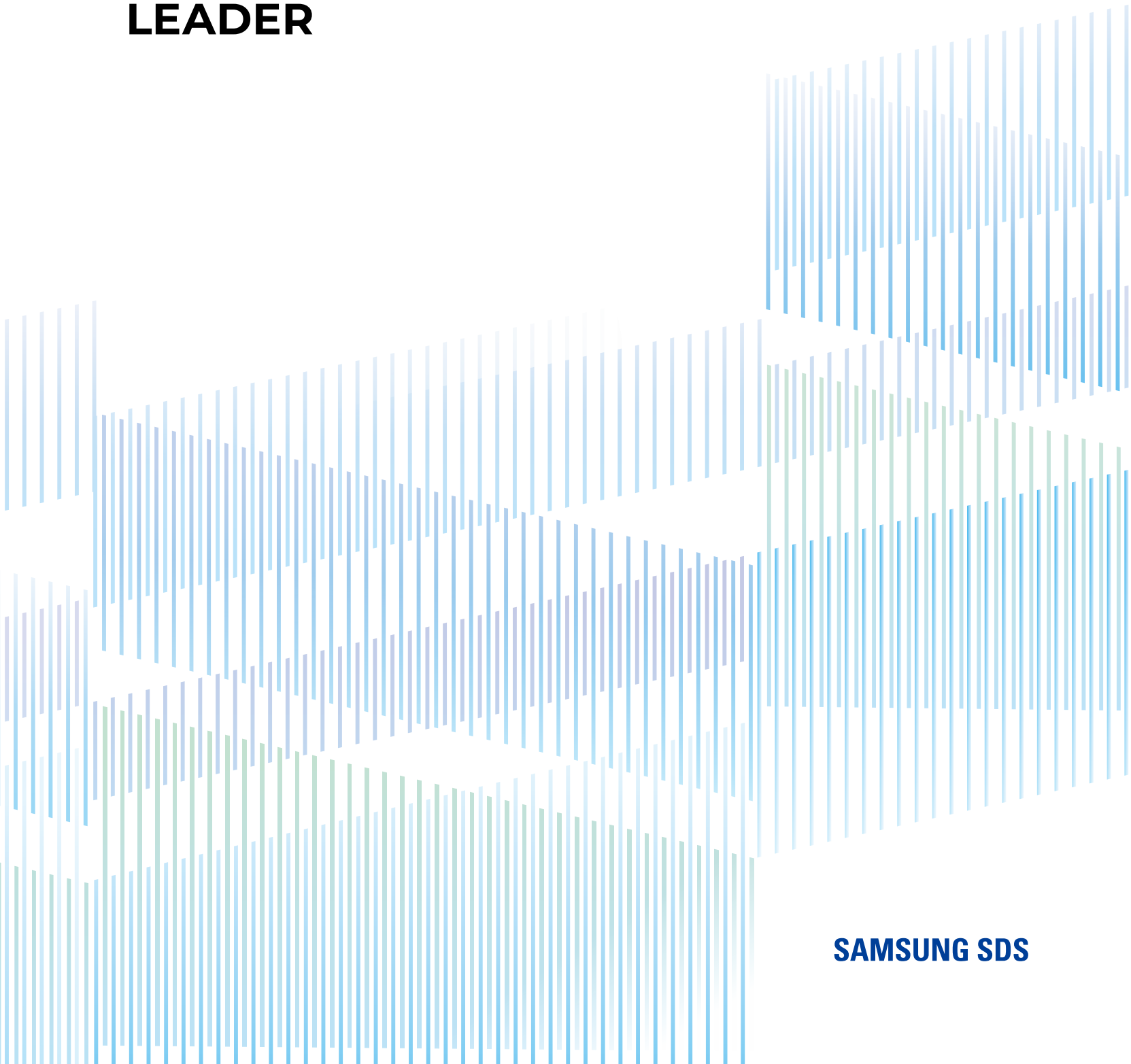
SAMSUNG SDS
SUSTAINABILITY REPORT 2020

DATA-DRIVEN DIGITAL TRANSFORMATION LEADER



SAMSUNG SDS

ABOUT THIS REPORT

Report Overview

Samsung SDS publishes its 1st Sustainability Report to transparently disclose the economic, social, and environmental values and achievements generated through its business conduct with wide-ranging stakeholders. This report serves as a communication channel to annually share Samsung SDS's sustainability management activities, accomplishments and future plans with stakeholders.

Reporting Standards

This report was prepared in accordance with the international sustainability reporting guidelines of the GRI Standards: Core option, as well as IIRC (International Integrated Reporting Council)'s Integrated Reporting Framework. The financial data within the report were based on the K-IFRS (Korean International Finance Reporting Standards).

Reporting Period

This report illustrates Samsung SDS's economic, social, and environmental achievements and activities during the period that spans January 1st of 2018 and December 31st of 2019. As to quantitative performance, the report contains data over the past three years (January 2017 – December 2019) to present their time-series trajectory.

Reporting Scope

The reporting scope of this report includes Samsung SDS's Global Headquarters and all domestic establishments, and this extends to its overseas establishments for a portion of the performance data. Financial data were prepared on a consolidated basis in accordance with the K-IFRS. As for the data that require additional attention in terms of reporting scope and boundary, they were annotated separately for the convenience of readers.

Assurance

This report was assured by Deloitte Anjin LLC to ensure the objectivity and transparency of its preparation and to gain trust from stakeholders in so doing. The third-party assurance of the non-financial data of this report was performed by the Korea Management Registrar.

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DATA-DRIVEN DIGITAL TRANSFORMATION LEADER

INTRODUCTION

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CEO Message

"Samsung SDS will create a new future through the convergence of technology and business, respect its stakeholders, and fulfill its social responsibility."

Dear Stakeholders,
Let me extend my heartfelt gratitude for your everlasting encouragement and support for Samsung SDS.

The increasing adoption of the Stewardship Code highlights the importance of corporate responsibility to shareholders and investors more than ever, and businesses today are required to take their social responsibility even more seriously to their partners, employees, and local communities. At Samsung SDS, we take note of the social values that we create as well as economic values such as sales and profits, and strive to fulfill our social responsibility as a global corporate citizen. It is with this renewed awareness that we candidly communicate with stakeholders our endeavors and achievements made in our journey to become a responsible corporate citizen. We at Samsung SDS present our 1st sustainability report this year, and aim to share our activities, accomplishments and future plans on the issues that interest our key stakeholders, including shareholders & investors, customers, employees, partners, and communities.

While Samsung SDS surpassed the KRW 10 trillion mark in 2018 sales thanks to the support and commitment of our stakeholders and employees, the company took a step further in 2019, setting a new record in its corporate history with KRW 10.7196 trillion in sales and KRW 990.1 billion in operating profit. In the face of the ongoing COVID-19 outbreak, the global economic downturn and other challenging business conditions in Korea and abroad, we will leverage our exceptional technology and deep understanding of customers to generate even better business performance this year.

Building on our disruptive technology – AI, cloud, and blockchain – and abundant IT expertise accumulated over the years, we assist our customers in achieving innovation through Digital Transformation and pursue mutual growth with customers in so doing.

On the environmental front, we are fully responding to climate change issues by operating eco-friendly data centers, including our Chuncheon Data Center which embraced renewable energy sources and energy efficiency improvement systems. In our spirit of giving back to society, we also provide IT education to teens and join the Samsung Global Volunteer Festival.

To promote sustainable growth, not only do we recruit and nurture talented individuals, but also ensure diversity and equal opportunity for them while striving to increase their life satisfaction. In addition, we pursue shared growth with our partners to create a sustainable IT ecosystem.

Our outside directors bring to the table their expertise in the fields of IT, finance, and management strategy and they add to the independence of our Board of Directors to help maintain a sound governance structure. Furthermore, we sincerely take our social responsibility by way of thorough compliance and ethics management.

We at Samsung SDS will drive the business growth of our customers through digital innovation, and relentlessly endeavor to respect stakeholders and fulfill our social responsibility. It is our firm belief that sustainable growth is only possible when we are supported by wide-ranging stakeholders who genuinely trust us and when we develop our business capabilities on our own.

As such, we at Samsung SDS will communicate with our stakeholders even more closely and earn their trust every step of the way so that we give back to our stakeholders through our sustainable growth. We look forward to your continued interest in and support for Samsung SDS.

Thank you.

President & CEO of Samsung SDS
Won-Pyo Hong

2018-2019 Highlights

Samsung SDS Redefining Its Global Vision ‘Data-driven Digital Transformation Leader’

In January 2018, Samsung SDS hosted the ‘Vision & Talk’ event to re-define its vision for Global Samsung SDS in a New Era, and announced its new vision ‘Data-driven Digital Transformation Leader.’ This vision embodies the company’s commitment to delivering differentiated solutions and services based on data and intelligent platforms that lie at the core of competitiveness in the digital age in order to evolve into Global Samsung SDS. The company CEO served as the master of ceremony to engage in conversations with employees to help them resonate with the new vision, and respective business departments presented their success stories and shared the blueprint for the future. This new vision will drive the company’s journey to become Global Samsung SDS in a New Era in conjunction with shareholders & investors, customers, employees, partners, and other stakeholders.

Hosting REAL 2019

In May 2019, Samsung SDS hosted ‘REAL 2019’ for enterprise customers who pursue digital innovation to unveil its ‘Digital Transformation Framework’. As a platform that supports the digitalization of the entire business operations from manufacturing and marketing/sales to management systems, this framework was developed through the integration of Samsung SDS’s unique industry know-how and new IT capabilities. The event also served to share the company’s innovative technologies and success stories on Digital Transformation, and exhibit its key technologies, including AI, blockchain, and IoT platforms, which was highly welcomed by nearly 1,300 participants. Samsung SDS will ensure that its digital technology and industry-specific experience assist its customers in driving their Digital Transformation.

REAL 2019

Becoming the 1st IT Services Provider to Reach KRW 10 Trillion in Sales

In 2019, Samsung SDS posted KRW 10.7196 trillion in sales and KRW 990.1 billion in operating profit, setting a new record in its corporate history. Back in 2018, the company became the first Korean IT services provider to surpass the KRW 10 trillion mark, with KRW 10.0342 trillion in sales and KRW 877.4 billion in operating profit. Its sales and operating profit rose 8% and 20% respectively against 2017, and this is mainly attributable to a remarkable 31% increase in the four IT strategic businesses of Intelligent Factory, AI/Analytics and Solution. Samsung SDS's ranking in the global IT services market also improved year after year according to the global IT research firm Gartner, from 27th in 2016 and 25th in 2017 to 22nd in 2018, solidifying its position as a truly global IT business.

Sales in 2019

KRW 10.7196 trillion

Hosting the Techtonic Developer Conference in 2019

As an employer of the largest number of developers in the domestic IT services industry, Samsung SDS continued to host the Techtonic Conference in 2019, following its initiation in 2018, to broaden the Korean developer ecosystem. Joined by nearly 1,200 IT developers, undergraduates, and masters & PhDs, the conference served to present Samsung SDS's technology platforms enabled by its five key technologies – AI, blockchain, cloud, data analytics, and security – as well as their success in innovating customer business while sharing the company's development knowledge. While Samsung SDS unveiled its open source AI/Analytics platform 'Brightics Studio' at the 2018 conference as a move to pioneer the AI analytics ecosystem, the company used the 2019 event to introduce the 'Samsung SDS Innovation Framework' that would guide its endeavors to explore new business, pursue industry-academia alignment, and make strategic investment. Going forward, Samsung SDS will make the Techtonic Conference a regular event to share its wide-ranging innovation and technology development knowledge to contribute to strengthening developer competency and facilitating the ecosystem.

Elevating Status as a Global IT Services Provider

Samsung SDS is elevating its status in the global IT services market on the strength of its top-tier information technology and performance. In May 2019, Gartner ranked the company in 22nd place among global IT services providers as of 2018. Its expanded global presence enabled the company to climb the ranks by three from 25th in 2017. In April 2019, the company was named one of the top 50 global blockchain companies by Forbes. In January 2020, Brand Finance valued the Samsung SDS brand at USD 3.7 billion(KRW 4.3 trillion) and ranked the company as the 11th most valuable global IT services brand, up by one step from 2019. Furthermore, Samsung Electronics('16, '17, '18), Samsung C&T('20), Samsung Life Insurance('17), and Samsung Electro-Mechanics('19) that adopted Digital Transformation provided by Samsung SDS on the basis of AI, cloud, and other new technologies, were chosen as CIO 100 Winners for five consecutive years by IDG.

*Source : Gartner, Market Share Analysis: IT Services, Worldwide, 2018, David Ackerman et al., 03 May 2019
*Source : Brand Finance IT Services 25 2020. Published on 22.01.2020
*Source : https://www.cio100.com/

Samsung SDS and VMware jointly conducting a digital work environment innovation business

Signing an MOU with Digital China to expand the IT service business

Expanding Global Partnerships

Samsung SDS pursued strategic partnerships with varying global IT businesses to reinforce its Digital Transformation business. The company decided to jointly conduct a digital work environment innovation business with VMware of the U.S. in February 2019, and joined hands with Digital China, to cooperate on cloud, AI, and IoT businesses in its local Chinese market in October 2019. Samsung SDS also decided to use its solutions to conduct a future-oriented convention center development business with Fiera Milano of Italy in November 2019, and to cooperate with Sovico Group of Vietnam on digital transformation and logistics innovation. These partnerships will undoubtedly enable Samsung SDS to leverage its AI, cloud and other new technologies to broaden its presence as an IT services provider across Europe and the Americas as well as Asia.

Concluding a strategic partnership with Fiera Milano of Italy to purse digital transformation

Signing an MOU with Sovico Group of Vietnam to assist digital transformation and pursue logistics innovation

Winning the Next-Generation Budgeting and Accounting System (dBrain) Development Project

In November 2019, Samsung SDS was awarded the 'dBrain' project designed to develop a next-generation budgeting and accounting system by the Ministry of Strategy and Finance. This public SW project will invest KRW 120 billion by March 2020 in the complete redevelopment of the fiscal work processing system in 17 areas including the integrated calculation of public finance statistics and the analysis of fiscal data. Samsung SDS was granted higher scores in the technology category – data analytics, AI, and other technology competency as well as independent development methodology – against its competitors. This project undertaking will enable Samsung SDS to leverage its in-house technology in building a critical national information system and to apply new technology in the public service domain.

Making Strategic Investments in CMC of Vietnam

Following the signing of a joint business agreement with CMC of Vietnam in the areas of smart factory and cyber security in June 2018, Samsung SDS agreed to make strategic investments to participate in the major decision-making process through equity investment in CMC in May 2019 while completing the share acquisition in July that year. This allowed Samsung SDS to combine its cutting-edge information technology – AI, big data analytics, and IoT – with CMC's local sales network and established awareness to fully tap into Vietnam, an emerging manufacturing power, and improve the quality of life for people in the country. Furthermore, Samsung SDS is making use of CMC's excellent technical workforce to strengthen its global business competitiveness and actively advance into Southeast Asia and other regions of the world.

Samsung SDS at a Glance

Company Overview

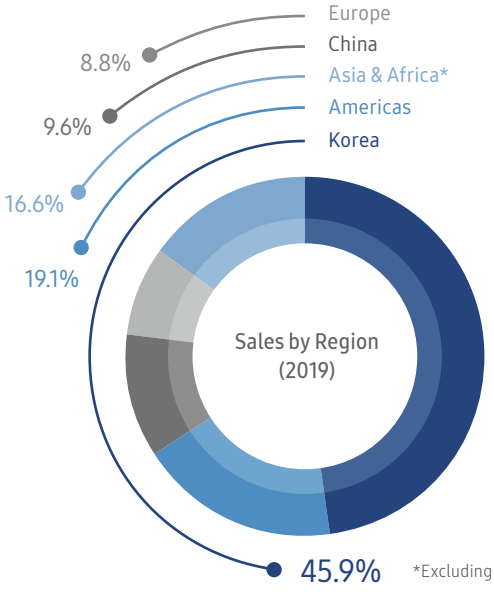
Since its inception in 1985, Samsung SDS has led Digital Transformation for its customers in a range of areas over the past three decades, and evolved into a Global IT Solution Provider with presence in over 30 countries across the globe. Samsung SDS leverages Disruptive Technology such as AI, cloud, and blockchain, as well as enterprise solutions that deliver productivity innovation in order to offer actionable insights that drive customers' business innovation in diverse industries, from manufacturing and financing to logistics and retail.

General Overview (as of end of December 2019)

Company Name	SAMSUNG SDS CO., LTD.
Date of Establishment	May 1st, 1985
Headquarters	125, Olympic-ro 35-gil, Songpa-gu, Seoul, Korea
CEO	Won-Pyo Hong
No. of Employees	23,403 (including domestic and overseas establishment)

Financial Status (as of end of December 2019)

Total Capital	Sales
KRW 6.7252 trillion	KRW 10.7196 trillion
Operating Profit	**Credit Rating**
KRW 990.1 billion	AA+ (Corporate bond, Korea Ratings)



*Excluding sales in Korea and China

Global Network (as of the end of Feb. 2020)

Domestic Infrastructure and Offices

- 1 Global Headquarters
- 2 Campuses
- 4 Data Centers

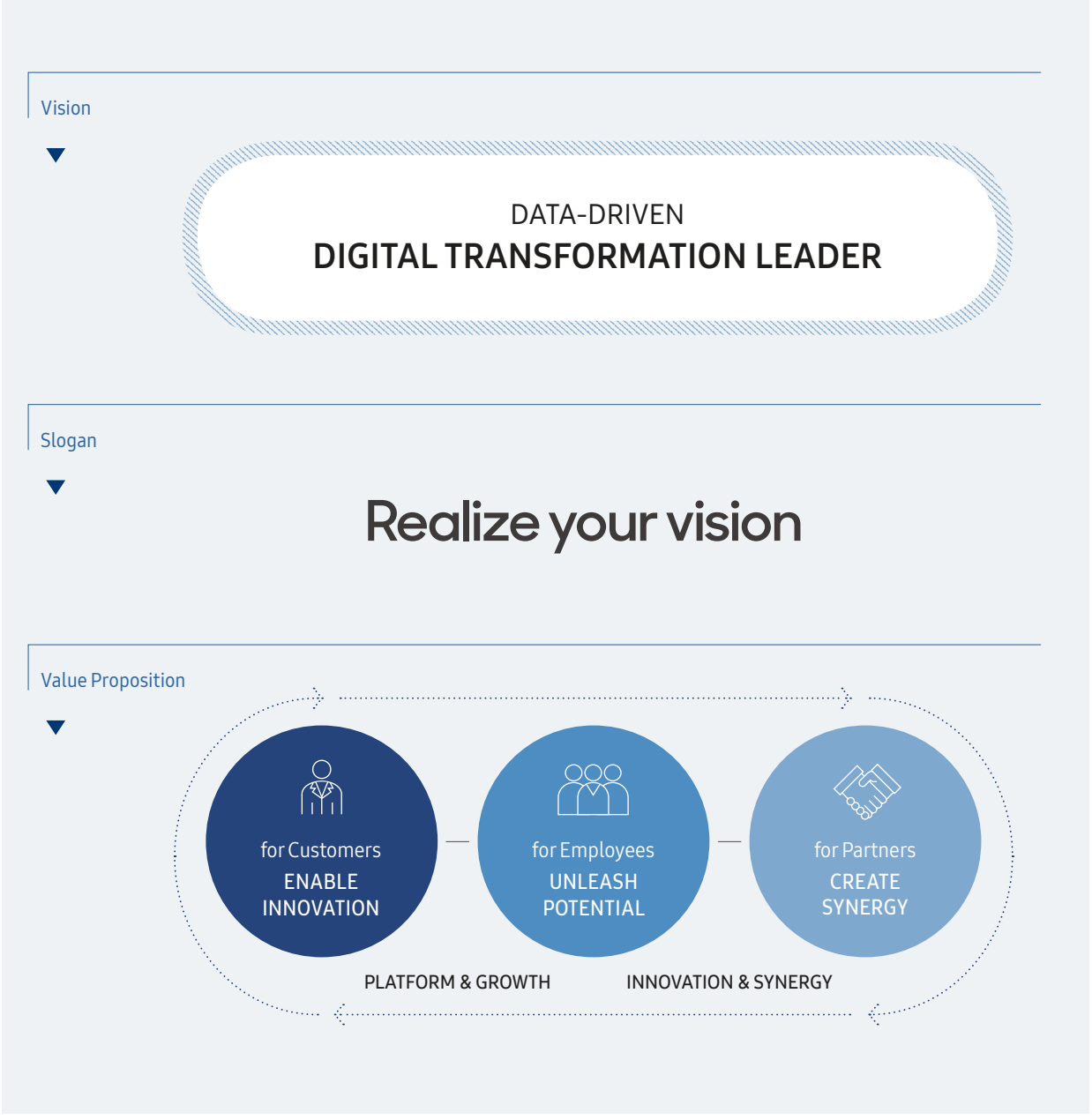
Global Infrastructure and Offices

- ◎ 8 IT Subsidiaries
- ● 35 Logistics Subsidiaries
- ▲ 7 Logistics Joint Ventures
- ◆ 21 Branches
- ○ 13 Data Centers

Vision and Value

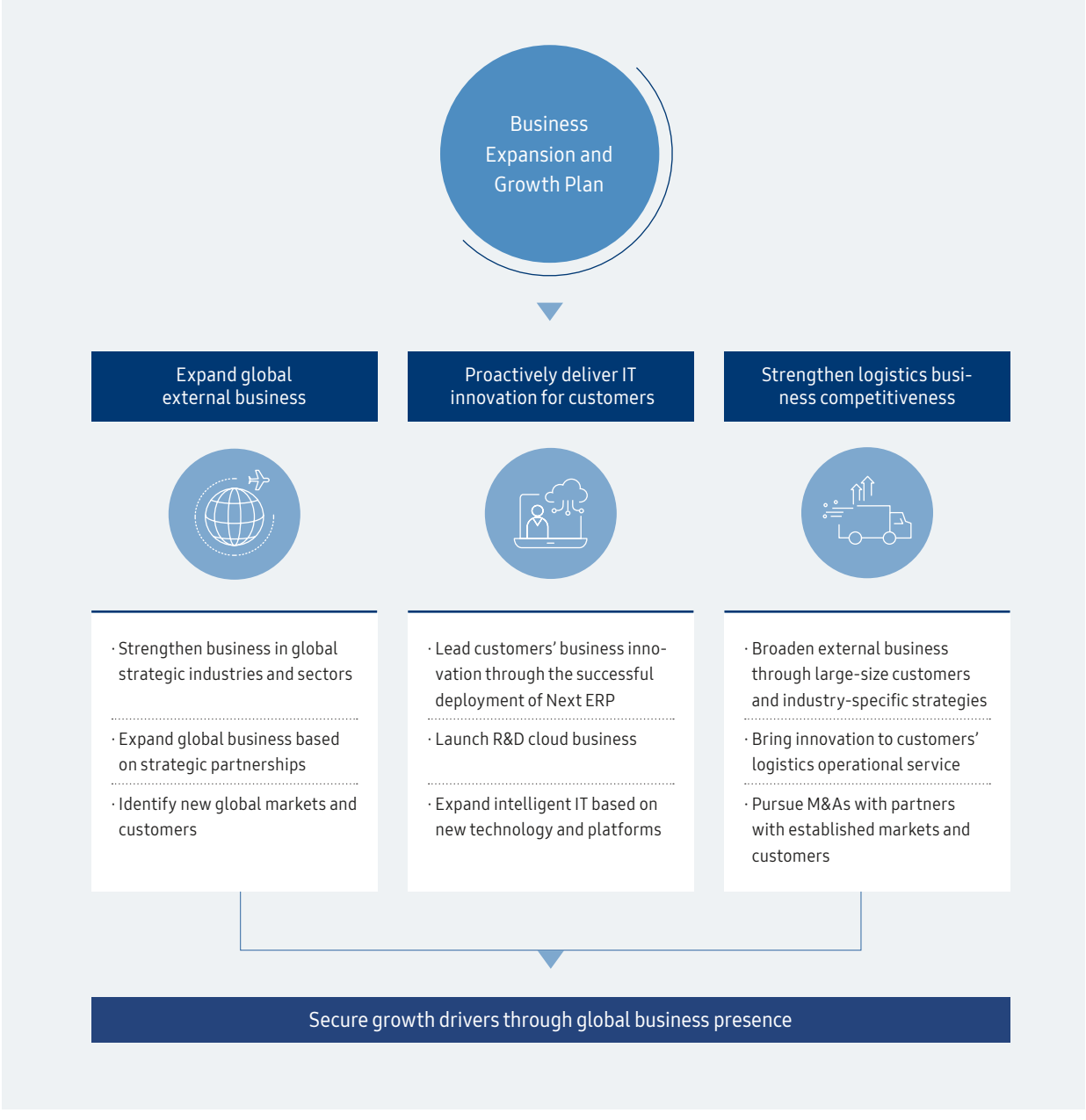
In 2018, Samsung SDS announced its new vision 'Data-driven Digital Transformation Leader', paving the way for Samsung SDS in a New Era. Under this new vision, Samsung SDS aims to become a leader in delivering differentiated value by assisting customers with their digitalization, from shop floor manufacturing and integrated logistics to customer contact points and operational efficiency, on the basis of its cutting-edge technology and data analytics competency.

In addition to this new vision, the company also defined the four key words of its management policy: 'Innovation & Synergy', 'Platform & Growth'. Samsung SDS takes a completely different approach to innovation amid the rapidly-shifting business landscape and generates synergy through convergence, rather than mere combination, in cooperation with wide-ranging partners. Samsung SDS defines a new success formula by creating a business model that combines industry-specific expertise with the Cloud-based common platform, and in so doing, reinforces its capabilities internally and externally in order to accelerate its growth to Global Samsung SDS.



2020 Growth Strategy

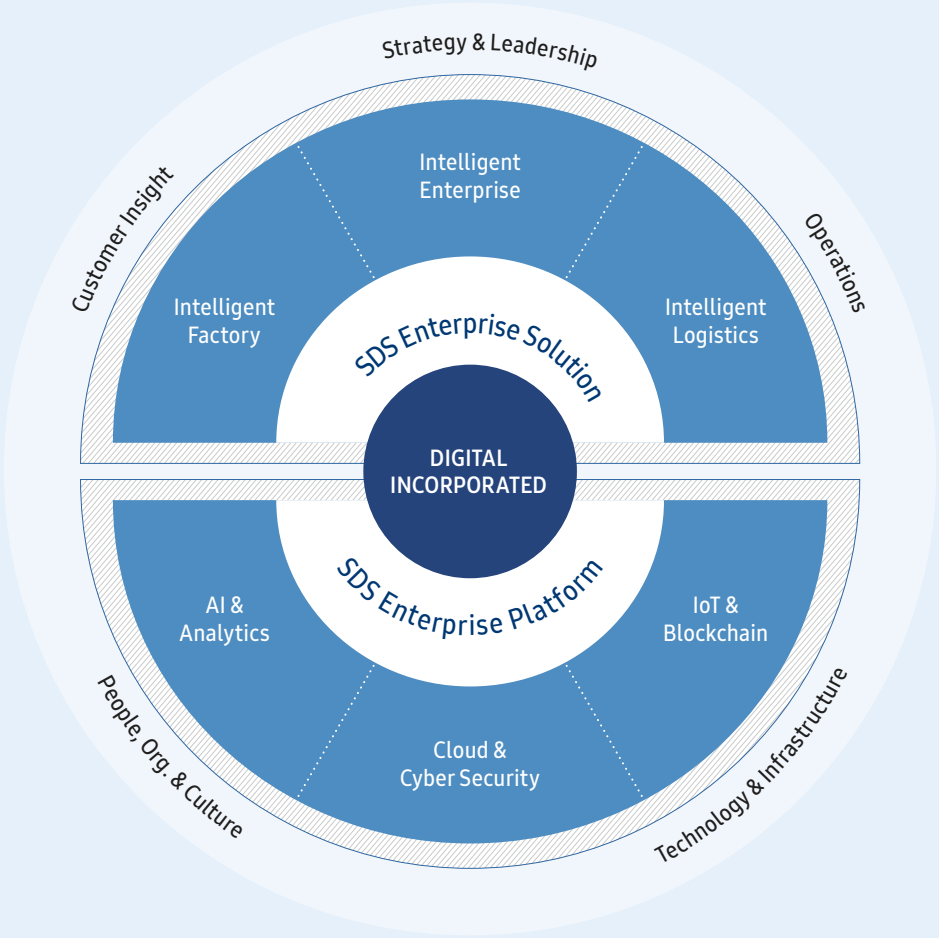
Samsung SDS intends to deliver platform-based innovative growth: its digital technology is integrated with data, the key assets of customers, and this results in the creation of new values. The company defined its four strategic IT businesses of Intelligent Factory, Cloud, AI/Analytics, and Solution, and aims to help drive customers' Digital Transformation. Furthermore, Samsung SDS will deliver integrated logistics operational services on the basis of its integrated logistics management platform and global network. This will surely enable the company to broaden its external and global business presence from strategic IT businesses to logistics Business Process Outsourcing (BPO) and to add improved quality to its solid business growth.



Services & Solutions

Samsung SDS grows while pursuing customer innovation on the basis of its in-house Digital Transformation Framework. The SDS Enterprise Platform, powered by cloud & cyber security, AI & analytics, and IoT & blockchain, delivers differentiated SDS Enterprise Solutions that span across intelligent enterprise, intelligent factory, and intelligent logistics to assist customers in advancing digital innovation.

Digital Transformation Framework



INTELLIGENT FACTORY

In line with the emergence of cutting-edge products and the increasing sophistication and complexity of shop floor operations, we witness the explosive growth of data as well as problems brought about by diverse and complex causes and thus barely solvable with human capacity. The Intelligent Factory uses new technology on the shop floor to collect, analyze, share, optimize, and control all manufacturing data in real time, from plant design to construction and operation, in order to deliver the highest-possible quality and productivity as well as workplace safety.

Our Business

Samsung SDS turns the Intelligent Factory into a reality for customers across all sectors of manufacturing, leveraging its Nexplant platform and working in partnership with global partners recognized for unrivaled excellence in their respective fields.

25 solutions and 13 platform-based intelligent services

Offer intelligent services based on the Nextplant platform and solutions in alignment with the professional solutions offered by global partners

Deliver tailor-made service based on extensive project experience

Establish a portfolio of more than 300 customers from wide-ranging industries as well as nearly 1,300 deployment cases with Samsung affiliates and domestic & overseas customers

Top-notch professionals across the entire Intelligent Factory domain

Hire professionals on manufacturing/facility/quality (yield), reverse logistics and facility control design, and plant intelligence engineering

Nexplant MES, PLM, SLM Intelligent product design and manufacturing execution	Features	· Increase product/process productivity through the real-time control and integrated management of manufacturing processes, resources, and facilities · Improve timely market response by adopting innovative processes for product design, R&D, and validation · Raise product yield and quality by identifying defects and analyzing their causes through big data and AI solutions · Improve facility productivity through the optimal operation enabled by management/control/analytics solutions
	Main Achievements	· Established a global manufacturing execution system for Samsung Electronics' set business and a manufacturing AI platform for Samsung Electro-mechanics
	Future Plans	· Expand AI platform-powered intelligent manufacturing business and Nexplant VI intelligent testing business · Strengthen data analytics business on manufacturing AI and big data analytics
Nexplant EAM, MCS Intelligent manufacturing infrastructure and logistics equipment	Features	· Optimize the inter-process facility movement of materials, semi-finished products, and finished products based on HW/SW convergence solutions · Maximize the efficiency of product loading/unloading and storage based on HW/SW convergence solutions · Create a stable shop floor environment through infrastructure facility control and integrated monitoring · Establish business continuity by providing a safe and compliant shop floor environment
	Main Achievements	· Undertook an automatic packaging material supply project for Amore Pacific and an overseas plant facility project for a Samsung affiliate
	Future Plans	· Expand logistics automation business in the retail sector by strengthening the coverage of HW/SW convergence solutions · Establish the Edge Intelligence platform to expand facility business
Nexplant 3D eXcellence, VI Intelligent plant design and operation	Features	· Optimize design and shorten delivery through design collaboration as well as design/construction alignment services and solutions · Optimize the productivity of equipment/materials, and reduce costs and construction periods based on management solutions · Ensure the safety and efficiency of facility operations by swiftly and accurately detecting anomalies and taking actions in the field
	Main Achievements	· Launched the Nexplant platform, and established a collaboration system with global partners in the design sector
	Future Plans	· Expand business in the respective design, construction and operation sectors on the basis of collaboration with partners, and launch the Nexplant 3D eXcellence platform

INTELLIGENT ENTERPRISE

The advancement of information technology is giving rise to the emergence of new technologies day after day, and customer needs are changing in a rapid and unpredictable manner. Samsung SDS's Intelligence Enterprise aims to improve business efficiency and maximize global competitiveness by delivering core services powered by latest information technology, from cloud and mobile to big data.

Our Business

Samsung SDS provides total IT services on the strength of its industry-specific knowledge and IT expertise, ranging from consulting to the development and operation of core systems that serve as the foundation of IT competitiveness, to assist customers with successful business execution.

IT services customized and optimized for the industry and needs of customers

Maximize customers' competitive edge through the swift reflection of customer requirements and stable system operation

Total IT services ranging from consulting to system development and operation

Develop and operate information systems that span from business management consulting to ERP, SCM and general business operations based on cloud, big data, mobile and other latest information technologies

IT experts with extensive business experiences

Professionals with experience in wide-ranging industries – electronics/manufacturing/service/finance – and expertise in consulting, development and operation of ERP, SCM, CRM and other core systems

Samsung SDS offers IT services optimized for industry-specific needs across electronics, manufacturing, service and finance to assist customers with successful business execution.

ERP	Maximize work productivity, advance real-time management, and instantly respond to market changes based on next generation ERP enabled by intelligent automation technology

CRM	Improve marketing efficiency and maximize its outcomes through customer data analytics

SCM	Leverage real-time supply chain simulations to reduce decision-making lead times while optimizing the use of resources to improve operational efficiency

ERP (Enterprise Resource Planning)

Deliver PI consulting and ERP system development/ operation services to assist the integrated management and optimization of company-wide business resources

Features	· Perform ERP consulting and development across diverse industries for 27 years since deploying SAP ERP for the first time in Korea · Leverage intellectual assets(Smart ERP) and pre-built solutions to deliver optimized customer services · Provide total ERP services from assessment and consulting to development and operation, and deliver Intelligent ERP powered by new digital technology(AI, cloud) · Employ Korea's largest pool of professional consultants with expertise on industry/ERP solutions (nearly 1,500 persons) · Secure business continuity and promptly respond to business changes through integrated global service operation services
Main Achievements	· Performed ERP development and operation for nearly 300 sites across 50 countries · Served wide-ranging domestic/overseas customers - Samsung Electronics and its related businesses, large & small companies, and public/finance sectors - through ERP development and operation
Future Plans	· Expand the next generation ERP business based on the completion of Samsung Electronics' Next ERP project and success stories · Expand the overseas business through global strategic collaboration with SAP and CMC of Vietnam

CRM (Customer Relationship Management)

Provide consulting and system development/ operation services to assists customers in improving their marketing performance based on data

Features	· Perform maturity assessments and marketing strategy consulting to maximize customer experiences · Improve customers' marketing outcomes through wide-ranging new marketing technology and solutions · Provide customer data integration and analytics services to offer marketing insights · Provide global marketing platform development and operation services
Main Achievements	· Developed global marketing/sales/service systems for Samsung Electronics · Developed and operated Samsung Electronics' samsung.com and e-commerce platforms
Future Plans	· Expand the customer data analytics business based on analytics platforms · Launch a marketing BPS business on the basis of digital marketing platforms

SCM (Supply Chain Management)

Deliver and develop faster, smarter and more flexible supply chain management solutions based on in-memory and AI platforms

Features	· Provide demand prediction automation based on AI prediction modeling as well as insights · Assist decision-making based on scenario planning and real-time simulation planning to swiftly respond to changing business conditions, market uncertainties and unexpected situations · Support system/data-based S&OP meetings while providing analytics-enabled early warning systems and user-customized supply chain dashboards · Provide AI-based automated planning data quality reviews, planning issue cause analysis, and solution guides · Employ Asia's largest pool of SCM experts with 15-year proven track records in undertaking more than 200 SCM process innovation/system development/operational support engagements for nearly 120 clients mainly in the manufacturing industry
Main Achievements	· Developed and operated Samsung Electronics' GSCM, automated AI-enabled sell-out forecasting, and deployed mobile SCM · Developed a scenario-based real-time planning system for Samsung Electronics' DS operations
Future Plans	· Provide Best of Breed convergence services on the basis of next-generation SCM platforms · Provide AI-based sell-out demand prediction automation BPS

INTELLIGENT LOGISTICS

Digital innovation has just begun in the logistics service industry with the power of information technology. As the global business landscape grows increasingly complex and the boundary between logistics and IT becomes blurred, IT-enabled innovative supply chain management and efficient logistics operations have become a determining factor for business competitive edge.

Our Business

Samsung SDS's Logistics Business Process Outsourcing (BPO) delivers comprehensive logistics services that span logistics innovation consulting as well as logistics execution services including seaborne/airborne/land transportation, warehouse management, and customs processing on the basis of its global logistics network and state-of-the art IT systems.

