



IT'S THE KEY TO SUSTAINABLE GROWTH

About This Report

Samsung SDS has published the 2023 Sustainability Report to transparently disclose the economic, social, and environmental values and outcomes generated through our business activities to various stakeholders. This report serves as a communication channel to annually share Samsung SDS' sustainability management activities, outcomes, and future plans with stakeholders.

Reporting Standards

This report has been prepared in accordance with the Core Option of the Global Reporting Initiatives(GRI) Standards, as well as global sustainability management standards and recommendations such as the UN SDGs(Sustainable Development Goals), TCFD(Task Force on Climate-related Financial Disclosures), and SASB(Sustainability Accounting Standards Board).

Reporting Scope

This report covers Samsung SDS headquarters and all subsidiaries. Financial performance data is based upon consolidated K-IFRS accounting standards. Any data requiring additional attention in terms of reporting scope and boundary has been annotated separately.

Reporting Period

This report covers the ESG performance and activities from January 1, 2022, to December 31, 2022, and includes some information extending until the first half of 2023. In addition, quantitative performance includes data from the latest three years to illustrate the annual trends.

Reporting Cycle

Annual(previous edition published in June 2022)

Third-Party Assurance

This report has been assured by the BSI Group Korea, an independent third-party assurance provider, to guarantee the report's reliability.

The verification was conducted in accordance with the AA1000AS v3 standard, and the verification level included Type 2 verification for the performance of key issues identified.

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Interactive User Guide

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INTRODUCTION

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Message from ESG Committee Chairperson



“The ESG Committee will provide direction for realizing Samsung SDS' ESG vision and core values, and strive to achieve performance in each ESG area to enhance Samsung SDS' sustainability.”

My warmest regards to all,
I am Seung-Ah Cho, the Chairperson of Samsung SDS' ESG Committee.

We would like to begin by expressing our sincere gratitude to all of you for your warm support and encouragement towards Samsung SDS.

Throughout the year, our ESG Committee has diligently examined and addressed key issues in each ESG area, actively practicing responsible management. In particular, we have prioritized our contribution to overcoming the global challenge of climate crisis. This has involved thorough discussions on managing carbon emissions throughout the entire value chain and fostering environmentally sustainable practices through the adoption of cutting-edge technologies. Furthermore, Samsung SDS continues to engage in constructive discussions on ways to contribute to the well-being of stakeholders as a global member of the international community. We also strive to enhance the transparency and soundness of our governance structure.

2023 will be a significant year for Samsung SDS as we establish a vision and strategy that reflects our unique ESG core values and expand them into key business areas.

To address our customers' ESG challenges and support sustainable growth through our digital capabilities, we will prioritize the following initiatives:

Integration of ESG values into our products and services.

We will provide eco-friendly cloud services through data center energy efficiency and develop low-carbon logistics products, creating ESG value in our products and services, and delivering them to our customers.

Enhancing global ESG capabilities.

We will apply our accumulated ESG management capabilities over the years to our domestic and overseas subsidiaries, securing competitiveness to adapt to the rapidly changing global ESG business environment.

Reinforcement of ESG execution.

We will be committed to driving ESG management activities effectively and systematically. To ensure the success of our efforts, we have established the Corporate Sustainability Management Office under the direct supervision of the CFO. Furthermore, we will strengthen internal and external communication, an endeavor aimed at further boosting the credibility of our sustainability commitments.

We would like to express our gratitude to everyone who always believes in and supports Samsung SDS. We sincerely thank you and kindly ask for your continued interest and unwavering support in the future.

Seung-Ah Cho
Chairperson of the Samsung SDS ESG Committee

A handwritten signature in black ink, appearing to read 'Seung-Ah Cho', written in a cursive style.

Message from the CEO



“Samsung SDS’ IT technology is a pivotal asset in unlocking a sustainable future for all.”

Dear respected stakeholders,

I would like to express my heartfelt gratitude to all stakeholders for their unwavering support of Samsung SDS.

In 2022, the importance of sustainable growth for companies was further emphasized due to economic and social challenges such as climate crisis, international conflicts, and economic downturn. In response, Samsung SDS revitalized our sustainability management system, centered around the ESG Committee and has actively pursued genuine ESG management activities.

To actively participate in overcoming the climate crisis, we have constructed environmentally friendly and high-performance data centers with global-leading energy efficiency. Furthermore, the greenhouse gas management system has been further enhanced. In addition, we are taking a leading role in researching Eco-Cloud technology, which reduces carbon emissions through data center energy efficiency. In the logistics field, we have developed and implemented a carbon emission monitoring system, and we are also preparing low-carbon transportation products and services.

In addition, we have conducted a scenario analysis on the potential risks of future climate change and have disclosed the results in this report. We believe that this will greatly contribute to understanding the impact of climate change on our company and help in formulating effective response strategies.

Samsung SDS also acknowledges stakeholder happiness as a fundamental value that corporations should strive for.

We established a safety and environmental system to create a safe and healthy work environment for our employees and we have strengthened our process of supporting ESG education and performance evaluation processes for suppliers. Moreover, we continue to engage in social contribution activities, such as providing IT education for adolescents that aligns with the nature of our business.

As IT technology rapidly develops, the importance of digital responsibility is being increasingly emphasized.

Samsung SDS is making various efforts to minimize the potential social side effects of digital technology utilization and maximize our advantages. As the first domestic IT service company, Samsung SDS has obtained international standard certification for open source and has established inspection and management systems for personal information processing. These efforts are aimed at reducing the negative impact of digital technology and maximizing our benefits.

From 2023 onwards, we will continue to pursue consistent ESG management and make efforts to deliver various ESG elements directly to our customers through our business, adding more direct value.

To achieve this, we have established detailed business strategies that are aligned with ESG for each business area. Recently, we have selected the ESG vision slogan “IT is the Key to Sustainable Growth.”, which signifies our ability to lead customers towards a sustainable future through our digital capabilities. We will make collective efforts, with all members of the company aligned towards the same ESG vision, to meet the expectations of our stakeholders.

We look forward to your continued interest and support in the sustainable future that Samsung SDS is set to create.

Thank you.

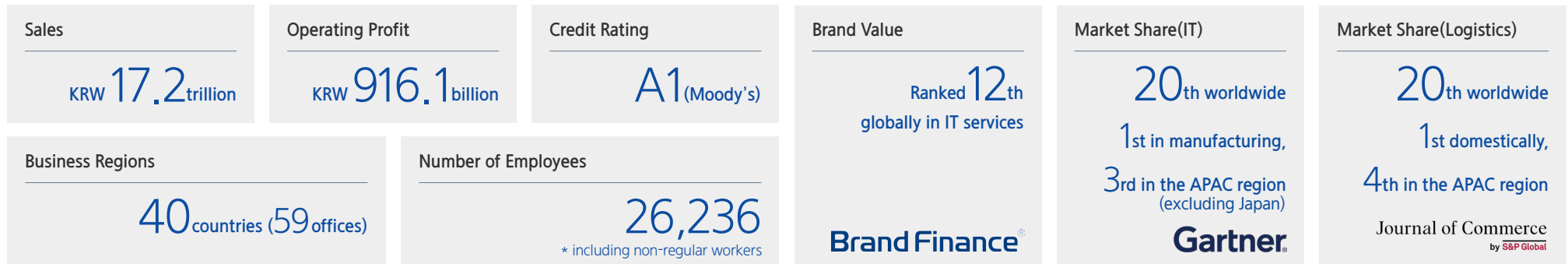
Sungwoo Hwang
President & CEO

A handwritten signature in black ink, appearing to read 'SWH'.

Company Overview

Samsung SDS provides enterprise-optimized cloud-based IT services and logistics services based on digital logistics platforms.

Samsung SDS at a Glance



Key Business Areas of Samsung SDS

IT Services

Samsung Cloud Platform leverages our differentiated technological capabilities and expertise across various industries and processes to provide Hybrid/Multi-Cloud services, SaaS adoption and operation, and cloud-based digital transformation services that utilize digital technologies.



Sales **6.0** trillion

Operating Profit **KRW 631.6** billion

Logistics Service

Samsung SDS provides global integrated logistics services, focusing on export-import logistics services, from customer's supply chain planning to logistics execution, through our digital logistics platform(Cello Square) that combines innovative IT technologies.



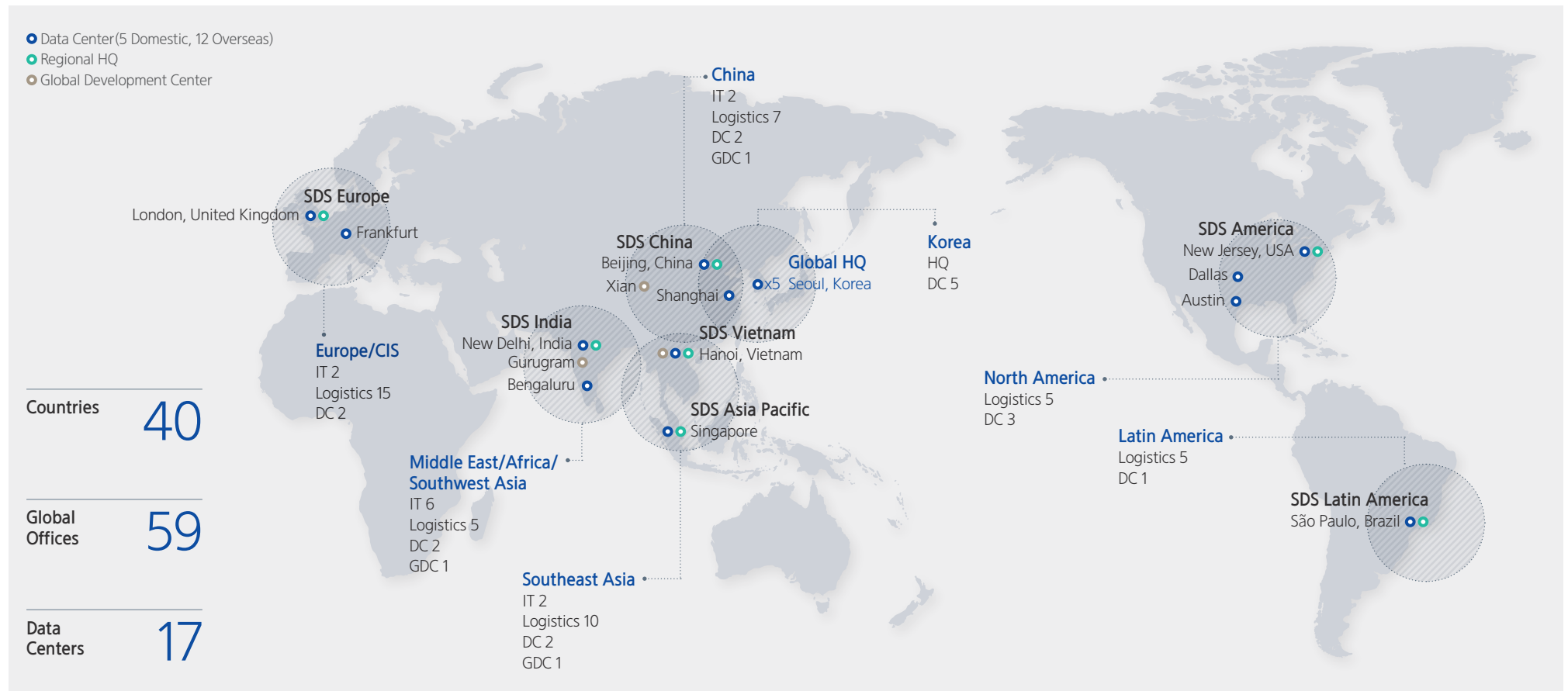
Sales **KRW 11.3** trillion

Operating Profit **KRW 284.5** billion

Company Overview

Global Network

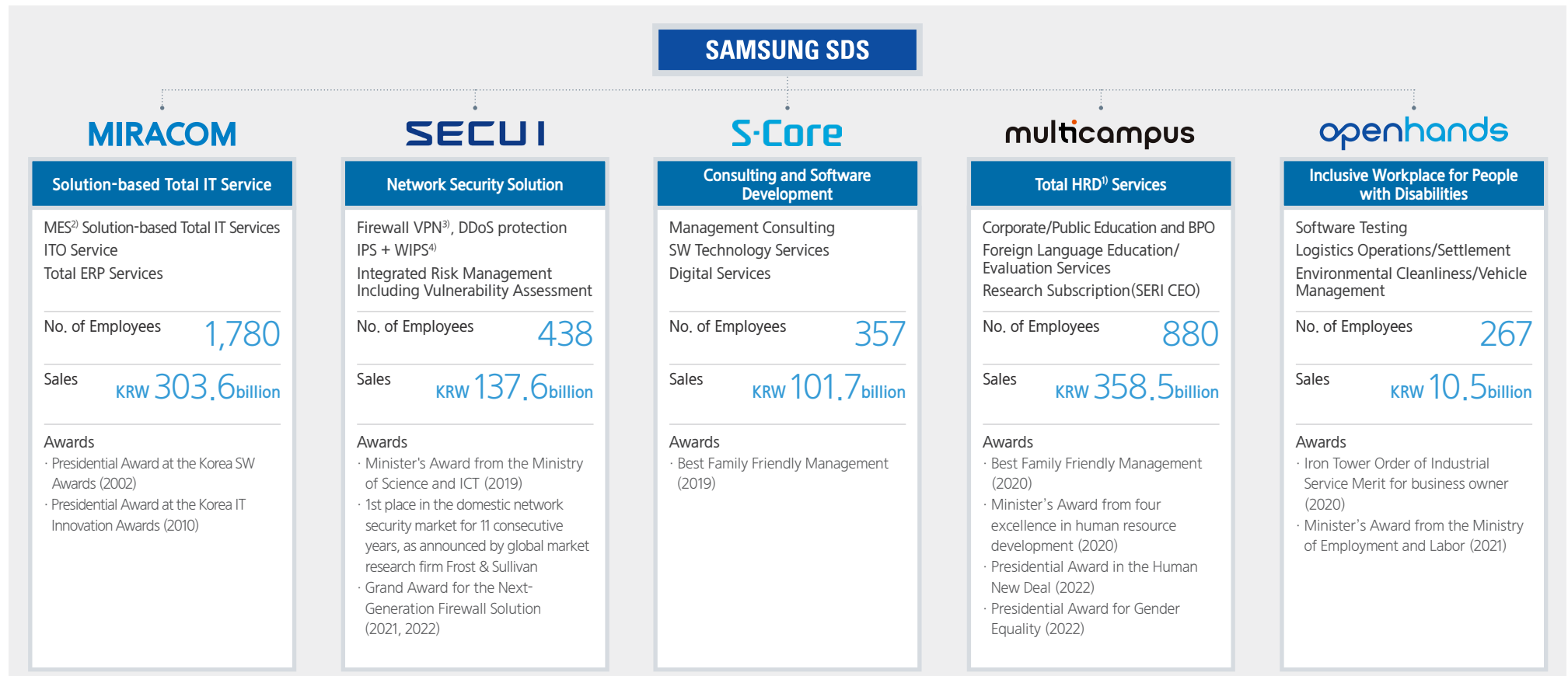
As of the end of 2022, Samsung SDS operates on a global scale across 40 countries, 59 offices and 17 data centers worldwide.



Company Overview

Our Subsidiaries

Within our ecosystem, Samsung SDS operates subsidiaries specializing in consulting, application development and operation, education BPO, and security.

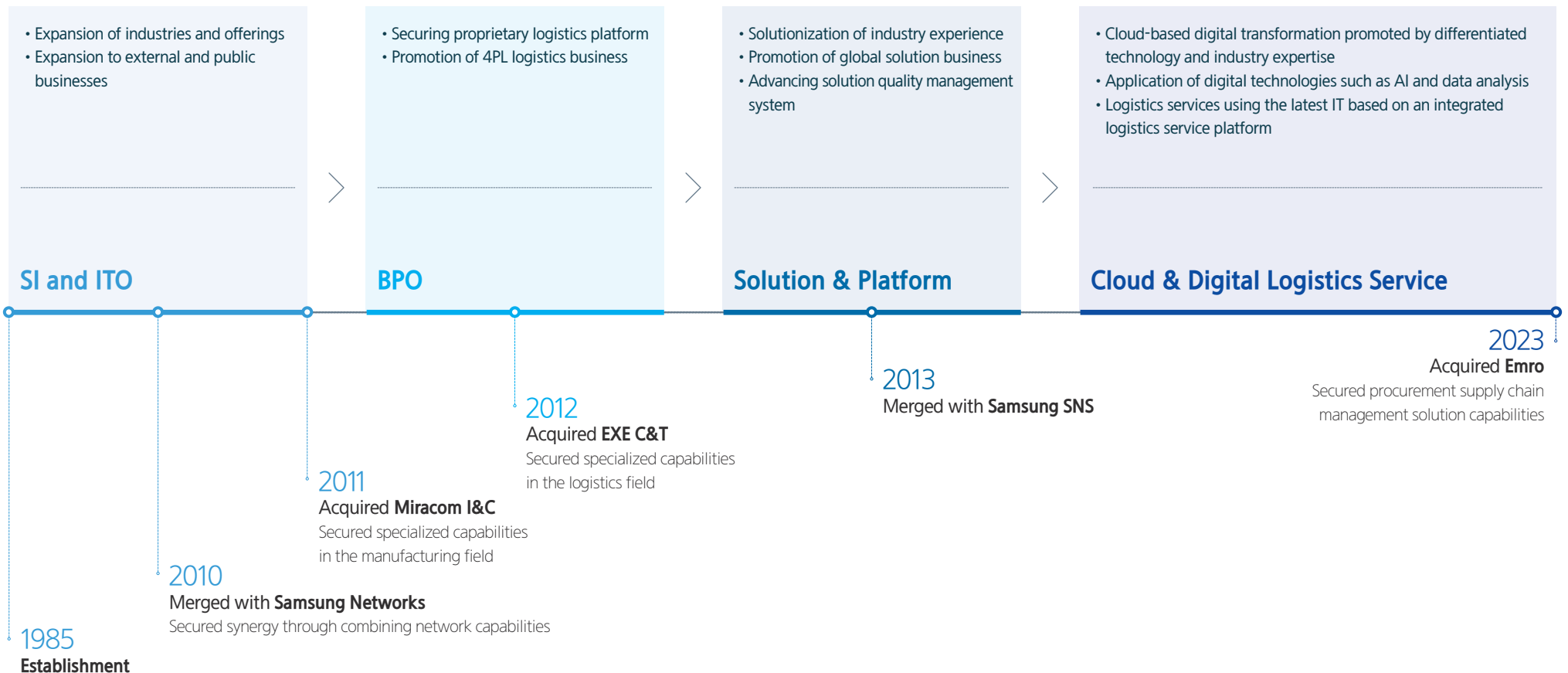


1)HRD: Human Resource Development 2)MES: Manufacturing Execution System 3)VPN: Virtual Private Network 4)WIPS: Wireless Intrusion Prevention System

Company Overview

Business Innovation

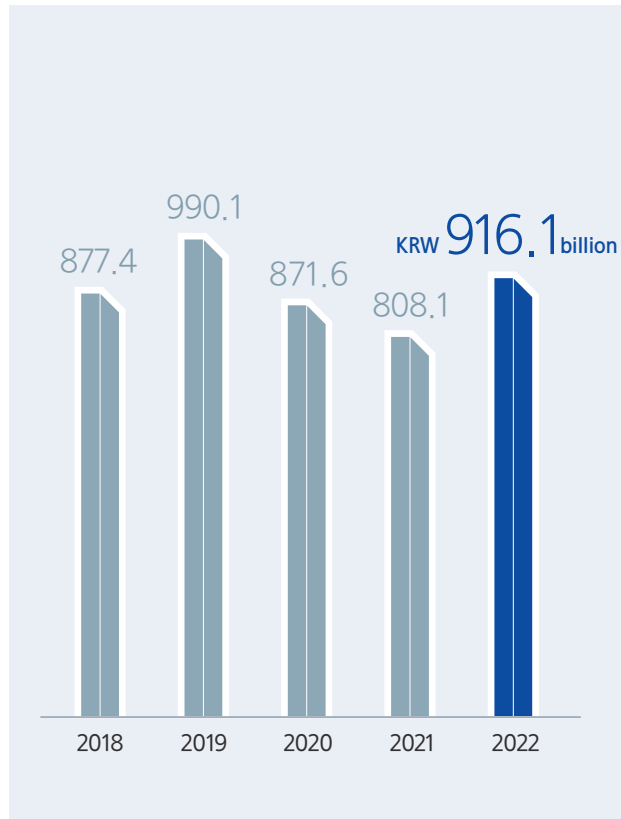
Leveraging 38 years of trailblazing experience in guiding customer IT transformations, we provide cloud-based digital transformation solutions.



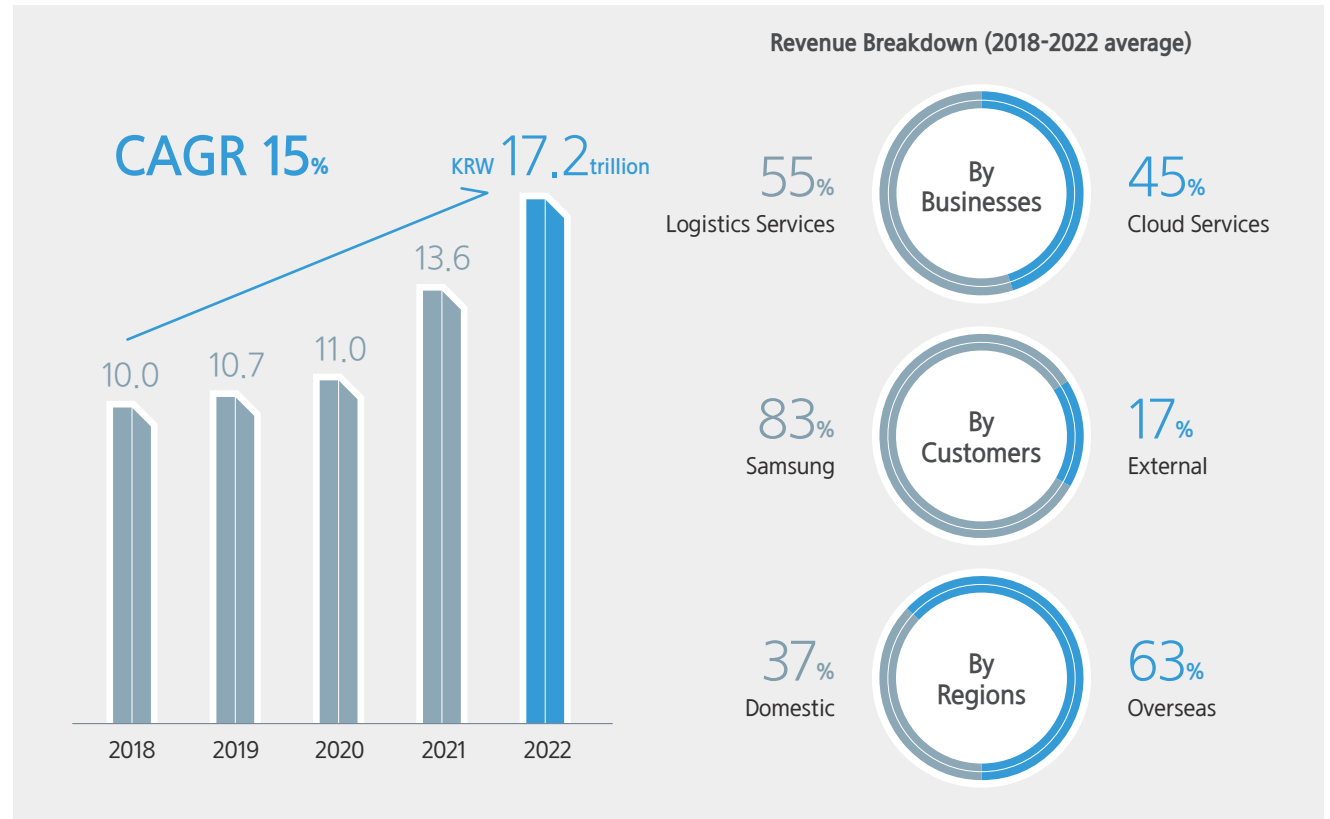
Business Overview

Business Performance

Operating Profit



Revenue



Business Overview

Cloud Service

Cloud Services that Best Fit Businesses

Samsung SDS is a global CSP + MSP provider that combines customized cloud services tailored to business needs with SaaS solutions for business innovation, offering all-in-one managed services from consulting to application modernization on a business platform.

Cloud. Simply Fit

Biz fitting
Cloud Service
CSP
Cloud Service Provider

Samsung Cloud Platform(SCP)

Customer Dedicated Cloud

High-Performance Cloud

Cloud Security

All-in-one
Managed Cloud Services
MSP
Managed Service Provider

Consulting for Cloud Transition

Cloud Migration

Application Modernization

Multi/hybrid Cloud Operation

Global SaaS Service Establishment/Operation

Innovation-driven
Enterprise SaaS
Solution Provider

Collaboration Solution
Mail, Meeting, Messenger, EFSS

Security Solution
EMM, Endpoint Security

Business Automation
RPA

Cloud Business Experience Accumulated
over Many Years

Over 200 Cases in Cloud Biz

12k VM+ Public Cloud Transformation

60k VM+ Private Cloud Operation

8500+ Cloud Professional Certifications



Top holders of AWS certs(2,095 certified, as of 2022)

First in Korea to ACQUIRE **AWS Competency**

AWS SaaS Competency

AWS Security Competency

Business Overview

Digital Logistics Services

More Simplified and Convenient Digital Forwarding Services

Samsung SDS provides a one-stop service covering all areas of logistics, including digital forwarding, leveraging our digital logistics platform, Cello Square. With 56 branches and over 6,700 logistics experts across 36 countries, Samsung SDS delivers more convenient, transparent, and optimized global integrated logistics services.



Digital Freight Forwarding Services for Export/Import

Platform support from quote to contract and settlement

Product-based service offerings

External platform and partner integration

High-quality logistics services based on AI and analytics

Instant Quoting

Online Reservation

Real-Time Tracking

Cost Settlement

Efficiency of Logistics Operations

- Instant online quoting
- Automated document generation and integrated management
- Real-time visibility of all segments
- Dashboard (schedule, issues, tracking)

Data-driven Logistics Insights

- Customized logistics cost, lead time analysis reports
- Inventory monitoring during international transportation
- Carbon emissions management
- Market prediction based on System Dynamics



Automated Interface Small and medium-sized/exporters Large corporations E-commerce marketplaces

Aggregated Data Airlines/shipping companies Truck services Express couriers Fulfillment/logistics centers

Global End-to-End Logistics Services

20th place in global 3PL

Over 6,700 logistics professionals

Operating 56 branches

36 countries

Project Logistics

- Raw materials (bulk) logistics
- Equipment logistics
- EPC logistics

Global Supply Chain

- Integrated logistics outsourcing
- 4PL services
- 24/7 global risk management

Warehousing & Distribution

- Strategy formation/operation based on Data Analytics
- Customer-oriented logistics center operation and shipment
- Real-time delivery tracking and issue response

E-Commerce

- Automatic connection between marketplace orders and logistics
- Real-time delivery monitoring and issue response

Freight Forwarding

- Optimal service provider selection
- End-to-end real-time monitoring of freight status

Air Cargo 280,000 Ton/year

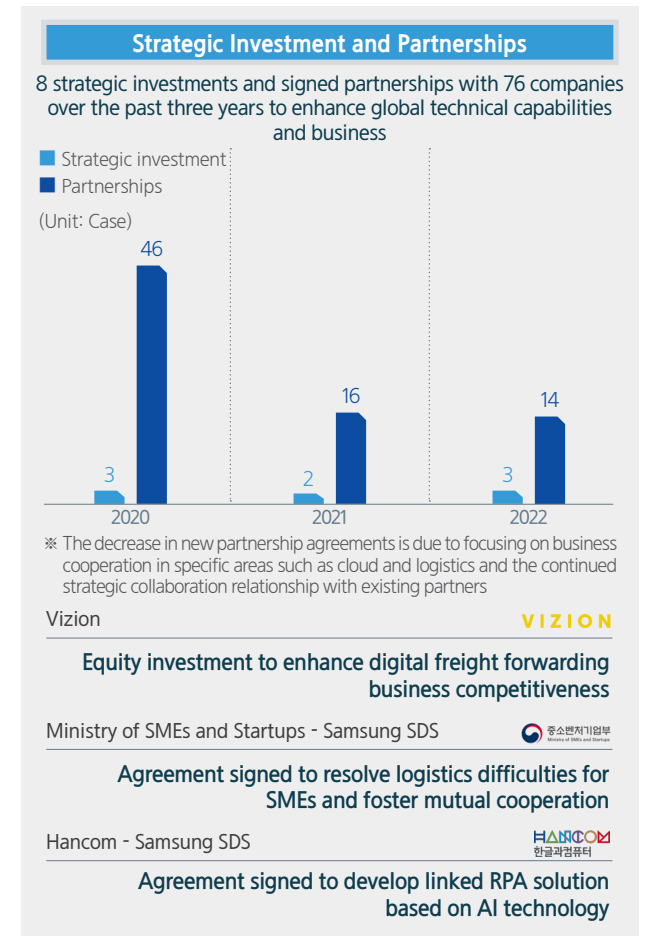
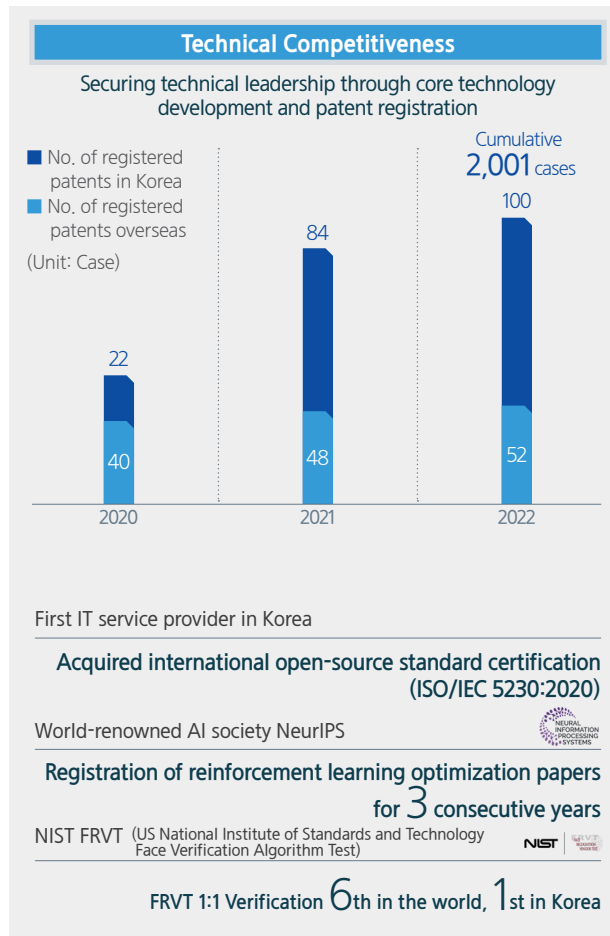
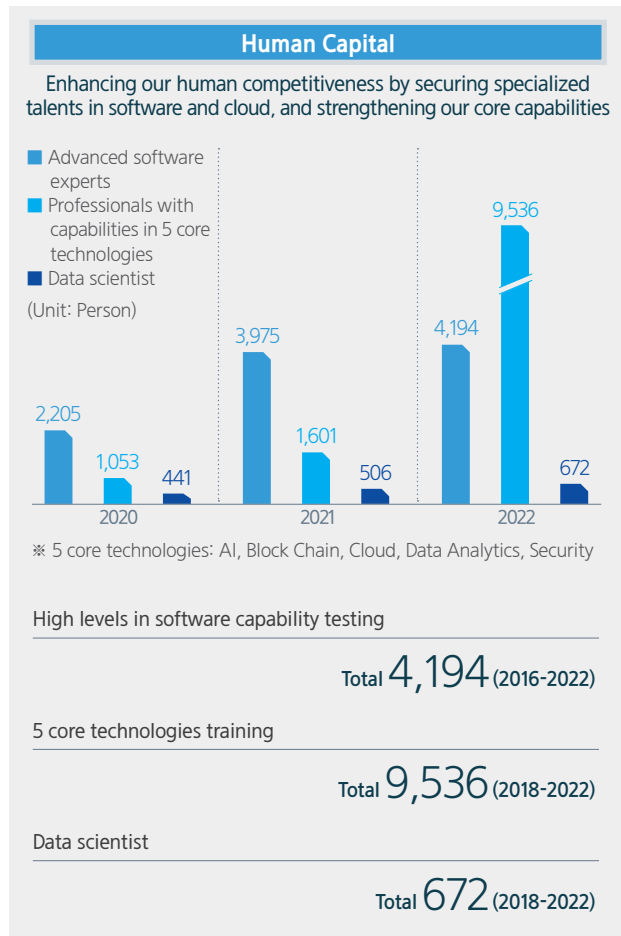
Ocean Cargo 810,000 TEU/year

Truck 580,000 Truckload/year

Business Overview

Business Competitiveness

Samsung SDS is enhancing our business competitiveness through proactive recruitment of specialized talents, development of core technologies, expansion of strategic investments, and the establishment of partnerships.

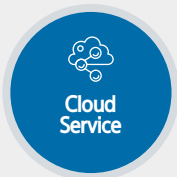


Business Overview

Awards & Recognition

Samsung SDS' cloud capabilities and customer innovation capabilities have been recognized for their excellence by global professional evaluation organizations.

Cloud



- **Gartner MQ** - Data Center Outsourcing and Hybrid Infrastructure Managed Services, Global(2022, 2021)
- **IDC Market Scope** - Asia Pacific Managed Cloud Services(2021)
- First Korean company to become KCSP¹⁾ and CNCF²⁾ Gold Member



- **IDC Market Scope** - Worldwide Managed Cloud Security Services in the Multicloud(2022) /Asia Pacific Cloud Security Services(2021)
- **Frost & Sullivan 'Global Company of the Year'** - South Korea Cybersecurity Services(2022) / MSS³⁾(2021, 2020)



- Possession of 8500+ Cloud expert certifications(AWS, Azure, OCI)
- First Korean company to join AWS exclusive global business network
- First Korean company to become AWS SaaS Competency Partner
- First Korean company to become AWS Security Competency Consulting Partner

Customer Innovation



- **Gartner**. 21st in the Global IT Service(2021) / 1st in manufacturing, 3rd in the APAC region(excluding Japan)
- **Gartner**. 7th in the Global BPO(2021)
- **CIO100** 10 awards for customer IT innovation projects(7 consecutive years)



- **Gartner MQ** - ERP, AI, RPA - SAP S/4HANA Application Services(2022, 2021, 2020), Data Science and Machine Learning Platforms(2021), Robotic Process Automation(2022, 2021, 2020)
- **IDC Market Scope** - ERP, AI, CRM - Asia/Pacific SAP Implementation Services(2022, 2020), Asia/Pacific Salesforce Implementation Services(2022), Asia/Pacific AI Life-Cycle Software Tools and Platforms(2022), Asia/Pacific Vision AI Software Platform(2021)
- **FORRESTER** Selected as a representative company in 'Now Tech' - ERP, IoT fields SAP Implementation Services Provider(2022, 2020), IoT Consultancies In Asia Pacific(2022)

1) KCSP: Kubernetes Certified Service Provider 2) CNCF: Cloud Native Computing Foundation 3) MSS: Managed Security Services



ESG HIGHLIGHTS

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Key Figures

Environment



GHG Emissions(Scope 1, 2)

122,842 tCO₂eq

GHG Emissions(Scope 3)

3,154,520 tCO₂eq

GHG Emissions Intensity

0.71 tCO₂eq/100 million KRW

Energy Consumption

2,522 TJ

Renewable Energy Production

306.31 MWh

Number of Employees

26,236 persons

Ratio of Female Employees

30.6 %

Employment Rate for the Disabled

3.62 %



Customer Satisfaction

94 /100

Number of Personal Data Leaks

Zero

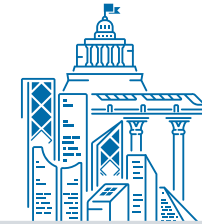
Beneficiaries of Social Contributions

357,811 persons

Win-win Growth Index

Top Excellence

Social



Governance

Number of Female Directors on the BOD

1 person

Average Board Meeting Attendance

96.4 %

Anti-corruption/Fair Trade Violations

Zero

Cash Dividend Per Share

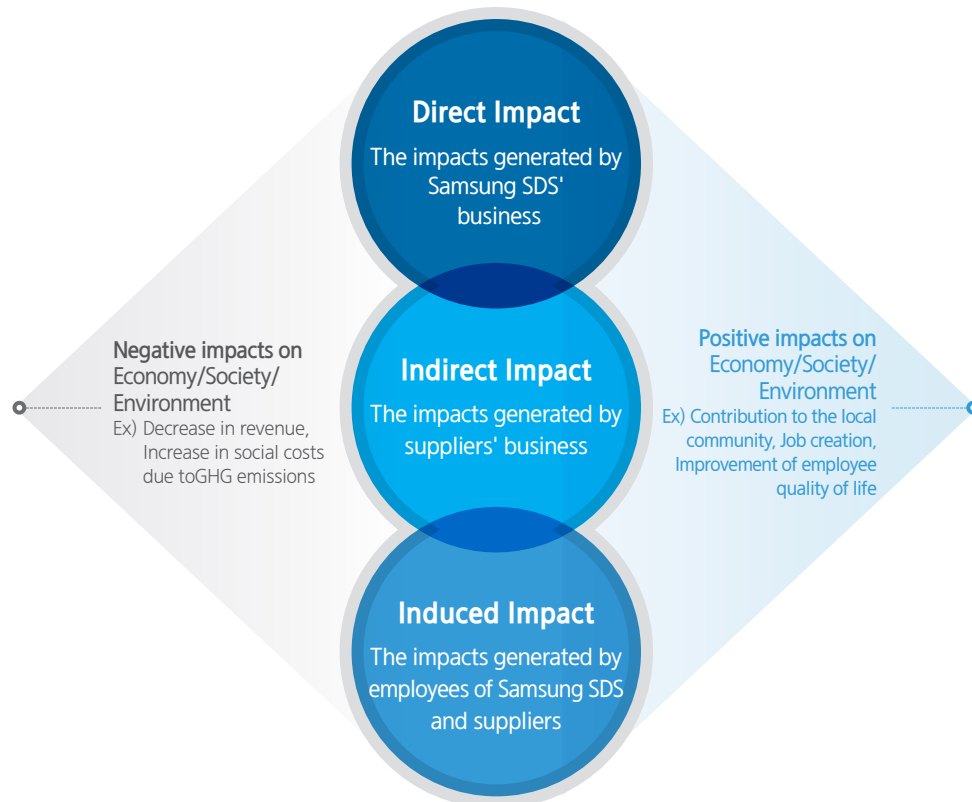
KRW 3,200 per share

Sustainability Impacts

Impact Analysis Process

Samsung SDS measures and manages the environmental and social impacts generated throughout our overall business activities to achieve better decision-making. As a responsible member of society, we analyze the diverse impacts generated by Samsung SDS. The value created by the company in 2022 is categorized into Economic Impact, Social Impact, and Environmental Impact.

Scope of Impact



Aspects

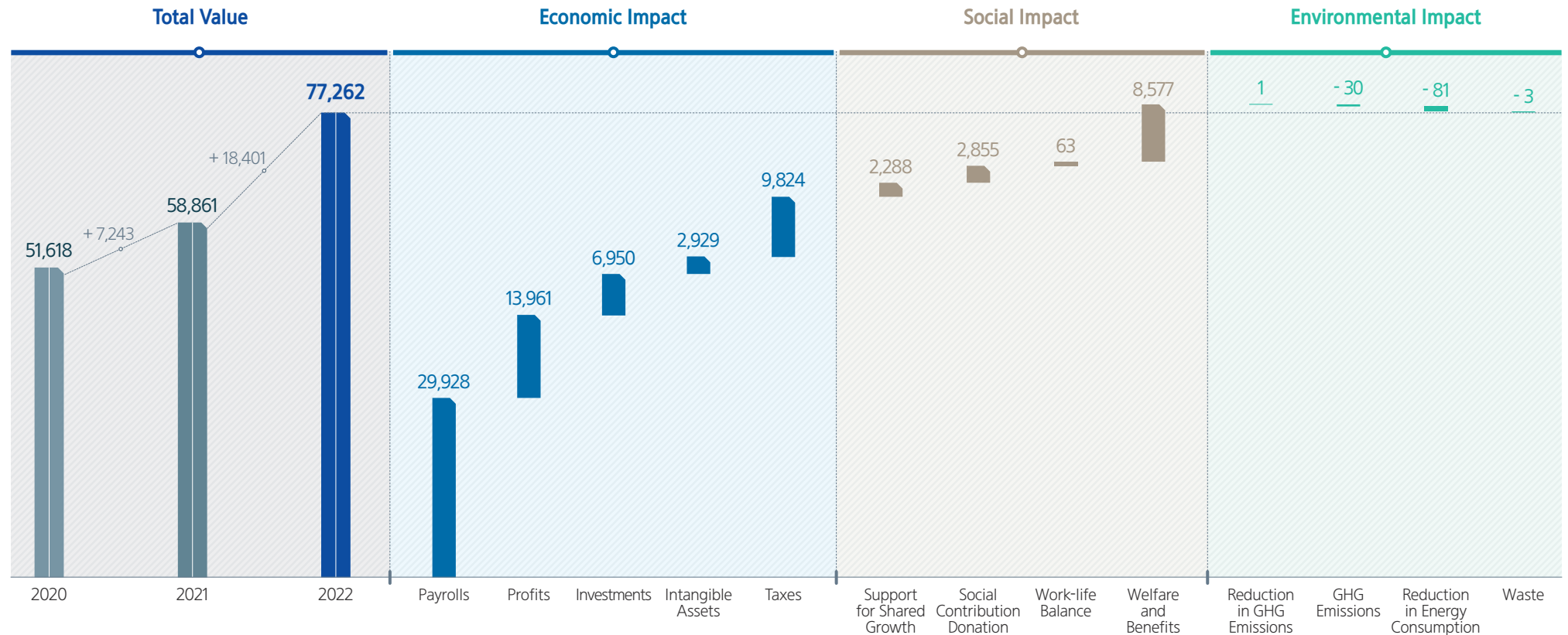
Category		Components	Impact
Economic Impacts	It is the sum of factors that can influence the GDP, including profit generation of businesses, acquisition of tangible and intangible assets, R&D expenses, and employee wages. It also includes the impact on public finances through tax payments.	Payrolls	Employees
		Profits	Shareholders
		Investments	Shareholders/Suppliers
		Intangible Assets	Shareholders/Suppliers
		Taxes	Governments
Social Impacts	It represents the cumulative impact of corporate social contribution and cooperative activities for shared prosperity have on enhancing the well-being of society members. This includes the quantified assessment of the impact of corporate donations, as well as the generation of production and value-added through employee welfare measures.	Support for Shared Growth	Suppliers
		Social Contribution Donation	Communities
		Work-life Balance	Employees
		Welfare and Benefits	Employees
Environmental Impacts	It represents the cumulative impact that can affect nature and the environment, quantitatively assessing factors such as GHG emissions and reductions, energy consumption, and waste disposal.	Reduction in GHG Emissions	Governments/Communities
		GHG Emissions	Governments/Communities
		Reduction in Energy Consumption	Governments/Communities
		Waste	Governments/Communities

Sustainability Impacts

Impact Analysis

Value Creation Amount in 2022 KRW **7.7** Trillion

KRW **1.8** Trillion Increased Compared to 2021



ESG Ratings

S&P Dow Jones Indices

A Division of S&P Global

World Index

The Dow Jones Sustainability Indices (DJSI), developed by S&P Dow Jones Indices, a global financial information provider, and Robeco SAM, a leading sustainable management assessment company, evaluate the sustainability of the top 2,500 companies worldwide based on market capitalization.

Samsung SDS was newly included in the DJSI World Index in 2022.

* Among the top 2,555 globally evaluated companies based on market capitalization, 326 companies, accounting for 12.8%, were included.



Grade A

Morgan Stanley Capital International (MSCI) evaluates over 8,500 listed companies worldwide based on a long-term and financial perspective related to environmental, social responsibility, and corporate governance factors, segmented by industry.

MSCI assigns rating grades ranging from AAA to CCC based on the level of ESG risk management.

Samsung SDS maintains a Grade A as of February, 2023.



Grade B

The Carbon Disclosure Project (CDP) provides reporting guidelines for climate change, water, and forests, and assesses carbon emissions information and its environmental impacts for cities, governments, and major global listed companies.

Samsung SDS has obtained a Management B grade* for its level of disclosure on climate change mitigation and adaptation.

