2023 Kakao ESG Report

kakao

Kakao's Commitment and Responsibility

About this report

Report Overview
Kakao annually publishes ESG reports to illustrate the company's commitments and responsibilities in making a better world. By transparently disclosing our performance in the Environmental, Social, and Governance areas, we aim to engage ever closer with our stakeholders.

Reporting Standards
This report was prepared in accordance with the international sustainability reporting framework of the GRI (Global Reporting Initiative) Standards 2021 and the Internet Media & Services Industry Standards of SASB (Sustainability Accounting Standards Board) of the US. The financial performance, unless otherwise stated, is presented in conformity with the K-IFRS (Korean International Financial Reporting Standards). Additionally, this report outlines our progress in abiding by the UN Global Compact's 10 principles in the areas of human rights, labor, the environment, and anti-corruption, as a member of the UNGC (United Nations Global Compact), as well as in attaining the UN SDGs (Sustainable Development Goals).

Reporting Period
The reporting period spans from January 1, 2023, to December 31, 2023. Information prior to 2023 or in the first half of 2024 is partially included and distinctly marked within the report. For quantitative performance, data from the last three years (2021-2023) are provided to enable year-on-year trend analysis.

Reporting Scope
Financial performance is reported on a consolidated basis, and non-financial performance is mainly focused on Kakao's domestic operations. A portion of the environmental and social performance data covers the performance of our major affiliated companies.

Assurance
Kakao has undergone third-party verification from an independent assurance provider, BSI Korea, to ensure the reliability of the reporting process and the disclosed information. The assurance engagement was conducted in conformity with AA1000AS v3 Moderate Level, Type 2.

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kakao ESG website

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Introduction

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Kakao's Mission

Kakao has established the New Vision House under the mission 'Kakao brings the future we need closer, using technology that understands people.' To achieve this mission, four major goals and promises have been set: 'Focus on the core of the problem,' 'Lead with today's technology,' 'Create a safe digital environment,' and 'Pursue social value.' Furthermore, four core values for our Krew have been established to be internalized throughout the company, and efforts will be made for their incorporation.

Kakao Vision House

Mission
Purpose of Our Existence

Kakao brings the future we need closer, using technology that understands people

Goal & Promise
Our Goal and Promise to Users

- **Focus on Essence**: Focus on the **Core of the Problem**
- **Tech for Now**: Lead with **Today's Technology**
- **Digital Safety**: Create a **Safe Digital Environment**
- **Social Value**: Pursue **Social Value**

Core Value
Code of Conduct

- **Integrity**: Selfless judgement and action
- **User-Centric**: User focused approach
- **Challenge for Excellence**: Dedication to achieve the best result
- **Team Synergy**: Collaborative effort towards common goal

A Message from the ESG Committee Chair

Dear Valued Stakeholders,

**My name is Sejung Choi,
and I am truly honored to serve as
the Chair of the Kakao ESG Committee.**

First and foremost, I would like to express my deepest gratitude to our shareholders, investors, customers, and users for their unwavering interest in and support of Kakao's journey towards sustainable growth. Additionally, I would like to extend my appreciation to our partners and Krew members who stand by us every step of the way on this journey.

The year 2023 marked a period of heightened responsibility, as it raised concerns among those who trust and support Kakao. We embrace both criticism and guidance as catalysts for our commitment to becoming a more trustworthy entity in the eyes of the public. We view this as an opportunity for Kakao's ESG initiatives to solidify further, embedding deeply within our operations and creating meaningful progress.

In 2023, we reached a significant milestones in our ongoing journey of ESG integration, yielding tangible outcomes and advancements. We strengthened service stability and engaged in collaborative activities with various stakeholders. Moreover, to ensure the delivery of safe and reliable services to our users, we augmented our investment in information security by 48.8% compared to the previous year, fortifying infrastructure and capabilities to mitigate various potential disasters. In September, we conducted a comprehensive company-wide disaster recovery drill to enhance our ability to swiftly and smoothly activate emergency response systems and recover systems in the event of a potential disaster.

Through partnership with Korea Federation of Micro Enterprise (KFME), we are in the process of establishing a Digital Support Center for small business owners, aimed at improving digital communication with their loyal customers. Particularly, our Dangol Market project, which provides digital transformation education for traditional market merchants, has been recognized for its success in engaging with 100 markets, by being awarded Presidential Recognition for its contribution for promoting traditional market activity in 2023.

Our 'Active Green Initiative' continues to address the climate crisis, and we have taken another step towards our goal of achieving net-zero emissions by 2040. We have doubled our renewable energy consumption compared to the previous year and have achieved 100% renewable energy for two consecutive years at our Jeju office.

We have also newly acquired renewable energy for our Pangyo office, with plans to further expand our procurement of renewable energy. Our in-house data center, the 'Kakao Data Center Ansan,' which was completed last year and is set to be fully operational this year, is expected to contribute to greenhouse gas reduction by actively adopting various eco-friendly technologies based on its environmentally friendly design.

As a result of these efforts, Kakao has been ranked in the global top 1% in the Services & Home Entertainment industry group for two consecutive years in corporate sustainability assessments conducted by S&P Global. We have also obtained an A grade in the Carbon Disclosure Project (CDP) and won CDP Korea's Sector Leaders Award, acknowledging outstanding performance in various sustainability management evaluations.

As we continue to face various challenges, we aim to further enhance ESG management in 2024. We will strive to reduce Kakao's social impact, restore trust with users and stakeholders, and create diverse social and economic value to enhance sustainability for all of us.

We look forward to your continued interest and encouragement.

Sincerely,

Sejung Choi, Chair, Kakao ESG Committee

A Message from the CEO

Dear Stakeholders,

My name is Shina Chung,
the CEO of Kakao.

It is my utmost pleasure to introduce the fourth edition of Kakao's ESG report, 'Kakao's Commitment and Responsibility.'

The year 2023 has been a challenging year for us at Kakao. Voices from a various stakeholders calling for Kakao's renewal have highlighted the increasing significance of ESG in shaping our corporate value. In response, Kakao is committed to pursuing both financial and non-financial performance to secure social trust and foster new growth drivers for the company.

In spite of such difficult and uncertain external environment, the dedication of our entire team resulted in Kakao achieving a consolidated annual revenue of KRW 7.557 trillion and an operating profit of KRW 460.9 billion in 2023. In 2024, we plan to focus on further enhancing our AI technology and services to achieve even greater business success. To this end, we will establish an integrated AI-focused organization to experiment with various AI-based services and strengthen our R&D capabilities.

As the new CEO, I have defined Kakao's mission as 'Kakao brings the future we need closer, using technology that understands people.' Under the core ESG theme of 'Kakao's commitment and responsibility to create a future for all together,' we have set practical tasks related to technology, people, and the future.

We have taken various measures to establish a more transparent and sound governance structure and to reduce risks. Notably, we have established an independent external body, the 'Compliance and Trust Committee,' to enhance the review of legal and ethical issues in Kakao's major decision-making processes. Furthermore, we are strengthening communication and decision-making consultations at the group level to systematically manage risks arising from each affiliate. This includes setting up committees and bringing in external experts.

In the rapidly evolving era of AI, we will continuously develop and review policies to enhance technological ethics, privacy protection, and data security at the group level. Kakao is also committed to addressing various social issues through its technology and services. Specifically, to implement the 'Barrier-Free Initiative' introduced in 2022, we will actively invest in digital accessibility.

In 2024, Kakao will remain committed to ESG as a crucial foundation for growth for Kakao, our users, and various partners. We will continue to create a collaborative ecosystem with our major partners by fulfilling our promises through co-prosperity programs and fund disbursements. In particular, we plan to expand our digital transformation education and support programs, which have been well-received by small business owners, to benefit even more entrepreneurs.

Kakao is dedicated to building a future that fosters co-prosperity and sustainability for both the company and its stakeholders. We will do our utmost to ensure that the future we create together will enhance the sustainability and mutual growth of Kakao and its stakeholders.

Thank you.

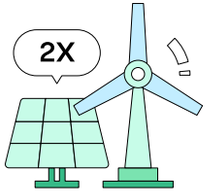
Shina Chung, CEO, Kakao

ESG Highlight (2023-2024)

Doubled renewable energy consumption compared to the previous year

Powered by wind in Jeju, solar in Pangyo

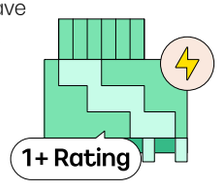
Kakao has procured renewable energy for usage in Jeju and Pangyo offices to achieve carbon neutrality and transition to renewable energy. We have consumed approximately 4,000 MWh of wind energy generated in Jeju and solar energy from the Gyeonggi-do Renewable Energy Coop, which is double the amount compared to the previous year.



Completed eco-friendly designed Kakao Data Center Ansan

Applying eco-friendly solutions to reduce energy and water consumption

The 'Kakao Data Center Ansan,' completed in September 2023, was designed with environmentally friendly solutions that efficiently utilize energy and resources. It incorporates solar power generation facilities and utilizes recycled water to conserve energy and water resources. Additionally, equipment and technologies to increase cooling power efficiency have been introduced. Recognizing these energy-saving efforts, the Data Center Ansan has been certified with a Grade 1+ energy efficiency rating for buildings.



Acquired GRS certification to improve eco-friendly e-commerce

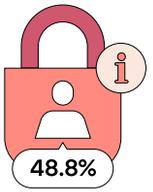
Linking resource circularity through regeneration and upcycling

Kakao plans to expand the application of the Global Recycled Standard (GRS) certification to products of Kakaomakers and Kakao Friends, following its receiving of the certification from the Control Union. The "Seagaburch" project by Kakaomakers practices resource circulation by producing new products from discarded items. Through the reuse of materials, over 4 million items have been repurposed with the participation of over 50,000 users.

Increased Information and security by 48.8% compared to the previous year

Strengthening information security for stable services

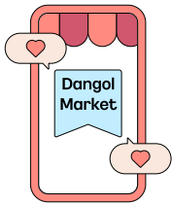
Kakao has published the 'Kakao Reliability Report,' which contains Kakao's measures and practical tasks for providing stable services such as real-time monitoring, response to failures, and information security management. To enhance information security, Kakao has increased personnel investment by 69% and financial investment by 48.8%. Additionally, efforts are being made to ensure service stability and information security by conducting various simulated drills to cope with potential failure situations.



Dangol Market project received the Presidential Award

Supporting digital transformation through our services

Kakao operates various programs to support small business owners in their digital transformation. The 'Dangol Market' program, which supports traditional market merchants in utilizing digital tools to attract and communicate with customers, has received the Presidential Award for its contribution to revitalizing traditional markets.
According to participant surveys, 95% of participating merchants reported satisfaction with our service, and 84% of participating merchant associations reported an increase in customers from our service, indicating high satisfaction and performance with the program.



ESG Highlight (2023-2024)

Published IT industry's first Diversity Report

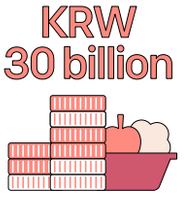
First step towards internalizing and spreading diversity

Kakao has published the '2023 Kakao Diversity Report,' the first of its kind in the domestic IT industry. Kakao advocates for a culture of diversity that respects individuals regardless of gender, age, nationality, disability, and other factors. Kakao boasts a female executive ratio of 57%, surpassing the average of the top 100 companies in South Korea, and its affiliate, 'Linkage Lab,' earned the title of 'Outstanding Employer for Disabled Employment' in 2023.

Reached KRW 30 billion in cumulative transactions of Jegaburch

Finding fair prices for unmarketable agricultural and marine products

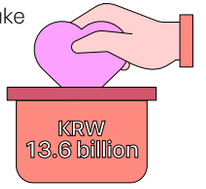
'Jegaburch' is a collaborative project by Kakaomakers aimed at converting oversupplied agricultural, fisheries, and processed food products into items for which consumers are willing to pay a fair price. As of February 2024, a total of 1.6 million units, weighing 5,300 tonnes of products, have been sold through 'Jegaburch,' surpassing a cumulative transaction amount of KRW 30 billion.



Kakao Together's emergency fundraising campaign raised 1 million participants in the shortest period

Donation of KRW 4.8 billion from 1.28 million donors for Turkey earthquake relief

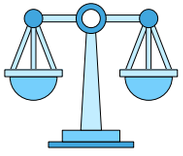
'Kakao Together', Kakao's social contribution platform raised a total of KRW 13.6 billion in 2023. In times of disaster, the platform launches 'Emergency Fundraising Campaigns' within 24 hours of the event. In February 2023, following the earthquake in Turkey, 1 million people participated within 104 hours, raising a total of KRW 4.8 billion from 1.28 million participants to support earthquake relief effort.



Created the Compliance and Trust Committee

Efforts to restore trust

Kakao is undertaking efforts to restore trust by establishing the 'Compliance and Trust Committee,' an external body to oversee compliance and ethical management within its affiliates. This initiative aims to establish a robust compliance and trust management framework and fulfill the company's social responsibilities. Through the Compliance and Trust Committee, Kakao is reviewing various compliance and trust risks both internally and externally, developing systems to mitigate these risks, and promoting mutual growth.



Achieved the highest rating for carbon information disclosure in environmental assessments

Achieved rating of Leadership A in CDP

Kakao has received the highest rating of 'Leadership A' in the 'CDP Climate Change' report published by the international environmental organization Carbon Disclosure Project (CDP). Additionally, Kakao was recognized at the 'Climate Change Response and Water Management Excellence Awards' hosted by CDP Korea, receiving the 'Carbon Management Sector Honors' award for its proactive efforts in addressing climate change.

Ranked in the Top 1% in sustainability assessment for two consecutive years

Attainment of Top Rating in S&P corporate sustainability assessment

Kakao became the sole domestic company to rank in the top 1% in the Interactive Media & Home Entertainment industry for the second consecutive year in S&P Global's 'Corporate Sustainability Assessment.' Furthermore, Kakao has been included in the DJSI World Index for three consecutive years while receiving an A rating in the MSCI ESG Ratings and an overall A rating from the Korea Institute of Corporate Governance and Sustainability for three consecutive years, in recognition of our ESG management performance.

About Kakao

Kakao defines itself as a mobile life platform that delivers innovative lifestyle services in the global mobile and internet market on the strength of its professional workforce, top-notch technology, competitive content, and large mobile traffic. Under the mission of 'Kakao brings the future we need closer, using technology that understands people,' we remain fully committed to developing services that make users' daily lives more convenient and providing the necessary technology to achieve this goal.

Company Overview

Name of company
Kakao Corp.

Date of establishment
Feb. 16, 1995
(Merger with Kakao Corporation: Oct. 1, 2014)

CEO
Shina Chung

Headquarters
242 (Yeongpyeong-dong), Cheomdan-ro, Jeju-si, Jeju-do, Republic of Korea

Headcount[1)]
3,880 persons

1) Kakao's separate criteria

Financial Performance

Sales
KRW 7.557 trillion

Operating profit
KRW 460.9 billion

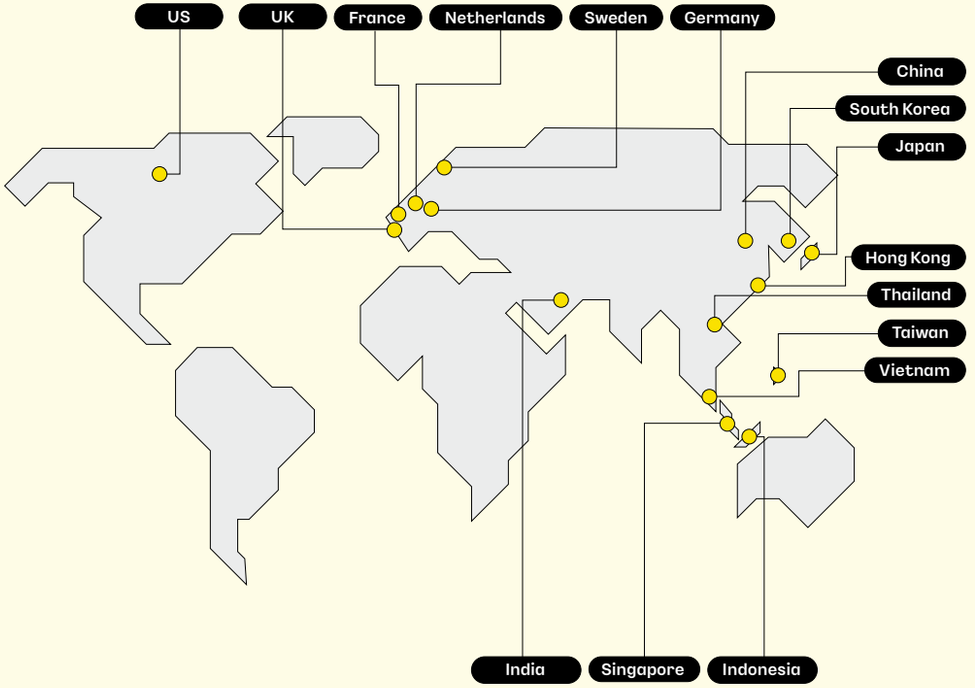
Credit rating
Korea Rating: AA
(Rating outlook : Positive)

Kakao Group Overview

kakao ENTERTAINMENT
kakaopay
kakaogames
kakaomobility
kakaopiccoma
kakaoinvestment
kakaoenterprise
kakaohealthcare
kakaoventures
kakaostyle
KnWorks
dktechin
Linkage Lab

Global Network

Kakao operates a global network consisting of 67 affiliated companies across 15 regions worldwide, including South Korea.



Business Portfolio

Platform Business

Talk Biz

We provide a wide spectrum of mobile services with KakaoTalk, Korea's No. 1 messaging service, playing a central role. We generate synergy with diverse businesses within the mobile ecosystem centered around KakaoTalk.

Where people and the world come to get connected

KakaoTalk

Enhancing the value of new connections and relationships in everyday life, while creating synergies through connections with various businesses within the mobile ecosystem, as the leading messenger service in Korea

MAU (Monthly Active User):
48.45 million in Korea / 53.57 million globally (as of Dec. 2023)

Connecting the world's interests

KakaoTalk Open Chat

Chat service that enables users to initiate topic-specific or event-specific conversations with others without the need to add friends with their phone numbers or Talk IDs

Our new language

Kakao Emoticon

Building an ecosystem that encourages collaboration with webtoon and character creators, offering a diverse range of emoticon services

Cumulative message volume : 260 billion
Total number of emoticon purchaser: 29 million (as of Nov. 2023)

KakaoTalk Channel, Counseling Talk, Info-talk, Kakao Biz Board

Kakao Business

Services utilizing KakaoTalk for business purposes, including KakaoTalk Channel (formerly known as Plus Friend), Kakao Biz Board, Counseling Talk and Info-talk

Uncomplicate your life

KakaoTalk Wallet

Space within KakaoTalk where users can securely store and manage both personal identity verification and financial assets, akin to the functionality of a physical wallet

Number of users : 39 million (as of Sep. 2023)

The easiest way to show you care

KakaoTalk Gift

KakaoTalk-based mobile commerce platform leading the mobile gifting culture, enabling users to give and receive gifts with friends just as easily as sending messages

Talk about shopping / Interactive Live Commerce

KakaoTalk Shopping/ Kakao Shopping Live

Ordering shopping items with ease using Kakao ID through Kakao Shopping Live facilitates effortless communication of the spatial and experiential aspects of products that are difficult to convey online

Impact commerce that pursues efficient production and meaningful consumption without waste

Kakao Makers

Mobile order-to-production platform that only produces and sells products based on consumer demand

Cumulative transaction volume over KRW 800 billion
Participation from over 6,940 manufacturers and creators (as of Jan. 2024)

Business Portfolio

Platform Business

Portal Biz

We offer a wide range of internet-based services through our portal website, Daum. By combining our advanced search technology with the extensive content available within the Kakao ecosystem, we provide users with a satisfying experience.

Smart mobile lifestyle

Daum

Korea's leading internet portal that offers a variety of internet-based services, including search, email, community, shopping, and finance

Kakao Story, Tistory, Brunch Story

Story

Kakao Story

Social networking service where users can share and subscribe to real-time stories not only about everyday life but also about topics of interest, brands, and business-related narratives

Tistory

Open-source blogging platform that allows users to create and design unique blogs according to their preferences

Brunch Story

Content-publishing platform that provides users with an environment focused solely on writing

Techfin & Finance

Kakao Pay is extending its scope of financial service offerings to include wire transfer, payment services, investment, and insurance on the KakaoTalk platform.

Effortless finance

Kakao Pay

Korea's first mobile easy payment service to remove inconvenience experienced with existing financial activities

Mobility & Other

We provide mobility services throughout every moment and stage of life, meeting the transportation needs of our users and delivering optimized mobility for people, products, and services to render a more seamless and convenient user experience. Additionally, we drive the expansion of our intellectual property (IP) business through various content creation centered around Kakao Friends.

For all kinds of mobility

Kakao T

Mobility platform that delivers taxis, parking, navigation, designated drivers, buses and other varied mobility services

Location-based life platform

Kakao Map

Map service offers a wide range of features, from providing route guidance for various modes of transportation to offering subway information tailored for individuals with mobility challenges. Additionally, it includes themed location recommendations for enhanced user experience

Pleasures of everyday life

Kakao Friends & Niniz

Kakao Friends offer a diverse experiences both online and offline, creating 'experiential content' across various fields beyond just 'viewing content'

Business Portfolio

Content Business

Game

Through Kakao Games, a global full-service game company that possesses the entire value chain from PC/console and mobile game development to publishing platforms, we are expanding K-games internationally.

kakaogames — Turn your everyday into a game!

Kakao Games

Expanding the global game business with a strategy of diversifying genres and platforms

Key Lineup: Odin: Valhalla Rising, ArcheAge War, R.O.M, Uma Musume Pretty Derby, Kakao Battle Ground, etc.

Music

We expand the reach of K-pop on a global scale by integrating the production and distribution of music and artist intellectual property(IP), and the operation of streaming platform.

Only my favorite music

Melon

Korea's leading music platform that has established market leadership through differentiated services that combine music and information technology

kakao ENTERTAINMENT — Music Production / Distribution

Kakao Entertainment

Securing global mega IPs through investment production in artist and music, while establishing a robust domestic and international music distribution network

Media

We are a media business equipped with distinctive studio capabilities, centered around creators, actors, and super intellectual properties (IPs).

kakao ENTERTAINMENT — Media Business

Kakao Entertainment

We have established a multi-studio with specialized capabilities in producing well-made original video contents such as TV series and films, covering a variety of subjects and genres that transcend platform boundaries

Story

We expand the reach of K-content into the global market based on super intellectual properties (IPs).

A global collection of stories

KakaoPage

Korea's largest webtoon and web novel platform and a leading OP business operator, introduced 'Wait or Pay' business model in 2014. This initiative facilitated the monetization of the webtoon and web novel industry, laying the foundation for the current ecosystem

Ranked 2nd in Korea after YouTube, in the consumer spending sector of 2023 ('2024 Mobile Status Report' by data.ai.)

A world like no other

Kakao Webtoon

Korea's leading webtoon original IP service platform, which has produced numerous global hits such as 'Moving' , 'The Uncanny Counter', 'Itaewon Class'

Stories you crave

Tapas

North America's webtoon / web novel platform, which serves as the cornerstone of Kakao Entertainment's global IP business initiative

A universe of contents in the palm of your hands

Piccoma

Kakao Japan Corporation, operating as 'Kakao Piccoma', runs an e-comics and novel platform offering Japanese manga and novels in e-pub format, as well as webtoons produced in Korea, Japan, and China. In 2023, it ranked as the number one platform in Japan for consumer app spending, including games, according to data.ai

Tech & Other Business

New Initiative

We aim to enhance the quality of human life through customer-centric AI solutions and build a digital healthcare ecosystem based on data.

To make people healthy with technology

Kakao Healthcare

Established in March 2022, our core value is to 'be a companion, friend, and assistant for everyone utilizing healthcare'. Through the provision of digital healthcare-related mobile services, we aim to lead positive social change and innovation, with a focus on the global healthcare market

kakaoenterprise — Global technology-driven Cloud Service Provider

Kakao Enterprise

As a globally recognized cloud partner for business innovation, we offer an extensive array of enterprise-grade cloud services. These include customized cloud computing resources tailored to business requirements, harnessing cutting-edge cloud technology recognized globally

Our Commitments

014 ESG Framework
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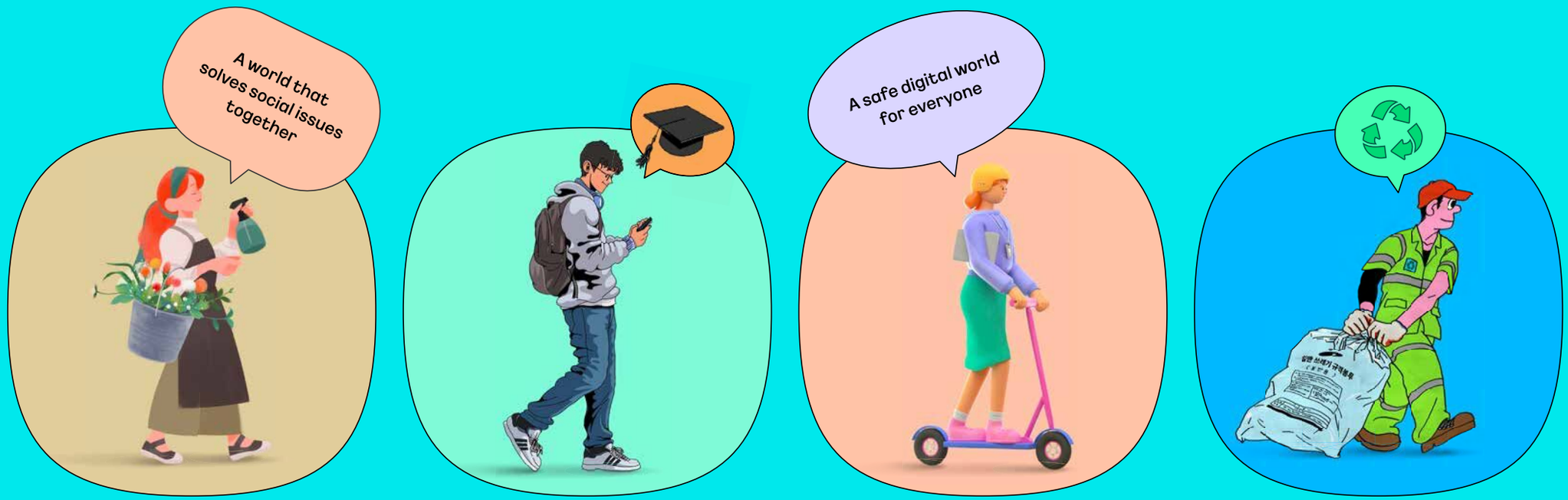


ESG Framework

Kakao's Commitment and Responsibility

Kakao is committed to fulfilling its commitment and responsibility based on its new mission, 'Kakao brings the future we need closer, using technology that understands people.' By adopting 'Technology that understands people' and 'Creating the future we need together' as core values, Kakao has established an ESG strategic direction to realize these values. Through our ESG report, we aim to share our 5 key strategic directions and continue to uphold Kakao's commitment and responsibility.

Kakao Mission

Kakao brings the future we need closer, using technology that understands people

ESG
Kakao's Commitment and Responsibility

Technology that understands people | kakao | Creating the future we need together

ESG Strategic Direction	Technology for People	Resolution of Social Issues	Trust in Kakao	Growing Together for a Better Tomorrow	Efforts for the Planet
ESG Proactive Tasks	• Improve digital accessibility • Establish AI ethics • Protect our users • Ensure data privacy and data security	• Resolve social issues through service and technology • Create and expand social impact	• Enhance corporate governance through improved internal control • Establish an integrated risk management system • Reinforce ethical and compliance management • Improvement in service stability	• Increase value for our Krew together • Pursue shared growth with our partners • Create a virtuous IT ecosystem	• Promote climate change adaptation • Expand user-engaged eco-friendly businesses • Preserve biodiversity and natural capital

ESG Framework

Progress Report on Key Focus Areas

Low ● Medium ●● High ●●●

Commitment and Responsibility			Action Plan	2022-2023 Achievement	Progress Status
Technology for People	Improve digital accessibility	Support an environment where everyone can utilize digital information and technology	Identify areas in need of accessibility improvement across overall services and make improvements	·Launched 'KakaoTalk made easier guide' for digital novices ·Conducted the first-year accessibility survey of Kakao affiliates ·Added alternative text input functionality for photos and videos in KakaoTalk chat rooms	●●●
	Establish AI ethics	Ethical utilization of AI technology	Develop tasks for establishing and implementing Kakao ethical algorithms	·Established AI ethics principles for Kakao affiliates ·Formed dedicated governance for technology ethics across eight affiliates ·Published monthly magazine 'Tech Ethics'	●●
	Protect our users	Prevent the violation of user rights that may occur in the course of service use	Implementation of systems and campaigns to prevent the violation of service user rights	·Launched Daum News comment community 'Time Talk' with the application of 'SafeBot' ·Introduced 'KakaoTalk Safety' campaign to provide user safety information ·Published Kakao Group Financial Safety Table and its report	●●●
	Ensure data privacy and data security	Comply with domestic/international regulations and prevent data breaches	Boost governance for personal data privacy and data security	·Increased information security investment and personnel (investment up by 49%, personnel up by 69%) ·Developed and published personal information protection guides for seniors and teenagers ·Introduced and operated Attack Surface Management(ASM) system for asset protection	●●
Resolution of Social Issues	Resolve social issues through service and technology	Pursue meaningful social change based on user engagement	Develop programs to resolve social issues based on Kakao's engaging users	·Surpassed a cumulative donation amount of KRW 74.3 billion through Kakao Together ·Surpassed KRW 30 billion in cumulative transactions for agricultural and fishery products through the Kakaomakers 'Saegaburch' project ·Provided digital transformation support programs for small business owners	●●●
	Create and expand social impact	Effective support to accelerate resolution of social issues	Support and value measurement of social impact projects using various Kakao resources	·Measured and managed the social value generated by the 'Harmonious Digital World' program ·Surpassed 1,500 participating merchants in the 'Dangol Market' program to bridge the digital divide in traditional markets. ·Beta launch of 'Tech for Impact' to connect social innovation organizations/individuals with digital technology	●●
Trust in Kakao	Enhance corporate governance through improved internal control	Establish transparent and sound corporate governance and build an ESG-driven decision-making framework	Strengthen internal control standards to enhance stakeholder trust	·Established a Compliance and Trust Committee ·Enhanced board independence (increased the ratio of independent directors to 62.5%)	●●
	Establish an integrated risk management system	Systematic management of financial/non-financial risk that may arise from business activities	Establishment of an integrated risk management system and internalization of risk management culture	·Established and managed Risk Management Governance Structure via the establishment of an ERM Committee ·Developed integrated risk management regulations	●●
	Reinforce ethical and compliance management	Promote ethical management and compliance with laws and regulations	Bolster the ethical management system across the group and internalize voluntary free-trade compliance culture	·Improved voluntary free-trade compliance systems (especially for the commerce sector) ·Conducted fair-trade education for over 130 affiliated companies (total of 13 sessions)	●●
	Improvement in service stability	Provide reliable and stable services	Establish and improve response capabilities for various disasters and failures	·Created an emergency response organizational structure for Business Continuity Plan (BCP) ·Conducted company-wide disaster recovery training exercises	●●

ESG Framework

Progress Report on Key Focus Areas

Low ● Medium ●● High ●●●

Commitment and Responsibility			Action Plan	2022-2023 Achievement	Progress Status
Growing Together for a Better Tomorrow	Increase value for our Krew together	Promote human rights and working conditions for Krew	Internalize a culture of respect for human rights and improve working conditions and welfare	·Conducted human rights impact assessment to identify human rights risks ·Established a Safety and Health Management Policy ·Implemented a comprehensive company-wide AI capability enhancement training program	●●●
	Pursue shared growth with our partners	Improve partners' capacity and disseminate ESG along our supply chains	Protect partners' right and improve ESG capabilities along our supply chains	·Adopted an ESG checklist system for our partners ·Overhauled the purchasing system for sustainable partnerships ·Introduced a revenue model for story creators	●●
	Create a virtuous IT ecosystem	Create a wholesome IT ecosystem by sharing technology and know-how	Disclose open-source asset to share Kakao's technology and know-how	·Expanded OLIVE Platform and its functionality ·Participated in the OSORI project to foster a secure open-source ecosystem ·Implemented diverse technical education programs to nurture IT talent	●●●
Efforts for the Planet	Promote climate change adaptation	Minimize climate impact and reduce GHG emissions	Improve energy efficiency and expand renewable energy procurement	·Doubled renewable energy procurement compared to 2022 ·Completed eco-friendly designed Data Center Ansan	●●
	Expand user-engaged eco-friendly businesses	Provide services to support the transition to an eco-friendly society	Develop and operate additional services with eco-friendly features	·Implemented user-engaging recycling project 'Saegaburch' ·Expanded Green Digital Campaign ·Managed Kakao Carbon Index performance	●●
	Preserve biodiversity and natural capital	Support marine ecosystem and forest conservation activities	Promote the protection of biodiversity in local communities	·Established marine environment improvement and forest restoration fund (KRW 470 million) through the 'Eco Seed Campaign' ·Created funds for the conservation of endangered species and bees, totaling KRW 32 million	●

ESG Framework

ESG Management System

ESG Governance

Highest decision-making body for ESG management

Based on a transparent governance structure, Kakao has established an ESG governance system to achieve sustainable growth in collaboration with internal and external stakeholders by disseminating positive impacts on the environment and society. Since 2021, the ESG Committee has convened four times annually to review the overall ESG strategic direction, addressing non-financial issues, implementing countermeasures, and managing non-financial risks related to the environment and society. It also oversees ESG management performance as it functions as the highest decision-making body. The Committee may seek feedback from stakeholders when necessary to manage the environmental and social impact of the Company, and is briefed by the ESG management, a dedicated company-wide organization, to perform final reviews and grant approval on the annual Kakao ESG report and the material issues chosen through materiality assessment.

Working-level ESG organization

ESG (formerly ESG Head) oversees the comprehensive management of the company's ESG strategy and operations, centralizing responsibility for managing the environmental and social impacts delegated by the ESG Committee, the highest decision-making body for ESG. The ESG Management (formerly ESG Business Division), as a company-wide ESG management organization, supports overarching ESG tasks, managing wide-ranging improvement initiatives implemented by the ESG Working Table composed of relevant departments. The ESG Management also collects and addresses ESG-related requirements from internal and external stakeholders, reports on the progress of ESG improvement initiatives to the ESG Committee, and establishes task forces for each ESG agenda, fostering close collaboration with relevant departments to implement improvement initiatives related to the environment, human rights, accessibility, win-win partnership and technological ethics.

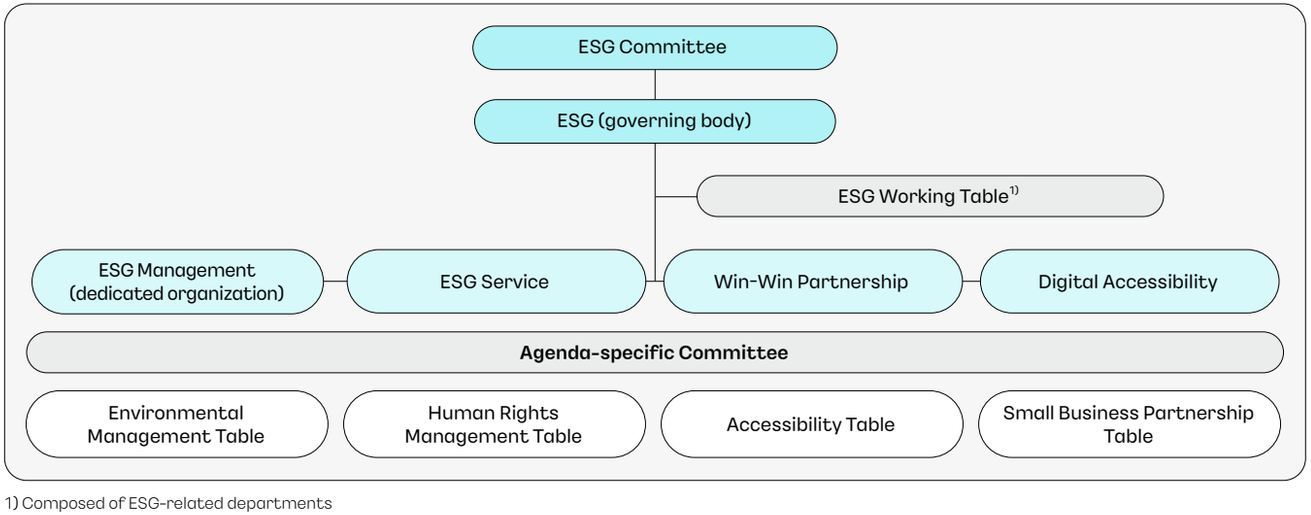
Bolstering ESG-drive Decision-making

To ensure that ESG considerations inform decision-making for both Krew and the CEO, ESG is factored into KPIs for top management and relevant departments. In order to promote the fulfillment of the CEO's social responsibilities, performance indicators related to strengthening ESG management implementation have been included as a determinant factor in the payment of performance-based bonuses (15%). By incorporating ESG elements into departmental KPIs, Kakao is driving the internalization of ESG management across the organization. Through these efforts, Kakao strives to secure societal trust and enhance corporate value from a long-term perspective through its management activities.

Reporting Status of the ESG Committee in 2023

Category	Reporting Agenda	Date of Reporting
Manage and oversee ESG management performance	Reporting on the status of the win-win initiative projects in 2022 and plans for the win-win initiative projects in 2023	Mar. 2023
	Reporting on the introduction and plans of the Kakao carbon index	Aug. 2023
	Reporting on the Kakao's RE100 road map	Oct. 2023
	Reporting key achievements in ESG for 2023	Dec. 2023
Review nonfinancial risk	Reporting the outcome of the Integrated Risk Management Performance in 2023	Dec. 2023
Communicate and engage with stakeholders	Reporting on the publication of Kakao ESG Report in 2022	Mar. 2023
	Reporting on the results of the ESG Report's double materiality assessment in 2022	
	Reporting on Kakao ESG assessment results in 2022	
Others	Appointment of the Chair of the ESG Committee	Mar. 2023

ESG Organizational Structure



1) Composed of ESG-related departments

Stakeholder Communication

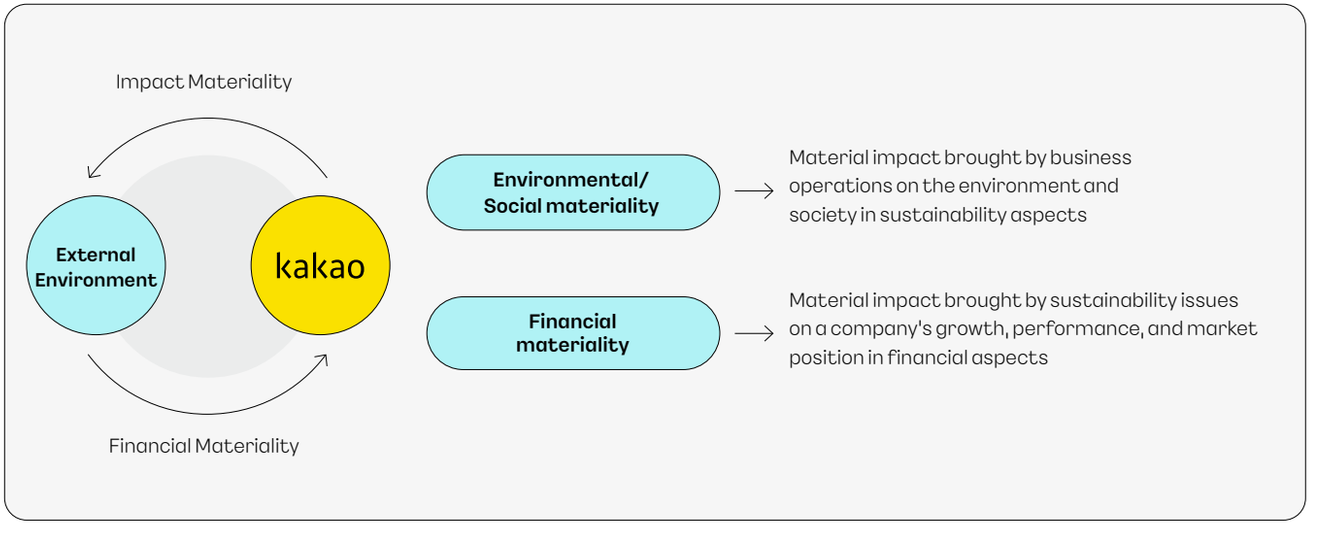
Category	Area of Interest	Communication Channel		Our Response	Our Communication Activity in 2023
Shareholders/ Investors	·Financial performance generation and dividend payout ratio ·Development of future growth drivers ·Preemptive risk management competency ·Transparent performance disclosure ·Sound governance	·Corporate website ·Annual General Meeting of Shareholders ·NDR (Non-Deal Roadshow) ·Earnings conference Call	·Analyst Day ·One-on-one meeting ·Shareholder engagement ·Disclosure materials	·Implement a mid/long-term shareholder return policy ·Ensure integrated and systemic risk management by establishing risk management regulations ·Establish sustainability management governance by operating the ESG Committee ·Transparently disclose financial performance ·Share business outcomes through IR meetings	**[Hosting the AGM]** In March 2024, the 29th Annual General Meeting of Shareholders was held. Its total attendance was 28.3% when excluding the largest shareholders and related parties, and a total of 229,127,219 shares exercised voting rights. A total of eight agenda items were deliberated and approved.
Users	·New service launching ·Improvement in user satisfaction ·Improvement in service reliability ·Personal data protection ·Improvement in access to digital services	·Corporate website ·Discussion with Kakao users ·Counseling Talk within KakaoTalk ·Service-specific customer center (web/ application)	·Emergency phone counseling and reporting center ·Customer center for in-person visits ·Disclosure materials	·Host Kakao user discussion meetings ·Launch Kakao Safety Campaigns ·Reinforce the user data protection system ·Operate a user protection system to protect them from the harmful internet environment ·Operate a user VOC handling process and manage user satisfaction ·Improve service accessibility and digital literacy	**[Holding User Discussion Meetings]** We held offline user discussion meetings to hear the voice of Kakao users on proposals for service upgrades. A total of 115 proposals were collected and will be fully reflected in our service improvement efforts.
Krew (Employee)	·Support for individual growth ·Workplace human rights protection ·Fair and reasonable appraisal ·Work-life balance ·Benefits	·In-house portal ·Open Talk ·TellMe@Kakao ·Roundtable grievance handling member ·Time's Up	·Occupational Safety and Health Committee (quarterly) ·Kakao organizational health check (annual)	·Advance the Krew grievance handling process ·Extend the scope of Kakao's employee satisfaction survey - 'organizational healthy checks' - to the wider group ·Support training for Krew's growth ·Implement fair appraisal and compensation systems ·Operate diverse benefit programs ·Create a safe and pleasant working environment	**[Organizational Health Check of the Kakao Group]** We perform organizational health checks as part of our employee satisfaction and engagement survey to gather Krew opinions on seven factors influencing employee engagement. In 2023, the survey was extended to include a total of 13 affiliates.
Partners	·Fair trade practices ·Provision of shared growth opportunities ·Training and infrastructure support ·Cooperation and communication ·IT ecosystem innovation ·Local economic development ·Corporate social responsibility	·Official shared growth web page ·New purchasing system PoK ·Online Ethics Center ·Purchasing briefing session ·Dispute Mediation Committee	·Partner's Day ·Kakao Class with Partners ·KakaoTalk Store seller training center ·Kakao tech campus ·Kakao Together ·Harbang on the Internet of Kakao ·Jeju with Kakao ·Disclosure materials	·Comply with the fair-trade principle ·Support for digital transformation of small businesses ·Offer online market entry and growth assistance initiatives for small businesses ·Operate win-win partnership funds for shared growth with partners ·Operate an online education program for partners 'Kakaoedu' and provide ESG management-related content support ·Implement community CSR activities through platforms ·Support the development of talents and startups for local community development ·Establish community communication channels and facilitate their operation	**[Supporting Digital Transformation of Small Businesses]** In August 2023, through an agreement with the Small Business Union, Kakao decided to establish a Small Business Digital Support Center and operate education programs using KRW 30 billion until 2028. Through the 'Small Business Support Benefits' program, Kakao supported approximately 60,000 small business owners with KRW 21.2 billion in Talk Channel messaging fees (accumulated from August 2022 to May 2024).
Governments	·Economic value generation ·Regulatory compliance ·Transparent tax practices ·Participation in major policy decision-making ·External environmental policy monitoring	·Corporate website ·Public service support ·Environmental policy symposium ·Disclosure materials		·Reinforce the compliance system ·Support infrastructure development by using platforms and data ·Create high quality jobs to contribute to employment ·Pay taxes honestly	**[Participating in Self-Assessment of User Protection Operations]** Participated in the self-assessment of youth protection officer operations in accordance with the Information and Communication Network Act to establish and implement youth protection policies.

Double Materiality Assessment

Double Materiality Assessment Process

In order to conduct sustainability management practices, Kakao conducts double materiality assessment to identify and select key environmental, social, and governance issues. To identify Kakao's key issues requiring intensive management, we analyzed both global standards and evaluation indicators related to ESG, as well as internal issues within Kakao, resulting in the formation of 30 issue pools. In anticipation of rapidly evolving global disclosure standards and guidelines, we evaluated individual issues from two perspectives: financial impact and environmental/social impact. As a result, we finalized a total of 12 key issues, an increase of 2 from last year, following thorough review by Kakao's management team, including the Board of Directors. Kakao integrates these selected key issues into its company-wide risk management framework and monitors and proactively manages them through the company risk management process.

Double Materiality



Step 1 Identify and Form Issue Pool

Formation of 30 issue pools considering Kakao's characteristics

- Analysis of global standard requirements
- Examination of ESG evaluation indicators considering industry characteristics
- Incorporation of internal issues within Kakao
- Integration of ESG issues and trends from similar industries

Step 2 Analyze Internal and External Environment

Evaluation of financial and social/environmental impact

- Financial Impact Assessment - Incorporation of key metrics from major evaluation agencies such as MSCI, DJSI, and alignment with key ESG initiatives from operational departments and management
- Environmental and Social Impact Assessment - Utilization of international standards like GRI, media research, and benchmarking within similar industries
- Collection of key opinions from ESG operational department and top management

Step 3 Obtain Stakeholder Feedback

Selection of key issues through expert analysis and of reporting on confirmed issues

- Total of 110 respondents
  Internal : Kakao leaders, Krew
  External : Kakao partners, ESG experts
- The survey utilized a scale to assess the magnitude, scope, and likelihood of impact

Step 4 Manage and Report Key Issues

Management and reporting of key issues based on prioritization of major issues

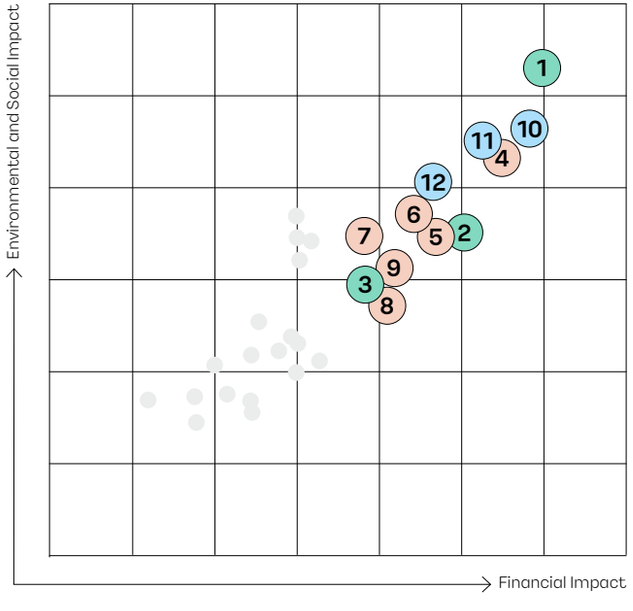
- Identification of final prioritization of issues considering financial and social/environmental impacts
- Reporting to the Board of Directors and top management
- Disclosure of impact and activities by core topic in alignment with ESG strategy

Double Materiality Assessment

Double Materiality Assessment Result

Kakao has systematically prioritized the the 12 key issues identified through the Double Materiality Assessment to manage them effectively. Considering the financial and environmental/social significance to stakeholders, Kakao categorizes issues into 3 core issues and 9 reporting issues, reflecting their substantial impact on Kakao's business operations across ESG domains.

Double Materiality Assessment Matrix



Low: less than ● **Medium**: More than ● ~ less than ●● **High**: over ●●

No.	Area	Key Issues	New	Degree of Impact		Category
				Magnitude	Probability	
1	E	Improve energy consumption efficiency and promote the use of renewable energy	New	●●●	●●●	Core
2	E	Expand eco-friendly services and businesses through user engagement		●●◐	●●◐	Reporting
3	E	Manage water consumption of data centers	New	●◐○	●◐○	Reporting
4	S	Strengthen information security and personal data protection		●●○	●●○	Reporting
5	S	Address social issues using technology and platforms		●●○	●●◐	Core
6	S	Operate businesses and services considering the creation of a healthy IT ecosystem		●◐○	●◐○	Reporting
7	S	Establish technology ethics		●◐○	●○○	Reporting
8	S	Innovate organizational culture	New	●○○	●○○	Reporting
9	S	Fair performance evaluation and compensation	New	●◐○	●◐○	Reporting
10	G	Enhance ethical management systems and compliance		●●◐	●●◐	Core
11	G	Ensure the integrity of governance structures (independence, diversity, expertise, etc.)	New	●◐○	●●○	Reporting
12	G	Secure future competitiveness in businesses and technologies (such as AI)	New	●●◐	●●◐	Reporting

Double Materiality Assessment

Management of Key Issues

Kakao identifies and manages both the positive and negative impacts (opportunities and risks) that each key issue poses to the company. These impacts are aligned with the key non-financial risks defined by the ERM Committee for integrated management. Furthermore, non-financial risks associated with the impacts of key issues identified through the materiality assessment are integrated into the company-wide risk management process for monitoring and management.

Area	Key Issues	Identified Opportunities and Risks	Page
Environmental (E)	Improve energy consumption efficiency and promote the use of renewable energy	Opportunity: Reduction of carbon emissions to mitigate environmental impact Risk: Cost associated with supply and price instability of renewable energy	27, 29
	Expand eco-friendly services and businesses through user engagement	Opportunity: Increase in demand and revenue due to the proliferation of value-based consumption trends for low-carbon and eco-friendly products and services	25, 30, 33
	Manage water consumption of data centers	Opportunity: Improvement of water resource utilization and conservation through innovative technology Risk: Reduced operational stability of data centers due to water resource depletion	31
Social (S)	Strengthen information security and personal data protection	Opportunity: Reducing social costs due to regulations and enhancing user trust Risk: Incurring social costs in case of infringement of user privacy	47 ~ 54
	Address social issues using technology and platforms	Opportunity: Contributing to the resolution of social issues and the promotion of public value through social impact projects	86 ~ 89
	Operate businesses and services considering the creation of a healthy IT ecosystem	Opportunity: Enhancing awareness and improving IT ecosystem capabilities through contributions to open-source development	40
	Establish technology ethics	Opportunity: Enhancing user trust and service satisfaction through the development of safe and reliable technologies Risk: Diminished service quality and societal conflict due to compromised diversity and biased viewpoints	36 ~ 37
	Innovate organizational culture	Opportunity: Improving employee engagement and productivity based on a healthy organizational culture Risk: Incurring fines and other costs due to strengthened domestic and international regulations related to human rights	69 ~ 70
	Fair performance evaluation and compensation	Opportunity: Reducing recruitment costs through enhanced talent acquisition and retention Risk: Increasing recruitment costs due to decreased employee morale	71
Governance (G)	Enhance ethical management systems and compliance	Opportunity: Enhancing reputation through building trust between the company and society Risk: Generating negative experiences among stakeholders due to internal risks	101 ~ 104
	Ensure the integrity of governance structures (independence, diversity, expertise, etc.)	Opportunity: Strengthening stakeholder trust and enhancing corporate value through sound and transparent decision-making Risk: Negative impact on corporate sustainability due to the decline in board performance	91 ~ 97
	Secure future competitiveness in businesses and technologies (such as AI)	Opportunity: Enhancing user convenience and driving business growth through technological and service innovation Risk: Causing negative impacts if the societal implications of technology are not considered	42, 68

Double Materiality Assessment

Management of Core Issues

Kakao identifies and manages issues that significantly impact its business operations as Core Issues, establishing medium to long-term goals and plans, and linking them to executive compensation. The Core Issues selected for 2023 include "Improve energy consumption efficiency and promote the use of renewable energy," "Address social issues using technology and platforms," and "Enhance ethical management systems and compliance." These Core Issues are diligently documented and reported throughout the entirety of Kakao's reports.

Core Issues	Background of issue selection	Identified risks and opportunities	Causes of impact			Stakeholders likely to be affected				Direction of issue management and implementation performance	Medium to long-term goals and plans	Executive compensation (linked to KPIs)
			Work-place	Supply Chain	Product Service	Envi-ron-ment	Com-munity	User	Partner			
Improve energy consumption efficiency and promote the use of renewable energy	Enhanced demand for greenhouse gas reduction and promotion of renewable energy for climate change adaptation	• Increased costs due to renewable energy supply and price volatility • Contribution to carbon emission reduction and environmental impact mitigation	●		●	●	●			• Formulation of strategies and roadmaps to achieve Net Zero by 2040 • Transition of Jeju office to 100% renewable energy usage and 10% for Pangyo office • Launch Kakao Carbon Index beta and establish its criteria	• Transition to 100% renewable energy usage by 2040 • Launch and expansion of user-participatory carbon reduction programs	• Declaration of Net Zero by 2040 and formulation of climate change adaptation strategies • Gradual transition to renewable energy to meet RE100 targets • Development of user-participatory carbon reduction programs
Address social issues using technology and platforms	Aims to create social impact by leveraging its role as a platform that connects people with people, people with information, and people with the world, thereby fostering partner co-prosperity and delivering positive effects to society	• Delivering projects that create social impact to enhance accessibility for marginalized communities and spread public value	●		●		●	●	●	Win-Win Partnership • Supporting channel message delivery costs for small business owners nationwide • Providing support to traditional market merchants such as education, marketing, and promotion for digital transformation Digital Accessibility • Conducting usability tests when adding new features to KakaoTalk • Enhancing convenience for wheelchair users by providing gap distance information between the subway and the platform on KakaoMap • Distributing and promoting Kakao's design accessibility guidelines • Establishing the 'Kakao Accessibility Table' and developing a unified system for managing accessibility quality resources	• Establishment of a Partner Mutual Growth Fund of KRW 300 billion by 2027 • Expansion of accessibility improvements for KakaoTalk and major Kakao services for people with disabilities	• Building an inclusive ecosystem in partnership with partners • Enhancement of inclusivity and diversity through improved digital accessibility and literacy
Enhance ethical management systems and compliance	Enhanced demands for compliance with domestic and international regulations and the establishment of fair and transparent corporate governance for internal and external stakeholders	• Establishment of trust between the company and society leading to enhanced reputation • Decrease in stakeholder trust due to internal risk occurrence	●	●	●			●	●	• Establishment of risk management regulations and appointment of risk management officers • Reporting to the ESG Committee and the Board of Directors on the status of non-financial risk management • Completion of preparations for the establishment of a voluntary free-trade compliance program	• Identification and response to potential risks • Introduction of a voluntary free-trade compliance program	• Development of risk management regulations and enhancement of management systems • Establishment of a compliance management system

Sustainable Management

Environmental

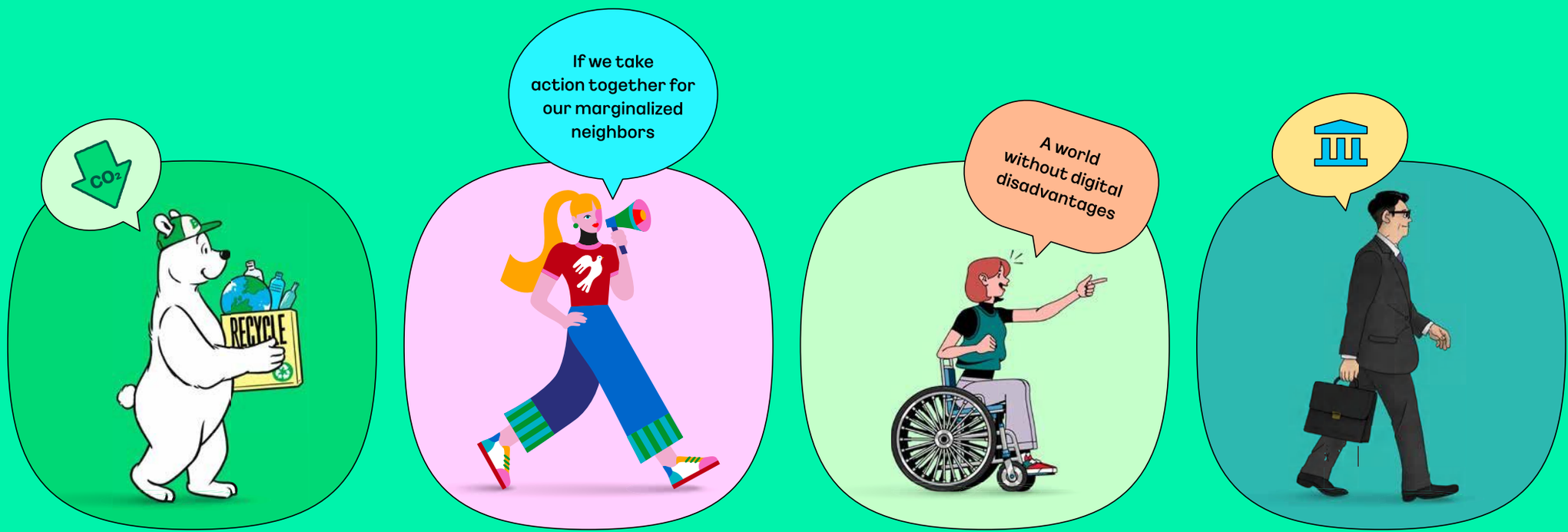
025 Active Green Initiative

Social

036 Safe and Responsible Digital Ecosystem
041 User Protection and Accountability
047 Data Privacy and Information Security
055 Service Reliability
060 Barrier-Free Initiative
062 Human Rights and Diversity
066 Krew Value Enhancement
074 Win-Win Initiative
086 Social Impact

Governance

091 Corporate Governance
098 Risk Management
101 Ethical Management and Compliance



Environmental

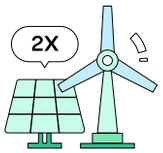
Why This Matters

A global consensus is emerging on the urgency of the climate crisis. With all companies facing direct and indirect impacts from climate change, addressing it has become not just an option but a necessity. Kakao aims to go beyond mere compliance with external environmental regulations and take proactive steps to address environmental issues. We will strive to make a positive difference in the world with our eco-friendly technology and services

Approach

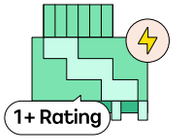
Kakao has independently established the 'Active Green Initiative' principles to address the climate crisis. Operating a dedicated organization, we implement environmental management practices at the group level. With a goal of achieving Net Zero by 2040, we are progressively increasing the proportion of renewable energy. For two consecutive years, we have achieved 100% renewable energy usage at our Jeju Office operations. Through launching our green digital services and eco-friendly campaigns, we work together with our users to pave the way for resolving environmental issues.