Improve platform-based logistics visibility and pursue automation

Enable the real-time monitoring of transport status of global logistics operations and provide an automatic logistics expense settlement system

Optimize logistics expenses

Bid for short/long-term contracts based on the world's 10th largest cargo volume, and set optimization plans on logistics operations and transport routes

Strengthen supply chain efficiency and logistics operational competency

Offer information to identify necessary improvements and strengthen operational capabilities to establish a virtuous cycle in the logistics industry, from demand forecast to final delivery

Integrated Logistics

Integrated global logistics service

Features	· Built a network of 227 sites and 61 locations across 38 countries · Perform global end-to-end logistics operations on the basis of the single platform that delivers integrated support from supply chain planning to logistics execution · Offer competitive rates through cooperation with diverse global logistics service providers (LSPs)
Main Achievements	· Provided nearly 1,500 global clients global clients with logistics services · Became the world's 1st to adopt blockchain technology for the export customs logistics service launched by the Korean Customs Service · Signed a blockchain-enabled seaborne logistics business agreement with ABN AMRO, one of the three largest Dutch banks, and the Port of Rotterdam Authority handling the largest cargo volume in Europe
Future Plans	· Consistently expand logistics business with external customers · Expand business driven by AI, blockchain, big data, and other new technologies · Open a flagship warehouse powered by new technology

Digital Forwarding (Cello Square®)

Online logistics service optimized for global e-commerce

Features	· Align with optimal shippers by nation and region · Provide real-time global visibility and preemptively respond to issues · Ensure transparent settlement management through system-based automatic settlement
Main Achievements	· Provided nearly 100 domestic e-commerce businesses with import/export logistics services
Future Plans	· Expand the express/air/marine transport modes · Identify optimal matches between transport mode/shipping partner · Deliver logistics-finance convergence services(blockchain-based trade document management, export escrow, trade finance, etc.)

CLOUD & CYBER SECURITY

Cloud

When you store your data, you can do so within your working station but also you can use the internet to store your data within a central server or a cloud. Using the cloud environment, you can extract data not only from your working station but also from anywhere anytime, just as you can witness the same clouds regardless of your location.

Our Business

Samsung SDS leverages its industry-specific know-how and its capabilities built over the past 30 years in operating Samsung's IT systems to successfully transform customers' data center infrastructure into the cloud environment that best serves their business purpose and policy.

SDDC-based data center

Virtualize IT resources and data center facilities – server, storage, and network – and flexibly allocate resources according to varying workloads in order to deliver operational automation

Hybrid-cloud platform

Enable the integrated management of diverse clouds, provide an at-a-glance view of data management and billing, and support seamless mobility between heterogeneous clouds

Extensive technology capabilities

Ensure successful transfer to and optimization of the cloud environment on the basis of infrastructure operational experience, and employ experts to serve public clouds including AWS and MS Azure

SDDC-based Cloud Data Center (as of the end of Feb. 2020)

Samsung SDS is broadening its cloud data centers with the SDDC(Software Defined Data Center) concept in mind, and delivers a cloud environment recognized for exceptional scalability and operational stability through its network of data centers – four in Korea and thirteen overseas. In June 2019, the Chuncheon Data Center was completed.

Data Center Equipment Virtualization

Eliminate hardware dependence and reduce the time taken to introduce and deploy equipment through the software-based virtualization of data center hardware equipment

Automated Operational Environment

Use software-based APIs and interlocking interfaces to enable integrated software-powered resource management, automate infrastructure operations, and improve operational efficiency

Advanced Capacity Management Service

Flexibly adjust the use of IT infrastructure as the scale of service increases or decreases so that users make payments under the 'pay as you go' principle

SDS Cloud

Deliver tailor-made cloud services, from consulting to transition and operation

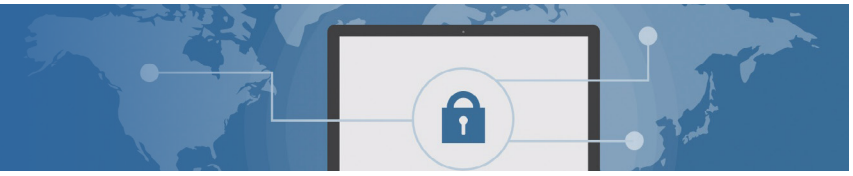
Features	· Promptly respond to customer requirements based on domain-specific knowledge (e.g. manufacturing, financing, etc.) · Offer the cloud architecture optimized for industry/business characteristics · Deliver globally-acceptable high-availability (99.999%, 5 minutes or less in annual downtime) · Provide wide-ranging platforms (PaaS) across infrastructure (IaaS), S/W, and development/analytics/ blockchain
Main Achievements	· Undertook cloud transition projects across diverse industries, including electronics, manufacturing, financing, and service · Undertook cloud transition projects to help customers shift from domestic to overseas electronics/ manufacturing production lines · Secured Kubernetes-based PaaS services · Offered GPU-enabled cloud services to adopt AI/deep learning · Added the Chuncheon Data Center to the portfolio
Future Plans	· **Build additional data centers to respond to the growing cloud demand** · **Expand industry/business-specific services** : public/financing cloud, ERP/MES, etc. · Introduce high-performance, high-capacity cloud service to embrace AI, big data and other new technologies · Secure development methodologies, including DevOps, CI/CD, and MSA

SDS Cloud Managed Service

Deliver Public Cloud services optimized for customer business on the basis of the Multi Cloud platform

Features	· Offer stable services based on the experience of conducting managed service business as well as the large-scale operational capabilities accumulated since 2013 · Contribute to reducing customers' TCO by optimizing IT resources, automating the operational suspension of unused servers, and optimizing Spot-Inst and GPU · Deliver hybrid cloud services through alignment among multi clouds, including SDS Cloud, AWS, and Azure · Provide an integrated platform to recommend the optimal cloud environment, perform integrated multi cloud monitoring, and optimize costs
Main Achievements	· Expanded multi cloud services mainly for AWS and Azure · **Delivered platform-based AWS-Azure integrated cloud management services**: product recommendation, cost optimization, etc. · Secured automatic multi cloud migration tools for multi clouds · Broadened partnerships to extend the coverage of public cloud service (Alibaba, Tencent) · Expanded partnership with VMC(VMware Cloud)
Future Plans	· Expand the customer base through Cloud SI/Managed service business that combines app development and operational service · Strengthen hybrid integrator service offerings that promote public-private alignment on the basis of customer business characteristics (security/regulations, NW Latency) · Achieve Software Reliability Engineering(SRE) to automate infrastructure and app operations

Cyber Security



When a business suffers damages from security incidents, it would take at least KRW 5 billion per incident just to recover from direct damages (e.g. system recovery), not to mention indirect costs caused by tarnished corporate reputation and falling stock prices. As Advanced Persistent Threats (APTs), that attempt strategic infiltrations based on the meticulous analysis of a specific organization, and indiscriminate malicious code attacks are constantly on the rise, businesses are required to further tighten the protection of their critical information assets.

Our Business

Samsung SDS merges its industry-specific security know-how across electronics, financing, manufacturing, and service with intelligent security technology to deliver the security solutions and services that best serve customer business.

Deliver tailor-made services based on extensive business experience

Leverage Samsung SDS's unique methodology to assess problems and identify necessary improvements

Enable AI-powered integrated intelligent security

Preemptively respond to ransomware and malicious code attacks through machine learning-enabled threat detection, and strengthen constant, proactive, and adaptive security monitoring

Secure market-leading security technology capabilities

Deliver optimal security consulting based on 20-year experience in security operations, and deploy a dedicated security core lab and professionals including an intelligent security technical support team

Security Consulting

Consulting to guide customers on how to diagnose and improve the security vulnerabilities of their IT systems

Features
- Identify customers' current level of capacity to respond to latest hacker attackers through the infiltration test performed by professional white hackers
- Prevent redundant investments by diagnosing the level of maturity by security management area and by prioritizing the necessary improvements to be made

Main Achievements
- Provided consulting to detect security anomalies and diagnose IT vulnerabilities for financing, manufacturing, and service sector customers

Future Plans
- Launch managed security system consulting service for overseas customers, and strengthen cloud security consulting

Managed Security Service

Security threat detection and response service offered through collecting security system log data in real time and performing correlation analyses

Features
- Operate an extensive pool of professionals recognized for their abundant experience and technology in such key managed security service areas as security threat analysis, detection rule development, incident analysis/response, and TI (Threat Intelligence)
- Maximize the efficiency of security threat detection through large-scale security log data analyses based on AI, TI and other new technology

Main Achievements
- Delivered hybrid operation and TI services by deploying an independently-developed AI-enabled security threat detection model

Future Plans
- Launch an AI-powered security operation platform business, expand internal/external business through customer-specific tailor-made services, and strengthen overseas operations on the basis of collaboration with local partners

Cloud Security Service

Optimal security service delivered in consideration of the characteristics and possible threats of the cloud environment to ensure the safety of cloud applications

Features
- Support the largest number of clouds in Korea, and became the 1st-ever Korean company to become an AWS Security Competency partner
- Deliver automatic security services that enable customized application for wide-ranging clouds, including IaaS and SaaS

Main Achievements
- Launched a new cloud security service business(cloud-based malicious code operation, SaaS protection, automated inspection of public cloud infrastructure)

Future Plans
- Provide security consulting services to customers who switched to a new cloud and multi-cloud support services while diversifying SECaaS product offerings

Security Solution

Security solution to preemptively address latest security threats and protect wide-ranging customer environments

Features
- Deliver proprietary solutions that leverage Samsung SDS's know-how on efficient policy management and stable operation
- Offer intelligent security solutions to assist customers in responding to increasingly sophisticated security threats (e.g. APTs, malicious codes)
- Provide end-to-end encryption solutions that span from corporate communication networks to data

Main Achievements
- Secured next-generation endpoint security solutions and strengthened the solution line-ups for exclusive distribution

Future Plans
- Expand the solution sales channels and strengthen the external solution business including public procurement

AI & ANALYTICS

In line with the growing corporate needs for big data-based business forecasts and efficiency improvements, Artificial Intelligence (AI) is drawing attention more than ever for its capability to think, learn and develop just as human beings. AI assists users in swiftly gaining insights from collected data and making forecasts in so doing while providing intelligent digital workforce capable of having natural language conversations with humans to ultimately bring added efficiency to business operations.

Our Business

Samsung SDS delivers data analytics, Natural Language Processing (NLP), and deep learning-powered visual analytics as platforms based on machine learning technology.

Expediently analyze even large-volume corporate data to generate insights

Analyze the data collected from manufacturing, logistics, retail, healthcare and other varying industries to generate optimal solutions to reach the set target

Improve work efficiency through conversational work automation solutions

Combine AI capable of processing natural languages and learning on its own with Robotic Process Automation (RPA) to improve work accuracy and productivity

Perform deep learning-powered video analytics applicable for wide-ranging industries

Extract and classify desired information - facial features or movement anomalies - from real-time video data to use such data for defect analysis or marketing

Samsung SDS's AI service is deployed in manufacturing, logistics, retail and other diverse sectors to contribute to generating customer value.

Manufacturing	Leverage extensive data to predict product defects and control yields

Logistics	Predict transport delays and optimize transport routes through real-time tracking

Retail	Improve the efficiency of store operation through product sales forecast, market response analysis, and store-specific customer traffic forecast & analysis

Brightics AI

Integrated AI platform that expediently analyzes massive data and visualizes such data in an easy-to-understand format

Features

- Serve as an integrated corporate AI platform that combines analytical modeling and collaboration/management functions
- Create a machine leaning/deep learning modeling environment that enables the high-performance analytics of structured/non-structured data
- Provide a visualized analytics environment for working-level users to perform analyses in an easy and convenient manner
- Transform the analytics models used by professional analysts into analytics apps to make them readily available for working-level operations
- Automatically recommend auto labeling and deep learning models to minimize manual image preprocessing

Main Achievements

- Configured large/middle/small capacity data analytics environments through the adoption of MSA
- Secured industry-specific analytics models – anomaly detection, optimization, etc.
- Developed an analytics application system for a range of operations at Samsung Electronics: demand prediction, quality analysis, and customer analytics
- Performed analyses for major Samsung affiliates- Samsung Electro-Mechanics, Samsung SDI, and Samsung Display
- Adopted for public sector application – KEA big data platform and Suwon City Hall's smart city challenge testbed project

Future Plans

- Broaden the on-cloud-enabled analytics model services
- Provide container-based individualized analytics environments and MLOps
- Diversify business offerings and expand the analytics ecosystem through domestic/overseas channel partners

Brightics Studio

Lightweight open source version of the Brightics AI platform, an integrated AI platform of Samsung SDS

Features

- Allow non-experts to easily install in their PC environment to access a range of advanced analytics functionalities free-of-charge
- Support the generation and servitization of analytics workflows through drag & drop, without program coding
- Enable users to freely use their script-based analysis function within the workflow
- Provide rich learning materials – scenario-driven tutorials and advanced analytics modeling simulations

Main Achievements

- Became the 1st in Korea to unveil an open source version of the data science platform that enables the development of advanced analytics services
- Created and revitalized a domestic analytics ecosystem through Brightics Studio
  - Operated the Brightics Academy at major domestic universities
  - Honored with the Ministry of Science and ICT Award at the ImpaCT-ech Korea in 2019

Future Plans

- Align with DL modelers to support deep learning analytics
- Enable the report function to visualize analytical outcomes
- Use Brightics Studio to form and facilitate a domestic analytics ecosystem – host analytics competitions for undergraduates

Brity Works

AI platform-based conversational work automation solution
(RPA, Robotic Process Automation)
(AI Digital Worker)

Features

- Combine RPA, robotic office software, with chatbot technology so that tasks are ordered, coordinated, and executed in conversational mode and that the automation of simple/repetitive tasks and the accumulation of execution log data result in transparency and traceability
- Automate tasks easily with a recording/GUI-based Drag & Drop approach even without software coding knowledge
- Adopt a plug-in structure that easily embraces latest AI technology as well as an open architecture structure that facilitates the alignment with both legacy and new systems

Main Achievements

- Registered as Samsung Electronics' standard RPA solution
- Deployed for wide-ranging tasks that addressed Samsung Electronics' overseas subsidiaries, affiliates, and external customers

Future Plans

- Deploy visual AI and analytics AI to extend the scope of support to include end-to-end work automation
- Expand overseas business through cooperation with global partners

Brity ICC

(Intelligent Contact Center)

AI platform-based intelligent contact center solution

Features

- Serve as an intelligent contact center platform/solution to improve counselors' work efficiency and deliver differentiated customer experiences through the use of such AI technologies as voice recognition, natural language understanding, text analysis, and omni-channel
- Provide counselor support(real-time knowledge-based recommendation), counseling analytics(counseling outcome summary/quality assessment), and customer counseling(chatbot/voicebot)

Main Achievements

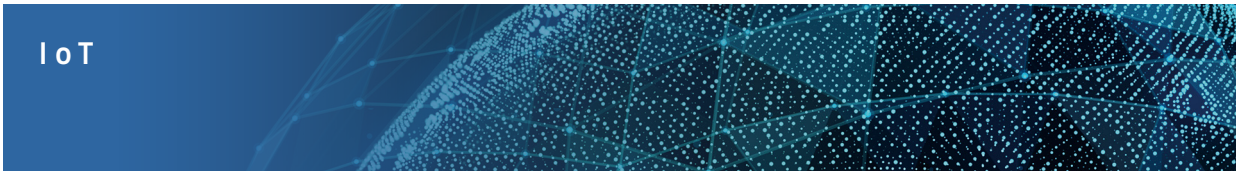
- Developed DB Insurance's smart contact center and Samsung Electronics' intelligent contact center

Future Plans

- Develop AI-powered intelligent contact centers that support in-house customer counseling services
- Strengthen proactive services by analyzing customer feedback collected through contact centers and then reflecting them in marketing or product development

IoT & BLOCKCHAIN

IoT



Internet of Things (IoT) technology connects different things together to collect data and create new added value in so doing. Today, demand is increasing on IoT platform-based data collection, management, and analytics across wide-ranging domains, including manufacturing, service, and public sector.

Our Business

Samsung SDS's Brightics IoT platform optimizes the collection, operation, and management of enterprise data, and seamlessly links IoT devices with big data solutions and legacy systems.

Support diverse IoT connections and End-to-End security

Support wide-ranging communication protocols and international IoT standards including MQTT, CoAP, BLE, Zig-bee, and Modbus

Enable the collection and high-speed processing of large data

Expediently collect and cleans large data with the use of more than 70 adaptors that contain industry-specific know-how

Allow for easy connections between data and applications

Provide APIs and development support tools to enable connections between IoT data and their corresponding business logic and applications

Samsung SDS's IoT service is deployed across manufacturing, smart home, construction, building and other varying sectors to contribute to creating customer value.

Manufacturing	Use abundant data to predict product defects and control yields
Smart Home	Connect diverse home devices through IoT technology and connect them with big data analytics to support a safe and convenient life
Construction/Building	Use the data gathered through IoT sensors to track the location of key materials in real time and offer environmental safety and integrated building control services

Brightics IoT

IoT Platform

Features	·Offer diverse IoT protocols as well as solutions to align with industrial devices ·Collect and cleanse data from wide-ranging legacy systems through the use of more than 70 adaptors ·Adopt End-to-End security technology applicable every step of the way from terminals and platforms to APPs ·Inspect devices in real time and troubleshoot issues through IoT-enabled remote monitoring ·Assist the expansion of platform functionalities through customer services and API development support ·Provide anomaly detection and analytics solutions in alignment with big data analytics platforms ·Provide industry-specific integrated offerings through the combination of partner solutions: manufacturing, construction, building, urban, and agriculture
Main Achievements	·Included in the Gartner 'Competitive Landscape' report as an Edge-based enterprise IoT platform ·Developed a high-security IoT business project and secured BP (DSTA) ·Advanced Brightics IoT with stronger Edge Computing capabilities ·Launched an IoT platform-based integrated building management solution ·Signed an MOU with the global player "Schneider Electric" ·Selected as a standard IoT platform for Samsung Electronics' semiconductor business ·Selected as a main vendor for the Forrester Wave Industrial IoT platform ·Secured the RTLS/AR/Security 3rd Party Eco
Future Plans	·Develop smart city data platforms and secure relevant BPs ·Advance the functionality of Intelligence Edge Computing ·Join the 2020 Gartner Magic Quadrant

Blockchain

Blockchain is encryption-based innovative technology that enables transparent and efficient data sharing and management among parties. As data blocks, chained to each other, are disseminated and validated in real time among all network peers, this ensures the credibility of data without relying on any intermediary.

Our Business

Samsung SDS leverages blockchain systems for a wide array of industries, and delivers Nexledger, a blockchain platform optimized for the enterprise environment, on the basis of its accumulated experiences and capabilities. Nexledger's scalability is guaranteed beyond industrial, channel, or regional limitations, and its deployment brings with it expedient and efficient services.

Fast Transaction

Enable expedient transaction processing through the improvement of distributed consensus algorithms as well as additional performance improvement

Interoperability

Ensure the flexible delivery of blockchain services through standard APIs based on the integration of diverse blockchain technologies

Security

Improve security through stringent node participation management, data encryption, and personal data protection technology

Cloud Service

Offer the Nexledger platform in the Cloud environment to allow for easy deployment and scalability

Digital Identity	Safely share user identification information among authorized participants, and allow for the development of an independent authentication system
Digital Payment	Reduce the transaction cost while improving the efficiency of the payment process through the use of value transfer
E-Contract	Reduce the cost and time taken for the contract process through e-contract management, and improve security through the prevention of document forgery
Supply Chain	Improve the efficiency of the trade process through the transparent real-time sharing of contract information/logistics data among participants

Nexledger Universal

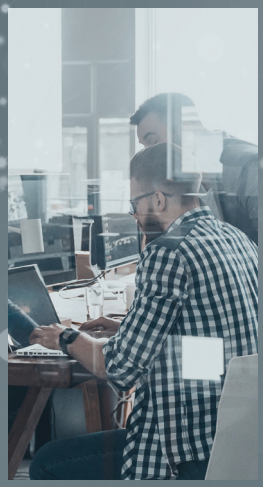
Enterprise blockchain platform that provides standard APIs through the integration of major blockchain technologies

Features	·Choose and modify the blockchain technology that caters to customer needs ·Improve the efficiency of service development by providing frequently-used blockchain standards in standardized API format ·Ensure advanced blockchain management monitoring and enable managers to instantly verify and control the status of the situation
Main Achievements	·Undertook a pilot project for the Korean Customs Service to use blockchain technology for export customs logistics services(Jan. 2019) ·Published the blockchain transaction speed acceleration module Nexledger Accelerator(Feb. 2019) and unveiled its open source(Jun. 2019) ·Named one of the global top 50 blockchain companies with Nexledger by Forbes(Apr. 2019) ·Unveiled the international trading platform ĐΞLIVΞR that ensures interoperability across heterogeneous blockchains(Jun. 2019) ·Joined the initial DID Association, a government-led blockchain consortium(Dec. 2019)
Future Plans	·Expand the blockchain business with a focus on payment, authentication, asset tracking/history management ·Build on the international trading platform ĐΞLIVΞR to expand the global trade/logistics network ·Expand the cloud-based BaaS(Blockchain as a Service, blockchain platform service) business

VALUES & PERFORMANCE

Samsung SDS contributes to creating social value as well as customer value in conducting strategic IT business on the basis of new technology. In 2019, Samsung SDS reached KRW 5.5423 trillion in social value calculated through the quantification of financial/non-financial impact the company generated as a member of society. Going forward, Samsung SDS will continue to create and distribute even greater social value.

1 VALUE PROPOSITION OF SAMSUNG SDS STRATEGIC IT BUSINESS



2 SAMSUNG SDS VALUE CREATION IN 2019

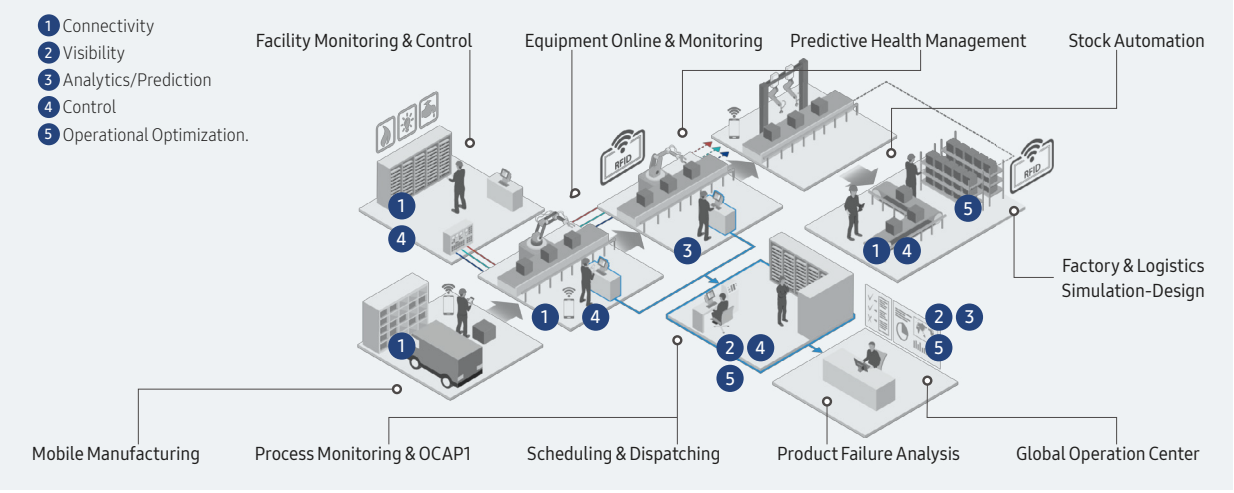
Value Proposition of Samsung SDS Strategic IT Business

Samsung SDS defined Intelligent Factory, AI/Analytics, Cloud and Solution as its strategic IT business that will enable the company to pursue sustained growth with customers and to drive customers' business innovation. In promoting growth and innovation in conjunction with customers, Samsung SDS does not simply contribute to generating greater profits: the company takes a novel approach to resolving customers' issues in order to create customer value and to help address structural challenges in society, thereby bringing positive impact to society at large.

Intelligent Factory

The Intelligent Factory enables inter-facility connectivity, production visibility, analytics & prediction, facility control, and operational optimization, which minimizes variability and eliminates unnecessary waste to ultimately contributes to the efficient operation of all production assets. Samsung SDS extends its Intelligent Factory definition from factory to plant: varying datasets generated from each and every plant operation, from design and construction to operation and maintenance, are consolidated, aligned, managed, and circulated to transform the entire manufacturing process into a truly intelligent one.

How the Intelligent Factory Works



Values Delivered by Samsung SDS Intelligent Factory

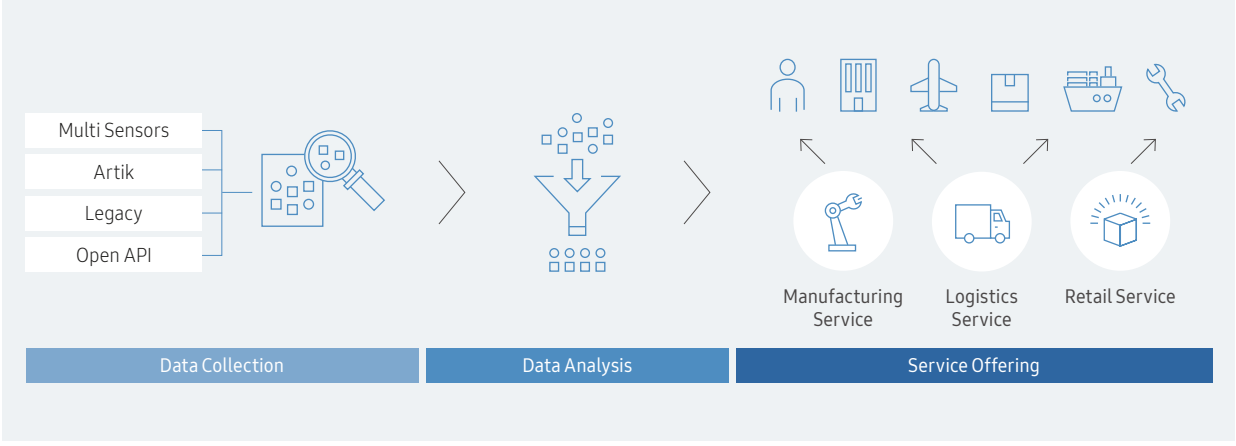
The Challenge	SDS Service & Solution	Customer Value	Social Value
Nexplant MES			
Management difficulties caused by manually identifying defective products	Introduce deep-learning algorithms to automatically detect and classify atypical defect images	Improvement in shop floor quality	Increased efficiency in resource/energy consumption Reduced generation of process-induced pollutants
Complexity of business logic and need to process abundant data	Introduce an IoT platform to collect real-time data, and perform AI platform-based analyses to develop patterns and rules to preemptively detect facility anomalies	Prevention of facility failures and improvement in operational efficiency	
Shop floor uncertainties and variations	Adopt automation across the entire process, and ensure the integrated management of production resources and remote control	Flexible adaptation to changes in product sales and the supply chain	Improved competitiveness of the nation's manufacturing industry
Nexplant PLM			
Lack of inter-departmental communication in collaborating for product development	Create an environment to share product development information in real time	Reduction in delivery time	Strengthened competitiveness of the nation's manufacturing industry
Security incidents caused when layouts/documents are personally	Ensure the integrated management of layouts and documents, and enable web preview without downloading	Reduction in security costs and improvement in security management convenience	
Material disuse that occurs due to the lack of BOM[1] accuracy	Maintain consistency among layouts-design BOM-production BOM through the automated extraction of change data and specification-based BOM	Reduction in operational costs	

1) Bill of Material

AI/Analytics

Samsung SDS's wide-ranging intelligent services are powered by its internal big data analytics platforms and AI algorithms. Samsung SDS combines these platforms and algorithms with IoT, blockchain and other disruptive technologies to perform significant analyses and predictions in the manufacturing, logistics, and retail sectors. They are also applicable to conversational services enabled by chatbots and natural language understanding as well as visual services such as manufacturing defect classification and retail customer behavioral analyses.

How AI/Analytics Works



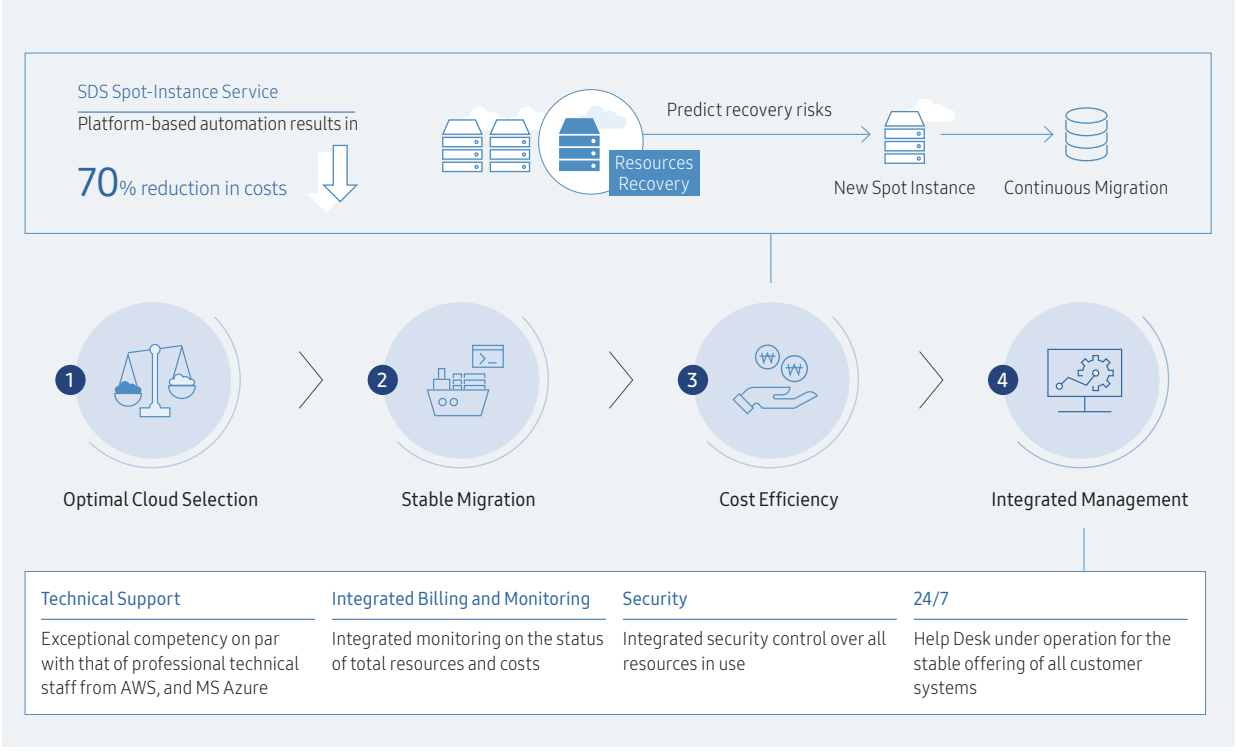
Values Delivered by Samsung SDS AI/Analytics

The Challenge	SDS Service & Solution	Customer Value	Social Value
Brightics AI			
Business uncertainties in marketing, logistics, etc.	Leverage real-time/large-volume/big data analytics to predict emergency situations and customer demand	Reduction in business costs and improvement in adaptation to market changes	Strengthened competitiveness of the nation's industry
Limitations faced by non-experts in accessing and analyzing data	Provide an integrated data analytics environment, and support multiple high-performance analytical functions and convenient analytical modeling	Improvement in data accessibility and analyzability	Support for transition into high value-added industry
Brightics IoT			
Reduction of user convenience due to manual device operation	High-speed data collection and analysis	Increase in daily life and work convenience	Increased efficiency in resource/energy consumption
Concerns over security and safety incidents	Detect behavioral anomalies and perform real-time analyses in the absence of human staff	Improvement in response to emergency situations	Elevated perceived safety of the general public
Brity Works			
Restrictions in service availability due to limited work hours	Ensure uninterrupted 24/7 business operations through chatbots	Improvement in customer satisfaction based on swift search and business handling	Improved accessibility to service on the national level
Errors generated due to the manual operation of simple and repetitive work	Ensure speed and accuracy in business handling through Robotic Process Automation (RPA)	Improvement in the efficiency and quality of HR resources	Support for transition into high value-added industry

Cloud

More than 80% of the global businesses are already operating in the multi-cloud environment to choose optimal cloud services for different types of work (e.g. general business and mission critical business). Samsung SDS offers a total package service from consulting to migration and operation to enable multi cloud services optimized for the enterprise business environment based on its industry-specific expertise, extensive experience in operating and migrating to multiple cloud environments, and unparalleled technology competency.

How Cloud Services Work



Values Delivered by Samsung SDS Cloud Services

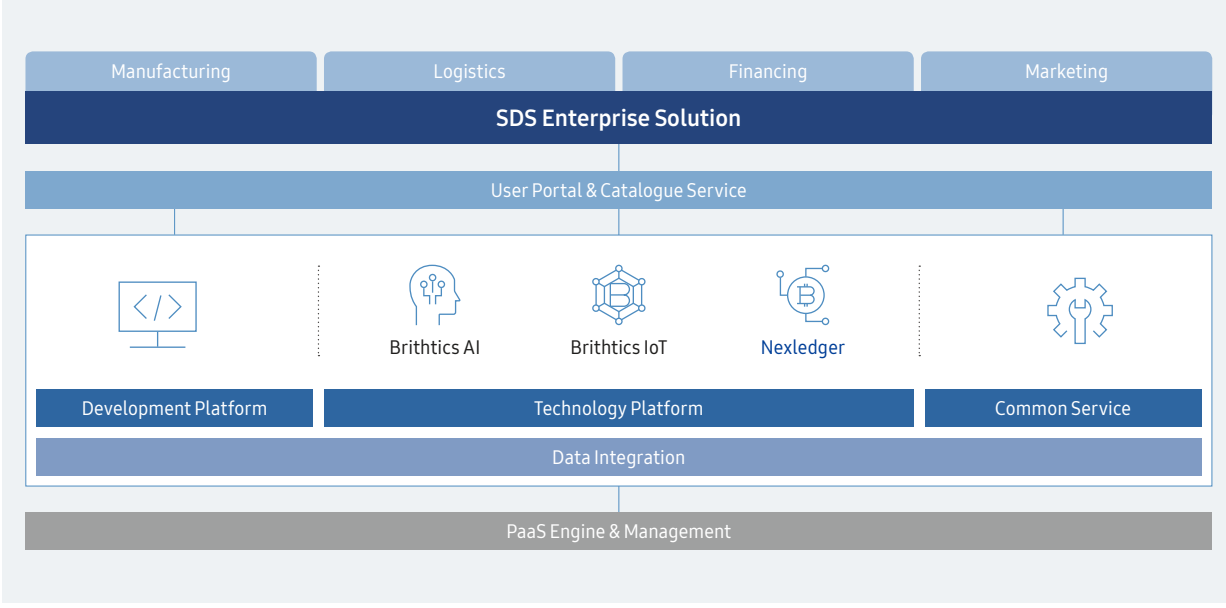
The Challenge	SDS Service & Solution	Customer Value	Social Value
SDS Cloud Managed Service			
Inefficiency in managing corporate resources	Leverage big data analytics to analyze the pattern of using Cloud resources and to suggest cost reduction plans	Reduction in TCO*	Increased efficiency in resource/ energy consumption and strengthened competitiveness of the nation's industry
	Provide integrated resource management through the use of dashboards, resource efficiency measures, and integrated security control functionalities	Resource management with a focus on mission critical business	Improved economic productivity
Cloud Security Service			
Possible occurrence of data leaks and security incidents	Leverage data analytics to detect users' behavioral anomalies and take corresponding actions, and adopt world-renowned white box encryption and homomorphic encryption technology	Safe use of Cloud services and reduction in security costs on the corporate level	Strengthened competitiveness of the nation's industry

* TCO (total cost of ownership): Sum of the up-front investment costs that occur when a company introduces a computing system as well as operational and maintenance costs that occur following the introduction of such a system

Solutions

Created through the convergence of information technology and business that drive the 4th Industrial Revolution, Samsung SDS Solution brings improvements to a wide array of business environments. Not only does Samsung SDS pursue both efficiency and security in customers' business operations amid the increasingly complex and rapidly-shifting business landscape, but also delivers the service and convenience optimized for their respective business so that customers can achieve innovation, building on their own capabilities. Through the expansion and convergence & divergence of the available service areas, Samsung SDS also moves forward a single platform capable of catering to all customer needs to further advance its solution portfolio.

How Solutions Work



Values Delivered by Samsung SDS Cloud Services

The Challenge	SDS Service & Solution	Customer Value	Social Value
Nexshop			
Difficulties in analyzing in-store customer data in real time	Perform real-time analyses on visiting customers for their preferences and in-store behavioral patterns	Support for a strategic marketing approach	Strengthened competitiveness of the nation's industry
One-way communication concerning product and service information	Provide in-store interactive experience, including video and audio support	Reduction in customer communication costs	Improved efficiency in resource consumption through the substitution of unnecessary promotional materials
EMM/Nexsign			
Difficulties in separately managing apps and devices	Adopt comprehensive access and control policies for all apps and devices to streamline policy management	Improvement in convenience for security managers	Reinforced security of the nation's industry
Continuous needs for additional investment in security infrastructure	Adopt Cloud EMM to manage the enterprise mobility environment without additional infrastructure investment	Reduction in security management costs	Increased efficiency in resource/energy consumption
Nexoffice			
Temporal and spatial limitations in relation to collaboration	Improve the efficiency of collaboration through real-time messaging, cloud-based file management, and web conferences	Reduction in travel/space arrangement costs	Increased efficiency in resource/energy consumption, improved productivity at the national level

Samsung SDS Value Creation in 2019

Value Creation Process

Samsung SDS outlines its financial/non-financial value creation process in accordance with the Integrated Reporting Framework recommended by the IIRC (International Integrated Reporting Council). The company expects that this will provide stakeholders with a comprehensive view on its endeavors to create value.

