CREATIVE ENERGY & MATERIALS SOLUTION LEADER

SAMSUNG SDI

SAMSUNG SDI
Sustainability Report 2020

About This Report

Reporting Principle
This Report was prepared in accordance with the Global Reporting Initiative (GRI) Standards: Core option. To report on industry-specific issues, this Report also made disclosures in line with the Sustainable Industry Classification System of the SASB (Sustainability Accounting Standards Board) and the TCFD (Task Force on Climate-related Financial Disclosure) recommendations.

Reporting Period
This Report outlines Samsung SDI's sustainability management activities and achievements during the period between January 1, 2020 and December 31, 2020. This extends to the first half of 2021 for major achievements in consideration of the timeliness and materiality of information contained.
For a portion of the quantitative performance, data over the recent three years (2018~2020) is presented to help readers identify its multi-year trajectory.

Reporting Scope
The scope of this Report spans the economic, social and environmental activities and accomplishments of Samsung SDI and its associates. Financial data is stated on a consolidated basis in accordance with K-IFRS, and separate annotations were added when variations occured in reporting scope and boundary.

Reliability of the Report
This Report contains financial data audited by KPMG Samjong Accounting Corp. This Report was also assured by the Korea Management Registrar as a third-party assurance provider to establish the reliability and transparency of non-financial data.

Reporting Cycle
Reporting Cycle | Annually
Previous Report | June 2020

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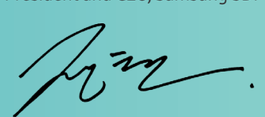
CEO Message

Jun Young-Hyun
President and CEO, Samsung SDI



> “Samsung SDI will take yet another step forward and pursue sustainable development. We will hold steady to the principle that neither compromise nor exception is tolerated when it comes to quality and safety while contributing to the environment and society at large and seeking harmonious growth with stakeholders.”

Dear Stakeholders of Samsung SDI,

Last year, we celebrated our meaningful 50th anniversary at Samsung SDI. Throughout our history spanning a whole half century, we have pursued sustainable growth by creating ESG (Environment, Social and Governance) values while positioning ourselves as a global market-leading provider of cutting-edge materials and energy solutions. I would like to take this opportunity to extend my heartfelt gratitude to all our stakeholders for their unwavering encouragement and support.

While COVID-19 gave rise to mounting uncertainties in 2020 across the global business landscape, we at Samsung SDI stood united and generated significant values.

Our Automotive and ESS Business landed more orders to continue its growth trajectory, and our Small-sized Li-ion Battery Business broadened its business presence into micro-mobility as well as wireless power tools to help maintain our solid performance. Our Electronic Materials Business also showed sustained growth with increasing sales of high value-added products. All in all, our annual sales exceeded the KRW 11 trillion mark for the first time in our corporate history to reach yet another notable milestone.

We will look back on 2020 as a year when we further solidified our commitment to sustainability management and joined forces to resolve climate change and environmental issues. The scope of our activities widened to include ‘decarbonization’ and ‘resource circulation’, and activities were taken to fully establish social responsibility and ethical practices across our entire supply chain.

In 2021, we brace ourselves for the year ahead that will surely bring a fair share of challenges as competitors scale up their business and customers advance into our business territory amid the protracted COVID-19 pandemic and its resulting economic impacts. As we have successfully navigated through such turbulent times and stayed the course towards growth over the past five decades, we see this year as a pivoting point of inflection that will take us on a journey ahead to seek sustainable development on the strength of our unrivaled ability to grow in step with the times.

In particular, we will bolster all our capabilities on all levels to truly initiate quality management in 2021. Establishing absolute quality and safety contributes immensely not only to our corporate growth, but also to the well-being of our society, and this constitutes our most valued management principle at Samsung SDI. We hold steady to the principle that neither compromise nor exception is tolerated when it comes to quality and safety, and will ensure our conduct in business reflects this every step of the way.

Samsung SDI, for the first time, announces its renewable energy transition goal and its mid-term environmental management goal through this year's Sustainability Report. We vow to look beyond mere quantitative growth to systematically attain our sustainability goal to contribute to the environment and society at large while pursuing harmonious growth with our stakeholders.

We look forward to your unwavering interest in and encouragement for Samsung SDI in the years ahead.

Thank you.

Company Overview

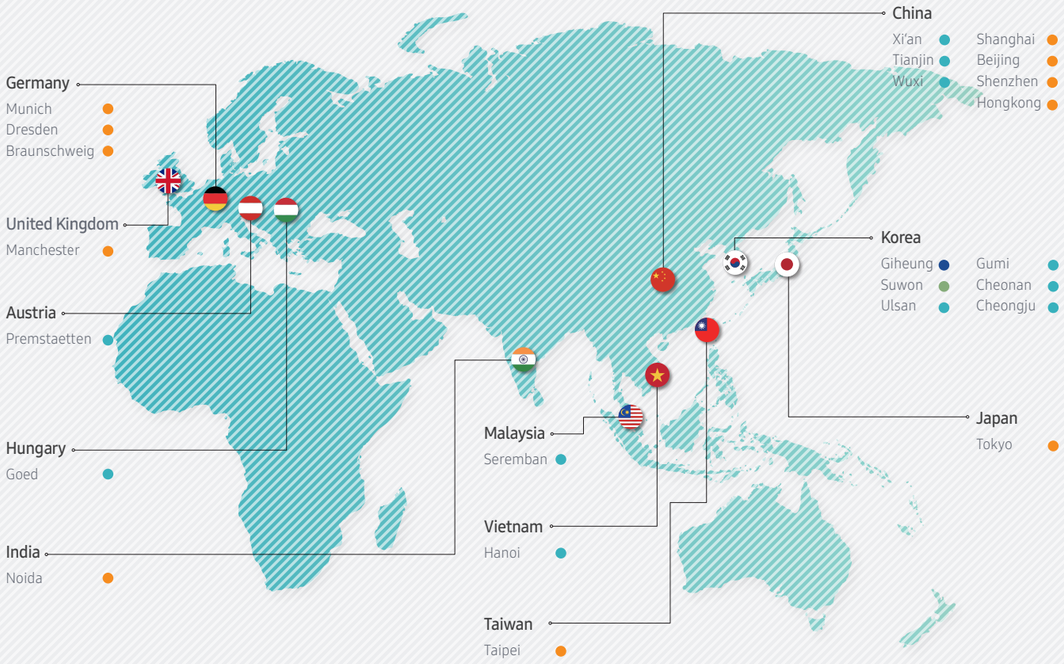
Samsung SDI at a Glance

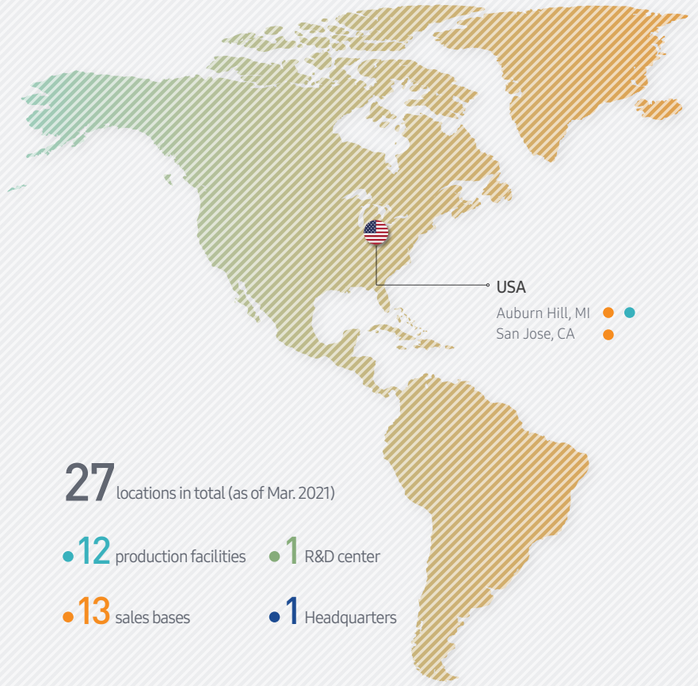
Since its foundation back in 1970, Samsung SDI has tirelessly challenged its limits and pursued innovation, and celebrated its 50th anniversary in 2020. We produce and sell rechargeable batteries used for IT device, automotive, and Energy Storage System (ESS) applications as well as materials for semiconductors and displays, enriching the life of humankind in so doing. We are committed to building next-generation growth drivers at all corporate levels and are emerging as a Creative Energy and Materials Solution Leader.

Company name	CEO	Establishment	Headquarters	Shareholders with more than 5% ownership (as of Dec. 31, 2020)
Samsung SDI Co., Ltd.	Jun Young-Hyun	Jan. 1970	150-20, Gongse-ro, Giheung-gu, Yongin City, Gyeonggi Province, Korea	Samsung Electronics: 13,462,673 shares (19.58%) National Pension Service: 6,857,609 shares (9.97%) BlackRock Fund Advisors: 3,444,030 shares (5.01%)

Global Network

Our global network consists of a total of 27 locations, including the Headquarters, the R&D Center, production facilities and sales bases.





27 locations in total (as of Mar. 2021)

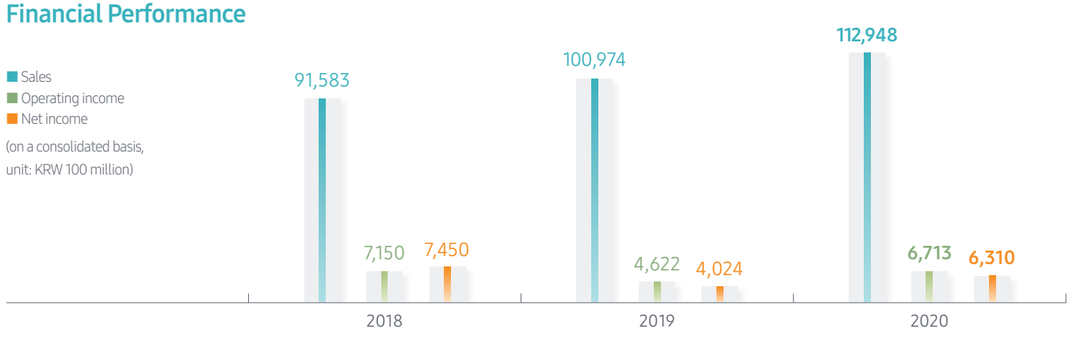
- 12 production facilities
- 1 R&D center
- 13 sales bases
- 1 Headquarters

Sales Breakdown by Region

(as of Dec. 31, 2020, unit: KRW 100 million)

Korea	11,339
North America	14,468
Europe	38,159
China	29,168
Southeast Asia and others	19,814

Financial Performance



External Sustainability Assessments Made on Samsung SDI

Member of Dow Jones Sustainability Indices Powered by the S&P Global CSA

Listed on the DJSI World for the 16th time in 2020

Listed on the Dow Jones Sustainability Index (DJSI) World for 16 times

GLOBAL100

Ranked 60th in 2021, listed for 4 consecutive years

Named one of the Global 100 Most Sustainable Corporations[1] for 4 consecutive years

CLEAN200

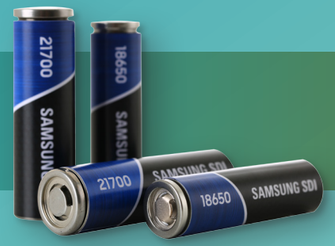
Ranked 38th in 2021

Ranked 38th on the 2021 Clean 200 list[2]

1) Supervised by Corporate Knights and published by the World Economic Forum (WEF)
2) Ranks companies for their green business practices under the supervision of Corporate Knights in reducing carbon emissions and waste generation, adopting green materials, and opting for alternative energy sources in the product and service manufacturing process

Business Overview

Small-Sized Li-ion Battery



Business Summary

Samsung SDI develops and sells small-sized Li-ion batteries primarily in three forms - cylindrical, prismatic and pouch. Notably, we are recognized for our sustained technology leadership in the IT devices sector which is constantly growing in line with the emergence of 5G communication and Internet of Things technology as well as in the power application sector that demands ever-improving eco-friendliness and energy efficiency due to heightened regulations and consumer preferences for environmental protection. We tirelessly pursue technology innovation with our quality-first management philosophy, and are maintaining a high market share in the global small-sized Li-ion battery industry.

Application

Small-sized Li-ion batteries are used to power the three major IT devices of mobile phones, laptops, and tablets as well as wireless earbuds and to supply power to power tools, e-bikes and e-scooters.

Cylindrical
Power tools, gardening tools, vacuum cleaners, e-bikes, e-scooters, e-kick scooters

Prismatic
Feature phones, smartphones, laptops, mobile gaming devices

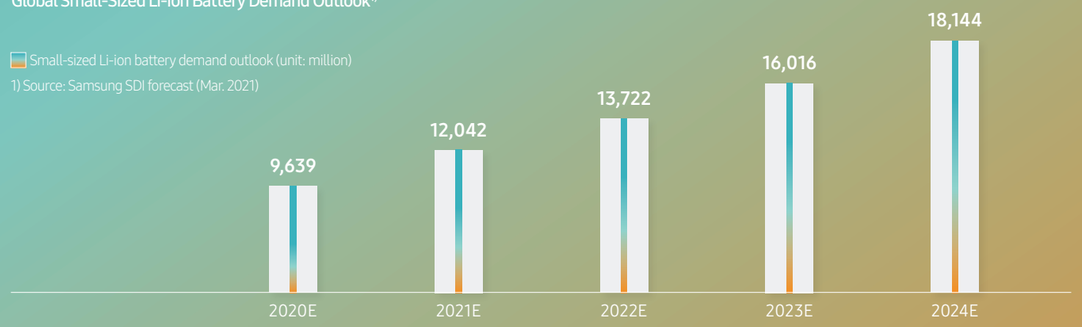
Pouch
Smartphones, tablets, wearables, wireless earbuds

Market Outlook

While demand for small-sized Li-ion batteries is not free from uncertainties in 2021 amid the continued COVID-19 pandemic, the market is forcasted to reach 12 billion cells[1] in total, up by 25% from the previous year. The IT market is poised to witness an increased application of IoT technology that combines Artificial Intelligence (AI) with 5G services, and demand for wireless earbuds and wearables is specifically expected to grow. In the power application market, the start-up EV segment will expand with Tesla, which deploys cylindrical batteries, playing a central role. The growth of the cylindrical battery market will be driven by rising demand for e-bikes and e-scooters stemming from booming micro-mobility sharing services as well as rebound in demand for power tools boosted by the recovering housing business.
In response to these growing markets, Samsung SDI plans to establish its position as a pioneer of innovative rechargeable battery technology across the entire IT and power application sectors, solidifying its market leadership in so doing.

1) Based on demand forecasts of our 2021 business plan

Global Small-Sized Li-ion Battery Demand Outlook[1]



Automotive Battery

Business Summary

EVs are no longer a niche choice made only by early adopters or environmentalists, but are emerging as a mainstream player of the global mobility landscape. Improvement in battery performance lies at the core of this transition into the EV era, and Samsung SDI is front-and-center in leading innovative technology development.
Samsung SDI ensures that EV drivers can travel farther while enjoying dynamic driving experiences, and takes a step further to develop low-carbon eco-friendly batteries to position itself as a leading provider of clean energy solutions. By supplying high-efficiency, high-capacity Li-ion batteries to global car OEMs, we help minimize CO_2 and other air pollutants emitted from internal combustion engine vehicles and advance sustainability in so doing.

Application

Electric Vehicle (EV) We deploy materials that deliver optimal service life and high-capacity features and design optimized battery components to pursue innovation in extending the driving range of EVs.

Plug-in Hybrid Vehicle (PHEV) As it is essential to strike the right balance between energy density required for electric-mode driving and power density that supports the engine operation, Samsung SDI is in constant search for the optimal point of balance by staying ahead of the competition in developing battery technology.

Hybrid Electric Vehicle (HEV) We continuously develop technology to reduce costs and improve productivity while comprehensively delivering improved fuel efficiency and vehicle performance.

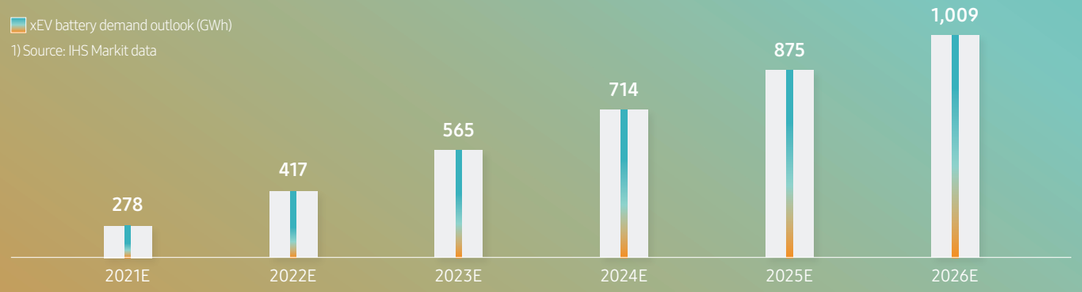
Mild Hybrid Electric Vehicle (Mild HEV)[1] We continue to develop solutions to bring improved fuel efficiency and vehicle performance to a wide array of vehicle types in a cost-effective and efficient manner.

1) Mild HEVs combine the strengths of the Idle Stop and Go (ISG) system and hybrid vehicles by maintaining the voltage of the power supply equipment under 60V.

Market Outlook

While the overall global automotive market posted a more than 15% y-o-y decline due to the unprecedented COVID-19 pandemic, xEV sales experienced explosive growth mainly in Europe. Tightening environmental regulations and the launching of a wide array of new xEV models boosted global xEV production by more than 30% from the previous year. Automakers plan to continuously broaden their xEV line-ups with upgraded driving efficiency, and those models equipped with fast charging and autonomous driving are expected to drive the market. Annual xEV sales is set to exceed 25 million units by 2025 (EVs, PHEVs, and HEVs combined), accounting for more than 25% of the total automobile market.

Global xEV Battery Demand Outlook[1]



Business Overview

ESS Battery
Energy Storage System

Business Summary

Samsung SDI's ESS battery business has been fully launched since 2011. Harnessing the stability of our rechargeable batteries achieved in small-sized battery business, we post a high market share in the ESS market while deploying our EV battery technology and manufacturing process for ESS applications to establish the qualitative reliability of our ESS offerings. Our products serve a broad range of applications, from general residential to commercial & industrial, utility, UPS, and telecom base stations. Our globally-recognized battery pack design capability and standardized modules enable us to deliver total ESS solutions that cater to diverse customer needs.

Application

Utility We contribute to ensuring the stability of power grids in the power supply system spanning from power generation to transmission, and to standardizing renewable energy power generation. Installation | Power companies, microgrids within industrial complexes, etc.

Commercial & Industrial (C&I) We improve the stability of power operation and the availability of self-consumption by lowering day-time maximum loads in office buildings including office spaces, public institutions, schools and hospitals. Installation | Buildings, factories, etc.

Residential We ensure the 24/7 supply of eco-friendly energy through alignment with photovoltaic power systems. This, in turn, increases energy self-consumption rates while reducing electric bills. Installation | Detached and row houses

UPS We help protect data centers from unexpected operational disruptions by ensuring reliable power quality and continuity while minimizing total power consumption and reducing facility investments. Installation | Factories, financial institutions, IT companies (servers), etc.

Telecom We deliver lifetime performance as well as reduced weight, smaller volume, and higher energy density, and bring a dramatic reduction in maintenance expenses through the use of Li-ion batteries. Installation | Base stations, repeaters

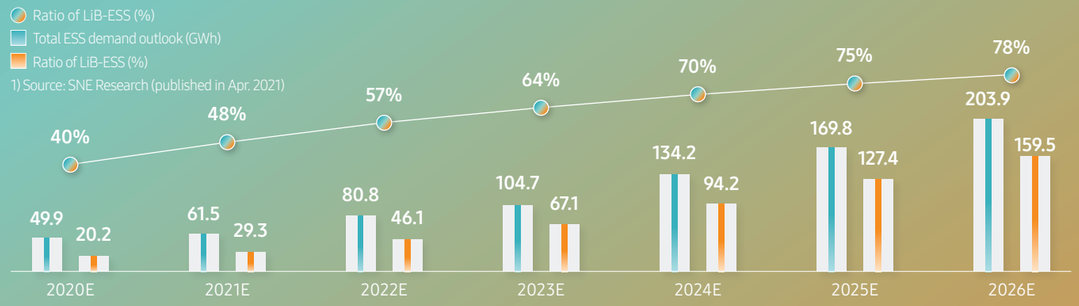
Market Outlook

Global warming and abnormal weather events, along with the emerging global trends of denuclearization and decarbonization, have given rise to mounting interest in renewable energy. This further highlights the role of ESS in supporting efficient power demand management in response to the wider adoption of renewable energy, including the need for energy storage and emergency power for possible power outages.

Countries across the globe are announcing green policy initiatives and introducing their implementation plans as demonstrated in the inauguration of the Biden Administration in the US, the European Green Deal, and the 'Renewable Energy 3020 Implementation Plans' in Korea. This will continuously boost demand in the ESS market along with the growth of associated industries. In Korea, the US and Europe where renewable energy was adopted faster than others, the market size is expanding beyond large-scale demonstrations to the replacement of aging power grid systems and the generation of GWh-capacity power in alignment with renewable energy. Emerging countries are also joining this global trend.

The global Li-ion battery ESS markets is forecasted to continually post a high CAGR of 45%, from 20GWh in 2020 to 127GWh in 2025.

Global LiB-ESS Demand Outlook[1)]



Electronic Materials

Business Summary

Since the development of EMCs for the semiconductor manufacturing process in 1994, Samsung SDI has consistently pursued innovation in the electronic materials sector to eventually establish its presence in the development and sales of semiconductor and display materials.

While reinforcing market dominance in the conventional semiconductor and LCD markets, we also strive to position ourselves as a market-leading company in the QD, OLED, EUV and other next-generation cutting-edge materials sectors.

Application

Semiconductor
We produce patterning materials (SOH, SOD, and Slurry) used to form semiconductor wafer patterns as well as packaging materials (EMC) that protect semiconductors and chips from the external environment.

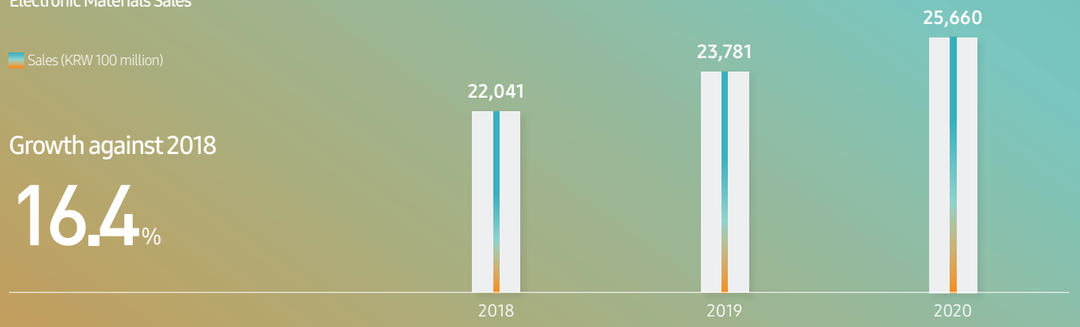
Display
Our electronic materials are mainly adopted for LCD, OLED and other display panels, and are sold in the form of films or base composite materials. They include films such as POL (polarizing film) and FOCA and process materials such as OLED materials and color Photo Resist (color PR).

Market Outlook

In 2020, COVID-19 brought change on multiple fronts in the semiconductor, display and other upstream segments. The increased adoption of remote working, home-schooling and 5G technology resulted in supply failing to meet demand in applications such as laptops, monitors and semiconductors mounted on electronic devices.

Turning to 2021 market outlook by respective markets associated with our electronic materials business, wafer input is expected to increase in the memory semiconductor market in line with the business recovery. The full-fledged deployment of EUV will further intensify competition to deliver ever-finer lines in the system semiconductor market, driving the growth of related materials sectors. In the display market, LCD will maintain its growth mainly based on Chinese demand for ultra-large-sized panels, and OLED will raise its share in the mobile display market with marked growth in foldable OLED panels. Specifically, the commercialization of such next-generation panel technologies as Mini-LED and QD-display will spur the growth of their related markets.

Electronic Materials Sales



Sustainability Management System

Approach to Sustainability Management

Samsung SDI set its sustainability management vision of 'Sustainable Development Innovator' with an aim to become a company that is 'contributing to society through sustainable development based on strong leadership in the economic, social and environmental spheres'. On the basis of the Triple Bottom Line (TBL) that refers to economy, environment and society, we chose the three domains of 'Sustainable Growth', 'Win-Win Partnership', and 'Creation of Environmental Value' and their respective focus areas to pursue balanced development and growth for all stakeholders.

Sustainability Management Strategy

Vision

Sustainable Development Innovator

Contributing to society through sustainable development based on strong leadership in the economic, social and environmental spheres

Harmony & Growth

	Economy	Society	Environment
Domain and Impact	**Sustainable Growth** Pursue sustainable growth and generate profits through customer satisfaction	**Win-Win Partnership** Pursue balanced partnerships based on mutual trust and benefits with diverse stakeholders	**Creation of Environmental Value** Contribute to the improvement of the quality of life for all by creating greater value through eco-friendly operations throughout the entire product and service lifecycle
Focus Area	Product quality and safety Compliance and ethics management	Employees Health and safety Supply chain	GHG emissions mitigation, green energy Resource circulation Environmental impact mitigation

Material Issues for 2020

Implementation Approach for 2020 Material Issues

Material Issues	Major Approach to Samsung SDI's Material Issues	UN SDGs[1]
· Reinforce product safety and quality management	Samsung SDI analyzes customer requirements and market needs to provide optimized battery and electronic material products that deliver absolute safety and quality in wide-ranging use conditions. To this end, we reinforce our quality assurance/certification process to guarantee the safety and quality of our products while improving our mass-production quality to ensure homogeneous quality across the entire global market that we serve. We also operate a quality monitoring system for preemptive quality management to strengthen the detection and control of potential risks.	
· Secure future growth drivers · Generate solid business outcomes	**Small-sized Li-ion Battery** In the emerging small-sized Li-ion battery market that continues to grow in response to the increasing needs for eco-friendliness and high-efficiency, we leverage our differentiated technology to broaden our business territory and lead the market. We set a new record in the sales of small-sized Li-ion battery in 2020, and will maintain this growth momentum by increasing sales and improving profitability in 2021. In the pouch battery sector, we will continue to expand our sales drawing on our differentiated product performance enabled by high-capacity, fast charging technology in line with the growing markets of 5G smartphones, foldable phones, and wireless earbuds. In the cylindrical battery sector, we will maintain our market share for power tools and other existing applications while expanding the development and launching of competitive products for EVs, e-bikes, e-scooters and the wider micro-mobility market.	
	Automotive Battery Our various business strategy is aligned with tightening global environmental regulations and car OEMs expanding their xEV line-ups. Harnessing our know-how accumulated in engineering mobile device batteries, we focus on the development of high-efficiency, high-energy density batteries and accelerate our research on all-solid-state battery technology for next-generation materials. To help increase the distribution of high-performance xEVs that meet the needs of consumers in Europe, China and the US that are expected to grow rapidly, we are engaged in wide-ranging cooperation and development activities with car OEMs. Samsung SDI will not only deliver optimal automotive battery solutions to carmakers but also will duly fulfill its role and responsibility as a partner that leads the overall xEV industry.	
	ESS Battery Samsung SDI is raising its market share across a wide range of applications from commercial and residential ones to UPS and ships with a focus on utility ESS batteries that are used to connect with renewable power generation or stabilize the power grid network. From the viewpoint of market entry, we continuously tap into such new markets as Southeast Asia. In 2021, based on our product stability, we will intensely penetrate into the ESS markets linked with renewable energy such as PV and wind power, and continue to expand our grid stabilization business to address power instability. We will also lead the shift into Li-ion batteries in the UPS market where lead-acid batteries are mainly employed, and cooperate with major global partners in the recently-growing ESS market for vessel applications to constantly explore new markets.	
	Electronic Materials Samsung SDI strengthens its core technology competency through technology cooperation and R&D with customers to establish advanced technology competitiveness while rigorously managing quality and building a product portfolio to minimize risks in the upstream market. In 2021, we will realign our existing profit/loss structure for greater soundness in line with the growing upstream market, and increase investments in new product items to pioneer the rapidly-shifting technology trends. On the strength of our differentiated technology accumulated over the years, we will tap into the ultra-fine semiconductor process materials market – QD (Quantum Dot)/OLED/foldable display/EUV process – that is expected to post high growth and establish our technology leadership to deliver next-generation products.	
· Support the sustainability of the supply chain · Ensure responsible mineral sourcing	As operational risks increase due to ESG issues along the supply chain across the global business landscape, Samsung SDI is committed to improving the sustainability of its supply chain. To this end, we operate the S-Partner certification system to evaluate and certify our partners for their compliance with our 'Supplier Code of Conduct' while continuously offering annual training on latest ESG trends and awareness-building to help our partners elevate their management of human rights, labor, ethics, environment and health & safety issues. To build responsible sourcing practices along the supply chain, we set the zero-tolerance principle in relation to ethical mineral sourcing, and actively join industry initiatives to stringently manage our business operations from mineral mining to their processing and procurement.	
· Respond to climate change · Mitigate environmental impact along the product life cycle (production and use) · Achieve circular economy through resource circulation	The World Economic Forum's Global Risk Report 2021 states that humanity is facing existential threats that stem from climate change and other environmental issues. As a global company operating across the world, Samsung SDI is dedicated to reducing environmental loads generated in the product use phase as well as in the manufacturing phase to minimize its environmental impact. Notably, we endorsed the Net-Zero declaration made by the international community in 2021, and set a new goal of achieving a full 100% renewable energy transition by 2050. To attain this goal, we will increase the use of renewable energy step by step across our domestic and overseas worksites, beginning with our Hungary plant embracing renewable energy in 2021.	