2023-2024 Highlights



Expansion of renewable energy consumption for Jeju/Pangyo offices

Doubled renewable energy consumption compared to the previous year



Application of eco-friendly solutions to reduce energy and water usage

Completion of eco-friendly design of Kakao Data Center Ansan by September 2023

Establishment of a circular economy through regeneration and reuse

Obtained global recycled standard certification 'GRS (Global Recycled Standard)' to strengthen eco-friendly e-commerce

Reporting Contents

Active Green Initiative 025

Active Green Initiative

Active Green Initiative

The Active Green Initiative embodies Kakao's environmental strategy, reflecting its proactive commitment to addressing global climate crises and environmental issues. Kakao is dedicated to reducing greenhouse gas emissions across its internal operations and value chain, while also enhancing society's sustainability through the promotion of various eco-friendly services and campaigns.

Kakao's Active Green Initiative is built on three core principles: 'Within Kakao,' 'Through Kakao,' and 'With Kakao.' This initiative is designed to align with global standards in climate change response, enhance environmental contributions through internal operational efficiency, and drive the transition to an eco-friendly society by engaging users and partners in various services and campaigns. Through the Active Green Initiative ,Kakao seeks to involve all members of our society, including Krew, partners, and users, to actively participate in addressing environmental challenges.

Active Green Initiative Implementation System

Environmental Governance	Strengthen environmental governance across Kakao affiliates
Objectives and Strategies	Aim towards 2040 Net Zero through efficiency and renewable energy
	Accelerate transition to an eco-friendly society through user awareness enhancement
Risk Management	Proactive identification of climate change opportunities and risks
	Assessment of financial impact due to climate disasters and social transitions

Principles and Key Activities of the Active Green Initiative

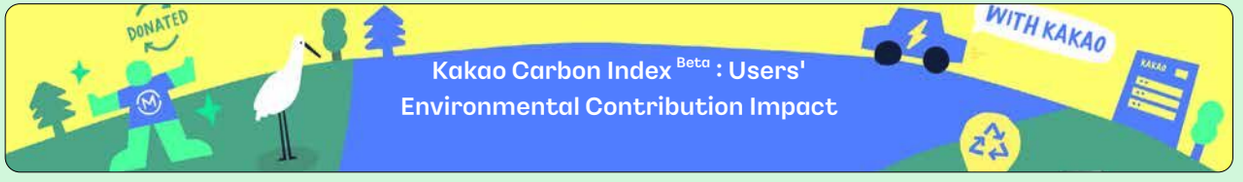
Kakao's Environmental Efforts

- Establishment of environmental management system
- Climate disclosure following global standards
- Establishment and operation of eco-friendly data centers

Act Together for a Greener Future

- Promotion of eco-friendly behavior and awareness
- Quantitative understanding through Carbon Index
- Expansion of user participatory eco-friendly activities

In Focus



Kakao Carbon Index Beta

Active Green

The Kakao Carbon Index Beta is a quantitative measure that quantifies various eco-friendly activities in which users participate through Kakao group's services and platforms. Designed to elevate users' environmental awareness and enhance eco-friendly impact, the Carbon Index is disclosed by converting it into the internal management indicator KUC (Kakao Users' Carbon Reduction).

The 2023 Kakao Carbon Index is expected to be publicly disclosed on Environmental Day in 2024, incorporating both the societal carbon reduction effects of services and platforms and indirect contributions such as participation in eco-friendly campaigns. Among these, the societal carbon reduction effects are calculated through collaboration with the Climate Tech Center at Seoul National University, amounting to approximately 27,000,000 $kgCO_2$-eq. Kakao plans to externally disclose the methodology used in Carbon Index calculation as the "Guidelines for Measuring Societal Reduction Performance in the Platform Industry" aiming to enable more IT platforms to contribute to the transition to an eco-friendly society.

Moving forward, Kakao will continue to collect, analyze, and expand the scope of various data generated from users' eco-friendly service usage, purchases, and utilization. Through related research and partnerships with environmental experts, we will strive to expand efforts toward a low-carbon transition in our society.

Key Components of the 2023 Kakao Carbon Index

Kakaomakers Saegaburch Upcycling Project[1]	Issuance of Electronic Document & Certificate[2]	Operation of KakaoT Electric Taxi[3]	Melon's Forest;Streaming Project[4]
136,000 $kgCO_2$-eq	711,000 $kgCO_2$-eq	10,700,000 $kgCO_2$-eq	244,000 $kgCO_2$-eq

1) Applied emissions factors: 10.1 $kgCO_2$-eq/kg for T-shirts, 16.5 $kgCO_2$-eq/kg for aluminum, 0.9 $kgCO_2$-eq for paper products, etc.

2) Utilized emissions factor for printing paper (newly produced) for the Environmental Performance Label in 2021 from the Korea Environmental Industry & Technology Institute (1.12 $kgCO_2$-eq/g) (assumed one A4 sheet of paper (5g) per general document or certificate)

3) Applied emissions factors: 116.4 gCO_2-eq/km for electric taxis, 145.9 gCO_2-eq/km for LPG taxis (based on the Korea Energy Economics Institute's report 「Study on Energy Price and Tax Reform for the Proliferation of Electric Vehicles」 and domestic taxi vehicle statistics)

4) Utilized the average cumulative CO_2 absorption of pine trees (141.04 $kgCO_2$-eq per tree) from the 「Standard Carbon Absorption of Major Forest Species」 by the National Institute of Forest Science

Active Green Initiative

Environmental Management Implementation System

Environmental Management Policy

In 2021, Kakao established its initial environmental policy as the foundation for the implementation of environmental management and has been continuously refining it since. This policy drives us to minimize environmental impact arising from our service delivery and fulfill our responsibility for environmental pollution prevention and environmental protection. In 2023, the policy was updated with the addition of provisions concerning company-wide environmental management governance. In line with the policy, the Board of Directors, as the highest decision-making body, makes decisions and performs oversight of environmental performance and risks, and the ESG Working Group under the Committee integrates the decisions made into the overall operations and manages environmental performance.

Kakao Environmental Policy

- Improve environmental performance on an on-going basis
- Take the lead in responding to climate change
- Develop eco-friendly technology/service and expand eco-investing
- Take preventive action through improvement
- Comply with laws and regulations and other requirements
- Manage waste and energy
- Education and transparent disclosures
- Support the engagement of partners and users
- Operate with partners to reduce environmental impact
- Environmental Governance

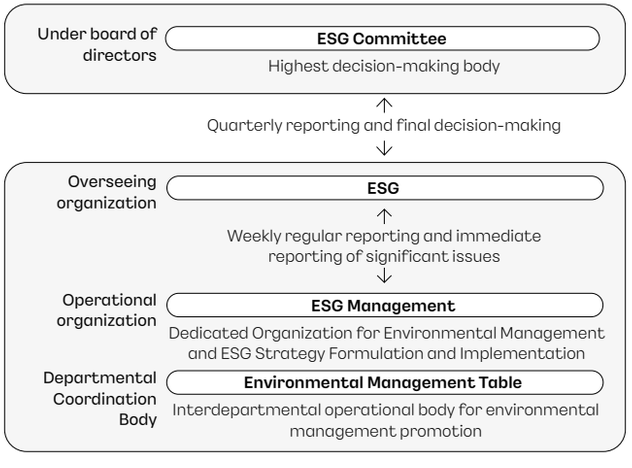
Kakao's Environmental Policy

Environmental Management System

To efficiently manage environment-related risks based on the environmental management system, Kakao systematically identifies, evaluates, manages, and improves our organization in terms of environmental aspects. In April 2021, Kakao obtained ISO 14001 environmental management system certification for its Jeju headquarters and Pangyo Agit and has since received annual surveillance audits by independent third-party organizations. Internal audits of the environmental management system were conducted in 2022, followed by routine audits in 2023, and we maintained our certification through regular ISO 14001 audits performed in March 2024.

Environmental Management Governance

Climate change and other environmental issues are reported to the ESG Committee under the Board of Directors for final decision-making, including environmental management issues. The Chief ESG Officer (ESG Head) of Kakao oversees the overall ESG strategy by delegating responsibility delegated from the ESG committee for environmental and social impact management. The role involves making decisions on significant issues and supporting critical decisions by reporting to the ESG Committee and the Board of Directors on key issues to facilitate decision-making. The ESG Committee meets four times annually to manage and supervise climate change response activities and performance. Under the oversight of ESG leadership, ESG management oversees operational aspects related to the development and implementation of ESG strategies. This includes driving environmental management practices, such as operating environmental management systems, formulating and implementing environmental strategies, managing environmental performance, and responding to global initiatives, including climate change adaptation. ESG management conducts regular assessments to identify climate change-related risks and opportunities, ensuring prompt reporting to management in the event of significant issues. In addition, the Environmental Management Table, an inter departmental working group, implements environmental management practices and improvement tasks to promote company-wide environmental management.

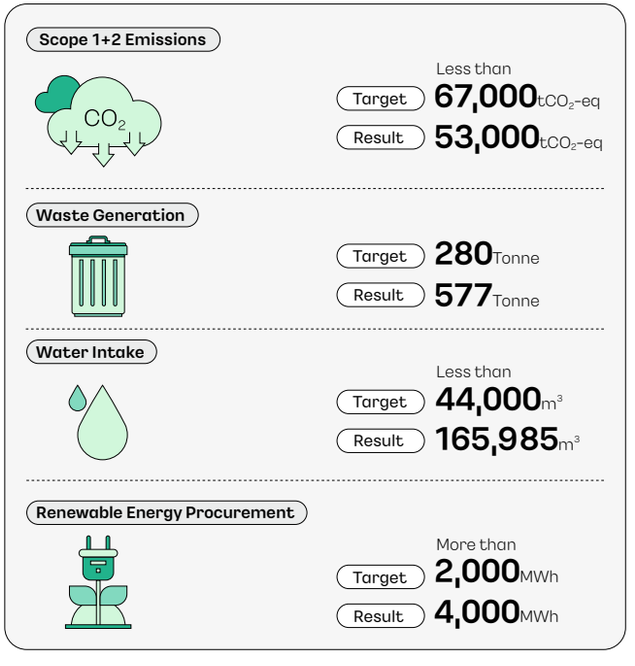


Environmental Goal

Kakao sets goals and implements detailed plans to reduce environmental impact from our business operations while striving to bring about positive environmental change through the services we provide. The environmental goals for 2023 were set internally to procure 2,000 MWh of renewable energy and maintain Scope 1+2 greenhouse gas (GHG) emissions, water intake, and waste generation at the previous year's level.

Throughout 2023, Kakao exceeded its renewable energy procurement goal by double and successfully reduced Scope 1+2 emissions through the replacement of outdated equipment and the introduction of high-efficiency equipment. However, in terms of the management of water resources and waste, despite not achieving our initially set targets due to heightened environmental standards and changes in work systems, Kakao continues to make ongoing efforts to mitigate environmental impacts resulting from its business operations.

Key Environmental Target and Achievement Status for 2023



Active Green Initiative

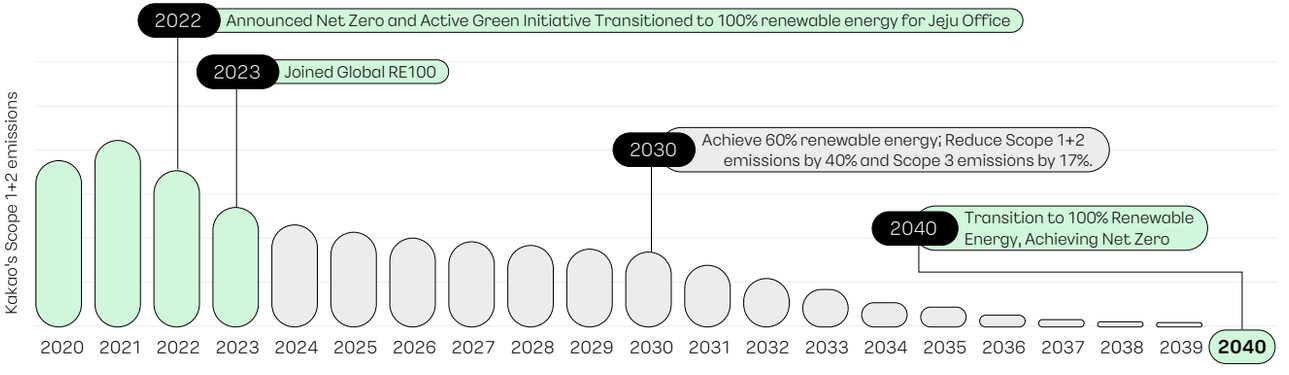
Climate Change Adaptation

Kakao Net Zero Roadmap

In April 2022, Kakao committed to 2040 Net Zero goal as part of its response to the climate crisis. Kakao aims to achieve zero emissions[1] of Scope 1+2 by 2040, while also minimizing Scope 3 emissions generated indirectly along the value chain, contributing to the Korean government's 2050 carbon neutrality goal.

To reach this Net Zero target, Kakao has developed a carbon neutral roadmap. By 2030, Kakao aims to reduce Scope 1+2 emissions by 40% compared to 2021 levels and Scope 3 emissions by 17%. These mid-term targets align with the 1.5℃ temperature rise mitigation goal of the Paris Agreement, based on the SBTi[2] methodology.

Kakao 2040 Net Zero RoadMap

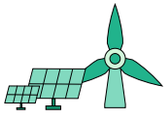


Scope-specific Reduction Strategies

Scope 1

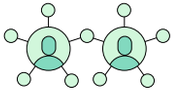
- Transition to electric vehicles for corporate fleet

Scope 2



- Power usage reduction through the introduction of high-efficiency equipment
- Procurement of renewable energy (PPA[3], REC[4], Green Preminum, etc.)

Scope 3



- Adoption of green purchasing policies
- Establishment and enhancement of supply chain management systems
- Development of support measures for partners

1) The six main greenhouse gases (CO_2, CH_4, N_2O, HFCs, PFCs, SF_6) and market-based Scope 1+2 emission standards
2) SBTi, Science Based Target Initiative
3) PPA, Power Purchase Agreement
4) REC, Renewable Energy Certificate

CASE

Office powered by the winds of Jeju Island and the sunlight of Gyeonggi Province

In 2023, Kakao significantly expanded its procurement of renewable energy, totaling 4 GWh, doubling from the previous year.

At its Jeju headquarters, Kakao sourced renewable energy generated by Jeju's wind, maintaining 100% renewable power supply, as achieved in 2022. Through collaboration with the energy IT startup 'VPP Lab,' Kakao secured 2,000 MWh of renewable energy certificates from wind power generation within Jeju Island.

Meanwhile, at its Pangyo Agit, Kakao initiated its transition to renewable energy by procuring solar energy generated by Gyeonggi Province's sunlight, marking its first step towards renewable energy conversion. Partnering with the energy IT social venture 'Sixty Hertz,' Kakao purchased 2,000 MWh of renewable energy certificates from Gyeonggi Energy Cooperative. Additionally, Kakao selectively sourced renewable energy from small-scale solar power plants, ensuring minimal environmental impact without disrupting natural landscapes.

Kakao aims to further expand its procurement of renewable energy, diversifying options to reduce environmental impact during operations and maximize regional cooperation and social significance.

Active Green Initiative

Climate Change Adaptation

Kakao's Investigation of Climate Change Scenarios and Responses

Kakao conducts a thorough examination and response to climate change scenarios in accordance with the recommendations and guidelines of the Task Force on Climate-related Financial Disclosures (TCFD). This involves analyzing climate change risks and opportunities more concretely while considering the characteristics of its business structure, thereby systematically formulating response plans. To actively address climate change, Kakao regularly assesses its climate risks and opportunities, and furthermore, conducts scenario analysis and measures business impact to implement comprehensive risk management for climate change at an organizational level.

Process for Identifying and Incorporating Climate Change Risks and Opportunities into Strategy

Step 1. Identification of Climate Risks and Opportunities
Qualitative and quantitative assessment based on TCFD recommendations and guidelines

Step 2. Selection of Major Risks and Opportunities
Evaluation based on probability, timing, and impact

Step 3. Scenario Establishment and Analysis
Financial impact analysis using global scenarios such as IEA

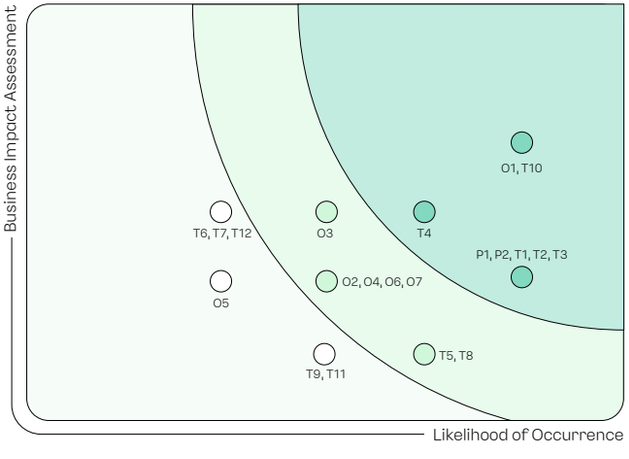
Step 4. Selection of Response Strategies
Review of response strategies for transition risks and opportunities Improvement and formulation of risk response strategies

Kakao regularly monitors climate change risks and opportunities in accordance with TCFD recommendations, analyzing them by distinguishing between physical and transition risks. Following TCFD guidelines, physical risks are categorized as acute and chronic, while transition risks consider policy, technology, market, and reputation factors. For opportunities, analysis factors include resource efficiency, energy resources, products/services, market, and resilience. Subsequently, identified climate change risks and opportunities are comprehensively analyzed based on occurrence timing[1], likelihood[2], and business impact[3], with appropriate responses implemented.

P : Physical Risk T : Transition Risk O : Opportunity

Category		Type		Risks and Opportunities	Occurrence Timing
Risk	Physical	Acute	P1	Increase in extreme weather events such as typhoons, heavy rainfall, and heatwaves	Long-term
		Chronic	P2	Gradual increase in annual mean temperature	
	Transition	Policy	T1	Designation of entities for Greenhouse Gas Target Management System	Mid-term
			T2	Designation of companies subject to Korea Emission Trading Scheme	
			T3	Designation as mandatory disclosure entities under the KSSB, etc.	
			T4	Uncertainty in the supply and price of renewable energy	
			T5	Increasing demands from civil society to address the climate crisis	
		Technology	T6	Increased operating costs due to inadequate data center efficiency improvements	Long-term
			T7	Incurred R&D costs for data center efficiency enhancement	Short-term
		Market	T8	Costs incurred for meeting corporate environmental requirements and certifications	
			T9	Costs incurred due to increased demand for eco-friendly products and services from consumers	Mid-term
			T10	Increased costs due to rising industrial electricity prices from KEPCO	Short-term
		Reputation	T11	Decreased brand value due to inadequate climate change adaptation	Mid-term
			T12	Reduced investment amount due to inadequate climate change adaptation	
Opportunity	Resource Efficiency		O1	Transition to eco-friendly data centers to reduce power consumption	Mid-term
	Energy Resources		O2	Cost reductions resulting from emission management, reduction, and legal compliance measures in response to risks	
	Product/Service		O3	Enhancement of corporate value through the introduction of user-engaged services in business sectors to mitigate environmental impacts	Long-term
			O4	Revenue expansion through the promotion of environmentally friendly product sales and purchases	
	Market		O5	Possible compliance with electricity supply regulations for data centers under Enforcement Decree of Electric Utility Act	Mid-term
			O6	Profit generation through surplus emission rights sales upon inclusion in emissions trading schemes	
	Resilience		O7	Enhanced brand reputation and image through achieving climate change goals	

Major Issue Matrix



1) Time Horizon: Short-term (~2025), Medium-term (~2030), Long-term (~2040)
2) Likelihood of Occurrence: None (0), Very Low (1), Low (2), Moderate (3), High (4), Very High (5)
3) Business Impact: Very Low (up to 10%), Low (up to 33%), Moderate (up to 66%), Significant (up to 90%), Very Significant (up to 100%)

Active Green Initiative

Climate Change Adaptation

Financial Impact of Climate Change

Transition Risks

T1 Designation of entities for Greenhouse Gas Target Management System

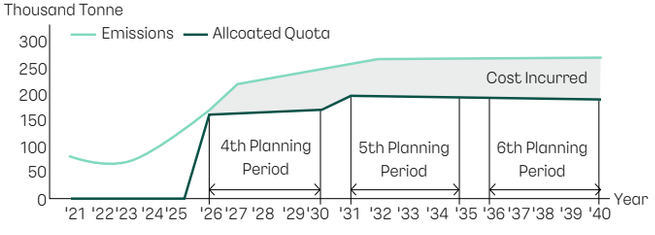
T2 Designation of companies subject to Korea Emission Trading Scheme

Business Impact Assessment

The government mandates emission allowances for businesses exceeding specific greenhouse gas emission thresholds to drive greenhouse gas reduction efforts. While Kakao is presently not encompassed within target management or emission trading schemes, it has recognized substantial business implications upon potential future inclusion in such frameworks. Consequently, the company diligently monitors and manages financial impacts accordingly.

Financial Impact Assessment Analysis

Kakao has undertaken a financial impact analysis concerning the purchase of emission rights across various climate change scenarios. The analysis is set within the timeline of 2040, utilizing our medium to long-term BAU[1] framework as a baseline. Assumptions include the incorporation of emission trading scheme designations for the 4th planning period (2026-2030), taking into account overall increases in the paid allocation ratio. Carbon pricing projections are derived from the IEA (International Energy Agency) GEC Model's STEPS[2], APS[3], NZE[4], with a focus on forecasting domestic carbon emission rights prices from 2026 onwards for financial impact assessment.



Response Strategies

To minimize the financial impact stemming from Kakao's purchase of carbon credits, we are diligently monitoring and managing domestic and international regulations. In alignment with our 2040 Net Zero Roadmap, we are actively pursuing initiatives such as procuring renewable energy, transitioning our corporate fleet to electric vehicles, and enhancing the energy efficiency of our data centers. These efforts aim to reduce our carbon emissions while ensuring compliance with regulatory frameworks.

1) BAU: Business As Usual (Projected Emissions)
2) STEPS: Stated Policies Scenario, reflecting reduction plans or policies pursued or confirmed by each country
3) APS: Announced Pledges Scenario, considering each country's carbon neutrality goals and emission reduction targets (NDCs)
4) NZE: Net Zero Emission by 2050, a scenario assuming zeroing net emissions by 2050 and limiting the average temperature increase to below 1.5°C
5) An analysis was conducted to determine the cumulative renewable energy costs from 2024 to 2030, followed by calculating the lowest and highest cumulative costs based on the 25th and 75th percentiles respectively

Transition Risks

T4 Uncertainty in the supply and price of renewable energy

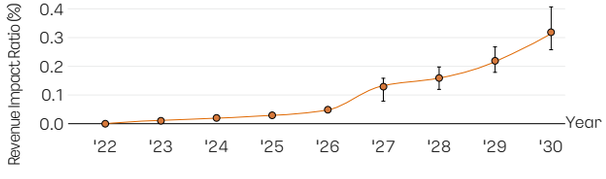
T10 Increased costs due to rising industrial electricity prices from KEPCO

Business Impact Assessment

In alignment with the National Basic Plan for Carbon Neutrality and Green Growth and the Nationally Determined Contributions (NDC) roadmap, domestic companies are announcing Net Zero and RE100 commitments. While the demand for renewable energy is increasing, the supply of renewable energy in Korea is significantly constrained due to geographical limitations. Kakao has committed to achieving RE100 and carbon neutrality by 2040. Since the majority of Kakao's greenhouse gas emissions are attributed to electricity consumption, the company has identified this as a major risk. To ensure a stable supply of renewable energy, Kakao monitors and manages the financial impacts associated with renewable energy supply and price volatility, as well as rising electricity costs.

Financial Impact Assessment Analysis

Kakao has conducted financial impact analysis regarding the effects of electricity costs across various climate change scenarios. Considering the uncertainty in electricity cost predictions, the analysis timeline has been set to a maximum of 2030. Based on prediction, it is estimated that the financial impact will be up to 0.41% or less of the projected revenue.



Response Strategies

Kakao aims to achieve the RE100 target by 2040 while actively monitoring and managing internal and external market trends, relevant policies, and regulatory changes to minimize associated financial impacts. Moreover, the company diversifies procurement options, including REC, PPA, and Green Premium, to address uncertainties in renewable energy supply and pricing due to future demand increases and government policy shifts. Various scenarios are established to calculate[5] and manage the costs of achieving RE100.

Options	Attributes	Scenario Setting
REC	• High market efficiency and scalability • Low economic viability due to additional purchase of certificates adding to electricity costs	Found a total of 288 scenarios by setting strategic and cost-effective proportions for each option and developing corresponding measures
Green Premium	• Ineligibility for emission reduction recognition within emissions trading scheme • Low economic viability as additional payment is required beyond electricity costs	
PPA	• Long-term contracts of 15 years or more based on fixed price • High economic viability as it can suppress the volatility of electricity costs	

Active Green Initiative

Climate Change Adaptation

Financial Impact of Climate Change

Physical Risks

P1 Increase in extreme weather events such as typhoons, heavy rainfall, and heatwaves

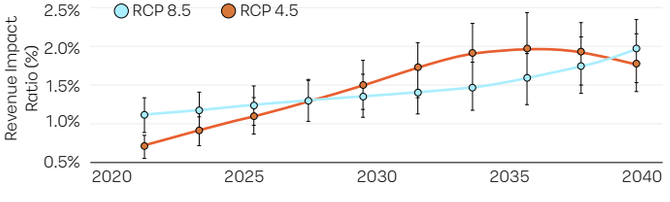
P2 Gradual increase in annual mean temperature

Business Impact Assessment

Due to the escalating severity of the global climate crisis, average temperatures are rising, and the frequency of severe natural disasters such as typhoons, heavy rainfall, and heatwaves is on the rise. This has led to an increase in operational risks for businesses, and Kakao is no exception. In response, Kakao identifies and addresses the business impacts. As a platform and content business, Kakao provides stable services to its users through its main asset, data centers. Recognizing the significant cascading effects of climate change-induced disruptions to data center operations, Kakao has identified and manages this as a major risk, considering the substantial ramifications, including user damage, associated with service unavailability due to data center operational disruptions.

Financial Impact Assessment Analysis

Kakao has conducted a financial impact analysis on physical risks stemming from key climate-related disasters such as heatwaves, cold spells, and heavy rainfall. Utilizing the Climate Change Risk Assessment System developed by the Korea Environment Institute for private enterprises, the analysis was performed on RCP[1]4.5 and RCP8.5 scenarios. Prioritization of physical risks and assessment of potential revenue decline and cost escalation impacts were undertaken. The projected financial impact resulting from physical risks is deemed minimal relative to revenue, estimated to remain within 2.5% by 2040.



Response Strategies

Kakao operates data centers to mitigate financial impacts stemming from physical risks, including typhoons, heavy rainfall, heatwaves, and temperature increases. The company's in-house data center, 'Kakao Data Center Ansan,' is engineered to sustain uninterrupted operations during emergencies. From the outset, the design considers natural disasters such as floods and typhoons. Safety features include resilient designs capable of withstanding typhoon-force winds and strategic building placement to prevent flood damage. Critical facilities like power, communication, and cooling systems are redundantly duplicated for continuous 24/7 operation, complemented by disaster response facilities for emergency situations.

1) RCP : Representative Concentration Pathways

Financial Impact of Climate Change

Opportunity

O4 Revenue expansion through the promotion of environmentally friendly product sales and purchases

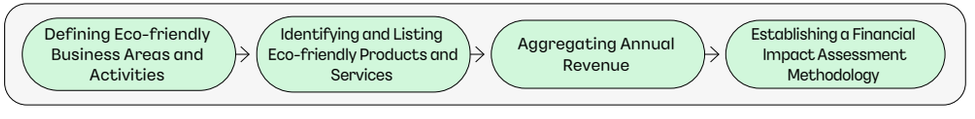
Business Impact Assessment

With the global proliferation of environmentally friendly policies and the growing emphasis on products' social value and sustainability, consumer behavior is shifting towards 'value conscious consumption.' Kakao is expanding its user-participatory eco-friendly business initiatives, actively promoting eco-certified products and the adoption of eco-friendly packaging materials. Recognizing the influx of new users through value-added activities as a significant opportunity for future growth, the company strategically manages this as a major opportunity.

Financial Impact Assessment Analysis

Kakao has conducted an analysis of its business activities aimed at enhancing environmental value and assessed the financial impact of these activities in terms of annual revenue. Eco-friendly business activities are defined as those within the commerce services sector that directly provide products to consumers. Revenue was calculated based on sales from eco-certified products and services, as well as from products and services resulting from eco-friendly initiatives. In 2023, eco-friendly revenue totaled approximately KRW 50 billion. Kakao is dedicated to actively enhance the value of its eco-friendly initiatives and will continue to prioritize these efforts.

Eco-friendly Product Financial Impact Analysis Process



Response Strategies

To capitalize on opportunities from eco-friendly product sales, Kakao leverages its core business areas —services and platforms—to actively promote user-participatory eco-friendly activities. Kakao is expanding its range of eco-friendly products in the production of Kakao Friends merchandise by obtaining GRS certification and developing the Green Life lineup. The company is dedicated to continuously advance eco-friendly initiatives, aiming to enhance value, increase revenue, and create social value through these efforts.

Active Green Initiative

Kakao's Environmental Efforts

In Focus

Establishment of 'Kakao Data Center Ansan'

"Applying Eco-friendly Design"

Kakao Data Center Ansan embodies the identity of an eco-friendly data center by incorporating high-efficiency energy systems and energy-saving technologies to enhance cooling power efficiency. Designed and constructed to achieve a PUE [1] of 1.3 or lower [2], the data center is projected to reduce energy consumption by approximately 30% compared to conventional data centers when operating at full capacity. This reduction is expected to result in an annual decrease of 30 GWh in power usage, a 15% reduction in emissions, and over KRW 3 billion in energy cost savings. As a testament to these efforts, Kakao Data Center Ansan received an upgraded Building Energy Efficiency rating of 1+ in December 2023

Eco-friendly elements of Kakao's Data Center Ansan

Eco-friendly design considering natural conditions

- Implementation of passive design for minimizing energy consumption
- Enhancement of insulation performance through shading and high-performance double facades

Eco-friendly facilities utilizing sunlight and wind

- Production and utilization of renewable energy through 1,000 kW-scale solar panels
- Optimization of cooling water/cooling through cold external air and natural evaporation

Energy efficiency technologies for reducing energy consumption

- Waste heat recovery/utilization for heating by reusing heat emitted from servers
- Air/heat flow control technology within the data center to maximize energy efficiency
- Introduction of energy-efficient equipment to reduce environmental impact
- Adoption of 50 kW-scale environmentally friendly fuel cells

Water resource management to minimize wastage

- Improvement of water resource efficiency through the introduction of rainwater and greywater reuse facilities
- Introduction of water-saving devices for reducing water usage

Optimization of Data Center Operations Efficiency and Leadership in Innovative Technologies

In light of recent endeavors to actively leverage artificial intelligence (AI) in business operations, Kakao has been intensifying the introduction of GPU[3] servers within its data centers to meet customer demands. GPU-based servers offer advantages in analyzing large volumes of data repeatedly; however, they consume more power and generate heat compared to conventional CPUs. Consequently, there is a heightened emphasis on minimizing power consumption and maximizing cooling efficiency in data centers. To address this, Kakao is striving to reduce energy usage in data centers through the introduction of high-efficiency equipment, proactive utilization of outside air, and enhancing air's tightness of containment[4] within computer rooms. Furthermore, Kakao is actively considering the adoption of innovative technologies such as liquid cooling, aligning with the trend of environmentally friendly data centers and persistently striving for greenhouse gas reduction efforts.

Pursuit of Energy Efficiency and Environmental Friendliness in Co-location Data Centers

Kakao's co-location data centers also strive for environmental friendliness, dedicating efforts to energy conservation and greenhouse gas reduction within their operations. Looking ahead, Kakao aims to enhance its Data Center Infrastructure Management (DCIM)[5] systems from a medium to long-term perspective and actively explore the adoption of innovative technologies like liquid cooling to pursue continuous development toward environmentally friendly data centers.

1) PUE (Power Usage Effectiveness): A measure of energy efficiency
2) The average PUE of domestic data centers is 2.66, with the average for private data centers being 1.79, according to the Korea IT Services Industry Association's 'Research Survey for the Development of the Data Industry'
3) Graphics Processing Unit (GPU): A fundamental computing device composed of small, specialized processors with multiple cores operating in parallel, tailored for large-scale but straightforward tasks.
4) Containment System: A system designed to effectively improve cooling efficiency by segregating cold and hot air within computer rooms to prevent their mixing.
5) Data Center Infrastructure Management (DCIM): An infrastructure solution specialized for data centers, encompassing monitoring, management, planning, and other comprehensive elements

Active Green Initiative

Kakao's Environmental Efforts

Eco-conscious Pangyo Agit

Kakao operates and manages the Pangyo Agit with a focus on environmental friendliness. In March 2023, it obtained a Gold rating from the Leadership in Energy and Environmental Design (LEED) certification program, which evaluates eco-friendly buildings. The building is equipped with a lighting control system to meet LEED certification requirements to reduce the excessive use of lighting and save energy in the process. Using a lighting schedule system and occupancy sensors that detect human presence ensures that lights turn off automatically when no one is around.

AI Campus Eco-conscious Office Space

Kakao endeavors to create an environmentally friendly office space within the Kakao AI Campus through various initiatives aimed at reducing electricity and water consumption and improving indoor air quality through the use of eco-friendly materials.

Daylight Sensor

- The installation of daylight sensors enables automatic adjustment of indoor lighting intensity based on external building brightness, leading to electricity savings for lighting usage

Water-saving fixtures

- Installation of water-saving fixtures and fittings such as lavatory faucets, kitchen faucets, urinals, and water closets
- Installation of water-saving fixtures and fittings in the Krew communal office spaces, including canteens/restrooms, resulting in approximately 55% reduction in aggregate water consumption

Low-emission VOC materials

- To reduce concentrates of chemical contaminants, ceiling and flooring materials made of low-emission VOC substances are utilized to enhance indoor air quality

Environmental Trainings and Campaigns for Krew

In November 2023, we invited Jaechun Choe, a chair professor at Ewha Womans University, to conduct an internal environmental education session titled '2023 Active Green Talk' aimed at improving Krew's ESG awareness and environmental consciousness. Under the theme of 'Ecological Transition and ESG,' this company-wide session covered topics including the climate crisis, biodiversity, ESG, and social diversity. A total of 337 Krew members participated in the education session, which was conducted both online and offline. Going forward, we will continue such environmental education sessions at least once a year so that our Krew better understand and take interest in environmental issues.

Environmental Education Participation

337 participants

Education Satisfaction/ Comprehension

4.7 out of 5

Promoting Eco-conscious Commuting and Mobility for Krew

To help reduce carbon emissions generated during the commutes of our Krew, we operate commuter buses and shuttle buses. We also provide bike parking lots and EV charging stations within Pangyo Agit. We are working to increase the proportion of zero-emission vehicles in our corporate fleet vehicles, with 15% of our owned fleet vehicles being electric as of 2023.

Eco-friendly Commute Programs

Commuter bus

- Operate commuter buses on 24 routes to work and 18 routes to Krew's destinations as of Dec. 2023
- Operate shuttle buses between our office and nearby subway stations

Bike ride

- Arranged a bike parking lot for 230 bikes at Pangyo Agit
- Operate charging stations for e-scooters and e-wheels
- Operate a self-repair zone

Switch to EVS for corporate fleet vehicles

- As of Dec. 2023, 7 out of 46 corporate fleet vehicles were EVs
- Plan to gradually increase the proportion of zero-emission vehicles

Efforts to mitigate the environmental impact by affiliated companies

Kakao Pay

- Participated in WWF(World Wide Fund for Nature)'s Global Environmental Campaign '2023 Earth Hour'
- Operate 'Plastic-free Kafe' to reduce single-use items in in-house café

Kakao Enterprise

- Provision of reusable cups and eco-friendly toothbrushes
- Continuous maintenance of reusable cups/mugs, sanitizers, and tumbler/mug cleaning machines

dktechin

- Created new Krew welcome kits to support the Zero Papercup campaign
- Placed air-purifying plants to enhance office air quality and cleanliness

Active Green Initiative

Act Together for a Greener Future

'Saegaburch', User-Participatory Upcycling Project

Kakaomakers has been running the 'Saegaburch' upcycling project since 2022, which aims to give pre-owned items a second life. In 2023, the project expanded beyond clothing to include difficult-to-recycle waste such as aseptic packs and coffee capsules, in collaboration with companies like Maeil Dairies and Nespresso.

By 2023, the 'Saegaburch' project had conducted a total of seven sessions, with participation from over 51,000 users, resulting in the creation of approximately 90,000 upcycled products. These products were sold through Makers, generating around KRW 30 million in sales revenue. Additionally, approximately 6,000 pairs of upcycled socks were donated to children's institutions. Looking ahead to 2024, we will further extend the scope of upcycling items and open new possibilities for the manufacturing industry so that 'upcycling becomes a new norm of our everyday life'.

Project Participants	Items Given a Second Life
51,219 users	4,424,500 items

Creation of Social Employment

101 people (Young adults with developmental disabilities and seniors)

(Cumulative achievements from Feb. 2022 to Nov. 2023)

Providing Green Certificate Information

Kakaocommerce provides green certification information on the product detail pages of its KakaoTalk Gift and KakaoTalk Shopping services. In 2022, the scope of "Organic Certification" registration was extended, and products registered for their green certification status were highlighted as 'Green Gifts' on the Gift search result page, improved user accessibility to eco-friendly products.

Obtained Global Recycling Standard Certification 'GRS'

In 2024, Kakao obtained the 'Global Recycled Standard (GRS)' certification from the eco-friendly certification body 'Control Union'. The GRS certification is awarded to products containing over 20% recycled materials and enables the tracking of their usage. Through GRS certification, Kakao plans to actively combine recycled materials into products developed by Kakaomakers and Kakao Friends in the future.

Development of PB Products Using Recycled Materials

Kakao is currently developing Kakao Friends PB (Private Brand) products utilizing various recycled materials. In May 2023, as part of the "Blooming Day" theme product line, Kakao launched a reusable cup made from bamboo fiber and a reusable wine glass set for outdoor picnics as alternatives to disposable items. Furthermore, in the production of the 2023 diary of Kakao affiliates, recycled paper and soy-based ink were used to enhance environmental friendliness. In 2024, Kakao plans to expand the application of recycled polyester filling material into the flagship product category of Kakao Friends plush dolls. Particularly in April, in celebration of Earth Day, Kakao plans to launch a range of eco-friendly stationery products featuring artwork on recycled paper and mugs made from bio-based materials (CXP) as an alternative to plastic.

Digital e-Document Service

Kakao Pay provides mobile-based digital e-document delivery and viewing services. Particularly through its Electronic Bill Presentment and Payment (EBPP) service, it allows users to conveniently manage and pay their utility bills and other wide-ranging daily service bills on their mobile devices instead of using paper. These services not only contribute to reducing paper waste but lead to environmental benefits such as forest conservation and reduction of carbon emissions.

Act Together for Green Digital Campaign

Kakao Together, dedicated to supporting anyone to participate in and take action for social change, continues to drive various projects addressing diverse social issues. In 2023, it expanded the 'Green Digital' environmental campaign initiated in 2022. The expansion involved increasing the previously established three actions to reduce daily digital carbon emissions to six, calculating carbon reduction amounts for feasible activities, and issuing 'Commitment Certificates' upon completion.

In the collaborative participation project 'Act Together', when a participant certifies their environmentally friendly missions and successfully accomplishes their objectives, Kakao contributes a total of KRW 30 million to the nonprofit organization 'Peace Forest' for afforestation efforts. Moving forward, Kakao remains committed to leveraging technology and platforms to continuously explore campaigns and projects aimed at reducing environmental impact in collaboration with users.

Act Together, Action Mission

Reducing carbon emission through cycling

KakaoTalk dark mode and data-conserving media sharing

Digital detox through cleaning up emails and unsubscribing from newsletters

2023 Kakao Green Digital Campaign

Active Green Initiative

Act Together for a Greener Future

Kakao is at the forefront of promoting a host of user-engaging activities aimed at protecting natural capital for the preservation of marine and forest ecosystems across our communities. We safeguard endangered animals and plants whose habitats are being threatened and ensure to keep our natural ecosystem intact.

ECO SEED Fund for Environmental and Social Causes

Kakaomakers is joining hands with customers in implementing its ECO SEED campaign, an impact fund initiative. Under this campaign, KRW 100 is donated as ECO SEED for every order placed by a customer to support environmental and social activities. In 2022, KRW 390 million was raised, which went towards creating forests to prevent particulate matter and collecting ocean litter, among other initiatives. In 2023, the campaign raised KRW 470 million, contributing to projects including the establishment of fine dust-blocking forests in the Ulsan abandoned shipyard, the creation of resource cycling parks, a three-stage marine plogging initiative, and the sponsorship of environmental education programs.

Kakaomakers ECO SEED Fund

Total of **KRW 470 million** raised in 2023

MAKE US GREEN

Kakaomakers, in collaboration with the Jeju Special Self-Governing Province Development Corporation, conducted the 'Make Us Green' initiative in June 2023 for marine environmental cleanup on Jeju Island, coinciding with World Environment Day. This activity was carried out as part of the memorandum of understanding signed in April for the recycling of marine plastic waste, utilizing the Impact Fund 'Eco Seed' generated from Kakaomakers' sales revenue. 200 users who applied through Kakaomakers and four citizen groups from the 'Save the Sea Network' participated together, engaging in plogging to collect trash at Hamdeok Beach and large-scale underwater cleanup activities around Tokkeiseom Island. Additionally, professional divers conducted underwater cleanup activities at Gapado and Beom Island, including plogging, contributing significantly to marine environmental conservation efforts.

Campaign to Aid in the Conservation of Endangered Wildlife and Honeybee Populations

In response to the ecological crises highlighted in 2023, Kakaomakers planned a range of merchandise to support endangered wild animals in celebration of World Environment Day. These products feature artwork of five endangered species: sea turtles, finless porpoises, tigers, elephants, and snow leopards. Approximately KRW 24 million in sales proceeds were donated entirely to WWF[1] to support their endangered species protection programs.

Additionally, Kakaomakers launched initiatives to protect honeybee biodiversity. According to the domestic beekeeping industry, around 7.8 billion honeybees disappeared in Korea in 2022, with over 10 billion more lost in 2023. To raise public awareness of the declining honeybee population, Kakaomakers created and sold goods featuring honeybee artwork. The sales proceeds, nearly KRW 8 million, were donated to WWF to support their honeybee conservation efforts.

For the conservation of endangered wildlife and honeybee biodiversity

KRW 32 million donated in 2023

Eco-friendly Project 'Melon's Forest;Streaming'

'Forest;Streaming' was launched by Melon, Kakao Entertainment's music platform, as a green project to help create forests under the names of users' favorite artists. Users may select the names of their favorite artists on the 'Forest;Streaming' page during their regular membership period. Up to two percent of their monthly payments are automatically accrued, and when these accruals reach KRW 20 million for a specific artist, the sum is donated to the Korea Federation for Environmental Movement in Seoul to implement forestation projects under that artist's name in the nation's capital city. As a result, in 2023, four forests were created in Nanji Hangang Park: BTS Forest No. 1 and 2, Seventeen Forest, and Lim Youngwoong Forest.

Spreading Eco-friendly K-pop Culture through 'Platform Album'

Kakao Entertainment continues to pursue various avenues to promote eco-friendly K-pop culture. As initial strategic investors, we have partnered with production firms possessing the pivotal patented technology for platform albums, known as 'eco-friendly albums,' to facilitate a range of collaborations aimed at advancing the widespread adoption of eco-friendly album releases.

In 2023, our music label IST Entertainment released the 2nd regular album 'PHANTASY' by the boy group 'THE BOYZ' as platform album. Subsequently, we have continued to release platform albums for artists under our labels, such as Weeekly's 5th mini album 'ColoRise.'

In platform albums, only physical components such as photocards and merchandise for fan interaction are provided, while all additional content including the CD, is digitally released through digital platforms. This effort aims to address the environmental issues existing in the K-pop industry and contribute to the spread of eco-friendly culture within the industry.

1) WWF (World Wide Fund for Nature)

Social

Why This Matters

Regulations are tightening in Korea and overseas to address unfair trade practices on platforms and user protection issues, and IT companies face ever-increasing expectations to fulfill their social responsibility. This highlights the importance of preemptively understanding varying stakeholder requirements and incorporating them into business operations. Specifically, our stakeholders expect Kakao to put its services and technology to collaboratively address emerging social issues and grow in step with society in the process, which underscores the need for us to take responsibility as a member of the community and continue our efforts to create social value.

Approach

Kakao pursues shared growth in collaboration with our key stakeholders — Krew, partners, users, and communities — as our core value. We take responsibility for respecting human rights in our business conduct and create a work environment where our Krew take the lead in their growth and work safely. We also operate various programs to help content creators, partners, and suppliers build their competitive edge while supporting the innovation of the IT ecosystem by making our open-source resources widely available. Such efforts extend to the protection of user data as we work to safeguard privacy, improve service accessibility, and comply with algorithm ethics. Furthermore, we endeavor to promote societal welfare values by utilizing Kakao platforms to encourage universal participation.

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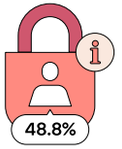
2023-2024 Highlights

Supporting digital transformation through our services

'Dangol Market' project, **Received Presidential Award**



Strengthening information security capabilities for stable services

Information and security investment **increased by 48.8%** compared to the previous year

Ensuring fair prices for unsold agricultural and marine products

Reached **KRW 30 billion** in cumulative transactions of Jegaburch

Safe and Responsible Digital Ecosystem

Technology Ethics & Ethical Technology Development

Algorithm Ethics

Kakao has established and adheres to the 'Kakao Algorithm Ethics,' which encapsulates our principles and philosophy aimed at fostering a healthy digital ecosystem. Through this charter, we consider the societal impact of our AI services and products and encourage all members at Kakao to act with greater responsibility, striving to become a company with a strong ethical conscience.

We keep our algorithm ethics up to date with the shifting technology and social landscape by adding provisions on inclusive technology (1st amendment) in August 2019, on the protection of children and teens (2nd amendment) in July 2020, and new provisions on privacy protection (3rd amendment) in August 2022. Through this, we fulfill our social responsibility in algorithm development and operation. Furthermore, in 2023, Kakao is undertaking various initiatives, such as improving the existing algorithm ethics through the Tech for Good Committee of the Kakao Group and developing an AI ethics checklist, to practice responsible technological ethics.

Kakao Algorithm Ethics

Kakao Algorithm Ethics

① Fundamental Principles of Kakao's Algorithm

Enhance mankind's benefit and wellbeing and keep all efforts for algorithm development within the ethical framework of society

② Vigilance Against Discrimination

Ensure that algorithms shall not generate biased results

③ Management of Data

Collect and manage data for algorithm learning in accordance with social ethical norms

④ Independence of Algorithms

Ensure that algorithm shall not be manipulated internally or externally

⑤ Transparency of Algorithms

Provide explanations on algorithm to strengthen users' trust to the extent that it does not compromise corporate competitiveness

⑥ Inclusivity of Technology

Ensure that algorithm-based technology and service embrace our society

⑦ Protection of Children and Youth

Put priority on child and youth not to be exposed to inappropriate information and threat from the beginning stage of algorithm development and service design

⑧ Privacy Protection

Make our best efforts to protect users' privacy throughout the entire process of designing and operating services and technologies that utilize algorithms

Case

International Exchange on AI Ethics Policies

In December 2023, Kakao participated as a panelist in an event held at the United Nations Conference Center in Geneva, Switzerland, commemorating the publication of the report titled "A Human Rights-Based Approach to AI for Tech Startups and Global Normative Governance." This event was co-organized by the Permanent Mission of the Republic of Korea in Geneva, Seoul National University's Artificial Intelligence Policy Initiative (SAPI), and the Universal Rights Group (URG). We highlighted the importance of our internal AI ethics governance system, emphasizing our commitment to developing and utilizing AI technology in line with human rights principles. Furthermore, we engaged in discussions on initiatives aimed at bolstering AI ethics through the implementation of guidelines and internal awareness campaigns. We also reiterated our dedication to fulfilling our social responsibility as a digital company, continuously endeavoring to enhance AI ethics in our operations.

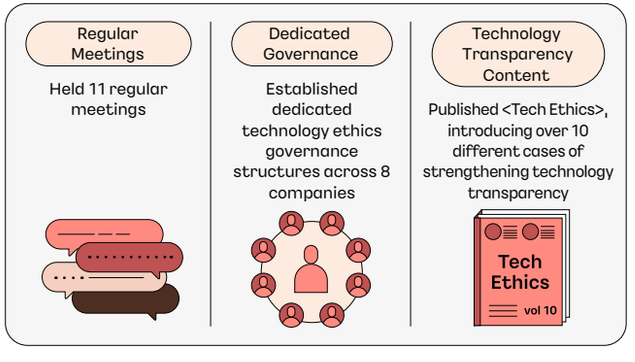
Safe and Responsible Digital Ecosystem

Technology Ethics & Application to Technology Development

The Tech for Good Committee of the Kakao Group

In 2022, Kakao Group established the 'Tech for Good Committee'[1)] to review the business operations of the entire group from a technology ethics perspective, striving to advance technology ethics alongside societal changes. Since its inception, monthly meetings have been held to examine the safety of our services from a technology ethics perspective, including compliance with the Kakao Algorithm Ethics, reviewing potential and actual risks, and bolstering algorithm transparency. The Committee comprises the Chief Technology Officers (CTOs) representing Kakao and 7 affiliated companies. In March 2023, the Committee revised the 'Guidelines for Responsible AI in the Kakao Group,' incorporating changes in technology and society to establish improved AI ethics principles. Furthermore, in response to the government's request for enhancing technological transparency through voluntary regulation, Kakao and other affiliated companies have formulated principles and implementation plans for voluntary regulation. The Human Rights and Technology Ethics team is responsible for providing direct support for effective operation of the Tech for Good Committee.

Key Achievements in 2023



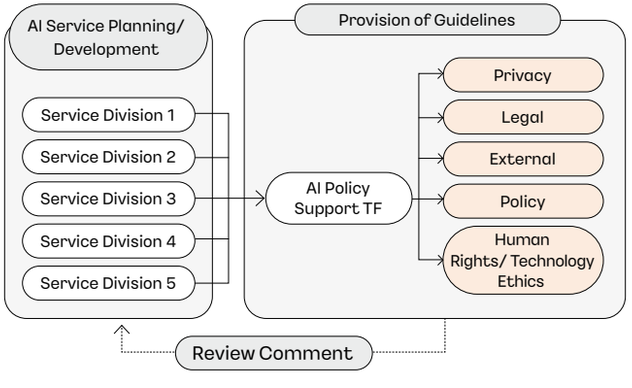
Kakao Group AI Ethics Principles

In March 2023, the Kakao Group Technology Ethics Committee established the 'Guidelines for Responsible AI in the Kakao Group' by updating the Algorithm Ethics to reflect evolving technological and societal landscapes. The new set of AI ethics principles builds on the key principles of the original charter, emphasizing ethical data collection and training, vigilance against social biases, and enhanced algorithm explainability to ensure AI technology is safely integrated across various services. Going forward, our group plans to refine internal structures and execution frameworks and develop concrete strategies for applying related assessment tools to services, thereby reinforcing the implementation of community-wide AI ethics principles.

AI Policy Support Task Force

Kakao has established AI ethics governance centered around the AI Policy Support Task Force (TF). Biweekly meetings are held to discuss technology ethics at a practical level. The AI Policy Support TF provides guidelines on privacy, legal issues, and AI ethics essential for AI services throughout the development process. These guidelines are delivered in two forms: (1) reviewing bottom-up requests from the service teams, (2) top-down sharing of pre-checklists for proactive compliance.

AI Policy Support Task Force Framework



Tech Ethics Magazine

Since June 2023, Kakao has been publishing the monthly magazine 'Tech Ethics' to enhance technology transparency and trustworthiness by making the technology applied to our services more accessible to the general public. The agenda and content of 'Tech Ethics' are selected in agreement with Kakao and its other affiliated companies participating in the Tech for Good Committee of the Kakao Group. The magazine is published on Kakao's official website and the Kakao Policy and Industry Research Brunch Story.

Kakao Tech Ethics

Company-wide Technology Ethics Training

In August 2023, Kakao conducted a company-wide training event titled the "Human Rights and Technology Ethics Quiz Olympics" with the goal of fostering internal consensus on our technology ethics strategy. Prior to the event, educational materials on technology ethics were provided. The effectiveness of the training was measured through online quizzes and surveys. A total of 397 employees participated in the online quizzes, with approximately 39.6% of participants showing improved awareness of technology ethics.

1) Total of 8 companies including Kakao and its 7 affiliates: Kakao, Kakao Entertainment,Kakao Pay, Kakao Games, Kakao Mobility, Kakao Bank, Kakao Enterprise, Kakao Brain

Safe and Responsible Digital Ecosystem

Content & Advertising Ethics

Ensure Diversity in Service Content

Kakao strives to respect and protect the diverse personalities of its users. To ensure a diverse range of content, we have established operation policy that prohibit any and all act of undermining one's human dignity, inciting violence or encouraging discrimination or prejudice on the grounds of country/region of origin, race, appearance, disability, disease, or its lack thereof, socioeconomic conditions and status, religion, age, gender, sexual identity and orientation or other identity factors. These measures are aimed to maintain a rich and inclusive content environment.

Commitment to Counter Hate Speech

Kakao has established the Principle to Counter Hate Speech to ban hateful expressions in postings within our services and included it in our operational policy. We formed the 'Self-initiated Hate Speech Regulation Research Group,' composed of experts recommended by academic institutions, the National Human Rights Commission, and National Institute of Korean Language, to engage in a variety of activities to eliminate hate speech. As part of these efforts, in 2022, we developed 'emoticon ethics guidelines' to set standards to eradicate hate speech. Furthermore, to enhance hate speech detection policy and technological advancement, we have established the 'Ethics/Business/Copyright Essential Guideline.' The guideline provides ethical standards for creators to reference when creating emoticons, while also actively managing to prevent copyright and trademark infringement.

We also integrated the 'voluntary hate speech policy guidelines' announced by the Korean Internet Self-governance Organization (KISO) in April 2023 into our operational policy. Kakao continues to explore and implement specific measures based on the principles established to eradicate hate speech.

Mandatory Guidelines on Emoticon Ethics, Business, Copyright

Kakao believes that the emoticon content should be made available within a diverse and inclusive ecosystem. We make sure that emoticon creators abide by the moral and ethical standards that we present, and strictly ban any act of violating copyrights or trademark rights. We have also established 'mandatory guidelines on ethics, business and copyright' to ensure active monitoring and management.

Furthermore, we strive to ensure that emoticon contents embrace diverse values even in digital spaces by analyzing the diversity status of emoticon creators and the actual emoticon content being serviced. In addition, while actively supporting the freedom and creative expression of emoticon creators, we manage ethical standards within guidelines to prevent users from being offended or negatively influenced.

In 2002, our 'Self-initiated Hate Speech Regulation Research Group' recognized the potential for discrimination and prejudice against specific groups based on the context and cultural trends in which emoticon are used. Therefore, we explicitly state in the guidelines that hate speech is judged based on the complete meaning of the content itself and take preventive measures to ensure that the rights of others are not violated.

Moving forward, we will continue our efforts to build an emoticon ecosystem where the rights of creators and users are guaranteed.

Enhancement of Emoticon Content Policy Based on Generative AI Technology

To protect creators and the ecosystem, we are improving our emoticon content policy using our generative AI technology. Recognizing the lack of societal consensus on the creativity and copyright issues of digital content generated by AI, Kakao has sought to formulate its emoticon content policy by gathering input not only from a legal and institutional perspective but also from various stakeholders and members of society. Through this process, we aim to cooperate with society and communicate with stakeholders to establish comprehensive corporate policies related to AI. This approach ensures the formulation of transparent and collaborative policies that consider the opinions of social constituents during the application of new technologies.

Platform for Discussion

In April 2023, Kakao presented its initial responses and key issues at the 'Legal Issues in the Age of Generative AI' seminar hosted by Korean Association for Artificial Intelligence and Law

Expert Opinions

We requested research collaboration with researchers affiliated with Korean Association for Artificial Intelligence and Law and conducted surveys to gather opinions from creators

Policy Briefing

In September 2023, we held a policy briefing, inviting creators and stakeholders to discuss and collect feedback

Reorganizing the News Transparency Committee

To enhance the operation of reliable media services and protect user rights, we restructured the Media Advisory Committee, established in 2016, into the News Transparency Committee in 2023. This reorganization aims to focus discussions specifically on news services, increasing transparency in technology and policy to provide responsible media services to users. We introduced a policy for cautionary statements in news reports related to suicide on Daum News, revamped our comments policy by removing the comment section and introducing TimeTalk, and implemented new measures such as additional key news arrangements and the establishment of a media outlet tab. These policy revisions for Daum News were developed through discussions and feedback from external experts.

