

## Independent Assurance Report

### To the management of Samsung Electronics Co., Ltd.

We have undertaken an engagement requested by Samsung Electronics (the “Company”) to review the information established in Samsung Electronics Sustainability Report 2022 (the “Report”). It is the responsibility of the management to prepare the Report, and it is our responsibility to perform a limited assurance engagement and issue a statement based on the information collected.

### Responsibilities of the Company and Ernst & Young Han Young

The Company is responsible for collecting and presenting the data within the Report. This responsibility involves structuring, implementing, and maintaining the relevant corporate system so that there is no critical misstatement due to fraud or error. Our responsibility, in line with the contract, is to perform a ‘limited level’ of assurance regarding the selected quantitative and qualitative performance stated in the Report. We shall hold no responsibility whatsoever to any other purpose, individual or organization in respect to the result of the limited assurance performed. The decision made by the third party based on the Report is the sole responsibility of the third party.

### Scope and context

The limited assurance was performed based on the following information.

GRI index: p101~p103

Facts&Figures: p90~p97

### Description of procedures performed We conducted

the assurance engagement in accordance with ISAE3000<sup>1)</sup> developed by IAASB.

The following procedures were performed to reach our conclusion on the Report:

- Identified the Company's processes for stakeholder engagement
- Identified the Company's processes for determining material issues of key stakeholders
- Examined media coverage of the Company's environmental, social and governance (“ESG”) issues during the reporting period
- Analyzed recently reported ESG issues of the Company's global competitors
- Conducted interviews with respective personnel regarding the Company's ESG activities and reporting Process during the reporting period
- Inspected data regarding the Company's ESG performance, supporting evidence for assertions, and intranet source data
- Identified the Company's process for collecting and consolidating ESG performance data
- Reviewed whether the financial performance data has been appropriately extracted from the Company's audited financial statements.

1) International Standard on Assurance Engagements: Assurance Engagements Other than Audits or Reviews of Historical Financial Information issued by International Federation of the Accountants

### Level of assurance

We conducted our limited assurance engagement in accordance with ISAE 3000. Procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than in a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

### Conclusion on limited assurance

Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that the Report is not prepared, in all material respects, in accordance with the standard adopted by the Company.

### Independence

We comply with the Code of Ethics issued by the International Federation of Accountants.

### Our engagement team

This engagement was performed by an assurance team of extensive experience and expertise in the ESG sector.

17 June, 2022  
Ernst & Young Han Young

# Verification Statement on 2021 Samsung Electronics Co.,Ltd., Greenhouse Gas Emission



## Introduction

Korean Foundation for Quality (hereinafter 'KFQ') has been engaged by Samsung Electronics Co.,Ltd (hereinafter the 'Company') to independently verify its 2021 Greenhouse Gas Emission Report of domestic corporations and 24 overseas subsidiaries. It is the responsible of the Company to compile the Greenhouse Gas Emission Report according to the 'Guidelines for GHG emission reporting and certification of GHG emission trading scheme (Notification No. 2021-278 of Ministry of Trade, Industry and Energy)', GHG Protocol Scope 2 Guidance' and 'ISO 14064-1:2006' and KFQ has responsibility to conduct verification based on 'ISO 14064-3:2006' to provide verification opinion on compliance of the Report against verification criteria.

## Verification Scope

In this verification, domestic corporations and 24 overseas subsidiaries under operational control of Samsung Electronics Co.,Ltd, and reported emission is including Scope 1 and Scope 2 emission.

## Verification Procedure

The Verification has been planned and conducted by the "Greenhouse Gas and Energy Target Management Scheme", and to reach reasonable level of assurance.

## Limitations of verification

Accuracy and completeness of emission data reported in the 'GHG Inventory' are subject to inherent limitations due to their nature and the methodology used in determining, calculating and estimating such data.

## Conclusion/Opinion

Through the verification process according to the 'ISO 14064-3:2006' KFQ could obtain reasonable basis to express following conclusion on the Greenhouse Gas Emission Report

- 2021 Samsung Electronics Co.,Ltd., Greenhouse Gas Emission Report was prepared against 'Samsung Electronics Co.,Ltd., Greenhouse Gas Inventory Guideline' developed based on the 'Guidelines for GHG emission reporting and certification of GHG emission trading scheme', GHG Protocol Scope 2 Guidance' and 'ISO 14064-1:2006'
- As a result of materiality assessment on 2021 domestic Greenhouse Gas Emission, material discrepancy is less than the criteria of 2.0% for the organization which emits more than 5,000,000 tCO2-eq/year in accordance with the requirements of the 'Guidelines of verification for Greenhouse gas emission trading scheme'.
- For the 24 overseas subsidiaries, document review was conducted for entire 24 subsidiaries as well as Company self-assessment. The result of material discrepancy is less than 2.0%.