1) Please refer to page 86 for further details on the UN SDGs.

2020 Business Highlight

Small-Sized Li-ion Battery

Leading the power tool market with cylindrical 21700 batteries and advancing into a new market with new coin cell batteries

Samsung SDI is leading the power tool market with its high-power, high-capacity cylindrical 21700 batteries. We became the first in the industry to unveil 5.0Ah cells in 2020 to advance into the OPE (Outdoor Power Equipment) market, and witnessed a surge in demand for our 21700 batteries in line with growing demand to switch to cordless in the mid/large-size special power tool and construction tool markets.

We also strategically developed coin cells as a new form factor, and initiated the supply of our differentiated coin cell batteries to major TWS (True Wireless Stereo) headphone companies. The TWS headphone market is rapidly growing to reach more than 300 million units in 2020, and the latent demand in this market is enormous as only one out of every 10 global smartphone user has such headphones, which makes this market a promising new growth driver in the future.

Automotive Battery

Attending the 8th InterBattery 2020 to present the future vision of battery technology

In October 2020, Samsung SDI attended Korea's largest rechargeable battery trade fair 'InterBattery 2020' to share its vision of pushing the boundary and prepare for a sustainable future through battery technology under the theme of 'The Future We Create'. With the three keywords of 'Green Technology', 'Sustainable Innovation' and 'Green Road Storytelling', we presented our advanced battery technology and a greener world that we aim to create harnessing such technology while unveiling our roadmap for all-solid-state battery under development with a goal of reaching commercialization in 2027. Besides, we displayed our main battery line-up currently under mass-production as well as real-life applications including Jaguar Land Rover's PHEV model 'Range Rover Vogue' and Daelim's electric motorbike models 'Zappy' and 'Arte', widely demonstrating our differentiated technology prowess.

ESS (Energy Storage System) Battery

Launching a high-density/high-capacity 112Ah cell to boost the safety of battery systems and lead the ESS market

Innovation in battery cells and system products is accelerating with the growth of the ESS market. Samsung SDI unveiled a new 112Ah cell with significantly improved capacity and efficiency through the deployment of high-nickel technology and the optimized cell design. Developed exclusively for ESS applications, this 112Ah cell will be gradually employed for the most optimal line-ups by installation type starting from non-walk in type energy platforms (E40) to walk-in, non-walk in and enclosure installations. The resulting new battery system has adopted fire extinguishing technology with further improved safety, and fully complies with the safety test standards of the internationally-recognized UL9540A. In 2020, we first landed a supply order for a large-scale GWh-capacity renewable energy-connected project in the state of California, US, and will broaden our market presence with competitive products by tapping into the Philippines and other emerging Southeast Asian markets.

Electronic Materials

Developing W One Slurry

Slurries[1] refer to materials consumed for wafer planarization during semiconductor Chemical-Mechanical Polishing (CMP) process, and a wide range of slurries are used depending on the characteristics of the process involved. To deliver even greater value to customers, we developed a new type of slurry that produces the benefits of integrating multiple kinds of W (tungsten) slurries into one, resulting in further expediting the polishing process compared to the conventional approach of choosing different slurries for different processes. The application of such a differentiated product ultimately assisted customers in enhancing their facility efficiency and productivity, and is also expected to strengthen the influence of our products in the future semiconductor process that pursues ever-finer line widths.

1) Slurry: Suspension of fine solid particles being dispersed in the solution or a mix of solids and liquids

Samsung SDI Value Chain

Small-sized Li-ion batteries, automotive batteries, ESSs and electronic materials that Samsung SDI delivers with exceptional quality are deployed for a wide array of applications and services to render our everyday lives more convenient and productive.

Sustainable Supply Chain

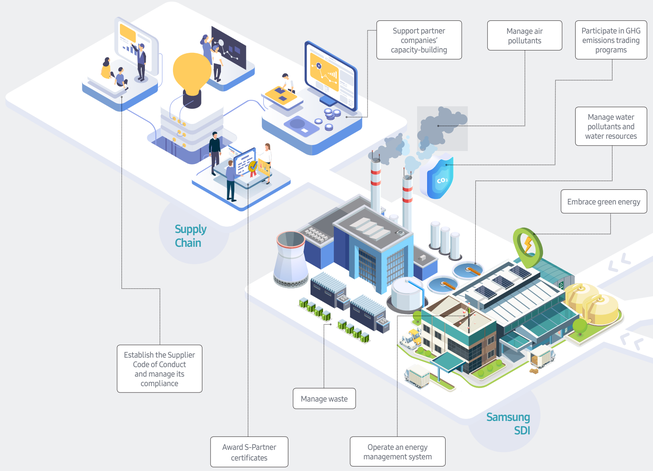
We establish fair trade practices and support partner companies with their management capacity-building to pursue proper win-win partnerships along the supply chain. We created the 'Supplier Code of Conduct' and assess partner companies for their compliance, and elevate our supply chain ESG risk management performance through the S-Partner certification program.

Environmental Impact

Each of our worksites is managed for air/water pollutants, effluents, and waste to minimize our environmental impact in the product manufacturing and assembly process.

Response to Climate Change

Along with the adoption of green energy, we participate in GHG emissions trading programs and take energy management activities at all levels. We also analyze our environmental impact from the product lifecycle perspective and develop improvement measures accordingly while seeking ways to facilitate product recycling and reuse.



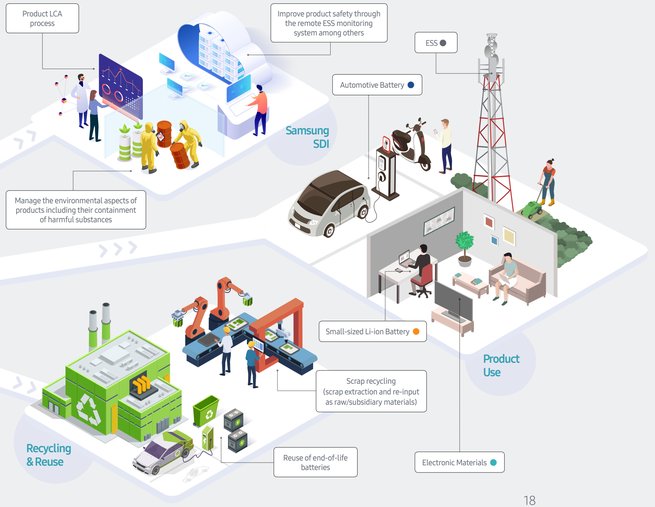
Samsung SDI's value chain considers sustainability throughout the entire product life cycle, from the supply of raw materials and manufacturing to use and disposal to manage and improve the social and environmental impact brought by its business operations.

Product Safety

We render our products even safer by building remote depositories and strengthening the automatic detection of signs of anomalies. We apply stringent standards in managing hazardous substances on par with the product environment practices of our customers to improve the eco-friendliness of our products while securing the safety of workers at our customers.

Business Area

Laptop	● ●	Wearables	● ●	E-scooter	●
Smartphone	● ●	Power tool	●	EV	●
Tablet	● ●	Vacuum cleaner	●	E-bike	●
TV	●	Residential ESS	●	ESS for telecom applications	●
Power bank	●	Gardening tool	●	EV charging infrastructure	●



2020 Sustainability Highlight

Response to Climate Change

Measuring the environmental impact of products

Over the years, businesses focused on measuring their GHG emissions and setting GHG emissions reduction targets as a way to mitigate their GHG emissions. To render such efforts more sustainable and truly achieve carbon neutrality, however, we need to develop low-carbon products or products that help us avoid GHG emissions just by using them. With this awareness in mind, we evaluated GHG emissions reductions made by the operation of battery-powered vehicles: the number of EVs produced was calculated based on the production volume of our Automotive and ESS Battery Business (for some specific models only), and GHG emissions emitted in the product use phase were measured in consideration of differences in such emissions between gasoline-powered vehicles and EVs. As a result, it is estimated that the GHG emissions reduction delivered by the operation of battery-powered vehicles amounts to 1,206,622tCO$_2$e/year. This will be followed by Life Cycle Assessments (LCAs) to extend our management scope of environmental impacts from products.

Product Safety

Reinforcing the management of battery safety

In line with the increasing importance of ESS safety, Samsung SDI established a remote depository to raise the bar on the safety of battery product management. Building a data depository and an analysis system on the cloud platform, we remotely monitor ESS operational data while detecting and managing signs of anomaly to improve the safety of our ESSs. Additional analyses are made based on collected data to protect the battery management system and proceed with advanced analyses to strengthen our real-time response capabilities.

In addition to employing such a remote system, we also ensure safety in the ESS construction and installation phases. Our ESS offerings enable automatic spraying and swift fire extinguishing in the event of detecting signs of fire and are equipped with thermal diffusion inhibitors to improve their intrinsic insulation performance and secure product safety in so doing.

Mitigation of Environmental Impact

Setting 2025 mid-term environmental targets

Recently, both domestic and international ESG evaluation and disclosure guidelines increasingly demand that businesses provide information on their management of environmental indicators and their results. As the mid-term environmental targets we set back in 2015 reached their end date in 2020, we set a new set of mid-term targets to be attained by 2025. Indicators newly added under these targets include water withdrawal intensity/reuse rates, waste discharge intensity/recycling rates, and air pollutant emissions/water pollutant discharge intensity, and their scope spans all our production facilities in Korea and abroad (excluding the Headquarters, the R&D Center, sales bases and offices). Our mid/long-term business goals and approaches were considered in setting these targets, and detailed action plans were developed through close communication and consultation with the environment and infrastructure departments at the Headquarters, worksites and overseas corporations.

Sustainable Supply Chain

Supporting partner companies with ESG risk management

To preemptively respond to ESG issues that occur along the supply chain, Samsung SDI strictly manages such non-financial risks as workplace safety, environment and human rights as well as financial status, production capacity and quality of partner companies.

Given that partner companies often fail to promptly recognize regulatory amendments in the areas of labor and environment, we offer training on external ESG trends as part of our visits paid to perform S-Partner certification audits so that partner companies appropriately manage relevant risks. Besides, we share information on major regulatory revisions and their effective dates in relation to labor and environmental regulations that go into effect in 2021 – expansion of the scope of the 52-hour workweek system to businesses employing five or more people and of the occupational health and safety insurance system to workers engaged in special types of work – to assist partner companies in preventing ESG risks from occurring.

Total Impact Measurement & Management (TIMM)

Impact Measurement Methodology

Samsung SDI is clearly aware of the positive/negative impacts its business operations may bring in the areas of economy, environment and society, and endeavors to deliver the greatest-possible benefits in the interest of stakeholders. As part of this commitment, we annually measure the impact of our financial and non-financial performance generated for the concerned year through PwC's Total Impact Measurement and Management (TIMM) methodology, and improve our management plans accordingly.

Impact	Extent to which a company or society changes either positively or negatively as a result of outcomes (change in company or society vis-à-vis activities)
Target of impact assessments	Company-wide business outcomes or outcomes of a single program when assessments are made in specific areas such as social-giving activities
Measurement method	Use public disclosures made by the Company in accordance with applicable laws and regulations, statistics from government agencies and international organization, and research findings from relevant domestic/international research articles

Impact Measurement Aspect and Indicator

Impact measurements are made in the three categories of economy, environment and society, and a total of 15 indicators were used to measure our impact across these categories in 2020.

Economy — Current or future impact on GDP (Gross Domestic Product)

- **Wage**: Sum of employee wages and retirement benefits, estimated wages of partner employees, and estimated per-capita consumption expenditures of employee family members
- **Profit**: Net income (profits generated from the current period)
- **Tangible asset**: Sum of depreciation of tangible assets and invested properties (contribute to the generation of future profits)
- **Intangible asset**: Sum of separately-acquired intangible assets and R&D expenditures (contribute to the generation of future profits)
- **Corporate tax**: Sum of corporate tax payments estimated based on the Company's corporate taxes paid and the sales of partner companies who supply raw materials consumed to manufacture Samsung SDI's products

Environment — Impact on the natural environment

- **Air pollutant**: Social costs caused by the emission of SOx, NOx, and PM
- **Greenhouse gas - product**: Social value generated from the sale of EV batteries
- **Greenhouse gas - production**: Social costs caused from GHG emissions generated from the process
- **Waste**: Social costs caused by the discharge of waste
- **Water resources**: Social costs caused by the use of water resources

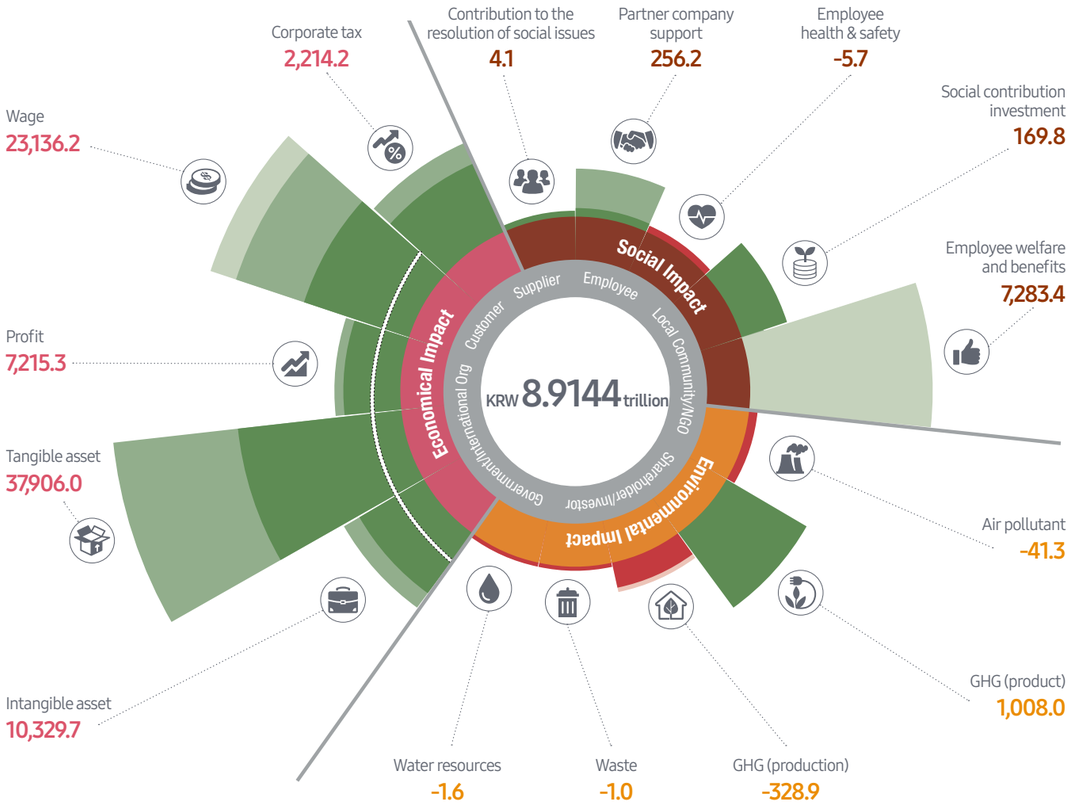
Society — Impact on members of society leading a better life

- **Contribution to the resolution of social issues**: Social cost savings through Green Planet Environment School's career mentoring education and Blue Elephant's cyberbullying prevention education
- **Support for share growth**: Impact from the lower interest rates offered through the win-win growth funds as well as from the credit assistance for partner companies in paying molding fees
- **Health and safety**: Losses from the health and safety incidents involving employees
- **Social contribution investment**: Impact from production activities, added values, and increased employment on the part of beneficiaries
- **Employee welfare and benefits**: Social value created by contributing to improving the quality of life for employees

Impact Measurement Outcomes in 2020

POSITIVE		NEGATIVE	
Direct Impact	Positive impact generated from Samsung SDI's business conduct	Direct Impact	Negative impact generated from Samsung SDI's business conduct
Indirect Impact	Positive impact from the business conduct of partner companies influenced by Samsung SDI	Indirect Impact	Negative impact from the business conduct of partner companies influenced by Samsung SDI
Induced Impact	Positive impact generated by employees working at Samsung SDI and its partner companies in leading their life	Induced Impact	Negative impact generated by employees working at Samsung SDI and its partner companies in leading their life

(Unit: KRW 100 million)



Major Assumptions and Considerations

- Impact measurements were conducted based on the performance data managed by the Company in accordance with the reasonable assumptions made by leveraging official statistics from national agencies and international organizations as well as a range of current research findings. The currency value of the concerned year is subject to change later on.
- To improve the reliability and objectivity of the assessment process and its results, sources and references deemed important were separately annotated.

: Samsung SDI annual report (for the 51st period), Global Burden Disease (GBD) data from the Institute for Health Metris and Evaluation (IHME), the inter-industry table from the Bank of Korea (2015), VSL data from the Korea Environment Institute, national statistics from Statistics Korea, statistics from the World Bank, etc

Impact Management Plans

Samsung SDI defines the impact of the measurement indicators on its stakeholders, and develops detailed management plans across the entire value chain to maximize the positive impact from its business operations while minimizing their negative impact.

The 2020 performance and related management measures are disclosed transparently to the public through this Sustainability Report.

			Economy				
	TIMM factors		Wage +	Profit +	Tangible asset +	Intangible asset +	Corporate tax +
Impact on stakeholders	Stakeholders	Customers			High quality & reasonable pricing, improved safety and convenience in product use		
		Partner companies			Sales expansion through delivery volume increases and unit price guarantee, opportunity to explore new growth drivers		
		Government					Contribution to national fiscal soundness and the improved quality of life for the public
		Industry associations, universities and research institutes					
		Local communities and civic organizations					
		Employees	Contribution to income growth and the improved quality of life				
		Shareholders and investors		Increases in interest & dividend income			
	Impact measurement outcomes		KRW 2,313.62 billion	KRW 721.53 billion	KRW 3,790.60 billion	KRW 1,032.97 billion	KRW 221.42 billion
			Economical Impact: KRW **8,080.13** billion				
			Total Impact				
Management plans for maximum impact	Value chain	R&D				Diversify new applications in line with increasing needs for battery safety and eco-friendliness	
		Purchasing		Select and retain outstanding partner companies			
		Manufacturing		Ensure uniform product quality	Improve equipment safety and support partners to improve quality		
		Logistics					
		Sales		Expand & maintain the global sales network, increase transaction orders			
		Service		Strengthen initial response to VOC and customize customer value management			
		Marketing		Analyze global market outlook and customer trends			
		Business Management	Ensure transparent performance appraisal and compensation	Ensure clarity in profit/loss management	Strengthen transparent accounting in acquisition, management and disposal		Fulfill tax-paying obligations and minimize tax risks
Samsung SDI's sustainability issues in 2020			- Reinforce welfare and benefits	- Generate solid business outcomes - Secure new customers and win orders	- Secure future growth drivers	- Reinforce R&D capacity	- Observe the principles of compliance and anti-corruption
Reporting Page			76p	72-73p, 34-37p	36p, 72p	52-53p, 72p	73-74p

Environment					Society				
Air pollutants (NOx, SOx, PM) -	GHG (product) +	GHG (production) -	Waste -	Water resources -	Contribution to the resolution of social issues +	Partner company support +	Employee health & safety -	Social contribution investment +	Employee welfare and benefits +
	Expansion of the green market, opportunity to explore new growth drivers								
						Strengthened financial stability and technology competitiveness	Reduction in employee work efficiency and health		
Development of new environmental policies and regulations		Development of new environmental policies and regulations							
Contribution to air pollution and negative ecosystem impact		Contribution to climate change – global warming, floods and rising sea levels	Contribution to soil pollution and negative ecosystem impact	Contribution to community water resources depletion	Expansion of career exploration opportunities and prevention of cyberbullying damage for adolescents			Development of local communities and protection of the vulnerable	
							Reduction in employee work efficiency and health		Improved quality of life for employees
- KRW 4.13 billion	KRW 100.80 billion	- KRW 32.89 billion	- KRW 0.1 billion	- KRW 0.16 billion	KRW 0.41 billion	KRW 25.62 billion	- KRW 0.57 billion	KRW 16.98 billion	KRW 728.34 billion
Environmental Impact: KRW **63.52** billion					Social Impact: KRW **770.78** billion				
KRW **8.9144**trillion									
	Strengthen product eco-friendliness and develop green products								
	Develop measures to secure green raw materials					Operation of Win-Win Cooperation Consulting, Supply chain ESG risk management	Strengthen the operation of the equipment safety certification process		
Install emission control equipment and shift to high-efficiency equipment	Analyze environmental impact along the product life cycle and reduce generated environmental loads	Expand the shift to renewable energy at workplace	Ensure safety in waste treatment and increase recycling rates	Change processes and install/operate a remote water quality monitoring system			Establish tailor-made shop floor safety measures and an emergency response system		
			Review plans to recover, recycle and reuse end-of-life batteries						
					Encourage employees to join social contribution programs and facilitate social contribution programs	Implement win-win growth strategies	Strengthen the workplace safety management system and operate the COVID-19 TF	Ensure transparency in the execution of donations	Improve the welfare and benefits system
- Manage the discharge of pollutants	- Develop eco-friendly products and services - Mitigate environmental impact along the product life cycle (production and use)	- Mitigate environmental impact along the product life cycle (production and use) - Respond to climate change - Reduce energy consumption - Reinforce the use of renewable energy	- Achieve the circular economy through resource circulation - Manage the discharge of waste	- Manage water resources - Manage the discharge of pollutants	- Contribute to the development of local communities	- Support the sustainability of the supply chain - Disseminate a culture of co-prosperity and shared growth	- Strengthen the handling and management of hazardous chemicals - Strengthen workplace safety management - Manage employee health and safety	- Contribute to the development of local communities	- Reinforce welfare and benefits
33p, 75p	30p	26p, 32-33p	31p, 33p, 75p	33p, 75p	63-65p, 79p	38-41p, 78-79p	58-62p, 77-78p	78-79p	56-57p, 77p

SUSTAINABILITY MEGATREND

Response to Climate Change

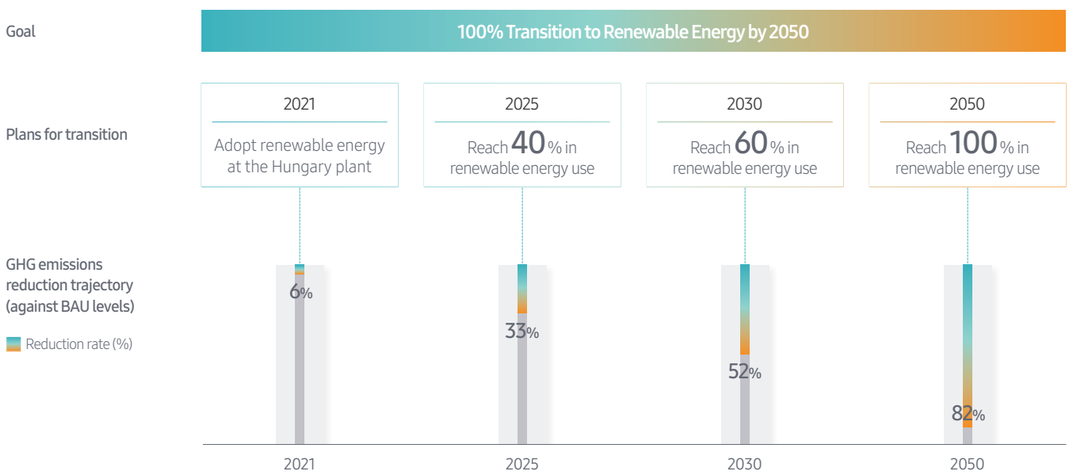
01

Management Strategy and Approach

Setting Our Renewable Energy Goal

Countering climate change is emerging as a grave, imminent challenge of the international community and also as a new opportunity for businesses.
To join in the concerted effort of the global community to address climate change and respond to the new normal of climate regulations, we at Samsung SDI have set a new goal of achieving '100% transition to renewable energy by 2050'.

To achieve our renewable energy transition goal, we will first increase the use of renewable energy step by step across domestic and overseas manufacturing worksites. We will adopt renewable energy at our Hungary plant, an automotive battery production location, in 2021, and move on to gradually expanding the use of renewable energy to meet 40% by 2025, and 60% by 2030 of our total power consumption through renewable energy respectively to completely shift to renewable energy at all our domestic and overseas worksites by 2050.
By implementing our renewable energy transition plan, we believe we could reduce our GHG emissions by 33% by 2025, and by 52% by 2030 from BAU (Business As Usual) levels.



Governance Related to Climate Change Response

Major issues such as climate-related risks and opportunities that may have impact on our business operations are managed at the Board of Directors and senior management level.
Our top management including the CEO discusses and manages climate-related major issues and response strategies (use of renewable energy and GHG emissions reduction targets & strategies, etc.). Major risks that could bring significant impact to our business operations are addressed through the deliberations and decisions made by the BOD.
Our Planning Team is responsible for identifying risks and opportunities in such sustainability management sectors as climate change, and for developing company-wide response strategies in alignment with our business strategy.
In addition, the EHS & Infra Team is engaged in diverse activities from calculating GHG emissions generated from business operations to conserving energy to help mitigate GHG emissions.

Risk and Opportunity Factor Analysis

To effectively respond to tightening global climate change regulations and the needs of stakeholders including customers and investors, Samsung SDI is analyzing climate-induced risk and opportunity factors and their resulting impacts from the mid/long-term perspective.

Risk Factor

Samsung SDI's climate-related risks are categorized into transition risks and physical risks.
Transition risks refer to risks that may arise as a result of the transition towards a low carbon economy in the international community, and can be classified into policy risks, market risks, technology risks and reputation risks.
To analyze transition risks, we assessed these risks based on three carbon price pathways – a high price scenario (full implementation to meet the Paris Agreement goal of 2°C), a medium price scenario (future possible carbon prices), and a low price scenario (full implementation of countries' nationally determined contributions) as well as on future GHG emissions prospects.
Policy risks are defined as impacts that affect businesses as a result of carbon prices increasing due to tightening climate change regulations.

While financial impacts from renewable energy transition and carbon regulations are not expected to be sizable in the short-term at Samsung SDI, their mid/long-term implications could expose us to additional carbon cost risks due to the growing EV battery and ESS markets and their resulting increases in production, GHG emissions and carbon prices.
Our level of risk exposure was assessed as low both in market risks and technology risks, each referring to the impact of climate change on market demand and cost of migrating existing products to their low-carbon versions respectively.
As to physical risks, our worksites in China, Korea and other Asian regions are likely to be exposed to the risks of heat waves, fires, floods (inundation) due to abnormal weather conditions stemming from climate change while our Hungarian worksite that serves as our key production base of EV batteries faces low risks.

Opportunity Factor

Our green materials and energy solutions business falls under the category of low-carbon industries that play a pivotal role in achieving the 2°C scenario. As the global battery market demand is forecast to surge by 2030, this will naturally bring greater opportunities to increase our profits.

Risk Management

Samsung SDI will strengthen internal management and connect more closely with stakeholders to move towards attaining its goal of achieving a full 100% renewable energy transition by 2050.
We will establish a mid/long-term roadmap for renewable energy transition, and achieve our goal as planned through continued risk factor identification, evaluation, and systemic performance management. We will transparently communicate each of the milestones we reach in attaining the set goal with our stakeholders through sustainability reports, CDP reports and other diverse means.