Safe and Responsible Digital Ecosystem

Content & Advertising Ethics

Advertising and Content Ethics Policy

Kakao publicly discloses ethical standards for advertising through the Advertising Screening Guide within our business guides to fulfill our social responsibilities. The guide provides execution standards and compliance requirements for placing advertisements via Kakao's services, including specific details on adherence to relevant laws and ethical standards. It also clearly outlines actions that may undermine user experience and cause harm. Additionally, when necessary, the ERM Committee monitors advertising ethics-related risks, reviews processes, and recommends policy improvements.

Kakao Ad service operational policy | Kakao Moment screening guides

Advertising and Content Ethics Governance

Kakao is currently operating a dedicated organizations to oversee advertising and content ethics, which includes the Advertising Policy Planning and Partner Onboarding. The Advertising Policy Planning team is responsible for developing and implementing policies that assess and regulate the ethical appropriateness of Kakao's advertising content such as Kakao Moment, and search advertisements. Additionally, the Partner Onboarding team is tasked with developing customer service (CS) policies and providing support to Kakao's advertising clients.

Advertising Ethics Organization Responsibilities and Roles

Advertising Policy Planning

- Advertising content quality management
- Analysis of advertising ethics-related laws, external trends, and media characteristics
- Support for compliance with obligations according to terms and conditions, operational policies, and business guides for stakeholders such as advertisers and agencies
- Application of a step-by-step sanction policy in case of violations of advertising ethics obligations or occurrence of ethical and emotional issues

Partner Onboarding

- Support for advertisers and agencies in platform utilization, operation of customer service centers (including inquiry boards, consultation chats, emails, etc.)
- Customer service response for users of advertising-related services (such as advertising damage reporting centers)

Advertising and Content Ethics Management Process

Kakao has implemented an advertising ethics management process in accordance with the provisions outlined in our advertising service operation policies. In the event of violations, sanctions are applied in accordance with these operational policy regulations. Particularly, we prioritize the use of advanced technology to detect and block advertising content that does not meet ethical standards. Additionally, we actively apply filtering technology to screen out offensive language, pornography, hate speech, illegal content, and other inappropriate content within messages. Furthermore, to protect children and adolescents, Kakao has introduced age verification technology and measures within messages and post content to prevent exposure of harmful content to minors.

Advertising Content Registration and Screening

Advertisers are required to register materials that meet Kakao's advertising operational policy and screening guides through individual platforms. During this process, Kakao reviews the registered materials through its policies and systems and decides approval their execution based on the review results. Violations may result in material modification requests, campaign suspension, or service restrictions. The review process is conducted during the initial registration of advertisement, as well as during material modification, and monitoring stages. Even after approval or execution acceptance, reassessment may occur based on Kakao Moment Advertising Screening Guidelines and individual service operational principles. In addition to Kakao's efforts, advertisers are responsible for understanding and complying with Kakao's advertising policies, terms of service, operational policies, and relevant laws. Kakao operates advertising review regulations to comply with applicable laws and strives to prevent the exposure of potentially policy-violating advertisements.

Taking Action against Harmful Advertising and Content

Kakao Ad service operational policy specifies provisions that provide evidence for our restriction actions, including 'Article 3 Creation and Management of Advertising Accounts', 'Article 6 Execution of Advertising', and 'Article 12 Restriction on Use'. They base our decision to impose restrictions for non-compliance.

Operating an Information Webpage for Personalized Ads

Kakao operates the 'Kakao Personalized Advertising' service to provide personalized advertisements, taking into account the diverse characteristics and interests of users. The service aims to assist users in receiving advertisements relevant to their interests. By utilizing various demographic information such as gender, age, location, and user interests, the service enhances user engagement with advertisements while reducing users' exposure to unnecessary ads. Additionally, information regarding the types and features of personalized ads, methods for selective ads blocking, and behavioral information collected and provided to third parties are transparently disclosed on Kakao's website. In cases of user grievances or complaints, Kakao promptly and accurately responds through the reporting and remediation procedures provided by the company.

Kakao personalized advertising

Stakeholder Engagement Concerning Advertising Ethics

To protect users of Kakao advertising services and prevent damages caused by advertisements, we operate an Advertising Damage Reporting Center. This center aims to facilitate easier submission of inquiries regarding our advertisements to our customer service and provide guidance on applying for damage relief in cases where damages are anticipated or occur. We direct users to appropriate channels for damage relief application, such as the Electronic Cybercrime Report & Management System of Korean National Police Agency, the Personal Information Infringement Reporting Center, and the Illegal Spam Response Center. Additionally, as a platform provider, we have established and operate an Electronic Commerce Damage Relief Application Proxy System to enable users to apply for damages relief more conveniently. In 2023, around 480 inquiries were received, and appropriate measures were taken in hand with internal policy, external cooperation, and user protection departments. Furthermore, to prevent user damages caused by advertisements and manage risks, we conduct regular monitoring and take preemptive measures. We verify business information registered in Kakao advertising based on criteria provided by national agencies such as the Korea Fair Trade Commission and the Seoul Metropolitan Government Electronic Commerce Division, focusing on companies reported for recurring complaints and suspected fraudulent websites. If a business is deemed to potentially cause user damages, we take proactive sanctions against Kakao advertising operations.

Safe and Responsible Digital Ecosystem

Open Innovation

Contribution to Establishing an Open-Source Ecosystem

Kakao continuously strives to establish a safe and efficient open-source ecosystem. In 2023, we unveiled our open-source resources, including python-ssdb and TC. Furthermore, we actively participated in initiatives to enhance the capabilities of the development ecosystem, such as taking part in the 'Policy Discussion Forum for Innovative Growth of Open-Source Software.' We also arrange open-source sessions at the if (Kakao) developer conferences, participate in the preparation of NIPA (National IT Industry Promotion Agency)'s corporate open software governance guides, and proactively engage in training for students, businesses, and developers. Through these efforts, we aim to raise awareness of open source and improve competency across the overall development ecosystem.

Open-Source Utilization and Contribution

- Publication of the Revised Edition of the Corporate Open-Source Software Governance Guide (2024)
- Presented at the National Assembly's 'Policy Forum for Innovative Growth of Open-Source Software' (June 2023)
- Undertook a research project with the open-source SW license expert community of the Korea Copyright Commission course (2022~2023)
- Prepared and updated NIPA's corporate open software governance guides (2021~2023)
- Served as a lecturer for NIPA's Open Software Management Academy (2021~2023)
- Served as a lecturer for KOSSA WISET's open-source SW coordinator training course (2021~2023)
- Participated in the Open Chain KWG and made presentations (2019~2023)
- Served as a lecturer on open-source development methodology for Jeju National University's Kakao Track (2015~2023)

Expanding the Functionality of OLIVE Platform

In 2023, the OLIVE Platform expanded the scope of open-source data provided so as to encompass the entire dataset of package managers. By collecting millions of open-source packages, it offers licensing and security vulnerability information for over 50 million open-source package versions, with the latest data automatically updated. Vulnerability information is collected and provided based on the security vulnerability database from Dependency-Track. The OLIVE Platform supports dependency analysis for 13 package managers and uses the SCANOSS library for code snippet analysis.

Functions Added to OLIVE Platform

Nov. 7, 2023

Added ESG Membership

- Expanded open-source management to 100 projects (increased the limit from 5 to 100 projects
- Software Bill of Materials (SBOM) management

Nov.27, 2023

Provided licensing and security vulnerability information for over 50 million open-source package versions

- Automatically collected data has now increased to approximately 70 million open-source package versions
- Collected millions of open-source packages and provided information on copyright, licenses, and other metadata
- Collected vulnerability data for open-source software to provide information on vulnerabilities in the open-source packages in use

2024

2024 Plans

- Expand the scope of open-source analysis and increase open-source data collection
- Verify and improve security vulnerability information
- Expand education and usage among affiliates

Utilization of OLIVE Platform

Project (1,676 scans)	Open-source license
1,077projects	220licenses
Open-source component	**Open-source package**
4,404,051components	5,252,152packages

OLIVE Platform

(As of Feb. 28, 2024)

OSORI Project

'OSORI'[1] aims to contribute to the proliferation of compliance systems and foster a secure open-source ecosystem by making open-source data,jointly developed by Kakao, Samsung Electronics, and LG Electronics, publicly available for users to utilize. To achieve this, we have been engaged in extensive discussions to optimize the structure of the open-source database, define license risk levels, and conduct license reviews. OSORI operates as an open-source project, allowing participation from all users, and is planning to expand the contribution process to facilitate the involvement of various companies and the expansion of data. Additionally, as the first public-private cooperation project in Korea, the three companies and the Copyright Commission will collaborate to review and ensure the continuous provision of reliable open-source data.

OSORI Project Achievement

Free Release of Open-Source Data	Free Release of Open-Source License
60,000data	463licenses

1) Open Source DB Integration

User Protection and Accountability

User Protection

User Protection Vision and Plans

Kakao is continuously working to create a safe internet environment for all. In conformity with Article 32 of the Telecommunications Business Act, which governs user protection, we have developed our user protection vision and plans and made them widely available on our website for transparent communication with stakeholders. Kakao endeavors to protect our users from all illegal and harmful content and to take legally appropriate measures against abusive language used to slander, insult, or belittle others, any language that discriminates or demeans any individual on the grounds of place of origin, disability, or gender, and behaviors that hurt the feelings of others, through proper procedures.

Kakao User Protection Vision and Plans

Vision for User Protection

- We will strive to establish diverse protective mechanisms to prevent harm to users
- We will make active efforts to address legitimate opinions or grievances raised by users
- In cases where opinions or grievances cannot be addressed immediately, we will inform users of the reasons and the expected timeline for resolution
- We will endeavor to provide an online space where all users can access services safely and conveniently

Plans for User Protection

- We have appointed a user protection officer to establish business plans aimed at safeguarding users and continuously devising improvement strategies
- In accordance with relevant laws and amendments, as well as changes in the telecommunications service landscape initiated by governmental reforms, we actively apply measures necessary for user protection
- We routinely monitor the operational status of each service to identify and address any vulnerabilities in user protection
- Through regular training sessions focused on user protection, we strive to prevent recurring harm to users
- We endeavor to ensure that users are not exposed to harmful information and environments and can conveniently access our services

User Protection Policy

Guaranteed Freedom of Expression for Users

Kakao has established policies to ensure users' fundamental rights to knowledge and freedom of expression, protecting users against any infringements. Since 2009, Kakao has been a member of Korea Internet Self-Governance Organization (KISO), participating in joint self-regulation among internet platform companies. In April 2023, Kakao began adhering to the 'Hate Speech Self-Regulation Guidelines' issued by KISO's Hate Speech Review Committee. By respecting users' freedom of expression while also preventing harm caused by hate speech, Kakao is committed to fostering a healthy internet culture.

Children and Teenager Protection Policy

Kakao considers it a primary responsibility to protect children and teens from harmful internet environments. We implement youth protection policies outlined in the Act on Promotion of Information and Communications Network Utilization and Information Protection and engage in activities in line with our 'Digital for Kids' initiative to safeguard teens from harmful information and foster a secure online environment.

Furthermore, Kakao strongly prohibits acts of sexual crimes targeting children and teens or any actions promoting such crimes, applying a zero-tolerance policy not only to such behaviors but also to any attempts to access related content. To block such harmful content, we operate a harmful content reporting center 24/7, 365 days a year, promptly responding to any relevant reports. In addition, in 2023, Kakao conducted youth protection education for 154 Kakao Krew members, as well as 529 personnel from Kakao's customer service center and report center demonstrating our utmost efforts in youth protection.

User Protection Organization

The Platform Safety Organization, dedicated to user protection, also reports relevant issues directly to the CEO. The Platform Safety Leader fulfills the roles of User Protection Officer, Youth Protection Officer, and Responsible Officer for preventing the distribution of illegal content, such as non-consensual recordings.

Safe Digital World

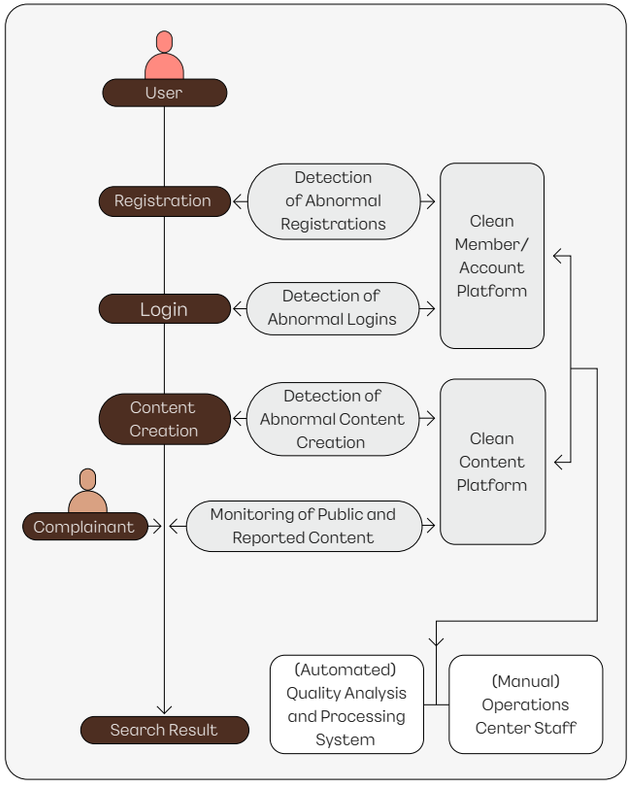
User Protection and Accountability

User Protection

User Protection Management System

Kakao employs advanced content filtering technologies to protect users from harmful contents which are constantly evolving. Furthermore, we are continuously investing in and researching various filtering technologies to prevent users' exposure to harmful content, including AI-powered content blocking technology, harmful image blocking technology, and SafeBot.

Kakao's Harmful Content Filtering Technology



Machine Learning Technology to Block Harmful Content

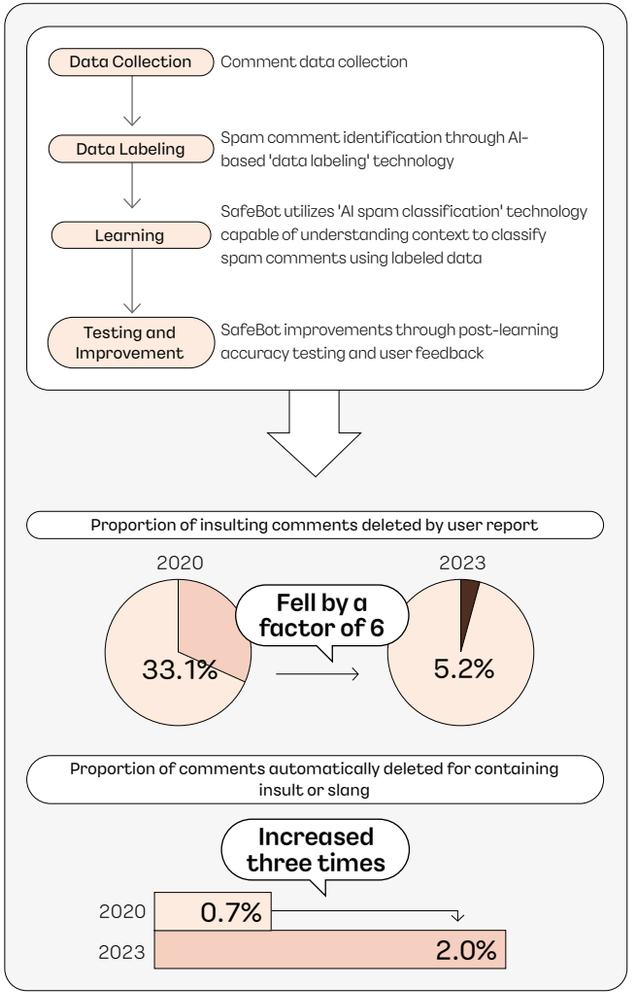
Kakao leverages advanced AI technology to promptly detect and block harmful images. Building on the traditional method of automatically processing identical image hashes, we are extending our capabilities through machine learning to effectively detect a wider range of subjects.

AI Technology to Block Harmful Content - SafeBot

Kakao utilizes AI technology to analyze, learn, and automatically regulate harmful content. It is worth noting that we have developed an AI-enabled comment filtering feature called 'SafeBot' to foster a pleasant commenting environment. SafeBot analyzes and identifies comments that violate our posting policy, including insults, slang, vulgar remarks, and banned keywords, and automatically report such content. Users can freely choose to enable or disable the SafeBot feature in their configuration settings.

In 2023, we implemented 'SafeBot V2' with improved accuracy and performance. As a result, the proportion of comments automatically filtered for containing insults or slang increased from 0.7% to 2.0%, and the likelihood of users encountering offensive comments decreased threefold. In addition, the proportion of insulting comments deleted by user reports plummeted from 33.1% in the second half of 2020 to 5.2% in 2023, a reduction of one-sixth of its previous level. Kakao is building a dataset to detect harmful images and hate speech, which will be integrated into SafeBot. Driven by our goal of resolving social issues through technology, we are committed to further advancing the performance of SafeBot.

Identification Process and Achievements of Inappropriate Expressions through SafeBot



User Protection and Accountability

User Protection

User Protection Work Assessment

Kakao undertakes various initiatives to fulfill our responsibility to prevent and protect users from potential harm, in compliance with Article 32 of the Telecommunications Business Act. Specifically, we perform regular assessments to evaluate our user protection efforts to ensure their effectiveness. In 2023, we introduced several improvements to support the information vulnerable, such as introducing voice-based consultation reservations and text-based ARS and enhanced the transparency of customer service phone numbers. These efforts have significantly improved our user satisfaction scores, with Kakao seeing an increase of 36 points and Daum an increase of 43.3 points compared to the previous year.

Also in 2023, we provided 683 personnel from Kakao's customer service center, operational center, and report center with training on 'key inquiries related to user and youth protection.' We will continue to bolster necessary training based on satisfaction measurements to further strengthen the capabilities of our Krew.

Disclosing Data on User Protection

Kakao is dedicated to protecting users from harmful content and ensuring that their fundamental right to freedom of expression is not restricted, while also safeguarding copyright across all domains, including music and video. We enforce strict measures against defamatory posts and any content that infringes on the rights of others.

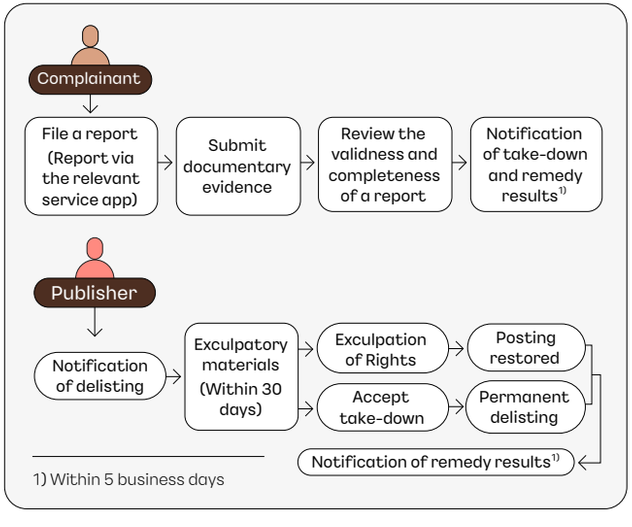
In line with these efforts, Kakao transparently discloses the status of post deletion requests and processing from both users and government agencies. This information is collected and published biannually, detailing the outcomes of copyright, trademark, image right infringement, data breaches, and defamation charges filed by users. Additionally, we provide transparency on government agency requests, including corrective and deletion requests, the outcomes of requests from the Korea Internet Self-Governance Organization, and the regulation and restriction results for posts and comments based on user reports.

User Damage Compensation

Any user who has suffered from copyright infringement or other damages while using Kakao's services can report these issues through various channels. Accordingly, Kakao provides compensation for such damages in compliance with relevant laws, regulations, and service terms and conditions.

Kakao operates the 'E-Commerce Dispute Mediation Request System,' which allows users to conveniently submit requests for dispute resolution in cases of e-commerce-related damages. Additionally, through our 'Rights Infringement Notice' channel, we support users who have experienced privacy violations, defamation, or copyright infringement, ensuring they receive swift remedies. The responsible team promptly reviews the reported issue and notifies the party who uploaded the content to take down the posting. If their rights are vindicated through the due explanation process, the content can be re-posted. If they fail to do so, a permanent ban is imposed on the posting of the concerned content. The results of these processes are notified to both the submitter of the report and the publisher of the content within five business days.

Rights Infringement Remedy Procedure



Case

Stakeholder Cooperation and Communication for a Safer Digital World

Kakao is committed to establish itself as a wholesome internet platform for all users to safely and freely put forward their view in a safe environment. Kakao is committed to establishing itself as a healthy online platform where all users can freely express their opinions in a safe environment. To achieve this, we collaborate with a wide range of stakeholders, including government agencies, research institutions, and NGOs. Through ongoing communication with these stakeholders, we strive for the betterment of our digital environment.

Producing hate speech guidelines

- Joined KISO's hate speech deliberation committee to produce 'Guidelines to determine and handle hate speech'

Making an insults database available free-of-Charge

- Awarded the 'Grand Prize' at the 2023 Human Technology Awards

Performing voluntary operational status reviews regarding user Protection

- Develop and implemented our teenager protection policy as a mandatory business entity responsible for overseeing the operation of youth protection measures
- Submit our transparency reports outlining our efforts to prevent the distribution of illegal recordings and other prohibited content to the Korea Communications Commission at the end of January each year

Operating the Safe Digital World webpage

- Provided a range of information to protect users from harm through the Safe Digital World webpage created by Kakao

Publishing the Financial Safety Report

- Released a report in November 2023 detailing initiatives and efforts to ensure financial safety for users across various Kakao platforms

User Protection and Accountability

User Protection

Improving Digital Literacy[1]

Kakao Safety Campaigns

Since 2022, Kakao has been running the 'Kakao Safety Campaign' to create a safer platform and protect our users. This campaign, named after KakaoTalk's keyword 'Safety,' which signifies a state where users can use the platform without issues, provides a variety of useful safety-related information to promote the safer use of KakaoTalk in their everyday life.

Kakao Safety Campaigns

Kakao Safety Guide

Launching Digital Safety Campaigns

Kakao runs a wide range of campaigns to enhance digital safety. On the Daum portal, the 'New Types of Financial Scams' prevention campaign page provides guidelines on preventing and responding to online financial fraud. Additionally, our anti-messenger phishing campaign educates users on how to avoid and handle fraudulent activities such as impersonation by acquaintances or public organizations to obtain information, schemes that use events or loans as bait to steal account information, and threats of spreading recorded explicit video chats to extort money. Moreover, through the 'How to Safely Use KakaoTalk' campaign disclosed on our Kakao Brunch Story Kakao introduces various case studies, including requests for Kakao account information and account hijacking incidents, offering users practical advice on how to take proper countermeasures.

Reinforcing the Protection of User Rights Concerning Our Comments Service

Kakao recognizes the serious impact that malicious comments can have on users' human rights and dignity. In response, we have strengthened regulations against those who post harmful comments and implemented new protective features to safeguard users' rights and well-being.

Activities to Reinforce the Protection of User Rights Concerning Our Comment Service

- Adding 'reporting criteria' for hate speech and violence
- Strengthening regulations against malicious commenter
- Providing 'reporting notifications' to inform users of the outcome of reported comments
- Providing a 'hide' feature to conceal unwanted comments or users.
- Adding a 'Fold' function to fold and expand the comment section
- Establishing 'Time Talk' to enhance real-time communication and restore a healthy public forum

Comment Management Policy Status

- Operation of a 24-hour comment reporting center
- Implementation of a system to prevent comment abuse[2]
- Application of systems to prevent and control abusive expressions of support or opposition in comments
- Introduction of automatic filtering for illegal, obscene, and harmful comments Implementation of CAPTCHA[3] to prevent comment flooding
- Strengthening sanctions against malicious comments, introducing features such as 'hide' and 'fold'
- Application of AI-based filtering and substitution for profanity and derogatory language, as well as masking with SafeBot

1) Ability to understand and properly use digital technology and content
2) Acts of abusing the system by disrupting its normal operation
3) CAPTCHA, Completely Automated Public Turing test to tell Computers and Humans Apart, primarily composed of characters that are indistinguishable by programs, designed to differentiate between humans and computer programs

Case

Daum News' New Comment Beta Service 'TimeTalk'

In May 2023, Daum News launched a new comment communication platform called 'TimeTalk' to foster better comment services and public discourse culture. Based on SafeBot functionality, TimeTalk provides users with a pleasant comment environment where they can exchange opinions in real-time.

Preventing the Distribution of Illegal Videos

Kakao has the mandatory responsibility to take technical and managerial measures to prevent the distribution of illegal videos. To fulfill this obligation faithfully, Kakao operates a 24/7 illegal video reporting center and actively conducts activities to prevent the distribution of such materials. Additionally, Kakao provides detailed guidance on how to report the distribution of illegal video contents and the actions taken on its customer service homepage to ensure that users do not encounter difficulties in reporting. Furthermore, when content containing videos that fall under identification and publication restriction measures is attempted to be published, it undergoes inspection through a comparative identification system. When determined to be illegal video content, the video is deleted and restricted from posting.

User Protection and Accountability

User Protection

Expanding the Operation of the Roundtable on Financial Customer Protection

In response to the user needs for reliable financial transactions, Kakao has decided to expand the operation of the Roundtable on Financial Customer Protection in December 2022. The Table has been meeting regularly each month since 2023, bringing together service-specific working-level Krew from Kakao Bank, Kakao Pay, and other financial affiliates to discuss ways to preemptively address risks to ensure service reliability and user data protection. Reflecting on these efforts, Kakao published its inaugural Financial Safety Report in 2023 and plans to publish it regularly in the future.

2023 Financial Safety Report

Online financial fraud, such as impersonation, impersonation of acquaintances or public officials, and high-yield investments, is evolving and becoming more frequent. In response to various illegal activities threatening users' financial safety, Kakao is enhancing security systems to protect users. Comprehensive prevention activities, including informing users of financial fraud trends and prevention measures, establishing defense systems, swift reporting, and follow-up measures, as well as building a cooperative framework within the financial community, are being undertaken to prevent financial fraud and protect users' personal information.

Kakao has shared its concerns, efforts, and determination for financial safety with stakeholders through the '2023 Financial Safety Report.' We will continue to fulfill our responsibility to ensure that users can use financial services more safely and conveniently in the future.

Kakao'e Efforts for Financial Safety

24 hours The phishing reporting channels of Kakao and its financial affiliates are available 24/7	**30 publications** Kakao and its financial affiliates have published a total of 30 preventive content pieces
118.32 million people Kakao's financial safety campaign has reached a total of 118.32 million individuals	**KRW 4.36 billion** Kakao and its financial affiliates have provided a total of KRW 4.36 billion in financial support

As of Nov. 30, 2023

User Protection Through Financial Fraud Defense System

Kakao has established a system that detects and warns against suspected financial fraud activities, even if users do not apply special settings. Through this system, users can easily block fraudulent activities and report them conveniently.

Globe Signal

- Display the profile of users registered with non-Korean (international) phone numbers, who are not added as friends, with a globe icon, and show the country information of the registered phone number along with a caution message during conversations

Talk Siren

- Display the profile of users registered with domestic (Korean) phone numbers, who are not added as friends, with an orange warning icon, and show a caution message during conversations

Business Channel Policy

- Verify the business information submitted by partners and assign a business badge to secure channels
- If a channel is not converted to a business channel, display a phishing warning text at the top of the channel home and conversation windows

Setting Prohibited Keywords for KakaoTalk Channels

- Manage prohibited words through the system
- Disallow channel creation with keywords associated with high risks of fraud or impersonation, such as those related to financial or public institutions
- Allow channel creation through customer service (CS) only when appropriate documents are submitted to prove authenticity

Continuous Monitoring of Suspicious Channels

- Conduct regular operator monitoring by searching for channels with keywords associated with high risks of fraud or impersonation
- Immediately take enforcement actions upon discovering suspicious channels

Addressing Unregistered Investment Advisory Services

- Provide guidance to ensure clear display of business information when operating channels related to investment advice and financial planning
- Enforce penalties on channels that fail to display business information

Caution Indicators for Non-Friend Users

- Display a phishing warning banner and provide report and block buttons at the top of the chat window when a user who is not a friend invites someone to a chatroom
- Show a warning popup when clicking on links or files sent by users who are not friends

Warning Indicators for Links with High Report Volumes

- Display a warning image on the thumbnail of links that require caution if already reported by other users
- Show a warning popup when clicking on these links

Transfer Restrictions in Open Chatrooms

- Display a transfer warning message if account information appears in an open chatroom

Reporting Function for ID/QR Search Results

- If a URL included in external social media or illegal spam messages leads to a KakaoTalk ID-QR search result page, capture the screen and apply sanctions according to the operational policy when reported

Option to Disallow Friend Additions

- When the option to allow friend additions is set to "disallow," other users cannot add you by your phone number

User Protection and Accountability

Improving User Satisfaction

User Satisfaction Management System

Kakao actively collects user feedback on its services through various communication channels and systematically manages this feedback via the Customer Relationship Management System (CRMS). Issues that can be immediately resolved are addressed through counselors, and those that are not readily solvable are promptly routed to the team in charge of service planning and development to ensure prompt and accurate resolutions. This significantly contributes to developing service modalities and formats which would otherwise not have been considered by service planners and developers.

We also perform 'counseling satisfaction surveys' on customer inquiry channel users. This allows us to regularly monitor users' overall satisfaction with our services and reflect their feedback on any inconveniences experienced in our counselor training program and job testing for customer services representatives. Furthermore, exemplary responses are reviewed, new instructions are registered, and functional improvements are made to address any inconveniences identified.

Various Communication Channels

- Consultation via KakaoTalk
- Customer support inquiries through the website and application
- 24/7 emergency telephone support center
- In-person customer service center

Expanding Stakeholder Communication Channels

Since 2022, Kakao has been conducting the "Kakao User Meeting" to directly listen to user feedback and suggestions. In 2023, the meeting focused on various topics, including KakaoTalk profile emoticon customization, KakaoTalk memorial profiles, KakaoTalk scheduled messages, KakaoTalk leave silently/silent chatroom, KakaoTalk VoiceTalk/FaceTalk, KakaoTalk Open Chat, Daum services, KakaoTalk guide, Kakao/Daum customer support, and other improvement suggestions. User feedback was collected through a pre-email survey and then discussed in an offline meeting. A total of 115 valuable suggestions were collected, categorized into our list of improvements, and will be fully reflected in service enhancement efforts in consultation with relevant departments.

User VOC Handling Process

Service improvement requests and suggestions submitted through multiple channels play a crucial role in embracing customer feedback and providing the best possible service. These requests are actively analyzed and processed through Kakao's Voice of Customer (VOC) handling process, with collaboration among the customer service center, service planning and development departments, and customer CS team. Additionally, these requests are systematically managed through the integrated Customer Relationship Management System (CRMS), enabling us to quickly reflect customer opinions and continuously improve our services with increased accuracy.

Major Improvements in VOC Handling Process in 2023

- Enhanced convenience of personal information masking using OCR(Optical Character Recognition) technology for document submission
- Implementation of 'Tag Management' and customer classification technologies for effective VOC response
- Introduction of a spell checker in Consultation Talk to improve the speed and accuracy of responses
- Strengthened analysis of customer needs before and after service releases through the CS Data Dashboard

Strengthening User-centered Services

AI-based Customer Service Center

Our 'counseling chatbot', available through customer service center KakaoTalk channel, is the first in Korea to deploy machine learning-based technology to analyze questions and recommend answers. Our chatbot analyzes concerns for which customers may require assistance and the relationship between identical or similar questions and chosen answers and engages in self initiated learning to recommend more accurate answers. Additionally, the chatbot simplifies complex procedures such as self-authentication reset and email address changes, which can be cumbersome and contribute to high inbound traffic. Moving forward, Kakao will continue to advance its AI technology to enhance customer convenience and satisfaction.

Achieving Web Accessibility Quality Certification Mark for Our Customer Service Center

Kakao is committed to make our customer service center (PC web, mobile web) more accessible to provide equal service access opportunity to people with disabilities, the elderly, and other digitally underprivileged groups. Such efforts allowed both PC and mobile websites of Kakao's customer service center to pass the Web Accessibility Quality Assessments conducted by WebWatch, a quality certification body designated by the Ministry of Science and ICT. The certification is valid for one year, and we will receive surveillance audits each year to maintain and monitor the quality of our web accessibility operations and to deliver convenient customer service center experience to all our users.

Data Privacy and Information Security

Data Privacy

Privacy by Design

To comply with domestic and overseas laws and to protect user privacy, we embrace Privacy by Design as the overarching principle for our data privacy operation. Privacy by Design involves anticipating and preventing privacy breaches at the planning and design stages of a service, rather than reacting after an incident occurs, making it well-suited for environments where technological advancements occur rapidly.

Based on Privacy by Design, Kakao has established principles and policies necessary for the operation of services. We conduct privacy impact assessments throughout all stages of service planning, operation, modification, and termination to eliminate service risks beforehand and internalize principles of personal information protection. Additionally, We conduct preventive reviews such as vulnerability checks, security coding and code reviews, and take technical and managerial protection measures such as technical vulnerability reviews and 24/7 security monitoring.

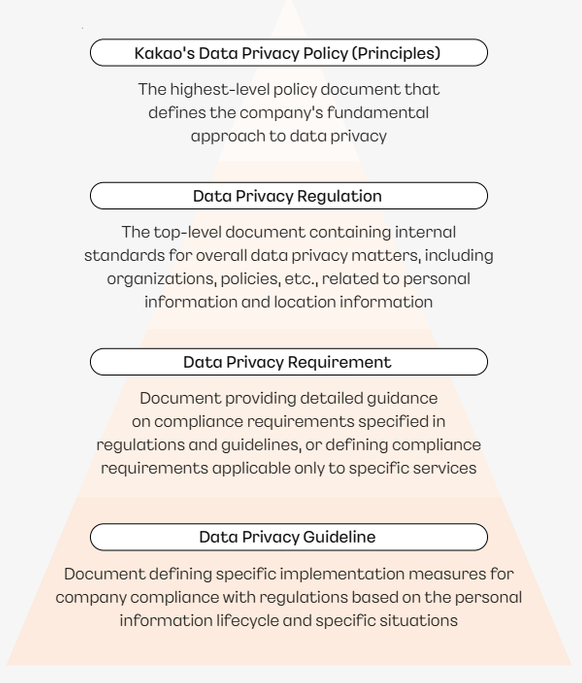
Kakao Privacy by Design Principles

1. Proactive not Reactive
2. Privacy as the Default Setting
3. Privacy Embedded into Design
4. Balancing between Privacy and Business Operation
5. Full Protection of Personal Information Lifecycle
6. Visibility and Transparency
7. User-Centric Design and Operation with Respect for User Privacy

Data Privacy Policy and Guideline

Kakao's data privacy policy is divided into different stages of personal information processing and tasks and is publicly available for all Krew members. This allows Krew members to refer to the guidelines as needed and apply them to their tasks at any time. Additionally, we regularly review and revise policies to adapt to changes in domestic and international data privacy regulations and emerging technologies, ensuring we can respond to environmental changes effectively.

Data Privacy Policy and Guideline Level



Data Privacy Principles

Kakao recognizes that building trust with users is the most critical element in service provision. In line with this recognition, we adhere to the following principles in handling personal information, ensuring that all Krew members strive to protect user privacy to the best of their abilities.

Data Privacy Principles

1. Kakao respects user privacy and protects personal data at every phase of its services
2. Kakao discloses its personal data handling process transparently
3. Kakao collects the minimum personal data necessary for service provision
4. Collected data are retained only for as long as necessary and managed safely
5. Kakao guarantees users' right to self-determination
6. Kakao strives to fulfill social responsibilities

Information Security Certification

Since obtaining the industry's first certification for Information Security Management System (ISMS) based on the international standard ISO/IEC 27001 for infrastructure operations in 2006, Kakao has continuously strengthened its information security management system. Following this milestone, Kakao has acquired the ISO/IEC 27701 certification for privacy information management and the ISO/IEC 27017 certification for cloud service information security and data privacy certification. In addition, Kakao has obtained the domestic information security certification ISMS-P for its internal services such as e-mail and KakaoTalk, further enhancing its information security management system to meet global advanced standards.

Information Security Certification

Certification Scope : Effectiveness of service operation
Period : Feb 1, 2023 ~ Jan 31, 2026

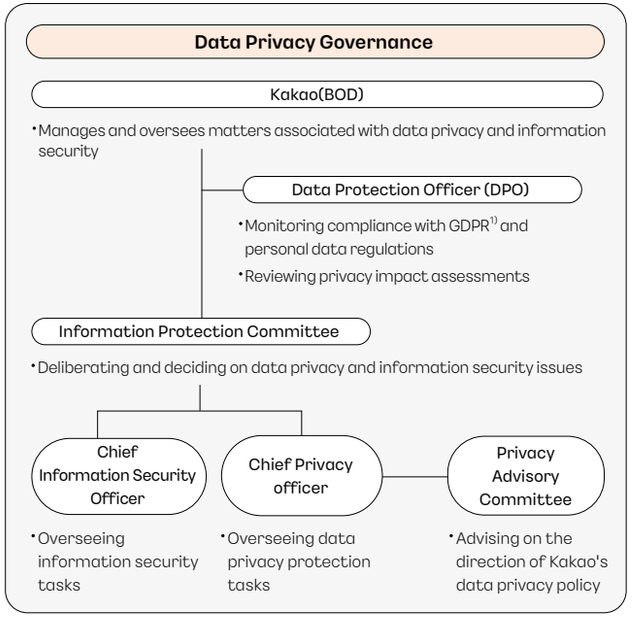
Certification Scope : Effectiveness of company-wide sevices influding e-mail, KakaoTalk, advertisement and search
Period : July 7, 2021 ~ July 6, 2024

Data Privacy and Information Security

Data Privacy

Data Privacy Governance

Kakao separate CPO (Chief Privacy Officer) and CISO (Chief Information Security Officer) roles to ensure we deal with data privacy issues professionally and systematically. The CPO, who oversees privacy matters, is appointed as the head (executive) of the department organized for privacy protection tasks, in accordance with the Personal Information Protection Act and internal regulation to ensure his/her qualification for overseeing data privacy operations. The CISO is appointed for expertise on data privacy and information security/technology following the Act on Promotion of Information and Communications Network Utilization and Information Protection.



Operating the Data Privacy Committee

Information Protection Commission

The Information Protection Commission chaired by the CISO is composed of the CPO and the heads of relevant teams at the executive level to deliberate and decide on pertinent issues. Kakao's Board of Directors (BOD) manages and oversees matters related to data privacy and information security.

Privacy Advisory Committee

Kakao have been operating the Kakao Privacy Advisory Committee composed of Korea's privacy experts with backgrounds associated with data privacy and security including law and academia since 2014. The committee held regular advisory meetings to identify regulatory trends related with domestic and overseas privacy issues and provided well-informed advice to our privacy policy directions based on these insights.

Activities Undertaken by the Information Protection Commission and the Privacy Advisory Committee

Information Protection Commission

- Deliberated/decided on vulnerability analyses and assessments in accordance with electronic finance supervisory regulations
- Deliberated/decided on vulnerability analyses and assessments on electronic financial infrastructure following electronic finance supervisory regulations
- Deliberated/decided on the internal risk assessments made on an exception to network separation for electronic finance
- Developed information technology plans and deliberated/decided on such plans

Privacy Advisory Committee

- Discussed on the key contents of the amended Personal Information Protection Act and the company's response direction
- Discussed on personal data issues when providing AI services
- Discussed on issues related to the right of data subjects to access their personal information
- Reported on the activities and achievements of Kakao's Data Privacy Protection Office in 2023

Operating the Data Privacy Policy Organization and Community CPO Meetings

Our data privacy policy organization has been operational since 2018, aiming to securely safeguard user data and enhance service provision. Comprised of experts proficient in practical data handling and possessing a profound understanding of privacy regulations, this organization develops Kakao's data processing policies and ensures the dissemination of data privacy regulations throughout the company. Kakao's Chief Privacy Officers (CPOs), along with representatives from six affiliated companies[2], convene regularly on a quarterly basis to share our data privacy philosophy and principles, and discuss key policies and issues. This practice ensures consistency in the development and implementation of data privacy policies across all affiliated companies, thereby facilitating effective data protection.

Summary of 2023 CPO Meeting

- Policy on network segregation within the consortium and considerations for third-party provision of personal information between consortiums
- Management approach for unified personal data processing policies
- Operation of the information security portal and measures for access log management
- Implementation of user consent and withdrawal functions
- Status and regulation of global cookie consent

1) GDPR, General Data Protection Regulation
2) Kakao Entertainment, Kakao Pay, Kakao Games, Kakao Mobility, KakaoBank, Kakao Enterprise

Data Privacy and Information Security

Data Privacy

Data Privacy Management System

Kakao has established a robust privacy protection management system to ensure the secure processing of users' personal data. Following the Privacy by Design principle, we conduct privacy impact assessments to ensure that user data is handled securely throughout the entire service lifecycle. From service planning to modification and termination, we rigorously check compliance with relevant regulations such as the Personal Information Protection Act and carefully evaluate the impact on user privacy to eliminate risks in advance.

We have established a 'Data Privacy Review and Management System' to conduct post-assessments to ensure that privacy protection activities for users are appropriately carried out according to the results of privacy impact assessments. The checklist for service inspections includes compliance with the Personal Information Protection Act, Act on the Protection and Use of Location Information, various information security certifications, and necessary requirements for privacy protection. Additionally, through the 'Personal Data Handling Management System,' we identify the company's personal information processing systems and comprehensively manage the status of personal information processing and personal data handling operations.

Personal Data Impact Assessment Phases and Review

Service Introduction

Review compliance with the Personal Data Protection Act and the protection measures being taken under the personal data processing system in the planning phase prior to service launching

Collection of personal data

- Ensure users' explicit consent
- Collect minimum necessary data

Transmission and storage of personal data

- Ensure the safe transmission of personal data
- Encrypt passwords, financial data, and location data
- Manage access control and privileges

Service Operation

Conduct second reviews on the considerations made in the service introduction phase in the event of changes made to personal data processing, including the collection, use, and provision of personal data

Use of personal data

- Use only when necessary for business purposes
- Prevent the misuse of personal data

Personal data processing system management

- Review the details of personal data handling and handling authorization
- Control the unnecessary exposure of personal data
- Logging of personal data processing

Provision of personal data

- Minimize the provision of personal data
- Ensure the secure transmission of personal data

Service Termination

Consider the disposal of personal data used for intended purposes and verify the termination of the personal data processing system

Dispose of personal data

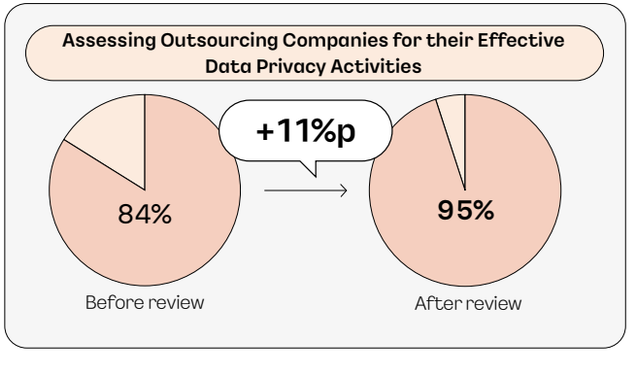
- Verify disposal targets, the adequacy of the disposal timeframe and safe disposal

Termination of the personal data processing system

- Terminate the personal data processing system and verify the return of assets

Managing and Reviewing Outsourcing Companies for Data Privacy

Kakao ensures that affiliates, suppliers, and other third parties ('outsourcing companies', hereafter), to whom we contract out our personal data processing operations, implement data privacy policies on par with those of Kakao. We enter into written contracts with these outsourcing companies to stipulate that they abide by the Personal Information Protection Act and Kakao's data privacy policy. We developed an outsourcing company checklist in line with relevant laws to verify their data privacy policy and protection activities and ensure improvements are made if any non-compliance is identified. If any violations are found during the inspections, we take corrective actions to address them. We evaluate the effectiveness of improvement measures by comparing the level of personal data protection before and after implementation and ensure that the results are reflected in subsequent inspection activities. In 2023, we reviewed our product delivery outsourcing companies and made improvements on the identified vulnerabilities, which led to an improvement in data privacy levels from 84% before the review to 95% after improvement.



Data Privacy and Information Security

Data Privacy

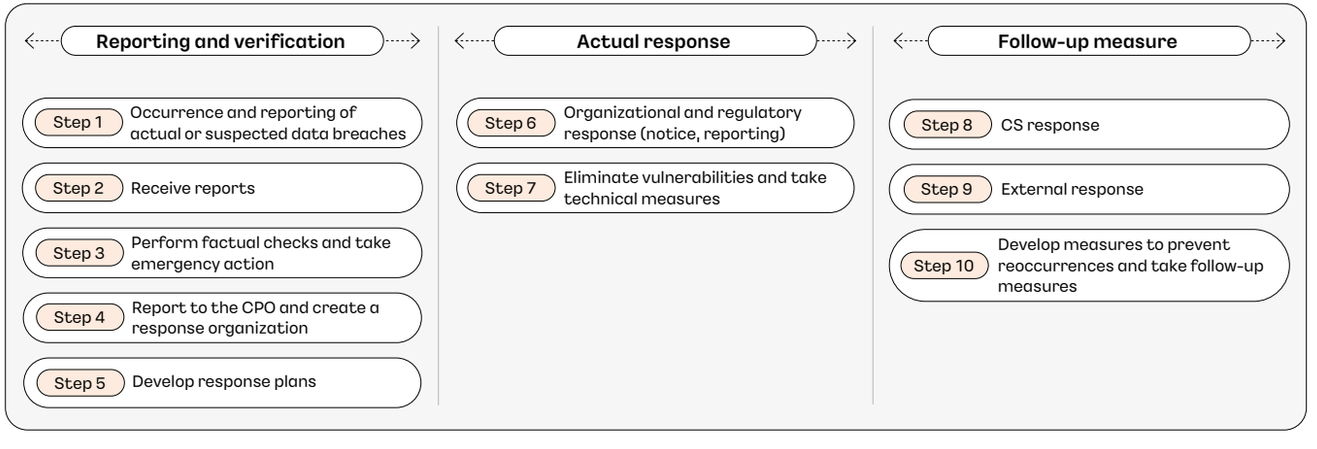
Personal Data Processing Procedure

Kakao process personal data in accordance with the user consent, and our personal data processing procedures consist of collection, use and provision, and disposal. We collect only minimum necessary personal data for service subscription, use, and access, and use such data for intended purposes only. Specifically, user data is immediately disposed of when their purpose is fulfilled, and user data in electronic file format is safely deleted through technical methods that prohibit their recovery or reproduction. In addition, to provide better understanding of our personal data processing procedure, Kakao provides a 'Personal Data Processing Infographic,' along with our 'Easy-to-understand Privacy Policy' for young users.

Kakao's Personal Data Processing Infographic | Easy-to-understand Privacy Policy

Response to User Data Breaches and Information Guidance

As user data breaches may still occur in spite of our best efforts to implement thorough proactive and reactive control activities, Kakao has established and manages guidelines for responding to personal information breaches to prepare for the possibility of user information leakage. This guideline includes notifying users of the incidents that occurred and our reporting to authorities as well as the actions we take to respond to such incidents, contact information for counseling, and remedies available to minimize user damages, ensuring that we effectively address any unexpected events.

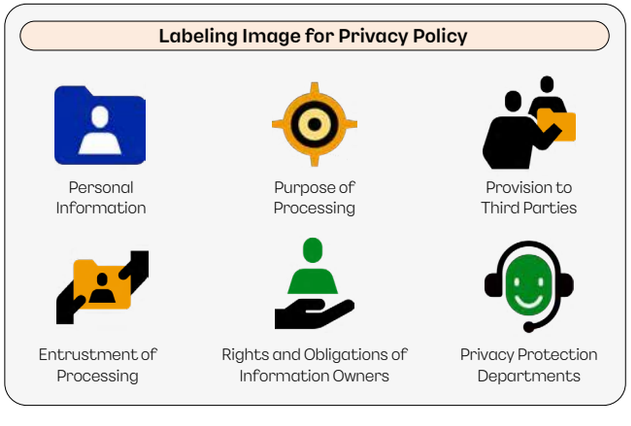


Guarantee of Users' Right to Informational Self-determination

Kakao prioritize to protect users' right to informational self-determination. We provide a 'Personal Information Management' menu on the Kakao Privacy website, enabling users to check their own data and its processing status and to access, modify, and delete their own personal data. Through the 'Manage My Information' feature, users can review and update the information registered with their Kakao account, as well as review, modify, withdraw, or request deletion of their service-specific consent details. Additionally, users can check the services connected to their Kakao account and request to disconnect from or delete personal information related to any unused services.

Kakao transparently discloses information about its personal data processing practices through its Privacy Policy, ensuring users can access this information at any time. Recognizing that legal language can be complex and challenging for users to understand, we use simple words and sentences and have created custom labeling images to make the Privacy Policy more intuitive and easier to comprehend.

Privacy Protection Menu | Personal Data Processing policy



Data Privacy and Information Security

Data Privacy

Operating Kakao Privacy Website

Kakao is committed to ensuring users' right to self-determination over their personal data, thus we operate a privacy policy website to provide information on our privacy policy philosophy, and other related activities. In 2023, we fully revamped the site to further enhance users' ability to exercise their data rights and to ensure their right to be informed. Through the privacy site, users can easily check, modify, and adjust security settings for their personal data at any time. The site also provides detailed information about our privacy principles and the data management system based on Privacy by Design. Additionally, we offer guides to help all age groups, including children, adolescents, and seniors, understand Kakao's privacy policies. Furthermore, through our Privacy Brunch Story, we share various information with stakeholders, including updates on Kakao's privacy protection organization and the latest developments in domestic and international privacy policies.

Kakao Privacy Website

Disclosing Our Transparency Reports

In the event of a governmental or judicial agency request, Kakao follows legally appropriate procedures in conformity with warrant requirements. We disclose include statistics related user data requested by governmental organizations for the purpose of investigation and others through our transparency report. This practice reflects our pride in protecting user rights and safeguarding their information diligently.

When overseas governmental agencies or private sector organizations request user data, this is not directly handled by Kakao and we call for cooperation with the Korean government or judicial agencies when deemed necessary. We do not respond to any request for user data made by domestic organizations or individuals without following the set official procedures.

Kakao Transparency Report

Data Privacy Activities for Children and Teens

Kakao engage in a variety of activities to help children and teens become aware of the importance of data privacy and develop capacity to keep their own personal data safe in their daily life. We provide an easily understandable privacy policy tailored for children under the age of 14. This policy was developed with the participation of the 'Children's Advisory Group,' composed of children under the age of 14, and is presented in a chat format featuring Kakao characters Ryan and Chunshik, making it accessible for young users who may not be comfortable with long texts.

Additionally, we developed our Privacy Protection Guides along with the Teen Advisory Group joined by nine junior and high school students to ensure children and teens protect their personal data in their daily routine. The Guides illustrate 12 rules made in reflection of feedback from the Advisory Group to help children and teens protect their privacy in different situations. These guidelines help young users easily understand and apply the data privacy features offered by Kakao.

Personal Information Processing Policy for Children and Youth

Data Privacy Guide for Seniors

To assist seniors who face challenges in protecting their personal information in the digital environment, we have created and published the 'Data Privacy Guide for the Elderly.' The content and delivery method of this guide were developed in collaboration with researchers from the 'Aging and Technology Policy Lab' at the Korea Advanced Institute of Science and Technology (KAIST). The guide is presented through three videos designed to help seniors navigate the digital world. These videos cover the concept and importance of personal information, examples of privacy breaches such as phishing, prevention methods, and ways for seniors to manage their personal information independently.

Date Privacy Guide for the Elderly

Data Privacy Activities for Small Businesses

Kakao supports capacity-building activities for small businesses that find it challenging to understand data privacy regulations or lack the resources for data privacy protection initiatives. Since 2022, Kakao, in collaboration with the Korea Internet & Security Agency, has been providing privacy protection education to partners using Kakao Business as well as small businesses interested in data privacy. In 2023, to enhance privacy awareness among sellers on online shopping platforms and for use in training their employees, we produced and released two educational videos titled 'Important Considerations for Handling Customer Personal Information.' Additionally, Kakao offers small businesses free access to data privacy policy labeling images, which can be applied in various ways such as on offline documents and shipping boxes, supporting their efforts to protect personal information.

Raising Awareness of Krew on Data Privacy

To raise awareness of Krew members regarding personal information and data privacy, various activities are carried out. When granting the authority to handle personal information, a pledge procedure concerning personal information protection is conducted. Regular education on personal information protection and location information protection is provided to all Krew, including permanent employees, contract employees, and temporary staff who handle personal information.

In 2023, the regular personal information protection education was conducted in a manner that made it easier for Krew to understand, using familiar Kakao Friends characters like Ryan and Choonsik to explain essential rules and related policies and laws within the personal information handling process. Besides the regular training, Krew responsible for data handling receive ongoing education about policies and protective measures related to our data processing. As part of internal awareness-raising activities, three personal information protection campaign videos were released, in which Krew participated in the entire process from scenario writing to acting, filming, and editing. Additionally, a personal information weekly newsletter and a quarterly personal information protection magazine are published to naturally encourage interest in personal information protection during work processes.

Data Privacy and Information Security

Information Security

Information Security Management System

Kakao safely manages corporate information assets through various proactive/reactive management systems. For services and systems under information security management, risk analyses are performed based on our pre-established risk management guides. Assets are identified, and related risks are analyzed and assessed to determine their severity, with risk management measures selected accordingly based on this assessment. Following the evaluation results, Kakao establishes plans for subsequent measures, including training on our information security management system for our own Krew and partner employees working at our operations under outsourcing contracts. This framework is continually developed and improved.

Proactive/Reactive Information Security Management System

Preventive review activity
- Conduct annual, regular preventive vulnerability reviews along the entire lifecycle of Kakao's services to maintain their security level above regulatory requirements
- Perform timely security patches and updates to prevent vulnerabilities to ensure service integrity
- Take appropriate improvement measures when identifying vulnerabilities, and document and manage review results through internal groupware

Post-incident response and management
- Assemble and operate an incident response unit to ensure swift and accurate analysis and action in the event of a security incident
- Convene the incident response team according to departmental roles, with assembled personnel performing tasks assigned according to their roles and instructions
- Classify incidents by severity to conduct thorough damage analysis and implement appropriate measures
- Develop and execute follow-up actions post-incident to prevent recurrence and ensure continuous improvement in security management practices

24/7 security monitoring
- Operate a 24/7 security control center to respond to risk originating from external sources in real-time
- Conducting thorough correlation analysis and response to security events and attack scenarios through a risk management system that has been validated over several years
- All threats are addressed based on the type of attack and severity, ensuring the secure protection of Kakao's various services and customer data

Security incident tabletop exercise
- Conducted one round of APT e-mail simulation exercise to alert our Krew to e-mail hacking scams, and another round of exercise involving server hacking scenarios to improve our preparedness against intrusions in 2023
- Conducted one round of awareness-building and response exercise involving artificially triggered DDoS attacks to build stronger preparedness against such incidents

Security Development Lifecycle

Kakao not only provides security education and guides for developers but also operates a comprehensive security support system that encompasses the entire development process from service planning and design to development, release and operation. We conduct security reviews and checks across major development phases to reflect security requirements while eliminating security vulnerabilities. In the service development and release phases, we provide SAST (Static Application Security Testing), DAST (Dynamic Application Security Testing), and system reinforcement tools that are readily available for developers to support security automation. Furthermore, our services and infrastructure currently under operation receive regular security assessments at least once a year, and our services and systems that are publicly open are also subject to regular security scanning and monitoring are performed to prevent potential risks.

Security Development Lifecycle

Training	• Online/offline developer security training • Provide security guides (100 or more)
Planning and design	• Plan and design services and review their security features • Define security requirements and threat modeling • Encryption and encryption protocol design guides
Application	• Provide development security guides • Support DevSecOps[1] tools
Verification	• Service/system security checks • System security hardening (system and network security) • Secure coding review
Release and monitoring	• Conduct annual security assessments • Perform penetration testing • Maintain continuous security monitoring and vulnerability scanning

1) DevSecOps, Development, Security, Operations

Bug Bounty Program

Kakao operates a bug bounty program that allows external parties to report security vulnerabilities in its web and app services to identify and address security weaknesses proactively. Individuals who discover bugs and vulnerabilities in Kakao's web and app services are awarded bounties based on predefined criteria, and reported vulnerabilities are promptly corrected and addressed.

Since 2022, Kakao has operated its own vulnerability reporting website. In 2023, a total of 85 vulnerability reports were received from 36 reporters, with rewards given for valid vulnerabilities. Through the bug bounty program, Kakao maintains direct communication and collaboration with external security analysts to ensure the provision of safer services for Kakao's users and partners.

Bug Bounty Process

Reporting	• Receipt of vulnerability reports through the Kakao Bug Bounty website
Analysis	• Kakao security personnel analyze reported vulnerabilities and assess their impact on services based on the report content • Confirmation of whether vulnerabilities are being addressed or if they have been previously reported
Assessment	• For newly reported vulnerabilities, conducting risk assessments based on analysis results and internal criteria to determine the reward amount • Modifying and addressing affected services due to vulnerabilities
Notification	• Notification of reward eligibility based on analysis and assessment results • Explanation of reasons for excluding vulnerabilities from rewards if they fall outside the scope or are duplicates
Compensation	• Detailed guidance on final assessment results and completion of consent forms for reward payment • Quarterly (January, April, July, October) notifications regarding reward payments

Data Privacy and Information Security

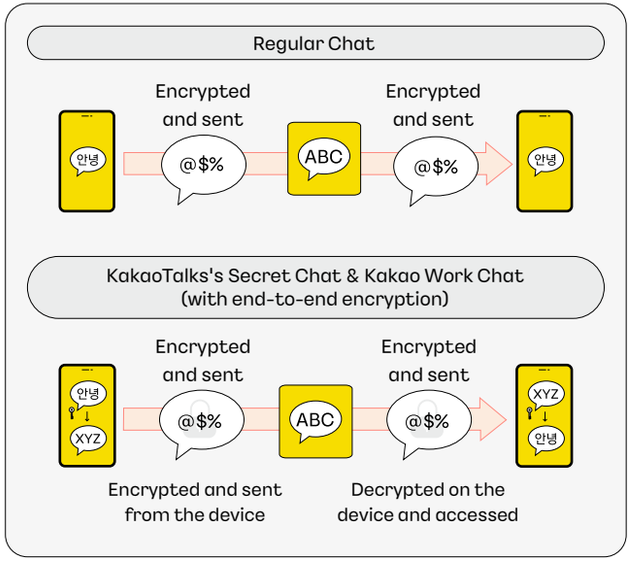
Information Security

Applying Strengthened Information Security Technology

KakaoTalk's Secret Chat feature employ End-to-End Encryption technology to provide stronger user data protection. This technology transmits encrypted messages and stores decryption keys used to decrypt such messages only on user's individual terminals, effectively preventing any possibility of accessing messages stored in our server unless the terminals are directly analyzed.

