and the management system are procured via the electronic purchasing system. When supplying products to customers, information about managed substances' hazardousness, safety usage manuals, and MSDS are provided.

SK trichem has upgraded its chemical substance management system by integrating it with the ERP system, which tracks incoming quantities and conducts pre-regulation reviews upon approval. For 2023, a management procedure will be established based on policies for reducing hazardous chemical substances, including evaluations of regulated substances under RoHS and REACH regulations and risk assessments.

SK materials performance utilizes a Design Review Process to assess hazardous substance usage from the R&D stage. This approach gathers and verifies information on hazardous substances throughout product development, identifying opportunities for improvement. In 2022, practical improvements were executed in the refining process to eliminate hazardous substances detected in resins supplied by suppliers.

## Environmental Accident Preparedness System

SK specialty employs multiple measures to detect and prevent leaks across equipment and pipelines. This includes installing color-changing paint and tape for leak detection and utilizing gas detectors in storage facilities and around the plant perimeter. In case of hazardous substance leaks, gas detectors trigger the emergency sprinkler system for containment. Vulnerable areas are continually identified, leading to improvements and checks. A 24-hour comprehensive disaster response center, featuring systems and water curtains, ensures swift response and damage minimization.

In 2022, a process access control system was established, governing high-risk processes (HF, NH3) and monitoring personnel access. It requires approval for entry, records real-time access history, and alerts unauthorized entry. Emergency calling is available for rapid rescue. For 14 high-risk HF storage tanks, a leak detection system was integrated into the high-risk area monitoring system, enhancing response capabilities.

SK materials airplus employs a 24-hour real-time monitoring system using CCTV and gas detectors to detect chemical substance discharge, release, or leakage incidents. Human motion detection systems are applied to control panels for key equipment to prevent unauthorized operation.

SK trichem utilizes flange covers to detect even minor pipeline leaks, employing alarms and emergency stop buttons for gas leaks beyond the work area, prioritizing worker safety and quick response.

### Storage and Transportation of Hazardous Chemical Substance

SK materials has strengthened its management system for the transportation of products and raw materials to ensure safety during storage and transportation processes. In 2022, a focus on transportation vehicle safety led to assessments of emergency response readiness for product and raw material transport vehicles across subsidiaries, identifying areas for enhancement. Safety management standards for raw material transportation were established, refining emergency response organization, procedures, manuals, driver information, and customer response protocols. Inspection checklists, transportation contracts, and necessary emergency equipment for vehicles carrying hazardous substances were revised,

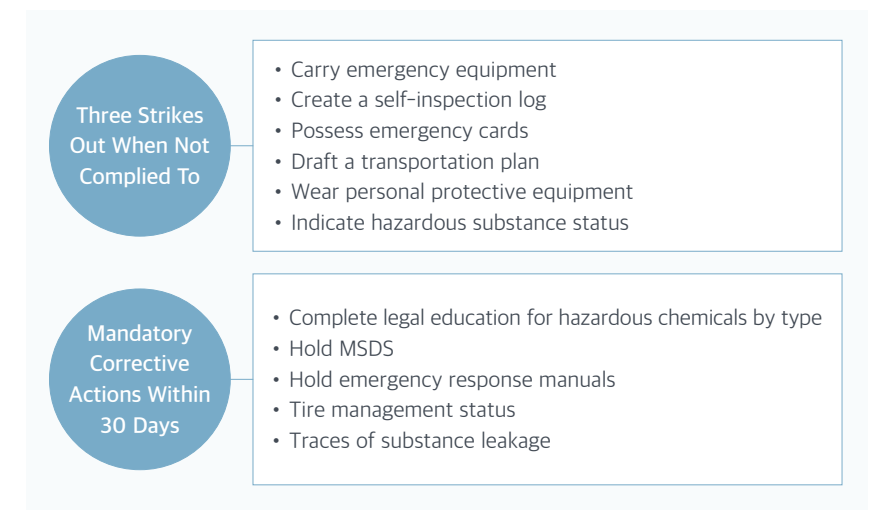
resulting in 49 transportation safety management standards customized for each business site.

For hazardous chemicals storage, SK materials adheres to the Toxic Chemicals Control Act, conducting external inspections and regular internal checks, including thematic inspections for external transportation vehicles.

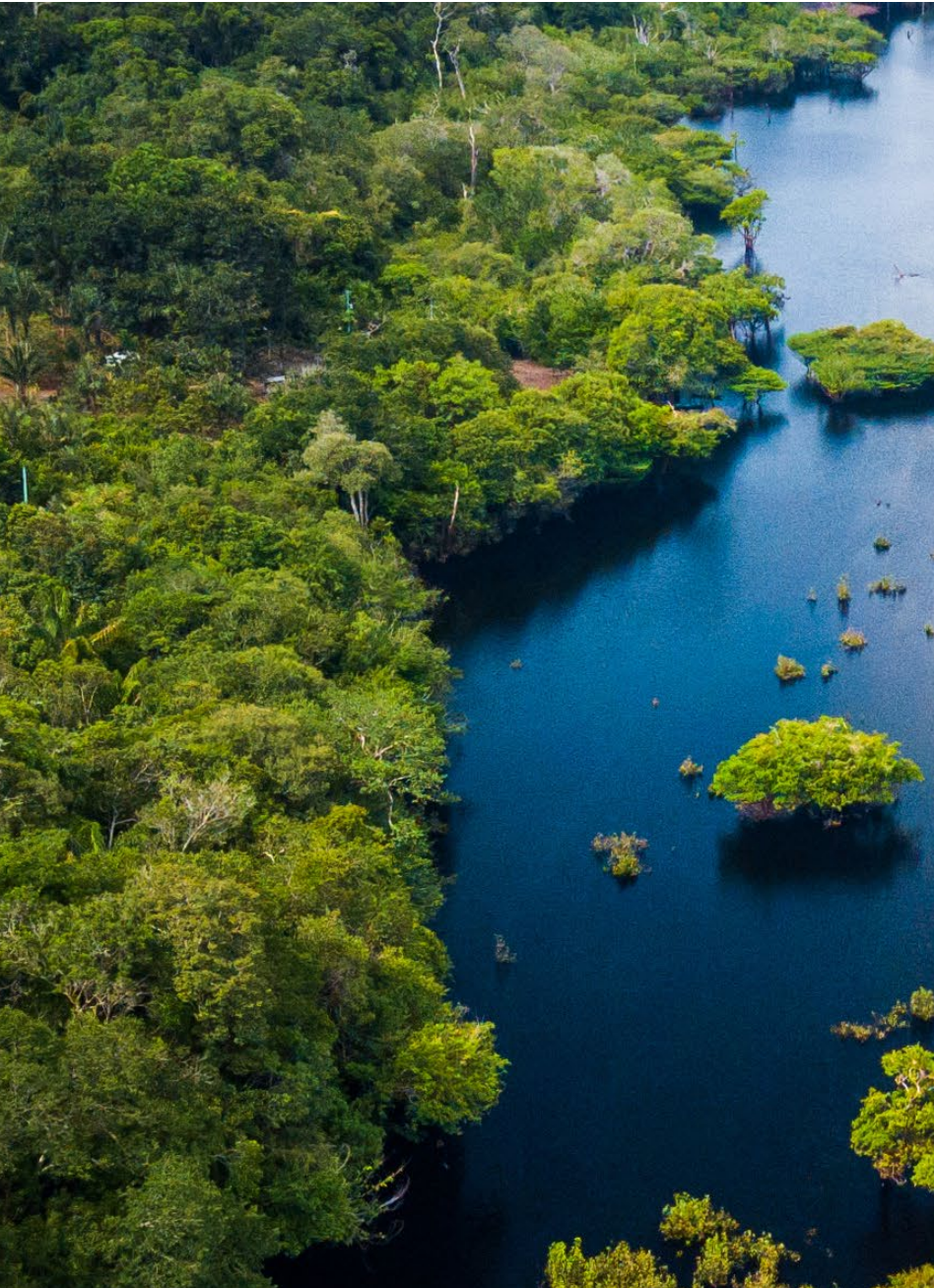
In chemical transportation, SK specialty emphasizes safety with inspections of compliance during loading and unloading. The "Three Strikes Out" policy enforces safety standards and access prohibition for companies with repeated violations.

For customer deliveries, SK specialty equips corporate vehicles with safety measures like pupil detection for driver alertness, gas detectors, and accompanying support vehicles equipped with GPS tracking through urban areas. Emergency response training for transportation vehicles is also conducted.

### Inspection Items for Hazardous Chemicals Loading and Unloading







### Establishing the Safety Collaboration System for Local Communities

SK materials is actively strengthening its ability to respond to environmental accidents by establishing collaborative systems with relevant institutions, with a focus on local communities surrounding each business site.

For instance, SK specialty and SK Resonac’s Yeongju Plant have implemented an emergency contact system (Hot Line) involving 8 key institutions like fire stations, police stations, city halls, hospitals, and air force bases. Real-time monitoring of the City Hall Control Center and the entire plant through CCTV and automatic gas alarms is established, with gas detection status boards installed at strategic locations, enabling sharing of measurement results with local community members. Additional efforts include wind direction indicators in nearby villages, safety equipment distribution, and behavior guideline booklets for chemical accidents. Resident explanation sessions were conducted in 2022, with plans to resume evacuation training from 2023.

Furthermore, through the Chemical Safety Community, we collaborate with local government and corporate practitioners in the Yeongju and Andong regions. Regular discussions include sharing corrective actions for chemical regulations, case studies, and practical safety-related activities to enhance chemical safety.

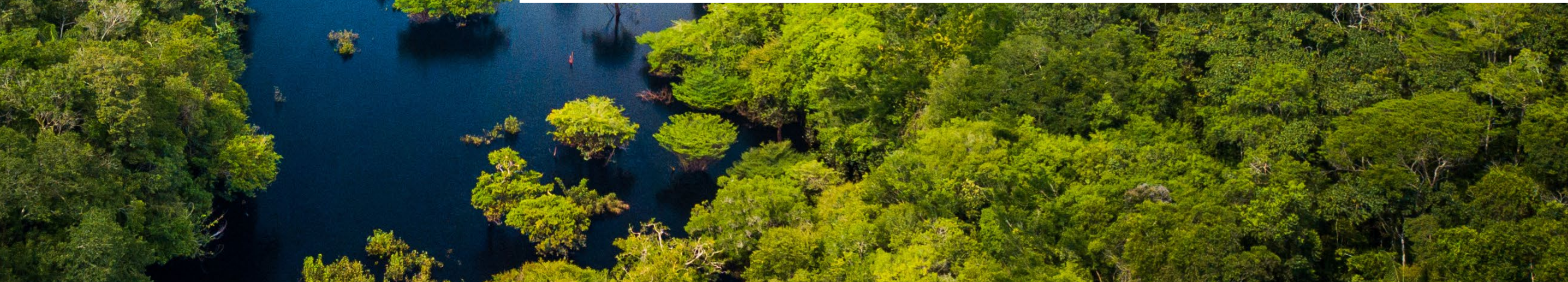
### Mitigating Ecological and Environmental Impact

Based on environmental risk analysis, SK materials continues its efforts to reduce environmental impact and manage ecological environments to protect the eco-systems near its business sites.

SK specialty, SK trichem, and SK Resonac monitor the impact of their operational activities on forest resources through regular checks on the condition of nearby trees. In particular, SK specialty has installed noise prevention facilities and night-time light-blocking structures to reduce noise and light pollution, minimizing disruption to wildlife communication and circadian rhythms. We have also installed and operated devices to remove blue-green algae in reservoirs.

In 2022, we carried out a river purification activity called “Making and Throwing Soil Balls1),” involving all employees. This activity aimed to decompose harmful substances and eliminate odors in rivers near business sites such as Yeongju, Ulsan, and Sejong, thereby improving water quality. In 2023, we will continue river purification activities alongside “plogging” activities to maintain the efforts.

1) Soil balls : A ball made of 80 types of microorganisms and yellow soil to purify water quality and eliminate odors





# Social

SK materials enhances employees' happiness through improving its organizational culture and communication with its employees. Furthermore, we are increasing the happiness of stakeholders, including the local community through various social contribution activities.



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# Respecting Employees

## Improving Organizational Culture

The cornerstone of SK materials’ aspired corporate culture is “employee happiness”. We believe that when contented employees collectively pursue the happiness of society through organized efforts, we can evolve into a company capable of sustainable growth and earning respect. To this end, SK materials engages in diverse activities to foster an organizational culture where “employees cultivate happiness by working autonomously, experiencing a sense of accomplishment, and nurturing healthy relationships within the company and among colleagues”.

### Happiness 112 Campaign

SK materials has established the “Happiness 112 Principles,” 1 set of 12 commitments aimed at ensuring the contentment of all employees at work. Continuously, we unfold this campaign. By disseminating video cases showcasing each of the 12 principles through internal broadcasts and creating department-specific commitment pledges for sharing, we strive to embed a culture of mutual respect and consideration.

### Our Distinct Approach to Work - “Code of Conduct”

In 2023, a distinct approach to work, known as the “Code of Conduct” (CoC), was introduced across the entire staff organization, including the Business Development Center, BM Innovation Center, Global Tech Center, Quality Analysis Center, and DT Group. The CoC, collectively crafted through employees’ voluntary participation, encompasses both the manner of working that the entire employee should adhere to for a joyful work environment and the elements that leaders and team members need to uphold. SK materials conducts team-specific workshops, distributes posters and stickers, and fosters understanding and implementation of the CoC among employees.

## Culture Survey

Annually, SK materials conducts a comprehensive Culture Survey involving all employees to gauge the corporate culture and employee satisfaction. Insights from the survey drive actions for improvement. In 2022, the Culture Survey, guided by the CEO, emphasized communication about corporate culture and growth strategies. This led to enhanced employee well-being and a favorable work environment, resulting in increased happiness levels in areas like “relationship and affiliation,” “sense of belonging,” “psychological stability,” and “contribution to achievements”. The 2022 survey saw substantial participation with around 94% of the 1,492 participants contributing, achieving a high score of 81 out of 100.

In 2023, SK materials is committed to elevating the overall corporate culture through various avenues such as strengthening management philosophy, propagating VWBE culture, achieving SUPEX Co., and promoting employee happiness. Furthermore, we conduct detailed organizational diagnostics to assess employee happiness levels and organizational culture when necessary. This process helps uncover and resolve various issues within the organization.

- 1) Based on the employee count during the survey period (8/29~9/8)
- 2) VWBE : Voluntarily, Willingly, Brain Engagement

### Culture Survey Items

Belief and Confidence in Management Philosophy		
Practicing and Overall Conditions of VWBE		
Systematic Management for Achieving SUPEX Company		
Employee Happiness/ Organizational Traits	Employee Well-being	
	Sustainable Community	Work/Growth
		Relationship/Affiliation
		Overall Conditions
Pursuit of Social Value and ESG Management		

## CASE

### Company Open Day

The Sejong Campus for High-tech Materials hosts an annual “Company Open Day” for SK specialty, SK trichem, SK materials performance, Global Tech Center, and Quality Analysis Center employees and their families. This event offers participants and their families the opportunity to explore the campus, visit workspaces and welfare facilities, and enjoy a meal together at the cafeteria. The aim is to create lasting memories while fostering a sense of affection and pride. Since its launch in June 2022, the Company Open Day has been organized 11 times. In 2022 alone, the event saw participation from a total of 60 employees and 131 family members.



Orientation

### “Avengers for Organizational Culture Enhancement” Influencer

SK materials airplus implemented the “Avengers for Organizational Culture Enhancement” Influencer initiative to elevate organizational culture and boost employee happiness. Influencers were selected from different departments, serving as bridges between employees and the company. Through these influencers, we gathered opinions and suggestions from employees about organizational culture. These insights were then used to unearth and execute various strategies, leading to the enhancement of our organizational culture. Furthermore, we organized organizational culture dialogue sessions between influencers and managerial staff to strengthen mutual understanding and camaraderie.



Influencer Promotion Poster



Organizational Communication

Communication Programs

SK materials aims to cultivate a culture where all employees, regardless of career level, age, or job tenure, can voice their opinions. To achieve this, we operate various communication channels and programs that bring together employees of diverse ranks, from CEO to executives and employees, enhancing communication. In particular, we strengthen programs focused on two-way communication between the company and employees, such as CEO MBWA, Comm. Day, and 1on1. These initiatives broaden opportunities for all employees to share company information and exchange opinions.

Communication Channels and Programs

Area	Content
CEO MBWA <sup>1)</sup>	<ul style="list-style-type: none"><li>CEO-led site tours and communication with employees by business location</li></ul>
Departmental Communication Sessions	<ul style="list-style-type: none"><li>Discovery of factors affecting and enhancing employee happiness within executive departments</li><li>Maximizing organizational culture advantages</li></ul>
Intranet Website	<ul style="list-style-type: none"><li>Operation of suggestion and inquiry boards, sector-specific bulletin boards like SHE Box</li><li>Listening to employee opinions through features like post recommendations and comments</li></ul>
Comm. Day	<ul style="list-style-type: none"><li>Transmission of major current issues and shared matters within departments</li><li>Facilitating communication between leaders and employees</li></ul>

1) MBWA : Management by Wandering Around, A management practice where leaders directly visit workspaces, observe operations, and engage in on-site interactions with employees



CEO MBWA

Respect for Human Rights and Diversity

Human Rights Management Roadmap



Human Rights Policy

SK materials supports the international standards and guidelines related to human rights and labor, including the Constitution of the Republic of Korea, UDHR<sup>1)</sup>, UNGPs<sup>2)</sup>, the Charter of the ILO<sup>3)</sup>, and the OECD Due Diligence Guidance for Responsible Business Conduct. All employees adhere to the Human Rights Management Policy, and SK materials reinforces the human rights management system to ensure the rights of all stakeholders, including employees and suppliers, are safeguarded. In particular, SK specialty joined the UNGC<sup>4)</sup> in 2021, publicly declaring its commitment to the Ten Principles, which include human rights and labor, and actively practices human rights management.

1) UDHR : Universal Declaration of Human Rights    2) UNGPs : UN Guiding Principles on Business and Human Rights    3) ILO : International Labor Organization    4) UNGC : UN Global Compact

Detailed Operational Policies for Human Rights Policy

① Respect for Human Rights	We respect all employees as individuals and strive to prevent any actions that infringe upon human rights.
② Work Environment and Safety	We continuously endeavor to create a comfortable work environment and prevent accidents by adhering to international standards, relevant laws and regulations, and internal guidelines related to the work environment.
③ Prohibition of Forced Labor	We do not compel any employee to work against their free will through physical or mental coercion. We do not demand the surrender of government-issued identification, passports, or labor permits as a condition of employment.
④ Prohibition of Child Labor	We do not employ children under the age of 15, and for individuals under 18, we ensure compliance with local labor laws and regulations to prevent engagement in hazardous or harmful tasks.
⑤ Compliance with Working Hours	We adhere to regular working hours and overtime regulations according to the standards established by each country or region's labor laws.
⑥ Wages and Employee Benefits	We establish wages for employees that exceed the minimum levels stipulated by the labor laws of each country or region.
⑦ Non-Discrimination	We do not discriminate in employment based on reasons such as gender, race, nationality, ethnicity, religion, or any other criteria. Similarly, we do not differentiate in terms of wages, promotions, or any other employment conditions based on the same factors.
⑧ Freedom of Association	The freedom of association and the right to collective bargaining as stipulated by the labor laws of each country or region are guaranteed. No adverse treatment will be applied due to membership, activity, or formation of labor unions.
⑨ Freedom of Expression	All individuals have the freedom of opinion and expression. They have the freedom to hold opinions without interference and to seek, receive, and impart information and ideas through any media and regardless of borders.
⑩ Personal Information Protection	To protect the rights of all stakeholders, we adhere to local regulations to safeguard personal information. Personal information will not be used or disclosed for other purposes without consent from the individuals concerned.



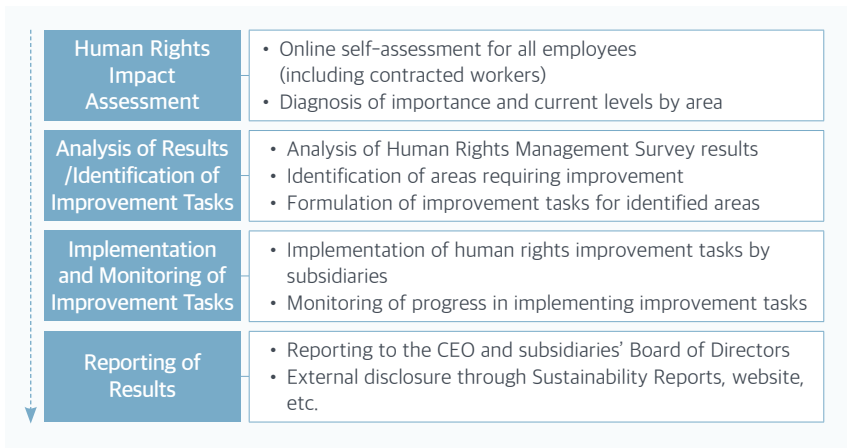
Human Rights Impact Management

SK materials operates a human rights impact assessment to identify and address potential human rights risks that may arise from its business activities.

Human Rights Impact Assessment Process

In 2023, SK materials and its subsidiaries began conducting an annual human rights impact assessment for all employees (including contracted workers), according to international guidelines such as UNGC and OECD. Throughout the year, we assessed the significance of 28 items across 3 domains: basic human rights, human rights of local communities and suppliers, and system/support. This process led to the development of tasks and plans for improvement. The outcomes of these tasks will be presented to the CEO and Board of Directors of each subsidiary and will be shared with relevant stakeholders.

Assessment Process



Assessment Categories

Basic Human Rights of Employees (22 criteria)	<ul style="list-style-type: none"><li>Diversity and Non-Discrimination (10 criteria)</li><li>Healthy Working Environment (8 criteria)</li><li>Safety and Health (3 criteria)</li><li>Protection of Human Rights from Customers (1 criterion)</li></ul>	Systems and Support Channels (2 criteria)
		Human Rights of Local Communities and Suppliers (4 criteria)

2023 Human Rights Impact Assessment Results

Key Areas for Improvement	Corrective Action and Response Plans
Fairness of HR Policies	<ul style="list-style-type: none"><li>Continuation of People Session to enhance evaluation fairness and encouragement of implementing feedback from assessment results</li></ul>
Healthy Working Environment (Mutual Respect / Compliance with Working Hours)	<ul style="list-style-type: none"><li>Implementation of business etiquette education to strengthen mutual respect, along with the establishment of Ground Rules for communication within each department</li></ul>
	<ul style="list-style-type: none"><li>Establishment of a working hours monitoring/alert system</li><li>Development of a refreshment leave plan and monitoring its execution rate</li></ul>
Channel for Reporting Human Rights Issues / Anti-Corruption and Ethics Support Process	<ul style="list-style-type: none"><li>Enhancement of awareness among employees regarding the reporting channel and support process through education and promotion</li></ul>

Human Rights Violation Prevention Program

Each year, we offer mandatory online training to all employees, covering topics like sexual harassment prevention, disability awareness, personal data protection, and workplace harassment prevention, as required by law. Furthermore, we have established the “Happiness 112” employee code of conduct, explicitly prohibiting behaviors like verbal abuse and offensive language. Regular surveys ensure ongoing implementation of these preventive measures.



Culture of Diversity and Inclusion

Creating a Work Environment for Employee Diversity

SK materials strives to identify issues that hinder diversity within the organization and work towards improvements, initiate programs to enhance diversity, and cultivate an inclusive organizational culture of mutual respect and acceptance.

**Female-Inclusive Work Environment** - We are committed to promoting gender equality throughout our workforce. This includes gender-neutral hiring, competency development, fair evaluation, and supportive programs to help women advance into leadership roles without career interruptions. Our maternity policies align with legal standards, encompassing maternity leave, childcare-related reduced working hours, and fertility leave. We have established dedicated spaces for women employees. For empowering women leaders, we identify and support talented women through focused training. As of 2022, we have nurtured 10 women leaders within our organization.

**Promoting Employee Awareness** - SK materials defined a culture of diversity and inclusion that it needs to pursue. To enhance employee awareness, we share global management trends that prioritize diversity and inclusion. We also learn from other companies’ systems and best practices to foster a more inclusive organizational culture.

Workplace for Employees with Disabilities, “Happy Companion”

SK materials operates “Happy Companion,” a subsidiary workplace for employees with disabilities, aiming to increase job opportunities and economic independence for disabled workers. As of late 2022, “Happy Companion” employs 14 disabled individuals, including 12 with severe disabilities. Their responsibilities include tasks such as improving environments, managing laundry facilities, and postal services.

The focus is on their well-being, with ongoing efforts to enhance their roles and identify suitable positions. Our commitment is to provide meaningful employment and explore growth opportunities for disabled individuals.

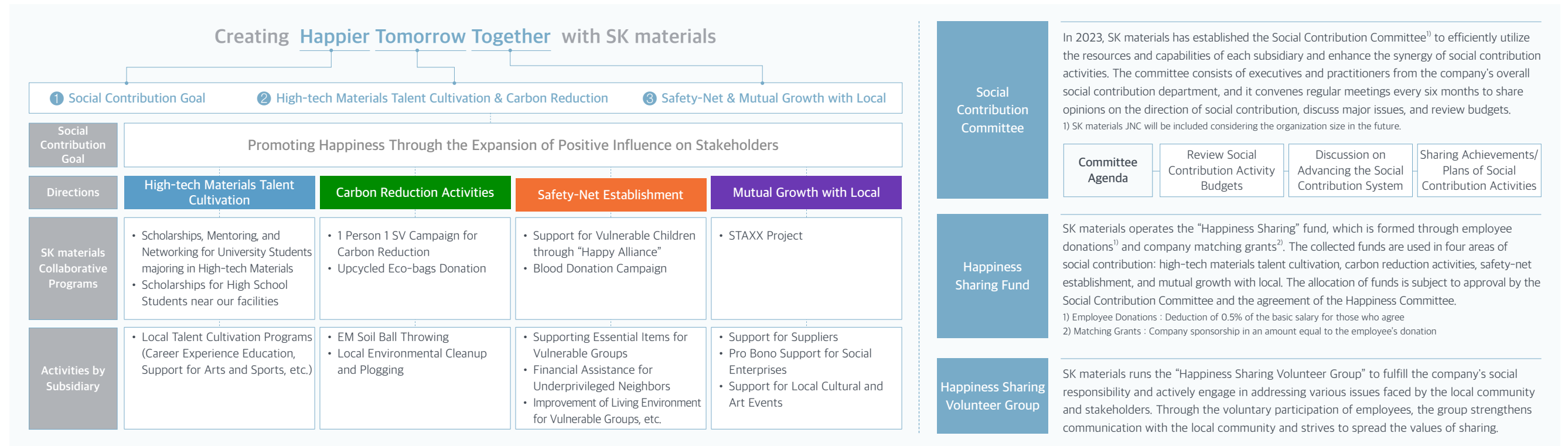
# Social Contribution

## SK materials' Social Contribution System

Under the slogan, "Creating Happier Tomorrow Together with SK materials," SK materials is committed to expanding positive influence and enhancing happiness for all stakeholders through our social contribution activities. To enhance the competitiveness of South Korea's advanced materials industry, we are offering programs for cultivating talents in high-tech materials industry in South Korea. Moreover, we are dedicated to reducing carbon emissions in alignment with our ESG management policy. Additionally, we are committed to establishing a safety net for vulnerable groups and engaging in social contribution activities that promote mutual growth in the communities where our subsidiaries operate.

Our social contribution programs are divided into collaborative programs involving all subsidiaries and individual programs tailored to the specific circumstances and needs of each subsidiary. The overall planning and execution of the programs are led by the Sustainability Department along with the social contribution teams of each subsidiary. In 2023, we established a Social Contribution Committee to guide the direction of SK materials' social contribution activities and grant budget approval authority. Matters discussed within the committee are subsequently approved by the Happiness Committee within each subsidiary before implementation. Furthermore, the progress of our social contribution activities is communicated to employees through various channels, including internal broadcasts and notice boards. Regular surveys are conducted among employees to gauge awareness, satisfaction, suggestions, and feedback related to our social contribution activities, and the results are integrated into the operation of our social contribution programs.

### Social Contribution System



# High-tech Materials Talent Cultivation

SK materials is actively engaged in talent cultivation programs to enhance the competitiveness of the high-tech materials industry and ensure a sustainable future for the local community. We grant scholarships for university students majoring in material-related fields and provide educational programs for local youths to enhance their understanding of the industry. Moreover, we have established programs to support local youths' talents, enabling them to pursue their aspirations through art scholarships and employment assistance.



Hope, Sharing, and Dream Support project

## High-tech Materials Talent Development Programs

As a leader in high-tech materials technology, SK materials seeks to foster talent in this field to contribute to the future growth of South Korea. Starting in 2023, we will select 10 universities renowned for their expertise in high-tech materials disciplines such as chemistry and advanced materials engineering. This program will extend financial support of KRW 2 million to exceptional students from economically disadvantaged backgrounds (one student per academic year from freshman to senior year) at these universities. Moreover, an annual event, "High-tech Materials Scholar's Night," will be organized to facilitate networking and career guidance sessions between scholarship recipients and SK materials alumni who graduated from the same universities. Furthermore, we will introduce a program to select one outstanding student from each grade level at six high schools situated near key SK materials business sites (Yeongju, Sangju, Sejong). These students will receive scholarships of KRW 1 million per year.