INPUT

Financial Capital
- Listed on the Korea Exchange on Nov. 14th, 2014
- Total No. of shares issued (common stock): 77,377,800 shares
- Financial capital procured through shareholders and investors
- Disclosure of business status through General Shareholder Meetings, etc.

Manufacturing Capital
- Tangible assets: KRW 1.080 trillion
- IT Subsidiary: 8 subsidiaries
- Logistics Subsidiary (including Logistics Joint Ventures): 42 subsidiaries
- Data center(as of the end of Feb. 2020): 4 in Korea, 13 overseas

Intellectual Capital
- Intangible assets: KRW 789.7 billion
- Acquisition of intangible assets: KRW 37.0 billion
- R&D expenditures: KRW 143.0 billion

Human Capital
- No. of employees: 23,403 persons
- Total employee training hours: 583,130 hours
- Average year of service: 13.7 years
- In-house idea contests, in-house ventures and other developer support programs

Social Relation Capital
- Global network of 71 locations across 41 countries
- Strategic alliances and equity investments
- KRW 40.7 billion invested in the Win-Win Growth Funds
- Support for partners through training, technology, patent application, recruitment, and advancement into new markets
- Total social contribution expenditures: KRW 2.52 billion

Natural Capital
- Eco-friendly data center development
- Energy consumption: 1,935TJ
- Waste generation: 1,300Ton
- Water consumption: 254,365Ton

BUSINESS ACTIVITY

Vision and Value

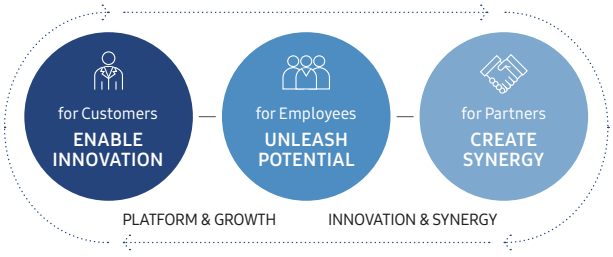
Vision

DATA-DRIVEN
DIGITAL TRANSFORMATION LEADER

Slogan

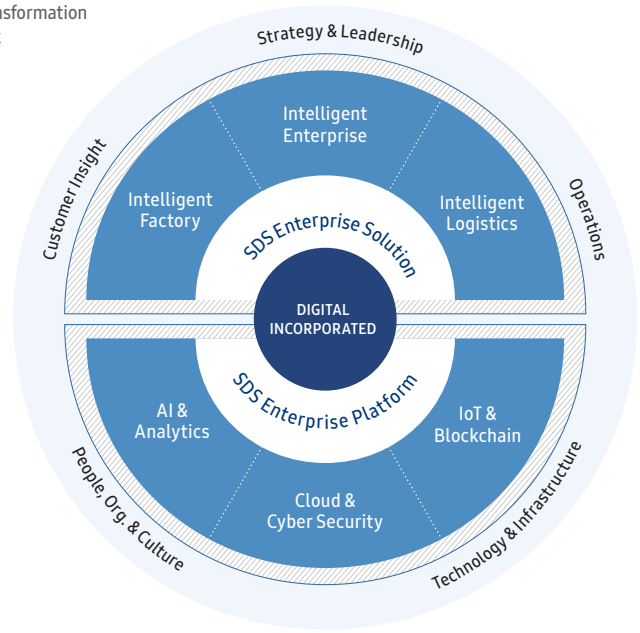
Realize your vision

Customer Support



Services & Solutions

Digital Transformation Framework



OUTPUT/OUTCOME

Financial Capital

- Sales: KRW 10.7196 trillion
- Net income: KRW 750.4 billion
- Earnings per share: KRW 9,521
- Total assets: KRW 9.0212 trillion

Manufacturing Capital

- Sales by Major Product
  - Business solution: KRW 1.5185 trillion (14.2%)
  - Cloud & ITO: KRW 4.3542 trillion (40.6%)
  - Logistics BPO: KRW 4.8469 trillion (45.2%)

Intellectual Capital

- Patents granted (on a cumulative basis): 1,650 patents
- Honored at the iF Design Award in Germany in 2018
- Development of new technology – original encryption
- technology, remote facial recognition, and analytics engines, etc.

Human Capital

- Female managers: 13.2%
- Retention of 940 data scientists
- Mini-MBA completed by nearly 320 employees
- Winner at the World StarCraft AI Competition in 2018
- 1st-ever spin-off established out of the in-house idea contest in 2018

Social Relation Capital

- Strategic agreements and investments made with global IT businesses in Vietnam, the U.S., India and China
- Rated Most Excellent in the Win-Win Growth Index
- Rated Most Excellent in fair trade agreement assessments
- Total No. of social contribution beneficiaries: 16,488 persons

Natural Capital

- GHG emissions: 97,119tCO_2eq
- Reduction in waste generation from the previous year: 146Ton

STAKEHOLDER IMPACT

Shareholders/ Investors

Financial Capital

Procure business funds from shareholders and investors in a stable and consistent manner, and properly distribute the economic and social values created among relevant stakeholders

Customers, Shareholders/ Investors

Manufacturing Capital

Use manufacturing capital efficiently and effectively and expand such capital as needed to continue to deliver high-quality services and solutions

Customers

Intellectual Capital

Develop exceptional services and solutions to drive customers' growth and innovation in order to cater to the needs of existing customers while identifying the needs not met with conventional services and solutions to create new customers and markets

Employees

Human Capital

Recruit and develop talented individuals based on respect for employees' human rights and diversity and create a great work place for developers to pursue mutual growth between employees and the company

Partners, Communities

Social Relation Capital

Assist teenagers in understanding and accessing information technology and constantly pursue mutual cooperation with partners to create a healthy IT ecosystem

Governments, Communities

Natural Capital

Minimize the environmental impact generated from operating data centers, and achieve operational innovation in so doing

Creation and Distribution of Economic Values

Economic Values Created

(unit: KRW million)

Item	2017	2018	2019
Sales	9,299,206	10,034,219	10,719,632
Operating profit	731,559	877,356	990,089
Net income	541,772	638,792	750,449

*as of December 2019, on a consolidated basis

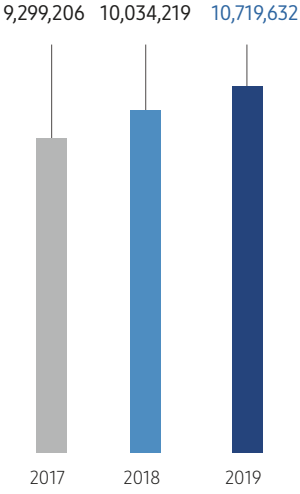
Economic Values Distributed

(unit: KRW million)

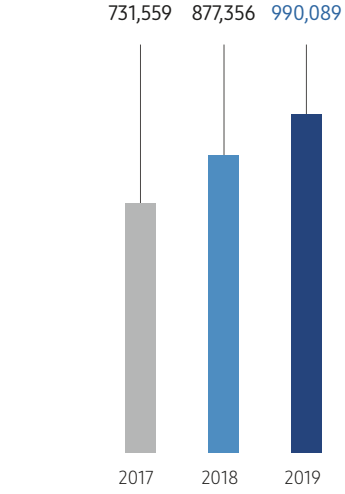
Stakeholder	Item	2017	2018	2019
Communities	Donations	3,242	1,973	3,396
	Social contribution expenditures	1,221	1,287	2,130
Employees	Wages	1,763,033	1,888,760	1,973,832
	Welfare & benefits	315,959	341,768	372,099
Partners	Purchases	1,365,256	1,491,297	1,655,343
Governments	Income taxes, etc.	234,730	348,952	316,802
Shareholders & Investors	Total cash dividends	154,700	154,700	185,640
	Interest expense	1,901	1,667	15,073

*as of December 2019, on a consolidated basis

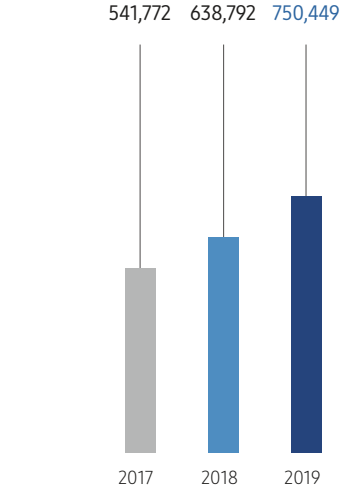
Sales (unit: KRW million)



Operating profit (unit: KRW million)



Net Income (unit: KRW million)



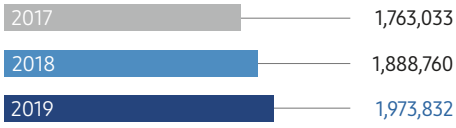
Communities

Donations (unit: KRW million)

Social contribution expenditures (unit: KRW million)

Employees

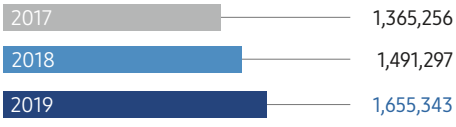
Wages (unit: KRW million)



Welfare & benefits (unit: KRW million)

Partners

Purchases (unit: KRW million)

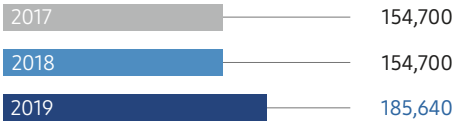


Governments

Income taxes, etc (unit: KRW million)

Shareholders & Investors

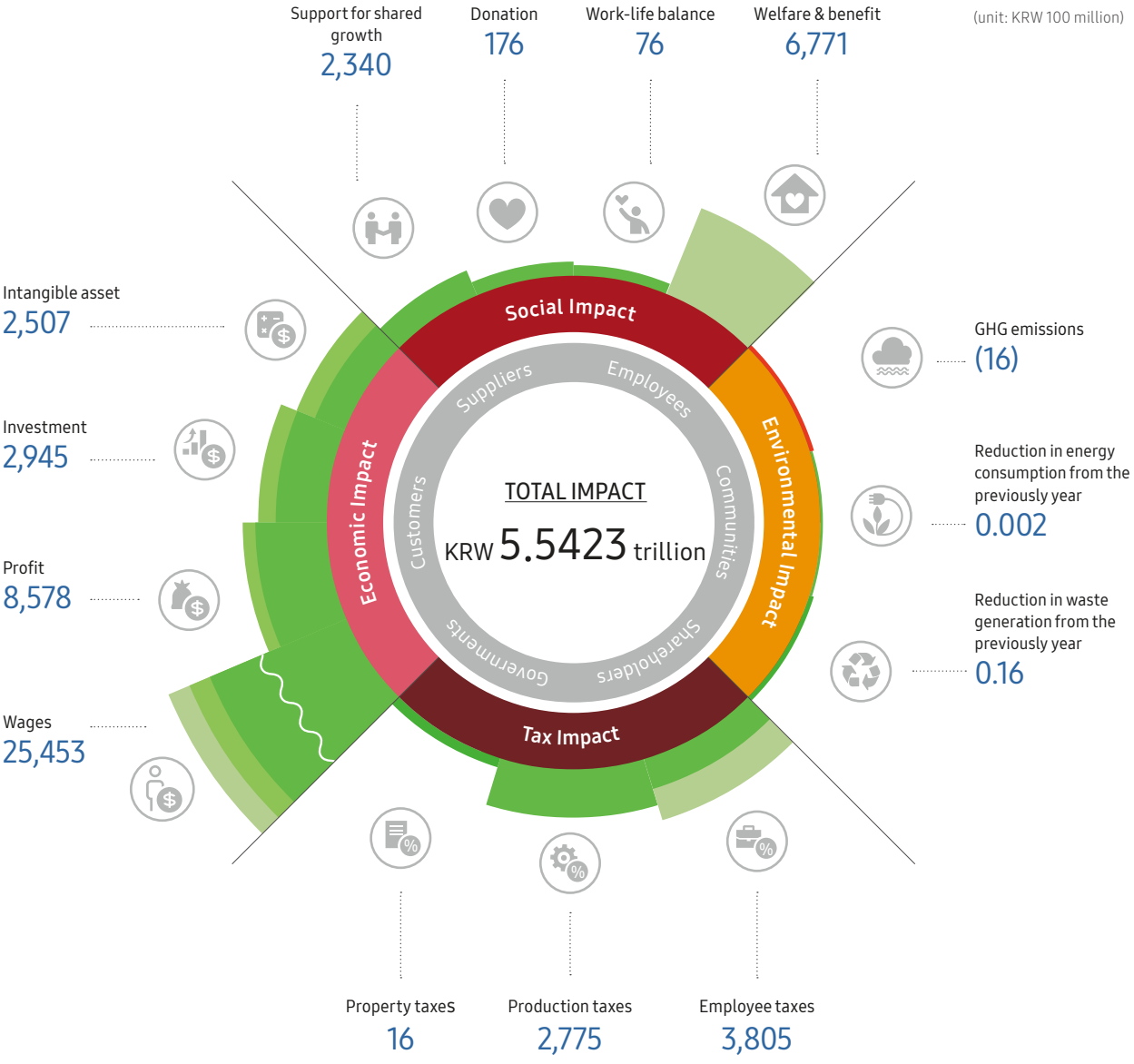
Total cash dividends (unit: KRW million)



Interest expense (unit: KRW million)

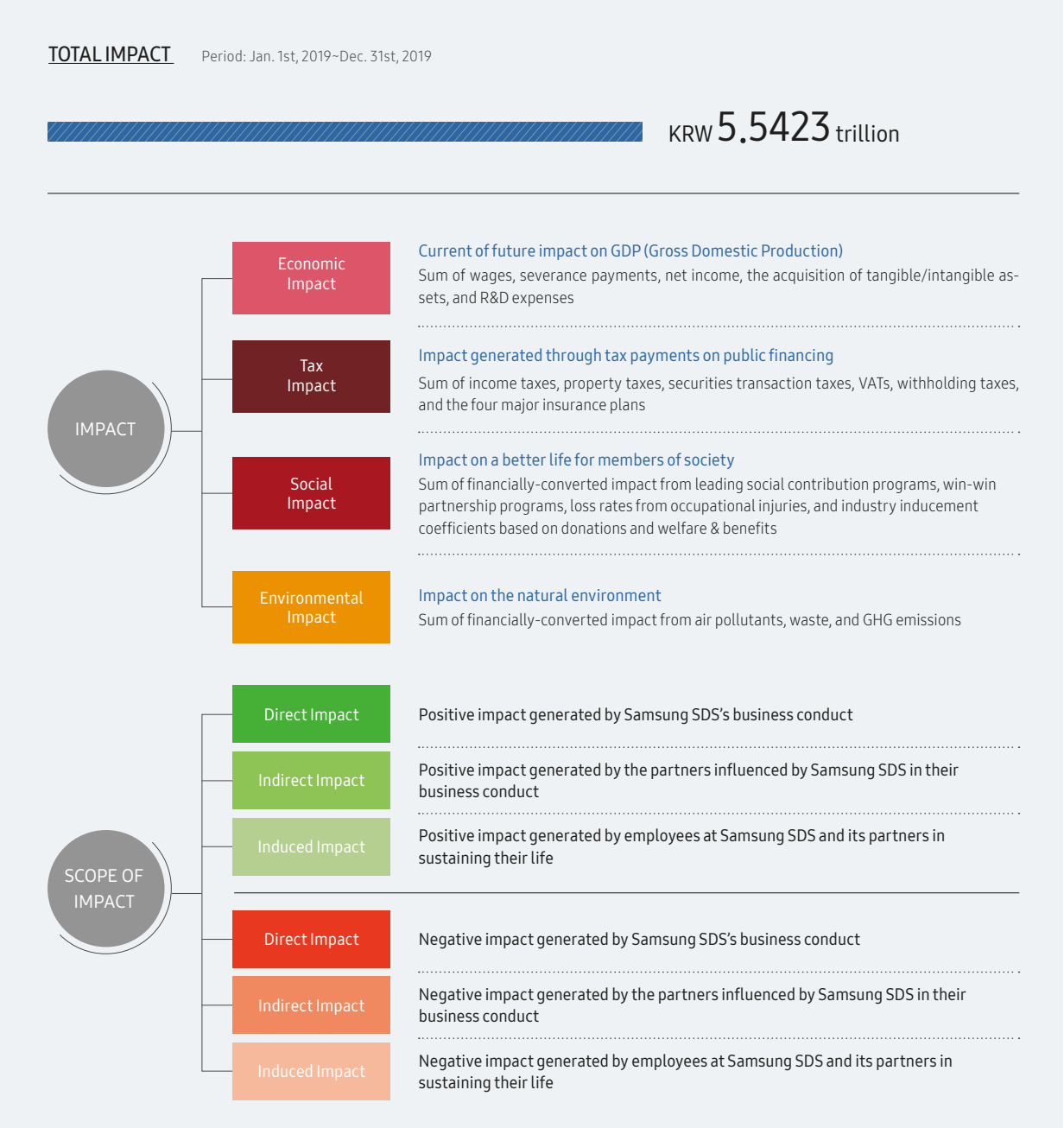
Creation and Distribution of Social Values

Samsung SDS is clearly aware of both the positive and negative impact of its business conduct on economy, society and the environment. This prompted the company to adopt PwC's 'TIMM' methodology to quantify the impact of its non-financial performance as well as the financial value that has been already disclosed through financial reports with an aim to take a more systemic approach to sustainability management. To measure the impact generated by Samsung SDS as a member of society from the aspects of economy, taxation, society, and the environment in its pursuit of mutual growth with stakeholders during the year 2019, the company collected or converted relevant data, and shares the outcomes with stakeholders through this report.



Samsung SDS Total Impact Measure and Management (TIMM)

The Total Impact Measure and Management (TIMM) methodology adopted by Samsung SDS to measure the social values created by the company takes a comprehensive viewpoint to span all aspects of economy, society and the environment, and extends beyond the conventional notions of input and output to consider the results of the actions taken and even their impact. In quantifying the impact the company generated as a member of society and translating such impact in financial terms, Samsung SDS can communicate with stakeholders in the language of business and make better business decisions. The impact from Samsung SDS's business conduct is categorized into Economic Impact, Tax Impact, Social Impact, and Environmental Impact, and is measured based on the scope of positive and negative impact on stakeholders.



STAKEHOLDERS & SUSTAINABILITY

Samsung SDS firmly believes that its corporate sustainability is deeply intertwined with its pursuit of co-prosperity with wide-ranging stakeholders, including communities, customers, employees, partners, shareholders & investors, and compliance & ethics management. This urges the company to identify major sustainability management issues by stakeholder group and meet their expectations accordingly. Samsung SDS will constantly respond to such issues as sound governance, risk management, and compliance management while building future growth engines to seek mutual benefits for the company and communities and taking heed to the expectations of its employees, partners, and communities.

COMMUNITIES

Samsung SDS will fulfill its environmental and social responsibility to thrive in harmony with its local communities.

Operation of Eco-friendly Data Centers

Samsung SDS is proactively responding to climate change issues, as demonstrated in the operation of its Chuncheon Data Center which embraced renewable energy sources and energy efficiency improvement systems.

Chuncheon Data Center

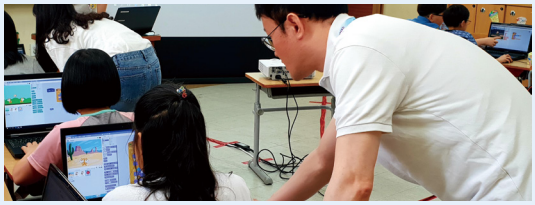
Gaining Internal and External Credibility for Eco-friendly Management

Samsung SDS's data center achieved the ISO 14001 environmental management system certification and the Tier III international data center infrastructure certification. At the DatacenterDynamics Awards Asia Pacific 2016, its data center was honored with the 'Enterprise Data Center Award' for the efficiency and innovation of its data center infrastructure configuration.

The Enterprise Data Center Award

Social Contribution

Samsung SDS is engaged in a range of social contribution programs, from coding education for teens, education on the proper use of IT, and other educational volunteer programs led by employees to community-based grand volunteer festivals, support for sisterhood villages, and Happy Center for juvenile detention centers.



Coding Campus

Employees serving as lecturers in 2019: 645 employees

Teenagers attending the program in 2019: 7,252 teens

* Excluding overseas and local children centers

Grand Volunteer Festival

Employees participating in the festival in 2019: 9,044 employees

Volunteer hours in 2019: 73,884 hours

CUSTOMERS

Samsung SDS delivers customer satisfaction and protects customer information to pursue mutual growth with its customers.

Product & Service Quality Management

Driven by the mission to 'Deliver Impressive Customer Experience through Quality Innovation', Samsung SDS provides customers with products and services of unrivaled quality by operating an independent quality assurance frame, adopting a global quality management system, and addressing service disruptions.

2019 Customer Satisfaction Score
92.5 points

VOC Handling Rate
100 %

Quality Charter

Samsung SDS Quality Assurance Framework

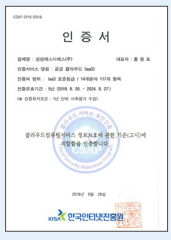
Information Protection

Samsung SDS established its information protection system in accordance with relevant domestic/overseas regulations to reduce security incidents to zero and improve its competitive edge in so doing. Furthermore, the company maintains the ISO 27001 certification, establishes information protection review criteria, and takes security incident prevention and response measures to operate a globally-recognized information protection management system and strengthen customer data protection and management.

No. of Personal Information Leaks Recorded between 2017 and 2019

0 case

ISO 27001 Certificate



Public Cloud(IaaS) Security Certification

EMPLOYEES

Samsung SDS will set the stage for outstanding talent to enjoy their work and pursue their growth.

Procurement & Development of Outstanding IT Professionals

To secure and nurture talented IT professionals, Samsung SDS recruits masters/PhD-degree holders at prestigious universities in Korea and abroad and operates core technology courses and industry-academia collaboration courses. In addition, the company assists the growth of in-house/external developers by operating the developer portal DEV+, hosting and sponsoring developer conferences, and holding the in-house idea competition XEED-LAB.

Mini-MBA Course

2017-2019

Sponsoring developer conferences on 6 occasions

2,241 developers in attendance

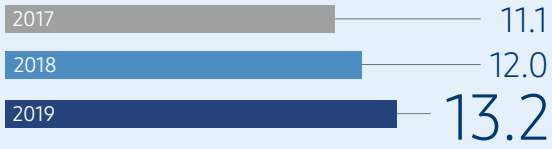
Commercialization of XEED-LAB Projects

Project	Description
ChajazOOm	AI-enabled media search platform
AlphaLaw	Automated detection of risk factors in legal contract documents
Insfiler	Processing of public data for corporate marketing
BotStation	API standardization between the messenger and the chatbot
SAIDA	Advanced AI bot for the Star Craft game
Catius	AI chatbot doll enabled by voice recognition

Diversity and Equal Opportunity

Samsung SDS ensures diversity and equal opportunity for employees by increasing the recruitment of overseas employees and female employees as well as their promotion, operating a standard workplace for the disabled, and providing human rights education and protection.

Ratio of Female managers (%)



Increased Life Satisfaction

Samsung SDS is committed to improving the quality of life for employees by implementing work-life balance programs including flexible work hours, operating a range of insurance, pension plan, and welfare programs, and offering education to enhance employees' employability.

PARTNERS

Samsung SDS contributes to creating a sustainable IT ecosystem to pursue shared growth with its partners.

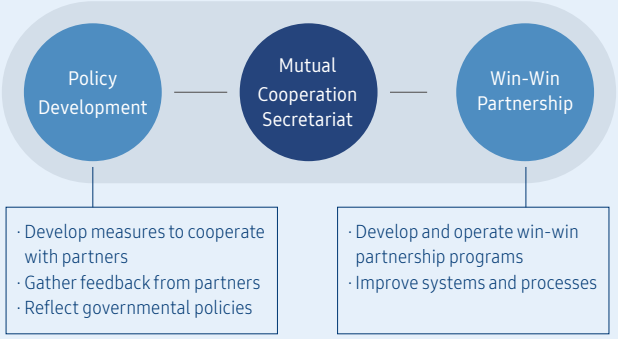
Creating a Sustainable IT Ecosystem

Samsung SDS provides its partners with technology, business, and educational support through the Mutual Cooperation Secretariat, and lends financing support with the help of the Win-Win Management Funds, creating a partner ecosystem in so doing.

1
2018-2019

Rated Most Excellent
for 2 consecutive years
in the Win-Win Index

Win-Win Growth System

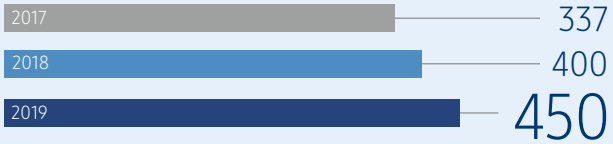


Support for the Sustainability of Partners

Strengthening Partners' Technology Competitiveness

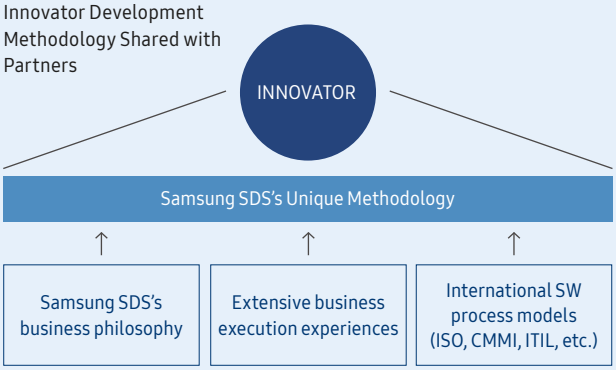
Joint R&D Efforts	Patent Sharing and Technology Protection
Training Support for Partners	Support for the Recruitment of Exceptional Talent

Loans Extended of Win-Win Management Funds
(unit: KRW one hundred Million)



Partner Council CEO Discussion Meeting

Innovator Development Methodology Shared with Partners



STAKEHOLDERS & INVESTORS

Samsung SDS will be ceaselessly committed to promoting sustainable growth and improving corporate value.

Sound Governance

Samsung SDS ensures that its Board of Directors(BOD) is composed of members who bring to the table their expertise in wide-ranging areas to assist the BOD in making strategic decisions from the comprehensive perspective. The company CEO with unrivaled expertise in the IT services sector serves as the general manager, and the Independent Director Recommendation Committee is mandated to review expert candidates for their qualifications and experiences in IT, management, accounting, law and other fields in order to appoint outside directors from diverse backgrounds. These outside directors account for the majority of the BOD to ensure its independence.

BOD Committees

- Audit Committees
- Management Committees
- Related Party Transactions Committee
- Compensation Committees
- Independent Director Recommendation Committee

BOD Composition

Director	Name	Position	Specialty
Inside Director	Won-Pyo Hong	President & CEO (BOD Chair)	IT, electronic engineering
	Sung-Tae Park	Executive VP & Logistics Unit Leader	Business management
	Jung-Tae Ahn	Executive VP & CFO	Management assessment, financial management
Outside Director	Jae-Man Yu	Chair of the Related Party Transactions Committee	Legal affairs
	Hyuck Yoo	Chair of the Independent Director Recommendation Committee	IT, computer science
	Hyun-Han Shin	Chair of the Audit Committee	Finance, accounting
	Seung-Ah Cho	Chair of the Compensation Committee	Business strategy

BOD Meetings Held in 2019

10 meetings

Attendance of Outside Directors in BOD Meetings in 2019

97.5%

Risk Management

Samsung SDS operates dedicated risk management units and programs to prevent financial risks(credit and liquidity risks) and non-financial risks(regulatory violations) that may arise in its business conduct.

Securing Future Growth Drivers

Samsung SDS builds core technology competency through R&D efforts to reinforce internal capabilities while securing new technology through corporate investment, strategic alliance, and M&A to strengthen external capabilities.

Cumulative Ownership of Intellectual Property Rights (as of the end of Dec. 2019)

1,650 cases

New Patent Registrations in 2019

40 patents in Korea

25 patents overseas

Major R&D Outcomes (2016-2019)	
Big data analytics platform	IoT-integrated platform
AI chatbot engine	Data Lake management platform
AI collaborative development framework	Enterprise blockchain platform
AI defect analytics engine	Original encryption technology
Remote facial recognition and analytics engine	Cloud Native Computing

COMPLIANCE & ETHICS MANAGEMENT

Samsung SDS advances compliance management and ethics management as the fundamental drivers behind its journey to become a company that not only survives but lasts for the years to come.

Establishment of an Ethics Management System

Samsung SDS provides training to share its ethics management principles and improve ethics awareness to encourage employees to take the initiative in advancing ethics management while operating whistle-blowing channels to strengthen external ethics monitoring.

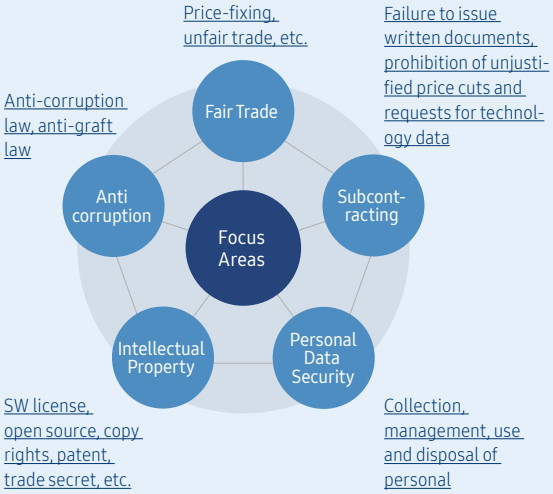
Ethics Management Principles →

1. We comply with all laws and ethical standards.
2. We maintain a transparent organizational culture.
3. We respect customers, shareholders, and employees.
4. We care for the environment, health, and safety.
5. We are a socially responsible corporate citizen.

Reinforcement of Compliance Management

Samsung SDS established compliance management standards, its organizational structure and relevant systems, and focuses on the key areas of compliance management, implementing a range of activities from performing compliance review & training and operating whistle-blowing systems to taking disciplinary measures and awarding best practices.

Focus Areas of Compliance Management

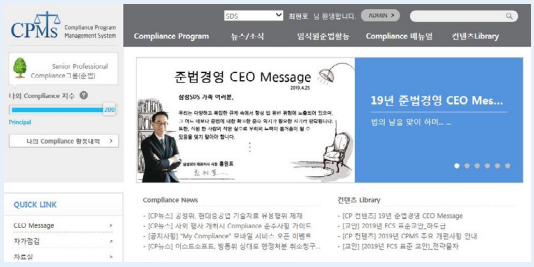


Compliance control standards and relevant regulations were established and are currently under operation to achieve compliance management while chiefs and managers were appointed at the Compliance Council, dedicated compliance departments, and respective organizations.

In accordance with the decision made by the BOD on January 30, 2020, Samsung SDS signed an agreement with seven major Samsung affiliates to participate in the establishment of the Samsung Compliance Committee. Samsung SDS will take action as requested and recommended by the committee to further strengthen its compliance management.

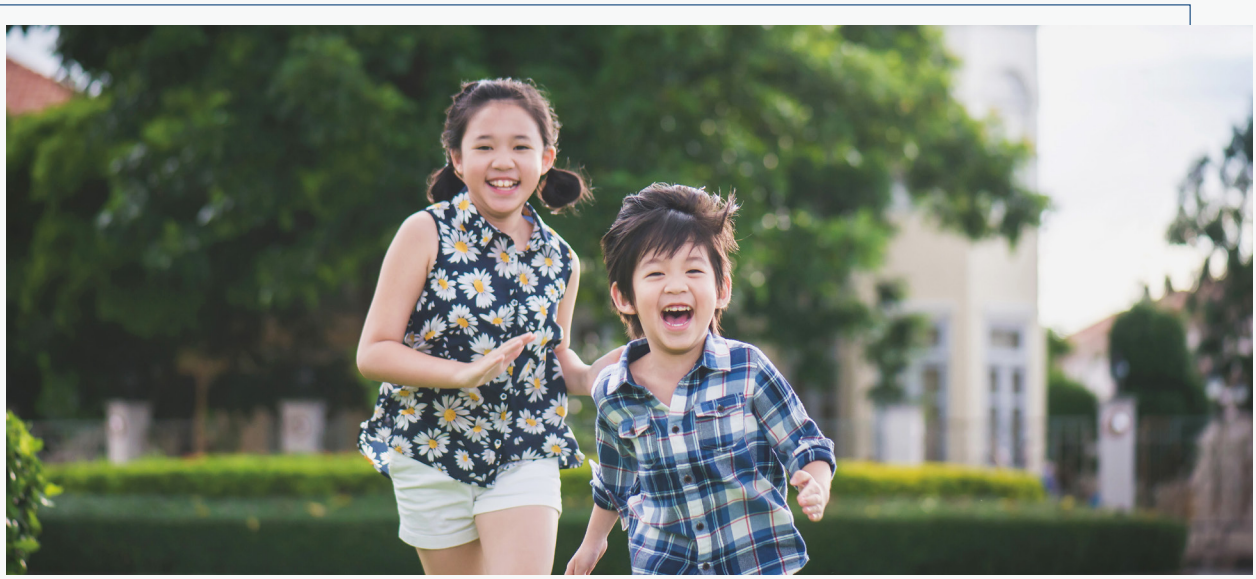
At Samsung SDS, the Compliance Program Management System(CPMS) is up and running to constantly help employees raise their compliance awareness and practice compliance management, and the company is operating varying compliance training programs for all employees.

Compliance Program Management System



COMMUNITIES

Samsung SDS will fulfill its environmental and social responsibility to thrive in harmony with its local communities.



WHY MATTER?

As Samsung SDS aspires to bring innovation and change to society at large through disruptive technology, local communities serve as its key stakeholder that mirrors the present and future of Korea's IT industry. Furthermore, the environmental and social responsibility imposed on Samsung SDS by local communities is fully aligned with customer demand to reduce energy consumption and GHG emissions. This urges Samsung SDS to establish a company-wide environmental management system and to cater to community expectations through social contribution initiatives that improve accessibility to IT.

WE PLANNED & ACHIEVED

Focus Area	2019 Plan	2019 Achievement	Achievement
Establishment of an Environmental Management System	· To receive ISO 14001 (environmental management system) certification audits	· Completed audits successfully and became re-certified	· Achieved
Social Contribution	· To reorganize the social contribution portfolio to focus more on adolescent education based on expertise in the IT industry	· Reorganized the social contribution portfolio to focus more on adolescent education and expanded the operation of coding education for teens	· Achieved

WE WILL

Establishment of an Environmental Management System

In response to the increasing expectations imposed on businesses to advance environmentally-responsible management, Samsung SDS plans to introduce high-efficiency energy systems even more proactively. Furthermore, the company aims to leverage environmental management system audits to identify areas in need of improvement and make necessary improvements to cater to stakeholder expectations for eco-friendly management.

Social Contribution

Samsung SDS plans to add AI and big data, the core technology of the future, to the educational curriculum of its social contribution programs, in addition to coding education provided on the basis of its leading IT educational volunteer program Coding Campus. This will help teens from varying backgrounds elevate their understanding of information technology to develop interest in IT and improve academic achievement in the short-term and to nurture them into top-notch IT talent in the 4th Industrial Revolution era over the long haul.

Establishment of an Environmental Management System

Operation of Eco-friendly Data Centers

Samsung SDS data centers were designated as a participant in the GHG trading scheme introduced in 2015 in accordance with the Korean government's Low Carbon Green Growth Act. This prompted the company to reduce its carbon emissions, use renewable energy sources in operating data centers, and build a GHG inventory system to automatically measure the power consumption of data centers and to compile their GHG emissions data in real time. Such wide-ranging endeavors allow Samsung SDS to proactively respond to climate change and operate green data centers.

Samsung SDS's High-Efficiency Energy System

- Use power-saving flash memory and Solid State Drive for IT systems to maximize energy efficiency
- Leverage innovative energy solutions to power the data centers whose demand is expected to increase continuously (solar water heating, photovoltaic power generation, geothermal cooling/heating system, fuel cell technology, natural lighting, geothermal heat pump, etc.)
- Closely analyze the status of such utilities as air conditioning, electricity, firefighting, and security to increase the management efficiency of data centers while perform integrated monitoring of utilities and security equipment to detect, analyze, and control failures and to efficiently manage the energy consumption of computer rooms
- Optimize cooling performance through the separation and containment of cold and hot aisles within the server room and through the minimization of cool air leaks while improving the use of cooling energy within data centers through the direct/indirect use of fresh air
- Use CFD (Computational Fluid Dynamics)-based data center air conditioning simulation tools to optimize the flow of air within the server room while automatically controlling the speed and air volume of ventilators installed on the thermal-hygrostat to reduce power consumption
- Build a Data Center Infra Management System (DCIM) to monitor the consumption of IT devices and data center facilities in real time in order to measure, evaluate and improve energy consumption by respective component
- Develop an energy management system that is based on PUE[1] to effectively respond to climate change policies and other regulations
- Use real-time power consumption monitoring solutions on a device/rack/panel board unit basis to reduce power losses, and introduce high-efficiency modular equipment for Uninterrupted Power Supply (UPS) to maximize energy efficiency through the application of modular operation, suspension, and high-efficiency mode operation
- A theoretically perfect data center has a PUE of 1: Samsung SDS's Suwon Data Center and Sangam Data Center posted 1.5 and 1.3 in PUE respectively, which is above the global average of 1.7[2], and its Chuncheon Data Center was built in June 2019 was designed and constructed to have a PUE of 1.2.