Also, Kakao Enterprise deploys its independently developed E3 (Enterprise Endpoint Encryption) system to all Kakao Work chatrooms to effectively protect and manage customer data. The E3 retains the advantages of end-to-end encryption while addressing its security-related drawbacks, providing even stronger protection. This generates and stores message encryption and decryption keys on the user's device, and messages are sent encrypted to the server to be accessible only by senders and receivers to prohibit their access by service providers and third parties and allow for robust security as a result.

Regular Chat vs End-to-End Encrypted Chat Process



Hosting an Internal Online Capture the Flag (CTF) Hacking Competition

Kakao conducted security training for developers through an online Capture The Flag (CTF) hacking competition. In this competition, intentionally vulnerable programs or websites were used to hide flags. Participants earned points by finding these flags through exploiting the vulnerabilities. In 2023, a total of 285 developers participated, with 185 successfully solving the problems.

Compared to traditional lecture-based security training, this format significantly increased interest and participation. It effectively conveyed knowledge about security vulnerabilities and countermeasures to the participants, thereby enhancing preventive security measures. In the future, Kakao plans to organize sessions where participants can collaboratively solve existing CTF problems offline. Besides offline CTF hacking competitions, Kakao intends to develop various forms of online and offline security training for developers to continuously improve engagement and participation.

2023 CTF(Capture the Flag) Hacking Competition

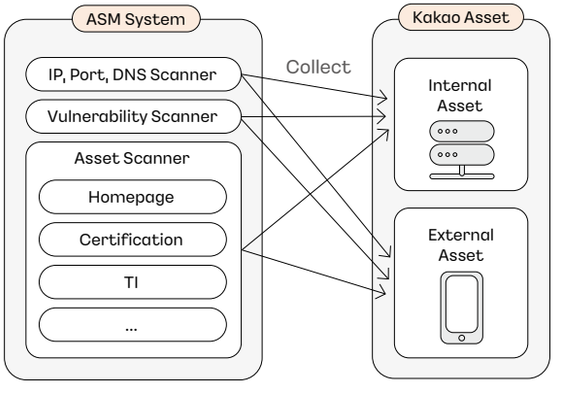
Operating Attack Surface Management (ASM) System

The ASM (Attack Surface Management) system is designed to continuously monitor and manage all enterprise assets, including servers, applications, and network devices, to protect against external attacks. Since 2023, Kakao has implemented a commercial ASM system and operated a proprietary ASM system to minimize the attack surface and promptly identify and address vulnerabilities.

In 2023, Kakao reduced the attack surface by identifying and removing unnecessary asset exposures on the internet and conducted attack simulations against publicly known threats to preemptively identify and mitigate vulnerabilities. As a result, Kakao identified and addressed 109 external vulnerabilities in its assets, detected and managed 28 phishing domains related to Kakao, and performed 58 assessments and mitigation recommendations for publicly disclosed CVEs[1].

Moving forward, Kakao plans to continuously optimize and operate its ASM system to quickly identify internal vulnerabilities and reduce external attacks, thereby improving its response processes.

ASM System Diagram



1) CVE, Common Vulnerabilities and Exposures

Data Privacy and Information Security

Information Security

Information Security Campaign

Kakao launches a range of information security campaigns for our Krew to effortlessly recognize and implement security activities in their day-to-day work. Each year, we designate Information Security Day (Kakao S day) to raise security awareness, and commemorated Information Security Day along with the Kakao affiliated companies in 2023. Key activities included producing and sharing a video introducing fundamental security principles through groupware. Offline booths offered opportunities to engage in various security-related activities, such as 'Checking Secure Passwords,' and distributed promotional materials, such as postcards, stickers and fans.

Furthermore, external security experts were invited to deliver lectures to strengthen security awareness. Various events, including security quizzes and everyday security certifications, encouraged active participation in security activities among employees. Additionally, the quarterly information security magazine covers internal security guidelines, security trends, and external security issues, presenting them in an easy-to-understand format using diverse images and videos.

Data Privacy and Information Security Training for Krew and Partners

Kakao provides annual information security training to all our Krew who have direct or indirect access to information assets, including Krew, part-time workers, and employees of outsourcing companies. In 2023, a total of 3,667 Krew members attended our information security training titled 'Security in Everyday Life with Artificial Intelligence.'

In addition, Kakao ensured that the mandatory training hours[1)] required by the Electronic Finance Supervisory Regulations were fulfilled for specific groups: 398 information technology personnel responsible for electronic finance business at Kakao, 75 information security personnel, and 20 executive-level Krew members. Furthermore, new Krew members joining Kakao, whether on a full-time or part-time basis receive an onboarding information security training. All information security training is followed by feedback collection and such feedback is reflected in designing the following year's training program, ensuring continuous improvement and importance.

Kakao Affiliated Company's Data Privacy and Information Security Activities

Kakao affiliated companies undertakes various activities to protect user's data privacy and maintain service security. All affiliated companies align their efforts with Kakao's information protection framework and activities, including establishing dedicated teams, developing policies, obtaining and maintaining certifications, operating websites, and conducting mandatory legal training.

Kakao Entertainment

- Public disclosure of information security personnel and budget
- Establish security guidelines for AI to prevent potential security risks in new business ventures
- Provided training to 532 personnel handling personal information using internally developed materials that reflect updates in personal information laws
- Used internally developed training materials to educate 532 personnel handling personal information, incorporating internal security policies, work environment considerations, and amendments to personal information protection laws

Kakao Enterprise

- Maintained international standard certifications, including ISO/IEC 27001, ISO/IEC 27017, ISO/IEC 27018 for cloud service/privacy information security, ISO/IEC 27701 for privacy information management, and ISO/IEC 27799 for information security management in health
- Through the Cloud Security Assurance Program (CSAP) follow-up evaluation, Kakao Enterprise conducted safety verification for incident response and disaster recovery preparedness

Linkage Lab

- Established a dedicated department for personal information protection and formulating information security regulations
- Implement Data Loss Prevention (DLP) solutions to prevent information leaks

1) 9 hours or more for information technology personnel, 12 hours or more for information security personnel, 3 hours or more for executive-level personnel

Service Reliability

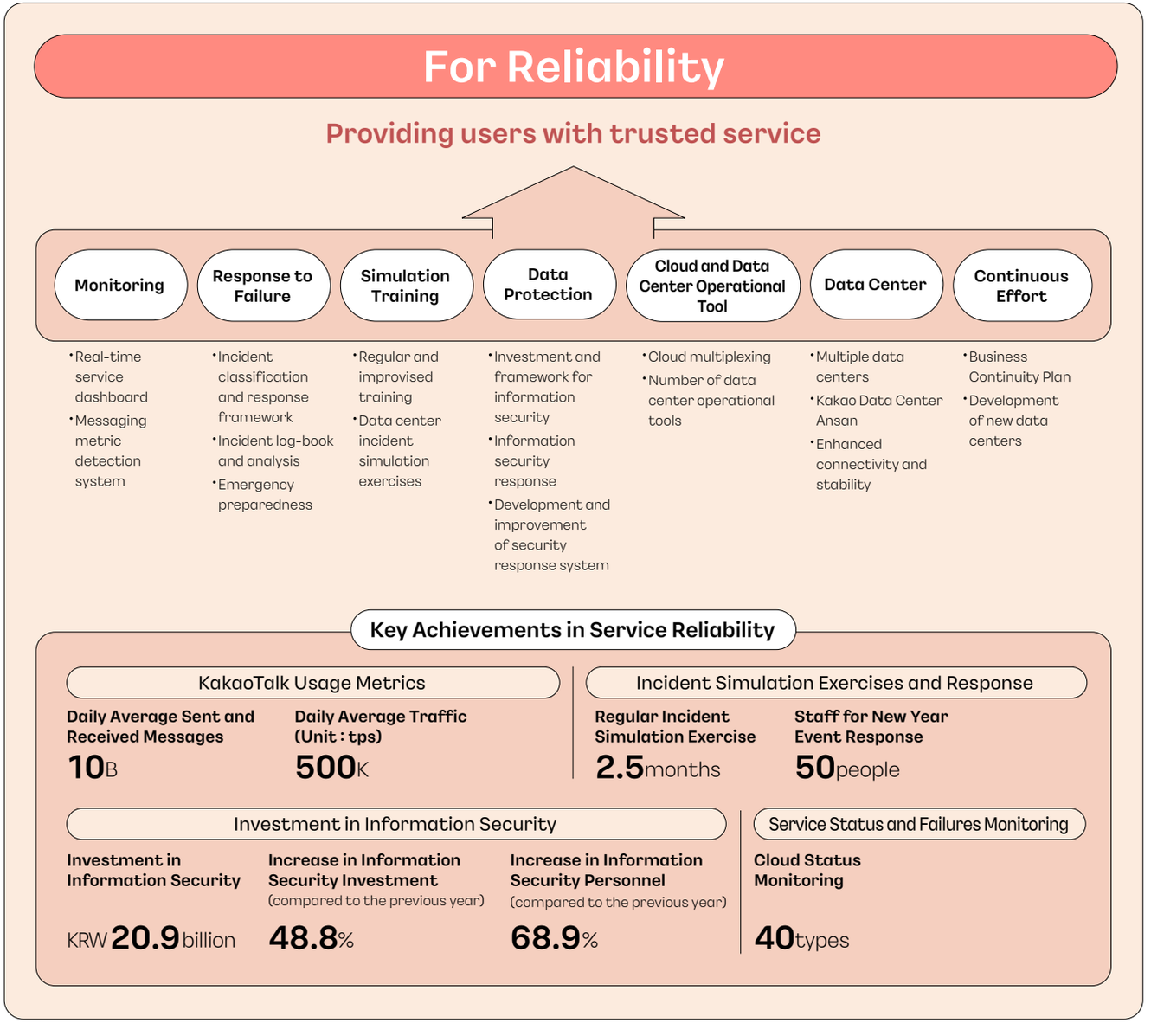
Enhancing Service Reliability

Service Reliability Framework

To ensure the uninterrupted continuity of all Kakao services, we are steadfast in our commitment to service reliability. Kakao has established a comprehensive execution framework, encompassing monitoring systems, systematic fault response, simulated fault exercises, information security practices, system redundancy, Business Continuity Plans (BCP), and the establishment of new data centers, all aimed at enhancing service stability.

In September 2023, Kakao publicly released the 'Kakao Reliability Report,' detailing our efforts and achievements in service reliability. The report highlights the information security management systems of key affiliates such as Kakao Pay, Kakao Entertainment, Kakao Mobility, and Kakao Bank, as well as efforts towards stable service operations through system redundancy. This demonstrates Kakao's commitment to ESG principles and transparent communication of our efforts to ensure service continuity and reliability.

Kakao Reliability Report



Service Reliability

Response to Service Failure

Monitoring

We are conducting comprehensive monitoring to continuously improve service quality and ensure stability. Through this, we aim to monitor the service status in real-time and enable prompt detection by responsible personnel in the event of unforeseen circumstances, facilitating swift action.

Real-time Service Dashboard

To enable responsible personnel to promptly grasp changes in approximately 40 types of cloud services, we classify service statuses into five categories: Up, Down, Warning, Maintenance, and Unknown

Service Dependency Information and Incident Notifications

Within Kakao's cloud infrastructure, there exist over 40 types of services, many of which are interdependent in their functionality. Consequently, when an outage occurs in one service, it can propagate failures to other interconnected services, leading to disrupted functionality. Thus, understanding the inter-service dependency information is crucial. Service managers can mitigate rapid failure response and minimize cascading effects by configuring alerts for service failures through the dependency information available on the service status dashboard.

Incident Notification System

The incident notification system sends alerts through four channels - KakaoTalk, e-mail, KakaoWork, and internal bulletin boards - to ensure immediate awareness among service managers of key proceedings such as service deployment, service status changes, and error occurrences.

KakaoTalk Messaging Anomaly Detection System

We periodically implement a process to enhance fault detection capabilities by incorporating time-series indicator learning models into our recording and monitoring systems.

Response to Failure

Despite multiple efforts to maintain service stability, unforeseen failures can still occur. Establishing an efficient system for incident response is a critical component for prompt recovery.

Kakao categorizes incidents into three levels and systematizes response processes into five steps according to these levels, providing a foundation for swift incident handling. Furthermore, distinct incident response teams are described, with responsibilities and authorities clearly defined to minimize potential confusion during response procedures. Potential emergency situations are classified into traffic increase events and data center events, enabling the formulation of appropriate response strategies. Additionally, we diligently record the entire process from incident occurrence to resolution to prevent the recurrence of similar incidents.

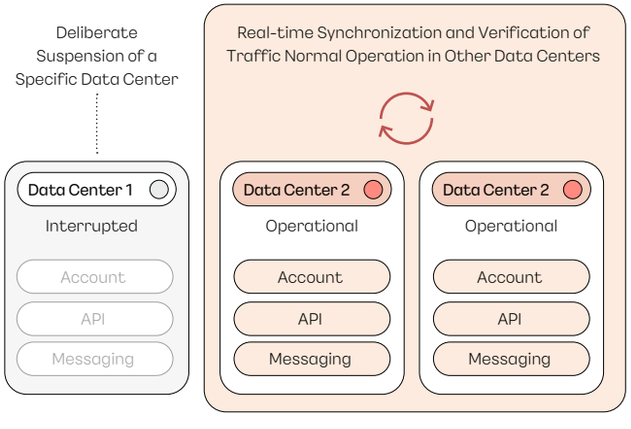
Cloud and Data Center Operational Tool

The services operated by Kakao are based on cloud infrastructure. To swiftly address any incidents occurring within the services or data centers and ensure secure storage without data loss, Kakao has implemented cloud multiplexing. Moreover, the services operated by Kakao are distributed across multiple data centers. The multi-data center platform supports rapid deployment and monitoring of physically distributed services as if they were operated from a single data center. Operational tools provide management functionalities necessary for operating services and individual platforms. Kakao has pursued data center-level multiplexing to prepare for disasters and emergencies at the data center level and has established an integrated operational system for managing functionalities distributed across data centers.

Simulation Training

Kakao conducts regular and improvised simulation exercises to proactively address various incident scenarios. Regular drills are conducted to prepare for sudden surges in traffic. These drills progress through five stages, starting from past response demonstrations, proceeding to response adjustments, scenario validations, response training, and concluding with a New Year response, spanning approximately two and a half months. Improvised simulation exercises, based on assumptions about various incidents in KakaoTalk, are conducted in four stages. During these drills, the effectiveness and efficiency of the response to incidents, based on prepared manuals, are evaluated. Additionally, simulations of data center incidents, which are crucial for addressing issues arising from data center problems, are conducted to ensure that elements critical to the functioning of message processing and sending operations are operating normally.

Simulation of Data Center Failure (Example)



Service Reliability

Disaster Preparedness

Kakao Data Center Ansan's Disaster Preparedness

Scheduled to begin operations in 2024, the Kakao Data Center Ansan is a state-of-the-art facility built on land approximately 2.6 times the size of a football field (7,140m^2). This large-scale data center integrates advanced technologies and practices to ensure maximum service stability for our users.

The Kakao Data Center Ansan is engineered to withstand a variety of natural disasters and emergencies, including fires, tsunamis, typhoons, earthquakes, and floods. To guarantee uninterrupted 24/7 operations, the data center incorporates dual redundancy across three critical infrastructure areas: power, communications, and cooling systems. Additionally, robust backup systems are in place to maintain continuous power supply during emergencies.

With a capacity to accommodate up to 4,000 racks[1], approximately 6 exabytes[2] of data storage, and up to 120,000 servers, the Kakao Data Center Ansan is set to become a pivotal facility for Kakao and its affiliated companies.

Data center server rooms are equipped with dual redundant power supplies via overhead trays, to ensure reliable service operation

Data Centers Designed for Natural Disaster and Emergencies

2.6 times the size of a football field	Redundancy in power, communication, and cooling systems	Accommodation of up to 4,000 racks which enables a maximum capacity of servers	Storage capacity	Fire prevention and response system
18,383 m^2	2 N(needs)	120,000 units	6 EB	4 stage

Fire

- Establishment of fire response process: Fire Occurrence → Alarm Activation → Operation of Fire Facilities → Notification to Administrators → Evacuation Guidance → Fire Department Dispatch → Prevention of Fire Spread
- The UPS room and battery room are constructed with fire barriers to ensure that a fire in the battery room does not affect the operation of other facilities
- Grouping UPS, EPS, and batteries into one sector to secure a total of four sectors and maximize power stability
- Triple-stage fire suppression mechanism for battery room fires
  - Stage 1 (activation of internal fire suppression devices within the panel) → Stage 2 (activation of battery room fire suppression gas) → Stage 3 (water spray system activation) → Stage 4 (fire department intervention)
- Establishment of collaboration system with the fire department
  - Planned joint development of customized fire response manuals between the fire department and Kakao data center
  - Regular joint fire exercises between the data center and the fire department

Floods

- The ground floor, standing at a height of 9.4m above ground level, and surrounding terrain at 7.6m, maintains an elevation of over 1.8m above the surrounding landscape, reducing the risk of potential flooding. Primary facilities are strategically located on the ground floor, while the basement serves as a parking facility with minor electrical installations situated on the ground level
- Installation of scuppers with a minimum depth of 530mm is installed to prevent water ingress

Typhoons·Tsunami

- Wind (wind load) mitigation: structural design factors, accommodating maximum wind speeds of 28m/s in the Ansan region
- Positioned at an average elevation of 10m above sea level and situated 17.7km away from the Sihwa Flood Control Complex, the site boasts a secure location

Earthquake

- Seismic resilience measures adhere to legal standards, ensuring the facility's ability to withstand seismic events with a magnitude of Richter scale 6.5 or higher

1) Rack: A facility for housing multiple servers, with standard rack dimensions typically measuring 2.4 meters in height, 0.6 meters in width, and 1.2 meters in depth
2) Exabyte(EB): 1 exabyte is approximately equivalent to 1 billion gigabytes

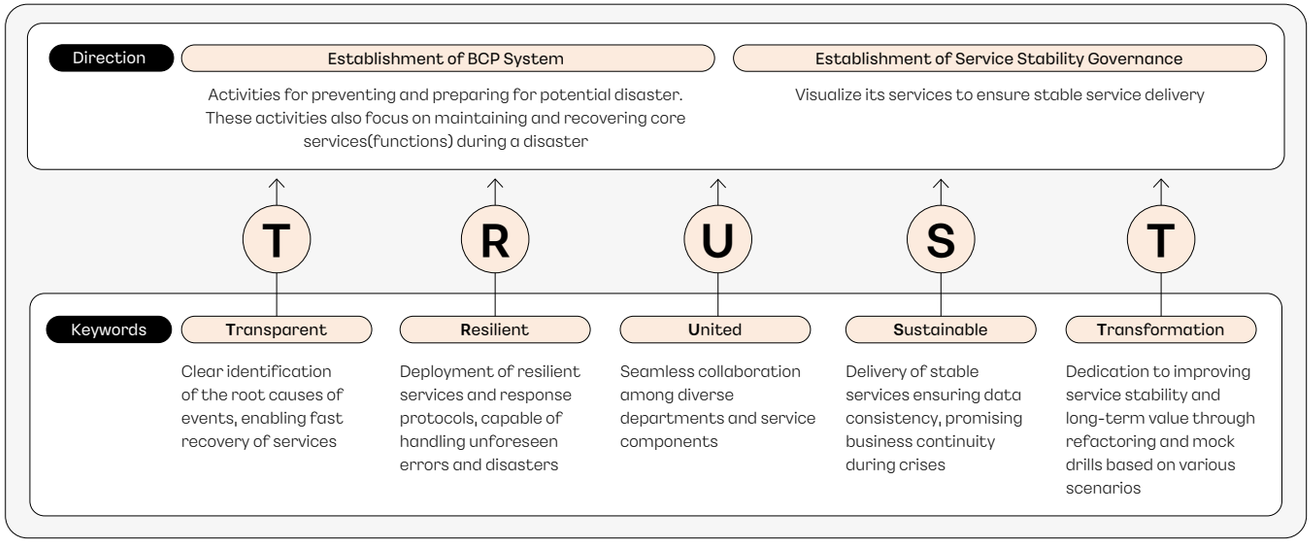
Service Reliability

Business Continuity Plan

T.R.U.S.T Stability Framework for Trust Recovery

In October 2022, following service outages caused by a fire at the Pangyo Data Center, Kakao identified and analyzed key areas for enhancement. Subsequently, Kakao implemented the standardized T.R.U.S.T framework for stability management. Built on transparency, this framework enables all Kakao team members to thoroughly assess and address the root causes and impacts of incidents. Through this framework, Kakao is committed to building resilient systems that can maintain stability despite any disruptions. Additionally, Kakao also focuses on improving stability management through ongoing activities such as training, mock drills, and postmortem, thereby enhancing service continuity and resilience.

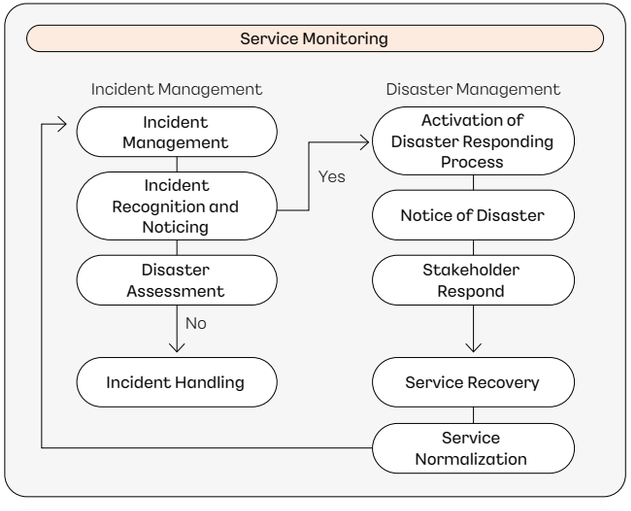
T.R.U.S.T Framework

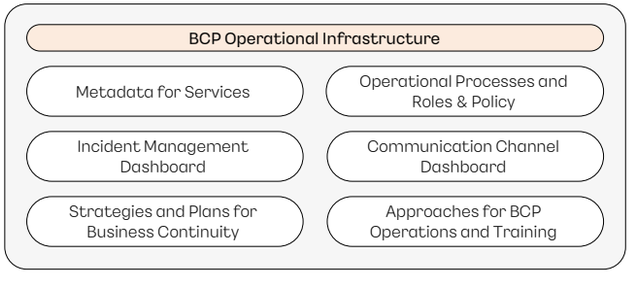


BCP Operational Framework

Kakao has established governance and infrastructure to operate Business Continuity Planning (BCP) and continuously improving them. These efforts ensure stable IT service delivery. By integrating continuous incident management practices, Kakao effectively manages disaster scenarios and executes appropriate response processes.Furthermore, Kakao diligently manages its BCP operational infrastructure, including key components such as metadata for services and crisis management dashboards.

BCP Governance



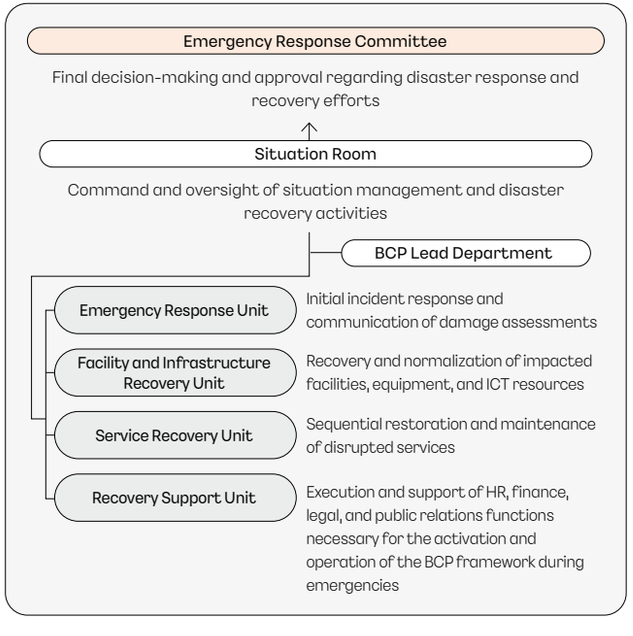


Service Reliability

Business Continuity Plan

Emergency Response Organizational Structure

Kakao has established a comprehensive organizational framework to act as the control center for company-wide disaster responding. This framework includes an Emergency Response Committee, a Situation Room, and Service Recovery Support Groups. The Emergency Response Committee, led by the CEO, is responsible for making company-wide decisions during disaster situations. The Situation Room manages disaster response operations from a practical standpoint, directing on-ground actions. Additionally, Kakao has formed a Recovery Support Group that includes not only departments responsible for service recovery itself but also support related functions such as HR, Finance, Legal, Public Relations, and External Relations. Each department's role within the Recovery Support Group is clearly pre-defined. Based on this structure, Kakao develops various disaster scenarios, including fire, and continuously identifies and executes effective training simulations that mimic real-world conditions, ensuring readiness through consistent practice and improvement.

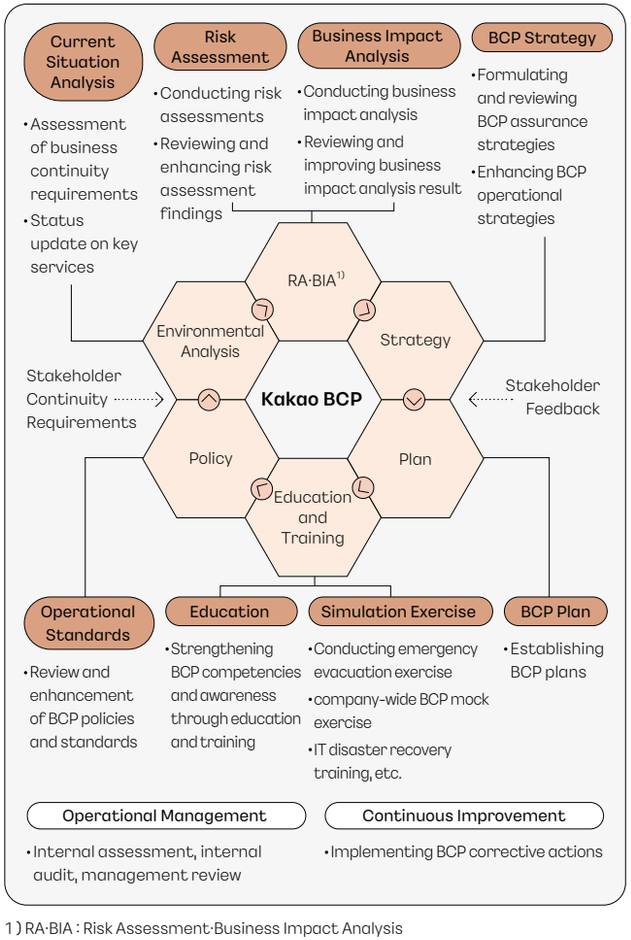


Company-wide Disaster Recovery Simulation Exercise

Under the leadership of the CEO, Kakao conducted a company-wide disaster recovery simulation exercise. This mock drill, designed to replicate the 2022 fire incident, involved about 50 departments from both service and support groups. The exercise was conducted in a hybrid format, both online and offline, and featured meticulously designed scenarios to closely mirror real incidents. Key steps included activating the Emergency Response Committee and the Situation Room immediately after the simulated fire. This was followed by declaring a disaster and deploying the emergency response system to restore operations. The process concluded with a formal declaration ending the disaster. It was essential that all departments participated to the company's emergency response process. Kakao is dedicated to improving the response capabilities of all employees by identifying new risk factors and incorporating them into our company-wide simulation exercises. This effort ensures swift and efficient recovery in various realized disaster situations.

BCP Framework

Kakao has developed a Business Continuity Plan (BCP) framework that aligns with international standards (Domestic: Certification for Excellent Disaster-Resilient Company, International: Business Continuity Management System, ISO 2230[1]). In 2024, Kakao plan to obtain ISO 22301 certification. Obtaining this certification will enable Kakao to establish a robust foundation that exceeds international standards, further reinforcing our commitment to sustainable and resilient operations.



1) RA·BIA : Risk Assessment·Business Impact Analysis

Barrier-Free Initiative

Convenient Service for All

Barrier Free Initiative

Kakao is dedicated to ensure that our services are made available for all regardless of physical or environmental barriers. In 2022 we became the first Korean IT business to appoint the Digital Accessibility Officer (DAO) and have since launched our Barrier Free Initiative to make our services barrier-free.

Dedicated Organization to Digital Accessibility

Digital Accessibility Officers (DAO) at Kakao and its affiliates head our overall digital accessibility operations to create an environment where Kakao users are not excluded nor discriminated against in using our digital services. Within the DAO organization, UI/UX leaders from each affiliate have been appointed as accessibility officers to effectively drive and implement accessibility improvements.

Since 2022, we have established a structured system for managing accessibility quality assurance across our affiliated companies through Kakao's DAO organization. This centralized management ensures smooth and efficient execution of accessibility-related tasks.

In 2023, we further strengthened our approach by introducing the 'Kakao Accessibility Table.' This initiative involves leaders from various services who collaboratively manage accessibility status and discuss strategic directions.

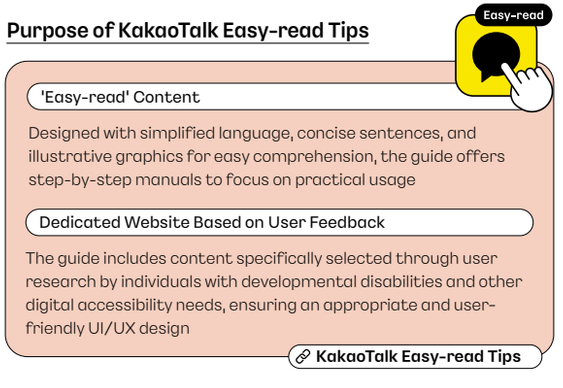
Furthermore, our subsidiary, Linkage Lab, operates a dedicated accessibility organization where Krew with and without disabilities work together. This team proactively identifies potential challenges that users with disabilities might face when accessing services provided by Kakao and its affiliates, striving to create universally accessible digital experiences.

In 2023, Kakao conducted 130 accessibility quality assurance (QA) tests across 27 services offered by Kakao and its affiliates, identifying a total of 4,672 issues. These efforts reflect our ongoing commitment to enhancing digital accessibility, ensuring that our services are inclusive and equitable for all users.

Case

Publication of KakaoTalk Easy-Read Tips

Kakao has recognized the need to produce content that guides users on how to install and use various features of KakaoTalk to enhance mobile app accessibility for digitally vulnerable groups. To address these challenges, we have developed comprehensive and easy-to-understand content that facilitates the use of KakaoTalk. This initiative ensures that everyone, regardless of their digital proficiency, can use KakaoTalk with ease and convenience. The beta version was launched in January 2024, and the official version with additional content was released on May 16, in celebration of Global Accessibility Awareness Day (GAAD).



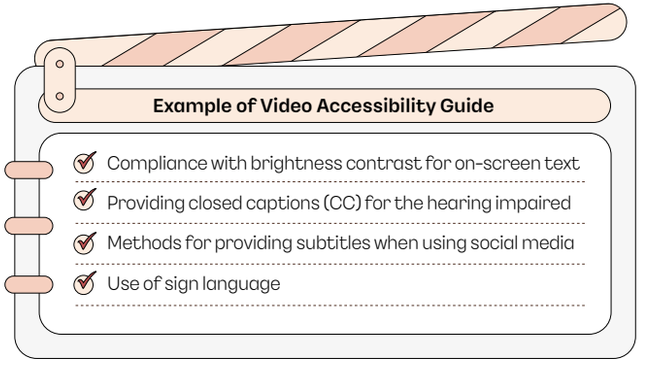
Operation of Kakao Accessibility Supporters

In commemoration of Disability Day on April 20, 2024, Kakao launched the 'Kakao Accessibility Supporters' initiative. This program aims to enhance the accessibility of Kakao's services by directly communicating with users with disabilities. Approximately 30 participants with visual, hearing, and developmental disabilities are involved in this initiative. Over the course of a year, they will report any difficulties they encounter while using Kakao's services.

By listening to the challenges faced by users with disabilities, Kakao plans to significantly improve service accessibility, ensuring an inclusive experience for all users without exclusion.

Distribution of Accessibility Guide for Working-Level

Kakao has been distributing accessibility guides tailored to different job positions to improve the accessibility of its services. These guides were collaboratively developed by experts in design and video production fields, along with collaboration from the DAO organization, to ensure practical applicability for working-level employees in their respective tasks. The design team utilizes these accessibility guides to elevate service quality and improve the design system. In addition, video producers have recently provided subtitles for over 150 videos on the Kakao corporate webpage and have incorporated audio descriptions for the visually impaired and captions for the hearing impaired in animation series such as 'Yellow Muzi & Friends', 'Dododo Choonsik', and 'Ryan's Show'.



Kakao Service Accessibility Survey

In January 2023, we conducted an accessibility survey on 30 services with over 10 million users to assess them for accessibility and identify necessary improvements. This served to test success rates in service use for each of the key frequently-used functions and comprehensively go over the limitations specific vulnerable groups may face in using Kakao services.

Barrier-Free Initiative

Convenient Service for All

Providing Descriptive Text for Images and Videos on KakaoTalk

On May 18, 2023, in commemoration of Global Accessibility Awareness Day, Kakao implemented a new feature within KakaoTalk chat rooms, enabling users to include descriptive text when sharing photos or videos. This functionality allows for the input of concise descriptions, approximately 50 characters or less, at the bottom of the photo or video editing interface. Upon sending images or videos with descriptions, a marker appears in the lower-right corner of the chat interface, facilitating recipients' access to the accompanying text. This initiative highlights Kakao's commitment to accessibility and inclusion, particularly for individuals with visual impairments who utilize screen reader technology on smartphones, thereby enhancing their ability to comprehend multimedia content shared within chat conversations.

KakaoTalk photo/video description example

Providing 'Barrier Free Trails' on Kakao Map

In May 2024, Kakao became the first mapping application to provide information on 113 'Barrier Free Trails' nationwide through Kakao Map. These forest trails, supported by the Korea Forest Welfare Institute of the Korea Forest Service, are designed to ensure safe access to forests for people with disabilities, pregnant women, seniors, and others with mobility difficulties by considering factors such as width and slope of the trail. In addition to providing information on the routes, locations, and total distances of these Barrier-Free trails, Kakao has also unveiled a Kakao Map theme map titled 'Top 10 forest trails for convenient and safe visits for everyone.' This effort aims to enhance accessibility for pedestrians with mobility difficulties through digital services.

Improving Accessibility to Email Service

In 2023, Kakao made efforts to improve the overall accessibility of our email service. Number of buttons and text contrasts within the email service website were increased to ensure clearer visibility for users with low vision. Accessibility was improved to allow users who navigate using a keyboard, instead of a mouse, to smoothly operate features such as date selection, folder lists, checkboxes, radio buttons, and layer pop-ups using the keyboard. In addition, several function keys convenient for keyboard users were defined, and separate links were provided for visually impaired users to easily access these function keys.

Improving Accessibility of Kakao Customer Center

Kakao has significantly enhanced the accessibility of its customer center to facilitate easier resolution of difficulties that users with disabilities may encounter while using our services. The accessibility of the Kakao Customer Center website was improved to obtain the 'Web Accessibility Quality Certification Mark' from the Ministry of Science and ICT. Alternative text was provided for all explanatory images in the customer center FAQ, and silent videos were accompanied by explanatory text such as 'Silent Video' to prevent confusion for users with hearing impairments.

Furthermore, the service list on the homepage of the customer center website now includes a 'Kakao Accessibility' category, allowing for more explicit accessibility inquiries. The existing accessibility inquiry process was further strengthened to provide more meaningful accessibility support. In the Kakao Customer Center channel on KakaoTalk, a 'Schedule a consultation via voice chat' feature is provided for visually impaired users and users aged 60 and above who may find it difficult to use chat consultation services, enabling smoother communication and support.

Offering Text-to-Speech (TTS) Functionality on Kakaopage

Kakaopage, the webtoon and web novel platform operated by Kakao Entertainment, has been actively addressing accessibility concerns[1] since 2022, with a commitment to continuous improvement. In 2023, the platform significantly enhanced its Text-to-Speech (TTS) functionality, ensuring equal access to web novel content for all users. These enhancements enable users to customize their experience by adjusting playback speed and selecting from a range of voices. Furthermore, accessibility validation is integrated into every project, with ongoing collaboration with Kakao to identify and improve accessibility issues throughout the current year.

Conducting Validation and Improvement Efforts for Accessibility Issues on Melon

In 2023, Kakao Entertainment's music platform Melon has worked closely with Kakao to maintain a steadfast commitment to assessing and remedying accessibility concerns. Extensive efforts were undertaken to ensure that the revamped player and playlist features, as well as fundamental music service functionalities, were seamlessly accessible. Accessibility validation and enhancement efforts were seamlessly integrated into the development of key services, aimed at fostering an inclusive environment for all users. Moreover, Melon remains dedicated to continually enhancing accessibility across a spectrum of platforms, spanning from mobile devices to PC web, PC player, and wearable devices such as Apple Watch and Galaxy Watch. These initiatives underscore Melon's commitment to promoting inclusivity and equitable access to its music services.

1) In 2023, a total of 661 accessibility reports were conducted and addressed, comprising 154 cases for iOS, 195 for Android, 122 for design, and 190 for mobile web platforms

Human Rights and Diversity

Kakao's Effort for Business and Human Rights

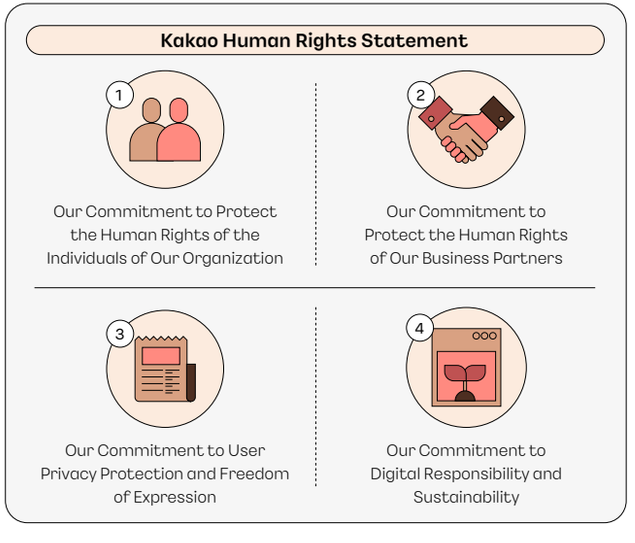
Kakao's Human Rights Due Diligence

Grounded in a human-centric philosophy, Kakao is dedicated to fostering a culture of mutual respect and collective growth. We align with international principles and norms concerning human rights, as advocated by esteemed bodies such as the United Nations and the International Labour Organization, etc., and abides by domestic laws and regulations that reflect these principles. In January 2021, we formalized our commitment to human rights by establishing the 'Business and Human Rights Statement,' with efforts focused on its dissemination among our Krew and business partners. Furthermore, in February 2021, we underscored this commitment by becoming a signatory of the United Nations Global Compact (UNGC).

In 2023, we revised the Business and Human Rights Statement to explicitly address freedom of association and the right to collective bargaining. This amendment aims to facilitate robust organizational development through seamless and sustained communication between labor and management, thereby aligning with our enduring dedication to responsible corporate practices.

Kakao Human Rights Statement

Kakao's UNGC CoP website



Diversity and Inclusion

At Kakao, we hold the belief that growth is best achieved in harmony with all stakeholders connected through our services and technology. Embracing the diverse backgrounds and values of our Krew, we are committed to fostering an inclusive work environment characterized by equality and respect.

Furthermore, in the development and operation of Kakao's services, our objective is to progress towards a direction where our technology and offerings provide comprehensive protection for all users, promoting an ethos of inclusivity and accessibility for all.

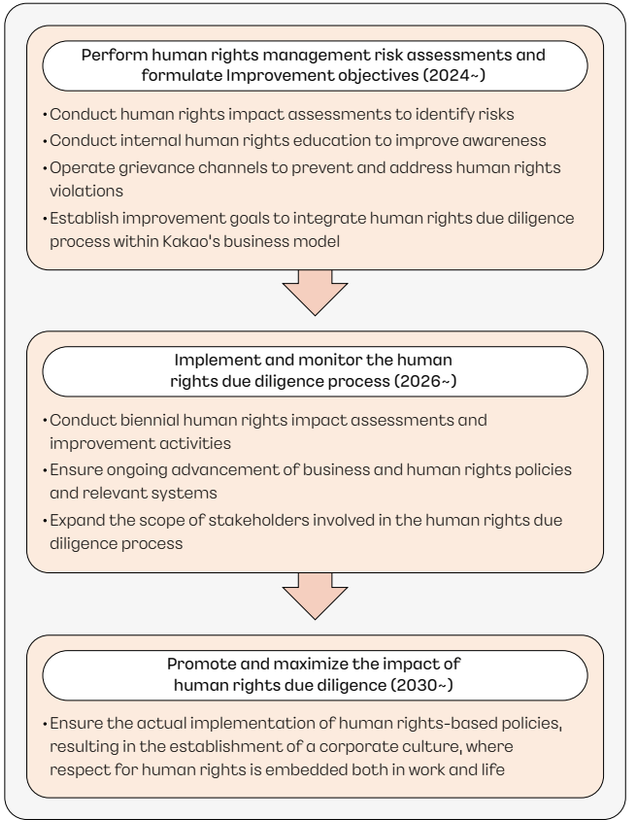
Governance System for Business and Human Rights and Technology Ethics

Kakao maintains a specialized unit dedicated to business and human rights, aimed at effectively implementing the corporate responsibility to respect basic human rights. The Human Rights and Technology Ethics Team systematically assesses and manages human rights risks inherent in Kakao's services and business operations. Not only complying with the global human rights norms and guidelines, the team also analyzes the business and human rights trends in and outside the country, which leads to offering practical recommendations for human rights-related initiatives accessible to the Kakao affiliates.

Inaugurated in 2022, the Roundtable on Human Rights and Business convened its inaugural meeting in January 2023. It is tasked with proactively addressing human rights issues and collaboratively formulating concrete implementation strategies. Regular monthly meetings are held to ensure timely responses and fundamental resolutions concerning human rights violations within Kakao's operations.

Mid to Long-term Goals for Kakao's Business and Human Rights

Kakao has developed a comprehensive roadmap, encompassing mid to long-term goals and implementation strategies, to institutionalize a culture of human rights respect throughout the organization. Through activities like identifying, preventing, and improving human rights risk, we are committed to amplifying the outcomes of our company-wide human rights management endeavors.



Human Rights and Diversity

Human Rights Risk Management

Krew Human Rights Education Program

In response to the key recommendations from the 2022 Kakao Krew Human Rights Impact Assessment Report, which highlighted the importance of strengthening internal education, Kakao has intensified its human rights education efforts for Krew members.

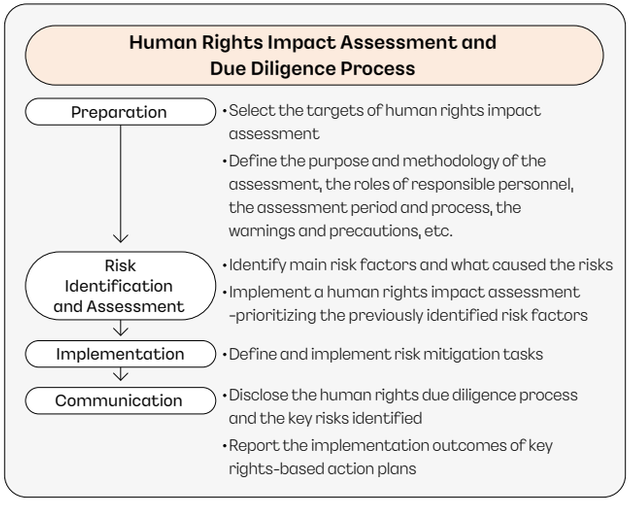
To this end, we implemented the 'Human Rights and Technology Ethics Quiz Olympics,' a participatory educational program. Held from August 21st to 24th, 2023, this initiative provided comprehensive learning materials on business and human rights and included an online quiz. A total of 577 Krew participated, with the results showing that over half (approximately 53.5%) demonstrated improved awareness of human rights management.

Moving forward, Kakao is dedicated to continuously developing and implementing human rights education programs, ensuring sustained efforts to enhance awareness and understanding among our Krew.

Survey Results on Awareness Improvement in Human Rights Management

Human Rights Impact Assessment

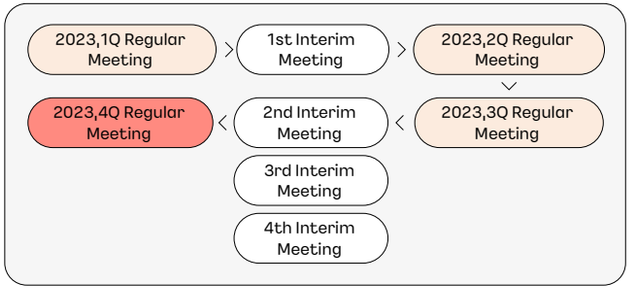
Kakao conducts regular human rights impact assessments to ensure the effective protection of human rights for both Krew and partners, and to continuously manage potential human rights risks across all business operations. Through the 'Kakao Krew Human Rights Impact Assessment Report,' we transparently share the results, improvements, and progress of our business and human rights efforts with all Krew members. In 2023, guided by the recommendations from the initial human rights impact assessment, we established a comprehensive human rights management framework, enhanced internal education programs, and refined procedures for addressing human rights violations. In 2024, Kakao plans to conduct a second human rights impact assessment.



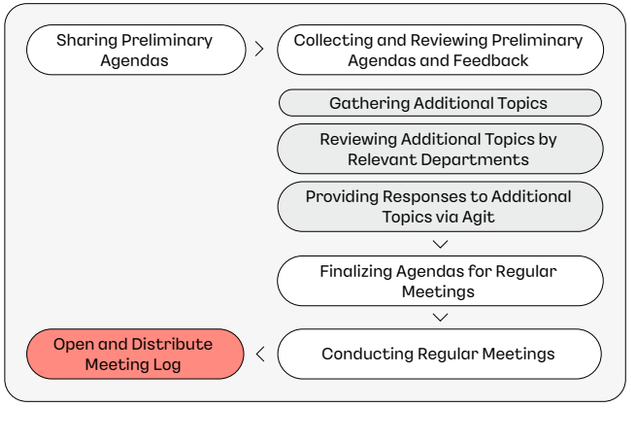
Communication-based Labor Relations

Kakao respect the right to organize, the right to collective bargaining, and the right to collective action in accordance with the universal norms that guarantee basic labor rights as recommended by the Constitution of Republic of Korea, Trade Union and Labor Relations Adjustment Act, and the ILO declarations. In August 2021, our collective agreement was renewed through collective negotiations made with our labor union, which guides our efforts to maintain and improve Krew's labor and living conditions. To promote Krew-centered communication, we regularly operate the Roundtable as a labor-management consultative body composed of employee representatives elected by the Krew. The council convenes quarterly to foster trust between labor and management, addressing a diverse array of topics such as the company's strategic direction, personnel policies, and welfare programs. In 2023, the Roundtable collected and incorporated feedback on improving welfare systems, refining work arrangements, and enhancing measures to prevent workplace harassment. To maximize the effectiveness of these quarterly meetings, we have enhanced our processes by gathering and reviewing agenda items and feedback beforehand.

2023 Roundtable Regular and Interim Meetings



Refining the Roundtable Process



Human Rights and Diversity

Human Rights Due Diligence Management System

Human Rights Violation Reporting Channel

Kakao operates a hotline reporting channel to facilitate the reporting of human rights violations by all stakeholders, including Krew, partners, and users. Through this channel and the internal intranet system, TellMe@kakao, reports of human rights violations are promptly investigated to minimize harm to victims. Partners can utilize the official communication channel within the purchase system, PoK, to report issues arising from collaboration and transactions, while users can report infringements via the rights violation reporting channel within the customer service center. Going forward, Kakao is committed to ensuring the safety of all stakeholders from acts of corruption, violations of fair-trade practices, and sexual harassment.

Human Rights Violation Reporting Channels for Stakeholders

Partners	Human rights violations occurring during collaboration and transaction processes can be reported through the official communication channel within Kakao's procurement system, PoK.
Users	Violations related to personal data protection, copyright infringement, and other related matters can be reported through the rights violation reporting channel within the customer service center
Krew	TellMe@kakao provides dedicated channels for reporting human rights violations and engaging in 1:1 grievance counseling, available both online and offline

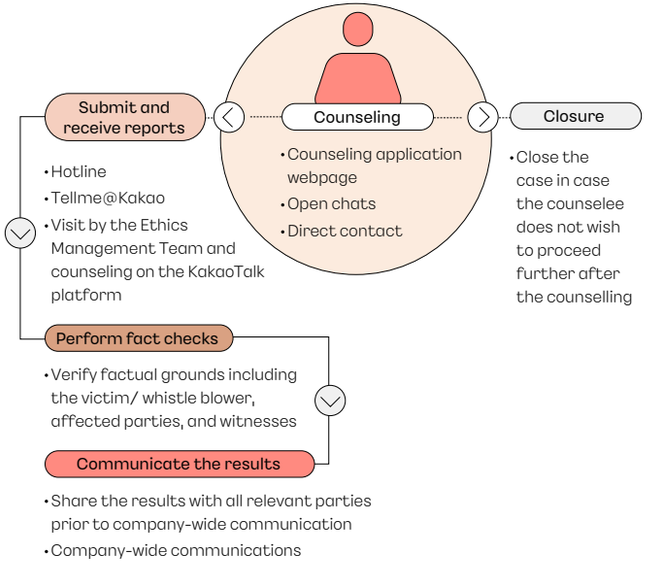
- Kakao's channel to receive human rights violation reports
- Kakao's procurement system PoK
- Channel to report the violation of rights

Grievance Mechanisms for Krew

Kakao proactively maintains diverse channels to promptly identify and address potential grievances among Krew, ensuring accessibility to counseling and reporting mechanisms. In 2023, efforts were made to enhance the accessibility and clarity of these channels through the refinement of their terminology and reinforcement of their descriptions within the grievance handling channels.

Within the grievance handling process, roles such as fact-checking and post-action measures are segregated from those involving personnel actions and advisory functions. This segregation ensures the maintenance of fairness and impartiality through the operation of independent organizations. In cases where disciplinary actions are warranted per internal regulations, a standing Ethics Committee is convened to facilitate discussions aimed at gathering diverse perspectives. The Chairman of the Ethics Committee is the CEO himself/herself, or whom appointed by the CEO, with authority and qualifications, ensuring a balanced composition of committee members based on various factors, including position, gender, and age.

Grievance Handling Process for Krew



Krew Grievance Handling Channels

Reporting through Hotline

Report violations of the Code of Ethics

Operate the grievance reporting and counseling channel for Krew to keep the identity and information of whistleblowers confidential and receive reports through e-mail, post, and our website

Roundtable grievance-handling member

1 : 1 grievance counseling

Let Krew choose one of the three grievance handling members for 1 : 1 counseling, and institutional and other issues hardly resolved through counseling are reported as agenda items for discission at regular Roundtable meeting

Time's Up Taskforce

Sexual harassment

Assist Krew in the counseling, whistleblowing, and grievance handling process, and support their return to a safe workplace with the help of the taskforce team voluntarily organized by Krew to prevent sexual harassment and minimize the resulting damage

TellMe@Kakao

Counseling on leadership or organizational issues; reporting violations of ethical regulations; reporting human rights violations; counseling on workplace harassment, etc.

Serve as a Krew-exclusive intranet reporting system allowing Krew to instantly report any non-compliance with the Code of Ethics or seeking counseling either anonymously or under one's name. The system features intuitive channels like 'Human Rights Violation' and 'Human Rights Policy Suggestions' to facilitate reporting processes.

Human Rights and Diversity

Diversity and Inclusion

Institutional Support for Greater Diversity

Support for Employees with Disabilities

Kakao is committed to advancing towards a better world by fostering connections between people with and without disabilities. The Krew of 'Linkage Lab,' our subsidiary-type standard worksite for the disabled, undertake IT-specialized tasks such as accessibility enhancement, search operation, and content management in environments designed with universal design[1] principles. In addition, we provide working opportunities for individuals with disabilities to work at our in-house cafeteria, KAFE. We also work with visually-impaired individuals - masseuses/masseurs certified by the government for their professional qualification - by recruiting them as our Health Keepers of Talk Clinic. These efforts have been recognized, with Linkage Lab being honored as a 'Leading Company in Job Creation in South Korea for 2023,' reflecting our dedication to diversity and inclusion.

Operating In-house Daycare Centers

Kakao is fostering a workplace culture where employees can thrive, including those with family responsibilities. To support this commitment, Kakao operates childcare facilities within its office complexes, catering to a total of 907 children, making it the largest of its kind in the industry. These facilities, such as Neulyesol and Agitteul in the Pangyo office complex, and the recently inaugurated Byeoleaden in April 2023, as well as Space Dot Kids at our Jeju office, adhere to standardized childcare practices tailored to address age-specific developmental needs and milestones. In addition to the core curriculum, these centers offer specialized enrichment programs in physical education, music, English, and arts, reflecting Kakao's commitment to providing comprehensive support for working parents.

Awarded in the 2023 Korea Workers' Compensation and Welfare Service Childcare Contest, Space and Environment Design Category

Grand Prize: 'Byeoleaden'

Excellence Award: 'Agitteul'

Improvement of Facility Accessibility

Kakao is dedicated to enhancing accessibility for both its employees and users of its facilities at Kakao Agit. Efforts have been made to improve accessibility for children, the elderly, and wheelchair users by partially replacing manual doors with automatic doors at the east entrance of the 1st floor of Pangyo Agit. Additionally, Braille signage[2] has been installed in conference rooms and separate collection bins throughout Pangyo Agit to enhance accessibility for visually impaired individuals. In addition, Kakao AI Campus strives to design facilities for vulnerable groups, such as DFA[3] rooms and café bar designed for and wheelchair accessibility, as well as a height-adjustable kiosk screen interface of way-finding system, considering wheelchair users and children.

Support for Work-Life Balance

Kakao aims to support employees balancing work and family responsibilities through a range of work-life integration initiatives. We have expanded maternity and parental leave entitlements for both employees and their spouses. Furthermore, we provide paid family care leave to address situations where employees need to care for family members due to various circumstances. Additionally, we implement a flexible and autonomous work system known as 'Kakao ON' (Fully Selective Working Hours), enabling employees to achieve a harmonious balance between their professional and personal lives.

1) Designing products, services, facilities, and other amenities without constraints based on factors such as age, gender, nationality, or disability status, ensuring inclusivity and accessibility for all individuals
2) Tactile stickers for visually impaired individuals to perceive through touch
3) Design for All: Under the mission of 'Benefiting many by considering the needs of one,' designs are created to make them convenient for all users to utilize

Category	Program	Description
Leave	Parental Leave	•Employees with children under the age of 8 or in the second grade or below are entitled to up to 2 years of combined reduced working hours for childcare per child, including the 1 year mandated by law
	Family Care Leave	•Up to 90 days of leave per year for reasons such as childcare, elderly care, accidents, illness, or caregiving
Break (Leave)	Prenatal Checkup Leave	•Up to 8 days of paid leave (including up to 3 days for spouse's prenatal checkups)
	Maternity Leave (Pre- and Post-natal)	•Up to 90 days of paid leave for childbirth (up to 120 days for multiple births) (including up to 10 days for spouse's paternity leave)
	Miscarriage and Stillbirth Leave	•Paid leave ranging from 5 to 90 days depending on the pregnancy week (up to 2 days for spouse's miscarriage or stillbirth leave)
	Adoption Leave	•Up to 10 days of paid leave for various caregiving needs
	Infertility Treatment Leave	•Up to 3 days of paid leave per year
	Family Care Leave	•Up to 10 days of paid leave per year for reasons such as childcare, visiting educational institutions (nurseries, kindergartens, schools), elderly care, accidents, or illness
	Refreshment Sabbatical and Support Grant	•Upon reaching 3 years of employment, employees are entitled to up to 30 days of paid leave and a KRW 2 million bonus (including public holidays and weekends)
Work Hours Reduction / Adjustment	Reduced Working Hours During Pregnancy	•Reduced working hours of up to 2 hours per day
	Reduced Working Hours During Childcare Period	•Reduced working hours of 1 to 5 hours per day, combining with childcare leave for up to 2 years per child
	Reduced Working Hours During School Enrollment Period	•Reduced working hours of up to 1 hour per day for the first year of a child's primary school enrollment
	Reduced Working Hours for Family Care	•Reduced working hours of 1 to 5 hours per day for reasons such as family care, personal health, retirement preparation, or personal education (up to 1 year for educational reasons, up to 3 years for other reasons)

Krew Value Enhancement

Talent Recruitment and Growth Support

Recruiting Approach

Kakao recognizes talent acquisition as the starting point for 'Bringing the future closer with technology that understands people.' We are committed to hiring and developing new Krew members who can pursue sustainable innovation together, based on principles and standards that are applicable to their work.

Kakao's New Vision House

1. Focus on Core of the Problem
2. Lead with Cutting-edge Technology
3. Create a Safe Digital Environment
4. Pursue Social Value

Talent Pipeline Development Strategy

New Krew Recruitment

Kakao focuses on Krew acquisition strategy centered on competencies essential for job performance and alignment with business needs. Since 2017, we have adopted a blind recruitment method, refraining from collecting information such as academic background, major, age, or gender. As part of this approach, all the entry-level recruitment candidates are provided with opportunities to undertake coding tests without undergoing preliminary document screenings. Beginning in 2019, we launched a full-time convertible internship program, and in 2023, we extended our efforts to winter internships targeting the technology and service business domains These initiatives aim to attract the talented candidates with strong domain knowledge and growth potential.