* Industry average: C, Global average: B-



Gold Medal

EcoVadis is a global research organization that evaluates the social performance of 50,000 companies across 190 industries in 150 countries around the world. EcoVadis evaluates ESG performance on supply chain, ESH (Environmental Safety and Health), labor and human rights, and ethics and fair operation.

Samsung SDS has achieved the Gold Medal* for two consecutive years in 2022.

* Given to the top 5%



Low Risk

Sustainalytics provides ESG Risk Ratings that primarily target investors and focus on measuring the impact on companies when risk management is lacking. ESG Risk Ratings assess three components: corporate governance, key ESG issues, and unique ESG issues. These ratings serve to help investors understand the environmental, social, and governance risks associated with companies.

Samsung SDS received Low Risk in the ESG Risk Ratings.



Grade A

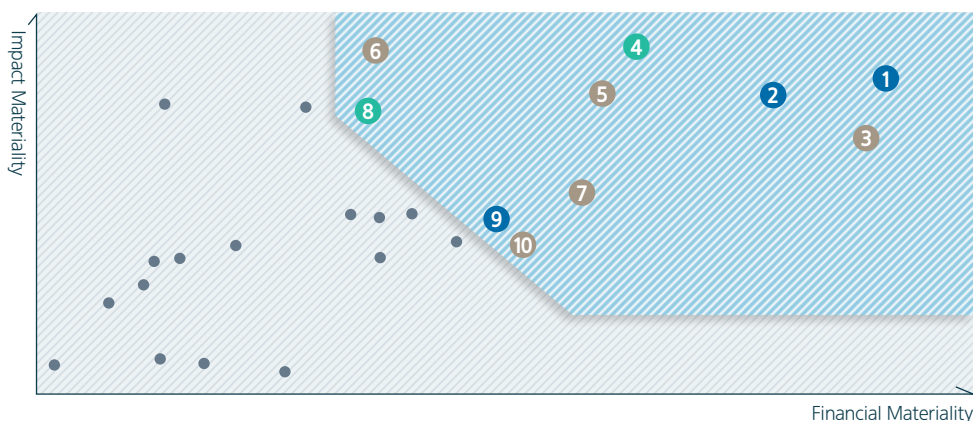
KCGS has been comprehensively evaluating the sustainability performance of domestic listed companies in South Korea, including social responsibility and environmental management, since 2011. The evaluation is divided into four categories: overall sustainability, environment, social, and governance.

Samsung SDS received a comprehensive A-grade rating for the third consecutive year in 2022, recognizing our level of sustainable management.

Materiality Analysis

Samsung SDS has conducted a double materiality assessment, applying international standards, to identify sustainability issues throughout our business activities and align with the expectations of various stakeholders. This assessment aims to determine the significance of these issues and prioritize them accordingly. Samsung SDS will communicate with stakeholders regarding 2022 activities, achievements, and future plans in relation to these material issues, and will continue sustainable management by addressing these material issues.

Materiality Matrix



Samsung SDS Sustainability Material Issues

Environment	4	GHG emissions management and reduction	Social	3	Talent attraction and development
	8	Expand renewable energy usage		5	Respect for human rights and diversity
Governance	1	Information Security	6	Create a quality organizational culture	
	2	Compliance and business ethics	7	Manage health and safety	
	9	Digital Responsibility	10	Supply chain ESG management	

Potential Issues
 Social contribution | Manage climate change risk | Strengthen service quality and improve customer satisfaction | Generate stable profits | Eco-friendly data centers | Enhance growth through cloud services | Provide eco-friendly logistics services | Communication between executives and employees | Strengthen responsible management of the board of directors | Establish environmental management strategies and systems | Expand into new business areas | Manage and reduce water consumption | Expand stakeholder communication | Shared growth | Biodiversity | Establish sustainability management strategies and systems

No.	Area	Material Issues	Changes Compared to the Previous Year	Type of Impact ¹⁾	GRI Standards	References
1	Governance	Information Security	New	Negative	418-1	42~43, 103~106, 110
2	Governance	Compliance and business ethics	Up (5 ⇔ 2)	Negative	205-1,2,3 / 206-1	98~102, 110
3	Social	Talent attraction and development	Up (10 ⇔ 3)	Positive	404-1,2,3	57~59, 112~113
4	Environment	GHG emissions management and reduction	Down (3 ⇔ 4)	Complex	305-1~5	36~38, 47~49, 117~118
5	Social	Respect for human rights and diversity	Down (4 ⇔ 5)	Positive	405-1,2 / 410-1	54~56, 112
6	Social	Create a quality organizational culture	New	Positive	-	60~63
7	Social	Manage health and safety	New	Negative	403-1~10	70~75
8	Environment	Expand renewable energy usage	New	Complex	302-4	38, 50, 117
9	Governance	Digital Responsibility	New	Negative	418-1	40~43, 110
10	Social	Supply chain ESG management	Down (9 ⇔ 10)	Complex	308-1,2	82~84, 116

1) Each material issue can be classified as "Positive" if it is likely to act as an opportunity factor for both internal and external stakeholders, "Negative" if it is likely to act as a risk factor, and "Complex" if it has a combined effect.

Materiality Analysis

Double Materiality Assessment Process

Step 01 Create Issue Pool

Samsung SDS has identified a total of 50 issues by analyzing the impacts of Samsung SDS in terms of Economic Impact, Social Impact, and Environmental Impact, in order to assess how well they align with sustainable management and international standards.

Step 02 Determine Key Issues

Based on various media investigations and research, Samsung SDS has reviewed internal data and selected a total of 26 key issues in the IT and logistics industries.

Step 03 Analyze Double Materiality

Samsung SDS reviewed a total of 26 key focal areas, dividing them into financial materiality and impact materiality, to determine their priority.

Financial Materiality Evaluation

- Incorporate the sustainability topics that are of high interest to external experts.
- Benchmark sustainability key issues among 13 companies in the same industry
- Internal stakeholder survey(employees)

Impact Materiality Evaluation

- Analyze international standards(GRI Standards, DJSI, ISO 26000, KCGS, UN SDGs, TCFD, SASB)
- Media research and studies related to Samsung SDS(from January 2022 to January 2023 / a total of 698 articles)
- External stakeholder survey(customers, suppliers, shareholders, investors, researchers, NGO, etc)

Materiality Survey for Stakeholders

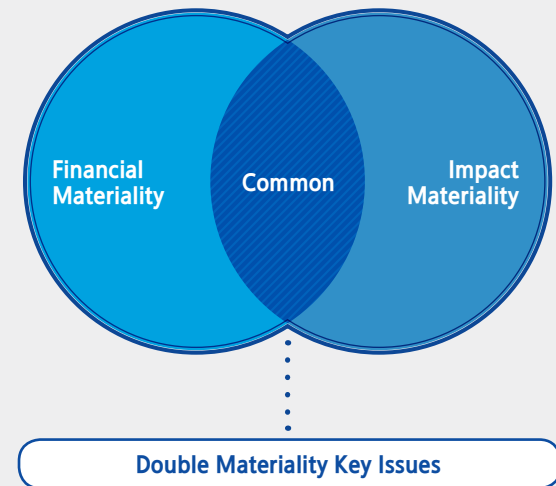
Period	February 23rd, 2023 ~ March 3rd, 2023	Detail	<ul style="list-style-type: none"> · Assessment of Samsung SDS' sustainable management performance · Materiality evaluation · Gathering opinions on Samsung SDS' sustainable management activities and Sustainability Reports
Method	Online Survey		
Target	Internal and external stakeholders		

Step 04 Double Materiality Assessment Result

Samsung SDS has reported the results of the double materiality assessment to ESG committee, which identified a total of 10 material issues: 4 in terms of overall importance, 3 in terms of Financial materiality, and 3 in terms of Impact materiality. These material issues have been disclosed transparently in the current sustainability report and demonstrated ESG committee.

Double Materiality

The double materiality assessment is a method of evaluating a company's material issues by considering both the Financial materiality of the external environment (environment and society) on the company and the Impact materiality of the company on the external environment (environment and society). International standards in the field of sustainability reporting, including GRI, have adopted the concept of double materiality to strengthen reporting criteria.



Materiality Analysis

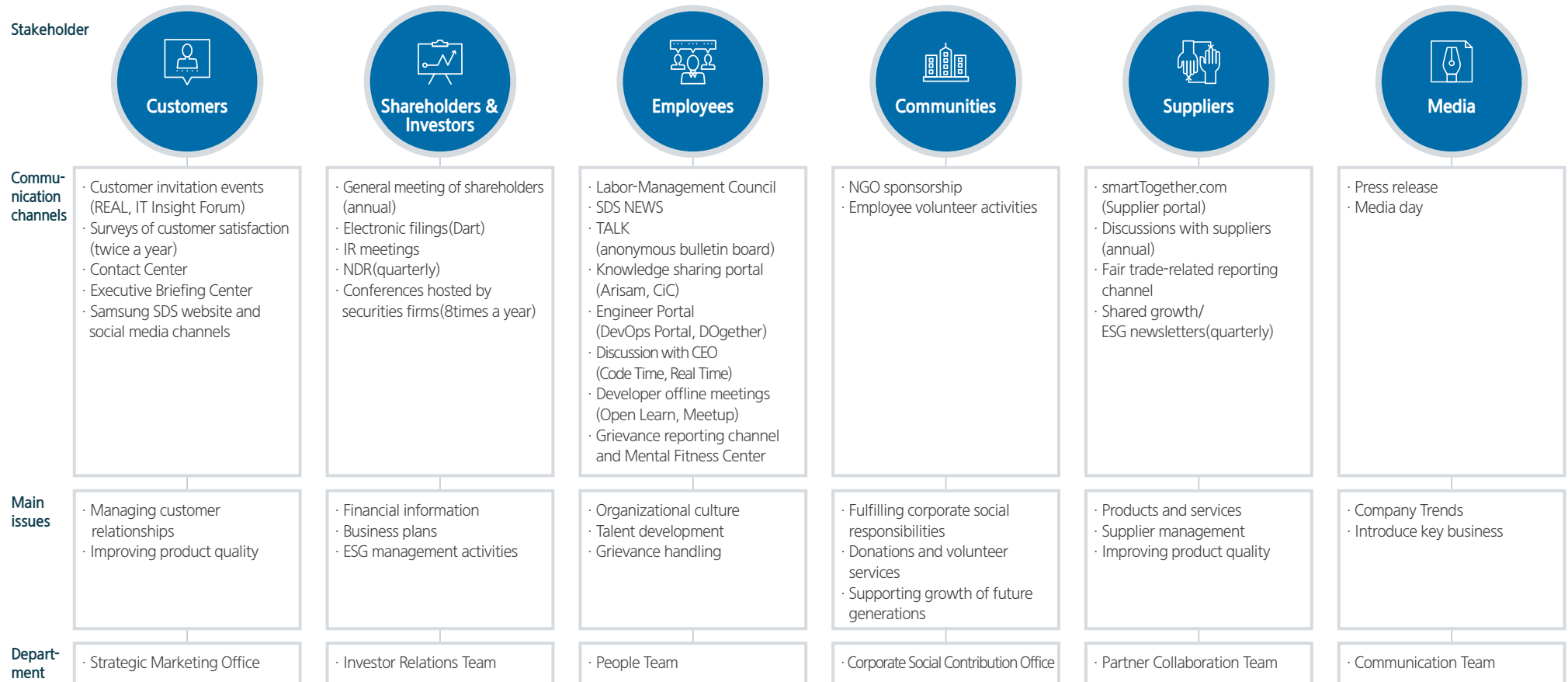
Material Issues and Value Chain

Applying the result of the materiality analysis to work process, Samsung SDS will enhance ESG management by reflecting these material issues.

Material Issues	Samsung SDS Work Process														
	Marketing/ Planning	R&D	Business/ Opportunity Mgmt.	Purchasing/ Supply Chain	Business Development and Operation	International and Domestic Logistics	CX/Failure Mgmt.	Manufacturing/ Network Operation	Quality Improvement/ Risk Mgmt.	Strategic Planning	Tax/ Treasury	Mgmt. Innovation	Audit/ Compliance	Communication	Security Control
E	Manage and reduce GHG emissions	●	●		●		●		●				●		●
	Expand renewable energy usage	●	●		●		●			●				●	
S	Talent attraction and development	●	●												
	Respect for human rights and diversity			●	●		●						●	●	●
	Create a quality organizational culture	●	●	●		●			●			●		●	
	Manage health and safety			●	●	●	●		●	●			●		
	Supply chain ESG management			●	●	●	●		●	●	●				
G	Information Security						●	●	●						●
	Compliance and business ethics			●			●		●		●		●		●
	Digital Responsibility		●		●				●				●		●

Stakeholder Engagement and Communication

Samsung SDS defines key stakeholders associated with our business activities into six groups: customers, shareholders and investors, employees, local communities, suppliers, and the media. We value the opinions of each group and strives to build strong relationships based on trust. In addition, we actively work towards achieving the UN Sustainable Development Goals (SDGs) in collaboration with our stakeholders, contributing to the global efforts in addressing cross-border challenges.



ESG MANAGEMENT

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Sustainability Management Strategy Framework

Sustainability Management Strategy






Samsung SDS has established a new framework for our sustainability strategy with the aim of actively contributing to the resolution of customers' ESG (Environmental, Social, and Governance) challenges through our digital capabilities and providing support to them.



Sustainability Management Strategy Framework

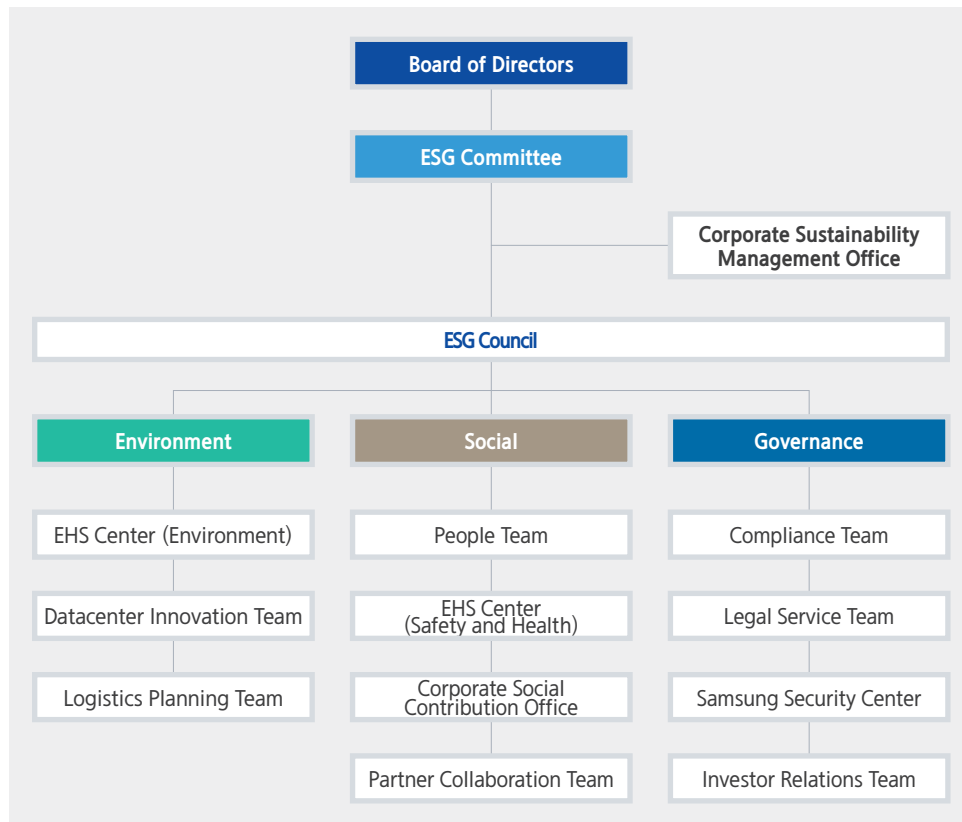
Sustainability Management Implementation Roadmap

Samsung SDS has established a phased implementation roadmap and set mid-to-long-term tasks for the enhancement of ESG management. We are committed to realizing our sustainable management strategy through effective coordination and communication among business units and relevant departments.

Phased Implementation		2023	2024	2025	2030	2050
		Establishing quick-win tasks and foundational structures for ESG strategy implementation in the short term			Elevating ESG management through the implementation of mid-to-long-term strategies	
Business	 Cloud Services	<ul style="list-style-type: none"> Securing high-efficiency equipment and liquid cooling system database Establishing a basis for carbon emissions measurement 	<ul style="list-style-type: none"> Developing a guide for liquid cooling design Providing low emissions simulations and Open API 	<ul style="list-style-type: none"> Conducting proof of concept(PoC) validation for liquid cooling system implementation 	<ul style="list-style-type: none"> Implementing liquid cooling within the data center Designing high-efficiency/high-performance hardware 	<ul style="list-style-type: none"> Building a Net Zero data center based on renewable technology
	 Logistics	<ul style="list-style-type: none"> Developing and providing a customer-centric carbon dashboard 	<ul style="list-style-type: none"> Developing and providing environmentally friendly logistics products/services 		<ul style="list-style-type: none"> Providing environmentally friendly logistics consulting services 	<ul style="list-style-type: none"> Establishing a management system for environmentally conscious implementations and offering priority services
	 Solutions	<ul style="list-style-type: none"> Establishing an ESG value measurement system Formulating new business initiative 	<ul style="list-style-type: none"> Measuring the effect of customer ESG value Acquiring ESG solution business capabilities 	<ul style="list-style-type: none"> Monetizing measured ESG value Driving ESG solution new business initiative 	<ul style="list-style-type: none"> Advancing and expanding the ESG solution business 	
Operation	 Subsidiaries and Overseas Corporations	<ul style="list-style-type: none"> Expanding ESG application in subsidiaries and overseas subsidiaries Establishing roles and responsibilities(R&R) and gathering essential data 	<ul style="list-style-type: none"> Expanding the scope of data collection and measuring social/environmental benefits 	<ul style="list-style-type: none"> Setting improvement goals and targets for each subsidiary and overseas subsidiaries 	<ul style="list-style-type: none"> Managing ESG performance of subsidiaries and overseas subsidiaries 	
	 Communications	<ul style="list-style-type: none"> Expanding communication channels for ESG strategy formulation 	<ul style="list-style-type: none"> Increasing channel-specific communication Building an internal ESG portal 	<ul style="list-style-type: none"> Responding to global ESG disclosures Improving the operation of the internal ESG portal 	<ul style="list-style-type: none"> Executing impact communication 	

Sustainability Management Implementation System

Sustainable Management Governance



ESG Committee

In 2021, Samsung SDS reinforced our sustainable management governance by establishing the ESG Committee under the Board of Directors. The objective was to collaboratively create sustainable value with diverse stakeholders and foster a more proactive approach to sustainable management.

The ESG Committee comprises four independent directors and one executive director, with the aim of enhancing corporate value from an ESG perspective and fostering collaborative sustainable value creation with diverse stakeholders. In the future, Samsung SDS will maintain an active role in deliberating and making decisions on specific issues related to environment, society, governance, as well as ESG strategies, policy establishment, and implementation activities. Our aim is to consistently expand our impact and contribution in these areas.



Seung-Ah Cho
Committee Chairman
(Independent Director)



Hyun-Han Shin
Committee Member
(Independent Director)



Moo Il Moon
Committee Member
(Independent Director)



Jae Jin Lee
Committee Member
(Independent Director)



Sungwoo Hwang
Committee Member
(Executive Director)

ESG Council






The CFO-led ESG Council has been established to facilitate communication between relevant departments in the field of sustainability management and to address operational-level sustainable management tasks. The ESG Council reviews and addresses matters that are then reported to the ESG Committee. It convenes on a monthly basis or as needed when relevant issues arise, playing a crucial role in responding to sustainable tasks.

Strategy for Sustainable Business

Cloud Services

Low Power, Environmentally Friendly Data Center

Samsung SDS operates five data centers in Korea, leading the way in data center technology innovation with a strong emphasis on energy conservation and environmental safety. We are strategically dedicated to continuous research to improve energy efficiency, which includes replacing outdated equipment and expanding the use of high-efficiency equipment. Additionally, we are establishing technical standards for the implementation of Liquid Cooling technology¹⁾.

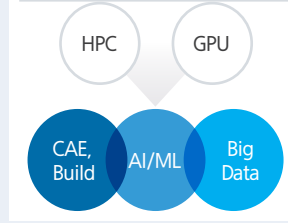
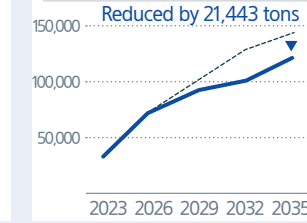
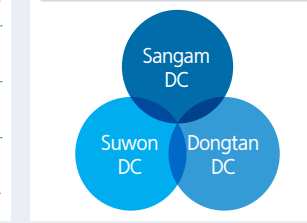
<p>PUE²⁾ 1.1 Liquid Cooling Ready Dongtan Data Center Korea's first high-performance computing exclusive data center</p> 	<p>PUE 1.2 Direct Free Cooling Chuncheon Data Center Acquired Green Data Center Certification (Platinum Grade)</p> 	<p>PUE 1.4 Indirect Free Cooling Sangam Data Center Winner of Data Center Dynamic Awards</p> 	<p>PUE 1.6 Water-side Economizer³⁾ Suwon Data Center Acquired Asia's first Tier III certification</p> 	<p>PUE 1.8 Gumi Data Center Integration/operation of Affiliated companies' IT resources</p> 
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1) Liquid Cooling: A technology that uses a liquid with high thermal conductivity to cool IT equipment, instead of using gas
2) Power Usage Effectiveness (PUE): An index showing how efficiently a data center uses energy. The closer to 1.0, the more efficient
3) Initial Free Cooling System

SPECIAL SECTION

Dongtan Data Center

Samsung SDS built the Dongtan Data Center to meet the rapidly increasing demand for high-performance computing (HPC), which commenced operations in February 2023. The server rooms within the Dongtan Data Center are maintained at a standard temperature of 27°C, which is higher compared to the typical operating temperature of 22°C in most data centers. This strategic approach enables Samsung SDS to achieve significant energy savings in cooling operations. Cooling towers are deployed to achieve approximately 70% efficiency in cooling. Furthermore, we have optimized energy consumption at the data center by employing solar power generation facilities and high-efficiency uninterruptible power supply (UPS). The Dongtan Data Center is striving to achieve optimal energy efficiency through its refined power design. Samsung SDS aims to achieve globally unparalleled power usage efficiency by incorporating cutting-edge cooling technology (liquid cooling), implementing waste heat recovery systems, and maximizing the utilization of renewable energy.

<p>Korea's First HPC Exclusive Data Center</p> <ul style="list-style-type: none"> 15kW or more power supply for all racks Providing high-performance resources for HPC, GPU, etc. for R&D use 	<p>Energy-Saving Technology in Compliance with ESG</p> <ul style="list-style-type: none"> Application of high-heat dissipation liquid cooling Utilizing UPS Eco Model⁴⁾ 	<p>Cloud Multi-AZ⁵⁾ Service</p> <ul style="list-style-type: none"> The only domestic cloud service provider (CSP) with a Multi-AZ deployment configuration across three data centers (DCs) Rapid service recovery system in the event of a DC disaster 																																				
<p>Providing R&D Cloud Services</p> 	<p>Reduction of GHG Emissions</p> <p>Reduced by 21,443 tons</p>  <table border="1"> <caption>GHG Emissions Reduction (Tons)</caption> <thead> <tr> <th>Year</th> <th>2023</th> <th>2026</th> <th>2029</th> <th>2032</th> <th>2035</th> </tr> </thead> <tbody> <tr> <td>2023</td> <td>~40,000</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2026</td> <td></td> <td>~70,000</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2029</td> <td></td> <td></td> <td>~100,000</td> <td></td> <td></td> </tr> <tr> <td>2032</td> <td></td> <td></td> <td></td> <td>~130,000</td> <td></td> </tr> <tr> <td>2035</td> <td></td> <td></td> <td></td> <td></td> <td>~150,000</td> </tr> </tbody> </table>	Year	2023	2026	2029	2032	2035	2023	~40,000					2026		~70,000				2029			~100,000			2032				~130,000		2035					~150,000	<p>Inter-DC Backup</p> 
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4) Minimizes AC-DC conversion to save energy 5) Available Zone

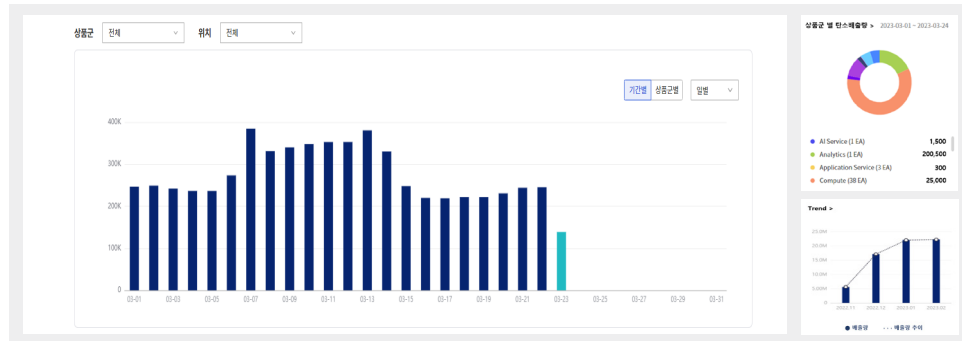
Strategy for Sustainable Business

Cloud Services

Customer-tailored Carbon Emission Information

Samsung SDS plans to assist customer ESG activities by supplying dashboards detailing carbon emission status and reduction effects on the Samsung Cloud Platform (SCP), catering to SCP users and Open API users.

- Provision of dashboard for viewing carbon emission status and reduction effects
 - Comprehensive carbon emission checks including monthly and year-end projections
 - Period, product-line and AZ based status check
 - Providing widget-based personalized information based on customer's main product usage history

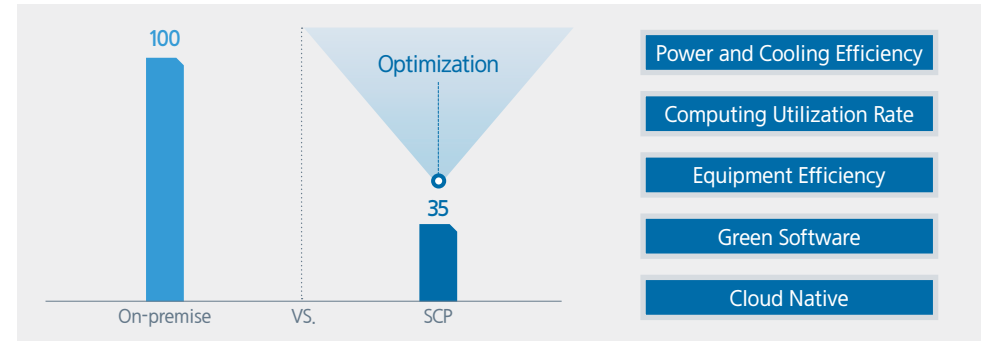


- Development of simulation feature for efficient management of customer's carbon emissions
 - Providing carbon emission simulation features for each activity such as product application, modification, and inquiry
 - Mock carbon emission estimations linked with cost calculator on the SCP portal
 - Expanding customer ESG activities through provision of Open API for carbon emission metrics information

Identification and Proposal of Carbon Emission Reduction Elements

Samsung SDS aims to expand our carbon footprint information service in the future by leveraging carbon emission data. This initiative will empower customers to visualize the impact of reducing carbon emissions through the utilization of our cloud services, thereby assisting them in managing their ESG performance.

- Securing and analyzing pre- and post-cloud conversion carbon emission reduction cases
 - Measuring the carbon emission reduction effects of customers' cloud adoption by identifying instances of carbon emission reduction after implementing Samsung SDS' MSP operations
 - Analyzing the ESG value of opting for its MSPs



- Leveraging cloud transformation to enhance customer propositions
 - Integrating ESG principles within MSP service offerings and contemplating to introduce new offerings to capture future ESG value in customer propositions
 - Establishing carbon emission reduction process and service

Strategy for Sustainable Business

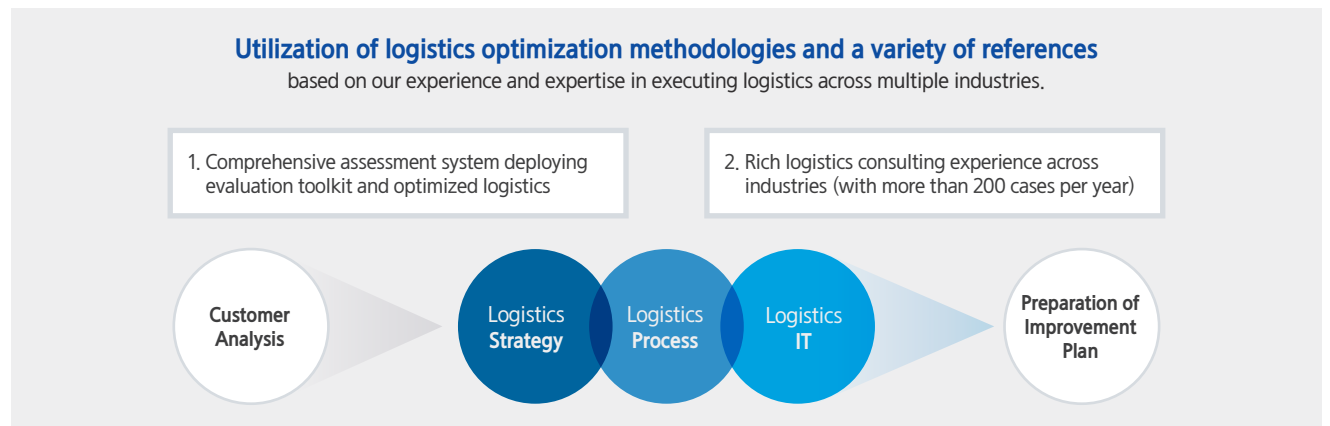
Logistics Service

Eco-friendly Logistics Services

Samsung SDS' Logistics Service is committed to delivering globally integrated logistics outsourcing services underpinned by IT technology and consulting capabilities. Our goal is to assist customers in optimizing their logistics through Cello solutions. These solutions encompass advanced logistics processes, innovative IT technologies, and optimization methodologies, leveraging our extensive experience, expertise, and references in executing logistics across various industries. As a result, this contributes to a reduction in carbon emissions. Cello solutions allow customers to optimize transportation routes and cargo loading in all aspects of international and local transportation, as well as warehouse operations, thereby enabling more eco-friendly logistics operations such as shifting from air to sea transportation. Furthermore, Samsung SDS assists in enhancing logistics strategies, processes, and IT elements by analyzing customers' current situations and challenges, leveraging our extensive logistics consulting experience across various industries. As a result of these efforts, Samsung SDS was awarded the Green Logistics Certification in January 2022. Moreover, we hold annual Cello Conference sessions to share best practices with suppliers including transportation companies.



Cello Square Conference



Strategy for Sustainable Business

Solutions

Establishment of ESG Value Delivery System

Samsung SDS is committed to developing a system to communicate ESG values to customers through our solutions. Our goal is to provide a clear pathway for customers to identify and leverage the ESG value they can achieve by utilizing our solutions.



Promoting unencumbered collaboration through meetings, portals, and Enterprise File Synchronization and Sharing (EFSS)

Direction of implementation

- Establishing metrics for quantifying the ESG value derived from using Brity Works
- Discovering ESG-related benefits such as carbon reduction, bridging the digital divide, and enhancing work environments



Automation of simple, repetitive tasks with AI-based RPA solutions, bringing about productivity improvements as well as innovative transformations in corporate culture and customer value

Direction of implementation

- Uncovering ESG value and calculating effectiveness for Brity RPA customers
- Identifying environmentally friendly improvement cases, such as reduced carbon emissions, through the automation of repetitive tasks



Providing differentiated end-to-end services covering all aspects of supply chain management(SCM) including Process Innovation(PI), system setup, and maintenance, leveraging the expertise of the largest SCM specialist organization in Korea.

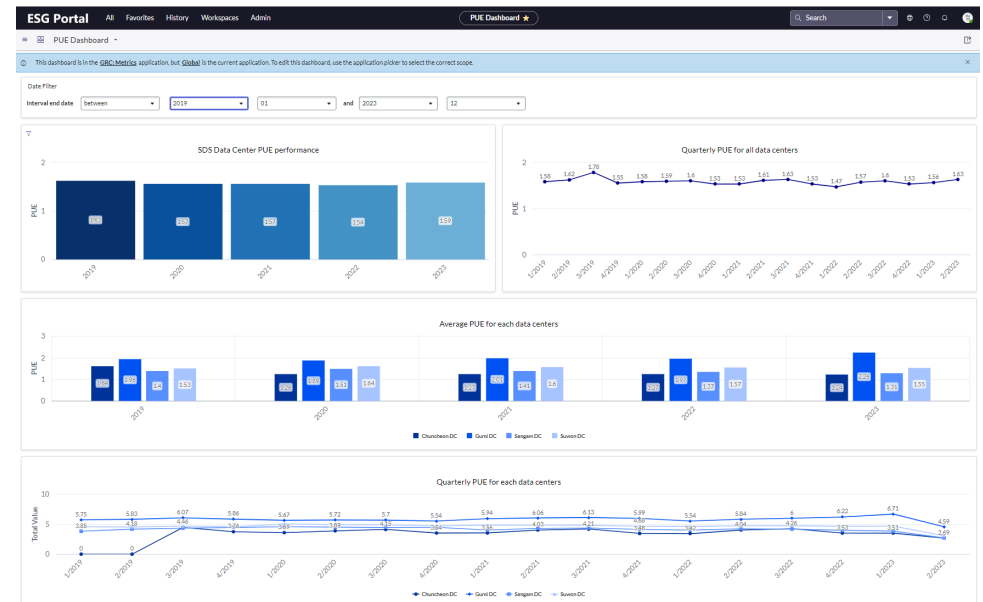
Direction of implementation

- Discovering ESG-related values such as operational efficiency enhancement cases and minimization of unused resources through various solutions
- Developing decision support systems within Nexprime SCM that are based on an ESG perspective

ESG Platform

In anticipation of the mandatory ESG disclosure requirement for publicly-traded companies with assets exceeding KRW 2 trillion, effective in 2025, and the proliferation of ESG information management items, Samsung SDS initiated the application of an ESG platform for ESG information management in September 2022. The ESG platform oversees more than 640 ESG indicators, and Samsung SDS is augmenting the efficiency and accuracy of data management by integrating with existing systems like ERP, HR, and supply chain.

In 2023, Samsung SDS plans to expand the ESG platform beyond the headquarters and extend it to overseas subsidiaries and affiliates, ensuring consistent data management across all entities. Building upon our expertise in constructing and operating the ESG platform, Samsung SDS is actively exploring the commercialization of ESG solutions.



Climate Change Response

Governance

At Samsung SDS, the responsibility for climate change response lies with the Board of Directors (BOD) and the ESG Committee, which has been delegated authority by the BOD. They oversee the decision-making and supervision of the climate change strategy, operations, and management. The implementation of the climate change strategy is managed by the environmental management organization, with a focus on the EHS Center. This center consistently identifies environmental management tasks and drives eco-friendly projects across different sectors.

ESG Committee

The ESG Committee was established with the delegated authority from the BOD to examine issues and agendas related to ESG, including climate change response. The Committee deliberates and resolves significant matters related to management activities in a more professional manner. Recognizing the increasing importance of ESG management, Samsung SDS appointed Ms. Seung-Ah Cho, an independent director specializing in business strategy and international management, as the chairman of the ESG Committee. The members of the ESG Committee conduct discussions and make decisions related to climate change response, leveraging their respective expertise and experience.

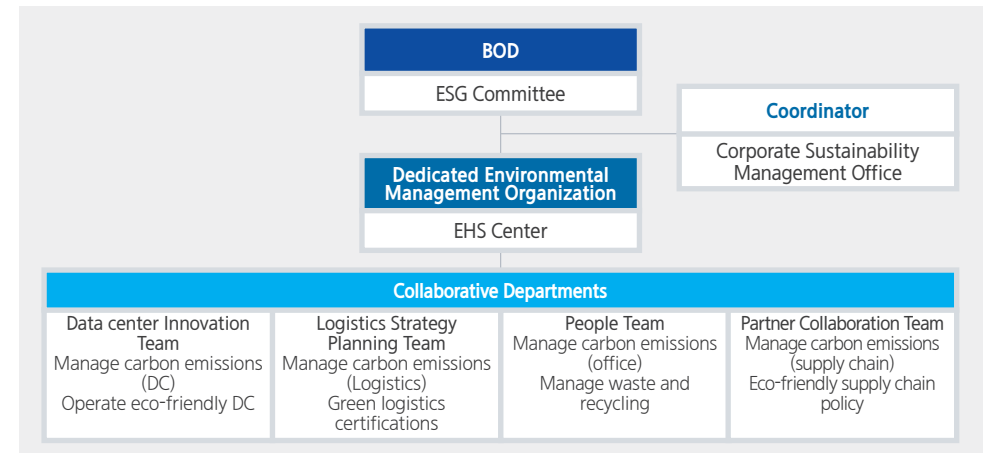
Composition of Committee

Category	Name	Position	Expertise and Role
Chairman	Seung-Ah Cho	Independent Director	Establishment of climate change response strategies, international cooperation
	Hyun-Han Shin	Independent Director	Risk analysis, review of financial impacts
Committee Member	Moo Il Moon	Independent Director	Review of regulations related to climate change
	Jae Jin Lee	Independent Director	Research on carbon emission reduction technologies for data center
	Sungwoo Hwang	Executive Director (CEO)	Review of business alignment with climate change response strategies

Climate Change-related Report/Approval Agenda

Committee Meeting Date	Agenda	Attendance Rate
January 27, 2022	· Report on the operation plan of the environmental management organization	100%
July 28, 2022	· Report on the promotion of specialized environmental management tasks	80%
September 29, 2022	· Approval of carbon neutrality targets · Report on RE100 membership progress	100%
October 27, 2022	· Report on Scope 3 carbon emissions status and management plan	100%

Climate Change Response Governance Structure



Committee Workshops

Workshop Date	Workshop Contents
April 13, 2022	[TOPIC] Discussion on Carbon Neutrality Direction · Understanding global trends and the need for carbon neutrality · Discussion on the basic direction of carbon neutrality
May 16, 2022	[TOPIC] Review of Carbon Neutrality Goals and Renewable Energy Transition Plans · Identifying the status of carbon neutrality initiatives of key competitors/partners across different industries · Analysis of carbon emission status and scenarios for achieving carbon neutrality at different time points · Trends in the renewable energy market and expected purchase costs

Climate Change Response

Strategy | Analysis of Climate Change Risk and Opportunity Factors

To formulate a comprehensive strategy for climate change response, Samsung SDS has projected potential financial impacts in the short, medium, and long term. This is done in accordance with the TCFD guidelines, considering the risks and opportunities presented by climate change. Risks were analyzed based on policy, legal, technological, market, reputation, and acute and chronic physical risk factors in the context of transitioning to a low-carbon economy. Opportunities were identified and categorized according to their nature into resource efficiency, energy sources, products and services, markets, and resilience.

Risk Factors

Category	Type	Content	Potential Financial Impact	Timeframe ¹⁾		
				Short Term	Medium Term	Long Term
Policy/ Regulatory		Reinforcing mandatory disclosure of GHG emissions information	Increased indirect cost	●		
		Increase in carbon price due to tightening regulations such as carbon tax and carbon credit	Increased operating cost	●	●	●
		Risk of litigation due to climate-related legislation such as EU Corporate Sustainability Due Diligence	Increased litigation cost			●
Technology		Emergence of low-carbon alternatives for IT/logistics services	Decreased revenue	●	●	
		Cost burden due to investment in low-power technology for data centers	Increased direct cost	●	●	
		Failure of new technology investment	Increased financial risk			●
Transition Risks		Strengthening of carbon neutral requirements and eco-friendly purchasing policy by clients	Increased direct costs and decreased revenue		●	●
	Market	Increase in energy costs due to the transition to renewable energy in the power sector	Increased direct cost	●	●	
			Increase in logistics cost due to carbon reduction in the logistics sector such as the introduction of eco-friendly fuels	Increased direct cost	●	●
Reputation		Decrease in consumer preference due to carbon emissions of product/service	Increased transition cost		●	●
		Increase in negative feedback from stakeholders	Declined corporate reputation			●
		Decline in external evaluation rating on climate change response	Increased credit risk	●	●	●
Physical Risks	Acute	Fluvial flooding	Decreased operating profit		●	●
		Intensifying drought	Declined asset value		●	●
		Wildfires	Decreased productivity		●	●
Chronic		Extreme temperature	Increased operating costs and decreased productivity			●

Opportunity Factors

Category	Type	Content	Potential Financial Impact	Timeframe		
				Short Term	Medium Term	Long Term
Resource Efficiency		Energy efficiency in data centers through the application of liquid cooling technology	Reduced operating costs	●	●	
		Minimizing waste battery production through the application of UPS-less technology	Reduced operating costs	●	●	
		Transport efficiency through digital logistics platforms	Reduced costs and increased profits	●	●	●
Energy Sources		Utilization of policy incentives for renewable energy	Reduced operating costs		●	
		Participation in the carbon credit trading market (purchase or sale of remaining credits)	Reduced operating costs and improved profitability	●	●	
		Enhancing energy supply stability through distributed power generation	Improved profitability			●
Opportunity	Product/ Services	Development of eco-friendly cloud services	Increased revenue	●	●	
		Expansion of low-carbon logistics goods and services	Increased revenue	●	●	
		Increase in consumer preference for low-carbon products/services	Increased product/service demand	●	●	●
Market		Increase in demand for digital transformation and IT services to reduce total energy	Increased revenue		●	●
		Enhancement of access to the low-carbon logistics market	Increased revenue		●	●
		Utilization of policy incentives in the public sector, such as price subsidies for low-carbon products	Reduced direct cost		●	●
Resilience		Mitigation of power cost volatility through long-term renewable energy supply contracts	Reduced operating costs and increased productivity			●
		Decrease in dependence on external power through self-reduction of carbon emissions	Enhanced productivity	●	●	●

1) Timeframe: Short term 3 years (2023-2025), Medium term 5 years (2026-2030), Long term 20 years (2031-2050)

Climate Change Response

Strategy | Analysis of Climate Change Risk Scenarios

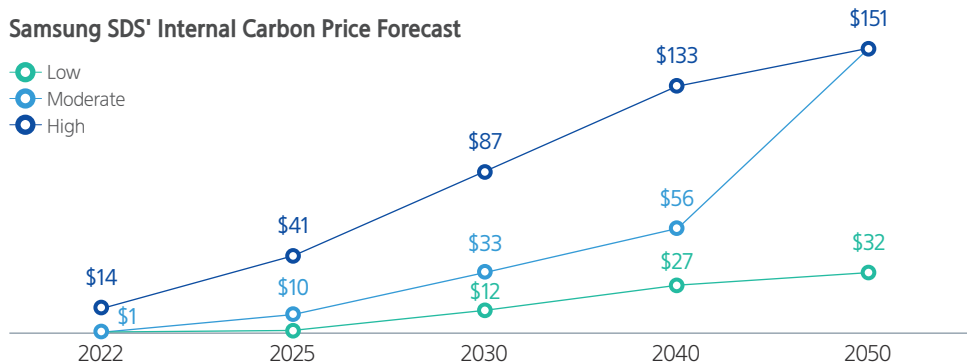
Transition Risks

To assess the financial implications of transition risks on Samsung SDS, we conducted a scenario analysis in collaboration with S&P Global, focusing on carbon price risk. By evaluating three carbon price scenarios (high/moderate/low) and two emissions scenarios (BAU and Net-Zero), Samsung SDS calculated the total carbon cost associated with each scenario and determined the proportion of these costs relative to our total operating expenses (OPEX).