We will continue expanding the benefits, encompassing special lectures on materials technology, internships, and plant visits. This approach ensures that the chosen scholarship recipients actively contribute to elevating the competitiveness of South Korea's high-tech materials industry.

## Career Experience Education

SK specialty is actively conducting career experience education for local elementary, middle, and high school students to enhance their interest and understanding of semiconductor materials. We provide career counseling and specialty gas-related lectures to local students. In response to the increasing demand for online learning due to the impact of COVID-19, we have updated the existing course materials into e-learning content and game-based content.

## Local Talent Development Program

SK materials airplus collaborates with the global children's rights organization "Good Neighbors" to carry out the "Hope, Sharing, and Dream Support" project for underprivileged youth in the local community. In 2022, we selected four elementary schools and two middle schools in Ulsan to provide career experience programs, group activities, mentoring, and more to a total of 30 students.

Moreover, SK specialty provides scholarships to support extracurricular activities in the arts, such as soccer, cycling, and orchestras, for six local elementary, middle, and high schools, as well as universities.



Barista Certification Education Program

## Employment-Linked Certification Support

SK trichem partnered with the "Areum Youth After-School Academy" in Sejong to offer a barista certification education program for underprivileged youths. From recruiting instructors to curriculum development, material preparation, and certification exams, we supported the entire process. As a result, all 10 participating students successfully obtained a level 2 barista certification.



# Carbon Reduction Activities

SK materials is taking a leading role in the domestic materials industry by aiming to achieve both RE100 and Net Zero by 2030. We are focusing on eco-friendly projects such as GHG emission reduction, waste reduction, and increased water recycling. These principles are reflected in our corporate social responsibility efforts, where we are actively promoting various activities to reduce carbon emissions.



## 1 Person 1 SV Campaign for Carbon Reduction

SK materials promotes carbon reduction among employees through the “Haenggarae” social value app. The “1 Person 1 SV” campaign suggests simple daily actions like walking, using stairs, separating plastic waste, and using reusable cups for carbon reduction. The app shows real-time carbon reduction effects, aiming to cut over 128 tons of CO<sub>2</sub> annually. We organize events and promotions to boost employee participation.

## Upcycled Eco Bags and Bedding Donations

SK materials is involved in a project that transforms discarded materials into environmentally friendly products. We create eco-friendly bags from used work uniforms from our main factories. Additionally, SK materials employees collaborate with underprivileged children to design these bags, which are then distributed to those in need in Yeongju, Sangju, and Sejong.

Furthermore, SK specialty and SK Resonac partnered with Save the Children in October 2022 to upcycle waste plastics from our facilities into bedding for donation. Through the social enterprise “Usisan,” waste plastics were transformed into blankets and pillows and provided to 65 vulnerable households in Yeongju.



Upcycled Bedding Donations  
Plogging Along Local Rivers



River Cleanup with EM Soil Balls

## Throwing EM Soil Balls

Since 2022, SK materials has been conducting a volunteer activity called “Making and Throwing EM Soil Balls” to improve the water quality of rivers near various business sites across the country. The EM soil balls made by employees are delivered to local business sites and matured for two weeks. They are then thrown into rivers in various regions, including Yeongju, Ulsan, and Sejong City, to improve water quality. Additionally, daily environmental cleanup activities like “plogging” (picking up litter while jogging) are carried out near industrial complexes and riverbanks.

In particular, SK materials airplus organized an environmental protection volunteer activity called “Kang Kang Joo Ul Lae” in Seolbong Park near its Icheon worksite on June 14, 2022, in celebration of World Environment Day. Employees and students from the local youth culture center in Icheon participated in this activity, which included throwing EM soil balls, plogging, and planting succulents. Through these environmental cleanup activities, participants had the opportunity to enhance their awareness of environmental protection.

1) Soil balls : A ball made of 80 types of microorganisms and yellow soil to purify water quality and eliminate odors



# Safety-Net Establishment

SK materials is working as a collaborative partner within the local community, striving to address social issues that the community is facing. In particular, we are conducting tailored social contribution activities for vulnerable groups within the local area, such as underprivileged youth, individuals with disabilities, and elderly individuals living alone, in order to establish a safety net for the socially vulnerable.



Improvement of Housing Environment for Vulnerable Groups

## Support for Vulnerable Children through the Happy Alliance

As a member of the Happy Alliance<sup>1)</sup> social contribution network, SK materials actively supports at-risk children through various activities. Our “Happy Two Meals Project” provides specially prepared nutritious meals for malnourished children, considering their preferences and needs. In 2022, the project extended to offer “Happy Meal boxes” to 56 children in partnership with the local government for six months. We also engage in donation and volunteer efforts, creating “Happiness Boxes” with essential items like nutritious snacks, hygiene products, and school supplies for children.

1) Happy Alliance : A coalition comprising businesses, government bodies, and ordinary citizens working together to establish a social safety-net for underprivileged youth facing issues like hunger, as well as other welfare benefits

## Group Blood Donation Campaign

Given the uncertainties in blood supply due to the effects of COVID-19, we advocate for group blood donations during periods of anticipated shortages. This program engages not only our employees but also partners and local welfare organizations in the regions where we operate. These coordinated efforts aim to generate social value through blood donation campaigns.



Happy Alliance Happiness Boxes



Group Blood Donation

## Sharing Happiness with Community

We collaborate with local municipalities near our facilities to assist economically disadvantaged groups, including the elderly living alone, single-parent households, individuals with disabilities, and multicultural families. This support takes the form of essential items like meal boxes, rice, kimchi, coal, and heating oil. We also engage in activities such as aiding crime victims and improving living conditions for vulnerable groups by maintaining roofs, drainage systems, and replacing floor coverings to prepare for extreme weather.

SK trichem strives to enhance the living environment for individuals with mobility challenges through the “Green RE: House” project. This involves upgrading facilities in households facing economic difficulties due to illnesses or disabilities. In 2022, we focused on safety measures, installing non-slip mats and safety equipment in the homes of people with disabilities. We also conducted energy-efficient upgrades by replacing outdated appliances, installing LED lighting, and upgrading window frames.

Furthermore, we explore different forms of support, including sponsoring braille printers for the Sejong Braille Library and engaging in activities that involve applying braille stickers.

## Local Community Safety Training

SK specialty conducts regular safety training programs for residents living near its factories. The program includes plant tours showcasing advanced safety facilities, as well as discussions with safety officers to explain our major safety policies and systems. Moreover, an emergency manual was developed to guide proper actions and evacuation procedures during crises.

# Mutual Growth with Local

## STAXX Project

The STAXX Project, driven by SK specialty in Yeongju, is a local mutual growth project that fosters urban revitalization and local economic advancement. This project targets challenges like population decline and economic slowdowns faced by Yeongju. It achieves this by identifying and nurturing social ventures with business models that leverage local resources. With a KRW 5 billion donation from SK materials, we have chosen eight social ventures, with plans to select two more. To support these ventures, the project encompasses four core activities: acceleration, establishing an entrepreneurial ecosystem, creating collaborative spaces, and operating investment funds.

Our commitment lies in ensuring enduring cycles of entrepreneurship, fostering thriving social ventures, stimulating the economy, and attracting young populations. We aim to position the STAXX Project as a leading example of local mutual growth nationwide, transforming Yeongju into a hub where young aspiring entrepreneurs gather.

## Support for Local Cultural and Art Events

SK specialty sponsors various festivals held in Yeongju to contribute to local cultural development. Notably, we made a commitment to purchase 10,000 admission tickets as a gesture of goodwill for the successful Yeongju World Punggi Ginseng Expo held in 2022. These tickets were distributed to vulnerable groups first. Furthermore, we support the Smile Festival organized by Yeongju Elderly Welfare Center, and our employees actively participate as volunteers to support on-site event operations.

SK materials actively participates in collaborative endeavors to enhance the well-being of local communities and stakeholders. Specifically, we collaborate with local governments and relevant organizations to address challenges like economic downturns and population decline faced by local cities. Furthermore, we have established an employee volunteer group to drive mutual growth initiatives grounded in individual expertise.



STAXX



Local Event Sponsorship

## SK Pro Bono Activities

SK specialty and SK materials Group14 jointly launched pro bono<sup>1)</sup> initiatives benefiting two local social enterprises in Sangju. Leveraging our SHE experts, we conducted safety consultations for these enterprises, evaluating their operational processes and fire facilities.

Our support encompassed enhancing fire facilities with directional signs, firefighting equipment, and fire detectors. Additionally, we provided protective gear and operational signs for improved safety management. We concentrated on managing safety facilities with identified risks, addressing concerns like vehicle collisions, falls, and slips. Measures such as floor tape and paint delineating pathways were adopted to prevent pedestrian-forklift collisions. To mitigate falling and slipping risks, we installed intermediate pillars and anti-slip pads.

Our commitment extends to sharing workplace safety expertise, elevating SHE standards for local small businesses, and fostering a secure local community.

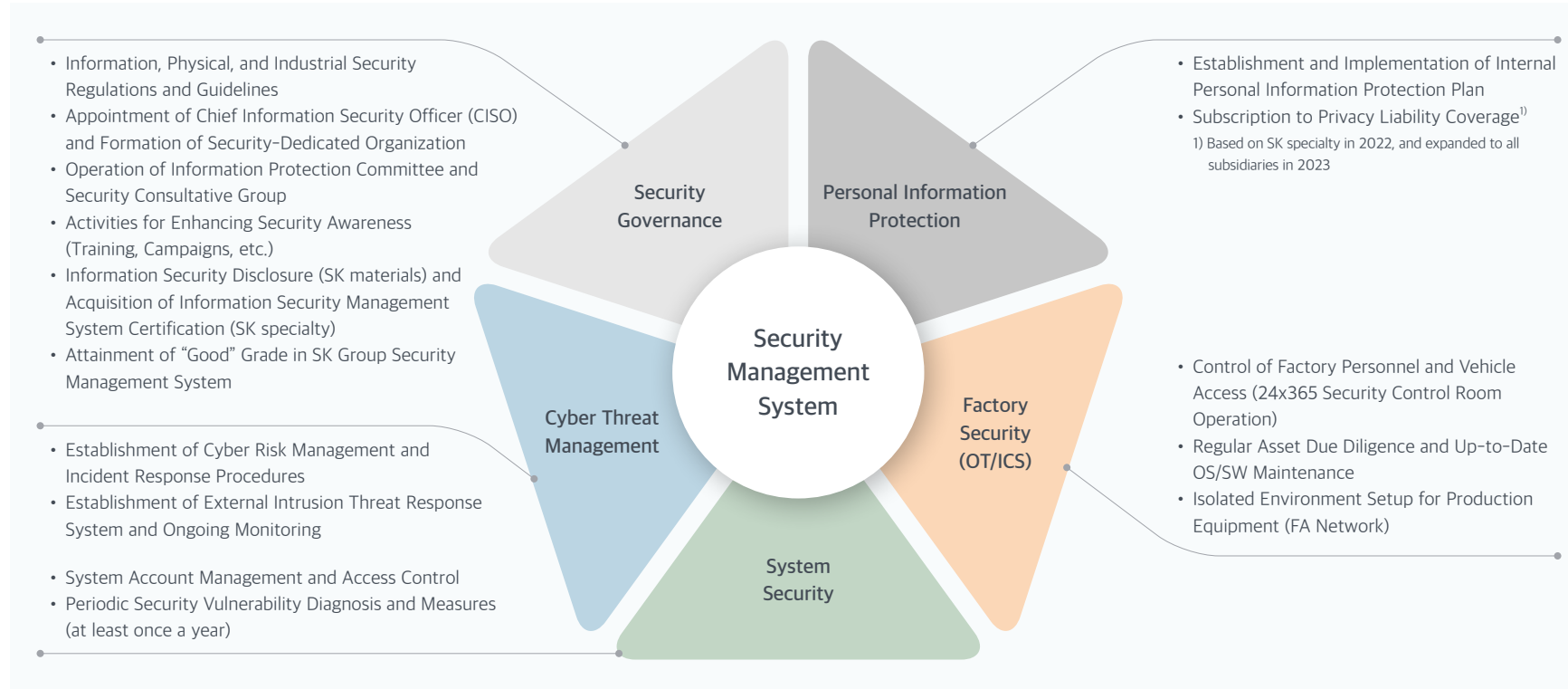
1) Pro bono refers to the voluntary and fee-free contribution of a professional's specialized knowledge or services to society.



SK Pro Bono Activities - Safety Consulting



# Security and Information Protection



## Security Regulations and Guidelines

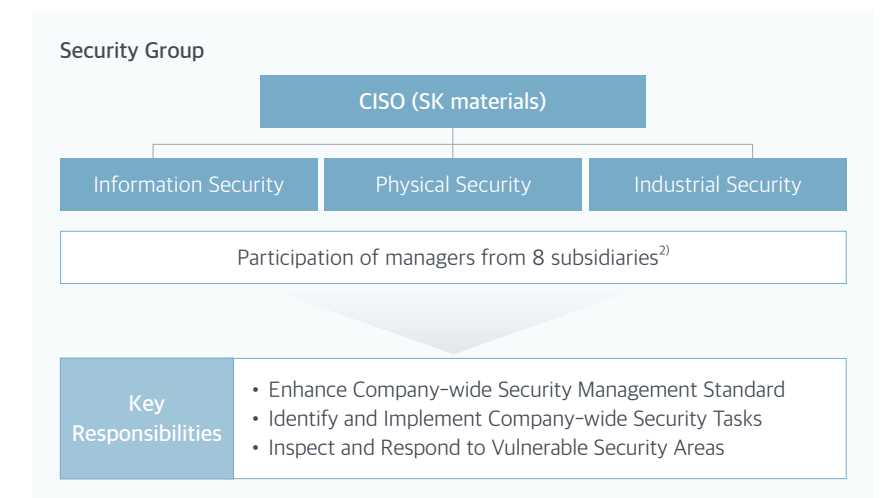
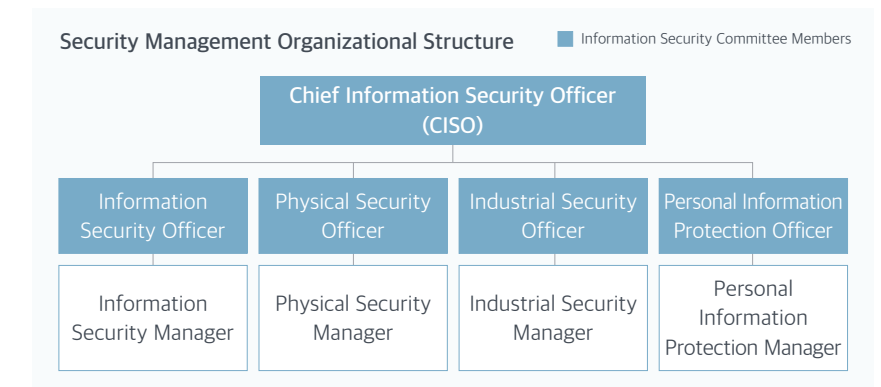
SK materials has established Information Security Management Regulations and 17 detailed guidelines to effectively respond to changing internal and external information security threats. Additionally, we operate Physical Security Regulations and 4 detailed guidelines, as well as Industrial Security Regulations and 5 detailed guidelines, to build security processes for protecting industrial facilities and critical information. All regulations and guidelines are shared with all employees through the groupware system. These are reviewed and revised by the Chief Information Security Officer (CISO) at least once a year.

## Security Regulations and Guidelines

Information Security Regulations	Physical Security Regulations	Industrial Security Regulations
<ul style="list-style-type: none"> <li>Information Asset Management</li> <li>Incident Response</li> <li>Personal Information Protection</li> <li>Security Inspection and Protection</li> <li>Audit Guidelines, etc.</li> </ul>	<ul style="list-style-type: none"> <li>Facility Security</li> <li>Vehicle Access</li> <li>Import/Export Guidelines for Items, etc.</li> </ul>	<ul style="list-style-type: none"> <li>Industrial Technology Asset Management</li> <li>Industrial Security Inspection</li> <li>Incident Response</li> <li>Industrial System Operation Guidelines, etc.</li> </ul>

## Security Management Organization

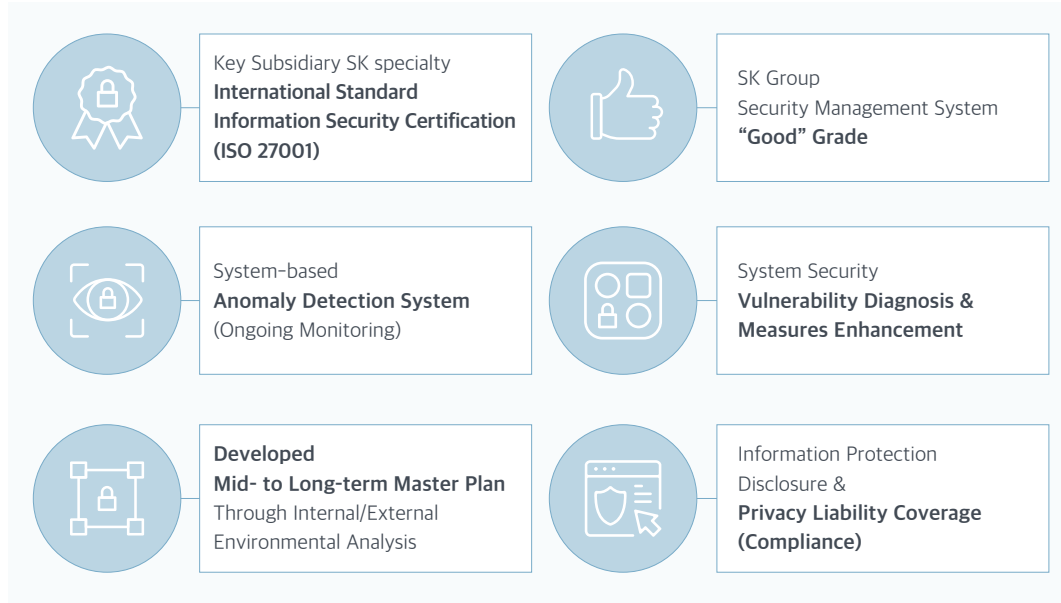
SK materials' CISO manages the formulation, revision, and compliance of security policies. We take responsive measures to security threats in information, physical, industrial, and personal information areas by establishing designated organizations in each area. Furthermore, we discuss group-wide information security matters through a security consultative group involving security managers from both domestic and overseas corporations. The relevant matters are deliberated and decided in the Information Security Committee, which is the highest decision-making body composed of the CISO and information security managers.



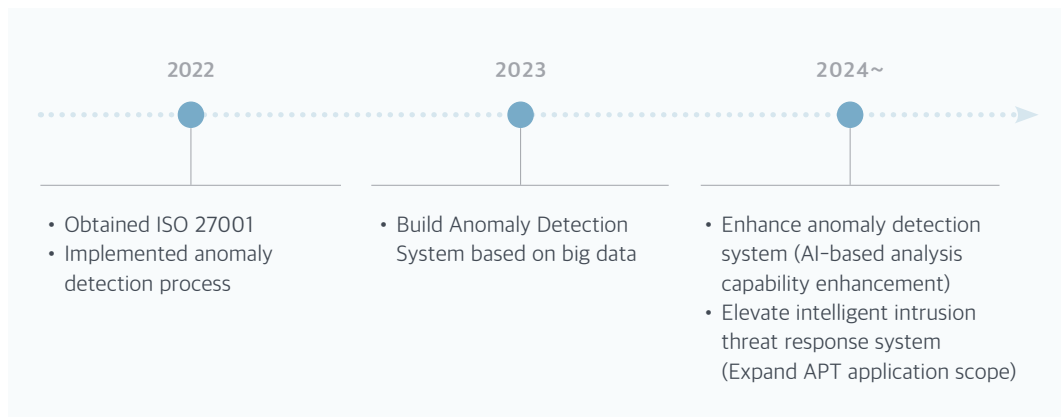
2) Including Zhenjiang Corporation

## Information Security

### 2022 Key Achievements in Information Security



### Information Security Roadmap



### Information Security Certification and Solutions

SK materials recognizes the importance of information security. To this end, we strive to establishing an advanced security environment. This includes refining response measures based on incident type, setting up a CVSS<sup>1)</sup>-based reporting process, and implementing both a Virtual Desktop Infrastructure (VDI) and a data backup system. In 2022, SK specialty’s commitment to information protection was globally recognized when we achieved the international standard for Information Security Management System (ISO 27001) certification without any discrepancies. Furthermore, SK materials constantly monitors security threats, such as malicious codes, using the APT<sup>2)</sup> defense solution. We also respond to various information breaches through security solutions including ISD/IPS System<sup>3)</sup>, firewalls, and Distributed Denial of Service (DDoS) protector. In 2023, a big data-based anomaly detection system was established to automate security threat responses and management. In 2024, the anomaly detection system will be enhanced to create a Security Threat Response System that integrates big data and AI technologies. Moreover, various systems like output security solutions and Endpoint APT will be introduced to securely manage the company’s information assets.

1) CVSS : Common Vulnerability Scoring System, an open framework for rating the severity of security vulnerabilities

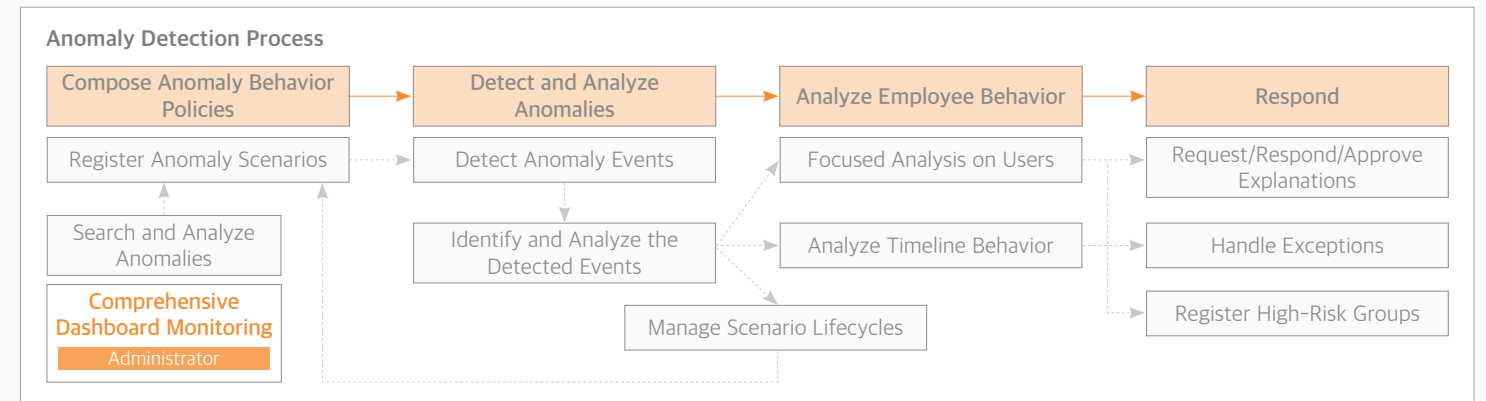
2) APT : Advanced Persistent Threat, sophisticated and sustained cyberattack using methods like malicious email attachments and pattern detection

3) IDS/IPS System : Intrusion Detection System and Intrusion Prevention System

### CASE

#### Anomaly Detection System

SK materials has applied an information security system that improved upon the traditional approach to prevent causes of data leaks. This system identifies and prevents threats in advance, establishing a comprehensive protection system against anomalies. In 2022, we introduced a new anomaly detection system that utilizes information gathered from the big data platform. This comprehensive management system is used to define, detect analyze, and respond to anomalies such as misuse of personal information and attempted information leaks. We take measures according to risk levels by conducting timeline-based scenario analysis of employees’ office activities, including email sending, document printing, and external storage device usage. In 2024, AI technology will be applied to the anomaly detection system to build a more sophisticated monitoring and response process. During scenario analysis, machine learning techniques will identify individual behavior patterns, comparing and analyzing similarities with previous abnormal behavior to effectively identify potential threats.



### Internalizing Information Security Awareness

SK materials annually conducts online education for all employees to enhance their understanding of preventive measures against security incidents, including cyberattack response and physical/personnel security management. Additionally, specialized group trainings, such as information/physical security lectures, are provided to new employees. Furthermore, to raise awareness about security threats involving malicious code infiltration and internal data breaches through emails, a company-wide mock drill on responding to malicious emails is carried out. Starting in 2023, the result of the mock drills and daily security routine check will be reflected in the anomaly detection system, to quantify and manage security levels of each team.

Moreover, a set of employee security rules has been formulated to ensure employees' compliance with the five major security areas. We strengthened guidance on Information Security Management Regulations, information breach cases, and responsive measures to prevent employees from violating them. We also implement a security campaign that provides information about email security rules and employees' daily security routine providing information on data leakage and response procedures, and implementing security campaigns such as email security rules and employee daily security routine guides. Moving forward, we will continue to adapt security rules to changing security trends and conduct campaigns for new IT technologies, fostering a culture of voluntary compliance with security regulations.

#### Security Rules for Employees

Document Security	<ul style="list-style-type: none"> <li>Prohibit unauthorized decryption and external exposure of documents</li> <li>Re-encrypt after external transmission</li> <li>Immediate disposal or shredding of unnecessary documents</li> </ul>
Email Security	<ul style="list-style-type: none"> <li>Reconfirm sender, recipient, and CC addresses</li> <li>Exercise caution when using external email accounts</li> </ul>
Mobile Security	<ul style="list-style-type: none"> <li>Prohibit capturing or recording work-related materials</li> <li>Exercise caution when clicking links in SMS messages</li> </ul>
PC Security	<ul style="list-style-type: none"> <li>Regularly change passwords and avoid sharing them</li> <li>Exercise caution when installing unauthorized software or wireless networks</li> <li>Block access to harmful websites</li> </ul>
Daily Security	<ul style="list-style-type: none"> <li>Mandatory use of employee identification cards, no lending or transferring to others</li> <li>Prohibit the use of personal PCs and external storage devices within the company</li> </ul>

### Personal Information Protection

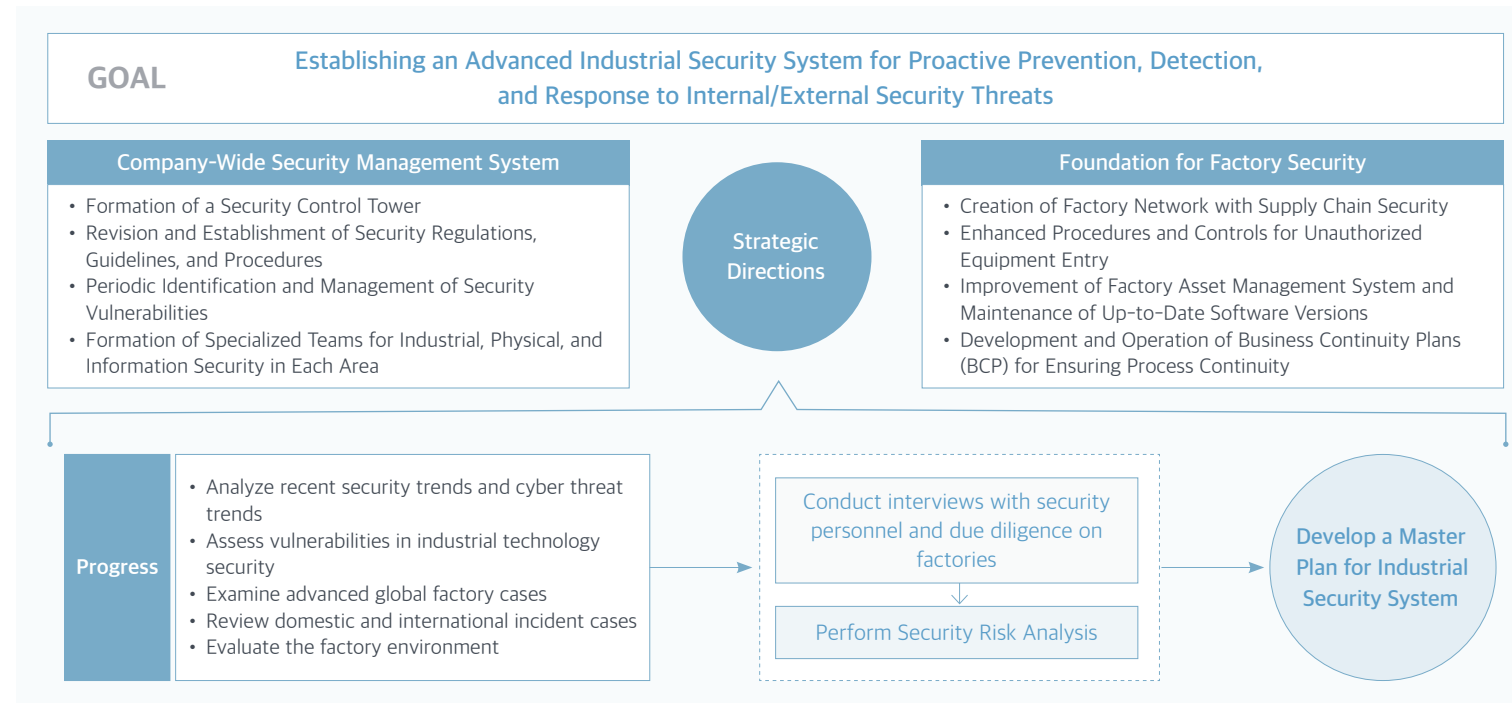
SK materials complies with domestic and international privacy laws including the Personal Information Protection Act. We established guidelines for the collection, recording, storage, retention, processing, editing, search, output, use, provision, and disposal of all personal information handled during the entire processing cycle. All acquired personal information is stored encrypted, and a designated personal information protection manager oversees management, operation, and auditing. Additionally, we conduct education and management level assessments for personnel handling personal information to prevent privacy breaches. A control system is in place to block unauthorized access to personal information. In 2022, we performed security vulnerability checks across the entire internal system, including databases, websites, and source codes, to prepare for any potential threats of personal information leakage during work operations. In efforts to minimize the risks of personal information breaches, losses, and damages, SK specialty joined the "Privacy Liability Coverage" in 2022, and in 2023, we expanded this coverage to all subsidiary companies.