1) PUE: Power Usage Effectiveness, an indicator used to measure the effectiveness of data centers and a figure closer to 1 means higher energy efficiency.
2) Source: ITSA(Korea Information Technology Service Industry Association)

Cloud Infrastructure Expansion – Chuncheon Data Center

Samsung SDS completed its Chuncheon Data Center in June 2019. This two-story building accommodates a total of six sever rooms and adopted an architecture that consists of six independent modules to ensure stability, scalability, and efficiency as a data center. Samsung SDS has established an integrated operational system that spans the Chuncheon Data Center and its four other data centers, and this new center will serve as a cloud data center capable of immediately offering services that require high-performance and high-efficiency IT resources. Specifically, the Chuncheon Data Center is a Software Defined Data Center (SDDC) that embraces such emerging concepts as the virtualization of servers, storage, networks, and other IT resources and the integrated, software-enabled, automatic management of these resources. As the center takes on a significantly broadened role as a cloud data center to offer the core services of Digital Transformation, including AI and big data, it will pave the way for Samsung SDS to seek sustainable growth by elevating its competitive edge in smart factory, smart logistics, digital financing, and other key solution businesses.

Chuncheon Data Center (Aerial view & 3D view)

Gaining Internal and External Credibility for Eco-friendly Management

Achievement of Environmental Management System Certification

ISO 14001 represents an international environmental system standard applicable to all industries and activities. Following its achievement of ISO 14001 certification in 2006, Samsung SDS passed the recertification audits in 2018 and has remained certified ever since. By establishing an internationally-compliant environmental management system, the company can systematically identify, evaluate, manage, and improve its environmental management in order to efficiently address environmental risks.

Environmental Management System certificate

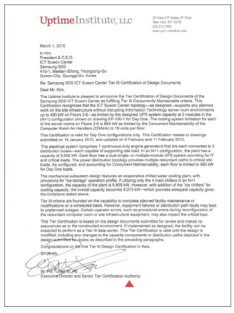
Enterprise Data Center Award

Samsung SDS's Sangam Data Center was honored with the 'Enterprise Data Center Award' for its efficiency and innovation in constructing data center infrastructure at the 2016 Datacenter Dynamics Asia Pacific Enterprise Data Center Awards held in 2016 at the Hong Kong Convention and Exhibition in November 2016. The awards is hosted annually by DatacenterDynamics, a prestigious media in the data center business sector, to recognize data centers who demonstrate exceptional data center construction technology and operational know-how.

The Enterprise Data Center Award

Achievement of Tier III Certification

Samsung SDS's Suwon Data Center became a Tier III data center in March 2010 which recognized its stability as a data center. Initiated by the world-renowned U.S.-based certification body Uptime Institute, this data center certification program classifies data centers from Tier I to Tier IV based on architecture, electricity, machinery and other major components of data center infrastructure. To receive Tier III certification, a data center should be able to deliver 24-hour on-call maintenance throughout the year without any interruption of data service.



Tier III Certification

Achievement of Grade 1 in Building Energy Efficiency and Green Building Certification

Completed at the end of May in 2015, Samsung SDS's Sangam Data Center embraced high energy efficiency materials and engineering along the entire cycle from design and construction to maintenance to efficiently manage energy consumption, and such endeavors allowed the data center to be graded 1 in building energy efficiency. Furthermore, the data center was rated excellent under the green building certification program designed to recognize buildings that contribute to the reduction of energy consumption and environmental pollution throughout the entire life cycle from design and construction to maintenance. The Chuncheon Data Center completed in June 2019 is situated in Chuncheon, the coldest area among data center locations, and this prompted the company to let outdoor air directly flow into the server room for nine months throughout the year, which dramatically decreased its consumption of cooling power. In addition, high-efficiency air-cooled chillers and 99% high-efficiency UPS were adopted and power transformation steps were reduced to conserve the energy use of infrastructure equipment to ultimately reach a PUE level of 1.2, the highest-ever recorded in Korea.

Green Building certificate

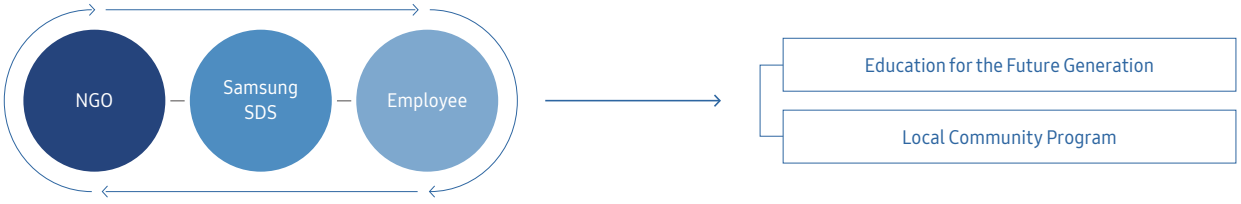
Graded 1 in building energy efficiency

Social Contribution

Adolescent Education & Community Contribution

In reflection of Samsung Group's business philosophy and core values, Samsung SDS chose 'future generations', who are able to unleash their potential with unlimited creativity, as the main target of its social contribution programs, and is assisting teenagers in developing the essential qualities required to become a responsible member of society. Samsung SDS's social contribution programs are classified into 'youth education programs' and 'local community programs': the former aims to provide IT education to teenagers and disseminate the appropriate IT culture while the latter is designed to improve the quality of life of the less-fortunate in society.

In 2019, Samsung Group's social contribution value system was further upgraded by sharing the common vision of social contribution and developing a more systemic approach among all group affiliates. This, in return, prompted Samsung SDS to advance its existing social contribution programs to increase the ratio of strategic programs that leverage the inherent characteristics of the IT industry, rather than simply making financial donations. Furthermore, the company is determined to develop social contribution programs that are aligned with local communities and professional non-profit organizations, and to encourage its employees to donate their talent to assist young generations to become a valued member of society.



Social Contribution Vision and Theme

Vision

Go Together for the Future! Enabling People

- Realize the business philosophy of enabling people to reach their maximum potential
- Reflect the core values of People and Co-Prosperity

Theme

Education for Future Generations

- Choose future generations who are able to unleash their potential through unlimited creativity, as the key target
- Assist future generations in developing the essential qualities required to become a responsible member of society

Program

Samsung SDS's leading social contribution program 'Coding Campus'

2018

Elementary school	Middle school	High school	Juvenile detention center	Local children center	Overseas

2019

Theme

Youth education program

- Coding education for teens (elementary/middle/high school, juvenile detention center) (JA Korea)
- Coding education for overseas teens (World Vision)
- Coding education at local children centers (Kids & Future Foundation)

Specialty

Programs that reflect the inherent characteristics of the IT industry

- Educate teens on the proper way of using IT (National Information Society Agency)
- Take a Smart Break talk concert

Communities

Local community program (for the underprivileged)

- Hands-On volunteer program (the promise)
- Happy Santa for juvenile detention centers (Korea Juvenile Protection Association)
- Support for the Songpa-gu community (Heart to Heart International)

Social Contribution Activities and Performances

Youth IT Education Program

Coding Campus, Tailor-made IT Education for Teens

As one of its leading social contribution programs, Samsung SDS provides tailor-made teenager software education for elementary/middle/high schools, juvenile detention centers, local children centers, and overseas teens. In collaboration with JA Korea and the Kids & Future Foundation, NGOs with a focus on education, the company develops software education contents customized for different age groups while its employees and undergraduate volunteers visit schools to put their IT work experiences into helping these teens nurture computing-driven thinking and creativity. The Coding Campus curriculum is designed in a way to assist students in learning programming and exploring IT-related career paths even without basic-level IT knowledge.

Under the elementary curriculum, students use an 'entry' block-type programming language to resolve the given challenges that become increasingly difficult just as they do in the gaming environment. Middle school students learn to use 'micro:bit' physical computing tools to enjoy hands-on experiences to configure the process of how daily products are controlled through software, and they can attend IT competitions that serve as an opportunity to comprehensively develop communication, collaboration, and logical thinking capabilities in addition to programming skills. Under the high school curriculum, students at IT vocational high schools can join a two-day 'hackathon': participating teams develop their ideas into software/hardware outcomes and finalize their work with the help of employee mentors, which helps them gain practical developer knowledge, understand the developer culture and explore IT-related careers. At juvenile detention centers, both current and previous residents learn a block-type programming language to control the lego robot 'EV3' to stimulate their interest in the IT sector and improve academic performance. Local children centers are provided with four sessions of education that utilize 'entry' tools and the physical computing tool 'Blacksmith Board' to assist students at these centers who lack access to education other than regular school curriculum in taking IT learning courses.

In 2019, a total of 645 employees served as teachers to volunteer under the Coding Campus program, and 7,252 adolescents(*excluding overseas teens and local childen centers) and 116 schools completed the Coding Campus curriculum.

Coding Campus

Take a Smart Break Talk Concert(Proper Use of IT for Teens)

As a social contribution program designed to create a culture of proper IT use among teens, the 'Take a Smart Break Talk Concert' is operated by Samsung SDS in conjunction with the National Information Society Agency and the National Association of Local Children Centers. IT experts, teachers, and students gather together to communicate on how to use smartphones properly to prevent teens from developing overdependence on or addiction to smartphones. Teenagers freely present their fresh new perspective on positive IT applications and become part of the process to resolve the side effects of IT development and relevant social issues.

The event consists of smartphone overdependence surveys, cultural/arts performances, theme-based lectures, and panel discussions: moving away from one-way information delivery, this concert aims to provide experience programs to encourage teens to develop interest in this critical issue and think for themselves. According to the outcomes of the scale-based survey conducted on participating students, counseling is provided to teens at high risk of smartphone overdependence in connection with the Smart Break Centers located in respective school districts, and these students are guided towards positive behavior through follow-up management.

The 'Take a Smart Break Talk Concert' held in 2019 was joined by a total of 24 employees as panelists and volunteers, and 4,861 middle/high school students at 15 schools received education on smartphone overdependence and addiction prevention.

Take a Smart Break talk concert

Sharing Happiness, Local Community Program

Grand Volunteer Festival

Every April and October, the Grand Volunteer Festival is held with the help of employee volunteers: a range of volunteer activities are undertaken by departments, families, and individual employees to create a culture of sharing that pursues co-existence with local communities.

Sharing of True Love Festival(Apr.)
In celebration of the establishment of Samsung SDS, employees have volunteered for the month of April since 1994 to serve local communities in diverse ways, from IT education and hands-on programs to blood donation and family-engaging volunteering.

Global Volunteer Festival(Oct.)
The Samsung Global Volunteer Festival is joined by all Samsung affiliates, both domestic and overseas establishments, during the one month of October each year. A variety of volunteer activities are undertaken, from talent donation and environmental clean-ups to education for teenagers by respective domestic and overseas worksites.


Volunteering for Local Communities


Teen Education


Hands-on Volunteering

Support for Sisterhood Villages

To promote exchange with agricultural and fishing villages and help revitalize their economy, Samsung SDS lends a helping hand, provides experience programs, and operates local specialty markets on national holidays for 12 sisterhood villages in 10 regions of the nation, including Yangpyeong, Jeongan, Yeoju, Hoengseong, Seosan, Hongcheon, Gapyeong, and Chuncheon.

PC Donation

Since 1995, PCs used by employees have been repaired and donated to local communities and overseas teen education institutes on an annual basis for the purpose of offering IT education.

Blood Donation

To help address the shortage of blood supply and lead the culture of blood donation, Samsung SDS launches blood donation campaigns in the 1st and 2nd half each year to share the practice of loving neighbors. Furthermore, blood donor cards offered by employees are donated to underprivileged individuals in local communities and employee families in need of such help.

Support for Juvenile Detention Centers

To ensure that adolescents become a responsible member of society, Samsung SDS helps current and previous residents of juvenile detention centers with their social rehabilitation through education and scholarship. Every December, employees visit juvenile detention centers across the nation to offer gifts under the 'Happy Santa' program to interact with teens living at these facilities in a genuine manner. Since 2019, juvenile detention centers have been included in the Coding Campus curriculum to assist their teenage residents in exploring IT career paths.

Day of One Meal Sharing

Since 2009, Samsung SDS employees have raised funds to support underfed local community teens. Following the relocation of the office building to Songpa-gu, Seoul, in 2014, Samsung SDS has worked with the Songpa District Office of Education and World Vision to help financially-challenged students in paying their meal expenses, leading the way to spread a culture of sharing across the board.

Health Care

Samsung SDS offers 'health care (massaging) service' as part of its employee welfare & benefits programs, and donates the entire fees paid by employees using such service to welfare centers for the visually-impaired. The donations are used to manufacture Braille books in order to promote reading for adults and children with visual impairments.

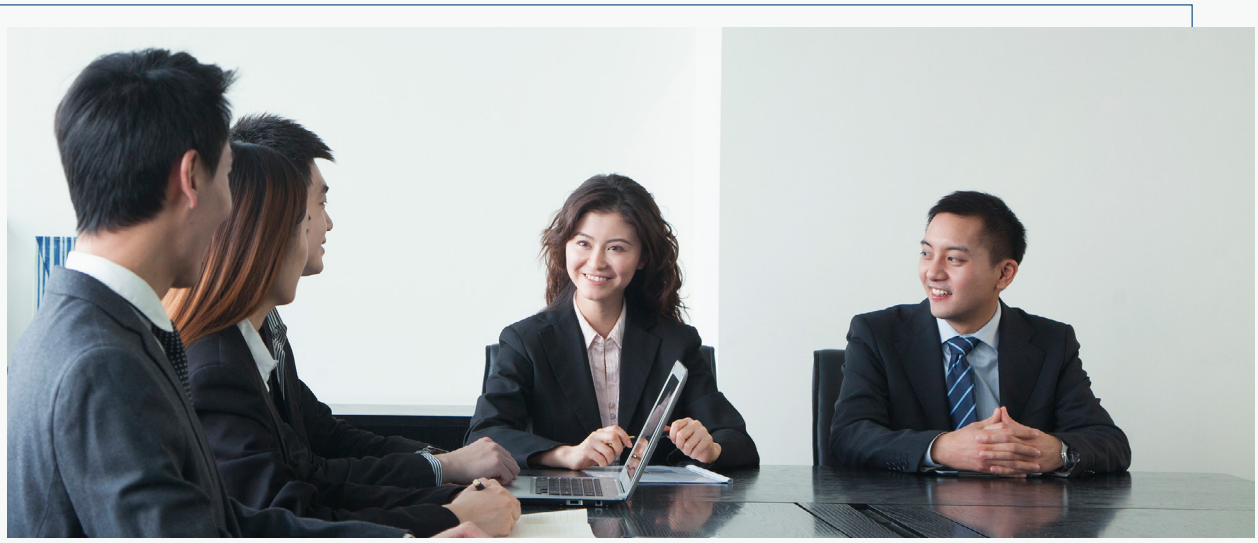

Helping Hand for Sisterhood Villages

Blood Donation


Support for Juvenile Detention Centers

CUSTOMERS

Samsung SDS delivers customer satisfaction and protects customer information to pursue mutual growth with its customers.



WHY MATTER?

In today's digital era, information technology is evolving rapidly and new technology is emerging constantly. As a result, customer needs are shifting quickly and customers expect even better experience every step of the way. Samsung SDS leverages its abundant IT expertise and deep understanding of customer business to offer tailor-made services in wide-ranging professional areas and to relentlessly pursue change to deliver innovative customer experience. In line with the increasing cyber security threats against AI, cloud, IoT and other emerging technologies and the growing likelihood of new threats occurring, it is imperative that IT businesses further strengthen their security capabilities to protect the invaluable information assets of their customers.

WE PLANNED & ACHIEVED

Focus Area	2019 Plan	2019 Achievement	Achievement
Product & Service Quality Management	· To reach 92 points in customer satisfaction	· Scored 92.5 points in customer satisfaction	· Achieved
	· To reach 0.038ppm in failure rate	· Reached 0.020ppm in failure rate	· Achieved
	· To reach 28% in the ratio of quality certification examiners	· Reached 30% in the ratio of quality certification examiners	· Achieved
	· To reach 28% in the ratio of ISTQB-certified testers	· Reached 28% in the ratio of ISTQB-certified testers	· Achieved
Information Protection	· To retain and achieve security certification	· Renovated ISMS and obtained ISO27001 certifications	· Achieved
	· To create a safe in-house security environment and maintain customer information security	· Recorded zero in the No. of security incidents and minimized the malicious code infections of PCs(31 cases in 2018 to 3 cases in 2019)	· Achieved

WE WILL

Product & Service Quality Management

Samsung SDS aims to improve its quality system to develop and operate remote sites. The company will advance its AI-based Smart Contact Center to deliver innovative customer service, preemptively reinforce quality in conducting new business, and broaden the scope of automation to prevent and manage operational failures.

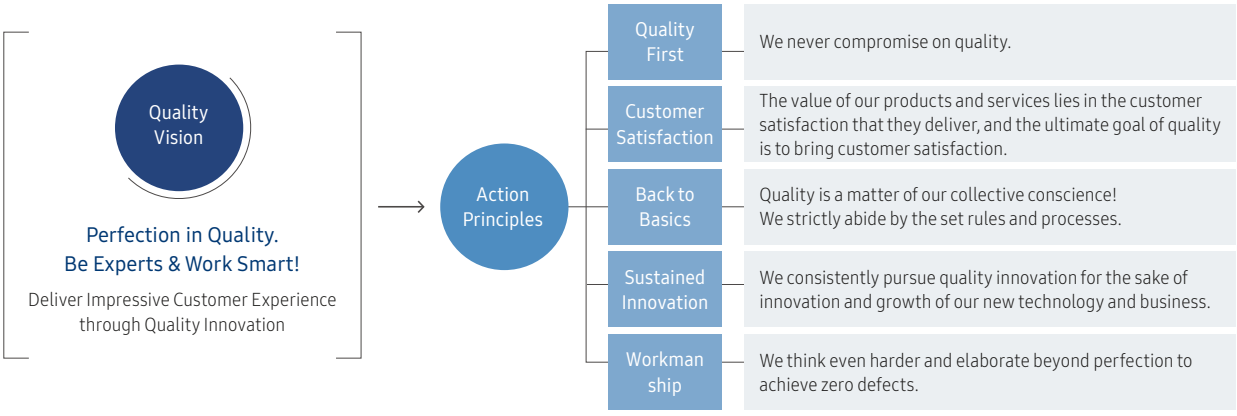
Information Protection

Samsung SDS will effectively address the security threats that are increasingly intelligent and sophisticated in a bid to further safeguard its information assets.

Product & Service Quality Management

Quality Charter

Samsung SDS set fort its quality vision of delivering impressive customer experience through quality innovation, and faithfully abides by the following five action principles of quality management.



Quality Management System

Under the quality management principles of quality first, customer satisfaction, and sustained innovation, Samsung SDS is building its own quality management systems by business type – system development, operation/service, and solution – and advancing quality management accordingly.

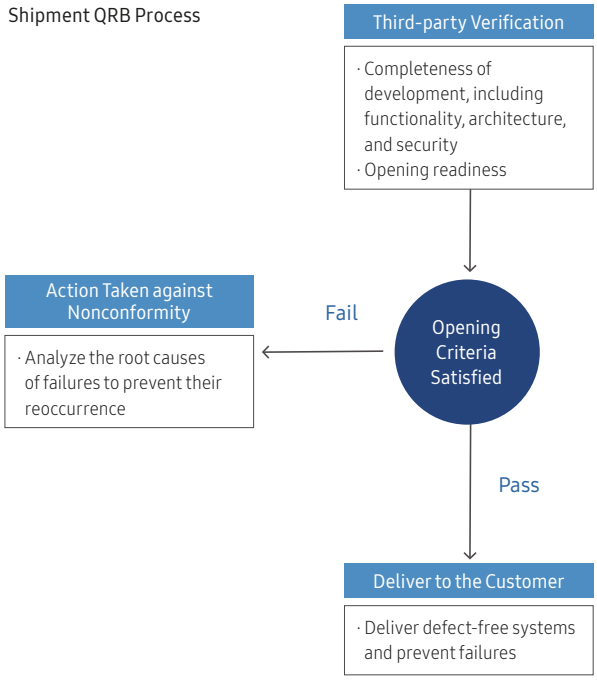
Samsung SDS Quality Assurance Framework

1) Q-Academy: Samsung SDS's unique training system designed to nurture quality professionals
2) INNOVATOR: Samsung SDS's unique methodology
3) Open QA: Quality activity integrated management system
4) Q-Analytics: Quality analysis system for risk prevention
5) Code analyzer: Code analysis and inspection tools
6) PPW: Project Planning Workshop
7) QRB: Quality Review Board
8) PCW: Project Closing Workshop

System Development Business

In developing a system, Samsung SDS performs quality checks in each of the major project phases and takes corrective actions on nonconformities prior to advancing to the next phase in order to deliver a system with proven quality. Furthermore, the company continuously undertakes quality innovation initiatives including system-based risk management and advanced process quality reinforcement.

Shipment QRB Process



Operation/Service Business

Samsung SDS undertakes quality management initiatives to ensure the stable operation of its products and services and to reach the service level agreed upon with its customers. Quality inspections are conducted at the time of operational transfer and service opening to guarantee the stable initiation and operation of services, and key actions are taken to regularly improve operational quality and fundamentally eliminate the occurrence of failures in order to deliver even greater customer satisfaction.

Operational Transfer Diagnosis Process

Plan and Prepare	· In transferring a developed system into the operational phase · In shifting to a new system operator
Diagnose and Analyze	· Check essential maintenance deliverables · Check application functionalities · Diagnose security vulnerabilities · Diagnose the architecture
Take Corrective Actions	· Take action against all nonconformity areas · Deliver a defect-free, failure-free system

Solution Business

Samsung SDS implements its quality management process from solution planning to development and release with an aim to secure quality every step of the way. With the DevOps framework under operation, the company constantly monitors the status of development quality, and performs quality inspections on product functionality, CX, performance, and security prior to their release. Notably, Samsung SDS secures source codes with exceptional maintainability and development productivity through code quality management, which contributes to improving the quality of its solutions.

Solution Testing Process

Test Preparation	· Establish a process and an organization · Secure testing scenarios · Create an automated test environment
Test Execution	· Test based on scenarios · Achieve automated regression testing
Test Performance	· Reduce test effort · Increase test coverage

Service Failure Management

At Samsung SDS, failure management is performed as part of the daily business routine to prevent any service or system failures even before they occur. Failure and disaster recovery drills are conducted regularly every year to take swift countermeasures and recovery measures in the event of failures in order to minimize their impact on customers' business operations. To swiftly respond to failures, Samsung SDS performs constant monitoring on infrastructure equipment and applications twenty-four seven. If any sign of anomaly is detected, this is shared in real time with relevant departments to promptly take necessary actions. Following these actions against failures, Failure Review Board (FRB) meetings are held with Root Cause Analysis (RCA) experts present in order to review technical causes, operational conditions, countermeasures, and preventive measures, from the occurrence of failures to the actions taken, and to identify the action items to be disseminated across the board to prevent similar failures from taking place in the upcoming years.

System-assisted Quality Management

Samsung SDS uses its Open QA system to manage quality issues and risks by business type – development/operation/solution/research project. Inspection outcomes generated via code inspections and other automated tools as well as quality inspection outcomes identified by quality managers are uploaded in the system to analyze quality risks and take necessary actions. Presently, the company is building a system to analyze key data on quality risks/failures and to make predictions and issue alarms. By constantly upgrading its quality management and inspection systems, Samsung SDS endeavors to deliver high-quality products.

Introduction of a Global Quality Management System

Since Samsung SDS became the 1st SI service provider to be certified against ISO 9001 in 1994, the company proudly achieved Master qualifications, the highest level of ITIL (IT Infrastructure Library) Certification, in 2003, which demonstrates its commitment to adopting globally-renowned quality management systems. Furthermore, Samsung SDS obtained ISO 22301 business continuity certification and ISO 27017 cloud security certification in 2017. In 2017 and 2018, the company performed gap analysis audits with the help of external professionals and offered change management training in a bid to ensure a successful transition into the ISO standards that were updated to include Risk Based Thinking (RBT) and customer orientation. In so doing, Samsung SDS received the transition and recertification audits performed by external certification bodies, and successfully achieved ISO 14001:2015 and ISO 9001:2015 in September 2017 and August 2018 respectively.

ISO 14001:2015 Certification

ISO 9001:2015 Certification

ISO 22301:2012 Certification

Improved Quality Awareness among Employees

Samsung SDS is clearly aware that all its employees should contribute to completing their project as a lead agent of quality management. As such, the company offers special quality training and quality mindset training every year to help domestic and overseas employees strengthen their quality competency. The quality mindset training focuses on problem-solving based on quality management case studies and aims to improve employees' quality awareness. Furthermore, the company provides employees working in relation to quality management with offline job training, and offers clean code training to developers to establish top-notch quality during the product development process. Root Cause Analysis (RCA) training on problem-solving methodology also helps nurture RCA professionals and the training content was shared among in-house risk managers as well. RCA methodology training aims to assist employees in improving their capacity to analyze root causes and solve problems, and will be continuously provided in online format.

True Customer Satisfaction Delivered by Improved Customer Value

To identify the level of customer satisfaction and provide even better services, Samsung SDS has requested Gallup Korea to conduct annual surveys that comprehensively measure customer satisfaction by industry, position, and business type since 2008. In 2019, the company reached 92.5 points, and its customer satisfaction score has been above the 90 point mark for the past three years. Samsung SDS has established a customer satisfaction management system to identify the areas that failed to meet the set target, create tasks to make necessary improvements, and upload these tasks on the VOC (Voice of Customer) management system to monitor the progress made. The company also shares the outcomes of executing these tasks with customers as a way to improve customer value.

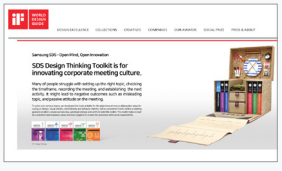
(unit: point)

Category	2017	2018	2019
Customer Satisfaction	93.0	93.7	92.5

Design Thinking for Innovative Customer Experience

Samsung SDS's unique Design Thinking methodology was initiated in 2017 to host the Co-Creation Workshop with customers with an aim to bring innovation to the company's development culture and to create value with a strong focus on customer experience. Design Thinking leads the repetitive process of divergence and convergence based on logical and creative thinking and supports balanced thinking in so doing. Samsung SDS's Design Thinking Toolkit was named the winner at the iF World Design Guide, one of the global top three design awards, in February 2019, and its Agile advanced methodology powered by Design Thinking is contributing to creative and innovative work culture, products & services, and customer experiences & values. The company was also awarded the Best of the Best Award in the Smart category of the Red Dot Concept Award: the AI-enabled virtual personal assistant submitted by the company was globally recognized for its creativity and excellence as it elaborated on the future intelligent work environment and presented the upcoming future in a highly predictable manner.

Design Thinking OPUS 3.0



Design Thinking Toolkit Awarded at the iF Design Award 2019

Contact Center Operation

Samsung SDS operates contact centers to provide customer assistance. In 2019, the company established the Smart Contact Center(SCC) powered by AI technology to pave the way to bring innovation to customer support operations.

VOC Handling Data

Category	Unit	2017	2018	2019
VOC Received	No. of Cases	477,433	943,702	936,844
Resolution Rate	%	100	100	100

To shorten customer wait times and speed up inquiry handling, diverse VOC collection channels were made available including the online customer support portal, chatbots, and chats in addition to traditional phone and e-mail channels to improve customer accessibility. Furthermore, the AI Assistant helps increase the accuracy of responses through real-time knowledge-based recommendation and inquiry type classification while AI analytics allowed for the real-time monitoring and automated assessment of counseling quality. Samsung SDS's SCC operation resulted in the enhanced quality of customer counseling and technical support and in the innovation of customer support, thereby contributing to strengthening customer satisfaction.

Information Protection

Information Protection System

Samsung SDS is committed to protecting customers' information assets in full compliance with domestic and overseas regulations, including Korea's Personal Information Protection Act and Information and Communications Network Act, and is determined to reduce security incidents to zero as a way to improve its competitive edge.

"Improve Samsung SDS's Competitive Edge" by Reducing Security Incidents to Zero

↓

① Security policy development and management
Security strategy development, security performance assessment, training/promotion

② Security check
Corporate website, IT infrastructure, establishments, products, personal data

③ Security system management
PC security software, firewall, MDM

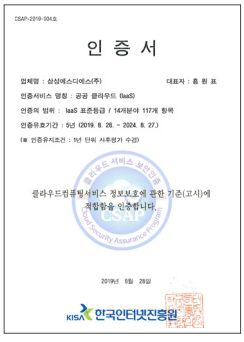
④ Physical security
Check-in/out management, access control, establishment protection

⑤ Security incident response
Security breach response, malicious code response, forensics

↓

Workforce (Organization)	Establishment	User Device
Network	Server	Application

ISO 27001 Certificate



Public Cloud(IaaS) Security Certification

Global Information Protection System Operation

Since 2006, Samsung SDS has been certified against ISO 27001, the international standard that stipulates the development, implementation, maintenance, and management of an information security management system. The company also achieved Korea's Information Security Management System (ISMS) certification in 2013 and has continuously received recertification audits to remain certified ever since then. In so doing, Samsung SDS ensures that its information security management system satisfies globally-recognized standards.

ISO 27001	Gwacheon Center became the 1st to be certified in 2006 Gumi Center certified in 2007 Suwon Center certified in 2008
Infrastructure Safety Assessment	Received the Grand Prize in the VoIP sector in 2012
IDC Safety Assessment	Received the ICT Infrastructure Center Grand Prize in 2012
Designated as key information and communications infrastructure	ICT Suwon/Gwacheon Centers in August 2013
ISMS	Achieved in December 2013
ISO 27017	Achieved in December 2018
Public Cloud(IaaS) Security Certification	Achieved in September 2019

Information Protection Check Criteria Development

Samsung SDS's information security check process allows the company to select targets and perform checks accordingly to identify and eliminate the security vulnerabilities found in its products and systems so as to prevent security incidents even before they occur. Furthermore, the company uses its company-wide information security portal to encourage employees to conduct self-directed checks and make necessary improvements to reinforce information security.

Security Verification

Procedure	Details	Period
Define security requirements	· Review the domestic/overseas regulations and security requirements of the target market, and identify criteria · Review the preliminary use of standard open source when using it	In planning products or setting development plans
Perform preliminary security checks	· Conduct source code security checks and take measures · Use standard open source across the company	Before requesting security verifications (including measures)
Request security verifications	· Prepare and submit security verification applications	In performing security verifications
Perform final security verifications	· Perform source code checks (source code security, open source security) · Perform mock hack attacks (WEB, mobile) · Perform infrastructure checks (server, DBMS, WEB, WAS) · Perform personal data security checks · Perform cloud security checks	Before deliberating on release
Notify results	· Notify security verification results	In completing security verifications

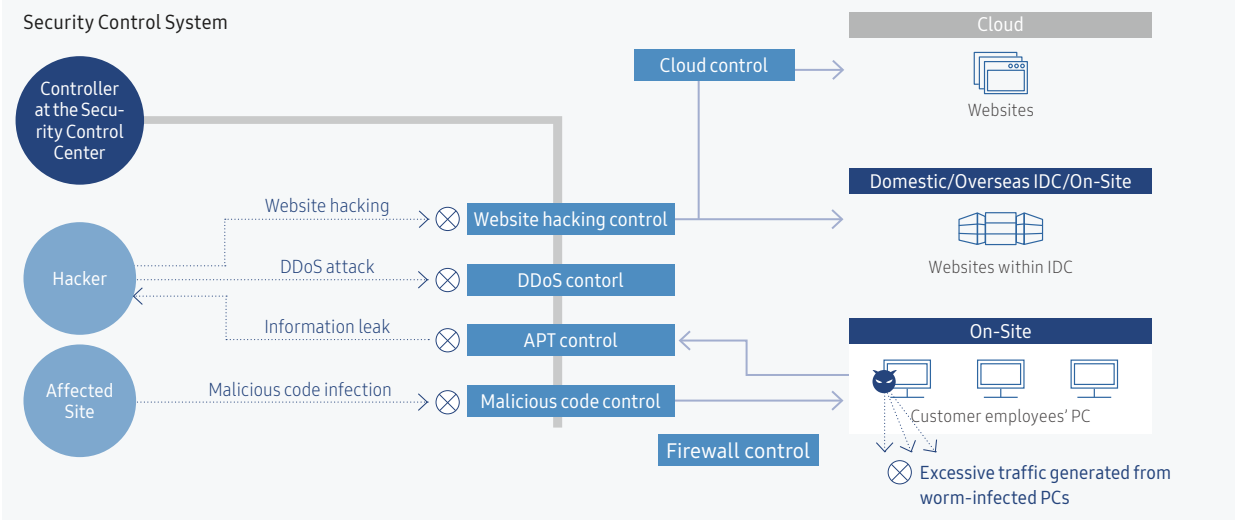
Security Index System

Samsung SDS developed the Security Index System to prevent security incidents and strengthen credibility in its security operations through the sustained management of customers' information system. The system spans a total of 79 items in three IT areas and five management areas.

Area	Domain	Details	Check Item
Management	Security Policy	· Security regulations and compliance	4
	Security Organization	· Organizational structure and job capacity	4
	Awareness Improvement	· Security training for employees and business partners	5
	Incident Response	· Incident reporting system	1
	IT Security	· Security check	5
IT	Authority Management	· Authority management	43
	WEB / WAS		17

Security Incident Prevention and Response

Samsung SDS established a security control system to constantly monitor and respond to outsiders infiltrating customers' IT system, information leaks, and other security risks in order to safeguard the workplace environment from external threats. Furthermore, the company sends e-mails containing malicious codes to its employees on a monthly basis as part of the mock drill against such threats to strengthen their security awareness and put them on the alert for the risk of these malicious codes. The company also deployed malicious URL detection techniques to ensure that employees do not accidently click on the link contained in their received e-mail and become infected with malicious codes. In so doing, Samsung SDS consistently endeavors to prevent security incidents.



Information Security Training for Employees

Samsung SDS offers regular security awareness training to help its employees improve their awareness on the importance of information security. All employees receive online training in each of the secure coding, source security, infrastructure security, personal information security, and authority management domains while department-level security managers and developers are specifically provided with security capacity-building and on-site security check training. Furthermore, the company requests all employees to sign and submit the security pledge each year, and offers secure coding training to product and service developers to prevent quality security issues from occurring.

Offline Information Security Training

Training	Trainee	Benefit
Security diagnosis capacity-building	Department-level security manager	Build mock hack attack capacity
Personal information security and development security	Department-level system operator	Improve awareness on development security among application operators
Web/mobile system hacking	Developer and security manager	Assist developers in building mock hack attack capacity
Security awareness improvement at subsidiary	Subsidiary developer	Assist subsidiaries in building security capacity
Mock hack attack	Department-level security manager	Build capacity to perform mock hack attacks

Strengthened Management of Customer Personal Information

Samsung SDS appoints the Chief Privacy Officer (CPO) to be responsible for the general management of company-wide personal information processing services, and supports the protection of personal information in relation to such services. The CPO is authorized to control and report general issues concerning personal information security, and assists the personal information security organization in performing relevant activities.

Personal Information Security Management

- Develop and implement personal information security plans
- Offer personal information security training
- Check department-level compliance with personal information security and investigate its current status
- Review and revise guidelines and procedures related to personal information security
- Develop other business plans necessary for personal information security

Personal Information Processing System Protection

- Manage personal information access authority and log
- Encrypt stored personal information

Personal Information Processing

- Abide by the Information and Communications Network Act, the Personal Information Protection Act, and other relevant regulations concerning the collection, storage, use, provision, disposal, and outsourced processing of personal information
- Immediately reflect the revisions made to the personal information processing guidelines and manage revision history

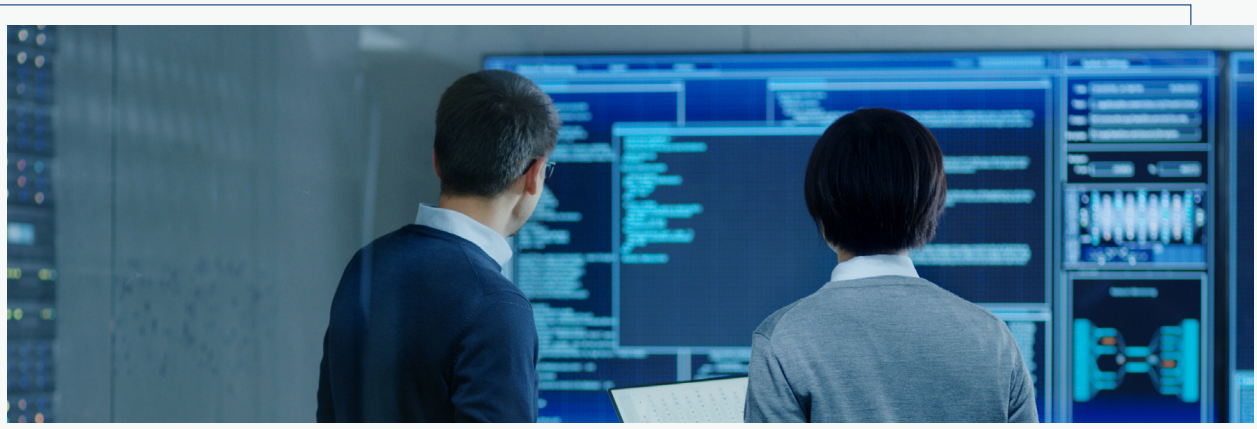
Personal Information Leak

(unit:No. of Cases)

Category	2017	2018	2019
Personal Information Leak	0	0	0

EMPLOYEES

Samsung SDS will set the stage for outstanding talent to enjoy their work and pursue their growth



WHY MATTER?