Carbon Price Scenarios	Emissions Scenarios
<ul style="list-style-type: none"> High-intensity mitigation (high): Limiting global warming to within 2°C by 2100(1.6°C to 2°C, IRENA) Moderate mitigation: Long-term limit at 2°C (based on OECD & IEA research) Low-intensity mitigation (low): No separate target (3.1°C to 4°C, IEA NPS) 	<ul style="list-style-type: none"> BAU: Projected emissions if the current level of self-reduction is continued Net Zero: Projected emissions if the company achieves carbon neutrality by 2050

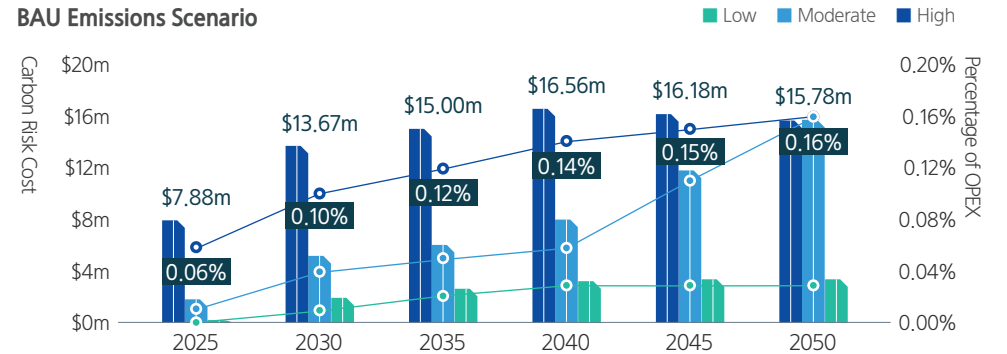
Initially, Samsung SDS computed the internal carbon price by considering the anticipated increase in carbon prices by country under the carbon price scenario and the global business sites where Samsung SDS operates. The analysis showed that it would increase from \$14 in 2022 to \$151 in 2050 under the High reduction scenario.

Samsung SDS' Internal Carbon Price Forecast

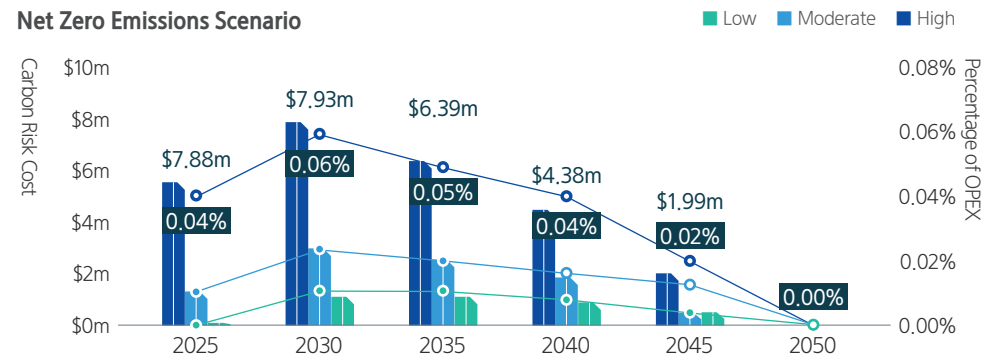


Based on the BAU emissions scenario, the total cost of carbon price risk ascends from \$7.9 million in 2025 to \$15.8 million in 2050 under the High mitigation scenario. These costs represent a share of operating expenses(OPEX) amounting to 0.06% in 2025 and 0.16% in 2050. Despite the upward trend in costs driven by rising carbon prices and emissions, they remain a small percentage of OPEX and are not considered a significant risk.

BAU Emissions Scenario



Net Zero Emissions Scenario



Climate Change Response

Strategy | Analysis of Climate Change Risk Scenarios

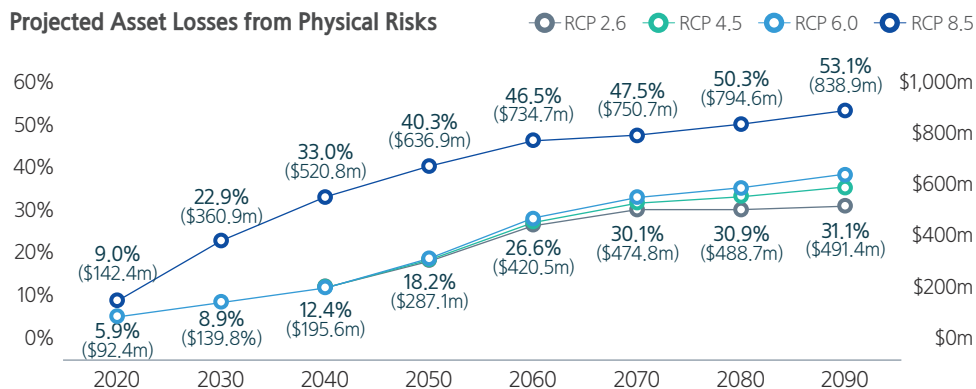
Physical Risks

Samsung SDS employed S&P Global's Climonomics service to perform a physical risk analysis. We projected average annualized asset value losses and decade-spanning losses from 2020 to 2090 for seven climate hazards, including fluvial flooding, abnormally high temperatures, drought, wildfires, coastal flooding, tropical cyclones, water shortages under the RCP scenarios(RCP 2.6, 4.5, 6.0, and 8.5) of the IPCC Fifth Assessment Report.

Scenario	Definition	Carbon dioxide concentration in 2100	Average temperature from 2081 to 2100
RCP 2.6	Implementation of all emissions reduction policies	420ppm	+1.3°C
RCP 4.5	Substantial implementation of mitigation policies	540ppm	+2.4°C
RCP 6.0	Partial enforcement of mitigation policy	670ppm	+2.7°C
RCP 8.5	Continuance of emissions at current trend	940ppm	+4.0°C

According to this analysis, under the RCP 8.5 scenario, which presents the highest climate change risk, Samsung SDS' asset loss rate is projected to be 22.9% in 2030 and 40.3% in 2050. Conversely, in the RCP 2.6 scenario, which has the lowest risk, the asset loss rate was comparatively low at 8.9% in 2030 and 18.2% in 2050.

Projected Asset Losses from Physical Risks



Among the seven climate hazards, the greatest impact on asset loss is expected to be caused by fluvial flooding, with some degree of impact also expected from extreme temperature and drought. However, the risks of wildfires, coastal inundation, cyclones, and water stress are considered to have minimal potential for loss. The assets with high loss rates are the Sangam Data Center and Suwon Data Center, which are located near rivers and require high recovery costs due to the nature of data centers.

Asset Loss Rate by RCP Scenario

Scenario	Year	Fluvial Flooding	Temperature Extremes	Drought	Wildfire	Coastal Flooding	Tropical Cyclone	Water Stress
RCP 2.6	2030	3.1 %	3.1 %	2.6 %	-	-	-	-
	2050	11.1 %	4.3 %	2.7 %	-	-	-	-
RCP 8.5	2030	16.3 %	3.4 %	3.1 %	0.1 %	-	-	-
	2050	30.9 %	5.6 %	3.7 %	0.1 %	-	-	-

Response to Physical Risks

Fluvial Flooding

For the most likely risk of fluvial flooding, response scenarios are being established, taking into account the elevation of the ground where the assets are located and the highest water levels during past floods. Countermeasures are being implemented for facilities with a relatively high potential for flooding, such as parking lots and entrances. These measures include the installation and placement of flood barriers, protective shutters, and water pumping stations to prepare for such events.

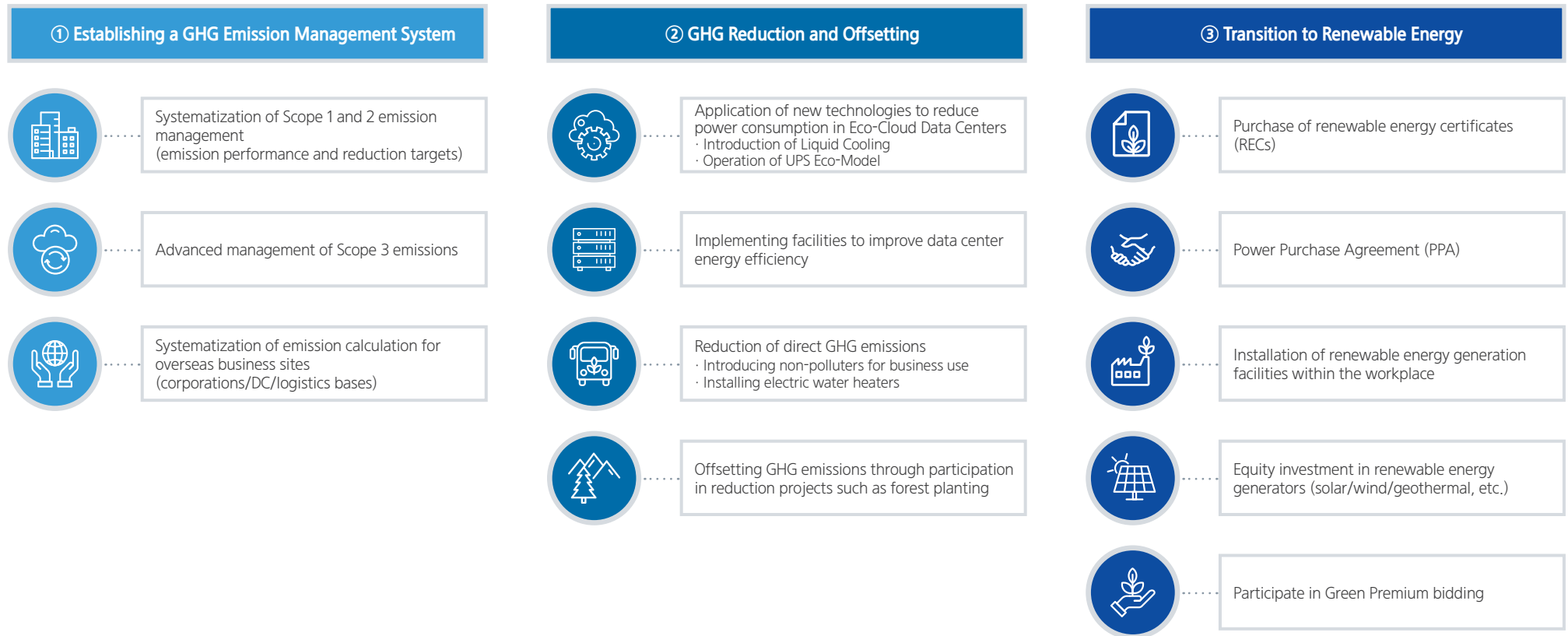
Extreme Temperature and Drought

In situations of extreme temperature and drought, there are concerns regarding additional operating costs and reduced productivity due to decreased cooling efficiency. Samsung SDS plans to mitigate such risks by continuously enhancing cooling efficiency, which involves expanding cooling facilities in data centers, upgrading outdated facilities, and applying liquid cooling technology.

Climate Change Response

Strategy | Strategy for Climate Change Response

To minimize the negative impact of climate change risks and opportunities in business Samsung SDS has established climate change response strategies in alignment with international agreements like the Paris Agreement and national goals for carbon neutrality by 2050. We have implemented greenhouse gas management systems across all business units, including subsidiaries and overseas branches, to reduce and offset emissions. Additionally, Samsung SDS plans to achieve carbon neutrality by transitioning the energy used in data centers to renewable sources.



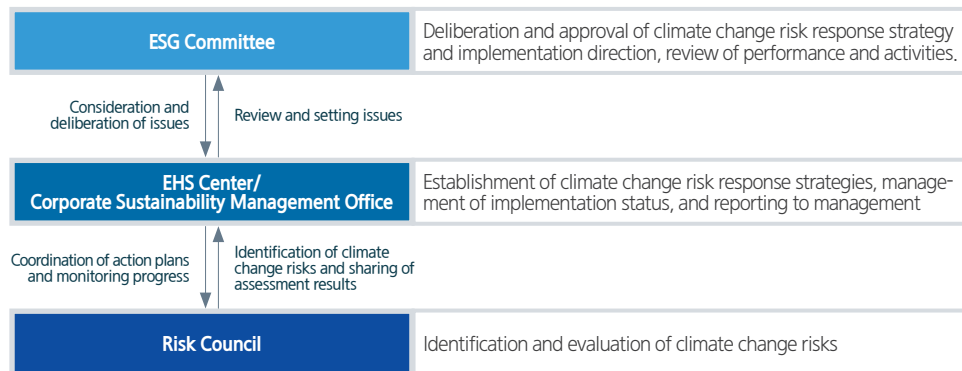
Climate Change Response

Risk Management

Samsung SDS has established a systematic process to identify, assess, and develop response strategies for the risks and opportunities posed by climate change. This risk management process extends not only to directly operated facilities but also to the entire value chain. It is integrated into the company-wide risk management process.

Integrated Climate Change Risk Management Process

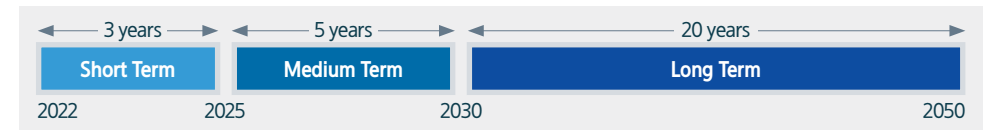
Sustainability issues, including climate change risks, are among the key topics discussed in the Risk Council, with regular meetings held at least once a year. For risks deemed significant, the Environmental, Health, and Safety (EHS) Center, a dedicated environmental management organization, along with the Corporate Sustainability Management Office a supporting organization, manage these risks. Decisions and management strategies from the EHS Center and the Corporate Sustainability Management Office are reported to the ESG Committee. Response strategies and action plans are subsequently developed and approved.



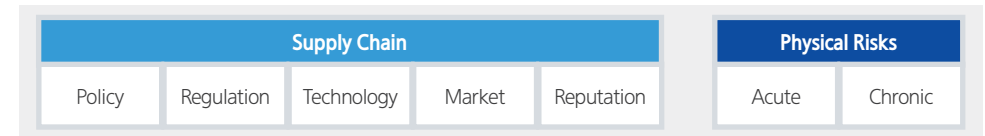
Climate Change Risk Review History

Date	Agenda	Department in Charge
October 24, 2022	· Management of data center energy use and carbon emissions	Data Center Innovation Team
January 31, 2023	· Climate change response and environmental management strategy	EHS Center
May 30, 2023	· Supply Chain Carbon Emission Management Plan	Partner Collaboration Team

Management Period



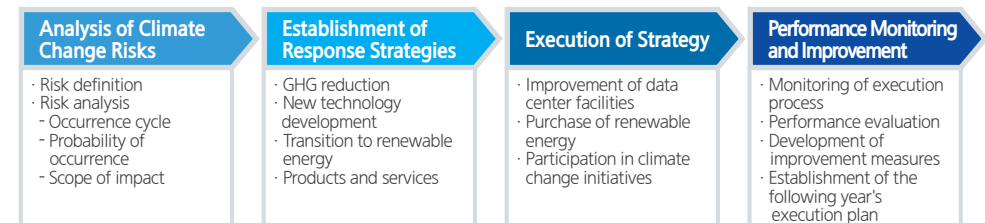
Climate Risk Types



Scope of Climate Risk Management



Climate Risk Identification and Evaluation Management Process



Digital Responsibility

AI Ethics

AI Ethics Principles

Samsung SDS recognizes that when utilizing AI technology, it is important to consider not only human dignity and rights but also the environment and ecosystem. As a result, we have established an AI Ethics Charter based on UNESCO's Recommendation on the Ethics of Artificial Intelligence. We are committed to applying this Charter throughout the entire process of developing and utilizing AI technology.

1. Respect for Human Rights

Based on the Samsung Spirit, our top priority is to benefit humanity and society. We respect and comply with international human rights laws and values in general and also in relation to AI technologies. Further, we will work to limit any potentially harmful or abusive application that can negatively affect human beings and their rights as we develop and deploy AI technologies.

2. Diversity and Inclusion

We believe that everyone should be treated fairly and equitably. We understand that defining fairness is not always simple and differs across cultures and societies. We will seek to avoid biased results and unjust impact on sensitive characteristics such as race, ethnicity, gender, nationality, income, sexual orientation, ability, and political or religious belief. We also will seek to avoid exposing children to inappropriate content.

3. Data and Privacy Protection

We recognize the importance of protecting the privacy and security of people's data. To minimize privacy risks, we will continue to monitor data processing processes and develop safe and secure practices.

4. Conservation of Environmental Ecosystem

We will comply with relevant national and international regulations, standards and practices to assure that AI development and services do not adversely affect the sustainability of the environment and ecosystem.

5. Communication

We believe in transparency and explainability. AI will be explainable for users to understand its decisions or recommendations to the extent technologically feasible and that this does not jeopardize corporate competitiveness. Samsung SDS will also devise countermeasures against the risks and negative consequences that AI technology can cause to the users.

AI Council

Since April 2023, Samsung SDS has been operating a regular committee led by the Research Institute, in which each business unit and relevant department participate. This committee aims to facilitate discussions and collaboration regarding the activation of new business models integrating AI. It is conducted on a monthly basis.



- Discussion on understanding AI business and commercialization plans
- Discussion on technical support, research and development matters
- Discussion on AI business risks such as security, copyright, and personal information

SPECIAL SECTION

Insight Report: AI ethics and AI governance

A report is published to allow key stakeholders of the company, including customers and employees, to gain insights into AI ethics and governance. This report offers information regarding the concept of a trustworthy AI system, international standardization and technical trends, and the establishment of AI governance for corporate social responsibility.



신뢰할 수 있는 AI 시스템이 추구하는 사회적 책임과 우리의 과제



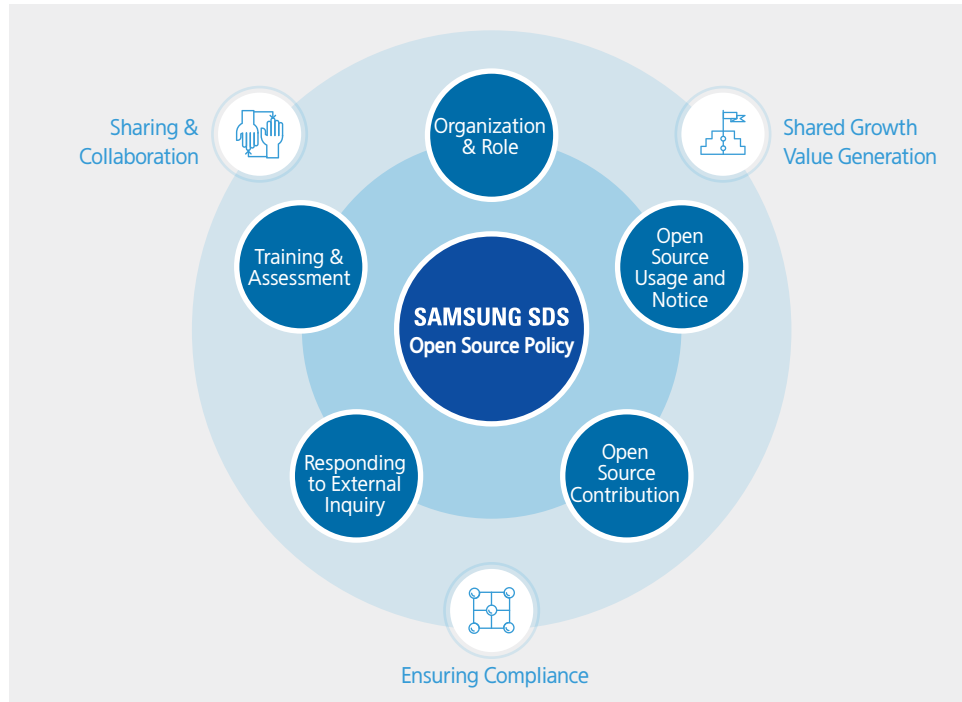
신뢰할 수 있는 AI 시스템 신뢰 배경
삼성 SDS가 인공지능 기술의 발전과 함께 AI 시스템의 윤리적 문제와 사회적 책임을 고려하여 AI 시스템의 신뢰성을 높이기 위한 노력을 하고 있습니다. 이번 보고서는 AI 시스템의 신뢰성을 높이기 위한 노력의 일환으로, AI 시스템의 윤리적 문제와 사회적 책임을 고려하여 AI 시스템의 신뢰성을 높이기 위한 노력을 하고 있습니다.

Digital Responsibility

Open Source

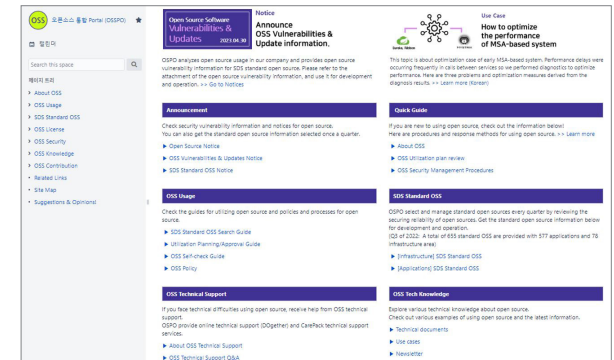
Open Source Policy

Samsung SDS is actively promoting various activities to foster the growth of the open-source community and developers based on the values of sharing and collaboration. We also operate an open-source policy to ensure appropriate usage and voluntary compliance with open-source practices. Through these efforts, we aim to prevent legal liabilities resulting from non-compliance with open-source licenses or indiscriminate usage and distribution. Additionally, we aim to contribute to value creation through the utilization of open-source technologies while respecting the rights of intellectual property owners.



Open Source Software Portal

In August 2022, Samsung SDS launched the Open Source Software Portal for employees to safely and efficiently use open source, providing various content. This portal offers guides for using open source and licenses, technical documents, and continually updates the standard open source and use cases.



SPECIAL SECTION

International Open Source Standard Certification

In July 2022, Samsung SDS became the first domestic IT service company to obtain the International Standard Certification (ISO/IEC 5230:2020) granted by the OpenChain Project.

This certification is awarded to companies that demonstrate compliance systems and capabilities in utilizing open-source licenses, initiated by the OpenChain Project led by the Linux Foundation in 2016. Samsung SDS has been recognized for our global competence in all aspects of open-source compliance, including the establishment of open-source utilization policies and processes, securing specialized personnel, and providing education to the company's members.



Digital Responsibility

Privacy

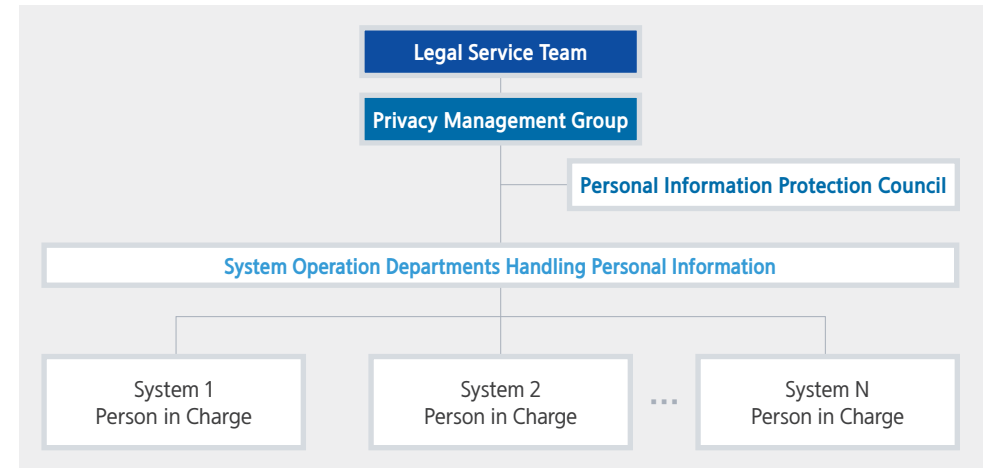
Customer Privacy Policy

Samsung SDS recognizes the importance of personal information and strives to utilize and protect personal information in accordance with relevant policies and regulations. We have designated a Chief Privacy Officer (CPO) separately from the Chief Information Security Officer (CISO) to actively address privacy issues and also operates the Personal Information Protection Council in which relevant departments participate. Furthermore, Samsung SDS prepares the policies in accordance with the Personal Data Protection Act and conduct inspections of the implementation status of personal information security policies.

Policy	Legislation	Training and Communication	Audit
<p>Establish operational standards and guidelines for privacy</p> <p>Develop processes in case of data leakage</p>	<p>Study and monitor constantly evolving trends and legal landscape around information security</p>	<p>Train employees who are responsible for personal information security, and trustees</p> <p>Providing personal information security letters and guides</p>	<p>Regular audit on operation and application of data protection and privacy policy</p> <p>Take immediate actions in case of necessity</p>



Dedicated Organization for the Protection of Personal Information



Personal Information Protection Council

Chairman	Head of Legal Service Team (Secretary: Privacy Management Group Leader)
Composition	Legal Service Team, Compliance Team, People Team, Samsung Security Center, Business Innovation Team, Quality Strategy Team, Communication Team, Data Consolidation & Analytics Center, Marketing Team
Agenda	<ul style="list-style-type: none"> Privacy issues and Law amendments Privacy protection and data usage
Cycle	Regular meeting(quarterly) and Ad-hoc meeting (whenever issue occurs)

Digital Responsibility

Privacy

Personal Information System

In August 2021, a Personal Information System (PIS) was established to manage the domestic and overseas legal application targets and the detailed inspection history of the personal information processing system. Regulations, legal information, news, content, and FAQs are provided through a documentation center.

Privacy Management Status

Category	Unit	2020	2021	2022
Number of data breaches/incidents	Case	0	0	0
Number of complaints received via external agencies	Case	0	0	0
Number of complaints received via regulatory bodies	Case	0	0	0
Number of requests of user data and information from the government and law enforcement agencies	Time	47	45	47
Rate of submission of data/information requested	%	100	100	100
Number of cases of user information usages for secondary purposes	Unit	0	0	0

ISMS-P Certification

Samsung SDS obtained the Information Security Management System Personal (ISMS-P) certification in March 2022, which is administered by the Ministry of Science and ICT and the Korea Internet & Security Agency(KISA) in collaboration with the Personal Information Protection Commission. This certification validates our high level of operation in managing information security and personal information protection systems. It demonstrates externally that appropriate protective measures are in place at each stage of personal information processing.



Certification scope: Samsung Cloud Platform, Cloud Service
Certification period: From March 2nd, 2022 ~ March 1st, 2025

Global Personal Information Security

Samsung SDS systematically responds to the strengthening global regulations on personal information protection to ensure the smooth execution of expanding international business operations. Specifically, we recognize the key areas of compliance risk reduction, focusing on the personal information protection laws of the European Union (EU), the United States, Brazil, and China. It derives key response measures and diligently conducts compliance checks.

Guarantee Rights of the Data Subject

- Right of access
- Right of rectification(correction)
- Right to erasure/delete(be forgotten)
- Right to be informed
- Right to restrict processing
- Right to data portability
- Right to object
- Rights related to automated decision making and profiling
- Right to opt out of targeted advertising, sale or sharing
- Right to limit use and disclosure of sensitive personal information

Establish a Response Plan in Case of a Breach of Personal Information

Action Plans

- Notify and ensure the rights related to privacy through the Privacy Policy
- Establish the process of receiving and responding to requests related to processing from data subjects
- Implement measures for protection and minimize the collection of personal information
- Monitor administrator accounts and access rights
- Define types of privacy violations and establish counteracting plans
- Report to the relevant authorities within the period stipulated by local law upon recognizing a personal information infringement incident
- Comply with procedures stipulated by local law in case of personal information transfer to overseas only through appropriate certification, use of EU standard contracts, and consent from the data subject, etc.

ESG PERFORMANCE

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ENVIRONMENT

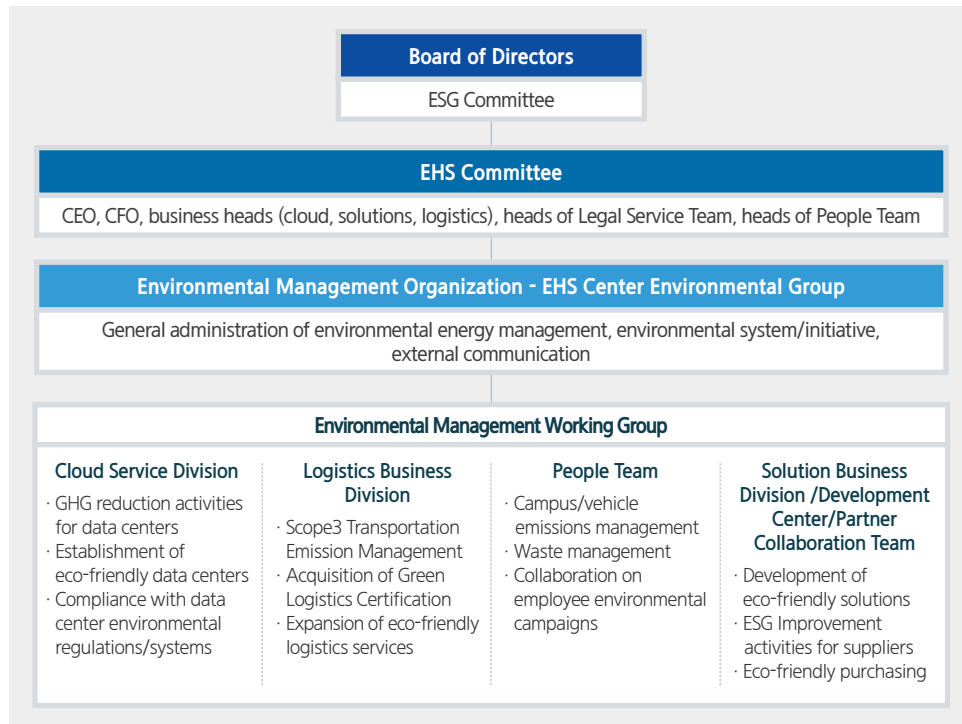
Governments and corporations around the world are actively addressing the increasingly urgent issue of climate change.

The push for a transition to a low-carbon economy is gaining momentum, leading many businesses to adopt eco-friendly systems and sustainable practices. Samsung SDS is at the forefront of climate change response, committed to achieving carbon neutrality, increasing the adoption of renewable energy, and prioritizing the construction of energy-efficient and eco-friendly data centers.

Environmental Management System

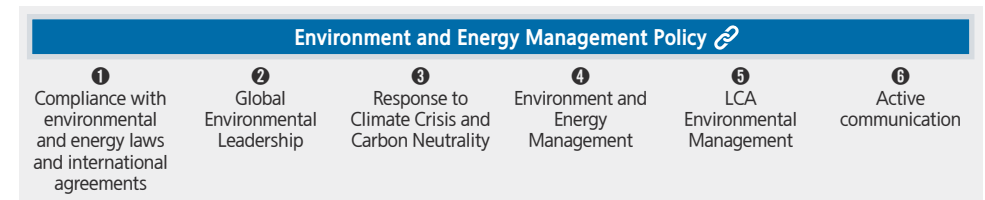
Environmental Governance

The responsibility for environmental and climate crisis response at Samsung SDS starts with the top executives. Together with the CEO, who serves as the Chairman of the Board of Directors, the Board performs governance and oversight of climate change strategy, operations, and management. Samsung SDS' executives oversee the company's comprehensive environmental management through the EHS Committee and the Environmental Management Working Group. In December 2022, Samsung SDS established the Environment Group within the EHS Center, a dedicated organization for environmental management, to oversee the company-wide environmental responsibilities and establish governance. The Environment Group of the EHS Center is responsible for devising and implementing environmental strategies, managing data, and fostering internal and external communication channels.



Environment and Energy Management Policy

Samsung SDS considers the establishment of safe and healthy workplaces, as well as environmentally friendly management, as top priorities. We strive to enhance the quality of life and preserve the environment through corporate activities that respect both people and nature in our products, services, and business areas, both domestically and internationally. By committing to environmental management, Samsung SDS ensures compliance with laws and regulations and promotes environmental stewardship throughout the entire process, including our suppliers.



Environmental Management System Certification

Samsung SDS holds and operates environmental management system certifications (ISO 14001) for all domestic and global business sites, led by the company-wide environmental organization. We oversee processes such as goal management, education and training, document and record management, and internal audits, as well as internal standards for each division. Furthermore, in 2023, not only the environmental management system but also the energy management system (ISO 50001) is being developed, with preparations underway to obtain certification in the second half of the year.



ISO 14001

SPECIAL SECTION

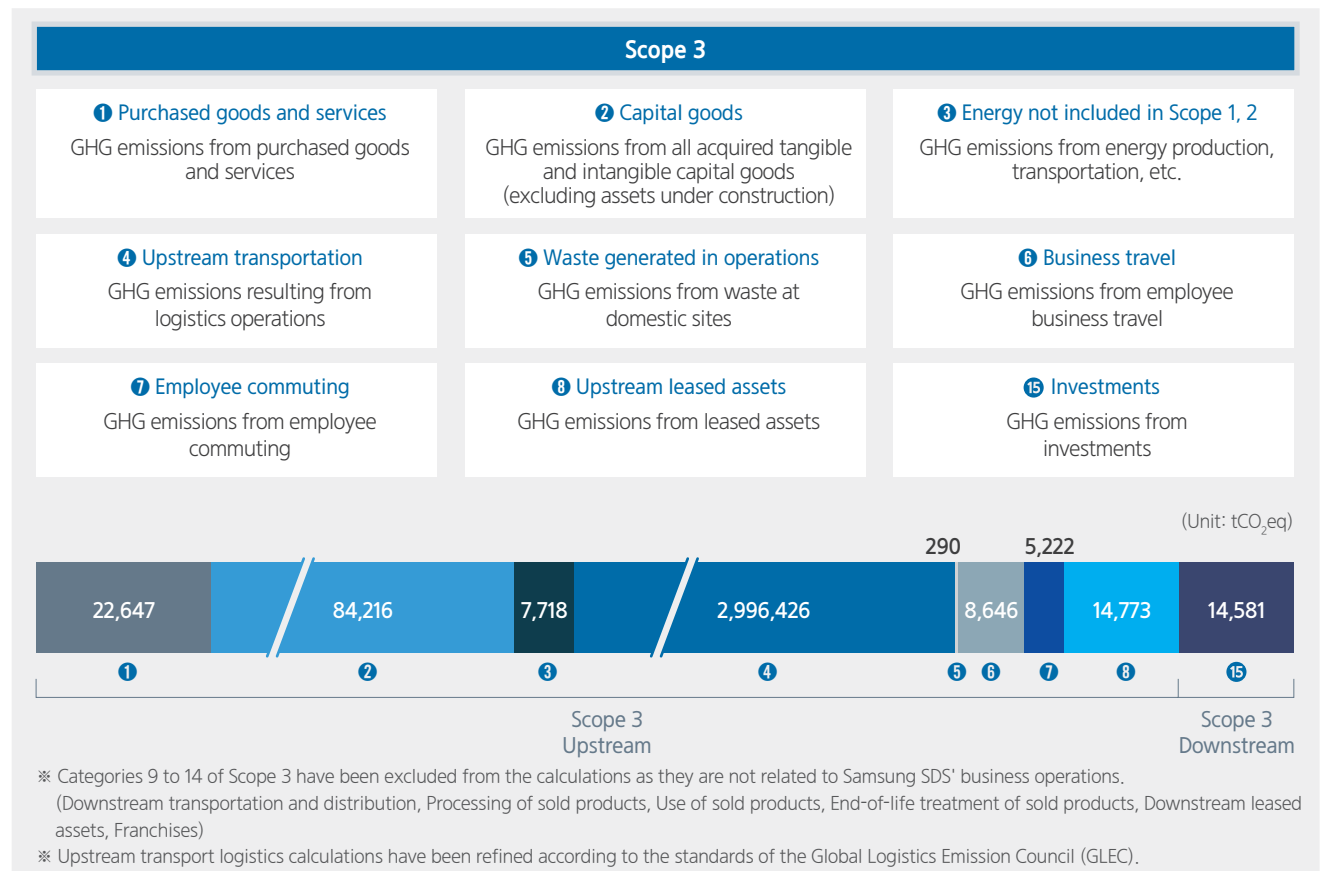
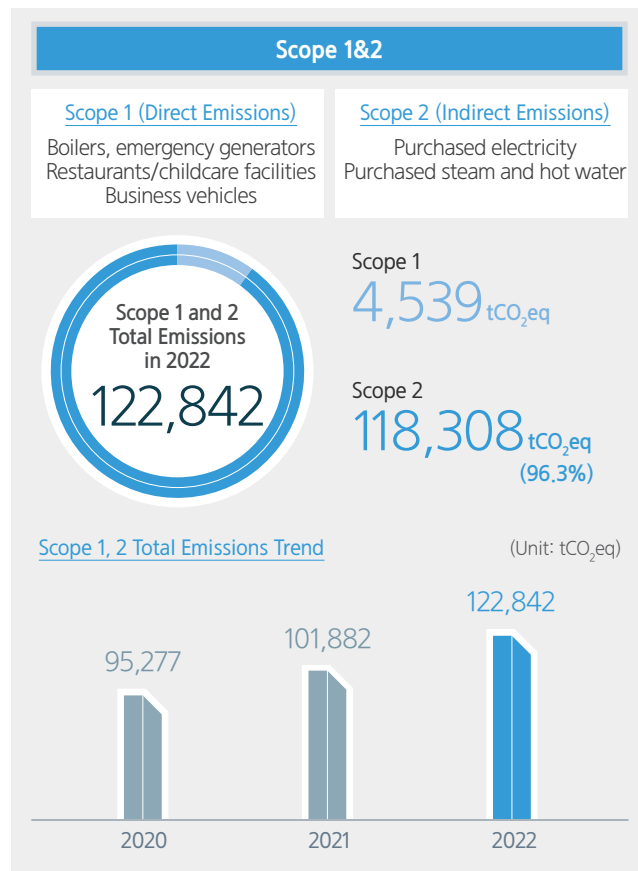
2023 Asia-Pacific Climate Leader

Samsung SDS has been recognized as one of the '2023 Asia-Pacific Climate Leaders' by the Financial Times. The Asia-Pacific Climate Leaders program, organized by the Financial Times, focuses on more than 1,500 companies headquartered in the Asia-Pacific region with annual revenue exceeding \$50 million. The selection process takes into account criteria such as GHG emissions and Scope 3 emissions relative to revenue over a five-year period, disclosure of emissions data, and the Carbon Disclosure Project (CDP) evaluation rating. In 2023, a total of 275 companies from 14 countries, including 16 companies from South Korea, were honored as climate leaders in the Business & Professional Services sector. Samsung SDS is the sole South Korean company to be selected in this category.

GHG Emissions Management

GHG Emissions of the Entire Value Chain

Samsung SDS manages GHG emissions for each of our business site by Scope. In 2022, significant progress was made in enhancing the calculation and management of Scope 3 emissions, expanding the scope to include energy sources beyond Scopes 1 and 2, as well as upstream leased assets(③ and ⑧).



Eco-friendly Operations

GHG Emissions Reduction by Data Center

Samsung SDS is actively committed to minimizing GHG emissions from our business sites through a series of environmentally conscious investments.

Category	Reduction Activities	Unit	2022
Suwon Data Center	Control of the number of thermo-hygrostats through temperature-humidity sensors	tCO ₂ eq	154
	Extension of the operation period of spray pumps in cooling towers	tCO ₂ eq	134
	Partial shutdown of air-cooled thermo-hygrostats	tCO ₂ eq	93
	Efficient operation of server room humidifiers	tCO ₂ eq	25
	Replacement of highly efficient PAC in the subroom	tCO ₂ eq	6
	Installation of solar power generation facilities	tCO ₂ eq	19
	Subtotal	tCO ₂ eq	431
Sangam Data Center	Adjustment of the cooling set temperature	tCO ₂ eq	19
	Control of the No. of operating cooling towers	tCO ₂ eq	11
	Installation of pump inverters	tCO ₂ eq	306
	Subtotal	tCO ₂ eq	336
Chuncheon Data Center	Expansion of direct free cooling introduction period	tCO ₂ eq	19
	Installation of outdoor chiller awning screens	tCO ₂ eq	17
	Outdoor chiller condenser coil spraying	tCO ₂ eq	7
	Subtotal	tCO ₂ eq	43
Gumi Data Center	Electric boiler	tCO ₂ eq	45
	Subtotal	tCO ₂ eq	45
Total		tCO ₂ eq	855

Data Center Energy Efficiency

Data Center Certifications

Green Data Center Certification for Chuncheon Data Center

In April 2022, the Chuncheon Data Center received a score of 99.05, the highest evaluation score in the Green Data Center certification assessment, and became the third facility in South Korea to achieve Platinum grade certification. We established a data center in Chuncheon, which has the lowest average temperature, and implemented direct free cooling to maximize the use of outside air. In addition, we designed and manufactured a Building Integrated Cooling System(DIF: Direct-air Integrated Fan-wall system), which received top marks for infrastructure efficiency.



Uptime Institute M&O Stamp for Sangam Data Center

The Sangam Data Center was assessed for its infrastructure and operational management system through the Data Center Risk Assessment (DCRA) diagnosis conducted by the Uptime Institute. It received the Management & Operations Stamp, marking the first time a Korean center achieved this recognition for its outstanding infrastructure stability, backup system configuration, and global-level operational management system.



Data Center Certifications and PUE

Site	Certification	Emissions(tCO ₂ eq)	PUE
Suwon Data Center	Uptime Institute Tier 3 (first in South Korea)	50,431	1.56
Sangam Data Center	Acquired Uptime Institute's M&O Stamp (first in South Korea)	29,436	1.37
Chuncheon Data Center	Green Data Center Certification(Platinum, highest ever)	13,621	1.27

Eco-friendly Operations

Energy Efficiency for Data Centers

Green Technology for Data Centers

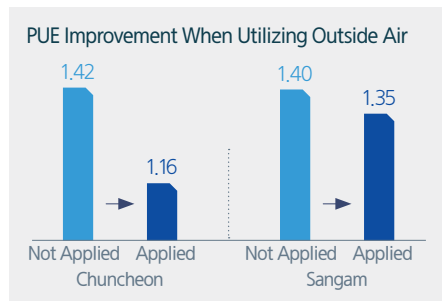
Free Cooling Operation

To cool the server rooms in the data center, we actively utilize cold outside air to minimize the operation of chillers. In the Sangam data center, we have implemented Water-Side Economizer(WSE) using cooling towers and Air-Side Economizer(ASE) using heat pipes. During the operation of the two types of indirect free cooling, the Sangam Data Center has achieved an average improvement of 0.05 in Power Usage Effectiveness(PUE). Furthermore, the Chuncheon Data Center is equipped with a direct free cooling system, which introduces cold outside air directly into the server room. This direct free cooling system does not involve intermediate heat exchange processes, resulting in an excellent PUE of 1.16 and the ability to operate for more than 7 months throughout the year.

Green Investments for Data Centers

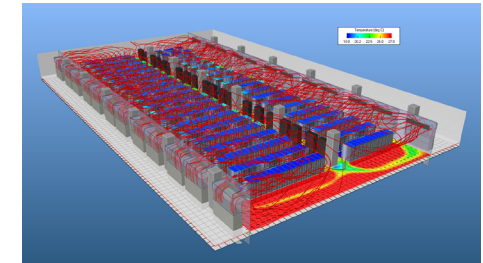
Category	Item	Investment Amount
Suwon Data Center	Installation of solar power generation facilities	KRW 344 million
Sangam Data Center	Installation of inverters	KRW 200 million
Dongtan Data Center ¹⁾	Inclusive of the fan wall(Variable air volume fan)	KRW 39.2 billion

1) Investments for the Dongtan Data Center spanning from 2021 to 2022



Thermo-hygrostats Optimization with Air-conditioning Simulation

Through computational fluid dynamics (CFD) based data center air-conditioning simulation, the flow and temperature distribution within the server room are analyzed. The appropriate supply air temperature and airflow of the air-conditioning system are determined. By controlling the operation rate of the air conditioning system based on the cooling load of each server room, the power consumption is minimized.



Expansion of Chilled Water Pump Inverter at Sangam Data Center

The Sangam Data Center has implemented an inverter to modulate the utilization rate of the chilled water pump based on the cooling load, resulting in a reduction of emissions by 306 tons annually through the controlled operation of the chilled water pump. Older facilities at the Suwon Data Center are being updated in 2023, thereby expanding the application of these high-efficiency installations.



Data Center Efficiency

	Unit	2019	2020	2021	2022	Target
Average PUE	-	1.57	1.54	1.50	1.47	1.48
Data Coverage	%	100	100	100	100	-

Eco-friendly Operations

Production and Utilization of Renewable Energy

Samsung SDS has been expanding the use of renewable energy by installing solar power generation and solar water heating systems on idle sites such as rooftops and parking lots. Furthermore, we are developing and implementing plans to purchase renewable energy domestically and internationally.

Renewable Energy Production

Data centers are equipped with solar water heating systems, solar power generation, geothermal cooling/heating systems, and geothermal heat pumps. There are plans to continuously increase the production of renewable energy in the future.

Renewable Energy Production

Category	Unit	Type	2022
Suwon Data Center	MWh	Solar water heating energy	85.84
	MWh	Photovoltaic solar energy	19.11
Sangam Data Center	MWh	Photovoltaic solar energy	56.73
Chuncheon Data Center	MWh	Photovoltaic solar energy	144.63
Total	MWh		306.31

Solar Power Generation Facilities at Suwon Data Center

With the construction of a solar power generation facility on top of the outdoor power distribution room at the Suwon Data Center, an estimated 64 MWh of renewable energy can be generated annually. This setup has reduced the summer operating temperature of the outdoor power distribution room by 10-20°C, thereby reducing emissions by 48 tons annually and improving the lifespan of electrical equipment.