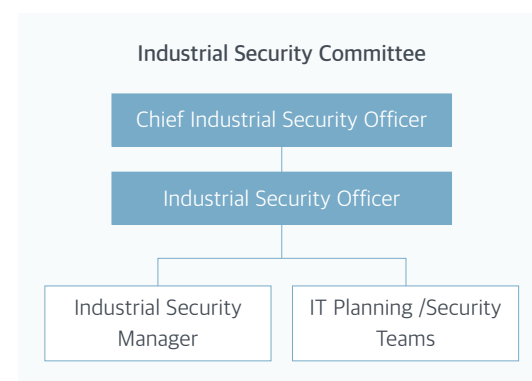
## Industrial Security

### Industrial Security Master Plan



### Industrial Security System

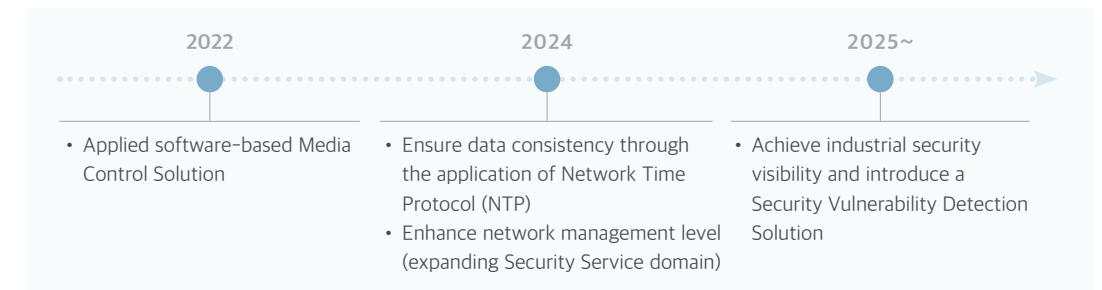
Recently, with the acceleration of digitization in manufacturing equipment, security threats and damages to Operational Technology(OT) targeting the digital systems of factories, are becoming more significant. In response, SK materials has formulated the Industrial Security Master Plan to address the latest OT security threats. Furthermore, to enhance industrial technology security, we are operating a separate organization called the Industrial Security Committee. The Industrial Security Committee consists of industrial security managers, administrators, and IT planning and security teams, working together to review and approve major industrial security-related matters.



### 2022 Key Achievements in Industrial Security



### Industrial Security Roadmap



### Industrial Security Activities

SK materials is strengthening its industrial security system to address both internal/external security threats and the rapidly changing industrial landscape. To prevent significant data leaks related to production, unauthorized media usage and equipment entry are prohibited. We implemented a software-based media control approach to proactively counter external media-related intrusion threats. We are expanding internal security audits to subsidiaries, providing guidelines for vulnerability improvements based on audit results. In this regard, industrial, physical, and daily security routine checklists have been developed incorporating SK Group security guidelines and relevant regulations. These checklists are periodically revised with reference to regulations and guidelines. We are planning to enhance control over factory entry, as well as inbound and outbound items, based on site inspection results. Starting in 2024, the industrial control systems will incorporate Network Time Protocol (NTP) and network-related security services will be included in maintenance agreements to bolster network management. In 2025, we will introduce a solution for network asset identification and traffic monitoring to fulfill security requirements and eliminate security vulnerabilities.



# Governance

SK materials practices board-centered responsible management and operates a company-wide risk management system.



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# Corporate Governance

SK materials conducts board-centered responsible management based on its Corporate Governance Charter. The Board of Directors (BOD) makes decisions on key management matters, including investment, management, finance, accounting, and personnel. The BOD also supervises its directors’ execution of duties.

## Composition of the Board of Directors<sup>1)</sup>

(As of July 2023)

Affiliation	Category	Name	Expertise	Key Career	Term of Office
SK specialty	Executive Director	Lee Kyu-won	Management/Finance	CEO & President [Former] SK materials airplus Co.,Ltd CEO, SK materials Co.,Ltd CFO	2021.12~2024.12
	Outside Director	Tak Yong-seok	Tech (Electrochemical Engineering)	Outside Director, Professor of Chemical Engineering Department at Inha University [Former] SK materials Co.,Ltd Outside Director	2021.12~2024.03
	Other Non-executive Director	Lee Yong-wook	Management/M&A/Investment	Board Chair, SK Inc. materials President [Former] SK Inc. Investment 1 Center Executive	2021.12~2024.03
		Kim Yang-taek	Management/M&A/Investment	SK Inc. Advanced Material Investment Center Head [Former] SK Inc. Investment 1 Center Group Head	2021.12~2024.12
	Auditor	Lim Ju-hwan	Finance	SK Inc. Finance Operation Department Head [Former] Essencore Executive	2021.12~2024.12
SK materials airplus	Executive Director	Oh Jong-jin	Management	CEO, Board Chair [Concurrent] SK trichem Co.,Ltd CEO [Former] SK siltron Co.,Ltd Sales Division Head	2022.01~2025.01
	Other Non-executive Director	Park Byung-bae	Planning/Investment	SK Inc. materials Portfolio Mgmt. Department Head [Former] SK Inc. Advanced Material Investment Center Team Leader	2023.07~2026.07
		Park Jong-bok	SHE	SK Inc. materials SHE Management Department Head [Former] SK specialty Co.,Ltd SHE Department Head	2022.03~2025.03
		Kim Hwa-kyun	HR	SK Inc. materials Corporate HR Department Head [Former] SK materials Co.,Ltd Corporate Culture Department Head	2022.03~2025.03
		Choi Dong-wook	Investment	SK Inc. Advanced Material Investment Center Semiconductor Material Group Head [Former] SK Inc. Advanced Material Investment Center Battery Material Group Head	2022.03~2025.03
	Auditor	Jang Moon-hyuk	Accounting/Finance	SK Inc. materials Management Corporate Management Department Head [Former] SK materials Co.,Ltd Finance Department Head	2021.01~2024.01

1) 6 subsidiaries, excluding SK specialty, have the CEO concurrently serving as the Chairman of the Board of Directors to ensure swift adaptation to changing business environments and enhance the operational efficiency of the board



Affiliation	Category	Name	Expertise	Key Career	Term of Office
SK trichem	Executive Director	Oh Jong-jin	Management	CEO, Board Chair [Concurrent] SK materials airplus Co.,Ltd CEO [Former] SK siltron Co.,Ltd Sales Division Head	2023.01~2026.01
		Lee Sang-kyung	R&D	SK trichem Co.,Ltd R&D Department Head [Former] SK trichem Co.,Ltd Research & Sales Department Head	2021.03~2024.03
	Other Non-executive Director	Park Ki-sun	Business Strategy	SK Inc. materials Business Development Center Head [Concurrent] SK materials Group14 Co.,Ltd CEO [Former] SK materials Co.,Ltd New Business Development Department Head	2023.03~2026.03
		Kiyoshi Tazuke	Management	Tri Chemical Research Center President [Former] Tri Chemical Research Center Sales Division Head	2022.03~2025.03
		Yoshihide Suzuki	Accounting/Finance	Tri Chemical Research Center Director [Former] Tri Chemical Research Center General Manager	2022.03~2025.03
	Auditor	Jang Moon-hyuk	Accounting/Finance	SK Inc. materials Management Corporate Management Department Head [Former] SK materials Finance Management Department Head	2021.01~2024.01
		Ahn Byung-hoon	Management	Tri Chemical Co.,Ltd Research Center Korea Office President [Former] Tri Chemical Co.,Ltd Research Center Korea Office Vice President	2021.03~2024.03
SK Resonac	Executive Director	Kim Young-min	Management/Marketing	CEO, Board Chair [Concurrent] SK specialty Co.,Ltd Sales Division Head	2023.03~2026.03
		Gwak Gi-seop	Production	SK specialty Co.,Ltd Production Division Head [Former] SK Global Chemical Co.,Ltd Optimized Operation Department Head	2021.01~2024.01
		Park Byung-bae	Planning/Investment	SK Inc. materials Portfolio Mgmt. Department Head [Former] SK Inc. Advanced Material Investment Center Team Leader	2023.03~2026.03
		Ohara Yoshinori	Marketing	Resonac Corp. Information Electronics and Chemical Products Division Head [Former] Showa Denko K.K Information Electronics and Chemical Products Division Head	2023.01~2026.01
		Sasaki Toru	Product Development	KOREA SHOWA CHEMICAL CO. CEO [Former] Showa Denko K.K Information Electronics and Chemical Products Division Deputy Head	2023.03~2026.03
	Auditor	Yoneyama Kunihiro	Finance	Resonac Corp. Information Electronics Business Division [Former] Showa Denko K.K Information Electronics Business Division	2023.03~2026.03
SK materials performance	Executive Director	Ha Jung-hwan	R&D/Management	CEO, Board Chair [Concurrent] SK Inc. materials CTO, SK materials JNC Co.,Ltd CEO [Former] SK Inc. Photo & Color Material Advisory Council Member	2021.09~2024.09
		Ahn Seon-yeol	Business Strategy	Photo Business Innovation Department Head [Former] SK Inc. Advanced Material Investment Center Team Leader	2020.02~2026.02
	Other Non-executive Director	Park Ki-sun	Business Strategy	SK Inc. materials Business Development Center Head [Concurrent] SK materials Group14 Co.,Ltd CEO [Former] SK materials Co.,Ltd New Business Development Department Head	2020.02~2026.02
		Kim Tae-hun	R&D/Management	SK Inc. materials Adv. PKG Development Department Head [Former] SK Inc. Advanced Material Investment Center Team Leader	2023.03~2026.03
		Park Byung-bae	Planning/Investment	SK Inc. materials Portfolio Mgmt. Department Head [Former] SK Inc. Advanced Material Investment Center Team Leader	2023.03~2026.03
	Auditor	Jang Mun-hyuk	Accounting/Finance	SK Inc. materials Management Corporate Management Department Head [Former] SK materials Co.,Ltd Finance Department Head	2021.01~2024.01

Affiliation	Category	Name	Expertise	Key Career	Term of Office
SK materials JNC	Executive Director	Kim Su-hyun	Management/Quality Management	CEO [Former] JNC Corp. CEO & President	2021.06~2024.06
		Ha Jung-hwan	R&D/Management	CEO, Board Chair [Concurrent] SK Inc. materials CTO, SK materials JNC Co.,Ltd CEO [Former] SK Inc. Photo & Color Material Advisory Council Member	2022.02~2025.02
		Toshiaki IKUTA	R&D	SK materials JNC Co.,Ltd Product Development Department Head [Former] JNC Corp. Information Materials Division Technology Department Head	2021.06~2024.06
	Other Non-executive Director	Park Ki-sun	Business Strategy	SK Inc. materials Business Development Center Head [Concurrent] SK materials Group14 Co.,Ltd CEO, SK materials performance Co.,Ltd Other Non-executive Director [Former] SK materials Co.,Ltd New Business Development Department Head	2021.06~2024.06
		Kang Gwang-hyun	R&D/Management	JNC Corp. Information Materials Division Head SK JNC Japan Co.,Ltd CEO [Former] JNC Corp. Display Materials Division Head	2021.06~2024.06
	Auditor	Yoshihiro FUSAMOTO	Accounting/Finance	JNC Corp. Financial Manager, Kyushu Chemical Industries Auditor, Taiwan JNC Auditor, Korea JNC Auditor, ZesChem Auditor [Former] JNC Corp. Management Planning Department Deputy Manager	2021.08~2024.07
		Jang Moon-hyuk	Accounting/Finance	SK Inc. materials Management Corporate Management Department Head [Former] SK materials Co.,Ltd Finance Department Head	2022.03~2025.03
SK materials Group14	Executive Director	Park Ki-sun	Business Strategy	CEO, Board Chair [Concurrent] SK Inc. materials Business Development Center Head, SK materials performance Co.,Ltd Other Non-executive Director [Former] SK materials Co.,Ltd New Business Development Department Head	2021.10~2024.10
	Other Non-executive Director	Kang Seon-yeong	Quality Management	SK Inc. materials Quality Analysis Center Head [Former] SK innovation Chemical & Polymer R&D Center Head	2023.03~2026.03
		Park Byung-bae	Planning/Investment	SK Inc. materials Portfolio Mgmt. Department Head [Former] SK Inc. Advanced Material Investment Center Team Leader	2022.03~2025.03
		Eric Charles Luebbe	Management/Technology	Group 14 Technologies CEO & Co-Founder [Former] EnerG2 CEO & Co-Founder	2021.12~2024.12
	Auditor	Jang Mun-hyuk	Accounting/Finance	SK Inc. materials Management Corporate Management Department Head [Former] SK materials Co.,Ltd Finance Department Head	2022.03~2025.03

## Independence, Diversity, and Expertise of Directors

Each subsidiary of SK materials selects director candidates either through the Human Resources Committee or the Board of Directors (BOD) and appoints them with the approval of the shareholders' meeting. In accordance with Article 382-3 of the Commercial Act (Appointment of Outside Directors), final outside director candidates are deemed qualified only if they maintain their independence from the largest shareholders, contracted companies, a parent company, and subsidiaries. Should a conflict of interest arise due to their involvement in other companies within the same line of business, the BOD has the authority to request the resignation of the outside directors based on the BOD regulations.

The BOD ensures that there is no discrimination based on gender, race, religion, nationality, or cultural background in order to maintain diversity. Directors are selected based on their work experience and expertise in areas such as management, economics, engineering, and the chemicals. Our goal is to actively identify and recommend outside director candidates with professional and global capabilities to further enhance the expertise of the BOD.

### BOD Features

Independence	<ul style="list-style-type: none"> <li>Candidates are selected based on their independence from the largest shareholders, the parent company, and contracted companies.</li> <li>In cases of conflicts of interest, a resignation can be requested based on a decision by the BOD</li> </ul>
Diversity	<ul style="list-style-type: none"> <li>Candidates are selected fairly, regardless of gender, race, religion, nationality, cultural background, etc.</li> </ul>
Expertise	<ul style="list-style-type: none"> <li>Directors are appointed based on their work experience and expertise in fields such as management, economics, engineering, and chemicals.</li> </ul>

## Transparent Management

### Establishment of the Corporate Governance Charter

In 2022, SK materials established the Corporate Governance Charter regulating the governance principles based on SK's management philosophy and commitment to improving governance. Based on the charter, we stipulate the board-centered responsible management and enhances transparency in corporate governance. We aim to achieve an advanced corporate governance to maximize shareholders' interests, protect stakeholders' rights, enhance corporate value, and ensure sustainable growth.

As of 2022, SK specialty, SK materials airplus, SK trichem, SK Resonac, and SK materials performance executes their respective Corporate Governance Charters.

## Operation of the BOD

### Meetings and Resolutions

According to the BOD bylaws, SK materials' subsidiaries hold regular meetings every quarter or month and ad-hoc meetings as needed. The BOD meeting is attended by a majority of directors, and all resolutions are made by a majority vote of the attendees, except for certain items<sup>1)</sup> specified in the BOD regulations, which are "Transactions Between a Director and the Company" and "Prohibition of the Use of Company Opportunities and Assets".

In 2022, SK specialty held 8 board meetings and deliberated 31 agenda items, including the Sustainability Report publication, Net Zero/ESG progress, safety & health plans, and the Fair Trade Self-Compliance Program. Moreover, we are strengthening the BOD's management responsibility by applying ESG items to the CEO's performance indicators and through performance appraisal/compensation based on reporting to the BOD.

SK materials airplus amended the BOD bylaws with items including regular BOD meetings and "Establishment/Amendment of the Corporate Governance Charter". Throughout the year, 13 board meetings were convened, and the ESG plans and outcomes, such as the Net Zero/RE100 Master Plan and ESG performance metrics, were reported to strengthen the ESG Management System.

SK trichem held 8 board meetings and resolved 12 items. By reporting and deliberating key ESG agenda including ESG promotion plans, safety & health initiatives, the Corporate Governance Charter establishment, and the Fair Trade Self-Compliance Program implementation, we were able to build the BOD-centered ESG Management System and enhance the executive management's responsibility for ESG matters.

SK Resonac held 11 board meetings in 2022 and passed resolutions on 31 agenda items. These actions laid the groundwork for a board-centered ESG Management approach through the establishment of the BOD bylaws, Code of Ethics, and Corporate Governance Charter. Furthermore, we underscored the significance of ESG Management to our JV partners by presenting key ESG activities to the BOD.

SK materials performance held 9 board meetings and made decisions on 13 agenda items. We bolstered the executive management's commitment to ESG by discussing crucial ESG topics. This included the NET Zero/RE100 Master Plan, ESG priority tasks and strategies, updates on safety & health agenda, and the Fair Trade Self-Compliance Program.

SK materials JNC convened 8 board meetings and made decisions on a total of 16 agenda items. The ESG items included results of compliance with the Serious Accidents Punishment Act and safety/health-related laws. In 2023, SK materials JNC plans to reinforce the executive management's responsibility for ESG, by reporting on ESG policy formulation and implementation.

SK materials Group14 convened 9 board meetings and deliberated 11 agenda items. A key focus was enhancing executive management's accountability for safety/health, as we reviewed progress in compliance with the Serious Accidents Punishment Act and other relevant safety/health regulations. Moving into 2023, we aim to further enhance the executive management's commitment to sustainability management by reporting on the development and progress of our ESG policies.



### Supporting Activities for Outside Directors

Each subsidiary of SK materials has established separate management planning teams to support the decisions of the directors and ensure diligent execution of their responsibilities. These support teams provide materials before board meetings to enable thorough review of the agenda items and also offer information on other significant internal matters.

In 2022, SK specialty conducted training sessions for outside directors focusing on enhancing governance expertise. Topics included global changes in management environment, CEO evaluation and compensation, and governance innovation.

### Board Evaluation and Compensation

Directors' compensation is set within the limits approved by the general shareholders' meeting. Through the Human Resources Committee<sup>1)</sup>, established in 2022, SK specialty assesses the appropriateness of executive director compensation. This compensation includes a performance-based bonus determined by both the basic salary and a management performance evaluation. To ensure their independence, outside directors receive only a basic salary, without any additional compensation such as performance-based rewards or stock options.

1) The Human Resources Committee, within the BOD, is responsible for evaluating, compensating, and recommending candidates for directors. The Human Resources Committee also reviews and finalizes the key performance indicators (KPIs) of the CEO and conducts an annual evaluation for compensation decisions.

### Operation of the Audit System

Each subsidiary of SK materials appoints auditors based on their expertise in accounting, financial, and risk management, with the deliberation and approval of the general shareholders' meeting. Additionally, the Accounting and Finance Teams offer support in auditing activities, including legal consulting and internal control measures. During board meetings, auditors independently oversee the activities of directors and can request relevant information when necessary.



# Risk Management

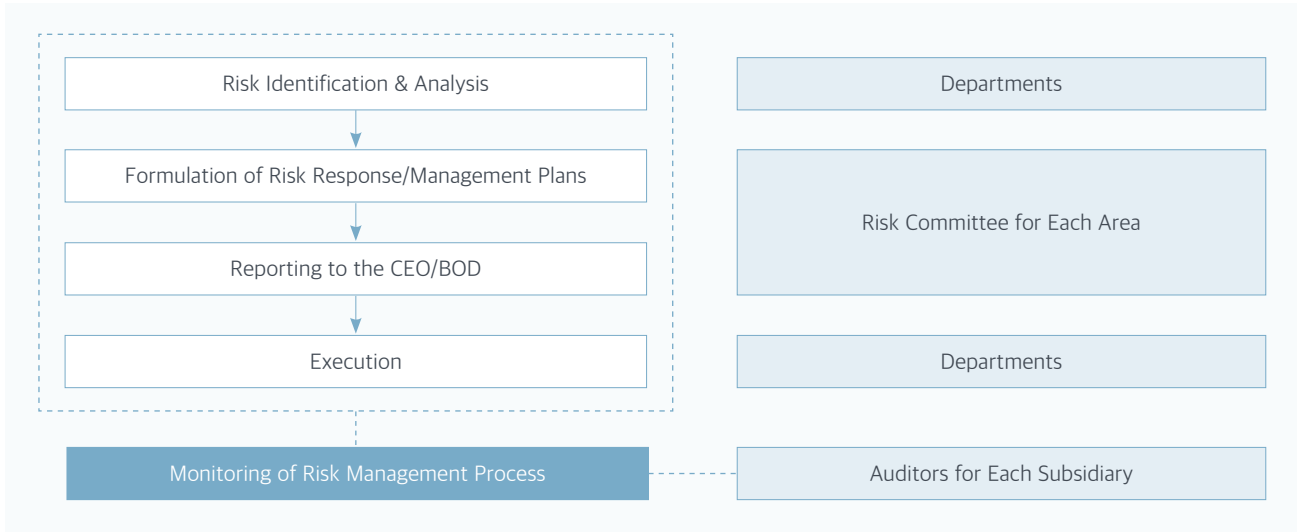
## Company-wide Risk Management System

SK materials employs a comprehensive risk management process that encompasses risk identification, analysis, reporting, management, and response. This is designed to minimize potential losses that might impact our business activities. Furthermore, we have established 4 specialized centers: the Business Development Center, BM Innovation Center, Global Tech Center, and Quality Analysis Center. These are led by industry-leading experts who participate in the subsidiary’s BOD meetings to manage and mitigate risks

Operational departments within each subsidiary pinpoint risks throughout the business process and assess both the probability and potential impact of these identified risks. These analyzed risks are then presented to specialized risk committees designated for each area. In these committees, the most suitable response and management strategies are deliberated upon and formulated. Once crafted, these strategies undergo review and approval by the respective subsidiary’s executive management and the BOD before being executed.

Auditors, appointed through resolutions from each subsidiary’s shareholder meeting, independently oversee the completeness and adequacy of the subsidiary's entire risk management procedure.

### Risk Management Process and Organizations



## Emerging Risk Management

SK materials continuously monitors and analyzes risks arising from social and environmental changes and establishes effective strategies and plans to address emerging risk factors that could significantly impact corporate activities.

Emerging Risks	Emerging Risks and Business Impacts	Response Measures
Digital Transformation Risks	In all industries, process and workflow automation based on digital technologies is accelerating. Within the semiconductor materials industry, securing digital technologies for better material performance and quality is emerging as a key factor for business competitiveness in response to ultra-fine processes.	<ul style="list-style-type: none"><li>Establishing a DT organization to collaborate with business units for data-driven process optimization and quality enhancement</li><li>Planning and implementing a comprehensive company-wide program to develop and strengthen DT capabilities for nurturing DT talents</li></ul>
Unpredictable Geopolitical Risks	Unpredictable geopolitical shifts such as wars and trade disputes can disrupt the raw material supply chain, leading to issues like price fluctuations and supply disruptions. Consequently, these factors raise concerns about the sustainability of SK materials' business operations.	<ul style="list-style-type: none"><li>Proactive diversification of the raw material supply chain, with a focus on reducing overreliance on specific countries for critical materials</li><li>Reducing raw material consumption through process innovation</li><li>Exploring strategies to address increased electricity costs, including electricity self-generation methods</li></ul>



Risk Management Categories

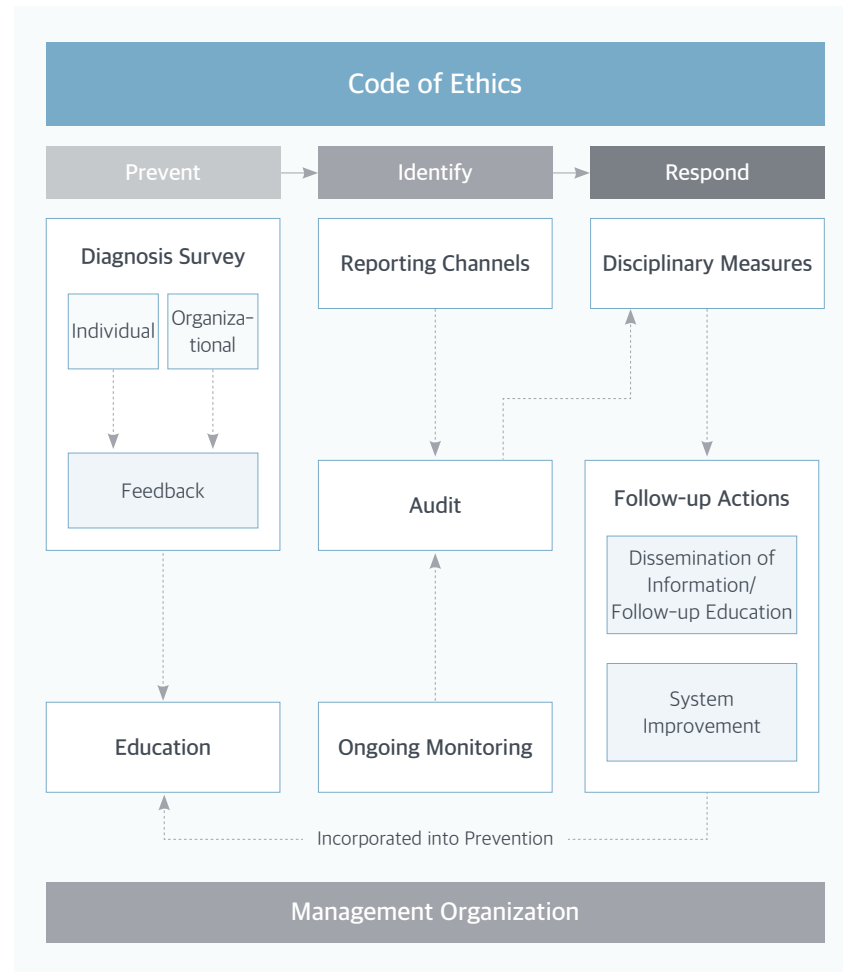
SK materials manages financial risks to build a solid financial structure. We also monitor, analyze, and manage ESG-risks regarding climate change, waste and water resource management, disaster and safety, and information security.