Kakao Recruitment

Approach to Supporting Krew's Growth

Kakao provides five guiding principles to Krew who are committed to their growth to take the lead in their growth journey. Embracing diversity among its workforce, Kakao offers comprehensive policies and a diverse array of educational programs, empowering each employee to autonomously define and pursue their growth objectives. In addition, in alignment with Kakao's ethos that Krew can grow even more when they share their knowledge and experience with other Krew, we actively encourage them to communicate their knowledge internally.

Kakao's Principles for Growth Support

Leaders recognize learning motivations and offer opportunity

Leaders pay close attention with the belief that learning forms an essential part of work

We share and growth

We grow together along with all other Krew while sharing knowledge and experience.

We provide processes and conditions

We support Krew with continuous opportunities to try out in real-world settings as well as feedback, rather than one-off events

We do not standardize nor generalize

We respect the different motivations, learning styles, and situations of individual Krew members

We promote voluntary participation

We help motivate Krew to take action

Krew Growth Support Program

Kakao is dedicated to fostering leadership development and enhancing job competencies among its workforce through a dedicated collaboration between specialized units and relevant departments. The Learning & Development division oversees the comprehensive infrastructure, programs, and systems for employee growth, while actively identifying and managing initiatives tailored to specific professional domains such as technology and design.

Talent & Organization

- Planning and implementation of organizational development/leadership growth programs
- Operation of job-specific and AI-related growth programs, company-wide seminars, and growth support systems/infrastructure

Technological Planning

- Development of technical strategies, recruitment, growth, culture, DevRel, technical documentation, and other common technical tasks within the Tech Division
- Planning and operation of AI and technical courses for developers

Job-specific Growth TF

- Discussion and development/validation of new education programs and systems for professional growth within each department, aimed at enhancing growth within respective job domains

Growth Support Programs by Type

Internal training

- Leadership Program
- Organizational Support Program
- Onboarding Program for Newly-hired Krew
- Knowledge sharing program
- AI Capability Enhancement Program
- Job Proficiency Enhancement Program

Support for growth

- External training and conference attendance
- Purchase and lending of work-related books

Krew Value Enhancement

Talent Recruitment and Growth Support

Leadership Program

Leadership Program for Leaders

Kakao provides Krew members in leadership roles with comprehensive leadership programs from a corporate perspective. In 2023, our onboarding program was expanded to systematically support newly appointed leaders, providing a total of 9 sessions (6 times for cell and part leaders, and 3 times for team leaders). Additionally, we enhanced the CFR (Conversation, Feedback & Recognition) program, originally designed for team leaders, to strengthen communication skills across all leadership roles. We also introduced the FYS (Find Your Story) program for part leaders, aimed at leaders to contemplate their leadership growth direction within Kakao, and conducted workshops for team leaders to share and discuss the organization's overarching management agenda.

Leadership Program for Office Leaders

We provide 6 annual onboarding program for newly appointed office leaders to help them fulfill their role. In January 2023, we launched the Division Leader's Table (DLT) seminar for all our office leaders, which has been expanded to include division leaders and group heads. This has evolved into a quarterly (four times a year) workshop titled 'Workshop for Sustainable Growth of Kakao.' During these workshops, we share and discuss various topics, including corporate management strategies, leadership, and external perspectives on Kakao, in order to seek collaborative ways forward.

Organizational Support Program

To maximize team effectiveness by identifying elements that enhance engagement within the smallest organizational units, Kakao conducted an organizational survey involving all Krew members. Based on the survey results, review seminars were held for organizational leaders, providing them with tips and workshop tools to facilitate discussions with their teams. This initiative aims to enhance the effectiveness of the smallest organizational units.

Onboarding Program for Newly-hired Krew

To facilitate smooth adaptation and growth for newly-hired Krew, Kakao offers a comprehensive onboarding program that supports the assimilation of Kakao's culture and work practices from before they start work through to their initial period at the company. Prior to starting, they are provided with guidance on the necessary skill sets for their roles. The onboarding process includes an Onboarding Day and an Onboarding Monthly program.

For new (first job) and intern Krew members embarking on their professional journeys with Kakao, we offer them a more diverse and in-depth onboarding program. This program is designed to enhance their understanding of the organization and their roles, improve problem-solving and collaboration skills, and develop communication abilities. These initiatives are designed to actively support new Krew members in opening a new chapter in their career journey at Kakao.

Knowledge Sharing Program

In line with Kakao's growth support principles, which emphasize sharing and collective growth, we actively share our best-in-industry knowledge through various knowledge sharing programs. Notably, Kakao's unique seminars, Connecting Krew (held five times) and Tech Talk (held thirty-five times), allow our Krew to present and directly share their own professional experience and knowledge on diverse topics, including work retrospectives, work practices, and career development.

Furthermore, Kakao's VOD learning platform 'Rainbow' enables Krew members to upload and freely access learning content they have curated themselves. Each year, Krew members who voluntarily participate in these programs and share their experiences and knowledge are recognized as 'Kakao Gurus.' In 2023, we selected a total of 65 Gurus, ensuring the sustainability of the program through acknowledgment and appreciation.

Additionally, we held two sessions of 'Open Studio,' where external experts from various fields provided insights and trends on the rapidly changing industry landscape.

CASE

Kakao Hackathon "Next Kakao AI Service"

A hackathon, a combination of 'hacking' and 'marathon,' is an event where developers and service planners come together to collaborate in order to solve specific challenges. Since its inception in 2013, Kakao has held its 5th internal hackathon in 2023. This event brought together Krew from diverse fields such as development, design, and planning, who voluntarily formed teams to turn their ideas into reality.

The 24K AI hackathon centered around Kakao's overarching theme of 'Next AI.' Under sub-themes such as 'AI Connecting People,' 'AI Creating a More Enjoyable World with Content,' and 'AI for a Better World,' a total of 51 teams, comprising over 170 participants, developed and showcased service cases utilizing generative AI. The winning ideas from this hackathon will undergo further processes for integration with actual services, contributing to the realization of Kakao's Next AI vision.

Krew Value Enhancement

Talent Recruitment and Growth Support

AI Capability Enhancement Program

To drive innovation based on Kakao's AI technology, we have introduced number of programs to help all our Krew members understand the present and future of AI and identify practical application points in their work. We offer content tailored to the growth needs of our AI-related Krew, with programs segmented into company-wide and tech/non-tech categories. In 2024, we plan to expand and deepen our AI competency development programs, aligning them with the evolving landscape of AI technology and services, and focusing on the AI skills essential for Kakao's future needs.

Company-Wide

AI Trend Seminar

- Analyzing the latest trends through domestic and international seminars
- A total of 32 sessions with participation from approximately 2,700 Krew members (including affiliates).

AI Study Group

- Establishing teams to study AI-related topics freely, with the flexibility to choose duration and format
- A total of 26 teams with 168 Krew members participating

Technical Role

Understanding and Applying Generative AI and LLM: Theory and Practice

- Understanding core AI technologies for AI generation, and advanced chatbot development through internal data utilization
- A total of 80 participants
- Excellent satisfaction with the program: 65% of survey respondents reported that they were able to enhance the performance of LLM models by utilizing various technologies through the program

Non-Technical Role

AI Bootcamp Program

- Operating two tracks (Gen AI-based business efficiency and data analysis) to support basic understanding of AI and its application in work
- A total of 66 participants

Job Proficiency Enhancement Program

To support the growth of all employees across the organization, we provide an annual job proficiency enhancement program. In 2023, we revamped the communication foundational course 'Basic C', previously aimed at tech job role Krew, into 'Competency 101'. This program was designed to strengthen essential job-related competencies required for tasks across all job roles. Comprising four subjects (Speaking, Presentation Skills, UX Writing, Technical Writing), a total of 446 Krew members participated. Through this program, Krew were trained on how to effectively express their thoughts and experiences and fostered a collaborative mindset. They also identified improvement points with colleagues and external experts, applying them to generate results in their respective fields. Additionally, various technical education initiatives were undertaken to foster growth within the tech job roles. In 2023, based on feedback from operational departments, we conducted diverse courses on coding practices suitable for maintenance across different development languages (Java, Kotlin, JavaScript), including both theoretical understanding and practical exercises. Moreover, we conducted DB education sessions to aid understanding of internal development environments and DBMS application techniques. Through courses like ATDD (with Spring), encompassing development methodologies, we supported the enhancement of refactoring skills among tech job role Krew.

Support for growth

To cultivate specialized knowledge for each job category, Kakao supports proactive learning and growth among our Krew through external education, conference participation, and access to work-related books through purchase or rental. In 2023, approximately 2,300 Krew members utilized around 23,000 instances of growth support initiatives, demonstrating their active engagement in self-directed learning.

Particularly noteworthy is the 'Workbook Purchase' program, through which 29% of all Krew purchased over 4,500 books in 2023. Kakao also continued to operate the 'Kakao Exclusive e-Library', emphasizing and encouraging Krew members' book-based learning. Kakao actively promotes Krew members' engagement in book-based learning and will continue to improve growth support initiatives based on Krew feedback.

CASE

Kakao's Assessment of Job Proficiency Enhancement Programs

Kakao is committed to monitoring and improving the effectiveness of the job proficiency programs provided to our Krew, ensuring continuous enhancement

CW Competency 101: UX Writing

- Improve writing skills to move users' minds and guide intentions by understanding and practicing principles of UX writing
- Course attendance in 2023 : 53 persons

Practicality 4.67 points
Training Effectiveness 4.85 points

CW Competency 101: Technical Writing

- Develop the ability to effectively understand others' technical documents and produce clear technical documentation through understanding principles and methodologies of technical document writing
- Course attendance in 2023 : 89 persons

Practicality 4.34 points
Training Effectiveness 4.51 points

Tech Developing Maintainable Code (Kotlin)

- Enhance software engineering skills to write maintainable code in Kotlin and adapt to changing development environments for improved scalability
- Course attendance in 2023 : 50 persons

Practicality 4.37 points
Training Effectiveness 4.67 points

Tech DB Education for Kakao Developers

- Improve understanding of Kakao's internal databases through comprehension of DBMS application techniques and data modeling, and solidifying advanced SQL skills
- Course attendance in 2023 : 81 persons

Practicality 4.16 points
Training Effectiveness 4.05 points

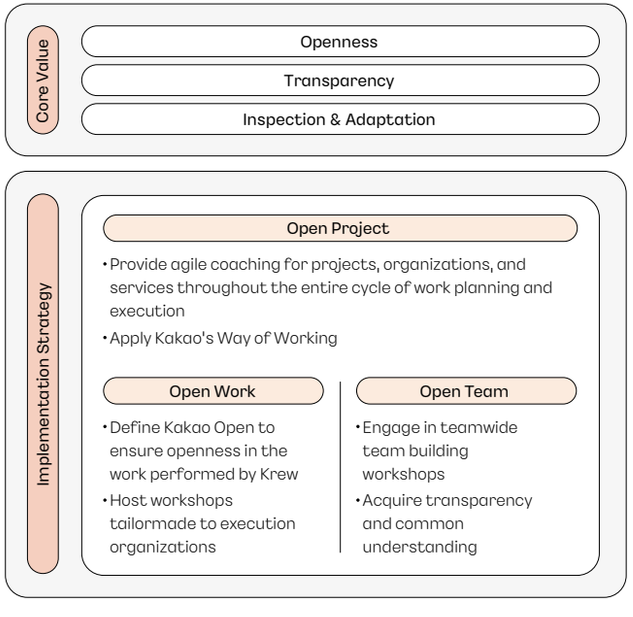
Krew Value Enhancement

Innovative Work Methodology

Kakao Open for Agile Working

Our technological competitiveness begins with our Krew, and the competitiveness of our Krew can be maximized through innovative ways of working. Kakao's Open Work is a Kakao-style approach aimed at enabling all Krew members to objectively and transparently reveal their work, ensuring that every Krew member at Kakao can efficiently perform their duties. Specifically, we design ways of working tailored to each organization's situation, ranging from small teams of around 10 members to large-sized organizations of over 100 members, creating a mature work culture through interconnectivity of tasks.

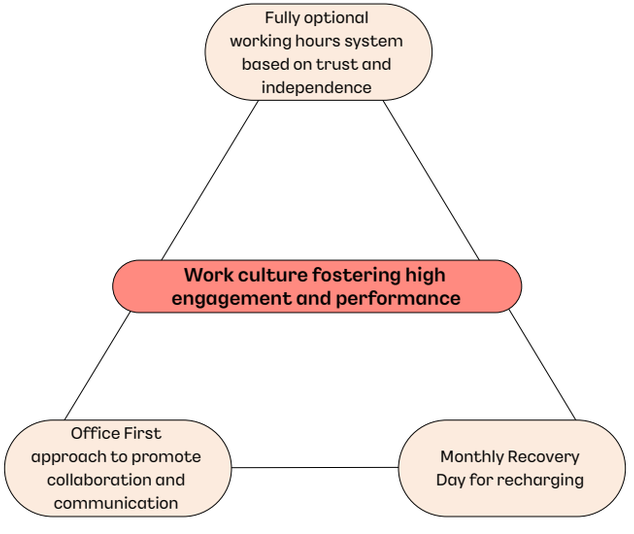
Kakao Open Framework



Kakao ON, Kakao's New Work Arrangement

Kakao introduced its new way of working, 'Kakao ON', in January 2023. Under the Kakao ON working system, Krew members have the flexibility to set their own working hours through a fully optional working hours system, and the primary workplace is designated as the office specified by the company, with exceptions allowed for designated alternative workplaces as needed by each organization. Also, the last Friday of each month is designated as 'Recovery Day', ensuring Krew members' rest and recovery to promote focus when working. Kakao is committed to continuously exploring ways to increase Krew engagement and maintain work-life balance.

Kakao ON Framework



People Analytics for Data-based Talent Management

Kakao accumulates a range of data and leverages appropriate analytic tools to make data-driven decisions on Krew related matters. Analysis results are made available for decision-makers and stakeholders through customized reports and dashboards to support their execution when needed. Analytics projects at Kakao are conducted across different levels (individual Krew, teams, and company-wide) according to situational requirements. In the event of excessive overtime work, notifications are issued to the individual and organizational leaders to facilitate vacation usage or curb overtime, thus mitigating work burdens. In 2023, Kakao established a foundation for individual and organizational development by providing tools such as Pulse Surveys at the organizational unit level, organizational leader review seminars, and guides, enabling the organization to identify elements of change proactivly and attempt interventions.

Management of Internal Transfer

To create an environment where Krew members can immerse themselves in roles that best align with their personal growth direction, Kakao operates an internal transfer system encompassing strategic reallocation, job matching, and job posting. In 2023, a total of 120 Krew members embarked on new roles within the organization through internal transfer initiatives. By operating a flexible system tailored to individual growth and organizational decision-making needs, Kakao aims to enhance our Krew's organizational and job engagement while securing the talent required by the organization. This process creates an effective cycle of continuous improvement.

Strategic reallocation	Support for transfer based on strategy/priority
Job matching	Assistance for transfer based on Krew/job fit assessment
Job posting	Support for transfer for growth and cyclical improvement

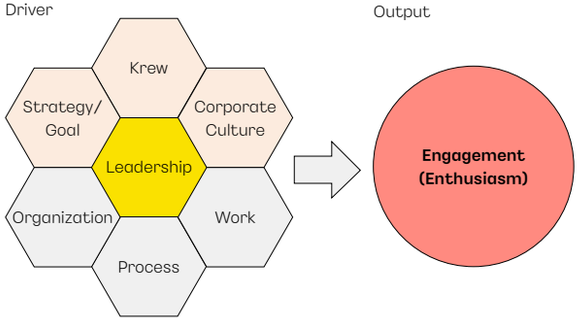
Krew Value Enhancement

Innovative Work Methodology

Employee Health Check

Kakao conducts an annual 'Organizational Health Survey' to assess Krew satisfaction and engagement. In 2023, 13 affiliated companies[1], including Kakao, participated, which shows an increase of three companies compared to the previous year. To better reflect Kakao's Style, the survey expanded from five to seven Drivers to measure the Output aspect of 'engagement.' This approach helped identify strengths and areas for improvement for each affiliate. Additionally, the survey was refined to reflect the unique characteristics of each affiliate and to reduce ambiguity in the questions. For the Organizational Health Check 2023, the response rate was 45% at Kakao and 54% at the remaining 13 affiliated companies combined.

Organization Health Check Framework



Promoting Measures to Improve Well-being

Each year, we compile the results of our Organizational Health Check into company-wide reports and share them with each affiliated company. We engage in in-depth discussions with the CEO and HR leaders to identify necessary measures to improve the well-being of our employees. Starting from 2023, we provide a 'Diagnosis Utilization Guide' to empower affiliates to implement activities tailored to their circumstances independently.

Wide-ranging Benefits for Krew

To enhance Krew members' job satisfaction and engagement, Kakao operates various benefit programs. These benefits are available to all our Krew and extend to dispatched workers, interns, and assistants. Kakao remains committed to continuously incorporating Krew feedback to realize Krew-centric benefit programs.

Category	Benefit	Detail
Kakao Krew are happy	Kakao Refresh	Provide 30 days Refresh leave and vacation bonus of KRW 2 million for every three years of service
	Condominium	Provide access to company's affiliated resort facilities and varying discount benefits
	In-house club	Support monthly club expenses
	Melon subscription	Support Melon music streaming service Subscription
	Employee discount	Provide discounts at Kakao Friends shops and Airlines
	Emoticon/network drive support	Support Krew to use KakaoTalk's emoticons and network drive
Kakao Krew are healthy	Group accident insurance/ Medical expense Support	Provide fee-for-service insurance plans and disease/accident insurance plans for Krew and their spouse, parents, and children as well as dental insurance plans for Krew and their spouse and children
	Health checkup	Provide annual check-ups to Krew (transferrable over to their family members during years when they are not eligible for statutory check-ups)
	Talking About	Support external counseling 8 times a year
	Talk Clinic	Support massage services twice a month
	Recovery Center	Support weight training, pilates, yoga and other work-out programs to prevent musculoskeletal diseases (operated twice a day and used by nearly 700 people a year)
Kakao Krew are looked after	Family Love support	Support insurance payment in case of Krew's death
	Family event support	Support expenses (goods) and vacations for weddings, birthdays, funerals, and childbirth
	Holiday gift	Give KRW 300,000 on Lunar New Year's and the Korean Thanksgiving holidays
	Loan support	Offer loan support up to KRW 150 million for life stability
	In-house daycare center	Operate daycare centers in Pangyo and Jeju Offices
	Maternity care	Provide kits for expectant mothers and help pay for taxi fares
Other	Support for commuter buses	Operate commuter shuttle buses at the Pangyo and Jeju Offices
	Support for work-related reading	Provide access to work-related e-books
	Kakao Benefit	Grant welfare points worth KRW 3.6 million per year

1) Kakao, Kakao Pay, Kakao Games, Kakao Entertainment, Kakao Mobility, Piccoma,Kakao Enterprise, Kakao Style, Kakao Brain, Kakao Healthcare, Kakao Space, Kakao Ventures, KnWorks

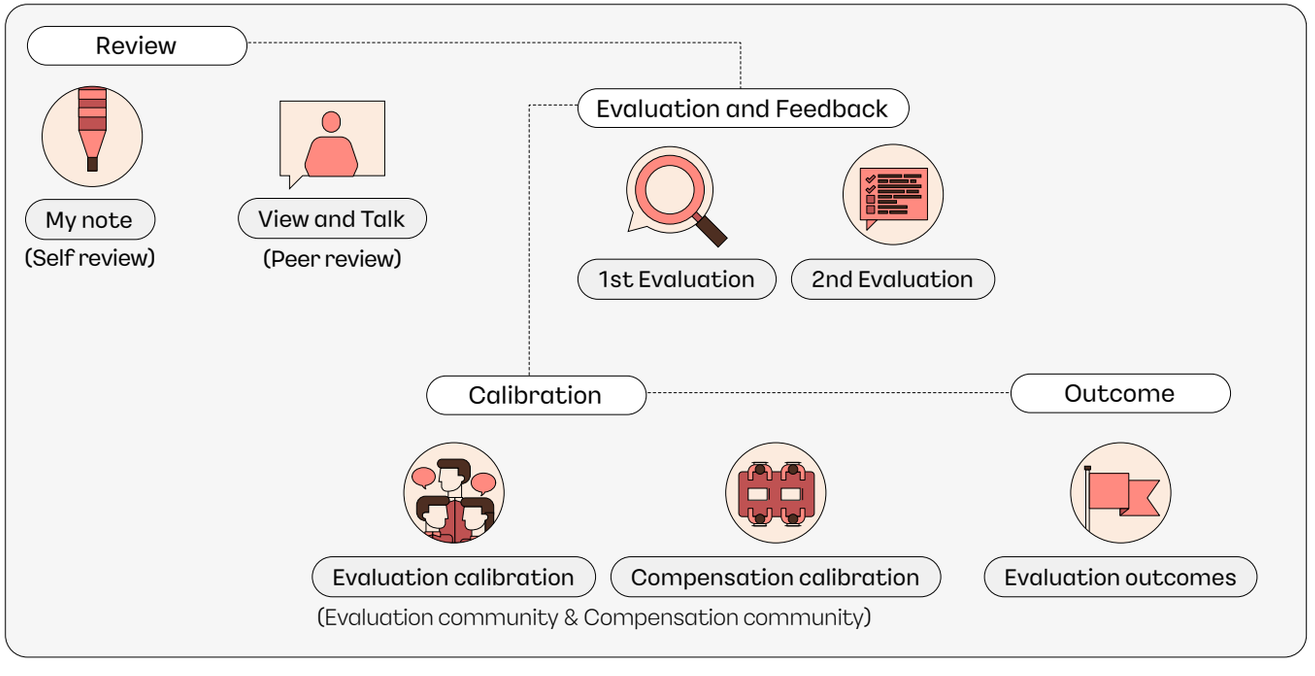
Krew Value Enhancement

Performance Evaluation and Compensation

Performance Evaluation and Compensation System

Kakao's Krew performance is evaluated through review made from viewpoints by the Krew members themselves, colleagues they have worked with and their leaders. Annual performance evaluations are conducted for full-time Krew members, where leaders take the primary responsibility for this evaluation process in accordance with the growth stage framework. Achievement evaluations for individual tasks and competency evaluations for knowledge and skills related to job duties are conducted. Achievement evaluations are closely aligned with the short-term compensation of performance bonuses, while competency evaluations are with the long-term compensation of annual salary increases. Such evaluation and compensation results are confirmed through the calibration sessions conducted by the evaluation and compensation community composed of the evaluation responsibility leaders and top-level leaders, to ensure standardized results through group discussions. Also, we operate the Check-in program at least twice a year for leaders and Krew members to communicate on performance continuously to improve Krew's individual capabilities and motive to achieve their goals.

Performance Evaluation and Compensation Process



Improving the Feedback-Centric Evaluation System

Kakao recognizes the need to improve the performance evaluation and compensation systems and strive to operate our HR system according the Kakao's style. In 2023, we reformed our evaluation system to reduce operational complexity and enhance performance-centered feedback. By reviewing the existing processes, we integrated and streamlined the evaluation stages, simplifying the previously detailed evaluation framework. This reform aims to alleviate the time and resource burdens associated with evaluation management and grade determination, allowing us to focus on delivering meaningful feedback.

Performance Evaluation and Compensation Strategy

Kakao aims to operate a fair performance evaluation system that aims to facilitate the growth of Krew and their collaboration with colleagues through the improvement and development of individual capabilities. We ensure that Krews who proactively generate performance are appropriately rewarded based on their achievements and work contributions. By implementing a stock compensation system, we motivate Krews to share the perspective of shareholders and contribute to the company's long-term value and success.

In March 2023, we granted stock options to a total of 3,538 Krew members, offering 667,700 shares. This initiative is designed to boost motivation and provide a foundation for continuous growth. Additionally, to encourage long-term commitment, Krew who have been with the company for over a year were awarded 200 shares, while newly hired Krew who have been with the company for 6 to 12 months were granted 100 shares. They can exercise 50% of their stock options after two years of service, and 100% after three years of service.

Krew Value Enhancement

Health, Safety and Well-being

Health and Safety Management Policy

Kakao established a regulatory compliance system that prioritizes the health and safety of Krew and everyone involved in the business and performs annual reviews and improvements on our management policy and action plans to ensure continuous improvement of safety performance. In March 2023, we set forth health and safety management policy 2023 to effectively control hazards/risks and establish a safety-first culture with all our suppliers and contractors understanding and complying with the policy for the purpose of protecting the life of Krew and workers and maintaining a pleasant workplace. The health and safety plans developed based on this policy were reported to the Board of Directors.

Health and Safety Management Policy

- We continue to advance health and safety management.
- We strive to create a safe and pleasant work environment.
- We abide by health and safety laws and regulations.
- We work to raise awareness on health and safety in/outside Kakao.

Health and Safety Management Policy

Dedicated Organization to Health and Safety

In October 2023, Kakao established a dedicated organization to health and safety to improve our health and safety management system and comply with the Serious Accident Punishment Act. This organization, led by the General Affairs & Asset Management Performance Leader, who is responsible for health and safety management, operates under Kakao's health and safety management policy.

The organization continuously monitors relevant laws and regulations to ensure the health, safety and well-being of all Krew and workers, fostering a healthy working environment. It plans and implements safety accident prevention activities and risk assessments.

Occupational Safety and Health Committee

Kakao operates the Occupational Safety and Health Committee to ensure a healthy and safe work environment for Krew. With the participation of 5 labor and 5 management representatives pursuant to Korea's Occupational Safety And Health Act and our collective agreement. The committee holds regular meetings to deliberate and decide on the health and safety matters of Krew. The outcomes of these discussions are integrated into the implementation process for improving safety facilities and preventing accidents, thereby fostering a safer working environment

Key Discussion of the 2023 Occupational Safety and Health Committee

Category	Key Discussion
Q1	Enhancements to office infrastructure and health check-ups etc.
Q2	Upgrades to Jeju fire detection systems and safety inspections etc.
Q3	Comprehensive elevator checks, disaster response training and education, and flu vaccinations etc.
Q4	Addressing issues such as broken glass and elevator malfunctions, assessing risks associated with commuting in winter, and conducting health examinations etc.

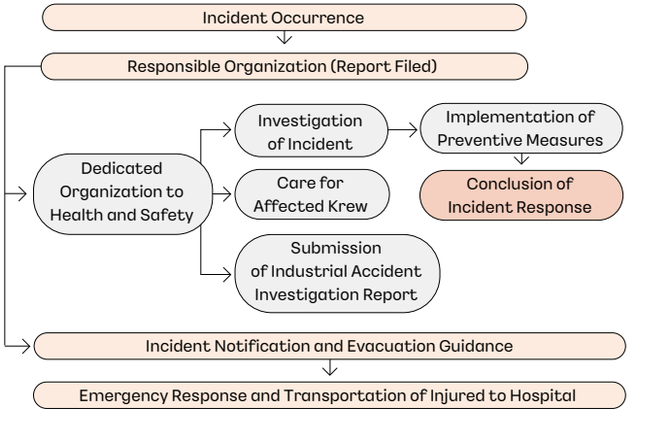
Health and Safety Inspection

In accordance with the Serious Accidents Punishment Act, Kakao has conducted an inspection to determine whether the duties under health and safety-related statutes or regulations have been performed. The review included 13 items related to the 'Establishment and Implementation of the Health and Safety Management System.' Notably, through on-site inspections to identify hazardous risk factors, conducted as part of the compliance check with health and safety-related laws, we identified over 60 areas needing improvement. These, along with other identified issues, are scheduled for improvement by the end of 2024.

Investigation Process for Work-related Injuries, Illnesses, and Accidents

Every work-related injuries, illnesses, or accidents must be reported. Once a report is submitted, a series of procedures are initiated according to the manual, including investigating the incident, submitting an industrial accident investigation report, and applying for occupational accident compensation insurance claim and etc. In case of a serious accident, an immediate alert system is activated upon incident occurrence. This includes the dissemination of information to relevant departments and agencies, issuing emergency evacuation orders based on the type of accident, and requesting support from the fire department. The process also ensures that injured Krew member are taken care of, and measures are taken to prevent reoccurrence based on the identified hazards/risks.

Reoccurrence Prevention Process



Krew Value Enhancement

Health, Safety and Well-being

Emergency Response Training and Exercise

Kakao is committed to minimizing damage during emergencies through comprehensive emergency response training and exercises. These drills focus on incident notification, evacuation, and initial response actions, helping to improve crisis management capabilities. Based on the outcomes, we continuously review and enhance our emergency preparedness plans.

In 2023, fire evacuation exercises were conducted for all Krew members at our Pangyo and Jeju Offices. The drills included training on initial fire response, such as the use of firefighting equipment. Notably, at the Pangyo Office, a joint fire extinguishing exercise was conducted in collaboration with the building's disaster prevention unit, simulating an electric vehicle fire to further enhance emergency response capabilities.

Looking ahead to 2024, with the operation of our own data center, we plan to develop and implement an annual training and education program covering various emergency scenarios, including fires. Also, we will strengthen our emergency response system by conducting joint exercises with external agencies, such as local fire departments, to establish a robust disaster preparedness and cooperation framework.

Health and Safety Training Conducted in 2023

All Krew[1]	
Emergency response training	Both online and offline formats (50 participants)
CPR training	Offline format (80 participants in four sessions)
All on-site workers[2]	
Fire evacuation exercise	Offline at each workplace (1,350 participants across three sessions)

Preventing Work-related Illnesses

Every three years, we examine risk factors for musculoskeletal illnesses that could typically occur among Krew members, considering the nature of our work. From December 2022 to March 2023, the musculoskeletal risk inspection and job stress test were conducted through on-site inspections and surveys on Kakao Krew and subcontractor employees, along with work environment review interviews advised by ergonomic engineers. The results of the study concluded that there were no tasks falling under the 11 musculoskeletal burden tasks according to the standards set by the Ministry of Employment and Labor, both in Pangyo and Jeju offices. Furthermore, we disseminated the 'Proper posture guide for preventing musculoskeletal disorders' to allow individuals to adjust standing desks according to their body types. Moreover, to prevent illnesses caused by job stress, we conduct job stress examinations and simultaneous on-site investigations to assess cumulative stress.

Healthcare Programs for the Krew

Talkeuibogam / Recovery Center

We operate in-house nursing office Talkeuibogam to provide emergency care, wound dressing, over-the-counter medications, and healthcare services for obesity or smoking cessation. The Recovery Center which opened in 2022 provides stretching, meditation, aerobic exercise, and strength training to help Krew stay healthy both in terms of mind and body.

Talk Terrace

Talk Terrace serves as a space for meditation and counseling for Krew members to alleviate their stress while promoting their mental health. Through sessions with psychological professionals, Krew members can receive support to manage stress and difficulties related to relationships, work, career, and other issues, empowering them to handle stress in a healthy manner.

1) Emergency response and CPR training are offered to volunteers, while selection for Recovery Center training is conducted via lottery

2) During the training, on-site workers and affiliates (such as building emergency unit and in-house daycare staff) participate

Expanding EAP Support

To expand EAP (Employee Assistance Program) support, Kakao has launched pilot programs, including mental health assessments and organizational group counseling. We provide comprehensive psychological counseling to effectively manage Krew mental health, along with organization-specific group counseling programs to address stress management within the organization and foster empathy and camaraderie among the Krew. Starting from 2024, we plan to integrate these efforts with the specialized counseling service 'Talk-ing About' tailored for Kakao Krew.

Mental Health Assessment

Program overview	• Through self-diagnosis, we provide a comprehensive diagnosis of psychological difficulties, offering a personalized mental health guide that includes a comprehensive report, individual factors report, and in-depth report based on the test results
Operational status	• Assessment Period: 2023.10.04 - 2023.10.20 • Participants: 741 out of 3,923 Krew (18.9%) • Assessment Details: 102 questions measuring mental health levels
Key Achievement	• Each participant receives a personalized mental health diagnosis and tailored solutions

Organizational Group Counseling Program

Program overview	• Following the mental health assessment, the program focuses on stress management within the organization and fostering empathy and camaraderie among Krew members who have experienced physical and psychological distance due to the emergency remote work system maintained since COVID-19
Operational status	• Target Audience: 9 teams/parts/cells (24 organizations applied in total) • Participants: 59 Krew • Support Programs: 3:Re Stress Management and From Communication to Synergy! Relationship Enhancement Program
Key Achievement	• Based on organizational counseling, the program contributes to improving relationships and understanding among Krew members by fostering empathy within the same organization

Win-Win Initiative

Kakao Partner Win-Win Activities

Kakao partners with a diverse range of stakeholders, including small business owners, digital content creators, mobility platform workers, startups, social innovators, local communities, and collaborators. Driven by the belief that Kakao's growth is intertwined with the growth of its partners, we strive to create a virtuous ecosystem where our partners can enhance their competitiveness through collaboration with Kakao. To this end, Kakao, together with its affiliates, has established a win-win partnership fund totaling KRW 300 billion to be utilized over five years starting in 2022. We have developed and implemented practical win-win strategies. Moving forward, Kakao and its affiliates will continue to consider their social roles and work diligently to fulfill the commitments we have made.

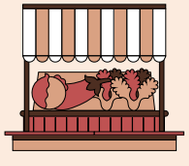
Kakao Group's Win-Win Partnership Fund Implementation Goals

Small Business and Local Partners

Provided support for the digital transformation and growth of small businesses through dedicated programs

KRW 100 billion

Affiliated Partner
Kakao,
Kakao Games,
Kakao Pay,
Kakao Impact



Digital Content Creators

Established number of support measures to ensure the sustainable creative activities of digital creators

KRW 70 billion

Affiliated Partner
Kakao,
Kakao Entertainment,
Kakao Impact

Mobility Platform Workers

Improved working conditions and earnings for mobility platform workers, while striving for industry advancement

KRW 50 billion

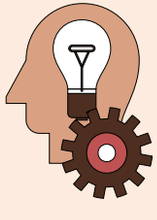
Affiliated Partner
Kakao,
Kakao Mobility,
Kakao Impact

Startups and Social Innovators

Created a virtuous IT ecosystem by supporting indie/small developers, startups, and social innovators

KRW 20 billion

Affiliated Partner
Kakao,
Kakao Enterprise,
Kakao Impact

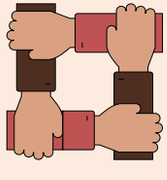


Communities and Mobility/Digitally Underprivileged Groups

Addressed social issues by conducting various support activities for regions and populations with limited social capital

KRW 60 billion

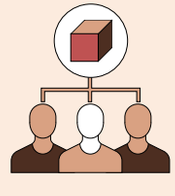
Affiliated Partner
Kakao, Kakao Mobility,
Kakao Entertainment, Kakao Games,
Kakao Pay, Kakao Enterprise, Kakao Brain,
Kakao Impact



Suppliers

Offered support activities and programs to foster win-win partnership with highly important suppliers

Sustainable Partnership



Win-Win Initiative

Together with Small Business and Local Partners

Support for Digital Transformation of Small Businesses

In August 2023, Kakao signed a memorandum of understanding with the Korea Federation of Micro Enterprise to develop concrete and ongoing measures to enhance the competitiveness of small businesses and facilitate their digital transformation. A total of KRW 30 billion is earmarked for support until 2028. Planned initiatives include establishing a digital support center for small businesses, conducting educational programs, building a social safety net for small businesses in the event of disasters such as floods or fires, producing promotional videos for small business policies, and providing support for events aimed at revitalizing local economies and transitioning to digital platforms like KakaoTalk channels.

1) Assuming the unit cost of sending a message on a KakaoTalk channel is set at KRW 4,000, 75 messages can be sent with a grant of KRW 300,000

2) The average value (C) of KakaoTalk channel messages provided per small business owner is the result of multiplying the analyzed evaluation indicator value per KakaoTalk channel message (A) by the number of messages that can be sent (B)

Customer Retention Support Program

In April 2022, Kakao disclosed its intention to allocate KRW 1 trillion from our KRW 3 trillion mutual fund to support small businesses and local partners. As part of its efforts to bolster small businesses, the "Customer Retention Support Program" offers a subsidy of KRW 300,000 for KakaoTalk channel messaging. This initiative aims to facilitate connections between small businesses and their loyal customers through KakaoTalk. As of May 2024, approximately 60,000 business owners have received a total subsidy of around KRW 20 billion. In addition, Kakao endeavors to simplify the process for small businesses to send KakaoTalk channel messages by providing service examples utilizing Kakao IPs, thereby enhancing platform accessibility.

Support for KakaoTalk Channel Messaging Costs
60,939 persons | KRW **21.2** billion

(Cumulative from August 2022 to May 2024)

The Social Impact of Customer Retention Support Program

Kakao commissioned the Korea Fiscal Policy Institute to estimate the economic impact of KakaoTalk channel messages provided to small businesses. Analyzing the contribution of small businesses to sales growth as a key indicator, it was found that KakaoTalk channel messages contributed an annual sales increase of KRW 25.5 million.

Valuation Indicator	Per KakaoTalk Channel Message (A)	Number of Messages that can be Sent (B)[1]	Average Value Generated per Person by KakaoTalk Channel Messages (C)[2]
Willingness to Pay for KakaoTalk Channel Messages	KRW 23,000	75 times	KRW 1.725 million
Level of Revenue Contribution from Channel Messages	KRW 340,000	75 times	KRW 25.5 million

Detailed Study on the Topic

CASE

Dangol Market

In June 2022, Kakao initiated the 'Dangol Market' project to support the digital transformation of traditional markets. Over the past two years (2022-2023), Kakao provided digital education to 1,472 merchants from 111 merchant associations across 111 markets nationwide, and supported the establishment of 1,583 KakaoTalk channels, resulting in the creation of online connections with over 240,000 friends. Additionally, Kakao has strengthened collaboration with the Ministry of SMEs and Startups and the Small Enterprise and Market Service by signing a memorandum of understanding on the activation of digital transformation in traditional markets, aiming to enhance sustainable digital transformation in traditional markets.

Key Achievements of Dangol Market in 2023

Contribution to Revitalizing Traditional Markets in 2023
Received Presidential Award

Number of Supported Markets Increased by more than
9 times[1]

Satisfaction of Merchants with Education[2]
4.9 point

Satisfaction of Merchant Associations with Education[2]
4.7 point

1) Increased from 11 in 2022 to 100 in 2023
2) Rated out of 5

Win-Win Initiative

Together with Small Business and Local Partners

Online Market Expansion and Growth Support Programs

In 2023, Kakao provided various online market expansion and growth support programs aimed at Talk Store sellers, including nurturing entrepreneurial online sellers, supporting the entry of small and medium-sized enterprises in the cosmetics and natural food industries in Chungcheongbuk-do, and providing planning support for special sales events. Also, Kakao contributed to the revenue growth of small businesses through its own growth support program for small partners in Talk Store Community.

Effect of online market expansion and growth support programs

KakaoShopping Valueplus (Public-Private Partnerships in Education)

Transaction Volume	Number of KakaoTalk Channel Friends	Favorite Store
KRW 790 million	Increased by 85,816	Increased by 13,330

Support for shared growth among small and medium-sized enterprises in the cosmetics and natural food industries in Chungbuk Province

Transaction Volume of Small Businesses participated (Compared to 2022)

Growth of 162%

Expanding Support for Small Business O2O Platform

The Ministry of SMEs and Startups and the Small Enterprise and Market Service jointly conducted the 'O2O Platform Entry Support Project,' known as the Online Customer Project, in collaboration with Kakao. Through this initiative, a total of 1,090 small businesses were planned to expand their KakaoTalk channel friends using Kakao emoticon events. As a result, participating small businesses secured approximately 60,000 friends compared to before the business participation. Additionally, a total of 6,250 small businesses received a subsidy of KRW 300,000 each for KakaoTalk channel messaging, contributing to the smooth activation of KakaoTalk channels for small businesses.

Dangol Challenge

From October to December 2023, Kakao conducted the 'Dangol Challenge' program targeting nationwide small businesses, both online and offline, who desired to engage with more customers. The program aimed to achieve the mission of 'Creating 1,000 KakaoTalk Channel Friends.' A total of 1,941 participants joined the challenge, and ultimately, 149 participants successfully completed the mission. These successful participants were rewarded with a certification plaque and a subsidy of KRW 1 million for channel messaging. Additionally, tailored education programs were conducted for small businesses of varying sizes to leverage the experience gained from this challenge as a stepping-stone for growth momentum. Moving forward, Kakao pledges to continue expanding various collaborative activities with small business partners with digital needs.

KakaoTalk Channel

Increase by approx. 230,000 participants[1)]

1) Compared to before the challenge

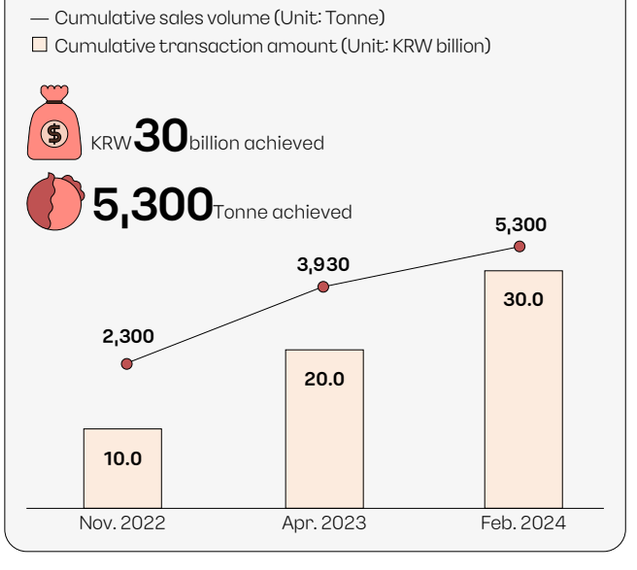
Kakao Business Best Awards Ceremony

Kakao hosted the '2023 Kakao Business Best Awards,' inviting business partners to submit their success stories, showcasing the utilization of Kakao's advertising, services, and business platforms directly in their operations, leading to business success. The awards ceremony honored a total of 25 teams, with one grand prize winner (worth KRW 30 million), one outstanding prize winner (worth KRW 10 million), and 23 excellent prize winners (each worth KRW 3 million). The winners received a total of KRW 109 million worth of KakaoMoment cash, trophies, and commemorative items. In addition, the winning teams were offered additional benefits such as invitations to Kakao Business seminars as speakers and one-on-one business consulting sessions. Kakao will continue to provide various information and benefits to assist more businesses in their operations and goal achievements, striving to foster an ecosystem for shared growth.

Kakaomakers' Jegaburch project

The 'Jagaburch' project aims to support the distribution channels of surplus agricultural and fisheries products that would otherwise be discarded due to oversupply, thereby reducing producers' inventory burdens and contributing to price stabilization. Through this project, producers can distribute 'ugly produce' with diminished value due to appearance factors such as shape and size, while consumers can purchase agricultural products of the same quality at a lower price. As of April 2023, the cumulative transaction volume of agricultural and fisheries products traded through the Jegaburch project is estimated to exceed KRW 20 billion. Building on the success of agricultural and fisheries products, the project expanded its scope to include flowers in May. It has also contributed to the expansion of sales channels for floriculture farms, with steady achievements such as the early sell-out of approximately 30,000 units of 'ugly flowers' demonstrating its effectiveness.

Cumulative transaction and sales volume of Kakaomakers' farm assistance program



Win-Win Initiative

Together with Digital Content Creators

Emoticon Creating Shared Growth with Creators

In 2023, marking the 12th anniversary since its launch, Kakao Emoticons has released approximately 600,000 emoticons over the past 12 years. Through the 'Kakao Emoticon Studio,' where anyone can easily propose emoticons, new emoticons are created daily, contributing to the activation of the emoticon ecosystem and giving rise to a new profession of emoticon artists/creators.

As of 2023, the service boasts an average monthly usage of approximately 30 million emoticon users and over 2 million subscribers to 'Emoticon Plus,' providing various creators with revenue-generating opportunities. Since its launch, the cumulative number of emoticon buyers has reached 29 million, with a total sending volume of 260 billion, indicating its significant popularity.

Kakao Emoticon 2023 Highlights

Cumulative number of individual emoticon Approx. **600,000**	**Monthly average number of emoticon users** Approx. **30** million persons
Cumulative number of emoticon purchasers **29** million persons	**Cumulative number of emoticon sent** **260** billion sent
Cumulative number of Emoticon Plus users Approx. **12** million persons	**Number of Emoticon Plus subscribers** **2** million persons

Donation Through Emoticons: Give-ticon

'Give-ticons' are mobile sponsorship products where Kakao donates a portion of the purchase amount on behalf of our user when purchasing emoticons. In 2023, in partnership with the popular influencer 'Chommy,' Kakao released its 15th Give-ticon. A total of 96,450 participants joined this donation campaign, with the creator 'Chommy' also contributing by donating all proceeds from the emoticons purchased. The target sponsorship amount of KRW 100 million was achieved within a week of the campaign's launch, and all sponsorship funds were delivered to Good Neighbors to support children who have suffered from abuse. Going forward, Kakao plans to continue our efforts to provide opportunities for easy participation in mobile sponsorship culture, such as 'Give-ticons,' and to facilitate experiences of sharing and giving back to the community.

Hosting a Seminar on the 'Creation-based AI Technology Emoticon Policy'

Kakao hosted a session titled 'AI-generated Emoticon Entry Policy Seminar' targeting emoticon creators. During the session, they presented survey results aimed at creators and research findings from scholars affiliated with Korean Association for Artificial Intelligence and Law regarding AI-generated emoticons. Kakao, in its commitment to safeguarding the creator ecosystem, plans to continue engaging in periodic and ongoing reviews, consulting with external experts, to determine the acceptance and methods of utilizing AI-generated emoticons.

Discovering Brunch Authors

Kakao have launched the annual Brunch Book Publishing Project since 2015 to support aspiring authors wishing to publish their own books. In 2023, celebrating its 11th anniversary of Brunch Story, the project provided publishing opportunities to a total of 10 writers and supported them with a prize of KRW 5 million each.

Cumulative Achievements Made by Brunch Authors	Cumulative Achievements of the Brunch Book Publishing Project
No. of Brunch authors Nearly **67,000** persons	**No. of applications** **53,177** applications
No. of authors who published books Nearly **4,100** persons	**No. of awardees** **349** awardees
No. of books published Nearly **7,200** books	**Financial support provided** Nearly KRW **560** million

Introduction of a Revenue Model for Creators

Brunch Story (August 2023) and Tistory (October 2023) have introduced the 'Story Creator' and 'Support' systems to discover outstanding creators and facilitate their revenue generation. The 'Story Creator' designation is conferred upon creators who demonstrate expertise and activity, while 'Support' is a creator revenue model enabling readers to contribute funds along with supportive comments to selected creators' posts.

Brunch Story expanded the 'Support' feature to 'Story Creators,' starting with 50 representative writers, resulting in a 30% increase in the number of posts by exceptional creators compared to the previous year.

Similarly, Tistory provided 'Support' to 'Story Creators,' leading to a 16% increase in the number of posts compared to the previous year. Both Brunch Story and Tistory aim to continue improving functionalities to foster an active creative ecosystem.

Win-Win Initiative

Together with Digital Content Creators

Safeguarding Domestic Creators' Rights Through Global Content Piracy

Kakao Entertainment, as the largest domestic IP company providing webtoons and web novels globally, systematically responds to domestic and international illegal distribution to protect creators' rights and the domestic creative ecosystem.

Publication of 3rd and 4th White Papers on combating illegal distribution

The P.CoK, responsible for combating illegal distribution, employs global monitoring personnel and publishes semi-annual white papers detailing their achievements and processes. These white papers are shared within the industry to disseminate best practices. Through its third and fourth white papers, Kakao Entertainment has actively cracked down on illegal content to restore the rights of copyright holders. The company has expanded its response system to cover all languages, including Arabic, Latin American, and Vietnamese markets. By activating channels for reporting illegal content and raising awareness among global users, a self-regulating ecosystem has emerged, with users voluntarily reporting illegal translations and copyright infringements. Starting in July 2023, Kakao Entertainment began sending quarterly copyright protection letters to creators supplying works to the company, informing them of enforcement results and efforts.

Kakao Entertainment's Achievements in Combating Illegal Distribution

Third White Paper on Illegal Content Crackdown Results	Fourth White Paper on Illegal Content Crackdown Results
14 million cases	208 million cases

Expansion of Enforcement Scope

E-Books, open platforms, illegal character merchandise, and printed secondary works

Kakao Creative Foundation

The Kakao Creative Foundation is a non-profit organization established by Kakao Entertainment under the Ministry of Culture, Sports and Tourism to create a healthy creativity ecosystem in collaboration with creators. Established in 2022, the foundation has initiated its primary activities with the launch of the 'Online Creative Academy Kakao Entertainment will contribute at least KRW 10 billion over the next five years, allocating KRW 2 billion each year. The foundation plans to extend its support to not only webtoon and web novel creators but also to creators of other cultural content, including music.

Online Creative Academy

The Online Creative Academy offers free courses on webtoon and web novel creation, as well as legal and psychological guidance for creators. In 2023, advanced courses were added, and the platform was revamped to enhance user convenience.

Online Creative Academy

Webtoon Complex Center-Bucheon Creator Rent Support

In September 2023, the Kakao Creative Foundation provided full annual rent support for the workspace within the newly established Webtoon Complex Center-Bucheon, aiding webtoon creators in their creative endeavors.

Offline Workshop: Grow Up Talk & Talk

The Kakao Creative Foundation organized the 'Grow Up Talk & Talk' offline workshop for students of the Online Creative Academy. This event provided creators with valuable lectures and opportunities for direct interaction with speakers, offering a practical and engaging platform for creative support.

Indie Music Promotion Project: Melon 'Track Zero'

Since April 2022, Melon has been running the indie music promotion project 'Track Zero.' This initiative highlights indie music gems through a curated playlist featured on Melon's main screen and the Melon Station music show 'Track Zero' every Thursday. Additionally, Melon hosts the offline performance series 'Track Zero Alive,' enabling artists featured in the 'Track Zero' playlist to connect directly with their fans. All 'Track Zero Alive' performance videos are made available on Melon, actively supporting the branding efforts of these artists. In 2023, Melon showcased over 530 indie songs from a total of 360 artists on its main screen.

Supporting Up-and-coming Creators

Kakao Entertainment promotes the continuous growth of the domestic creative ecosystem by discovering and nurturing talented new writers in various fields, including webtoons, web novels, dramas, and films. To provide opportunities for creation and debut, Kakao Entertainment hosts competitions and collaborates with academic institutions.

Kakaopage Competition

To discover Korean young adult novels, Kakaopage, in collaboration with Changbi Publishers, holds the annual 'Kakaopage X Changbi Young Adult Novel Award.' In 2023, the competition reached its fifth year. Winners are given the opportunity to serialize their work on Kakaopage, and to publish both print and electronic books through Changbi. Also, Kakaopage is expanding its IP experiments beyond webtoons and web novels into gaming. In collaboration with Nexon, they held the 'Blue Archive X Kakaopage Web Novel and Webtoon Contest,' and with Pearl Abyss, they conducted the 'Black Desert X Kakaopage Web Novel Competition,' offering a total prize of KRW 63 million, providing new opportunities for creators to debut.

Kakao Webtoon Competition

In 2023, Kakao Webtoon organized the 'Webtoon Feedback Day,' inviting selected students from various collaborating institutions to engage in one-hour sessions of feedback exchange with program directors(PDs) through one-on-one matching. A total of 16 educational institutions and 22 students were provided with opportunities for growth and platform tours. Furthermore, to discover new talent and offer opportunities for creators, Kakao Webtoon conducted the '2023 Super Challenge Webtoon Contest,' selecting two works and awarding each with a prize of KRW 10 million.

Kakao Entertainment Film and Drama Competition

Kakao Entertainment conducted the '2023 Kakao Entertainment Drama and Film Competition' to provide support for creators in the drama and film sectors and to create a sustainable ecosystem for content industries while enhancing global competitiveness. A total of 11 winners, including 5 dramas and 6 films, were awarded a total prize of KRW 150 million. Additionally, Kakao Entertainment collaborated with various creators and production companies under its umbrella to discuss support measures for the winners' future projects, including planning, development, and video production, aiming to facilitate their growth as prominent drama and film creators.

Win-Win Initiative

Together with Mobility Platform Workers

Tax Driver Medical Support Program

Kakao Mobility has been dedicated to promote cooperative management with mobility platform workers in 2023 by providing emergency medical and living expenses totaling KRW 2 billion to all taxi drivers nationwide. Through joint efforts with Kakao Impact and donation contributions, this program aimed to support taxi drivers who faced difficulties in affording medical treatment due to illnesses or accident-related injuries. Each driver received financial assistance of up to KRW 13 million, covering their out-of-pocket expenses for health insurance and private insurance. Throughout the project duration, Kakao Mobility handled over 25,000 inquiries, providing medical livelihood support to a total of 564 taxi drivers over the past year. Moving forward, Kakao Mobility remains dedicated to improving the working environment for mobility platform workers, including taxi drivers, designated drivers, quick delivery personnel, and on-foot delivery workers, by safeguarding their health rights.

Kakao Mobility Junior Lab

Kakao Mobility implemented a growth support program for the children and grandchildren of taxi drivers. From July to August 2023, the program targeted a total of 23 children and grandchildren of taxi drivers, offering coding education programs, showcasing their achievements, field learning at the Future Mobility Research Institute, and mentoring sessions with Kakao Mobility developers. These initiatives aimed to facilitate their growth as future IT talents. In 2024, the program will expand its scope by introducing a more diverse and in-depth program in a camp-style format over 3 days and 4 nights period. Furthermore, it will broaden the eligibility criteria nationwide, extending the opportunity for participation to more candidates, for the Junior Lab 2nd edition.

Health Support Service for Designated Drivers

Kakao Mobility launched the 'Driver Health Support Service' in July 2022, participating in the Ministry of Employment and Labor's Workplace Improvement Support Program and the Occupation-Specific Health Checkup Program conducted by the Korea Occupational Safety and Health Agency. The service aims to manage the health of designated drivers, who are exposed to stress and musculoskeletal/cardiovascular diseases due to continuous night shifts. In 2022, 858 individuals and in 2023, 1,576 individuals were provided with health check-ups. These check-ups include examinations focusing on neurological and cardiovascular diseases, tailored to the needs of drivers engaged in prolonged night work, and specialized health assessments for insomnia diagnosis. To alleviate the economic burden on drivers, Kakao Mobility covers 20% of the self-payment portion of the health check-up costs, enabling them to receive the check-ups free of charge.

Training Programs and Health Management Campaign for Designated Drivers

In response to the difficulties faced by novice designated drivers in adapting to new working environments, including emotional labor due to inadequate customer service skills and sustained night shifts, Kakao Mobility launched the 'Training Programs and Health Management Campaign' to implement protective measures for customer service workers. Recognizing the lack of appropriate job training and support for novice designated drivers, the campaign aimed to provide essential support. The campaign featured lectures on 'Healthy Work Practices' and 'Medical Consultation Services,' where veteran designated drivers shared their expertise and medical professionals offered one-on-one consultations to drivers in need. This initiative, conducted in collaboration with the Industrial Safety Guardian following a collective agreement between Kakao Mobility and the designated drivers' union, represents the first collaborative effort toward workplace improvement. Looking ahead, we remain committed to enhancing the workplace environment for mobility platform workers.

Win-Win Initiative

Together with Startups and Social Innovators

Supporting Startup Growth Through Re-enterprising : Re:born Project

Kakao Enterprise has collaborated with the Korea Institute of Startup & Entrepreneurship Development, under the Ministry of SMEs and Startups, to execute the 'Re:born' project, aimed at supporting re-enterprising startups. Through this initiative, Kakao Enterprise provided KRW 1 billion worth of cloud credits, along with consulting and mentoring, to nine startups. Additionally, in partnership with Kakao Impact, the company offered KRW 50 million worth of cloud credits to each of the four winning companies of the Ministry of Science and ICT's Grand Championship. By fostering an innovative cloud and open-source ecosystem, Kakao Enterprise contributes to creating an environment conducive to the mutual growth of startups.

Supporting Family Value-up

Kakao Ventures is a venture capital (VC) firm that invests in innovative startups accelerating the future across various sectors including software, ICT-based services, deep tech, digital healthcare, and gaming. As of December 2023, it has a portfolio of over 260 companies and manages assets exceeding KRW 400 billion.

Kakao Ventures introduces various value-up programs to facilitate the growth of its portfolio companies. It provides support in areas such as promotion, consulting, and networking, allowing startups to focus on technology and service development without any distraction. Also, it promotes its portfolio companies' businesses and messages through media connections and in-house content production. Furthermore, it offers value-up partners who specialize in areas such as growth hacking, organizational culture, and product/service development, ensuring that portfolio companies have access to expert advice whenever needed. Through programs like the Venture Assistance Program (VAP), Kakao Ventures diagnoses and addresses challenges faced by our invested companies, creating an environment where they can thrive.

KV Shared Services

Support for services that are challenging for early-stage companies to internalize, such as finance, tax, and legal services, along with risk assessment

Recruitment Support

Regular recruitment channels on Wanted and the creation of hiring guidebooks to support portfolio companies in talent acquisition

Communication

Post-investment support for external promotion through media connections and direct production of various content

Specialty Program

Direct engagement with Kakao Ventures' investment managers who listen to on-site feedback from portfolio companies

Family Networking

Annual Family Day events to facilitate networking and communication

Insight Session

Invitations to leading experts on crisis management, financial statement management, talent recruitment, and effective marketing

Advisory Panel

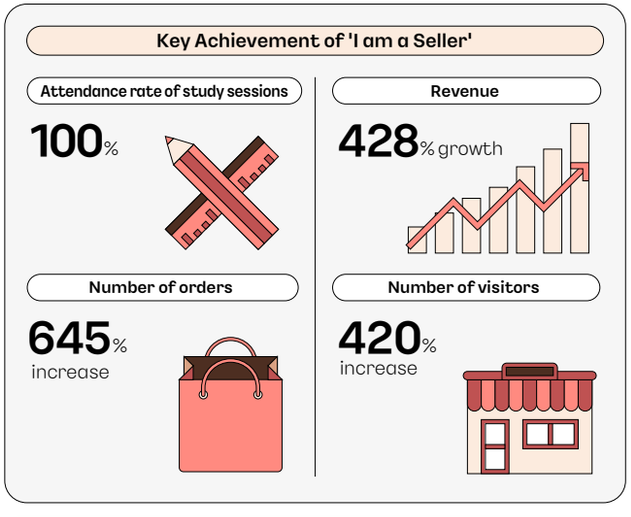
Advisory panels in areas such as gaming, growth hacking, and organizational management

Digital Healthcare BD Session

Small-scale networking events for early-stage digital healthcare founders with experienced entrepreneurs and international healthcare companies

Operating Small to Medium Seller Growth Program

Kakao Style runs the 'I am a Seller' program to support the growth of small and medium-sized sellers on its platform. Since the launch of the first group of sellers in November 2023, the program has successfully completed its third group. It focuses on strategic sales growth through various educational initiatives, including active product updates, coupon strategies, and advertising techniques. This in-depth, hands-on growth program helps sellers plan and execute strategies to increase their sales effectively.