Risk Factor Analysis Outcomes

Risk		Expected Impact	Risk Impact (Mid/long-term, 5 years and beyond)	Assessment Basis
Transition Risk[1]	Policy	Increasing climate-related policies and regulatory risks	High	Samsung SDI GHG emissions prospects and future regional carbon prices based on climate change scenarios * Analytical tool: S&P Trucost
	Market	Low impact of climate change on the financial status of major customers	Low	Financial impact assessments on customer industries and major customers * Analytical tool: S&P Trucost
	Technology	Low risk in consideration of low-carbon product and service offerings and R&D investments	Low	Ratio of sales in low-carbon related industries, ratio of investments and R&D on low-carbon technology * Analytical tool: S&P Trucost
Physical Risk	Precipitation and inundation	Risk of floods due to increases in average global temperature	Low	Risk impact assessments made in consideration of the regional proportion of business locations * Analytical Tool : Think Hazard index
	Heat wave	Rising expenses to maintain the operational conditions of manufacturing	Medium	Risk impact assessments made in consideration of the regional proportion of business locations * Analytical Tool : Think Hazard index

1) Source of carbon price scenarios: IEA and IRENA(2017); Trucost Analysis. As of June, 2017.

Response to Climate Change

Renewable Energy Transition

Samsung SDI is operating manufacturing worksites in Europe, the US, China, Southeast Asia and other parts of the world as well as in Korea. As such, we will consider institutional conditions and efficiency factors in these regions in developing our renewable energy transition plans and gradually extend their scope.

For our overseas manufacturing worksites, wide-ranging implementation plans are under review including the purchase of renewable energy certificates and the signing of Power Purchase Agreements. Beginning with our Hungary corporation embracing renewable energy in 2021, we will expand the use of renewable energy consecutively at our overseas manufacturing worksites in Asia, the US and others. In 2020, our Austria corporation met 67% of its total power needs through renewable energy. In Korea, review is underway on RE100 (Renewable Energy 100%) support programs by participating in a green pricing pilot project and a pilot program on RE100 Certificate (REC) trading.

Reinforcing the Energy Management System at the Worksite Level

We take a multi-faceted approach to improving the substantial management of energy consumption at respective worksites. In 2020, an EES (Equipment Engineering System) was introduced to monitor and analyze the operational data of utility equipment mainly at our Cheonan worksite, and its application will extend to our Ulsan worksite in 2021. Furthermore, we are extending the application of the s-GEMS, our energy management system used by domestic worksites, to our overseas corporations. This system has been established at our Xi'an and Wuxi corporations, and will be expanded to all our overseas locations when COVID-19 subsides.

In line with the transition of international energy management system standards from ISO 50001 to ISO 50001:2018, we received reassessments and provided responsible staff at respective worksites with training on the new standard. In domestic manufacturing locations (Cheonan, Ulsan), we engaged external professional consultancies in auditing the on-site operation of our energy management system to identify and improve pending issues and establish a more efficient management system.

Participating in the Emissions Trading System

We participate in the GHG emissions trading system to proactively respond to global climate change regulations. We are systematically managing our emissions targets with the help of the carbon management system established under the principles of Monitoring, Reporting, and Verification (MRV) and the s-GEMS, our IT energy management system. Such effective GHG emissions reduction activities eliminated the need for us to purchase GHG emissions credits for a total of six years during the first and second planning periods. Samsung SDI will continue with its efforts to mitigate GHG emissions in the years ahead.

GHG Emissions Reduced at the Global Company-wide Level

Category	Unit	2018	2019[1)]	2020
Fuel	tCO_2e	9,878	16,306	17,662
Electricity & steam	tCO_2e	42,998	104,073	76,183
Total	tCO_2e	52,877	120,379	93,845

1) Reductions increased in line with change in the emission coefficient.

Response to the CDP

In response to the increasing demand for climate information disclosures both at home and abroad, we are transparently disclosing our climate change strategy and our implementation of GHG emissions reduction activities through the CDP (Carbon Disclosure Project)[1)].

As the impact of climate change aggravates on the financial aspect of businesses, we are also conducting objective analyses to proactively respond to this challenge. In 2020, we made it onto CDP's A-list.

1) A non-profit organization that evaluates the world's largest 500 companies by market capitalization for their response to its official request to disclose their environmental data, including GHG emissions and energy data

Energy Use Management

Major Energy Conservation Activities

We have designated specific worksites in Korea and abroad to provide them with intensive support and turn them into hub locations responsible for respective business divisions in rendering our manufacturing process more eco-friendly. Continuous technical support for overseas worksites is made available to the Cheonan worksite for Small-sized Li-ion Battery Business, the Ulsan worksite for Automotive and ESS Battery Business, and the Cheongju worksite for Electronic Materials Business. These worksites were assisted in altering their manufacturing process and infrastructure equipment operation methods, adopting energy-saving, high-efficiency equipment, and regularizing the reduction of losses from energy-consuming processes. In addition, quarterly theme-based energy-saving activities (Air Leak management, refrigerator and air compressor efficiency management, etc.) have been scaled up at the company-wide level to generate the greatest-possible reductions in energy use.

Achievements Made in Reducing Energy Consumption among Domestic Worksites

Worksite	Activity	Achievement
Cheonan	Adopted variable controls on the regeneration temperatures of dehumidifiers	Reduce the consumption of electricity and steam energy
	Introduced a system to reuse pure RO concentrate	Reduce the consumption of industrial water
Ulsan	Altered the method to control temperatures within the dry oven/ activated operational controls during the suspension of operations	Minimize electricity losses
Gumi	Improved the heat exchange method for air-conditioning equipment (direct expansion → cooling water)	Reduce electricity expenses
Cheongju	Improved efficiency in recovering waste heat within the water heating system	Reduce steam consumption

Global Company-wide Energy Investments and Achievements in Reducing Energy Use

Category		Unit	2018	2019	2020
Total investments		KRW million	1,840	1,495	2,869
Fuel saving activities		No. of cases	78	88	98
Electricity & steam saving activities		No. of cases	634	543	667
Savings generated	Total reductions made	TJ	1,081	1,679	1,640
	- Fuel reduced	TJ	197	321	396
	- Electricity & steam reduced	TJ	884	1,358	1,244
	Total savings generated	KRW 100 million	89	186	195
	- Fuel savings generated	KRW 100 million	10	38	44
	- Electricity & steam savings generated	KRW 100 million	79	148	151

Building Electric Vehicle/Bus Infrastructure

Along with the RE100 initiative, EV100 (Electric Vehicle 100%) is gaining increasingly wider acceptance to mitigate environmental pollution including but not limited to GHG emissions and particulate matters. Samsung SDI introduced two-step EV buses, that are purely battery-powered and thus do not generate any environmental loads during operation, for commuters at the Giheung worksite in 2019. We have since then built EV charging infrastructure in the parking spaces of our domestic worksites so that both our employees and customers can conveniently use their EVs.

Worksite	EV Chargers Installed
Giheung	1 for buses, 10 for passenger cars
Cheonan	1 for buses, 6 for passenger cars
Ulsan	7 for passenger cars
Gumi	4 for passenger cars

Management of Product Environmental Impact

Life Cycle Assessment (LCA)

Life Cycle Assessments (LCAs) were designed to identify GHG emissions and other environmental loads throughout the entire product life cycle from the extraction of raw materials to product use and disposal and to analyze the substantial environmental impact of such loads. Samsung SDI performs LCAs to develop measures to improve its environmental impact, and takes a step further to make these assessments in accordance with the principles set out in ISO14040/44 and PEFCRs (Product Environmental Footprint Category Rules) as a way to respond to the EU Battery Directive that is gaining significance recently.

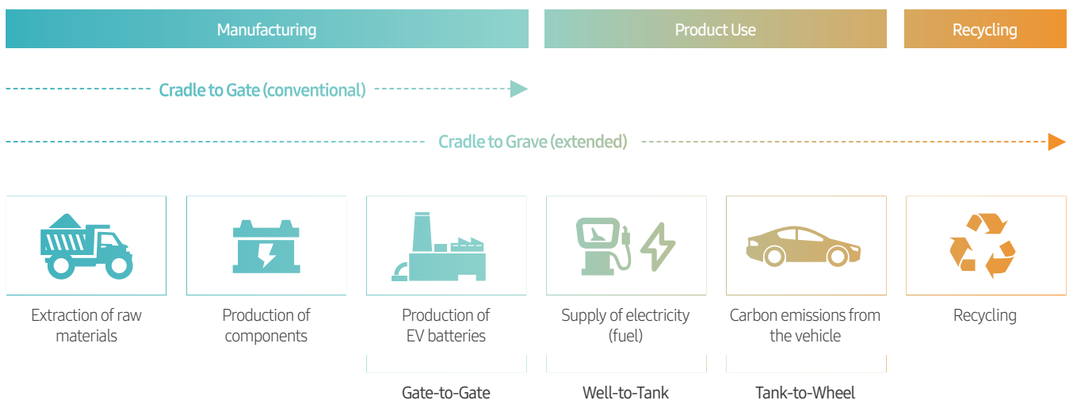
While the conventional Cradle-to-Gate LCA focused on the partial life cycle of products from manufacturing to the factory gate before they are delivered to the consumer, the improved process will take a Cradle-to-Grave approach to extend to the disposal phase in evaluating the environmental impact of products. This expanded methodology is expected to enable us to make further segmented assessment on environmental impact of products, and broaden the scope of assessments into reuse, recycling and other diverse impacts associated with resource circulation. Samsung SDI will leverage this improved process to evaluate the environmental impact of its products and thoroughly analyze assessment outcomes to further mitigate its environmental impact.

Category of Environmental Impacts Analyzable through LCAs

Global warming	Abiotic resource depletion
Acidification	Eutrophication[1]
Ozone layer depletion	Photochemical oxidation creation
Human toxicity	Freshwater aquatic ecotoxicity
Marine water aquatic ecotoxicity	Terrestrial ecotoxicity

1) Process by which rivers, seas and other aquatic ecosystems become progressively enriched with nutrients to eventually give rise to green tides or red tides

Product Impact Assessment Phases of EV Battery



Recycling & Reuse

Background

Li-ion rechargeable batteries fulfill diverse functions in our daily lives, from mobile phones and laptops to EVs, and the market is surging in line with the growing demand. In proportion to this rapid market growth, the generation of end-of-life batteries is also expected to increase dramatically. Currently, there are no legally-binding regulations or guidelines both on the national and international level to govern the safe recovery and disposal of end-of-life Li-ion rechargeable batteries. This prompted us at Samsung SDI to partner with governments and specialized service providers to examine recycling and reuse measures to minimize the environmental impact of these end-of-life batteries from the product life cycle viewpoint.

Recycling Achievements and Plans

In 2020, we established a resource circulation system to process the scraps generated from our Cheonan and Ulsan worksites to promote the recycling of end-of-life batteries. These scraps are sent to professional domestic recycling service providers and are recycled into cobalt sulfate, which is then delivered to materials suppliers and is fed back into our manufacturing process as primary/subsidiary raw materials. Going forward, we aim to expand a similar type of partnership to our overseas locations in Hungary, Malaysia and other parts of the world.

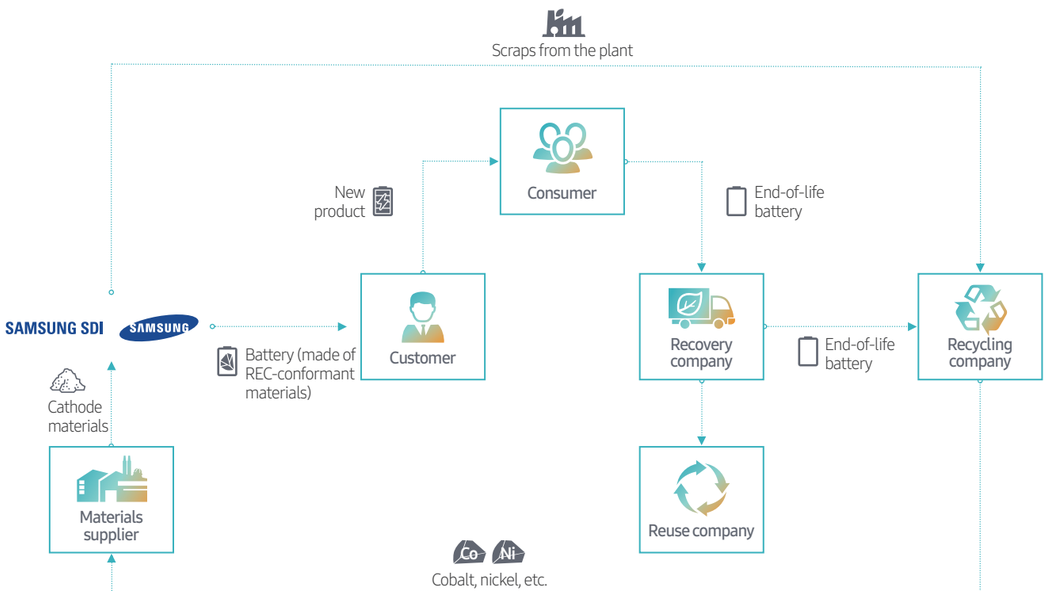
Reuse Achievements and Plans

We are exploring the possibility of reusing end-of-service EV batteries for other applications. As part of such efforts, we are participating in an 'end-of-service EV·ESS battery recycling industrialization project' led by Jeollanam-do Province of Korea. Our plan is to review the technical conditions and feasibility requirements to be met to reuse batteries through R&D and demonstration on battery reuse.

Resource Recovery Process

End-of-life batteries can be recovered in two distinctive ways: the first is to retrieve the scraps generated from the manufacturing process at the plant, and the second is to recover end-of-life batteries used by consumers in their disposal phase. Samsung SDI is closely cooperating with professional recycling companies equipped with scrap recovery skills to extract scraps generated from its plants, which then undergo grinding and chemical treatment to be recycled as raw materials for major metals. Looking ahead, we will consider potential partnerships with automotive OEMs to develop a closed-loop resource recovery system.

Samsung SDI's Resource Recovery Process



Management of Environmental Impact

02

Management Strategy and Approach

2025 Mid-term Environmental Targets[1)]

As the 2020 environmental goal (2015-2020) we set to systematically reduce our environmental impact reached its end date, we set a new mid-term goal to be attained by 2025. Its target indicators include water withdrawal intensity/reuse rates, waste discharge intensity/recycling rates, and air pollutant emissions/water pollutant discharge intensity, and we will increase our environmental efficiency through company-wide efforts and improve our business sustainability in so doing.

Environmental Target Indicator	Unit	2021 Reduction Target (baseline 2020)	2025 Cumulative Reduction Target (baseline 2020)
Intensity of water withdrawal	Ton/KRW 100 million	-7.3%	-32%
Intensity of waste discharge	Ton/KRW 100 million	-2.1%	-10%
Intensity of air pollutant[2)] emissions	Ton/KRW 100 billion	-3.6%	-17%
Intensity of water pollutant[3)] discharge	Ton/KRW 100 billion	-7.7%	-33%
Water reuse rate	Water reused/water withdrawn	-	22%
Waste recycling rate	Amount recycled/amount discharged	-	80%

1) Reporting scope: All production facilities in Korea and abroad, excluding sales bases and offices, and the Headquarters and the R&D Center (as to production facilities, only those with production records for 2020 were included), Intensity: Calculated based on consolidated sales

2) Sum of NOx, SOx, and PM emitted

3) Sum of BOD, COD and SS discharged

Pollutant Management

Management of Air Pollutant Emissions

To ensure the stringent management of air pollutants generated from our worksites, we install and operate appropriate control equipment at each of our emitting facilities. Pollutants that are emitted to the atmospheric environment following their treatment are monitored for their compliance with our internal standards that exceed the legally-allowable thresholds that have been further reinforced recently, and are managed for their emission trajectory. To minimize the generation of particulate matters that are emerging as a serious social issue, we have promptly replaced boilers with low-NOx burners at our worksites, and have reset the replacement cycle of fillings used for air pollutant control equipment to improve their treatment efficiency and reduce the emission of pollutants accordingly.

Air Pollutant Emissions in 2020 (unit: kg)

Category		2020
Air pollutants	NOx	70,114
	SOx	3,480
	PM	63,329

Management of Water Pollutant Discharge

To preserve our aquatic ecosystem, we have raised the bar in operating and managing effluent treatment facilities to minimize the discharge of water pollutants in so doing. In particular, we introduced internal standards that are more stringent than the legally-permissible thresholds (30~50% of such thresholds), and perform year-round monitoring by installing and operating the TMS (Tele-monitoring System)[1)] even at those worksites that do not bear any legal obligation to install such a system in order to review their compliance with these standards. Furthermore, annual 'water quality analysis capacity assessments' are made on those companies that measure water quality at our worksites to verify their competency and to establish the reliability of water pollutant measurement data.

1) Remote water quality monitoring system that enables the real-time monitoring of water pollutants being discharged at sewage and effluent treatment facilities and effluent-discharging worksites

Water Pollutant Discharge in 2020 (unit: kg)

Category		2020
Water pollutants	BOD	11,977
	COD	98,907
	SS	46,785

Waste Management

Endeavors to Ensure Safety in Waste Treatment and Reduce Waste Generation

To minimize the environmental impact from our business operations, we improve defect rates within the manufacturing process as a way to reduce waste generation. Any and all waste generated is transferred to professional waste treatment companies for treatment, and these companies are assessed annually for their status of treatment facility management and regulatory compliance to doubly make sure that waste is processed in accordance with applicable regulations.

We also identify qualified recycling companies to increase our recycling rates, and reuse raw materials by engaging in tolling business on end-of-life batteries and scraps to reuse them as raw materials through recycling to ultimately mitigate the discharge of waste. In 2020, company-wide waste generation amounted to 143,373 tons, out of which 124,183 tons were recycled.

Waste Management in 2020 (unit: Ton)

Domestic waste recycling rate	96.1%
Total generation	71,097
- General waste	37,810
- Designated waste	33,287
Amount recycled	68,334
Amount landfilled	317

Overseas waste recycling rate	77.3%
Total generation	72,276
- General waste	41,514
- Designated waste	30,762
Amount recycled	55,849
Amount landfilled	4,542

Water Resources Management

Water and Effluent Management

At Samsung SDI, we endeavor to reduce our consumption of water and manage water quality at an appropriate level. In 2020, to minimize the amount of chemicals used to operate facilities exclusively assigned for manufacturing, we shifted from the existing ion exchange resin method to EDI (electrodeionization) to curb the use of such harmful chemicals as hydrochloric acid and caustic soda and mitigate the generation of effluents accordingly.

In 2021, we set a goal of completely eliminating the use of hazardous chemical substances (sulfuric acid and caustic soda) and will cut off the source of high-concentration acidic and alkaline effluents while rationalizing processes to improve the storage, transport and treatment facilities of organic/inorganic effluents at battery production locations.

Effluent Discharge in 2020 (unit: Ton)

Category		2020
Domestic	Giheung	673
	Suwon	40,132
	Cheonan	801,773
	Cheongju	383,198
	Gumi	363,865
	Ulsan	709,417
	Subtotal	2,299,058

Category		2020
Overseas	Malaysia	140,519
	Tianjin	75,072
	Wuxi	608,633
	Xi'an	84,384
	Hungary	205,620
	Vietnam	40,323
	Subtotal	1,154,551

Product Safety

03

Management Strategy and Approach

Quality Management Strategy

Samsung SDI puts product safety and quality before all else, and is committed to delivering these top priority values on multiple fronts. Our quality innovation spans both the development and mass-production phases to bolster our company-wide quality operation system and supply the optimal products that cater to customer needs as a result.

In 2020, our battery business established a more stringent quality gate to strengthen the assurance of mass production quality, and secured the safety quality of our products in so doing. Work is also underway to ensure the uniform quality of products through the standardization and automation of our global manufacturing operations.

Our Electronic Materials Business has posted a more than 30% improvement in such major customer quality indicators as quality VOC and customers' return rate in 2020 through its sustained efforts for quality improvement and assurance. Notably, significant improvements were made on quality issues related to post-process impurities through the fine-tuned management of impurities present in raw materials. In 2021, we will focus on minimizing defects escaped by elevating the quality of raw materials and quality assurance so that we contribute to attaining the company-wide management philosophy of 'establishing top-notch quality'.

Quality Management System

Samsung SDI operates its development (PLM), manufacturing (MES) and quality (IQMS, LIMS) systems in accordance with such quality management system standards as ISO 9001 and IATF 16949. Furthermore, we are in full compliance with our 8-Step Quality Process that ranges from development to VOC management while making constant reviews and improvements on the issues identified as in need of supplementation.

Quality Management Code of Conduct

Deliver value to customers to earn their trust

We enhance customers' value by lending an attentive ear even to their potential needs and fully reflecting them in our products. We address the Voice of Customers (VOC) in a speedy, accurate and cordial manner to forge close and trust-based partnerships with customers..

Place the environment and safety first

We believe that product quality is a matter of our collective conscience and thus can never be compromised. As such, we faithfully comply with international environmental management standards, and value quality awareness and responsibility in accordance with our Zero Defect philosophy in order to put customer safety first.

Continuously improve the quality management system and process

Samsung SDI's quality management policy is in compliance with ISO 9001 and IATF 16949. We clearly define, strictly follow and continuously improve phase-specific procedures and judgment criteria of our development (PLM), manufacturing (MES), and quality (IQMS, LIMS) systems as well as the 8-Step Quality Process.

8-Step Quality Process

Commitment to Improved Product Safety

Proactive Safety and Quality Assurance

Samsung SDI performs complete verifications on safety factors even from the product development phase including the selection of raw materials. To put safety first across the entire quality management process, a Q-FMEA (Quality Failure Mode and Effect Analysis) is made in the development phase to identify and improve potential issues related to safety and quality in order to preemptively ensure quality. To consider changing product use conditions and increasingly diversifying applications in establishing product safety and quality, we expand the coverage of product verifications to doubly make sure that any and all products are shipped to our customers remain risk-free. Besides, an accelerated testing methodology was employed in the product development phase to proactively detect potential issues that may arise during mass-production while stricter verifications were made to secure the quality of mass-production.

Strengthened Quality Assurance

As the pursuit of ever-finer line widths accelerates in the semiconductor manufacturing process, this demands that we raise the bar on the quality of semiconductor materials and also establish our assurance capabilities. Our plan in 2021 is to secure a larger-area wafer evaluation process to improve the compatibility of our evaluations. As to polarizing films, we are optimizing optical inspection devices among others in line with the shift towards ultra-large-size and ultra-high-resolution products among our customers in order to detect even minute defects.

Stabilization of Raw Material Quality

Our Electronic Materials Business is tightening the management of metals, impurities and residual solvents that are present in raw materials to improve on quality issues related to raw materials and preemptively ensure quality in so doing. In 2021, we will reduce quality costs that incur due to impurities contained in raw materials while stabilizing their quality through the preliminary processing of samples, the development of product evaluation tools, and the creation of a database of raw material impurities.

Establishment of a Statistics-based Quality Management System

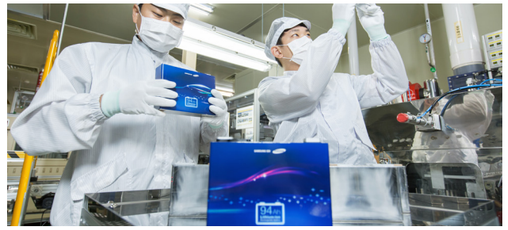
We leverage an advanced statistical analysis and quality monitoring system to detect and control potential quality risks before their occurrence to better guarantee our product performance and safety. Besides, a quality system is up and running to monitor and manage safety factors, and statistical process management allows us to perform real-time monitoring and control of anomaly signs on key management factors across the entire process from component handling to customer delivery.

This ensures that we take a preemptive approach to quality management and fundamentally prevent defects from escaping and affecting our customers. By exploring statistical logics and deploying an associated system to advance our quality assurance system, we tirelessly identify and improve issues with our quality assurance process.

Our Electronic Materials Business is reinforcing its statistical data analyses, and rigorously examines any process anomalies by analyzing even fine patterns of material-related process conditions. In 2021, we will upgrade our monitoring of quality trends on polarizing films.

Strengthened Management of Product Environmental Performance

Materials provided by our Electronic Materials Business mainly go to manufacture semiconductors and displays, and they are managed for their containment and content of hazardous substances in accordance with the product environment conditions of our customers. In line with the increasingly tightening product and environment requirements across the globe, we are also revising relevant management standards, and, in the event that harmful substances are contained in product raw materials, we go the extra mile to ensure that such substances are mitigated or eliminated as early as from the development phase. We also apply internal standards that are even more stringent than those stipulated in domestic/international environmental regulations in controlling the content of harmful materials to assist our customers in establishing the safety of their workers and the eco-friendliness of their products.



Strengthened Product Safety and Quality from the Customer Viewpoint

Products that Reflect Customer Feedback

To establish a market-leading competitive edge in product quality, we keep a watchful eye on customer defect rates, Voice of Customers (VOC) and other customer-related metrics as the Key Performance Indicators (KPIs) of our business operations. In 2021, we set a main goal of expediting our response to VOC in addition to registering VOC on our system and making metric-specific analyses and improvements with an aim to accelerate our handling of VOC as well as pursuing quality improvements, thereby delivering greater customer satisfaction. In so doing, lead time targets were set in each of the immediate response - customer report - improvement measure phases to be managed by respective business divisions. Furthermore, an emergency response organization system was developed for each of our major customers to minimize any delay in response in the initial emergency phase and to strengthen our focus on addressing such situations.

Our battery business established an RMA (Returned Materials Authorization)-based customer response process to manage such effective customer indicators as customer inline defects and field failure rates and to swiftly detect and improve issues. We also hold field quality meetings to reinforce our capabilities in collecting feedback generated from the field while developing fundamental solutions to quality issues by improving on chronic defects and analyzing the effectiveness of the measures taken.

Our Electronic Materials Business has adopted the quality issue management system dubbed 'Focus 119' to identify quality issues in real time that arise when customers use products. In addition, the division has identified defect simulation methods, which is attributable to its efforts to collect process-related information from customers to preemptively establish quality, thereby securing our quality assurance capabilities. From 2021 onwards, we will dispatch our employees to China to better service our Chinese customers in line with the increasing demand from these customers.

Customer Environment Test (CET)

We continue to raise the bar on our Customer Environment Test (CET) operation to secure performance stability while minimizing risks in the product use phase that may occur due to the diversification of battery-powered applications. CET aims to improve safety risks by reviewing product use conditions upfront. While the widely-adopted practice is to apply a company's own quality standards, CET examines the appropriateness of cell applications under the conditions set by customers. By delivering cell products in their optimal conditions, we prevent large-scale quality incidents caused by misdesign or miss-matching on the part of customers as well as ignition accidents experienced by consumers due to their improper product use.

In 2021, we are standardizing customer review documents to reinforce our CET response and management regulations in line with the increasing penetration of sharing applications (bike, kick board, and scooter) while extending the scope of reviews on sharing modes and charging station management. To boost the capacity management of new packers, we made it a rule to conduct on-site reviews and ensure 100% of compliance. Going forward, we will identify additional review metrics to beef up the CET process review and stability concerning our ESS business, and reflect CET metrics in the product development process. Improvements are also being made by analyzing issues across respective phases of the CET process and operating regular meetings to share such issues. This surely leads to reduced lead times in each phase and enhanced completeness, meeting the customer needs for timely deployment.

Customer Satisfaction Management and Improvement

To advance our quality assurance system and truly cater to customer needs as a result, we not only strengthen our initial response to the Voice of Customers, but also conduct customer satisfaction surveys by respective business divisions. This also allows us to examine any complaints raised by customers across a wide range of categories, including R&D competency, service and delivery as well as product quality. The VOC collected during the survey period is transferred to relevant departments through various meetings, and is fully considered in understanding the current status of our product quality and services and in setting the direction for our improvement activities. In 2020, COVID-19 made it extremely challenging to immediately respond to customers. Still yet, we arranged customer response staff at respective global worksites and engaged in preemptive communication with customers to keep customer response issues to a minimum. Our Small-sized Li-ion Battery Business proceeded with a Customer Satisfaction Index (CSI) survey on 15 major customers in 2020 to analyze their complaints on each of the survey categories (quality characteristics, quality satisfaction, etc.) and make necessary improvements.

Our Electronic Materials Business was not able to conduct customer satisfaction surveys in 2020 due to COVID-19. In 2021, on the condition that social distancing rules are eased, we will survey customers on the five categories of quality, technical support, development capacity, supply, and sales response to identify issues and make necessary improvements.