Category	Risk Factors	Business Impacts	Responses
Finance	Finance	<ul style="list-style-type: none"><li>Expansion of global business and business portfolio leading to exposure to various risks including financial risks, market risks, liquidity risks, and credit risks</li></ul>	<ul style="list-style-type: none"><li>Regular assessment and management by the executive management for market risks (commodity, exchange rate, interest rate fluctuations, etc.), liquidity risks (asset management, credit ratings, etc.), and credit risks (customer and supplier credit risks, etc.)</li></ul>
	Investment	<ul style="list-style-type: none"><li>Financial losses and cash flow problems that may result from wrong investment decisions or underperformance due to changes in the business environment</li></ul>	<ul style="list-style-type: none"><li>Investment execution focused on high value-added portfolios</li><li>Operating the Investment Review Committee composed of various experts in each field and reinforcing pre-review and post-management processes</li></ul>
	Supply Chain	<ul style="list-style-type: none"><li>Cost increases due to diversification of the raw material supply chains in response to changes in the global value chain of the semiconductor and battery sectors</li></ul>	<ul style="list-style-type: none"><li>Diversifying/internalizing supply chains and securing cost competitiveness by expanding supplier R&amp;D networks and research collaborations</li><li>Reducing consumption of raw materials with high supply chain risks through process innovation</li></ul>
	Rapid Technological Changes and Intensified Competition	<ul style="list-style-type: none"><li>Introduction of new products and technologies resulting from rapid advancements in semiconductor and battery technology, potentially leading to decreased demand for existing products or reduced profitability due to new competitors entering the market</li></ul>	<ul style="list-style-type: none"><li>Securing core technologies through collaboration (M&amp;A, JVA) with global tech companies based on customer needs</li><li>Early entry to the new product/technology area using global top technology/quality capabilities</li><li>Strengthening market power by securing technological/cost competitiveness based on in-house R&amp;D</li></ul>
ESG	Information Security	<ul style="list-style-type: none"><li>Negative impacts such as data leaks and manipulation affecting overall operations across purchasing, production, and logistics</li><li>Legal disputes and increased litigation costs arising from internal information leaks, leading to reduced company trust</li></ul>	<ul style="list-style-type: none"><li>Sophisticating information security system by acquiring international standards for information security (ISO 27001; SK specialty) and establishing an anomaly detection system</li><li>Executing the master plan for establishing an advanced industrial security system in order to prevent, identify, and respond to internal/external risk factors</li></ul>
	Product Liability	<ul style="list-style-type: none"><li>Chemical-accidents and violations of regulations affecting the company's image and competitiveness</li></ul>	<ul style="list-style-type: none"><li>Product safety evaluation and management throughout the overall process from production to usage based on the chemical substance management system</li></ul>
	Legal and Ethical Matters	<ul style="list-style-type: none"><li>Legal sanctions (fines, mandatory measures, etc.) and social censure leading to declined company trust and increased sustainability risks</li></ul>	<ul style="list-style-type: none"><li>Establishment of Code of Manufacturing Ethics to build a system for preventing ethical risks that may arise in production, manufacturing processes, research, development, and investment</li><li>Introduction of an ethical management measurement system to assess and improve the company's ethical management levels</li><li>Reporting on ethical management issues to the CEO and ongoing monitoring of the adequacy of internal controls through risk management meetings</li></ul>
	Climate Change	<ul style="list-style-type: none"><li>Short or long term physical damages due to climate change, including facility destruction, reduced production capacity, and decreased sales</li><li>Increased operating costs resulting from the transition to low-carbon products and technologies</li></ul>	<ul style="list-style-type: none"><li>Operation of a company-wide process for identifying and evaluating climate change risks and opportunities for proactive responses</li><li>Formulation of a climate change management strategy through the operation of the ESG Synergy Group</li></ul>
	Waste and Water Resource Management	<ul style="list-style-type: none"><li>Decreased sales due to disruptions in manufacturing caused by water shortages</li><li>Business interruptions or the increase in compensation demands arising from environmental pollution in local communities</li></ul>	<ul style="list-style-type: none"><li>Establishment of a waste recycling master plan targeting ZWTL Gold by 2030</li><li>Improving facilities to reduce waste generation and enhance recycling rates</li><li>Implementing activities to improve wastewater recycling rates and managing water risks in accordance with the wastewater recycling master plan</li></ul>
	Disasters and Safety	<ul style="list-style-type: none"><li>Loss of lives resulting from disasters and safety accidents</li><li>Increased costs and reputational damage due to non-compliance with relevant regulations</li></ul>	<ul style="list-style-type: none"><li>Operation of a company-wide safety health environment (SHE) management system, and the SHE Synergy Group to manage safety and health risks at a company-wide level</li><li>Enhancing the safety management system through DT solutions such as establishing smart safety platforms and emergency call systems</li><li>Conducting inspections at least twice a year after the risk assessment, identifying harmful risk factors within the workplace, and taking corrective actions</li></ul>
	Supply Chain ESG	<ul style="list-style-type: none"><li>Growing stakeholder demands due to the globally and domestically strengthening trend of supply chain audits legislation for ESG</li><li>Supply chain risks, including labor and human rights, environmental impacts, and safety and health, leading to reputational and operational risks</li></ul>	<ul style="list-style-type: none"><li>Introducing the IT platform-based supplier ESG assessment process and establishing the Supply Chain ESG Risk Monitoring System, which helps suppliers assess and improve their ESG performances</li><li>Expanding mutual growth programs in order to promote suppliers' internalization of ESG</li></ul>



# Ethical Management

## Ethical Management Framework

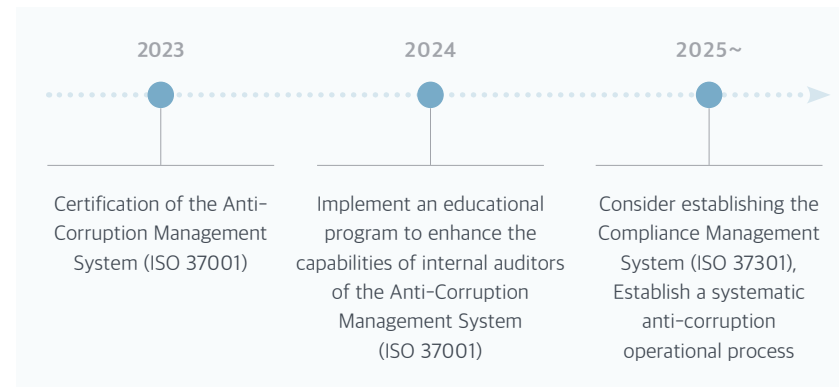


SK materials views the Code of Ethics as the cornerstone of its Ethical Management. We address ethical risks through a structured approach encompassing prevention, identification, and response. This Code of Ethics delineates practical guidelines for ethical behavior and establishes a definitive code of conduct for our employees. It sets out clear standards that every employee is expected to uphold in all business activities and underscores policies concerning key risks.

On September 1, 2022, SK materials instituted the Code of Manufacturing Ethics. This was established to generate social value for our stakeholders, including customers, regular/contract employees, and suppliers. Furthermore, it aims to contribute to broader social and economic development. The code focuses on Ethical Management issues distinctly pertinent to the industry. As a result, SK materials has set a foundation for the proactive prevention of ethical risks across areas such as production, manufacturing, research, development, and investment.

In 2023, SK materials plans to introduce the Anti-Corruption Management System (ISO 37001) to achieve “Zero Corruption Risk”. This system will allow us to progressively enhance our Ethical Management framework.

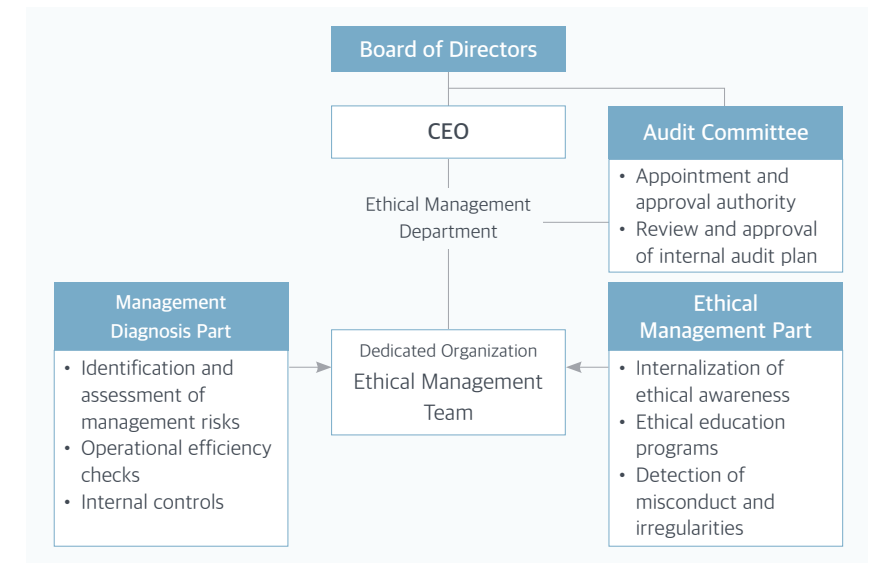
## Zero Corruption Risk Plans



## Ethical Management Organization

SK materials has established the Ethical Management Department that reports directly to the CEO, ensuring the effective execution and monitoring of the Ethical Management initiatives. Within this department is the Ethical Management Team, bifurcated into two distinct units for enhancing efficiency and expertise. The Ethical Management Part handles activities such as instilling ethical practices, managing reporting channels, and executing investigations. The Management Diagnosis Part is dedicated to conducting business-specific and organizational management diagnostics, as well as overseeing internal controls.

Furthermore, the results of management diagnostics, significant issues, and ethical management activities, including reports, are regularly presented to the CEO and the Audit Committee under the Board of Directors. The Audit Committee has the authority to appoint and approve the appointment of the head of the Ethical Management Department and reviews and approves the internal audit plan annually. In 2022, a total of 16 Audit Committee meetings were held.



Ethical Management System

SK materials recognizes unethical and corrupt behavior as a significant risk that undermines trust with stakeholders. In response, we have established “Compliance Regulations for Anti-Corruption” and built the Ethical Management 3C (Code, Compliance, Consensus) system.

3 Elements (3C) of the Ethical Management System



Code of Ethics

- Practical regulations for Code of Ethics
- Key violation examples by area (Don'ts)
- Ethical Management FAQ for SK leaders
- Ethical Management Pledge
- Prohibition of receiving holiday gifts



Compliance

- Operation of a Group-wide reporting site and protection of whistleblowers
- Operation of the Ethical Complaint Center (Happiness Empathy)
- Operation of Self Management System



Consensus

- Development and implementation of ethical management education programs
- Ethical Management Practice Letters
- Operation of employee communication and engagement programs
- Execution of ethical management level assessment surveys
- Ethical Management Practice Workshops

Ethical Risk Monitoring

Self Management System for Ethical Management

SK materials creates checklists to preemptively identify and address ethical risks in key areas such as HR, expenses, sales and receivables, investments, inventory, and unusual risks. These checklists are used for internal self-assessments conducted at least once a year.

In 2022, the checklist was expanded to include purchasing and business partner items to enhance procurement responsibility and supply chain risk capabilities. Self-assessments were also extended to subsidiaries. The assessment found no significant violations, but identified areas for improvement where workflow processes were enhanced. Notably, the purchase management department, where unfair trade risks were identified, added a separate monitoring feature within the electronic purchase system and took measures such as sanctions against relevant suppliers through deliberation processes.

Introduction of Ethical Management Measurement System

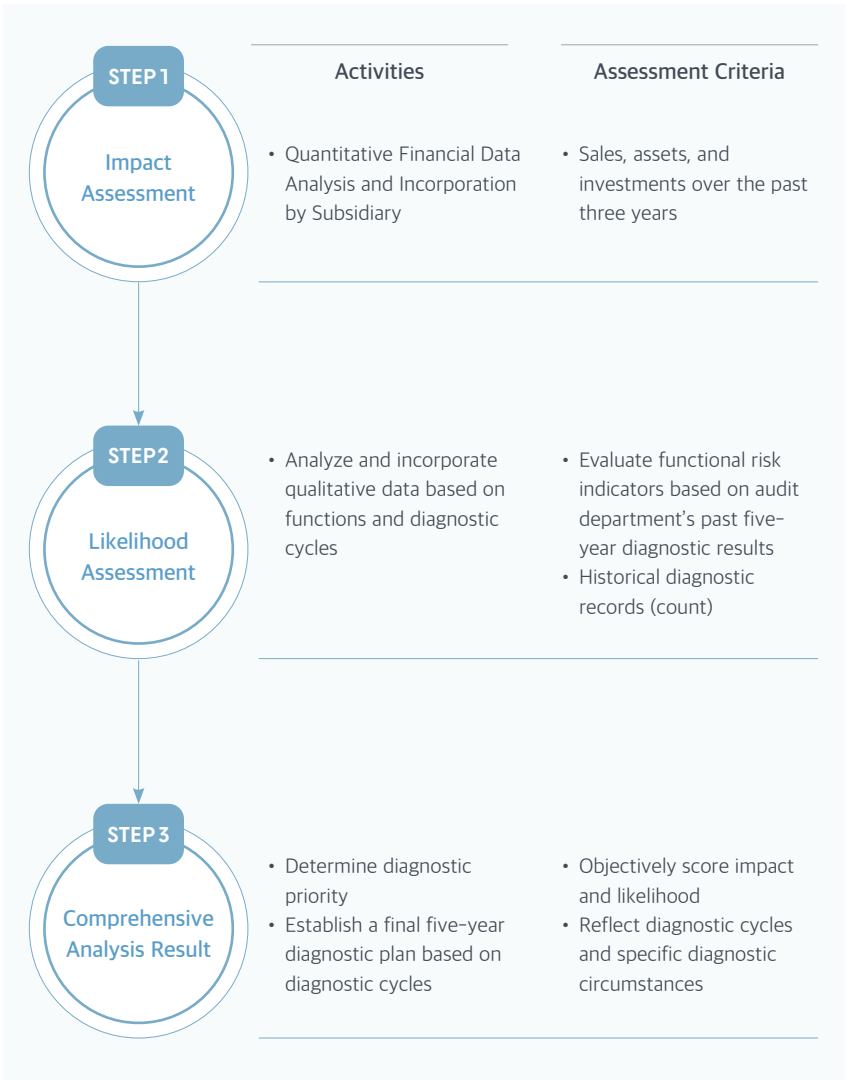
SK Group has introduced a new ethical management measurement system to assess and improve the organization’s ethical management level. The group-wide evaluation recognized a high level of ethical management in areas including ethical management processes and audit processes, acknowledging the effectiveness of the internal audit team and processes.

Ethical Management Audit

The Ethical Management Department follows the principle of conducting audits across the entire organization at least once every three years. The annual audit plan incorporates risks identified from management diagnostics and reports through a risk pool management process. In 2023, a long-term diagnostic plan and prioritization system have been established to analyze qualitative and quantitative data from all subsidiaries, identifying potential risks affecting business activities for the next five years.

Additionally, SK materials established a new risk management committee in 2023 which reports ethical management issues to the CEO at least once a month. This mechanism enables continuous monitoring of the adequacy of internal controls by the executive management.

Risk Assessment Flow



## Establishment of Special Terms for Ethical Practices by Suppliers

SK materials has established and operates special terms for ethical practices to prevent unethical behaviors such as bribery, collusion, and information leakage. These special terms outline the obligations and responsibilities that must be fulfilled to prevent such actions. SK materials provides these ethical practice terms to all suppliers engaged in transactions with the company, recommending that they adhere to the principles and rules specified in the terms.

### Special Terms for Ethical Practices by Suppliers

Obligation to Prevent Bribery to Public Officials	<ul style="list-style-type: none"> <li>Compliance with domestic and international anti-bribery and anti-corruption laws and regulations</li> <li>* UN Convention against Corruption, Foreign Corrupt Practices Act (FCPA), etc.</li> </ul>
Types of Violative Actions	<ul style="list-style-type: none"> <li>Unethical actions related to providing benefits</li> <li>Unfair practices such as bid rigging</li> <li>Deliberate misrepresentation or omission of critical information</li> <li>Unauthorized disclosure of management information</li> <li>Asset damage resulting from illegal actions</li> <li>Coercion and facilitation of illegal acts</li> <li>Obstruction of fair business activities</li> </ul>
Sanctions in Case of Violations	<ul style="list-style-type: none"> <li>Deregistration</li> <li>Bid restriction</li> <li>Opportunity for presenting arguments</li> </ul>

## Internalization of Employee Ethical Management

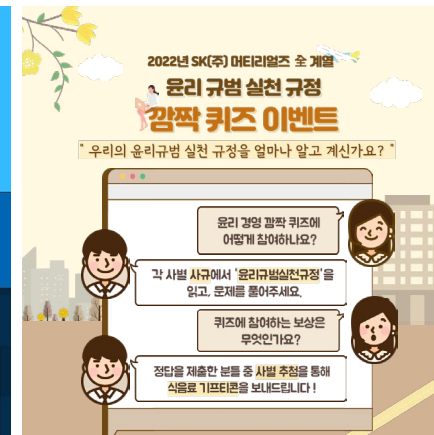
### Ethical Awareness Activities

SK materials ensures that all employees sign the Code of Ethics annually and adhere to it, fostering a sense of responsibility for ethical management practices. Additionally, we have established ethical practice guidelines that serve as standards for employees' decision-making and conduct. Operating a code of conduct for employees, SK materials strives to embed ethical management into its corporate culture.

Furthermore, we share Ethical Practice Letters with our employees on a regular basis, providing specific guidelines for ethical management practices. In 2022, an ethical management quiz was conducted based on content extracted from the code of ethics. Various activities were also conducted, such as campaigns to prohibit receiving holiday gifts and providing guidelines for reporting procedures, all aimed at promoting a culture of ethical management.



Ethical Management Guide Letter



Ethical Management QUIZ

### Ethical Management Practice Activities

Each year, SK materials conducts an ethical management practice survey targeting all employees, including overseas subsidiaries. This survey diagnoses the adherence to ethical guidelines and the level of ethical practice culture throughout the organization. The results are reported to the executive management. Based on

survey outcomes, areas receiving relatively low scores are identified for improvement, and these insights are integrated into special training and relevant ethical management programs.

Moreover, we hold Ethical Practice Workshops to help employees in making ethically sound decisions when facing challenging situations. These workshops facilitate discussions on improvement strategies for ethical management practices and promote a shared understanding of directions for enhancing organizational culture. The 2022 Ethical Practice Workshop focused on topics such as “Insufficient Respect for Dignity” and “False Reporting,” which were selected based on management diagnoses and reported issues, as well as the results of the ethical management practice survey. A total of 1,637 participants from 143 departments and divisions, including overseas subsidiaries, took part in the workshops.

## Ethics Education Programs

### Enhancing Employee Ethical Awareness

SK materials conducts annual ethics management and anti-corruption education programs to enhance ethical awareness among all employees, including both regular and contract workers. These programs aim to disseminate information about ethical management and relevant legal amendments. Particularly, education content is designed for topics crucial from an ethical management perspective, such as fair trade, confidentiality breaches, embezzlement, workplace harassment, and verbal abuse. This content is delivered through SK Group’s online education platform, “mySUNI”. Additionally, we provide specialized training on bullying, solicitation, and gift-receiving, which are closely related to ethical risks, by inviting external experts for specific departments and individuals prone to ethical risks. Separate training sessions are also conducted for the CEO, executives, and the Board of Directors.

### Enhancing Supplier Ethical Awareness

SK materials offers ethical management and anti-corruption education to domestic suppliers involved in our mutual growth initiatives to propagate an ethical corporate culture even among our supplier companies. This education was conducted for 40 supplier companies in June 2022, and we have plans to extend the coverage of participants in the future.

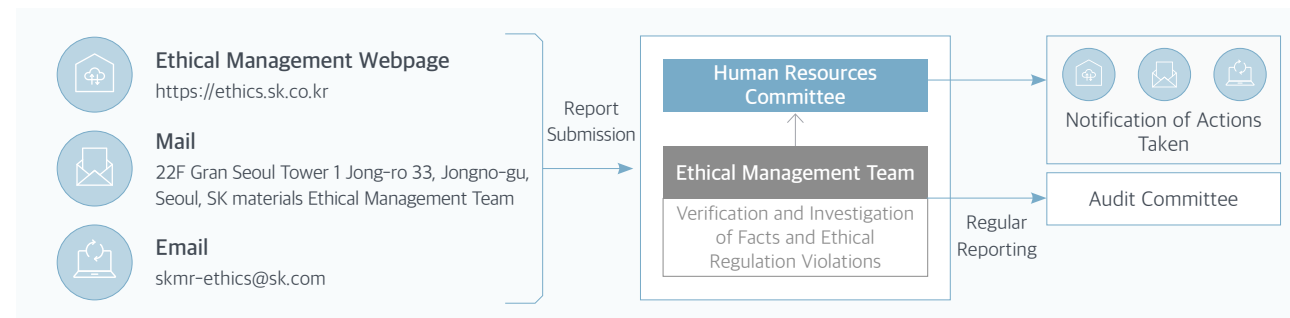


## Ethical Management Reporting and Handling Process

SK materials receives reports on Ethical Management violations through various channels, such as online, email, and postal communication from employees, suppliers, and other stakeholders. All report contents are protected according to whistleblower protection regulations, and investigations are conducted to determine the facts and the presence of Ethical Management violations. If unethical behaviors, such as verbal abuse, information leakage, or acceptance of bribes, are confirmed, appropriate actions are decided through the Human Resources Committee based on relevant regulations. Results of audits and investigations on reports are reported periodically to the Audit Committee, and the implementation of improvements is verified annually.

Furthermore, a whistleblower protection campaign has been carried out to enhance awareness among employees of the reporting channels and the whistleblower protection program. For local employees working overseas, the reporting process and whistleblower protection regulations are provided in the local language to broaden the accessibility of the reporting channels.

### Ethics Counseling/Reporting Channels & Ethical Management Reporting Process



### Whistleblower Protection Program

#### Whistleblower Protection Regulations

1. Individuals who make legitimate reports will not face any adverse actions or discrimination based on their report.
2. If an individual experiences negative consequences as a result of their report, they can request correction and protection from the Ethical Management Department. The Ethical Management Department will take all necessary measures to minimize adverse outcomes.
3. The identity and content of the report will be kept strictly confidential, and will not be disclosed against the individual's will.
4. Individuals who cooperate with the investigation by providing statements or evidence during the fact-checking process will receive equal protection.
5. In cases where an individual has been involved in unethical or illegal activities but voluntarily reports the facts, sanctions for such actions may be reduced

#### Whistleblower Protection Process

1. Receipt	Mitigation of sanctions for voluntary reporters
2. Review	Protection of the whistleblower's identity
3. Investigation	Guarantee of confidentiality and protection for cooperating individuals
4. Conclusion	Implementation of sanctions and communication of results



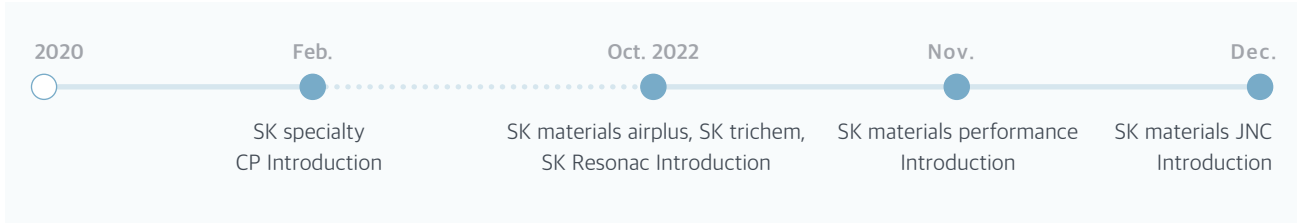
# Compliance

## Compliance Management System

Starting with SK specialty's implementation of the Fair Trade Self-Compliance Program (CP) in February 2020, SK materials has been expanding the scope of CP management across all subsidiaries. Furthermore, compliance managers have been appointed to establish a company-wide Fair Trade Self-Compliance System, and Compliance Principles, outlining the voluntary compliance obligations and operational plans for employees, have been established.

Furthermore, we pursue compliance activities focused on risk areas closely related to business/department task for systematic risk management. In 2022, education on Fair Trade and the Serious Accidents Punishment Act were provided to employees, and a training program on fundamental contract knowledge and the Serious Accidents Punishment Act was offered to suppliers. Additionally, we have expanded the scope of compliance risk management by conducting subcontractor transaction investigations across all SK materials subsidiaries. Starting from 2023, we plan to enhance fair trade education for employees and suppliers, broaden the scope of investigative activities, and further enhance the compliance monitoring system.

### CP Roadmap for SK Inc. materials' Subsidiaries



### Key Compliance Risk Areas

Accounting/ Taxation	Fund	Disclosure	Subsidiary Management
Overseas Corporation Management	SHE	Labor Law Compliance	Transactions with Subcontractors/Suppliers
Intellectual Property (IP)	Ethical Management	Fair Trade	Governance

## Fair Trade and Fair Competition

### Compliance Principles and Procedures

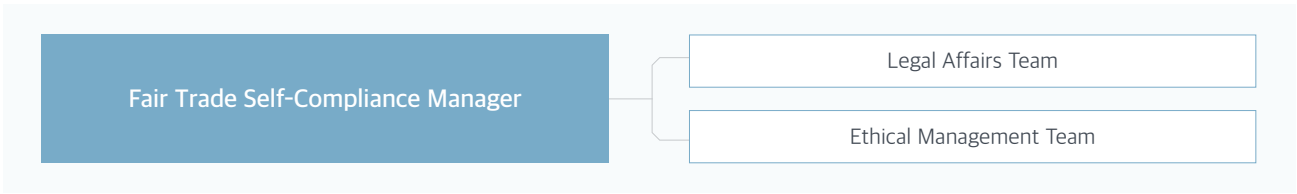
SK materials has established subsidiary-specific Compliance Principles and operates based on the principle of “Fair Trade and Competition” within its Ethical Management Regulations, to ensure that all employees comply with relevant fair trade laws and practice them. The Compliance Principles specify the obligations of employees, strictly prohibiting unfair trade practices with competitors and business partners.

### Employee Obligations



### Compliance Organization

The Fair Trade Self-Compliance Manager is appointed through the Board of Directors, and the appointment is announced through methods such as written notices, electronic documents, and website postings. The Fair Trade Self-Compliance Manager is responsible for overseeing CP operations, including the development and execution of CP action plans, supervision of execution, operational plans and performance reporting, and communication. In 2022, SK specialty appointed the Head of the Management Support Department as the Fair Trade Self-Compliance Manager. Each subsidiary appointed a leader responsible for management support as Compliance Manager. The Legal Affairs Team and Ethical Management Team provide support for related tasks.



Compliance Education

The Compliance Principles specify the requirement for conducting regular education sessions at least once a year for employees and, accordingly, various compliance-related education programs are conducted. In 2022, a basic education session on fair trade law was provided to all employees, with a total of 1,475 participants. Additionally, specialized education and workshops were conducted for departments such as sales, procurement, and management support that are more likely to face fair trade-related risks. These efforts aim to prevent violations of relevant regulations and establish a culture of voluntary compliance with fair trade principles.

Program	Contents	Targets
Advanced Compliance Education	Guidelines and Behavior Manual for Collusion Risk Management	Relevant Department Employees
SK Fair Trade Workshop	Job-specific Compliance Education including subcontract act and transactions between affiliates	Relevant Department Employees
Basic Education on Fair Trade Law	Guidelines for Risk Prevention regulating Collusion, Unfair Trade Practices, Cartel, etc.	All Domestic Employees

Inspection on Subcontract Transaction

SK materials conducts regular inspection on subcontract transaction and submits the results to the Fair Trade Commission, reporting them to the BOD as well. In June 2022, we carried out an investigation involving all subsidiaries, confirming no violations. Starting from 2023, we plan to expand the scope of investigation to include consigned transactions.

Distribution of Fair Trade Self-Compliance Guide

SK materials has created a Fair Trade Self-Compliance Guide and distributed it to all employees in electronic document form. This guide details specific information and examples concerning laws and regulations related to business dealings with affiliates and suppliers, as well as responsibilities associated with performing tasks involving the Fair Trade Commission disclosures.

Reporting System for Unfair Trade Practices

SK materials handles reports related to unfair trade practices through an internal reporting system, which is integrated with the Ethical Management Reporting System. The Fair Trade Self-Compliance Manager investigates reported matters with the Fair Trade Support Department (Legal Affairs Team, Ethical Management Team). Investigation results are regularly reported to the highest decision-making body.

Rewards and Sanctions

SK materials has established procedures for rewarding exceptional departmental and individual contributions to encourage exemplary CP activities and promote adherence to relevant regulations. Additionally, we take appropriate measures against employees violating fair trade laws, depending on the severity of the violation. In cases where the violation is expected to cause significant damage to the company's reputation and financial loss, the Human Resources Committee determines the level of disciplinary action and informs the results to Compliance Manager.





# Appendix

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# Performance\*

\* For better readability, company names are abbreviated as follows in quantitative reporting:  
SK specialty (SKST), SK materials airplus (SKMA), SK trichem (SKTC), SK Resonac (SKRE), SK materials performance (SKMP), SK materials JNC (SKMJ), SK materials Group14 (SKMG14)

\* Following the merger of SK materials airplus and SK materials renewtech in April 2023, the quantitative performance of the "SK materials airplus renewtech Division" is reported separately as "Renewtech" using data from before the merger.

- The quantitative performance of SKMA does not include data from Renewtech.