Existing outdoor power distribution room



Outdoor power distribution room after installing solar power generation facilities

Utilization of Renewable Energy

Renewable Energy Consumption for HQ

Category	Unit	2019	2020	2021	2022	Target
Non-renewable energy consumption	MWh	198,988	196,867	217,007	249,692	-
Renewable energy consumption	MWh	184	239	245	306	300
Total energy consumption	MWh	199,172	197,106	217,252	249,998	-
Renewable energy production	MWh	184	239	245	306	-
Renewable energy use ratio at data centers	%	0.08	0.12	0.11	0.12	-



Suwon DC Solar Water Heating System



Sangam DC Photovoltaic Power Generation



Chuncheon DC Photovoltaic Power Generation

Transition to Renewable Energy

Samsung SDS is promoting the transition to renewable energy both domestically and internationally. In the short term, there are plans to transition to renewable energy sources, taking into consideration the renewable energy volume, unit price (economic feasibility), and factors such as Green Premium¹⁾ and Renewable Energy Certificates (REC²⁾). In the medium to long term, we will accelerate the transition to renewable energy through Power Purchase Agreement (PPA³⁾) contracts and participation in equity investments⁴⁾ through partnerships with external entities.

- 1) Green Premium: A system by KEPCO to purchase renewable energy by paying a premium on existing electricity bills.
- 2) REC (Renewable Energy Certificates): A program by the Korea Energy Agency (KEA) to purchase renewable energy certificates (indirect purchase system).
- 3) PPA (Power Purchase Agreement): A system for direct purchasing/contracting of renewable energy between a power generator and a company (long-term transaction contract).
- 4) Equity investment: Procurement of renewable energy through a separate contract after investing a certain amount of equity in a renewable energy generation business.

Eco-friendly Operations

Waste Management

Samsung SDS is dedicated to the development of a systematic approach to waste management. In particular, in 2023, we are promoting the 5R campaign for waste management, making efforts to recycle waste but also to reduce the overall waste generation at its source. We have established a waste management system for each business site to monitor the waste generation status on a quarterly basis. Under the supervision of the company-wide environmental department and business unit, we are actively conducting campaigns by generating various ideas that employees can actively participate.

Waste Management System

Designation of Target Business Sites	<ul style="list-style-type: none"> For all SDS business sites * Subject to legal management: 4 data centers (Suwon/Sangam/Chuncheon/Gumi), West Campus, East Campus, Seoul R&D Campus, Pangyo IT Campus, Pangyo Logistics Campus, Giheung Terra Tower
Definition of Waste Scope	<ul style="list-style-type: none"> Waste from business sites, designated waste, recyclable waste
Establishment of Waste Calculation System	<ul style="list-style-type: none"> Waste from business site: Pay-as-you-go bags Designated waste: Allbaro system data Recycled waste: Root value
Management of Waste Recycling/Landfill/Incineration Rates (ESG evaluation items)	<ul style="list-style-type: none"> Establishment of waste status management standards for each business site Consultations with waste certification organizations, along with external consultation and verification Establishment of Zero Landfill Waste certification criteria, with a goal to obtain certification by 2024

Promotion of the Waste 5R Campaign

Samsung SDS conducts quarterly assessments of waste generation by business sites and categorizes waste that falls within the scope of the 5R strategy. In addition, from the second half of 2023, we will implement a reduction target management system using the 5R campaign.

REDUCE	RECYCLE	REUSE	REFUSE	ROT
Reducing waste	Recycling waste	Reusing waste	Utilizing items destined for disposal	Using biodegradable products

Waste Generation

Category	Unit	2019	2020	2021	2022 ¹⁾		Target
					HQ	Global ²⁾	
Total waste generation	Ton	1,300	1,575	953	496.7	2,183.8	2,200
Total waste recycled/reused	Ton	0	0	361	113.4	897.2	900
Total waste disposed	Ton	1,300	1,575	592	383.3	1,286.6	1,300
Landfilled waste	Ton	1,295	1,568	576	371.2	1019.4	-
Incinerated waste with energy recovery	Ton	0	0	0	0.7	3.8	-
Incinerated waste without energy recovery	Ton	0	0	15	11.4	11.4	-
Waste otherwise disposed	Ton	5	7	1	0	252	-
Waste with unknown disposal method	Ton	0	0	0	0	0	-

1) Starting from 2022, data from subsidiaries and overseas subsidiaries have been included. Since they do not fall under the category of business waste emitters based on emission criteria, the recycling/disposal information is not accurately known. Therefore, a conservative estimation has been made.

2) Global: headquarters, overseas subsidiaries, and domestic subsidiaries.

Waste Disposed for HQ

Category	Unit	2022
General waste	Landfilled waste	Ton 371.2
	Incinerated waste	Ton 11.4
	Recycled waste	Ton 95.3
Designated waste	Incinerated waste	Ton 0.7
	Recycled waste	Ton 18.2
Total	Ton	496.7

Eco-friendly Operations

Water Resource Management

Samsung SDS regularly monitors the monthly water consumption by comparing the water volume with the previous year's corresponding month or the previous month, as indicated on the water utility bills. We analyze the reasons for any changes in water usage and establish management strategies accordingly. Furthermore, we conduct regular cleaning and disinfection of water tanks and manage the water quality through periodic water quality inspections.

Water Consumption Reduction Activities

Samsung SDS reduces water consumption by diversifying cooling methods when designing data centers. (Consumption : Suwon DC, Sangam DC, Chuncheon DC in order) Sangam Data Center utilizes local water for effective cooling with less water consumption; local cold water(12°C) is about 5°C lower than general water(17 to 18°C). Sangam Data Center uses outdoor cooling method to reduce water consumption.

Water Consumption

Category		Unit	2019	2020	2021	2022
Water-intake	Waterworks	Ton	254,365	326,406	323,461	401,701
	Underground water	Ton	161,964	162,868	167,784	164,997
Discharge	Underground water	Ton	161,964	162,868	167,784	164,997
Total water consumption(HQ ¹⁾)		Ton	254,365	326,406	323,461	401,701
Total water consumption(global ²⁾)		Ton	-	-	-	3,073,927

1) Starting 2022, additional sites have been included for environmental disclosure beyond the initial six, encompassing Dongtan Data Center, Pangyo IT Campus, Pangyo Logistics Campus, Seoul R&D Campus, and Giheung Terra Tower

2) Global: Headquarters, overseas subsidiaries, and domestic subsidiaries

Eco-friendly Activities

Paperless Campaign	<ul style="list-style-type: none"> Reducing toner usage for multifunction devices through in-house paperless campaign(41.8% reduction compared to the previous figure) Minimizing the use of paper through electronic voting and online observation of general shareholders' meetings and general meetings of employee stock ownership association
Installation of Eco Umbrella Dryer	<ul style="list-style-type: none"> Minimizing the generation of plastic wastes by installing umbrella rainwater removers instead of providing plastic bags for umbrella
Installation of HiSAVER, Automatic Light-off at Lunchtime and at Night	<ul style="list-style-type: none"> Minimizing power consumption by shutting off unnecessary power at all times
Encourage Bicycle Commuting	<ul style="list-style-type: none"> Installing bicycle storage and shower facilities for employees commuting by bicycle

New Activities in 2022

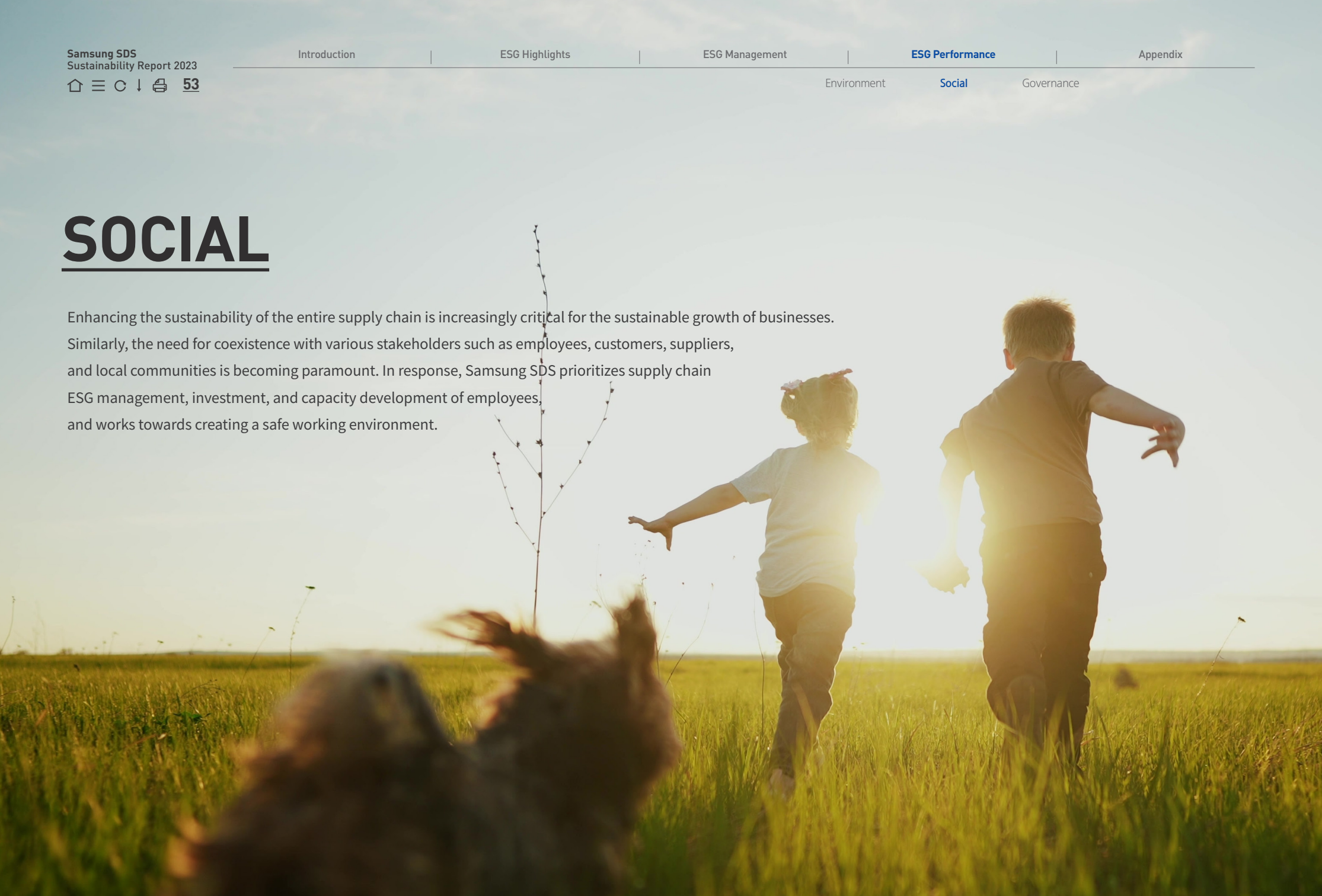
Collection of Discarded Mobile Phones and Batteries	<ul style="list-style-type: none"> Hosting donation events and prize events for donors of discarded mobile phones and batteries
Participation in Earth Hour Event	<ul style="list-style-type: none"> Improving energy efficiency and raising employees' environmental awareness through participation in the Earth Hour Event
Installation of Electric Vehicle Chargers	<ul style="list-style-type: none"> Expansion of electric vehicle charging facilities (Suwon 7, Chuncheon 3, Gumi 4, Dongtan 4)



Gumi Electric Vehicle Charging Station

SOCIAL

Enhancing the sustainability of the entire supply chain is increasingly critical for the sustainable growth of businesses. Similarly, the need for coexistence with various stakeholders such as employees, customers, suppliers, and local communities is becoming paramount. In response, Samsung SDS prioritizes supply chain ESG management, investment, and capacity development of employees, and works towards creating a safe working environment.



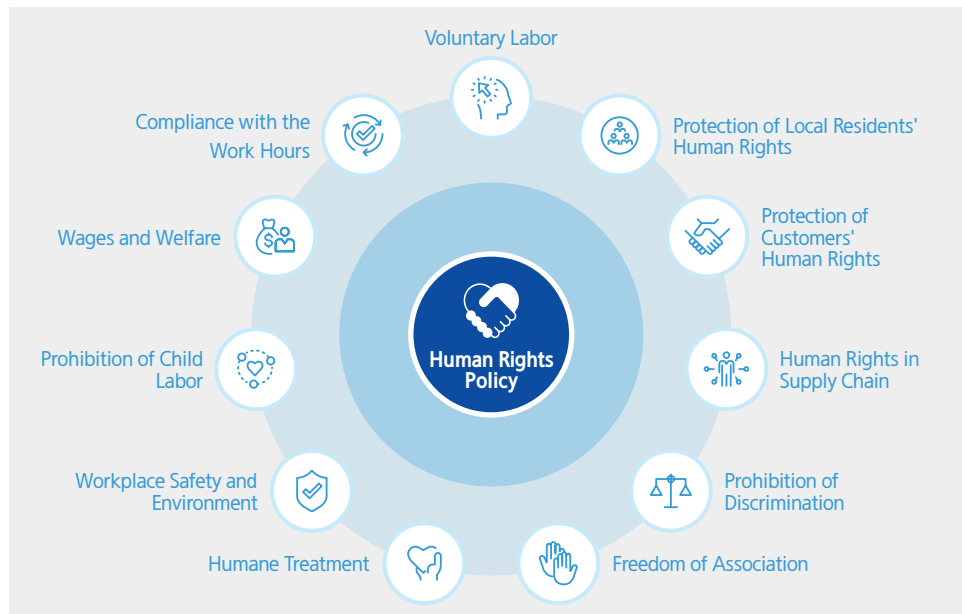
Human Rights

Human Rights Management

As a global leading IT service provider, Samsung SDS has established human rights management system for employees to work in non-discriminatory work environment and to respond international demands on human rights protection. Samsung SDS is deeply committed to respecting human rights under the United Nations' International Bill of Human Rights and the International Labor Organization's Core Conventions set out in ILO's Declaration on Fundamental Principles and Rights at Work. Samsung SDS also abides by the Code of Conduct of the Responsible Business Alliance(RBA) and comply with the laws and regulations of the countries where Samsung SDS conducts business.

Human Rights Policy

Samsung SDS has prepared and implemented 11 human rights policies to protect the human rights of our employees. Human rights policies protect the human rights and dignity of employees at a level befitting a world-class company. This policy applies to all types of employees, including temporary employees, migrant employees, trainees, and dispatched employees. Employees must be guaranteed that all demands they are subject to in the workplace are legal, and that their rights are protected in accordance with the laws and regulations. Suppliers also continue to carry out activities such as assessment and monitoring to prevent human rights violations. 🔗



Declaration of Human Rights

Samsung SDS will support and comply with the human rights principles set forth in the 'Universal Declaration of Human Rights' and the 'UN Guiding Principles on Business and Human Rights' of the UN Human Rights Committee. In order to comply with human rights management, we will establish an internal system for human rights management in accordance with this Human Rights Management Statement, and collect and process opinions from stakeholders related to human rights management.

Focus Areas of Human Rights Management

<p>Governance and Policies</p> <ul style="list-style-type: none"> · Policies and declarations · Roles and responsibilities of Board of Directors 	<p>Human Rights Risks Management System</p> <ul style="list-style-type: none"> · Human rights management · Human rights due diligence 	<p>Achievements in Human Rights Practices</p> <ul style="list-style-type: none"> · Prohibition of child labor and forced labor · Guarantee freedom of association · Prohibition of sexual harassment and discrimination
<p>Human Rights Issues and Responses</p> <ul style="list-style-type: none"> · Serious human rights issues relevant company policies 	<p>Remedies and Handling Grievances</p> <ul style="list-style-type: none"> · Channels and mechanism · Process for handling reports · Remedies for human rights issues 	<p>Transparency in Information Disclosure</p> <ul style="list-style-type: none"> · Willingness to disclose information · Information disclosed

Human Rights

Human Rights Management

Human Rights Training

Samsung SDS conducts human rights education for all employees every year to promote understanding of diversity and foster a healthy organizational culture.

Q2

Training for improving the awareness of people with disabilities and sexual harassment prevention

Q3

Training for preventing workplace harassment, training for mental health



Human Rights Risk Management Process

Human Rights Risk Assessment

Developing assessment indicators

- Reflect principles in Charter on Human Rights and other international initiatives
- Develop indicators for human rights risk assessment, concerning matters such as working conditions

Selecting assessment targets

- Select organizations subject to Charter on Human Rights
- Provide assessment indicators and guidelines to assessment targets

Inspection

- Conduct self-diagnosis by organization subject to assessment
- Establish self-improvement plans to address shortcomings

On-site due diligence

- Conduct interviews and on-site inspections to check internal regulations, systems, and risks in detail

3rd party verification

- Conduct separate assessments by third parties, if necessary, to guarantee objectivity of assessment and on-site due diligence

Improvement plans

- Establish and implement plans for improvement concerning 'high-risk' and 'non-conformity' issues identified through due diligence

Human Rights Management Improvements

Monitoring implementation status

- Monitor whether improvement measures drawn up based on mutual consent continue to be properly implemented and taking appropriate corrective actions if necessary

Deriving improvement measures

- Specific plans for improvement concerning the risks identified through human rights risk assessment

Regular Reporting and Disclosure on Management Status

Reporting to decision makers

- Reporting severe risks, improvement plans and implications identified through assessment to the target organization's management committee and business meeting

Disclosure

- Disclosing cases of human rights violations, risk assessment results and measures to be taken for risk reduction and mitigation, on the company's website or in its sustainability report

Human Resource Management

Employee Diversity Policy

Samsung SDS respects the diversity of all our members, including those in the headquarters, subsidiaries, and overseas subsidiaries and does not discriminate against employees based on gender, race, nationality, religion, age, or disability.

Proportion of Female Employees

The proportion of female employees at Samsung SDS increased from 29.2% in 2021 to 30.6% in 2022, while the percentage of female managers saw an increase from 22.4% in 2021 to 24.2% in 2022.

Female Employee Status

Category	Unit	2020	2021	2022	
Employment Status	Ratio of female employees	%	28.4	29.2	30.6
	Ratio of female junior managers ¹⁾	%	39.3	40.1	40.2
	Ratio of female managers	%	20.9	22.4	24.2
	Ratio of female executives	%	11.1	11.8	8.1
	Ratio of female employees in STEM	%	22.7	22.5	22.8
	Ratio of female managers in charge of sales/revenue	%	21.2	20.9	24.6

1) As per the internal grading system, junior manager corresponds to CL2, while manager is classified as CL3 and CL4.

Anti-discrimination Training for Overseas Local Employees

Samsung SDS provides global etiquette and local behavior guidelines training for newly assigned resident representatives to ensure that overseas dispatched employees can work harmoniously with local employees. In addition, each overseas subsidiary conducts training on human rights protection and cross-cultural understanding for local staff.

Exceeding the Mandatory Employment Rate for the Disabled

Samsung SDS fulfills our corporate social responsibilities by meeting the mandatory employment rate for the disabled and promotes employee diversity. Samsung SDS strives to improve the working environment for people with disabilities by providing all employees trainings to improve their awareness on disabilities. Further, professional counselors for people with disabilities were hired and trained. In 2022, the ratio of employees with disabilities has reached 3.62%¹⁾, 0.52%p higher than the legal mandatory rate of people with disabilities employment(3.1%).

Operation of Openhands, Inclusive Workplace for People with Disabilities

In November 2010, Samsung SDS founded Openhands, Inclusive Workplace for People with Disabilities as designated by the Korean government, as a subsidiary with the aim of fulfilling our corporate social responsibility and creating good jobs for people with disabilities. In January 2017, the company moved its headquarter and consolidated office spaces to provide a better work environment and improve convenience for its employees with disabilities at restrooms, parking spaces, elevators, and cafeteria services. These endeavors were recognized when Openhands was chosen as an excellent employer of people with disabilities in 2018 and received the Iron Tower Order of Industrial Service Merit at the Expanded Recruitment of the Disabled Competition in 2020, and an award from the Ministry of Employment and Labor at the Expanded Recruitment of the Disabled Competition in 2021. Utilizing the customized trainings provided by Korea Employment Agency for Persons with Disabilities, Openhands has provided education for those with disabilities and continues its contribution in hiring people with disabilities.

Selected as an Excellent Employer for Employment of People with Disabilities in 2018

Received the Iron Tower Order of Industrial Service Merit in the business owner category at the 2020 Employment Promotion for People with Disabilities

Received Minister's Award in the worker category by the Ministry of Employment and Labor in 2021

Employment Rate for the Disabled

Category	Unit	2020	2021	2022
No. of employment	Person	413	407	429
Employment rate	%	3.27	3.31	3.62

1) The employment rate calculation criteria under the 'Act on the Employment Promotion And Vocational Rehabilitation Of Persons With Disabilities'

Human Resource Management

Recruitment

Talent Profile and Recruitment Process

Samsung SDS does not discriminate on the basis of education, gender, nationality, or religion, and selects talented individuals who challenge the future with relentless passion, change the world with creativity and innovation, and fulfill their roles and responsibilities with honesty and good behavior. Samsung SDS provides equal opportunities to all those who wish to join us and operates a fair and transparent recruitment process to secure excellent talents in various fields. New employees are recruited through open recruitment in the first and second half of the year, and experienced employees are recruited from time to time according to the needs of each job or business division. Starting in 2021, we're introducing metaverse counseling into our recruiting for both new and experienced employees, allowing us to engage with people on and offline.

Securing Outstanding IT Talents

Samsung SDS is striving to secure global talent to lead digital transformation in various industries such as manufacturing, logistics, finance, healthcare, and EPC based on IT technologies such as cloud, security, AI, and data analytics. We are strengthening our technical and business capabilities by recruiting experts and doctoral-level talents from global leading companies, while building networks and presenting career visions to attract top talent.

Recruitment of Master's or Doctoral Degree Graduates

Samsung SDS holds campus recruitment twice a year at domestic and overseas graduate schools that have competitiveness in major business fields such as cloud, solutions, and logistics to recruit excellent master's and doctoral talents. In particular, in the second half of 2022, we conducted offline recruitment activities that were difficult to conduct after COVID-19, and developed and operated a recruitment chatbot so that master's and doctoral researchers can easily receive recruitment counseling at any time.

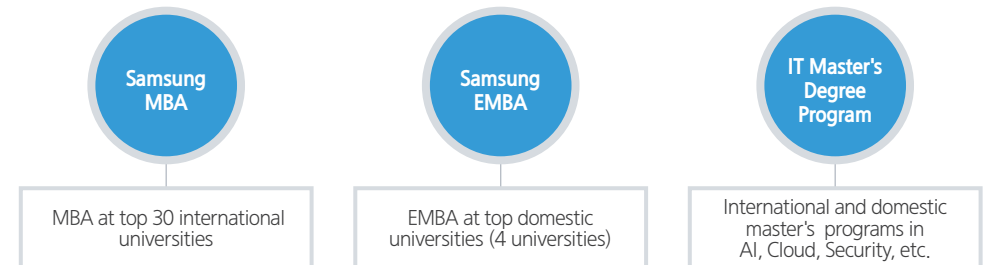
Special Lecture on Algorithms for Undergraduates

Since 2018, Samsung SDS has been conducting the Special Lecture on Algorithms twice a year during the summer and winter breaks for undergraduate students and graduates who aspire to become IT professionals. The lecturers, comprised of employees, provide in-depth training and practical exercises on algorithms to improve students' understanding and competency levels in algorithms and programming, while also using the program as a channel to discover outstanding new talents for Samsung SDS.

Talent and Experts

Academic Training Programs

Samsung SDS selects and supports the outstanding talents through the programs such as Samsung MBA, Samsung EMBA, and IT Master's degree, aiming to cultivate professionals who possess both theoretical knowledge and practical skills to lead our future.



SDS Certified Professional(SCP) Program

SDS implements the SCP program to acknowledge exceptional employees with premier technical skills and expertise, propose a growth vision to technical employees, and cultivate an organizational culture where experts receive preferential treatment. Initiated in 2003, the program selects 1% of the company's technical staff, providing them with differential treatment that makes them feel valued as top experts within the organization. SCPs lead technology dissemination activities by establishing research groups centered on their fields of expertise and contribute to the enhancement of skills through generous technical advice provided through internal mentor-mentee programs. Additionally, they guide technical reviews across our businesses to boost competitiveness.

Samsung Regional Specialist

Samsung SDS sends talents to strategic countries such as Vietnam, China and India to develop businesses in global markets and foster employees' talents. Regional Specialists should experience, analyze, and report on local culture, market trends, and data collection for benchmarking.

※ No staff was sent in 2022 due to the COVID Pandemic

Human Resource Management

Competency

Cultivating Cloud Experts

To strengthen the competitiveness of our cloud business, Samsung SDS has established a cloud workforce training system and is focusing on fostering specialized personnel. Starting with online basic training for all employees, we have organized and operated SDS self-training and vendor-specific training to strengthen the ability to utilize public clouds.

SW Development Competency Support System

Samsung SDS operates a SW competency test system to diagnose the algorithmic and coding competencies required for SW development. We provide step-by-step training for developers to diagnose and improve their level of competency, and award promotion points and incentives for acquiring higher-level certifications. In addition, we are continuously strengthening SW competency by establishing Architect certification and Code Reviewer training courses.

Participation Rate in Employee Development Programs

Category	Unit	2022
Cultivating cloud experts	%	37.2
Software qualification program	%	21.0

Cultivate Hands-on Global Talent

To foster global talent, Samsung SDS provides a variety of customized training programs to help employees perform their jobs in a practical way. We offer lecture-style online language courses, conversation-based 1:1 English coaching over the phone, AI tutoring courses, and practical courses for employees working overseas.

Leadership Training

Samsung SDS continues to provide special training for organization leaders to help them recognize the importance of organizational management and strengthen their leadership abilities. Regular training is also available to compensate for deficiencies detected through individual organizational management competency diagnoses. Moreover, newsletters are regularly published to enhance the leadership of employees.

Employee Capability Development Portal

Samsung SDS operates more than 600 collective and online curriculums based on competencies for each job. Employees use the in-house competency development portal My ProWay to freely apply for and take courses necessary for developing job competency.

Employee Training Status

Category	Unit	2020	2021	2022 ¹⁾
Average training hours per employee	Hour	55.4	63.6	75.7
Average amount spent per employee	million KRW	2.3	1.6	1.3
Total number of employees participated in training	Person	12,621	12,644	23,413
Training hours	Total	699,557	804,034	1,773,458
	Male	500,796	584,853	1,242,568
	Female	198,761	219,181	530,890

1) Include subsidiaries and overseas subsidiaries data starting in 2022

Human Resource Management

Competency

Certification Support System

We provide support for examination fees for approximately 500 qualifications related to job functions. For some qualifications strategically important at the company-wide level, additional points are given during promotions. The list of supported qualifications is continuously updated through regular reviews.

Data Scientist Certification

Samsung SDS developed and operates Data Scientist(DS) Certification Program to cultivate Data Scientist systematically. Various contents and training courses are provided through DS Academy, the in-house DS training center.

Appraisal

Employee Performance Appraisal

Samsung SDS conducts biannual employee performance appraisals. At the beginning of the year, the evaluator and appraisee engage in discussions to collaboratively set work goals that align with the individual's job characteristics. To ensure the objectivity and fairness of the appraisal, the guideline is to set the work goals as measurable as possible. If there are changes in the job responsibilities or department of appraisee, the work goals can be modified throughout the year. The evaluator conducts regular pre-interview and appraisal interview before and after the appraisal period to motivate appraisee to meet the appraisal objectives and to assist in resolving professional concerns and building capacity. If the appraisee has any objections to the appraisal results, the appraisal review committee may conduct deliberations and adjust the appraisal rating. Samsung SDS remunerates employees differently based on the results of individual job performance to enhance their work efficiency.

Category	Unit	2020	2021	2022
Ratio of performance appraisal	%	100	100	100
No. of employees participated	Person	23,740	24,779	26,236

Peer Review

To foster collaboration among colleagues and support the strengthening of competencies from various perspectives, Samsung SDS will commence biannual peer reviews in May and October of 2023, prior to the mid-term and comprehensive evaluations. The contents of the peer reviews are anonymously delivered to department heads and reflected in employee evaluations.

Identifying Collaborators

Collaborators are registered and checked per work goal. Collaborators are not assigned for tasks executed individually.

Selection of Reviewers

3-7 reviewers are chosen among coworkers for each task. Additional reviewers can be added at the department head's discretion.

Conducting a Peer Review

Reviewers select keywords and provide feedback on strengths and areas of improvement in the reviewed coworker's workflow. A peer review can be excluded if the reviewer determines it's not pertinent to his/her work.

SPECIAL SECTION

Open Learn Seminar

Employees are provided with information and insights on business and IT technologies through weekly open-learn seminars in which all employees are welcome to participate. The open-learn seminars, which cover the business status of Samsung SDS and global companies, as well as the latest technological know-how such as cloud and AI, are conducted by the heads of departments in charge of the business and internal and external technical experts.



Human Resource Management

Organizational Culture

Horizontal and Mutually Respectful Organizational Culture

To promote an organizational culture of mutual respect and horizontal communication among employees, Samsung SDS has ceased to display job titles and numbers in our internal system and refrain from announcing promotions from 2022 onwards. Subsequently, we are conducting activities to create a culture of mutual respect and consideration among employees, including the use of respectful titles such as "Pro" and "Mr/Ms", the use of respectful language, guidelines for titles in global business communication, and campaigns themed around praise and appreciation.

Smart Work Culture

To foster an efficient work culture, Samsung SDS persistently conducts various activities such as generating reports and distributing guidelines for practicing meeting culture, implementing mobile etiquette campaigns for meetings, and conducting prodigy training and departmental workshops for work immersion.

Internal Competition System

To offer employees career development opportunities to transition into their desired fields and to secure human resources for our strategic projects, Samsung SDS routinely conducts internal recruitment programs.

Flexible Working Hours

In order to foster a creative organizational culture, Samsung SDS has been operating Flexible Working Hours since 2011 allowing employees to autonomously decide commuting to and from work. Since 2018, Flextime were adapted for employees to flexibly adjust daily working hours, improving work efficiency and employee satisfaction with the working environment.

Welfare and Benefits

To motivate employees and boost their morale, Samsung SDS offers a wide-ranging welfare & benefit programs and convenient facilities under such diverse themes such as housing support, healthcare, and leisure activities.

Tuition for children · Tuition support for children attending preschool, middle/high school, and university

Welfare benefits · Welfare point provided and can be used as of the needs of employees

Support for family events · Offer expenditure support and day offs for family events involving themselves and the immediate family members
· Offer supplies and personnel services for family events

Medical support · Medical expense support for employees, their spouses and children
· Comprehensive medical check-up for employees and their spouses, medical expense support for fertility treatment
· In-house clinics(i.e., flu vaccination)

Convenient facilities · Cafeterias, daycare centers, fitness centers, health care centers, Dodami room for pregnant women, etc.



Dodami room(Breast-feeding/lactation facilities)



Daycare centers

Human Resource Management

Organizational Culture

Improvement of the Working Environment for Caregivers

A personnel system is in place to support employees' childbirth and childcare needs, facilitating a balance between work and family life.

Parental Leave

Employees with children under the age of 12 can take up to 24 months of parental leave in two installments, regardless of gender.

Infertility Leave

An infertility leave system is in operation for employees facing challenges in balancing work and family due to infertility. Infertility leave can be availed in three installments over a maximum period of 12 months.

Part-time Working Options

In order to protect expectant employees from risks such as miscarriage and premature birth, Samsung SDS provides the option of reduced working hours and systematically ensures time for prenatal check-ups. We also have implemented a system that offers reduced working hours during the childcare period as an alternative to full-time parental leave for those employees who find it challenging to perform their normal duties due to childcare responsibilities.

Usage of Parental Leave

Category	Unit	2020	2021	2022	
Number of employees on parental leave	Subtotal	Person	355	310	315
	Male	Person	106	93	106
	Female	Person	249	217	209
Number of employees returning from parental leave	Subtotal	Person	294	304	289
	Male	Person	76	83	83
	Female	Person	218	221	206
Parental leave return rate ¹⁾	Subtotal	%	82.8	98.1	88.4
	Male	%	71.7	89.3	78.3
	Female	%	87.6	101.8	98.6
Number of employees who stayed on the job for more than 12 months after returning to work	Subtotal	Person	286	290	276
	Male	Person	74	73	77
	Female	Person	212	217	199
Paid parental leave for the primary caregiver	Week	65	65	65	
Paid parental leave for non-primary caregiver	Week	55	55	55	

1) Parental leave return rate = number of returning employees/total users of the parental leave

Paid Parental and Family Care Leave

Samsung SDS provides up to 10 days of family care leave per year for employees who urgently need to take care of their family members due to disease, accident, or child-rearing. Employees can take care leave of up to 12 months.

Best Family Friendly Management Certification

Samsung SDS first obtained Best Family Friendly Management Certification in February 2013, and renewed the certification in December 2021. We have been recognized as a Best Family Friendly Management for 11 years, through 2024.



SPECIAL SECTION

Employee-Executive Communication

CEO Code Time: Online communication that brings everyone together

This program enables the CEO, heads of business divisions, external experts, and employees to share and reflect on the management status, latest technologies, and business strategies, with the aim of deciphering the code for a united Samsung SDS. In 2022, a total of four live online events were held to address employees' questions and internal issues.



CEO Real Time: CEO's on-site visits

An on-site communication program is operated where the CEO visits employees located across the country. Various face-to-face programs are also facilitated where employees can meet with the CEO to discuss their concerns and ask questions. By actively listening to voices from the field, tailored messages were shared directly with the employees, taking into account the unique characteristics of the business sites. (4 visits in 2022)



Human Resource Management

Organizational Culture

Labor-Management Council

Samsung SDS operates the Future Empathy Council for a three-year term to cultivate healthy labor-management relations and communication. In compliance with the Act on Promotion of Employee Participation and Cooperation, the Council conducts regular meetings (four times a year) aimed at enhancing the company's system and work environment. Additionally, in 2022, the Council, along with executives, visited business sites to conduct surprise events aimed at boosting employees' morale and sense of belonging. Various activities were carried out to invigorate the organizational culture, including visits to local business sites and labor projects, as well as visits to employees' families.

Category	Unit	2020	2021	2022
Employee participation rate	%	100	100	100



Grievance Handling System

Samsung SDS operates a range of communication channels, including the organizational culture guardian system, to gather and address major and minor grievances experienced by employees swiftly and fairly. For issues reported by employees, interviews are conducted to verify the facts while strictly maintaining the confidentiality of the informant's information and the content of the report. Necessary measures are taken, and in some cases, disciplinary procedures are conducted in accordance with the company's regulations.

Samsung Culture Index

To identify the strengths and weaknesses of the organizational culture and enact improvements, Samsung SDS conducts Samsung Culture Index (SCI) once a year for all employees. This involves a total of 30 questions across three areas: enjoyable work, colleagues to work with, and a company to be proud of. Significant efforts have been made to reduce the total number of questions from 55 in five areas, in order to lessen the time required for participation in the diagnosis, and a mobile diagnosis function has been introduced for convenience. Focus group interviews are also carried out with employees to further examine employee sentiment. Based on the results of the organizational health diagnosis, a mini SCI, a follow-up activity, has been implemented. This activity selects departments that require further improvement, identifies weak points, and proposes solutions tailored to each department.

Category	Unit	2019	2020	2021	2022
Participation rate in SCI	%	96.9	98.1	89.9	92.1

Employee Survey Composition



Change Agent

A Change Agent (CA) is a representative who instigates positive change within the organizational culture. They listen to and share the opinions of their department members, thereby stimulating intra-departmental communication. To address vulnerabilities in the organizational culture, they implement department-specific cultural activities, fostering a vibrant organization.

Human Resource Management

Organizational Culture

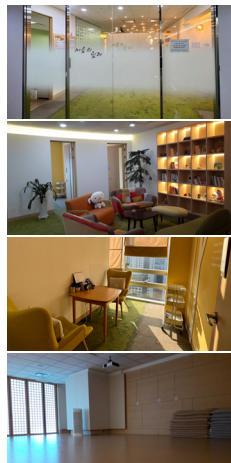
Mental Fitness Center

Samsung SDS operates Mental Fitness Center to care for the mental health of our employees.

<p>Resident Services</p> <p>Jamsil, Pangyo IT</p>	<p>Individual Counseling</p> <p>Mental health, family issues, interpersonal relationships, stress</p>	<p>Psychological Test/ Interpretation</p> <p>Mental health (depression/anxiety), personality, career, marriage, parenting</p>	<p>Mental Fitness Programs</p> <p>Team building programs, Mindfulness Therapy, target specialization, meditation</p>
<p>Weekly</p> <p>Pangyo Logistics, Suwon Data Center, Sangam Data Center, Giheung (Semicon Plaza/ Terra Tower)</p>	<p>* For employees working in locations without counseling offices, on-site counseling or phone/video counseling is supported.</p>		

Mental Fitness Programs

Samsung SDS provides a variety of psychological testing and interpretation services, including individual counseling, as well as online and offline mental health programs.



Team Building				
<p>Pleasant Dialogue Acquisition of communication skills</p>	<p>Joyful Connection Sharing of emotions/praise</p>	<p>Treasure Hunt Sharing of happiness and strengths</p>		
Mindfulness Therapy				
<p>Unfolding the Heart's Mirror Awareness / Meditation</p>	<p>My Heart's Secret Recipe Dealing with stress</p>	<p>Healing Haven Emotional intelligence development</p>	<p>Charging the Inner Self Burnout diagnosis/healing</p>	
Target Specialization				
<p>Men's Chit-Chat Tailored for male employees</p>	<p>Mom's Time to Unwind Designed for working moms</p>	<p>Journey of Joy Exclusive for married couples</p>		
Meditation				
Breath Work	Body Mapping	Imaginative Unwinding	Grounding	Benevolence Blossom

Retirement Planning Support

Samsung SDS, through our Career Consulting Center, offers education and counseling on life planning, career mapping, reemployment, entrepreneurship, and Urban-to-rural migration to assist retirees in establishing a new life post-retirement. Despite the challenging circumstance of social distancing due to COVID-19, we have recently facilitated remote counseling and education for retirees. From 2016 to 2022, a total of 385 individuals participated in the education program.

Programs to Support Prospective Retirees

Career Design Program	Diagnosis of personal values and competencies, identification of self-identity, comprehensive details on the six areas of life, information on career alternatives, setting of career goals, and creation of specific activity plans
Support for Reemployment	Understanding changes post-retirement, forming a mindset for successful reemployment, comprehending the characteristics of small business management, exploring the job market, and honing resume writing and interview strategies
Support for Startup	Defining business models, analysis of the business environment, business feasibility analysis, information on startup support policy, individual and corporate business registration, as well as startup support business and educational information.
Support for Urban-to-Rural Migration	Providing information, experiences, and opportunities for career exploration for homesteaders and returnees
Industry Experts (professors)	Understanding the role of an industrial professor and related tasks, student guidance methodologies, and coaching leadership

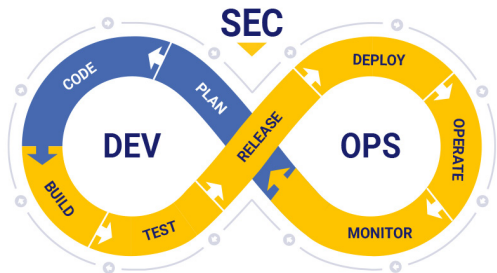
Human Resource Management

Work Culture Innovation

Samsung SDS has created our unique DevSec-Ops standardized system to innovate work culture and work methods. We have integrated security into development and operation workflows and established an organic feedback system among planners, developers, and operators to share responsibilities. Through automation, it has improved work efficiency and enhanced product release cycles.

DevOps vs. DevSecOps

DevOps is a compound of Development and Operation, denoting the culture, philosophy, methods, and tools required to enhance organizational capabilities based on the integration and collaboration between development and operations. DevSec-Ops extends the principles of DevOps by incorporating and automating security at every stage.



DevOps Transformation			
Automation	Lean	Measurement	Sharing
· Elimination of errors/risks	· Focusing on customer value	· Measuring everything	· Information sharing
· Improvement of Process Speed	· Swift/continuous improvement	· Confirming improvement	· Collaboration
Culture			

DevSecOps

Automating configuration of development environment	<ul style="list-style-type: none"> · Web-based development environment to enable development remotely · Automatic configuration of development and distribution system · Reduce Environment configuration period from 5 days to 1 day
Time To Market	<ul style="list-style-type: none"> · Preventing Human error through automation · Global distribution in 4 hours → 20 seconds · Application cycle reduced by half · Zero downtime · Automating security vulnerability analysis and security check

※ Based on Intranet System (74 Countries, 500,000 Users)

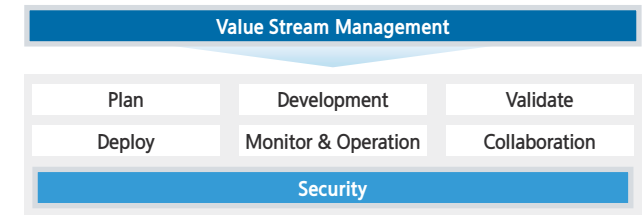
Sustainable DevSecOps

Samsung SDS continues to improve the level of DevSecOps through efforts such as improving the culture of sharing and collaboration, simplifying development and operation processes, and enhancing automation and security based on standard tools. Through our internal DevSecOps organization, it supports the application of DevSecOps in each department and improves the quality of work through maturity evaluation.

Plan Maturity level managing customer requests, planning stage requirements, roadmaps, etc., through a system-based standard development and operation process	Development The maturity level of all activities related to coding such as coding, test code, configuration management, code review	Validate Maturity levels performing continuous integration, such as code integration, code quality, static security vulnerability analysis, test automation, security check automation, and packaging
Deploy Maturity level managing customer requests, planning stage requirements, roadmaps, etc., through a system-based standard development/operation process	Monitor & Operation Maturity levels of management such as rates of service availability, operational stage requirements, regular/irregular tasks, release process and history, etc.	Collaboration Maturity levels of collaboration and communication between related departments such as planning, development, and operational departments

DevSecOps-Based Working Standards

The standard DevSecOps system of Samsung SDS, based on DevOps principles, classifies the development and operation lifecycle into six areas: Plan, Development, Validate, Deploy, Monitor & Operation, and Collaboration. It integrates standardized toolchains and security in each area and visualizes the progress flow of the whole area for measurement.



Social Contribution

Social Contribution Strategy

CSR Promotion System

Samsung SDS upholds our CSR vision, “Together for Tomorrow! Enabling People,” which aligns with Samsung’s management philosophy of maximizing potential(Enabling) and core values of prioritizing people and pursuing co-prosperity. Under this vision, we actively run a wide range of programs that support youth education and contribute to local communities, particularly focusing on vulnerable neighbors. Furthermore, starting in 2022, Samsung SDS has begun to collaboratively operate key CSR projects across affiliates to enhance the expertise and societal impact of the programs. This collective approach amplifies Samsung’s capacity to create a positive societal impact in a more significant manner.

CSR Vision	Together for Tomorrow! Enabling People!
Key Themes	Youth education programs
Flagship Programs	Youth Education <ul style="list-style-type: none"> · Samsung Junior SW Academy (AI/SW educational support for primary, middle, and high school students) · Samsung Youth SW Academy (Employment support and software training for unemployed youth) · Blue Elephant (Cyberbullying prevention training for adolescents) · Hope Stepping Stones (Assistance for vulnerable teenagers transitioning out of protection) · Samsung Dream Class (Bridging the educational gap among middle school students from underprivileged backgrounds)
	Local Community Programs <p>Activities to support multiple vulnerable groups, including NANOOM Kiosk, support for boys' home residents and discharged youth, and meal support for underprivileged adolescents</p>
Office in Charge	Corporate Social Contribution Office

“Together for Tomorrow! Enabling People!”

Samsung SDS is dedicated to assisting young individuals in creatively articulating their potential, and fostering their development into healthy societal contributors.

Concurrently, the company makes significant strides to contribute to the local community through diverse social contribution initiatives

VISION

Samsung SDS cultivates a sustainable future aligned with its CSR vision, which echoes Samsung’s managerial philosophy of “Enabling” and its core values of “People” and “Co-Prosperity.”

Direction of Activities

Samsung SDS is committed to creating a sustainable society, working in collaboration with various stakeholders such as civil society, NGOs, governments, and individuals to address global social challenges. In particular, we focus on addressing the issue of “youth education” to empower the younger generation to unleash their potential.