Win-Win Initiative

Together with Suppliers

Definition of Suppliers

At Kakao, supplier is defined as a business that engages in transactions involving goods, services, or subcontracting to conduct its operations. This includes both businesses who will or are currently in a business relationship with Kakao and extends to general contractors in addition to subcontractors as defined under the Subcontracting Act.

Kakao's Supplier Code of Conduct

Kakao has established the Supplier Code of Conduct for all suppliers to follow to ensure transparent and fair transactions. All our suppliers are required to consent to their compliance with the Code, which outlines the responsibilities and roles of our suppliers in five key areas: Human Rights Management, Health and Safety, Environmental Management, Personal Data and IPR Protection, and Ethical Management. This Code encourages and manages suppliers to fulfill their social responsibilities and specifies that suppliers must comply with anti-corruption laws and regulations to promote ethical business practices.

Supplier Selection and Management

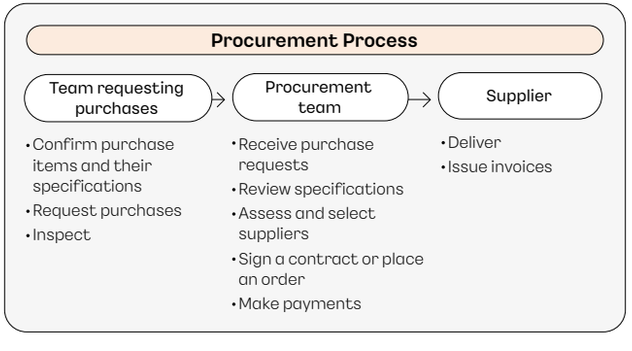
When selecting our new suppliers, we consider number of factors comprehensively. We have incorporated the Supplier Code of Conduct into our evaluation criteria and, in 2023, we implemented an ESG Self-Checklist within our system. This checklist helps identify ESG issues among potential suppliers, ensuring only those meeting a certain standard are registered. Suppliers with one or more identified issues are given a one-year grace period to resolve them; if issues persist for two consecutive evaluations, their registration as our supplier may be canceled. Additionally, we conducted pilot ESG assessment consultations to elevate the ESG standards of selected suppliers. Outstanding suppliers are given incentives in the following year's selection process, establishing a quantitative basis for decision-making.

Specifying Supplier ESG Compliance within Procurement Regulations

In 2023, Kakao revised its procurement regulations to ensure that suppliers actively comply with ESG-related matters. Under these new amended regulations, Kakao can conduct annual ESG compliance audits on key suppliers. If any ESG risks are identified and not addressed, the procurement team is authorized to suspend transactions or terminate contracts. To better assess and manage the implementation of health and safety measures by suppliers, Kakao now requires subcontractors to sign a health and safety compliance pledge in addition to the standard contract. Starting from 2024, health and safety competency evaluations will be mandatory during the supplier selection process.

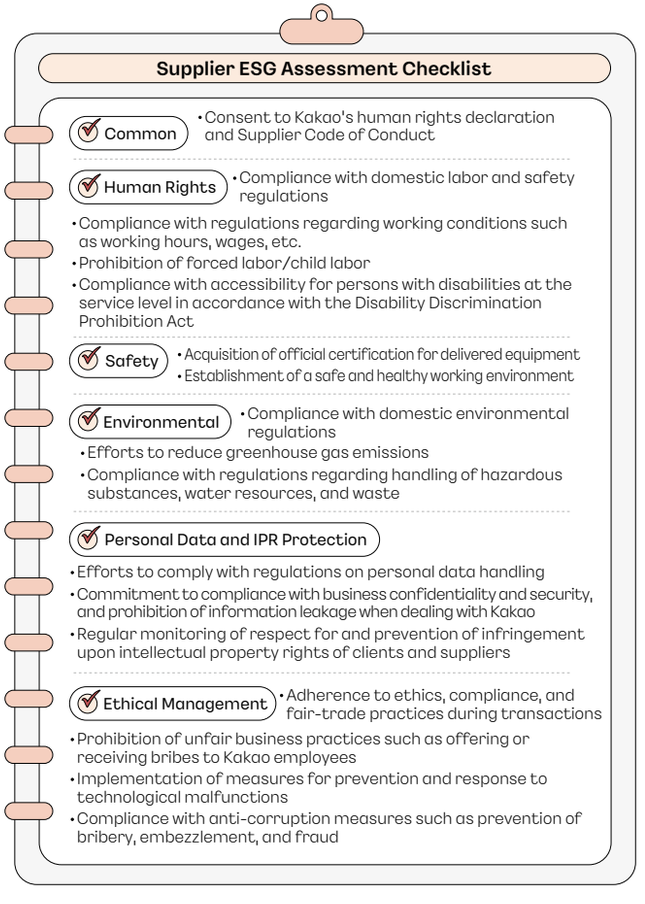
Transparent Procurement System

Kakao has established a transparent procurement system called PoK (Partner on Kakao), designed to facilitate continuous collaboration with our suppliers from their selection to contract signing, inspection, and payment. The system is continuously being improved, with a particular focus on preventing potential risks within the procurement process. In September 2023, Kakao added a pre-quotation system to PoK, allowing quotation requests and submissions to be conducted through the platform instead of via email or social media channels. This improvement ensures more transparent transactions and communication with suppliers.



Supplier ESG Risk Assessment

Since November 2023, Kakao has been mandating suppliers to complete an ESG checklist upon registration in the Procurement System (PoK). Failure to meet Kakao's ESG criteria may result in transaction limitations. The ESG checklist is comprised of six categories and eighteen sub-items, including Common, Human Rights, Safety, Environmental, Personal Data and IPR Protection, and Ethical Management. Kakao aims to encourage ESG management practices among our suppliers to foster a sustainable future together.

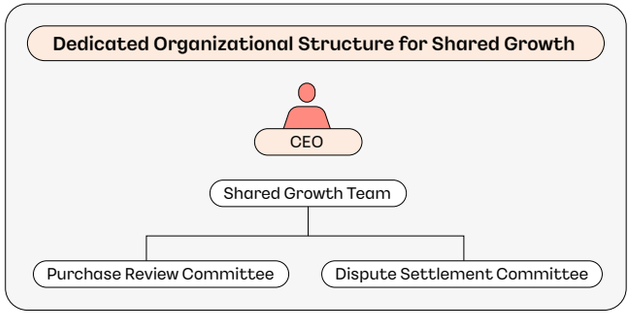


Win-Win Initiative

Together with Suppliers

Dedicated Organization to Developing Shared Growth

Since 2017, Kakao has been operating a dedicated organization to develop shared growth under the CEO's purview, alongside Purchase Review and Dispute Settlement committees.



Supplier Communication Channel

Kakao maintains sustainable relationship with its suppliers through effective communication. Via our official communication channels such as the Kakao shared growth webpage, the Online Ethics Center, and the electronic procurement system PoK, Kakao receives complaints raised by suppliers and operates an internal Dispute Settlement Committee if necessary, providing various avenues for effective communication. Our annual purchasing presentations and Partners' Day events serve as platforms for soliciting diverse opinions from our suppliers.

Supporting Top-performing Suppliers and Hosting Partner's Day

Kakao has been hosting Partner's Day annually for the past 15 years to foster a healthy corporate ecosystem and to recognize and honor our top-performing suppliers that demonstrate excellence in shared growth policies and vision. In 2023, MVP Partner's Day was held at the Jeju headquarters, honoring 56 suppliers. The event emphasized mutual respect and shared growth by highlighting collaborative achievements between Kakao and its suppliers. With the participation of 120 supplier employees and over 80 Kakao Krew members, the event facilitated corporate building while also featuring ESG education, award ceremonies, and presentations on Kakao's procurement vision, reaffirming the commitment to sustainable shared growth through collaborative efforts.

ESG Training for Suppliers

To enhance the ESG-related capabilities of our suppliers and their employees and provide continuous information, Kakao conducts in-house ESG training. During Partners' Day in May 2023, a number of programs were held, including ESG training and the introduction of the payment linkage system for suppliers. These initiatives aim to increase our suppliers' understanding of ESG and raise awareness of ESG management. Additionally, Kakao supports sustainable shared growth activities by offering ESG management consulting fees to nine selected companies through supplementary online training.

Supplier Support Programs

Kakao offer support programs to help suppliers improve business operations and enhance employee welfare in various business activities, including finance and education. As of 2022, the number of shared growth supplier is 59, and the mutual growth index received a 'Good' rating.

Financial support	• Make full cash payments to suppliers to support their stable business operations and liquidity supply • Make payments ahead of the set due date during national holidays and participate in government-sponsored projects with large/mid/small-sized suppliers • Provide loan support at below-market-rate interest rates to suppliers who signed the shared growth win-win partnership agreement • Provided loan support to 40 companies, totaling KRW 14.7 billion in 2023
Training support	• Operate kakao.edu as our free-of-charge online training program for suppliers which offers 110 courses on key content of respective job categories • Operate Kakao Class with Partners whereby Krew who are experts in their field share Kakao's experience and knowledge • In 2023, a total of 241 participants from 14 companies attended 'kakaoedu' training • In 2023, 'Kakaoclass with Partners' had a total of 1,053 participant
Learning platform support	• Provide suppliers with an account to take nearly 100 courses on online learning platforms each month • Will provide ESG management content on learning platforms from 2023 onwards

Win-Win Initiative

Together with Community

Kakao Tech Campus

Kakao Tech Campus was designed to make Kakao's technology available for local undergraduate students to develop them into IT developers with the aim of resolving the widening regional disparities and labor shortages in the IT field. In 2023, Kakao conducted 'Frontend' and 'Backend' training for students from our partner universities, Pusan National University and Chonnam National University, and produced a total of 111 graduates. For 2024, the program expanded to include three additional universities: Kangwon National University, Kyungpook National University, and Chungnam National University, bringing the total to five universities and enrolling 234 students. The program also introduced a new 'Android' track into the existing curriculum. The second phase of the 2024 program aims to develop well-rounded web and mobile app developers by offering comprehensive training, from basic developer education to project-based practical training, enhancing their technical skills, problem-solving abilities, and collaboration capabilities. In recognition of its outstanding training outcomes, Kakao Tech Campus was recognized by the 'ESG Support for Youth-friendly Businesses' project led by the Ministry of Employment and Labor in 2023.

Kakao Tech Campus Developer Training Stages and Goals

Step 1 Development Training

Acquire fundamental skills by learning the essential technology stacks needed for various development areas

Step 2 Clone Project

Apply the acquired skills by cloning key Kakao services

Step 3 New Service Development Project

Develop and implement services using a variety of technology stacks

Kakao Tech Campus Key Achievements

First Cohort Graduates	Program Recommendation Rate
111 graduates	95.8%
Academic Credit Integration	**Total Training Hours Provided**
6 credits	414 hours

Kakao Tech Campus

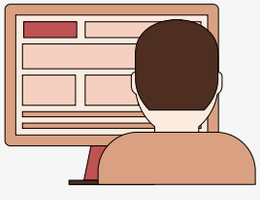
Kakao Cloud School

Since 2022, Kakao has been selected for two consecutive years as an educational operating institution for the Digital Leading Academy under the K-Digital Training program. In collaboration with the Korea Radio Promotion Association (RAPA), a subsidiary of the Ministry of Science and ICT, Kakao operates the 'Kakao Cloud School' program. The program is conducted in two tracks: Cloud Developer Training and Cloud Engineer Training. It includes five days of offline training per week over a six-month period, focusing on cultivating key talent in the cloud computing field.

Starting from the third cohort in 2023, Kakao has incorporated its proprietary cloud-based learning system, 'Krampoilne,' into the education and project work. Trainees gain hands-on experience with practical exercises using Kakao's internal cloud network. The ten members from the Kakao Cloud Platform Team participate as mentors, offering practical experience and career consulting.

Furthermore, Kakao plans to expand its education programs to increase practical IT education opportunities, aiming to cultivate Kakao-specific talent through the enhancement of the curriculum.

Kakao Cloud School Achievements



Employment Rate

58%*

* 79 out of 137 graduates of the 1-3 cohorts of the Academy secured employment

IT Education for Teens

Kakao offers software education and career experience programs for teenagers residing in Jeju Island to enhance their digital transformation skills and adaptability in the rapidly evolving knowledge information society.

Unplugged Day

- Assist in learning computing principles through play-driven education provided at Kakao's Jeju Office

SW Value Dissemination

- Provide on-site AI and coding education to students in digitally-underserved areas
- Conducted for schools located in Gapado, Udo, and Chujado
- Number of students: 58

Show me the IT

- Experience Kakao-related career options and IT service workshops
- Total sessions: 49
- Total number of participants: 4,031

Remote video career mentoring

- Provide remote career mentoring for junior/high school students in Jeju and nationwide
- Total sessions: 3
- Number of participants: 68

Win-Win Initiative

Together with Community

Kakao Track

The 'Kakao Track', an employer-centered, fit-for-purpose talent development program , has been undertaking in partnership with Jeju National University's Center for Innovation in Engineering Education since 2007, marking its 17th year. The program is designed to train and produce practical professionals who can be assigned to work immediately once deployed in the field. Junior and senior student participants are provided with a four-week winter internship opportunity while being supported through mentoring offered by our Krew member. We also donate KRW 20 million in program scholarships to 20 students each year to encourage active participation in our program.

Achievements of Kakao Track in 2023

Graduates(cumulative)
157 persons

Employment rate at Kakao and domestic IT companies
73.3%

Total donations
KRW **340** million

Jeju with Kakao

Cooperation with Jeju Local Partners

Kakao Class

Kakao has partnered with the Jeju Center for Creative Economy and Innovation to offer lecture programs aimed to help prospective small business owners and creators better utilize Kakao's diverse service platforms.

Since 2022, its scope extended in line with our ESG management initiatives to include startups and small businesses nationwide who have faced difficulties in expanding their market post COVID-19. Kakao Krew and professional lecturers serve as mentors to share their practical know-how, and promotional support is provided, including Kakao Moment's advertising platform, Kakao's emoticons and promotional exhibitions, so that class participants may safely try digital transformation on Kakao's platform. The curriculum is tailored to meet the specific needs of local startups and small business owners, to cover understanding of KakaoTalk Store, product management, and sales management to facilitate small businesses in exploring their digital business opportunities.

Neighborhood Business Development Center

Kakao has partnered with the Ministry of SMEs and Startups as a private collaboration partner for the Neighborhood Business Development Center support project. The initiative aims to revitalize local commercial districts by providing digital transformation training to merchants in historic city centers, ultimately boosting sales and stabilizing their businesses. The training program, which included participation from 34 stores, focused on creating and utilizing KakaoTalk channels, along with hands-on practice sessions. During the training period, business owners collectively published over 140 posts and gained 600 new friends on their KakaoTalk channels, demonstrating significant engagement and outreach.

Open Innovation for Co-prosperity with Local Startups

Supporting the Creation of a Startup Ecosystem in Jeju

Kakao aim to take the lead in making a positive impact in the local startup ecosystem by initiating our first venture investment consortium and committing to invest KRW 300 million annually over the next three years to support innovative startups.

Public-private Partnership Open Innovation

Kakao actively participates in the public-private partnership open innovation program organized by the Korea Institute of Startup and Entrepreneurship Development. Through this program, Kakao engages in proactive startup scouting efforts, facilitating connections between large corporations and startups and providing investment opportunities to establish optimal collaboration frameworks. Under the program, Kakao successfully identified three startups through the challenge of 'developing environmentally friendly, innovative products utilizing waste resources in Jeju.' The Kakaomakers' Saegaburch team directly participated in mentoring startup teams for project refinement and provided up to KRW 100 million in business development funding to startups selected in the top three during the Demo day.

ESG Open Innovation

Kakao participated in the ESG open innovation program organized by the Jeju Creative Economy Innovation Center. Through the program, Kakao engaged in the challenge of 'carbon neutrality and renewable energy technology,' collaborating with the local energy IT platform startup, VPPlab, to contribute to environmental problem-solving. Through the collaboration, Kakao sourced wind power energy within Jeju Island, procuring the entirety of the power used in its Jeju office in 2023. Kakao is committed to consistently implementing the principles of the 'Active Green Initiative' for climate crisis response and will continue to enhance its collaborative framework.

Win-Win Initiative

Together with Community

Creating the Value of Togetherness with Jeju People

Kakao Jeju Impact Challenge

Jeju Impact Challenge is open to all Jeju residents who are interested and committed to solving local challenges. They may propose project ideas for any local issues in the topics related to youth/local community, education, environment and more. In 2023, we collaborated with a total of 8 teams to improve the project through problem-solving workshops and mentoring based on design thinking. We demonstrated a long-term problem-solving approach by providing support funds ranging from KRW 3 million to KRW 5 million. We also provided expert mentoring and additional activity funds to two teams that have continued their activities from the 2021 and 2022 programs. Going forward, we will support the continuity of sustainable regional growth and strive to create positive changes in the region by linking the program with our 'Harbang on the Internet' program.

2023 Support Project

Category	Team	Detail
Environment	Acornz	Campaign to improve awareness of zero-waste camping culture and hosting a Camping day
	Cheonpyeong Farm	Planning campaigns and experience programs for young farmers practicing ecological agriculture
Youth/ Community	Together Project	Generation empathy project, creating storybooks together with the elderly and youth
	Great Unemployed	Planning and crowdfunding for a photo essay documenting the lives of residents on Gapado Island, facing population decline
	234	Campaign to improve working conditions and public perception of clean house workers and establishing rest areas
	Sister	Planning and operating the 'Haenyeo Academy' program for emotional support and empowerment of migrant new faenyeo (female divers) to integrate into the local community
Education	Manduk Bread & Books	Operating the 'Book Olleh' program to help students with care caps become familiar with books and grow through reading
	Hyeyum Salon	Operating play programs to foster peer relationships among children

Jeju Regional Contribution Activities and Achievements

Kakao has been recognized as a 'Volunteer-Friendly Company 2023' and has also been acknowledged under the 'Community Contribution Recognition Program.' The 'Volunteer-Friendly Company 2023' designation, organized by the Jeju Special Self-Governing Province and the Jeju Volunteer Center, honors Kakao's contributions to regional development through its academic-industrial collaborations, social contributions, and problem-solving program activities. In addition, Kakao's efforts have been recognized by the Ministry of Health and Welfare and the Korea National Council on Social Welfare under the 'Community Contribution Recognition Program,' highlighting the company's dedication to community-based social contribution activities. Kakao remains committed to continuous regional collaboration efforts to further our contribution to society.

Harbang on the Internet of Kakao

Harbang on the Internet of Kakao is our social contribution program that fulfills the wishes that serve the public interest made by individuals and families residing in Jeju as well as social welfare and non-profit organizations located in Jeju. As of the end of December 2023, the program has supported 517 individual stories and 245 group stories, with total donations reaching nearly KRW 1.07 billion. As part of this initiative, we also provided the 'Thanks to You' program for the self-development and emotional well-being of social workers who take care of youth, elderly and women among others to prevent their burnout and strengthen their vocational qualities. Participants were able to take a much-needed break and tend to their own needs while taking a family trip, attending a forest experience program with co-workers, watching a movie, and enjoying a meal.

Ansan Regional Communication Activities

Kakao Data Center Ansan is dedicated to nurturing communication and engagement with the local community. During the construction phase, priority was given to selecting companies and workers from within Ansan, ensuring that local businesses and residents benefited directly. The center also operated a promotional booth for the Ansan Science Valley and donated various supplies. Kakao also partnered with Forena to establish a small library within the Ansan House of Peace and donated a mobility support vehicle to the Ansan Tree-Planting School for the Disabled. Additionally, Kakao has contributed to the development fund of Hanyang University ERICA Campus and donated spaces for academic-industrial collaboration. These efforts reflect Kakao's commitment to responsible community membership and its ongoing dedication to achieving mutual growth with the local community.

The 2023 Ansan Science Valley (ASV) Science Festival

Social Impact

Making a Better World with People and Technology

Social Impact Approach

Kakao empowers changemakers addressing societal issues through various means such as platforms, funding, content, and technology, thereby fostering substantial social impact by driving meaningful change across diverse problem domains. To achieve this, Kakao operates a dedicated department within its overarching ESG organization, aimed at supporting organizations seeking to contribute to societal problem-solving with innovative ideas. Moreover, Kakao allocates a portion of its profits to establish a donation fund, managed by Kakao Impact, its corporate foundation. Through Kakao Impact, Kakao collaborates with external innovative and specialized partners to execute projects utilizing technology and platforms to address societal issues effectively.

Kakao Social Impact Framework

Making a Better World with Technology and People

Digital for All	Tech for Good	Platform for Impact
Supporting a universal shift toward digital transformation to promote a convenient and informed lifestyle	Facilitating impactful technological support for addressing social issues	Spreading impact via participation of platform-based professionals and users
Dangol Market	Tech for Impact	Empowering Nonprofit Organizations
Harmonious Digital World	Impact Climate	Kakao Together
Digital Finance(Pay) School for All		

Social Impact

Digital for All

Harmonious Digital World

Harmonious Digital World is a digital citizen education program for teens launched by Kakao and the Blue Tree Foundation since 2015. This aims to educate our children and teens, who will be the future leaders of the digital world, about the essential values to into responsible digital citizens.

Change Made Through Harmonious Digital World

Activity

We conduct training sessions to educate students on concepts such as emotions, empathy, personal data protection, and cyberbullying through play and participation. These sessions also equip teachers to integrate digital citizenship education into their daily interactions with students.

Participating schools
428 schools

Participating classes
1,968 classes

Participating students
40,647 students (as of 2023)

Output

Following the operation of the internal program 'Mobile Classroom,' a satisfaction survey among teachers revealed a high likelihood of recommendation and willingness to participate again.

Likelihood of recommendation
95.8%

Willingness to re-engage
69.9%

Impact

We annually measure the social value created through the 'Harmonious Digital World' initiative.

The social value generated by the "Harmonious Digital World Program" in 2023
KRW **2,726** million

Measured Value and Expected Benefits for 2023

Cyberbullying Prevention Effect: KRW **1,989** million	Increased Awareness of Personal Data Protection: KRW **90** million
Improved Digital Literacy: KRW **631** million	Enhanced Awareness of Copyright Protection: KRW **15** million

Individual

Enhanced Ability to Respond to Cyberbullying	Improved Personal Data Protection Skills
Strengthened Communication Skills in the Digital World	Enhanced Copyright Protection Skills

Social

Reduced Social Costs through Cyberbullying Prevention Among Youth	Reduced Social Costs through Increased Awareness of Personal Data Protection
Fostering Comprehensive Digital Citizenship through Improved Digital Literacy	Reduced Social Costs by Preventing the Use of Illegal Copies through Strengthened Copyright Awareness Among Youth

Dangol Market

Our 'Dangol Market' project supports the digital transformation of traditional market merchants, with the application of KakaoTalk channels to facilitate the creation and communication with customers online.

Number of Markets Completed Training	Number of Merchants Completed Training	Number of Stores Opened KakaoTalk Channels
100 markets	**870** persons	**1,001** channels

Training Completion Rate	Training Satisfaction
96.6/100% (Merchants/Market Associations)	**4.7/4.9** (Merchants/Market Associations)

Dangol Market

*As of 2023

Digital Finance(Pay) School for All

Kakao Impact and Kakao Pay have established a fund of KRW 3 billion to support digital financial literacy education over the next three years. This initiative aims to assist individuals who are not familiar with digital finance or face accessibility challenges, making it difficult for them to utilize new financial services. In November 2023, a pilot class targeting seniors was conducted, and plans are underway to expand the scope of educational support in 2024.

Support for Digital Financial Education
KRW **3** billion (contracted)

Social Impact

Tech for Good

Tech for Impact

Tech for Impact is an initiative by the Kakao Impact Foundation aimed at creating a healthy impact technology ecosystem by connecting social impact organizations with technology experts, focusing on solving social problems and providing growth opportunities through technology.

Change Made Through Tech for Impact

Activity

Connects developers, computer science students, Kakao Krew, and other technology experts with impact organizations partnered with Kakao Impact to collaborate on projects that address social issue.

Participants in 2023

Technology Experts	Social Innovators
Over **73** developers participated	**5** impact organizations participated

Output

Kakao Krew, KAIST, Everyone's Research Institute, and Brian Impact Fellows have worked together to implement Tech for Impact technology support projects. In December 2023, participants of Tech for Impact gathered to share the year's achievements at the 'Tech for Impact Connect Day.'

2023 Projects in progress

10 projects

Impact

By providing appropriate technology to impact organizations through technology experts, a foundation is established to accelerate the impact created by social innovators.

Photos from Tech for Impact Connect Day

2023 Technology Support Cases

- Creating a tourism culture to protect dolphin habitats using drones and AI
  DVA LAB X Marine Animal Research Center (MARC)
- Standardizing nutritional content information for food for people with type 1 diabetes
  DAYSCOUT X Korean Type 1 Diabetes Association
- Developing a diary app for continuous mental care for social activists
  MODY X Amazing Center

Tech for Impact

Impact Climate Network

Kakao Impact is fostering an ecosystem for ClimateTech startups that contribute to solving climate issues through technology and solutions, driving innovation and expanding climate impact.

Impact Climate Network	Monthly Climate Network
107 startups participating	**2,357** participants (cumulative)

Building the Climate Technology Ecosystem (Kakao Impact Climate Network)

Kakao has partnered with impact investment firm Sopoong Ventures to expand the reach and development of climate technology and create an ecosystem. Together, they are pooling their resources and expertise to drive the 'Kakao Impact Climate Network' project. Under this agreement, various programs will be conducted to connect ClimateTech startups with networks and expertise to help address climate issues.

Direct Air Capture Technology Seminar

Kakao Impact, in collaboration with Sopoong Ventures and the 2050 Carbon Green Growth Committee, hosted a seminar to introduce direct air carbon capture technology and policies, with a focus on business development and investment support. A total of 360 participants joined both online and offline. The seminar was conducted as a 'carbon-neutral event' by purchasing carbon removal credits.

Impact Climate

Social Impact

Platform for Impact

Kakao Together

Kakao Together is a social contribution platform by Kakao that enables anyone to participate and take action for social change. Through initiatives like 'With Kakao Fundraising,' where Kakao donates on behalf of users who support and share projects, and 'Act Together,' where users engage in small, everyday actions and certify their participation, Kakao is working with users to create a better world.

Change Made Through Kakao Together

Activity

The platform introduces projects led by public players, such as non-profit organizations, allowing users to easily donate and participate in the action through the platform

(As of May 2024, cumulative data)

Project Fundraisers

17,700 fundraisers initiated

Act Together Project

26 projects launched

Output

In 2023, 'With Kakao Fundraising' garnered 1.24 million participation, raising a total of KRW 13.6 billion. Through 'Act Together,' a total of 15 projects were conducted

(As of May 2024, cumulative data)

With Kakao Fundraising Fund

KRW **74.6** billion raised

With Kakao Fundraising Participation

59 million participations

Act Together Participation

608,455 participations

Mental Well-being Participation

13.84 million participations

Impact

- The platform sparks interest and connects resources to rapidly address urgent issues such as disasters, contributing to problem resolution
- By diversifying the fundraising channels for non-profit organizations, the platform encourages participation in solving social issues, contributing to social change

Notable Projects of 2023

Turkey-Syria Emergency Fundraising Campaign

This 'Emergency Fundraising Campaign' was launched within 24 hours of a disaster. During the Turkey earthquake in February 2023, the campaign saw the fastest participation in history, raising funds from 1.28 million people, amounting to KRW 4.8 billion, within just 104 hours.

'Move Together' Act Together Campaign

In celebration of Disability Day, a campaign was conducted with Kakao Map to certify places with wheelchair ramps, creating the ;Move Together' map. A total of 2,586 people participated in the action, and Kakao donated KRW 10 million to support the mobility rights of people with disabilities.

Kakao Together

Heroes on the Road

Kakao Mobility and Kakao Impact have initiated the Heroes on the Road campaign to introduce stories of hidden heroes among mobility service workers who demonstrate acts of kindness and courage such as protecting lives, implementing justice, volunteering, caring for others, kindness to others, and heartfelt stories. By expressing gratitude and acknowledging their contributions, we aim to create a better society.

도로위 히어로즈

A social contribution project aimed at spreading the positive influence of mobility workers in our daily lives

2023 Heroes on the Road

Recognized a total of **24** heroes

Examples of Heroes on the Road

City bus driver **Woo-Sik, Choi Hero** who prevented a major fire disaster by acting as ten fire trucks

Bus driver **Hong-Sik, Na Hero** who saved the life of a passenger in critical condition

Truck driver **Byeong-jo, Yoo Hero** who saved three lives despite risking his own life

Heroes on the Road

Governance

Why This Matters

Establishing transparent governance is essential not only for enhancing shareholder value but also for achieving balanced growth with various stakeholders. Developing and implementing proper principles and means for ethical and fair business operations is fundamental to securing stakeholder trust and represents one of the core values a corporation should uphold. Furthermore, in a rapidly changing business environment, cultivating comprehensive risk management capabilities and adopting proactive response strategies are critical elements for enhancing long-term corporate value.

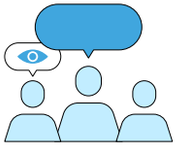
Approach

Kakao is committed to making decisions that spread positive value to stakeholders, based on responsible management led by its highest decision-making body, the Board of Directors. To achieve this, we have established a transparent governance structure with a Board that embodies expertise, independence, and diversity. The ESG Committee plays a central role in proactively managing financial and non-financial risks that may arise during business activities. Additionally, we have established the Compliance and Trust Committee, an independent external body, to enhance the preemptive review of legal and ethical issues in Kakao's major management decision-making processes

2023-2024 Highlights

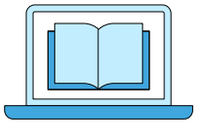
Efforts to restore trust

Created the Compliance and Trust Committee



Strengthening board independence

62.5% ratio of Independent Directors on the Board



Enhancing ethical management awareness among Krew members

94.1% completion rate of ethics training for all our Krew

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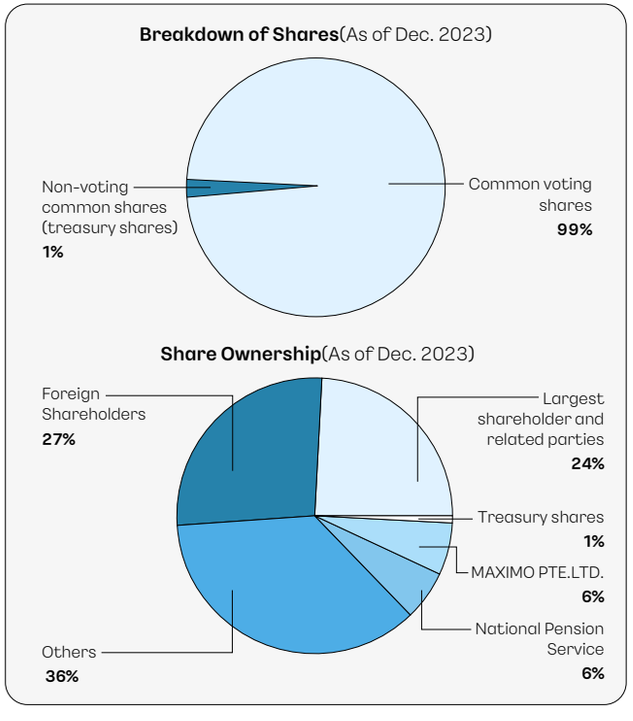
Corporate Governance

Shareholder-friendly Management

Stock and Capital Structure

As of 2023, Kakao has a total issued share capital of 444,849,878 shares, with a principle of One Share One Vote. As of December 31, 2023, there were 438,206,095 common shares carrying voting rights and 6,643,783 treasury shares that have no voting rights pursuant to the Commercial Act.

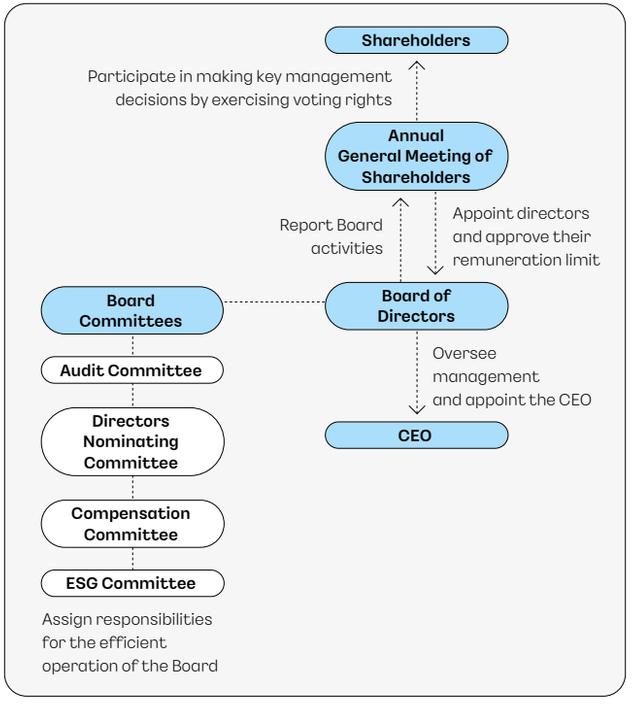
Breakdown of Shares



Shareholder-friendly Management Framework

Kakao has established a transparent decision-making system and governance structure to ensure rational business management and deliver greater shareholder value. Key activities include setting our mid to long-term shareholder return policy, fully disclosing our capital and stockholding structure, and proactively engaging in Investor Relations (IR) activities and disclosures, prioritizing the rights and interest of our shareholders in the process.

Kakao's Decision-making System



Shareholder-friendly Policy

To improve shareholder participation in voting rights exercise and provide convenience for exercising their rights, we have established various systems. We announce key agenda items, business reports, and audit reports at least two weeks prior to the annual general meeting to allow shareholders to be informed of the management situation in advance. We have also adopted electronic voting and proxy solicitation systems for shareholders to ensure voting right exercise who cannot physically attend the general meeting. Since 2017, when setting the date of our AGM(Annual General Meeting), we have been avoiding the period when such meetings are concentrated as published by the Korea Listed Companies Association. We also joined the Association's compliance program since 2018 to promote equal distribution of annual general shareholder meetings.

Stipulating Regulations on Executives Selling Stocks and a Preliminary Risk Review Process

Kakao has established and operates detailed standards for compliance with restrictions on the sale of shares by executives to prevent potential risks in advance. Under these regulations, executives are prohibited from collectively selling their shares. Executives except for CEOs are banned from selling their shares for one year following their listing, and two years for CEOs. Executives who resign/retire are also subject to these regulations for one year. Furthermore, executives who sold their shares in accordance with these regulations are still obligated to give advance notice on the number of shares and the timing of sales to the CA (Corporate Alignment) Committee and are also required to undergo the risk assessment process following their notification.

Corporate Governance

Shareholder-friendly Management

Mid to long-term Shareholder Return Policy

Implementation of mid to long-term shareholder return policies for three years (2021-2023)

In February 2022, Kakao established a mid to long-term shareholder return policy through the Board of Directors to strengthen global competitiveness and create a foundation for sustainable growth through reinvestment, in response to increased expectations and interest from shareholders. The discussions held during the board meeting formed the basis of the shareholder return policy for the three years from the FY 2021 to FY 2023. As part of this policy, annual cash dividends and share buybacks were allocated at levels ranging from 15% to 30% of our non-consolidated free cash flow (FCF).

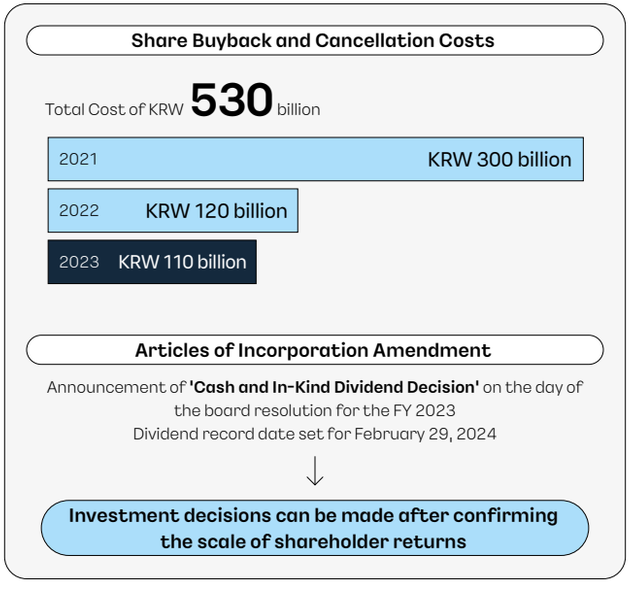
In the FY 2021, our retired shares amounted to KRW 300 billion in total, combining shares retired based on our shareholder return policy and shares retired under our special buyback plan. In the FY 2022, our retired shares accounted for approximately KRW 120 billion, nearly 25% of our adjusted free cash flow. In the latest fiscal year, FY 2023, which marked the final year of our three-year shareholder return policy, we conducted a share buyback of approximately KRW 1.1 trillion, equivalent to 24% of the adjusted surplus cash flow.

Furthermore, during the general meeting of shareholders in March 2023, Kakao revised its articles of incorporation regarding dividend record dates to enable investors to make investment decisions after confirming the scale of the company's shareholder returns. On the day of the resolution by the Board of Directors regarding dividend payments for FY 2023, Kakao announced both the 'decision on cash/share dividend' and the 'decision on shareholders' registry closure date (record date) for cash/share dividend' with the record date set as February 29, 2024.

Establishing a new mid to long-term shareholder return policy

As the three-year shareholder return policy implemented from 2021 to 2023 concluded in March 2024, Kakao is now preparing a new mid to long-term shareholder return policy. The new shareholder return policy will be determined considering changes in the company's business environment, capital investments including CAPEX, and future investment opportunities. It is expected to provide predictability and transparency regarding the scale of shareholder returns, aiming to enhance both shareholder and corporate value. The newly established shareholder return policy will undergo discussions with the newly appointed management team and the Board of Directors and will be disclosed to stakeholders in the future.

Performance of the three-year mid to long-term shareholder return policy

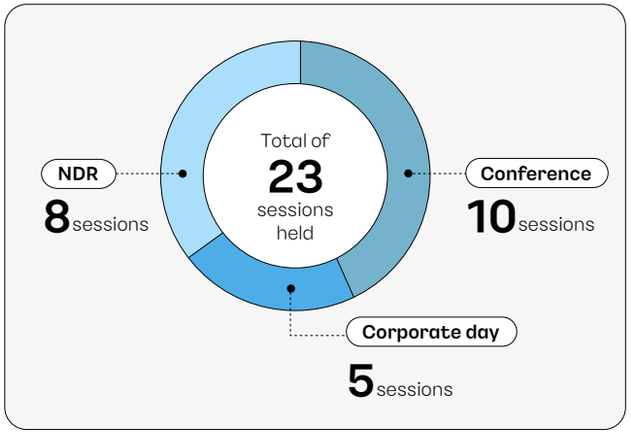


Strengthening shareholder communication

Kakao actively participates in domestic and international Non-Deal Roadshows (NDRs), securities firms' conferences, and Corporate Day events to actively share information about our company's status and strategic direction, while conveying the capital market's demands to the management team. In 2023, Kakao conducted a total of 23 domestic and international NDRs, conferences, and Corporate Day events, engaging proactively with various institutional investors.

Furthermore, Kakao regularly conducts Investor Relations (IR) meetings through face-to-face meetings or conference calls with domestic and international institutional investors and analysts. In September 2023, Kakao hosted an Analyst Day event where key management members directly communicated with securities analysts, enhancing investors' understanding of the company's management strategies.

Key Achievements in Shareholder Communication



Corporate Governance

Board Composition

Independence and Efficiency of the Board

As of March 28, 2024, Kakao's Board of Directors (BOD) consisted of 8 directors, with 5 independent directors (62.5% of total), thereby ensuring a level of independence exceeding the requirement stipulated in the Commercial Act. Kakao adheres to the Regulations of the Directors Nominating Committee and the Corporate Governance Charter which specify the criteria to evaluate the independence and transparency of directors following domestic commercial law, fair trade act and other relevant regulations. We consider expertise, diversity, and independence of the Board in the director nomination process. Moreover, on March 30, 2023, Kakao appointed an independent director as its Chair for the first time, ensuring its independence from top management and controlling shareholders.

According to Kakao's Corporate Governance Charter, an independent directors must have no significant conflicts of interest with Kakao. In the appointment process, our independent directors are mandated to prepare documents confirming their understanding of and compliance with our independent director qualifications and submit data on other current corporate positions outside Kakao. We transparently disclose data on our independent directors, including their previous positions at Kakao and its affiliated companies, transactions entered between them (or companies where they are the largest shareholder) and Kakao and its affiliated companies, and transactions entered between companies hiring them as employees and Kakao and its affiliated companies. Independent directors are prohibited from holding more than two positions following applicable laws to ensure they fulfill their role at the Board. In case any of our independent directors serves as an executive at companies other than Kakao, this should be approved by the Board according to Article 10-(1) 4-2 of the BOD Regulations.

Kakao's Corporate Governance Charter

Disqualifying Factors for Independence[1)]

- Directors, executive, and employees engaged in the company's business, as well as directors, auditors, executive, and employees who have been engaged in the company's business within the past 2 years
- The company's controlling shareholder, their spouse, and direct relatives
- Directors, auditors, executives, and employees of the controlling shareholder's corporation if the controlling shareholder is a legal entity
- Spouse and direct relatives of directors, auditors, and executives
- Directors, auditors, executives, and employees of the company or its affiliates
- Directors, auditors, executives, and employees of corporations with significant relationships such as transactions with the company
- Directors, auditors, executives, and employees of other companies where the company's directors, executives, and employees serve as directors, auditors, executives, or employees

1) Criteria for assessing independence as stipulated in the Directors Nominating Committee regulations, in accordance with domestic Commercial Law, Fair Trade Act, and other relevant regulations

Principles of Diversity and Expertise for Directors

Kakao Corporate Governance Charter endorses the 'diversity principle' in the composition of the Board of Directors to ensure that directors do not represent specific interests. Regulations of the Directors Nominating Committee also specify that the nomination of director candidates should factor in the expertise and diversity of the Board (gender, age, religion, nationality, race, ethnicity, and cultural backgrounds among others) to ensure a diverse composition. Moreover, considering the rapidly changing trends in the IT and internet industries and the internal and external business environments, Kakao appoints experts with diverse backgrounds and rich knowledge and experience to the Board of Directors. This ensures that the Board, as the company's highest decision-making body, can participate in key decisions with sufficient competitiveness and responsibility.

As of March 28, 2024, all five independent directors were experts in their field — finance/accounting, media, and technology and their diverse backgrounds and expertise contribute to high-quality discussions on the agenda items submitted to the Board and efficiently monitoring the work of senior management. There are four female directors (50% of total), and this helps improve the gender diversity of our Board. Kakao introduced the Board Skills Matrix to communicate to stakeholders' information on our Board members in terms of their expertise and gender/age breakdown as part of our continued efforts to ensure the expertise and diversity of the Board.

Board Skills Matrix

Experience and Expertise \ Directors	Shina Chung	Dae-Yeol, Kwon	Suk-Yung, Cho	Seok, Yun	Choon-Seung, Ham	Se-Jung, Choi	Kyung-Jin, Cha	Sae-Rom, Park
Law / regulations, policy		●	●	●				
Business management / investment	●		●	●	●		●	
Finance / accounting	●			●	●			
Digital / technology / security	●						●	●
Brand / communication	●	●				●		●
Risk management / stakeholder response		●	●	●	●	●		
ESG		●				●		●

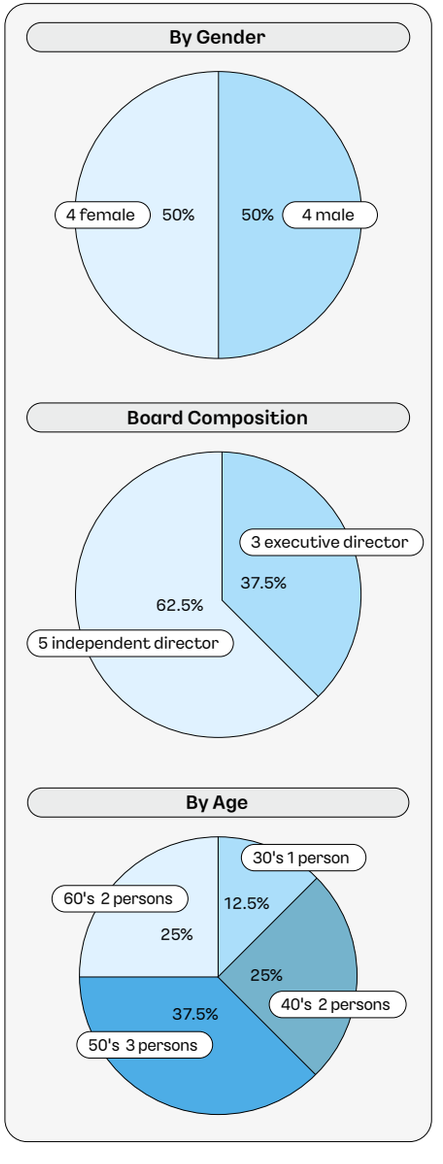
Corporate Governance

Board Composition

Board Composition

As of March 2024

Director	Name	Gender	Tenure	Career	Responsibility
Executive Director (CEO)	Shina Chung	Female	March 2024 ~ 2026 (As of AGM)	• French/French Literature and business administration Bachelor of Arts, Yonsei University • Marketing Master of Business Administration, Yonsei University • MBA, University of Michigan, Ross School of Business • Consultant, The Boston Consulting Group • General Manager, NHN Corp. • CEO, Kakao Ventures Corp. • (Current) Co-Chairman, Corporate Alignment Council	Member of the Directors Nominating Committee
Executive Director	Dae-Yeol, Kwon	Male	March 2024 ~ 2026 (As of AGM)	• Bachelor of Laws, Seoul National University • Journalism Master of Arts, Graduate School of Journalism, Media, and Communication, Yonsei University • Chosun Ilbo Co., Ltd. • CRO(Chief Relationship Officer), Kakao Corp. • Head of Enterprise Risk Management Committee, Kakao Corp. • (Current) President of ESG Committee, Corporate Alignment Council	Member of ESG Committee
Executive Director	Suk-Yung, Cho	Male	March 2024 ~ 2026 (As of AGM)	• Bachelor of Business and Administration, Seoul National University • Master of Laws, Northwestern University Law School • Head of the Investigation Team, Defense Industry Corruption Investigation Unit of the National Board of Audit and Inspection • Prosecutor, Seoul Central District Prosecutors' Office • Head of ERM Division, Kakao Corp. • (Current) Responsible Management Integrated Office Team Leader, Corporate Alignment Council	-
Independent Director	Seok, Yun	Male	March 2023 ~ March 2025 (Reappointment)	• Bachelor of Business Management, Yonsei University • MBA at NYU • Managing director, Head of equity research, Credit Suisse (Korea) • Managing director, Head of wholesale business/Head of research center, Samsung Securities • CEO, Samsung Active Asset Management • Vice President, Head of Active Management, Samsung Asset Management • (Current) CEO, Yun & Co • (Current) Adjunct Professor of Division of Business Administration, Sookmyung Women's University	Chairman of the Board Chairman of Compensation Committee Member of Audit Committee
Independent Director	Choon-Seung, Ham	Male	March 2024 ~ 2026 (As of AGM)	• Bachelor of Economics & Political science, Yale university • Managing Director, Citigroup Global Markets Korea Securities Ltd. • CEO, Citigroup Global Markets Korea Securities Ltd. • (Current) President, PH & Company Inc.	Chairman of Audit Committee Member of Directors Nominating Committee
Independent Director	Se-Jung, Choi	Female	March 2023 ~ March 2025 (Reappointment)	• Ph.D. in Mass Media (Advertising), Michigan State University • Assistant Professor/Associate Professor, Department of Advertising, The University of Texas at Austin • Independent Director, JTBC Mediacom • President, Korea Media Management Association • Editor- in- chief, The Korean Journal of Advertising and Public Relations • (Current) Professor, School of Media and Communication, Korea University • (Current) Independent Director and Chairman of the ESG Committee, HSAD	Chairman of ESG Committee Member of Audit Committee
Independent Director	Sae-Rom, Park	Female	March 2023 ~ March 2025 (Reappointment)	• Doctor of Science in Industrial Engineering, Seoul National University • Researcher, Industrial and Mathematical Data Analytics Research Center, Seoul National University • Assistant Professor of Department of Convergence Security Engineering, Sungshin Women's University • (Current) Assistant Professor of Department of Industrial Engineering, UNIST	Member of ESG Committee Member of Compensation Committee
Independent Director	Kyung-Jin, Cha	Female	March 2024 ~ 2026 (As of AGM)	• Business Information System Doctor of Philosophy, Australian National University • (Current) Associate Professor of Management Information Systems and Chair of Business Informatics Department, Hanyang University • (Current) Member of Advisory Committee for KoRoad Smart Future Transportation Big Data • (Current) Member of Advisory Committee for Gyeonggi Provincial Office Big Data • (Current) Member of Advisory Committee for Korean National Police Agency Data- based Administration • (Current) Member of Policy Advisory Committee for Digital Government, Ministry of the Interior and Safety	Chairman of Directors Nominating Committee Member of Compensation Committee



Corporate Governance

Board Composition

Management of CEO and Independent Director Candidate Pool

As the emphasis on ESG management by the Board of Directors increases and the importance of selecting, managing, and educating CEO candidates and managing independent director candidates grows, Kakao systematically manages its CEO and independent director candidates. In 2023, Kakao conducted management workshops and offline leadership training for CEO candidates and developed a management plan for independent director candidates, reporting the candidate pool to the Directors Nominating Committee. Moving forward, Kakao plans to continuously operate management and education programs for CEO candidates and will report suitable independent director candidates to the Directors Nominating Committee at least once a year, identifying priority candidates.

Management of CEO and Independent Director Candidate Pool

CEO Candidate Pool

- Candidates are selected from a group of senior executives within Kakao who possess advanced capabilities, extensive experience, and are responsible for leading large, high-demand leadership organizations
- Management workshops and leadership training are conducted for the candidates to promote a comprehensive understanding of Kakao's overall management and foster leadership growth

Independent Director Candidate Pool

- Candidates are selected based on the Board's expertise and diversity, absence of specific conflicts of interest, and compliance with legal qualification requirements
- A management plan for the independent director candidate pool was established in the first half of 2023, and the selected candidates were reported to the Directors Nominating Committee in the second half

CEO Candidate Nurturing Program

Kakao conducts training programs in diverse formats to help CEO candidates develop business insights and leadership skills. Management workshops are held for CEO candidates to share ideas and engage in discussions concerning their individual roles and responsibilities to better understand Kakao's overall business operations. Since 2023, Kakao have also provided training to CEO candidates to address key areas where they need to develop their competency.

Director Appointment Process

The Directors Nominating Committee comprehensively reviews the qualifications and capabilities of director candidates and recommends them to the general shareholders' meeting, where the final selection is made. Kakao's Corporate Governance Charter specifies that the Directors Nominating Committee must be composed to ensure fairness and independence in the nomination process. Furthermore, in accordance with Article 9-2 of the Directors Nominating Committee regulations, the committee establishes and thoroughly reviews internal criteria for the nomination of director candidates and, as per Article 9-3, for candidates for the Audit Committee.

Independent Director and Audit Committee Member Nomination

Independent Director

<Article 9-2 of the Regulations of the Directors Nominating Committee>

① Expertise and diversity of the Board of Directors (such as gender, age, religion, nationality, race, ethnic group, cultural background or other various factors);

② Independence in operating the Board of Directors (the ratio of composition of independent directors);

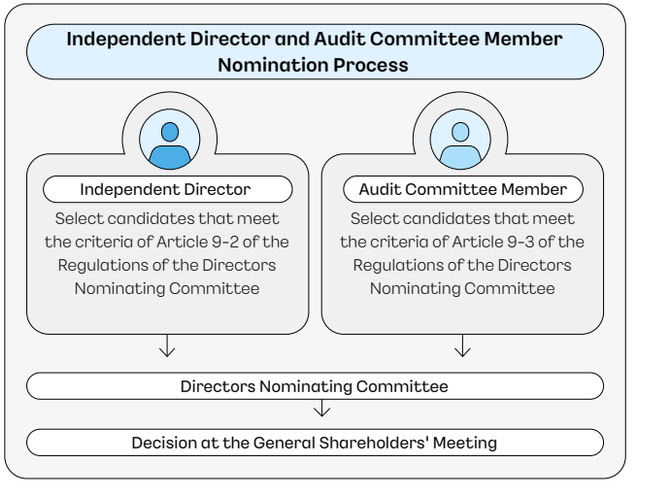
③ Risks of damaging the corporate value or violating the shareholders' rights and interest (whether the candidate has been subject to a final judgement due to one's embezzlement or breach of trust for the past 5 years, or whether the candidate is liable for damaging the corporate value and violating the shareholders' rights, interest, etc.); and

④ For an independent director, whether the candidate satisfies the qualification prescribed by the applicable laws and regulations, including Article 382 and Article 542-8 of the Commercial Act

Audit Committee Member

<Article 9-3 of the Regulations of the Directors Nominating Committee>

① The Committee shall select candidates for Members of the Audit Committee among the directors or director candidates in consideration of the matters prescribed by the applicable laws and regulations, including Article 542-11, Article 542-12, etc., of the Commercial Act.



Corporate Governance

Board and Committee Operation

Board Operation

In accordance with the BOD regulations, our Board meets regularly every quarter and holds ad-hoc meetings when deemed necessary. Decisions are made by the Board with a majority of the directors present and a majority of the attending directors voting for or against, unless otherwise stated in applicable laws or BOD regulations. Our BOD regulations and committee regulations are subject to periodic annual reviews to continuously make necessary improvements with any policy shortcomings to promote the efficient and reasonable operation of the Board. Also, to assist independent directors in making decisions, we ensure they have access to support from external experts when necessary as specified in the BOD Regulations and committee regulations.

In 2023, a total of 18 Board meetings were held, during which 51 agenda items were deliberated and resolved, and 13 items were reported.

Board Operation in 2023

Regular meeting : 11 meetings
Ad-hoc meetings : 7 meetings
Attendance : 96.3% for executive and independent directors
Major agenda : Deliberation on 51 agenda items , including capital increases, public offerings, disposal of shares in other companies, loan agreements, and granting stock options, and 13 reported items

Board Committees

Under the Board are four committees of the Directors Nominating Committee, the Compensation Committee, the Audit Committee, and the ESG Committee to aid in the efficient operation of the Board. All four committees are composed of a majority of independent directors and are all chaired by independent directors to enhance their independence and management oversight. Specifically, the Audit Committee and the Compensation Committee are solely composed of independent directors to ensure their independent decision-making as expert committees.

Committee Composition

Board of Directors

Audit Committee
- Chair: Choon-seung Ham, independent director
- 3 independent directors

Directors Nominating Committee
- Chair : Kyung-Jin Cha, independent director
- 2 independent directors/1 executive director

Compensation Committee
- Chair : Seok Yun, independent director
- 3 independent director

ESG Committee
- Chair : Se-jung Choi, independent director
- 2 independent directors/1 executive director

Audit Committee Operation

In accordance with Article 542-11 of the Commercial Act and relevant articles of incorporation, Kakao has established an Audit Committee, with its operations, authority, and responsibilities defined in the Audit Committee's operating regulations. The Audit Committee is composed entirely of independent directors, including accounting and finance experts, ensuring professionalism and independence. This composition emphasizes the independence and soundness of the corporate governance structure. In June 2023, the Audit Committee participated in both online and offline training programs to enhance their expertise. The training covered the role and responsibilities of the Audit Committee in overseeing internal controls, as well as ESG oversight by the Board considering the domestic environment.

ESG Committee Operation

Kakao operates the ESG (Environmental, Social, Governance) Committee under the Board of Directors to examine the strategic direction of our ESG management, oversee relevant performance, and manage any issues. The Committee is also responsible for conducting final review and grant approval on the annual 'Kakao's Commitment and Responsibility Report.' In addition, the Committee presents non-financial issues and countermeasures concerning ESG, non-financial risk review outcomes, domestic and international ESG evaluation outcomes, and issues in need of support for ESG capacity building and internalization. In 2023, the Committee reviewed and approved agenda items as Kakao and our affiliates shared value projects, introduction and reporting of carbon index, sharing of RE100 roadmap, and results of integrated risk management related to ESG.

ESG Training for Independent Directors

Kakao provide regular ESG training to independent directors to help bolster their ESG capabilities. In 2022, training was provided on our environmental strategy 'Active Green Initiative', attended by all independent directors. Following this, in 2023 a session on the 'Recent ESG Regulatory Trends and Risks' was conducted with participation from all independent directors to enhance their understanding of the current evolving ESG landscape.

Corporate Governance

Board and Committee Operation

Board Assessment

Board and Committee Assessment

To improve the operational efficiency of our Board of Directors and its committees, Kakao has established a performance evaluation system conducted once a year. The Board is assessed for its operational efficiency and each committee for their activities. The periodic annual self-assessment process was established for independent directors at the end of 2022, and this was implemented in January 2023 along with Board and committee assessments.