## Financial Performance

### Financial Data<sup>1)</sup>

Category	Unit	2020								2021							
		SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14	SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14
Total Assets	KRW billion	1,124	804	40	150	43	54	1	0	1,054	892	49	205	85	72	52	84
Sales	KRW billion	520	175	25	150	24	14	0	0	622	242	32	157	59	32	9	0
Operating Profits	KRW billion	91	58	7	63	11	-3	0	0	121	71	9	72	19	0.7	4	-0.3

Category	Unit	2022						
		SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ
Total Assets	KRW billion	1,257	835	59	202	134	96	53
Sales	KRW billion	842	243	43	227	118	62	21
Operating Profits	KRW billion	228	56	12	93	26	8	-2

1) Based on separate financial statements of each subsidiary

Tax Payment

Category		Unit	2020								2021								
			SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14	SKST(Jan. to Nov.)	SKST(Dec. <sup>6</sup> )	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14
Effective Tax Rate	Pre-Tax Profits	KRW billion	75	52	7	64	10	-4	0	0	119	7	116	9	75	20	1	-5	-0.2
	Corporate Tax Expense	KRW billion	18	5	1	15	2	0	0	0	46	1	27	1	18	4	-0.7	0.1	0
	Tax Adjustment <sup>1)</sup>	KRW billion	21	6	1	14	2	0.6	0	0	72	0.4	33	2	18	3	-0.7	0.2	0
	Effective Tax Rate <sup>2)</sup>	%	23.9	9.9	21.5	23.6	21.1	0	0	0	39.0	24.4	23.2	18.4	24.5	19.6	-38.9	-2.0	0
	Corporate Tax Burden	KRW billion	17	6	1	12	2	0	0	0	33	1	25	1	16	3	0	0	0
	Tax Rate <sup>3)</sup>	%	23.2	11.8	19.0	19.4	19.3	0	0	0	28.0	20.5	22.0	16.3	21.2	17.2	2.8	0	0
	Amount of Tax Paid <sup>4)</sup>	KRW billion	17	6	1	12	2	0	0	0	33	1	25	1	16	3	0	0	0
Category		Unit	2022																
			SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14									
Effective Tax Rate	Pre-Tax Profits	KRW billion	216	510	12	90	25	10	-2	-6									
	Corporate Tax Expense	KRW billion	51	135	2	23	5	2	0.4	0									
	Tax Adjustment <sup>1)</sup>	KRW billion	58	162	1	29	6	4	0.7	-0.1									
	Effective Tax Rate <sup>2)</sup>	%	23.6	26.5	20.8	25.5	21.7	21.9	-14.3	0									
	Corporate Tax Burden	KRW billion	57	124	2	20	4	0.9	0	0									
	Tax Rate <sup>3)</sup>	%	26.5	24.4	17.6	22.9	17.4	9.0	0	0									
	Amount of Tax Paid <sup>4)</sup>	KRW billion	55	124	2	20	4	0.9	0	0									

SK specialty - Local and Overseas Worksites

Category	Unit	2020						2021												2022					
								Jan. to Nov.						Dec. <sup>6)</sup>											
		Happy Companion Co., Ltd.	China (Zhenjiang)	China (Xi'an)	China (Shanghai)	Taiwan	Japan	Happy Companion Co., Ltd.	China (Zhenjiang)	China (Xi'an)	China (Shanghai)	Taiwan	Japan	Happy Companion Co., Ltd.	China (Zhenjiang)	China (Xi'an)	China (Shanghai)	Taiwan	Japan	Happy Companion Co., Ltd.	China (Zhenjiang)	China (Xi'an)	China (Shanghai)	Taiwan	Japan
Sales	KRW billion	1	39	34	7	27	7	1	39	53	9	17	6	0.1	4	6	0.9	1	0.5	1	58	70	12	26	6
Operating Profits	KRW billion	0.3	-0.4	1	0.3	1	0.8	-0.1	-2	0.7	0.4	1	0.6	0	-0.1	0.7	0	0.1	0	0.1	8	1	0.5	2	0.1
Amount of Tax Paid <sup>5)</sup>	KRW billion	0.3	0	0.3	0	0.4	0.3	0	0	0.2	0	0.4	0.2	0	0	0	0	0	0	0	0.7	0.4	0.2	0.3	0.1

1) Adjusted Taxable Income

2) (Corporate Tax Expense) / (Pre-tax Income) X 100

3) (Corporate Tax Payments) / (Pre-tax Income) X 100

4) The payment amount is calculated based on the total tax amount according to the current taxable standard and the calculated tax amount

5) The payment amount is apportioned based on operating profit

6) Due to the establishment of a new corporation after the split-merger in December 2021, reporting is separated for January to November and December



R&D Investment

Category		Unit	2020									2021								
			SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ <sup>2)</sup>	SKMG14	Other <sup>3)</sup>	SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14	Other
R&D Investment	Cost	KRW million	9,236	0	0	2,978	0	2,603	0	0	0	13,556	0	0	2,860	0	5,152	7,898	0	972
	Ratio <sup>1)</sup>	%	1.80	0	0	1.98	0	17.71	0	0	0	2.18	0	0	1.82	0	15.95	87.76	0	-
R&D Personnel		Persons	31	0	0	16	0	18	0	0	0	12 <sup>4)</sup>	0	0	19	0	20	64	0	0

Category		Unit	2022																	
			SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14	Other									
R&D Investment	Cost	KRW million	4,951	0	0	4,627	0	6,555	12,080	0	16,519									
	Ratio <sup>1)</sup>	%	0.59	0	0	2.04	0	10.54	55.16	0	-									
R&D Personnel		Persons	14	0	0	23	0	22	62	0	0									

1) Compared to Sales  
2) Including personnel from Ichihara Research Institute, Japan  
3) Global Tech Center, Quality Analysis Center  
4) Personnel criteria are based on the establishment of a new corporation in December 2021, and the existing personnel before the split-merger totaled 33, showing an increase compared to the previous year

Intellectual Property

Category		Unit	2020									2021								
			SKST <sup>1)</sup>	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14	Other <sup>2)</sup>	SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14	Other
No. of Patent Applications	Annual	Cases	11	0	0	12	0	0	99	0	4	11	0	0	16	0	2	82	0	4
	Cumulative	Cases	88	0	0	12	0	235	534	0	76	99	0	0	28	0	237	616	0	80

Category		Unit	2022																	
			SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14	Other									
No. of Patent Applications	Annual	Cases	9	0	0	26	0	4	82	0	28									
	Cumulative	Cases	108	0	0	54	0	241	698	0	108									

1) Corrected the figures due to errors in the 2020 values  
2) SK Inc. materials

## ESG Performance

### Environment\*

\* Reporting Scope for Greenhouse Gases, Energy, Water, Waste, Water Pollutants, Air Pollutants, and Chemical Substances Data

- SK materials airplus Icheon Plant reported data for the years 2020 to 2021, as it was sold in 2022
- SK materials JNC, established in December 2020, reported data for the years 2021 to 2022
- SK materials Group14, scheduled for full-scale production from 2023 onwards, is excluded from the overall reporting scope

### Greenhouse Gases<sup>1)</sup>

Category	Unit	2020						2021					
		SKST·SKRE <sup>5)</sup>	SKMA	Renewtech	SKTC	SKMP <sup>6)</sup>	SKMJ	SKST·SKRE	SKMA	Renewtech	SKTC	SKMP	SKMJ
Total GHG Emissions <sup>2)</sup>	tCO <sub>2</sub> eq	229,031	277,757	11,730	3,243	12	-	255,819	443,900	13,445	3,672	521	376
Scope 1 <sup>3)</sup>	tCO <sub>2</sub> eq	26,415	86	20	299	12	-	27,768	145	19	484	28	20
Scope 2 <sup>3)</sup>	tCO <sub>2</sub> eq	202,616	277,671	11,710	2,945	0	-	228,051	443,756	13,425	3,189	493	356
Intensity	tCO <sub>2</sub> eq/KRW million	0.44	1.58	0.45	0.02	0.001	-	0.41	1.83	0.41	0.02	0.02	0.04
Scope 3 <sup>4)</sup>	tCO <sub>2</sub> eq	278,465	-	-	-	-	-	2,718,204 <sup>7)</sup>	-	-	-	-	-

Category	Unit	2022 <sup>8)</sup>					
		SKST·SKRE	SKMA	Renewtech	SKTC	SKMP	SKMJ
Total GHG Emissions <sup>2)</sup>	tCO <sub>2</sub> eq	282,842	286,208	17,156	4,110	2,236	996
Scope 1 <sup>3)</sup>	tCO <sub>2</sub> eq	28,291	120	15	554	45	91
Scope 2 <sup>3)</sup>	tCO <sub>2</sub> eq	254,555	286,090	17,141	3,557	2,192	905
Intensity	tCO <sub>2</sub> eq/KRW million	0.34	1.18	0.40	0.02	0.04	0.05
Scope 3 <sup>4)</sup>	tCO <sub>2</sub> eq	3,029,079	12,660	-	103,713	30,546	-

1) Emissions due to NF3 will be disclosed after the establishment of the measurement system

2) Total GHG Emissions include Scope 1 and Scope 2. Verification of emissions for the past three years was completed for SK specialty and SK materials airplus, and that of 2022 was done for SK trichem, SK materials performance, and SK materials JNC. The company-wide emissions verification is scheduled from 2023

3) Emissions are based on GHG inventories. Values for unverified subsidiaries are measured from Business as Usual (BAU) for Net Zero

4) SK specialty has disclosed Scope 3 emissions with verification from 2020, while SK materials airplus, SK trichem, and SK materials performance disclose Scope 3 emissions verified from 2022 onwards

5) SK Resonac falls within the organizational boundary of SK specialty and its GHG emissions are included in SK specialty's inventory, thus these are disclosed together

6) SK materials performance falls within the organizational boundary of SK specialty and its GHG emissions are included in SK specialty's inventory. However, SK materials performance's emissions are also disclosed separately.

7) The emission quantity was increased due to the expansion of Scope 3 categories (2020: 9 categories → 2021: 11 categories)

8) Total GHG emissions are aggregated by truncating decimal places at the site level, leading to differences between the total emissions and the sum of emissions by type

Energy<sup>1)</sup>

Category	Unit	2020						2021					
		SKST·SKRE <sup>4)</sup>	SKMA	Renewtech	SKTC	SKMP <sup>5)</sup>	SKMJ	SKST·SKRE	SKMA	Renewtech	SKTC	SKMP	SKMJ
Total Energy Consumption	TJ	4,684	5,727	245	67	0.2	-	5,303	9,283	281	76	11	8
Electricity	TJ	4,171.8	5,717.2	244.7	61.5	0	-	4,765.0	9,272.9	280.5	66.6	10.3	7.4
Gas (LNG)	TJ	498.4	0.2	0	4.7	0	-	524.0	0.5	0	8.0	0	0.4
Gasoline	TJ	1.5	0.7	0.3	0.5	0.2	-	1.0	1.4	0.3	0.7	0.3	0
Diesel	TJ	12.7	0.4	0	0.4	0	-	13.0	0.3	0	0.5	0.1	0
Steam	TJ	0	8.3	0	0	0	-	0.03	8.2	0	0	0	0
Intensity	TJ/KRW million	0.00901	0.03258	0.00946	0.00045	0.00001	-	0.00851	0.03822	0.00861	0.00048	0.00033	0.00087
Total Renewable Energy (RE) Consumption <sup>2)</sup>	MWh	-	-	-	-	-	-	10,300	0	0	0	0	0
RE100 Implementation Rates <sup>3)</sup>	%	-	-	-	-	-	-	1.9	0	0	0	0	0

Category	Unit	2022 <sup>6)</sup>					
		SKST·SKRE	SKMA	Renewtech	SKTC	SKMP	SKMJ
Total Energy Consumption	TJ	5,865	5,985	358	85	46	21
Electricity	TJ	5,319.1	5,978.2	358.2	74.3	45.8	18.9
Gas (LNG)	TJ	532.5	0.9	0	9.2	0	1.6
Gasoline	TJ	1.3	0.9	0.2	0.6	0.5	0.1
Diesel	TJ	15.0	0.2	0	0.6	0.1	0
Steam	TJ	0.3	7.9	0	0	0	0
Intensity	TJ/KRW million	0.00696	0.02458	0.00826	0.00037	0.00075	0.00094
Total Renewable Energy (RE) Consumption <sup>2)</sup>	MWh	30,000	25,000	2,350	500	550	100
RE100 Implementation Rates <sup>3)</sup>	%	9.9	4.0	6.3	6.5	11.5	5.1

1) Based on the GHG inventory, energy consumptions for unverified subsidiaries were calculated based on their own measurement criteria

2) Based on the Green Premium (Renewable Energy Certificate)

3) Renewable Energy Usage / Electricity Usage (MWh)

4) SK Resonac falls within the organizational boundary of SK specialty, and its GHG emissions are included in SK specialty's inventory, thus these are disclosed together (RE100 compliance rates are managed integrally)

5) SK materials performance falls within the organizational boundary of SK specialty, and its GHG emissions are included in SK specialty's inventory. However, SK materials performance's emissions are also disclosed separately

6) Total energy consumption is aggregated by truncating decimal places at the site level, leading to differences between the total consumption and the sum of consumption by type



Water<sup>1)</sup>

Category		Unit	2020							2021						
			SKST	SKMA	Renewtech	SKTC	SKRE	SKMP <sup>4)</sup>	SKMJ	SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ
Total Water Consumption		m'	1,031,475.5	839,410.4	63,730.0	13,311.0	17,622.6	-	-	1,109,700.0	1,207,846.6	55,622.0	14,523.0	23,744.9	2,153.0	2,118.0
Total Water Withdrawal		m'	1,031,475.5	839,410.4	65,015.0	13,311.0	17,622.6	-	-	1,109,700.0	1,207,846.6	57,319.0	14,523.0	23,744.9	2,153.0	2,118.0
Water Withdrawal by Source	Surface Water (River Water) <sup>2)</sup>	m'	997,271.0	803,368.0	63,730.0	6,412.0	17,261.6	-	-	1,063,299.0	919,470.0	55,622.0	7,523.0	23,014.9	0	0
	Ground Water	m'	0	0	0	0	0	-	-	961.0	0	0	0	0	0	0
	Public Water	m'	34,204.0	36,042.4	1,285.0	6,899.0	361.0	-	-	45,441.0	288,376.6	1,697.0	7,000.0	730.0	2,153.0	2,118.0
Water Withdrawal Intensity		m'/KRW million	1.98	4.77	2.51	0.09	0.73	-	-	1.78	4.97	1.76	0.09	0.40	0.07	0.24
Wastewater and Sewage Treatment Volume		m'	656,688.0	175,309.6	13,841.0	9,148.4	0	-	-	643,031.0	525,749.2	11,396.0	11,506.0	0	588.3	9.7
Total Water Recycling Volume <sup>3)</sup>		m'	5,256.0	0	0	0	0	-	-	5,256.0	0	0	0	0	0	0
Water Recycling Rate		%	0.51	0	0	0	0	-	-	0.47	0	0	0	0	0	0

Category		Unit	2022						
			SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ
Total Water Consumption		m'	1,189,452.6	913,362.0	81,978.0	22,783.0	40,954.0	4,551.0	3,054.4
Total Water Withdrawal		m'	1,189,452.6	913,876.9	95,500.0	22,783.0	40,954.0	4,551.0	3,054.4
Water Withdrawal by Source	Surface Water (River Water) <sup>2)</sup>	m'	1,145,886.3	912,339.0	81,978.0	7,751.0	39,539.0	0	0
	Ground Water	m'	0	0	0	0	0	0	0
	Public Water	m'	43,566.3	1,537.9	13,522.0	15,032.0	1,415.0	4,551.0	3,054.4
Water Withdrawal Intensity		m'/KRW million	1.41	3.75	2.20	0.10	0.35	0.07	0.14
Wastewater and Sewage Treatment Volume		m'	688,463.3	221,741.0	13,588.0	11,513.0	0	661.1	51.4
Total Water Recycling Volume <sup>3)</sup>		m'	5,256.0	0	0	0	0	0	0
Water Recycling Rate		%	0.44	0	0	0	0	0	0

1) Sejong Research Institute conducts integrated treatment of wastewater as it is located within the SK trichem facility, thus wastewater cannot be separately aggregated

2) Includes industrial water usage

3) SK specialty installed flow meters in 2022, and the total water recycling volume for 2022 is retroactively applied using data for the past three years

4) SK materials performance commenced operations in 2021, thus there is no applicable data for the year 2020

Waste<sup>1)</sup>

Category	Unit	2020							2021						
		SKST <sup>2)</sup>	SKMA	Renewtech	SKTC	SKRE	SKMP <sup>3)</sup>	SKMJ	SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ
Total Waste Generation	Tons	16,249.1	32.2	3.7	210.8	13.0	-	-	17,505.0	35.8	20.7	182.2	12.1	58.9	3.1
General Waste	Tons	15,284.4	29.1	0	48.0	12.4	-	-	16,405.0	25.4	0	60.1	10.1	0	0
Designated Waste	Tons	964.7	3.1	3.7	162.7	0.6	-	-	1,099.0	10.4	20.7	122.2	2.0	58.9	3.1
Waste Generation Intensity	Tons/KRW billion	0.312	0.002	0.001	0.014	0.005	-	-	0.281	0.001	0.006	0.012	0.002	0.018	0.003
Waste Recycling Amount	Tons	12,091.7	14.3	3.7	165.7	0.5	-	-	13,875.0	24.1	13.7	139.2	0	57.8	0
Generate Waste	Tons	11,980.1	11.3	0	48.0	0	-	-	13,577.0	15.1	0	60.1	0	0	0
Designated Waste	Tons	111.6	3.0	3.7	117.6	0.5	-	-	298.0	9.0	13.7	79.1	0	57.8	0
Waste Recycling Rate	%	74.4	44.3	100.0	78.6	3.5	-	-	79.3	67.5	66.2	76.4	0	98.1	0

Category	Unit	2022						
		SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ
Total Waste Generation	Tons	23,032.3	70.4	66.6	256.0	14.5	117.8	17.1
General Waste	Tons	22,195.8	58.3	33.5	82.0	12.7	28.1	0
Designated Waste	Tons	836.5	12.1	33.1	173.9	1.8	89.7	17.1
Waste Generation Intensity	Tons/KRW billion	0.273	0.003	0.015	0.011	0.001	0.019	0.008
Waste Recycling Amount	Tons	18,287.8	22.7	32.3	235.8	0.8	105.7	0
Generate Waste	Tons	17,806.9	14.0	2.6	82.0	0	28.1	0
Designated Waste	Tons	480.9	8.7	29.7	153.8	0.8	77.6	0
Waste Recycling Rate	%	79.4	32.2	48.5	92.1	5.4	89.7	0

1) Based on Waste Allbaro System record

2) For SK specialty Seoul Office, due to integrated management of the building it occupies, waste generation and recycling amounts cannot be separately aggregated

3) SK materials performance commenced operations in 2021, thus there is no applicable data for the year 2020

Water Pollutants<sup>1)</sup>

Category		Unit	2020							2021						
			SKST	SKMA	Renewtech <sup>3)</sup>	SKTC	SKRE	SKMP <sup>4)</sup>	SKMJ <sup>5)</sup>	SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ
TOC <sup>2)</sup>	Emissions	Tons	4.790	1.699	-	0.011	0.288	-	-	4.774	3.473	0.245	0.019	0.397	0.001	-
	Intensity	Tons/KRW billion	0.000092	0.000097	-	0.000001	0.000120	-	-	0.000077	0.000143	0.000075	0.000001	0.000067	0	-
T-N	Emissions	Tons	4.700	1.392	-	0.010	0.282	-	-	5.000	3.506	0.138	0.017	0.389	0.001	-
	Intensity	Tons/KRW billion	0.000090	0.000079	-	0.000001	0.000118	-	-	0.000080	0.000144	0.000042	0.000001	0.000066	0	-

Category		Unit	2022													
			SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ							
TOC <sup>2)</sup>	Emissions	Tons	0.798	3.570	0.356	0.012	0.088	0.001	-							
	Intensity	Tons/KRW billion	0.000009	0.000147	0.000082	0.000001	0.000007	0	-							
T-N	Emissions	Tons	4.550	2.327	0.254	0.012	0.439	0.001	-							
	Intensity	Tons/KRW billion	0.000054	0.000096	0.000059	0.000001	0.000037	0	-							

1) Monthly average concentrations are being measured, leading to variations in annual emissions based on the timing of measurements

2) In 2022, due to amendments in the Water Conservation Act, the analysis parameter for organic substances changed from Chemical Oxygen Demand (COD) to Total Organic Carbon (TOC). As a result, the existing COD emissions were converted to TOC values for disclosure

3) Data management for SK materials airplus renewtech Division started from the year 2021

4) SK materials performance commenced operations in 2021, thus there is no applicable data for the year 2020

5) SK materials JNC completely outsources its processing, making it irrelevant for reporting and thus excluded from the reporting scope



Air Pollutants<sup>1)</sup>

Category		Unit	2020							2021						
			SKST	SKMA	Renewtech	SKTC	SKRE	SKMP <sup>2)</sup>	SKMJ <sup>3)</sup>	SKST	SKMA	Renewtech <sup>4)</sup>	SKTC	SKRE	SKMP	SKMJ
Nitrogen Oxides (NOx)	Emissions	Tons	5.000	0.241	0.137	0.167	0	-	-	6.100	2.756	-	0.221	0.038	0	-
	Intensity	Tons/KRW billion	0.000096	0.000014	0.000053	0.000011	0	-	-	0.000099	0.000113	-	0.000014	0.000006	0	-
Sulfur Oxides (SOx)	Emissions	Tons	0.300	0	2.025	0	0.097	-	-	0.600	0	-	0	0.002	0	-
	Intensity	Tons/KRW billion	0.000006	0	0.000782	0	0.000041	-	-	0.000006	0	-	0	0	0	-
Dust	Emissions	Tons	0.400	0.043	0.086	1.140	0.006	-	-	0.600	0.446	-	1.008	0.001	0.002	-
	Intensity	Tons/KRW billion	0.000008	0.000002	0.000033	0.000076	0.000002	-	-	0.000009	0.000018	-	0.000064	0	0.000001	-

Category		Unit	2022													
			SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ							
Nitrogen Oxides (NOx)	Emissions	Tons	22.338	1.927	0.079	0.158	0.087	0	-							
	Intensity	Tons/KRW billion	0.000265	0.000079	0.000018	0.000007	0.000007	0	-							
Sulfur Oxides (SOx)	Emissions	Tons	1.574	0	0.653	0	0	0	-							
	Intensity	Tons/KRW billion	0.000019	0	0.000151	0	0	0	-							
Dust	Emissions	Tons	1.005	0.123	0.039	0.734	0.010	0.498	-							
	Intensity	Tons/KRW billion	0.000012	0.000005	0.000009	0.000032	0.000001	0.000080	-							

1) For Nitrogen Oxides and Sulfur Oxides, concentrations are measured 1 to 2 times annually, leading to variations in emissions based on the timing of measurements

2) SK materials performance commenced operations in 2021, thus there is no applicable data for the year 2020

3) SK materials JNC, being not subject to atmospheric emission facility permits, is excluded from the reporting scope

4) SK materials airplus renewtech Division, being categorized as a non-emitting facility in 2021, has no relevant performance data

Chemical Substances<sup>1)</sup>

Category	Unit		2020							2021							2022						
			SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ
Total Usage of Hazardous Chemicals	Tons		31,557.0	133.4	-	15.7	0	-	-	44,601.0	173.5	-	31.2	0	-	-	49,260.5	207.3	-	84.2	0.001	-	-
Total Emission of Chemicals <sup>2)</sup>	Tons		405.2	0.3	-	1.2	0.03	-	-	339.4	0.3	-	26.2	0.06	-	-	549.7	0.3	-	22.0	0.1	-	-

1) SK materials airplus renewtech Division, SK materials performance, and SK materials JNC are excluded from the reporting scope as they are not subject to permits

2) Based on the Ministry of Environment's Chemical Substance Emission Survey Criteria

Environmental Training

Category	Unit	2020								2021								2022							
		SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14	SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14	SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14
Legal Training <sup>1)</sup>	Persons	35	0	-	2	0	-	-	-	39	1	-	12	3	-	3	1	22	5	4	4	1	2	3	0
	Hours	692	0	-	44	0	-	-	-	816	28	-	192	48	-	42	16	424	116	24	76	16	32	32	0
Non-legal Training <sup>2)</sup>	Persons	624	28	-	76	6	-	-	-	449	26	-	99	11	-	0	0	660	49	0	119	15	15	6	67
	Hours	5,350	322	-	670	26	-	-	-	3,152	150	-	1,038	92	-	0	0	8,632	396	0	1,024	156	34	96	1,072

1) Includes training for specialized air environmental technicians, specialized water quality environmental technicians, technicians for hazardous chemical substances, and managerial training

2) Includes training for workers in companies dealing with hazardous chemical substances, personnel handling hazardous chemical substances, and internal and international ISO auditors

Environmental/Energy Certification

Category	Unit	SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14
ISO 14001	Validity Period	2025.12.06	2025.05.12	2025.12.28	2026.03.26.	2024.12.26	2023.06.11	2025.01.06	2025.12.25
ISO 50001	Validity Period	2024.12.20	2025.10.24	-	-	2024.12.26	-	-	-

Violation of Environmental Regulation

Category	Unit	2022							
		SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14
Fines	Cases	0	0	0	0	0	0	0	0
	KRW million	0	0	0	0	0	0	0	0
Penalties (\$10,000 or more)	Cases	0	0	0	0	0	0	0	0
	KRW million	0	0	0	0	0	0	0	0

Social\*

\* Data Reporting Scope

- For SK materials JNC, reporting covers the years 2021 to 2022, as it was established as a corporation in December 2020
- For SK materials Group14, reporting covers the years 2021 to 2022, as it was established as a corporation in October 2021
- Supplier status, supplier support, opinions and handling status of the Mutual Growth Council, and supplier ESG management are disclosed starting from 2022

Employees<sup>1)</sup>

Category			Unit	2020								2021								2022							
				SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14	SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14	SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14
Total Number of Employees <sup>2)</sup>			Persons	794	135	26	130	7	60	-	-	798	173	33	136	12	73	28	9	851	177	40	163	19	99	33	68
Gender	Male	Persons	693	123	23	121	7	41	-	-	711	161	30	126	12	54	23	9	754	164	37	150	19	80	25	67	
		%	87	91	88	93	100	68	-	-	89	93	91	93	100	74	82	100	89	93	93	92	100	81	76	99	
		Persons	101	12	3	9	0	19	-	-	87	12	3	10	0	19	5	0	97	13	3	13	0	19	8	1	
	Female	%	13	9	12	7	0	32	-	-	11	7	9	7	0	26	18	0	11	7	8	8	0	19	24	1	
		Persons	764	125	25	128	6	43	-	-	733	161	32	133	11	64	23	9	811	167	40	158	19	89	31	52	
Contract Type	Permanent	Male	Persons	667	118	22	121	6	32	-	-	653	154	29	124	11	46	19	9	725	160	37	148	19	70	25	52
		Female	Persons	97	7	3	7	0	11	-	-	80	7	3	9	0	18	4	0	86	7	3	10	0	19	6	0
		Total	Persons	30	10	1	2	1	17	-	-	65	12	1	3	1	9	5	0	40	10	0	5	0	10	2	16
	Contract	Male	Persons	26	5	1	0	1	9	-	-	58	7	1	2	1	8	4	0	29	4	0	2	0	10	0	15
		Female	Persons	4	5	0	2	0	8	-	-	7	5	0	1	0	1	1	0	11	6	0	3	0	0	2	1
		Total	Persons	17	3	2	2	0	0	-	-	9	5	0	2	0	0	0	2	9	4	1	2	0	1	0	3
Positions	Executives <sup>3)</sup>	Male	Persons	17	3	2	2	0	0	-	-	9	5	0	2	0	0	0	2	9	4	1	2	0	1	0	3
		Female	Persons	0	0	0	0	0	0	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Total	Persons	230	48	10	38	1	32	-	-	195	59	11	45	1	36	19	6	234	62	13	50	2	44	19	15
	Supervisors	Male	Persons	195	48	10	38	1	25	-	-	172	59	11	43	1	29	16	6	208	62	13	48	2	35	16	15
		Female	Persons	35	0	0	0	0	7	-	-	23	0	0	2	0	7	3	0	26	0	0	2	0	9	3	0
		Total	Persons	547	84	14	90	6	28	-	-	594	109	22	89	11	37	9	1	608	111	26	111	17	54	14	50
	Team Members	Male	Persons	481	72	11	81	6	16	-	-	530	97	19	81	11	25	7	1	537	98	23	100	17	44	9	49
		Female	Persons	66	12	3	9	0	12	-	-	64	12	3	8	0	12	2	0	71	13	3	11	0	10	5	1
		Total	Persons	167	37	2	47	6	11	-	-	123	37	6	32	6	6	5	0	146	45	7	47	7	23	8	17
Age	Below 30		Persons	582	92	19	80	1	45	-	-	621	120	23	101	6	62	23	6	658	119	31	113	12	71	24	46
	30~50		Persons	45	7	5	3	0	4	-	-	54	16	4	3	0	5	0	3	47	13	2	3	0	5	1	5
	Over 50		Persons	21	4	0	2	0	0	-	-	23	5	0	2	0	0	0	0	22	5	0	3	0	0	0	0
Socially Vulnerable Persons <sup>4)</sup>	Employees with disability	Number	Persons	3.5	3.0	0	1.5	0	0	-	-	3.2	3.5	0	2.9	0	0	0	0	3.8	3.4	0	3.5	0	0	0	0
		Proportion	%																								

1) Excludes external employees (dispatched, contracted, subcontracted, etc.)

2) Corrected data for 2020 to 2021 is disclosed based on the number of personnel in the business report

3) Excludes registered executives (CEO, outside directors, non-full-time executives)

4) SK specialty includes members from the workplace for employees with disabilities, “Happy Companion”



Recruitment, Turnover, and Tenure

Category		Unit	2020								2021								2022								
			SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14	SKST <sup>1)</sup>	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14	SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14	
New Recruits	Total	Persons	113	33	1	22	1	60	-	-	115	53	11	17	1	16	27	0	100	21	10	33	7	35	13	57	
	Gender	Male	Persons	95	30	1	20	1	41	-	-	104	51	11	15	1	14	22	0	81	17	10	29	7	31	6	56
		Female	Persons	18	3	0	2	0	19	-	-	11	2	0	2	0	2	5	0	19	4	0	4	0	4	7	1
	Age	Below 30	Persons	24	19	0	7	1	11	-	-	47	16	4	2	1	4	5	0	36	11	1	16	1	18	5	17
		30~50	Persons	78	11	1	13	0	45	-	-	62	32	7	15	0	12	21	0	62	8	9	16	6	16	7	38
		Over 50	Persons	11	3	0	2	0	4	-	-	6	5	0	0	0	0	1	0	2	2	0	1	0	1	1	2
Turnover Rate <sup>2)</sup>	Total	%	5.5	9.6	0	3.8	0	0	-	-	3.1	9.2	30.3	4.4	16.7	6.8	25.0	0	5.3	9.6	10.0	4.3	10.5	12.1	18.2	7.4	
	Type	Voluntary Turnover Rate	%	4.8	6.7	0	3.8	0	0	-	-	3.0	8.1	24.2	3.7	16.7	6.8	25.0	0	4.1	6.2	7.5	3.7	10.5	10.1	15.2	7.4
		Others <sup>3)</sup>	%	0.8	3.0	0	0	0	0	-	-	0.1	1.2	6.1	0.7	0	0	0	0	1.2	3.4	2.5	0.6	0	2.0	3.0	0
Average Tenure	Total	Years	6.70	3.43	1.05	2.30	1.68	0.66	-	-	6.99	3.35	12.37	2.91	1.52	1.42	0.53	0.08	7.27	3.97	2.00	3.25	1.77	1.70	0.95	0.66	
	Male	Years	7.00	3.39	1.05	2.33	1.68	0.64	-	-	7.14	3.31	13.40	2.94	1.52	1.37	0.49	0.08	7.46	3.95	1.91	3.30	1.77	1.61	1.11	0.66	
	Female	Years	5.30	3.82	1.08	1.83	0	0.70	-	-	5.79	3.84	2.08	2.49	0	1.59	0.69	0	5.77	4.16	3.08	2.70	0	2.09	0.46	0.72	

1) 2021 data is calculated based only on personnel after the split

2) Excludes personnel transferred to investment companies

3) Includes retirement due to retirement age, contract expiration, etc.