Given the characteristics of the business the company is involved in, Samsung SDS needs talented individuals who think out of the box and rise to new challenges in order to promote the differentiation of core technology, platforms, and solutions as well as the novelty and innovation of business cases. It is indeed imperative that Samsung SDS identifies, recruits and retains such talent to build its competitive edge in the IT services industry. As such, the company is introducing a range of programs to find and hire exceptional IT professionals and developers early on, and endeavors to create a workplace where top-notch talent stay to develop their career.

WE PLANNED & ACHIEVED

Focus Area	2019 Plan	2019 Achievement	Achievement
Recruitment and Development of Exceptional Talent	· To develop talent in core technology areas	· Expanded the development of talent in core technology areas	· Achieved
	· To implement a Data Scientist certification program	· Developed a Data Scientist certification program and implemented a level-based certification program	· Achieved
Diversity and Equal Opportunity	· To build a horizontally-oriented organizational culture	· Realigned the job position and title systems	· Achieved
	· To operate a fair evaluation system	· Strengthened the individual performance-based evaluation system	· Achieved
	· To prevent negative practices of the conventional corporate culture (verbal violence, excessive alcohol consumption, and sexual harassment) and their reoccurrence	· Provided training on the reporting and action process to curb these negative practices	· Achieved
Increased Life Satisfaction	· To improve employees' work & life balance	· Introduced the alternative work schedule and launched a work culture innovation campaign	· Achieved
	· To introduce life planning diagnoses to offer systemic consulting	· Introduced a tailor-made training program following life planning diagnoses	· Achieved
	· To establish a tailor-made training system with a focus on employees and their spouses	· Designed training programs customized for employees and their spouses – life/career planning, outplacement, startup, back-to-the farming, and professor with industry experience	· Achieved
Health & Safety Management	· To reduce safety incidents to zero	· Posted zero in the number of safety incidents	· Achieved

WE WILL

Recruitment and Development of Exceptional Talent Samsung SDS will continue to nurture exceptional talent required to develop solutions through its talent development program in core technology areas, and reorganize its Data Scientist nurturing and training support system to increase the number of certified Data Scientists.

Diversity and Equal Opportunity Samsung SDS will shift to a new promotion system based on career development phases to emphasize capacity-building and expertise development so as to operate a fair performance evaluation system and create a horizontally-oriented corporate culture.

Increased Life Satisfaction Samsung SDS aims to leverage Brity Works, its work automation solution, to automate simple work while using its Brightics big data platform to predict work hours and prevent excessive workload. In line with the continuously increasing life expectancy, the company will provide on-site life planning counseling and training to assist its employees in preparing for a successful 'Second Act' in retirement.

Health & Safety Management To embed health and safety into its corporate DNA, Samsung SDS plans to encourage employees to voluntarily join regular disaster evacuation drills, first-aid training, and other health & safety campaigns while performing regular and ad-hoc health & safety inspections on its establishments to highlight the importance and accountability of health & safety management.

Recruitment and Development of Exceptional Talent

Procurement of Outstanding IT Talent

Recruitment of Top-notch Global Talent

Leveraging its widely-recognized IT technology in AI/analytics, cloud, and security, Samsung SDS strives to recruit top-notch global talent in order to spearhead digital innovation across financing, manufacturing, retail and other diverse industries. The company continues to build a network with experts from global leading companies while presenting its career development vision to attract the best and the brightest talent capable of growing into leaders in R&D and business development.

Recruitment of Master/Doctoral Degree Holders in Korea and Abroad

Samsung SDS uses campus recruiting to hire talented master/doctoral degree holders across domestic and overseas universities each year. The company pays bi-annual visits to prestigious graduate schools that are highly competitive in its key business areas – AI/Analytics, cloud and security – and offers company presentations and recruitment counseling. The company conducts local on-site interviews and executive interviews to accelerate the recruitment of researchers with master/doctoral degrees who will play a key role in its R&D operations.

Recruitment of Outstanding Recent Graduates

Samsung SDS recruits top-notch recent graduates through wide-ranging programs. Samsung SDS executives visit their alma mater to offer the special lecture titled 'IT Trends and Samsung SDS at a Glance' to undergraduates majoring in computer engineering, physics, mathematics and other disciplines that are aligned with the company's business. The company visits domestic universities to provide career counseling every March and September as well as year-round job fairs in order to assist undergraduates who wish to become IT professionals in making the right career choice. In addition, Samsung SDS operates such distinctive programs as the 'Special Lecture on Algorithms for Undergraduates' and 'Brightics Academy'.

Special Lecture on Algorithms for Undergraduates

The 'Samsung SDS Special Lecture on Algorithms for Undergraduates' has been initiated in 2018 as a semi-annual program targeting junior and senior undergraduates as well as graduates who wish to become IT professionals. Samsung SDS employees serve as lecturers to provide systemic algorithm education from basic-level knowledge to practical exercise to help students improve their software programming capabilities. In so doing, the company can also recruit exceptional IT talent.

Brightics Academy

Samsung SDS's Brightics Academy aims to support the analytics research performed through the use of its AI data analytics platform 'Brightics' in cooperation with prestigious domestic universities and to secure top-tier analytics workforce. The 'Brightics Academy Contest' held in 2019 was attended by nearly 1,300 undergraduates to develop their data analytics capabilities and new experiences.

Special Lecture on Algorithms for Undergraduates

Brightics Academy

Development of Outstanding IT Professionals

My ProWay, an In-house Capacity-Building Portal

Samsung SDS operates nearly 1,000 group/online training courses on the basis of its job-specific competency system. Its employees can access the in-house capacity-building portal dubbed My ProWay to freely choose and take any courses that will help them improve critical job capabilities.

Core Technology Courses

Samsung SDS core technology courses intend to identify individuals with high growth potential and nurture them into experts on new technology. In-house and external professionals provide their lectures and wide-ranging practice sessions are arranged in the areas of AI/analytics, blockchain, and cloud that are leading the 4th Industrial Revolution to help course trainees develop into experts in their own fields.

Practical Global Language Courses

'English ACE Premier' is Samsung SDS's practical language course that aims to nurture globally-competitive talent capable of leading the company's overseas business. Speaking-oriented English practical business courses are also provided to help employees improve their global business capabilities in a short period of time, including wide-ranging business skills – hosting meetings, preparing documents, and making negotiations – and understanding of different cultures. In addition, online language courses and one-on-one English coaching by phone are provided to allow employees to learn language skills with continuity and autonomy beyond time or space limitations. In local establishments across Korea where such educational opportunities are limited, the company offers 'on-site language education'. The Samsung SDS 'Global Lounge', designed with employees' training accessibility and convenience in mind, is operated in private education institute format to assist employees with self-directed learning of Chinse, Japanese, Vietnamese and other languages in addition to English.

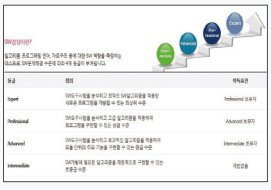
Software Development Capacity Support System

SW Capacity Test

Samsung SDS operates the SW Qualification program to assess employees' algorithm and coding capabilities required for software development. Developers are provided with phase-specific training programs to evaluate their current level and make necessary improvements. As a way to fully motivate their capacity building, those who achieve higher-level certifications are granted additional promotion points and financial rewards.

Data Scientist Certification

To systematically nurture Data Scientists (DSs), Samsung SDS independently developed a DS Certification program in collaboration with the Korea Advanced Institute of Science and Technology (KAIST) in 2018. The in-house DS Academy provides a range of learning contents and educational programs required for DS Certification, and certification examinations are available year-round. As of 2019, nearly 940 employees passed the exam to become certified Data Scientists.



Introduction to SW Capacity Test

Introduction to Data Scientist Certification

Talent Nurturing through Industry-Academia Cooperation

SW Architect

Samsung SDS's SW Architect development/certification program has been under operation since 2018 through the agreement signed with KAIST. Intended to strengthen the capabilities required to design optimal solution structures, this program has proven its benefits in improving the performance of solution products.

Mini-MBA

To nurture tomorrow's leaders armed with IT technology and business competency, Samsung SDS launched the SDS-KAIST 'Mini-MBA' program in 2016 in partnership with the KAIST Graduate School of Management. In consideration of the unique business characteristics of Samsung SDS, this techno-MBA program is focused on AI/Analytics, and blockchain. As of Dec. 2019, nearly 320 employees completed their Mini-MBA course.

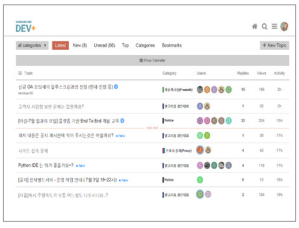
Mini-MBA Course

A Great Work Place for Developers

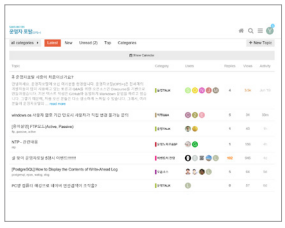
Samsung SDS continues to 'revitalize the culture of development and the developer ecosystem'. The Development Competency Office, as a dedicated unit set up to support developers with their organizational culture, capacity-building and work environment, ensures that developers and operators enjoy their work, learn necessary skills, and resolve wide-ranging development-related issues so that they can fully engage in their work. The company operates the developer portal(DEV+) and the operator portal(OPS+) to help all IT engineers responsible for development and operation to share information while hosting or sponsoring meet-ups and conferences in order to promote interactions among internal/external developers.

Developer Portal(DEV+)/Operator Portal(OPS+) Operation

Samsung SDS created the developer portal(DEV+) in 2016 to facilitate communication among developers, and launched the operator portal(OPS+) in 2019 to strengthen operators' work knowledge and interactions. These portals serve as a venue for communication to enable developers and operators to share latest technology trends and knowledge and discuss major issues across the technology and regulatory landscape. To establish Samsung SDS's distinctive developer culture and ecosystem, these portals were made accessible by employees at overseas/domestic subsidiaries to extend the scope of users.



Web screenshot of the developer portal



Web screenshot of the operator portal

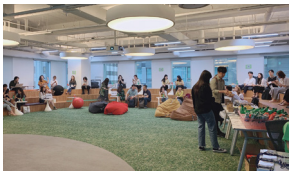
Developer Meetups

Samsung SDS sponsors a variety of developer meetups to facilitate the software ecosystem. These events are hosted and supported for developers to share and constantly learn such IT technologies as blockchain, AI, cloud, data analytics, CX, and Agile as well their development practices. In 2019, 48 meetups were held during the course of 2019 and attended by nearly 2,100 developers to visit Samsung SDS's office building and share wide-ranging technology and experience. In 2020, these meetups will address even more diverse areas of interest and encourage the attendance of developers working in related fields.

Hyperledger Meetup Korea

Agile Korea Meetup

Kaggle Days Meetup - Seoul



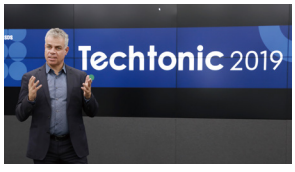
@d.designerclub

Developer Conference

Samsung SDS hosted the 'Techtonic 2018' developer conference to share its latest technology and extensive development know-how in order to broaden the developer ecosystem. Attended by nearly 1,200 software developers, researchers, undergraduates, and graduate course students, this conference allowed Samsung SDS to share recent IT trends, technology platforms enabled by its five core technologies(AI, blockchain, cloud, data analytics, and security), and their real-life applications. The company also sponsored a range of external developer events, including the 'Kafka Seoul 2019' held to address latest data processing technology that interests developers. These events served to raise awareness among developer communities on the transformation initiative undertaken at Samsung SDS and to share recent technology trends to assist Samsung SDS employees in improving their capacity.

Developer Conference Sponsorship

Conference	Date	Theme	Attendance
Agile Conference 2017	Sep. 29th, 2017	Can We Survive with Agile?	362 persons
I Am a Programmer	Nov. 25th, 2017	Functional Programming and Reactive Programming	758 persons
OKKYCON	Oct. 18th, 2018	The Real TDD, Know Your TDD	315 persons
Agile Conference 2018	Nov. 23rd, 2018	Journey to Being Agile, Agile Transformation	333 persons
Kafka Seoul 2019	Oct. 18th, 2019	Kafka Deep Dive	363 persons
Women@IT	Oct. 29th, 2019	Special lecture by leaders with extensive experience in the IT sector & small group mentoring	110 persons



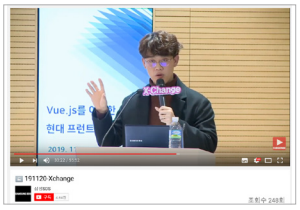
Techtonic 2019

Women@IT

X-Change Open Seminar

Samsung SDS has provided developers and operators with an opportunity to learn new skills and share their best practices on development and operation on a monthly basis in order to help them exchange their knowledge and experience. Rather than formal auditoriums or training rooms, these gatherings are held at in-house cafes or live broadcast through YouTube to create a comfortable environment where developers and operators can freely share the knowledge and know-how they learned over the years, which in turn generates positive synergy effects among developers and operators.

X-Change Seminar



YouTube Live Broadcast

On-site Developer Training

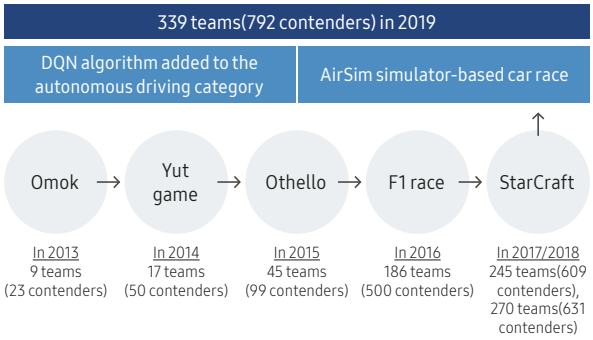
To ensure that developers do not lose sight of rapidly-shifting IT technology trends and learn work-related know-how, Samsung SDS operates a range of on-site training programs. To help these developers become polyglotters[1] who are able to leverage multiple languages including Vue.js, Golang, and Python rather than one single language, the company offers an opportunity to learn and practice diverse development languages and while widening the window of opportunity to learn AI/Analytics, Blockchain, Cloud, and other new technology and to put them to work. Such activities designed to revitalize the software ecosystem and strengthen technology capacity allowed Samsung SDS to train nearly 1,300 employees in 2019.

1) Developers who are capable of freely leveraging multiple development languages

On-site developer training poster

Algorithm Competitions

Over the past eight years since 2013, Samsung SDS has hosted developer competitions through which developers compete on the algorithms they develop from the new technology they learn. In 2019, the company intends to expand these competitions to invite contenders from its overseas/domestic subsidiaries so that they evolve into a developer festival worth celebrating.

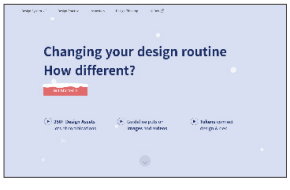


Algorithm Competitions Held in 2019

SW Reuse

Since 2018, Samsung SDS has been dedicated to creating an in-house ecosystem conducive to the reuse of software. This helps recycle diverse source codes, APIs, and design assets to improve development productivity and assists developers in achieving a better work & life balance. The company established reuse processes and systems to consistently pursue its SW Reuse initiative, including its design asset portal OPUS 3.0, and is further driving this initiative through in-house campaigns.

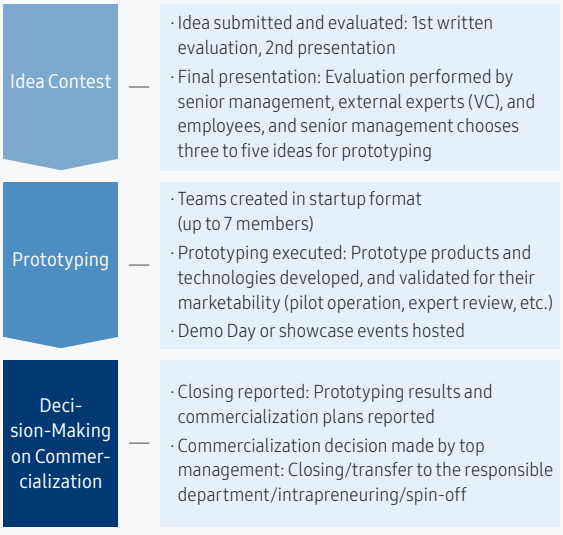
Campaign GoGoReuse for SW asset reuse



Portal OPUS for design asset reuse

XEED-LAB

XEED-LAB was launched back in 2016 as Samsung SDS's in-house contest to discover new technology and business ideas with an aim to promote employees' entrepreneurship and the spirit of challenge. This annual event takes a bottom-up approach in receiving future business ideas from employees, chooses three to five of them through a total of three rounds of screening, and initiates the prototyping of selected ideas. Following the deliberations made by senior management, these ideas are commercialized through different pathways, including transferring to the responsible department, intrapreneuring, and spin-off. Intrapreneuring, an in-house venture system that promotes incubation through the creation of an independent internal organization, assists fast-track implementation and swift performance generation. Spin-off allows employees to establish their own startups outside the company based on their chosen ideas, and Samsung SDS supports them with the transfer of necessary intellectual property assets and capacity-building on legal/accounting/labor issues, in addition to up-front investments. Furthermore, employees are allowed to return to the company when their spin-off companies fail, and thus are proactively encouraged to challenge their limits to make their startup a success.



As of 2019 on a cumulative basis, nearly 850 ideas were submitted to XEED-LAB. Out of these ideas, 12 of them were given a chance to move on to the prototyping phase: six of them were commercialized through intrapreneuring, transfer to the responsible department, and spin-off. With the conclusion of the 4th contest, three ideas are currently under the prototyping process. The team 'SAIDA', whose idea was commercialized and transferred to the responsible department to develop an additional project, won the AIIDE StarCraft® AI competition, the world's most renowned of its kind, with its AI bots developed in 2018 by adopting a learning algorithm based on the gaming patterns of pro-gamers, showcasing Samsung SDS's unrivaled AI technology across the world. Another team named 'chajazOOm', which is undertaking an intrapreneuring project, landed an order and signed a contract to build a 'Vision AI' platform for a domestic media company. Going forward, Samsung SDS will leverage XEED-LAB to combine the creative ideas of its employees with its own solutions to translate these ideas into business success and pursue innovation in so doing.

Commercialization of XEED-LAB Projects

Project	Description	Pathway
chajazOOm (1st contest)	Video search/analysis service that enables users to spot the scene they were looking for (AI-based media search platform)	Intrapreneuring
Brightics Law (2nd contest)	Automated risk detection service that identifies risk factors within legal contracts by using natural language processing technology	Intrapreneuring
Insfiler (2nd contest)	Processing and selling of public data from governmental agencies by analyzing them through Brightics and turning them into information available for corporate marketing purposes	Spin-off
SAIDA (2nd contest)	Advanced StarCraft AI bots enabled by the development of analysis and learning algorithms based on StarCraft pro-gamers' gaming patterns	Transfer to the responsible department
BotStation (2nd contest)	API interface standardization solution that connects diverse messengers and chatbots	Transfer to the responsible department
Catius (3rd contest)	AI chatbot doll that converses with the child at his/her eye level based on voice recognition while the mom takes a break	Spin-off

Agile Core Team (DEV: CRAFT)

Agile Core Team (DEV: CRAFT), created in 2015 to bring innovation to Samsung SDS's development culture, has collaborated with industry leaders to learn systemic and efficient methods such as Lean Startup, Agile, and Design Thinking Process and to adapt these methods to reflect Korea's domestic conditions to pioneer organizational innovation. From its inception to the end of 2018, the team developed AI-enabled product MVP and executed company-wide process improvement for capacity-based refactoring and bottleneck-free development through MSA CoE (Center of Excellence). In 2019, the team is engaged in elevating the operation and performance of the Agile/DevOps system, supporting external business with Agile/DevOps competency, improving the system-based product management system, and assisting system/asset-based project undertakings. Furthermore, collaboration continues across diverse areas from CVC-based consulting to product development through digital transformation.

As such, Agile Core Team promotes the qualitative improvement of the development environment through wide-ranging attempts to take the lead in development process and technology, experiment with advanced HR and assessment systems, and create a collaboration-driven open development environment.

Diversity and Equal Opportunity

Employee Diversity

Samsung SDS employees are not discriminated against on the grounds of nationality, race, gender, religion, or health conditions, and their diversity is duly respected. As Samsung SDS broadens its global presence, the number of its overseas employees has been on the rise, and the number of female managers in manager and higher positions has also increased for the past three consecutive years in line with the growing number of total female employees.

Indicator	Unit	2017	2018	2019
No. of overseas employees	No. of Persons	6,538	6,533	6,880
Ratio of overseas employees	%	28.6	28.2	29.4
Female executives	No. of Persons	8	10	10
Female managers[1)]	No. of Persons	1,425	1,525	1,656
Ratio of female managers	%	11.1	12.0	13.2

1) Female employees in manager and higher positions, including executives at domestic establishments (excluding subsidiaries)

Evaluation and Compensation System

Samsung SDS conducts employee evaluations twice a year: in June, core value evaluations are performed to see whether employees develop necessary capabilities as a Samsung SDS employee and put their capabilities into use; in December, performance evaluations are conducted to measure whether employees successfully attained their annual work target set in the beginning of each year. If an employee raises any objection against evaluation outcomes, the Evaluation and Deliberation Committee deliberates on such objections before finalizing the evaluation rating.

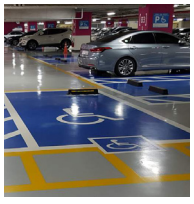
Evaluation Item		Evaluation Details
Core Value	Core Value	Core values shared and pursued by all employees
	Behavioral Competency	Organizational engagement, communicative collaboration, global competency, learning ability
	Leadership	Organizational management, talent development, performance management, future preparation
Performance	Annual Work Assigned	Attainment of the set work target for the year

Open Hands Co, Ltd., a Standard Workplace for the Disabled

In November 2010, Samsung SDS founded Open Hands Co., Ltd., a standard workplace for the disabled as designated by the Korean government, as its subsidiary with an aim to fulfill its corporate social responsibility and create decent jobs for people with disabilities. In January 2017, the company moved its headquarters and consolidated office spaces to provide a better work environment and improve convenience for its employees with disabilities across rest rooms, parking spaces, elevators, and cafeteria services. These endeavors were recognized when the company was honored with the 'Accessible Work Place of the Year Award' granted by the Korea Employment Agency for the Disabled. In 2018, Open Hands was chosen as a great employer of people with disabilities.


Handrail


Guidance blocks


Accessible parking space

Defibrillator


Protective gear box


Emergency evacuation drill

Employee Human Rights Protection

Human Rights Training and Protection

Samsung SDS provides all its employees with semi-annual training to prevent verbal, physical violence and sexual harassment to enhance their human rights awareness. In 2019, the company added the prevention of workplace bullying to its training curriculum. In addition, the 'Organizational Culture Keeper' section on the main page of the in-house e-mail system (Knox Portal) allows employees to receive counseling on their individual grievances and to submit whistle-blowing reports concerning organizational culture. Once such reports are submitted, their factual grounds are confirmed through interviews, and necessary actions are taken while disciplinary measures are taken if deemed necessary. As to the details of submitted grievances and the information of individual whistle-blowers, the principle of confidentiality is strictly observed.

Category	Unit	2017	2018	2019
Employees to receive human rights training	No. of persons	12,472	12,177	11,974
No. of employees who completed training (ratio)	No. of persons (%)	12,388 (99%)	11,991 (98%)	11,917 (99%)

Anti-Discrimination Training for Locally-Hired Employees

On a half-yearly basis, employees approaching their expatriation are trained on global etiquettes on diversity and equality and locally-appropriate behaviors so that they can work in harmony with their local coworkers. Respective overseas worksites also provide training to locally-hired staff once or twice a year on accident prevention, understanding of Korean and other cultures, and human rights protection.

Increased Life Satisfaction

Work & Life Balance

Samsung SDS is introducing and operating wide-ranging work & life balance programs. Notably, flexible work hours and Single Office contribute to improving the work environment and increasing work efficiency, thereby assisting employees in striking the right work & life balance. Samsung SDS was first certified as a Family-Friendly Enterprise by the Korean government in February 2013, and was re-certified in December 2018.

Flexible Work Hours

Under the fundamental business philosophy that employees should be recognized for their work performance, rather than work hours, in order to create an innovative and creative corporate culture, Samsung SDS launched its 'flexible work hours' in 2011 to allow its employees to customize their own work schedule. Since July 2018, the company introduced the alternative work schedule to comply with the Korean government's 52-hour workweek policy: employees' weekly work hours were reduced to 40 hours on average, and all Samsung SDS employees now come to work anytime between 6 a.m. and 6 p.m. This shortened total work hours and improved work efficiency, which ultimately increased employees' satisfaction with their work environment.

Single Office

The Single Office program was designed to overcome spatial limitations to increase the flexibility of workforce operations and the convenience of employees. Under this program, employees can work in a place of their own choice, such as their home, through prior application and approval, and their work hours are officially recognized. To improve the effectiveness of this Single Office program, the company designated Adaptive Working Zones in each of its office buildings in order to minimize the hours lost due to limited work space options and to maximize work productivity..

Insurance and Pension

Samsung SDS is faithfully fulfilling its obligations to sign up for the four major insurance policies as stipulated by the Korean government, and is operating retirement pension and individual pension plans to ensure a stable retirement life for its employees. The company also holds a collective insurance policy to support its employees in the event of disease treatment, injury or death.

Collective Insurance		Pay for the diagnosis of major diseases, hospitalization, and death benefits
Pension Program	Retirement Pension	Operate both Defined Benefit (DB) and Defined Contribution (DC) plans
	Personal Pension	When an employee purchases a personal pension plan, the company pays half of the premium

Retirement Pension Funds under Management

(unit: KRW million)

Indicator	2017	2018	2019
Defined Benefit (DB)	898,848	1,005,815	1,152,366
Defined Contribution (DC)[1)]	19,623	29,922	45,999

1) On a non-consolidated basis

Support for Employee Onboarding and Their Employability

Onboarding Support for New Recruits

Retaining exceptional talent is only possible when they become fully acquainted with the organization. As such, Samsung SDS provides all its new hires with one-year mentoring and pays relevant expenses. During this one-year period, new recruits receive mentoring from three mentors: a buddy mentor from whom they may seek advice in relation to their work life, a boss mentor who can offer advice concerning career development, and an HR mentor who may help with administrative work for their successful onboarding. Furthermore, new international hires can use the Global Help Desk to receive guidance on their work life as well as their new life in Korea in general.

Support for Retirement Life Planning

Through the career consulting center, Samsung SDS ensures that retirees or those nearing their retirement can confidently open a new chapter in their life by offering training and consulting on life planning, career planning, outplacement, startup, and returning to farming. Between 2016 and 2019, a total of 207 persons attended 55 sessions of such training.

Training Course for (Future) Retirees	Training Details
Outplacement Support	Life planning including change management and financial planning, job seeker know-how development, understanding of SMEs
Startup Support	Business model development, feasibility analyses, introduction to startup case studies and relevant support systems
LDP (Life Design Program) Support	Knowledge development in six major life domains, re-identification through a view from the past, preparation of the pledge for a future life, action plan development
CDP (Career Design Program) Support	Importance of CDP and alternative exploration, improved understanding of the self, looking for opportunities in the social economic sector, career alternative organization, life career planning
Support for Returning to Farming	Provision of information on returning to farming and of experience and career exploration opportunity
Professor with Industry Experience	Understanding of the role and work of professors with industry experience, student guidance methodology, coaching leadership

Sound Labor Relations

Samsung SDS operates the Labor-Management Council that consists of 20 members in total in order to build sound labor relations and promote labor-management communication. Council members serve two years, and ten members are appointed alternately each year. The council is tasked with holding regular meetings and handling employee grievances in conformity with governmental regulations on employee involvement and cooperation.

Labor-Management Council- Major Activity and Performance in 2019

- Held approximately 300 employee discussions for grievances/ suggestions
- Handled 105 grievances
- Paid 12 surprise visits to the family of employees
- Paid 12 visits to the establishments and project sites
- Volunteered for local communities, including 'Doneui-dong Dosshouse Volunteer Program'

Major Welfare & Benefit Programs

To motivate employees and boost their morale, Samsung SDS offers wide-ranging welfare & benefit programs and accommodations under such diverse themes as livelihood support, healthcare, and leisure.

Tuition support for employee children →	Support tuition payment for preschoolers, middle/ high school students, and undergraduate students
Selective welfare & benefits →	Operate a welfare point program to offer a wide range of welfare benefits for employees to choose from to meet their individual preferences
Support for family events →	Offer expenditure support and special leave for family events involving the immediate family members of employees and their spouses as well as supplies and personnel services for major family events
Health care support →	Provide medical expense support for employees and their spouses and children as well as comprehensive medical check-up expense support for employees and their spouses
Accommodations →	Operate a range of in-house accommodations, including cafeterias, childcare centers, gyms, clinics, and healthcare facilities

Online Discussions for an Innovative Work Culture (Dtalks)

Samsung SDS hosted an online debate dubbed Dtalks with an aim to 'detoxicate' its work culture and create an innovative work culture in so doing. All employees were engaged in the debate on corporate culture innovation to address such topics as meeting, reporting, collaboration, and engagement: with 6,451 employees attending online, the number of hits amounted to 36,337 in total and 3,825 opinions were uploaded. Furthermore, on-site surveys were performed at the Jamsil, Suwon, Sangam, and Pangyo establishments to identify 8,348 opinions on relevant topics. The feedback gathered through Dtalks will be reflected in Samsung SDS's work culture innovation initiative, and the company plans to proactively listen to the voice of employees raised on its corporate culture.

Major Opinions Raised by Topic

Topic	Major Opinion
Reporting	· Facilitate verbal/messenger/regular reporting (47%) · Present one-page reports with minimum attachments (21%)
Meeting	· Ensure only minimum attendance sufficient for decision-making (37%) · Draw meaningful conclusions (22%)
Collaboration	· Share clear and detailed work contexts/purposes (37%) · Ensure work communication based on mutual respect (27%)
Work Engagement	· Create a culture where employees can properly take rest and focus on their work (42%) · Create the work environment conducive to individuals' work engagement (32%)

Online debate on work culture innovation (Dtalks)

Health & Safety Management

Health & Safety Management System

It is from the viewpoint of advancing its business philosophy and pursuing practical execution in line with changing times that Samsung SDS set forth its workplace safety policy and 10 safety rules for all employees to abide by. The company set up the Occupational Health and Safety Committee to promote its business growth and employees' health & safety, and top management and employee representatives meet quarterly to deliberate and decide on major health & safety issues concerning its eight establishments. The committee is responsible for developing occupational injury prevention plans, stipulating and revising health and safety management regulations, offering health and safety training, checking and improving the work environment, and investigating the causes of occupational injuries and taking corresponding preventive actions. As employers today are required to take on a stronger role for safety management, the company also appointed eight health and safety management officers and provided them with diverse online/offline training while constantly monitoring relevant governmental regulations and notices to address health & safety regulatory risks and to prevent safety incidents from occurring.

Safety Check and Risk Factor Analysis

Samsung SDS conducts monthly safety checks and improves on the risk factors identified to jeopardize workplace safety. Over the past three years, the company completely eliminated the risk factors discovered at 11 domestic establishments and five subsidiaries to reinforce workplace safety. In addition, the scope of safety checks was extended to include data centers and project sites, and senior management from the headquarters is proactively engaged in performing on-site safety checks as a way to raise company-wide awareness on workplace safety.

Office inspection

Field inspection

Health & Safety Initiatives and Training

Emergency Response Drill

Samsung SDS conducts regular emergency response drills to prevent safety incidents. At the Jamsil Campus and data centers in Sangam, Suwon, Gwacheon, and Gumi, responsible executives and emergency response organizations at respective establishments are engaged in semi-annual exercises based on scenario-based manuals developed for fires, earthquakes, and other disaster situations. Data centers, that have direct impact on customers' data security and their stable business operations, perform emergency procedure drills based on multiple scenarios including natural disasters, power outages, and utility failures as well as comprehensive emergency response training more than once every year. Specifically, data centers have emergency power sources to prepare for any possible suspension of power supply, and establish emergency power supply plans that consist of more than three different phases. Furthermore, Samsung SDS is operating an organization designed to ensure the safety of data center staff and the stable operation and recovery of data centers in case of emergency while developing emergency response plans to keep both employees and corporate facilities out of harm's way.

Emergency response drill (outdoor evacuation)

Emergency response drill (fighting fires early on)

Health & Safety Training

To assist employees in developing health & safety capacity and establish a health & safety management system, Samsung SDS develops relevant training contents and offers annual online training to all employees. In response to the increasing number of employees diagnosed with cardiovascular and cerebrovascular diseases, the company is inviting external experts to provide exercise-based training on 'how to perform CPR (cardiopulmonary resuscitation) and use AED (automated external defibrillator)' in order to help employees better respond to emergency situations. Furthermore, AEDs are placed, one unit on each floor, at major establishments, data center lobbies, and work spaces to minimize any loss of life even in case of emergency.

CPR and AED Training

Category	2017	2018	2019
Employees who completed training (No. of persons)	2,034	1,542	1,148

CPR Training

AED installation and operation

Health & Safety Certification

Samsung SDS consistently improves its health & safety environment by taking the 'Plan-Do-Check-Action' approach: on the basis of the health & safety management system, the company develops action plans, executes and operates these plans, performs checks, and then takes actions along the P-D-C-A cycle. Such endeavors have allowed the company to become certified against OHSAS 18001 (health & safety management system) and ISO 14001 (environmental management system) in 2014, and the company has remained certified ever since then by completing recertification, transfer, and surveillance audits. In 2017, Samsung SDS successfully transferred to ISO 45001, an upgraded version of the conventional OHSAS 18001 standard.

ISO 45001 Certification

ISO 14001 Certification

Employee Health Promotion

Samsung SDS develops and provides a range of support programs as follows in order to protect and promote the physical and psychological health of its employees.

Health Promotion Support Programs

Program	Details
Comprehensive medical check-up	Provide comprehensive medical check-ups for all employees - Every year for employees 40 years old and older, every two years for employees under 40 years old, the same benefit is available for employee spouses
In-house clinic	Operate an in-house clinic that consists of one doctor and two nurses at the Jamsil Campus - Offers counseling and vaccination for employees diagnosed with specific medical conditions as well as general treatment
In-house mental health shelter	Assist employees in better understanding themselves through permanently-stationed psychological counselors and psychological tests - Provide on-site counseling service for employees working at locally-based establishments
Health promotion facility	Fitness gym, female-only rest area, healthcare facility, space for pregnant employees
Take the Stairs to Stay Healthy	Improve employees' healthcare, its operation is currently being expanded at data centers

In-house mental health shelter

Take the Stairs to Stay Healthy

PARTNERS

Samsung SDS contributes to creating a sustainable IT ecosystem to pursue shared growth with its partners.

WHY MATTER?

As technology is evolving rapidly and convergence & integration is mainstreaming in today's global business landscape, one critical factor that strengthens a company's competitive edge lies in its ability to network with its business partners. This implies that businesses should follow transparent criteria and procedures in selecting their business partners and establish fair trade principles to maintain mutually-trusted relationships. Samsung SDS needs to generate synergy effects with its partners in order to elevate mutual cooperation into a whole new level and to pursue shared growth as the company can be only as competitive as its partners.

WE PLANNED & ACHIEVED

Focus Area	2019 Plan	2019 Achievement	Achievement
Creation of a Sustainable IT Ecosystem and Support for the Sustainability of Partners	· To maintain the 'Most Excellent' rating in the Win-Win Growth Index	· Rated 'Most Excellent' for two consecutive years	· Achieved
	· To share the Innovator methodology more broadly	· Added Agile development methodology and opened this to eight additional partners	· Achieved
	· To expand communication with partners	· Hosted Partner's Day and other events to invite partners to share Samsung SDS business strategy	· Achieved

WE WILL

Creation of a Sustainable IT Ecosystem and Support for the Sustainability of Partners

Samsung SDS will share its Innovator development methodology with even more partners to continuously contribute to improving their technological competitiveness while expanding financial support to assist these partners in stabilizing their business operations. Furthermore, the company plans to identify and implement programs to support the sustainability of its partners.

Partners

Creating a Sustainable IT Ecosystem

Shared Growth Policy

To advance partnerships that contribute to shared growth and development, Samsung SDS formulates and implements relevant policies. The company sets mutual growth implementation strategy to share its vision with partners, and its senior management personally visits these partners or holds meetings to promote even closer communication and build trust-based relationships.

Policy Goal

Generate synergy effects with partners to pursue shared growth

Policy Keyword

Create a fair and transparent business environment

Strengthen the competitiveness of partners through cooperation and assistance

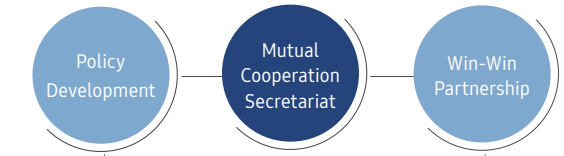
Create future values through creativity and innovation

Detailed Action

Fair TWrade	Financial (Funding) Support	Business Support
· Four Fair Trade Principles Unfair · Practice whistle-blowing system	· Win-Win Management Funds · Make cash payments	· Discover and nurture solution partners · Performance sharing program
Technology Support/ Protection	**Education/Training, Welfare & Benefits**	**Win-Win Culture (Communication)**
· Share the development methodology · Technology escrow program	· Support partners with training · Partner cooperation center	· Partner collaboration portal · Partner Council

Implementation Framework

Samsung SDS develops and implements company-wide shared growth policies through the Mutual Cooperation Secretariat which serves as a dedicated shared growth organization. The company also operates the Partner Council as a regular consultation body to exchange opinions with its partners and periodically provide them with information on possible business opportunities on Samsung SDS's major business.