Customer Satisfaction Scores by Business Division in 2020

(unit: point)

Small-sized Li-ion Battery	Automotive and ESS Battery
85.1	81.2

Expansion of Quality Improvement Support

Support for Partner Companies with Quality Improvement

In response to the spread of COVID-19 in 2020, we assisted partner companies in building independent quality capabilities by establishing their own quality assessment and approval process. Our partner company quality management monitoring system extended its scope to allow for the preemptive monitoring of quality anomalies through the data monitoring system, and system improvements were made to support the automatic uploading of their test certificates. New evaluation metrics were added for materials and components to improve the inspection process so that intensive inspections could be performed on key inspection metrics while efforts were made to strengthen the inspection process infrastructure and automate the inspection process to help partner companies improve their detection performance.

Our Electronic Material Business is also establishing quality system management infrastructure to deliver better quality in partnership with overseas partner companies working in relation to mobile and IT device polarizing films as well as domestic partner companies who consume high-resolution polarizing films. Collaboration is underway to pursue quality improvement through regular consultations with and visits to partner companies.

Support for Overseas Corporations with Quality Improvement

With a goal of building a differentiated global competitive edge, Samsung SDI is upward standardizing quality across domestic and overseas production locations. Our early warning system was supplemented on the basis of measurement data from respective unit processes through the improvement of quality gates that aimed to reinforce the mass production quality assurance, and improvement practices were applied equally to overseas corporations to elevate our management performance at all levels. In the face of the COVID-19 pandemic, the Headquarters dispatched its technical staff to support overseas corporations with key quality operations – setting up a new production line and checking the line in initiating the manufacturing of new products – for their quality stabilization, and switched to virtual modes in providing training and addressing issues to help them with quality management and stabilization, turning these challenging conditions into an opportunity for overseas corporations to build their self-reliant capabilities.

We continue to operate a data monitoring system so that our overseas corporations remain a self-sustaining business even when the support function of the Headquarters is disrupted amid the on-going pandemic. We will supplement our diverse data analytics program and our automatic data collection functionality to ensure business continuity beyond any limitations of time and space.

Our Electronic Materials Business ensures that its domestic quality improvement competencies are disseminated to overseas corporations. Domestic experts working at our Cheongju worksite in the areas of manufacturing, technology and quality attend meetings to transfer their knowledge in manufacturing polarizing films to locally-hired staff and expatriates and engage in discussions to solve problems to help employees at overseas corporations improve their work skills.

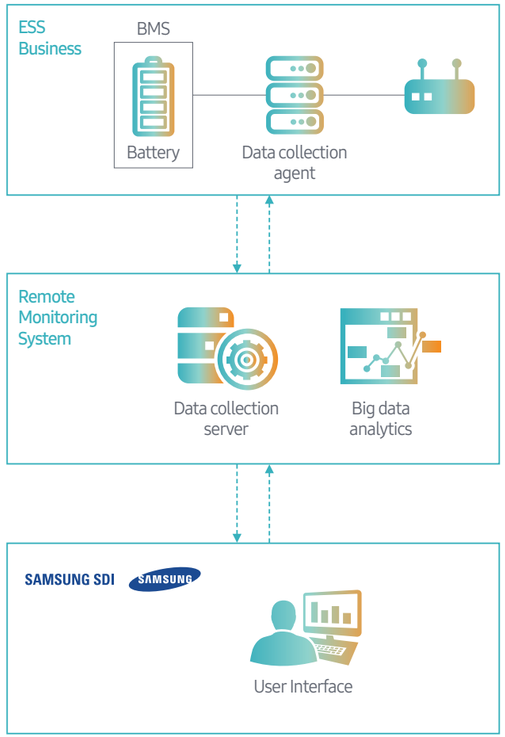
Strengthened Battery Safety

Building a Remote Depository for Strengthened Battery Safety

In September 2020, we established a remote depository that complies with the ESS (Energy Storage System) installation standards[1] stipulated by the Ministry of Trade, Industry and Energy while strengthening battery safety through the monitoring of ESS operational data and the application of anomaly detection algorithms. Building a data depository and an analytical system on the cloud service platform, this depository fulfills such core functions of analyzing and managing data on the status of the site, anomaly detection and emerging trends. The NDAP (NexR Data Analysis Platform) was also deployed so that database inquiries could be made on unidentifiable data.

Besides, alarm/protection monitoring enables us to take action even before receiving Voice of Customers and to compare critical data on the cell and rack level and detect anomalies on a daily basis. Collected data is visualized in chart and graph formats to improve convenience for data reviewers, and all data is downloadable for further analyses. This, in turn, supports the preemptive analysis of cell anomalies through the combination of BMS FW (Battery Management System Firm Ware) protection and the monitoring-based analysis system, reinforcing our real-time response capabilities as a result.

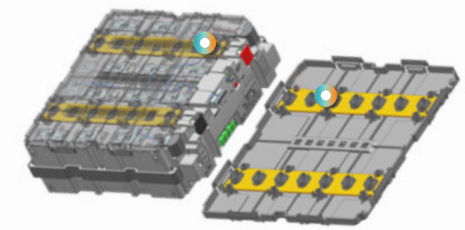
1) Article 296 Clause 3 of the Energy Storage System Technical Standards



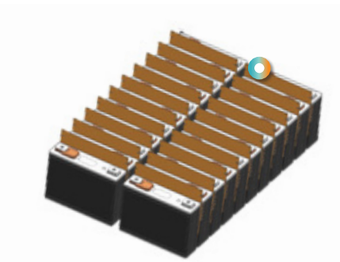
Improving Safety in Constructing and Installing ESS

As an additional measure to establish the safety of our ESS, we endeavor to improve safety during construction and installation and reinforce the automatic detection of anomaly signs. As such, each and every installed site currently under operation in Korea as well as any and all our products that have been manufactured since October 2019 are equipped with fire extinguishing sheets created through the application of cutting-edge chemicals that enable automatic spraying and prompt fire extinguishing in the event of detecting signs of fire. In addition, a special fire extinguishing system is installed that employs a whole new type of thermal diffusion inhibitors made of composite materials to improve insulation performance.

Fire extinguishing sheet



Cell-to-cell insertion of inhibitors



Sustainable Supply Chain

04

Management Strategy and Approach

Definition and Selection of Partner Companies

Samsung SDI classifies its supply chain partners into first, second, and third-tier partners and manages them accordingly. First-tier partners supply raw materials and components that go into our components and products, and second/third-tier partners provide raw/subsidiary materials to first-tier partners. We specifically define the suppliers of key raw materials and components whose suspended supply may immensely impact our manufacturing and business operations as primary partners, and continue to promote wide-ranging cooperation and support to pursue win-win partnerships.

In selecting and managing partner companies, we perform rigorous paper-based screenings and due diligence to build transparency and fairness into the entire supply chain.

Supplier Code of Conduct

We established the 'Samsung SDI Supplier Code of Conduct' that sets out proper behavioral guidelines for partner companies to follow, and made it mandatory for all our partner companies to comply with these guidelines. The Code spans the aspects of human rights, labor, health & safety, environment and ethics, and is based on the Responsible Business Alliance (RBS) Code of Conduct as well as ILO and ISO standards.

Each and every partner company is required to sign the consent form to observe the Code in entering into any contract with us to strengthen their commitment to sustainability management. As to any non-compliance with the Code on the part of partner companies, we recommend them to take corrective measures, and if such non-compliance continues or no corrective measures are taken, we impose restrictions on our future contracts with them.

Win-Win Cooperation Promotion System

Compliance with Fair Trade

Fair Trade Policy

To establish reasonable and fair trade practices, we make it a rule to use standard contract forms in doing business with partner companies, and observe the following four action principles stipulated and amended by the Fair Trade Commission to promote compliance with subcontract regulations.

4 Action Principles

- Execution of desirable agreements
- Fair selection and registration of partners
- Operation of unfair trade practice prevention and monitoring systems
- Issuance and retention of written agreements

Establishing a Culture of Fair Trade along the Supply Chain

Samsung SDI's endeavors to create a culture of fair trade extend beyond its first-tier partners and into second/third-tier partners. We support partner companies to conclude the fair trade agreement among themselves and encourage them to improve their payment criteria so that payments could be made in cash within 30 days. Official documents are sent to call for cooperation in mainstreaming the signing of standard subcontract agreements between first and second-tier partners, and the application of such agreements is monitored.

2020 Performance in Supporting the Signing of the Fair Trade Agreement

Category	Unit	2018	2019	2020
Samsung SDI - first-tier partners	No. of companies	111	109	110
First-tier – second-tier partners	No. of cases	129	120	129
Second-tier – third-tier partners	No. of cases	-	42	40

Capacity-Building for Partner Companies

Operation of the Samsung SDI Partners' Association

The Samsung SDI Partners' Association (SSP), which consists of the three subcommittees of materials, components and equipment, aims to promote interactions among partner companies. The SSP is newly launched every two years, and the 9th SSP established in 2020 was joined by a total of 41 partner companies to share information on internal and external management status and strengthen strategic partnerships. The general meeting for 2020 was held through virtual means due to COVID-19, and the SSP will continue with its benchmarking, seminars, subcommittee meetings and Shared Growth Day events.

Introduction of Win-Win Cooperation Consulting

Samsung SDI has provided win-win cooperation consulting (management advisory) since 2020 to support partner companies with efficient business conduct. Consultants, who previously served as professional executives at Samsung SDI, draw on their extensive field experience, management know-how and expert knowledge to provide management advice in their areas of expertise to meet the needs of partner companies, thereby assisting partner companies in improving their management competency and strengthening their overall competitive edge. These consultants also engage in VOC activities to collect complaints raised by partner companies and make necessary improvements to serve as a bridge in promoting win-win cooperation. In 2020, such management advisory activities benefited nine partners, and VOCs were collected from 11 partners.

Management Advice Provided

Development/Quality	New product development roadmap, quality analysis and reliability evaluation/prediction, mass production process management
Business administration/ Management	Business competitiveness analysis, business administration and HR management
Sales/Marketing	Market trends, new business strategy development, business feasibility analysis

Benefit Sharing System

Samsung SDI operates the benefit sharing system to facilitate win-win cooperation with SMEs. Under this program, companies placing orders and companies landing such orders collaborate in diverse ways to attain the set common goal, and share the benefits generated accordingly. In 2020, we identified six tasks and collaborated with a total of six partner companies in the first and second half of the year. Both Samsung SDI and participating companies reached all of the set common goals, including reducing defects and improving production quantity per man hour and quality, and partner companies were able to elevate their manufacturing competitiveness in line with process improvements and the resulting productivity gains.

Assistance in Recruiting Outstanding Talent

Leveraging the training system and infrastructure available at our Consortium for HRD Ability Magnified Program, we assist partner companies in providing training to employees and strengthening their employee competency in so doing. The training curriculum consists of 22 courses on job skills, quality management, process management, and business administration, and was attended by 851 employees from a total of 89 partner companies in 2020. We also help partner companies offer talent development training to job candidates and align this with recruitment so that our partners hire talented individuals armed with the job skills and personality that will expedite their onboarding at partner companies. As of 2020, two partner companies created jobs for 51 persons under this recruitment support program.

Laying the Basis for Sustained Growth

Operation of the S-Partner Certification System

Samsung SDI provides annual ESG awareness-building training to partner companies to render its supply chain even more sustainable. In tandem with this, we also operate the S-Partner certification system to biennially evaluate and certify partner companies for their compliance with our 'Supplier Code of Conduct' which is based on the Responsible Business Alliance (RBA) Code of Conduct to help our partners fulfill their social responsibility and make relevant progress. Evaluations are performed on major raw/subsidiary material suppliers and new partner companies in the following risk areas of labor, ethics, environment, and health & safety. In 2020, compliance with COVID-19 prevention guidelines and implementation of their detailed rules were added to the scope of evaluations to tighten the monitoring of health risks.

The evaluation process begins with preliminary self-assessments made by partner companies and then proceeds to on-site audits performed by external professionals. For issues identified as a result of on- site audits, partner companies are required to submit their improvement plans within one month, and re-audits are performed for those who failed to meet mandatory compliance requirements or the set score threshold. Specifically for such critical categories as child labor, forced labor, pollutant discharge, and environmental approval, the zero tolerance principle is applied to demand their thorough compliance.

In 2020, on-site audits were conducted on 29 domestic partner companies, and 26 overseas partner companies received paper-based audits instead due to COVID-19.

S-Partner Certification Assessment Outcomes in 2020 (unit: No. of companies)

Category		2018	2019	2020
Domestic	Certification terminated	41	50	24
	New partner	14	16	2
	Re-audit	5	4	3
	Total	60	70	29
Overseas	Certification terminated	17	20	26
	New partner	14	-	-
	Re-audit	-	-	-
	Total	31	20	26
Total	Certification terminated	58	70	50
	New partner	28	16	2
	Re-audit	5	4	3
	Total	91	90	55[1)]

Areas Where Major Improvements Were Made under the S-Partner Certification System in 2020

1. Environment
- Effluent and solid waste management programs and procedures
- Placement of protective equipment within areas where chemicals are handled
- Six major GHG management and documentation

2. Environment/Health & Safety System
- Risk assessments on core business operations

3. Health & Safety
- Procedures to protect workers from high-risk machinery
- Provision of protective equipment for safety hazards and creation of relevant supporting documents
- Appropriate placement of fire and emergency response manuals prepared in working languages

4. Labor
- Operation of regulations on maternity protection concerning work hours, overtime work and high-risk work
- Compliance with holiday regulations to provide regular breaks for workers
- Operation of regulations for disciplinary purposes concerning penalties and pay cuts

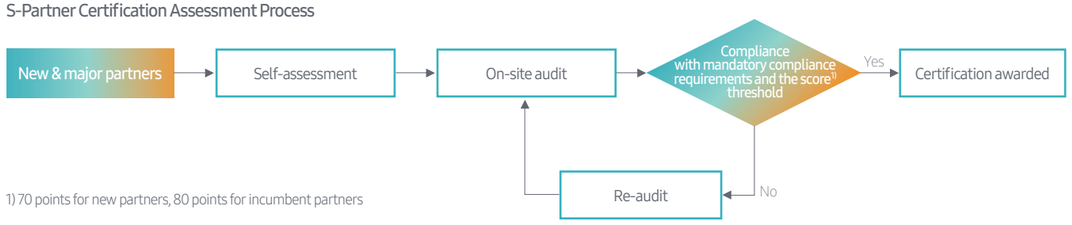
5. Ethics
- Assessment of compliance with ethical regulations and other requirements and operation of regular internal audits
- Operation of anti-corruption programs and procedures in entering into contracts with partner companies, contract parties and dealers

Corrective Actions Taken under the S-Partner Certification System (unit: No. of companies)

Category		2020
Partners who received assessments	Partners who are assessment targets[2)]	63
	Partners who received actual assessments	59
Corrective actions taken for identified issues	Partners identified as in need of improvement	55
	Partners who submitted improvement plans	55

1) Excluding four companies that have been assessed for COVID-19
2) Small/medium-sized suppliers of raw/subsidiary materials with transaction value of KRW 400 million or over in 2019

S-Partner Certification Assessment Process



1) 70 points for new partners, 80 points for incumbent partners

Support for Manufacturing Innovation along the Supply Chain

Pursuing win-win partnerships with partner companies and sourcing top-notch quality components in so doing is at the core of building globally-recognized product competitiveness. Samsung SDI contributes to partner companies' improving their fundamentals through the sustained manufacturing innovation activities undertaken along the supply chain. In 2020, we assisted Shinheung SEC, a battery component supplier with 40-year history, in securing its manufacturing and quality competitiveness. To take a systemic approach, weekly innovation TF meetings were held with attendance of our organizations responsible for automation, manufacturing technology and quality operations as well as external professional consultancies.

Innovation tasks were categorized into the three areas of total facility efficiency, productivity and process quality, and status analyses were performed on each of these categories and detailed tasks were identified. This was followed by improvement activities on chronic defects and process optimization, and 21 out of 22 tasks in total were completed.

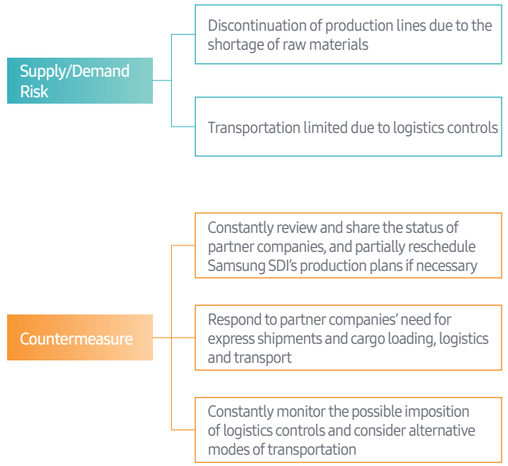
Innovation Task Execution Outcomes (unit: No. of tasks)

Category	Total Facility Efficiency	Productivity	Process Quality	Total
Tasks executed	9	5	7	22
Tasks completed	9	5	6	21[1)]

1) As to the one task not completed, this was reviewed by Samsung SDI's relevant departments and was notified as not applicable (customer requirement).

Managing Supply Chain Risks amid COVID-19

Samsung SDI has established a swift response system to identify potential supply/demand risks that occur as a result of COVID-19 and to minimize impact on its manufacturing and sales. In addition to the on-going COVID-19 pandemic, a wide array of issues are emerging, ranging from natural disasters (typhoon, earthquake) to export restrictions imposed by Japan, to highlight the need to manage risks associated with the supply/demand of materials. Samsung SDI is committed to ensure the uninterrupted sourcing of materials by securing liquidity and performing preliminary verifications across its supply bases for the four primary materials of cathodes, anodes, electrolytes and separators and for major at-risk materials and components.



Responsible Minerals Sourcing

In line with the rapid growth of the Li-ion Battery market, social responsibility issues are emerging in relation to child labor, human rights violation, and environmental pollution in the process of extracting and sourcing minerals consumed as primary raw materials. This prompted us at Samsung SDI to establish transparent and responsible sourcing practices across the whole of our supply chain, from mineral extraction to processing and procurement. We also form partnerships with customers, partner companies, industry initiatives and other stakeholders to step up our efforts in resolving these issues.

Joining Global Initiatives

Responsible Minerals Initiative

To improve a wide array of issues present in the mineral supply chain, it is critical that we build consensus and closely cooperate with a number of stakeholders within the supply chain. In a move to join in the concerted efforts made by the international community to improve mineral sourcing practices, Samsung SDI joined the RMI (Responsible Minerals Initiative) in May 2020. This membership provides us with the supply chain information held by the RMI on conflict minerals and minerals from high-risk areas (cobalt) as well as their place of origin and smelters & refiners, and we will leverage such information in conducting supply chain due diligence and helping our partner companies make necessary improvements.

'Cobalt for Development' Project

Since 2019, we have teamed up with likeminded companies to undertake the Cobalt for Development Project in conjunction with the German development agency (GIZ) with an aim to improve working and living conditions in cobalt mines and their surrounding communities in the Democratic Republic of the Congo. Wide-ranging improvement activities are implemented, including training provided to create better labor conditions for miners and improve their local communities and the expanded dissemination of personal protective equipment.

Ban on DSM

With mounting interest in the use of mineral resources retrieved from the sea bed as well as from the ground, questions are being raised on their potential harm and impact on the deep sea ecosystem. In march 2021, Samsung SDI announced a statement to call for moratoriums on deep seabed mining (DSM) conducted for commercial purposes in partnership with the international environmental organization WWF (World Wide Fund for Nature), BMW, Volvo and Google. Companies who signed up to this initiative commit not to extract minerals from the deep seabed until the safety of deep seabed mining and its environmental impact is scientifically established and not to source resources supplied through DSM to protect the marine ecosystem.

Responsible Sourcing Policy

In 2017, Samsung SDI established its responsible minerals sourcing policy and supply chain code of conduct in conformity with the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas. We have since insisted that all our suppliers of raw/subsidiary materials comply with these norms, and have performed continued monitoring and improvement. In addition, regular trainings and meetings are held to publicize our policy and improve awareness among internal/external stakeholders including customers, investors, senior management and the purchasing department as well as partner companies.

Supply Chain Traceability and Risk Management

Each year, Samsung SDI surveys all its suppliers using cobalt and other minerals that raise social responsibility issues to establish the traceability of their supply chains. Since 2020, we have gradually extended the scope of such surveys from the four conflict minerals of tantalum, tin, gold and tungsten to nickel, lithium, mica, graphite, and all other minerals identified as having adverse impact from the environmental and social aspects.

In 2020, we surveyed our cobalt supply chain and verified five places of origin and a total of 24 smelters and refiners. Going forward, we will use information available from external initiatives and pay visits to partner companies to ensure full traceability along the cobalt supply chain and reinforce our risk management, thereby further validating the consistency of survey outcomes.

Third-party Audit

Samsung SDI ensures that all its verified smelters and refiners complete either the third-party audits performed by the RMI or other corresponding independent audits. To this end, we send official documents or hold meetings to firmly demand that all smelters and refiners who have yet to join the RMI Responsible Minerals Assurance Program (RMAP) participate in this program designed to conduct third-party audits on smelters and refiners. Out of 24 smelters and refiners verified in 2020, eight of them are RMI-Conformant, 13 of them are included in the active list and currently engaged in the RMAP process, and one of them was reported to have completed corresponding independent third-party audits.

Managing Conflict Minerals and Assuming Extended Responsibility for Such Minerals

Conflict minerals refer to Tantalum, Tungsten, Tin and Gold (3TG) that are sourced in conflict-affected zones in the Democratic Republic of the Congo and its adjacent countries. Samsung SDI established its own policy to prevent environmental pollution, human casualties, labor exploitation and human rights infringements that often occur in these conflict areas and is excluding the use of conflict minerals from the raw material procurement phase. To this end, we are building a supply chain survey and management system, and demand that all our partner companies do business with RMI-Conformant smelters and refiners. As a result of our 2020 survey, all smelter and refiners of 3TG minerals used for Samsung SDI products were fully conformant with the RMI certification standards.

As managing social and environmental risks is gaining increased importance in the mineral mining and procurement process, this also raises the need for risk management on an extended scope of minerals. Samsung SDI is stepping up its efforts to establish traceability along the supply chain and improve risks on all major minerals consumed for its product manufacturing.

Responsible Sourcing Management Process

Establish traceability along the supply chain	Assess risks	Set risk improvement plans
• Survey mineral supply chains • Verify survey outcomes	• Conduct self-assessment surveys • Visit plants • Identify signs of risk • Assess and map risks	• Perform third-party audits on partner companies • Develop and implement risk improvement plans

List of Cobalt Smelter and Refiners

No.	Cobalt Smelters and Refiners	Country
01	Dynatec Madagascar Company	Madagascar
02	Chemaf Etoile	DRC
03	Chemaf Usoke	DRC
04	Ganzhou Yi Hao Umicore Industry Co., Ltd.	China
05	Ganzhou Tengyuan Cobalt New Material Co., Ltd.	China
06	Gem (Jiangsu) Cobalt Industry Co., Ltd.	China
07	Guangdong Jiana Energy Technology Co., Ltd.	China
08	Hunan Yacheng New Materials Co., Ltd.	China
09	Hunan Zoomwe New Energy Science & Technology Co., Ltd.	China
10	Jiangsu Xiongfeng Technology Co., Ltd.	China
11	Jiangxi Jiangwu Cobalt industrial Co., Ltd.	China
12	Jingmen GEM Co., Ltd.	China
13	JSC Kolskaya Mining and Metallurgical Company (Kola MMC)	Russia

No.	Cobalt Smelters and Refiners	Country
14	Kamoto Copper Company	DRC
15	Lanzhou Jinchuan Advanced Materials Technology Co., Ltd.	China
16	New Era Group Zhejiang Zhongneng Cycle Technology Co., Ltd.	China
17	Quzhou Huayou Cobalt New Material Co., Ltd.	China
18	SungEel HiTech Co., Ltd.	Korea
19	Tianjin Maolian Science & Technology Co., Ltd.	China
20	Umicore Finland Oy	Finland
21	Umicore Olen	Belgium
22	Vale	New Caledonia
23	ZheJiang Huayou Cobalt Co., Ltd.	China
24	Zhuhai Kelixin Metal Materials Co., Ltd.	China

Cobalt Countries of Origin

1	Australia	2	Democratic Republic of the Congo	3	New Caledonia	4	Madagascar	5	Russia

FUNDAMENTAL SUSTAINABILITY ISSUES

Governance

BOD at a Glance

Samsung SDI is dedicated to establishing transparent and sound governance. The Board of Directors (BOD) is mandated to deliberate and decide on the matters stipulated by applicable regulations and the Articles of Incorporation, the matters delegated by the general shareholder meeting, and major issues related to the Company's basic management policy and business execution. To improve the accountability of directors and the flexibility of BOD operations, the Chair of the BOD is appointed among directors – both executive and independent directors - through the decision made by the BOD. As of Mar. 31, 2021, the BOD consisted of three executive and four independent directors.[1)]

Executive Director

Name	Young Hyun Jun	Gender	Male
First appointment	Mar. 24, 2017 (reappointed on Mar. 18, 2020)	Expertise	General management
Career	CEO and President, Samsung SDI		
Role within the BOD	Chair of the BOD and the Management Committee, member of the Independent Director Candidates Recommendation Committee		

Name	Hyuk Chang	Gender	Male
First appointment	Mar. 17, 2021	Expertise	Overall management
Career	Executive Vice President, Samsung SDI R&D Center		
Role within the BOD	Member of the Management Committee and the Independent Director Candidates Recommendation Committee		

Name	Jong Sung Kim	Gender	Male
First appointment	Mar. 17, 2021	Expertise	Overall management
Career	Executive Vice President, Business Management Office, Samsung SDI		
Role within the BOD	Member of the Management Committee, the Independent Director Candidates Recommendation Committee, and the Compensation Committee		

Independent Director

Name	Oh Kyong Kwon	Gender	Male
First appointment	Mar. 18, 2020	Expertise	Electrical and electronics industry
Career	Professor of Electronic Engineering, Hanyang University		
Role within the BOD	Chair of the Related Party Transactions Committee, Member of the Audit Committee, the Independent Director Candidates Recommendation Committee, and the Compensation Committee		

Name	Duk Hyun Kim	Gender	Female
First appointment	Mar. 18, 2020	Expertise	Law and human rights
Career	Attorney, law firm Jin-Sung		
Role within the BOD	Member of the Audit Committee, the Related Party Transactions Committee and the Independent Director Candidates Recommendation Committee		

Name	Tae Ju Park	Gender	Male
First appointment	Mar. 18, 2020	Expertise	Labor policy and labor relations
Career	Senior researcher, Korea University Institute for Research on Labor and Employments		
Role within the BOD	Chair of the Compensation Committee, Member of the Audit Committee, the Related Party Transactions Committee and the Independent Director Candidates Recommendation Committee		

Name	Won Wook Choi	Gender	Male
First appointment	Mar. 18, 2020	Expertise	Accounting and tax
Career	Professor at School of Business, Yonsei University		
Role within the BOD	Chair of the Audit Committee, member of the Related Party Transactions Committee and the Independent Director Candidates Recommendation Committee		

1) New appointment: Hyuk Chang and Jong Sung Kim were newly appointed as executive directors through the 51st General Shareholder Meeting held on Mar. 17, 2021
Directors assuming multiple positions: Jong Sung Kim, an executive director, serves as a non-executive director at Samsung Display, Oh Kyung Kwon, an independent director, services as an independent director at the Yumin Cultural Foundation, and Won Wook Choi, an independent director, serves as an independent director at LIG Nex1.
Average BOD tenure: 1.61 years as of the end of Dec. 2020

Appointment of Directors

Independence and Transparency of the BOD

At Samsung SDI, director candidates are nominated by the BOD and the Independent Director Candidates Recommendation Committee, and appointed through the approval granted at the general shareholder meeting. The BOD and the Independent Director Candidates Recommendation Committee review director candidates for any potential disqualifications as set forth in applicable regulations (Clause 3, Article 382 and Clause 8, Article 542 of the Commercial Act) in order to ensure the independence of directors. There has been no case of independent directors appointed in spite of their disqualifications as defined in independence-related criteria. Furthermore, independent directors constitute the majority of the BOD (four independent directors) to ensure that the BOD remains independent of senior management and controlling shareholders. Furthermore, our directors are limited in entering into transactions with the Company to ensure the transparent operation of the BOD in conformity with Article 398 of the Commercial Act. Article 10 of the Regulations for the Operation of the BOD also stipulates that directors who have special interest in specific agenda items can't exercise their voting rights to prevent any possibility of conflict of interest from ever occurring.