Parental Leave

Category		Unit	2020								2021								2022							
			SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14	SKST <sup>2)</sup>	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14	SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14
Number of Employees Used Parental Leave	Male	Persons	4	1	0	0	0	0	-	-	6	2	0	0	0	0	0	0	6	1	0	0	0	0	0	0
	Female	Persons	8	0	0	0	0	0	-	-	4	2	0	0	0	0	0	0	5	2	0	0	0	0	0	0
Parental Leave Rate	Male	%	1	2	0	0	0	0	-	-	2	3	0	0	0	0	0	0	2	1	0	0	0	0	0	0
	Female	%	40	0	0	0	0	0	-	-	17	67	0	0	0	0	0	0	21	67	0	0	0	0	0	0
Number of Employees Returned After Parental Leave	Male	Persons	6	1	0	0	0	0	-	-	4	1	0	0	0	0	0	0	6	1	0	0	0	0	0	0
	Female	Persons	3	0	0	0	0	0	-	-	2	0	0	0	0	0	0	0	4	2	0	0	0	0	0	0
Return Rate <sup>1)</sup>	Male	%	100	100	0	0	0	0	-	-	100	50	0	0	0	0	0	0	100	100	0	0	0	0	0	0
	Female	%	100	0	0	0	0	0	-	-	100	0	0	0	0	0	0	0	100	100	0	0	0	0	0	0

1) (Number of Employees Returned from Parental Leave in Reporting Year) / (Number of Employees Eligible for Returning from Parental Leave in Reporting Year) × 100, applicable to those with over 6 months of employment after return

2) 2021 data is calculated based only on personnel after the split

Labor Union<sup>1)</sup>

Category	Unit	SKST		
		2020	2021	2022
Labor Union Membership	Number of Eligible Employees for Labor Union Membership	Persons	-	511
	Number of Labor Union Members	Persons	-	442
	Labor Union Membership Rate	%	-	86

1) Labor union established at SK specialty in September 2021

Labor-Management Committee<sup>1)</sup>

Category	Unit	2020								2021								2022							
		SKST	SKMA	Renewtech <sup>2)</sup>	SKTC	SKRE	SKMP	SKMJ	SKMG14	SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14	SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14
Number of Labor-Management Committee Memebers	Persons	16	18	-	6	-	6	-	-	12	18	6	6	-	6	-	0	12	18	6	6	-	6	-	8

1) SK Resonac and SK materials JNC have fewer than 30 employees, so this is not applicable

2) SK materials airplus renewtech Division had fewer than 30 employees in 2020, so this is not applicable

Human Rights Training

Category	Unit	2020								2021								2022							
		SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14	SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14	SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14
Number of Employees Completed Legal Human Rights Training	Persons	2,612	405	78	383	20	181	-	-	2,655	478	99	509	29	233	59	40	2,686	549	120	485	52	281	113	185

Employee Engagement

Category	Unit	2020								2021								2022							
		SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14	SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14	SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14
Culture Survey Result (Out of 100 Points)	Points	83	74	72	76	86	74	-	-	73	75	70	85	69	76	-	-	82	75	69	89	82	82	67	76

Employee Capacity Building

Category		Unit	2020								2021							
			SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14	SKST <sup>1)</sup>	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14
Training Hours	Total Training Hours	Hours	160,301	10,372	643	12,314	266	353	-	-	80,467	17,113	1,507	20,203	185	2,248	178	1,695
	Training Hours per Person	Hours	201.9	76.8	24.7	94.7	38.0	5.9	-	-	100.5	98.9	45.7	148.6	15.4	30.8	6.4	188.4
Training Costs	Total Training Costs	KRW thousand	1,381,560	230,000	41,130	209,800	1,420	23,770	-	-	1,399,200	255,000	40,240	199,030	2,100	79,480	23,370	0
	Training Costs per Person	KRW thousand	1,740	1,704	1,582	1,614	203	396	-	-	1,760	1,474	1,219	1,463	175	1,089	835	0
Training Satisfaction (Out of 100 Points)	DT Training <sup>2)</sup>	Points	-								85.0 (Including SK Inc. materials)							

Category		Unit	2022							
			SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14
Training Hours	Total Training Hours	Hours	56,025	8,968	658	7,954	702	3,581	1,115	2,573
	Training Hours per Person	Hours	65.8	50.7	16.5	48.8	36.9	36.2	33.8	37.8
Training Costs	Total Training Costs	KRW thousand	1,190,750	297,000	73,450	263,750	2,320	106,340	71,870	109,120
	Training Costs per Person	KRW thousand	1,399	1,678	1,836	1,618	122	1,074	2,178	1,605
Training Satisfaction (Out of 100 Points)	DT Training <sup>2)</sup>	Points	85.0 (Including SK Inc. materials)							

1) Data for per capita training hours and per capita training costs in 2021 are calculated based only on personnel after the split

2) Survey results of DT training attendees

Rate of Employees Subject to Performance Evaluation Process<sup>1)</sup>

Category	Unit	2020								2021								2022							
		SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14	SKST <sup>1)</sup>	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14	SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14
Rate of Employees	%	100	100	100	100	100	100	-	-	100	100	100	100	100	100	100	-	100	100	100	100	100	100	100	100

1) Based on employees employed for 6 months or more during the given year

Benefits and Welfare

Category	Unit	2020								2021								2022							
		SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14	SKST <sup>1)</sup>	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14	SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14
Benefit and Welfare Expenses	KRW million	12,499	2,319	243	1,622	76	655	-	-	14,333	3,431	494	2,207	115	985	286	0	11,906	3,995	475	2,849	198	1,724	383	705

1) The combined total of employee benefits and welfare expenses for the existing corporation from January to November 2021, amounting to KRW 13,810 million, and the newly established corporation's employee benefits and welfare expenses of KRW 523 million for December 2021

Occupational Safety and Health

Category		Unit	2020								2021							
			SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14	SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14 <sup>5)</sup>
Number of Industrial Accidents	Employees	Cases	1	0	0	0	0	0	-	-	0	0	0	0	0	0	0	0
Industrial Accident Rate <sup>1)</sup>	Employees	%	0.14	0	0	0	0	0	-	-	0	0	0	0	0	0	0	0
Fatality Rate	Employees	%	0	0	0	0	0	0	-	-	0	0	0	0	0	0	0	0
	Suppliers	%	0	0	0	0	0	0	-	-	0	0	0	0	0	0	0	0
Number of Fatalities	Employees	Persons	0	0	0	0	0	0	-	-	0	0	0	0	0	0	0	0
	Suppliers	Persons	0	0	0	0	0	0	-	-	0	0	0	0	0	0	0	0
LTIR <sup>2)</sup>	Employees	Number of LTI	Cases	1	0	0	0	0	-	-	0	0	0	0	0	0	0	0
		Total Working Hours	Hours	1,409,702	305,045	54,163	308,925	16,000	590,570	-	-	1,977,886	400,903	71,548	291,611	18,237	136,020	35,437
		LTIR	Number of Cases	0.16	0	0	0	0	0	-	-	0	0	0	0	0	0	0
	Suppliers	Number of LTI	Cases	3	1	1	0	0	0	-	-	2	1	1	0	0	0	0
		Total Working Hours	Hours	869,298	1,425,984	68,368	21,631	0	0	-	-	1,546,444	581,464	75,679	37,758	41,756	0	14,648
		LTIR	Number of Cases	0.74	0.14	2.93	0	0	0	-	-	0.26	0.34	2.64	0	0	0	0
	Total	Number of LTI	Cases	4	1	1	0	0	0	-	-	2	1	1	0	0	0	0
		Total Working Hours	Hours	2,279,000	1,731,029	122,531	330,556	16,000	590,570	-	-	3,524,330	982,367	147,227	329,369	59,993	136,020	50,085
		LTIR	Number of Cases	0.35	0.12	1.63	0	0	0	-	-	0.11	0.20	1.36	0	0	0	0
OIFR <sup>3)</sup>	Employees	Number of OI	Cases	0	0	0	0	0	0	-	-	0	0	0	0	0	0	0
		Total Working Hours	Hours	1,409,702	305,045	54,163	308,925	16,000	590,570	-	-	1,977,886	400,903	71,548	291,611	18,237	136,020	35,437
		OIFR	Number of Cases	0	0	0	0	0	0	-	-	0	0	0	0	0	0	0
TRIR <sup>4)</sup>	Employees	Number of Incidents	Cases	5	0	1	0	0	0	-	-	2	0	2	0	0	0	0
		Total Working Hours	Hours	1,409,702	305,045	54,163	308,925	16,000	590,570	-	-	1,977,886	400,903	71,548	291,611	18,237	136,020	35,437
		TRIR	Number of Cases	0.71	0	3.69	0	0	0	-	-	0.20	0	5.59	0	0	0	0
	Suppliers	Number of Incidents	Cases	5	2	1	0	0	0	-	-	4	1	1	0	0	0	0
		Total Working Hours	Hours	869,298	1,425,984	68,368	21,631	0	0	-	-	1,546,444	581,464	75,679	37,758	41,756	0	14,648
		TRIR	Number of Cases	1.15	0.28	2.93	0	0	0	-	-	0.52	0.34	2.64	0	0	0	0
	Total	Number of Incidents	Cases	10	2	2	0	0	0	-	-	6	1	3	0	0	0	0
		Total Working Hours	Hours	2,279,000	1,731,029	122,531	330,556	16,000	590,570	-	-	3,524,330	982,367	147,227	329,369	59,993	136,020	50,085
		TRIR	Number of Cases	0.88	0.23	3.26	0	0	0	-	-	0.34	0.20	4.08	0	0	0	0

1) Industrial Accident Rate : (Number of Workers with Occupational Injuries) / (Total Number of Workers) × 100  
2) LTIR : Lost-Time Injury Rate, (Number of Lost-Time Injury Cases) / (Total Working Hours) × 200,000  
3) OIFR : Occupational Illness Frequency Rate, (Number of Occupational Illness Cases) / (Total Working Hours) × 200,000  
4) TRIR : Total Recordable Incident Rate, (Number of Recordable Injury Cases) / (Total Working Hours) × 200,000  
5) For SK materials Group14, established in October 2021 with a small number of employees, total working hours for 2021 are excluded for calculation. Calculation begins from 2022



Occupational Safety and Health

Category		Unit	2022							
			SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14
Number of Industrial Accidents	Employees	Cases	0	0	0	0	0	0	0	0
Industrial Accident Rate <sup>1)</sup>	Employees	%	0	0	0	0	0	0	0	0
Fatality Rate	Employees	%	0	0	0	0	0	0	0	0
	Suppliers	%	0	0	0	0	0	0	0	0
Number of Fatalities	Employees	Persons	0	0	0	0	0	0	0	0
	Suppliers	Persons	0	0	0	0	0	0	0	0
LTIR <sup>2)</sup>	Employees	Number of LTI	Cases	0	0	0	0	0	0	0
		Total Working Hours	Hours	1,710,136	389,535	77,069	318,907	36,378	175,374	63,331
		LTIR	Number of Cases	0	0	0	0	0	0	0
	Suppliers	Number of LTI	Cases	2	1	0	0	0	0	1
		Total Working Hours	Hours	964,651	648,807	76,898	49,164	236,560	33,048	14,460
		LTIR	Number of Cases	0.41	0.31	0	0	0	0	0.41
	Total	Number of LTI	Cases	2	1	0	0	0	0	1
		Total Working Hours	Hours	2,674,787	1,038,342	153,967	368,070	272,938	208,422	77,791
		LTIR	Number of Cases	0.15	0.19	0	0	0	0	0.34
OIFR <sup>3)</sup>	Employees	Number of OI	Cases	0	0	0	0	0	0	0
		Total Working Hours	Hours	1,710,136	389,535	77,069	318,907	36,378	175,374	63,331
		OIFR	Number of Cases	0	0	0	0	0	0	0
TRIR <sup>4)</sup>	Employees	Number of Incidents	Cases	1	0	0	0	0	0	0
		Total Working Hours	Hours	1,710,136	389,535	77,069	318,907	36,378	175,374	63,331
		TRIR	Number of Cases	0.12	0	0	0	0	0	0
	Suppliers	Number of Incidents	Cases	2	1	0	0	0	0	1
		Total Working Hours	Hours	964,651	648,807	76,898	49,164	236,560	33,048	14,460
		TRIR	Number of Cases	0.41	0.31	0	0	0	0	0.41
	Total	Number of Incidents	Cases	3	1	0	0	0	0	1
		Total Working Hours	Hours	2,674,787	1,038,342	153,967	368,070	272,938	208,422	77,791
		TRIR	Number of Cases	0.22	0.19	0	0	0	0	0.34

1) Industrial Accident Rate : (Number of Workers with Occupational Injuries) / (Total Number of Workers) × 100

2) LTIR : Lost-Time Injury Rate, (Number of Lost-Time Injury Cases) / (Total Working Hours) × 200,000

3) OIFR : Occupational Illness Frequency Rate, (Number of Occupational Illness Cases) / (Total Working Hours) × 200,000

4) TRIR : Total Recordable Incident Rate, (Number of Recordable Injury Cases) / (Total Working Hours) × 200,000

Occupational Safety Training

Category	Unit	2020								2021								2022							
		SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14	SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14	SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14
Legal Training <sup>1)</sup>	Persons	836	461	1	284	0	54	-	-	1,603	589	49	289	424	82	14	0	1,464	675	105	332	173	167	37	284
	Hours	16,330	2,972	17	4,993	0	369	-	-	16,859	3,896	290	4,603	1,242	1,554	230	0	18,705	4,314	654	4,851	970	2,426	442	2,300
Non-legal Training <sup>2)</sup>	Persons	1,055	0	0	0	0	0	-	-	2,172	0	0	140	117	0	0	0	1,526	0	0	402	286	134	0	152
	Hours	6,328	0	0	0	0	0	-	-	11,634	0	0	140	652	0	0	0	7,572	0	0	442	1,340	321	0	1,374

1) Includes regular occupational safety and health training, and other trainings for supervisory management, fire-fighting facility management, high-pressure gas safety management, hazardous chemicals management, etc.

2) Includes trainings for work environment assessment, Material Safety Data Sheets (MSDS), process safety procedures, SHE competencies, etc.

PSM

Category	Unit	2020								2021								2022							
		SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14	SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14	SKST <sup>1)</sup>	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14
PSM Grade	-	S	-	N/A	S	S	-	-	-	S	S	N/A	S	S	-	N/A	-	S	S	N/A	S	S	-	N/A	-

1) SK specialty achieved P Grade in January 2023

Safety and Health Certifications

Category	Unit	SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14
ISO 45001	Validity Period	2023.12.07	2025.05.08	2024.12.20	2026.03.04	2024.12.26	2023.06.11	2025.01.06	2025.12.25
Excellent Safety Management Laboratory Certification <sup>1)</sup>	-	1 Laboratory	-	-	-	-	4 Laboratories <sup>2)</sup>	-	-
Safety Zone Certification	Validity Period	2026.01.12	-	-	-	-	-	-	-

1) The validity period is planned to be renewed every 2 years

2) Additional certification for 3 laboratories is planned to be obtained in August 2023

Supplier Status

Category		Unit	2022							
			SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14
Tier 1	All (Primary) Suppliers <sup>1)</sup>	No. of Companies	467	188	139	162	133	121	36	86
	Key Suppliers <sup>2)</sup>	No. of Companies	25	10	0	3	0	2	0	0
	Purchase Proportion from Key Suppliers	%	23	43	0	33	0	17	0	0

1) Suppliers with expenditure performance in the given year  
2) Based on Mutual Growth Council member companies

Supplier Support

Category		Unit	2022							
			SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14
Supplier Support Amount (Technical Support, Occupational Health and Safety Support, etc.)		KRW million	92	221	0	313	0	0	2	0

Opinions and Handling Status of the Mutual Growth Council

Category		Unit	2022							
			SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14
Number of Cases Received		Cases	6	3	1	3	1	4	0	0
Number of Cases Completed		Cases	6	3	1	3	1	4	0	0
Completion Rate		%	100	100	100	100	100	100	-	-

Supplier ESG Management

Category			Unit		2022							
					SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14
Receipt of Suppliers' Code of Conduct Agreements	Target	No. of Companies			22	10	6	7	5	17	0	0
	Implementation	No. of Companies			22	10	3	7	5	17	0	0
	Rate	%			100	100	50	100	100	100	-	-
ESG Risk Assessment	Target <sup>1)</sup>	No. of Companies			22	2	1	3	1	1	0	0
	Implementation	No. of Companies			21	2	1	3	1	1	0	0
	Rate	%			95	100	100	100	100	100	-	-
High-Risk Suppliers Site Inspection <sup>2)</sup>	Target	No. of Companies			17	1	0	2	1	0	0	0
	Implementation	No. of Companies			0	1	0	0	0	0	0	0
	Rate	%			0	100	-	-	-	-	-	-
Support for High-Risk Suppliers' Implementation of Corrective Action Measures	Target	No. of Companies			17	1	0	2	1	0	0	0
	Implementation	No. of Companies			13	1	0	2	1	0	0	0
	Rate	%			76	100	-	100	100	-	-	-

1) Based on Mutual Growth Council member companies  
2) Being conducted for Suppliers with Click ESG evaluation scores of less than 3 points starting from 2022

Customer Satisfaction Survey<sup>1)</sup>

Category	Unit	2020								2021								2022							
		SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14	SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14	SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14
Customer Satisfaction Survey Score <sup>2)</sup>	Points	9.4	99.3	-	-	90.0	74.0	-	-	9.1	99.2	-	-	90.0	73.8	-	-	9.3	96.8	4.7	9.3	90.0	79.7	-	-

1) SK materials airplus renewtech Division and SK trichem began customer satisfaction survey starting from 2022, while SK materials JNC is scheduled to begin from 2023  
2) SK specialty is scored on a 10-point scale, SK materials airplus renewtech Division on a 5-point scale, and other subsidiaries on a 100-point scale



Quality Management Certifications

Category	Unit	SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14
IATF 16949	Validity Period	2024.12.21	-	-	2024.12.21	-	-	-	-
ISO 9001	Validity Period	2024.12.21	2025.05.12	2025.11.26	2023.03.26	2024.12.26	2023.06.11	2025.01.06	-
FSSC 22000	Validity Period	-	-	2024.11.09	-	-	-	-	2025.12.25

Information Security Certifications

Category	Unit	SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14
ISO 27001	Validity Period	2025.08.09	-		-	-	-	-	-

Social Contribution

Category		Unit	2020								2020							
			SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14	SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14
Social Contribution Investment Amount	Total	KRW million	2,095	43	8	2	0	0	-	-	3,976	82	14	54	0	0	0	0
	Monetary Donations	KRW million	2,095	5	0	0	0	0	-	-	3,976	0	0	52	0	0	0	0
	In-kind Donations	KRW million	0	38	8	2	0	0	-	-	0	82	14	2	0	0	0	0
Happiness Sharing Volunteer Group Performance	Volunteering Hours	Hours	2,949	362	40	132	0	0	-	-	1,548	0	0	72	0	40	0	0
	Converted Value	KRW million	27	3	0	1	0	0	-	-	39	0	0	1	0	0	0	0

Category		Unit	2022															
			SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14	SKST	SKMA	Renewtech	SKTC	SKRE	SKMP	SKMJ	SKMG14
Social Contribution Investment Amount	Total	KRW million	2,971	76	65	52	7	4	0	0								
	Monetary Donations	KRW million	2,971	3	59	47	0	0	0	0								
	In-kind Donations	KRW million	0	73	6	5	7	4	0	0								
Happiness Sharing Volunteer Group Performance	Volunteering Hours	Hours	1,100	856	124	149	0	180	0	0								
	Converted Value	KRW million	64	8	1	9	0	7	0	0								

Governance

Board of Directors

Category	Unit	2020							2021							2022							
		SKST	SKMA	SKTC	SKRE	SKMP	SKMJ	SKMG14 <sup>1)</sup>	SKST		SKMA	SKTC	SKRE	SKMP	SKMJ	SKMG14	SKST	SKMA	SKTC	SKRE	SKMP	SKMJ	SKMG14
									Jan. to Nov.	Dec. <sup>2)</sup>													
Total Number of Directors	Persons	4	4	5	5	3	3	-	4	4	4	5	5	4	5	3	4	5	5	5	5	5	4
Number of Executive Directors and Other Non-executive Directors	Persons	3	4	5	5	3	3	-	3	3	4	5	5	4	3	3	3	5	5	5	5	4	4
Number of Outside Directors	Persons	1	0	0	0	0	0	-	1	1	0	0	0	0	2	0	1	0	0	0	0	1	0
Number of Board Meetings	Times	10	11	3	9	6	1	-	11	2	6	6	10	10	10	2	8	13	8	11	9	8	9
Average Participation Rate	%	98.1	100	100	100	100	100	-	97.7	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Number of Deliberated and Resolved Items	Cases	36	21	9	29	9	2	-	45	8	15	8	31	13	18	6	31	37	11	31	13	16	11

1) SK materials Group14, established in 2021, is excluded from the 2020 reporting

2) Due to the establishment of a new corporation after the split and merger in December 2021, reporting is separated for January to November and December

Ethical Management<sup>1)</sup>

Category		Unit	2020								2021							2022						
			SKST	SKMA	SKTC	SKRE	SKMP	SKMJ	SKMG14	SKST		SKMA	SKTC	SKRE	SKMP	SKMJ	SKMG14	SKST	SKMA	SKTC	SKRE	SKMP	SKMJ	SKMG14
										Jan. to Nov.	Dec. <sup>2)</sup>													
Ethics Education Programs	Total Training Hours	Hours	1	1	1	1	1	-	-	1	1	1	1	1	1	0	1	1	1	1	1	1	1	
	Number of Total Trainees	Persons	737	149	126	8	48	-	-	843	169	128	7	62	20	0	946	211	135	16	78	77	45	
Measures Taken for Ethical Code Violations <sup>2)</sup>	Violations	Cases	0	0	0	0	0	-	-	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Measures	-	0	0	0	0	0	-	-	Dismissal	0	0	0	0	0	0	0	0	0	0	0	0	0	
Number of Ethical Management Reporting Cases <sup>3)</sup>	Total	Cases	5	0	0	0	1	-	-	7	1	1	0	1	0	0	0	0	0	1	0	0	1	
	Ethics/Anti-corruption	Number of Reporting Cases	Cases	1	0	0	0	0	-	-	1	0	0	0	0	0	0	0	0	0	0	0	0	
		Result	-	-	0	0	0	0	-	-	Dismissal	0	0	0	0	0	0	0	0	0	0	0	0	
	Suppliers	Number of Reporting Cases	Cases	1	0	0	0	0	-	-	2	1	0	0	1	0	0	0	0	0	0	0	1	
		Result	-	-	0	0	0	0	-	-	Sanction(1)	-	0	0	-	0	0	0	0	0	0	0	-	
	Human Resources	Number of Reporting Cases	Cases	3	0	0	0	0	-	-	3	0	1	0	0	0	0	0	0	0	1	0	0	0
		Result	-	-	0	0	0	0	-	-	-	0	-	0	0	0	0	0	0	-	0	0	0	
	Others	Number of Reporting Cases	Cases	0	0	0	0	1	-	-	1	0	0	0	0	0	0	0	0	0	0	0	0	0
		Result	-	0	0	0	0	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	

1) Based on reports received during the year from January 1st to December 31st

2) Excludes cases of violations due to ad hoc and regular audits, other than ethical management reports

3) Unspecified outcomes indicate allegations without merit or matters resolved with simple measures

Social Value Performance

Social Value Performance and Measurement<sup>1)</sup>

(Unit : KRW 100 million)

Category			2020	2021	2022	Formula
Indirect Economic Contributions	Employment		1,140.5	1,409.9	1,763.1	• The total sum of employees' wages for the given year (amount subject to withholding tax on earned income reported to the National Tax Service) + welfare* for improving employees' quality of life, such as condolence payments, housing support, etc. * Employee welfare performance has been measured since 2021 - SK materials had a total of 1,739 Employees in 2022
	Dividends		593.1	1,464.6	4,675.0	• Total amount of dividends for the given year
	Taxation		470.5	892.5	2,174.6	• Total amount of taxes paid for the given year
Environmental Performance	Resource Consumption	Water	-7.5	-9.3	-11.7	① Public water consumption 787,279.4 m <sup>3</sup> × Average public water rate KRW 1,400.3 + ② River water consumption 1,193,176.3 m <sup>3</sup> × Average river water rate KRW 191.8 + ③ Other water consumption 994,831.8 m <sup>3</sup> × Average other water rate KRW 578.8
	Environmental Pollution	GHG	-570.7	-838.7	-740.8	• GHG emissions 682,548.8 ton × GHG Eco-cost KRW 108,539.8
		Air Pollutants	-0.6	-1.1	-2.4	① NOx emissions 24,646.7 kg × NOx Eco-cost <sup>2)</sup> KRW 7,696.3 + ② SOx emissions 2,227.5 kg × SOx Eco-cost KRW 12,589.4 + ③ Other_dust emissions 1,829.6 kg × Other_dust Eco-cost KRW 6,971 + ④ Other_F emissions 234.9 kg × Other_F Eco-cost KRW 44 + ⑤ Other_NH <sub>3</sub> emissions 644.9 kg × Other_NH3 Eco-cost KRW 18,432
		Water Pollutants	-1.9	-3.0	-3.3	① COD emissions 17,512.3 kg × COD Eco-cost KRW 124.5 + ② T-P emissions 295.2 kg × T-P Eco-cost KRW 20,767.9 + ③ T-N emissions 10,134.2 kg × T-N Eco-cost KRW 30,133.8 + ④ Other water pollutant emissions 2,002.8 kg × Other water pollutant Eco-cost KRW 5,877
		Waste	-5.8	-5.1	-10.6	① General/Incinerated waste amount 309.7 ton × General/Incinerated waste amount Eco-cost KRW 116,705.5 + ② General/landfill waste amount 4,118.4 ton × General/landfill waste amount Eco-cost KRW 176,459.4 + ③ Designated/incinerated waste amount 387.7 ton × Designated/incinerated waste amount Eco-cost KRW 768,838.2
	Product/Service		-	36.8	36.4	• GHG emission reduction through ultra-pure LCO <sub>2</sub> residual gas recycling (SK specialty, SK materials airplus) = KRW 130 million * Newly measured in 2022; Sales volume and measurement formula is confidential • Hazardous substance emission reduction through dry ice sales replacing conventional ice packs (SK materials airplus) = In-house Sales Volume × SAP Leakage Volume × Plastic Ecosystem Value Decrease Cost (\$33,000/ton) × SV Benchmark = KRW 3.51 billion
Social Performance	Labor	Employment of Vulnerable Worker	1.5	0.1	-0.2	• Increase in Income for Vulnerable Workers = (Income of Employed Vulnerable Workers - Pre-Employment Income of Vulnerable Workers) × Excess Legal Employment - Applies to the number of disabled Employees employed in the SK specialty workplace for employees with disabilities (Happy Companions), established in August 2019 • Applicable burden due to shortfall in mandatory employment of disabled individuals - Paid burden of disabled employment during a temporary supplementation period due to lack of employment flexibility; however, continued operation of the disabled standard workplace since February 2022

1) To ensure the objectivity of quantifying social value in monetary terms and securing a basis for measurement: ① Only objective data recognized by third parties are considered for measurement, ② Proxies are applied for social benefits and costs for the current year, ③ The principle of annual updates and management is followed. If certain proxies are not updated annually, they are adjusted using factors like inflation rates to reflect their current value for the current year.

2) Eco-cost : The cost associated with the environmental pollutants generated by human activities, particularly during the production, usage, and disposal of products, to ensure the maintenance of environmental sustainability.