The assessment results were analyzed by the Compensation Committee to provide mutual feedback on the performance of the Board and its committees and were reported to the Board later on. The feedback generated from Board assessments contributed to our improvement efforts to support the efficient operation of the Board and its committees.

Board, Committee, and Independent Director Assessment Results in 2023

Board's operational efficiency	Board committee activities	Independent director self-assessment
Excellent in general	Excellent in general	Excellent in general

Management Performance Review

Performance reviews of top management team, including the CEO, comprehensively consider their contributions to our financial performance of the business, attainment of strategic goals, the growth of corporate value, and the internal and external business conditions. To ensure our CEO fulfills his/her social responsibility, we included metrics associated with bolstering ESG management in determining CEO's bonus pay (15%) to further strengthen our response to society demands.

ESG Performance Metrics Set for the CEO

Area	2022~2023 Goals	Performance Metric
Environmental	Set carbon emissions reduction goals and implement the roadmap for climate change adaptation	• Make our 2040 Net Zero commitment and develop climate change adaptation strategy • Achieve the RE100 through phased-in renewable energy transition • Develop and implement green building certification guides (LEED, etc.) • Develop user-engaging carbon reduction programs
Social	Create an inclusive ecosystem with partners	• Operate a support center for small business owners • Implement the Dangol Market project • Expand sales opportunities for agricultural/livestock/fisheries products through the Jegaburch Project
	Promote inclusion and diversity through improved digital accessibility and literacy	• Appoint the Digital Accessibility Officer • Make KakaoTalk and KakaoMap more accessible for people with disabilities • Develop programs to help Krew bolster their accessibility competency and raise awareness • Support communication with users with disabilities and reliable assistive technology
Governance	Advance the company-wide integrated risk management system and further stabilize services	• Stipulate risk management regulations and advance the management system • Establish a compliance management system • Expand infrastructure investment to provide reliable services

Board Remuneration

The remuneration limit of directors including the CEO is set through the decisions made by the shareholders' meeting, and compensation is made through the Compensation Committee in conformity with our executive compensation regulations. Compensation for executive directors consists of fixed base pay and bonuses aligned with one's performance. Base pay is calculated based on the value of the work performed and individual capabilities, and bonuses are determined by comprehensively taking into account one's contribution to the company's business performance and attainment of strategic goals, the growth of corporate value, internal and external business conditions, and external competitiveness in compensation. In addition, we provide benefits to promote the welfare of our Board members and the CEO, and grant stock options as approved by the shareholders' meeting to hold top management accountable for our long-term corporate value growth and responsible management. Our independent directors receive base pay only without other additional compensation such as bonuses and stock options. Compensation for individual directors and auditors that exceeds the KRW 500 million threshold is disclosed through our business reports to transparently share details on director compensation.

Director Compensation in 2023 (Unit: Persons, KRW million)

Director	No. of Directors [1]	Total Compensation	Average Compensation per Person [2]
Registered director (excluding independent directors and Audit Committee members)	3	2,800	1,018
Independent director (excluding Audit Committee members)	1	69	69
Audit Committee Member	3	211	70

Details of Remuneration Payment Ratio [3] (Unit: KRW million)

CEO remuneration	Employee average remuneration	CEO-to-employee remuneration ratio
1,296	101	12.8times

1) Refers to the number of directors subject to approval for the total remuneration limit resolved at the annual general meeting of shareholders

2) Calculated by dividing the total remuneration amount by the average number of executives, taking into account the changes in the number of executives during the disclosed fiscal year

3) Based on our 2023 annual report

Risk Management

Risk Management

Approach to Risk Management

Kakao have institutionalized the ERM (Enterprise Risk Management) Committee reporting system as part of its efforts to enhance our risk management for managing company-wide risks. In 2023, a dedicated ERM support division was established to provide more effective support and operation of the ERM Committee, striving for improved risk management.

In line with risk management regulations, the Board of Directors, the ESG Committee and the Audit Committee analyze the impact of potential losses that may occur due to changing external conditions while implementing separate risk management plans to address relevant risks. Risk management plans include stress tests and phased contingency plans and are headed by the Risk Management Committee. Furthermore, we continue to manage financial and non-financial risks that may arise in the technology development and service planning and operation phases with relevant departments.

Basic Principles of Risk Management

- Risk Management will be carried out by striking a balance between the short-term and the mid- and long-term perspectives.
- The Company shall ensure that the resources are efficiently utilized by adequately diversifying the risks and setting a permissible limit.
- Risk Management shall be carried out at the Company level and shall be proactively carried out from the phase of project planning.
- Risks shall be meticulously checked and managed by the Responsible Department (defined below) and the Primarily Responsible Department (defined below) through all the phases, including technology development and services planning and operation phases.
- As for any Risks that may occur from time to time, the Company shall operate a sharing system where all the Krew as well as the Responsible Department and the Primarily Responsible Department may check such Risks.

Risk Management Regulation

Risk Management Governance

The Board of Directors, the ESG Committee, and the Audit Committee are collectively responsible for integrated risk management, headed by the ERM Committee. The Compliance Management Division is responsible for non-financial risks and the Finance Group for financial risks to ensure appropriate risk response. The ERM Committee holds monthly regular meetings to review the management status of non-financial risks according to risk management regulations, analyze their impact on the company, and make key decisions regarding major non-financial risks. Relevant key issues and outcomes are reported to the ESG Committee, the Audit Committee, or the Board of Directors.

The integrated management system for non-financial risks under the ERM Committee's oversight is planned to be expanded not only within Kakao but also throughout the entire group by 2024.

Board of Directors

- Head the management of financial and non-financial risks
- Review and oversee potential risks and develop policies

ESG Committee

- Head the management of non-financial risks
- Delegated by the Board to manage non-financial risks

Audit Committee

- Head the management of financial risks
- Delegated by the Board to manage financial risks

ERM Committee

- Share the status of risk management through monthly regular meetings
- Overall responsibility for company-wide risk management and reporting of key risk management issues to the Board of Directors

Responsible Department

- Support and manage risk-based business operations including risk management status review, response, control, policy development and progress review

Risk Management Process

Kakao operates a company-wide risk management process consisting of risk identification, assessment, monitoring, response, and review.

Risk Identification

- ERM Committee serves to regularly identify and list financial and non-financial risks that affect business operations
- Identified risks are categorized and defined following risk management regulations while their responsible team is assigned, and management plans are developed for risk response

Risk Assessment

- Risks are identified four times a year and are assessed for their 'probability of occurrence' and 'impact'
- Risks are prioritized based on the need for response in consideration of risk tolerance and appetite → Top-priority risks are defined as 'key risks'

Risk Monitoring and Response

- In line with the set risk management plan, the responsible team develops detailed implementation measures → pursue continuous and regular risk monitoring and response

Risk Management Process Review

- The ERM Committee reviews and manages the risk management process for its effective, company-wide implementation following risk management regulations.
- The Committee analyzes risks for their impact on Kakao and reports key findings to the ESG Committee and the Audit Committee.

Disseminating a Culture of Risk Management

Kakao immediately shares/communicates any identified risks right upon their detection to the dedicated organization. For cross-sectoral issues, we leverage our collaboration system to work with experts from relevant teams to ensure efficient response to such risks. Kakao also forms committees with expertise in specific fields, such as the News Transparency Committee, to develop risk mitigation plans.

Risk Management

Risk Management

Kakao defines risk as any potential uncertainty that may occur in the course of business activities, potentially leading to unfavorable outcomes or losses to corporate value. Risks are managed by categorizing them into financial and non-financial risks. Financial risks include those related to interest rates, liquidity, credit, foreign exchange, capital, financial reporting, internal accounting management, taxes. These risks pertain to the company's financial condition, financial information reporting system, and tax policies. Non-financial risks encompass items that may arise in business operations, such as compliance, corporate/technology/service ethics, human resources, climate change, and environmental. Kakao identifies the following key risks and addresses them through relevant departments.

Defining and Responding to Risks

	Risk	Definition	Our Response	Relevant Team
Nonfinancial risk	Technology ethics	AI, cloud, blockchain and other emerging technologies not only provide varying benefits but also bring adverse effects, and thus require the management of risk factors	• Created the Tech for Good Committee comprising technology leaders and risk managers at Kakao and the group • Reviewed major technology ethics issues with external experts through social cooperation agencies	Tech for Good Committee of the Kakao Group, Human Rights and Technology Ethics Team, Policy Team
	User protection	Technical defects and other risks may cause inconvenience for users in their service use and infringe upon users' rights	• Reviewed and improved policies on an on-going basis from the viewpoint of user protection • Advanced our management system through organizational restructuring to increase the stability of service infrastructure • Advanced our security system to protect users from financial scams including phishing committed through the abuse of services • Established a service support system for swift societal response, in an era of multiple disasters and emergencies	Infra Group, Roundtable on Financial Customer Protection, User Service Team, Disaster Response TF
	Privacy	User information collected through service offerings inherently entails privacy infringement risks, and any violation of applicable laws may lead to sanctions imposed on the concerned services	• Provided internal training on privacy • Conducted personal data impact assessment even before service launching • Reviewed our privacy policy through the Privacy Advisory Committee composed of external experts	Privacy Office
	Policy and regulation	Policy and regulatory changes impact the competitiveness of our existing business and could hamper our stable advancement into new business areas	• Monitored domestic and overseas policy trends on an on-going basis • Analyzed factors affecting our business competitiveness and set the course to respond to such factors	ER Division, Policy Team
	Compliance	Direct/indirect financial liabilities, civil or criminal disadvantages, sanctions by regulatory authorities, or adverse impact on the organization or its employees may occur	• Conducted reviews to ensure we do not run counter to any current laws or policies in the course of our business conduct • Reviewed contracts and transactions among affiliated companies for their appropriateness	The Compliance Management Division
	Information security	Abusing activities that disrupt normal service operations, malicious hacker attacks against systems and other information security issues are always present	• Established a system to maintain a reliable security environment • Engaged in sustained monitoring and advanced our response capabilities against abuses, hacking, and other external attacks	Information Security Division
	Ethics	Unethical behaviors of Krew or partners that occur in the course of business conduct expose us to operational and reputational risks.	• Provided training on an on-going basis to prevent unethical behaviors and decision-making • Supported supply chains for ethical management activities	Ethics Management Team, Human Rights and Technology Ethics Team
	Reputation	Poor business performance, social controversies caused, complaints raised and critical litigations could all create negative public sentiments and undermine our public reputation.	• Launched proactive public communication activities through media and internal/external channels • Responded to the spread of inaccurate information across society and identified promotional practices to improve our corporate reputation	Communication Group, Marketing Division, ERM Committee
	CI (Corporate Identity)	Poor business performance, social controversies caused, complaints raised and critical litigations could all create negative public sentiments and undermine our public reputation.	• Collected reports on the misuse/abuse of Kakao IP components including our key CI and took action	Intellectual Property Team, Marketing Division (Brand Management Committee)
	PI (Personal Identity)	Social controversies could occur for executives, Krew and other members of the Company, critical lawsuits could be raised in relation to work, and the sound growth of the Community could be inhibited.	• Provided regular training on the Code of Ethics and disciplinary regulations to raise internal awareness • Operated a hotline program to report misdeeds	Ethics Management Team
	External conditions	Infectious diseases, wars, terrorism, and other unexpected changes in the external environment may cause disruption to our sustainable business operations.	• Swiftly recovered from the service outage caused by the data center fire • Created a company-wide organization for systemic response to overall risks including external environment risks	Specialized ad-hoc teams (e.g. Emergency Response Committee), ERM Committee
	Human rights	Violation of human dignity, value, freedom, and rights guaranteed by the constitution or laws or recognized internationally results in human rights risks.	• Operated a system to respond to behaviors that are unethical or could violate human rights across the entire business operations • Operated a reporting system to take swift action for the damage caused • Created a dedicated organization (Human Rights and Technology Ethics Team) for the systemic implementation of human rights management • Conducted human rights and technology ethics training for all Kakao employees • Issued the first diversity report among domestic IT companies	Human Rights and Technology Ethics Team, Roundtable on Human Rights and Business
	Climate change and environment	Risks may occur in the process of responding to a range of environmental challenges, including actual or potential environmental pollution and degradation and climate crisis caused by climate change, and its resulting policy and regulatory changes.	• Established climate change and environmental risk response strategy • Reduced environmental impact by fully transitioning to renewable energy at our Jeju Office • Launched eco-friendly services and campaigns to reduce GHG emissions by opting for greener alternatives	ESG Management, Environmental Management Task Force, Active Green Platform Team
Financial risk	Currency/ interest rate/capital/ credit/tax	Abrupt currency rate fluctuations, interest rate changes, capital risks, credit rating risks and tax risks all represent the instability of and dramatic volatility of the future market.	• Continuously monitored the rapidly-shifting macroeconomic landscape • Took a conservative approach to tax policy operations through regulatory reviews and authoritative interpretations	Finance Group

As of Dec. 2023

Risk Management

Risk Management

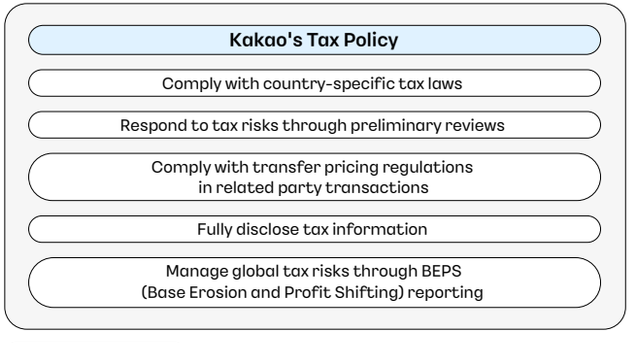
Emerging Risk Management

Kakao ensure that we recognize emerging risks from the long-term perspective and analyze how such risks may impact our business to respond to them before they occur. As a result, potential risks in the area of technology, economy, society and environment have been identified. As such, Kakao will continue with close monitoring and preemptive response to ensure emerging risks do not negatively impact our future business operations.

Emerging Risk	Potential Impact	Our Response
Concerns about declining trust due to ethical issues related to AI technology bias, hate speech, and other technology ethics issues	In AI-driven services, the absence of a filtering system to prevent the learning of racially or gender-biased samples or the violation of ethical values can lead to a loss of trust in the technology, which may result in a loss of service competitiveness and significant damage to the company's social reputation	• Through Tech for Good Committee of the Kakao Group, revised the 'Guidelines for Responsible AI in the Kakao Group' and established AI ethics principles • Enhanced internal organization and implementation systems to practice AI ethics principles and pursued specific application plans for related inspection tools in services • Established a dedicated organization for the execution of AI technology ethics • Developed algorithms to defend against users' adversarial training which contaminates AI technology and causes verbal violence • Provided company-wide technology ethics training
Response to the rapid advancement of science technology and shifting market conditions	Just as dynamics of the digital industry and market itself surged in the wake of ChatGPT, the emergence of new technologies and services powered by such technologies may bring multifaceted impact on Kakao's business operations, including our business competitive edge	• Continuously monitored the emergency of new technology and the resulting market changes, and identified and responded to change in our business competitiveness • Established a system to swiftly address even unexpected changes
Domestic and international communities' efforts to contain the dissemination of technology-based Platforms	As digital platform companies become increasingly influential across society, social needs are rising along with policy and regulatory restrictions that call for platform businesses to consider even the sustainability of the industry ecosystem where they operate	• Develop ways to make society as well as our business operations more sustainable • Give back to society through sharing-driven activities undertaken outside our business areas • Internalize ways to make our society more sustainable simply by conducting business
Increasing demand to contribute to countering climate change	As digital platform companies become increasingly influential across society, social needs are rising along with policy and regulatory restrictions that call for platform businesses to consider even the sustainability of the industry ecosystem where they operate	• Embed eco-friendly values into our essential business operations over the mid-to-long term in line with the Active Green Initiative, Kakao's environmental management principle • In line with the 2040 Net-Zero roadmap, pursued the transition to renewable energy, the transition to electric vehicles, and data center power efficiency • Continued reduction of greenhouse gases through eco-friendly integrated design of the Data Center Ansan and energy efficiency improvements at co-location data centers

Tax Risk Management Policy

Since 2022, Kakao has established and operated a tax policy, rigorously adhering to domestic tax laws and tax agreements signed in countries where we have business interests. We doubly make sure that we file and pay taxes within the set deadline, and lawfully retain and manage all documentary evidence associated with business operations. We fully cooperate in the implementation of the tax policies of countries where we are based, maintain transparent working relationships with tax authorities, and swiftly and accurately provide tax-related information when such information is requested.



Kakao's tax policy

Tax Risk Management Process

Kakao makes efforts to prevent potential tax-related risks that may arise from any transactions in goods, services, as well as capital in the course of our business conduct. We seek advice from multiple external experts and submit preliminary inquiries to tax authorities to prudently consider tax risks in important decision-making processes. Particularly, Kakao maintains fair transaction prices in transactions with related parties (such as Kakao affiliated company) in accordance with relevant laws and regulations. It closely collaborates with related parties to ensure fair pricing as stipulated by applicable laws and seeks to prevent risks through external consultations.

Ethical Management and Compliance

Ethical Management System

Code of Ethics

Kakao puts ethical management first before all else and complies with the Code of Ethics set out to build trust-based relationships with all stakeholders, ensuring compliance throughout our management activities. The Code of Ethics provide all Krew with set of standards to adhere to in making ethical judgement and behavior, aiming to prevent any suspicious situations that may undermine the company's values or raise external doubts in advance. To uphold this commitment, Kakao has been obtaining pledges from all employees since 2021 to strictly adhere to the company's ethical guidelines as Kakao Krew. Our partners are also encouraged to understand and comply with Kakao's Code of Ethics. This Code is subject to regular review and supplementation to keep abreast with the shifting business landscape and social norms.

Kakao Code of Ethics

Chapter 1	General Provisions	Chapter 5	Responsibility Towards Stockholders
Chapter 2	Attitude of the Krew	Chapter 6	Relationship with Business Partners
Chapter 3	Responsibility Towards Customers	Chapter 7	Responsibility Towards the Society
Chapter 4	Responsibility Towards the Krew	Chapter 8	Reporting and Informant Protection

Kakao Code of Ethics

Code of Ethics Governance

Kakao operates the Standing Ethics Committee as the top governance body for ethical management and has a dedicated department (Ethics&Audit) under its jurisdiction. The Standing Ethics Committee strives to enhance employees' ethical standards (anti-corruption consciousness, fairness in work, etc.) through investigation and deliberation on ethical issues concerning our Krew. Decisions and other measures resulting from deliberations are made fairly through discussions and secret voting, with strict adherence to confidentiality regarding deliberation matters.

These decisions, including the results of fraud risk assessments (2023 audit of improvement measures for consumables and asset procurement processes) and the status of reports received, are reported to the Board of Directors once a year.

The Committee is chaired either by the CEO or by a member delegated and authorized by CEO's designation, and its composition takes into account the balanced representation of its members in terms of position, gender, and age. In 2022, two additional ethics committee members were appointed to oversee deliberations and decisions of the Standing Ethics Committee for improved objectivity and fairness. In 2023, a total of nine ethics committee members actively participated in the activities.

Implementation Process

Kakao has established a three-step process consisting of prevention, review, and remedy, and the dedicated department (Ethics&Audit) effectively carries out ethical management based on this process.

Ethical Management Implementation Process

Prevention

Clarify and promote principles, criteria and norms

- Operate trainings and systems on business ethics
- Pledge to Code of Ethics

Review

Assess the process based on data analytics

- Conduct regular audits (fraud risk assessment) and report to the Audit Committee (annually)
  - 2021: Review of infrastructure asset procurement process improvement measures implementation
  - 2022: Audit of consumables and asset procurement processes
  - 2023: Review of consumables and asset procurement process improvement measures implementation
- Operate counseling and whistleblowing channels

Remedy

Discover, check facts, and respond

- Protect those affected
- Recommend disciplinary and HR actions
- Notify results
- Develop measures to prevent reoccurrence

Ethical Management and Compliance

Prevention and Response to Ethical Violations

Ethics Training for New Hires

New recruits are provided with monthly ethics training as part of the onboarding program. The training include understanding Kakao's Code of Ethics and sharing and disseminating cases of non-compliance. In 2023, a total of 194 new hires participated in and completed the ethics training through our onboarding program.

Ethics Training for the Entire Krew

We provide all our Krew - full-time employees, contract workers and fixed-term workers - with training designed to internalize ethical management into our business operations. In 2023, the training was conducted on understanding ethics management, unfair trade practices, and the anti-corruption management system. Out of 3,827 Krew subject to training, 3,601 members (94.1% of total) completed the training.

Ethical Management Education for Krew in 2023

Chapter 1	Ethical Management Story : What is ethical management for?
Chapter 2	Ethical Management Story : How can we eliminate cartel and unfair trade practices?
Chapter 3	Understanding policies for the prevention of bribery and corruption (Anti-corruption Management System) Part 1
Chapter 4	Understanding policies for the prevention of bribery and corruption (Anti-corruption Management System) Part 2

Reporting System for Ethical Violation and Whistleblower Protection

Kakao Cyber Ethics Center serves as a channel for external stakeholders to report concerns on unethical or corrupt practices involving employees at Kakao and other affiliated companies, including unfair practices, unjustifiable requests such as bribery and entertainment, misuse or abuse of corporate assets, illegal investments in suppliers, leaks of confidential information, and document/data fabrication. The Cyber Ethics Center strictly abides by the principles of confidentiality and identity protection for whistleblowers following applicable laws and internal regulations, prohibiting any form of discrimination or disadvantage that may result from making a report or statement.

By the request of the reporter or whistleblower for identity protection, our dedicated department (Ethics&Audit) coordinates with HR and legal departments to provide legal support, department transfers, or any other necessary assistance.

We operate TellMe@kakao and hotline email service (hotline@kakaocorp.com) 24/7 as a whistleblowing channel for Krew to report the violation of the Code of Ethics or seek counseling in relation to such violations either anonymously or under their real name. In 2023, a total of 38 cases of counseling and whistleblowing were submitted through internal and external counseling and whistleblowing channels. After investigation, all 13 confirmed cases were resolved.

Cyber Ethics Hotline

Email : hotline@kakaocorp.com
Address : 13529) Kakao Ethics&Audit, 166, Pangyoyeok-ro, Bundang-gu, Seongnam-si, Gyeonggi-do, Kakao Ethics Audit
Online Report : https://www.kakaocorp.com/policy/cyberEthics/new

Operating a Gift Return Center to Prevent Bribery and/or Entertainment

In accordance with Article 11 (gifts and entertainment) of the Code of Ethics, Kakao adheres to a strict 'no giving and no receiving' policy regarding gifts from stakeholders. To enforce this policy, Kakao operates a Gift Return Center, where all gifts received from stakeholders are processed and returned via the Service Lounge. Also, Kakao Krew and their families are prohibited from receiving any bribes or entertainment that may cause conflict of interest. The same prohibition applies to competitors, customers, and other business partners.

If receiving a gift or monetary benefit is unavoidable, it must be returned immediately. Any provided gifts or bribes should be immediately turned into our Gift Return Center, following the set procedures.

Examples of Issues Related to the Acceptance of Gifts and/or Entertainment

- An interested party dines and entertains the Kakao Krew
- An interested party sends money or flowers to a Kakao Krew's personal occasion
- An interested party provides lecture fees, concert tickets to a Kakao Krew, or pays for their meal for reasons that are justified as training, pep rallies or cultural events
- An interested party offers conveniences that includes rides, lodging expenses and tour guides while accompanying a Kakao Krew for business purposes

Preventing Political Donations and Sponsorships for Associations

Kakao strictly abides by Chapter 6, Article 31 (restriction on donations) of Korea's Political Funds Act and prohibits the use of company-related funds for political donations. We make it very clear that we do not make any political donations by using our corporate funds nor provide any political funds, election-related campaign funds, or funds for lobbying political organizations. However, Kakao does sponsor certain public interest associations and trade associations that are politically neutral.

Ethical Management and Compliance

Strengthening Group Ethical Management

Enhancing Group Ethical Management Governance

Kakao has established ethics committees within our affiliates to strengthen the group's ethical management governance. Furthermore, to ensure high standards of ethical management across all our affiliates, we provide the necessary procedures and guidelines for ethical management, enabling both Kakao and its affiliates to implement these practices effectively.

Core Values for Promoting Ethical Management

- The Kakao Group is committed to maintaining thorough integrity in all its actions, internal relationships, and interactions with external stakeholders through the practice of ethical management
- The Kakao Group aims to prevent, monitor, and address any breaches of its ethical guidelines
- Should any violations of the Kakao Group's ethical guidelines occur, immediate and appropriate action will be taken

Group Ethical Management Protocol

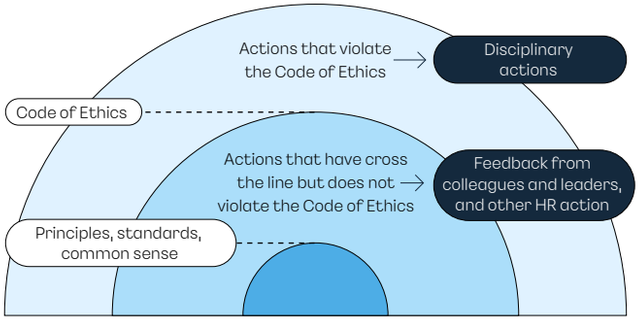
Kakao operates a group ethical management protocol that facilitates the sharing of ethical issues among affiliates and streamlines responses. In 2023, we encouraged group-wide ethical management training to enhance employees' ethical awareness. As a result, Kakao and several of our affiliated companies, including Kakao Games, Kakao Entertainment, Kakao Pay, Kakao Enterprise, and Kakao Investment, conducted ethical management training for all our Krew.

Operating Group Legal Table

Kakao regularly operates the Group Legal Table to integrate the collaboration system between our affiliates and legal affairs. The legal leaders from each affiliated company (such as compliance officers) attend these meetings both online and offline to share identified risks and issues that could potentially impact the entire group.

Given the importance of timely responses and sharing to minimize risks, Kakao maintains continuous communication channels in addition to the regular Group Legal Table meetings. For legal insights related to new business ventures, separate seminar sessions are organized to share relevant insights and apply them to issues faced by each company. Through this, the Kakao Compliance Team and each affiliated company have established an integrated compliance system. This system is continually enhanced to ensure the processes of risk identification, timely response, monitoring, and prevention of recurrence are carried out effectively.

Responses According to Ethical Regulations



Ethical management activities of affiliated companies

Kakao affiliates pursue strict integrity in all their activities and in their relationships with both internal and external stakeholders through the practice of ethical management.

Kakao Entertainment	• Implemented ethical management education for all Krew • Operated Cyber Ethics Reporting System and proactive monitoring system for ethical management within the organization
Kakao Pay	• Conducted various ethics training programs such as Improper Solicitation and Graft Act, Campaigns against giving or receiving gifts, Confidential Information Management, etc. • Ethics management education for key partner companies
Kakao Mobility	• Implementation of company-wide Ethical Management Education • Conducted Compliance Campaigns and implemented Compliance Checklists • Operated an online whistleblowing hotline
Kakao Enterprise	• Established Standing Ethics Committees, Technical Ethics Committees, and Support Organizations for Ethics Management
Kakao Style	• Revised and established regulations related to ethical management (Ethics Regulations, Conflict of Interest, etc.) • Formed Standing Ethics Committees and dedicated departments for Ethics Management

Kakao Group Cyber Ethics

Ethical Management and Compliance

Comply with the fair-trade principle

Principles of Fair Trade and the Ethical Practice Agreement

Kakao provides all business partners with fair trade opportunities and conducts business in accordance with principles. We have adopted four action agendas for compliance with subcontract regulations stipulated by the Fair Trade Commission into our Purchase System PoK (Partner on Kakao), to build trust-based relationships with suppliers. We also sign the ethical practice agreement with suppliers to commit to respect them as business partners and pursue mutual growth while engaging in transparent and fair transactions and mutual cooperation. Through this, both Kakao and suppliers pledge to abide by laws and ethics and to conduct business fairly and transparently.

4 Action Agendas for Fair Trade

Enter into desirable contracts to promote win-win partnerships among large/mid/small-sized businesses

Kakao complies with reasonable and fair contracting guidelines to ensure that SMEs duly pursue their interests in the contract

Select (register) suppliers in a fair manner

Kakao follows transparent and fair procedures in selecting and operating suppliers in accordance with the set guidelines

Establish and operate the internal subcontract deliberation committee

Kakao's internal deliberation committee fairly reviews the overall process of subcontracting including supplier selection, contract signing, and pricing

Issue and retain written documents in subcontract transactions

Kakao establishes fair transaction practices by disseminating a culture of conducting transactions in writing and implementing a policy to this effect, and issues and retains written documents in principle in signing contracts and engaging in transactions

Assessing Unfair Trade Risks with Suppliers

Our Procurement Deliberation Committee meets at least once a month to review and deliberate on the occurrence of unfair transactions or violation of the Subcontract Act through a checklist used before and after the signing of a contract with suppliers. The Dispute Settlement Committee also convenes at least once a month to proceed with settlement procedures for suppliers involved in the issues raised. Since the Dispute Settlement Committee was established in 2018, not a single case of dispute settlement has been recorded.

Establishing guidelines for operating the Dispute Resolution Committee

- Kakao strives to comply with the Subcontracting Act and other Fair Trade Commission regulations in transactions with suppliers
- If a supplier raises an issue related to subcontracting transactions, we ensure a fair and transparent resolution process
- Suppliers who apply for dispute resolution can submit their opinions to the Dispute Settlement Committee
- The Dispute Settlement Committee is an independent internal body, and the personnel responsible for the transaction in question are not involved in the dispute resolution process
- We will make efforts to ensure that the resolutions derived from the Dispute Settlement Committee are implemented in actual transactions

Strengthening Compliance Program

To conduct Kakao's fair trade compliance activities under a systematic framework, we have reviewed the existing fair trade business processes and identified necessary revisions for the current Fair Trade Compliance Manual. Also, to proactively respond to the legalization of Fair Trade Compliance Programs (CP) and ensure effective operation, we have prepared for the establishment and revision of regulations and subordinate guidelines related to fair trade compliance, including operating regulations and pre-business consultations.

Enhancing the Fair Trade Compliance System

To reduce the risk of legal violations in high-risk areas of commerce[1], we have improved our systems. By integrating the process of entering into gift store contracts into the system, we have minimized the risk of omission during the contract documentation process. We have also opened the Commerce Integrated Safety Transaction Center to foster a safe shopping culture. Furthermore, through the implementation of self-regulation measures, we have revised the terms of service for Talk Store sellers and Kakao Shopping Live to protect sellers' rights.

Provide Fair Trade Education

To promote a culture of fair trade compliance throughout the entire Kakao Group, we provided a total of 13 fair trade education sessions for over 130 affiliates. Kakao will continue to support and strive to establish a culture where affiliates independently uphold market economy order and comply with competition regulations.

Fair Trade Education

Session Details	No. of sessions
Education on Fair Trade Commission disclosures and corporate group policies	10 sessions
Training on Fair Trade Compliance Program (CP) systems, consent decrees, and technology information protection	1 session
Overview of the Subcontracting Act and training on the linkage system for delivery payments	2 sessions

1) Gift, Shopping, Makers

Appendix

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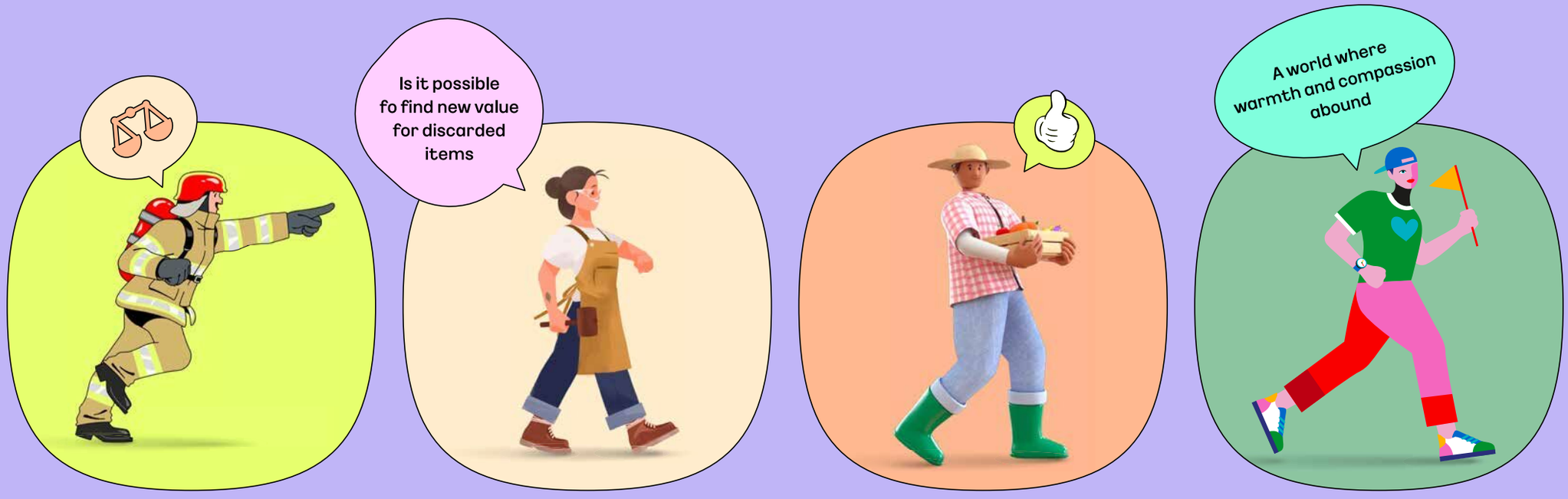

About Kakao Affiliates

kakao ENTERTAINMENT

CEO : Kweon Kisu, Chang Joseph
Establishment : Jul. 2010

Kakao Entertainment

Kakao Entertainment was launched through the merger of KakaoPage, Kakao M, and Melon. Under the vision 'Content beyond Content', we create an IP value chain which centers on three major business areas, including music, story, and media to take a big step to become a global enterprise.

https://kakaoent.com

kakaopay

CEO : Shin Won-keun
Establishment : Apr. 2017

Kakao Pay

As Korea's first to offer easy payment services, Kakao Pay has emerged as a Techfin business by extending its scope of services into money transfer, billing, membership, investment, loan, and insurance, unveiling new financial services that bring benefits to the daily lives of users while eliminating the inconveniences inherent in existing financial activities on the strength of information technology. Kakao Pay seeks to create a financial platform that can be easily and safely accessed through the KakaoTalk and Kakao Pay apps.

https://kakaopay.com

kakaogames

CEO : Han SangWoo
Establishment : Aug. 2013

Kakao Games

As a full-service game company spanning from game development to global publishing on the unrivaled platforms of 'Daum Games(PC)' and 'Kakao Games(Mobile), leveraging expanded game platforms including mobile, PC online, and consoles, Kakao Games develops and provides a diverse range of game genres from casual to hardcore for domestic and international markets.

https://kakaogamescorp.com

kakaomobility

CEO : Ryu Gung-Seon
Establishment : May 2017

Kakao Mobility

Under the goal of rendering mobility experiences 'faster and more convenient' for all, Kakao Mobility provides various mobility services including taxis, parking, navigation, designated drivers, e-bikes, trains and buses on its Kakao T MaaS (Mobility as a Service) platform to relentlessly pursue innovation and growth. Kakao Mobility strives to promote improved options and experiences in our daily lives, extending the definition of the mobility platform from people to services and things.

https://kakaomobility.com

kakaopiccoma

CEO : Kim Jae-yong
Establishment : Jul. 2011

Kakao Piccoma

As our local subsidiary in Japan, Kakao Piccoma is responsible for servicing the manga app 'Piccoma' in Japan while delivering the value of pleasures in the daily lives of all.

https://kakaopiccoma.com

kakaoinvestment

CEO : Kwon Kioh
Establishment : Apr. 2017

Kakao Investment

As a member of Kakao affiliated companies with investment expertise, Kakao Investment supports startups capable of pursuing innovation on the basis of Kakao's philosophy of 'making a better world with people and technology', and provides M&A, IPO and other exit opportunities to establish a virtuous cycle within the venture ecosystem.

https://kakaoinvestment.com

kakaoenterprise

CEO : Lee Kyung Jin
Establishment : Aug. 2019

Kakao Enterprise

Kakao Enterprise, a leading Cloud Service Provider (CSP), delivers top-class cloud services that are globally recognized. With our cutting-edge cloud technology and innovative solutions, we are striving to provide a faster and more secure cloud environment for businesses worldwide.

https://kakaoenterprise.com

kakaohealthcare

CEO : Hee Hwang
Establishment : Mar. 2022

Kakao Healthcare

Kakao Healthcare leverages technology for all to lead a healthier life easily and conveniently. Kakao Healthcare delivers specialized technology and solutions to enable greater innovation through the application of health data.

https://kakaohealthcare.com

kakaoventures

CEO : Kim Ki-Jun
Establishment : Mar. 2012

Kakao Ventures

As a dedicated investor in startups and as Kakao's venture capital affiliated company, Kakao Ventures has raised over KRW 400 billion through ten investment associations to invest in 260 + startups since its inception.

https://www.kakao.vc/

About Kakao Affiliates

kakaostyle

CEO : Seo Jung Hoon
Establishment : Feb. 2012

Kakao Style

Kakao Style believes that everyone has his/her own distinctive style and becomes their authentic self through the joy of discovering one's favorites.

https://kakaostyle.com

KnWorks

CEO : Shin Seok Cheol
Establishment : Feb. 2005

KnWorks

KnWorks is a professional operational service provider armed with extensive domain knowledge, competency across respective advanced functions, and years of experience and expertise. On the strength of the varying services available within the Kakao affiliates, KnWorks nurtures a sustainable mobile ecosystem.

http://www.knworks.co.kr

dktechin

CEO : Lee Wonju
Establishment : Aug. 2015

dktechin

dktechin delivers end-to-end IT services spanning systemic consulting, system deployment and operation, and infrastructure, and leverages differentiated information technology to provide services and solutions with exceptional quality. dktechin offers far-reaching ICT services in line with the accelerating digital transformation era in the areas of SAP ERP, AI chatbots, and smart businesses.

https://www.dktechin.com

Linkage Lab

CEO : Park Dae Young
Establishment : Feb. 2016

Linkage Lab

As Kakao's subsidiary and a standard site hiring people with disabilities, Linkage Lab creates opportunity for both people with and without disabilities to work together to achieve its mission of 'building a better society together'. Linkage Lab provides an opportunity to train and nurture experts with disabilities in the IT service and welfare service areas.

https://www.linkagelab.co.kr

ESG Data

Economic Performance

Key Financial Performance[1)]

Category	Unit	2021	2022	2023
Sales revenue	KRW million	59,105	67,987	75,570
Operating profit	KRW million	5,879	5,694	4,609
Net Income	KRW million	13,873	13,580	-10,126

Sales by Business Segments

Category	Unit	2021	2022	2023
Talk Biz	KRW million	1,643,922	1,901,657	1,982,204
Portal Biz	KRW million	492,503	424,099	344,334
Other Platforms	KRW million	878,197	1,136,808	1,227,904
Game	KRW million	998,759	1,109,512	1,009,529
Music	KRW million	772,516	894,096	1,723,949
Story	KRW million	791,702	920,917	922,070
Media	KRW million	332,915	411,958	347,012

Value Distribution by Stakeholders[2)]

Category		Unit	2021	2022	2023
Shareholders and investors	Dividends and interest expense	KRW million	41,356	136,090	219,292
Krew	Labor costs and benefits	KRW million	1,311,630	1,557,652	1,708,593
Partners	Product and manufacturing costs, payment agency fees, etc.	KRW million	2,544,767	2,554,754	2,720,324
Community	Donation	KRW million	15,217	24,822	30,853

Tax payments by Country[3)]

Category		Unit	2021	2022	2023
Domestic	Sales	KRW million	5,504,247	5,966,178	6,451,192
	Earnings before tax	KRW million	2,286,661	1,268,935	-648,470
	Corporate tax	KRW million	641,800	199,325	128,527
	Taxes paid	KRW million	227,092	307,013	260,869
Japan	Sales	KRW million	460,232	560,758	679,512
	Earnings before tax	KRW million	21,816	64,134	26,504
	Corporate tax	KRW million	-2,553	26,945	28,848
	Taxes paid	KRW million	127	-2,627	26,945
Netherlands	Sales	KRW million	38,834	8,987	6,651
	Earnings before tax	KRW million	577	-26,088	-509,457
	Corporate tax	KRW million	535	1,271	-1,202
	Taxes paid	KRW million	395	-1,304	1,271
Others	Sales	KRW million	133,356	570,915	419,247
	Earnings before tax	KRW million	-919	-168,707	-516,818
	Corporate tax	KRW million	7,759	14,245	12,256
	Taxes paid	KRW million	-235	14,842	14,245

1) Consolidated financial statements basis

2) Aggregated as of December 31st of the respective year on a consolidated basis

3) Domestic operations engage in portal and other internet information intermediary services. In Japan, the focus is on software development and services, while in the Netherlands, it involves game software development and supply. Operations in other countries primarily focus on software development and services, as well as retailing

ESG Data

Environmental Performance

GHG Emissions[1)]

Category		Unit	2021	2022	2023
Scope 1 emissions	Total	tCO_2-eq	233	248	358
	Pangyo Office	tCO_2-eq	81	168	278
	Jeju Office	tCO_2-eq	49	80	80
	Co-location Data Centers[2)]	tCO_2-eq	104	0	0
Scope 2 emissions	Total[3)]	tCO_2-eq	85,087	67,143	53,426
	Pangyo Office	tCO_2-eq	2,209	7,333	8,145
	Jeju Office	tCO_2-eq	860	0	0
	Co-location Data Centers	tCO_2-eq	81,673	59,473	44,964
	Offline sales locations[4)]	tCO_2-eq	346	337	316
Scope 3 emissions[5)]	Total	tCO_2-eq(%)	69,393	70,517	60,238
	1. Purchased goods and services	tCO_2-eq(%)	137 (0.2)	63 (0.1)	20 (0.03)
	2. Capital goods	tCO_2-eq(%)	47,898 (69.0)	49,508(70.2)	14,766 (24.5)
	3. Fuel- and energy related activities	tCO_2-eq(%)	6,176 (8.9)	7,922 (11.2)	4,237 (7.0)
	4. Upstream transportation and distribution	tCO_2-eq(%)	3 (0.004)	1 (0.001)	81 (0.1)
	5. Waste generated in operations	tCO_2-eq(%)	56 (0.1)	282 (0.4)	237 (0.4)
	6. Business travel	tCO_2-eq(%)	91 (0.1)	435 (0.6)	272 (0.5)
	7. Employee commuting	tCO_2-eq(%)	210 (0.3)	71 (0.1)	85 (0.1)
	8. Upstream leased assets	tCO_2-eq(%)	-	-	89 (0.1)
	9. Downstream transportation and distribution	tCO_2-eq(%)	110 (0.2)	87 (0.1)	127 (0.2)
	11. Use of sold products	tCO_2-eq(%)	8,151 (11.7)	4,547 (6.4)	1,238 (2.1)
	12. End-of-life treatment of sold products	tCO_2-eq(%)	253 (0.4)	203 (0.3)	194 (0.3)
	13. Downstream leasedassets	tCO_2-eq(%)	272 (0.4)	207 (0.3)	134 (0.2)
	14. Franchises	tCO_2-eq(%)	25 (0.04)	26 (0.04)	102 (0.2)
	15. Investments	tCO_2-eq(%)	6,011 (8.7)	7,165 (10.2)	38,656 (64.2)
Emissions intensity	Total emissions	tCO_2-eq	154,713	137,908	114,022
	Emissions intensity (Scope 1,2,3)[6)]	tCO_2-eq/ KRW 100 million	2.5	5.6	4.6
	Sales[6)]	KRW 100 million	61,367	24,566	24,996

Energy Consumption[1) 7)]

Category			Unit	2021	2022	2023
Energy consumption	Direct energy	Total	GJ	3,532	4,125	6,138
		Stationary combustion (LPG)	GJ	820	1,025	1,044
		Stationary combustion (LNG)	GJ	-	1,218	2,915
		Stationary combustion (Diesel)	GJ	1,497	-	-
		Stationary combustion (Kerosene)	GJ	-	-	255
		Mobile combustion (Gasoline)	GJ	1,198	1,586	1,901
		Mobile combustion (Diesel)	GJ	17	296	23
	Indirect energy	Total	GJ	1,779,828	1,405,129	1,120,132
		Electricity[8)]	GJ	1,772,532	1,395,932	1,104,114
		Heat	GJ	7,296	9,197	16,018
Energy consumption intensity	Total energy consumption		GJ	1,783,360	1,409,254	1,126,270
	Energy consumption intensity (direct, indirect, external energy)[6)]		GJ/KRW 100 million	29.1	57.4	45.1
	Sales[6)]		KRW 100 million	61,367	24,566	24,996
Renewable energy consumption	Green premium purchases made		GJ	28,588	-	-
	RECs(Solar)		GJ	-	18,240	19,205
	RECs(Wind)		GJ	-	-	19,200
	Percentage of renewable energy used[8)]		%	1.6	1.3	3.3

1) The above sum of GHG emissions and energy consumption was rounded down to the integer level.
2) In line with the updated organizational and operational boundary, emissions generated since 2022 from back generators and air-conditioning facilities at our co-location data centers were excluded in the aggregation of our emissions.
3) Jeju and Pangyo Office's Scope 2 emissions calculations were adjusted based on its REC (Renewable Energy Certificate) purchases.
4) Scope 2 emissions from offline sales locations were aggregated from 2022 onwards, and these emissions concern Kakao Friends shops.
5) Category 1-6, 11-15 emissions were aggregated from 2021, while Category 8 has been aggregated from 2023 and bracketed numbers refer to the proportion within the total Scope 3 emissions.
6) For the year 2021, the aggregation factor was calculated using consolidated revenue based on the total power usage of Kakao affiliates. From 2022 onwards, the aggregation factor was calculated using separate revenue excluding affiliate usage, resulting in an increase in aggregation compared to the previous year.
7) The consumption-based conversion factor (9.6MJ/kWh) was used in line with the GHG & Energy Target Management specification preparation standards.
8) MWh unit-based electricity energy consumption : 184,639MWh in 2021, 145,410MWh in 2022, 119,513 MWh in 2023.

ESG Data

Environmental Performance

Water Comsumption[1) 2)]

Category		Unit	2021	2022	2023
Withdrawal[1)]	Total	m^3	12,690	44,469	165,985
	Pangyo Office	m^3	4,868	36,524	153,221
	Jeju Office	m^3	7,822	7,945	9,065
	Offline sales locations	m^3	-	-	3,699
Reused	Total	m^3	0	890	7,060
	Pangyo Office	m^3	0	890	7,060
	Jeju Office	m^3	0	0	0
Withdrawal Consumption[3)]	Total	m^3	12,690	44,469	165,985
Withdrawal intensity	Total	m^3/ KRW 100 million	0.6	1.8	6.6
	Sales (nonconsolidated)	KRW 100 million	21,329	24,566	24,996

Air Pollutant Emissions[4)]

Category		Unit	2021	2022	2023
Emissions generated by Type	Total	Tonne	0	0	0
	NOx[5)]	Tonne	0	0	0
	SOx[6)]	Tonne	0	0	0
	VOC[7)]	Tonne	0	0	0
	PM[8)]	Tonne	0	0	0
	HAP[9)]	Tonne	0	0	0

Waste[10)]

Category				Unit	2022	2023
Waste Generated	Total Waste Generated			Tonne	279	577
disposed	Total waste disposed of			Tonne	253	255
	Hazardous waste			Tonne	0	0
	Municipal Waste[11)]	Subtotal		Tonne	253	255
		By disposal method	Landfill	Tonne	253	82
			Incineration	Tonne		172
recovery	Total waste recovered			Tonne	26	322
	Hazardous waste			Tonne	0	0
	Municipal Waste	Subtotal		Tonne	26	322
		By recovery type	Pre-treatment for reuse	Tonne	0	0
			Recycling	Tonne	26	322
			Other recovery methods	Tonne	0	0
		By recovery method	Internal treatment	Tonne	0	0
			Outsourcing	Tonne	26	322
Disposable plastic used[12)]				Tonne	0.11	0.13

1) Does not include water withdrawals from co-location data centers.
2) All water withdrawn for our Pangyo Office and Jeju Office comes from utility water.
3) Due to the nature of the industry, there is no wastewater discharge thus withdrawal and water use is considered the same.
4) Kakao did not disclose related information because it does not emit air pollutants, but new disclosures have been made in response to stakeholder requests.
5) NOx, Nitrogen Oxides
6) SOx, Sulfur Oxides
7) VOC, Volatile Organic Compounds
8) PM, Particulate Matter
9) HAP, Hazardous Air Pollutants
10) Waste generation and disposal data were aggregated from 2022 onwards regarding office, commerce and Makers, and municipal waste(as defined in Article 2 of the Waste Control Act) is considered the same as General waste.
11) Municipal waste is disclosed by disposal method (incineration/landfill) from 2023 onward.
12) The amount of disposable plastics used in the in-house KAFE, all of which are biodegradable plastics (PLA, Poly Lactic Acid)

ESG Data

Social Performance

Employee Data[1)]

Category			Unit	2021	2022	2023
Total			No. of persons	3,472	3,901	3,880
By gender	Male		No. of persons	1,958	2,183	2,147
	Female		No. of persons	1,514	1,718	1,733
By age group	Under 30		No. of persons	986	1,141	989
	30 — under 50		No. of persons	2,457	2,709	2,828
	50 and over		No. of persons	29	51	63
By contract type[2)]	Full-time	Subtotal	No. of persons	3,303	3,681	3,686
		Male	No. of persons	1,926	2,138	2,135
		Female	No. of persons	1,377	1,543	1,551
	Fixed-term	Subtotal	No. of persons	169	220	194
		Male	No. of persons	32	45	12
		Female	No. of persons	137	175	182
By job category	Office	Subtotal	No. of persons	1,750	1,964	1,932
		Male	No. of persons	592	650	614
		Female	No. of persons	1,158	1,314	1,318
	Technology	Subtotal	No. of persons	1,722	1,937	1,948
		Male	No. of persons	1,366	1,533	1,533
		Female	No. of persons	356	404	415

Recruitment

Category		Unit	2021	2022	2023
Total		No. of persons	994	870	452
By gender	Male	No. of persons	558	453	139
	Female	No. of persons	436	417	313
	Proportion of Males	%	56.1	52.1	30.8
	Proportion of Females	%	43.9	47.9	69.2
By age group	Under 30	No. of persons	716	466	294
	30 — under 50	No. of persons	275	396	156
	50 and over	No. of persons	3	8	2
	Proportion of those under 30	%	72.0	53.6	65
	Proportion of those aged 30 and over and under 50	%	27.7	45.5	34.5
	Proportion of those 50 and over	%	0.3	0.9	0.4
Internal recruitment to fill job openings		%	10.7	0	43.9
Average recruitment cost		KRW	1,134,440	552,161	351,439

Turnover

Category			Unit	2021	2022	2023
Voluntary turnover		Total	No. of persons	330	373	208
Turnover	By gender	Male	No. of persons	188	227	108
		Female	No. of persons	142	146	100
	By age group	Under 30	No. of persons	143	109	61
		30 — under 50	No. of persons	184	250	133
		50 and over	No. of persons	3	14	14
	Proportion of voluntary turnover		%	9.5	10.7	5.3
	Number of employees in the previous year		No. of persons	2,837	3,472	3,901
	Average years of service[3)]		Years	4.9	4.3	5.0
Dismissal[4)]	Employees dismissed		No. of persons	0	0	0
	Employees affected by mergers and acquisitions		No. of persons	0	0	0

1) The number of employees is calculated as of Dec. 31 of each year and does not include registered directors. For further details on employee data, please refer to the 'Status on Employees and Others' under the section VIII. Matters on Executives, Employees and Others' of our annual report.

2) There were no temporary employees between 2022 and 2023, and one temporary employee who worked in 2021 was included in calculating the number of fixed-term employees.

3) Average years of service of incumbent employees as of Dec. 31 of each year

4) Only dismissals made for business reasons were calculated.

ESG Data

Social Performance

Diversity

Category			Unit	2021	2022	2023
Executives	Total		No. of persons	7	6	7
	By gender	Male	No. of persons	5	4	3
		Female	No. of persons	2	2	4
		Proportion of Males	%	71.4	66.7	42.9
		Proportion of Females	%	28.6	33.3	57.1
	By age group	Under 30	No. of persons	0	0	0
		30 — under 50	No. of persons	3	2	4
		50 and over	No. of persons	4	4	3
		Proportion of those under 30	%	0	0	0
		Proportion of those aged 30 and over and under 50	%	42.9	33.3	57.1
		Proportion of those 50 and over	%	57.1	66.7	42.9
High-level managers[1]	Total		No. of persons	129	170	191
	By gender	Male	No. of persons	89	112	132
		Female	No. of persons	40	58	59
		Proportion of Males	%	69.0	65.9	69.1
		Proportion of Females	%	31.0	34.1	30.9
	By age group	Under 30	No. of persons	0	0	0
		30 — under 50	No. of persons	120	156	170
		50 and over	No. of persons	9	14	21
		Proportion of those under 30	%	0	0	0
		Proportion of those aged 30 and over and under 50	%	93.0	91.8	89.9
		Proportion of those 50 and over	%	7.0	8.2	10.1
Low-level managers[2]	Total		No. of persons	418	477	494
	By gender	Male	No. of persons	284	314	320
		Female	No. of persons	134	163	174
		Proportion of Males	%	67.9	65.8	64.8
		Proportion of Females	%	32.1	34.2	35.2
	By age group	Under 30	No. of persons	4	2	4
		30 — under 50	No. of persons	411	466	481
		50 and over	No. of persons	3	9	9
		Proportion of those under 30	%	1.0	0.4	0.8
		Proportion of those aged 30 and over and under 50	%	98.3	97.7	97.4
		Proportion of those 50 and over	%	0.7	1.9	1.8

Category			Unit	2021	2022	2023
Employees at revenue generating departments[3]	Total		No. of persons	1,032	1,121	1,087
	By gender	Male	No. of persons	316	335	313
		Female	No. of persons	715	786	774
		Proportion of Males	%	30.6	29.9	28.8
		Proportion of Females	%	69.4	70.1	71.2
Employees in STEM positions[4]	Total		No. of persons	1,722	1,937	1,948
	By gender	Male	No. of persons	1,366	1,533	1,533
		Female	No. of persons	356	404	415
		Proportion of Males	%	79.3	79.1	78.7
		Proportion of Females	%	20.7	20.9	21.3
By nationality	Korea		No. of persons	3,455	3,895	3,875
	US		No. of persons	8	2	1
	Australia		No. of persons	7	0	0
	Japan		No. of persons	1	1	1
	Canada		No. of persons	1	3	3
Foreign national employees	Number of foreign national employees		No. of persons	17	6	5
	Proportion of foreign national employees		%	0.5	0.2	0.1
Employees with disabilities	Number of employees with disabilities		Persons	8	7	8
	Proportion of employees with disabilities		%	0.2	0.2	0.2
Annual work hours			Hours	7,249,536	8,145,288	8,101,440
Number of people			Persons	3,472	3,901	3,880

1) Total number of managers in team leader and higher and below executive-level positions
2) Total number of managers in cell leader and higher and below team leader-level positions
3) Total number of employees falling in the service business job category
4) The number of STEM (Science, Technology, Engineering, Mathematics) employees equals the number of employees falling under the technology job category

ESG Data

Social Performance

Employee Training

Category			Unit	2021	2022	2023
Training targets	Total[1]		No. of persons	3,479	3,907	3,887
	By contract type	Full-time	No. of persons	3,303	3,681	3,693
		Fixed-term	No. of persons	176	226	194
Total training hours			No. of hours	98,506	77,707	88,351
Average training hours	Training hours per person		No. of hours/person	28.3	19.9	22.7
	By gender[2]	Male	No. of hours/person	38.0	23.3	24.8
		Female	No. of hours/person	15.8	15.5	20.2
	By contract type	Full-time	No. of hours/person	29.6	20.7	23.6
		Fixed-term	No. of hours/person	3.5	7.1	6.7
	By age group	Under 30	No. of hours/person	71.4	30.7	26.5
		30 — under 50	No. of hours/person	11.3	15.5	21.5
		50 and over	No. of hours/person	5.3	14.3	20.6
	By manager level	Executive	No. of hours/person	1.7	0.3	6.4
		High-level manager	No. of hours/person	9.6	15.7	26.3
		Low-level manager	No. of hours/person	11.2	16.7	27.4
	Foreign national employees		No. of hours/person	7.1	1.0	25.2
	By training type	Leadership	No. of hours/person	2.3	6.4	10.6
		Onboarding	No. of hours/person	26.4	21.3	9.9
		Job competency	No. of hours/person	2.4	9.5	11.5
		Knowledge sharing	No. of hours/person	0.8	1.7	4.1
		Common	No. of hours/person	6.2	3.7	4.7
Training and exercise expenses per person			KRW million/person	0.2	0.3	0.3

Compensation

Category			Unit	2021	2022	2023
Average employee pay	Total		KRW million	172	139	101
	Male		KRW million	217	173	114
	Female		KRW million	108	94	84
Retirement pension plan	Defined benefit (DB)	Funds under management	KRW million	131,504	162,777	190,803
		Number of subscribers	No. of persons	2,100	2,902	3419

Performance Evaluation

Category	Unit	2021	2022	2023
Proportion of employee performance evaluations conducted	%	100	100	100

1) Total Training targets of 3,880 people include 7 registered executives
2) The gender ratio of newcomer developer training participants in 2021 was 7:1, resulting in a difference in average training time between male and female employees.