Diversity of the BOD

At Samsung SDI, diversity of directors is considered in the composition of the BOD to support its objective and efficient decision-making and supervision. No limitations are placed in appointing directors on the grounds of gender, race, religion, ethnicity, nationality, or cultural background, and this is officially stated in our sustainability reports and corporate governance reports.

Operation of the BOD

93.5%
in director attendance at BOD meetings
(average)

BOD meetings are convened by the Chair of the BOD, and are categorized into regular meetings and ad-hoc meetings hosted when the need arises. BOD agenda items are decided by a majority of the directors present and voting for, given the quorum is reached (a majority of the total number of directors). In 2020, seven regular meetings and four ad-hoc meetings were held to deliberate and decide on a total of 32 agenda items. In particular, ad-hoc meetings were held to debate on the donations made in relation to COVID-19.

BOD Attendance in 2020 (%)

Meeting	Executive Director	Independent Director	Total
1st ad-hoc meeting	100	75	85.7
1st regular meeting	100	100	100
2nd regular meeting	66.7	100	85.7
2nd ad-hoc meeting	100	100	100
3rd regular meeting	100	100	100
4th regular meeting	100	100	100
3rd ad-hoc meeting	100	100	100
5th regular meeting	100	100	100
6th regular meeting	66.7	100	85.7
4th ad-hoc meeting	100	100	100
7th regular meeting	33.3	100	71.4
Average Attendance	**87.9**	**97.7**	**93.5**

BOD Subcommittee

Five subcommittees have been established under the BOD to improve the efficiency of BOD operations. These subcommittees are segmented into their own expertise areas, and delegated by the BOD to fulfill a portion of its functions.
These subcommittees are led by independent directors: independent directors make up the majority of the Independent Director Candidates Recommendation Committee and the Compensation Committee, and the Audit Committee and the Related Party Transactions Committee are solely composed of independent directors.

BOD Subcommittee

Committee	Composition	Role
Management Committee	3 executive directors	· Perform work in accordance with the Articles of Incorporation and BOD regulations and decisions · Deliberate and decide on matters delegated by the BOD
Audit Committee	4 independent directors	· Conduct accounting and work audits
Related Party Transactions Committee	4 independent directors	· Ensure transparency in related party transactions and compliance with fair trade regulations
Independent Director Candidates Recommendation Committee	3 executive directors and 4 independent directors	· Nominate independent director candidates
Compensation Committee	1 executive director and 2 independent directors	· Deliberate on the remuneration limits imposed on registered directors · Annual salary and one-time payment for registered directors · Deliberate on other matters delegated by the BOD

BOD Performance Appraisal and Remuneration

Expertise of Independent Directors

To elevate the expertise of the BOD, our independent directors are appointed for their extensive knowledge and experience in business administration, economy and the electronics and battery industries in general as well as their qualifications set forth in applicable regulations or the Articles of Incorporation. In 2020, four independent directors were newly appointed based on their expertise across such diverse areas as electrical and electronics industry, law/human rights, labor policy/relations, and accounting/tax among others. We provide independent directors with information on agenda items prior to BOD and subcommittee meetings so that they can sufficiently review such information and faithfully fulfill their manager and supervisor roles in so doing. To assist independent directors in better understanding our business, we regularly share our quarterly business status and outlook, and provide training at their request or when the need arises. In 2020, all our newly-appointed independent directors received training to take stock of BOD operations and our business activities.

Training Provided to Independent Directors

Date of Training	Training Topic
2020.04.28	· Introduction to Samsung SDI's battery products and understanding of their manufacturing process · Li-ion Battery market outlook · Electronic materials market outlook · Briefing of compliance monitoring reinforcement plans for top management

Independent Director Performance Appraisal

Our independent directors are evaluated fairly in accordance with the set internal criteria which reflect both quantitative and qualitative indicators. Such performance appraisals are conducted regularly each year, and combined appraisal outcomes of respective independent directors are used as reference data in deciding their reappointment.

Independent Director Performance Appraisal System

Quantitative Indicator	Qualitative Indicator
BOD meeting attendance, number of deliberations made on agenda items, activities at the associated subcommittees	Expertise and understanding of Samsung SDI's business

BOD Remuneration

The Compensation Committee deliberates on the limit of director remuneration as an agenda item to be addressed at the general shareholder meeting to review its appropriateness. In conformity with Article 388 of the Commercial Act, the limit on director remuneration is decided by the general shareholder meeting, and remuneration is paid within the approved boundary in consideration of the work assumed by respective directors and the outcome of fulfilling their given mandates. Executive director remuneration consists of position-specific base salary and performance-based bonus. Performance-based bonus is calculated in consideration of quantitative indicators related to financial performance (sales, net income, and stock prices) and of non-quantitative indicators related to environmental and social performance (safety, labor relations, insolvency, corruption, security, and compliance). Independent director remuneration includes base pay, welfare benefits, and diverse expenses paid to perform work as an independent director. While remuneration for independent directors is not aligned with their performance appraisal results to ensure the independence of their decision-making, full consideration is given to the level of compensation provided by industry peers, as well as risk, responsibility and time involved in performing their work in determining their remuneration.

Breakdown of BOD Remuneration in 2020[1)]

Category	Unit	2020
Net payments made	KRW million	10,047
Total remuneration for executive directors	KRW million	9,690
Total remuneration for independent directors	KRW million	357
Average remuneration per executive director	KRW million	3,230
Average remuneration per independent director	KRW million	45

1) Four independent directors are members of the Audit Committee, and the above data on the number of directors and total remuneration include those independent directors and members of the Audit Committee who resigned during the fiscal year of 2020.

Compliance

Compliance Management System

Penalties and sanctions imposed due to the violation of applicable laws and regulations

Zero cases

Compliance Program

Samsung SDI operates a systemic compliance program to disseminate a culture of compliance. This program follows the process of 'risk monitoring and prevention – training and review – improvement and follow-up management', and its focus areas include cartel, related party transactions, subcontracting, trade secret protection, and anti-corruption. In 2020, seven Samsung Group affiliates including Samsung SDI signed an agreement to organize and operate the 'Samsung Compliance Committee' as an external body tasked with supervising these affiliates and their senior management for compliance.

Since the Committee was initiated in February 2020, Samsung SDI has regularly informed the Committee of its compliance supervision and control activities while implementing measures as recommended or requested by the Committee, bolstering its compliance management system in doing so.

Compliance Organization

In 2020, a dedicated compliance unit was reorganized into the Compliance Team under the direct leadership of the CEO, and was reinforced with the assignment of dedicated staff. While the head of the Legal & IP Team also served as the Compliance Officer, this was changed to appoint a separate Compliance Officer to elevate our compliance oversight at all levels. Compliance chief managers in department head positions were also appointed to highlight their roles and strengthen compliance implementation units that were set up at respective organizations.

Compliance chief managers are responsible for the operation of these units and encourage organization members to abide by compliance guides and engage in compliance activities (training and review) to support compliance management activities. In 2021, we will provide compliance chief managers with regular training, year-round compliance newsletters, and updates on major regulatory enactments and amendments to help them build stronger competence.

Compliance Control Regulations

Samsung SDI operates the 'Compliance Control Regulations' to be followed by the Company and employees in conducting any and all business activities to ensure its regulatory compliance and sound development. These regulations were established in conformity with the Commercial Act and specify the operation of the compliance control system, authorities and obligations of the Compliance Officer, and employees' compliance obligations and compliance control activities.

In 2020, the Regulations were updated to strengthen the role of the Compliance Officer for the advancement of compliance management, and validity assessments were conducted in accordance with the Regulations to independently evaluate the adequacy and effectiveness of the our compliance control system and identify its operational status. The validity evaluation results will be fully reflected in practicing compliance management in the upcoming years.

Compliance System

We operate a compliance system to enable employees to easily obtain compliance-related information and develop awareness on associated behavioral norms. Our employees can use this system to check detailed compliance guides and manuals as well as the Compliance Control Regulations and to learn about latest domestic and overseas compliance issues. The system offers easily accessible assistance to help employees make compliance-related inquiries that may arise in performing their work and access various menus to report contacts made with industry peers and make anonymous whistleblower reports.

In 2020, an independent 'technical data request system' was created and introduced at all levels to prevent the risk of regulatory violations concerning technical data and to improve convenience in managing such data. This system enables our employees to request and receive technical data from suppliers, and we will continue with training and review on this system to promote its wider application.

Compliance Activities

Compliance Framework

Samsung SDI implements a range of internal controls to ensure effective compliance and establish a culture of compliance. We continue to operate a system to report contacts made with industry peers to prevent cartel from occurring, and evaluate our executives under the compliance index program to improve their compliance competence and sense of responsibility and reinforce our compliance controls in so doing. Furthermore, preliminary consensus-building is included as a mandatory component into our work processes associated with related party transactions, subcontracting, trade secret protection and anti-corruption to prevent and manage the risk of regulatory violations. Since 2020, we have raised the bar on internal regulations and procedures on external contribution expenditures and the registration of new partner organizations to prevent anti-corruption risks in a more effective manner while turning over the managing role of the 'Sponsorship Council' that deliberates on contributions that exceed the set amount, to the Compliance Team.

Review and Monitoring

We conduct regular or year-round compliance reviews and monitoring to prevent the risk of regulatory violations from ever occurring. Each year, departments associated with major risks are periodically reviewed for their compliance with applicable laws, internal policies and work processes. Non-routine reviews are also made on risks that warrant preemptive prevention in consideration of internal/external legal issues to ensure regulatory compliance.
In 2020, respective compliance implementation units, under the leadership of compliance chief managers, performed theme-specific self-reviews in reflection of their organizational status concerning such work processes as protecting trade secrets, requesting for suppliers' technical data, and reporting contacts made with competitors. Risks identified as a result of such reviews were addressed through improvement measures, and best review practices were rewarded.

Counseling and Whistleblowing Channels

Samsung SDI operates whistleblowing channels to prevent legal risks that stem from the violation of compliance obligations on the part of the Company and employees to establish compliance practices at all levels. These channels include our compliance system and corporate website, e-mail, phone, fax and other diverse options, and submitted reports are handled in a confidential manner to protect the anonymity of whistleblowers. In 2020, our whistleblowing functionality, that had been separately operated for ethics management and compliance management respectively, was integrated to improve accessibility and convenience for whistleblowers and render anonymous reporting easier.

Dissemination of Compliance Awareness

Dissemination of Compliance Culture

Samsung SDI's CEO regularly states the Company's commitment to compliance management both internally and externally, and executives follow suit to share such commitment with their department members to elevate compliance awareness at all levels. In 2020, all executives signed their compliance pledge and department-specific compliance training was provided as part of our efforts to disseminate compliance culture. Respective department heads, as compliance chief managers, encouraged employees to abide by compliance guides and use whistleblowing channels to consistently support all employees to fully engage in compliance activities.
Besides, quarterly 'SDI Compliance Letter' has been published since 2020 to assist independent directors in making compliance-related decisions by sharing reports made by major media outlets on compliance issues and regulatory enactments and amendments.

Compliance Training

We provide a range of compliance training to raise employees' compliance awareness and prevent the risk of regulatory violations. In 2020, regular job level-specific training was offered to all employees, along with regular training for compliance chief managers. Furthermore, anti-cartel training was conducted for employees responsible for domestic sales and marketing and expatriates in charge of sales activities to prevent actual risks that may occur in the course of business conduct. Employees handling purchasing operations also received training on subcontract regulations to strengthen the special training for employees working in key risk areas. Furthermore, we operated compliance training courses for major suppliers to help them improve their legal competency and advance compliance management.

Patent Management

Patents registered in Korea and abroad
(on a cumulative basis)

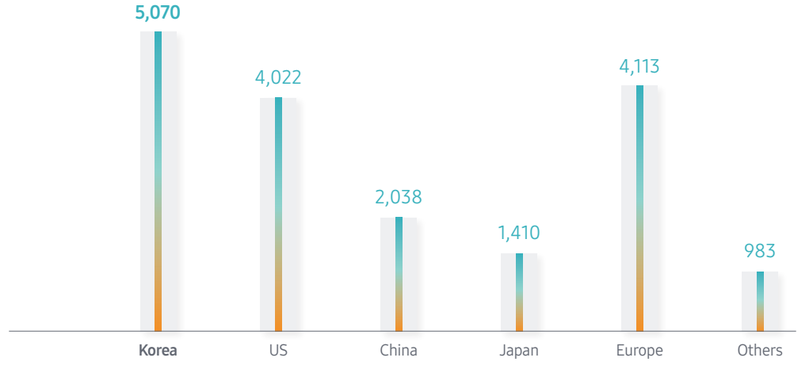
17,636
patents

Intellectual Property Management and Dispute Settlement

Samsung SDI is fully committed to managing its patents granted on the deliverables generated throughout its entire business domains, from R&D to mass production. We also continue to assess the value of our patents following patent registration to maintain a highly-applicable patent portfolio in line with the shifting business landscape. In particular, we secured high-quality patents across diverse battery technology applications, from small-sized batteries for wearable and IT devices to mid/large-sized batteries mounted on EVs and ESS, and are now focused on generating next-generation battery patents. In the electronic materials sector, we are building our patent competitiveness in key technologies for semiconductor and display materials. The sum of these endeavors allowed us to register 5,070 patents in Korea and 12,566 patents overseas as of the end of 2020.

In addition to patents, we work to secure and manage intellectual property including but not limited to designs, trademarks and trade secrets, and are developing a system to effectively leverage and manage our intellectual property. In the event of unfair infringement of our intellectual property rights (IPR), we take appropriate legal action to fully protect our due rights. In addition, we engage in prior art research even from the initial R&D phase to identify any possibility of patent disputes and develop countermeasures prior to initiating development in order to doubly make sure that we do not unintentionally infringe upon the rights of other companies and prevent unnecessary patent disputes from occurring. Our efforts to prevent disputes concerning patents and other IP extend from R&D to the entire business operations, and we recruit experts from outside the Company and assist internal staff in improving their expertise to effectively handle IPR-related disputes.

Patents Registered on a Cumulative Basis as of 2020
(unit: No. of patents)



R&D

R&D Approach

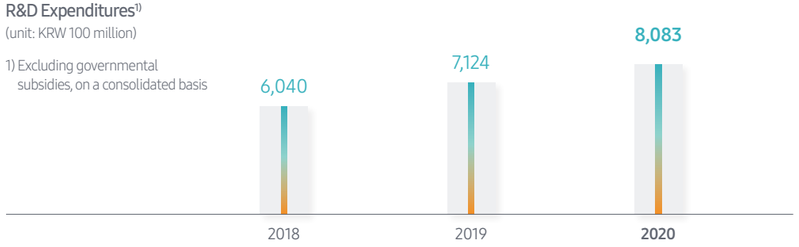
R&D expenditures

KRW **808.3** billion

The battery industry is witnessing the rising demand for improving eco-friendliness across the international community, and this highlights the need to diversify new applications and deliver safety performance.
As an 'leading total solution provider of world-class eco-friendly materials and energy', Samsung SDI is broadening its business portfolio from cutting-edge materials to components and elevating its technology competitiveness as a company focused on IT device and semiconductor materials. We continue with our R&D activities to embrace new market-leading products and technology, and set the trend in the rapidly-shifting technology landscape while securing future growth drivers.

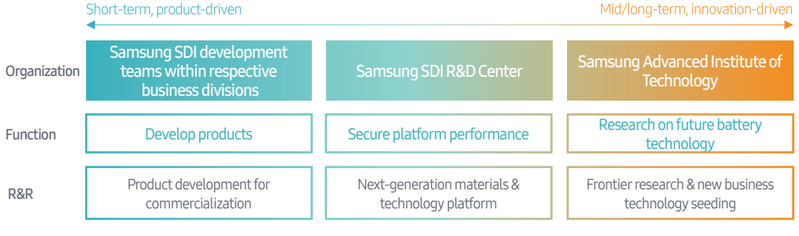
R&D Expenditures[1)]
(unit: KRW 100 billion)

1) Excluding governmental subsidies, on a consolidated basis



R&D Organizational System

We operate R&D organizations within our Small-sized Battery Business, Automotive and ESS Business, and Electronic Materials Business divisions in conjunction with the SDI R&D Center which is tasked with establishing platform performance, and are reinforcing our global technology leadership through close collaboration across these business divisions. We also engage in R&D on rechargeable battery materials and ensure a stable supply of raw materials. In particular, the characteristics of materials determine the performance of batteries from energy density to cycle life and power, and materials account for a large share of the total costs, which underscores the utmost importance of competitive materials.
Our Electronic Materials Business has moved into the Samsung Future Technology Campus (Samsung Electronics Materials Research Complex) to generate synergy through joint R&D endeavors, and our Battery Business and Automotive and ESS Business placed their related functional infrastructure – development locations and evaluation facilities – together at our Giheung worksite to generate greater R&D synergy and improve the efficiency of development activities. In 2020, the sales and marketing operations of the Strategy Marketing office were transferred to our Battery Business and Automotive and ESS Business to strengthen the management accountability of respective business divisions while expediting our work and decision-making process.



Open Innovation

Samsung SDI engages in industry-academia cooperation with external institutions and prestigious universities in Korea and abroad. Samsung SDI also reinforces its next-generation technology and contributes to nurturing talented individuals in the industry. Such cooperation spans a wide spectrum of areas, from battery and electronic materials to the development of evaluation methods to secure battery safety. Notably, we have continuously teamed up with universities that are leading battery research – Seoul National University, POSTECH, Hanyang University, Sungkyunkwan University, and UNIST – since 2016 to secure next-generation battery technology. In the materials field, we continue to partner with universities in Korea, the US and across the globe to elevate our technology competitiveness. Going forward, we will further expand the scope of such collaboration.

R&D Outcomes

Automotive and ESS Battery

Samsung SDI continues to develop technology to improve the energy density of batteries with an aim to help increase the size of the green EV market and extend the driving range of EVs. In 2020, we succeeded in developing a world-leading high-capacity, high-power EV battery: fully deploying high-capacity, high-nickel cathode materials on the strength of our differentiated battery cell design, this battery resulted in a 1.5-fold increase in driving range. We also designed a low-resistance electrode made of high-performance anodes and preemptively established a new process to bring this design to life, reducing the time taken for battery charging by 30%. This new product is set for full-scale mass-production in 2022, and we have also initiated the development of technology to further improve energy density to cater to future needs.

Small-sized Li-ion Battery

The adoption of small-sized cylindrical rechargeable batteries is on the constant rise in the power tool (high-power), EV (high-capacity), and micro-mobility (mid-power, e.g. e-scooter) markets. Specifically, the demand for coin cells is surging recently for TWS (True Wireless Stereo) applications. In response to the rising demand for TWS batteries, we completed our product development in 2020 and established a mass-production system. In 2020, we became the industry's first to develop a high-capacity, high-power power tool battery that supports a 5.0Ah/25A continuous discharge, moving ahead of the competition by more than one full year in unveiling products that significantly improved user convenience, including extended usage times. Samsung SDI blazes a new trail in the industry, proactively responding to the shifting market landscape while continuously launching ultra-high-capacity, ultra-high-power products for respective applications.

All-Solid-State Battery

In cooperation with the Samsung Advanced Institute of Technology, we are developing all-solid-state batteries which deploy solid electrolytes in place of liquid ones normally adopted for conventional batteries with the view to improving both battery safety and usage time. The Institute developed original technology to resolve the issue of crystal 'dendrites' that are known to lead to side effects such as reduced battery life and safety (dendrites refer to lithium ions growing with a multi-branching tree-like form on the anode surface during the charging process of the Li-ion metal anode that helps increase the capacity of batteries). The research outcomes were featured at the world-renowned academic journal of Nature Energy in March 2020. Presently, we are developing an all-solid-state battery that will enable EVs to travel nearly 800 km on a single charge and feature a life cycle of more than 1,000 charges.

R&D Outcomes in 2020

Business	Research Topic	Expected Benefit
Automotive and ESS battery	Develop industry-leading high-capacity, high-power EV batteries	Contribute to becoming a first-mover in the premium EV segment with specialized rapid charging performance
	Develop next-generation battery structures and new processes	Secure processes and processing technologies for high-capacity, high-quality battery production
Small-sized Li-ion battery	Demonstration research to evaluate the performance of rechargeable battery pouches for IT device applications and to apply them to customers	Develop globally-recognized high-reliability pouches
Electronic materials	Develop W One Slurry	Launch this never-before-possible product that fulfills the functions of two different products to contribute to replacing the existing market and advancing into new ones
	Develop CIS materials	Substitute the materials previously monopolized by Japanese makers and develop thin, high-resolution products to increase sales
	Develop polarizer film with improved visibility	Create a new market for advanced products for TV applications and increase sales
	Develop QD display materials	Create new business opportunities by developing new platform technology for next-generation display products

Talent Management

Talent Development

Samsung SDI develops globally-competitive, exceptional talent through its systemic capacity-building training programs. To remain dominant even amid the fierce technology competition, we introduced practice-based early onboarding courses as part of the introductory training for new recruits, and are operating leadership training and couching courses to nurture next-generation leaders as well as special foreign language skill courses to help build global competences. In 2020, we embraced virtual training to cope with the rapidly-shifting external environment (e.g. COVID-19) to render our training programs more efficient and continue with our commitment to nurturing talented individuals.

Global Competency Development

As Samsung SDI broadens its overseas business presence, this highlights the importance of global competency development. In line with this emerging trend, we have selected employee's global capacity-building as one of our primary goals for 2020 and have focused on increasing the ratio of employees achieving advanced qualifications in English, Chinese and other foreign languages. Notably, 'Intensive Courses' were created in multiple time durations – 1-week/2-week/12-hour/4-hour – to assist employees whose work can't be discontinued for extended periods of time in receiving training and choosing appropriate courses in consideration of their current level. To preemptively respond to the increasing number of expatriates assigned to overseas corporations, we continue to increase the share of such strategic languages as Hungarian and Vietnamese that are spoken in the countries where we operate in our language training curriculum.
As COVID-19 made it practically impossible to provide on-the-job training, we opted for virtual tools and introduced video-based training that supports real-time interactions with external guest lecturers while operating courses across diverse time slots – weekdays, weekends, early in the morning and later in the evening – to aid in the development of employees' global competency.

Development of Job Experts

We operate on-the-job and online training courses that address all job categories, including development, technology, manufacturing, sales & marketing, and management support to help employees develop expertise required in their respective positions. Specifically, we operate the STEP (SDI Technology Education Program) designed to meet the distinctive needs of Samsung SDI to systemize technology training for development, process & equipment, and quality operations. Any shortfalls of such on-the-job and online training are supplemented by department-level in-house seminars and learning cells.
In addition to in-house training, we provide master/doctorate academic training and non-degree courses through industry-academia alignment to nurture experts in the development and technology sectors. Our license acquisition support program also encourages employees to obtain internationally/nationally-recognized qualifications in the areas of purchasing, quality, management and finance in order to promote the development of job experts at all levels.

Building a Learning Culture Led by Working-level Staff

With the rising need for specialized training to cope with the rapidly-changing new technology trends as well as issues that occur in the field across different job categories, we are witnessing the shift from one-way information delivery for all employees to customized training that caters to the specific needs of different job categories.
Samsung SDI established the Education Agent program in 2020 to create a culture of learning led by working-level staff and provide training that meets the practical needs of team members. Education Agents are responsible for planning and operating job training required by respective teams and jobs, and for supporting employees to receive training at the time and place of their choosing. One prime example of such training is team-specific training that invites experts from and outside the Company, and we also operate learning cells that gather together working-level staff to study and in-house seminars hosted to share information among department members on selected topics.

Technology Training Center

We operate the Technology Training Center to assist technical staff in systematically developing common competences and process & equipment technology expertise while helping new hires and recently-relocated employees to preemptively learn relevant basic competences. Tailor-made, level-specific training is provided from introductory to practical levels, and training equipment, made of core components and modules that are deployed in real-life conditions, is used to provide one-person one-kit training to effectively promote theoretical understanding and hands-on practice. In addition, the 'component technology expert course' is operated to address issues through self-initiated learning on core equipment components, and the 'process & equipment expert course' to resolve equipment-related challenges and chronic process quality issues in order to assist our employees develop expertise in a differentiated manner.
Our Technology Training Center will strengthen its role as a test bench for engineers to freely translate their ideas into life while consistently introducing training courses required to establish competitiveness in emerging technologies.

Respect for Human Rights

Infringement upon human rights

Zero cases

Samsung SDI respects human rights and the freedom of association as a way to protect human dignity. We endorse International Labour Organization (ILO) conventions, the RBA (Responsible Business Alliance) Code of Conduct, and other global standards and guidelines in the areas of human rights and labor, and fully comply with labor laws and other local regulatory requirements in the regions where we operate.

Human Rights & Labor Impact Management at All Levels

Self-reviews are made under the supervision of the Headquarters or independently by worksites to ensure that we comply with human rights standards concerning child labor and forced labor, work hours, wages & benefits, humanitarian treatment, ban on discrimination and bullying, and the freedom of association. We also apply the zero tolerance principle to rigorously manage relevant issues. This allows us to identify and manage regions and worksites with vulnerable human rights and labor conditions and to verify factors that may give rise to human rights violations so that the same issues do not ever reoccur. As to our 15 overseas corporations, self-audits were performed on human rights and regulatory compliance to identify risks and make necessary improvements by undertaking mid/long-term tasks.
The S-Partner certification system intends to consistently review our suppliers for their compliance with human rights management and establish human rights management at all levels across the entire supply chain in so doing. In 2020, no violation occurred in relation to the ban on child/forced labor and anti-discrimination/bullying policy.

☞ Go through this link to see the full version of Samsung SDI's Code of Conduct

Improvement in Human Rights Awareness

We provide all employees with training to prevent sexual harassment, improve awareness on people with disabilities, and promote the culture of mutual respect in line with the enforcement of the Workplace Harassment Prevention Law with the view to awakening all our employees to the importance of assuring and protecting fundamental human rights. To render such training even more effective, our training curriculum reflects the ever-changing internal/external conditions and social needs, and is continuously updated with new training content. The 'It Basic' bulletin board within our in-house website serves to post basic-level guides on human rights issues, including training materials on anti-sexual harassment and the culture of mutual respect as well as action guidelines for employees to follow in order to take cautions and make proper responses to prevent sexual harassment and verbal violence and to improve on drinking culture. All our employees are able to use this board to file their reports or complaints on human rights issues, and stringent measures are taken in accordance with the set standards in the event of such issues occurring.

Creating an Advanced Organizational Culture

Change Agents operating across the company

283 employees

Building a Top-tier Organizational Culture

Samsung SDI aims to improve employees' work satisfaction and engagement to increase both the contentment of individual employees and the business performance of the Company while building on such achievements to recruit outstanding talent from outside the Company and to ultimately reinforce its product competitiveness. To establish an advanced organizational culture that supports this virtuous cycle, we have set five goals – fair appraisal, team member development, open communication, improved work efficiency and better collaboration – in conjunction with 283 Change Agents who lead our organizational culture at respective departments, and are working to build a top-tier organizational culture accordingly.

5 Organizational Culture Goals and Activities to Create a Top-tier Organizational Culture

Fair appraisal ▸
- Improve appraiser competency through strengthened appraisal training
- Establish the procedural fairness of the appraisal process and improve the acceptance of appraisal outcomes by expanding appraisal interviews concerning interim appraisals for process management and feedback

Team member development ▸
- Select department-level EAs (Education Agents) to provide customized job-specific training and promote learning led by working-level staff (e.g. learning cells, in-house seminars)
- Create a career market for employees looking to relocate to apply for the department of their choosing to aid in employees' career development

Open communication ▸
- Expand discussion infrastructure to facilitate the free exchange of ideas and create a culture of debate
- Support diverse communication activities – virtual office dinners/discussions – to facilitate interactive communication amid the COVID-19 outbreak which puts limitations on outdoor activities

Improved work efficiency ▸
- Identify and award best practices of improving work efficiency to disseminate a culture of encouraging employees to fully engage in high-value-added work
- Create efficient meeting practices by reducing meeting durations and unnecessary attendance and streamlining meeting materials

Better collaboration ▸
- Expand interactions among relevant departments to create a culture of inter-departmental collaboration
- Operate a collaboration project undertaking process to recognize relevant departments that select their collaboration projects and successfully resolve project challenges

Virtual corporate dinners to facilitate communication

Awards granted to best practices of undertaking collaboration projects

Creating a Great Work Place

Facilitating Labor-Management Communication

In response to the changing needs of the time, Samsung SDI advances compliance management to build cooperative labor-management relationships and facilitate bilateral communication. We fully protect labor's three primary rights and comply with applicable laws and regulations to provide better labor conditions while operating the Works Council in conformity with the Act on the Promotion of Workers' Participation and Cooperation to make institutional improvements and take heed of any difficulties faced by employees. Specifically, we operate 'Sisicolcol' as an in-house online communication channel to collect improvement suggestions or grievances raised by employees in relation to their professional life, and sincerely address the submitted issues by making it a rule that relevant departments respond to them within 24 hours. Inquiries made by employees remain confidential when necessary through the private comment functionality, and employee feedback is proactively collected. In so doing, the channel serves to improve the work environment and plays a pivotal role in facilitating communication between labor and management. In 2020, 1,193 issues were submitted and addressed with follow-up measures. In addition, the 'Leaders' Channel' is under operation as a monthly department leader meeting to communicate on the Company's management and institutional operation. Meeting outcomes are directly briefed by department leaders and shared among employees.