Category				2020	2021	2022	Formula
Social Performance	Employees' Quality of Life	Family-friendly System		3.1	6.0	7.8	• Parental Leave = Number of Parental Leave Months (162 months) × Average Monthly Salary of Domestic Workers in 2022 (KRW 4,038,837) • Paid Shortened Work Hours = Shortened Work Hours (3,594 hours) × Average Hourly Wage of Domestic Workers in 2022 (KRW 24,582) • Unpaid Shortened Work Hours = Shortened Work Hours (400 hours) × Minimum Hourly Wage in South Korea in 2022 (KRW 9,160) • Total Cost of Alternative Services or Resources for the Implementation of Other Work-Family Reconciliation Programs
		Training		0.1	19.6	26.4	• Total Cost related to Employee Training Achievement (Including mySUNI*, DT Competency Building, Job-specific Training, Support for Certification Acquisition, etc.) * SK Group's online training platform launched in 2020
	Employees Safety and Health	Disease and Illness Prevention		54.8	55.7	59.8	• Total Cost for Disease and Illness Prevention, Health and Safety Assurance: KRW 5.98 billion
		Safety Accidents		-0.1	-0.5	0	• Received Amount of Industrial Accident (Human) Insurance Compensation: KRW 1 million
	Mutual Growth	Fair Trade	Payment Terms Reduction	3.4	0.2	0.4	• Amount Paid for Subcontracting Fees: KRW 51.1 billion × (Days Beyond Average Payment Period for Large Corporations 15.6 days* - Average Payment Period 9.65 days)/365 days × Average Market Bank Interest Rate 4.32% * The average payment period for large corporations was changed from 60 days to 15.6 days, and this calculation applies to cases where payment is made in less than 15.6 days
			Unfair Trade	-	-	-	① (1st Priority) Costs Incurred due to Unfair Trade Practices Affecting Suppliers ② (2nd Priority) Costs Incurred from Fair Trade Commission Sanctions due to Unfair Trade Practices (Fines, Penalties, Sanctions, etc.)
		Mutual Growth	Technical Support and Protection	6.7	4.1	10.3	• Amount Invested for the Benefit of Suppliers through Technical Support and Protection: KRW 1.03 billion
			Management-related Support	0.8	1.1	1.6	• Expenditure for Mutual Growth and Suppliers' ESG Improvement/Support: KRW 160 million
		Social Contribution & Responsible Purchase	Social Contribution Purchases	0.1	0.5	1.2	• Contribution to the Income Increase of Vulnerable Producers through Social Enterprise Purchases = Purchase Amount × Value-Added Ratio of Purchasing Entity's Industry (e.g., Wholesale and Retail Trade, Information and Communication Services) = KRW 80 million • Impact of Purchases through Happynarae= SK materials' Purchase Amount from Social Enterprises (KRW 110 million) × Value-Added Ratio of Relevant Industry for Social Enterprises (40%) = KRW 40 million * Products are purchased/traded from social enterprises through Happynarae, SK's proprietary subsidiary distribution platform
		Suppliers Safety/Health	Providing Safe Working Conditions through Suppliers' Safety and Health Management	1.6	1.5	0.8	• Total Support Amount for Suppliers' Accident Rate Reduction and Suppliers' Safety and Health Management = (Cost of Workplace Environment Measurement KRW 30 million + Cost of Suppliers' SHE Consulting KRW 40 million + Cost of Providing Hygiene Supplies KRW 10 million)
			Material/Human Damages to Suppliers Caused by Industrial Accidents	-	-	-2.0	• Total material damage costs • Compensation received by suppliers' workers for Industrial Accident Insurance (Costs incurred due to subcontracting/supply work commissioned by SK Group)
		Product/Service	Contribution to Supply Chain Stability through Ultra-High Purity AHF Gas Development/Sales	-	48.1	-	• Details of calculation are confidential (Newly measured)
	Social Contribution Activities			27.8	31.1	41.6	• Contribution of Social and Economic Support through Happynarae Profit Sharing = Total Social Impact of Happynarae Support Projects (KRW 13.1 billion) × Happynarae Purchase Ratio (0.65%) = KRW 90 million * Measurement of each affiliated company's contribution to the social impact of supporting the social enterprise ecosystem through Happynarae • Blood Donation Impact: KRW 60 million (372 donations × Social Value of 1 Blood Donation, KRW 167,011) * Blood donation performance in 2020 and 2021 was measured as “Volunteering,” and starting from 2022, it is measured as “Social Contribution Activities” • Myanmar Cookstove Impact: KRW 4.01 billion (Creation of Low-Income Jobs KRW 60 million + Reduction in Firewood Usage Fee KRW 1.52 billion + Increased Available Time through Cooking Time Reduction KRW 1.89 billion + Contribution to Carbon Emission Allowances KRW 540 million)
	Donation			19.9	38.6	40.9	• Legal/Designated Donation Impact = Total Amount of Legally Recognized Donations for the Reporting Year (SV Joint Budget KRW 2.07 billion + Happiness Sharing Offering Donations KRW 360 million + Happy Alliance KRW 70 million + STAXX Project KRW 1.59 billion) * Corporate donations are measured as impact at the beneficiary level, as the final beneficiaries are determined in various stages
	Volunteering			0.3	0.4	0.5	• Measurement of Impact for Employees' Volunteer Hours: KRW 50 million (① + ② + ③) ① Simple Volunteer Work: 1,729 hours × 2022 Minimum Wage Hourly Rate in Korea (KRW 9,160) ② Pro Bono: 132 hours × 2022 Consulting Hourly Rate (KRW 225,000) ③ Skill-based Volunteer Work: 40 hours × 2022 Average Hourly Rate for Employees (KRW 20,235)
Total				1,737.8	3,152.8	8,069.2	



# Endorsement

## TCFD

### Governance

#### Roles of the Board of Directors and Executive Management

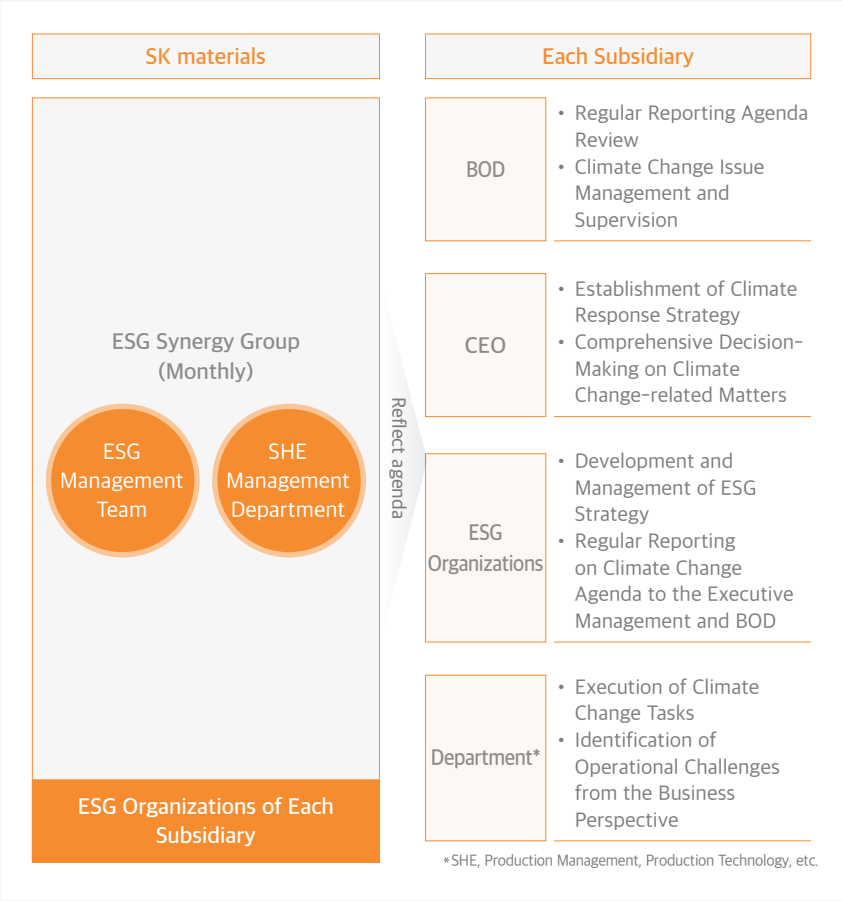
SK materials manages its climate change agenda with a focus on the CEOs and boards of each subsidiary.

The board oversees climate-related issues comprehensively and plays a role in recognizing and controlling potential climate change risks across all business areas. SK materials regularly reports key climate change issues to the board and in 2022, we reported and decided on matters related to Net Zero/RE100 implementation, and direct PPA purchasing contracts. The CEO holds significant responsibility in managing the climate change agenda and making comprehensive decisions considering climate-related situations.

The Sustainability Department and SHE Management Department formulate SK materials' climate change response strategies, manage objectives and outcomes, and derive response measures for various climate-related topics. Additionally, each subsidiary's ESG governing organization checks the progress of ESG tasks through the ESG Synergy Group, discusses climate-related topics, and implements matters decided within the collaborative framework based on individual ESG promotion systems.

We enhance our Climate Change Response System by promoting discussions on climate change issues among subsidiaries and improving the task execution capabilities of relevant organizations through the ESG Synergy Group.

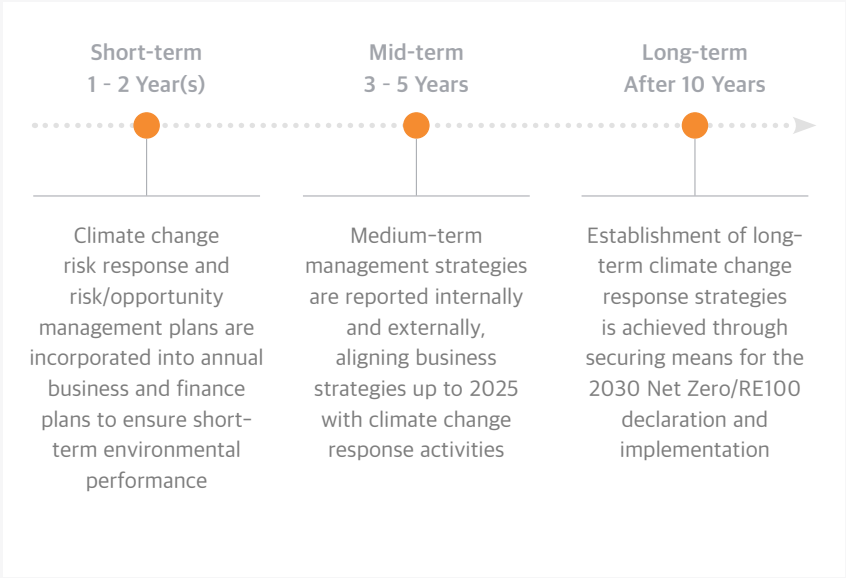
Climate Change Response Organization and System



### Strategy

SK materials has established the materiality assessment process for identifying and evaluating financial and strategic risks and opportunities related to climate change. This process involves understanding the organization's key tasks and issues, stakeholder demands and expectations, as well as identifying risks within the management process. Impact and likelihood are evaluated, and based on this assessment, short-term, medium-term, and long-term business impacts are analyzed to integrate into medium and long-term business strategies.

#### Response Strategies for Short-Term, Medium-Term, and Long-Term Risks



Climate Change Scenario Analysis

SK materials has adopted scenarios to identify financial risks associated with climate change. For transition risks, the International Energy Agency's (IEA) Net Zero Emissions (NZE) 2050 scenario is adopted, while for physical risks, the Representative Concentration Pathways (RCP) 4.5 scenario is chosen. Based on these scenarios, we are striving to minimize financial risks related to climate change by setting carbon emission reduction goals and strategies for emissions trading.

Category	Selected Scenarios	Key Conditions for Scenarios
Transition Risks	IEA NZE 2050 (1.5°C Increase)	<ul style="list-style-type: none"><li>Regulation: Significant increase in carbon emission allowance prices</li><li>Technology: Widespread adoption of CCUS in GHG emission facilities</li><li>Reputation: Strengthening of voluntary reporting obligations, increased demands for emission reductions from customers</li></ul>
Physical Risks	RCP 4.5 (2.8°C Increase)	<ul style="list-style-type: none"><li>Significant realization of GHG reduction policies - CO<sub>2</sub> concentration projected to reach 540ppm by 2100</li><li>Physical risks: Typhoons, floods, water scarcity, sea level rise, etc.</li></ul>

Under the IEA NZE 2050 scenario, SK specialty's analysis of transition risks reveals that the financial burden due to the increase in carbon emission allowance prices could be approximately 3.8 times higher in 2030 compared to 2020. To address this, we are implementing their Net Zero plan for 2030. We are formulating an analysis methodology to extend transition risk analysis to all subsidiary companies.

All subsidiaries of SK materials have completed a physical risk analysis targeting major domestic and international business sites and supply chains.

Analysis of Physical Risks due to Climate Change

Background and Scope

The TCFD requires an analysis of physical risks caused by climate change. SK materials conducted an analysis targeting major domestic and international business sites and supply chains of 7 subsidiary companies.

Analysis Method

SK materials adopted the RCP<sup>1)</sup> 4.5 scenario, which envisions a scenario with significant realization of greenhouse gas reduction policies, for the analysis of physical risks. Additionally, to evaluate physical risks from a more conservative perspective, an analysis was conducted using the RCP 8.5 scenario, which assumes greenhouse gas emissions continue on our current trajectory without proper execution of GHG reduction policies.

Leveraging S&P Global's Climanomics® hazard modeling, the impact of 7 major climate hazards<sup>2)</sup> based on asset types and physical locations was analyzed in 10-year intervals from 2023 to 2100. This analysis calculated the ratio of risk cost to asset value by considering the impact of these climate risks.

Analysis Results

Under both the RCP 4.5 scenario adopted by SK materials and RCP 8.5 scenario, which represents a more cautious perspective, the asset loss rates for SK materials and its key supply chains were calculated to be lower than the risk level<sup>3)</sup> of 10%. As a result, it is evaluated that significant impacts are not expected to occur.

SK materials will continue to analyze physical risks and conduct ongoing monitoring. Preemptive risk response processes will be established for business sites and supply chains that are evaluated to have risk levels.

1) RCP (Representative Concentration Pathways) : Climate change scenarios presented in the 5th Assessment Report of the Intergovernmental Panel on Climate Change (IPCC)  
2) 7 Major Climate Hazards : Abnormal temperatures, sea level rise, drought, wildfires, typhoons, water stress, river flooding  
3) Risk Level : Defined by S&P Global's Climanomics® hazard modeling as a range of significant loss risk for companies. It classifies as a significant risk range if the annual average asset loss rate is over 10%, and if it exceeds 16%, it is classified as a critical risk range

Results of Physical Risk Analysis before 2030 (2023~2029)

Physical risk level by site under the IPCC RCP 4.5 scenario								
Category		Abnormal Temperatures	Sea Level Rise	Drought	Wildfire	Typhoons	Water Stress	River Flooding
SK specialty	Yeongju Head Office	●	●	●	●	●	●	●
	Sejong Research Center	●	●	●	●	●	●	●
	Sangju Business Site	●	●	●	●	●	●	●
	China Business Site	●	●	●	●	●	●	●
	Supply Chain 1	●	●	●	●	●	●	●
	Supply Chain 2	●	●	●	●	●	●	●
	Supply Chain 3	●	●	●	●	●	●	●
	Supply Chain 3	●	●	●	●	●	●	●
SK materials airplus	Ulsan Business Site	●	●	●	●	●	●	●
	Cheongju Business Site	●	●	●	●	●	●	●
	Yeongju Business Site	●	●	●	●	●	●	●
	Gumi Business Site	●	●	●	●	●	●	●
	renewtech Division	●	●	●	●	●	●	●
	Supply Chain 1	●	●	●	●	●	●	●
	Supply Chain 2	●	●	●	●	●	●	●
	Supply Chain 3	●	●	●	●	●	●	●
SK trichem	Sejong Business Site	●	●	●	●	●	●	●
	Supply Chain 1	●	●	●	●	●	●	●
	Supply Chain 2	●	●	●	●	●	●	●
	Supply Chain 3	●	●	●	●	●	●	●
SK Resonac	Yeongju Business Site	●	●	●	●	●	●	●
	Supply Chain 1	●	●	●	●	●	●	●
	Supply Chain 2	●	●	●	●	●	●	●
	Supply Chain 3	●	●	●	●	●	●	●
SK materials performance	Sejong Business Site	●	●	●	●	●	●	●
	Supply Chain 1	●	●	●	●	●	●	●
	Supply Chain 2	●	●	●	●	●	●	●
	Supply Chain 3	●	●	●	●	●	●	●
SK materials JNC	Dongtan Head Office/ Research Center	●	●	●	●	●	●	●
	Pyeongtaek Business Site	●	●	●	●	●	●	●
	Japan Research Center	●	●	●	●	●	●	●
	Supply Chain 1	●	●	●	●	●	●	●
	Supply Chain 2	●	●	●	●	●	●	●
SK materials Group14	Sangju Business Site	●	●	●	●	●	●	●
	Supply Chain 1	●	●	●	●	●	●	●
	Supply Chain 2	●	●	●	●	●	●	●
	Supply Chain 3	●	●	●	●	●	●	●

MAAL<sup>1)</sup> : ● N/A<sup>2)</sup> ● 0~3% ● ~6% ● ~10% ● ~16% ● Over 16%

Physical risk level by site under the IPCC RCP 8.5 Scenario								
Category		Abnormal Temperatures	Sea Level Rise	Drought	Wildfire	Typhoons	Water Stress	River Flooding
SK specialty	Yeongju Head Office	●	●	●	●	●	●	●
	Sejong Research Center	●	●	●	●	●	●	●
	Sangju Business Site	●	●	●	●	●	●	●
	China Business Site	●	●	●	●	●	●	●
	Supply Chain 1	●	●	●	●	●	●	●
	Supply Chain 2	●	●	●	●	●	●	●
	Supply Chain 3	●	●	●	●	●	●	●
	Supply Chain 3	●	●	●	●	●	●	●
SK materials airplus	Ulsan Business Site	●	●	●	●	●	●	●
	Cheongju Business Site	●	●	●	●	●	●	●
	Yeongju Business Site	●	●	●	●	●	●	●
	Gumi Business Site	●	●	●	●	●	●	●
	renewtech Division	●	●	●	●	●	●	●
	Supply Chain 1	●	●	●	●	●	●	●
	Supply Chain 2	●	●	●	●	●	●	●
	Supply Chain 3	●	●	●	●	●	●	●
SK trichem	Sejong Business Site	●	●	●	●	●	●	●
	Supply Chain 1	●	●	●	●	●	●	●
	Supply Chain 2	●	●	●	●	●	●	●
	Supply Chain 3	●	●	●	●	●	●	●
SK Resonac	Yeongju Business Site	●	●	●	●	●	●	●
	Supply Chain 1	●	●	●	●	●	●	●
	Supply Chain 2	●	●	●	●	●	●	●
	Supply Chain 3	●	●	●	●	●	●	●
SK materials performance	Sejong Business Site	●	●	●	●	●	●	●
	Supply Chain 1	●	●	●	●	●	●	●
	Supply Chain 2	●	●	●	●	●	●	●
	Supply Chain 3	●	●	●	●	●	●	●
SK materials JNC	Dongtan Head Office/ Research Center	●	●	●	●	●	●	●
	Pyeongtaek Business Site	●	●	●	●	●	●	●
	Japan Research Center	●	●	●	●	●	●	●
	Supply Chain 1	●	●	●	●	●	●	●
	Supply Chain 2	●	●	●	●	●	●	●
SK materials Group14	Sangju Business Site	●	●	●	●	●	●	●
	Supply Chain 1	●	●	●	●	●	●	●
	Supply Chain 2	●	●	●	●	●	●	●
	Supply Chain 3	●	●	●	●	●	●	●

1) MAAL (Modeled Average Annual Loss) : The ratio of predicted loss amount to current asset value

2) N/A : Stands for “Not Applicable”. This is used when the source of the risk factor does not exist or when it is not located in coastal areas. It is also used when the risk factor is not included in the analysis model due to data limitations

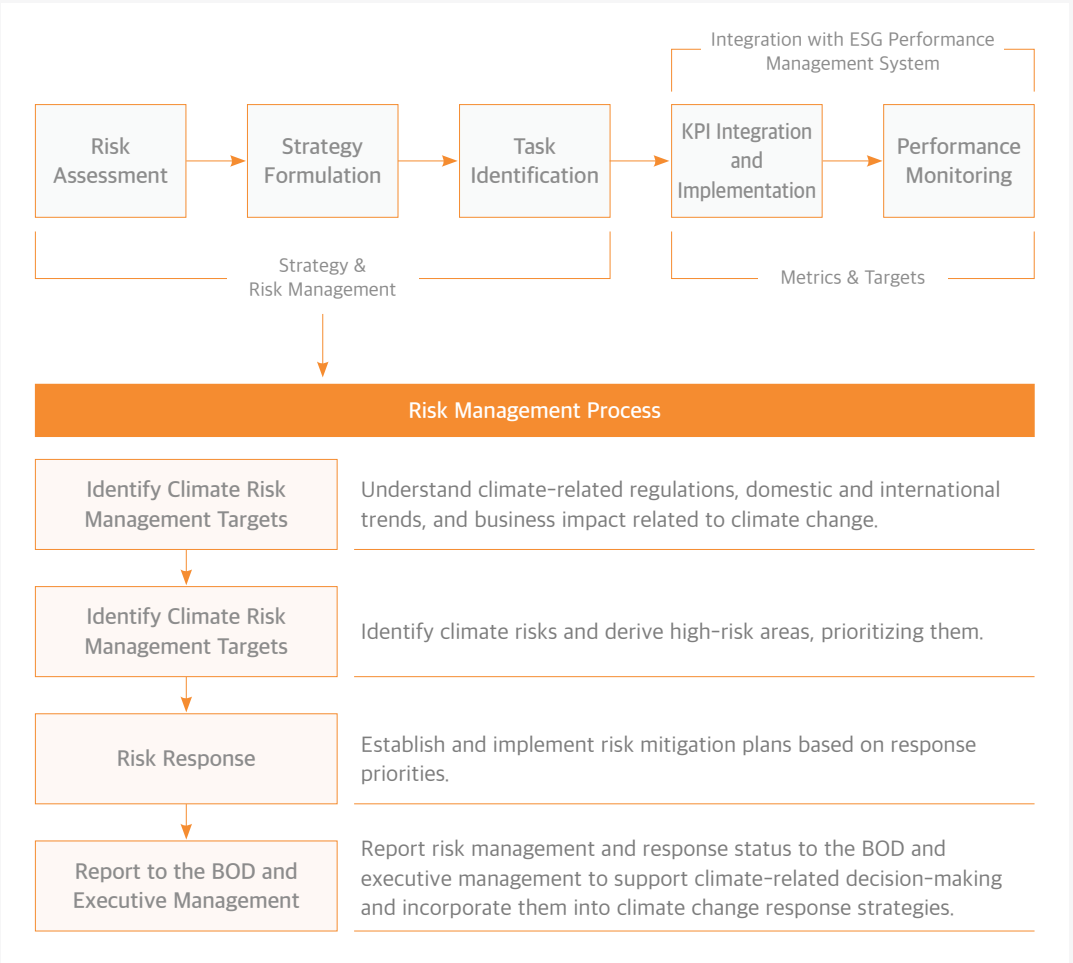
Response Strategies Based On Major Climate Change Risks and Opportunities

Category		Risk/Opportunity	Period	Financial Impact	Response Strategy
Transition Risk	Current regulation	Reinforcement of GHG emission regulations	Long-term	<ul style="list-style-type: none"><li>• Increase in the cost of purchasing carbon credits due to reduction in the GHG quota and increase in the proportion of paid quotas</li></ul>	<ul style="list-style-type: none"><li>• Monitoring and responding to current regulations through outside consulting</li><li>• Calculation of expected excess/deficiency by year and reflection on annual budget plans</li><li>• Establishment of integrated carbon credit management system among subsidiaries of SK Inc. materials</li></ul>
	Technology	Transition to low-carbon technology	Long-term	<ul style="list-style-type: none"><li>• Increase in R&amp;D and investment costs</li><li>• Increase in revenue through new product development and productivity improvement</li></ul>	<ul style="list-style-type: none"><li>• Technical collaboration with partners (Showa Denko, JNC, etc.)</li><li>• Recruiting of R&amp;D specialists</li><li>• Implementing demonstration project after transferring CO<sub>2</sub> capture technology</li></ul>
	Reputation	Increase in stakeholders' concerns or negative views	Mid-term	<ul style="list-style-type: none"><li>• Negative impact on corporate value and reputation due to passive responses to climate change or insufficient information disclosure</li></ul>	<ul style="list-style-type: none"><li>• Declaration to achieve Net Zero/RE100 by 2030</li><li>• Publication of Sustainability Report</li><li>• CDP response (Climate Change, Water Security) and TCFD information disclosure</li><li>• Publication of Net Zero Report in 2022</li></ul>
	Market	Increase in demand for use of renewable energy by stakeholders such as customers	Long-term	<ul style="list-style-type: none"><li>• Increase in operating costs due to the purchase of renewable energy</li></ul>	<ul style="list-style-type: none"><li>• Declaration to achieve Net Zero/RE100 by 2030</li></ul>
Physical Risk	Acute	Increase in damage due to abnormal weather events such as typhoons and floods	Mid-term	<ul style="list-style-type: none"><li>• Loss of sales during the recovery period due to production disruption caused by increased frequency and intensity of extreme abnormal weather events such as typhoons, floods, and wildfires</li></ul>	<ul style="list-style-type: none"><li>• Proceduralization and internalization of Business Continuity Plan (BCP)</li><li>• Operation of inspection organizations such as the SHE Inspection TF, computerized management of inspection results and corrective actions</li><li>• Diversification of risk through buying fire insurance, etc.</li></ul>
Opportunity	Market	Advance into next-generation silicon anode materials	Long-term	<ul style="list-style-type: none"><li>• Investment to advance into the battery material business (Equity investment in technology companies, establishment of joint ventures, etc.)</li></ul>	<ul style="list-style-type: none"><li>• Invested in the equity of U.S. battery materials company Group 14 Technologies and established a joint venture "SK materials Group14"</li><li>• SK specialty's expansion investment in SiH4, a silicon anode material</li></ul>

Risk Management

To proactively address potential climate change risks, SK materials operates a company-wide process for identifying and evaluating climate change risks and opportunities. Through this process, detailed response strategies and tasks are derived for each risk, and objectives are linked to KPIs for regular performance monitoring. These outcomes are integrated into the ESG performance management system.

Climate Change Response Process





Metrics and Targets

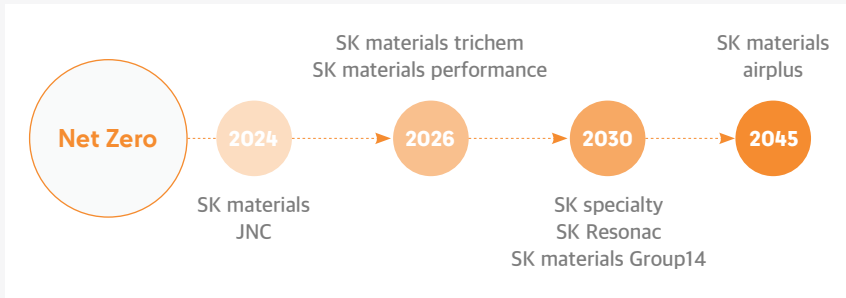
SK materials derives key indicators that need to be managed and sets annual targets, ensuring transparent disclosure of progress to address key climate change risks.

Metric 1. Net Zero and RE100 Achievement Rate

SK materials established Net Zero/RE100 achievement targets for each subsidiary, reflecting the industry characteristics and business environment, and created roadmaps to monitor the progress. Particularly, key indicators for achieving 2030 Net Zero, such as GHG emissions, energy consumption, and intensity, are emphasized. Efforts are focused on reducing carbon emissions by expanding the use of renewable energy and actively engaging in direct greenhouse gas reduction and offset activities.

Go to GHG and Energy Indicators

Net Zero Achievement Targets by Subsidiary



Subsidiary	Net Zero (BAU)				
	2022	2024	2026	2030	2045
SK specialty/SK Resonac	0.3%	12%	64%	100%	100%
SK materials airplus	3%	2%	4%	8%	100%
SK trichem	6%	35%	100%	100%	100%
SK materials performance	11%	39%	100%	100%	100%
SK materials JNC	4%	100%	100%	100%	100%
SK materials Group14	-	21%	38%	100%	100%

Go to Reduction Plans of Subsidiaries

Metric 2. Carbon Footprint Certified Products (Measurement and Reduction)

With the goal of achieving carbon neutrality by 2030, we are actively expanding the certification of Carbon Footprint for key products.

Annual Targets

2022 → 2023 → 2025 → 2030				
SK specialty	Measurement/Reduction (WF6)	Reduction (WF6) Measurement (NF3)	Reduction	Carbon Neutral
SK materials airplus	-	Measurement (LAr)	Reduction	Carbon Neutral
SK trichem	-	Measurement (CpHf)	Reduction	Carbon Neutral
SK materials performance	-	Measurement (ASPIN-1195)	Reduction	Carbon Neutral
SK materials JNC	-	-	Reduction	Carbon Neutral
SK materials Group14	-	-	LCA	LCA

Metric 3. CDP Assessment Rating

Starting with SK specialty's Climate Change (CC) response in 2021, SK materials strives for CDP assessment and score improvement for each subsidiary.

Annual Targets

2022 → 2023 → 2025 → 2030				
SK specialty	A-	A-	A	A
SK materials airplus	-	B-	A-	A
SK trichem	-	B-	B	A
SK materials performance	-	B-	B	A
SK materials JNC	-	-	A-	A
SK materials Group14	-	-	B	A

Metric 4. Wastewater Recycling Rate

With the goal of achieving a 100%<sup>1)</sup> wastewater recycling rate by 2030, SK materials is undertaking various activities to enhance water usage efficiency within its processes.