Together for Tomorrow!
Enabling People



Youth Education Program

Local Community Program

Social Contribution

Youth Education Program

Samsung Junior SW Academy

Incepted in 2013 and managed by Samsung SDS since 2022, the Samsung Junior SW Academy operates in partnership with Samsung Electronics, Samsung Display, Samsung SDI, and Samsung Electro-Mechanics. The Academy offers SW-AI convergence education programs, fostering young talent for the AI era through the integration of various knowledge domains. To reinforce the SW-AI education abilities of current educators, the Academy conducts teacher training programs twice a year during school vacations. They provide grade-specific curricula, SW-AI programming editors, and teaching materials developed in collaboration with education experts, thereby supporting schools in delivering high-quality SW-AI education. Additionally, Samsung SDS is dedicated to providing special lectures delivered by Samsung staff and online IT mentorship to students, aiding in the career planning of the younger generation. As of 2022, around 3,600 teachers and 150,000 young people have benefited from the Samsung Junior SW Academy.

Furthermore, the Academy continues to uncover future SW-AI professionals through the Samsung Junior SW Creative Competition, which addresses societal issues via SW-AI. Participating students gain insights into Design Thinking education, SW-AI technology, and digital ethics. These insights are then utilized to identify environmental and social(ESG) issues in the surrounding community and propose various solutions using SW-AI. From 2015 to 2022, a cumulative total of 13,557 teams and 36,094 individuals participated.

Samsung Junior SW Academy (Cumulative total from 2013 to 2022)		708 teachers 43,012 students		3,600 teachers 150,000 adolescents	
Participation in the Samsung Junior Software Creativity Contest (Cumulative total from 2015 to 2022)		Employee volunteers: 66 individuals 619 teams (1,637 individuals)		Overall participation: 13,557 teams Total number of participants: 36,094 individuals	
Employee Talent Donation - One-day School Special Lectures		92 employee volunteers 3,221 students			
Employee Talent Donation - Online IT Mentoring		36 employee volunteers 36 students			



Samsung Junior SW Academy (Teacher training)



Samsung Junior SW Academy (School education)

Samsung Youth SW Academy

The 'Samsung Youth SW Academy' is a project designed to nurture SW professionals and bolster their employability. This is achieved by providing unemployed individuals under the age of 29 with a year of professional SW training and job placement services. This project is a joint effort by six Samsung affiliates, including Samsung SDS. Trainees in the basic course learn about algorithms, coding, web technologies, and more, based on a curriculum designed according to their proficiency levels. In the advanced course, they undertake practical competency projects that utilize 4th Industrial Revolution technologies such as AI and IoT. Launched in 2018, the Samsung Youth SW Academy has seen a total of 4,732 students complete the program from the 1st to the 7th term. By the end of 2022, 3,575 of them secured employment across various sectors like IT and finance, resulting in an impressive employment rate of 76%. Currently, approximately 2,100 individuals are receiving training in the 8th and 9th terms.

Trainee selection (Cumulative total from 1st to 9th term)
7,400 individuals

Graduates (Cumulative total from 1st to 7th term)
4,732 individuals

Employed (as of the end of 2022)
3,575 individuals



Samsung Youth SW Academy (7th and 8th graduation ceremony)

Social Contribution

Youth Education Program

Blue Elephant

Blue Elephant, a project run jointly by five electronics affiliates including Samsung SDS since 2020, aims to prevent the increasing issue of cyberbullying among youth. As smart device usage surges, so does this serious social issue. The project operates a plethora of activities designed to prevent cyberbullying and establish a safe digital environment. These include online and offline prevention education for youth, teachers, and parents, counseling and healing for victims of cyberbullying, youth idea competitions, forums, SNS campaigns, and academic research. In 2022, it has broadened the age range of prevention education to lower elementary grades to address the decreasing age of cyberbullying victims, and it laid a foundation for policy proposals through parliamentary debates. By 2022, the Blue Elephant Project had seen participation from a total of 660,000 elementary, middle, and high school students, teachers, and parents.

Cyberbullying Prevention Education

124,211 participated

Number of participants receiving counseling and treatments

4,082 participated

Number of participants in spread of preventing cyberbullying

127,159 participated

Number of participants in academic research

10,062 participated

Number of participants in Cyberbullying Prevention Platform

43,427 participated

Total

308,941 participated



Blue Elephant (Cyberbullying Prevention Program)

Samsung Dream Class

The Samsung Dream Class is a program aimed at bridging the educational divide and supporting the aspirations of youth by providing educational opportunities to underprivileged middle school students. This program, operated jointly by 22 Samsung affiliates including Samsung SDS since 2022. Utilizing an online platform, this program offers three types of educational content: career guidance enabling youth to identify their aptitudes and aspirations while exploring diverse fields; future competencies such as global communication, coding, math, and logic that society will demand; and curriculum learning essential to actualizing their dreams. The program also supports a range of activities, such as mentoring by Samsung employees, field experts, and university students, competitions by field, and online major fairs.

Samsung Dream Class - Online Classes

5,000 students

Employee Talent Donation

157 individuals



Samsung Dream Class

Hope Stepping Stones

Hope Stepping Stones is an initiative designed to provide housing and customized education to young individuals discharged from institutional care, easing their transition into the workforce. This collaboration involves twenty-two Samsung affiliates, including Samsung SDS, alongside social welfare groups, local governments, and NGOs. The project offers single-occupancy housing for two years and various self-reliance support programs, such as education and employment information, to youth aged 18 to 25. Having commenced operations in Busan and Daegu centers in 2016, the project now runs eight centers in regions including Gangwon, Gwangju, Gyeongnam, Chungnam, Jeonbuk, and Gyeonggi, with a Gyeongbuk center opened in 2022 and a Jeonnam center set to open in 2023.

Establishment of the Hope Stepping Stone Center

2 centers
(Cumulative total: 10 centers)

Beneficiary Adolescents

6,284 individuals



Stepping Stones of Hope

Social Contribution

Local Community Program

Online and Offline Community Contribution

NANOOM Kiosk

The NANOOM Kiosk is a sponsorship program that shares the stories of vulnerable children and young people in need, such as those from single-parent families or being raised by grandparents, through a kiosk panel or online. Each time an employee tags their employee ID card, KRW 1,000 is donated. Once the target donation amount is achieved, the collected funds are delivered to a chosen child through a partnering NGO. In 2022, a total of KRW 45 million was donated to 15 children, assisting them with educational, medical, and living expenses.

IT Training Center for Local Community

In 2022, Samsung SDS established the Future IT Education Library at four social welfare organizations in underprivileged areas of Gyeonggi-do. This effort aims to bridge the digital divide among children and youth, fostering the development of future talent. The Future IT Education Library allows disadvantaged children and youth to freely borrow and use IT education equipment, such as VR devices and AI-equipped robots, along with educational programs developed by IT education experts and books related to the Fourth Industrial Revolution.

Meal Support for Underprivileged Adolescents

Samsung SDS has initiated a meal support project for vulnerable youths in Songpa-gu, who face challenges accessing adequate nutrition due to the ongoing COVID-19 pandemic. In 2022, it supplied 75 students from five elementary and middle schools with high-quality home-cooked meals tailored to the nutritional needs and preferences of adolescents, promoting a healthier school life.

Scholarships and Gifts for Youth at Detention Centers

This program offers educational scholarships and Christmas gifts to former juvenile detention center residents, aiming to aid their transition into becoming hopeful and ambitious members of society. In 2022, it conveyed society's warmth and hope through scholarships and gifts to 1,405 reentry students at 10 juvenile centers nationwide.

Laptop Donation

Since 1995, Samsung SDS has refurbished and donated idle laptops annually to educational institutions both domestically and internationally through NGOs. This practice not only recycles resources but also supports the IT education environment.

Sister Village Market

To foster interactions with rural communities, Samsung SDS has been collaborating with sister villages since 2002, organizing markets with these villages during Lunar New Year and Chuseok holidays to bolster the rural economy. The company donated local specialties such as tteok-mandu-guk (sliced rice cake and dumpling soup) and songpyeon (half moon-shaped rice cake) from these sister villages to social welfare organizations in Songpa-gu, ensuring a warmer holiday experience for vulnerable neighbors.

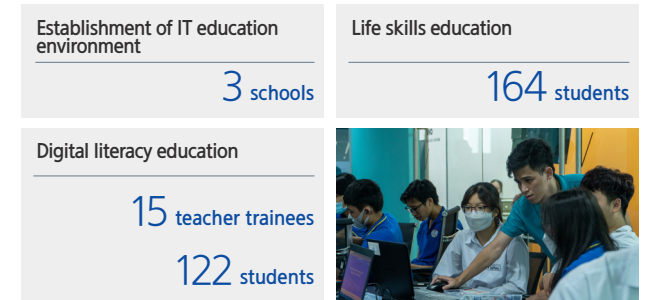


Donation of local products from sister villages



Global Social Contribution

In an effort to support overseas IT education, Samsung SDS has delivered digital competency education and has established an IT classroom environment for vulnerable youth in four high schools in Nguyen Quang District, Vietnam. This initiative encompasses digital literacy education—featuring coding, multimedia, and digital marketing—and life skills training on subjects such as time management, communication, and conflict management. The endeavor helps youth to enhance their IT abilities and emerge as proficient future human resources. Furthermore, the organization has set up an infrastructure environment for digital literacy education, including IT education equipment and software programs, for three high schools.



Overseas IT education support

Social Contribution

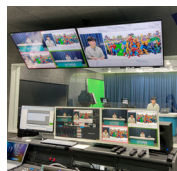
Employee Participation in Social Contribution

Remote Employee Social Contribution

Despite restrictions on face-to-face volunteer activities due to COVID-19, Samsung SDS has continued to contribute to local communities both domestically and internationally through a variety of remote volunteer activities. These include hands-on volunteering, blood donation campaigns, online mentoring, and IT training videos. Hands-on volunteering—where employees and their family members create donation items for vulnerable individuals—and online IT mentoring—where employees share their SW-AI expertise and experiences—have been particularly well received by program participants. We will continue to contribute to bridging the education gap among youth and solving community issues through various volunteering activities alongside our employees.

Category	2020	2021	2022
Participants	3,221	1,265	1,252
Service hours per person ¹⁾	6.6	6.8	8.2

1) Service hours per person = Total service hours (cumulative) / Number of participants in volunteer activities (net)



IT education video production



Hands on



Blood donation campaign

Sharing Culture

Samsung SDS regularly publishes a social contribution newsletter, “Nanoom Book Story,” every even-numbered month. We also post news about employee-involved social contribution activities on our social contribution website to stimulate employee interest and trust in the company's social contributions. Moreover, since 2022, employees who have been exemplary in their passionate social contribution activities have been recognized as outstanding volunteers on a quarterly basis. Their activities and reflections are shared, further promoting the company's culture of sharing. During the company's anniversary month in April, a remote sharing culture festival was held to recount the history of SDS's social contributions through the “Nanoom Book Story”, and a “Sharing One Word” contest was organized to encapsulate employees' thoughts on sharing in one word.

Publication of Nanoom Book Story

6 times (once every other month)

CSR activities letter

143 times

Quarterly excellent volunteers

6 individuals

SDS Award - CSR category

* An annual award for employees who have shown exceptional models in social contribution

2 individuals

Social Contribution Evaluation

Listed as a Corporate Social Responsibility in the Community

Organized by the Ministry of Health and Welfare and the Korea Council for Social Welfare, the CSR in the Community recognizes companies that have consistently carried out local social contribution activities in partnership with non-profit organizations (NGOs). In 2021 and again in 2022, Samsung SDS received high ratings on a total of 25 indicators in the ESG field and was selected as a company recognized for its community contributions.



Types of Philanthropy

Category	Unit	2020	2021	2022
Cash	million KRW	6,161	3,629	4,163
Time: employee volunteering during paid working hours	Hour	21,345	8,578	10,274
In-kind giving: product or services donations, projects partnerships or similar	million KRW	6	33	16
Expenses ¹⁾	million KRW	31	1,800	1,603

1) From 2023, expenses will be calculated as a separate social contribution expense in addition to donations, so previous years' data will be restated on the same basis.

Category	Unit	2022
Charitable donation	%	37.1
Community investment	%	54.9
Commercial initiatives	%	8.0
Total	%	100

Volunteers and Beneficiaries

Category	Unit	2020	2021	2022
Total volunteers	Person	10,956	9,858	10,347
Total beneficiaries	Person	93,411	253,006	357,811

Safety and Health

Safety and Health Management System

Safety and Health Management Policy

Samsung SDS has formulated and implemented a safety and health management policy to cultivate a health-conscious company that operates in a safe environment. Additionally, occupational safety and health committees have been established at major worksites, where management and employee representatives convene quarterly to discuss and make decisions on crucial matters pertaining to workplace safety and health. This includes formulating plans to prevent industrial accidents and inspecting and enhancing the working environment. The organization plans to persist in refining the safety and health management system for all stakeholders, including suppliers and employees, within Samsung SDS' management jurisdiction through its safety and health management policy.

1. Comply with laws and regulations, domestically and internationally
2. Create a safe and pleasant workplace
3. Manage safety and health at a global level
4. Build a culture that values safety and health
5. Promote activities to prevent fatal occupational/civil accidents

Safety and Health Management System Certification

In 2014, Samsung SDS secured our initial safety and health management system certification, and in 2017, we successfully transitioned to ISO45001—an extended version of OHSAS 18001—and continues to renew and uphold this certification annually. In 2020, the scope of the certification was broadened to cover not only the headquarters and overseas subsidiaries but also overseas logistics regions and bases. With this in place, Samsung SDS has established a system to evaluate risks and minimize them by proactively identifying risk factors associated with corporate management activities.



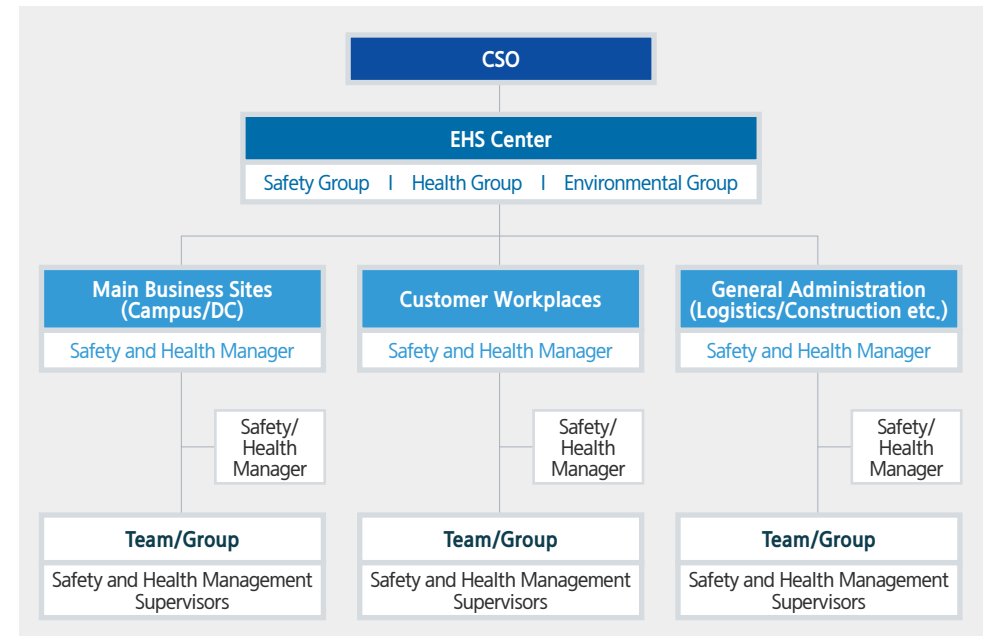
Safety and Health Management Policy



Safety and Health Management System Certification

Establishing and Expanding the Safety and Health Organization

Samsung SDS has instituted dedicated safety and health organizations within each business division, centralized around the company-wide EHS Center, to enhance their autonomy and expertise. In particular, in 2022, a chief safety and health officer (CSO) was appointed to oversee safety and health operations across businesses and business sites.



Samsung SDS is extending our domestic safety and health management system to overseas locations and undertaking various activities to ensure the safety and health of our employees. We have designated a safety and health manager at each overseas subsidiary, implemented an accident reporting and information-sharing system, and improved the level of safety and health management at overseas business sites by establishing regular communication with the headquarters through monthly meetings.

Safety and Health

Safety and Health Management System

Safety and Health System



Listening to the Opinions of Management and Employees

The EHS Committee convenes bi-monthly to share key safety and health activities with senior leadership, including the CEO and CSO. Furthermore, Samsung SDS seeks to incorporate insights from all stakeholders, including suppliers, through regular initiatives such as Occupational Safety And Health Committee, Safety and Health Council, and risk assessments. A variety of channels such as chatbots, the EHS portal, the Smart Safety Management System(SSMS), and a dedicated reporting line(1119), are utilized to receive and address identified risk factors.



Promoting Employee Safety Awareness

Samsung SDS has implemented the EHS slogan, Ten Commandments, and Ten Safety Rules to stimulate employees' interest and consciousness around safety and health. Safety and health awareness are consistently fostered throughout the company through EHS letters, Office Safety, and a knowledge-sharing program.



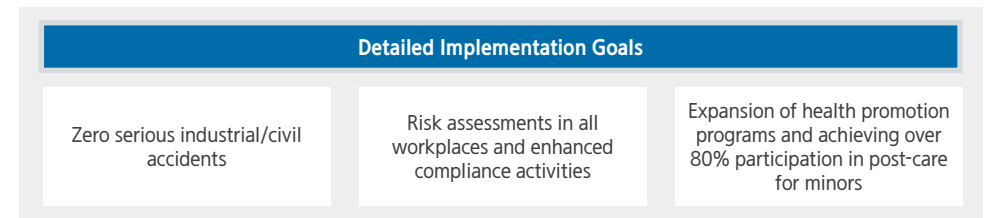
EHS slogan

Internal and External Safety and Health Assessment System

Samsung SDS engages with external specialized entities such as the Samsung Institute of EHS Strategy and law firms for diagnosis and consultation to recognize and remedy any deficiencies within the EHS management system. Post-self-inspections by various business divisions, the EHS Center undertakes further evaluation and improvement activities related to safety and health.

Implementation Plan of Safety and Health Management System in 2023

To ensure a safe working environment and employee wellbeing, Samsung SDS sets significant advancement goals, reports them to the BOD, and chooses and executes specific tasks to achieve each goal.

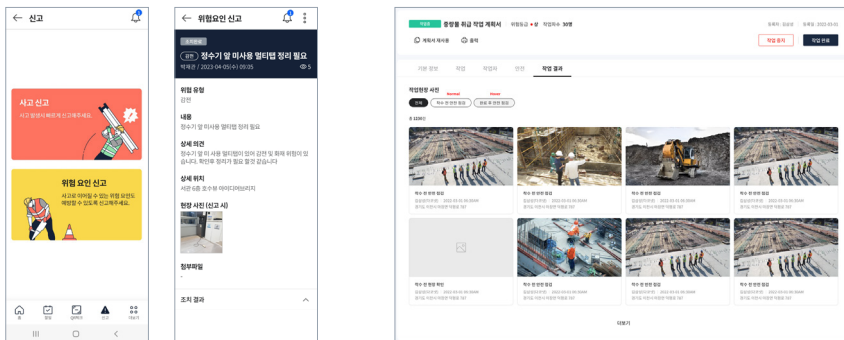


Safety and Health

Safety Management Activities

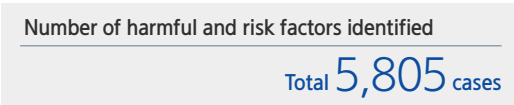
Implementation of Smart Safety Management System

A site-centered Smart Safety Management System (SSMS) has been implemented to proactively prevent various accidents and to comply with laws and regulations. Plans and results from numerous activities such as meetings, inspections, and training sessions are digitized and managed to increase worker convenience and guarantee legal compliance. Moreover, functions for accident reporting and follow-up, evaluation of qualified suppliers, and so on, have been further developed to ensure legal compliance.



Safety Inspection and Hazardous and Risk Factors Improvement

Samsung SDS conducts regular on-site inspections at domestic business sites, logistics centers, and construction projects to detect potential hazards and risks and to make necessary improvements. In 2022, a total of 5,805 hazards and risks were identified and mitigated. Special safety inspections are carried out during holidays and potential disasters to preemptively identify and eliminate risk factors. Furthermore, special safety inspections led by the CEO, CSO, and other executives are conducted to enhance the overall commitment to safety and health within the organization.



Risk Assessment

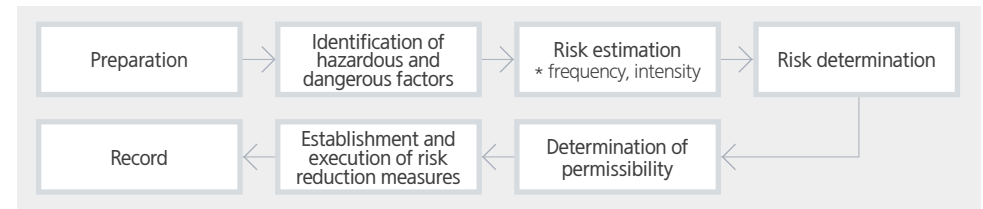
A risk assessment process is employed to identify harmful and dangerous factors in the workplace, with reduction measures subsequently established and implemented based on the estimated frequency and severity of these risks.

Activities to Strengthen Risk Assessment

Samsung SDS regularly offers specialized risk assessment training for employees and suppliers at domestic business sites, logistics centers, and construction projects. We reinforce management through various methods such as the operation of task forces for risk assessment verification, training through external specialized organizations, consulting, and a certification system.



Risk Assessment Training



Right to Cease Operations

Samsung SDS ensures that all workers, including subcontractors, have the right to halt operations should there be an imminent risk of industrial accidents. Workers are then able to make their judgment and evacuate after stopping work if necessary. There are no penalties for exercising this right: in fact, rewards are given for contributing to disaster prevention. The right to halt operations is promoted to workers and is a focal point in safety management at high-risk sites.



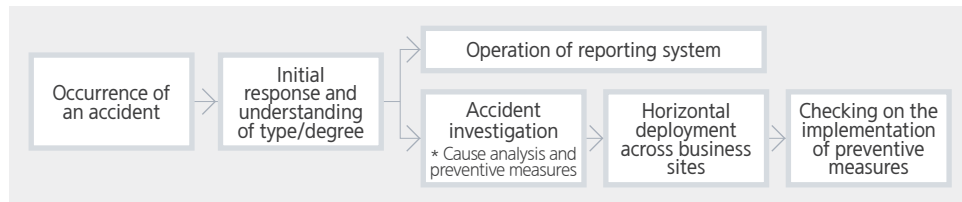
On-site promotional materials for the right to cease operations

Safety and Health

Safety Management Activities

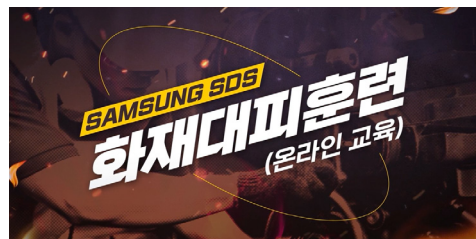
Accident Investigation Response Process

In the event of an accident involving an employee or a supplier's worker, the organization adheres to a systematic process that includes accident investigation and reporting, the establishment and implementation of measures to prevent recurrences, and horizontal deployment across business sites if necessary. Samsung SDS operates a reporting system according to the type and extent of the accident and analyzes the cause and prevention measures for recurrence following procedures based on internal guidelines. Subsequently, measures are implemented to prevent similar accidents from recurring through a knowledge-sharing program termed "Learning from Mistakes".



Safety and Health Training in Workplaces

To heighten our employees' interest in safety and health, and to build their capacities for ensuring health and safety, Samsung SDS has developed safety and health training contents. With the developed content, Samsung SDS trains all employees every year. Additionally, Samsung SDS plans and provides a variety of safety and health training programs to prevent safety accidents in the workplaces, such as training to strengthen the job-specific competencies of persons in charge of safety and health management and training specialized for those working at warehouses and construction sites.



Online Fire Evacuation Training



Special Lecture on Safety Leadership

Emergency Response Drills

Samsung SDS carries out emergency response drills biannually, designed to ensure rapid evacuation of all employees in the event of emergencies, such as fire outbreaks. Emergency response scenarios have been devised for not only the Jamsil Campus but also major business sites like data centers and logistics centers. The organization constantly refines its emergency response system through role-specific drills.

Safety and Health of Suppliers

Priority Management of Suppliers

A safety management system has been established, focused primarily on suppliers who may be more exposed to industrial accident risks. Based on the working conditions and previous accident incidents at high-risk locations, like logistics centers and construction projects, Samsung SDS aims to maintain a safe environment and a healthy workforce for all personnel, including suppliers, via on-site training and awards.

Activities to Prevent Disasters in Suppliers

For the prevention of supplier-related disasters, Samsung SDS has implemented the Campaign, a system to acknowledge excellent practices through engagement in sub-accidents and risk factor discovery activities. Activities such as suppliers to comply with legal requirements through the Smart Safety Management System (SSMS) are also carried out at business sites.

Assessment of Qualified Suppliers

Samsung SDS minimizes accident risk through assessments that confirm the safety and health competencies of suppliers. Guidelines are provided to assist suppliers in autonomously bolstering their safety and health management systems, thus ensuring worker safety. This is achieved through the evaluation of various elements such as safety and health plans, risk assessments, and safety inspections.

Safety and Health

Health Management Activities

Safe and Healthy Workplaces Management

To maintain a healthy workplace, Samsung SDS has broadened our air quality management within our offices. Furthermore, we have carried out consultations on musculoskeletal hazards in a bid to prevent musculoskeletal diseases, which have recently been the focus of societal attention. It has been confirmed that there are no tasks posing musculoskeletal burdens.

Air Quality Measurement

Samsung SDS has enhanced office air quality management program at our major business sites, aiming to ensure a healthy working environment.

Targets	3 campuses, 4 data center offices and rest areas, etc.
Period	Precise measurements twice a year
Items (9 items)	Ultrafine dust, fine dust, carbon monoxide, carbon dioxide, formaldehyde, TVOC, total airborne bacteria, nitrogen dioxide, mold
Results	No areas to concern; all items were measured within the allowable range in both 1st and 2nd half of 2022

Survey on Musculoskeletal Hazards

Samsung SDS undertook a musculoskeletal hazard survey for the first time in October 2022 to build a healthy office environment for our employees and prevent health hazards. It confirmed that there were no tasks imposing musculoskeletal burdens. In order to prevent Visual Display Terminal (VDT) syndrome among employees who spend long hours on PCs, ergonomically designed chairs have been provided at all business sites to alleviate neck and back pain. Keyboards and mice have also been supplied to all employees.

Securing the Response Capacity for Contagious Diseases

Samsung SDS has vaccinated our employees against COVID-19 through in-house medical professionals and implemented flexible workplace response guidelines to mitigate the business impact.

Round (Year)	Unit	person
1st Round(2021)	Person	5,027
2nd Round(2021)	Person	4,989
3rd Round(2022)	Person	756

COVID-19 Prevention Guidelines Implementation

Quarantine guidelines to prevent infectious diseases have been established, and an emergency response system activated through a dedicated organization to enhance workplace safety. A teleworking system is also in place for all employees, with flexible policies enacted to facilitate the safe return of employees to their regular routines, reflecting the recent decline in COVID-19 cases.

Disease Control Guidelines	<ul style="list-style-type: none"> Remote work system in operation (2020-2023) Operate a flexible system in accordance with government and affiliate guidelines
Chatbot	<ul style="list-style-type: none"> Delivering major announcements on test results through an internal messenger Implementation of proactive responses through the input of examination records and operation of FAQs
COVID-19 Cost Assistance	<ul style="list-style-type: none"> Support for rapid antigen test costs based on quarantine standards

Employee Healthcare and Support Activities

Samsung SDS offers comprehensive health checkups for employees, their spouses, and parents, and operates clinics at the Jamsil and Pangyo IT Campuses. In-house clinics or external hospitals also provide support for flu vaccinations, aiming to ensure a healthy and safe working environment for all employees.

Support for Comprehensive Health Examinations for Employees and Their Spouses/parents

Category	Unit	2020	2021	2022
Employees	Person	10,146	10,415	10,014
Spouse/Parent	Person	6,041	6,439	6,635
Total	Person	16,187	16,854	16,649

Operation of In-house Clinics at Jamsil Campus/Pangyo IT Campus

Primary care and vaccinations conducted by the Department of Family Medicine	Post-examination health management	Operation of the health examination program
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Safety and Health

Health Management Activities

Employee Health Promotion Training

In an effort to improve employee health, a health promotion program, "Healthy UP," was initiated for individuals with severe health conditions. Health lectures were also held to increase employee health consciousness. In 2023, plans are in place to broaden the program to include more participants.

Operation of Health Promotion Program

In 2021, Healthy UP, a health promotion program, was implemented for individuals with high health risk factors identified during health checkups. In 2023, the program expanded to include "Healthy UP+" through in-house clinics in Jamsil and Pangyo Campuses, and "AnyFit PRO," a digital healthcare program using an app to manage employees' health at local business sites.

Healthy UP	
Period	May 2022 ~ November 2022 (6 months)
Targets	100 volunteers among those with findings in 2021 health examinations
Institution	In-house clinic at Jamsil Campus
Details	· Periodic health indicator tests (blood test, blood pressure, InBody) · 1:1 tailored lifestyle correction counseling
Participation rate	93% (93 completed, 7 dropped out due to long-term business trips, education, etc.)
Comparison of key blood indicators before and after participation (overlap possible)	84 with kidney disease 78 with dyslipidemia
	77 with diabetes 64 with improved liver disease

2023 Health Promotion Program (2022: 1 session → 2023: 4 sessions) (Unit: Person)			
Healthy UP+	200 in the 1st half (in progress)	AnyFit PRO	100 in the 1st half (in progress)
	200 in the 2nd half		100 in the 2nd half

Health Lectures for Employees

As part of the initiatives to increase employee health awareness, health management lectures were conducted to spur interest in health and promote a health-conscious organizational culture. The course was made available online on the company's bulletin board, ensuring employees who couldn't attend the live sessions could take it at their convenience. Due to high interest from the employees, the program is slated to run again in both the first and second halves of 2023.

Wise Healthy Living (2022)	
Attendees	100 individuals
Date	October 6, 2022
Instructor	Professor Mi Hyun Kim (Department of Family Medicine, Kangbuk Samsung Hospital, Samsung Medical Center)
Subject	Tips for choosing individual optional items during health screenings, and ways to prevent and manage the 9 major diseases designated by the Ministry of Employment and Labor(MOEL)

Health Lectures (2023)	
Attendees	200 individuals
Date	March 22, 2023
Instructor	Professor Yong-Woo Park (Head of the Health Promotion Center, Kangbuk Samsung Hospital, Samsung Medical Center)
Subject	Understanding and managing hypertension and dyslipidemia ※ 1 operation in 2022 → 2 operations in 2023 (first half completed)

CPR Training

To prepare for potential emergencies such as sudden cardiac arrest and breathing difficulties, Samsung SDS has provided CPR and automated external defibrillator (AED) handling education to designated CPR officers responsible for emergency evacuation on each floor across all campuses. Additionally, in 2023, the organization plans to expand this program to include all employees and conduct CPR and AED training at major business sites.

Emergency Evacuation Officer CPR Training (2022)	
Jamsil Campus	150 completed
Pangyo IT Campus	43 completed
Pangyo Logistics Campus	33 completed

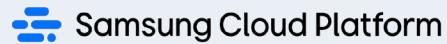


Customer Satisfaction

SPECIAL SECTION

Brand Story

Cloud Service



Cloud. Simply Fit: The Most Concise Answer for Businesses

Samsung SDS stands as the sole cloud company in Korea, providing comprehensive Cloud Service Provider(CSP), Managed Service Provider(MSP), and Software as a Service(SaaS), the core services of the cloud. We craft a "true hybrid cloud" catering to the needs of a diverse range of corporate customers. The brand's slogan, "Cloud. Simply Fit(The Most Concise Answer for Businesses)," embodies our commitment to delivering an easy-to-use, customizable cloud for enterprises feeling overwhelmed by the complexity of cloud technology, thereby fostering digital business transformation, an essential ingredient for future enterprise growth.

Samsung Cloud Platform: A Custom-Made Cloud for Enterprises

The Samsung Cloud Platform fosters data-driven business transformation in collaboration with clients, utilizing distinguished technology and a deep understanding of customer needs.

It caters to the demands and regulations of various sectors such as public, financial, and manufacturing. The platform empowers customers to swiftly implement new IT technologies in the cloud environment to accomplish corporate innovation and growth. By hosting media days, digital advertisements, and industry-specific roadshows in major cities like Seoul, Jeonju, and Busan, Samsung SDS seeks to form stronger ties with customers and present a blueprint for the industry cloud.

※ Terminology

- CSP(Cloud Service Provider): An enterprise that provides virtualized physical resources such as software, storage, and servers via the network
- MSP(Managed Service Provider): A corporation that offers services ranging from consulting to network and infrastructure management, and security and monitoring when a business client adopts and operates a cloud
- SaaS(Software as a Service): A service that provides applications needed by users via the cloud



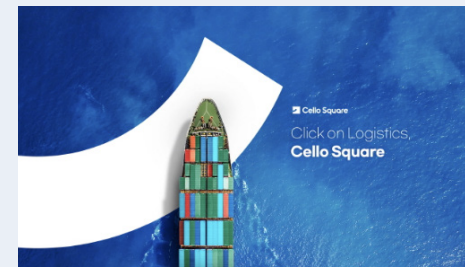
Logistics Service



Cello Square: Click on Logistics

Samsung SDS' Logistics Business Division embarked on our Logistics business process outsourcing journey in 2012, initially with Samsung affiliates. Inspired by the pivotal role of the cello in an orchestra, the operation system adopted the name "Cello," signifying the orchestration of logistics and innovation. Today, Cello symbolizes the integrated logistics platform that anchors Samsung SDS' IT-based global logistics services.

In 2015, the Logistics Business Division of Samsung SDS unveiled Cello Square, an open global logistics platform and digital forwarding service. Cello Square combines the symbol of "Cello" representing IT-based logistics services, with "Square" representing the space where collaboration and communication between shippers and logistics execution companies take place.



Customer Satisfaction

Customer Communication

Samsung SDS operates websites in 7 different languages to communicate with our customers around the world. Customers can access Samsung SDS' cloud products, digital transformation services, insight reports, and customer cases. In addition, Samsung SDS conducts an annual web accessibility quality certification review and checks the convenience so that the elderly and people with disabilities also can easily use the websites. In July 2020, Samsung SDS launched a cloud-based My Trial service where users can try out Samsung SDS solutions and services. My Trial service is as channel to support untact sales in the midst of COVID-19 and serves as a unified channel for customer contact. Samsung SDS actively communicates with customers through various social media channels including YouTube and Instagram.

Customer Satisfaction Measurement(Regular)

- A comprehensive customer satisfaction survey by industry/class/business type every year

Customer Satisfaction Measurement(Irregular)

- Survey on customer experience on projects, logistics services, and solutions.

Digital Channels

- Optimized environment for mobile devices on its official websites
- Guidelines on accessibility standard that allows all users to use the websites conveniently

Content Marketing

- Executive Briefing Center(EBC)
- Social channels(YouTube and Instagram)
- Newsletters
- Insight Reports

Customer Needs

Improvement Plan

Progress Review

SPECIAL SECTION

REAL SUMMIT 2022

Real Summit is an annual flagship event where Samsung SDS showcases its IT technologies and application instances to external customers. Initiated in 2019, the yearly event boosts awareness of Samsung SDS' IT technologies among external customers and facilitates business expansion. This event introduces digital transformation(DT) strategies targeting industries such as parts, manufacturing, distribution, and service and detail Samsung SDS' cloud-centric technologies and their practical applications. Seminars are divided into general sessions and multi-tracks, and exhibition booths are also available. The Real Summit provides a platform for invited customers to reinforce their relationship with Samsung SDS, participate in interest-based seminars.



Customer Satisfaction Management

Since 2008, Samsung SDS has regularly conducted comprehensive customer satisfaction surveys in the first and second halves of each year by customer industry, class, and business type through Gallup Korea. In 2022, we achieved a customer satisfaction score of 94, and have maintained a level above 90 for four consecutive years.

Category	Unit	2020	2021	2022	Target
Customer satisfaction score	Score	93.3	92.2	94.0	90
Data coverage	%	100	100	100	100

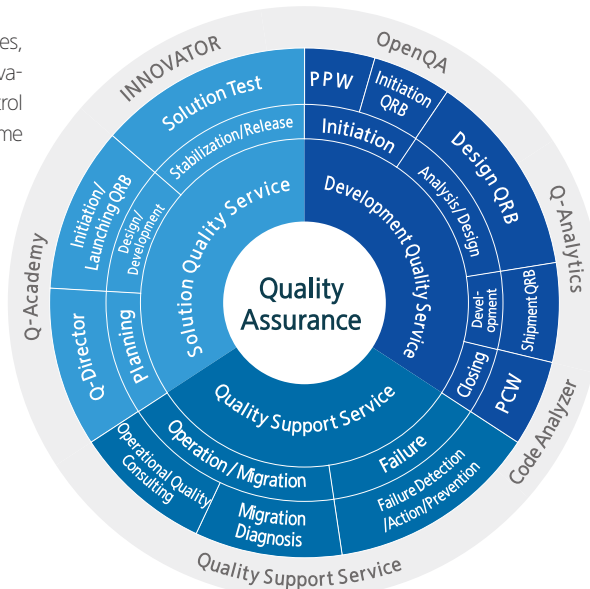
Customer Satisfaction

Quality Management Activities

Quality Control System

Under the quality management principles, customer satisfaction, and sustained innovation, Samsung SDS operates a quality control system by building the quality assurance frame by service type.

- **Q-Academy**
Samsung SDS unique training system designed to nurture quality experts
- **INNOVATOR**
Samsung SDS unique methodology
- **Open QA**
Integrated quality management system
- **Q-Analytics**
Quality analysis system for risk prevention
- **QRB (Quality Review Board)**
Quality Review Board, essential activities to achieve quality goals
- **PPW (Project Planning Workshop)**
Project Planning Workshop
- **Code Analyzer**
Code analysis and inspection tools
- **PCW (Project Closing Workshop)**
Project Closing Workshop



Quality Management System

In 1994, Samsung SDS became the first company in the industry to be certified for Quality Management System(ISO 9001) in the System Integration sector. We achieved the Master level of the IT Infrastructure Library(ITIL) in 2003, obtained the Environmental Management System(ISO 14001) certification in 2014, and the Information and Communication Quality Management System(TL 9000) certification in 2017, with continuous renewal and maintenance. In 2020, we added the Cloud Controls Matrix-based Maturity Assessment Certification(CSA STAR) and Supply Chain Security Management System(ISO 28000) certifications to our portfolio, expanding the application of global top-level quality management systems. In 2023, Samsung SDS acquired the highest level of software process quality certification(SP Grade 3) for the first time in Korea.

SPECIAL SECTION

Acquired the Highest Level of Software Process Quality Certification

Software Process(SP) certification, governed by the National IT Industry Promotion Agency(NIPA), assesses software process quality capabilities of software companies and assigns a grade based on the Software Industry Promotion Act. Samsung SDS is the only Korean company to achieve the highest grade since the implementation of the program in 2009. The high software process quality signifies consistency and continuous improvement throughout the entire process of software development to delivery, leading to superior quality services. The SP certification grade reflects the quality capability level of the project execution-related activities of the audited organization. While Grade 2 necessitates meeting the standards in project management, development, and support areas, Grade 3 requires additional organizational management and process improvement areas. The main evaluation criteria for Grade 2 include project management(project planning/control/supplier management), development(requirements management/analysis/design/implementation/testing), and support(quality assurance/configuration management/measurement and analysis). In contrast, Grade 3 evaluation involves organizational management(organizational process management/staff training) and process improvement(organizational performance management/problem resolution/process improvement management). Samsung SDS is committed to further enhancing our quality capabilities grounded on processes, methodologies, and systems to earn customers' trust.



Quality Management System (ISO 9001)



Information and Communication Quality Management System (TL 9000)



Supply Chain Security Management System (ISO 28000)



Cloud Controls Matrix-based Maturity Assessment Certification (CSA STAR)



Software Process Quality Certification (SP Grade 3)

Customer Satisfaction

Quality Management Activities

Charter of Quality

Samsung SDS has set "Perfection in Quality. Be Experts & Work Smart!" as our quality vision and strives to improve quality according to five guidelines.

Quality Vision

Perfection in Quality. Be Experts & Work Smart!

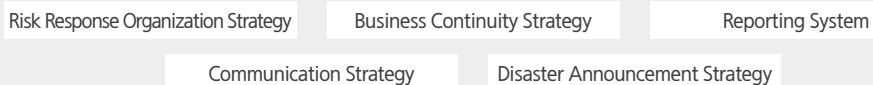
Quality Vision Guidelines

Quality First	Quality is not a subject to compromise.
Customer Satisfaction	Quality is to bring customer satisfaction and the value of products and services.
Faithful to Basic	Quality is our conscience! Strictly abide by rules and processes.
Continuous Innovation	Consistent quality innovation to innovate and grow based on new technologies and businesses.
Craftsmanship	Ponder and elaborate beyond perfection towards zero defect.

Business Continuity Plan

For various risks, Samsung SDS reviews optimal response plans based on the results of organizational status analysis, Business Impact Analysis(BIA) and Risk Assessment(RA), establishing measures to minimize business disruption and damage and to secure business continuity.

In the event of business disruption, response measures are taken promptly to minimize initial confusion and damage, normalizing business functions at an early stage and resuming critical business functions within the recovery time(RTO).



Resource restoration strategy(human resources, information and data, alternative workplace, etc.)

Quality Risk Management

Application of Quality Management Process by Business Type

System Integration	<ul style="list-style-type: none"> Inspecting quality at major stages and taking corrective/follow-up measures for nonconformities Operation of risk management system for proactive risk identification and prompt response Continuous activities to strengthen quality competitiveness such as preceding process quality strengthening
Operation and Service	<ul style="list-style-type: none"> Ensuring stable supply of services and products and aiming to achieve service level agreed with customers Quality check at the time of operation transfer and service opening (guarantee of stable service) Increasing customer satisfaction through regular operation quality improvement and failure prevention activities
Solution	<ul style="list-style-type: none"> Applying quality management process from solution planning to development and launch Regular DevOps sprint checks through the following systems under the DevOps framework Checking quality on areas such as function, CX, performance, and security before release Securing source code with high maintainability and development productivity(solution quality improvement)

Improving Employees' Awareness of Quality

Samsung SDS conducts training for domestic and international employees to develop their capacities for quality improvement every year so that all employees can recognize the importance of project completion as the main body for quality management.

Training	Content
Quality mindset	· Raise employees awareness of quality by conducting case-based online education
Nurturing quality management experts	· Nurture quality management experts through theoretical and practical training on establishment/operation/solution quality management
Nurturing test experts	· Nurture quality management experts through functional test, security test, and performance test training for developers/operators
Root Cause Analysis(RCA)	<ul style="list-style-type: none"> Nurture RCA experts and providing training for in-house risk managers Improve capabilities for failure cause analysis and problem-solving(online training)

Customer Satisfaction

Quality Management Activities

Service Failure Management

Samsung SDS carries out activities on a regular basis to prevent service/system failures in advance, and conducts regular mock drills every year for failure and disaster recovery. In addition, Samsung SDS takes necessary measures in a timely manner by monitoring infrastructure equipment/applications 24 hours a day, 365 days a year, and by sharing anomalies in real time with relevant departments. Through the Failure Review Board(FRB), in which Root Cause Analysis(RCA) experts participate, Samsung SDS reviews the technical causes, operating environment, measures and preventive measures for all procedures, when a failure occurs until measures are taken, and carry out company-wide activities to prevent similar failures from reoccurring.

IT Failure Rate¹⁾

Category	Unit	2020	2021	2022
Target	ppm	0.060	0.060	0.024
Performance	ppm	0.053	0.024	0.004

1) Failure Rate: Accumulated downtime (minutes) ÷ equipment operating time (minutes)

No. of Failures and Customer Downtime

Category	Details of indicators	No. of failures/hour
Performance issue	No. of failures that lasted more than 10 minutes and less than 30 minutes	14 cases
Service disruption	No. of failures that lasted more than 30 minutes	49 cases
Customer downtime	Based on the duration of each failure and the number of SW or IT service licenses affected	112 hours

Quality Control through OpenQA system

Samsung SDS has managed quality and risk by business type through the OpenQA system, and expanded this system to mobile to register and analyze evaluation results and take necessary measures in real time. In addition, we are effectively monitoring the quality level by utilizing IT Service Health Check which allows each department to check the operating status/level classified by customer service, service operation, product quality, and process quality in real time.



Development Methodology

Samsung SDS leverages our Innovator methodology, which standardizes procedures and methods for conducting business based on our proprietary experience and expertise, to manage quality by business type. In 2022, we established and revised the methodology for each type of transition based on cloud transition business cases, thereby securing competitiveness in the cloud business.