Supporting Work-Life Balance

Samsung SDI provides a range of programs for employees to achieve a healthy work-life balance. Flexible work arrangements serve as a case in point: selective work hours and relevant systems are up and running so that our employees can manage their own work schedules. Reduced work hours also help create a more flexible work environment. In-house maternity protection rooms have been arranged for expectant mothers, and daycare centers are operated at all our worksites to help employees work all while taking care of their children. We have also extended our paternal leave programs to meet and even exceed the recommendations set by the Ministry of Employment and Labor in implementing maternity protection and work-life balance programs in order to alleviate employees' burden to both work and raise kids.

Fertility treatment leave ▸ Five-day leave is provided for employees to receive fertility treatment or support their spouse undergoing such treatment. These five days can be split, and up to KRW 1 million (KRW 500,000 per treatment) is provided per year.

Paternity leave ▸ Employees whose spouse gives a birth may take a 10-day Paternity leave five days prior to birth and within 90 days after birth (20 days for multiple birth). This leave can be split once.

Parental leave ▸ Legal parental leave can be used only for one year per child, but Samsung SDI grants an additional period of leave for up to one year. Also, while legally-mandatory parental leave set the age limit at eight years old, we have extended this to 12 years old.

Reduced work hours for working parents ▸ For employees whose children are aged eight years old and younger or are in grade 2 and under, we allow them to reduce their work hours for up to two years, including one-year legally-mandatory parental leave.

Operating Welfare & Benefits Programs

We provide a range of welfare and benefits programs to help employees improve the quality of their life. To promote residential stability which is one of the greatest social challenges faced by workers, we assist our employees who have yet to purchase a home in paying interests for three years on the loans extended through Samsung SDI's approval to buy or rent a house in size of 85m^2 or under, which is considered as a standard national house by the Korean government. As part of our selective welfare and benefits programs, we award welfare points each year to encourage employees to engage in self-development and enjoy their leisure and cultural life. We also support for their comprehensive health check-ups and indemnity insurance premiums.

☞ Go through this link to learn more about Samsung SDI's welfare and benefits programs

Health and Healthcare Management

Employee Health Promotion

Samsung SDI supports health promotion activities for employees including regular check-ups and work environment inspections to health training and disease prevention. In addition to regular health check-ups, comprehensive life-cycle health check-ups are provided for the early diagnosis and prevention of diseases. When deemed necessary based on check-up outcomes, health counseling is provided in alignment with the Samsung SDI medical clinic (health care office) while health promotion activities are implemented by inviting key opinion leaders in the healthcare sector and partnering with local health centers. To prevent diseases caused by work-related musculoskeletal burden, we perform regular inspections on workplace rick factors and change work methods to improve our work environment. Our Cheonan and Gumi worksites operate the musculoskeletal center, and offer one-on-one musculoskeletal disease prevention programs to help employees ease their musculoskeletal pain that stems from their daily habits as well as work-related ones.

Workplace Safety

Safety Management System

In line with the complete revision of Korea's Occupational Safety and Health Act in January 2020, we realigned our safety and health management process at all levels, and specifically, identified health and safety impacts prior to initiating work through our integrated EHS management system to prevent subcontract-related issues that are subject to tightened provisions under the revised Act. This allowed us to establish processes to preliminarily verify our compliance with health & safety regulations and internal standards and to eliminate risk factors to ensure improved workplace safety for employees of our subcontractors.

To preemptively respond to the pre-announcement of the fatal occupational injury punishment legislation, we received consulting from professional consultancies to analyze provision-specific impacts and elevate our management capabilities, and are taking improvement measures on those issues identified as in need of such improvements.

Dedicated EHS Organization

Our Safety and Environment Group has created a dedicated technology organization to run a range of fire tests in real-life conditions in order to preemptively address the risk of fires that arises with the increasing capacity of batteries. This enables us to re-examine our firefighting measures by battery type, process, and facility and to establish an optimal firefighting system. In addition, we monitor factors contributing to fires to proactively control fire risks.

EHS Code of Conduct

In line with our management philosophy that considers workplace safety as the first and foremost business principle, we established the EHS 10 Commandments as our EHS code of conduct for all employees to follow. Across our entire worksites, employees recite these commandments prior to meeting to fully embed their purpose and meaning into daily work routines while acting on these commandments to raise their safety awareness and build a safety-driven culture.

Improvement in Employees' Safety Awareness

Occupational Health and Safety Training

We provide health & safety training to all our employees to elevate their occupational health and safety awareness at the company-wide level. Our training curriculum consists of more than 200 courses for employees to choose from in consideration of their areas of interest and training needs. Managers, new hires, employees handling hazardous substances or high-risk machinery, and those assigned to specific or new tasks are supported in receiving tailor-made training depending on their job category or level and work processes.

Establishment of a Safety Culture

Samsung SDI makes use of internal safety culture assessment tools to regularly measure the level of its safety culture among employees. Measurement outcomes across the eight categories of safety culture are used to analyze reasons for areas where we underperformed compared to the previous year and areas where we are vulnerable, and to develop improvement strategies and undertake special activities to consistently improve our safety culture.

Workplace Safety Management

Integrated EHS System

Samsung SDI is operating an integrated company-wide EHS system to improve the efficiency of its EHS operations, perform regulatory monitoring, and detect risks before they occur. This system consists of 46 modules across the eight categories of safety and environment, health, chemicals, disease prevention, partner companies, audit and common areas. To ensure the normal operation of our company-wide EHS management system and establish its effectiveness, our EHS management system received surveillance audits across all domestic and overseas worksites in December 2020, and was certified to be 'valid' by the certification body.

Evaluation of Manufacturing Management Supervisors

While EHS management evaluations were made on part organizations at our Gumi worksite only, this will extend to all our worksites in Korea (Cheonan, Ulsan, and Cheongju). In the 2nd half of 2020, evaluation methods that differed across respective worksites were realigned and unified into 35 evaluation items in four areas, and pilot evaluations were performed on our Cheonan and Ulsan worksites. We will conduct such evaluations semi-annually (1st/2nd half) from 2021 onwards, and this will surely drive our efforts to regularly review the EHS performance of management supervisors who are responsible for the safety of our employees in the shop floor and to achieve zero injuries and accidents and create a safety-driven culture in so doing.

Reinforced Shop Floor Safety Certification

We ensure that the safety of our facilities is verified by third-party certification bodies in the facility manufacturing process to improve the safety of shop floor facilities. In 2020, a manufacturing work certification program was introduced to ensure that in performing high-risk work that involves the direct operation of facilities, error correction measures can be taken only by those workers who completed relevant job training to tighten our safety management system.

Inspection and Monitoring

At Samsung SDI, periodical assessments are made on the entire areas of safety, environment, health and disaster control through its workplace safety management system. These assessments are performed on a daily, weekly and monthly basis concerning respective categories, and weekly status monitoring is conducted to share feedback among worksites.

Identification of Potential Risks

We consistently identify and improve potential process-related risks at domestic and overseas worksites, and upload identified potential risks on our computer system to be shared across the board. In 2020, a total of 309,721 potential risks were identified at all levels as of manufacturing workforce, and this translates into 41.2 risks per employee, which far exceeds the set target (12 risks per employees) by 343%. In the 1st half of 2020, awards were granted to worksites that excelled in discovering potential risks, and our Vietnamese corporation received prize money for identifying the most number of risks and generating best practices in making improvements.

Emergency Response System

We are establishing an emergency response system to prepare for any and all possible incidents and accidents. Trainings and exercises are conducted to take swift emergency response measures through close collaboration at all levels, from senior management to working-level employees, in the event of emergency. Emergency firefighting units are also under operation 24/7 at respective worksites to build year-round preparedness against any emergency. In 2020, special training by each shift was provided in consideration of the risks of COVID-19.

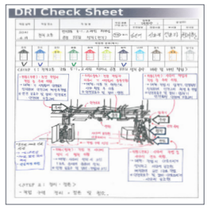
Battery Safety Management

It is with the awareness that safety comes before all else in the battery business that we are raising the bar on our management process to ensure battery safety from the product development phase. We are re-establishing handling and storage standards in line with battery risks to prevent fire accidents while building emergency response capabilities by conducting fire extinguishing drills for our firefighting staff in Korea and abroad to ensure prompt response in the event of fires. In particular, we created a monitoring room for the formation process that poses the risk of battery fires, and are building and operating a battery storage and transport management system. The addition of firefighting facilities helped strengthen our fire detection and extinguishing capabilities, and work is underway to manufacture and operate broad water immersion test chambers to manage high-risk cells concerning test batteries used for development and quality assurance. As a countermeasure to the fires caused by end-of-life batteries at our Cheonan worksite, we re-established our end-of-life battery handling standards and store inflammable wastes such as used electrolytes and oils in warehouses designed for hazardous substances as a way to tighten safety measures. In addition, waste is taken out of our worksites 2~3 times a week instead of 1~2 times a week to reduce the amount stored internally, and construction work to separate the end-of-life battery discharger facility from the resource recycling center is to be completed by the end of 2021.

Introduction and Facilitation of Handwritten DRIs

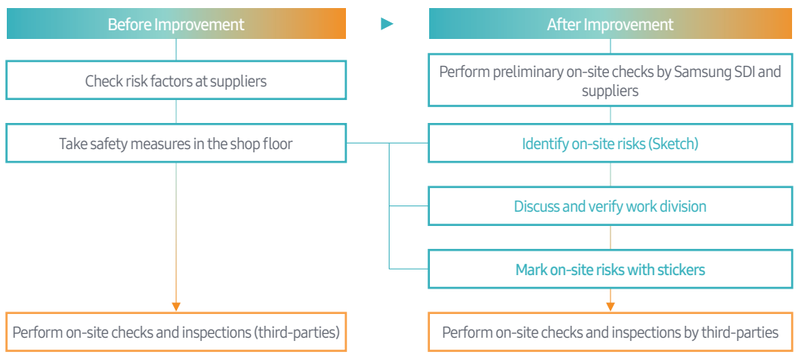
As work processes become increasingly complex and new work is added at our worksites, this has made it difficult to preemptively identify risks and has reduced on-site verifications into a mere formality. This prompted us to introduce handwritten DRIs (Double-check Risk Inspections) to help workers improve their preliminary risk recognition and on-site adaptability to strengthen their response to high-risk work. With the adoption of handwritten DRIs, risks are marked in the shop floor and workers or managers directly map out work methods and safety measures. This enables workers to elevate their safety awareness and take tailor-made safety measures to improve their execution and prevent accidents from occurring.

Handwritten DRIs were first conducted at suppliers in March 2020, and have been extended to high-risk work performed by our employees concerning manufacturing equipment and process. As a result of verifying work-specific safety measures to be implemented by suppliers and checking their on-site safety actions taken, they achieved "zero" injuries and accidents in 2020, a meaningful decline from the previous year, to demonstrate benefits in mitigating safety incidents.



DRI (Double-check Risk Inspection) Check Sheet

Improved Preliminary Verification of High-risk Work at Partner Companies



Safety Assessments for Partner Companies

Samsung SDI performed safety assessments on its partner companies to fulfill its legal responsibility to ensure safety along the entire supply chain. The associated process was established in collaboration with Equipment Purchasing Group, Safety and Environment Group and Infra Operation Group at respective worksites, and supplier modules are organized within the Samsung SDI G-EHS (environmental safety system) for registration and management. In 2020, we conducted contractor qualification selection and safety assessments as required by the Occupational Safety and Health Act on a total of 342 infrastructure construction and facility subcontractors including 76 in-house subcontractors. For 18 subcontractors who scored under 70 as a result of these assessments, they received on-site visits paid by our EHS experts to provide guidance, and were recommended to take improvement measures within three months.

Partner companies that received safety assessments

342 companies

Chemicals Management

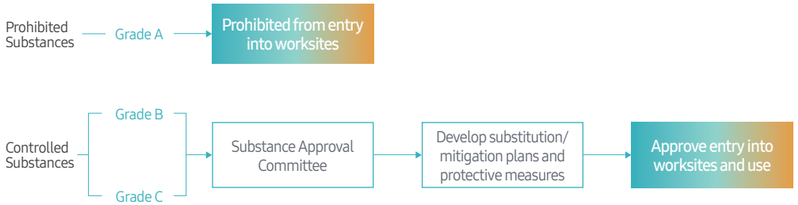
Chemicals Management System

Our Global Environment, Health & Safety (G-EHS) system ensures that chemicals are inspected prior to their entry for possible conflict with applicable laws and regulations to manage their entry and use at our worksites. Any and all chemical substances that enter our worksites (raw/subsidiary materials, development materials, and consumables) receive impact reviews and assessments across EHS categories prior to their purchase, and they are verified for their legal compliance during the purchasing and worksite entry process. This system has been extended to our overseas worksites to disseminate company-wide practices to use chemicals safely.

Management of Internally Regulated Substances

To protect our employees from health impairments and work-related ill health, we reflect regulations on substances harmful to the human body (e.g. carcinogens) as well as regulated substances in creating and managing a list of internally regulated chemical substances. These substances are graded into A, B, and C, and an approval system is operated accordingly so that chemicals that enter our worksites are verified for their inclusion in the prohibited substances list, applicable substitution and mitigation plans, and protective measures prior to their entry and consumption at our worksites. In addition, risk assessments are conducted on chemicals that are put into the process in consideration of their hazards, exposure levels, and work characteristics, and assessment results are used check the work environment including sealing and improving facilities handling these substances. Total inspections are also performed on chemical substances every quarter to identify the overall status of chemicals handling and regulatory compliance concerning the Material Safety Data Sheet (MSDS) and the installation of warning signs.

Grading and Approval of Internally Regulated Substances[1)]



1) Classified into Grade A, B, and C according to their level of hazards

Reinforced Inspection of Process Hazards

Samsung SDI performs semi-annual work environment measurements on processes that handle hazards including production and R&D with the help of external organizations. This comes in tandem with year-round measurements made in the event of process change or the addition of new materials to comply with legally applicable standards. For hazards that are handled throughout the entire process in general, we set our internal exposure limit at less than 30% of the legal threshold, and this is even further tightened to less than 10% of the legal threshold for carcinogenic, reprotoxic or mutagenic substances that require special management. In case there are processes that exceed our internally-set exposure limits, improvement measures are developed to replace or mitigate hazards and seal affected equipment in order to deliver a safe work environment for employees.

In addition, processes that handle chemicals are equipped with local exhaust ventilation and receive inspections and assessments at least once a year while hoods, ducts, and fans are managed to maintain their exhaust velocity above the mandatory legal threshold. At domestic worksites, regular deep-dive assessments are performed through consulting offered by external professional organizations. In 2020, we invested nearly KRW 4.9 billion in investigating odor-generating processes as well as hazards to continually improve the work environment by increasing the exhaust air flow, containing equipment within booths, and installing mobile local exhaust ventilators.

Response to COVID-19

In March 2020, the WHO (World Health Organization) declared COVID-19 a pandemic, raising its alert level to the highest in consideration of the severity of the spread of this infectious disease. While a full one year has passed since then, COVID-19 continues to wreak havoc and poses grave risk to the business operation of the global industry. To preemptively address this global challenge, Samsung SDI has been operating a response system from the early days of the COVID-19 outbreak, and is taking a multi-faceted approach to minimize impact on the health and safety of its employees.

COVID-19 TF Operation for Systemic Response

In January 2020, we launched a company-wide COVID-19 Task Force to promote a more prompt and systemic response to this global pandemic. The TF is composed of the Corporate HR Team, the Financial Management Team, the Communication Team, and ESH departments at the Headquarters, and is responsible for establishing standards on domestic/overseas business travels, worksite access controls, access to crowd facilities, the management of employees with symptoms of fever, disease control activities, and training and group activities. The TF regularly updates disease prevention standards and uploads and shares them on our company-wide board to assist all employees and relevant departments in making appropriate responses, serving as a control tower across the board to safeguard our employees from COVID-19 infections.

Prevention of Infection and Dissemination

To protect employees from COVID-19 infections and prevent their spread within the Company, Samsung SDI has suspended in-person activities including offline training and organizational events while shutting down in-house crowd facilities including gyms and club rooms. Elevators, handrails and other areas exposed to frequent physical contacts are disinfected more than once every day, and stronger controls are placed on worksites, dormitories, commuter buses and other facilities used by our employees. In particular, some of our worksites expanded the operation of commuter buses so that employees could seat with empty seats between each other while in-house cafeterias extended their business hours and arranged all seats to face the same direction to minimize physical contacts among employees. To elevate employees' safety awareness, daily text messages are sent to all employees to remind them of our disease prevention guidelines and distancing rules. Mobile health exams are made to check whether employees visited high-risk facilities or developed fever or other symptoms so that they can take self-quarantine measures when necessary.

Creating a Culture of Remote Work

In line with the prolonged outbreak of COVID-19, we are developing a range of support measures to establish a culture of safe, remote work. Leveraging external work support infrastructure, we assist our employees in performing work conveniently even outside the Company while facilitating video conferencing internally to expand work consultations through virtual means. For expecting mothers living in areas with high prevalence of COVID-19 infections and those who gave birth within the past six months and thus have a weakened immune system, we provide support for remote work in accordance with social distancing levels to better take care of employees who are more vulnerable to infectious diseases.

Supplier Compliance with COVID-19 Guidelines

In 2020, we developed a compliance checklist to help our domestic suppliers prevent the spread of COVID-19, and performed checks on four primary suppliers. The checklist included a total of 14 items concerning collective and individual disease prevention activities and workers' code of conduct. Our plan for 2021 is to conduct reviews and trainings through the use of this checklist as part of the S-Partner certification process to encourage suppliers to faithfully abide by disease prevention guidelines.

Social Contribution

Social Contribution Vision

Employees participating in social contribution programs

99%

Flagship Educational Programs

Samsung SDI, guided by its CSR vision of 'Together for Tomorrow! Enabling People', is making the world a better place and help children and adolescents dream a big dream and unleash their full potential.
While we planned to focus on adolescent education and implement associated activities accordingly, the continued spread of COVID-19 posed a range of limitations. Still yet, we leveraged wide-ranging virtual online platforms to continue with our adolescent education programs and successfully transitioned from in-person to virtual programs. In 2021, we continue to explore ways forward in implementing our CSR programs to cater to the needs of our changing time and make educational donations to generate tangible outcomes. In the face of unpredictable, ever-changing conditions, we will remain firm in our endeavors to take a diverse approach and blaze a new trail to create a better world and achieve our CSR vision.

Vision	Theme
Together for Tomorrow! Enabling People	Education for Future Generations (adolescent education)

Flagship Educational Programs

- Green Planet Environment School
- Green Planet Dreaming School
- Green Planet Future Science School
- Blue Elephant

Green Planet Environment School

Samsung SDI has continued to operate green and energy education programs for children and adolescents. Specifically, 'Green Planet Environment School' for elementary school students is a hands-on learning program that addresses the importance of environmental protection and proper energy use. Our employees serve as instructors to provide environmental education and experience-based activities on a wide array of topics, including renewable energy, global warming and green transportation.
As COVID-19 made it virtually impossible to engage in in-person education in 2020, we developed a virtual online platform and shifted to remote video-based career mentoring. This enabled us to broaden the window of learning opportunities for elementary schools in local areas that had been previously challenged in participating in experience-based activities, and a total of 716 students joined our newly-developed virtual educational program. In 2021, we will add new educational activities in consideration of changing conditions of the post COVID-19 era, and position Green Planet Environment School as our flagship environmental education program that is open and readily available for even more children.

Green Planet Environment School - Career mentoring performed through remote videos

Green Planet Dreaming School - An environmental education kit, 'SDI World'

Green Planet Dreaming School

The nation-wide introduction of the free-semester system across middle schools in Korea spurred demand for educational donation programs led by businesses to respond to this new governmental policy. This drove our decision at Samsung SDI to operate Green Planet Dreaming School in alignment with the free-semester system since 2019 to contribute to the more effective implementation of the nation's educational policy.

In 2020, we developed an online platform to create a safer learning environment even amid the COVID-19 pandemic. Our online courses provided the 'SDI World' as an individual environmental education kit for students to experience business areas linked with Samsung SDI, and effectively learn proper ways of using energy in response to the rapidly-shifting trends of the future society and climate change.

To deliver in-depth environmental education in the first semester of 2021, we extended the number of general education sessions operated with a focus on science study classes under the free semester system from four to eight sessions. We also operated a pilot run of online environmental education at two schools located near our Giheung worksite, and this will extend to middle schools in the vicinity of our six worksites nationwide from the second semester onwards. Going forward, we will increase the width and diversity of our experience-based virtual online education programs to contribute to nurturing our future leaders.

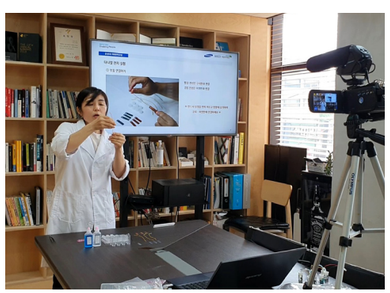
Green Planet Future Science School

Green Planet Future Science School provides science experience education for children at local children centers in the vicinity of our six worksites. As the spread of COVID-19 made it extremely difficult for us to visit these centers to offer in-person education in 2020, we created six new programs and prepared for the transition into a virtual online platform. This enabled beneficiary children to continue with their education on science experimentation and the production of actual outputs on a safe and fascinating online platform. In 2021, the online platform of Green Planet Future Science School will be made available for more educationally-underserved groups to proactively promote educational participation among children who can barely access learning opportunities.

Blue Elephant

Under our CSR vision of 'Together for Tomorrow! Enabling People', we have teamed up with five Samsung affiliates[1] to provide education on protecting adolescents from cyber violence. In collaboration with the Blue Tree Foundation, an NGO dedicated to the prevention of adolescent violence, the Ministry of Education, and the Community Chest of Korea, we hosted an agreement signing ceremony in February 2020 and provided on/offline programs for teachers at elementary/middle/high schools nationwide as well as parents concerning the production of educational content and prevention training on cyber violence, platform development, diagnostics and research, and cultural campaigns. In 2021, the scope of this program will include cyber violence prevention training, therapeutic counseling, prevention culture and academic research, and Blue Elephant education is set to continue for the next 10 years to help effectively remedy the issue of cyber violence.

1) Samsung Electronics, Samsung Display, Samsung SDI, Samsung Electro-Mechanics, and Samsung SDS



Green Planet Future Science School - Online education video

Blue Elephant - Agreement-signing ceremony

Other Virtual Social Contribution Activities

Dream Walking

On the occasion of our anniversary each year, we launch Dream Walking activities to ensure that our future generations fully enjoy their right to breathe clean air. Funds are raised in proportion to the number of steps taken by our employees to create School Forests for elementary schools in the vicinity of our worksites as a way to help reduce the level of particulate matters. This aptly fits with the current situation as participating employees can make invaluable donations all while complying with social distancing rules to prevent the spread of COVID-19. In 2020, a total of 7,144 employees took 1.3 billion steps to donate KRW 33.70 million, which went to create a School Forest for Chaam Elementary School near our Cheonan worksite. Samsung SDI will continue to build school forests so that children can promote their healthy growth under the clear blue sky without any worries over air pollution.

Hands-on - Environmental Education Books

As a way to make educational donations for children and adolescents, Samsung SDI is engaged in the direct hands-on production of environmental education books. In 2020, 2,984 employees volunteered to make a pop-up book that helps children learn the circulation of water and its importance, and donated copies of this environmental education book to young readers at local children centers. Each page of the book was manually produced by our employees who willingly put in their hard work to exert positive influence in satisfying the intellectual curiosity of numerous children across the nation through virtual volunteering.

Hands-on - Greedanemo

Our 'Greedanemo' hands-on program sponsors artists with developmental disabilities and the exhibition of their works. Our employees paint on a small-sized canvas and exhibit their works along with those created by artists with developmental disabilities. In 2020, a total of 3,083 employees joined this program.

The exhibition was hosted through virtual means in an open-air venue located in Cheonan to help curb the spread of COVID-19, and works created with employees' portraits in celebration of our 50th anniversary were displayed. Gathering together people with disabilities and those without to create meaningful works, Samsung SDI reaffirmed its commitment to mutually-beneficial partnerships to shape a fully inclusive, flourishing future for all.

Dream Walking - School Forest signboard in Cheonan Seongseong elementary school

Hands-on - Environmental Education Book

Hands-on - Exhibition for 'Greedanemo' and Samsung SDI's 50th Anniversary

APPENDICES

Value Creation Model

Samsung SDI's Value Creation Model

Samsung SDI pursues ESG management through its commitment to minimizing environmental issues throughout the entire business process ranging from product development to manufacturing and disposal. To this end, we implement tasks to create and improve values in each of the eight processes along the value chain that are associated with partner companies, customers and stakeholders while ensuring that the outcomes generated as such go to consistently contribute to stakeholders.

(Economic data: on a consolidated basis, Social and Environmental data: domestic and overseas worksites)

INPUT

Financial Capital	
Listed on the Korea Stock Exchange in 1979	
Total No. of shares issued (common stock)	68,764,530
Cash dividend payout ratio	11.6%
Financial capital sourced from shareholders and investors	
Disclosure of business status at the general shareholder meeting and others	
Intellectual Capital	
Intangible assets	KRW 793.573 billion
R&D investments (percentage of sales)	KRW 808.3 billion (7.2%)
Social and Relationship Capital	
Operation of 27 locations in total	
Employees' engagement in social contribution programs	
Operation of Green Planet Environment School, Green Planet Dreaming School, and Green Planet Future Science School	
Social contribution investments	KRW 6.77 billion
Manufacturing Capital	
Production facilities	12 locations
Production capacity	Small-sized Li-ion battery: 1,993 million units EMC: 3,317 tons Polarizing film: 96,356,000m^2
Tangible assets	KRW 6.1 trillion
Human Capital	
Total No. of employees	27,984 persons
Executive director/ independent director	3 directors/4 directors
New recruits	5,512 persons
Training expenses	KRW 7.5 billion
Natural Capital	
Achievement of ISO 14001 certification	
Investment in energy use reduction	KRW 2.87 billion
Energy consumption	23,661TJ

Management System and Operational Activity

1. R&D

We are committed to establishing differentiated technology to make our products more competitive, and are strengthening the technology asset management system and the collaboration system between partner companies and our relevant organizations.

- Improve the technical data/drawing sharing system
- Adopt a system to ensure consistency between drawings and component data

2. Procurement and Purchasing

We optimize our global purchasing process to procure at the right time in the right quantity, and are establishing a responsible raw material use process that excludes child labor in partnership with customers.

- Operate a system to synchronize material check and procurement, production and shipment plans among global locations
- Establish a responsible raw material operation system among customers, Samsung SDI and active material companies

3. Manufacturing

We are undertaking the smart factory initiative to automate the transport and input of materials to ensure homogeneous product quality and to leverage the data measured in the production process to automatically control equipment. We optimize our manufacturing operations through the simulations performed on the transfer route of materials, semi-finished products and finished products within the production process.

- Advance the function of data detection on equipment abnormalities and automatic blocking
- Establish a shop floor measurement automation system and a fully-automated control system

4. Logistics

We reinforce the system-based transport data interchanges among customers, partner companies and logistics companies while increasing fill rates to reduce the number of deliveries. We are developing and operating scenarios to swiftly respond to anomaly or emergency situations including COVID-19.

- Establish and apply an EDI (Electronic Data Interchange)-based transport data link system among automotive customers and material suppliers
- Advance the 3D warehouse management system and expand its application to other locations
- Introduce the Road Safety Remuneration Act for domestic container trucks

5. Marketing

We operate a product planning system in line with market trends, and expand order-winning opportunities through the system-based management of marketing data.

- Establish an AI-based automatic classification system on market demand data

6. Sales

We align the demand data collected with our production plans to respond to markets and customers more flexibly, and are strengthening the product entry/shipment and inventory management systems concerning VMI warehouses where customer sales occurs.