1) SK trichem aims for 30%, and SK materials performance aims for 80% recycling rate

Annual Targets

2022 → 2023 → 2025 → 2030				
SK specialty SK Resonac	18%	28%	100%	100%
SK materials airplus	-	20%	75%	100%
SK trichem	-	30%	30%	30%
SK materials performance	-	-	80%	80%
SK materials JNC	-	-	50%	100%
SK materials Group14	-	-	18%	100%

SASB<sup>1)</sup>

Sector : Chemicals

Sustainability Disclosure Topics & Accounting Metrics

Topic	Code	Metrics	Unit	Reporting page and information
Greenhouse Gas Emissions	RT-CH-110a.1	(1) Gross global Scope 1 emissions	tCO <sub>2</sub> eq	p.122
		(2) Percentage of Scope 1 emission covered under emissions-limiting regulations	%	100% <sup>2)</sup>
	RT-CH-110a.2	Scope 1 emission, emission reduction targets, analysis of long-term and short-term strategy or plan against its targets	-	p.28~37, 142~146
Air Quality	RT-CH-120a.1	(1) NOx emissions (excluding N <sub>2</sub> O)	Tons	p.127
		(2) SOx emissions	Tons	p.127
		(3) Volatile organic compounds (VOCs) emissions	Tons	N/A
		(4) Hazardous air pollutants (HAPs) emissions	Tons	N/A
Energy Management	RT-CH-130a.1	(1) Total energy consumed	TJ	p.123
		(2) Percentage grid electricity	%	100% <sup>3)</sup>
		(3) Percentage renewable energy	%	p.123
		(4) Total self-generated energy	TJ	p.123
Water Management	RT-CH-140a.1	(1) Total water withdrawn	Tons	p.124
		(2) Total water consumed	Tons	p.124
		(3) Percentage of each in regions with High or Extremely High Baseline Water Stress	Tons, %	0% (N/A) <sup>4)</sup>
	RT-CH-140a.2	Number of incidents of non-compliance associated with water quantity permits, standards, and regulations	Cases	One Case (October 2022)*
	RT-CH-140a.3	Description of water management risks and discussion of strategies and practices to mitigate those risks	-	p.87
Hazardous Waste Management	RT-CH-150a.1	(1) Amount of hazardous waste generated	Tons	p.125
		(2) Percentage recycled	%	p.125
Community Relations	RT-CH-210a.1	Discussion of engagement processes to manage risks and opportunities associated with community interests	-	p.90, 98
Workforce Health & Safety	RT-CH-320a.1	(1) Total recordable incident rate (TRIR) for direct employees and contract employees	%	p.133
		(2) Fatality rate for direct employees and contract employees	%	p.133
	RT-CH-320a.2	Description of efforts to assess, monitor, and reduce exposure of employees and contract workers to long-term (chronic) health risks	-	p.61~62

\*SK specialty's Ulsan Analysis Lab was fined due to the detection of four newly listed pollutants without permission in the Ulsan City's water sampling analysis

Topic	Code	Metrics	Unit	Reporting page and information
Product Design for Use-phase Efficiency	RT-CH-410a.1	Revenue from products designed for use-phase resource efficiency	KRW	p.48~49
Safety & Environmental Stewardship of Chemicals	RT-CH-410b.1	(1) Percentage of revenue of products that contain GHS Category 1 and 2 Health and Environmental Hazardous Substances	%	22.6% <sup>5)</sup>
		(2) Percentage of such products that have undergone a hazard assessment	%	100%
	RT-CH-410b.2	(1) Strategy to manage chemicals of concern	-	p.47, 127
		(2) Strategy to develop alternatives with reduced human and/or environmental impact	-	p.48~49
Genetically ModifiedOrganisms	RT-CH-410c.1	Percentage of products by revenue that contain genetically modified organisms(GMOs)	%	We do not produce products containing genetically modified organisms (GMOs)
Management of the Legal & Regulatory Environment	RT-CH-530a.1	Corporate positions related to government regulations and/or policy proposals that address environmental and social factors affecting the industry	-	p. 28~37, 85~90
Operational Safety, Emergency Preparedness & Response	RT-CH-540a.1	Process Safety Incidents Count (PSIC), Process Safety Total Incident Rate (PSTIR), and Process Safety Incident Severity Rate (PSISR)	Cases, %	0%
	RT-CH-540a.2	Number of transport incidents	Cases	0 Case

Activity Metrics

Topic	Code	Metrics	Unit	Output (2022)
Production by Reportable Segment	RT-CH-000.A	Specialty Gases	Tons	19,615
		Industrial Gases	Nm <sup>3</sup>	4,108,970,282
		Precursors	Tons	88.3
		Etching Gases	Tons	61.5
		Photo Resist	Gallons	37,781 <sup>6)</sup>

1) SK materials Group14 is excluded from the SASB reporting scope since it is scheduled for full-scale production from 2023

2) SK specialty and SK materials airplus are subject to GHG emissions trading

3) Ratio of KEPCO power supply, excluding renewable energy (Green Premium)

4) Only SK specialty conducts water resource risk analysis, so there is no relevance for others


5) Sales proportion by subsidiary

\* Including revenue from SK materials airplus renewtech Division

SKST	SKMA*	SKTC	SKRE	SKMP	SKMJ
9.5%	0.0%	99.8%	27.4%	20.9%	0.0%

6) Including outsourced production volume of 12,452 Gallons

## GRI Standards Index

GRI	Disclosure	Reporting Page	Explanation	Omission	Reference
General Disclosures					
GRI 2 : General Disclosures 2021	2-1 Organizational details	6, 14			
	2-2 Entities included in the organization's sustainability reporting	2			
	2-3 Reporting period, frequency and contact point	2			
	2-4 Restatements of information	2			
	2-5 External assurance	155			
	2-6 Activities, value chain and other business relationships	6			 Website Business Information
	2-7 Employees	129			
	2-8 Workers who are not employees	129			
	2-9 Governance structure and composition	105~107			
	2-10 Nomination and selection of the highest governance body	108			
	2-11 Chair of the highest governance body	105~107			
	2-12 Role of the highest governance body in overseeing the management of impacts	18			
	2-13 Delegation of responsibility for managing impacts	18			
	2-14 Role of the highest governance body in sustainability reporting	18, 25			
	2-15 Conflicts of interest	108			
	2-16 Communication of critical concerns	108~109			
	2-17 Collective knowledge of the highest governance body	108			
	2-18 Evaluation of the performance of the highest governance body	109			
	2-19 Remuneration policies	109	All 7 subsidiaries are unlisted and do not disclose this information, except for SK specialty, which discloses the information through its business report.	Information Incomplete	SK specialty Business Report (254p)
	2-20 Process to determine remuneration	109			SK specialty Business Report (255~257p)
	2-21 Annual total compensation ratio	-			SK specialty Business Report (253p)
	2-22 Statement on sustainable development strategy	5			
	2-23 Policy commitments	45, 55, 75, 85, 92, 93, 100, 108, 112, 117			
	2-24 Embedding policy commitments	46, 58, 75, 86, 94, 102, 114, 117			
	2-25 Processes to remediate negative impacts	86, 94, 110~111, 112~113			
	2-26 Mechanisms for seeking advice and raising concerns	57~59, 115, 117			
	2-27 Compliance with laws and regulations	116~117, 128			
	2-28 Membership associations	154			
	2-29 Approach to stakeholder engagement	24			
	2-30 Collective bargaining agreements	63, 131			

GRI	Disclosure	Reporting Page	Explanation	Omission	Reference
Material Topic & Topic Standards					
GRI 3 : Material Topics 2021	3-1 Process to determine material topics	25			
	3-2 List of material topics	26			
Material topics 1	R&D and Technological Innovation				
Non-GRI	-				
Material topics 2	Strengthening Workplace Safety and Health				
GRI 3 : Material Topics 2021	3-3 Management of material topics	25~26			
GRI 403 : Occupational Health and Safety	403-1 Occupational health and safety management system	54			
	403-2 Hazard identification, risk assessment, and incident investigation	58~59, 60			
	403-3 Occupational health services	61~62			
	403-4 Worker participation, consultation, and communication on occupational health and safety	54~55, 58			
	403-5 Worker training on occupational health and safety	58, 135			
	403-6 Promotion of worker health	61~62			
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	54~55, 57~58, 62			
	403-8 Workers covered by an occupational health and safety management system	58	Applied to all employees, 100% coverage.		
	403-9 Work-related injuries	55, 133~134			
	403-10 Work-related ill health	61, 133~134			
Material topics 3	GHG Reduction				
GRI 3 : Material Topics 2021	3-3 Management of material topics	25~26			
GRI 305 : Emissions	305-1 Direct (Scope 1) GHG emissions	122			
	305-2 Energy indirect (Scope 2) GHG emissions	122			
	305-3 Other indirect (Scope 3) GHG emissions	122	Emission amounts disclosed for four verified subsidiaries (SK specialty, SK materials airplus, SK trichem, SK materials performance) regarding Scope 3 emissions		
	305-4 GHG emissions intensity	122			
	305-5 Reduction of GHG emissions	33~37			
Material topics 4	Economic Value Creation and Distribution				
GRI 3 : Material Topics 2021	3-3 Management of material topics	25~26			
GRI 201 : Economic Performance	201-1 Direct economic value generated and distributed	119~120			
	201-2 Financial implications and other risks and opportunities due to climate change	142~146			
	201-3 Defined benefit plan obligations and other retirement plans	-	All six subsidiaries except SK Resonac operate a defined benefit/defined contribution pension system. SK Resonac operates only a defined benefit pension system due to the absence of participants in the defined contribution scheme.		SK specialty Business Report (82p)
	201-4 Financial assistance received from government	120			
GRI 207 : Tax	207-4 Country-by-country reporting	120			




GRI	Disclosure	Reporting Page	Explanation	Omission	Reference
Material topics 5	Transition to Renewable Energy				
GRI 3 : Material Topics 2021	3-3 Management of material topics	25~26			
GRI 302 : Energy	302-1 Energy consumption within the organization	123			
	302-2 Energy consumption outside of the organization	123	Emission amounts disclosed for four verified subsidiaries (SK specialty, SK materials airplus, SK trichem, SK materials performance) regarding Scope 3 emissions.		
	302-3 Energy intensity	123			
	302-4 Reduction of energy consumption	37			
	302-5 Reductions in energy requirements of products and services	48			
Material topics 6	Creating a Great Place to Work				
GRI 3 : Material Topics 2021	3-3 Management of material topics	25~26			
GRI 402 : Labor/Management Relations	402-1 Minimum notice periods regarding operational changes	52	Compliance with relevant laws and regulations, including the Labor Standards Act, with notification provided at least 30 days prior to significant changes		
GRI 407 : Freedom of Association and Collective Bargaining	407-1 Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	75	No identified locations where freedom of association and collective bargaining rights are significantly violated during the reporting period.		
Material topics 7	Supplier ESG Assessment and Management				
GRI 3 : Material Topics 2021	3-3 Management of material topics	25~26			
GRI 308 : Supplier Environmental Assessment	308-1 New suppliers that were screened using environmental criteria	63			
	308-2 Negative environmental impacts in the supply chain and actions taken	75, 137			
GRI 414 : Supplier Social Assessment	414-1 New suppliers that were screened using social criteria	74~76			
	414-2 Negative social impacts in the supply chain and actions taken	74~76, 137			
Material topics 8	Talent Acquisition and Competency Development				
GRI 3 : Material Topics 2021	3-3 Management of material topics	25~26			
GRI 401 : Employment	401-1 New employee hires and employee turnover	130			
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	63~64, 130, 132			
	401-3 Parental leave	130			
GRI 404 : Training and Education	404-1 Average hours of training per year per employee	132			
	404-2 Programs for upgrading employee skills and transition assistance programs	66~67			
	404-3 Percentage of employees receiving regular performance and career development reviews	132			
GRI 405 : Diversity and Equal Opportunity	405-1 Diversity of governance bodies and employees	108, 129			
	405-2 Ratio of basic salary and remuneration of women to men	-	The principle of equal pay for equal work at the same rank is applied, and there is no gender-based compensation ratio discrimination.		
Material topics 9	Product Quality and Safety				
GRI 3 : Material Topics 2021	3-3 Management of material topics	25~26			
GRI 416 : Customer Health and Safety	416-1 Assessment of the health and safety impacts of product and service categories	47			
	416-2 Incidents of non-compliance concerning the health and safety impacts of products and services	-	No such case		

GRI	Disclosure	Reporting Page	Explanation	Omission	Reference
GRI 417 : Marketing and Labeling	417-1 Requirements for product and service information and labeling	47			
	417-2 Incidents of non-compliance concerning product and service information and labeling	-	No such case		
	417-3 Incidents of non-compliance concerning marketing communications	-	No such case		
Material topics 10	Energy Consumption Reduction and Efficiency Enhancement				
GRI 3 : Material Topics 2021	3-3 Management of material topics	25~26			
GRI 302 : Energy	302-1 Energy consumption within the organization	123			
	302-2 Energy consumption outside of the organization	123	Emission amounts disclosed for four verified subsidiaries (SK specialty, SK materials airplus, SK trichem, SK materials performance) regarding Scope 3 emissions.		
	302-3 Energy intensity	123			
	302-4 Reduction of energy consumption	37			
	302-5 Reductions in energy requirements of products and services	48			
Other GRI Index					
GRI 203 : Indirect Economic Impacts	203-1 Infrastructure investments and services supported	79~82, 95~99			
	203-2 Significant indirect economic impacts	21, 95~99, 140~141			
GRI 205 : Anti-corruption	205-1 Operations assessed for risks related to corruption	113, 116			
	205-2 Communication and training about anti-corruption policies and procedures	114~117, 139			
	205-3 Confirmed incidents of corruption and actions taken	139			
GRI 206 : Anti-competitive Behavior	206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	117	No such case		
GRI 303 : Water and Effluents	303-1 Interactions with water as a shared resource	87			
	303-2 Management of water discharge-related impacts	87			
	303-3 Water withdrawal	124			
	303-4 Water discharge	124			
	303-5 Water consumption	124			
GRI 304 : Biodiversity	304-2 Significant impacts of activities, products and services on biodiversity	90			
GRI 305 : Emissions	305-7 Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	127			
GRI 306 : Waste	306-1 Waste generation and significant waste-related impacts	88			
	306-2 Management of significant waste-related impacts	88			
	306-3 Waste generated	125			
	306-4 Waste diverted from disposal	125			
	306-5 Waste directed to disposal	125			
GRI 406 : Non-discrimination	406-1 Incidents of discrimination and corrective actions taken	-	No such case		
GRI 408 : Child Labor	408-1 Operations and suppliers at significant risk for incidents of child labor	-	No such case		
GRI 409 : Forced or Compulsory Labor	409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labor	-	No such case		
GRI 413 : Local Communities	413-1 Operations with local community engagement, impact assessments, and development programs	79~82, 95~99			
GRI 418 : Customer Privac	418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data	-	No such case		

## The Ten Principles of UNGC










Starting with SK specialty’s United Nations Global Compact (UNG) membership in February 2021, SK materials has declared its commitment to the Ten Principles in the four core areas of human rights, labor, environment, and anti-corruption, which constitute the UNGC’s fundamental values. We are actively engaged in activities to implement and spread these principles, and its achievements are transparently disclosed through Sustainability Reports.

Category	Principle	Contents	Page
<div></div> <div>Human Rights</div>	Principle 1	Business should support and respect the protection of internationally proclaimed human right;	93
	Principle 2	Make sure that they are not complicit in human rights abuses.	93~94
<div></div> <div>Labor</div>	Principle 3	Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;	93
	Principle 4	The elimination of all forms of forced and compulsory labor;	93
	Principle 5	The effective abolition of child labour; and	93
	Principle 6	The elimination of discrimination in respect of employment and occupation.	66, 93~94
<div></div> <div>Environment</div>	Principle 7	Businesses should support a precautionary approach to environmental challenges;	30, 85
	Principle 8	Undertake initiatives to promote greater environmental responsibility;	28~37, 85~90
	Principle 9	Encourage the development and diffusion of environmentally friendly technologies.	48
<div></div> <div>Anti-corruption</div>	Principle 10	Businesses should work against corruption in all its forms, including extortion and bribery.	112~116

UN SDGs

SK materials actively participates in the achievement of the United Nations Sustainable Development Goals (UN SDGs), which were announced by the UN in 2015. We have selected specific targets that are highly relevant to our business areas and are engaged in activities to achieve these goals.

UN SDGs	Objective	Key Activities of SK materials
 1. No Poverty	End poverty in all its forms everywhere	1.3 <ul style="list-style-type: none"><li>Creating and donating "Happiness Boxes" and conducting employee volunteer programs</li><li>Providing essential goods for vulnerable groups</li></ul>
	2.1 2.2	End hunger, achieve food security and improved nutrition, and promote sustainable agriculture <ul style="list-style-type: none"><li>Conducting the "Happy Two Meals Project"</li></ul>
 3. Good Health and Well-being	Ensure healthy lives and promote well-being for all at all ages	3.3 <ul style="list-style-type: none"><li>Providing COVID-19 prevention items to employees and suppliers</li></ul>
	3.4 3.9	<ul style="list-style-type: none"><li>Operating programs to prevent worker health issues such as cardio-cerebrovascular diseases and noise-induced deafness</li><li>Operating smoking cessation clinics, body composition improvement programs, and on-site psychological support services</li><li>Operating the Comprehensive Disaster Response Center system and real-time monitoring system</li><li>Conducting emergency response and firefighting training for environmental accidents</li></ul>
 4. Quality Education	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	4.3 <ul style="list-style-type: none"><li>Operating the High-tech Materials Talent Development Program</li></ul>
	4.4	<ul style="list-style-type: none"><li>Conducting semiconductor material career experience training</li></ul>
	4.5	<ul style="list-style-type: none"><li>Collaborating with "Good Neighbors" for the "Hope, Sharing, and Dream Support" project</li><li>Supporting certification (barista) acquisition and job placement for vulnerable youth</li></ul>
 5. Gender Equality	Achieve gender equality and empower all women and girls	5.1 <ul style="list-style-type: none"><li>Establishing principles for preventing human rights violations in the "Happiness 112 Campaign"</li></ul>
	5.5	<ul style="list-style-type: none"><li>Conducting education to support female employees with a focus on securing and nurturing female core leaders</li></ul>
 6. Clean Water and Sanitation	Ensure availability and sustainable management of water and sanitation for all	6.3 <ul style="list-style-type: none"><li>Conducting water resource risk analysis and management</li></ul>
	6.6	<ul style="list-style-type: none"><li>Being selected as an excellent water management company by CDP Water</li></ul>
	6.b	<ul style="list-style-type: none"><li>Strengthening internal regulations for managing water pollution substances</li><li>Establishing wastewater filtration systems and improving wastewater treatment systems</li><li>Installing cumulative flow meters at 40 locations</li><li>Participating in environmental protection volunteer activities through "Kang Kang Joo UI Lae"</li></ul>
 7. Affordable and Clean Energy	Ensure access to affordable, reliable, sustainable and modern energy	7.2 <ul style="list-style-type: none"><li>Declaring RE100 achievement for all subsidiaries by 2030</li><li>Expanding the use of renewable energy through the Green Premium program</li></ul>
	7.3	<ul style="list-style-type: none"><li>Establishing an Electric Heat Tracing (EHT) automatic control system</li><li>Implementing Advanced Process Control (APC) systems based on process analysis models for predictive control</li><li>Replacing with high-efficiency premium electric motors</li></ul>
	7.a	<ul style="list-style-type: none"><li>Expanding environmentally friendly business investments through collaboration with companies possessing CCUS-related technology such as 8 Rivers, ExxonMobil, and ION</li><li>Signing an agreement for the Arensivia JVA to jointly promote the hydrogen recycling business with rare gases</li></ul>
 8. Decent Work and Economic Growth	Promote inclusive and sustainable economic growth, employment and decent work for all	8.2 <ul style="list-style-type: none"><li>Conducting joint R&amp;D for EUV PR</li><li>Increasing R&amp;D specialized personnel and investment</li></ul>

UN SDGs	Objective	Key Activities of SK materials
 8. Decent Work and Economic Growth	Promote inclusive and sustainable economic growth, employment and decent work for all	8.3 <ul style="list-style-type: none"><li>Operating the Mutual Growth Council</li><li>Promoting the local mutual growth project "STAXX"</li></ul>
	8.5	<ul style="list-style-type: none"><li>Operating the "Happy Companion" standard workplace for people with disabilities</li></ul>
	8.7 8.b	<ul style="list-style-type: none"><li>Expanding the application of human rights policies across the organization</li></ul>
 9. Industry, Innovation and Infrastructure	Build resilient infrastructure, promote sustainable industrialization and foster innovation	9.1 <ul style="list-style-type: none"><li>Completing the Central Interaction Space "STAXX" for local residents and social ventures</li></ul>
	9.4	<ul style="list-style-type: none"><li>Developing environmentally friendly materials such as OLED blue dopants</li></ul>
	9.5	<ul style="list-style-type: none"><li>Establishing the Sejong Campus for High-tech Materials</li></ul>
 10. Reduced Inequalities	Reduce inequality within and among countries	10.2 <ul style="list-style-type: none"><li>Expanding the application of human rights policies across the organization</li></ul>
	10.3	
	10.4	<ul style="list-style-type: none"><li>Operating a non-discriminatory and rational compensation process</li></ul>
 11. Sustainable Cities and Communities	Make cities inclusive, safe, resilient and sustainable	11.1 <ul style="list-style-type: none"><li>Improving living environments for vulnerable populations through projects like "Green RE: House"</li></ul>
 12. Responsible Consumption and Production	Ensure sustainable consumption and production patterns	12.2 <ul style="list-style-type: none"><li>Expanding the installation and improvement of advanced pollution detection devices</li></ul>
	12.4	<ul style="list-style-type: none"><li>Developing eco-friendly packaging materials</li></ul>
	12.5	<ul style="list-style-type: none"><li>Enhancing waste recycling rates through activities like dust compaction equipment and wafer reprocessing equipment introduction</li><li>Implementing design review processes and hazardous chemical substance management systems such as HF storage tank leak detection systems</li><li>Introducing waste reduction equipment such as centrifuges and wastewater separation systems</li></ul>
 13. Climate Action	Take urgent action to combat climate change and its impacts	13.2 <ul style="list-style-type: none"><li>Developing an organization-wide roadmap for achieving 2030 Net Zero/RE100 goals ahead of schedule</li></ul>
	13.3	<ul style="list-style-type: none"><li>Publishing the 2022 Net Zero Report</li><li>Conducting the "1 Person 1 SV" campaign for carbon reduction</li></ul>
 14. Life Below Water	Conserve and sustainably use the oceans, seas and marine resources	14.2 <ul style="list-style-type: none"><li>Engaging "Throwing EM Soil Balls" and plogging for river purification</li></ul>
 15. Life on Land	Sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss	15.2 <ul style="list-style-type: none"><li>Conducting inspections of the planting status around the workplace</li></ul>
	15.4	<ul style="list-style-type: none"><li>Undertaking activities to mitigate ecological and environmental impacts, including installing noise prevention facilities and nighttime lighting blocking facilities</li></ul>
 16. Peace, Justice and Strong Institutions	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all level	16.2 <ul style="list-style-type: none"><li>Expanding the application of human rights policies across the organization</li></ul>
	16.5	<ul style="list-style-type: none"><li>Implementing an ethical management measurement system</li></ul>
	16.6	<ul style="list-style-type: none"><li>Operating anti-corruption regulations in compliance with the Anti-Corruption Act</li></ul>
 17. Partnerships for the Goals	Strengthen the means of implementation and revitalize the global partnership for sustainable development	17.16 <ul style="list-style-type: none"><li>Joining and supporting the UNGC (United Nations Global Compact)</li></ul>



Associations and Memberships

SK specialty
Maekyung Safety & Environment Institute
Korea Industrial & Specialty Gases Association
Korea Fire Safety Institute
Korea Chemicals Management Association
Gyeongbuk Branch of Korea Industrial Safety Association
Korea Semiconductor Industry Association
COSAR (Consortium of Semiconductor Advanced Research)
Korea Display Industry Association
Korea RC (Responsible Care) Council
Korea Exchange
Daegu-Gyeongbuk PSM Safety Management Council
Korea Industrial Technology Association
LG Display Twins Club
THE CLIMATE CHANGE ORGANISATION
Korean Nurses Association
Yeongju Region Safety Managers Council
Korea Trade Association

SK materials airplus
Ulsan Chamber of Commerce and Industry Council
Korea Electric Engineers Association
Korea Fire Safety Institute
Korea Industrial & Specialty Gases Association
Korea Industrial Safety Association

SK trichem
Daejeon, Sejong, Chungnam Environmental Engineers Association
Chungbuk-Sejong Environmental Preservation Association
Korea Chemicals Management Association

SK materials performance
Korea Semiconductor Industry Association

SK materials Group14
Korea Battery Society
Sangju Chamber of Commerce and Industry
Gyeongbuk Provincial Police Industrial Security Council
Sangju City Regulatory Reform Committee
Gyeongbuk Seobu Environmental Technicians Association
Korea Chemicals Management Association
Gumi Environmental Safety Manager Council
Korea Industrial Safety Association
Korean Nurses Association
Korea Association of Occupational Health Nurses

## Independent Assurance Statement

### To: SK materials

#### Introduction

The Korea Compliance Initiative (hereinafter “the Assurer”) was requested to verify the 2023 Sustainability Report (hereinafter “the Report”) from SK Inc. materials’ seven major subsidiaries, including SK specialty, SK materials airplus, SK trichem, SK resonac, SK materials performance, SK materials JNC, and SK materials Group14 (hereinafter “the Publisher”), and submitted an Independent Assurance Statement. The responsibility for the information presented in the Report lies with the Publisher, and the responsibility of the Assurer is to provide the Publisher with an independent assurance opinion in accordance with the specified verification methodology. In addition, the Assurer does not have any interest with the Publisher that may hinder its independence.

#### Standards, Scope, and Levels

The assurance was deemed to be at Moderate Level based on the AA1000AS v3 (2020) assurance standards. It was conducted against Type 1 to confirm compliance with the four principles (Inclusivity, Responsiveness, Materiality, and Impact) of AA1000AP 2018 assurance standards, and in the case of the topic-specific (Topic Standards) GRI Standards for core issues, it was conducted against Type 2 to confirm the reliability and quality of information. In addition, this assurance also confirmed that the sustainability report complies with GRI 1: Foundation 2021 (GRI Standards). The scope of assurance covers the activities and performance of the seven companies that make up SK materials, the Publisher. The activities and performance of third parties, such as the Publisher’s suppliers and contractors, are excluded from the scope of assurance.

#### Limitations

The Assurer has confirmed that the information and data included in the Report according to the “Standards, Scope, and Levels” are as follows. Financial data was confirmed in the Business Report and the Auditor’s Report, and social, environmental, and governance activities and achievements were confirmed from written information such as the Greenhouse Gas Verification Statement and internal documents and manager interviews. The Independent Assurance Statement was published for the executive management under contract with the Publisher. The Publisher is responsible for all activities and performance included in the Report as it has been approved by the Publisher.

#### Korea Compliance Initiative’s Methodology

The Assurer complies with the verification standards of the Korea Compliance Initiative and has performed the following verification activities according to the methodology to improve the quality of the Report.

- Compliance with GRI 1: Foundation 2021 (GRI Standards)
- Compliance with the principles of information and quality based on the GRI Standards
- Review of the relevance of issues according to the materiality assessment process and results
- Review of key information including approach, activities, performance, monitoring, and goals related to material issues
- Review of appropriateness of the activities and performance in 2022 presented in the Report
- Verification of data collection, generation, management, and accuracy

#### Conclusion

It was concluded that the Publisher’s report does not contain any inappropriate or inaccurate descriptions of sustainability management activities and achievements. In addition, the Publisher reviewed the application level of General Disclosures, Material Topics, and Topic Standards as well as compliance with the GRI Standards.

- General Disclosures : 2-1, 2-2, 2-3, 2-4, 2-5, 2-6, 2-7, 2-8, 2-9, 2-10, 2-11, 2-12, 2-13, 2-14, 2-15, 2-16, 2-17, 2-18, 2-19, 2-20, 2-21, 2-22, 2-23, 2-24, 2-25, 2-26, 2-27, 2-28, 2-29, 2-30
- Material Topics : 3-1, 3-2, 3-3
- Topic Standards
  - Economic Performance : 201-1 ~ 201-4, 207-4
  - Environmental Performance : 302-1 ~ 302-5, 305-1 ~ 305-5, 308-1 ~ 308-2
  - Social Performance : 401-1 ~ 401-3, 402-1, 403-1 ~ 403-10, 404-1 ~ 404-3, 405-1 ~ 405-2, 407-1, 414-1 ~ 414-2, 416-1 ~ 416-2, 417-1 ~ 417-3

- Inclusivity : Opinion on stakeholder impact and encouraging participation  
The stakeholders are classified into five categories: investors, customers, suppliers, local communities, and employees. The Publisher complies with the principles of inclusivity by disclosing the channels, activities, and frequency of stakeholder communication, as well as major issues. In addition, it was confirmed that the participation system for major issues by stakeholders and the major activities identified through this are appropriately linked.

- Responsiveness : Transparent disclosure of material sustainability issues and impacts, and appropriate response  
In regards to identifying material sustainability issues and responding to the needs and expectations of stakeholders, it was confirmed that relevant activities and performance creation were appropriately described in the Report. In addition, the goals and roadmap for responding to Topic Standards issues related to stakeholders, as well as interviews describing the efforts of the executive director, confirm the Publisher’s commitment.

- Materiality : Identification and prioritization of material sustainability topics  
It was confirmed that the Publisher selected material issues and major issues based on the materiality assessment and properly described them in the Report. In addition, industry-related issues have been appropriately reflected through benchmarking of similar institutions. Furthermore, for selected issues, relevant activities and performance are clearly reflected in the Report.

- Impact : Identification, awareness, and management of the ecological impact of organization’s activities  
The Publisher sets the scope of stakeholder impact on the impact of the issue, identifies the impact of the organization on society and vice versa, and presents efforts to improve it. In addition, it was confirmed that the Publisher was making efforts to mitigate risk factors by conducting continuous monitoring and management based on each impact.

July 31, 2023

In-hak Hwang

President of the Korea Compliance Initiative



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