ESG Data

Social Performance

Parental Leave

Category		Unit	2021	2022	2023
Employees eligible for parental leave	Male	No. of persons	535	536	589
	Female	No. of persons	270	260	333
Employees who took parental leave	Male	No. of persons	10	12	16
	Female	No. of persons	67	52	71
Employees who are planning to return to work	Male	No. of persons	2	6	5
	Female	No. of persons	46	48	41
Employees who returned to work	Male	No. of persons	2	4	5
	Female	No. of persons	40	43	39
Employees who are continuously working for 12 months after they returned to work	Male	No. of persons	8	2	4
	Female	No. of persons	62	38	41
Proportion of employees who returned to work[1]	Male	%	100	66.7	100
	Female	%	87.0	89.6	95.1
Proportion of returned employees' retention rate[2]	Male	%	80.0	100	100
	Female	%	95.4	95.0	95.0

Labor-Management Relations and Corporate Culture

Category		Unit	2021	2022	2023
Proportion of applying collective bargaining		%	100	100	100
Period to give prior notice on major business changes		Days	50	50	50
Employee satisfaction	Family friendly business certification	-	Yes	Yes	No
	Employee satisfaction survey cycle	-	Annual	Annual	Annual
	Employee satisfaction survey results[3]	%	71	77	78
Employee grievance handling	Grievances raised	Cases	3	10	11
	Grievances handled	Cases	3	10	11
	Proportion of grievances handled	%	100	100	100

1) Ratio of employees who returned to work = (No. of employees who returned to work after parental leave)/ (No. of employees set to return for the concerned year after parental leave during the previous reporting period)×100

2) Retention of employees who took parental leave = (No. of employees who continued to work for 12 months after return from parental leave)/(No. of employees who returned to work after parental leave during the previous reporting period)×100

3) In line with the updated group organizational health check methodology, employee satisfaction survey results for 2022~2023 were calculated as the average score of the 'engagement (enthusiasm)' category, and results for 2021 were calculated as the average score of the 'positive work experience' which comprehensively considers individual 'growth', 'work-related sense of value', and 'work-related sense of achievement' in the organizational health check survey.

4) Including dispatched and subcontractor employees who are not Kakao's own employees but are under the control of Kakao

5) Injury rate = (No. of work-related injuries)/(annual hours worked)×200,000 hours

6) Absence rate = (Total sick leave days taken)/(total days worked)×100

7) Parking lot vehicle collisions (2 cases), struck by falling object (1 case), tripped while using the stairs (1 case)

Occupational Health and Safety

Category		Unit	2021	2022	2023
Occupational health and Safety management system[4]	Employees managed under the system	No. of persons	3,565	4,055	4,897
Work related injuries	Injury rate[5]	No. of injuries for every 200,000 hours worked	0.03	0.02	0.08
	Absence rate[6]	%	0.29	1.27	0.74
	Fatalities	No. of cases	0	0	0
	Injuries[7]	No. of cases	1	1	4
	Contractual working hours (1 person/Yearly)	No. of cases	2,088	2,088	2,088
Health and safety management system(ISO 45001) certification	health and safety management system(ISO 45001) certified	-	-	-	-

Supplier Data

Category		Unit	2021	2022	2023
Number of Suppliers	Registered suppliers	No. of Companies	233	261	442
	Long-term suppliers[8]	No. of Companies	50	53	56

Supplier Evaluation

Category		Unit	2021	2022	2023
Environmental risk assessment[9]	Proportion of suppliers evaluated	%	-	-	10
	Disclosure of significant environmental risks	-	-	-	Yes
Negative impact	Suppliers found to have negative impacts	No. of Companies	-	-	0
	Suppliers supported in implementing corrective actions	No. of Companies	-	-	0
	Suppliers with contracts terminated due to negative impacts	No. of Companies	-	-	0

Supplier Health and Safety Management / Environmental Management System[10]

Category	Unit	2021	2022	2023
Proportion of suppliers certified with Health and Safety Management System (ISO 45001) or EMAS Environmental Management System	%	-	-	0

8) No. of companies which attended Partner's Day

9) Environmental risk assessment for suppliers conducted for the first time in 2023

10) Supplier evaluation conducted for the first time in 2023, including verification of suppliers obtaining Health and Safety Management System (ISO 45001) and Environmental Management System (ISO 14001) certifications

ESG Data

Social Performance

Data Privacy and Data Security

Category			Unit	2021	2022	2023
Training for employees handling personal data	Participants		No. of persons	2,835	3,477	2,415
	Training targets		No. of persons	2,836	3,479	2,418
	Training hours per person		No. of hours	1	1	1
Grievances And violations that occurred in relation to personal data handling	Grievances submitted externally in relation to personal data breaches		No. of cases	0	0	0
	Grievances submitted from regulatory authorities in relation to personal data breaches		No. of cases	1	2	4
	Personal data breaches		No. of cases	0	0	0
	Proportion of breaches related to PII (Personally Identifiable Information)		%	0	0	0
	Users affected by personal data breaches		No. of persons	0	0	0
	Monetary losses that incurred due to legal proceedings concerning data privacy		KRW million	0	0	0
Bug Bounty Outcomes	Bugs reported		KRW million	232	67	85
	Those who reported bugs		No. of persons	43	30	36
Information Security training	Employees[1]	Employees subject to training	No. of persons	2,609	3,329	3,715
		Employees who completed the training	No. of persons	2,583	3,247	3,667
		Completion rate	%	99.0	97.5	98.7
	Partners[2]	Employees subject to training	No. of persons	261	379	661
		Employees who completed the training	No. of persons	261	379	0
		Completion rate	%	100	100	0

User Satisfaction

Category			Unit	2021	2022	2023
User satisfaction survey results	Internal Survey on Customer Service Center Satisfaction[3]		%	87.1	86.9	81.3
	User protection assessment (Korea Communications Commission)	Grade	-	Average	Average	Good
		Kakao	Point	827.7	844.2	880.2
		Daum	Point	836.5	845.5	888.8
User VOC management	Number of VOCs Submitted		No. of cases	3,292,260	3,009,238	2,377,917
	Number of VOCs Processed		No. of cases	3,199,906	2,840,282	2,170,728
	Processing Rate		%	97.2	94.4	91

Social Impact Activity

Category			Unit	2021	2022	2023
Kakao Together	Projects undertaken		No. of projects	1,342	1,271	1,396
	Donations made		No. of donations	6,228,099	7,876,092	7,433,819
	Value of donations made		KRW million	7,105	11,858	13,557
External Sponsorship and cooperation Projects	Harmonious Digital World	Students	No. of persons	20,495	52,520	40,647
		Participants in Teacher training	No. of persons	176	109	80
CSR programs undertaken in Jeju	Unplugged Day[4]	Students	No. of persons	0	192	240
	Career experience workshop Show me the IT	Students	No. of persons	745	792	4,031
	Remote Video Career Mentoring	Students	No. of persons	4,663	2,771	68
	SW Value Expansion Program	Students	No. of persons	45	51	58
	Kakao Track	Funds provided	KRW million	20	20	20
	Harbang on the Internet of Kakao	Individuals supported	No. of persons	17	11	9
		Organizations supported	No. of teams	10	6	13
		Funds provided	KRW million	92	97	107
	Kakao Class	Participants	No. of persons	733	1,982	1,504
	Jeju Impact Challenge	Teams supported	No. of teams	7	10	10
		Funds provided	KRW million	21	30	53

Social Value Measured in Monetary Terms

Category		Unit	2021	2022	2023
Social value created through 'Harmonious Digital World'[5]	Total	KRW million	994	2,873	2,727
	Prevention of cyber violence	KRW million	718	2,396	1,989
	Improvement in awareness on data privacy	KRW million	7	67	91
	Improvement in digital literacy	KRW million	250	346	632
	Improvement in awareness on copyright protection	KRW million	19	63	15

1) Provided to all employees, including full-time and contract workers, and short-term workers
2) Provided to employees of partners who are working at our operations under outsourcing contract
3) Changing the aggregation method resulted in data differences compared to the 2022 report
4) Unplugged Day was not held In 2021 due to COVID-19.
5) The measured social value of Harmonious Digital World in 2022, as well as the cyberbullying prevention effects, have been revised and reflected in the total due to a correction in the data on the youth cyberbullying victim rate

ESG Data

Governance Performance

Board of Directors Data[1)]

Category			Unit	2021	2022	2023
Board composition	Total		No. of persons	7	6	7
	By type of director	Executive director	No. of persons	3	2	2
		Non-executive director	No. of persons	0	0	1
		Independent director	No. of persons	4	4	4
	By gender	Male	No. of persons	5	4	3
		Female	No. of persons	2	2	4
Board operation	Meetings held		No. of meetings	17	13	18
	Average attendance of independent directors		%	100	100	98.9
	Agenda items	For decision	No. of items	45	59	51
		For information	No. of items	14	11	13

Membership Fees[2)]

Category	Unit	2021	2022	2023
Advocacy, lobbying, or similar organizations	KRW million	0	0	0
Regional or national political campaigns/ organizations/candidates	KRW million	0	0	0
Association expenditure (total membership fees, consolidated basis)	KRW million	1,587	5,361	3,058
Other (expenditure related to referendums/ plebiscites, etc.)	KRW million	0	0	0

Top Donation and Contribution Recipients

Category	Unit	2022	2023
K-Internet	KRW million	699.3	600
Korea Internet Self-Governance Organization	KRW million	413	475
Korea Digital Advertising Association	KRW million	50	50

Board Committees

Category			Unit	2021	2022	2023
Audit Committee	Proportion of independent directors		%	100	100	100
	Meetings held		No. of meetings	5	6	10
	Agenda items	For decision	No. of items	2	5	12
		For information	No. of items	6	6	8
Compensation Committee	Proportion of independent directors		%	100	100	100
	Meetings held		No. of meetings	3	2	4
	Agenda items	For decision	No. of items	4	6	9
		For information	No. of items	1	1	1
Directors Nominating Committee	Proportion of independent directors		%	66.7	66.7	66.7
	Meetings held		No. of meetings	3	3	5
	Agenda items	For decision	No. of items	2	0	3
		For information	No. of items	1	3	3
ESG Committee	Proportion of independent directors		%	66.7	66.7	66.7
	Meetings held		No. of meetings	4	3	4
	Agenda items	For decision	No. of items	3	2	1
		For information	No. of items	1	5	8

1) Calculated as of Dec. 31 of the concerned year
2) Calculated as of Dec. 31 of the concerned year on a consolidated basis

ESG Data

Governance Performance

Ethical Management

Category			Unit	2021	2022	2023
Ethics training for new hires	Training targets		No. of persons	1,101	455	200
	Training participants		No. of persons	1,101	455	194
	Training courses		No. of courses	1	2	1
Ethics training for all employees	Training targets		No. of persons	2,640	3,608	3,827
	Training participants		No. of persons	2,634	3,334	3,601
	Total completion rate		%	99.8	92.4	94.1
Training to improve perceptions on disability	Training targets		No. of persons	3,350	3,842	3,960
	Training participants		No. of persons	3,350	3,842	3,960
	Total completion rate		%	100	100	100
Training to prevent sexual harassment	Training targets		No. of persons	3,350	3,842	3,960
	Training participants		No. of persons	3,350	3,842	3,960
	Total completion rate		%	100	100	100
Training on workplace harassment	Training targets		No. of persons	3,350	3,842	3,960
	Training participants		No. of persons	3,350	3,842	3,960
	Total completion rate		%	100	100	100
Hotline whistleblowing	Total whistleblowing reports submitted	Total	No. of cases	11	10	13
	Whistleblowing reports submitted by type of violation	Discrimination and Harassment	No. of cases	4	5	3
		Corruption and Bribery	No. of cases	2	0	1
		Customer Personal Information Leakage	No. of cases	0	0	0
		Others	No. of cases	5	5	9
	Actions taken	Reprimand	No. of cases	0	1	0
		Pay cut	No. of cases	2	2	1
		Suspension	No. of cases	4	3	3
		Dismissal	No. of cases	4	0	2
		Others	No. of cases	1	4	7

Income Taxes Paid[1)]

Category	Unit	2021	2022	2023
Earnings before tax[2)]	KRW million	2,286,661	1,268,935	-1,648,240
Reported tax	KRW million	555,074	176,573	-380,743
Effective tax rate	%	24	14	23
Cash taxes paid	KRW million	227,379	317,923	303,330
Cash tax rate	%	10	24	-18

1) Calculated as of Dec. 31 of the concerned year on a consolidated basis
2) Revision of earnings before tax data for the year 2022

ESG Data

Consolidated Basis

Employee Data[1)]

Category				Unit	2021	2022	2023
Current Employees[2)]	Total			No. of persons	14,178	16,479	17,188
	By gender	Male		No. of persons	8,014	9,196	9,192
		Female		No. of persons	6,164	7,283	7,996
	By contract type	Full-time	Subtotal	No. of persons	13,206	15,268	16,033
			Male	No. of persons	7,665	8,732	8,780
			Female	No. of persons	5,541	6,536	7,253
		Fixed-term	Subtotal	No. of persons	972	1,211	1,064
			Male	No. of persons	349	464	337
			Female	No. of persons	623	747	727
New hires		Total	Subtotal	No. of persons	5,141	5,206	2,630
		By Gender	Male	No. of persons	2,846	2,626	1,297
			Female	No. of persons	2,295	2,580	1,333
Turnover (voluntary turnover)		Total	Subtotal	No. of persons	1,763	2,430	2,227
		By Gender	Male	No. of persons	1,010	1,286	1,174
			Female	No. of persons	753	1,144	1,053

GHG Emissions[3)4)]

Category			Unit	2022	2023
GHG Emissions	Scope1 emissions	Kakao	tCO_2-eq	248	358
		Kakao Games	tCO_2-eq	97	91
		Kakao Pay	tCO_2-eq	18	49
	Scope 2 emissions	Kakao	tCO_2-eq	67,143	53,426
		Kakao Games	tCO_2-eq	524	637
		Kakao Pay	tCO_2-eq	2,028	3,185

1) Kakao Entertainment, Kakao Pay, Kakao Games, Kakao Mobility, Kakao Bank, Piccoma, Kakao Investment, Kakao Enterprise, Kakao Brain, Kakao Healthcare, GroundX, Kakao Ventures, Kakao Space, KnWorks, dktechin, Linkage Lab

2) Registered executives, part-time workers, and non-affiliated workers are excluded from the scope of the data calculation of Current Employees, and in the case of dual positions, they are counted based on 'main affiliation'.

3) The affiliated companies are listed companies, and details can be found in each company's ESG report.

4) GHG emissions was rounded down to the integer level.

Reporting Methodology

Reporting Approach

Kakao's Commitment and Responsibility Report aims to share with stakeholders our sustainability strategy, implementation organization, management system, programs, and activities and achievements. We also transparently disclose our efforts and accomplishments made for the past one year to deliver on our commitment and responsibility and bolster trust from stakeholders in so doing.

This report was prepared in accordance with the international sustainability reporting framework of the GRI (Global Reporting Initiative) Standards 2021 and with the Internet Media& Services Industry Standard of the SASB (Sustainability Accounting Standards Board) of the US. The financial performance contained herein was presented in conformity with the K-IFRS, unless otherwise stated. This report also elaborates our responses to climate change in conformity with the TCFD recommendations and illustrates our activities that we implement to comply with the UN Global Compact 10 Principles in the areas of human rights, labor, the environment, and anti-corruption as a member of the UNGC as well as to attain the UN SDGs.

Reporting Period and Scope

This report spans the period between January 1, 2023, and December 31, 2023. Information prior to 2023 or in the first half of 2024 is partially included and such information is separately marked within the report. For quantitative performance, data over the recent three years (2021~2023) are provided to enable year-over-year trend analyses. The scope of the reported information is based on consolidated financial and non-financial performance centered on Kakao (on a non-consolidated basis). As to data on Kakao's consolidated subsidiaries, you may refer to 'Overview of Consolidated Subsidiaries' on pages 605~613 of our annual report. A portion of the non-financial performance data in this report includes performance of key affiliated companies, and this is noted separately in the report. While quantitative performance in each of the ESG area (pages 110— 118) is presented on a non-consolidated basis, data on value distributed among stakeholders, membership fees, and income taxes paid is reported on a consolidated basis.

Standards Used in Calculating Environmental Performance

GHG emissions and energy consumption data in the environmental performance section were calculated based on the 3-year performance of Kakao's (on a non-consolidated basis) domestic operations (Pangyo and Jeju Offices, offline sales locations) and co-location data centers, and were verified by the Korea Management Registrar as an independent third-party verification organization.

GHG emissions from co-location data centers before 2021, however, include emissions from Kakao and other Community members on a consolidated basis, and GHG emissions from co-location data centersfor 2022 and beyond reflect emissions generated by Kakao on a non-consolidated basis. In line with this organizational and operational boundary, our GHG emissions intensity calculations are based on consolidated emissions and revenue before 2021 and on separate emissions and revenue from 2022 onwards.

As for water consumption, data were calculated for the past 3 years at domestic operations (Pangyo and Jeju Offices). Waste generation and disposal data were calculated based on 2022 and 2023 performance only at domestic operations (Pangyo and Jeju Offices). We have included a third-party independent assurance statement for Kakao's GHG data, but the assurance statements for Kakao Pay and Kakao Games are included in the Sustainability Report of Kakao Pay and Kakao Games.

Standards Used in Calculating Social Performance

Employee data in the social performance section are presented on a non-consolidated basis on pages 112~113 and also on a consolidated basis to help stakeholders better understand our ESG activities and achievements

Information Correction and Restatement

The following data were restated and thus show discrepancies from the previous year's report.

- For Profit before tax on pages 108 and 117 of this report, prior year information has been restated due to the non-recognition of other employee liabilities for unused long service leave and the restatement of the consolidated financial statements due to the granting of put options and the non-recognition of derivatives on those put options.
- Renewable energy consumption on page 109 of this report has been restated using a consumption-based conversion factor (9.6 MJ/kWh) in accordance with the Greenhouse Gas and Energy Target Management System Statement Preparation Standard.
- The Customer center satisfaction survey (internal) on page 115 of this report was prepared by a different aggregation method from the previous reporting year, and all data for 2021 and 2022 have been restated with the changed aggregation method.
- The Social value created through Harmonious Digital World on page 115 of this report has been restated from prior reports due to a misstatement of Prevention of cyber violence rate data, and the totals have been replaced with the corrected data.

GRI Standards Index

Statement of Use	Kakao has published 'Kakao's Commitment and Responsibility 2023,' which covers our ESG performance from January 1, 2023, to December 31, 2023, in accordance with the Global Reporting Initiative (GRI) Standards for Sustainability Reporting.
GRI 1 used	GRI 1:Foundation 2021
Applicable GRI Sector Standards	As of the date of publication, the Sector Standards are not applicable given the nature of Kakao's industry, but Kakao has reviewed various external sources to determine the material issues applicable to Interactive Media and Services in accordance with the GICS Standards and has selected material issues and reported related performance. For a detailed description, please refer to pages 20~22 of this report.

Topic		Title	Reporting Page	Note
General Disclosures				
GRI 2: General Disclosure 2021	2-1	Organizational details	9	
	2-2	Entities included in the organization's sustainability reporting	2, 118~119	
	2-3	Reporting period frequency and contact point	2, 119	
	2-4	Restatements of information	119	
	2-5	External assurance	130~131	
	2-6	Activities, value chain and other business relationships	9~12, 81~82	See pages 9~19 of our 2023 Annual Report
	2-7	Employees	111~112	Based on headcount as of December 31, 2023, see page 565 of our 2023 Annual Report
	2-8	Workers who are not employees	-	Based on headcount as of December 31, 2023, see page 565 of our 2023 Annual Report
	2-9	Governance structure and composition	94~96	See pages 535~538 of our 2023 Annual Report
	2-10	Nomination and selection of the highest governance body	95	See Article 5. Composition of the Board of Directors and Appointment of Directors of the Corporate Governance Charter
	2-11	Chair of the highest governance body	94	
	2-12	Role of the highest governance body in overseeing the management of impacts	17, 96	
	2-13	Delegation of responsibility for managing impacts	17, 96	
	2-14	Role of the highest governance body in sustainablity reporting	17, 96~97	
	2-15	Conflicts of interest	-	We report on cross-board membership, cross-shareholding with suppliers and other stakeholders, controlling shareholders, transactions with related parties, and claim-obligation balance through our annual reports[1], and corporate governance reports[2]

Topic		Title	Reporting Page	Note
General Disclosures				
GRI 2 : General Disclosure 2021	2-16	Communication of critical concerns	96	See pages 536~538 of our 2023 Annual Report
	2-17	Collective knowledge of the highest governance body	93	See pages 544 of our 2023 Annual Report
	2-18	Evaluation of the performance of the highest governance body	97	
	2-19	Remuneration policies	-	See pages 569~572 of our 2023 Annual Report
	2-20	Process to determine remuneration	-	See pages 566~568 of our 2023 Annual Report
	2-21	Annual total compensation ratio	97	
	2-22	Statement on sustainable development strategy	5~6	
	2-23	Policy Commitments	62, 81	Sustainability management-related regulations are subject to final approval at the ESG Committee under the Board of Directors
	2-24	Embedding policy commitments	63~64, 82	
	2-25	Process to remediate negative impacts	98	While Kakao's business is directly related with environmental impact only minimally given its inherent characteristics, we will establish appropriate remedy processes to resolve negative impacts when an issue occurs.
	2-26	Mechanisms for seeking advice and raising concerns	64, 102	
	2-27	Compliance with laws and regulations	-	There is no significant incidence of noncompliance during the reporting period. For penalties and other minor restrictions imposed, see pages 597~602 of our annual report.
	2-28	Membership associations	127	
	2-29	Approach to stakeholder engagement	18	
	2-30	Collective bargaining agreements	114	
	3-1	Process to determine material topics	19	
	3-2	List of materials topics	20~21	
	3-3	Management of material topics	22	

1) Refer to 2022 Annual Report 'VII. Matters concerning shareholders', 'IX. Matters concerning affiliates, etc.'

2) Refer to 2021 Corporate Governance Report 'A. Internal transaction and self-transaction control device', 'A. Refer to 'Independence of Independent Directors'

GRI Standards Index

Material Topics

1. Improve energy consumption efficiency and promote the use of renewable energy

Topic	Title		Reporting Page	Note
GRI 3 : Material Topics 2021				
Material Topics	3-3	Management of material topics	22	
GRI 302 : Energy 2016				
Energy	302-1	Energy consumption within the organization	109	
	302-3	Energy intensity	109	

2. Address social issues using technology and platforms

Topic	Title		Reporting Page	Note
GRI 3 : Material Topics 2021				
Material Topics	3-3	Management of material topics	22	
GRI 203 : Indirect Economic Impacts 2016				
Indirect Economic Impacts	203-2	Significant indirect economic impacts	86~89	

3. Enhance ethical management systems and compliance

Topic	Title		Reporting Page	Note
GRI 3 : Material Topics 2021				
Material Topics	3-3	Management of material topics	22	
GRI 205 : Anti-Corruption 2016				
Anti-corruption	205-2	Communication and training about anti-corruption policies and procedures	102	
GRI 206 : Anti-Competitive Behavior 2016				
Anti-competitive Behavior	206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	-	See page 600 of our annual report (No legal actions related to unfair trading practices based on Kakao's standards)

Topic Standards

Topic	Title		Reporting Page	Note
GRI 201 : Economic Performance 2016				
Economic Performance	201-1	Direct economic value generated and distributed	108	
	201-2	Financial implications and other risks and opportunities due to climate change	29~30	
GRI 207 : Tax 2019				
Tax	207-1	Approach to tax	100	
	207-2	Tax governance, control, and risk management	100	
	207-4	Country-by-country reporting	108	

Topic	Title		Reporting Page	Note
GRI 303 : Water and Effluents 2016				
Water and Effluents	303-3	Water withdrawal	110	
	303-5	Water consumption	110	
GRI 305 : Emissions 2016				
Emissions	305-1	Direct (Scope 1) GHG emissions	109	
	305-2	Energy indirect (Scope 2) GHG emissions	109	
	305-3	Other indirect (Scope 3) GHG emissions	109	
	305-4	GHG emissions intensity	109	
GRI 306 : Waste 2016				
Waste	306-3	Waste generated	110	
	306-4	Waste diverted from disposal	110	

GRI Standards Index

Topic Standards

Topic		Title	Reporting Page	Note
GRI 401 : Employment 2016				
Employment	401-1	New employee hires and employee turnover	111	
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	70	
	401-3	Parental leave	65, 114	
GRI 403 : Occupational Safety and Health 2018				
Occupational Safety and Health	403-2	Hazard identification, risk assessment, and incident investigation	72	
	403-4	Worker participation, consultation, and communication on occupational health and safety	72	
	403-5	Worker training on occupational health and safety	73	
	403-6	Promotion of worker health	70, 73	
	403-9	Work-related injuries	114	
GRI 404 : Training and Education 2016				
Training and Education	404-1	Average hours of training per year per employee	113	
	404-2	Programs for upgrading employee skills and transition assistance programs	67~68	
	404-3	Percentage of employees receiving regular performance and career development reviews	113	
GRI 405 : Diversity and Equal Opportunity 2016				
Diversity and Equal Opportunity	405-1	Diversity of governance bodies and employees	112	
	405-2	Ratio of basic salary and remuneration of women to men	113	
GRI 406 : Non-Discrimination 2016				
Non-Discrimination	406-1	Incidents of discrimination and corrective actions taken	63, 117	

Topic		Title	Reporting Page	Note
GRI 415 : Public Policy 2016				
Public Policy	415-1	Political contributions	102, 116	Prohibition of political contributions
GRI 417 : Marketing and Labelling 2016				
Marketing and Labelling	417-2	Incidents of non-compliance concerning product and service information and labeling	-	See page 600 of our annual report (No legal actions related to product and service information and labeling)
	417-3	Incidents of non-compliance concerning marketing communications	-	See page 600 of our annual report (No legal actions related to product and service information and labeling)
GRI 418 : Customer Privacy 2016				
Customer Privacy	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	115	

SASB Index

By disclosing relevant data in accordance with the SASB Framework, which is a voluntary industry-specific disclosure standard for sustainability issues developed by the Sustainability Accounting Standards Board (SASB), Kakao aims to provide descriptive information to various stakeholders, including investors. The SASB reconciliation has been prepared in accordance with the Internet Media & Services industry standard in the Technology & Communication sector under the Sustainability Industry Classification System (SICS).

Topic	Code	Accounting Metric[1)]	Reporting Page	Description
Environmental Footprint of Hardware Infrastructure	TC-IM-130a.1	(1) Total energy consumed, (2) percentage grid electricity and (3) percentage renewable	109	(1) 1,127,588 GJ, (2) 100%, (3) percentage of renewable energy out of total energy consumption is 3.3%.
	TC-IM-130a.2	(1) Total water withdrawn, (2) total water consumed; percentage of each in regions with High or Extremely High Baseline Water Stress	110	(1) 165,985 m3, (2) 165,985 m3 (no water withdrawal or discharge), (3) Our Pangyo Agit, Jeju Office, and data centers are not located in regions with water stress.
	TC-IM-130a.3	Discussion of the integration of environmental considerations into strategic planning for data center needs	31	Refer to the Kakao Data Center Ansan 'Kakao's Environmental Efforts' section of this report.
Data Privacy, Advertising Standards & Freedom of Expression	TC-IM-220a.1	Description of policies and practices relating to behavioural advertising and user privacy	47~51	For further details, refer to the webpage describing our personalized advertising and our privacy policy website.
	TC-IM-220a.2	Number of users whose information is used for secondary purposes	50	The number of cases where personal information was used for secondary purposes is 0. Kakao uses your personal information only for the purposes for which you have given your prior consent, and we continuously monitor our compliance with laws and regulations related to personal information protection, including the use of personal information for purposes other than those for which you have given your prior consent, through the Personal Information Impact Assessment.
	TC-IM-220a.3	Total amount of monetary losses as a result of legal proceedings associated with user privacy	115	-
	TC-IM-220a.4	(1) Number of law enforcement requests for user information, (2) number of users whose information was requested, (3) percentage resulting in disclosure	51	For further details, see Kakao's privacy policy website (transparency report).
	TC-IM-220a.5	List of countries where core products or services are subject to government-required monitoring, blocking, content filtering, or censoring2	-	-
	TC-IM-220a.6	Number of government requests to remove content, percentage compliance with requests	-	-
Data Security	TC-IM-230a.1	(1) Number of data breaches, (2) percentage involving personally identifiable information (PII), (3) number of users affected	115	(1) 0, (2) 0%, (3) 0
	TC-IM-230a.2	Description of approach to identifying and addressing data security risks, including use of third-party cybersecurity standards	47~54, 99	-
Employee Recruitment, Inclusion & Performance	TC-IM-330a.1	Percentage of employees that are foreign nationals	112	In 2023, foreign national employees accounted for 0.1% of total.
	TC-IM-330a.2	Employee engagement as a percentage	114	The organizational health check conducted in 2023 showed that the average score in the employee 'engagement (enthusiasm)' category was 78%.
	TC-IM-330a.3	Percentage of gender and racial/ethnic group representation for (1) management, (2) technical staff, and (3) all other employees	112	-
Intellectual Property Protection & Competitive Behaviour	TC-IM-520a.1	Total amount of monetary losses as a result of legal proceedings associated with anti-competitive behavior regulation	-	Refer to pages 597~602 '3. Matters concerning sanctions and others' of our 2023 Annual Report. (No violation occurred)

Kakao's personalized advertising webpage

Privacy policy website

Code	Activity Metric[1)]	Reporting Page	Description
TC-IM-000.A	Entity-defined measure of user activity	10	As of the fourth quarter of 2023, the number of Monthly Active Users (MAU) of KakaoTalk was 48.45 million in Korea and 53.57 million globally based on monthly averages.
TC-IM-000.B	(1) Data processing capacity, (2) percentage outsourced	-	-
TC-IM-000.C	(1) Amount of data storage, (2) percentage outsourced	-	-

1) For metrics not reported, they were not disclosed as they contained sensitive business information.

ISSB

Kakao discloses performance and information aligned with the four pillars of the International Sustainability Standards Board's (ISSB) General Requirements for Disclosure of Sustainability Draft: Governance, Strategy, Risk Management, and Indicators and Targets.

IFRS S1 General Requirements

Pillar	Key Content		Reporting Page
Governance	Sustainability-related risks and opportunities	• Name of the responsible governance body • Matters to delegate to the governance body • Capacity-building methods • Reporting cycle • Goal setting and inclusion of performance metrics in compensation policy • Senior management's role, etc	17, 96~97
Strategy	trategy to address sustainabilityrelated risks and opportunities	• Significant sustainability-related risks and opportunities • Effects on the value chain • Effects on the company strategy and decision-making	14~16
Risk Management	Process to identify, assess, and manage sustainability-related risks and opportunities	• Sustainability-related risk and opportunity identification process • Sustainability-related risk and opportunity assessment process • Sustainability-related risk and opportunity management system • Integration with the company-wide ERM system	63~64, 98~100
Metrics and Targets	Method to measure, oversee, and manage sustainability-related risks and opportunities	• Goal • Performance metrics	15~16, 108~118

UN Global Compact

The United Nations Global Compact (UNGC) is a global corporate citizenship initiative that sets out 10 principles in the areas of human rights, labor, environment, and anti-corruption, and is signed by companies in more than 100 countries. Kakao joined the UN Global Compact in February 2021 and is committed to fulfilling its corporate social responsibility and adhering to the UNGC's 10 principles. We will continue to achieve our corporate citizenship responsibilities by transparently disclosing our performance in implementing the UNGC's 10 principles.

Goal	Kakao's Response	Reporting Page
Human Rights	1. Business should support and respect the protection of internationally proclaimed human rights.	62~65, 81
	2. Make sure that they are not complicit in human rights abuses.	
Labor	3. Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining.	62~65
	4. the elimination of all forms of forced and compulsory labor	
	5. the effective abolition of child labor; and	
	6. the elimination of discrimination in respect of employment and occupation	
Environment	7. Businesses should support a precautionary approach to environmental challenges;	25~34
	8. undertake initiatives to promote greater environmental responsibility;	
	9. encourage the development and diffusion of environmentally friendly technologies.	
Anti-Corruption	10. Businesses should work against corruption in all its forms, including extortion and bribery.	101~104

UN SDGs

The United Nations Sustainable Development Goals (UN SDGs) are a set of 17 goals that promise sustainable development for people and our planet by 2030, as a universal global commitment. Kakao's raison d'être to change the world for the better deeply resonates with the UN's global agenda to pursue sustainable development for humanity.

Goal	Target	Kakao's Contribution in 2023	Reporting Page
	(5.4) Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate	• Operates the industry's largest daycare center at Pangyo Ajit • Offer leave programs for both mothers and fathers, including maternity/miscarriage/stillbirth leave, parental leave, prenatal check leave, infertility treatment leave, and family care leave	65
	(7.3) By 2030, double the global rate of improvement in energy efficiency	• Kakao Data Center Ansan increased efficiency by applying eco-friendly designs and managing water resources • Kakao Data Center Ansan received an upgraded Building Energy Efficiency rating of 1+ • Pangyo Agit obtained LEED Gold	31, 32
	(8.3) Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services	• Launched Dangol Market, a project to support local traditional markets • Provided online sales support and consulting sessions for small businesses • Supported growth of ICT/SW startups by Kakao Ventures • Operated Re:born Project, a KRW 100 million consulting and mentoring program for startups in collaboration with government agencies	75, 76, 80
	(8.5) By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value	• Linkage Lab was selected as a '2023 Employer of Excellence for Employing People with Disabilities' • Installed automatic doors and added signage at Pangyo Agit to improve accessibility of the facility for children, the elderly, and wheelchair users. • Visually-impared Krew working as a nationally certified masseuses and individuals with developmental disabilities working in in-house KAFE	65
	(9.1) Develop quality, reliable, sustainable and resilient infrastructure, including regional and trans-border infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all	• Expanded capabilities of open-source management service 'Olive Platform' to identify and improve security vulnerability information • Revealed Open-source licensing through the OSORI project	40
	(10.2) By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status	• Appointing a Digital Accessibility Officer and creating a dedicated digital accessibility organization • Provided Kakaopage TTS function • Improved accessibility of mail service • Operated Kakao Accessibility Supporters • Provided alternative text for KakaoTalk photos and videos	60, 61
	(11.2) By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons	• KakaoMap provided information on subway station platform gaps	22
	(12.5) Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle · Published the 2022 Kakao Responsibility and Commitment Report	• Kakaomakers implemented the 'Saegaburch' upcycling project that engages users	33
	(13.3) Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning	• Kakao Carbon Index 2023 Performance Management • Established and implemented a roadmap to achieve Net Zero by 2040 • Procured 100% renewable energy for Jeju office for the second consecutive year • Promoted the 'Kakao Impact Climax' project to expand the ground for climate technology and create ecosystems	25, 27, 88
	(14.1) By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution	• Conducted 'MAKE US GREEN' initiative to clean up Jeju Island's marine environment with plogging and underwater cleanup activities	34
	(15.2) By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally	• Raised funds for reforestation and donated to tree-planting activities — Melon's 'Forest:Streaming Project', Kakao Pay's 'd-Document Green Challenge' • Establishing fine dust-blocking forests and creating a resource-circular park in 2023 through the ECO SEED Fund	34
	(16.5) Substantially reduce corruption and bribery in all their forms	• Bolstered the ethical management system at the Kakao affiliates level — Developed ethics training content for all Community members and provided company-wide training/Operated the Roundtable on legal affairs • Provided ethics training to all employees, Participants: 3,827 persons (completion rate: 94.1%) • Handled 100% of the 13 concerns raised through internal/external counseling/whistleblowing programs	102, 103
	(17.17) Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships	• Expanded engagement on Kakao Together platforms — Cumulative donations made: Nearly 59 million donations / KRW 74.6 billion	89

Kakao's ESG Policies and Regulations

Kakao establishes and implements our regulations and policies in line with domestic/international initiatives and norms to fulfill our corporate responsibility in all of the Environmental, Social, and Governance areas.

Environmental Policy
Kakao minimizes the environmental impact generated from its service offerings and fulfills its responsibility by preventing environmental pollution and protecting the environment.

Health and Safety Management Policy
Kakao fully commits to providing a safe and pleasant work environment for all Krew and workers.

Human Rights Statement
Kakao strives to prevent factors that may give rise to human rights violation in the boundary of its service and business operations and does its utmost to promptly respond to and resolve the violation of human rights.

Algorithm Ethics
Kakao makes every possible effort in relation to algorithms within our society and pursues the benefits and contentment of all in so doing.

Principle to Counter Online Hate Speech
Kakao stays vigilant against expressions that abuse the freedom of expression and threat the safety of others, and endeavors to combat hate speech online.

Kakao Operation Policy
Kakao stipulates the standards of service operations and detailed rules for users to follow to consistently address issues that may arise in relation to its service use.

Kakao youth protection Policy
Kakao endeavors to protect teens from harmful content and help with the safe use of the internet which is freely open to people of all ages.

Digital for Kids
Kakao applies the zero-tolerance principle to sexual crimes involving children and teens and ensures to develop and deploy diverse technologies to prevent such crimes.

Privacy Policy
Kakao endeavors to strike the balance between data connectivity and security and increase the value of data to provide better services while safely protecting user data.

Supplier Code of Conduct
Kakao assists suppliers in laying the basis to pursue shared growth with Kakao by complying with all applicable laws and regulations and fulfilling their social responsibility.

Corporate Governance Charter
Kakao stipulates the Corporate Governance Charter as the foundation for its sustainable business operations to build trust with wide-ranging stakeholders and do its utmost to pursue shared growth.

Regulations of the Board of Directors
Kakao specifies matters necessary for the efficient operation of its Board of Directors to establish sound governance.

Regulations of the Directors Nominating Committee
Kakao specifies matters required for the efficient operation of the Directors Nominating Committee established under the Board of Directors.

Regulations of the Compensation Committee
Kakao specifies matters required for the efficient operation of the Compensation Committee established under the Board of Directors.

Regulations of the ESG Committee
Kakao specifies matters required for the efficient operation of the ESG Committee established under the Board of Directors.

Regulations of the Audit Committee
Kakao specifies matters required for job performance standards and operations so that the Audit Committee conducts audit work in an appropriate and efficient manner.

Risk Management Regulation
Kakao manages risks that may occur across its business operations in a comprehensive and efficient manner to stipulate matters required to maintain business stability.

Code of Ethics
Kakao vows to uphold the highest possible level of integrity across its business operations and internal/external relationships and presents principles to follow to avoid situations in which the value the Company pursues is actually or seemingly violated.

Tax Policy
Kakao pursues growth as a way to contribute to social and economic development, stipulates and operates its tax policy to sincerely file and pay taxes in accordance with applicable laws and regulations, and faithfully file and pay its taxes pursuant to the set principles.

Memberships

Name of Association
OECD Digital for SMEs Global Initiative(D4SME)
UN Global Compact
Korea Startup Forum
Korea Listed Companies Association
Korea Internet Corporations Association
Korea Internet Self-governance Organization
Korea Investor Relations Service
Korea Digital Advertising Association
Seoul Chamber of Commerce & Industry
Jeju Chamber of Commerce & Industry
Korea Industrial Technology Association
Financial Security Institute
Korea Competition Law Association
Korea On-Line Shopping Association
Korea Council of Chief Information Security Officers
Jeju Startup Association
Korea Internet&Security Agency

ESG Achievements Made Publicly in 2023

Member of Dow Jones Sustainability Indices Powered by the S&P Global CSA
Listed in the DJSI World, Asia-Pacific, Korea Indices (2 consecutive years) (Elected as the outstanding company in the industry of Interactive Media, Service & Home Entertainment)

MSCI
Rated AA in MSCI ESG ratings

한국ESG기준원
Rated A in overall ESG rating by KCGS (3 consecutive years)

S&P Global
Ranked in the Top 1% S&P Global ESG Score category in the Sustainability Distinction by the S&P Global

CDP DRIVING SUSTAINABLE ECONOMIES
Rated Leadership A by CDP Climate Change

Awards

Year	Host	Name of Award
2024	S&P Global	Kakao Named 'Top 1%' in S&P Global's Corporate Sustainability Assessment (CSA)
	Korea Edu-care Association	Kakao daycare center, awarded Grand Prize in the Operational Case Category at the Korean Federation of Children's Homes 'Workplace Childcare Program and Operational Case Contest' (Ministry of Employment and Labor Award)
	Korea Digital Enterprise Association	Kakao awarded in three categories at '2023 A.N.D Award' (Korean Cultural Information Center Award, Grand Prix, Winner)
	Asia Business Daily	Awarded in the Mobility Technology Award (Asia Economic Representative Award) at the 2024 Korea Green Mobility Awards(Kakao Mobility)
2023	Ministry of SMEs and Startups	Awarded in '2023 Presidential Award for Active Traditional Markets' as Presidential Recognition (Kakao Impact)
	Korea Federation of Micro Enterprise	Awarded 'Outstanding Win-Win Company'
	Google Play	Winner of 7 categories in Google Play "Best of Awards"(Kakao Games)
	Ministry of Culture, Sports and Tourism, Korea Association of Game Industry	2023 Korea Game Awards 'Excellence in Social Contribution' (Kakao Games)
	Disabled First Movement Headquarters	Winner of the "Best Practice Award" at the Disability First 2023 Awards (Kakao Games)
	Asia Business Daily	Winner of the 8th Asia Gender Equality Award for Organizational Culture
	Korea Workers Compensation & Welfare Service	Won outstanding and excellence prize for two children's centers in the spatial environmental design category of 'THE Growing Up Workplace Childcare Competition 2023'
	Hankyoreh Human & Digital Forum	2023 Human Technology Awards Special Category Outstanding Prize(Makers)
	Ministry of Employment and Labor, Korea Employment Agency for Persons with Disabilities	Selected as a '2023 Employer of Excellence for Employing People with Disabilities' (Linkage Lab: Subsidiary Disability Standard Workplace)
	Ministry of Health and Welfare, Korea Human Resource Development Institute for Health & Welfare	Awarded the Regional Representative Recognition Plaque and approved as a Community Contribution Recognized Company under the Community Contribution Recognition Program
	Ministry of Employment and Labor	Selected as 'Korea's Best Company for Jobs in 2023' (Linkage Lab: Subsidiary Disability Standard Workplace)
	LACP	Winner of two LACP Vision Awards (Grand Prize for ESG Report, Gold for Sustainability Report)
	ARC	Winner of two ARC Awards (Gold for ESG Report, Gold for Sustainability Report Asia-pacific)
	Ministry of Employment and Labor	Selected as youth-friendly corporate ESG initiatives
	S&P Global	Ranked in the Top 1% S&P Global ESG Score category in the Sustainability Distinction by the S&P Global
	Jeju Special Self-Governing Province	Certified as 2023 Volunteer Friendly Company
	American Association for Artificial Intelligence	Selected in the Oral Session at 'AAAI 2023'FLAME (Free-form Language-based Motion Synthesis & Editing) Research(Kakao Brain)

GHG Emissions Verification Statement

GHG Verification Statement
Independent Verification Statement

Kakao Corp.

The Korea Management Registrar Inc. (hereinafter "KMR") has conducted the verification on the greenhouse gas (hereinafter "GHG") emission (Scope 1,2) of Kakao Corp.(hereinafter "the Company") in 2023.

SCOPE

Verification of places of business and emission facilities under the control of the company.

STANDARDS

- ISO 14064-1:2018, ISO 14064-3:2019
- WRI/WBCSD GHG Protocol
- IPCC Guidelines for National Greenhouse Gas Inventories(2006)
- Guidelines for Reporting and Certification of Emissions in the Greenhouse Gas Emissions Trading Scheme

PROCEDURE

We conducted a risk analysis approach and on-site verification based on data evaluation, and we identified the appropriateness of the data and factors applied to GHG emission calculations based on objective evidence. The verification team verified the GHG emissions during the reporting period in a reasonable way based on the verification guidelines.

INDEPENDENT

KMR does not have any stake in the verified entity and does not conduct verification with biased opinions/views. We have drawn an independent and objective verification conclusion based on the verification standards, and reviewed the every aspect of the verification we performed throughout the entire verification process through internal review.

LIMITATIONS

The verification team verified the related reports, information and data presented by the audited institution by sampling or enumeration methods. As a result, there are many inherent limitations, and there may be disagreements in the interpretation of appropriateness. Although we have tried to faithfully perform verification that meets the verification standards, we suggest that errors, omissions, and false statements that could not be found may be latent as the limitations to the verification.

KMR ISO 14064-1

KMR_VCV_24018 #1204, Acehightechcity 1-dong, 775 Kyunginro, Yeongdeungpo-gu, Seoul, 07299, Korea

GHG Verification Statement
Independent Verification Statement

OPINION

- GHG verification has been performed to meet the limited assurance level according to the verification standards.
- We express that no significant errors were found in the calculation of emissions during the verification process, and that relevant activity data and evidence were appropriately managed and calculated. As a result, we express an "unmodified" opinion.
- Criticality: meets the criterion, which is less than 5%

GHG Emission	Direct Emissions (SCOPE 1)	Indirect Emissions (SCOPE 2)	Total Emissions (tCO_2-eq)
2023	358	53,426	53,784

Energy consumption	Fuel	Electricity	Steam	Total (TJ)
2023	6	1,104	16	1,126

※ Note : There is a difference in the total amount of emissions and emissions by greenhouse gas and by workplace.
(Total emissions are cut to a decimal point for each workplace unit and emissions are summed up for each workplace unit.)

RESULTS

- We confirm through verification that the emissions from major emission facilities have been calculated and reported without omission.

※ The abovementioned company is responsible for preparing verification data in accordance with the "Guidelines for Reporting and Certification of Emissions in the Greenhouse Gas Emissions Trading System (Ministry of Environment Notice No. 2021-278)", and KMR's responsibility is limited to the party in the verification contract according to the agreed contract terms, and is not responsible for other decisions including investment decisions based on this verification statement.
※ The abovementioned company must comply with the use of the certification and logo marks under the contract entered into with KMR.

April 22, 2024

Authorized By E J Hwang

CEO Eun Ju Hwang

KMR ISO 14064-1

KMR_VCV_24018 #1204, Acehightechcity 1-dong, 775 Kyunginro, Yeongdeungpo-gu, Seoul, 07299, Korea

GHG Emissions Verification Statement

GHG Verification Statement
Independent Verification Statement

Kakao Corp.

The Korea Management Registrar Inc. (hereinafter "KMR") has conducted the verification on the greenhouse gas (hereinafter "GHG") emission (Scope 3) of Kakao Corp.(hereinafter "the Company") in 2023.

SCOPE

Verification of places of business and emission facilities under the control of the company.

STANDARDS

- ISO 14064-1:2018, ISO 14064-3:2019
- WRI/WBCSD GHG Protocol
- IPCC Guidelines for National Greenhouse Gas Inventories(2006)
- Guidelines for Reporting and Certification of Emissions in the Greenhouse Gas Emissions Trading Scheme

PROCEDURE

We conducted a risk analysis approach and on-site verification based on data evaluation, and we identified the appropriateness of the data and factors applied to GHG emission calculations based on objective evidence. The verification team verified the GHG emissions during the reporting period in a reasonable way based on the verification guidelines.

INDEPENDENT

KMR does not have any stake in the verified entity and does not conduct verification with biased opinions/views. We have drawn an independent and objective verification conclusion based on the verification standards, and reviewed the every aspect of the verification we performed throughout the entire verification process through internal review.

LIMITATIONS

The verification team verified the related reports, information and data presented by the audited institution by sampling or enumeration methods. As a result, there are many inherent limitations, and there may be disagreements in the interpretation of appropriateness. Although we have tried to faithfully perform verification that meets the verification standards, we suggest that errors, omissions, and false statements that could not be found may be latent as the limitations to the verification.

KMR ISO 14064-1

KMR_VCV_24018

#1204, Acehightechcity 1-dong, 775 Kyunginro, Yeongdeungpo-gu, Seoul, 07299, Korea

GHG Verification Statement
Independent Verification Statement

OPINION

- GHG verification has been performed to meet the limited assurance level according to the verification standards.
- We express that no significant errors were found in the calculation of emissions during the verification process, and that relevant activity data and evidence were appropriately managed and calculated. As a result, we express an "unmodified" opinion.
- Criticality: meets the criterion, which is less than 5%

SCOPE 3	Emission Activities	Emissions(tCO_2-eq)	Estimate
CAT 1	Purchased goods and services	**20**	O
CAT 2	Capital goods	**14,766**	O
CAT 3	Fuel and energy related activities	**4,237**	O
CAT 4	Upstream transportation and distribution	**81**	O
CAT 5	Waste generated in operations	**237**	O
CAT 6	Business Travel	**272**	O
CAT 7	Employee commuting	**85**	O
CAT 8	Upstream leased assets	**89**	O
CAT 9	Downstream transportation and distribution	**127**	O
CAT 10	Processing of sold products	**0**	X
CAT 11	Use of sold products	**1,238**	O
CAT 12	End-of-life treatment of sold products	**194**	O
CAT 13	Downstream leased assets	**134**	O
CAT 14	Franchises	**102**	O
CAT 15	Investment	**38,656**	O
Total		60,238	

※ Note : There is a difference in the total amount of emissions and emissions by greenhouse gas and by workplace.
(Total emissions are cut to a decimal point for each workplace unit and emissions are summed up for each workplace unit.)

RESULTS

- We confirm through verification that the emissions from major emission facilities have been calculated and reported without omission.

※ The abovementioned company is responsible for preparing verification data in accordance with the "Guidelines for Reporting and Certification of Emissions in the Greenhouse Gas Emissions Trading System (Ministry of Environment Notice No. 2021-278)", and KMR's responsibility is limited to the party in the verification contract according to the agreed contract terms, and is not responsible for other decisions, including investment decisions based on this verification statement.
※ The abovementioned company must comply with the use of the certification and logo marks under the contract entered into with KMR.

April 22, 2024

Authorized By E J Hwang

CEO Eun Ju Hwang

KMR ISO 14064-1

#1204, Acehightechcity 1-dong, 775 Kyunginro, Yeongdeungpo-gu, Seoul, 07299, Korea

Third-party Assurance Statement

To: The Stakeholders of Kakao Corp.

Overview

The British Standards Institution (hereinafter referred to as the "Assurer") was requested to verify the ESG Report (hereinafter referred to as the "Report"). The Assurer is independent to Kakao and has no major operational financial interest other than the assurance of the Report. This assurance opinion statement is intended to provide information related to the assurance of the Kakao's report relating to the environment, social and governance (ESG) to the relevant stakeholders and may not be used for any other purpose. This assurance opinion statement is prepared based on the information presented by the Kakao. The verification does not extend beyond such information and is solely based on it. In performing such verification, the Assurer has assumed that all such information is complete and accurate.

Kakao is responsible for managing the relevant information contained within the scope of assurance, operating the relevant internal control procedures, and for all information and claims contained in the Report. Any queries that may arise by virtue of this independent assurance opinion statement or matters relating to it should be addressed to Kakao only.

The Assurer is responsible for providing Kakao's management team with an independent assurance opinion containing professional opinions derived by applying the assurance methodology to the scope specified, and to provide the information to all stakeholders of Kakao. The Assurer will not, in providing this independent assurance opinion statement, accept or assume responsibility (legal or otherwise) or accept liability for or in connection with any other purpose for which it may be used, or to any person or party by whom the independent assurance opinion statement may be read.

Scope

The scope of engagement agreed upon with Kakao includes the following:

- Report contents during the period from January 1st to December 31st 2023 included in the Report, some data of 2024 are included.
- Major assertion included in the Report, such as sustainability management policies and strategies, goals, projects, and performance, and the Report contents related to material issues determined as a result of materiality assessment.
- Appropriateness and consistency of processes and systems for data collection, analysis and review.
- Confirmation of the Report's compliance with the AA1000 Accountability Four Principles and, where applicable, the reliability of the sustainability performance information contained within the Report, based on the type of sustainability assurance performed in accordance with AA1000 AS v3.

The following contents were not included in the scope of assurance.

- Financial information in Appendix.
- Index items related to other international standards and initiatives other than the GRI.
- Other related additional information such as the website, business annual report.

Assurance Level and Type

The assurance level and type are as follows;

- Moderate level based on AA1000 AS and Type 2 (confirmation to the four principles as described in the AA1000Accountability Principle 2018 and quality and reliability of specific performance information published in the report.)

Description and sources of disclosures covered

Based on the scope and methodology of assurance applied, the Assurer reviewed the following disclosures based on the sampling of information and data provided by Kakao.

[Universal Standards]

2-1 to 2-5 (The organization and its reporting practices), 2-6 to 2-8 (Activities and workers), 2-9 to 2-21 (Governance), 2-22 to 2-28 (Strategy, policies and practices), 2-29 to 2-30 (Stakeholder engagement), 3-1 to 3-3 (Material Topics Disclosures)

[Topic Standards]

201-1~2, 203-2, 205-2, 206-1. 302-1&3, 207-1,2&4, 303-3&5, 305-1~4, 306-3~4, 401~3, 403-2,4,5,6&9, 404-1~3, 405-1~2, 406-1, 415-1, 417-2&3, 418-1

Methodology

As a part of its independent assurance, the Assurer has used the methodology developed for relevant evidence collection in order to comply with the verification criteria and to reduce errors in reporting. The Assurer has performed the following activities;

- Validation of the materiality assessment and internal analytical process for determining assurance priorities, and a top-level review of issues that may be raised by external stakeholders in the context of sustainability.
- Discussion with managers and representatives on stakeholder engagement.
- Review of the supporting evidence related to the material issues through interviews with senior managers in the responsible departments.
- Review of the system for sustainability management strategy process and implementation.
- Review of the materiality issue analysis process and prioritization and verifying the results.
- Verification of data generation, collection and reporting for each performance index and document review of relevant systems, policies, and procedures.
- An assessment of Kakao's reporting and management processes against the principles of Inclusivity, Materiality, Responsiveness and Impact as described in the AA1000 Accountability Principles Standard (2018).
- Visit of the Pangyo Azit of Kakao to confirm the data collection processes, record management practices.

Limitations and approach used to mitigate limitations

The Assurer performed limited verification for a limited period based on the data provided by Kakao. It implies that the Assurer is therefore subject to limitations relating to inherent risks that may exist without the identification of material errors. The Assurer does not provide assurance on possible future impacts that cannot be predicted or verified during the verification process and any additional aspects related thereto.

Competency and Independence

British Standards Institution (BSI) is a leading global standards and assessment body founded in 1901. BSI is an independent professional institution that specializes in quality, health, safety, social and environmental management with over 120 years history in providing independent assurance services globally. No member of the assurance team has a business relationship with Kakao. The Assurer has conducted this verification independently, and there has been no conflict of interest. All assurers who participated in the assurance have qualifications as an AA1000AS assurer, have a lot of assurance experience, and have in-depth understanding of the BSI Group's assurance standard methodology.

Third-party Assurance Statement

To: The Stakeholders of Kakao Corp.

Opinion Statement

The assurance was conducted by a team of sustainability report assurers in accordance with the AA1000 Assurance Standard v3. The Assurer planned and performed the verification and collected sufficient evidence to explain Kakao's approach to the AA1000 Assurance Standard and to provide confidence in its self-declaration of compliance with the GRI Standards.

On the basis of our methodology and the activities described above, it is our opinion that the information and data included in the Report are accurate and reliable and the Assurer cannot point out any substantial aspects of material with mistake or misstatement. We believe that the economic, social and environment performance indicators are accurate and are supported by robust internal control processes.

Conclusions

The Report is prepared in accordance with the GRI Standards. (Reporting in accordance with the GRI standards). A detailed review against the AA1000 Accountability Principles of Inclusivity, Materiality, Responsiveness and Impact and the GRI Standards is set out as below.

Inclusivity: Stakeholder Engagement and Opinion

Kakao has selected its internal and external stakeholders (Kakao leaders, Krew and partner companies), shareholders, and investors as its main stakeholders. We operate communication channels for each stakeholder, gather their expectations and various opinions through stakeholder participation process, and reflect the key issues derived in the decision-making process related to sustainability and disclose this process through reports.

Materiality: Identification and reporting of material sustainability topics

Kakao has established a process to develop strategies related to sustainable management and to derive reporting issues. Based on the results of global initiative and ESG evaluation indicators, media research analysis, and analysis of issues and trends of the same/similar businesses, we have selected 12 major issues through a dual materiality assessment which includes social-environmental impact assessment (Impact materiality assessment) and financial impact assessment (Financial Materiality Assessment) and disclose 3 core issues and 9 reporting issues.

Responsiveness: Responding to material sustainability topics and related impacts

Kakao integrates the impact of the core issues determined by the materiality assessment with the ERM (Enterprise Risk Management) process. The disclose the response results including policies on core issues, progress of tasks, activity results, and improvement measures through reports.

Impact: Impact of an organization's activities and material sustainability topics on the organization and stakeholders

Kakao has established a process to understand and evaluate the impact on organizations and stakeholders related to core issues. The results of the analysis of the impact, risks, and opportunities of core issues are used in decision-making for the establishment of response strategies for each issue, and this disclose this process through reports.

Findings and conclusions concerning the reliability and quality of specified performance information

Among the GRI Topic Standards, an assurance Type 2 were conducted against the following disclourers based on the information and data provided by Kakao. In order to verify the reliability and accuracy of the data and information, internal control procedures related to data processing, and management were verified through interviews with the responsible department, and accuracy was verified through sampling. Errors and intentional distortions in sustainability performance information included in the Report were not found through assurance processes. The Kakao manages the sustainability performance information through reliable internal control procedures and can track the process of deriving the source of the performance. Errors and unclear expressions found during the assurance process were corrected and the Assurer confirmed the final version of the Report prior to its final publication.

- GRI Topic Standards: 201-1&2, 203-2, 2-5-2, 206-1, 207-1,2&4, 302-1&3, 305-1~4, 306-3&4, 401-1~3, 403-4~6&9, 404-1~3, 405-2, 406-1

Recommendations and Opportunity for improvement

The Assurer provides the following observations to the extent that they do not affect the assurance opinion;

- Kakao has selected 3 core issues and 9 reporting issues as its major sustainability topics, and reported the results on these. In addition, there is a need to show the policy direction and will of the organization by revealing long-term goals for each topic. Moreover, increasing the proportion of external stakeholders and selecting issues with high social interest would be effective.
- The assurers recommends upgrading the sustainability disclosure indicators management system across the Kakao community, such as establishing a consolidated sustainability disclosure system.

GRI-reporting

Kakao has self-declared compliance with GRI Standards. Based on the data and information provided by Kakao, the Assurer confirmed that the Report is prepared in accordance with the GRI Standards, and confirmed there are no errors in the disclosures related to the Universal Standards and Topic Standards Indicators. No sector standard is applied.

Issue Date: 24/05/2024
For and on behalf of BSI (Brithish Standards Institution):

BSI representative

Sangwoo Nam, Lead Assurer

Seonghwan Lim,
Managing Director of BSI Korea

BSI Group Korea Limited: 29, Insa-dong 5-gil, Jongno-gu, Seoul, South Korea

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