· Develop measures to cooperate with partners
· Gather feedback from partners
· Reflect governmental policies

· Develop and operate win-win partnership programs
· Improve systems and processes

External Performance of Shared Growth Initiatives

Samsung SDS has been rated 'Most Excellent' for two consecutive years in the 'Win-Win Growth Index' evaluation performed in 2019. The index quantitatively evaluates large businesses for their performance in promoting shared growth with their small and medium-sized suppliers with an aim to facilitate mutual growth and partnership, and is published every year by the Korea Commission for Corporate Partnership. Samsung SDS vows to uphold the principles of fairness and transparency in conducting business and to create a culture of win-win partnership with its partners.

Fair Trade Policy

To establish transparent and fair trade practices with partners, Samsung SDS has introduced the Four Fair Trade Principles to comply with subcontracting and other relevant regulations and to prevent any unfair practices from occurring in doing business with its partners.

Four Fair Trade Principles

Follow best practices for signing contracts

We introduce and implement the 'best practices for signing contracts' recommended by the Korean Fair Trade Commission, and set an example in doing business with partners in a reasonable and fair manner and facilitating shared growth with them.

Select and manage partners

We ensure fairness and transparency in selecting and managing partners, and operate partner management policies in a reasonable and transparent manner.

Create and operate the Subcontract Deliberation Committee

We perform preliminary deliberations on subcontractor deals that exceed the set value to promote the fairness and legality of such transactions.

Follow best practices for document issuance and preservation

We introduce the 'best practices for issuing and preserving written documents in signing subcontractor agreements and making subcontractor deals' recommended by the Korean Fair Trade Commission to take the initiative in establishing fair trade principles.

Fair Trade and Fair Contract

To prevent any unfair trade practices or unjustified behaviors that may occur in doing business with partners, Samsung SDS always includes ethics management action principles in signing subcontractor agreements with these partners. In 2012, the company participated in the public-private task force team project undertaken to improve standard software business subcontracting practices: not only did the company introduce the standard subcontractor agreement forms recommended by the Fair Trade Commission, but also expanded their application to construction (four types), manufacturing (two types), and logistics (two types) agreements in addition to software (four types). Furthermore, the company adopted an electronic contract system through its supplier collaboration portal 'smartTogether.com' to prevent verbal order awards, unreasonable order cancellations, and other unfair trade practices.

Improved Payment Terms

To help partners reinforce their financial stability, Samsung SDS made three times of subcontractor payments per month, and makes such payments within 10 days on average. If a partner requests early payment, the company accepts the request following reviews. Furthermore, Samsung SDS makes 100% full cash payments.

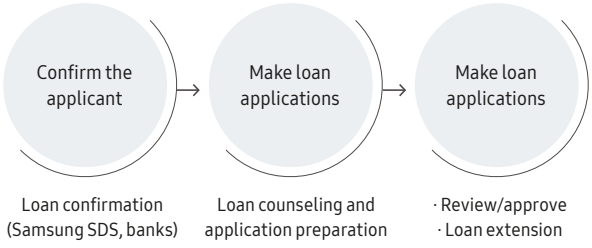
Closer Communication with Partners

Samsung SDS undertakes a range of communication initiatives to build trust and pursue shared growth with its partners. Its supplier collaboration portal 'smartTogether.com' helps the company to share information and exchange opinions, and the win-win whistle-blower system within the portal serves to allow partners to report any grievances or unfair practices that occurred in doing business with Samsung SDS. Furthermore, the company hosts partner discussion meetings to share its business strategy and mutual growth policy and to reinforce mutual partnership from the long-term perspective.

Financing Support for Partners

Samsung SDS offers wide-ranging financing support programs to help its partners stabilize their business operations. The Win-Win Management Funds, operated in conjunction with financial institutions, allow the company to financially support its partners to strengthen their competitive edge through technology and research development. Samsung SDS also operates the network loan program to provide indirect financing support: its partners can extend low-interest loans from financial institutions based on the track records of doing business with Samsung SDS.

Win-Win Management Funds Support Process



Compositional Status of the Win-Win Management Funds

(unit: KRW million)

Category	2017	2018	2019
Contribution from Samsung SDS	18,300	36,400	40,700
Contribution from Financial Institutions	21,700	3,600	4,300
Total Value	40,000	40,000	45,000
Loans Extended	33,695	40,000	45,000

Exemption from Contract-related Guarantee Insurance

Samsung SDS exempts its partners from guarantee insurance required as part of the contract-signing process so that they can lessen their financial burden in issuing such insurance policies.

Partner Council CEO Discussion Meeting

In February of 2018, Samsung SDS invited the CEOs of Partner Council executive members to a discussion meeting to share its vision and business agenda and to announce its commitment to win-win partnership and shared growth. The meeting was attended by Samsung SDS executives, including the company CEO, and the CEOs of eight partners, and it served to brief on Samsung SDS's four strategic businesses and its new vision 'Data-driven Digital Transformation Leader'. In addition, '2018 win-win cooperation policies' and operational plans were shared to confirm Samsung SDS's dedication to seeking shared growth through the synergy effects generated with partners.

Partner Council CEO discussion meeting

Strengthening Partners' Technology Competitiveness

Joint R&D Efforts

To assist partners in building their business competitive edge and enhancing technological capabilities, Samsung SDS supports joint R&D activities, from new product development and joint product planning & brand development to new technology development and transfer. Furthermore, the company supports partners to reach the common agreed-upon targets and shares the benefits generated through joint efforts under the performance sharing program.

Patent Sharing and Technology Protection

Samsung SDS provides partners with its patents free-of-charge, and helps partners make patent applications by sharing relevant procedures and its know-how to contribute to strengthening their technological capabilities. In addition, the company operates the technology escrow program to help protect the core technology assets of its partners. This program enables partners to safety deposit their core technology information under the custody of third-party institutions. Since 2018, Samsung SDS has also supported partners in verifying the original data source of their trade secrets so that they can safeguard these invaluable intellectual assets.

Support for the Recruitment of Exceptional Talent

Samsung SDS joined the '2019 Samsung Supplier Recruitment Grand Festival', a job fair hosted by the Samsung Group, as a way to support its partners to hire outstanding talent. Approximately 100 suppliers attended the event and seven of them were Samsung SDS partners. Nearly 10,000 job seekers came and visited the recruitment booths classified by job category to gain information on these suppliers and conduct on-the-spot interviews.

Training Support for Partners

To help partners build their own competitive edge and contribute to shared growth in so doing, Samsung SDS offers wide-ranging training programs for partners. The company supports online/offline training on information systems and software through Multicampus, a software professional training institute, while hosting technology seminars to share latest technology trends. Samsung SDS also plans customized training courses for job-level based competency development, including core job training on information services and introductory training for new recruits, and offers these courses free of charge.

Core Job Training for Partners (2019)

Core Job	—	**Project Manager (PM) Training** Study project cases to help PMs strengthen necessary skills and capabilities
	—	**Proposition Capacity-Building** Learn how to analyze customers' core issues and develop competitive proposition strategy based on exercises
	—	**Analysis/Design** Learn how to systematically analyze and design software projects and use standard modeling languages (UML)
	—	**Latest IT Trends (4th Industrial Revolution and IT)** Understand the shifting market paradigm in the 4th Industrial Revolution era and use the insight in performing one's job through mindset training
Introductory Training for New Hires	—	Learn the attitudes/roles required of new hires, workplace relationships, communication skills, and latest IT trends
Training by Professional IT Trainers	—	Take big data, JAVA, and other IT-related online/offline training courses (164 courses)

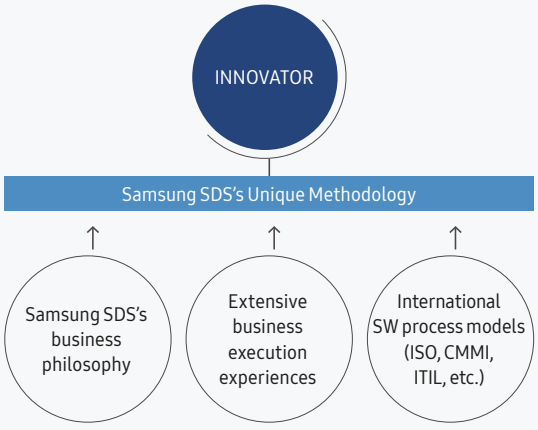
Support for Partners in Tapping into New Markets

Samsung SDS assists its partners in tapping into new markets both in Korea and abroad by promoting their solutions and products and joining hands in advancing into such new markets. Samsung SDS's executives in charge of solution business attend the presentations and discussions hosted to introduce partners' solutions in a bid to explore ways to collaborate to expand common markets. The company also hosts IT exchange events to identify new overseas markets and forge closer ties with local customers. This allows Samsung SDS partners to introduce their outstanding solutions and project experiences to these customers and to demonstrate their solutions and engage in customer counseling so that they can advance into untapped territories and enhance their brand awareness.

Innovator Development Methodology Shared with Partners

Samsung SDS willingly provides its Innovator methodology as a way to share its business methods and procedures standardized based on its unique experience and know-how in order to contribute to partners' improving their quality. Through smartTogether.com, the methods and deliverables required for business execution are offered to partners while Samsung SDS's quality professionals assist them in learning how to use the development methodology and relevant guidelines. In so doing, the company goes hand in hand with its partners in elevating mutual competitive edge in technology.

Innovator Development Methodology



Development Methodology Shared with Partners

Methodology	Details
Project Management	Provide project management methods, processes, guides, and deliverables along the entire project cycle, from project initiation and execution to control and closing, to help effectively manage software and system development projects
Information Engineering	Information engineering-based methodology to analyze, design, and develop applications with a focus on data and business
Object Oriented	Methodology to develop Java-based applications through UML modeling
Component Based Development	Methodology with additional processes to develop and assemble reusable components based on the Object Oriented methodology
Application Development (Package Application)	Provide processes and procedures to identify and resolve differences between packages and customer requirements based on the basic flow of information engineering
Application Development (Generic Agile)	Methodology to swiftly identify user-centric requirements and effectively perform deployment and validation by using short iteration cycles

Support for the Sustainability of Partners

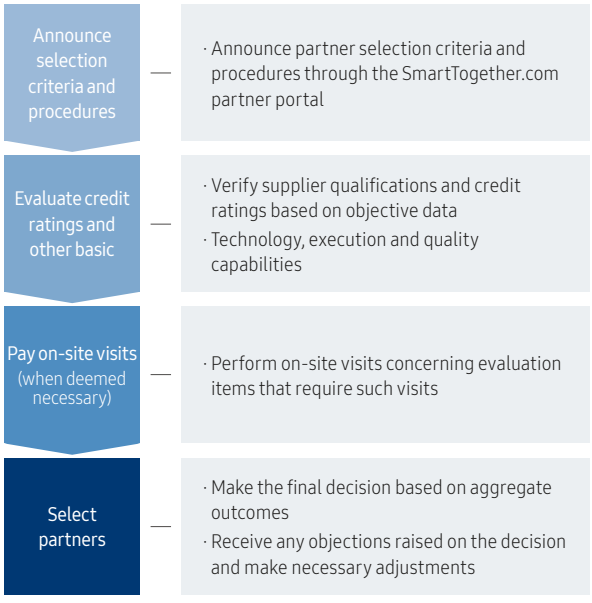
Samsung SDS Partners

Samsung SDS recognizes those suppliers selected in accordance with the set evaluation criteria and procedures as its official partners: they are defined as businesses who will or currently do business with the company concerning outsourced consignment of Samsung SDS's information service, manufacturing, and construction, and include general contract-based suppliers as well as subcontractors stipulated under the subcontractor regulations. As of December 2019, a total of 292 suppliers were included in the Samsung SDS's pool of partners.

Partner Selection

In accordance with the Four Fair Trade Principles, Samsung SDS develops and implements partner selection and management standards in a fair and transparent manner. Partner selection criteria and procedures are announced on its smartTogether.com portal, and selection and evaluation criteria are presented in concrete and accurate detail so as not be interpreted arbitrarily on the part of partners. Partner candidates are evaluated for their non-financial risks – human rights, information security, and compliance (for point addition or deduction) – as well as for their basic qualifications and capabilities before they are finalized as Samsung SDS partners.

Partner Selection Process



SHAREHOLDERS & INVESTORS

Samsung SDS will be ceaselessly committed to promoting sustainable growth and improving corporate value.

WHY MATTER?

Investors in Korea and abroad are keenly interested in the sustainable corporate value seen from the long-term perspective on the basis of environmental, social and governance (ESG) performance, as evidenced in the introduction of the Stewardship Code and the promotion of responsible investments. This urges businesses today to fulfill their social responsibility to generate non-financial values in addition to securing future growth drivers even amid uncertain business conditions to improve their financial values. Furthermore, they need to protect the rights of shareholders and investors and cater to the expectations of wide-ranging stakeholders through sound and transparent corporate governance in order to ultimately strengthen corporate value.

WE PLANNED & ACHIEVED

Focus Area	2019 Plan	2019 Achievement	Achievement
Sound Governance	· To reach 90% in outside director attendance	· Reached 97.5% in outside director attendance	· Achieved
	· To provide directors with the information needed to fulfill their job	· Offered outside director training on three occasions	· Achieved
	· To strengthen trust-based relationships with shareholders and investors	· Strengthened top management IR operations · Disclosed corporate governance data through business report	· Achieved
Risk Management	· To reinforce compliance system	· Regularly held Compliance Council	· Achieved
	· To minimize or prevent the risk of regulatory violations	· Conducted year-round self-directed reviews based on CPMS and employee training	· Achieved
Securing Future Growth Drivers	· To strengthen the competitiveness of the AI-powered big data analytics platform Brightics AI · To secure blockchain and other advanced technology · To secure original homomorphic encryption technology	· Developed an AI-enabled collaborative development framework and original technology on enterprise blockchain platform encryption	· Achieved
	· To discover exceptional startups	· Discovered 29 exceptional startups	· Achieved
	· To apply startup's technology to business/solutions	· Applied their technology to business/solutions on ten occasions	· Achieved
	· To provide the incubation program to three startups	· Provided the incubation program to four startups	· Achieved
	· To approve strategic startup investments	· Approved strategic startup investments	· Achieved

WE WILL

Sound Governance Samsung SDS will review and implement diverse measures to further strengthen the independence and expertise of its Board of Directors in order to establish sound governance. Its top management and IR department will promote consistency in their IR operations to earn deeper trust from shareholders and investors, and the Investors Tech Day event will be hosted continuously. Furthermore, the company will publish disclosures in English to provide its overseas shareholders and investors with an improved access to corporate information.

Risk Management Samsung SDS will reinforce constant risk management with responsible departments playing a leading role in addressing both financial and non-financial risks that may occur in conducting business while preemptively identifying new risks caused by changes in the business and regulatory environment, and developing and implementing countermeasures.

Securing Future Growth Drivers Samsung SDS will continue to explore new technology to promote its mid/long-term growth, develop the core technology required to conduct business, and apply new technology to strengthen its capabilities in conducting on-going business operations so as to secure future growth drivers through the use of its original technology. The company aims to systematically establish processes to discover promising startups, review their technology, and verify their applicability in order to swiftly embrace and execute outstanding new technology.

Sound Governance

BOD Composition

To ensure the sound and transparent operation of corporate governance, Samsung SDS follows relevant regulations and its Articles of Association in establishing and operating the Board of Directors (BOD). As of the end of March 2020, the BOD consisted of seven directors in total and four of them were outside directors, which satisfied the majority provision under Article 542.8 of the Korean Commercial Act. The BOD Chairman is elected by the BOD in accordance with Article 33 of the Articles of Association and Article 5 of the BOD Operational Regulations, and Won-Pyo Hong, the President & CEO of Samsung SDS, also serves as the BOD Chair to improve the efficiency of BOD operations and its decision-making process. While a senior outside director is not separately appointed, the outside director who was appointed before all others based on the appointment date takes on that role to coordinate the voting process on behalf of outside directors.

BOD Committees

At Samsung SDS, the BOD established committees in conformity with relevant regulations in order to ensure expedient and efficient decision-making. As of March 2020, a total of five committees were operated under the BOD: the Audit Committee, the Related Party Transactions Committee, the Independent Director Recommendation Committee, the Management Committee, and the Compensation Committee.

BOD Composition

(as of March 2020)

Director	Name(Male/Female)	Position	Tenure	Specialty	Career Experience
Inside Directo	Won-Pyo Hong (M)	President & CEO (BOD Chair)	Mar. 11th, 2016 - Mar. 19th, 2022	IT, electronic engineering	· President & CMO, Samsung Electronics · PhD in electronic engineering, University of Michigan
	Sung-Tae Park (M)	Executive VP & Logistics Unit Leader	Mar. 16th, 2015 - Mar. 22nd, 2021	Business management	· Head of Corporate Management Team, Samsung SDS · MBA, Helsinki School of Economic & Business Administration
	Jung-Tae Ahn (M)	Executive VP & CFO	Mar. 18th, 2020 - Mar. 17th, 2023	Management assessment, financial management	· Team Leader of Audit Team, Samsung Electronics · University of Illinois at Urbana-Champaign MBA
Outside Director	Jae-Man Yu (M)	Chair of the Related Party Transactions Committee	Mar.31st, 2017 - Mar. 30th, 2023	Legal affairs	· (current) Partner, Lee&Ko · BA in law, Seoul National University
	Hyuck Yoo (M)	Chair of the Independent Director Recommendation Committee	Mar. 18th, 2020 - Mar.17th, 2023	IT, computer science	· (current) Professor at Korea University, College of Informatics · PhD in computer science, University of Michigan
	Hyun-Han Shin (M)	Chair of the Audit Committee	Mar. 18th, 2020 - Mar. 17th, 2023	Finance, accounting	· (current) Professor at Yonsei University, School of Business · PhD in business administration, Ohio State University
	Seung-Ah Cho (F)	Chair of the Compensation Committee	Mar. 18th, 2020 - Mar.17th, 2023	Business strategy	· (current) Professor at Seoul National University, College of Business Administration · PhD in business administration at Columbia University (business strategy)

BOD Committees

(as of March 2020)

Committee	Composition	Purpose and Mandate
Audit Committee	Outside director(3 directors): **Hyun-Han Shin**, Jae-Man Yu, Seung-Ah Cho	Supervise and hold in check business operations to assist senior management in improving corporate and shareholder value through legitimate procedures and reasonable decision-making
Management Committee	Inside director(3 directors): **Won-Pyo Hong**, Sung-Tae Park, Jung-Tae Ahn	Deliberate and decide on major business issues delegated by the BOD to ensure expedient and smooth decision-making on such issues
Related Party Transactions Committee	Outside director(3 directors): **Jae-Man Yu**, Hyuck Yoo, Hyun-Han Shin Inside director(1 director): Jung-Tae Ahn	Deliberate and decide on important internal transactions for fair dealing with related parties
Compensation Committee	Outside director(3 directors): **Seung-Ah Cho**, Hyuck Yoo, Hyun-Han Shin	Deliberate and decide on the limit imposed on the remuneration of registered directors and their remuneration system to establish transparency in managerial remuneration and to properly calculate remuneration levels
Independent Director Recommendation Committee	Outside director(3 directors): **Hyuck Yoo**, Jae-Man Yu, Seung-Ah Cho Inside director(1 director): Jung-Tae Ahn	Recommend outside director candidates at the general shareholder meeting to ensure BOD's independence

* Committee chairs are marked in bold type

Reinforced Independence of the BOD

Samsung SDS ensures that outside directors constitute the majority of the BOD to enable its members to make decisions through the free and objective exchange of one another's views and independent judgment. In accordance with Article 398 of the Commercial Act and Article 10 of the BOD Operational Regulations, restrictions are imposed on 'transactions between directors and the company' to avoid any possible conflict of interest between the two parties and to minimize any decisions made in the interest of individual directors. If a director is found to have any interest in the decision item(s) of the BOD, he or she is prohibited from exercising his/her voting rights on the concerned item(s).

Diversity and Expertise of the BOD

Members of the BOD bring their own expertise from wide-ranging areas to the table to assist the BOD in making strategic decisions from the comprehensive viewpoint. The company CEO is responsible for the general management of Samsung SDS as a top-notch expert in the IT services sector, and also assumes the BOD Chairmanship to advance management accountability. The Independent Director Recommendation Committee serves to review outside director candidates from IT, management, accounting, legal and other diverse fields for their professional knowledge and extensive experience and to nominate candidates accordingly, who are then appointed at the general shareholder meeting. In so doing, experts from diverse fields share their own different views in their engagement in BOD operations to ultimately support objective management supervision and provide expert advice.

BOD Operation

The BOD hosts both regular and ad-hoc meetings, which are convened by the BOD Chair in accordance with Article 33 of the Articles of Association: regular meetings are held quarterly while ad-hoc meetings are held when deemed necessary. At the BOD, decisions are made with approvals of a majority of the incumbent directors as well as the attending directors. As stipulated by the Commercial Act, however, some decisions are made with a 2/3 majority vote. In 2019, the BOD met ten times to discuss a total of 18 agenda items, including 'dividends paid for the 2018 business year', 'prior approval of transactions with major shareholders', and 'contribution to social contribution funds.' The attendance of outside directors reached 97.5% in 2019.

Support for Outside Director Performance

At Samsung SDS, a support department is designated to provide necessary information and resources in order to assist outside directors in fulfilling their role as set forth. Notably, the company provides regular training on the company's management plans and business areas to help outside directors better understand its business operations.

Training for Outside Directors (2018)

Training Period	Attendant	Training Topic
Jan. 24th, 2019	All outside directors	2019 corporate management guidelines and business goals
Apr. 25th, 2019	All outside directors	Security business introduction and its progress status
July 23rd, 2019	All outside directors	Performance by business area in the first half of 2019
Oct. 24th, 2019	All outside directors	Finance business introduction and its progress status

Outside Director Assessment and Remuneration

Outside directors receive periodic annual performance assessments in accordance with the set internal criteria that consist of quantitative indicators – meeting attendance, number of deliberations made on agenda items, and BOD committee membership – and qualitative indicators – expertise and understanding of the company's business. Assessment outcomes are used to determine the reappointment of outside directors. The compensation limit of BOD members is determined at the general shareholder meeting following the prior deliberations made by the Compensation Committee, and directors are compensated within the approved limit. The remuneration of outside directors is not aligned with their performance assessment results since this may impede their independence, and these directors are subject to a separate set of remuneration policies. Outside directors receive base pay and are paid for the expenses they spent for business purposes.

Outside Director Remuneration (2019) (unit: KRW million)

Category	Total Remuneration	Average per-Capita Remuneration
4 outside directors	312	78

Protecting Shareholder Rights and Interests

Shareholder Rights

Samsung SDS ensures that its shareholders are provided with the sufficient and timely information necessary to exercise their rights and that they do so in accordance with due process. The date, venue, agenda and other general details of the general shareholder meeting are announced four weeks prior to the meeting to allow shareholders to thoroughly review the agenda items and exercise their voting rights. Reference proxy documents are also disclosed to promote proxy solicitation so that shareholders who could not attend such meetings cast their votes by proxy. Furthermore, Samsung SDS schedules its general shareholder meetings so that they do not overlap with such meetings of other companies to increase the attendance of shareholders.

Shareholder Returns Delivered through Dividends

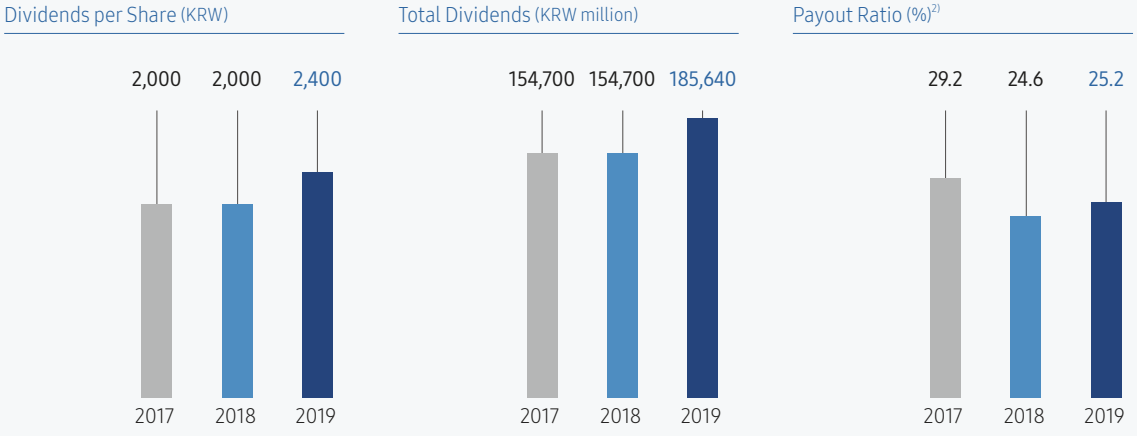
Samsung SDS fully respects the philosophy of 'returning to shareholders' through increased shareholder value and dividend, and has expanded its dividend payments over the past four years. General dividend information is provided to shareholders through public disclosures and the general shareholder meeting. The dividend policy announced by the company on January 30, 2020 stated that its dividend payouts would stay above 25% and increase up to 30% for the next three years between 2019 and 2021 to improve visibility for shareholders and investors on their dividend returns.

Corporate Information Disclosure

Samsung SDS provides its shareholders with timely, sufficient, and equal corporate information to make sure that their voting rights are not infringed upon. For investors' convenience, the company periodically announces its quarterly performance based on tentative business results through its electronic disclosure system or corporate website while hosting more than 300 IR events throughout the year, including NDRs[1], on-site investor meetings, and attendance at the conferences held by securities firms. Samsung SDS responds to related inquiries through the IR phone number and e-mail address uploaded on the corporate website, and has been publishing its official disclosures in English on the stock exchange for foreign shareholders since 2019.

1) Non-Deal Roadshow: Investor meetings that do not feature any public or secondary offerings or selling of debt (IPO, bond issuance, etc.) with the sole purpose of assisting investors to better understand the company

Dividends Paid (on a consolidated basis, type of share: common shares[1], 2019 data is based on estimates)



1) Preferred stock and other types of stock, other than common stock, are not available
2) Payout ratios were calculated by dividing total dividends by net income in controlling interests

Risk Management

Financial Risk

Samsung SDS defines financial risks as market risks, credit risks, liquidity risks and other risks that may occur in the financial sector, and operates risk management policies and programs to respond to such risks. The Financial Management Team serves as the responsible supervisor and is tasked with policy development as well as financial risk measurement, assessment and hedging in cooperation with respective business departments and individual companies in Korea and abroad.

Currency Risk

As Samsung SDS has global presence, its profits and expenditures are denominated in multiple foreign currencies, which in turns results in possible currency risks. Samsung SDS manages these risks by stipulating the definition of currency risks, their measurement cycles, and management authority and procedures in order to minimize their occurrence. The company has also established a global currency management system to monitor its currency risks on a monthly basis.

Credit Risk

In managing credit risks, Samsung SDS periodically assesses financial credit ratings while setting and managing credit limits in consideration of the financial status of its customers and transaction partners, past experiences, and other factors. Furthermore, the company does business only with those financial institutions globally recognized for their high credit ratings, and such transactions are approved, managed and supervised by the Financial Management Team.

Liquidity Risk

As Samsung SDS often engages in large-scale investments, it is critical that the company maintains an adequate level of liquidity. To this end, the company periodically predicts its funding levels, measures the level of necessary cash funds, and manages funds balance while managing its performance against the set plans to minimize liquidity risks. In making large-scale facility investments, the company uses internal reserve funds or long-term borrowings to manage such investments in alignment with their procurement period.

Non-Financial Risk

Samsung SDS defines non-financial risks as risks that occur in relation to compliance, human rights, safety accidents, and the environment, and controls these risks under the leadership of respective organizational functions in addition to the financial risks that arise in conducting business.

Compliance Risk

Samsung SDS takes a stringent approach to compliance risk management to ensure that its employees do not violate any relevant regulations in performing their job. The Chief Compliance Officer is appointed by the BOD to ensure compliance, from providing compliance training to reviewing compliance with relevant control criteria and requesting necessary improvement or corrective measures. The Compliance Council, that consists of more than five executives including the Compliance Officer, deliberates and decides on major pending issues concerning the establishment and operation of a company-wide compliance system. In 2019, a total of nine regular reviews were conducted on subcontracting, personal data security and other issues, and Samsung SDS is taking preventive actions, including the self-administered compliance reviews performed by employees through the use of the Compliance Management System (CPMS), so as to minimize any risk of regulatory violations.

Risk Management at the BOD Level

The BOD and its committees assist Samsung SDS in preemptively responding to a wide array of risks that occur in business conduct. The Management Committee is responsible for managing and supervising the general management of the company, and the Audit Committee is briefed on the operational status of the company's internal accounting management system and performs reviews accordingly. Meanwhile, financial risks are managed by responsible financial departments under the supervision of the Audit Committee.

Securing Future Growth Drivers

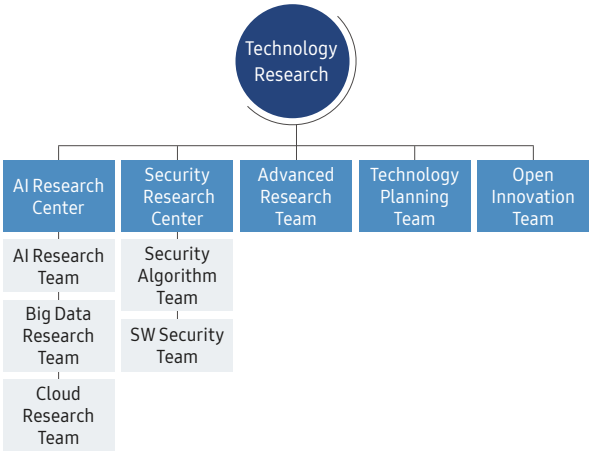
Samsung SDS is operating its own Technology Research to independently develop essential disruptive technology – AI, cloud, blockchain, and security technology – that will bring revolutionary change to the existing modus operandi of businesses as well as to the future IT services market. The company also systematically safeguards its intellectual property rights generated in developing core technology in order to gain a technological competitive advantage in commercializing such technology and to minimize relevant business risks. Furthermore, Samsung SDS is partnering with global startups in Silicon Valley and Israel through equity investment or strategic alliance to facilitate agility in responding to the shifting IT services market and technological landscape while leveraging open innovation to surely obtain all necessary technology.

Strengthening Internal Capabilities

R&D Organization

At Samsung SDI, its R&D operations are intended to build core technology and future growth engines on the firm foundation of creativity and innovation. Its R&D organization consists of the AI Research Center, the Security Research Center, the Advanced Research Team, the Technology Planning Team, and the Open Innovation Team. The AI Research Center, the Security Research Center, and the Advanced Research Team are responsible for securing differentiated core technologies in the areas of AI, data analytics, cloud, blockchain, and security and for studying the application of such technologies across wide-ranging sectors. The Technology Planning Team is in charge of the development and implementation of technology strategies and the management of intellectual property rights, and the Open Innovation Team is committed to discovering advanced technology and building dominance in the concerned sector to ensure its swift application for business operations.

R&D Organizational Chart



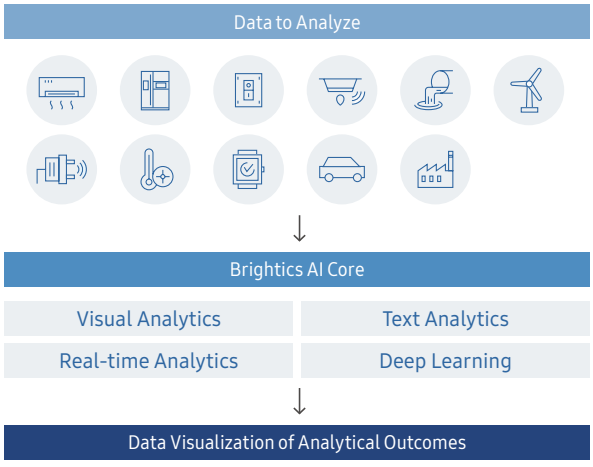
Key Research Areas

Samsung SDS defines AI/analytics, cloud, blockchain, and security technology as its key R&D areas, and is committed to developing core technology in these areas while extending their application across different industries.

AI/Analytics

Samsung SDS conducts pilot studies on AI element technologies and develops core algorithms. Technology R&D and dissemination are at the core of its business conduct to ensure that Samsung SDS solutions and platforms stay ahead of the competition.

AI-based Analytics Platform – Brightics AI Brightics AI serves as an integrated platform to deliver end-to-end services: fast and easy analyses are performed on diverse data based on AI algorithm-powered analytical functions and models, and analytical outcomes are reported to immediately deliver application services to customers through the analytics app. Its automatic analysis function enabled by Guided Analytics allows even non-experts who are not familiar with analytics to easily gain analytical insights. Brightics AI provides 100 prebuilt analytics models based on industry-specific best practices.



Open Source AI Analytics Platform – Brightics Studio
Brightics Studio assists anyone in performing AI analytics with ease: optimal functionalities are chosen from the key Brightics AI functionalities and then are modulized by taking into account individual uses' analytics environment. Anyone can download this open source release version and freely use it.

Data Lake Management Platform – Brightics Data Preparation
Brightics Lake is capable of collecting, cleansing and converting data in wide-ranging formats and of storing and managing such data in their analyzable form. This platform provides differentiated big data management features, from remote data exploration & processing and real-time data handling to automatic data cleansing and conversion. Brightics Lake caters to the needs for collecting and cleansing diverse data generated in line with the adoption of global production line equipment and MES in the manufacturing industry, and also enables retail customers to integrate the account data of their overseas subsidiaries and produce their analytic results.

Cloud

Samsung SDS delivers multi-cloud services optimized for the customer's business environment on the strength of its industry expertise, support for transition to diverse clouds, and proven operational experience and technology. By identifying and developing advanced cloud technology and assisting commercialization, Samsung SDS will further accelerate customers' digital innovation.

Storage as a Service Technology for AI/Big Data Processing This technology provides distributed parallel file systems in the cloud environment to allow for large parallel data processing. Storage is generated on an as-needed basis at the request of users, and users can readily increase or decrease storage capacity in accordance with their actual storage consumption.

Cloud-based Distributed Deep Learning Platform – Brightics Deep Learning This deep learning platform technology allows multiple users to share and simultaneously use server resources. Since deep learning models usually perform an extensive amount of calculation work, the simultaneous use of GPUs on multiple servers helps generate fast results. When compared to individually owning and using high-performance assets that include GPUs, such sharing of server resources generates cost savings.

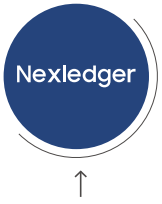
Blockchain

By building essential and differentiated technological capabilities in next-generation general-purpose blockchain technology, Samsung SDS reinforces its competitive edge in solution and platform offerings and contributes to creating future markets.

Enterprise Blockchain Platform – Nexledger This enterprise high-performance blockchain-integrated platform enables users to select from diverse blockchain engines and aids in the easy and quick development of blockchain systems based on standard APIs.

Performance Acceleration Solution Nexledger Accelerator This performance enhancement solution for corporate blockchain accelerates the transaction processing speed of blockchain platforms by more than 15 times. Nexledger Accelerator is applicable to a wide array of blockchain platforms without modifying the blockchain platforms currently under operation, and delivers specialized management functionalities as well.

Off-Chain and Heterogenous Alignment Technology Off-chain technology ensures reliability and transparency on a variety of data types in alignment with blockchain. This also enables alignment among heterogenous devices so that data can be linked among platforms powered by different blockchain technologies without any separate hub network.



Most Effective Blockchain Architecture	
Proven Open Source Blockchain algorithm-enabled distributed data management	Samsung SDS's Technology Asset Use cases, CX, FIDO, security, architecture
Hyperledger Project Enterprise general-purpose distributed ledger composition	Enterprise Ethereum Alliance Enterprise general-purpose smart contract technology

IoT/Edge

Samsung SDS secured IoT platforms to connect and develop a large number of devices that follow diverse communication protocols and to promptly collect and process large-scale data, and is currently performing R&D on edge platforms that consume minimum computing resources to distribute, execute, and manage analytical models and preprocessing functions on edge devices.

IoT Connection and Management Platform- Brightics IoT Core Brightics IoT Core is compatible with IoT devices from multiple manufacturers in compliance with international standards as well as in-house communication protocols, and offers such low-power/high-efficiency collection functionalities as simultaneous access by a large number of IoT devices(105,000 units/node) and high-speed event processing(30,000EPS/node). This platform is applicable to a wide array of industries, from manufacturing(equipment monitoring) and home IoT(remote control of home devices) to logistics(access/inventory management at warehouses).

Edge Runtime Platform – Brightics IoT Edge Brightics IoT Edge is Samsung SDS's lightweight edge runtime platform capable of distributing, executing, and managing edge modules when a large number of edge devices needs to be operated under multiple OSs with tiny footprints. This platform provides ideal solutions to detecting on-site abnormalities in real time, reducing network and hardware expenses through the precleaning of large amounts of data, and performing systemic integrated operations of equipment and sensors. Brightics IoT Edge is also applicable to wide-ranging industries in need of edge computing in addition to manufacturing(equipment automation).

Security

Samsung SDS is committed to the R&D of security technology as a way to reinforce its competitive edge in solution and service offerings.