International SW Process Model	SDS Management Philosophy	Diverse Business Experience
Samsung SDS' Exclusive Methodologies		
INNOVATOR		
MSP	Cloud Transition(Consulting/Re-host/Re-platform/Re-factor/Re-purchase), Cloud Infrastructure Construction	
Solution	Product Development(SW), Application Construction(Package Application)	
CSP	Infrastructure Design and Construction, Overseas ICT Infrastructure Construction	
SI	BPR/ISP, PI/MDM/FA/BIM/DSC Consulting, PLM Level Diagnosis, Infrastructure Diagnosis, Feasibility Study for Global Business, Application Construction, ES/MDM/SCM/ERP/CRM/RPA/Communication Network Construction	
SM	Basic Facility Diagnosis, Data Center Migration, Security and Network Consulting, Security Solution Construction, Service Design, Application Improvement and Operation, GDC Operation Transfer, Infrastructure Operation	
Logistics	Establishment of Global Trade Management (GTM)	
DT Engine	Technological R&D, IoT/Chatbot/Big Data Platform/BA/DW/Blockchain Construction	
General	Proposals, Project Management	

Customer Satisfaction

Quality Management Activities

Code Quality Management

In 2021, Samsung SDS introduced an evaluation methodology to index software structural quality levels aiming to enhance software maintenance and code quality. An automated measurement system was established through the code quality analysis tool, CodeBot.

Software Structural Quality Level Indexing Evaluation Method

This methodology evaluates codes used in business operations using a three-level index (good/partial improvement/full improvement), based on seven structural code quality criteria. This indexing approach improves code comprehension by reducing code complexity, removes redundant source code to reduce executable file size and deployment time, and strengthens independence between modules to improve source code reusability.

Structural Code Quality Measurement

Cyclomatic Complexity

Functions with an excessive number of execution paths

Duplication Code

Code blocks that repetitively use the same source code

Module Circular Dependency

Modules that cyclically refer to each other

Coupling Between Objects

Objects that excessively refer to and call external objects

Lines Of Code

Files with an excessive number of source code lines

Dependency Complexity

Modules where internal functions excessively call other functions

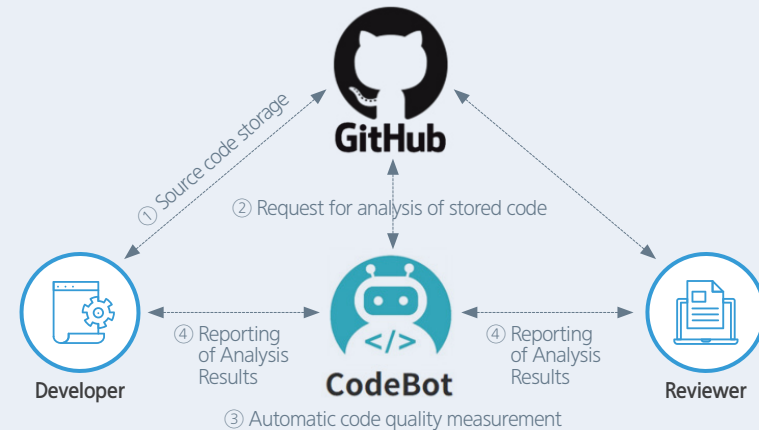
God Module

Modules with an excessive number of functions

SPECIAL SECTION

Code Quality Analysis Tool(CodeBot)

CodeBot validates changed code by performing builds and running unit tests, identifies code targeted for structural code quality improvement, and facilitates code reviews by automatically assigning reviewers and updating review progress(requesting reviews, registering review comments, etc.). The utilization of CodeBot has enhanced the convenience of code quality reviews, reduced labor time(from 1 hour to 35 minutes), identified errors in advance, provided improvement guidelines, and suggested improvements to increase code quality.



- ① The developer stores the source code in the source code repository
- ② Requests are made to measure code quality indicators for newly stored source code
- ③ The automatic measurement tool measures the code quality indicators for the requested source code
- ④ Reporting of analysis results: Score by indicator and identification of source codes for improvement, along with other improvement information, is provided to developers and reviewers

Sustainability in Supply Chain

Supply Chain ESG

Supply Chain ESG Roadmap

With the goal of building a sustainable supply chain ESG ecosystem, Samsung SDS is establishing a supply chain ESG management system, strengthening the ESG management capabilities of our suppliers, and continuously striving to comply with global ESG laws and standards and fulfill our social responsibilities.



Creating a Sustainable Supply Chain

To build a sustainable supply chain, Samsung SDS has implemented company-wide policies and systems and established a dedicated supply chain ESG organization comprised of in-house experts. We provide various programs to aid suppliers in identifying and implementing improvements through systematic processes such as guiding codes of conduct, confirming compliance agreements, self-inspections, on-site inspections, and third-party inspections. Starting in 2023, Samsung SDS plans to join the CDP Supply Chain Program to promote the reduction of GHG emissions among our suppliers and to monitor and improve the accuracy of carbon emissions management and reduction performance in the supply chain.



Supply Chain ESG Status

Samsung SDS is continuously expanding our supply chain ESG management targets. In 2022, we expanded from IT to logistics and construction, and we are managing supply chain ESG risks by strengthening management of labor rights as well as safety environment of our suppliers.

Category	2021	2022
ESG management targets	IT	IT, logistics, construction
No. of suppliers that signed the Code of Conduct	207 companies	293 companies
No. of suppliers participating in self-inspection	207 companies	264 companies
No. of suppliers participating in on-site inspection	47 companies	66 companies
Evaluation criteria for internal organizations in charge	Include ESG into KPI for Partner Collaboration Team(purchasing)	
Signing ESG applied contracts(Labor, Human rights, Environment, Business ethics, etc)	Automatically include in the contract through the purchasing system	
Education on sustainable procurement	For Samsung SDS purchasing managers and those in charge of suppliers	

Strengthening ESG Management Capabilities of Suppliers

Samsung SDS is committed to improving the ESG management level of our suppliers and fostering mutual growth. The contracts signed by Samsung SDS and our suppliers include contents on sustainability management, ensuring the human rights and rights of workers of suppliers, and social responsibility to protect the environment(compliance with the Code of Conduct). Samsung SDS provides training and consulting services to bolster the ESG management capabilities of our suppliers, manage potential ESG risks, and enhance ESG awareness among our suppliers.

Operation of a Dedicated Organization

Samsung SDS has established a dedicated organization for supply chain ESG management to strengthen our independence and expertise and to check and support the sustainable management systems of our suppliers.



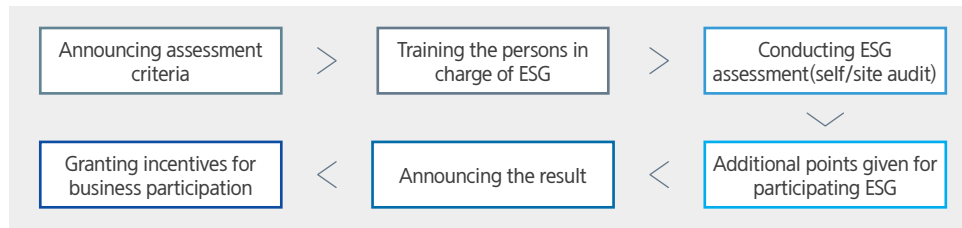
Sustainability in Supply Chain

Supply Chain ESG

ESG Evaluation for Supply Chain

ESG Evaluation Process for Supply Chain

Samsung SDS carries out a systematic and comprehensive ESG evaluation of our suppliers through a cycle of planning, execution, assessment, and improvement planning, along with continuous monitoring. This ensures that every facet of the business operation, from supplier selection to collaboration, is conducted in line with ESG principles.



Checklist

The checklist utilized in performance assessment is designed to ascertain suppliers' adherence to ethical conduct, integrating important national and international issues that are updated annually. In 2022, Samsung SDS added new evaluation criteria, such as efforts to diversify the supply chain and initiatives to curtail carbon emissions. Encouragingly, the attainment of certifications such as Family-Friendly Company, Excellent Employer for Persons with Disabilities, and Female Owned Enterprise was recommended. The checklist promotes the enactment of policies that foster diversity, equity, inclusion, and green purchasing initiatives.

Sector	No. of Items	Inspection Items	New Inspection Items Added in 2022
Labor Rights	23	Voluntary labor, compliance with working hours, etc.	Diversity(anti-discrimination, equity, and promotion of inclusiveness programs), etc.
Safety/Environment	10	Emergency preparedness, environmental permits, etc.	Green Procurement Activities for GHG Emission Reduction, etc.
Business Ethics	4	Corporate integrity, intellectual property protection, etc.	Prevention of anti-competitive behavior, etc.
Management System	4	Corrective actions, supplier responsibilities, etc.	Participation in ESG education, etc.

Supply Chain ESG Performance Assessment

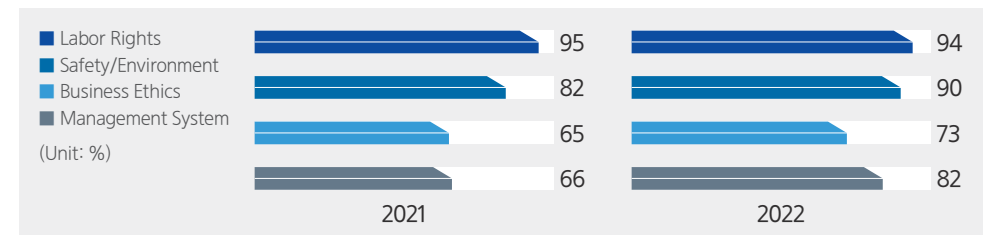
Self-Inspection

Samsung SDS has developed 41 self-check items based on the Code of Conduct that guides our supply chain ESG direction. These items are distributed to all suppliers for an annual self-check consisting of 35 questions, depending on their industry. Prior to distribution, we provide self-assessment training to our suppliers, which includes guidance on assessment methods, supply chain ESG management system direction, and new assessment items. Through dedicated time for inquiries and answers, we aim to foster ongoing two-way communication and expand engagement with our suppliers.

On-site Inspection

On-site inspections of suppliers are conducted by a dedicated supply chain ESG organization that performs independent verification functions. To rigorously scrutinize the work environments of our suppliers, Samsung SDS identifies problems and formulates short-, medium-, and long-term strategies based on feedback from suppliers. Immediate corrections are made for issues that can be improved on-site, and other issues are monitored based on the suppliers' improvement plans. Samsung SDS produces and provides an Implementation Guide for Improvement to our suppliers and conducts detailed training on each item separately, contributing to enhancing the level of ESG management of our suppliers.

On-Site Inspection Results - Compliance Rate



Sustainability in Supply Chain

Supply Chain ESG

Managing Implementation of Improvements through Third-Party Inspections

In 2022, to proactively identify and manage supply chain ESG risks, Samsung SDS selected key suppliers* and conducted third-party inspections based on a checklist that enhanced the existing inspection items. The third-party inspection was divided into a first and second audit. The average score increased by 10.8% in the second audit, reflecting the successful implementation of improvements identified during the first audit.

* Major suppliers: Companies with supply chain ESG risks and significant impact (companies with transactions and transaction percentages of a certain size, companies with improvement points identified through self-inspections and on-site inspections)

Improvement Rate

Category	Improvement Rate	Major Violations
Labor Rights	6%	Promotion of diversity, enhancement of equity, etc.
Safety/Environment	14%	Eco-friendly management strategy, etc.
Business Ethics	34%	Measures for intellectual property protection, etc.
Management System	8%	Corrective action processes, etc.

Incentive Program

Based on the results of ESG performance checks of suppliers, Samsung SDS supports incentive programs for suppliers demonstrating excellent ESG management. These incentives motivate participation in ESG practices and raise awareness about the necessity for ESG. In 2022, a total of eight suppliers were recognized as Excellent ESG Suppliers, and Samsung SDS provided practical incentives for a sustainable future, such as exemptions from on-site inspections for the next year, support for suppliers' education expenses, and financial support through the Win-Win Management Fund.

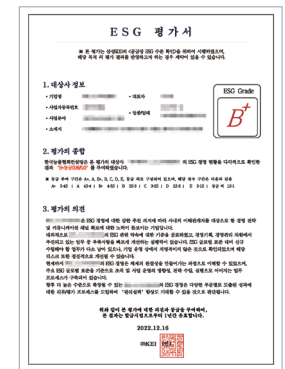
Reinforcement of Supplier ESG Competencies

Samsung SDS plans, develops, and operates various programs to enhance the ESG management capabilities of our suppliers and manage ESG risks.

Targets	Category	Content
All suppliers	Education through ESG experts	· ESG trends and best practices, sustainable procurement, Samsung SDS Code of Conduct, and customized guidelines
All suppliers	Training based on 2022 ESG Inspection results and implementation guidelines for improvement	· Selection of key improvement items from performance evaluations (self-inspections/on-site inspections) and production of implementation guides to support suppliers' ESG management · ESG Q&A and voice listening sessions
Major suppliers	Consultations with ESG experts	· Support in establishing and implementing improvement plans for ESG material issues (environment, labor rights, social responsibility, etc.) · Detailed guidelines for new inspection items in 2022 (diversity policy within supply chain, GHG reduction activities, establishment of eco-friendly purchasing policy, etc.)



Consultation sessions



Publication of ESG Assessment

Sustainability in Supply Chain

Shared Growth

Roadmap for Shared Growth

Samsung SDS leads in developing an ecosystem of collaboration by establishing and implementing a roadmap to achieve shared growth with our suppliers.



Shared Growth Policy

Samsung SDS has established policies to promote sustainable shared growth based on trust built through the establishment of a culture to promote fair trade, and conducts various activities for fair trade, collaboration, and value creation.



Partner Collaboration office

Samsung SDS has established and implemented company-wide policies to achieve win-win growth through the Partner Collaboration Office, an organization dedicated to win-win growth. Various opinions with suppliers are exchanged, and information on key business needs and win-win growth programs are provided on a regular basis.



Shared Growth Initiative

Samsung SDS was selected as the best honorary company for shared growth by obtaining the Top Excellent grade for 5 consecutive years in 2022 Win-Win Growth Index. The index evaluates and quantifies the level of shared growth of large companies to promote shared growth between large companies and SMEs, and announced by Korean Commissions for Corporate Partnership every year. Samsung SDS vows to uphold the principles of fairness and transparency in conducting business and to create a culture of win-win partnership with suppliers.

Sustainability in Supply Chain

Shared Growth

Fair Trade Policy

In order to establish a culture of transparency and fair trade with suppliers, Samsung SDS introduced the operating standards for the 4 fair trade principles complying with relevant laws such as the Subcontract Act and making every effort to prevent unfair practices from occurring in transactions with suppliers.

4 Fair Trade Principles

1. Operate contract execution practices

Take the lead in establishing an environment for fair and rational trade and shared growth by introducing Good Contract Execution Practices of the Fair Trade Commission

2. Select and manage suppliers

Secure fairness and transparency in the criteria when partnering suppliers, and operate supplier management policies in a reasonable and transparent manner

3. Create and operate Subcontract Deliberation Committee

Comply with the fairness and legality of subcontract transactions through prior deliberation for subcontract transactions over a certain size

4. Manage issuance and preserve practices

Take the lead in establishing a fair trade order by introducing the Fair Trade Commission's Written Issuance and Preservation Practices in the process of signing subcontracts and transactions

Fair Trade and Contract Conclusion

Samsung SDS includes the Code of Ethical Management in all subcontracts to prevent unfair trade and fraudulent acts that may occur in the course of business with suppliers. In 2012, Samsung SDS participated in the public-private task force to improve standard subcontracting for the software business, and introduced standard subcontracting contracts recommended by the Fair Trade Commission. Samsung SDS applied the standard subcontracting contract to software(4 types), construction(4 types), and logistics(2 types) industries. In addition, electronic contract signing through smartTogether.com was introduced to prevent unfair business practices such as verbal orders and unfair order cancellations.

Improvement of Payment Conditions

To strengthen the financial soundness of the suppliers, Samsung SDS makes subcontract payments three times a month, and pay 100% in cash within 10 days on average. In addition, when a supplier requests early payment, Samsung SDS reviews the request and make an early payment.

Supplier Selection

Suppliers were selected in a fair and transparent manner by establishing standards for the selection and operation of suppliers in accordance with the 4 practices of fair trade. Samsung SDS announces the criteria and procedures for supplier selection through smartTogether.com and provides specific criteria for selection and evaluation to prevent arbitrary interpretation by suppliers.

Supplier Selection Process

Announce

Notifying supplier selection criteria and procedures through smartTogether.com



Evaluate

Evaluating qualifications, credit ratings, technical skills, performance capabilities, and quality capabilities



On-site Evaluation

Conducting on-site evaluation for some items, if necessary



Announce the Result

Selecting suppliers based on the aggregated results
Receiving feedbacks against the results and taking necessary measures to resolve the complaints

Supplier Status

Category	Unit	2020	2021	2022
No. of suppliers	Unit	279	279	220 ¹⁾
Total purchasing amount	million KRW	367,632	413,570	405,925

1) No. of suppliers reduced due to sale of Home IoT business in 2022.

Sustainability in Supply Chain

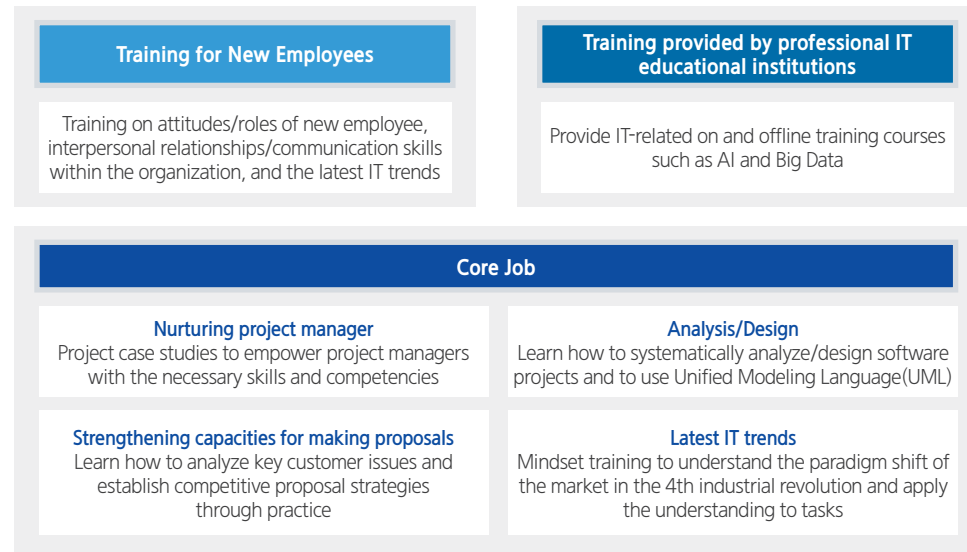
Shared Growth

Shared Growth Activities

Samsung SDS pursues sustainable mid-to-long-term shared growth through various activities including financial support, education and technical support to strengthen suppliers' technological competitiveness, welfare benefits, and communication.

Educational Support for Suppliers

Samsung SDS offers various training programs to promote shared growth with suppliers so that they can secure technological competitiveness on and offline training programs on software and information systems are provided through muticampus, an institution that nurtures software experts. Further, customized education for each class such as core job training in the information service field and introductory training for new employees are provided free of charge.

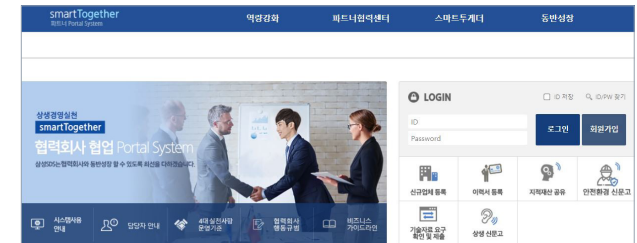


COVID-19 Support

Samsung SDS provides suppliers with contact-free collaboration solutions for businesses, distributes free quarantine products, and makes early payment to help suppliers suffering from COVID-19 to overcome difficulties.

Communication with Suppliers

SmartTogether.com, the Samsung SDS supplier collaboration portal, allows smooth communication including electric contract, sharing demand forecasting, policy, supplier promotion, grievance handling, etc.



SmartTogether.com

Financial Support for Suppliers(Win-win management fund)

Samsung SDS implemented a variety of financial support programs to ensure the business stability of our suppliers. Samsung SDS works with financial institutions to run Win-win management fund providing suppliers with financial supports to enhance their technological and R&D competitiveness. Also, we operate indirect financial support system(network loan) that allows suppliers to secure low-interest funds from financial institutions based on transaction performance with Samsung SDS.



Win-win Management Fund Status

Category	Unit	2020	2021	2022
Amount Raised	million KRW	60,000	60,000	60,000
Amount Executed	million KRW	45,404	40,843	51,093

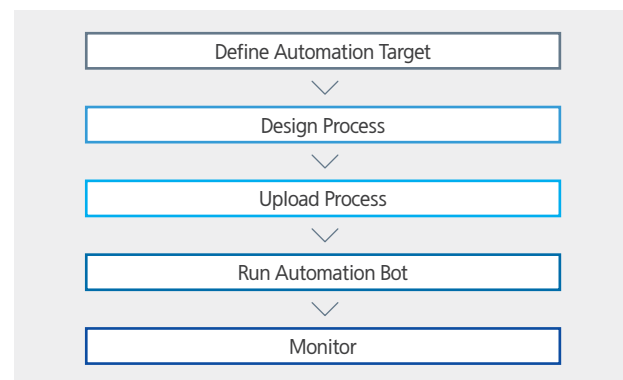
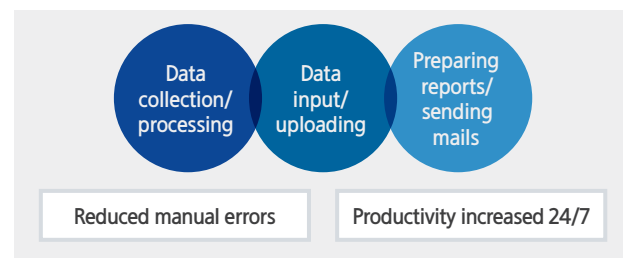
Sustainability in Supply Chain

Shared Growth

Shared Growth Activities

Technical Support for Suppliers - Brity RPA

An AI-based task automation solution, Brity RPA provides a development environment and modules that automates repetitive and complex tasks. Samsung SDS provides Brity RPA consulting and licenses free of charge to help suppliers to improve their work productivity, and Samsung SDS will continue on providing the support.



Technical Support for Suppliers - INNOVATOR development methodology

Since 2012, Samsung SDS has provided suppliers with INNOVATOR development methodology, which standardizes business methods and procedures based on Samsung SDS' business experiences and know-hows. So far, Samsung SDS has provided 6 development methodologies contributing to the quality competitiveness of 42 suppliers.

Shared Development Methodology for Suppliers

Category	Content
Project management	Providing overall project management methods, processes, guides, and deliverables from project initiation to implementation, control and termination to effectively manage software and system building projects
Information Engineering	An information technology-based methodology that analyzes, designs, and develops applications centered on data and business
Object Oriented	A methodology for Java-based application development through UML modeling
Component Based Development	A methodology that adds the process of developing and assembling reusable components based on the Object Oriented methodology
Building applications (package)	Providing processes and procedures for identifying and narrowing gaps between packages and customer requirements in the basic flow of Information Engineering
Building applications (generic agile)	Providing an approach to quickly identify, effectively implement, and validate user-centric requirements in units of short iteration cycles

Shared Growth Support Scale

Category	Unit	2020	2021	2022
Education support	No. of training programs	65	63	131
	No. of trainees	2,128	2,195	3,200
Technical support	Brity RPA support cases	-	4	7
	No. of support cases for development methodology	231	231	231
	No. of technical data escrow	22	19	13
HR recruitment support	No. of employees hired by suppliers	69	101	125

GOVERNANCE

As digital transformation accelerates in various fields, new digital technologies are emerging.

Along with this, managing security risks and ethical risks associated with emerging technologies has emerged as a new challenge for businesses. Samsung SDS is taking a leading role in digital responsibility and compliance management, with a board of directors(BOD) that embodies independence, diversity, and expertise.

Corporate Governance

Board of Directors

Board Composition

Samsung SDS' Board of Directors (BOD) is composed and operated in line with applicable laws and Articles of Incorporation, ensuring transparent and independent governance.

The Chairperson of the BOD is appointed from among the directors through a resolution by the BOD, consistent with the Articles of Incorporation and the BOD Operating Regulations. At the BOD meeting in March 2021, CEO Sungwoo Hwang was appointed as Chairperson of the BOD to enhance the efficiency of the BOD's operations and decision-making.

At the 38th Annual General Meeting of Shareholders held in March 2023, four independent directors and one executive director were appointed, following recommendations by the Independent Director Recommendation Committee and the BOD. The appointment process for each director was conducted individually in accordance with relevant laws and regulations, with a particular emphasis on enhancing the fairness of the process through the separate election of one independent director as a member of the Audit Committee.



- ① Hyun-Han Shin
- ② Jae Jin Lee
- ③ Seung-Ah Cho
- ④ Jung Tae Ahn
- ⑤ Hyung Joon Koo
- ⑥ Moo Il Moon
- ⑦ Sungwoo Hwang

Category	Name	Position	Gender	Tenure	Committee within the Board of Directors					
					Audit Committee	Management Committee	Related Party Transactions Committee	Compensation Committee	Independent Director Recommendation Committee	ESG Committee
Executive Director	Sungwoo Hwang	President & CEO, Board Chair	Male	Mar 17, 2021 ~ Mar 16, 2024		●				○
	Jung Tae Ahn	Executive VP & CFO/CRO	Male	Mar 18, 2023 ~ Mar 17, 2026		○	○		○	
	Hyung Joon Koo	Executive VP & Leader of Cloud Service Business Division	Male	Mar 17, 2021 ~ Mar 16, 2024		○				
Independent Director	Hyun-Han Shin	Chair of the Audit Committee	Male	Mar 18, 2023 ~ Mar 17, 2026	●		○	○		○
	Seung-Ah Cho	Chair of the Compensation Committee and ESG Committee	Female	Mar 18, 2023 ~ Mar 17, 2026	○			●	○	●
	Moo Il Moon	Chair of the Related Party Transactions Committee	Male	Mar 15, 2023 ~ Mar 14, 2026	○		●		○	○
	Jae Jin Lee	Chair of the Independent Director Recommendation Committee	Male	Mar 15, 2023 ~ Mar 14, 2026			○	○	●	○

●: Chair ○: Member

Corporate Governance

Board of Directors

Board Operation and Committees

The BOD holds decision-making authority over major management issues of the company such as management, governance, investment planning, and accounting financial management. It also performs monitoring and advisory roles in activities that have a significant impact on the company's management.

BOD Meeting

The BOD is convened by the chairperson in accordance with Article 33 of the Articles of Incorporation and Article 9 of the Regulations of the Board of Directors. Each director is notified of the convening details 24 hours prior to each meeting. Each director may request the chairperson to convene the BOD by delivering agendas and reasons. If the chairperson refuses to convene the BOD without justifiable reasons, the director who requested the convocation may directly convene the BOD. While the BOD meets regularly once every quarter in principle, temporary board meetings can be held whenever the need arises. In 2022, 8 board meetings were held to deliberate and decide on a total of 21 agenda items.

Board Resolution

The resolution of the BOD is made with the attendance of a majority of the enrolled directors and with the consent of a majority of the attended directors, in accordance with Article 35 of the Articles of Incorporation and Article 10 of the Regulations of the Board of Directors(unless stipulated otherwise by relevant laws). The BOD allows directors to participate in resolutions by means of communication that transmits and receives voices simultaneously. A director participating in such manner is considered as attended the BOD in person. Each director's BOD attendance, their approval/disapproval of major agenda items, and other details are disclosed in the Annual Report.

Category	Unit	2020	2021	2022
No. of the BOD meetings	Unit	13	11	8
No. of agenda items	Unit	29	28	21
Average board meeting attendance	%	98.1	97.7	96.4
Minimum of attendance for all BOD members required	%	85	85	85

Board Committees

The BOD has a total of 6 committees, as stipulated in Article 34 of the Articles of Incorporation and Article 14 of the Regulations of the Board of Directors, and delegates the authority of the BOD. The BOD enacts and stipulates regulations for committee operation through BOD resolution and stipulates details for structure, operation, and authority of each committee. The resolutions made by each committee are notified to all directors within 2 business days, and, if deemed necessary, each director may request a BOD meeting to the chairperson of the BOD within 3 business days from the date of notification. In this case, the BOD may adjudicate the resolutions made by the committee. However, the resolutions made by the Audit Committee are excluded from such adjudication to guarantee the independence of the audit body.

The Roles and Composition of the Board Committees

Management Committee	<ul style="list-style-type: none"> General Management, Financial Matters and Delegated Matters by the BOD Composed of 3 executive directors
Audit Committee	<ul style="list-style-type: none"> Auditing company's business as a whole, including its financial status Composed of 3 independent directors
Compensation Committee	<ul style="list-style-type: none"> Securing objectivity and transparency in the process of determining remuneration for directors Composed of 3 independent directors
ESG Committee	<ul style="list-style-type: none"> Creating sustainable value with various stakeholders Composed of 4 independent directors and 1 executive director(CEO)
Independent Director Recommendation Committee	<ul style="list-style-type: none"> Validation/recommendation of independent director candidates' independence, diversity, competency, etc. Composed of 3 independent directors and 1 executive director(CFO)
Related Party Transactions Committee	<ul style="list-style-type: none"> Enhancing management transparency through voluntary compliance with fair trade Composed of 3 independent directors and 1 executive director(CFO)

Corporate Governance

Board of Directors

Board Operation and Committees

Board Assessment and Remuneration

The remuneration of directors is within the amount approved by the General Meeting of shareholders according to the standards set by the BOD in consideration of their position and responsibilities. The amount of remuneration paid to directors and detailed payment standards are disclosed in 'Executive's Remuneration, etc.' on the Annual Report.

Board Remuneration

Category	No. of People ¹⁾	Total Remuneration (million KRW)	Average per-Capita Remuneration (million KRW)
Registered directors	3	3,854	1,285
Independent directors	1	89	89
Audit Committee members	3	257	86
Total	7	4,200	600

1) List includes directors who resigned during the current term(2 persons)

Shareholding Status

(As of December 2022)

Category	Unit	No. of Shares
Sungwoo Hwang(Executive Director)	Share	1,000
Jung Tae Ahn(Executive Director)	Share	1,000
Hyung Joon Koo(Executive Director)	Share	1,000
Hyun-Han Shin(Independent Director)	Share	500

BOD Compensation Payment Criteria (including CEO)

Category	Compensation Payment Criteria	
Registered Directors	Salary	Compensation is determined considering the position, nature of delegated duties, and performance of delegated tasks in accordance with the Director Compensation Regulations (decided by BOD)
	Lunar New Year/Chuseok Bonus	100% of monthly salary
	Target Incentive	Determined by the CEO based on the achievement level of departmental targets, paid twice a year within 0 to 200% of monthly salary (adjusted according to organizational performance)
	Performance Incentive	When the company's profit target is exceeded, 30% of the profit is used as a resource for the decision by the CEO, paid once a year within 0 to 50% of the base annual salary (adjusted according to individual performance)
	Long-Term Performance Incentive	Determined within the director compensation limit set by the General Meeting of Shareholders, based on the comprehensive assessment of quantitative indicators (sales, pre-tax profit, stock prices, etc.) and qualitative indicators (leadership, ethical management, social contribution, company contribution, etc.) and paid in installments over 3 years
	Welfare and Benefits	Benefits for executives such as health check-ups, insurance support, etc., in accordance with the Executive Compensation Regulations (decided by BOD)
Independent Directors	Salary	Compensation is determined considering the nature of delegated tasks according to the Independent Director Compensation Regulations
Audit Committee Members	Salary	Compensation is determined considering the nature of delegated tasks according to the Independent Director Compensation Regulations

Support for Independent Directors

Samsung SDS has designated a supporting department that provides necessary information and resources in order to assist independent directors in fulfilling their roles as set forth. Notably, we share and update the current status of the our management plan and business areas on a regular basis to enhance the independent directors' understanding in management activities.

Training Date	Participants	Training Topics
July 28, 2022	Jea-Man Yu, Hyun-Han Shin, Seung-Ah Cho	Training of internal accounting management system
October 19, 2022	Hyuck Yoo, Hyun-Han Shin, Seung-Ah Cho	Overview and Introduction of Pangyo IT Campus Operations

Corporate Governance

Board of Directors

Enhancement of Board Independence

Samsung SDS has a majority of independent directors to ensure the independence of the Board of Directors, and operates meetings that encourage open discussions and independent decision-making. In addition, to minimize the possibility of conflicts of interest, transactions between directors and the company are restricted, and directors who have an interest in the resolution of the board are prohibited from exercising their voting rights.

Furthermore, Samsung SDS ensures fairness and independence in the process of appointing directors. The candidate pool is formed by examining factors that may affect fairness and independence such as qualifications. The BOD and the Independent Director Recommendation Committee comprehensively considers evaluation criteria for individual candidates including expertise, social recognition, and integrity, together with the business aspects.

Board Diversity and Expertise

Samsung SDS composes our board of directors with diverse expertise to enable comprehensive and strategic decision-making from a comprehensive perspective. The CEO, a leading expert in IT services field, oversees the overall business and drives responsible management as the chairperson of the BOD. Furthermore, we appoint experts with deep knowledge and experience in various fields such as law, IT, finance, and business strategy as independent directors. They provide objective management supervision and professional advice. Independent directors are limited to holding dual positions at one company to ensure their expertise and loyalty.

Samsung SDS is committed to growing alongside our diverse stakeholders and advocates for diversity factors such as gender, age, nationality, education, disability, and political affiliation in the composition of the BOD. To promote gender diversity, a new female director was appointed to the BOD in 2020.

Board Skill Matrix

Items	Sungwoo Hwang	Jung Tae Ahn	Hyung Joon Koo	Hyun-Han Shin	Seung-Ah Cho	Moo Il Moon	Jae Jin Lee
Board Diversity					●		
Financial		●		●	●	●	
Global Business	●	●	●	●	●		●
Leadership	●	●	●			●	●
Risk Management		●		●	●	●	
Technology	●		●				●

Independence Requirements for Independent Directors

Samsung SDS checks the eligibility of independent director candidates and incumbent independent directors based on relevant laws such as the Commercial Act, ensuring they can effectively perform the roles of supervising and counterchecking management decisions. The main criteria include:

Not being a director, executive officer, or employee involved in the company's management, or not having been so within the recent 2 years

In the case where the largest shareholder is a natural person, not being the largest shareholder, their spouse, or direct ascendants or descendants

In the case where the largest shareholder is a corporation, not being a director, auditor, executive officer, or employee of the corporation that is the largest shareholder

Not being a spouse or direct ascendant or descendant of the director, auditor, or executive officer

Not being related to the parent company or its directors, auditors, executive officers, or employees

Not being a director, auditor, executive officer, or employee of a corporation that has a significant transactional relationship or other important interests with the company

Not being a director, auditor, executive officer, or employee of another company where the company's director, executive officer, or employee is an executive director

Not serving as a director, executive officer, or auditor of more than two other companies

Not providing advisory services such as accounting audits, tax representation, or having legal or management consulting contracts with the company, including attorneys (including those affiliated with foreign law consultancies), certified public accountants, tax accountants, or other advisory service providers

Corporate Governance

Shareholder-Friendly Management

Information Provision to Shareholders and Investors

Enhancement of Face-to-face Meetings with Investors

Samsung SDS utilized non-face-to-face meetings during the period of COVID-19 spread. However, starting from 2022, we have actively engaged in investor relations (IR) activities by conducting in-person meetings with institutional investors and participating in a total of 8 conferences hosted by securities firms.

Dissemination of Information via Samsung SDS Website and Public Disclosure System

Samsung SDS conducts quarterly performance conference calls through real-time streaming on our website, and we publish an annual Corporate Governance Report. In addition, we have newly added a FAQ menu on our company's website to help enhance shareholders' and investors' understanding of the company.

Articulation of Dividend Policy and Dividend Enhancement

3-year Dividend Policy

Samsung SDS revealed a comprehensive dividend policy for a three-year period spanning from the 2022 fiscal year through to the 2024 fiscal year (as of January 2023).

The key points of the 3-year dividend policy include raising the dividend payout ratio to 30% compared to the dividend policy baseline. (Dividend policy for the 2019 fiscal year to the 2021 fiscal year: Maintaining a dividend payout ratio of 25% or higher, maximum 30%)

Through this declaration, Samsung SDS aims to correlate our operational success with the magnitude of dividends and enhance the scope for investors' foresight.

Dividend Increase

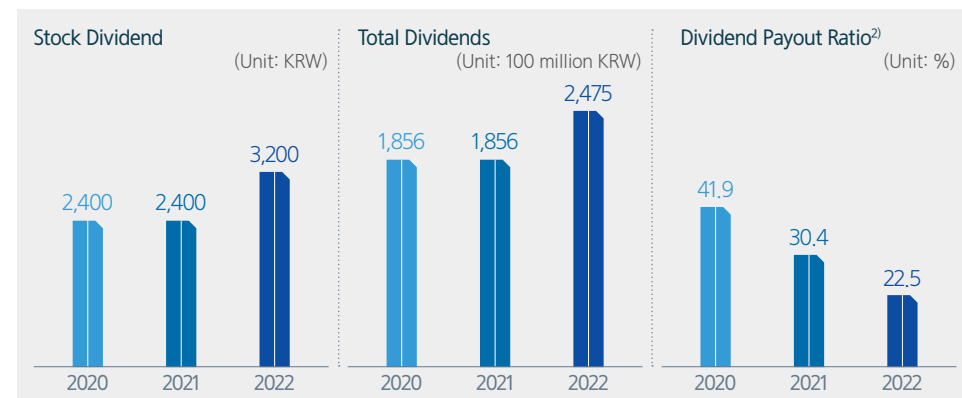
For the 2022 fiscal year, the dividend per share has been increased by 33% to KRW 3,200 compared to the previous year's KRW 2,400 per share. The dividend payout ratio for the 2022 fiscal year is 22.5%, but when excluding one-time non-operating income and expenses, the adjusted dividend payout ratio is 30.3%.

Communication with shareholders and investors

Category	Number of Sessions	Note
Non-Deal Roadshow	7 sessions	4 NDR sessions after performance announcement
		3 CFO meetings
Conference	8 sessions	2 sessions for Samsung Securities
		1 session for Bank of America
		1 session for KB Securities
		1 session for Credit Suisse
		1 session for Goldman Sachs
		1 session for Daiwa
		1 session for JP Morgan

Dividend Status

(Consolidated basis, Type of stock¹⁾: Common stock)



1) There are no other classifications of stocks such as common and preferred stock

2) The dividend payout ratio equals dividends divided by net income for controlling shareholders

Risk Management

Risk Management

Risk Governance

Samsung SDS manages risks through the BOD, the highest decision-making body, and Risk Management Council. The council identifies and analyzes risk types for the entire organization, checks management categories and risk management methods, presents them to the BOD, and reflects them in management strategies to respond.

Risk Management System

Monitoring frequently the risks of the roles of each Committee within the BOD, Samsung SDS is in charge of establishing and managing strategies for risk management. In addition, Samsung SDS designates CFO as the Chief Risk Officer(CRO) and holds a Risk Management Council in which relevant departments participate to share identified risk issues and establish countermeasures. The Risk Management Council establishes policies of management and response for financial risks such as market risks, credit and liquidity risks, and operational risks such as compliance, human rights, safety accidents, and environment that may occur during business operation. The council also implements related programs through the responsible department. For risks spanning across various areas, we have established a collaborative system with experts from relevant departments to efficiently address them.



Risk Management Procedure

Samsung SDS has institutionalized the reporting system for the BOD and the Risk Management Council to advance risk management. The Risk Management Council manages risks through materiality assessment and impact analysis of potential losses and appropriate responses, and reports material risks to the BOD and subcommittees so that they can be reflected in management strategies. Furthermore, relevant departments manage financial and non-financial risks at all stages of the business. In particular, emergent risks that occur in technology and services are immediately shared with the dedicated organization and relevant departments to counteract.

Sensitivity Analysis

Samsung SDS is enhancing our risk resilience through sensitivity analysis of key potential risks, such as global supply chain crises, climate change, exchange rate fluctuations, increasing carbon emission prices, and uncertainties in renewable energy supply.



Risk Management

Risk Management by Risk Type

Emerging Risk Management

Samsung SDS seeks to respond in advance by identifying long-term emerging risks and analyzing their impact on the business.

Emerging Risk	Details	Potential Impacts	Mitigating Actions
Technology Transition	<ul style="list-style-type: none"> · Risk of regulatory violations, litigation, and reputational damage due to the enactment of new laws following the commercialization of future innovative technologies such as AI and Big Data 	<ul style="list-style-type: none"> · Restriction of business area caused by the enactment of new laws or risk of litigation brought by customers against existing businesses · Transparency risk to secure customer trust in relation to AI logic, etc. · Risk of fatal reputation deterioration and business disruption in case of ethical issues related to new technology 	<ul style="list-style-type: none"> · AI Ethics Principles to prevent risks in advance that may occur with AI technology · Ongoing monitoring of patents, relevant laws, etc., and regular operation of Risk Management Council
Energy Supply	<ul style="list-style-type: none"> · The risk of inadequate energy supply for business activities due to geographical, climatic, or geopolitical factors such as increased energy demand caused by wars. 	<ul style="list-style-type: none"> · Cost risk due to rising electricity rates and power outages · Shutdown risk of data center operations due to energy shortage · Risk of disruption to corporate operations and business activities due to long-term energy shortage · Reputation risk, including the decline in corporate image and brand value. 	<ul style="list-style-type: none"> · Exploring alternative energy supply methods such as auxiliary generators · Establishment of emergency power supply systems for facilities necessary for the operation of data centers and other businesses · Efforts to improve the energy efficiency of the company · Collaborating with government and related organizations to seek solutions

Financial Risk Management

Samsung SDS closely monitors and responds to factors of market, credit, and liquidity risks based on risk management policy. The Financial Management Team supervises financial risk management and establishes global financial risk management policies in cooperation with our business divisions and individual domestic and foreign companies to measure, evaluate, and hedge financial risks.

Tax Risk

As global business expands, the importance of tax risk management has been highlighted. Samsung SDS diligently fulfills our tax reporting and payment obligations in accordance with relevant regulations. Through dedicated internal departments, we identify tax risks on a country-by-country basis and formulates response policies. In addition, we contribute to the development of local communities by ensuring compliance with tax regulations and creating local job opportunities while conducting business in each country.

Foreign Exchange Risk

Due to our global operations, Samsung SDS is exposed to foreign exchange risks which may affect future business transactions, assets, and liabilities. Samsung SDS suppresses the occurrence of foreign exchange positions by prioritizing local currency transactions and by matching deposit-withdrawal currency principle. If such position is unavoidable, we are managed in accordance with applicable statutes and procedures. Samsung SDS' exchange risk management regulations include the definition, measurement cycle, managing body, and management procedures of foreign exchange risk. Foreign exchange transactions are strictly limited and speculative transactions are prohibited. In addition, Samsung SDS manages and reports foreign exchange risks on a monthly basis through a global exchange management system.

Credit Risk

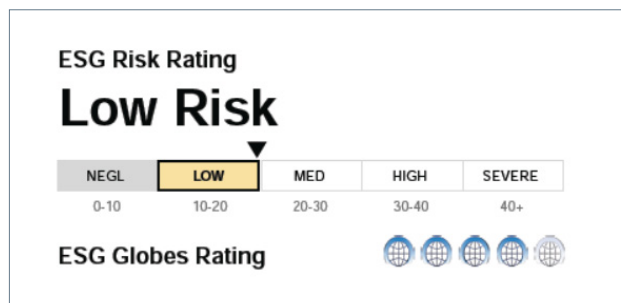
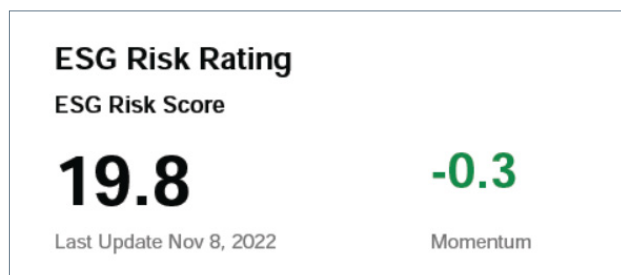
Credit risk arises when counterparty fails to comply with its obligations under the terms of the contract. To manage credit risks, Samsung SDS periodically evaluates the financial credibility of counterparties in consideration of factors such as financial status and transaction histories, and accordingly sets credit limits. Credit risk also can occur in financial product transactions with financial institutions. In order to reduce such risks, we transact only with banks with high international credit ratings under the approval and supervision of the Financial Management Team.