- Improve the management system for automotive customer demand data (call-off)
- Improve the VMI warehouse management system in Europe

7. Service

We manage the history of after-sales services provided to respective installation sites concerning our ESS products sold to end customers to improve user convenience and customer trust.

- Establish an information management system on ESS-installed sites

8. Business Management

We are reinforcing the management plans to improve sustainability in manufacturing and business operations, spanning safety, environment, HR and labor relations, while building infrastructure to secure the stability of the information system and its data.

- Extend the application scope of the energy management system to overseas corporations
- Replace aging IT infrastructure and establish a disaster recovery (DR) system at respective locations

OUTPUT / OUTCOME

Financial Capital	
Sales	KRW 11.3 trillion
Operating income	KRW 671.34 billion
Net income	KRW 631 billion
Intellectual Capital	
Strategic directions set and approved for respective business divisions	
Patents registered (cumulative)	17,636 patents
Social and Relationship Capital	
Corporate taxes paid	KRW 172.44 billion
Partners whose contracts were terminated due to corruption	Zero
Social contribution beneficiaries (cumulative)	Green Planet Environment School 37,552 persons Green Planet Dreaming School 3,751 persons Green Planet Future Science School 4,298 persons
Manufacturing Capital	
Main product output	Small-sized Li-ion battery: 1,537 million units EMC: 1,969 tons Polarizing film: 96,356,000m^2
S-Partners certified	55 companies
Purchases made	KRW 7.35 trillion
Human Capital	
Ratio of locally-hired leaders	48.5%
Ratio of female managers	11.2%
Employees injury frequency rate/loss rate	0.0596/6.3578
Natural Capital	
Energy consumption reduced	KRW 4.4 billion in fuel consumption KRW 15.1 billion in electricity and steam consumption
GHG emissions generated	1,399,830tCO$_2$e

Materiality Analysis

Issue Identification & Materiality Analysis

Samsung SDI comprehensively analyzes the sustainability issues and social trends raised by wide-ranging international standards and initiatives as well as internal/external management agendas for the concerned reporting year on an annual basis to update its pool of sustainability issues. In 2020, this process led us to create a pool of 35 issues, and material issues were analyzed and selected based on business impact and social concern.

STEP 1. Analyze the environment

Internal Environment

- **CEO's message for 2020**
- **Samsung SDI newsletters**
  42 internal news articles in 2020
- **Internal stakeholder survey**
  Engaging employees who participated in the preparation of the sustainability report (Mar. 2021)

External Environment

- **Media analysis**
  1,143 media articles related to Samsung SDI in 2020
- **Industry analysis**
  Sustainability management issues reported by industry peers and major customers
- **International standards and initiatives**
  GRI Standards, ISO 26000, UNGC, UN SDGs, SASB, DJSI
- **External stakeholder survey**
  Engaging sustainability management experts (Mar. 2021)

STEP 2. Identify a pool of issues

Samsung SDI's pool of sustainability issues for 2020

Business and economy	7 issues	35 issues
Environment	10 issues	
Labor and human rights	9 issues	
Society and ethics	9 issues	

Perform the materiality analysis

Business Impact

Impact on our business and priorities in our internal strategy

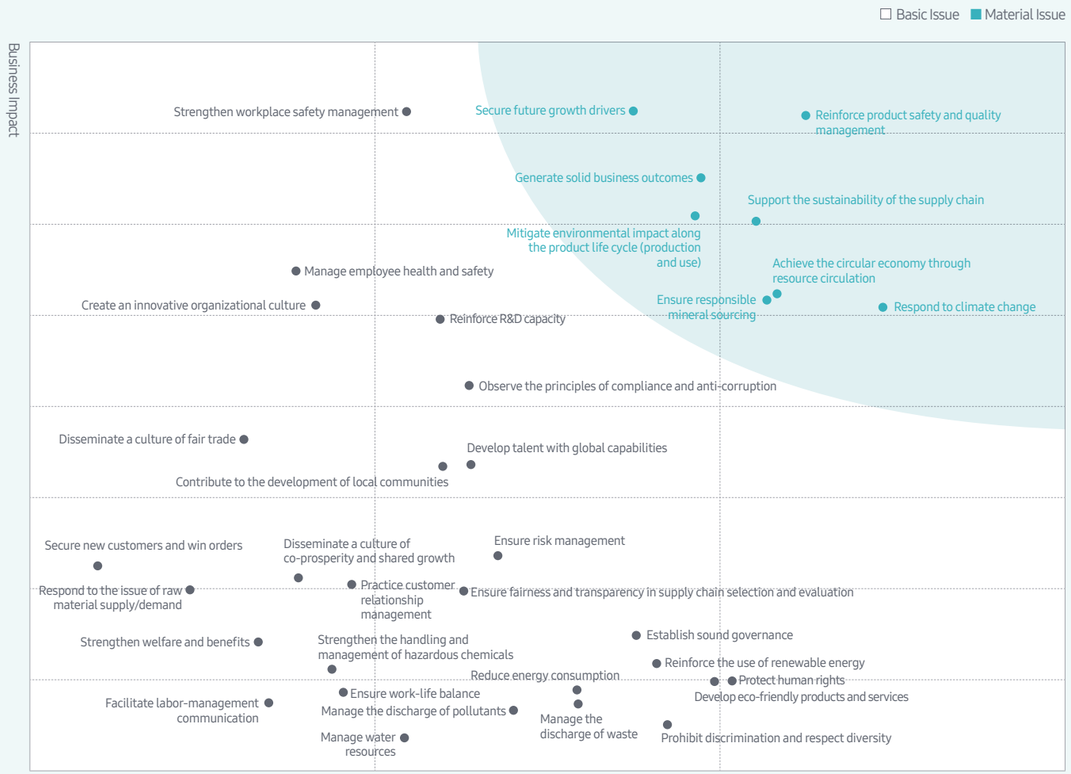
Social Concern

Social trends and the level of external concerns

Stakeholders	Major Issues for 2020	Communication Channel	
Customers	- Reinforce product safety and quality management - Contribute to the development of local communities	- Customer visits - Official website	- QBR(Quarterly Business Review) meetings - QTR(Quarterly Technical Review) meetings
Partner companies	- Support the sustainability of the supply chain - Disseminate a culture of fair trade - Disseminate a culture of co-prosperity and shared growth	- Purchasing portal system - Exchange meetings among partner companies	- SSP(Samsung SDI Partner's Association) - Visits by the CEO and executives to partner companies
Government	- Respond to climate change - Reinforce R&D capacity - Reinforce the use of renewable energy	- Participation in government-sponsored projects - Operation of joint cooperation programs	
Industry associations/ universities/ research institutes	- Secure future growth drivers - Develop talent with global capabilities	- Member activities at associations (Korea Battery Industry Association) and societies - R&D (Open Innovation) - Joint cooperation programs	
Local communities/ civil organizations	- Mitigate environmental impact along the product life cycle (production and use) - Contribute to the development of local communities	- Local Community Council - Social contribution activities - Sisterhood ties	
Employees	- Protect human rights - Prohibit discrimination and respect diversity - Strengthen welfare and benefits - Facilitate labor-management communication	- Works Council - Counseling Center - Management briefings - Satisfaction surveys	- Culture Leader - SDI Talk - Global SDI Pick! - Newsletters
Shareholders and investors	- Generate solid business outcomes - Ensure risk management - Establish sound governance	- IR earnings conference calls - IR roadshows - IR website - IR phone contact	- General shareholder meetings - Disclosures - Year-round meetings - IR conferences

Materiality Matrix

In 2020, a total of eight issues were selected as Samsung SDI's material issues.



Reporting of Material Issues

Rank	Material Issue	Reporting Topic	Reporting Page	GRI Standards Disclosure
1	Reinforce product safety and quality management	Sustainability Megatrend > 3. Product Safety	34-37p	416-1, 2
2	Secure future growth drivers	Overview > Business Overview	10-13,52-53p	Non-GRI
3	Generate solid business outcomes	Overview > Business Overview	10-13p	Non-GRI
4	Support the sustainability of the supply chain	Sustainability Megatrend > 4. Sustainable Supply Chain	38-43p	Non-GRI
5	Respond to climate change	Sustainability Megatrend > 1. Response to Climate Change	26-31p	201-2, 305-1~5
6	Mitigate environmental impact along the product life cycle (production and use)	Sustainability Megatrend > 1. Response to Climate Change	30-31p	Non-GRI
7	Achieve the circular economy through resource circulation	Sustainability Megatrend > 2. Environmental Impact Management	31p	301-2
8	Ensure responsible mineral sourcing	Sustainability Megatrend > 4. Sustainable Supply Chain	42-43p	308-1~2, 414-1~2

Financial Performance

Consolidated Statement of Financial Position

51st as of Dec. 31, 2020
50th as of Dec. 31, 2019
49th as of Dec. 31, 2018
(unit: KRW)

Item	End of 51st	End of 50th	End of 49th
Assets			
Current assets	5,657,405,165,394	5,181,414,896,890	5,519,342,209,666
Cash and cash equivalents	1,545,974,321,801	1,156,295,420,684	1,516,585,546,977
Account receivables and other receivables	1,870,381,153,317	2,015,345,598,328	1,851,185,858,690
Inventories	1,810,785,260,639	1,707,920,528,827	1,745,650,833,399
Other investments	167,037,269,633	135,761,635,931	143,164,812,551
Other current investments	256,395,938,005	154,545,416,286	198,560,107,177
Derivative assets	6,831,221,999	11,546,296,834	7,366,255,156
Non-current assets held for sale	-	-	56,828,795,716
Non-current assets	15,876,827,101,435	14,670,681,551,114	13,830,378,974,263
Account receivables and other receivables	25,279,489,150	27,812,097,927	23,168,938,800
Investments in associates	7,143,396,948,925	6,763,177,128,524	6,554,633,768,115
Property, plant and equipment	6,128,099,170,818	5,426,843,174,367	4,608,333,985,853
Intangible assets	793,573,297,061	831,370,661,521	866,271,119,300
Investment property	150,502,139,591	153,656,745,607	149,725,014,028
Deferred tax assets	96,846,429,192	85,799,169,237	51,799,609,019
Other investments	1,358,684,147,489	1,262,913,960,187	1,459,439,222,617
Other non-current assets	106,629,882,558	113,253,135,231	80,815,260,036
Derivative assets	73,815,596,651	5,855,478,513	36,192,056,495
Total assets	21,534,232,266,829	19,852,096,448,004	19,349,721,183,929
Liabilities			
Current liabilities	4,983,633,140,961	3,741,522,650,216	4,012,822,498,262
Account payables and other payables	1,809,091,871,927	1,434,987,949,747	1,859,434,196,479
Income taxes payable	44,391,708,778	72,873,576,031	35,623,226,493
Advances received	353,726,970,697	60,860,323,805	69,598,588,790
Unearned revenue	17,761,781,525	5,513,614,118	6,304,689,548
Short-term borrowings	2,427,504,179,850	1,766,474,985,603	1,739,389,710,470
Derivative liabilities	28,783,093,680	-	15,202,782,348
Provisions	302,373,534,504	400,812,200,912	285,640,857,536
Non-current liabilities held for sale	-	-	1,628,446,598
Non-current liabilities	3,191,672,237,752	3,450,228,602,652	3,111,679,469,477
Account payables and other payables	210,040,906,245	239,328,868,322	208,123,497,442
Long-term advances	1,344,199,495	2,863,948,796	-
Long-term unearned revenue	-	2,395,580,692	27,083,906,195
Long-term borrowings	1,484,319,604,943	1,801,994,890,105	1,514,282,000,856
Employee benefit liabilities	38,705,231,267	61,489,160,231	70,146,754,408
Derivative liabilities	-	2,420,075,456	29,866,610,049
Provisions	79,823,289,635	99,138,643,473	83,189,166,950
Deferred tax liabilities	1,377,439,006,167	1,240,597,435,577	1,178,987,533,577
Total liabilities	8,175,305,378,713	7,191,751,252,868	7,124,501,967,739
Total shareholders' equity			
Equity attributable to owners of the Parent Company	12,977,616,019,092	12,324,936,720,467	11,934,022,744,253
Capital stock	356,712,130,000	356,712,130,000	356,712,130,000
Capital surplus	5,001,974,693,202	5,001,974,693,202	5,037,936,783,944
Other capital items	-345,131,583,767	-345,131,583,767	-345,131,583,767
Accumulated other comprehensive income	545,959,019,790	404,513,003,532	271,989,660,350
Retained earnings	7,418,101,759,867	6,906,868,477,500	6,612,515,753,726
Non-controlling interests	381,310,869,024	335,408,474,669	291,196,471,937
Total stockholders' equity	13,358,926,888,116	12,660,345,195,136	12,225,219,216,190
Total liabilities and equity	**21,534,232,266,829**	**19,852,096,448,004**	**19,349,721,183,929**

Consolidated Statement of Comprehensive Income

51st as of Dec. 31, 2020
50th as of Dec. 31, 2019
49th as of Dec. 31, 2018
(unit: KRW)

Item	End of 51st	End of 50th	End of 49th
Revenue	11,294,770,446,035	10,097,426,164,132	9,158,272,454,945
Cost of sales	8,914,217,432,960	7,882,255,450,606	7,118,188,528,425
Gross profit	2,380,553,013,075	2,215,170,713,526	2,040,083,926,520
Selling, general and administrative expenses	1,709,217,654,651	1,752,994,251,257	1,325,113,320,369
Operating income	671,335,358,424	462,176,462,269	714,970,606,151
Other income	50,205,002,985	82,720,339,943	127,102,697,630
Other expenses	147,740,368,241	89,624,717,352	193,470,665,337
Financial income	528,826,123,713	314,411,076,884	384,164,315,917
Financial cost	591,925,690,538	383,670,661,559	338,715,140,922
Share of profit of equity accounted investees	292,710,207,317	178,629,731,183	342,181,823,994
Profit before income taxes	803,410,633,660	564,642,231,368	1,036,233,637,433
Income tax expenses	172,444,336,134	162,275,801,799	291,184,451,986
Profit for the year	630,966,297,526	402,366,429,569	745,049,185,447
Other comprehensive income	136,609,851,168	138,715,909,426	51,278,320,541
Items that will never be reclassified to profit or loss	59,405,681,279	36,230,016,544	36,023,582,593
Remeasurements of defined benefit liability	4,557,253,690	5,897,603,445	-29,815,080,893
Unrealized net changes in fair value of FVOCI financial assets	73,814,357,496	41,532,379,368	77,282,456,975
Related tax	-18,965,929,907	-11,199,966,269	-11,443,793,489
Items that are or may be reclassified to profit or loss	77,204,169,889	102,485,892,882	15,254,737,948
Change in equity of equity-method accounted investees	60,009,573,086	21,850,440,243	-6,897,968,336
Change in gain on translation of foreign operations	-26,482,304,334	60,421,135,318	39,557,923,656
Effective portion of unrealized changes in fair values of cash flow hedges	77,530,704,627	28,819,436,259	-25,658,003,955
Related tax	-33,853,803,490	-8,605,118,938	8,252,786,583
Total comprehensive income	767,576,148,694	541,082,338,995	796,327,505,988
Profit attributable to:			
Owners of the Parent Company	574,723,493,870	356,548,860,592	701,166,336,925
Non-controlling interests	56,242,803,656	45,817,568,977	43,882,848,522
Total comprehensive income attributable to:			
Owners of the Parent Company	719,623,908,425	493,820,676,756	748,427,028,644
Non-controlling interests	47,952,240,269	47,261,662,239	47,900,477,344
Earnings per share			
Ordinary share – Basic earnings per share	8,593	5,331	10,484
Preferred share – Basic earnings per share	8,643	5,381	10,534

Sales by Business Division

(on a consolidated basis, unit: KRW 100 million)

Category	51st	50th	49th
Energy solution	87,288	77,193	69,542
Electronic materials	25,660	23,781	22,041
Total	112,948	100,974	91,583

Sustainability Performance

Economic Performance

Production

Business		Unit	2018	2019	2020
Energy solution	Small-sized battery	Million	1,514	1,505	**1,537**
Electronic Materials	EMC	Ton	6,341	4,085	**1,969**
	Polarizing film	1,000 m^2	84,874	91,055	**96,356**

Market Share

Business		Unit	2018	2019	2020
Energy solution	Small-sized battery[1]	%	19	19	**18**
	- Cylindrical	%	24	25	**26**
	- Prismatic	%	20	15	**9**
	- Pouch	%	12	10	**9**
	Automotive battery[1]	%	5	5	**8**
	ESS[2]	%	46	29	**23**
Electronic Materials	EMC[3]	%	6	7	**7**

Source: 1) B3 Report, 2) SNE research, 3) Samsung SDI forecasts

Taxes Paid by Country and Continent

Category	Unit	2018	2019	2020
Korea	KRW	141,334,370,420	16,712,913,854	**10,770,144,804**
Japan	KRW	296,685,442	419,806,405	**270,427,271**
Americas and Europe	KRW	28,867,605,982	25,575,647,189	**37,120,086,061**
China and Southeast Asia	KRW	38,368,707,784	18,667,713,476	**37,964,819,171**
Latin America	KRW	4,338,053,536	30,445,256	**0**
Hong Kong	KRW	2,059,600,327	1,866,373,510	**1,431,640,895**

Samsung SDI complies with tax laws in countries where it operates and faithfully fulfills its tax filing and payment obligations. We assess tax risks from multiple aspects, and review our global worksites and respective business partners to prevent tax-related risks. To respond to regulations intended to prevent tax avoidance and tax evasion, we constantly monitor how tax authorities respond at the country and regional level as well as domestic/international tax laws, and reflect monitoring outcomes in our tax policy.

Environmental Performance

GHG Emissions

Category		Unit	2018	2019	2020
Total emissions		tCO_2e	1,129,564	1,275,165	**1,399,830**
Direct/indirect emissions	Direct emissions	tCO_2e	154,704	162,873	**183,925**
	Indirect emissions	tCO_2e	974,860	1,112,292	**1,215,905**
	Direct/indirect emissions intensity	tCO_2e/KRW 100 million	12.33	12.63	**12.39**
Other emissions	Employees' business travel	tCO_2e	4,385	5,529	**1,673**
	Product transport	tCO_2e	562	574	**568**
By region	Domestic	tCO_2e	511,379	536,928	**561,499**
	Overseas	tCO_2e	618,185	738,237	**838,331**
By product	Small-sized battery	tCO_2e	566,356	667,370	**764,133**
	Automotive & ESS battery	tCO_2e	331,027	371,585	**393,962**
	Electronic materials	tCO_2e	189,661	190,291	**195,817**
	R&D and others	tCO_2e	42,520	45,919	**45,918**

Energy Consumption

Category	Unit	2018	2019	2020
Company-wide consumption	TJ	18,947	21,297	**23,661**
- Domestic consumption	TJ	10,509	11,145	**11,601**
- Overseas consumption	TJ	8,438	10,152	**12,060**
Company-wide consumption intensity	TJ/KRW 100 million	0.21	0.21	**0.21**

Water Withdrawal

Category	Unit	2018	2019	2020
Company-wide withdrawal	Kiloton	7,138	7,640	**7,966**
- Domestic withdrawal	Kiloton	3,699	3,669	**3,900**
- Overseas withdrawal	Kiloton	3,438	3,971	**4,066**
Company-wide withdrawal intensity	Kiloton/KRW 100 million	0.08	0.08	**0.07**

Effluent Discharge

Category	Unit	2018	2019	2020
Company-wide discharge	Kiloton	3,511	3,329	**3,454**
- Domestic discharge	Kiloton	2,320	2,122	**2,299**
- Overseas discharge	Kiloton	1,190	1,207	**1,155**
Company-wide discharge intensity	Kiloton/KRW 100 million	0.04	0.03	**0.03**

Waste Generation and Disposal[1]

Category		Unit	2018	2019	2020
Total generation		Ton	112,112	123,174	**143,373**
- Domestic generation		Ton	67,987	56,417	**71,097**
- Overseas generation		Ton	44,125	66,756	**72,276**
Company-wide generation intensity		Ton/KRW 100 million	1.22	1.22	**1.27**
Designated waste generated		Ton	47,842	56,443	**64,050**
Domestic	Recycling rate	%	93.8	93.9	**96.1**
	Landfill rate	%	1.37	0.61	**0.45**
Overseas	Recycling rate	%	80.9	89.4	**77.3**
	Landfill rate	%	7.40	5.66	**6.28**
Waste disposal	Incineration	Ton	8,371	6,416	**14,316**
	Landfill	Ton	4,200	4,120	**4,859**
	Recycling	Ton	99,470	112,624	**124,183**
	Others (neutralization, etc.)	Ton	69	14	**15**

1) Reason for restatement from the previous year's report: While the total waste incinerated was previously included in the category of recycling, this was changed to include the waste incinerated by licensed waste recycling companies only in calculating recycling volume (rate).

Pollutant Generation

Category		Unit	2018	2019	2020
Water pollutant discharge intensity	BOD	kg/KRW 100 million	0.18	0.20	**0.11**
	COD	kg/KRW 100 million	1.11	0.94	**0.88**
	SS	kg/KRW 100 million	0.51	0.45	**0.41**
Air pollutant emissions intensity	NOx	kg/KRW 100 million	0.29	0.38	**0.62**
	SOx	kg/KRW 100 million	0.07	0.10	**0.03**
	Dust	kg/KRW 100 million	1.10	0.29	**0.56**

Annotations on environmental performance

1) Reporting scope: All domestic and overseas production facilities, the Headquarters, and the R&D Center, excluding sales bases and offices (including only those production facilities that have production records for 2020)
2) Intensity figures were calculated based on consolidated sales.
3) To set our company-wide mid-term environmental goal, five-year environmental data (2016~2020) was re-collected from domestic/overseas worksites that belong to the scope of environmental reporting to perform internal verifications, and this resulted in data restatements for some of our worksites.

Social Performance

Employee Data

Category		Unit	2018	2019	2020
Total		No. of persons	24,718	26,813	**27,984**
By gender	Male	No. of persons	18,307	20,364	**21,194**
	Female	No. of persons	6,411	6,449	**6,790**
By region	Korea	No. of persons	10,268	10,833	**10,705**
	Asia (excluding Korea)	No. of persons	12,242	12,121	**12,058**
	Europe	No. of persons	2,037	3,632	**4,959**
	Americas	No. of persons	171	227	**262**
By age	Under 30	No. of persons	12,185	12,636	**12,284**
	30~50	No. of persons	11,384	12,794	**14,065**
	50 and older	No. of persons	1,149	1,383	**1,635**
By employment type	Full-time	No. of persons	22,410	23,347	**24,392**
	Contract	No. of persons	1,387	1,871	**1,454**
	Dispatched[1)]	No. of persons	921	1,595	**2,138**

1) Domestic dispatched employees mainly assume positions of executive secretaries, administrative assistants, interpreters, and drivers, and overseas dispatched employees are responsible for manufacturing and packaging inspection among others.

Diversity and Social Equality

Category			Unit	2018	2019	2020
Employees with disabilities			No. of persons	152	169	**172**
Female employees	Local recruitment	Leaders at overseas worksites[1)]	No. of persons	184	205	**241**
		Locally-hired leaders	No. of persons	109	113	**117**
		Locally-hired leaders	%	59.2	55.1	**48.5**
	By job category	Development	%	19.6	19.7	**20.1**
		Manufacturing	%	27.6	24.1	**25.7**
		Quality & environment safety	%	36.3	36.5	**36.5**
		Sales & marketing	%	23.6	25.2	**25.5**
		Other jobs	%	19.3	19.8	**18.0**
	By region	Korea	%	12.8	13.4	**13.6**
		Asia (excluding Korea)	%	37.0	34.8	**34.7**
		Europe	%	21.4	18.2	**20.7**
		Americas	%	22.2	24.2	**24.8**
	By position	Rank-and-file employees	%	29.2	26.7	**26.9**
		Managers (senior professionals and higher positions)	%	9.4	10.5	**11.2**
		Executives (unregistered executive and higher positions)	%	4.9	5.2	**6.7**

1) Leader positions include group/team leaders and other leaders assuming such official positions.

Recruitment

Category		Unit	2018	2019	2020
Recruitment		No. of persons	8,188	6,792	**5,512**
By gender	Male	No. of persons	6,046	5,413	**4,144**
	Female	No. of persons	2,142	1,379	**1,368**
By region	Domestic	No. of persons	1,128	502	**367**
	Overseas	No. of persons	7,060	6,290	**5,145**

Remuneration

Category	Unit	2018	2019	2020
Wage	KRW million	977,764	1,062,900	**1,184,894**
Retirement benefits	KRW million	64,183	74,780	**84,213**
Ratio of base pay by gender	Male:female	1:1	1:1	**1:1**

Employee Grievance Handling (domestic)

Category	Unit	2018	2019	2020
Grievances submitted	No. of cases	887	1,083	**1,193**
Grievance handling rate	%	99.9	100.0	**100.0**

Organizational Culture

Category	Unit	2018	2019	2020
Samsung Culture Index (SCI) assessment scores	Point	70.0	71.4	**72.6**
Change Agents selected	No. of persons	250	272	**283**

Training

Category	Unit	2018	2019	2020
Total training expenditures	KRW 100 million	97	107	**75**
Accumulated No. of trainees	No. of persons	49,036	58,145[2)]	**50,628**
Training hours per employee[1)]	No. of hours/person	123	101	**90**
Training expenses per employee[2)]	KRW/person	984,151	1,120,602	**765,132**
Sales and marketing training expenses	KRW million	9	8	**9**

1) Based in Korea 2) Data on the number of trainees for 2019 was restated due to errors in data collection

Turnover[1)]

Category		Unit	2018	2019	2020
Turnover		%	22.2	18.1	**11.3**
- Domestic turnover		%	2.5	1.6	**1.8**
- Overseas turnover		%	35.9	29.6	**17.7**
By gender	Male	%	21.1	17.4	**10.8**
	Female	%	25.4	20.2	**12.9**
By region	Asia	%	37.2	30.0	**16.9**
	Europe	%	26.4	27.6	**21.4**
	Americas	%	28.7	26.6	**15.0**
By age	Under 30	%	35.2	31.3	**16.9**
	30~50	%	11.3	8.0	**7.9**
	50 and older	%	6.6	5.6	**5.3**

1) Turnover data is calculated by dividing the annual number of resignees by the annual average number of employees

Welfare and Benefits

Category		Unit	2018	2019	2020
Welfare and benefits expenditures		KRW million	297,369	332,563	**366,873**
Parental leave	Return-to-work ratio[1)]	%	95.8	99.4	**100.0**
	Return-to-work and retention ratio[2)]	%	96.5	99.1	**100.0**

1) Ratio of employees who returned to work in the concerned year after taking parental leave the previous year
2) Ratio of employees who worked 12 months and longer among those who returned to work after taking parental leave the previous year

Occupational Injury

Category		Unit	2018	2019	2020
Employees	Injuries	No. of cases	8	10	**4[1)]**
	Accident rate	-	0.0377	0.0376	**0.0143**
	- Domestic	-	0.0763	0.0554	**0.0280**
	- Overseas	-	0	0.0254	**0.0058**
	Illness rate	-	0.0054	0	**0**
	Fatalities	No. of persons	0	0	**0**
In-house partner companies	Injuries	No. of cases	1	3	**1[2)]**
	Accident rate	-	0.0459	0.0513	**0.0188**
	Fatalities	No. of persons	0	0	**0**

1) Accidents in grade D or higher that involved Samsung SDI employees (3 cases in Korea, 1 case overseas) 2) Outside partners not included

Detailed Occupational Injury Data in 2020

Category			Domestic	Overseas	Total
Employees	Injury frequency rate[1]	For every 300 days	0.1168	0.0241	**0.0596**
	Loss rate[2]		12.9223	2.2908	**6.3578**
	Injury rate (accidents + illnesses)		0.0280	0.0058	**0.0143**
In-house partner companies	Injury frequency rate		0.2793	0	**0.0783**
	Loss rate		18.4316	0	**5.1663**
	Injury rate (accidents + illnesses)		0.067	0	**0.0188**
Employees + in-house partner companies	Injury frequency rate		0.1366	0.0197	**0.0625**
	Loss rate		13.5962	1.8751	**6.1674**
	Injury rate (accidents + illnesses)		0.0328	0.0047	**0.0150**

1) Injury frequency rate: (No. of injuries/No. of annual work hours)X1,000,000
2) Loss rate: (No. of lost work days/No. of annual work hours)X1,000,000 (annual work hours = 8 hoursX300 days X No. of employees)

Purchases Made along the Supply Chain

Category	Unit	2018	2019	2020
Total purchases made	KRW 100 million	70,685	61,926	**73,455**
- Raw/subsidiary material purchases made	KRW 100 million	55,921	53,967	**60,793**
- Equipment purchases made	KRW 100 million	12,729	5,482	**9,971**
- MRO purchases made[1]	KRW 100 million	2,035	2,477	**2,691**
Ratio of local purchases made by partners (based on battery business)	%	39.0	35.0	**35.3**

1) MRO (Maintenance, Repair & Operation) purchases include the purchase of packaging materials

Shared Growth Agreement

Category	Unit	2018	2019	2020
Samsung SDI – first-tier partners	No. of companies	111	109	**110**
First-tier partners – second-tier partners	No. of cases	129	120	**129**
Second-tier partners – third-tier partners	No. of cases	-	42	**40**

Shared Growth Support and Performance

Category		Unit	2018	2019	2020
Financial support	Direct support (credit assistance for molding fees, etc.)	KRW 100 million	160	144	**135**
	Mixed support (contributions to the win-win fund)[1]	KRW 100 million	325	450	**450**
	Special support (training, etc.)[1]	KRW 100 million	4	2	**2**
Direct/indirect management support	On-the-job training (partners)	No. of persons	910	821	**851**
		No. of companies	137	111	**89**
	Online training (partners)	No. of persons	111	0	**35**
		No. of companies	11	0	**5**
	Recruitment support[2]	No. of persons	81	70	**52**
		No. of companies	4	7	**3**
	Innovation guidance	No. of companies	12	8	**6**
Performance in technology support and protection	Original trade secret certification system	No. of cases	47	74	**52**
	Technology escrow system	No. of cases	8	10	**8**
Performance in new market penetration	Buyer meetings hosted	No. of cases	6	11	**7**
	Product exhibitions operated for partners	No. of cases	1	1	**0**
	Support given to help penetrate into overseas markets	No. of cases	4	4	**0**

1) For first, second, third-tier partners
2) Support for creating jobs for youth (aged 15 and older and 30 and under)

S-Partner Certification

Category	Unit	2018	2019	2020
Domestic	No. of companies	60	70	**29**[1]
Overseas	No. of companies	31	20	**26**
Total	No. of companies	91	90	**55**
Partners who failed to meet the certification criteria	No. of companies	0	0	**0**

1) Excluding 4 partners that have been assessed for COVID-19

Employees' Participation in Social Contribution

Category	Unit	2018	2019	2020
Participation in social contribution programs	%	98.0	97.8	**99.1**
Volunteer hours per employee in Korea	No. of hours/person	13.7	13.0	**8.7**[1]

1) For one day each year, 8 hours are set as the target volunteer hour to encourage volunteering.