Database Encryption Solution – Samsung SDS Database Encryption (SDBE[1)]) Samsung SDS's DB encryption technology in compliance with international CC certification standards allows for the application of anti-hacking encryption to establish outstanding security performance, and log servers are deployed to satisfy relevant regulations. This solution is applicable to the public, finance, logistics, and health care sectors for data protection purposes.

Side-channel Resistant, White-box Cryptography – Samsung Anti-hacking Crypto Suite (SACS[2)]) This cryptography technology fundamentally prevents hacker attacks against encryption keys across diverse environments, including IoT, mobility and cloud, and can be used to protect critical data in financial services, medical devices, smart cards and other diverse areas.

Personal Data Security Technology (Homomorphic Encryption) – Privacy Preserving Data Mining (PET[3)]) Supporting data analytics while protecting privacy without data loss or leakage, this technology can be deployed to perform analyses without the risk of data exposure in the cloud, finance, health care, manufacturing, and marketing sectors.

Static Analysis-based Java Security Vulnerability Assessment Tool – Java Analyzer from Security Perspectives (Jasper[4)]) This static analysis tool enables users to detect security weaknesses and execution errors that may occur in running a program in its initial development phase. This serves to analyze the flow of data – its origin and destination – and the actions taken by an executing program.

1) SDBE: Samsung SDS Database Encryption
2) SACS: Samsung Anti-hacking Crypto Suite
3) PET: Privacy Enhancing Technologies
4) Jasper: Java Analyzer from Security Perspectives

Major R&D Outcomes (2016-2019)

R&D	Major Achievement
Big data analytics platform	· Hi-speed distributed processing of large data, data visualization, and the provision of diverse analytic functions · Visual charts, automated analytical functions, real-time streaming, and the additional development of anomaly detection algorithms
AI chatbot engine	· AI-based natural language understanding, alignment with legacy systems, and automatic dialogue management · Flexibility in responding to increasingly diversified customer needs through technology development on the automation of Q&A generation, NLU/NLP, and text analytics
AI collaborative development framework	· Support for the entire AI development workflow process from AI learning model development to its operation
AI defect analytics engine	· Development of an engine to automatically analyze the defects generated from the manufacturing process based on video analytics
Remote facial recognition and analytics engine	· Individual identification, gender/age-based analysis, and tracking data analysis delivered through the analyses of facial features based on video analytics
IoT-integrated platform	· Development of platforms to connect, authenticate, and manage a large number of diverse IoT devices while collecting and processing large amounts of IoT data in a fast and stable manner · Technology in compliance with international IoT standards - oneM2M and OCF – and capable of collecting IoT data with low power and high efficiency
Data Lake management platform	· Development of platforms to collect and preprocess batch/stream data from multiple source systems · Standardization of collected data and elimination of their errors/redundancies & integrated monitoring of data flows
Enterprise blockchain platform	· Development of a high-performance blockchain platform to apply and operate blockchain technology in the enterprise environment · Improved technological competitiveness of Nexledger delivered by the additional development of new API functionalities and the development of modules to align with other blockchain platforms
Original encryption technology	· Software security technology to protect data from malicious attacks during their storage, use or transmission · Support for high-quality analytics services by assisting data consolidation without the leakage of customer personal data based on encryption-based privacy technology
Cloud Native Computing	· Server virtualization technology that improves the efficiency of resources and thus delivers easy-to-use operational and managerial functionalities at lower costs

R&D Expenditure

Category	Unit	2017	2018	2019
R&D Expenditures	KRW million	133,810	135,262	143,042
Ratio of R&D Expenditures against Sales	%	1.44	1.35	1.33

Intellectual Property Rights Management

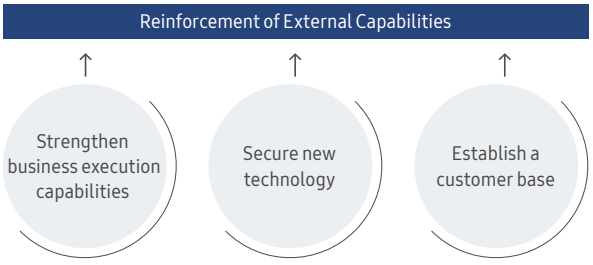
Samsung SDS is clearly aware that the quality of its patents determines its corporate competitive edge as a global IT services provider, and thus is committed to leading future markets through strategic patent management. As of the end of December 2019 and on a cumulative basis, Samsung SDS's patent portfolio included a total of 1,650 patents, and the company is making patent registrations in such major intellectual property economies as the U.S., China, EU and Japan as well as in Korea to effectively address any business-related patent disputes and to successfully translate its technology assets into effective rights. In 2019, the number of new patent registrations amounted to 40 in Korea and 25 abroad. Samsung SDS will proactively develop patents with an eye on future growth engines so as to further protect its technology and business in tapping into new markets.

Patent Registrations by Year

Category	Unit	2017	2018	2019
Korea	No. of Cases	37	30	40
Overseas	No. of Cases	58	73	25
Total	No. of Cases	95	103	65

Strengthening External Capabilities

Samsung SDS is developing new technology and expanding its customer base through investment in promising companies, strategic alliance, and M&A to build stronger external capabilities as well as internal capabilities. The company has chosen intelligent manufacturing, cloud & security, new technology, and logistics Business Process Outsourcing (BPO) as its focus areas and is making multi-faceted investments and forging partnerships accordingly.



Open Innovation

Samsung SDS discovers promising startups in Korea and supports their growth. This facilitates the IT startup ecosystem and the resulting collaboration contributes to the growth of Samsung SDS as well as these startups through open innovation. Samsung SDS identifies prospect startups in its major R&D areas, from AI/analytics to IoT and cloud, and provides them with a range of collaboration opportunities including licensing, purchasing, strategic investment, and M&A. Once chosen as collaboration partners, these startups can access free-of-charge office spaces and Samsung SDS technology and relevant experience required for their business operations through mentoring. In 2019, such collaboration projects were undertaken with four startups – Wizpace, Security Platform, Apposha, Sooho. Samsung SDS plans to discover even more startups recognized for their exceptional potential and to extend the scope of its collaboration with them.

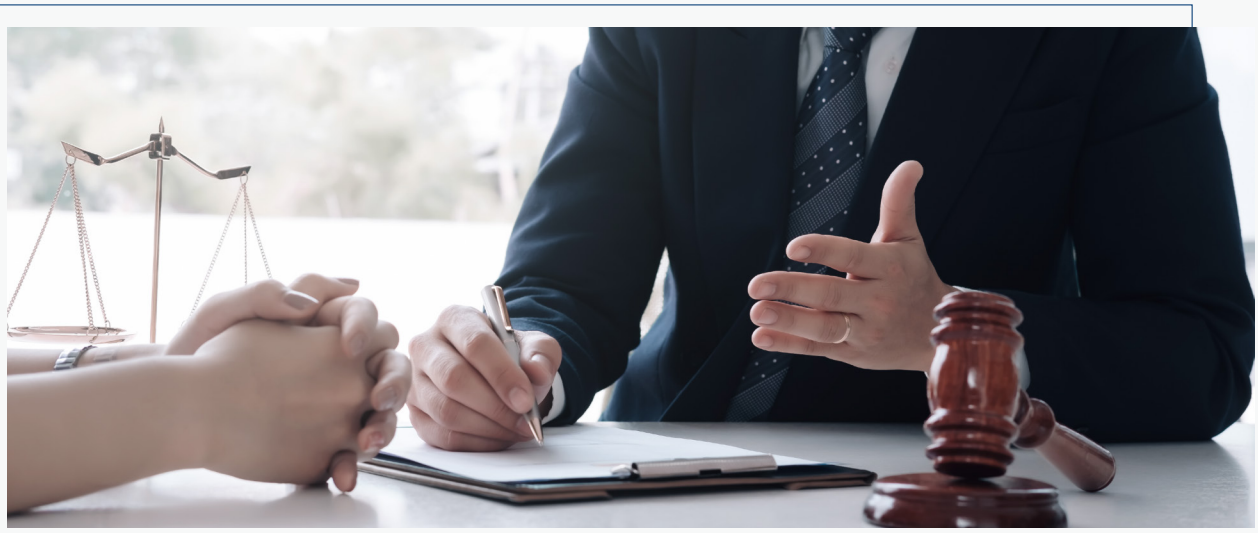
Actions Taken to Reinforce External Capabilities (Jan. 2018 – Dec. 2019)

Focus Area			Action Taken	
Intelligent Manufacturing	Bring intelligence to manufacturing processes – factory logistics, facility management, plant, etc.	→	Jun. 28th, 2018	· Signed a strategic agreement with the Vietnamese ICT services provider CMC to conduct joint business on smart factory, cyber security, and cloud
			May 27th, 2019	· Agreed to make strategic equity investments in CMC to participate in the company's major decision-making processes
			July 26th, 2019	· Invested nearly KRW 54 billion in CMC to acquire a 29.9% stake in the company
Cloud	Advance cloud capabilities, cooperate on advanced technology, and secure such technology	→	Jan. 29th, 2018	· Signed a business deal with Spotinst, a new cloud technology company based in Silicon Valley, the U.S., to strengthen 'Cloud Managed Service (CMS) business
			Feb. 26th, 2019	· Forged a strategic partnership with VMware, a virtualization technology-based enterprise software provider in the U.S., to jointly conduct 'digital work innovation business'
			Mar. 6th, 2019	· Invested in Iguazio, an Israeli leader in serverless computing business, to secure new cloud technology
			May 30th, 2019	· Invested in Jitterbit, a U.S.-based cloud solution provider, to strengthen cloud-system alignment
New Technology	Secure major new technology – AI, digital marketing, blockchain, etc.	→	Feb. 19th, 2018	· Signed an industry-academia agreement to facilitate big data analytics training and conduct joint research (College of Business, KAIST)
			Feb. 27th, 2019	· Signed an industry-academia agreement to facilitate big data analytics training and conduct joint research (UNIST)
			Apr. 15th, 2019	· Signed a business agreement with Tech Mahindra in India to expand the blockchain platform Nexledger
			July 11th, 2019	· Cooperated with SAP to explore business opportunities based on the Qualtrics solution
			Nov. 2nd, 2019	· Formed partnership with Fiera Milano to realize a future-driven convention center model
Security	Advance security threat detection and response capabilities	→	Jun. 10th, 2019	· Invested in SentinelOne, a U.S.-based EDR* solution provider and an owner of AI & machine learning-based next-generation security technology
			Nov. 26th, 2019	· Formed an alliance with Sovico to cooperate on ICT and logistics business in Vietnam
Logistics BPO	Strengthen executional capabilities in logistics	→	Oct. 22nd, 2018	· Signed an agreement with ABN AMRO, one of the three largest Dutch banks, and the Port of Rotterdam Authority, to undertake a 'project to develop blockchain-based maritime logistics'
Etc.	India	→	July 24th, 2019	· Formed partnership with Tech Mahindra to cooperate on smart city business
	China	→	Oct. 25th, 2019	· Initiated cooperation with Digital China to conduct Smart City/IoT/cloud, and logistics business in China

* EDR: Endpoint Detection and Response

COMPLIANCE & ETHICS MANAGEMENT

Samsung SDS advances compliance management and ethics management as the fundamental drivers behind its journey to become a company that not only survives but lasts for the years to come.



WHY MATTER?

Since Samsung SDS interacts with numerous partners as well as group affiliates in conducting business, it is only imperative that the company practices ethics management and compliance. As an inherent part of its business operations, the company collects, cleanses, analyzes, and intellectualizes data which lie at the core of Digital Transformation, which implies that safeguarding personal data and trade secrets has a direct impact on its business survival and lasting performance. As Samsung SDS proactively expands its global presence, this also imposes responsibility to properly understand and fully observe the laws and regulations of the countries where the company is based.

WE PLANNED & ACHIEVED

Focus Area	2019 Plan	2019 Achievement	Achievement
Establishment of an Ethics Management System	· To offer face-to-face training by job level and business division to prevent corruptive practices	· Strengthened collective training for new hires (both recent graduates and those with previous work experience) and newly-appointed managers	· Achieved
	· To provide online anti-corruption training	· Provided online training to employees in Korea and abroad	· Achieved
	· To prevent ethical risks at overseas establishments	· Provided on-site anti-corruption training at overseas worksites	· Achieved
Reinforcement of Compliance Management	· To strengthen top management's participation in compliance operations	· Regularly held Compliance Council meetings · Performed compliance assessments on executives	· Achieved
	· To strengthen preventive measures	· Conducted reviews on fair trade, subcontracting, outsourcing, and intellectual property	· Achieved
	· To provide training to all employees	· Offered training to all employees at least twice per person	· Achieved
	· To boost support for compliance operations	· Developed mobile systems and improved the global compliance system	· Achieved

WE WILL

Establishment of an Ethics Management System

Samsung SDS will extend the scope of its anti-corruption training program to include overseas employees and strengthen the whistle-blowing channel to consistently prevent corruption and mismanagement.

Reinforcement of Compliance Management

In line with the increasingly tightening regulations in Korea and abroad, Samsung SDS will perform more stringent reviews on compliance risks and make necessary improvements in consideration of the characteristics of respective business departments. As its overseas presence continues to expand, the company will also realign the compliance operational system of overseas subsidiaries and reflect local regulatory conditions in undertaking compliance programs.

Compliance & Ethics Management

Establishment of an Ethics Management System

Ethics Management Principles

Samsung SDS devotes its talent and technology to creating superior products and services that contribute to a better global society. To this end, the company stipulates and implements the management principles that will guide its employees in making decisions and taking actions so that it abides by legal and ethical standards and fulfills its essential role and social responsibility across the entire business operations.

1. We comply with all laws and ethical standards.

1-1. We respect the dignity and diversity of all individuals.
1-2. We engage in fair competition in accordance with laws and solid business ethics.
1-3. Our accounting and transaction records are kept transparent and accurate at all times.
1-4. We do not get involved in politics.

2. We maintain a transparent organizational culture.

2-1. We make a strict distinction between public and private affairs in our duties.
2-2. We protect and respect the intellectual property rights of the company and individuals within the company.
2-3. We create a healthy organizational atmosphere.

3. We respect customers, shareholders, and employees.

3-1. We consider customer satisfaction our foremost priority.
3-2. We pursue management focused on shareholder value.
3-3. We strive to improve our employees' quality of life.

4. We care for the environment, health, and safety.

4-1. We pursue environmentally-friendly management.
4-2. We value the health and safety of all human beings.

5. We are a socially responsible corporate citizen.

5-1. We faithfully fulfill our primary responsibilities as a corporate citizen.
5-2. We respect the social and cultural values of local communities and practice prosperous co-existence.
5-3. We build relationships with our business partners for co-existence and co-prosperity.

Ethics Management Organization

Samsung SDS operates Audit Team under the direct leadership of the company CEO in order to advance ethics management. The team is responsible for disseminating ethics awareness among Samsung SDS employees and partners, investigating the reports submitted through whistleblowing channels, and undertaking other wide-ranging ethics management initiatives.

Improved Employee Awareness on Ethics

Samsung SDS stipulated Business Principles on the Global Code of Conduct section of its website to elevate employees' awareness on ethics management practices. This enables the company to share the violations of ethics management regulations, from embezzlement of company funds or misappropriation of assets involving the company or its partners to deterioration of work discipline and information leaks, and to offer ethics management training and publicity events. In 2019, Samsung SDS provided online anti-corruption training to all employees as well as 32 sessions of on-site training to work leaders and on-site employees in Korea and abroad.

Whistle-Blowing Channel Operation

Samsung SDS operates an anonymous whistleblowing channel[1] on its corporate website for stakeholders to report any corruptive practices, including Samsung SDS employees' unfair business practices, unjustified requests made by abusing one's authority, and any other corruptive practices. These reports should concern Samsung SDS's domestic and overseas establishments and subsidiaries, and cover any corruptive practices committed by its employees in general. The company strictly protects the confidentiality of whistleblowers, ensures that whistleblowers are never disadvantaged due to their reports, and handles reports behind closed doors. If such reports prove to be true following investigations, disciplinary measures are taken according to the severity of the matter, and relevant measures are taken against the partner who offered money or other valuables to Samsung SDS employee(s) to prevent the reoccurrence of such unjustified practices.

1) https://www.samsungsds.com/global/ko/etc/foot_report_form.html

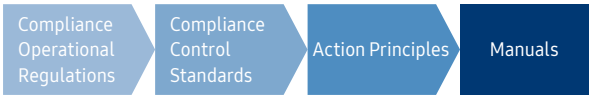
Reinforcement of Compliance Management

Compliance Management System

It is based on Samsung Group's core values of 'People, Excellence, Change, Integrity, Co-Prosperity' that Samsung SDS develops and operates a regular compliance system to minimize and prevent the risk of regulatory violations concerning fair trade, anti-corruption, intellectual property rights, and personal data security. To this end, the company establishes the standards, organizations, and systems required by relevant regulations and implements necessary compliance programs on review, training, whistleblowing, and sanctions & rewards. In so doing, Samsung SDS assists each and every employee in fully abiding by domestic and international compliance regulations.

Compliance Control Standards and Operational Regulations

Samsung SDS is implementing the compliance control standards established by the company to ensure fairness and transparency in business conduct and to promote its sound development and earn trust from customers by integrating the key provisions of governmental compliance regulations. As the high-level regulations to follow in advancing compliance management, these control standards serve as the foundation upon which CP (Compliance Program) operational regulations, action principles, and manuals are developed to present detailed guidelines for employees to abide by in practicing compliance management.



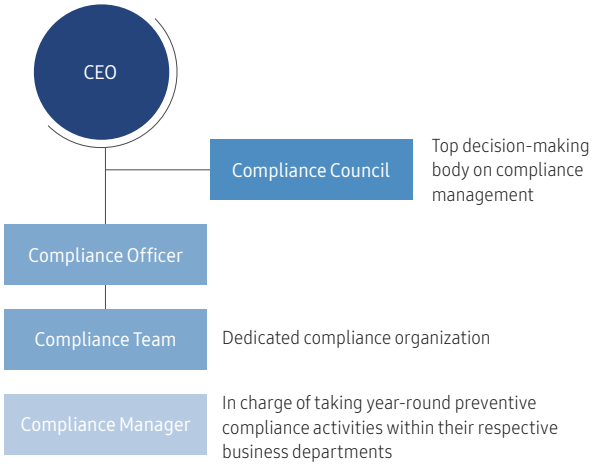
Compliance Management Organization

As stipulated by the Commercial Law, Samsung SDS appoints the Compliance Officer through the Board of Directors who is tasked with reporting major activities to the BOD. The company also established the in-house Compliance Council which consists of five executive members to conduct reviews and make decisions on major issues on a regular basis. In 2019, the committee held four regular meetings to report annual activity plans and quarterly activity outcomes, approve compliance activity assessment criteria, and award top performers. The Compliance Team is under operation as a dedicated company-wide compliance organization, and organizational-specific compliance managers and on-site staff are designated to respond to the different situations that respective organizations face and to ensure autonomy in practicing compliance management in the field.

Samsung Compliance Committee

On January 30, 2020, Samsung SDS signed an agreement with seven major Samsung affiliates to establish the Samsung Compliance Committee in accordance with the decision made by its Board of Directors with an aim to prevent top management from engaging in any illegal activity and strengthen compliance supervision in a more substantial manner. Going forward, Samsung SDS will follow up on the requests and recommendations made by the Compliance Committee to advance ethics and integrity management that lies at the core of the Samsung value system and to reinforce compliance management.

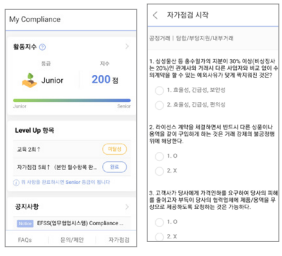
Organizational Structure of Compliance Management



Compliance Program Management System (CPMS)

To integrate compliance management into the daily business operations of employees, Samsung SDS developed the Compliance Program Management System (CPMS) to provide wide-ranging functionalities and contents including introduction to the company's compliance activities, relevant guidance, self-directed assessments, FAQs, Q&As, and compliance management trends and news. To improve the accessibility of the CPMS for employees, Compliance News, self-directed assessments, questions & suggestions, FAQs, and other major functionalities of the CPMS were made available under the My Compliance mobile service. In addition, Samsung SDS operates the 'Compliance Index' program for all employees to help them recognize the importance of compliance and pay continued attention to compliance issues as well as the whistleblowing system as a regular channel to monitor regulatory violations.

Screenshot of the CPMS portal



Screenshot of the mobile version of the CPMS, My Compliance

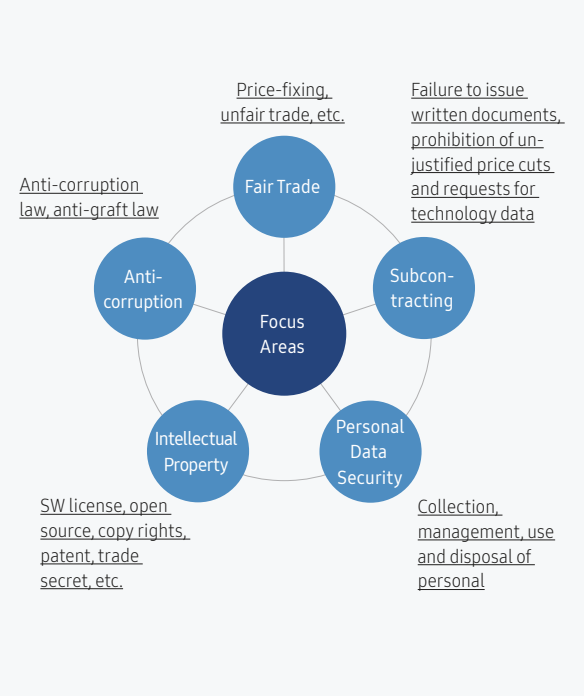
Compliance Index – 'My Compliance Index'

Samsung SDS introduced the company-wide 'Compliance Index' program to encourage employees to fully engage in compliance management. Under the Compliance Index program, employees earn points after completing compliance-related activities, such as receiving compliance training, making self-directed assessments, and using the CPMS, and then are graded Beginner, Junior, Senior, and Principal in accordance with their own performance level. Meanwhile, Samsung SDS reflects working-level compliance activities in the performance evaluation of executives as a way to strengthen the accountability of compliance management.

Compliance Review

Samsung SDS identified the five focus areas of fair trade, subcontracting, personal data security, intellectual property, and anti-corruption that are highly relevant to its employee's business operations, and conducts regular and year-round reviews on its compliance with relevant guidelines and processes under the supervision of the dedicated compliance department. In 2019, a total of nine regular reviews were performed, and review outcomes are used to consistently provide training and guidance to prevent the violation of compliance regulations. In addition, self-directed reviews can be performed within the CPMS to help employees raise their compliance awareness on major management items.

Focus Areas of Compliance Management



Compliance Training for Employees

Samsung SDS offers a range of training programs on the key details that its employees should be always aware of to practice compliance management in their daily business operations. Such programs are provided by job level, including training for new hires – both recent graduates and those with previous work experience, training supervised by department heads, and company-wide training. To minimize the risk of regulatory violations in subcontracting and other high-risk areas, special training is provided to the organizations and staff responsible for conducting relevant operations. In 2019, 30,075 employees in total completed compliance training, which means that each and every Samsung SDS employee received such training more than twice on average during the year.

Compliance Training for Employees

Category	Training	No. of Employees Who Completed Training
General Training	Company-wide online training	12,436
	Training supervised by department heads	12,301
	Self-initiated training for on-site managers	2,005
	Training for new hires with previous work experience	51
Special Training	Training for managers and leaders	2,648
	Training for on-site managers	223
	Training for high-risk operations	411

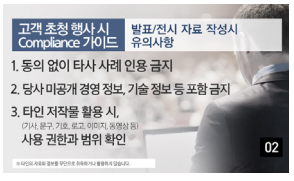
Integration of Compliance Awareness in the Corporate Culture

In addition to compliance training, Samsung SDS leverages diverse channels – compliance campaigns, newsletters, card news, in-house TV broadcasting, and CPMS postings – to raise employees' compliance awareness while undertaking a range of publicity activities to help employees better understand relevant information including latest trends, major issues, and key regulatory modifications in relation to compliance management..

CEO's commitment to compliance management

Card news

CPMS posting



In-house TV posting

Attainment of UN SDGs and Stakeholder Communication

Samsung SDS defines key stakeholders connected with its business operations as the following six groups of 'communities', 'customers', 'employees', 'partners', 'shareholders & investors' and 'compliance & ethics management', and takes heed to their invaluable feedback to establish robust trust-based relationships. Furthermore, Samsung SDS is fully committed to attaining the UN Sustainable Development Goals(SDGs) that are linked with its stakeholders to join hands in resolving the global challenges that demand concerted efforts of the entire international society.

Communication by Stakeholder Group

Stakeholder	Interests and Expectations	Major Communication Channel
Communities	· Local economy revitalization · Environmental protection · Social contribution · Right to know concerning corporate ESG impact	· Media Day · Press releases · Employee volunteer · Contest (Brightics Academy, undergraduate digital signage, etc.) · Samsung SDS website and social network channel
Customers	· Service and solution quality · After-sales management service · Latest technology and trend · Information disclosure for complete sales	· Customer invitation event (REAL 2019, IT insight Forum, C-level exchange meeting, etc.) · Customer visit meeting · Customer satisfaction survey · Contact Center · Samsung SDS solution exhibition · Samsung SDS website and social network channel
Employees	· Employment and labor environment · Career development · Diversity and equal opportunity · Respect for human rights · Labor relations	· Labor-Management Council (Future Consensus Council and portal) · SDS NEWS (Work, LIFE, TALK-anonymous bulletin board, Dtalks) · Global SDS NEWS (weekly brief mail) · CEO Dr. Hong Story, CEO discussion meeting, Vision&Talk · In-house portal · Technology portal (DEV+, OP+, SOURCE+) · Offline developer meeting (Techtonic, Meetup, Hackathon, etc.) · Employee family invitation event (Coding Camp, etc.) · Mental health shelter and portal · Grievance-handling and whistle-blowing channels
Partners	· Fair Trade · Creation of a mutually-beneficial IT ecosystem	· Partner portal (smartTogether.com) · Solution Fair · CEO discussion meeting · Partner discussion meeting · Fair trade-related whistleblowing channel
Shareholders & Investors	· Financial performance · Investment strategy · Risk management · Sharing of business information	· General shareholder meeting · Electronic disclosure · Regular/year-round IR meeting · NDR · Conference hosted by securities firms
Compliance & Ethics Management	· Indirect economic benefits · Compliance management · Policy engagement · Transparent information disclosure	· Participation in policy discussion · Society/association activity · Electronic disclosure

UN SDGs

The UN SDGs embody the goals set to address the environmental, social, and economic challenges that require global endeavors for their successful resolution. Sustainable development is development that meets the needs of the present, without compromising the ability of future generations to meet their own needs, and this definition refers to future-oriented development that pursues environmental protection as well as social and economic development. Samsung SDS will take the lead in creating solutions to these global challenges in the course of its business conduct.

SUSTAINABLE DEVELOPMENT GOALS

- 1 NO POVERTY
- 2 ZERO HUNGER
- 3 GOOD HEALTH AND WELL-BEING
- 4 QUALITY EDUCATION
- 5 GENDER EQUALITY
- 6 CLEAN WATER AND SANITATION
- 7 AFFORDABLE AND CLEAN ENERGY
- 8 DECENT WORK AND ECONOMIC GROWTH
- 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
- 10 REDUCED INEQUALITIES
- 11 SUSTAINABLE CITIES AND COMMUNITIES
- 12 RESPONSIBLE CONSUMPTION AND PRODUCTION
- 13 CLIMATE ACTION
- 14 LIFE BELOW WATER
- 15 LIFE ON LAND
- 16 PEACE, JUSTICE AND STRONG INSTITUTIONS
- 17 PARTNERSHIPS FOR THE GOALS

Samsung SDS's Commitment to Achieving the UN SDGs by Stakeholder Group

Communities

SDGs10. Reduce inequality within and among countries

10.2 By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status

· Operated the tailor-made IT education program Coding Campus for 7,252 teenagers in 2019 with 645 employees serving as instructors

SDGs13. Take urgent action to combat climate change and its impacts

13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries

· Responded to climate change issues by operating data centers powered by renewable energy and developing GHG inventory systems capable of automatically measuring power consumption and calculating GHG emissions in real time

Customers

SDGs8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

8.2 Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors

8.3 Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services

· Used Samsung SDS's distinctive Design Thinking methodology to host co-creation workshops with customers to contribute to promoting an innovative development culture and customer experience-focused value
· Adopted a global top-notch quality management system by achieving ISO 9001 as the industry's first to do so in the SI segment in 1994 and reaching the highest Master level in IT Infrastructure Library in 2003

SDGs9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

9.2 Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry's share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries.

9.3 Increase the access of small-scale industrial and other enterprises, in particular in developing countries, to financial services, including affordable credit, and their integration into value chains and markets

· Assisted in laying the basis for sustainable growth by using Intelligent Factory solutions to help manufacturers in Southeast Asia to establish automated and intelligent manufacturing
· Contributed to creating a trust-based society for customers by adopting the Nexledger blockchain platform in finance, logistics, health care, public and other wide-ranging industries and businesses

Employees

SDGs4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

4.4 By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship

· Hosted the 'Tectonic 2018 & 2019' to share Samsung SDS's latest technology and varying development know-how to help expand the developer ecosystem
· Sponsored diverse developer meetups to facilitate the software ecosystem while arranging 48 meetups for more than 2,100 developers during the year of 2019

Employees

SDGs5. Achieve gender equality and empower all women and girls

5.1 End all forms of discrimination against all women and girls everywhere
5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life

· Increased the ratio of female managers in manager and higher positions for three years in a row in addition to the overall increase in the number of female employees

Partners

SDGs4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

4.3 By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university
4.4 By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship

· Supported on/offline information system and software training via Multicampus, a software professional education institute, and operated diverse training programs(technology seminars) for partners to help them develop their own competitiveness

SDGs8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

8.3 Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services

· Strengthened partner communication by hosting Partner Council CEO discussion meetings, and obtained the 'Most Excellent' grade for two consecutive years in the 'Korea Win-Win Growth Index' through finance/training/technology support and payment condition improvement
· Contributed to improving partners' quality by sharing diverse development methodology with them, including Innovator methodology which standardized Samsung SDS's distinctive experience and know-how

Governments

SDGs16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

16.5 Substantially reduce corruption and bribery in all their forms
16.6 Develop effective, accountable and transparent institutions at all levels

· Established the Compliance Program Management System(CPMS) as a compliance operation platform to support employees in their daily compliance activities and operated an anonymous whistle-blowing system

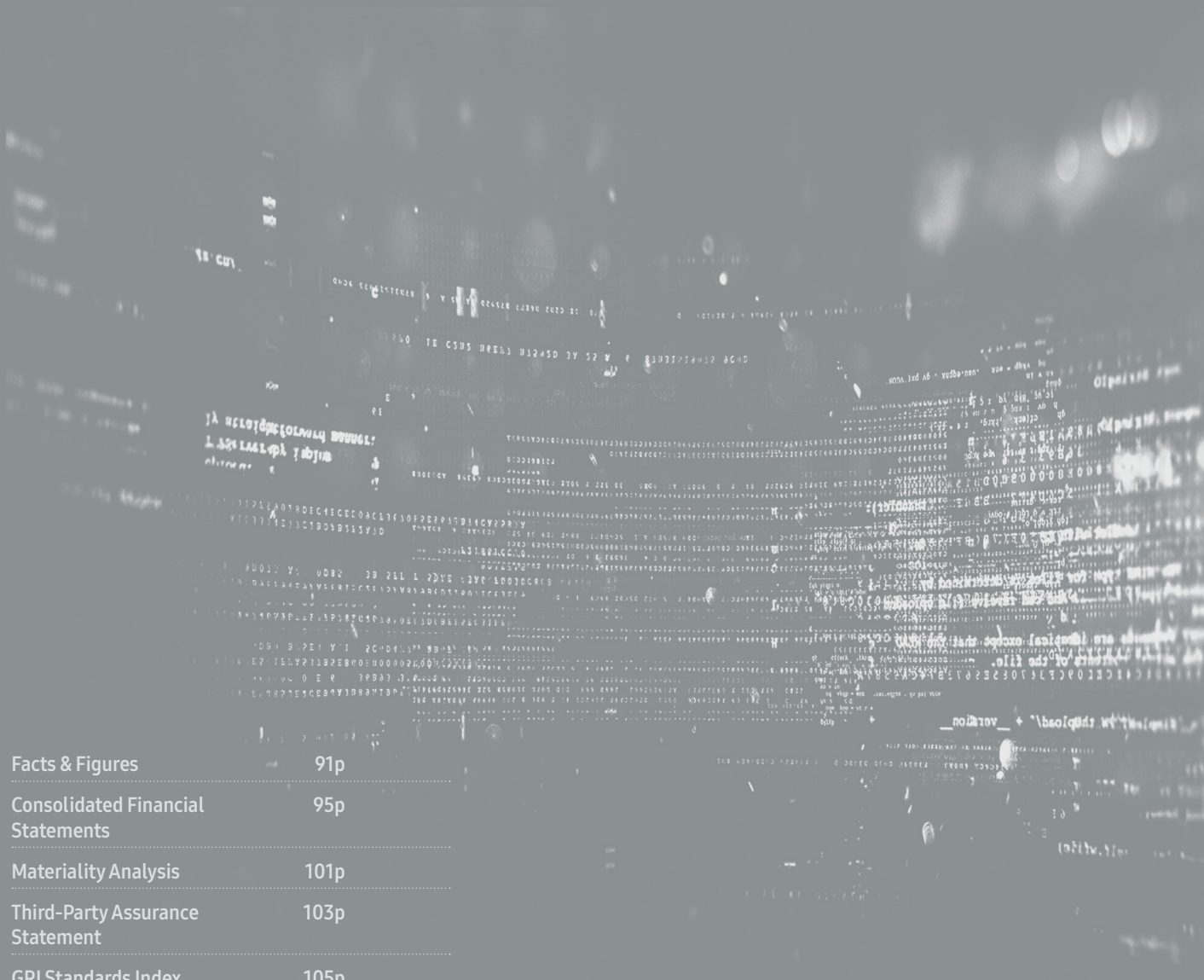
Stakeholders & Investors

SDGs9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all
9.2 Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry's share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries

· Contributed to addressing financial security vulnerabilities and increasing the visibility of logistics data through the enterprise blockchain platform Nexledger
· Provided the open source AI analytics platform Brightics Studio to improve accessibility to AI analytics

APPENDIX



Facts & Figures

Financial Position

Item		Unit	2017	2018	2019
Consolidated basis	Sales	KRW million	9,299,206	10,034,219	10,719,632
	Operating profit	KRW million	731,559	877,356	990,089
	Net income	KRW million	541,772	638,792	750,449
	Total liabilities	KRW million	1,558,331	1,865,297	2,296,079
	Total assets	KRW million	7,277,761	8,013,849	9,021,236
Non-consolidated basis	Sales	KRW million	4,547,167	5,083,718	5,096,158
	Operating profit	KRW million	457,931	666,607	691,675
	Net income	KRW million	369,686	534,497	520,825
	Total liabilities	KRW million	830,903	1,007,455	1,093,672
	Total assets	KRW million	5,678,285	6,178,103	6,576,534
Credit rating (Korea Ratings)		-	AA+	AA+	AA+

Dividends

Item		Unit	2017	2018	2019
Stock	Issued shares	No. of shares	77,377,800	77,377,800	77,377,800
	Outstanding shares	No. of shares	77,350,186	77,350,186	77,350,186
Dividends	Total dividends	KRW million	154,700	154,700	185,640
	Dividend payout ratio	%	29.2	24.6	25.2
	Dividends per share	KRW	2,000	2,000	2,400

R&D Investment

Item	Unit	2017	2018	2019
R&D expenditures	KRW million	133,810	135,262	143,042
R&D expenditures against sales	%	1.44	1.35	1.33

Energy Consumption (Domestic)

Establishment	Unit	2017	2018	2019
Total	GJ	1,974,584	1,936,189	1,988,432
HQ (including Pangyo Campus and Seoul R&D Campus)	GJ	264,802	252,013	249,607
Sangam Data Center	GJ	370,867	414,063	494,797
Suwon Data Center	GJ	866,866	809,897	800,459
Gwacheon Data Center	GJ	302,633	289,693	221,564
Gumi Data Center	GJ	169,416	170,523	167,783
Chuncheon Data Center	GJ	-	-	54,222

Water Consumption (Domestic)

Item	Unit	2017	2018	2019
Total	Ton	299,487	307,458	254,365

GHG Emissions (Domestic)

Item	Unit	2017	2018	2019
Total	tCO_2eq	96,689	94,590	97,073
Scope1	tCO_2eq	4,544	4,429	4,300
Scope2	tCO_2eq	92,145	90,161	92,778

Waste Generation (Domestic)

Item	Unit	2017	2018	2019
Total	Ton	1,068	1,446	1,300
General(Incineration)	Ton	1,068	1,079	1,295
General(Landfill)	Ton	-	-	-
Designated(Incineration)	Ton	-	367	5
Designated(Landfill)	Ton	-	-	-

Employee Data

Item		Unit	2017	2018	2019
Employees	Total	No. of persons	22,871	23,197	23,403
By region	Domestic	No. of persons	16,333	16,664	16,523
	Overseas	No. of persons	6,538	6,533	6,880
By gender	Male	No. of persons	16,532	16,646	16,809
	Female	No. of persons	6,339	6,551	6,594
By age	Under 30	No. of persons	4,315	3,801	3,283
	Between 30~50	No. of persons	17,247	17,837	18,127
	Over 50	No. of persons	1,309	1,559	1,993
By employment contract	Regular	No. of persons	22,445	22,721	22,906
	Non-regular (temporary)	No. of persons	426	476	497