Risk Management

Risk Management by Risk Type

Risk Management Based on External Assessment

Samsung SDS received a score of 19.8 in the 2022 Sustainalytics ESG Risk Rating, indicating a Low Risk rating. We are committed to improving Management risks and are making efforts in that regard.



Areas for Improvement		
Corporate Governance	Ownership & Shareholder Rights	<ul style="list-style-type: none"> Disclosure of shareholder rights and poison pill plans Shareholder approval is required for the annual election of the Board of Directors and for determining the size of the BOD.
	Remuneration	<ul style="list-style-type: none"> Disclosure of performance indicators or grounds for Short-Term Incentive (STI) / Long-Term Incentive (LTI) Disclosure of clawback or recovery policy
Data Privacy and Security	Data Privacy and Security Policy	<ul style="list-style-type: none"> Commitment to collecting and processing user data only for stated purposes Commitment to requiring third parties sharing data to comply with company policies Commitment to the prompt notification to customers in the event of policy changes or data breaches
	Data Privacy Program	<ul style="list-style-type: none"> Disclosure of the status of employee training on personal information protection and information security. Disclosure of regular/ad hoc inspection processes
	Cybersecurity Program	<ul style="list-style-type: none"> Disclosure of ISO 27001 certification on the website Regular external security audits or vulnerability assessments of company systems, products, and practices related to user data
Human Capital	Discrimination Policy	<ul style="list-style-type: none"> Publication of employee protection clauses based on ILO conventions on the website
	Diversity Programs	<ul style="list-style-type: none"> Disclosure of organization and recruitment goals related to employee diversity, and mentoring programs Disclosure of board responsibility for diversity initiatives
	Gender Pay Equality Program	<ul style="list-style-type: none"> Implementation of programs related to gender pay equality
	Gender Pay Disclosure	<ul style="list-style-type: none"> Disclosure of the median and average of the global gender pay gap within the company
	Collective Bargaining Agreements	<ul style="list-style-type: none"> Disclosure of the inclusion of all employees in labor negotiations agreements
Business Ethics	Human Capital Development	<ul style="list-style-type: none"> Disclosure of quantitative goals and risk assessments related to human capital development Disclosure of talent acquisition initiatives and open feedback systems
	Bribery & Corruption Policy Bribery & Corruption Programs Business Ethics Programs	<ul style="list-style-type: none"> Publication of corporate ethics guidelines, anti-corruption policies, and fair competition policies on the website Implementation and disclosure of the status of anti-corruption, fair competition programs, and regular ethics education Disclosure of board responsibilities for corporate ethical issues Conducting regular audits related to corruption and compliance
	Whistleblower Programs	<ul style="list-style-type: none"> Operation of a 24/7 anti-corruption channel in the primary languages of the countries in which the company operates, available on the website Disclosure of the number of reports received through the channel and cases of non-compliance/anti-corruption guideline violations
	Political Involvement Policy	<ul style="list-style-type: none"> Publication of political neutrality policy within the Code of Conduct guidelines on the website

Ethics and Compliance

Ethics Management

Principles of Ethics Management

Samsung SDS devotes our talent and technology to creating superior products and services that contribute for a better global society. To this end, we establish the Code of Conduct Guidelines according to business principles to accomplish the innate roles of an enterprise and fulfill our social responsibilities, while observing laws and ethical standards. The guidelines work as the criteria for judging the behaviors and decisions of the employees in Samsung SDS business activities.

Code of Conduct Guidelines

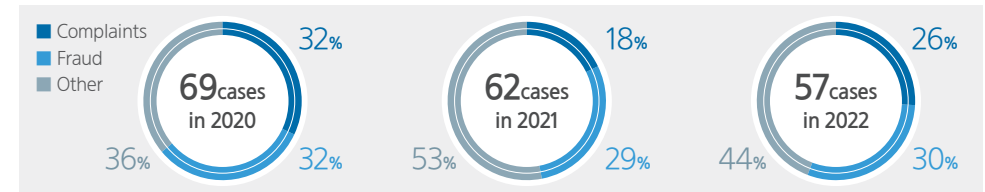
Business Principles	Code of Conduct Guidelines
Compliance and Ethics	Fair competition, data protection, protection of Samsung SDS' and others' properties
Clean Organizational Culture	Prevention of corruption and conflict of interests
Respect Customers, Stakeholders, and Employees	Respect of human rights, customer and quality control, and technical innovation
Caring for Environment, Safety and Health	Green management, health, and safety
Social Responsibility as Global Corporate Citizen	Win-win philosophy and contribution to local communities

Ethics Management Implementation Process

Samsung SDS discloses our business principles to external stakeholders and operates a whistle-blowing channel to report violations of the principles. Furthermore, we share the Employee Guidelines to encourage the employees maintaining integrity in practice. The Samsung Business Principles and the reporting channel are available in Korean and English, and the Employee Business Conduct Guidelines in 4 different languages.

Whistleblowing Channel

Samsung SDS operates an anonymous channel to report corruption on our website. The scope of the report includes reporting on illegal activities against the Fair Trade Act and the Personal Data Protection Act, as well as reports on unethical behaviors such as giving or receiving money/valuables or hospitality. A total of 57 reports were received in 2022 through global reporting channels, of which 26% were civil complaints and 30% were related to unethical behaviors. If such reports proven to be true through investigations, disciplinary measures are taken according to the severity of the violation.



Violations of Code of Conduct & Violations of Laws and Regulations

Category	Unit	2020	2021	2022	
Violations of Code of Conduct	Total number of reports ¹⁾	Case	22	18	20
	Number of investigations in progress among reported cases	Case	0	0	0
	Number of completed investigations among reported cases	Case	22	18	20
	Completion rate of verified cases	%	100	100	100
Violation of Laws and Regulations	Total amount of fine	million KRW	0	0	0
	Number of lawsuits filed	Case	23	39	31 ²⁾
	Number of cases related to corruption, anti-competitive practices, and security issues	Case	0	0	0
	Number of non-monetary sanctions	Case	1	0	0
	Total number of substantiated corruption & bribery cases	Case	0	0	0

1) Based on Code of Conduct violations (corruption) reported through the anti-corruption channel Excludes reports transferred to other companies due to lack of relevance to Samsung SDS

2) All SDSLA labor lawsuits.

Ethics and Compliance

Ethics Management

Business Ethics of Suppliers

Suppliers of Samsung SDS are to comply with all applicable laws and regulations in business activities, and Samsung SDS requires them to maintain the highest ethical standards. For this purpose, Samsung SDS includes the business ethics provisions in the Supplier Code of Conduct and defines corporate integrity, prohibition of unfair profit, intellectual property protection, identity protection, and personal information protection. The Code of Conduct and Guidelines for each provision are provided and apply to all suppliers of Samsung SDS.

Employee Ethical Awareness Enhancement Program

Through the Employee Guidelines, Samsung SDS discloses the regulation violation cases of suppliers, public funds and assets, working discipline, and information leaks. We conduct promotional activities and provide ethics management trainings on a regular basis for employees.

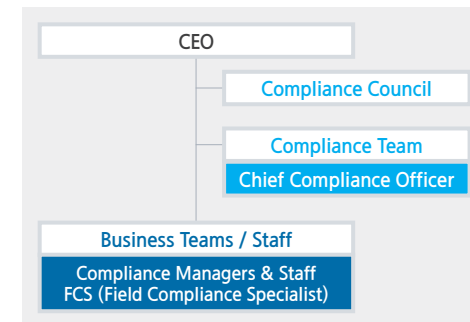


Compliance Management

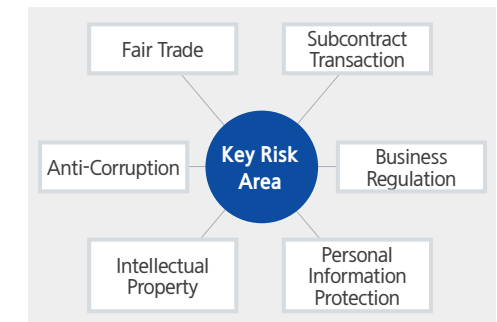
Compliance Management Organization and Areas of Management

Samsung SDS appoints compliance officers through a resolution of the Board of Directors (BOD) and operates the Field Compliance Specialist (FCS) system under the guidance of the Compliance Team. This dedicated unit selects compliance officers and managers for each business division and compliance officers for each department to conduct autonomous compliance activities (As of March 2023, it consists of 285 members). The Compliance Team manages risks in key areas such as anti-corruption, fair trade, subcontracting, business regulation, personal information security and intellectual property, in collaboration with the responsible departments.

Compliance Management Organization



Main Management Areas



Samsung Compliance Committee

In January 2020, Samsung SDS signed an agreement with 7 major Samsung affiliates to establish the Samsung Compliance Committee in accordance with the decision made by the BOD to prevent the top management from engaging in any illegal activity, and to further strengthen compliance supervision. In January 2022, the BOD made the resolution to approve the appointment of chairperson and members of the 2nd Samsung Compliance Committee. The Committee directly reviews Samsung SDS' external sponsorship expenditure and internal transaction issues and presents its independent opinion to the BOD. In addition, the Committee makes recommendations to improve the effectiveness of our compliance system based on the review.

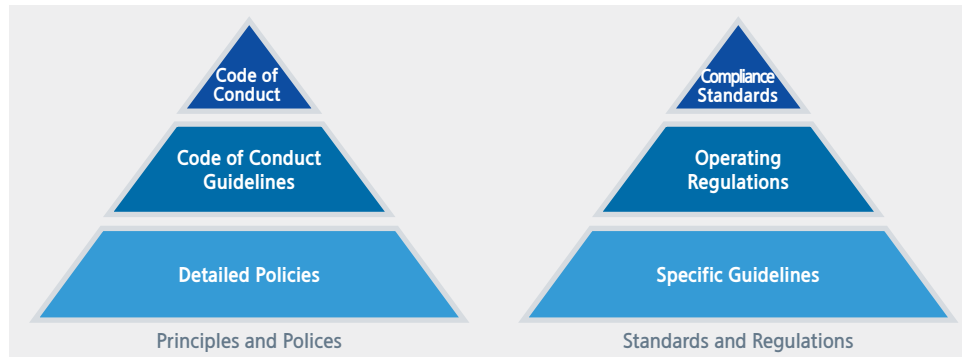
Ethics and Compliance

Compliance Management

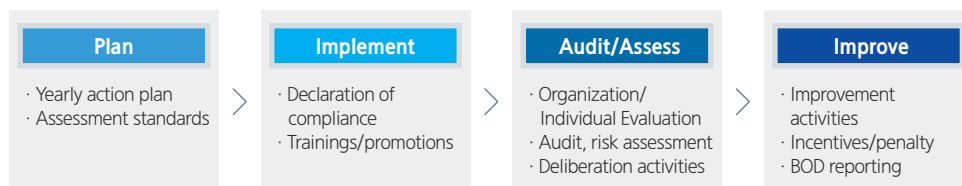
Compliance Management System and Process

In order to comply with laws and ethics and fulfill corporate social responsibilities in corporate activities, Samsung SDS has established and operates the Code of Conduct Guidelines that set our business principles and details. In addition, relevant detailed policies have been established and operated to comply with fair trade and anti-corruption. Samsung SDS establishes and operates the compliance operation regulations that set Samsung SDS' compliance control standards and related details through a resolution of the BOD. Situation-specific manuals are also provided for employees to easily understand major laws and regulations when conducting their work. To form compliance management organizational culture, various compliance related activities from planning to improvement are continuously carried out.

Compliance Management System



Compliance Management Process



Various Deliberative Committees to Ensure Compliance

In accordance with relevant internal and external regulations, Samsung SDS operates deliberative committees comprised of executives and related individuals to assess the practical appropriateness of internal transactions between affiliates and external sponsorships. In 2022, Samsung SDS held a total of 67 meetings.

Category	Contents	Number of Cases Reviewed
Related Party Transactions Committee	Deliberation of reasons for transactions and adequacy of compensation for large-scale internal transactions	8
External Sponsorship Preliminary Review Committee	Reviewing the purpose of external sponsorship funds, and verifying the previous sponsorship purpose and actual usage if the sponsorship is continuous	21
Affiliate Transactions Preliminary Review Committee	Reasons for selecting affiliates, confirmation of the adequacy of consideration, etc.	7
Subcontract Transaction Review Committee	Obligation to issue written documents, use of standard subcontract contracts, determination of unreasonable subcontract prices, confirmation of prior approval for subcontracting, etc.	31

Compliance Council Operating Process

In compliance with the Act on Collection and Use of Donations, external sponsorships are substantively judged, regardless of their form, with transparency ensured through verification by the deliberative body according to the sponsorship amount. Specifically, in May 2022, we tightened control over external sponsorships to ensure that the actual sponsorship funds were used in alignment with the intended purpose of existing sponsorships while conducting preliminary deliberations. Samsung SDS' Anti-Corruption Policy¹⁾ specifies compliance principles prohibiting the improper acceptance of money and goods, external sponsorships, and political contributions. Specifically, the policy sets out the criteria and deliberation process for external sponsorships and mandates that all records related to such sponsorships must be maintained.

1) Samsung SDS has established an Anti-Corruption Policy as a compliance guideline, which is disclosed on Samsung SDS' website. This policy applies to all company employees, including those at domestic and overseas subsidiaries, and all individuals and organizations doing business with Samsung SDS are expected to comply with this policy.

External Sponsorship Funds Review Process

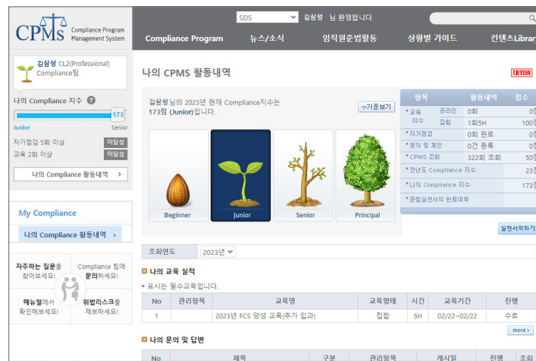


Ethics and Compliance

Compliance Management

CPMS(Compliance Program Management System)

CPMS, a compliance management platform, has been established and operated to support employees' regular compliance activities. For employees to become familiar with compliance matters, CPMS provides information such as compliance management-related operating system, guidelines, latest trends, FAQs, etc. In particular, Samsung SDS operates 'My Compliance Index Program', which indicates the level of compliance activities within the system for all employees to encourage and help them recognize the importance of compliance.



Law Bot

Samsung SDS operates a chatbot to enable employees to access guidelines on laws and processes related to company business from anywhere and at any time. We also actively utilize various compliance activities targeting all employees, such as compliance pledges, training, and providing guidance on major violations.



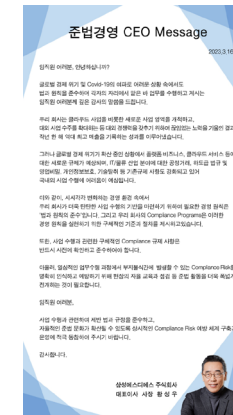
Compliance Violation Reporting Channel

Multiple external and internal reporting channels such as the website, Compliance Management Platform System(CPMS), and hotline are being operated so that compliance violations can be reported on a regular basis.

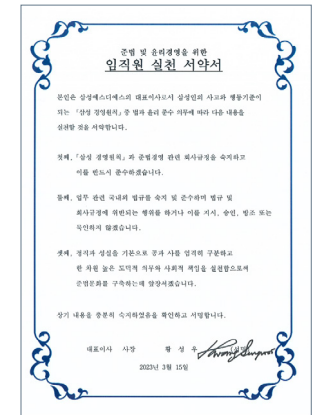
Commitment to Compliance

Every year, the management, including the CEO, expresses their will to abide by compliance. All executives and employees sign the Employee Compliance Pledge, which stipulates faithful compliance to work-related statutes, ethical obligations, and social responsibilities.

CEO's Message



Employee's Compliance Declaration



Compliance Training

Samsung SDS provides training courses for all employees(including part-time) to adhere with regulations and company compliance guidelines. In 2022, a total of 151 training sessions were conducted on an annual basis at the headquarters, with a cumulative total of 30,955 participants completing the training.

Category	Target	No. of Courses	Participants
General	All employees	2(once per half year)	22,805
	Executive Completion Rate(%): 100		
	Employee completion rate(%): 100		
High risk	Employees in charge of compliance	54	5,900
Executives	Executives	10	164
Entry level	New employees	9	267
Others	Self-training by department	76	1,819

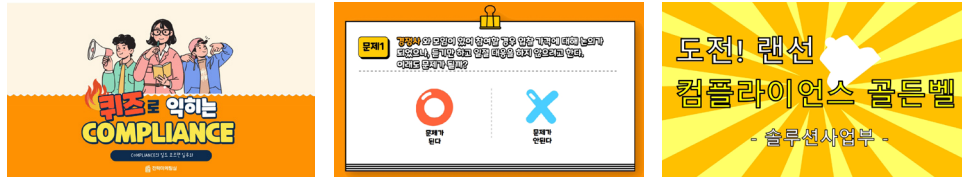
Ethics and Compliance

Compliance Management

Strengthening Field Activities of Field Compliance Specialists (FCS)

Samsung SDS consistently enhances the activities of FCSs, who play an autonomous role in supporting field compliance activities, in order to recognize potential legal violation risks and prevent unsuspected compliance risks. Emphasis is placed on educating the FCS and providing support to ensure that compliance activities are closely integrated with employees' work processes, including training and pre-inspection through the FCS and promoting a culture of compliance.

FCS Field Activities



Compliance Activities for Overseas Subsidiaries

Samsung SDS' overseas IT and logistics subsidiaries employ the same compliance management system as the headquarters, establishing Business Conduct Guidelines and implementing detailed policies on key management items such as fair trade and corruption prevention. Furthermore, we also implements compliance programs such as executive commitment to compliance and compliance training for employees. These programs are supported through G-CPMS, a compliance management platform. Employees can access various information such as laws and regulations, policies, latest trends, and FAQs through the CPMS, and participate in compliance activities through inquiries, responses, self-checks, and reports.

Legal Risk Assessment and Monitoring

Samsung SDS carries out legal risk assessments and inspection activities across all business sites, focusing on key management areas. The purpose of these actions is to identify and enhance compliance-related risks and to undertake improvement activities based on the findings. Through these risk assessment activities, Samsung SDS identifies legal risks in the sectors of anti-corruption and fair trade. These risks are categorized via on-site interviews and risk assessments, after which Samsung SDS establishes and enforces measures to control potential risks. Furthermore, Samsung SDS conducts legal risk inspection activities to discern improvements in risk factors associated with the Subcontracting Act, Mutually Beneficial Cooperation Act. This is done while considering the significant business characteristics of collaboration with suppliers, and promoting remedial actions such as education, promotion, providing guidelines, and process enhancement.

Compliance Evaluation System

Samsung SDS operates a compliance evaluation system, acknowledging the importance of adherence to rules. It encourages preventive activities by reflecting the compliance activities and violations of employees in the evaluation of organizations and executives.

CP Award for Employees

Samsung SDS operates an employee award system, adhering to the Compliance Control Standards and Compliance Operating Regulations. Each year, exemplary employees are selected and rewarded to motivate compliance activities and to disseminate and apply best practices. In 2022, a total of six outstanding employees were chosen and honored.

Information Security

Information Security System

Samsung SDS has an information security system that covers security policy establishment, security check, security system management, workplace security, and security incident response. Samsung SDS' information security system meets global security standards and is proven through various domestic and international certifications. We will continue to make efforts to securely protect our information assets from various forms of internal and external security threats, ensuring business continuity and sustainability. We disclose details related to information security on our website.

Purpose of Information Security

Enhancement of Samsung SDS Competitive Edge by Reducing Security Incidents to Zero

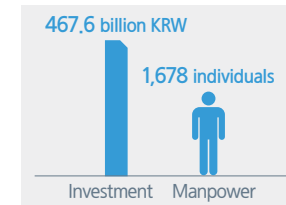
- Development and management of security policy**
Security strategy, security performance assessment, training/promotion
- Security check**
Corporate website, IT infrastructure, workplace, products, personal information
- Security system management**
PC security software, firewall, MDM, account authentication SW
- Physical security**
Device in/out control, access control, protection of the workplace
- Responding to security incidents**
Response to security breaches and malicious code, forensics

Workforce(organization) / Workplace / User Devices / Networks / Servers / Applications

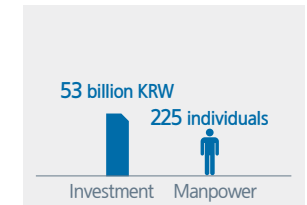
Information Security Status Disclosure

In compliance with the Act on the Promotion of Information Security Industry, Samsung SDS has been disclosing information security measures since 2022, providing users with accurate information on investment status, manpower, certification, and activities related to information technology and information security. Information regarding the disclosure of information security can be found on the information security disclosure portal of the Korea Internet & Security Agency (KISA).

Information Technology Sector



Information Security Sector



Information Security Verification System

Samsung SDS manages a security verification system to systematically verify and improve security vulnerabilities in our products and systems. Furthermore, we operate an internal security portal to assist employees in self-assessment and improvement.

Information Security Verification Process & Details

Category	Details	Responsible Department	Timeline
Integrated Support Meeting	<ul style="list-style-type: none"> · Confirm the targets for security check and provide guidance · Provide guidance referring to security requirements/design checklists · Design check & schedule out the final security verification 	Quality Control/Development/Security Verification teams	When development plans set
Request for Security Verification	<ul style="list-style-type: none"> · Request security verification · Conduct self-check to define security requirements 	Development teams	After integrated support meeting
Security System Check	<ul style="list-style-type: none"> · Check that security conditions meet the criteria on the design checklist 	Development/Security Verification teams	During interim checks
Preliminary Security Design Check	<ul style="list-style-type: none"> · Conduct security checks on the source code and take measures · Conduct security checks on the open source and take measures 	Development teams	Before requesting security verifications
Final Security Verification	<ul style="list-style-type: none"> · Verify the check results of the source code · Verify the check results of the open source · Perform mock attacks(WEB, mobile, others) · Perform infrastructure checks(server, DBMS, network, WEB, WAS) · Perform security checks for personal information · Perform security checks for Cloud 	Security Verification teams	Before deliberating on release
Notification of Results	<ul style="list-style-type: none"> · Notify the results of security verification 	Security Verification teams	When the security verification completes

Information Security

Information Security System

Certifications of Global Information Security System

Samsung SDS obtained ISO 27001 certification, an international standard for the establishment, implementation, maintenance, and management of information security management systems, in 2006 and has maintained it since then. In 2013, we also obtained domestic certification for Information Security Management System (ISMS). In 2018, we achieved international certification for Cloud Security(ISO 27017), followed by Public Cloud Security Assurance Program(CSAP) certification in 2019. In 2020, we obtained certifications for International Cloud Service Information Protection(ISO 27018), Cloud Controls Matrix-based Maturity Level Assessment(CSA STAR), Healthcare Information Security(ISO 27799), and Supply Chain Security Management System(ISO 28000) and has maintained them since then. In 2022, we also obtained certification for Information Security and Personal Information Protection Management System(ISMS-P), further strengthening its information security management system to meet global advanced standards.

ISO 27001	Initially certified in 2006
Infrastructure Safety Assessment	Grand Prize awarded in the VoIP sector in 2012
IDC Safety Assessment	Grand Prize awarded as ICT Infra Center in 2012
Designated as key ICT Infrastructure	ICT Suwon/Gwacheon Data Centers in August 2013
ISMS	Initially certified in December 2013
ISO 27017	Initially certified in December 2018
Public Cloud(IaaS) Security Certification	Initially certified in September 2019
ISO 28000	Initially certified in October 2020
ISMS-P	Initially certified in March 2022



Information Security Management System (ISO 27001)



ISMS Cloud Security (ISO 27017)



Management System for Protection of PII in Public Clouds Acting as PII Processors (ISO 27018)



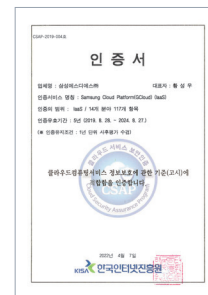
Information Security Management for Personal Health Information (ISO 27799)



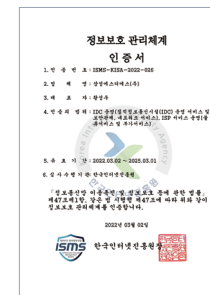
Information Security Management System for Personal Information Protection (ISMS-P)



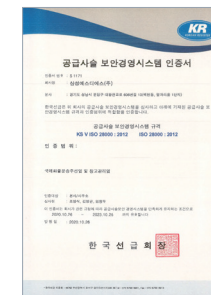
CSA STAR(Security, Trust, Assurance and Risk)



CSAP (Cloud Security Assurance Program)



Specification for Information Security Management System (ISMS)



Specification for Security Management Systems for the Supply Chain (ISO 28000)

Information Security

Information Security Improvement Activities

Samsung SDS is continuously carrying out security innovation activities that incorporate new technologies, such as Blockchain and AI, to respond effectively to evolving security threats. Furthermore, based on the expertise and experience accumulated over the years, Samsung SDS has systematized and utilized the security monitoring method in all areas.

Implementation of a Zero Trust Security System

Samsung SDS is implementing a Zero Trust security system to respond to changes in the corporate work environment, such as the expansion of new businesses using the public cloud and Software as a Service (SaaS), as well as the increase in remote work. We are continuously refining the access control, authentication, and authorization management policies of our internal systems to grant minimal permissions without trust, and by multifactor verification of the access environment of users and systems. Consequently, Samsung SDS is continuously identifying and implementing improvement tasks to respond to changes in the security paradigm, such as developing an integrated authentication system based on multifactor verification, integrated authority management based on Identity Access Management (IAM), and network access control based on Software-Defined Networking (SDN).

Systematic and Continuous Security Checks

Samsung SDS not only systematically manages checklists for each area to manage customer information systems, prevent security incidents, and enhance security reliability, but we also research and discover checklists for new technologies and conducts ongoing security checks at least twice a year.

Category	Area	Detail	No. of items
Management Security	Security Policy	Security regulations and compliance	7
	Security Organization	Organizational structure and job capacity	10
	Awareness	Training for employees and suppliers	5
	Disciplinary Actions	Incident reporting system in case of breach	11
	Physical Security	Device in/out control, access control	11
IT Security	PC	Password settings, Managing updates	13
	Application	Authentication bypass, Encryption	62
	Database	Permission management, Logging settings	16
	Server	Account management, Access control	40
	Network	Network Policy Management, Network Segregation	68
	Cloud	IAM management, COMPUTE security settings	103

Security Innovation Based on New Technologies

Samsung SDS continually identifies and implements improvement tasks to respond to security vulnerabilities and threats identified through security inspection activities and analysis of internal and external security issues.

Major Security Improvement Activities

- Established an information protection pledge system using blockchain technology (2020)
- Established and monitored an untact (contactless) security inspection system (2020)
- Automatic security vulnerability inspected using robotic process automation (RPA) technology (2021)
- Established an automatic detection system for open source intelligence (OSINT) based on big data (2022)

Cloud Security

In response to the rapidly evolving business environment, Samsung SDS has established an optimized cloud work environment based on the Samsung Cloud Platform (SCP) to secure new competitiveness through cloud-based digital transformation. Acting as a cloud service provider (CSP) and cloud management service provider (MSP), we conduct various activities to ensure a robust cloud security system. Samsung SDS prioritizes the introduction of an SCP-based Identity Access Management (IAM) solution, or Single ID, the development of various Software as a Service (SaaS)-type endpoint security solutions, and the automation of malware detection and security measures leveraging artificial intelligence and machine learning. Owing to these efforts, Samsung SDS' cloud security capabilities have gained international recognition, receiving accolades such as the Security Company of the Year from Frost & Sullivan for three consecutive years (2020-2022). In 2022, we were recognized as a major player in the worldwide cloud security services market by IDC, as reported in their IDC MarketScape Cloud Security Services Report.

Information Security

Security Incidents Prevention and Response

Employee Information Security Training

Samsung SDS conducts on/offline training to raise employees' awareness of information security. Different security trainings are provided such as general training for all employees, training for new/experienced employees, training for developers and security staffs, and security certification preparation training to enhance security capabilities. Security training for suppliers is also provided on a regular basis.

Employee Information Security Training

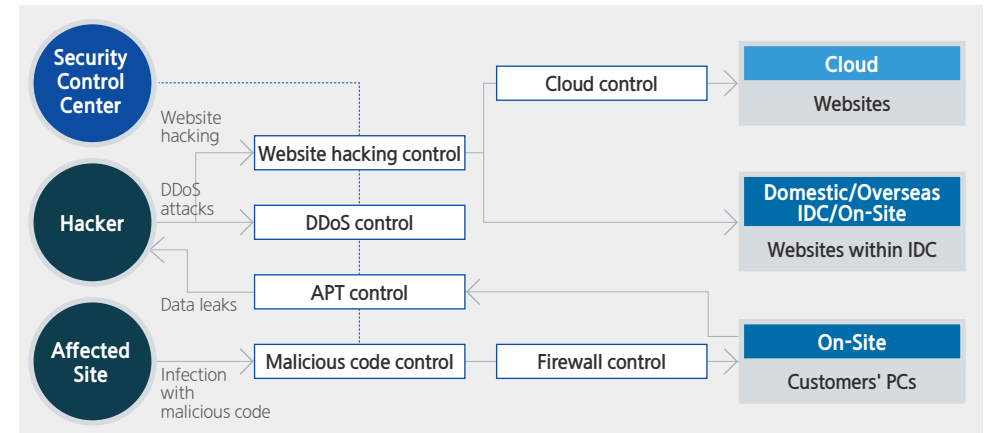
Training	Trainees	Benefits
Information Security training for all employees	All employees	Prevention of security incidents
Information Security training for new/experienced employees	Newly hired employees	Securing basic awareness of information security
Information Security training for suppliers	Suppliers	Raising awareness of information security of suppliers
Project security training	Project personnel	Gaining awareness of project security compliance
Anti-hacking training for web/mobile and systems	Developers and security staff	Securing mock hacking capabilities
Security certification preparation training	Developers and security staff	Securing competence for security certifications

Mock Drills for Malicious Emails

Samsung SDS conducts regular malicious email simulation training for all employees to prevent infection with malicious codes and to raise awareness among employees. In 2022, a total of 6 training sessions were performed, recording an average infection risk rate of 0.5%, and the infection risk rate is decreasing every year.

Security Management System

Samsung SDS has established a 24/7 security control system that monitors and responds to risks that threaten customer IT system security such as external intrusion attempts and data leaks.



Information Security

Category	Unit	2020	2021	2022
IT security breaches	Case	0	0	0
Total number of data leak incidents	Case	0	0	0
Total number of customers affected by data leaks	Person	0	0	0
Total amount of fines/penalties paid	million KRW	0	0	0

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ESG Data

Financial/Governance

Financial Performance

Category	Unit	2020	2021	2022	
Consolidated	Sales	million KRW	11,017,432	13,630,002	17,234,750
	Operating profit	million KRW	871,618	808,098	916,074
	Net income	million KRW	452,909	633,381	1,130,013
	Total liabilities	million KRW	2,295,811	3,073,731	3,485,455
	Total assets	million KRW	9,154,919	10,517,432	11,952,425
Non-consolidated	Sales	million KRW	4,549,427	4,985,713	5,174,554
	Operating profit	million KRW	582,117	406,734	296,153
	Net income	million KRW	266,592	327,599	530,146
	Total liabilities	million KRW	993,400	1,236,281	1,614,218
	Total assets	million KRW	6,510,161	6,850,930	7,628,899
Credit rating	Korea rating		AA+	A1	A1
	Moody's		A1	A1	A1

Eco-friendly Sales(Green Revenue)

Category	Unit	2022	
Total	Revenue	billion KRW	17,234.8
	CAPEX	billion KRW	671.0
	OPEX	billion KRW	16,318.7
Cloud ¹⁾	Revenue	billion KRW	1,084.3
	CAPEX	billion KRW	495.3
	OPEX	billion KRW	908.5
Nexplant FMS ²⁾	Revenue	billion KRW	108.3
	CAPEX	billion KRW	0
	OPEX	billion KRW	103.1
Meeting (Video conferencing)	Revenue	billion KRW	78.4
	CAPEX	billion KRW	0
	OPEX	billion KRW	49.8

1) Cloud includes MSP, CSP, and SaaS. (Meeting is included in SaaS, but excluded from Cloud to avoid duplication and calculated separately)

2) Nexplant FMS (Facility Management System): A solution that optimizes building operations through efficient integrated management of various facilities in a building and reduces energy and operating costs

Tax Obligation

Category	Unit	2020	2021	2022
Earnings before tax	million KRW	886,118	857,542	1,132,080
Reported taxes	million KRW	433,209	224,160	2,068
Tax adjustment	million KRW	-	-	-163,937
Effective tax rate	%	48.89	26.14	0.18
Cash taxes paid	KRW	213,271	188,515	271,934
Cash tax rate	%	24	22	24

Share and Dividend

Category	Unit	2020	2021	2022	
Stock	Issued shares	Share	77,377,800	77,377,800	77,377,800
	No. of shares with voting rights	Share	77,350,186	77,350,186	77,350,186
	Voting rights per share	ea	1	1	1
Dividend	Total dividends	million KRW	185,640	185,640	247,521
	Dividend payout ratio	%	41.9	30.4	22.5
	Stock dividend	KRW	2,400	2,400	3,200

Economic Value Distribution

Category	Unit	2020	2021	2022	
Employee	Wages	million KRW	1,937,121	2,245,856	2,447,405
	Welfare and benefit	million KRW	398,738	413,123	461,296
Suppliers	Purchase	million KRW	1,534,602	1,710,044	1,889,335
Shareholders	Dividend	million KRW	185,640	185,640	247,521
	Interest	million KRW	16,360	17,649	28,811
Government	Corporate tax	million KRW	433,209	224,160	2,067
Local community	Donation	million KRW	5,160	2,701	2,837

ESG Data

Financial/Governance

R&D Investment

Category	Unit	2020	2021	2022
R&D Expenditure	million KRW	131,383	159,625	198,505
Sales (IT services)	million KRW	5,314,450	5,637,197	5,968,194
R&D expenditure against sales	%	2.5	2.8	3.9
Patent registrations(cumulative)	Case	1,717	1,846	2,001

Contributions & Other Spending

Category	Unit	2020	2021	2022
Lobbying, interest representation or similar	million KRW	0	0	0
Local, regional or national political campaigns/organizations/candidates ¹⁾	million KRW	0	0	0
Trade associations or tax-exempt groups (e.g. think tanks) ²⁾	million KRW	319	352	484
Other(e.g. spending related to ballot measures or referendums)	million KRW	0	0	0
Total contributions and other spending	million KRW	319	352	484
Data coverage	%	100	100	100

1) As of Political Funds Act, Samsung SDS also does not provide funds for political contributions.(Every foreigner, corporation or organization both at home and abroad shall be prohibited from contributing any political funds. - Political Funds Act, Article 31)

2) Registration fees for individual industry associations are included.

※ Samsung SDS continuously reviews and manages our global initiatives and association activities in the context of climate change. All associations we join are monitored for violations of the Paris Agreement, and this applies to all of our operations. As of December 2022, we are not a member of any associations that are in material breach of the Paris Agreement.

CEO Remuneration

Category	Unit	2020	2021	2022
Total CEO remuneration	million KRW	5,731 ¹⁾	1,393	1,338

1) Include retirement income for former CEO

Board Remuneration

Category	No. of People ¹⁾	Total Remuneration (million KRW)	Average per-Capita Remuneration (million KRW)
Registered directors	3	3,854	1,285
Independent directors	1	89	89
Audit committee members	3	257	86
Total	7	4,200	600

1) List includes directors who resigned during the current term(2 persons)

Board Resolution

Category	Unit	2020	2021	2022
No. of the BOD meetings	Unit	13	11	8
No. of agenda items	Unit	29	28	21
Average board meeting attendance	%	98.1	97.7	96.4
Minimum of attendance for all BOD members required	%	85	85	85

Board shareholding status

(As of December 2022)

Category	Unit	No. of Shares
Sungwoo Hwang(executive director)	Share	1,000
Jung Tae Ahn(executive director)	Share	1,000
Hyung Joon Koo(executive director)	Share	1,000
Hyun-Han Shin(independent director)	Share	500

ESG Data

Financial/Governance

Violations of Code of Conduct & Violations of Laws and Regulations

Category	Unit	2020	2021	2022	
Violations of code of conduct	Total number of reports ¹⁾	Case	22	18	20
	Number of investigations in progress among reported cases	Case	0	0	0
	Number of completed investigations among reported cases	Case	22	18	20
	Completion rate of verified cases	%	100	100	100
Violation of laws and regulations	Total amount of fine	million KRW	0	0	0
	Number of lawsuits filed	Case	23	39	31 ²⁾
	Number of cases related to corruption, anti-competitive practices, and security issues	Case	0	0	0
	Number of non-monetary sanctions	Case	1	0	0
	Total number of substantiated corruption & bribery cases	Case	0	0	0

1) Based on Code of Conduct violations (corruption) reported through the anti-corruption channel Excludes reports transferred to other companies due to lack of relevance to Samsung SDS

2) All SDSLA labor lawsuits.

Whistleblowing Channel Report

Category	Unit	2020	2021	2022
Fraud	%	32	29	30
Complaints	%	32	18	26
Other	%	36	53	44

Compliance Training

Training	Target	No. of courses	Participants
General	All employees	2(once per half year)	22,805
	Executive Completion Rate(%): 100		
	Employee completion rate(%): 100		
High risk	Employees in charge of compliance	54	5,900
Executives	Executives	10	164
Entry level	New employees	9	267
Others	Self-training by department	76	1,819

Privacy Management Status

Category	Unit	2020	2021	2022
Number of data breaches/incidents	Case	0	0	0
Number of complaints received via external agencies	Case	0	0	0
Number of complaints received via regulatory bodies	Case	0	0	0
Number of requests of user data and information from the government and law enforcement agencies	Time	47	45	47
Rate of submission of data/information requested	%	100	100	100
Number of cases of user information usages for secondary purposes	Unit	0	0	0

Information Security

Category	Unit	2020	2021	2022
IT security breaches	Case	0	0	0
Total number of data leak incidents	Case	0	0	0
Total number of customers affected by data leaks	Person	0	0	0
Total amount of fines/penalties paid	million KRW	0	0	0

ESG Data

Social

Employee Status

Category	Unit	2020	2021	2022	
No. of employees	Total	Person	23,740	24,779	26,236
	Male	Person	16,994	17,534	18,201
	Female	Person	6,746	7,245	8,035
Domestic	Total	Person	16,277	15,836	15,392
	Male	Person	12,139	11,743	11,272
	Female	Person	4,138	4,093	4,120
Overseas	Total	Person	7,463	8,943	10,844
	Male	Person	4,855	5,791	6,929
	Female	Person	2,608	3,152	3,915
FTE	Total	Person	22,908	23,532	25,040
	Ratio	%	96.5	95.0	95.4
Non-FTE	Total	Person	832	1,247	1,196
	Ratio	%	3.5	5.0	4.6
By age	Under 30	Person	2,927	2,392	3,516
		%	12.3	9.7	13.4
	Between 30-50	Person	18,736	19,586	19,596
		%	78.9	79.0	74.7
	Over 50	Person	2,077	2,801	3,124
		%	8.7	11.3	11.9
Junior manager ¹⁾	Total	Person	8,144	7,802	8,463
	Male	Person	4,944	4,674	5,064
	Female	Person	3,200	3,128	3,399
Manager	Total	Person	13,520	14,261	14,817
	Male	Person	10,690	11,061	11,229
	Female	Person	2,830	3,200	3,588
Executives	Total	Person	153	152	149
	Male	Person	136	134	137
	Female	Person	17	18	12

1) As per the internal grading system, junior manager corresponds to CL2, while manager is classified as CL3 and CL4.

Workforce Breakdown by Region

Category	Unit	2022	
Korea	No. of employees	Person	15,392
	Ratio of all employees	%	58.7
	No. of all managers ¹⁾	Person	14,920
	Ratio of all managers	%	64.1
China	No. of employees	Person	1,950
	Ratio of all employees	%	7.4
	No. of all managers	Person	1,917
	Ratio of all managers	%	8.2
Middle East/Africa/ Southwest Asia	No. of employees	Person	1,407
	Ratio of all employees	%	5.4
	No. of all managers	Person	1,369
	Ratio of all managers	%	5.9
Southeast Asia	No. of employees	Person	2,977
	Ratio of all employees	%	11.3
	No. of all managers	Person	2,626
	Ratio of all managers	%	11.3
Latin America	No. of employees	Person	2,376
	Ratio of all employees	%	9.1
	No. of all managers	Person	953
	Ratio of all managers	%	4.1
North America	No. of employees	Person	879
	Ratio of all employees	%	3.4
	No. of all managers	Person	697
	Ratio of all managers	%	3.0
Europe/CIS	No. of employees	Person	1,255
	Ratio of all employees	%	4.8
	No. of all managers	Person	798
	Ratio of all managers	%	3.4

1) All managers: the sum of junior managers(CL2) and managers(CL3, CL4)

ESG Data

Social

Global Hiring Status

Category	Unit	2021	2022
Total no. of new employees hires	Person	3,675	4,949
Percentage of open positions filled by internal candidates(internal hires)	%	-	17

Recruitment of the Socially Disadvantaged

Category	Unit	2020	2021	2022 ¹⁾
People with disabilities	Person	413	407	492
	%	1.77	1.70	1.88
National veterans	Person	185	180	193

1) Include subsidiaries and overseas subsidiaries data starting in 2022

Female Employee Status

Category	Unit	2020	2021	2022
Ratio of female employees	%	28.4	29.2	30.6
Ratio of female junior managers ¹⁾	%	39.3	40.1	40.2
Ratio of female managers	%	20.9	22.4	24.2
Ratio of female executives	%	11.1	11.8	8.1
Ratio of female employees in STEM	%	22.7	22.5	22.8
Ratio of female managers in charge of sales/revenue	%	21.2	20.9	24.6

1) As per the internal grading system, junior manager corresponds to CL2, while manager is classified as CL3 and CL4.

Hiring Cost

Category	Unit	2022
Hiring cost	million KRW	6,995.8
Average hiring cost(hiring cost/FTE)	million KRW	1.8

Performance Appraisal

Category	Unit	2020	2021	2022
Ratio of performance appraisal	%	100	100	100
No. of employees participated	Person	23,740	24,779	26,236

Average of Executive and Employee Compensation for HQ

Category	Unit	2020	2021	2022	
Executive	million KRW	388	409	402	
Employee	Male	million KRW	104	125	137
	Female	million KRW	83	100	113

Gender Pay Gap

Category	Unit	2022	
Mean	Gender Pay Gap	%	100
	Bonus gap	%	100
Average salary(HQ) ¹⁾	Total average	million KRW	131
	Male	million KRW	137
	Female	million KRW	113
Average tenure(HQ)	Total average	Year	15.6
	Male	Year	16.4
	Female	Year	13.1
Average salary(global ²⁾)	Total average	million KRW	85.2
	Male	million KRW	93.3
	Female	million KRW	66.1

1) Samsung SDS treat employees equally regardless of their genders. The difference in average pay is due to average tenure differences. Therefore, equal remuneration are given.

2) Global: headquarters, overseas subsidiaries, and domestic subsidiaries.