Major Social Contribution Achievements

Category		Unit	2018	2019	2020
Green Planet Environment School[1]	Beneficiaries	No. of persons	9,149	10,626	**716**
	Beneficiaries (cumulative)	No. of persons	26,210	36,836	**37,552**
Green Planet Dreaming School[2]	Beneficiaries	No. of persons	397	3,354	**-**
	Beneficiaries (cumulative)	No. of persons	397	3,751	**3,751**
Green Planet Future Science School[2]	Beneficiaries	No. of persons	-	4,298	**-**
	Beneficiaries (cumulative)	No. of persons	-	4,298	**4,298**
Blue Elephant	Beneficiaries (cumulative)	No. of persons	-	-	**12,269**

1) Green Planet Environment School was undertaken on the virtual online platform (career mentoring performed through remote videos)
2) In 2020, training was not provided due to COVID-19, and beneficiary data for 2020 was excluded

Social Contribution Expenditures

Category	Unit	2018	2019	2020
Management expenses[1]	KRW 100 million	22.5	21.9	**16.5**
Cash expenses[2]	KRW 100 million	27.4	40.0	**51.2**
Time expenses	KRW 100 million	34	41	**30**

1) Directly-operated programs 2) Donations made (Samsung year-end love your neighbor funds, etc.)

Compliance and Ethics Training

Category		Unit	2018	2019	2020
Samsung SDI	Anti-corruption (in Korea, cumulative)	No. of persons	4,591	1,020[1]	**101**[2]
	Compliance and ethics (in Korea, cumulative)	No. of persons	5,412	9,697	**12,063**
Supply chain	Compliance and ethics	No. of companies	53	80	**50**

1) In 2019, we did not provide special training, online training and dissemination training while focusing on offline training to increase the effectiveness of training for new hires and expatriates, which resulted in decreases in the number of trainees
2) In 2020, the number of trainees declined as the scope of training was minimized to introductory courses for new recruits with/without previous work experience amid the COVID-19 pandemic

Worksite Corruption Risk Assessment

Category	Unit	2018	2019	2020
Total worksites	No. of worksites	30	30	27
Worksites identified as at risk (number)	No. of worksites	2	2	1
Worksites identified as at risk (rate)	%	7	7	4

Corruption Audits and Resulting Disciplinary Measures Taken

Category	Unit	2018	2019	2020
Disciplinary measure taken as a result of corruption audits (domestic)	No. of persons	2	9	12
Business partners whose contract was terminated in relation to corruption	No. of companies	-	-	-

Compliance Audit

Category	Unit	2018	2019	2020
Compliance audits performed	No. of cases	17	17	22

EHS (Environment, Health & Safety) Audit

Category		Unit	2018	2019	2020
Meetings supervised by the CEO		No. of meetings	4	6	6
Improvement tasks identified through EHS audits	Domestic	No. of cases	81	660[1)]	475
	Overseas	No. of cases	266	259	160

1) The number of improvement tasks rose from 2018 in line with the increasing number of audit projects

Safety Job Qualification Training[1)]

Category	Unit	2018	2019	2020
Completion of safety job qualification training	%	-	100	99.9
Employees to be trained	No. of persons	-	1,225	1,942
Employees who completed training	No. of persons	-	1,225	1,940[2)]

1) As training was initiated in 2019, data has been collected since 2019 2) In 2020, two employees at the Ulsan worksite did not take the performance test.

Acquisition of National Health & Safety Engineer Qualifications

Category	Unit	2018	2019	2020
Employees with industrial engineer and above qualifications	%	68	60	51[1)]
Employees with master engineer and above qualifications	%	21	32	23[2)]

1) Qualifications recognized within the Safety and Environment Group (industrial safety engineers, industrial hygiene management engineers, firefighting equipment engineers + masters and technicians)
2) Qualifications recognized within the Safety and Environment Group (masters and technicians)

Development of Qualify Workforce

Category		Unit	2018	2019	2020
Quality management training hours[1)]		No. of hours	704	739	42
Development of quality management experts	Development of new auditors (IATF 16949, ISO 9001, etc.)	No. of new acquisitions	18	63	32
	Quality management qualifications[2)] (CQE, CRE, professional engineer quality control, etc.)	No. of new acquisitions	13	13	0

1) In 2020, no training other than legally-mandatory training was provided due to COVID-19 2) In 2020, training was completely canceled due to COVID-19, and no acquisitions were made

Customer Satisfaction Score[1)]

Business Division	Category	Unit	2018	2019	2020
Small-sized Li-ion Battery	Customer satisfaction score	Point	82.0	85.7	85.1
	Companies surveyed	No. of companies	23	21	15
	Customers surveyed	No. of persons	25	21	15
Automotive & ESS Battery	Customer satisfaction score	Point	90.0	82.8	81.2
	Companies surveyed	No. of companies	4	5	5
	Customers surveyed	No. of persons	4	5	5

1) Electronic Materials Business, amid the COVID-19 pandemic, did not conduct customer satisfaction surveys in 2020

GRI Standards Index

Universal Standards(GRI 100)

Topic	Disclosure	Indicators	Pages	Note
GRI 102: General Disclosure 2016				
Organizational Profile	102-1	Name of the organization	9	
	102-2	Activities, brands, products, and services	10-13, 16	
	102-3	Location of headquarters	9	
	102-4	Location of operations	8-9	
	102-5	Ownership and legal form	9	
	102-6	Markets served	8-9	
	102-7	Scale of the organization	9, 74, 76	
	102-8	Information on employees and other workers	76	
	102-9	Supply chain	38-39	
	102-10	Significant changes to the organization and its supply chain	15	
	102-11	Precautionary Principle or approach	41, 74	
	102-12	External initiatives	15, 42-43	
	102-13	Membership of associations	70	
Strategy	102-14	Statement from senior decision-maker	6-7	
	102-15	Key impacts, risks, and opportunities	10-13	
Ethics and Integrity	102-16	Values, principles, standards, and norms of behavior	14, 55	
	102-17	Mechanisms for advice and concerns about ethics	50-51, 57	
Governance	102-18	Governance structure	46	
	102-22	Composition of the highest governance body and its committees	47	
	102-23	Chair of the highest governance body	46	
	102-24	Nominating and selecting the highest governance body	47	
	102-26	Role of highest governance body in setting purpose, values, and strategy	46	
	102-28	Evaluating the highest governance body's performance	48	
	102-35	Remuneration policies	48	
	102-36	Process for determining remuneration	48	
Stakeholder Engagement	102-40	List of stakeholder groups	70	
	102-41	Collective bargaining agreements	55, 57	
	102-42	Identifying and selecting stakeholders	70	
	102-43	Approach to stakeholder engagement	70	
	102-44	Key topics and concerns raised	70	
Reporting Practice	102-45	Entities included in the consolidated financial statements	-	Annual Report p.3~4
	102-46	Defining report content and topic boundaries	70-71	
	102-47	List of material topics	71	
	102-48	Restatements of information	-	Annotations were made when deemed necessary
	102-49	Changes in reporting	-	Annotations were made when deemed necessary
	102-50	Reporting period	About this report	
	102-51	Date of most recent report	About this report	
	102-52	Reporting cycle	About this report	
	102-53	Contact point for questions regarding the report	About this report	
	102-54	Claims of reporting in accordance with the GRI Standards	About this report	
	102-55	GRI content index	81-83	
	102-56	External assurance	87-89	
GRI 103: Management Approach 2016				
Management Approach	103-1	Explanation of the material topic and its Boundary	15	
	103-2	The management approach and its components	26, 32, 34, 38	
	103-3	Evaluation of the management approach	15-16, 19	

Economic Performance(GRI 200)

Topic	Disclosure	Indicators	Pages	Note
GRI 201: Economic Performance 2016	201-1	Direct economic value generated and distributed	68-69	
	201-2	Financial implications and other risks and opportunities due to climate change	26-27	
	201-3	Defined benefit plan obligations and other retirement plans	76	
GRI 202: Market Presence 2016	202-2	Proportion of senior management hired from the local community	69, 76	
GRI 203: Indirect Economic Impacts 2016	203-1	Infrastructure investments and services supported	78-79	
	203-2	Significant indirect economic impacts	20-23	
GRI 204: Procurement Practices 2016	204-1	Proportion of spending on local suppliers	78	
GRI 205: Anti-corruption 2016	205-1	Operations assessed for risks related to corruption	80	
	205-2	Communication and training about anti-corruption policies and procedures	50-51	
	205-3	Confirmed incidents of corruption and actions taken	-	No such case
GRI 206: Anti-competitive Behavior 2016	206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	-	No such case
GRI 207: Tax 2019	207-1	Approach to tax	74	
	207-4	Country-by-country reporting	74	

Environmental Performance(GRI 300)

Topic	Disclosure	Indicators	Pages	Note
GRI 301: Materials 2016	301-2	Recycled input materials used	31	
GRI 302: Energy 2016	302-1	Energy consumption within the organization	75	
	302-3	Energy intensity	75	
	302-4	Reduction of energy consumption	28-29	
GRI 303: Water and Effluents 2018	303-1	Interactions with water as a shared resource	33	
	303-2	Management of water discharge-related impacts	33	
	303-5	Water consumption	75	
GRI 305: Emissions 2016	305-1	Direct (Scope 1) GHG emissions	74	
	305-2	Energy indirect (Scope 2) GHG emissions	74	
	305-3	Other indirect (Scope 3) GHG emissions	74	
	305-4	GHG emissions intensity	74	
	305-5	Reduction of GHG emissions	28	
	305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	75	
GRI 306: Waste 2020	306-1	Waste generation and significant waste-related impacts	33	
	306-2	Management of significant waste-related impacts	33	
	306-3	Waste generated	33, 75	
	306-4	Waste diverted from disposal	75	
	306-5	Waste directed to disposal	75	
GRI 307: Environmental Compliance 2016	307-1	Non-compliance with environmental laws and regulations	-	No such case
GRI 308:Supplier Environmental Assessment 2016	308-1	New suppliers that were screened using environmental criteria	40	
	308-2	Negative environmental impacts in the supply chain and actions taken	40	

Social Performance(GRI 400)

Topic	Disclosure	Indicators	Pages	Note
GRI 401: Employment 2016	401-1	New employee hires and employee turnover	76-77	
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	57	
	401-3	Parental leave	57, 77	
GRI 403: Occupational Health and Safety 2018	403-1	Occupational health and safety management system	58-59	
	403-2	Hazard identification, risk assessment, and incident investigation	58-62	
	403-5	Worker training on occupational health and safety	58, 80	
	403-6	Promotion of worker health	57	
	403-9	Work-related injuries	77-78	
	403-10	Work-related ill health	77-78	
GRI 404: Training and Education 2016	404-1	Average hours of training per year per employee	77	
	404-2	Programs for upgrading employee skills and transition assistance programs	54-55	
GRI 405: Diversity and Equal Opportunity 2016	405-1	Diversity of governance bodies and employees	47, 76	
	405-2	Ratio of basic salary and remuneration of women to men	76	
GRI 406: Non-discrimination 2016	406-1	Incidents of discrimination and corrective actions taken	-	No such case
GRI 412: Human Rights Assessment 2016	412-1	Operations that have been subject to human rights reviews or impact assessments	55	
	412-2	Employee training on human rights policies or procedures	55	
GRI 413: Local Communities 2016	413-1	Operations with local community engagement, impact assessments, and development programs	63-65	
GRI 414: Supplier Social Assessment 2016	414-1	New suppliers that were screened using social criteria	40	
	414-2	Negative social impacts in the supply chain and actions taken	40	
GRI 415: Public Policy 2016	415-1	Political contributions	-	No political donations were made in accordance with Article 31 of the Political Fund Act.
GRI 416: Customer Health and Safety 2016	416-1	Assessment of the health and safety impacts of product and service categories	35-36	
	416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	-	No such case
GRI 417: Marketing and Labeling 2016	417-2	Incidents of non-compliance concerning product and service information and labeling	-	No such case
	417-3	Incidents of non-compliance concerning marketing communications	-	No such case
GRI 418: Customer Privacy 2016	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	-	No such case
GRI 419: Socioeconomic Compliance 2016	419-1	Non-compliance with laws and regulations in the social and economic area	-	No such case

SASB Index

SASB Sustainability Disclosure - Hardware Industry

Accounting Metrics

Topic	Code	Accounting Metric	Page (Reference)
Product Security	TC-HW-230a.1	Description of approach to identifying and addressing data security risks in products	Samsung SDI Privacy Policy https://www.samsungsdi.com/privacy-policy.html
Employee Diversity & Inclusion	TC-HW-330a.1	Percentage of gender and racial/ethnic group representation for (1) management, (2) technical staff, and (3) all other employees	76p
Product Lifecycle Management	TC-HW-410a.1	Percentage of products by revenue that contain IEC 62474 declarable substances	Samsung SDI complies with global regulations such as EU RoHS and REACH and national laws. In addition, strict pre-inspection and follow-up management is implemented for all components and raw materials used in products.
	TC-HW-410a.2	Percentage of eligible products, by revenue, meeting the requirements for EPEAT registration or equivalent	N/A
	TC-HW-410a.3	Percentage of eligible products, by revenue, meeting ENERGY STAR® criteria	N/A
	TC-HW-410a.4	Weight of end-of-life products and e-waste recovered, percentage recycled	N/A * Please refer to 31p for Samsung SDI's efforts regarding Recycling and Reuse
Supply Chain Management	TC-HW-430a.1	Percentage of Tier 1 supplier facilities audited in the RBA Validated Audit Process (VAP) or equivalent, by (a) all facilities and (b) high-risk facilities	40p
	TC-HW-430a.2	Tier 1 suppliers' (1) non-conformance rate with the RBA Validated Audit Process (VAP) or equivalent, and (2) associated corrective action rate for (a) priority non-conformances and (b) other non-conformances	40p
Materials Sourcing	TC-HW-440a.1	Description of the management of risks associated with the use of critical materials	42-43p

Activity Metric

Code	Activity Metric	Page (Reference)
TC-HW-000.A	Number of units produced by product category	74p
TC-HW-000.B	Area of manufacturing facilities	8-9p
TC-HW-000.C	Percentage of production from owned facilities	2020 Annual Report 19-20p

TCFD Index

TCFD Recommendation Index

Category	TCFD Recommendation	Page (Reference)
Governance	a) Describe the board's oversight of climate-related risks and opportunities	27p
	b) Describe management's role in assessing and managing climate-related risks and opportunities	27p
Strategy	a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term	27p
	b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning	27p
	c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	27p
Risk Management	a) Describe the organization's processes for identifying and assessing climate-related risks	27p
	b) Describe the organization's processes for managing climate-related risks	27p
	c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management	27p
Metrics and Targets	a) Disclose the metrics used by the organization to assess climate related risks and opportunities in line with its strategy and risk management process	26-29p
	b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks	74p
	c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets	26-29p, 74p

UN SDGs

Samsung SDI is engaged in a wide spectrum of activities centered around its sustainability management strategies and material issues with an aim to contribute to the attainment of the UN Sustainable Development Goals (UN SDGs).

UN SDGs	Samsung SDI's Contribution	Reporting Page
Quality Education	- Operate learning courses, industry-academia training courses and license acquisition support programs to help employees strengthen their job expertise - Operate Samsung Environment Campus and other educational programs for adolescents	54-55p, 63-65p
Clean Water and Sanitation	- Manage the discharge of pollutants in accordance with the standards more stringent than the legally-allowable threshold by installing a remote water quality monitoring system - Improve treatment facilities in relation to organic/inorganic effluents generated from battery production locations	33p
Affordable and Clean Energy	- Contribute to the stability of the global renewable energy industry through the production and supply of ESS batteries for power applications - Expand the use of renewable energy across the entire worksites starting with the Hungary plant in 2021 - Undertake global company-wide energy conservation tasks	12p, 26p, 28-29p
Decent Work and Economic Growth	- Contribute to the expansion of the green industry through the supply of small-sized Li-ion batteries, automotive & ESS batteries and electronic materials - Support partner companies with capacity building through win-win cooperation consulting (management advisory) - Contribute to SMEs and partner companies improving their competitiveness through the benefit sharing system and assistance in recruiting outstanding talent	10-13p, 16p, 38-41p
Industry, Innovation and Infrastructure	- Set a goal of reducing GHG emissions by 33% from BAU levels by 2025 - Contribute to nurturing outstanding talent in the industry through cooperation with external specialized organizations and prestigious universities in Korea and abroad - Reach 7.2% in R&D investments against sales in 2020	26p, 52-53p, 68p
Sustainable Cities and Communities	- Operate appropriate control equipment for each emitting facility at the worksite to manage air pollutants - Minimize the generation of waste by improving failure rates within the manufacturing process - Contribute to reducing waste discharge by recycling end-of-life batteries and scraps from the manufacturing process	31p, 33p
Responsible Consumption and Production	- Ensure traceability along the supply chain for all major minerals, and use minerals verified by third-parties and certified accordingly - Analyze environmental impacts in the entire process from production to disposal through the extended LCA and reduce environmental loads - Perform the management and real-time monitoring of workplace safety, environment, health, chemicals and disaster control through the integrated safety and environment system - Conduct real-time monitoring of ESS operational data, and build a remote depository enabled by anomaly detection algorithms to strengthen battery safety	30p, 34-37p, 42-43p, 58-62p
Climate Action	- Implement systemic environmental impact mitigation activities by setting the goal of '100% renewable energy transition by 2050' - Minimize the environmental impact of products by establishing an end-of-life battery recovery, recycling and reuse process - Operate Green Planet Environmental School as an environmental educational program for children and adolescents to teach them on the importance of environmental protection and proper energy use	19p, 26-28p, 31p, 63p
Peace, Justice and Strong Institutions	- Verify and improve risks concerning workplace human rights and compliance in domestic and overseas worksites through the S-Partner certification system - Disseminate a culture of compliance at all levels by realigning the compliance team and operating a systemic compliance program	19p, 49-51p, 55p

GHG Emissions Verification Statement

kfq Korean Foundation for Quality

IQNet

Third Party's Verification Statement

Introduction

Korean Foundation for Quality (hereinafter 'KFQ') has been engaged by Samsung SDI Co., Ltd. (hereinafter 'the Company') to independently verify its 2020 Greenohouse Gas Emission Report of domestic corporations and 8 overseas subsidiaries (hereinafter ' Inventory Report').

Verification Scope

KFQ's verification was focused on all of the greenhouse gas emissions from domestic and foreign sources (direct emissions and indirect emissions) controlled by the Company. Scope 3 (Indirect-business trip and domestic logistics) is also considered in total Greenhouse Gas Emissions.

Verification Criteria

The verification process was based on 'Rule for emission reporting and certification of greenhouse gas emission tranding Scheme (Notification No. 2018-70 of Ministry of Environment)' (hereinafter 'the Scheme') and 'ISO14064-3' for every applicable part. For overseas subsidiaries, national net caloric value were preferentially applied but net caloric value in the Scheme was used in case of nonexistence of it. In addition, the indirect emissions (electricity) factor from 'IEA composite electricity/heat factor and national factor' was applied for foreign sites. For the Scope 3 of the domestic corporation, its emissions were calculated according to the internal guideline of the Company considering distance of business trip based on objective evidences. As for the factors considered in emission calculations, the latest factors were applied, thus consistency and correctiveness are sustained in 2020 Inventory Report against the internal guideline of the Company.

Verification Limitation

In order to confirm the data and information provided by the Company, sampling method was applied in the course of the verification. As the verification of foreign sites is performed only through document review, the information and data provided by the Company were recognized and reviewed.

Conclusion/Opinion

Based on verification process according to the Scheme, KFQ obtained reasonable basis to derive following conclusion on the greenhouse gas emission data in the Inventory Report.

1) The Company's 2020 Report on Quantity of emitted Greenhouse Gas was documented in accordance with 'Rule for emission reporting and certification of greenhouse gas emission trading scheme' and 'ISO 14064-1:2006' run by the government.
2) According to materiality assessment on the quantity of greenhouse gas emitted from all domestic business sites in 2020, material discrepancy is less than the criteria of 2.5% for an organization that emits up to 500,000tCO_2_eq under 5,000,000 tCO_2_eq in accordance with "Rules for verification of operating the greenhouse gas emission trading scheme"
3) For the 8 overseas subsidiaries, material assessment was conducted according to the document review result and it shows that material discrepancy is less than 2.5%
4) In 2020 Samsung SDI Co., Ltd., Greenhouse Gas Emission Report, no significant errors, omissions, or inappropriate matters were found except for emission sources that were not considered in the relevant greenhouse gas calculation guidelines.

(Unit: ton CO_2 _eq)

Report year		2020	
Verification Scope		Domestic	Overseas
GHG emission	Direct Emission(Scope 1,2)	561,499	838,331
	Indirect Emission (Scope 3 : Business trip and logistics for the domestic corporation)	2,241	-

5) Thus, KFQ concludes that the Greenhouse Gas Emissions and Energy Consumption of Samsung SDI Co., Ltd., in 2020 is correctly calculated and stated.

April 14th, 2021

Ji Young Song

Ji Young Song

President & CEO Korean Foundation for Quality

Independent Assurance Statement

To readers of SAMSUNG SDI Sustainability Report 2020

Introduction

Korea Management Registrar (KMR) was commissioned by SAMSUNG SDI to conduct an independent assurance of its SAMSUNG SDI Sustainability Report 2020 (the "Report"). The data and its presentation in the Report is the sole responsibility of the management of SAMSUNG SDI. KMR's responsibility is to perform an assurance engagement as agreed upon in our agreement with SAMSUNG SDI and issue an assurance statement.

Scope and Standards

SAMSUNG SDI described its sustainability performance and activities in the Report. Our Assurance Team carried out an assurance engagement in accordance with the AA1000AS v3 and KMR's assurance standard SRV1000. We are providing a Type 2, moderate level assurance. We evaluated the adherence to the AA1000AP (2018) principles of inclusivity, materiality, responsiveness and impact, and the reliability of the information and data provided using the Global Reporting Initiative (GRI) Index provided below. The opinion expressed in the Assurance Statement has been formed at the materiality of the professional judgment of our Assurance Team.

Confirmation that the Report was prepared in accordance with the Core Options of the GRI standards was included in the scope of the assurance. We have reviewed the topic-specific disclosures of standards which were identified in the materiality assessment process. We also confirmed that the report was prepared in accordance with the SASB

- GRI Sustainability Reporting Standards
- Universal standards
- Topic specific standards
  - Management approach
  - GRI 201: Economic Performance
  - GRI 301: Materials
  - GRI 305: Emissions
  - GRI 308: Supplier Environmental Assessment
  - GRI 414: Supplier Social Assessment
  - GRI 416: Customer Health and Safety
- SASB Sustainability Disclosure Topics & Accounting Metrics

As for the reporting boundary, the engagement excludes the data and information of SAMSUNG SDI's partners, suppliers and any third parties.

KMR's Approach

To perform an assurance engagement within an agreed scope of assessment using the standards outlined above, our Assurance Team undertook the following activities as part of the engagement:

- reviewed the overall Report;
- reviewed materiality assessment methodology and the assessment report;
- evaluated sustainability strategies, performance data management system, and processes;
- interviewed people in charge of preparing the Report;
- reviewed the reliability of the Report's performance data and conducted data sampling;
- assessed the reliability of information using independent external sources such as Financial Supervisory Service's DART and public databases.

Limitations and Recommendations

KMR's assurance engagement is based on the assumption that the data and information provided by SAMSUNG SDI to us as part of our review are provided in good faith. Limited depth of evidence gathering including inquiry and analytical procedures and limited sampling at lower levels in the organization were applied. To address this, we referred to independent external sources such as DART and National Greenhouse Gas Management System (NGMS) and public databases to challenge the quality and reliability of the information provided.

Conclusion and Opinion

Based on the document reviews and interviews, we had several discussions with SAMSUNG SDI on the revision of the Report. We reviewed the Report's final version in order to make sure that our recommendations for improvement and revision have been reflected. Based on the work performed, it is our opinion that the Report applied the Core Option of the GRI Standards. Nothing comes to our attention to suggest that the Report was not prepared in accordance with the AA1000AP (2018) principles.

Inclusivity

SAMSUNG SDI has developed and maintained different stakeholder communication channels at all levels to announce and fulfill its responsibilities to the stakeholders. Nothing comes to our attention to suggest that there is a key stakeholder group left out in the process. The organization makes efforts to properly reflect opinions and expectations into its strategies.

Materiality

SAMSUNG SDI has a unique materiality assessment process to decide the impact of issues identified on its sustainability performance. We have not found any material topics left out in the process.

Responsiveness

SAMSUNG SDI prioritized material issues to provide a comprehensive, balanced report of performance, responses, and future plans regarding them. We did not find anything to suggest that data and information disclosed in the Report do not give a fair representation of SAMSUNG SDI's actions.

Impact

SAMSUNG SDI identifies and monitors the direct and indirect impacts of material topics found through the materiality assessment, and quantifies such impacts as much as possible.

Reliability of Specific Sustainability Performance Information

In addition to the adherence to AA1000AP (2018) principles, we have assessed the reliability of economic, environmental, and social performance data related to sustainability performance. We interviewed the in-charge persons and reviewed information on a sampling basis and supporting documents as well as external sources and public databases to confirm that the disclosed data is reliable. Any intentional error or misstatement is not noted from the data and information disclosed in the Report.

Competence and Independence

KMR maintains a comprehensive system of quality control including documented policies and procedures in accordance with ISO/IEC 17021:2015 - Requirements for bodies providing audit and certification of management systems. This engagement was carried out by an independent team of sustainability assurance professionals. KMR has no other contract with SAMSUNG SDI and did not provide any services to SAMSUNG SDI that could compromise the independence of our work.

June 2021 Seoul, Korea

Korea Management Registrar

SRV1000 Sustainability Committee Assurance

AA1000 Licensed Report 000-129/V3-NYG8V

CEO E. J Hwang

SAMSUNG SDI

www.samsungsdi.com