Employee Diversity (Domestic)

Item		Unit	2017	2018	2019
Diversity Indicator	Employees with disabilities	No. of persons	123	115	117
	Female executives	No. of persons	8	10	10
	Female managers (in manager and higher positions)	No. of persons	1,436	1,525	1,656

Childcare Leave (Domestic)

Item		Unit	2017	2018	2019
Employees who took childcare leave	Subtotal	No. of persons	267	317	320
	Male	No. of persons	45	72	76
	Female	No. of persons	222	245	244
Employees reinstated after taking childcare leave	Subtotal	No. of persons	257	248	288
	Male	No. of persons	40	48	68
	Female	No. of persons	217	200	220
Reinstatement Rate after taking childcare leave	Subtotal	%	96	78	90
	Male	%	89	67	89
	Female	%	98	82	90
Employees who worked 12 months or longer after reinstatement	Subtotal	No. of persons	248	241	265
	Male	No. of persons	38	44	66
	Female	No. of persons	210	197	199

Employee Training

Item		Unit	2017	2018	2019
Training expenditures	Total	KRW million	23,926	25,343	23,130
Training hours	Total	No. of hours	1,332,395	838,689	583,130

Employees Who Received Regular Performance Assessments

Item	Unit	2017	2018	2019
Employees who received regular performance assessments	No. of persons	22,871	23,197	23,403
Ratio of employees who received regular performance assessments	%	100	100	100

Female Employees' Base Pay against that of Male Employees

Item	Unit	2017	2018	2019
Ratio of female employees' base pay against that of male employees	%	100	100	100

Pension Funds

Item		Unit	2017	2018	2019
Pension funds under management	DB Type	KRW million	898,848	1,005,815	1,152,366
	DC Type (on a non-consolidated basis)	KRW million	19,623	29,922	45,999

Customer Satisfaction Survey Results

Item	Unit	2017	2018	2019
Customer Satisfaction Survey Results	point	93.0	93.7	92.5

Personal Information Leaks

Item	Unit	2017	2018	2019
Personal information leaks	No. of cases	0	0	0

Partners

Item	Unit	2017	2018	2019
Partners	No. of companies	282	270	292

Shared Growth Activities

Item		Unit	2017	2018	2019
Win-Win Growth Funds	Investment from financial institutions (A)	KRW million	21,700	3,600	4,300
	Investment from Samsung SDS (B)	KRW million	18,300	36,400	40,700
	Total (A+B)	KRW million	40,000	40,000	45,000
	Funds spent	KRW million	33,695	40,000	45,000
Training support	Training programs	No. of programs	31	27	44
	Training sessions	No. of occasions	23	23	21
	Trainees	No. of persons	2,188	2,410	2,823
Technology support	Support provided	No. of occasions	130	170	231
	Technology data escrow	No. of cases	26	29	27
	Free-of-charge patent use	No. of cases	26	26	26
Recruitment support	Recruitment	No. of persons	75	77	89
Joint endeavors to advance into the global market	Companies that made joint endeavors to advance into the global market	No. of companies	163	156	132

Social Contribution

Item		Unit	2017	2018	2019
Social contribution programs	Investments	KRW million	1,221	1,287	2,130
	Beneficiaries	No. of persons	6,308	8,230	16,488
Donations	Donations made by Samsung SDS	KRW million	3,242	1,973	3,396
	Donations made by Samsung SDS employees	KRW million	1,110	1,070	1,020
Employee volunteers	Volunteer hours	No. of hours	198,178	182,026	124,673
	Volunteers	No. of persons	11,376	10,713	10,257
	Volunteer hours per employee	No. of hours	17.4	17.0	12.2

Consolidated Financial Statements

Consolidated Statement of Financial Position

35th term, as of Dec. 31st of 2019
34th term, as of Dec. 31st of 2018
33rd term, as of Dec. 31st of 2017

(unit: KRW)

Item	35th term	34rd term	33nd term
Assets			
Current assets	6,383,846,734,777	5,881,776,287,021	5,117,498,574,866
Cash and cash equivalents	1,148,183,598,879	1,161,683,996,643	931,461,393,278
Short-term financial instruments	2,682,693,917,252	2,510,284,469,888	1,993,797,925,148
Trade receivables	1,439,461,740,815	1,291,751,923,940	1,209,629,541,269
Other receivables	793,950,872,475	705,745,458,041	752,347,002,331
Advances	44,618,326,945	44,176,075,255	50,929,792,621
Prepaid expenses	71,736,741,862	67,265,138,198	60,612,034,305
Inventories	17,481,715,898	18,774,414,708	24,760,255,484
Assets held for sale	61,548,000,000	0	0
Other current assets	124,171,820,651	82,094,810,348	93,960,630,430
Non-current assets	2,637,389,147,677	2,132,073,103,693	2,160,262,304,941
Long-term available-for-sale financial assets	0	0	12,651,779,719
FVTPL	10,076,340,131	3,643,123,202	0
FVOCI	22,238,265,844	22,934,357,054	0
Investments in associates	99,432,086,938	43,993,605,770	40,540,078,417
Property and equipment	1,108,003,641,187	1,068,725,507,567	1,028,557,824,366
Right-of-use assets	431,232,720,817	0	0
Intangible assets	789,717,152,634	844,969,106,310	934,859,502,433
Deposits	74,545,964,669	69,754,328,207	66,995,507,157
Long-term prepaid expenses	1,088,297,509	239,673,339	357,450,549
Deferred income tax assets	36,398,871,839	34,928,672,689	32,572,487,036
Net defined benefit assets	0	0	18,475,464,964
Other non-current assets	64,655,806,109	42,884,729,555	25,252,210,300
Total assets	9,021,235,882,454	8,013,849,390,714	7,277,760,879,807

Consolidated Statement of Financial Position

35th term, as of Dec. 31st of 2019
34th term, as of Dec. 31st of 2018
33rd term, as of Dec. 31st of 2017

(unit: KRW)

Item	35th term	34rd term	33nd term
Liabilities			
Current liabilities	1,698,187,475,543	1,574,796,377,567	1,324,862,538,584
Trade payables	544,465,103,369	553,320,727,257	443,247,815,452
Other payables	73,867,175,567	86,246,212,056	67,797,699,978
Short-term borrowings	797,510,000	774,724,000	820,296,000
Current corporate bonds	0	0	10,000,000
Advances received	121,300,591,442	136,026,841,259	156,455,270,861
Withholdings	15,809,340,448	13,638,047,892	13,695,212,967
Accrued expenses	572,166,174,706	530,638,197,561	423,284,546,673
Income tax payable	98,677,695,572	144,206,747,497	97,148,199,186
Current portion of long-term borrowings	0	0	0
Current portion of provisions	17,131,893,624	18,630,738,697	15,899,051,770
Lease liabilities	149,950,106,115	0	0
Other current liabilities	104,021,884,700	91,314,141,348	106,504,445,697
Non-current liabilities	597,891,318,411	290,500,828,777	233,468,904,580
Net defined benefit liabilities	59,409,931,410	40,822,200,125	10,926,995,813
Deferred income tax liabilities	176,910,305,069	175,950,146,216	164,663,348,882
Long-term borrowings	0	0	0
Corporate bonds	10,000,000	10,000,000	0
Long-term accrued expenses	43,610,246,526	51,418,608,045	38,608,592,197
Provisions	17,231,011,174	17,195,182,991	14,847,659,688
Lease liabilities	295,725,469,600	0	0
Long-term deposits received	0	5,104,691,400	4,422,308,000
Other non-current liabilities	4,994,354,632	0	0
Total liabilities	2,296,078,793,954	1,865,297,206,344	1,558,331,443,164
Equity			
Equity attributable to owners of the parent	6,545,795,303,242	5,982,455,009,648	5,558,278,543,648
Capital stock	38,688,900,000	38,688,900,000	38,688,900,000
Common stock	38,688,900,000	38,688,900,000	38,688,900,000
Share premium	1,297,466,852,618	1,297,466,852,618	1,297,466,852,618
Retained earnings	5,403,504,408,350	4,821,746,821,634	4,347,047,622,867
Other components of equity	(193,864,857,726)	(175,447,564,604)	(124,924,831,837)
Non-controlling interests	179,361,785,258	166,097,174,722	161,150,892,995
Total equity	6,725,157,088,500	6,148,552,184,370	5,719,429,436,643
Total liabilities and equity	9,021,235,882,454	8,013,849,390,714	7,277,760,879,807

Consolidated Income Statement

35th term, for the year ended Dec. 31st of 2019
34th term, for the year ended Dec. 31st of 2018
33rd term, for the year ended Dec. 31st of 2017

(unit: KRW)

Item	35th term	34rd term	33nd term
Sales	10,719,631,804,166	10,034,218,901,478	9,299,206,129,920
Cost of sales	8,925,703,658,997	8,369,829,634,622	7,804,602,140,616
Gross profit	1,793,928,145,169	1,664,389,266,856	1,494,603,989,304
Selling, general, and administrative expenses	803,838,748,081	787,033,453,660	763,044,840,695
Operating profit	990,089,397,088	877,355,813,196	731,559,148,609
Other non-operating income	24,579,015,353	29,243,729,251	41,215,803,934
Other non-operating expenses	45,534,792,473	28,111,462,915	37,251,002,915
Financial income	137,552,006,802	135,575,773,191	90,197,224,346
Interest income	81,374,359,497	66,358,435,182	42,723,967,343
Foreign exchange gains	49,056,786,862	57,595,346,881	37,722,405,811
Gain on foreign currency translation	7,120,860,443	11,621,991,128	9,750,851,192
Financial expenses	73,480,745,641	60,559,477,429	76,086,747,335
Interest expenses	15,072,706,828	1,667,001,406	1,900,956,600
Foreign exchange losses	44,155,961,130	51,578,624,582	41,616,916,543
Losses on foreign currency translation	14,252,077,683	7,313,851,441	32,568,874,192
Share of profit (loss) of associates	3,082,888,331	3,026,371,038	2,461,278,648
Profit before income tax	1,036,287,769,460	956,530,746,332	752,095,705,287
Income tax expenses	285,838,812,082	317,738,487,919	210,323,428,014
Profit for the year	750,448,957,378	638,792,258,413	541,772,277,273
Profit attributable to			
Owners of the parent	736,457,958,716	629,399,570,767	530,347,610,989
Non-controlling interests	13,990,998,662	9,392,687,646	11,424,666,284
Earnings per share			
Basic earnings per common share (unit: KRW)	9,521	8,137	6,856
Diluted earnings per common share (unit: KRW)	9,521	8,137	6,856

Consolidated Statements of Comprehensive Income

35th term, for the year ended Dec. 31st of 2019
34th term, for the year ended Dec. 31st of 2018
33rd term, for the year ended Dec. 31st of 2017

(unit: KRW)

Item	35th term	34rd term	33nd term
Net income	750,448,957,378	638,792,258,413	541,772,277,273
Other comprehensive income	(16,512,827,372)	(52,772,937,952)	(63,794,015,874)
Items that will not be reclassified to profit or loss	(59,445,089,011)	(60,056,199,419)	24,783,402,057
Remeasurement of the defined benefit plan	(59,299,224,648)	(67,590,731,350)	24,783,402,057
Other comprehensive income – gain or loss on financial assets at fair value	(145,864,363)	7,534,531,931	0
Items that may be reclassified to profit or loss	42,932,261,639	7,283,261,467	(88,577,417,931)
Gain or loss on long-term available-for-sale financial assets	0	0	2,177,512,468
Share of associates' other changes in net assets	(1,960,321,555)	590,356,315	(2,723,317,587)
Gain (loss) on foreign currency translation of foreign operations	44,892,583,194	6,692,905,152	(88,031,612,812)
Comprehensive income for the period	733,936,130,006	586,019,320,461	477,978,261,399
Total comprehensive income attributable to			
Owners of the parent	718,792,532,716	579,565,395,281	466,762,850,365
Non-controlling interests	15,143,597,290	6,453,925,180	11,215,411,034

Consolidated Statement of Changes in Stockholders' Equity

35th term, for the year ended Dec. 31st of 2019
34th term, for the year ended Dec. 31st of 2018
33rd term, for the year ended Dec. 31st of 2017

(unit: KRW)

Item	Equity						
	Parents' Interests						
	Equity Capital	Share Premium	Retained Earnings	Other Components of Equity	Sum of Parent's Ownership Interests	Non-controlling Interests	Total
Jan. 1st of 2017 (equity, beginning of the year)	38,688,900,000	1,297,466,852,618	3,874,712,651,378	(70,173,902,172)	5,140,694,501,824	150,429,592,757	5,291,124,094,581
Profit for the period			530,347,610,989		530,347,610,989	11,424,666,284	541,772,277,273
Gain or loss on available-for-sale financial assets				2,153,465,580	2,153,465,580	24,046,888	2,177,512,468
Other comprehensive income – gain or loss on financial assets at fair value							
Share of associates' other changes in net assets				(2,723,317,587)	(2,723,317,587)		(2,723,317,587)
Remeasurement of the defined benefit plan				24,951,126,358	24,951,126,358	(167,724,301)	24,783,402,057
Difference in foreign currency translation of foreign operations				(87,966,034,975)	(87,966,034,975)	(65,577,837)	(88,031,612,812)
Dividends paid to shareholders of the parent company			(58,012,639,500)		(58,012,639,500)	(1,522,447,250)	(59,535,086,750)
Change in subsidiary ownership interests, etc.				8,833,830,959	8,833,830,959	1,028,336,454	9,862,167,413
Dec. 31st of 2017 (equity, end of the year)	38,688,900,000	1,297,466,852,618	4,347,047,622,867	(124,924,831,837)	5,558,278,543,648	161,150,892,995	5,719,429,436,643
Jan.1st of 2018 (equity, beginning of the year)	38,688,900,000	1,297,466,852,618	4,347,047,622,867	(124,924,831,837)	5,558,278,543,648	161,150,892,995	5,719,429,436,643
Profit for the year			629,399,570,767		629,399,570,767	9,392,687,646	638,792,258,413
Gain or loss on available-for-sale financial assets							
Other comprehensive income – gain or loss on financial assets at fair value				7,437,212,891	7,437,212,891	97,319,040	7,534,531,931
Share of associates' other changes in net assets				590,356,315	590,356,315		590,356,315
Remeasurement of the defined benefit plan				(64,255,224,105)	(64,255,224,105)	(3,335,507,245)	(67,590,731,350)
Difference in foreign currency translation of foreign operations				6,393,479,773	6,393,479,773	299,425,739	6,692,905,512
Dividends paid to shareholders of the parent company			(154,700,372,000)		(154,700,372,000)	(2,294,963,500)	(156,995,335,500)
Change in subsidiary ownership interests, etc.				(688,557,641)	(688,557,641)	787,320,047	98,762,406
Dec. 31st of 2018 (equity, end of the year)	38,688,900,000	1,297,466,852,618	4,821,746,821,634	(175,447,564,604)	5,982,455,009,648	166,097,174,722	6,148,552,184,370
Jan. 1st of 2019 (equity, beginning of the year)	38,688,900,000	1,297,466,852,61	4,821,746,821,634	(175,447,564,604)	5,982,455,009,648	166,097,174,722	6,148,552,184,370
Profit for the period	-	-	736,457,958,716	-	736,457,958,716	13,990,998,662	750,448,957,378
Other comprehensive income – gain or loss on financial assets at fair value	-	-	-	(222,174,527)	(222,174,527)	76,310,164	(145,864,363)
Share of associates' other changes in net assets	-	-	-	(1,960,321,555)	(1,960,321,555)	-	(1,960,321,555)
Remeasurement of the defined benefit plan	-	-	-	(57,683,706,872)	(57,683,706,872)	(1,615,517,776)	(59,299,224,648)
Difference in foreign currency translation of foreign operations	-	-	-	42,200,776,954	42,200,776,954	2,691,806,240	44,892,583,194
Dividends paid to shareholders of the parent company	-	-	(154,700,372,000)	-	(154,700,372,000)	(2,295,032,500)	(156,995,404,500)
Change in subsidiary ownership interests, etc.	-	-	-	(751,867,122)	(751,867,122)	416,045,746	(335,821,376)
Dec. 31st of 2019 (equity, end of the year)	38,688,900,000	1,297,466,852,618	5,403,504,408,350	(193,864,857,726)	6,545,795,303,24	179,361,785,258	6,725,157,088,500

Consolidated Statement of Cash Flow

35th term, for the year ended Dec. 31st of 2019
34th term, for the year ended Dec. 31st of 2018
33rd term, for the year ended Dec. 31st of 2017

(unit: KRW)

Item	35th term	34rd term	33nd term
Cash flows from operating activities	893,786,644,757	1,196,531,554,170	834,847,191,286
Cash generated from operating activities	1,129,252,958,912	1,330,749,415,211	968,922,950,760
Interest received	64,746,627,104	61,863,057,751	30,259,865,840
Interest paid	(131,500,711)	(38,569,693)	(614,144,156)
Dividends received	15,900,000	15,900,000	18,175,000
Income taxes paid	(300,097,340,548)	(196,058,249,099)	(163,739,656,158)
Cash flows from investing activities	(606,218,259,228)	(818,556,277,028)	(970,422,623,297)
Increase/decrease in short-term financial instruments	(172,409,447,364)	(516,486,544,740)	(761,199,121,276)
Increase/decrease in other current assets	9,026,390,792	(7,004,809,295)	621,650,641
Increase/decrease in long-term financial instruments	(4,411,757,471)	(18,097,027,818)	4,500,000
Disposal of property and equipment	1,531,714,801	1,509,595,861	1,561,431,367
Disposal of intangible assets	2,105,601,273	5,888,893	106,430,563
Disposal of long-term available-for-sale financial assets	0	0	2,882,572
Decrease in deposits	4,893,061,646	8,174,848,980	519,211,000
Other comprehensive income – disposal of financial assets at fair value	2,251,342,236	0	0
Profit(loss) for the period - disposal of financial assets at fair value	3,874,745,064	0	0
Acquisition of property and equipment	(341,646,845,962)	(251,434,878,395)	(192,068,771,788)
Acquisition of intangible assets	(36,869,903,223)	(26,121,127,847)	(30,684,845,524)
Increase in deposits	(7,892,929,168)	(8,187,779,534)	(419,987,625)
Acquisition of available-for-sales financial assets	0	0	(2,313,599,745)
Other comprehensive income – acquisition of financial assets at fair value	(9,227,592,961)	(2,139,000,000)	0
Profit(loss) for the period - acquisition of financial assets at fair value	(2,308,717,465)	0	0
Acquisition of investment shares in associates	(54,554,914,392)	0	0
Increase/decrease in other non-current assets	(579,007,034)	1,224,556,867	13,447,596,518
Cash flows from financing activities	(308,802,660,517)	(156,208,015,453)	(67,645,429,457)
Net proceeds from short-term borrowings	0	0	(1,788,187,040)
Repayment of current portion of long-term borrowings	0	0	(4,079,731,662)
Issuance of corporate bonds	0	10,000,000	0
Repayment of corporate bonds	0	(10,000,000)	0
Payment of lease liabilities	(151,868,876,017)	0	0
Payment of dividends	(156,995,404,500)	(156,995,335,500)	(59,535,086,750)
Increase/decrease in other long-term non-current liabilities	0	0	(3,016,809,889)
Proceed from non-controlling interests	118,620,000	787,320,047	774,385,884
Decrease in non-controlling interests	(57,000,000)	0	0
Effect of exchange rate change on cash and cash equivalents	0	8,455,341,676	(55,545,203,874)
Net increase/decrease in cash and cash equivalents	(21,234,274,988)	230,222,603,365	(258,766,065,342)
Cash and cash equivalents, beginning of the year	1,161,683,996,643	931,461,393,278	1,190,227,458,620
Effect of exchange rate changes on cash and cash equivalents	7,733,877,224	8,455,341,676	(55,545,203,874)
Cash and cash equivalents, end of the year	1,148,183,598,879	1,161,683,996,643	931,461,393,278

Materiality Analysis

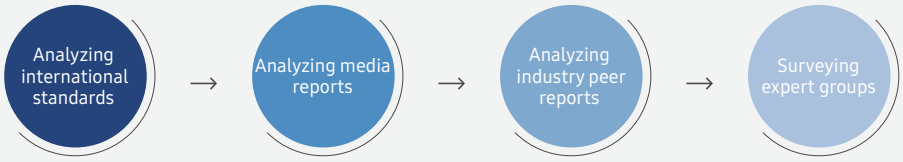
Samsung SDS is engaged in a wide array of activities to meet the expectations of stakeholders and to improve its sustainability as a company throughout its business operations. In performing the materiality analysis, Samsung SDS was able to identify the sustainability management issues that significantly interest its stakeholders and exert a grave impact on its business conduct. This report will help Samsung SDS communicate with stakeholders its 2018 activities, achievements, and future plans in relation to these material issues.

Materiality Analysis Process

STEP 01. Creating a Pool of Issues

To create a pool of issues, Samsung SDS summarized the key issues identified based on sustainability management trends and international standards. In so doing, the company created a pool of 24 sustainability management issues in the economic, environmental, and social areas, and utilized the pool in conducting the materiality analysis.

STEP 02. Analyzing the External Environment



Samsung SDS reviewed the reporting requirements of ISO 26000, UN SDGs, and other relevant standards as well as the sustainability reporting guidelines suggested by the GRI Standards.

Samsung SDS analyzed 6,720 media reports between January 2017 and June 2019 that concerned its sustainability management: the company categorized these reports into positive and negative issues from the economic, environmental, and social aspects, and created a list of material topics.

Samsung SDS looked at the sustainability reports published by industry peers to analyze the topics managed from the sustainability aspect.

Samsung SDS used the network of experts accessed through PwC to conduct a survey and to reflect the sustainability topics that highly interested these external experts.

STEP 03. Analyzing the Internal Environment

Samsung SDS analyzed the agenda items reported to and discussed by its Board of Directors (BOD) in 2018 to identify whether sustainability management-related topics were discussed.

Samsung SDS analyzed the alignment between sustainability management topics and executive KPIs.

Samsung SDS surveyed employees on their awareness of sustainability management to measure the impact sustainability topics have on its business operations.

STEP 04. Determining Priorities and Material Topics

Samsung SDS created the materiality analysis matrix in accordance with stakeholder concerns and business impact with an aim to identify material topics. In so doing, the company chose eight material topics that took precedence within this report.

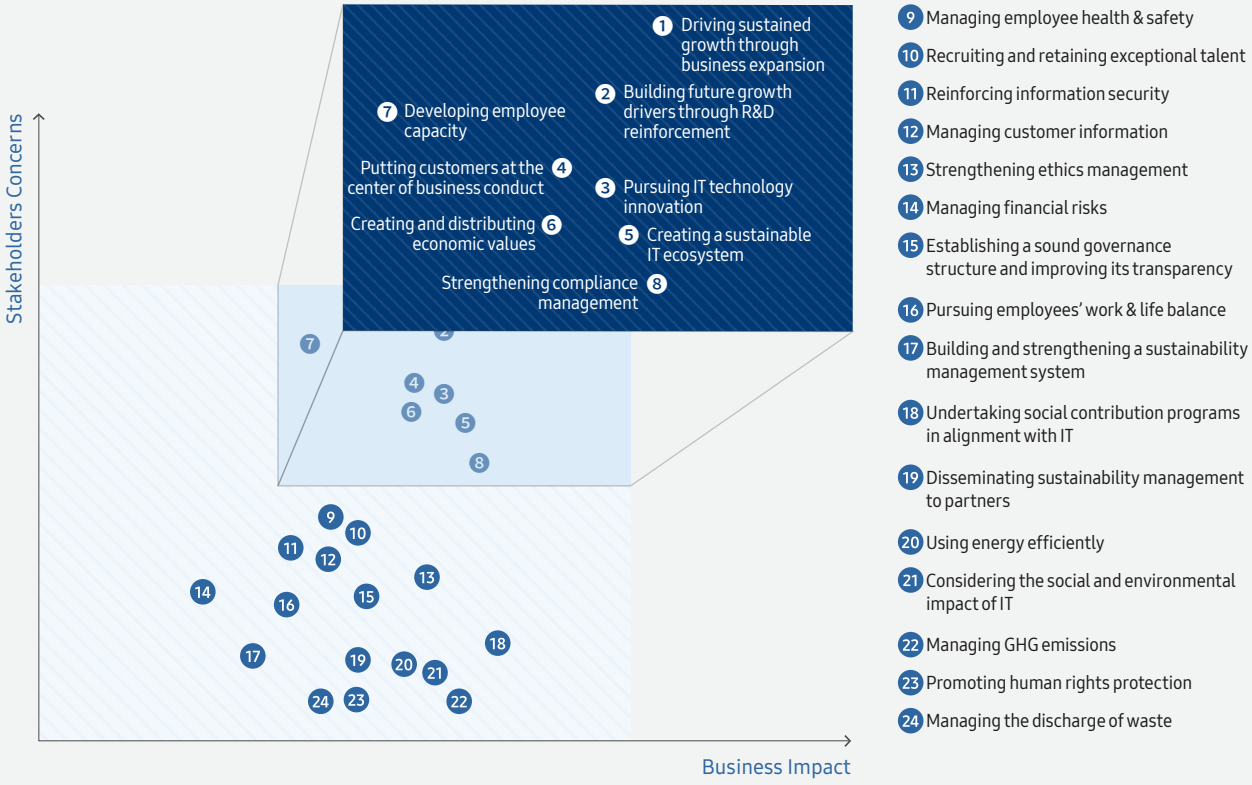
STEP 05. Performing Validity Reviews

The chosen material topics were reported to senior management to review their validity.

Materiality Analysis Results

Samsung SDS identified a total of eight material topics through the materiality analysis.

Materiality Analysis Matrix



Scope of Stakeholders by Material Topic

The following table illustrates the scope of stakeholders for each of Samsung SDS's material sustainability management topics identified through the materiality analysis.

Material Topic	Detailed Ranking			Key Stakeholder Impacted by the Topic						
	Total Rank-ing	Stakeholder Concerns	Business Impact	Employees	Shareholders/ Investors	Customers	Partners	Govern-ment	Govern-ment	Report Pages
1 Driving sustained growth through business expansion	1	2	1	●	●		●			81
2 Building future growth drivers through R&D reinforcement	2	8	2	●	●		●			78-80
3 Pursuing IT technology innovation	3	7	5		●	●				78-80
4 Putting customers at the center of business conduct	4	11	4		●	●				51-53
5 Creating a sustainable IT ecosystem	5	5	7				●	●		69-72
6 Creating and distributing economic values	6	12	6	●	●		●	●	●	32-33
7 Developing employee capacity	7	21	3	●	●					59-62
8 Strengthening compliance management	8	3	8		●		●	●		83-85

Third-Party Assurance Statement

To the Readers of SAMSUNG SDS Sustainability Report 2020 :

Foreword

Korea Management Registrar Inc. (hereinafter "KMR") has been requested by of Samsung SDS to verify the contents of its SAMSUNG SDS Sustainability Report 2020 (Hereby referred to as "the Report"). SAMSUNG SDS is responsible for the collection and presentation of information included in the Report. KMR's responsibility is to carry out assurance engagement on specific data and information in the assurance scope stipulated below.

Scope and standard

SAMSUNG SDS describes its efforts and achievements of the corporate social responsibility activities in the Report. KMR performed a type2, moderate level of assurance using AA1000AS (2008) and SRV1000 from KMR Global Sustainability Committee as assurance standards. KMR's assurance team(hereinafter "the team") evaluated the adherence to Principles of Inclusivity, Materiality and Responsiveness, and the reliability of the selected GRI Standards indices as below, where professional judgment of the team was exercised as materiality criteria.

The team checked whether the Report has been prepared in accordance with the 'Core Option' of GRI Standards which covers the followings.

- GRI Standards Reporting Principles
- Universal Standards
- Topic Specific Standards
  - Management approach of Topic Specific Standards
  - Economic Performance: 201-1, 201-3
  - Indirect Economic Impacts: 203-1, 203-2
  - Anti-Corruption: 205-2
  - Energy: 302-1
  - Water: 303-5
  - Biodiversity: 304-1, 304-2, 304-3, 304-4
  - Emissions: 305-1, 305-2, 305-6
  - Effluents and Waste: 306-2, 306-3, 306-4
  - Environmental Compliance: 307-1
  - Employment: 401-3
  - Occupational Health and Safety: 403-1, 403-2, 403-5, 403-6
  - Training and Education: 404-2, 404-3
  - Diversity and Equal Opportunity: 405-1
  - Non-Discrimination: 406-1
  - Child Labor: 408-1
  - Forced or Compulsory Labor: 409-1
  - Rights of Indigenous Peoples: 411-1
  - Marketing and Labeling: 417-2, 417-3
  - Customer Privacy: 418-1

This Report excludes data sand information of joint corporate, contractor etc. which is outside of the organization, i.e. SAMSUNG SDS, among report boundaries..

Our approach

In order to verify the contents of the Report within an agreed scope of assurance in accordance with the assurance standard, the team has carried out an assurance engagement as follows:

- Reviewed overall report
- Reviewed materiality test process and methodology
- Reviewed sustainability management strategies and targets
- Reviewed stakeholder engagement activities
- Interviewed people in charge of preparing the Report

Our conclusion

Based on the results we have obtained from material reviews and interviews, we had several discussions with SAMSUNG SDS on the revision of the Report. We reviewed the Report's final version in order to confirm that our recommendations for improvement and our revisions have been reflected. When reviewing the results of the assurance, the assurance team could not find any inappropriate contents in the Report to the compliance with the principles stipulated below. Nothing has come to our attention that causes us to believe that the data included in the verification scope are not presented appropriately.

- Inclusivity

  Inclusivity is the participation of stakeholders in developing and achieving an accountable and strategic response to sustainability

  - SAMSUNG SDS is developing and maintaining stakeholder communication channels in various forms and levels in order to make a commitment to be responsible for the stakeholders. The assurance team could not find any critical stakeholder SAMSUNG SDS left out during this procedure.
- Materiality

  Materiality is determining the relevance and significance of an issue to an organization and its stakeholders. A material issue is an issue that will influence the decisions, actions, and performance of an organization or its stakeholders.

  - SAMSUNG SDS is determining the materiality of issues found out through stakeholder communication channels through its own materiality evaluation process, and the assurance team could not find any critical issues left out in this process.
- Responsiveness

  Responsiveness is an organization's response to stakeholder issues that affect its sustainability performance and is realized through decisions, actions, and performance, as well as communication with stakeholders.

  - The assurance team could not find any evidence that SAMSUNG SDS's counter measures to critical stakeholder issues were inappropriately recorded in the Report.

We could not find any evidence the Report was not prepared in accordance with the 'Core Option' of GRI standards.

Recommendation for improvement

We hope the Report is actively used as a communication tool with stakeholders and we recommend the following for continuous improvements.

- Samsung SDS provided a full report on the achievements of individual business areas and their advantages in the context of sustainability and described in detail their efforts to contribute to the fulfilment of the UN's SDGs, reflecting the expectations and interests of its stakeholders. In pursuit of sustainable management, the company is advised to increase renewable energy and impact investing and support partners to enhance their CSR capabilities, eventually achieving the sustainable growth of the company as well as higher corporate values.

Our independence

With the exception of providing third party assurance services, KMR is not involved in any other SAMSUNG SDS's business operations that are aimed at making profit in order to avoid any conflicts of interest and to maintain independence.

May, 25th, 2020

KMR SRV1000 Sustainability Committee Assurance AA1000 Licensed Assurance Provider 000-129

CEO E. J Hwang

GRI Standards Index

Reporting Topic			Reporting Page
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	102-7	Scale of the organization	8-9
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	102-9	Supply chain	72, 94
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	102-12	External initiatives	N/A
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	102-22	Composition of the highest governance body and its committees	74
	102-23	Chair of the highest governance body	74
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	102-43	Approach to stakeholder engagement	101
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	102-52	Reporting cycle	0
	102-53	Contact point for questions regarding the report	0
	102-54	Claims of reporting in accordance with the GRI Standards	0
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	304-2	Significant impacts of activities, products, and services on biodiversity	N/A
	304-3	Habitats protected or restored	N/A
	304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	N/A
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Child Labor	408-1	Operations and suppliers at significant risk for incidents of child labor	N/A
Forced or Compulsory Labor	409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	N/A
Rights of Indigenous Peoples	411-1	Incidents of violations involving rights of indigenous peoples	N/A
Marketing and Labeling	417-2	Incidents of non-compliance concerning product and service information and labeling	N/A
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Customer Privacy	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	56

Awards & Memberships

Awards (between 2018 and 2019)

Period	Awards	Host (Awarding Body)
Nov. 2019	Management Information Awards 2019	Korea Society of Management Information Systems
Jun.2019	Most Excellent Citation in the Korea Win-Win Growth Index 2019	Korea Commission for Corporate Partnership
Apr. 2019	Korea ImpacT-ech Awards 2019 (Brightics Studio)	Korea Economic Daily, Korea Association for ICT Promotion
Feb. 2019	2019 iF Design Awards (Smart Doorlock/FLOW/Design Thinking Toolkit)	International Forum Design
Dec. 2018	Most Excellent Citation in the Korea Win-Win Growth Index 2018	Korea Commission for Corporate Partnership
Oct. 2018	2018 red dot Design Award (FLOW)	Design Zentrum Northeim Westfalen
Sep. 2018	2018 UX Design Awards (FLOW)	International Design Center Berlin
Sep. 2018	2018 IDEA Design Award (FLOW/OPUS Design System/Cello Smart LMD)	Industrial Designers Society of America
Jul. 2018	Korea Digital Management Innovation Awards 2018 (Nexledger)	Korea Knowledge Information Center (Awarded by the Ministry of Science and ICT, Maeil Business Newspaper, and MBN)
Jul. 2018	2018 CEE Awards (Smart Doorlock)	China Smart Home Expert Group
Feb. 2018	Korean Intellectual Property Office Commissioner Citation 2018	Korea Information & Communication Contractors Association
Feb. 2018	2018 iF Design Awards (OPUS Design System)	iF International Forum Design
Feb. 2018	HCI Korea 2018 Creative Award (Angel Talk)	Human Computer Interaction

Memberships

Organization	Membership Year
Korea Defense Industry Association	2019
Korea Data Center Council	2019
Korean Association of Business Education Accreditation	2019
Success Economic Research Institute	2018
Artificial Intelligence Industry Association	2017
Korea Management Registrar	2016
Service Design Association	2016
Korea Listed Companies Association	2014
Korea Association of Cloud Industry	2014
HL7 Korea	2011
Korea Council of Chief Information Security Officers	2010
Korea Information Technology Service Industry Association	2005

Organization	Membership Year
Consortium of Certs	2005
Korean Institute of Industrial Engineers	2005
Korea Telecommunications Operators Association	2004
Information & Communication Professional Engineer Association of Korea	2004
Telecommunications Technology Association	2002
Korea Software Technology Association	2000
Korea Association for ICT Promotion	2000
Seoul Chamber of Commerce and Industry	1995
Korea Industrial Technology Association	1994
Federation of Korea Information Industries	1985
Korea Software Industry Association	1985

DATA-DRIVEN DIGITAL TRANSFORMATION LEADER

Participants

Yong-Cheul Kang
Jong-Seok Kang
Yeong-Ho Ko
Jun-Hee Koh
Sung-Hwan Koo
Yong-Joon Kwon
Yong-Hwa Kwon
Up Kim
Kyung-Hwa Kim
Ran-Chul Kim
Min-Gyu Kim
Sang-Ho Kim
Sung-Ho Kim
Young-Sil Kim
Yong-Ho Kim
Woo-Sik Kim
Woo-Joo Kim
Yu-Mi Kim
Yoon Kim
Eui-Chang Kim
Isaac Kim
In-Cheol Kim
Jung-Hyun Kim
Jong-O Kim
Ji-Kyoung Kim
Ji-Min Kim
Ji-Soo Kim
Ji-Woong Kim
Tae-Hyon Kim
Han-Seup Kim
Hyun-Jung Park
Han-Wook Bae
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Wook-Soo Shin
Jee-Hea Shin
Hwang-Gyu Shin
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Nak-Hoon Yang
Jong-Mo Yang
Ji-Eun Yeom
Hyung-Jin Kim
Hye-Jin Kim
Hee-Jin Kim
Sun-Hee Roh
Song-Corn Ryu
Jae-Hyung Ryu
Cheol Mun
Byung-Jin Min
Eung-Shik Min
Dong-Seon Park
Seol-A Park
Se-Hun Park
Youn-Jin Park
Jong-Woo Park
Jun-Woo Park
Min-Young Won
Young-Mi Won
Sang-Ah Yoo
Hye-Bok Yoo
Hyo-Jin Yoon
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Kang-Hoon Lee
Kyung-Won Lee
Keum-Hee Lee
Nam-Kyoung Lee
Dan-Hee Lee
Doe-Young Lee
Min-Jung Lee
Seung-Hyun Lee
Young-Nho Lee
Young-Jin Lee
Ok-Joo Lee
Woo-Yeon Lee
Eun-Jung Lee
Jung-Rim Lee
Jung-Eun Lee
Ji-Eun Lee
Ji-Hwan Rhie
Cheol-Gyu Lee
Chul-Min Lee
Han-Sol Lee
Sang-Hyun Yim
Chan-Ho Jeong
Nam-Ho Cho
Min-Soo Cho
Sung-Hee Jo
Se-Hyong Jo
Go-Eun Choi
Dong-Chan Choi
Young-Doo Choi
Young-Hyun Choi
Jin-Mook Choi
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