ESG Data

Social

Employee Training Status

Category	Unit	2020	2021	2022 ¹⁾	
Average training hours per employee	Hour	55.4	63.6	75.7	
Average amount spent per employee	million KRW	2.3	1.6	1.3	
Total number of employees participated in training	Person	12,612	12,644	23,413	
	Total	Hour	699,557	804,034	1,773,458
Training hours	Male	Hour	500,796	584,853	1,242,568
	Female	Hour	198,761	219,181	530,890

1) Include subsidiaries and overseas subsidiaries data starting in 2022

Employee Training

Category	Unit	2020	2021	2022	
General	Training hours per person	Hour	52	58	75.3
	Participants	Person	12,621	12,644	22,282
Ethics	Training hours per person	Hour	1	1	0.9
	Participants	Person	12,317	11,919	19,970
Compliance	Training hours per person	Hour	1	2.4	1.7
	Participants	Person	12,274	12,107	20,843
Information security	Training hours per person	Hour	1	1	1.1
	Participants	Person	11,796	11,879	19,092
Human rights ¹⁾	Training hours per person	Hour	3	3	3
	Participants	Person	12,319	12,069	18,437
Sexual harassment prevention	Training hours per person	Hour	1	1	1.1
	Participants	Person	12,411	12,069	18,945

1) Human rights training: sexual harassment prevention training, disability awareness training, workplace bullying prevention, and mental health training

Growth of Experts

Category	Unit	2020	2021	2022
Advanced software experts	Person	2,205	3,975	4,194
Professionals with capabilities in 5 core technologies	Person	1,053	1,601	9,536
Data Specialist	Person	441	506	672

Participation Rate in Employee Development Programs

Category	Unit	2022
Cultivating cloud experts	%	37.2
Software qualification program	%	21.0

Human Capital Return on Investment

Category	Unit	2020	2021	2022
a) Total revenue	million KRW	11,017,432	13,630,002	17,234,749
b) Total operating expense	million KRW	818,130	875,066	984,482
c) Total employee-related expenses	million KRW	2,408,872	2,736,390	2,993,327
HC ROI = (a-(b-c))/c	-	5.23	5.66	6.43

ESG Data

Social

Usage of Parental Leave

Category	Unit	2020	2021	2022	
No. of employees on parental leave	Subtotal	Person	355	310	315
	Male	Person	106	93	106
	Female	Person	249	217	209
No. of employees returning from parental leave	Subtotal	Person	294	304	289
	Male	Person	76	83	83
	Female	Person	218	221	206
Parental leave return rate ¹⁾	Subtotal	%	82.8	98.1	88.4
	Male	%	71.7	89.3	78.3
	Female	%	87.6	101.8	98.6
No. of employees who stayed on the job for more than 12 months after returning to work	Subtotal	Person	286	290	276
	Male	Person	74	73	77
	Female	Person	212	217	199
Paid parental leave for the primary caregiver	Week	65	65	65	
Paid parental leave for non-primary caregiver	Week	55	55	55	

1) Parental leave return rate = number of returning employees/total users of the parental leave

Employee Participation Rate in Labor Management Council

Category	Unit	2020	2021	2022
Employee participation rate	%	100	100	100

Samsung Culture Index(SCI)

Category	Unit	2019	2020	2021	2022
Participation rate in SCI	%	96.9	98.1	89.9	92.1

Employee Turnover Rate

Category	Unit	2019	2020	2021	2022
Total turnover rate(HQ)	%	2.2	1.8	3.8	5.1
Ratio of turnover	%	-	-	-	100.0
Male	%	-	-	-	82.2
Female	%	-	-	-	17.7
Under 30	%	-	-	-	5.0
Between 30-50	%	-	-	-	69.1
Over 50	%	-	-	-	25.8
Voluntary turnover rate(HQ)	%	2.2	1.8	3.6	4.9
Total turnover rate(global ¹⁾)	%	-	-	-	9.0

1) Global: headquarters, overseas subsidiaries, and domestic subsidiaries.

Retirement Pension Funds

Category	2020		2021		2022 ¹⁾	
	Amount (million KRW)	No. of employees covered (Person)	Amount (million KRW)	No. of employees covered (Person)	Amount (million KRW)	No. of employees covered (Person)
Defined benefit plan-DB(domestic)	1,251,858	11,446	1,513,880	11,190	1,965,936	13,876
Defined benefit plan-DB(overseas)	-	-	-	-	73.087	3,505
Defined contribution plan-DC(domestic)	56,885	1,189	59,844	1,136	74,470	1,289
Defined contribution plan-DC(overseas)	-	-	-	-	51,771.3	2,174
IRP(domestic)	-	-	-	-	0	0
IRP(overseas)	-	-	-	-	1,667.6	108

1) Include subsidiaries and overseas subsidiaries data starting in 2022

ESG Data

Social

Employee Social Contribution

Category	Unit	2020	2021	2022
Participants	Person	3,221	1,265	1,252
Service hours per person	Hour	6.6	6.8	8.2

Types of Philanthropy

Category	Unit	2020	2021	2022
Cash	million KRW	6,161	3,629	4,163
Time: employee volunteering during paid working hours	Hour	21,345	8,578	10,274
In-kind giving: product or services donations, projects partnerships or similar	million KRW	6	33	16
Expenses ¹⁾	million KRW	31	1,800	1,603

1) From 2023, expenses will be calculated as a separate social contribution expense in addition to donations, so previous years' data will be restated on the same basis.

Category	Unit	2022
Percentage of total costs	Charitable Donation	37.1
	Community Investment	54.9
	Commercial Initiatives	8.0
	Total	100

Volunteers and Beneficiaries

Category	Unit	2020	2021	2022
Total volunteers	Person	10,956	9,858	10,347
Total beneficiaries	Person	93,411	253,006	357,811

Safety and Health

Category	Unit	2020	2021	2022 ¹⁾
Industrial accident rate(HQ)	%	1.60	0.00	0.00
Industrial accident rate(global ²⁾)	%	-	-	0.00
No. of employees	Person	12,495	12,400	26,236
No. of people with industrial accident	Person	2	0	0
Accident intensity rate	%	1.4	0	0
Total working hour(average per week)	Hour	26,389,440	26,188,800	55,410,432
Lost-time	Day	375	0	0

1) Include subsidiaries and overseas subsidiaries data starting in 2022

2) Global: headquarters, overseas subsidiaries, and domestic subsidiaries.

Category	Unit	2020	2021	2022 ¹⁾
Occupational safety	OIFR(Occupational Illness Frequency Rate)	0.00	0.00	0.00
	No. of occupational injuries and illness	0	0	0
LTIFR	Employee_LTIFR	7.58	0.00	0.00
	Total working hours ²⁾	26,389,440	26,188,800	55,410,432
	Lost-time	308	0	0
No. of occupational injuries and illness	Case	-	0	0
Suppliers_LTIFR	Suppliers_LTIFR	-	0.12	0.27
	Total working hours	-	8,038,272	14,838,868
	Lost-time	-	576	2,136
No. of occupational injuries and illness from suppliers	Case	-	0	0

1) Include subsidiaries and overseas subsidiaries data starting in 2022

2) working hours: total employees x 8 hours a day x 22 days a month x 12 month a year

ESG Data

Social

Supplier Status

Category	Unit	2020	2021	2022
No. of suppliers	Unit	279	279	220 ¹⁾
Total purchasing amount	million KRW	367,632	413,570	405,925

1) No. of suppliers reduced due to sale of Home IoT business in 2022.

Shared Growth Support Scale

Category	Unit	2020	2021	2022	
Education support	No. of training programs	Unit	65	63	131
	No. of trainees	Person	2,128	2,195	3,200
Technical support	Brity RPA support cases	Case	-	4	7
	No. of support cases for development methodology	Case	231	231	231
	No. of technical data escrow	Case	22	19	13
HR recruitment support	No. of employees hired by suppliers	Person	69	101	125

Win-win Management Fund Status

Category	Unit	2020	2021	2022
Amount Raised	million KRW	60,000	60,000	60,000
Amount Executed	million KRW	45,404	40,843	51,093

IT Failure Rate¹⁾

Category	Unit	2020	2021	2022
Target	ppm	0.060	0.060	0.024
Performance	ppm	0.053	0.024	0.004

1) Failure Rate: Accumulated downtime (minutes) ÷ equipment operating time (minutes)

Customer Satisfaction Status

Category	Unit	2020	2021	2022	Target
satisfaction score	Score	93.3	92.2	94	90
Data coverage	%	100	100	100	100

VoC Processing Status

Category	Unit	2020	2021	2022
VoC received	Case	851,751	814,504	754,540
Handling rate	%	100	100	100

Quality Management & Audits of Distribution Networks

Category	Unit	2022	
Quality Management System	Ratio of receiving regularly revised customer service quality standard documents	%	100
	Ratio of participating regular customer service quality management workshops by region, country, and customer	%	100
	Ratio of participating official training programs for distributors and customer service quality management	%	100
Audits	Regular internal audits of product/service distribution network	%	100
	Regular external audits, based on company-defined Quality Management System	%	100
	Regular external audits, based on ISO 9000 series or other generally accepted Quality Management Systems	%	100

ESG Data

Environment

GHG Emissions(Scope 1, 2)

Category	Unit	2019	2020	2021	2022
Direct GHG emissions(Scope 1)	tCO ₂ eq	4,300	3,488	3,354	4,539
Indirect GHG emissions(Scope 2)	tCO ₂ eq	92,778	91,795	98,528	118,308
GHG total emissions(Scope 2, market-based)	tCO ₂ eq	92,778	91,795	98,528	118,308
Ratio GHG emissions(Scope 2, market-based) of GHG total emissions	%	95.6	96.3	96.7	96.3
GHG total emissions(Scope 2, location-based)	tCO ₂ eq	92,778	91,795	98,528	118,308
Ratio GHG emissions(Scope 2, location-based) of GHG total emissions	%	95.6	96.3	96.7	96.3
GHG total emissions(scope 1+scope 2)	tCO ₂ eq	97,073	95,277	101,882	122,842
GHG emissions intensity	tCO ₂ eq/100 million KRW	0.91	0.86	0.75	0.71

GHG Emissions(Scope 3)

Category ¹⁾	Unit	2020	2021	2022
1. Purchased goods and services	tCO ₂ eq	-	38,755	22,647
2. Capital goods	tCO ₂ eq	-	77,435	84,216
3. Energy not included in Scope 1, 2	tCO ₂ eq	-	-	7,718
4. Upstream transportation ²⁾	tCO ₂ eq	-	3,214,027	2,996,426
Air	tCO ₂ eq	-	1,617,183	1,388,921
Truck	tCO ₂ eq	-	982,347	1,023,681
Sea	tCO ₂ eq	-	607,285	575,023
Train	tCO ₂ eq	-	7,212	8,055
5. Waste generated in operations	tCO ₂ eq	-	339	290
6. Business travel	tCO ₂ eq	-	2,177	8,646
7. Employee commuting	tCO ₂ eq	-	6,980	5,222
8. Upstream leased assets	tCO ₂ eq	-	69,739	14,773
15. Investments	tCO ₂ eq	-	-	14,581
Total	tCO ₂ eq	5,890,563	3,409,452	3,154,520

1) Categories 9 to 14 of Scope 3 have been excluded from the calculations as they are not related to Samsung SDS' business operations.
2) Upstream transportation in 2020 was calculated from a conservative perspective for the entire global transportation scope by referring to the notification of the Ministry of Environment. From 2021 onwards, upstream transport logistics calculations have been refined according to the standards of the Global Logistics Emission Council(GLEC).

Energy Consumption by Business Site¹⁾

Category	Unit	2019	2020	2021	2022 ²⁾
Headquarters(include campus)	TJ	250	229	248	288
Sangam Data Center	TJ	495	496	548	615
Suwon Data Center	TJ	800	862	921	1,052
Gumi Data Center	TJ	168	173	176	170
Chuncheon Data Center	TJ	54	183	224	284
Others	TJ	221	11	-	113
Total energy consumption	TJ	1,988	1,954	2,117	2,522
Energy intensity	TJ/100 million KRW	-	-	-	0.015
Total energy cost	million KRW	23,080	26,819	28,471	38,414

1) Energy consumption includes fuel, electricity, heat, cooling, and steam usage in our organization
2) Include subsidiaries and overseas subsidiaries data starting in 2022

Data Center Energy Consumption

Category	Unit	2019	2020	2021	2022	Target
Non-renewable energy consumption	MWh	178,946	179,821	192,936	224,414	-
Renewable energy consumption	MWh	184	239	245	306	300
Total energy consumption	MWh	179,130	180,059	193,181	224,720	-
Renewable energy production	MWh	184	239	245	306	-
Renewable energy use ratio at data centers	%	0.10	0.13	0.13	0.14	-

Physical Climate Risk

Category	Unit	2022
Percentage of revenue from existing operations that includes risk assessment and planning	%	100
Percentage of revenue from new operations that includes risk assessment and planning	%	100

ESG Data

Environment

Green Investments for Data Centers

Category	Item	Unit	2022
Suwon Data Center	Installation of solar power generation facilities	million KRW	344
Sangam Data Center	Installation of inverters	million KRW	200

Green Investments for Dongtan Data Center

Category	Item	Unit	2021 ~ 2022
Construction	Containment	billion KRW	0.93
	High efficiency UPS	billion KRW	4.02
Electricity	High efficiency transformer	billion KRW	2.43
	Device for power factor correction	billion KRW	0.20
	LED lights	billion KRW	0.69
	Establishment of solar energy facilities	billion KRW	0.94
Machinery	High-temperature and cold-water refrigerator (large temperature difference)	billion KRW	5.10
	Water-side economizer	billion KRW	5.10
	Inverter pump	billion KRW	1.00
	Fan wall (variable-air-volume fan)	billion KRW	16.76
	Temperature & humidity chamber (variable-air-volume fan)	billion KRW	2.03
	Total heat exchanger	billion KRW	0.01
Total		billion KRW	39.21

Data Center Certifications and PUE

Site	Certification	Emissions(tCO ₂ eq)	PUE
Suwon Data Center	Uptime Institute Tier 3 (first in South Korea)	50,431	1.56
Sangam Data Center	Acquired Uptime Institute's M&O Stamp (first in South Korea)	29,436	1.37
Chuncheon Data Center	Green Data Center Certification (Platinum, highest ever)	13,621	1.27

Data Center Efficiency

	Unit	2019	2020	2021	2022	Target
Average PUE	-	1.57	1.54	1.50	1.47	1.48
Data Coverage	%	100	100	100	100	-

Reduction of GHG Emissions by Business Site

Category	Reduction Activities	Unit	2022
Suwon Data Center	Control of the number of thermo-hygrostats through temperature-humidity sensors	tCO ₂ eq	154
	Extension of the operation period of spray pumps in cooling towers	tCO ₂ eq	134
	Partial shutdown of air-cooled thermo-hygrostats	tCO ₂ eq	93
	Efficient operation of server room humidifiers	tCO ₂ eq	25
	Replacement of highly efficient PAC in the subroom	tCO ₂ eq	6
	Installation of solar power generation facilities	tCO ₂ eq	19
	Subtotal	tCO ₂ eq	431
Sangam Data Center	Adjustment of the cooling set temperature	tCO ₂ eq	19
	Control of the No. of operating cooling towers	tCO ₂ eq	11
	Installation of pump inverters	tCO ₂ eq	306
	Subtotal	tCO ₂ eq	336
Chuncheon Data Center	Expansion of direct free cooling introduction period	tCO ₂ eq	19
	Installation of outdoor chiller awning screens	tCO ₂ eq	17
	Outdoor chiller condenser coil spraying	tCO ₂ eq	7
	Subtotal	tCO ₂ eq	43
Gumi Data Center	Electric boiler	tCO ₂ eq	45
	Subtotal	tCO ₂ eq	45
Total		tCO ₂ eq	855

ESG Data

Environment

Environment Management System Verification

Category	Unit	2022
Verification coverage in accordance with international standards	%	100
Third-party verification coverage received from external specialized organizations	%	0
Verification coverage by internal experts dispatched from headquarters	%	0
Total	%	100

Water Consumption

Category	Unit	2019	2020	2021	2022	
Water-intake	Waterworks	Ton	254,365	326,406	323,461	401,701
	Underground water	Ton	161,964	162,868	167,784	164,997
Discharge	Underground water	Ton	161,964	162,868	167,784	164,997
Total water consumption(HQ ¹⁾)	Ton	254,365	326,406	323,461	401,701	
Total water consumption(global ²⁾)	Ton	-	-	-	3,073,927	

1) Starting 2022, additional sites have been included for environmental disclosure beyond the initial six, encompassing Dongtan Data Center, Pangyo IT Campus, Pangyo Logistics Campus, Seoul R&D Campus, and Giheung Terra Tower

2) Global: Headquarters, overseas subsidiaries, and domestic subsidiaries

Water Consumption by Business site

Category	Unit	2022
Suwon Data Center	Ton	163,495
Sangam Data Center	Ton	44,461
Gumi Data Center	Ton	20,542
Chuncheon Data Center	Ton	15,329
Dongtan Data Center	Ton	4,646
East Campus	Ton	57,329
West Campus	Ton	49,731
Others	Ton	46,168
Total consumption	Ton	401,701

Waste Generation

Category	Unit	2019	2020	2021	2022 ¹⁾		Target
					HQ	Global ²⁾	
Total waste generation	Ton	1,300	1,575	953	496.7	2,183.8	2,200
Total waste recycled/reused	Ton	0	0	361	113.4	897.2	900
Total waste disposed	Ton	1,300	1,575	592	383.3	1,286.6	1,300
Landfilled waste	Ton	1,295	1,568	576	371.2	1019.4	-
Incinerated waste with energy recovery	Ton	0	0	0	0.7	3.8	-
Incinerated waste without energy recovery	Ton	0	0	15	11.4	11.4	-
Waste otherwise disposed	Ton	5	7	1	0	252	-
Waste with unknown disposal method	Ton	0	0	0	0	0	-

1) Starting from 2022, data from subsidiaries and overseas subsidiaries have been included. Since they do not fall under the category of business waste emitters based on emission criteria, the recycling/disposal information is not accurately known. Therefore, a conservative estimation has been made.

2) Global: headquarters, overseas subsidiaries, and domestic subsidiaries.

Waste Disposed for HQ

Category	Unit	2022	
General waste	Landfilled waste	Ton	371.2
	Incinerated waste	Ton	11.4
	Recycled waste	Ton	95.3
Designated waste	Incinerated waste	Ton	0.7
	Recycled waste	Ton	18.2
Total	Ton	496.7	

ESG Policy Book

Samsung SDS has instituted and rigorously enforced principal ESG policies across environmental, social, and governance areas, dedicating ourselves to the sustainable growth of the company.



Code of Conduct Guidelines



Anti-Corruption Policy



Fair Competition Policy



Tax Strategy



Supplier Code of Conduct



Supplier Code of Conduct Guide



Human Rights Policy



AI Ethics Principles



Open Source Policy



Safety and Health Management Policy



Environment and Energy Management Policy

Management Approach

Material Issues	Business Case	Business Strategy	Business Impact/ Type of Impact	Target/Metric	References
GHG Emissions Management and Reduction	In the wake of the Paris Agreement, the reduction of GHG emissions and the achievement of carbon neutrality have become paramount challenges for all nations. For businesses, these issues are intimately tied to the sustainability of their operations.	<ul style="list-style-type: none"> Establishment of a GHG emission management system and long-term reduction roadmap Active participation in government policies related to climate change Application of technologies for GHG emission reduction and energy efficiency improvement Promotion of low-carbon product and service development 	Risk/Negative	<p>Target: Minimizing GHG emissions</p> <p>Metric</p> <ul style="list-style-type: none"> - Output metric: Scope 1,2,3 GHG Emissions - Impact metric: Revenue generation through solutions contributing to carbon reduction 	38
Employee Health and Safety Management	Events such as epidemics and natural disasters can significantly impact business operations. It is vital for organizations to create an environment that ensures the safety of their employees and the smooth execution of their tasks. Sustained efforts are necessary to safeguard employees and establish a management system for accident prevention and response. Moreover, the ability to respond swiftly and effectively in the face of disaster signifies the caliber of a company's risk monitoring and response systems. Through these measures, companies can bolster their competitiveness in disaster situations and maintain stable operations.	<ul style="list-style-type: none"> Establishment and operation of safety and health management policies and system Acquisition of safety and health management system certification (expanded application overseas) Organization of dedicated safety and health teams Establishment of key safety and health goals, detailed tasks, and evaluation system 	Revenue/Positive	<p>Target: Zero severe industrial accidents/civil disasters</p> <p>Metric</p> <ul style="list-style-type: none"> - Output metric: Industrial accident rate - Impact metric: Business losses due to legal sanctions 	71
Workforce Diversity and Inclusion	Diversity and inclusion involve providing fair access to opportunities and resources for all individuals, irrespective of their race, gender, age, religion, geographical location, or cultural background while respecting individual differences. Embracing diversity and inclusion enhances a company's creativity and innovation by encouraging problem-solving from a variety of perspectives. It also enables improved collaboration and cooperation through open communication.	<ul style="list-style-type: none"> Establishment of human rights management system based on global guidelines Establishment of a human rights policy that complies with international organizations or regulatory standards Identification and management/improvement of human rights risks across the company Operation of a human rights-related grievance and redress system, public disclosure of qualitative/quantitative achievements 	Revenue/Positive	<p>Target: Exceeding the mandatory employment rate for people with disabilities</p> <p>Metric</p> <ul style="list-style-type: none"> - Output metric: Employment status of socially disadvantaged individuals and female employees - Impact metric: Brand value assessment due to hiring socially disadvantaged and female employees 	56
Supply Chain ESG Management	The presence of issues such as labor and human rights concerns, and conflict minerals in the supply chain, underscores the growing importance of managing and monitoring the sustainability of suppliers. By considering sustainability and social responsibility when managing risks in their supply chains, companies can mitigate related risks, strengthen their competitiveness, and establish a system to monitor their suppliers' human rights and working conditions.	<ul style="list-style-type: none"> Operation of a dedicated ESG organization in the supply chain Risk identification, management, and improvement through ESG performance evaluation, on-site inspections, and third-party inspections (secondary audits) of suppliers Support for capacity building of suppliers through ESG education and consulting Preparation of a code of conduct checklist for suppliers 	Risk/Negative	<p>Target: ESG training for all suppliers</p> <p>Metric</p> <ul style="list-style-type: none"> - Output metric: ESG training performance of suppliers - Impact metric: Risk cost reduction due to improved management level of suppliers 	82~84
Information Security	As digitalization leads to an increase in data throughput, and as threats such as cyberattacks and data leaks emerge, information security has become increasingly critical. Security incidents can result in reputational damage, decreased competitiveness, and legal issues. Therefore, organizations need to create systems to protect vital information assets and enhance Information Security activities.	<ul style="list-style-type: none"> Establishment of information security systems such as security policy establishment, security inspection, and security system management Acquisition of global security management system certification and information security/personal information protection management system certification Implementation of Zero Trust security system to verify the access environment of users and systems from multiple angles Establishment of a security verification system for products and systems 	Cost/Complex	<p>Target: Zero security incidents</p> <p>Metric</p> <ul style="list-style-type: none"> - Output metric: Number of security incidents - Impact metric: Financial losses due to information/data leakage(fines) 	103

※ Output metric: An indicator measuring environmental/social outcomes resulting from a corporation's business activities

Impact metric: An indicator measuring the degree of environmental/social impact (damage or benefit) arising from the output metric

Alignment with the UN SDGs

Samsung SDS is committed to contributing to the achievement of the United Nations Sustainable Development Goals (SDGs) through our corporate activities and addressing universal challenges facing humanity. By addressing various issues faced by local and global communities, we strive to make a positive impact in the five key areas of the SDGs known as the 5Ps: Planet, People, Prosperity, Peace, and Partnership. Samsung SDS is actively engaged in diverse activities in each ESG (Environmental, Social, and Governance) area to contribute evenly across these SDG pillars.

Partnership

Samsung SDS is actively involved in addressing major agendas faced by global society, grounded in solid global partnerships.



Goal 17. Revitalize the global partnership for sustainable development

Samsung SDS contributes to solving poverty and inequality issues facing the international community by collaborating with World Vision. This NGO is dedicated to supporting the world's most vulnerable children, families, and communities.

Peace

Samsung SDS is committed to building a more peaceful, fair, and inclusive society.



Goal 16. Promote just, peaceful and inclusive societies

To establish a transparent and fair trade culture with our suppliers, Samsung SDS applies the Standard Form Subcontract issued by the Fair Trade Commission (FTC) for electronic contracts. Electronic contracts based on SmartTogether.com prevent verbal orders and unfair order cancellations. Samsung SDS operates a labor-management council to foster healthy labor-management relations and communication between labor and management. The council works to improve the company system and working environment, address employee grievances through the council's communication channels, and conduct various other activities to revitalize organizational culture.

Prosperity

Samsung SDS contributes to improving society members' quality of life based on economic growth.



Goal 7. Ensure access to affordable, reliable, sustainable, and modern energy

To enhance the environmental friendliness of our data centers, Samsung SDS is increasing the proportion of energy supplied to our facilities from renewable sources. Utilizing a broad spectrum of renewable energy sources, including solar water heating, photovoltaic power generation, geothermal cooling and heating systems, fuel cell technology, natural lighting, and geothermal heat pumps, Samsung SDS seeks to fulfill the energy requirements of our data centers.



Goal 8. Promote inclusive and sustainable economic growth, employment and decent work for all

Samsung SDS executes various financial support programs such as direct loans (Win-Win Management Fund) and indirect financial support (Network Loan), aiming to stabilize the businesses of our suppliers.



Goal 9. Build resilient infrastructure, promote sustainable industrialization and foster innovation

Samsung SDS contributes to the promotion of industrialization through sustainable services grounded in accumulated ICT technologies.



Goal 10. Reduce inequality within and among countries

Samsung SDS has earned recognition as an Honorable Company for Shared Growth by securing the top rating for five consecutive years. This achievement was made possible by enhancing communication with suppliers, providing financial, educational, and technical support, and improving payment terms.

Alignment with the UN SDGs

People

Samsung SDS respects the inherent dignity and equal rights of all our employees.



Goal 2. Zero Hunger

Samsung SDS has implemented a meal support program for underprivileged adolescents in Songpa-gu, who are vulnerable to hunger and difficult to care for. For community engagement with rural villages, Samsung SDS has maintained partnerships with sister villages since 2002 and organizes markets with these villages during Lunar New Year and Chuseok holidays to aid in revitalizing the rural economy.



Goal 3. Ensure healthy lives and promote well-being for all at all ages

Samsung SDS operates the Mental Fitness Center to foster not only physical health but also the mental well-being of our employees. At the center, employees can express various concerns. Counseling sessions are held in a location that is convenient and close to the counselee, with strict confidentiality maintained.



Goal 4. Provide quality education for all

Samsung SDS operates a qualification support system to strengthen our business capabilities and bolster the professionalism of our employees. Samsung SDS provides support for about 500 work-related qualifications, and some strategically important qualifications at the company level are awarded additional promotion points. Moreover, the list of supported qualifications is constantly reviewed and updated.



Goal 5. Achieve gender equality and empower all women and girls

Samsung SDS does not discriminate against employees based on gender, age, or origin. Samsung SDS extends paid maternity leave to male employees and approves the use of parental leave, promoting equal sharing of family responsibilities and recognizing the value of unpaid care and domestic work.

Alignment with the UN SDGs

Planet

Samsung SDS actively participates in protecting natural resources and addressing climate change for future generations.



Goal 6. Ensure access to water and sanitation for all

Samsung SDS has established a water consumption management system and is continuously implementing measures to reduce the discharge of hazardous substances and sewage. After primary treatment in septic tanks, sewage discharged from business sites is treated at municipal sewage treatment plants. Samsung SDS also regularly cleans and disinfects septic tanks and measures the quality of discharged water.



Goal 12. Ensure sustainable consumption and production patterns

Samsung SDS continually monitors the amount of waste generation by building and data center units and strives to minimize waste generation and expand recycling rates. Old laptops and monitors used by employees are collected by recycling agencies, and Samsung SDS endeavors to increase the recycling rate of electronic products by participating in annual cell phone collection campaigns.

All old racks and IT equipment generated during the maintenance process of data centers are recycled. In this regard, the responsible department consolidates the amount of recyclable waste on a quarterly basis. Notably, 100% of scrap metal and rare metals are recycled through the smelting process.

Samsung SDS continuously encourages employees to adapt to a lifestyle that aligns with sustainable development, such as creating a paperless work environment, increasing the use of recyclables, and reducing the use of plastic cups.



Goal 13. Take urgent action to combat climate change and its impacts

Since 2016, Samsung SDS has participated in the Carbon Disclosure Project(CDP), aligning with international efforts to combat climate change and openly disclosing our climate change response strategies, goals, and activities to stakeholders.



Goal 14. Conserve and sustainably use the oceans, seas and marine resources

Samsung SDS operates Cello Trust, a system allowing users to verify the actual distribution history with a single QR code by providing transparent distribution processes on the blockchain. As a blockchain-based traceability management platform, traceability necessitates an entity to confirm the authenticity of the recorded information. In our effort to contribute to reducing the illegal capture of fish, Samsung SDS has included the World Wide Fund for Nature(WWF) as a validator.

GRI Standards Index

GRI 2: General Disclosures 2021				
Classification	Disclosure	Indicators	Page	Note
The organization and its reporting practice	2-1	Organizational details	2, 7, 8	Required
	2-2	Entities included in the organization's sustainability reporting	2	Required
	2-3	Reporting period frequency and contact point	2	Required
	2-4	Restatements of information	117	Required Editing 2021 GHG emissions(scope 3)
	2-5	External assurance	130~131	Required
Activities and workers	2-6	Activities, value chain and other business relationships	8, 23, 24	
	2-7	Employees	111, 112	
	2-8	Workers who are not employees	-	Disclose in annual report(359pg)
Governance	2-9	Governance structure and composition	90~93	
	2-10	Nomination and selection of the highest governance body	90~93	
	2-11	Chair of the highest governance body	90	
	2-12	Role of the highest governance body in overseeing the management of impacts	28, 121	
	2-13	Delegation of responsibility for managing impacts	28, 34	
	2-14	Role of the highest governance body in sustainability reporting	22	
	2-15	Conflicts of interest	93, 98	
	2-16	Communication of critical concerns	95~97, 121	
	2-17	Collective knowledge of the highest governance body	34, 93	
	2-18	Evaluation of the performance of the highest governance body	92	
	2-19	Remuneration policies	92	
Strategy, policies and practices	2-20	Process to determine remuneration	92	
	2-21	Annual total compensation ratio	112	
	2-22	Statement on sustainable development strategy	5, 6	
	2-23	Policy commitments	120	
	2-24	Embedding policy commitments	98~102	
	2-25	Processes to remediate negative impacts	62, 77, 98, 116	
	2-26	Mechanisms for seeking advice and raising concerns	62, 77, 98, 116	
	2-27	Compliance with laws and regulations	102, 110	
	2-28	Membership associations	109	
	Stakeholder engagement	2-29	Approach to stakeholder engagement	24, 62
2-30		Collective bargaining agreements	62, 114	

GRI 3: Material Topics 2021				
Classification	Disclosure	Indicators	Page	Note
Material Topics	3-1	Process to determine material topics	21, 22, 121	Required
	3-2	List of material topics	21, 22, 121	Required
	3-3	Management of material topics	21, 22, 121	

Topic Standards _ Economic Performance (GRI 200)				
Classification	Disclosure	Indicators	Page	Note
Economic Performance	201-1	Direct economic value generated and distributed	7, 9, 11, 19, 108	
	201-2	Financial implications and other risks and opportunities due to climate change	34~39	
	201-3	Defined benefit plan obligations and other retirement plans	114	
Indirect Economic impacts	203-2	Significant indirect economic impacts	18~19	
Anti-corruption	205-1	Operations assessed for risks related to corruption	102, 110	
	205-2	Communication and training about anti-corruption policies and procedures	98, 101, 110	
	205-3	Confirmed incidents of corruption and actions taken	98, 110	
Anti-competitive Behavior	206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	98, 110	
Tax	207-1	Approach to tax	120	
	207-2	Tax governance, control, and risk management	120	

GRI Standards Index

Topic Standards _ Environmental Performance (GRI 300)				
Classification	Disclosure	Indicators	Page	Note
Energy	302-1	Energy consumption within the organization	50, 117, 129	
	302-3	Energy intensity	117	
Water and Effluents	303-3	Water withdrawal	52, 119	
	303-4	Water discharge	52, 119	
Emissions	305-1	Direct (Scope 1) GHG emissions	47, 117, 129	
	305-2	Energy indirect (Scope 2) GHG emissions	47, 117, 129	
	305-3	Other indirect (Scope 3) GHG emissions	47, 117, 129	
	305-4	GHG emissions intensity	47, 117, 129	
	305-5	Reduction of GHG emissions	47, 48, 117, 118, 129	
Waste	306-3	Waste generated	51, 119	
	306-4	Waste diverted from disposal	51, 119	
	306-5	Waste directed to disposal	51, 119	
Supplier Environmental Assessment	308-2	Negative environmental impacts in the supply chain and actions taken	83~84	

Topic Standards _ Social Performance (GRI 400)				
Classification	Disclosure	Indicators	Page	Note
Employment	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	60~63	
	401-3	Parental leave	61, 114	
Occupational Health and Safety	403-1	Occupational health and safety management system	70	
	403-2	Hazard identification, risk assessment, and incident investigation	72~73	
	403-3	Occupational health services	75~76	
	403-4	Worker participation, consultation, and communication on occupational health and safety	75~76	
	403-5	Worker training on occupational health and safety	75~76	
	403-6	Promotion of worker health	75~76	
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	71~74	
	403-8	Workers covered by an occupational health and safety management system	70~73	
	403-9	Work-related injuries	115	
	403-10	Work-related ill health	115	
Training and Education	404-1	Average hours of training per year per employee	58, 113	
	404-2	Programs for upgrading employee skills and transition assistance programs	58, 63, 113	
	404-3	Percentage of employees receiving regular performance and career development reviews	59, 112	
Diversity and Equal Opportunity	405-1	Diversity of governance bodies and employees	90, 111	
	405-2	Ratio of basic salary and remuneration of women to men	112	
Supplier Social Assessment	414-2	Negative social impacts in the supply chain and actions taken	82~84	
Public Policy	415-1	Political contributions	109	
Customer Privacy	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	43, 110	

SASB Index

Topic	Code	Accounting Metric	Page	Note	Category	Unit of Measure
Energy Management	TC-SI-130a.1	(1) Total energy consumed, (2) percentage grid electricity, (3) percentage renewable	50, 117		Quantitative	TJ, %
	TC-SI-130a.2	(1) Total water withdrawn, (2) total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	52, 119	No information on High or Extremely High Baseline Water Stress	Quantitative	m ³ , %
	TC-SI-130a.3	Discussion of the integration of environmental considerations into strategic planning for data center needs	38, 48~52		Discussion and Analysis	N/A
Customer Privacy	TC-SI-220a.1	Description of policies and practices relating to behavioral advertising and user privacy	42~43, 103, 106	Privacy Policy on the website (As of April 1, 2022)	Discussion and Analysis	N/A
	TC-SI-220a.2	Number of users whose information is used for secondary purposes	43, 110		Quantitative	Numbers
	TC-SI-220a.3	Total amount of monetary losses as a result of legal proceedings associated with user privacy	106, 110		Quantitative	Reporting currency
	TC-SI-220a.4	(1) Number of law enforcement requests for user information, (2) number of users whose information was requested, (3) percentage resulting in disclosure	43, 110		Quantitative	Numbers, %
	TC-SI-220a.5	List of countries where core products or services are subject to government-required monitoring, blocking, content filtering, or censoring	43		Discussion and Analysis	N/A
Data Security	TC-SI-230a.1	(1) Number of data breaches, (2) percentage involving personally identifiable information (PII), (3) number of users affected	106, 110		Quantitative	Numbers, %
	TC-SI-230a.2	Description of approach to identifying and addressing data security risks, including use of third-party cybersecurity standards	103~106		Discussion and Analysis	N/A
Employee Engagement, Diversity & Inclusion	TC-SI-330a.1	Percentage of employees that are (1) foreign nationals and (2) located offshore	111		Quantitative	%
	TC-SI-330a.2	Employee engagement as a percentage	62, 113		Quantitative	%
	TC-SI-330a.3	Percentage of gender and racial/ethnic group representation for (1) management, (2) technical staff, and (3) all other employees	111		Quantitative	%
Competitive Behavior	TC-SI-520a.1	Total amount of monetary losses as a result of legal proceedings associated with anti-competitive behavior regulations	102, 110		Quantitative	Reporting currency
Systemic Risk Management	TC-SI-550a.1	Number of (1) performance issues and (2) service disruptions; (3) total customer downtime	80		Quantitative	Numbers, Days
	TC-SI-550a.2	Description of business continuity risks related to disruptions of operations	79~80		Discussion and Analysis	N/A

TCFD Index

Category	TCFD Recommendation	Page
Governance	a) Describe the board’s oversight of climate related risks and opportunities.	34
	b) Describe management’s role in assessing and managing climate related risks and opportunities.	
Strategy	a) Describe the climate-related risks and opportunities the company has identified over the short, medium, and long term.	35~38
	b) Describe the impact of climate-related risks and opportunities on the company’s businesses, strategy, and financial planning.	
	c) Describe the resilience of the company’s strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario	
Risk Management	a) Describe the company’s processes for identifying and assessing climate-related risks.	39
	b) Describe the company’s processes for managing climate-related risks.	
	c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the company’s overall risk management	
Metrics and Targets	a) Disclose the metrics used by the company to assess climate-related risks and opportunities in line with its strategy and risk management process.	38, 117, 119
	b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 GHG emissions and the related risks.	
	c) Describe the targets used by the company to manage climate-related risks and opportunities and performance against targets.	

GHG Verification Statement

GHG Verification Statement

Samsung SDS Co., Ltd.

Business sites subject to verification : 12 business sites, including Samsung SDS headquarters (including subsidiaries and overseas subsidiaries) The Korea Management Registrar Inc. (hereinafter “KMR”) has conducted the verification on the greenhouse gas (hereinafter “GHG”) emission (Scope 1&2) of Samsung SDS CO., Ltd. (hereinafter “the Company”) in 2022.

SCOPE

Verification of places of business, emission facilities, subsidiaries, and overseas subsidiaries under the control of the Company.

STANDARDS

- ISO 14064-1:2006, ISO 14064-3:2006
- IPCC Guidelines for National Greenhouse Gas Inventories (2006)
- Guidelines for Reporting and Certification of Emissions in the Greenhouse Gas Emissions Trading Scheme

LIMITATIONS

The verification has inherent limitations that may arise in the process of applying standards and methods.

RESULTS

- 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 “qualified” opinion.

GHGs Emission	Direct emission (Scope1)	Indirect emission (Scope2)	Total (tCO ₂ -eq)
2022	4,539	118,308	122,842
Energy Consumption			Total (TJ)
2022	80	2,448	2,522

※ Total emissions are summed by company after cutting the decimal point at the workplace.

May 23th, 2023



Authorized By CEO Eun Ju Hwang *E J Hwang*

GHG Verification Statement

Samsung SDS Co., Ltd.

The Korea Management Registrar Inc. (hereinafter “KMR”) has conducted the verification on the greenhouse gas (hereinafter “GHG”) emission (Scope3) of Samsung SDS CO., Ltd. (hereinafter “the Company”) in 2022.

SCOPE

Verification of places of business and emission facilities under the control of the Company.

STANDARDS

- ISO 14064-1:2006, ISO 14064-3:2006
- WRI/WBCSD GHG Protocol
- IPCC Guidelines for National Greenhouse Gas Inventories (2006)
- Emission Factor for Greenhouse Gas Inventories(EPA)
- Korea LCI DB Information Network(Korea Environmental Industry & Technology Institute)

LIMITATIONS

The verification has inherent limitations that may arise in the process of applying standards and methods.

RESULTS

- 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 “qualified” opinion.

No	CATEGORY	SCOPE 3 emission	No	CATEGORY	SCOPE 3 emission
1	Purchased goods and service	22,647	6	Business travel	8,646
2	Capital goods	84,216	7	Employee commuting	5,222
3	Fuel- and energy-related activities (not included in scope 1 or scope 2)	7,718	8	Upstream leased asset	14,773
4	Upstream transportation and distribution	2,996,426	15	Investments	14,581
5	Waste generated in operations	290	Total		3,154,520

May 30th, 2023



Authorized By CEO Eun Ju Hwang *E J Hwang*

Independent Assurance Statement

To: The Stakeholders of Samsung SDS Co., Ltd.

Introduction and objectives of work

BSI Group Korea (hereinafter "the Assurer") was asked to verify `2023 Samsung SDS Sustainability Report (hereinafter "the Report"). This assurance statement applies only to the relevant information contained in the scope of the assurance. Samsung SDS is solely responsible for all information and assertion contained in the report. The responsibility of the assurance is to provide independent assurance statement with expert opinions to Samsung SDS by applying the verification methodology and to provide this information to all stakeholders of Samsung SDS.

Assurance Standards and Levels

This assurance was based on the AA1000AS v3 (2020) Assurance Standard and confirmed that the report is prepared in accordance with the GRI Standards. The assurance level was based on the Type 1 that confirmed compliance with the four principles of AA1000 AP (2018) in accordance with the AA1000 AS and the Type 2 assurance that verified the quality and reliability of the information disclosed in the report. The Type 2 assurance was applied to the following disclosure of the GRI Topic Standards related to material topics:

[Topic Standards]

302-1(Energy), 303-3&4(Water and Effluents), 305-1~5(Emissions), 306-3~5(Effluents and Waste), 403-1~10(Occupational Health and Safety), 405-1&2(Diversity and Equal Opportunity)

Scope of Assurance

The scope of assurance applied to this report is as follows:

- Based on the period from January 1st to December 31st 2022 included in the report, some data included 2023.
- 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.
- Conformity, appropriateness and consistency of internal processes and systems for information, data collection, analysis and review.

The following contents were not included in the scope of assurance.

- Financial information presented in the report.
- Disclosures in the international standards and initiatives index excluding GRI presented in the report.
- Other related additional information such as the website, business annual report.

Methodology

As part of its independent assurance, the assurer has used the methodology developed to collect relevant evidence to comply with the verification criteria and to reduce errors in the reporting, and has performed the following activities:

- Review of the system for sustainability management strategy process and implementation
- Review of materiality issue analysis process and verification of the result to determine verification priorities,
- Review of the evidence to support the material issues through interviews with senior managers with responsibility for them
- Verification of data generation, collection and reporting for each performance index

Limitation

The assurer performed limited verification over a limited period based on the data provided by the reporting organization. This means that no significant errors are found during the verification process, and that there are limitations associated with the inevitable risks that may exist. The assurer does not provide assurance for possible future impacts that cannot be predicted or verified during the verification process and any additional aspects related thereto.

Assurance Opinion

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.
- The report is prepared in accordance with the GRI Standards. (Reporting in accordance with the GRI standards)
- The assurance opinion on the four principles presented by the AA1000 AP(2018) is as follows.

Independent Assurance Statement

AA1000 AP(2018)

Inclusivity: Stakeholder Engagement and Opinion

Samsung SDS defined customers, employees, shareholders/investors, local communities and suppliers as key stakeholder's groups, and operates communication channels for each group for stakeholder engagement. Samsung SDS reflected key issues drawn through stakeholder channels in sustainability management decisions and disclosed the process in the report.

Materiality: Identification and reporting of material sustainability topics

Samsung SDS established a strategy related to sustainable management and established a process to derive reporting issues and evaluate business relevance and social impact across major ESG issues pools to determine the importance of the issue, select 10 critical issues and publish the process in the report.

Responsiveness: Responding to material sustainability topics and related impacts

Samsung SDS established the management process for key reporting issues determined by the materiality assessment. In order to respond appropriately to the expectations of stakeholders, Samsung SDS disclosed the process including policy, indicator, activity and response performance on key reporting issues in the report.

Impact: Impact of an organization's activities and material sustainability topics on the organization and stakeholders

Samsung SDS established the process to identify and evaluate the impact on organizations and stakeholders related to key reporting issues. Samsung SDS used impacts, risk and opportunity factor analysis results for key reporting issues to make decisions to develop response strategies for each issue, and disclosed the process in the report.

Key areas for ongoing development

To the extent that the results of the verification are not affected, the following comments were made.

- Samsung SDS is enhancing environmentally friendly data center operations, carbon information disclosure, and eco-friendly logistics services through risk analysis and strategy development to address climate change. Considering ways to operate in conjunction with value chain activities and including them in climate change strategies would be more effective.
- In each area of the report, relatively positive aspects are explained and efforts to further develop are expressed. At the same time, it will help to improve the balance of reporting if issues with poor performance are identified and specific plans for resolving them are specified.
- Samsung SDS is effectively reporting on the key achievements of sustainable management. If internal verification processes are implemented for data quality and reliability management disclosed in the report, we can expect continuous improvement in the reporting process.

Statement of independence and competence

The assurer is an independent professional institution that specializes in quality, environment, safety and health, energy and anti-bribery, compliance related ESG management with almost 120 years history in providing independent assurance services. No member of the assurance team has a business relationship with Samsung SDS. 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 AA1000AS assurer, have a lot of assurance experience, and understand the BSI Group's assurance standard methodology.

Evaluation against GRI 'In Accordance' Criteria

The assurer confirmed that this report is prepared in accordance with the GRI Standards, and the disclosures related to the following Universal Standards and Topic Standards Indicators based on the data provided by Samsung SDS, the sector standard was not applied.

[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]

201-1~4, 203-1, 205-1~3, 206-1, 207-1~4, 301-1~3, 302-1~5, 303-1~5, 304-1~4, 305-1~7, 306-1~5, 308-1&2, 401-1~3, 402-1, 403-1~10, 404-1~3, 410-1, 413-1&2, 414-1&2, 417-1~3, 418-1

23 June 2023

S. H. Lim BSI Group Korea, Managing Director



SAMSUNG SDS