- As reported Greenhouse Gas Emission purchased electricity, process emission by fluorinated gas use and LNG consumption take more than 99% of total emission. Activity data of these emission sources were checked through the objective evidence provided by supplier therefore KFQ could confirm that these activity data is valid itself.
- The efficiency of process emission reduction technology that affects the calculation of greenhouse gas emissions has to reflect the values guaranteed by the government and third parties. However, the efficiency was calculated based on the Company's' own methodology, and errors are not included in the verification opinion. For the overseas subsidiaries, each national net caloric value and electricity emission factor were preferentially used but net caloric value and electricity emission factor were adopted from IPCC Guidelines or Korean Energy Law Enforcement Regulation in any change of these parameters or factors. Also, in case of buying credits(ex. RECs) in the market, the offset credit is applied to evaluate the emission and record separately in market base section.
- Except unconsidered emission source in the 'Samsung Electronics Co.,Ltd, Greenhouse Gas Inventory Guideline', material error, omission or insignificant issues was not found in 2021 Samsung Electronics Co.,Ltd., Greenhouse Gas Emission Report.

2021 Greenhouse Gas Emissions of 『Samsung Electroinics CO.,Ltd.』 (Unit: kiloton Co<sub>2</sub> eq)

Division	Total		Domestic		Overseas	
	Location based	Market based	Location based	Market based	Location based	Market based
Direct Emission(Scope 1)	7,604	7,604	5,695	5,695	1,909	1,909
Indirect Emission(Scope 2)	12,566	9,796	8,801	8,576	3,765	1,220
Sub total	20,170	17,400	14,496	14,271	5,674	3,129

May 10<sup>th</sup>, 2022

Ji Young Song

CEO Ji-Young Song  
Korean Foundation for Quality (KFQ)

## GRI Index

GRI Standards			Status	Page	Comments
GRI 102 General Disclosures					
Organizational Profile	102-1	Name of the organization	●	3	
	102-2	Activities, brands, products, and services	●	3	
	102-3	Location of headquarters	●	4	
	102-4	Location of operations	●	4	
	102-5	Ownership and legal form	●	X	Refer to the business report
	102-6	Markets served	●	4	
	102-7	Scale of the organization	●	3-4	
	102-8	Information on employees and other workers	●	91-92	
	102-9	Supply chain	●	4, 77-83	
	102-10	Significant changes to the organization and its supply chain	●	X	Refer to the business report
	102-11	Precautionary Principle or approach	●	7-9	
	102-12	External initiatives	●	19-20, 60, 83	
Strategy	102-13	Membership of associations	●	19	
	102-14	Statement from senior decision-maker	●	2	
	102-15	Key impacts, risks, and opportunities	●	26, 85	
Ethics and Integrity	102-16	Values, principles, standards, and norms of behavior	●	X	Refer to the company website
	102-17	Mechanisms for advice and concerns about ethics	●	7-9	
Governance	102-18	Governance structure	●	5-6	
	102-19	Delegating authority	●	18	
	102-20	Executive-level responsibility for economic, environmental, and social topics	●	18	
	102-21	Consulting stakeholders on economic, environmental, and social topics	●	19	
	102-22	Composition of the highest governance body and its committees	●	5-6	
	102-23	Chair of the highest governance body	●	5-6	
	102-24	Nominating and selecting the highest governance body	●	5-6	
	102-25	Conflicts of interest	●	5-6	
	102-26	Role of highest governance body in setting purpose, values, and strategy	●	5-6, 18	
	102-27	Collective knowledge of highest governance body	●	18	
	102-28	Evaluating the highest governance body's performance	●	5-6	
	102-29	Identifying and managing economic, environmental, and social impacts	●	18	
	102-30	Effectiveness of risk management processes	●	5-6, 18	
	102-31	Review of economic, environmental, and social topics	●	18	
	102-32	Highest governance body's role in sustainability reporting	●	18, 85	
	102-33	Communicating critical concerns	●	5-6, 18	
	102-34	Nature and total number of critical concerns	●	5-6, 85	

GRI Standards			Status	Page	Comments
Stakeholder engagement	102-35	Remuneration policies	●	X	Refer to the business report
	102-36	Process for determining remuneration	●	X	Refer to the business report
	102-37	Stakeholders' involvement in remuneration	○	X	
	102-38	Annual total compensation ratio	○	X	
	102-39	Percentage increase in annual total compensation ratio	○	X	
	102-40	List of stakeholder groups	●	19	
	102-41	Collective bargaining agreements	●	63-64	
	102-42	Identifying and selecting stakeholders	●	18-19	
	102-43	Approach to stakeholder engagement	●	19	
	102-44	Key topics and concerns raised	●	19	
Reporting Practice	102-45	Entities included in the consolidated financial statements	●	X	Refer to the business report
	102-46	Defining report content and topic Boundaries	●	85	
	102-47	List of material topics	●	85	
	102-48	Restatements of information	●	X	Corrections are noted in that information
	102-49	Changes in reporting	●	85	No significant changes during reporting period
	102-50	Reporting period	●	109	
	102-51	Date of most recent report	●	109	
	102-52	Reporting cycle	●	109	
	102-53	Contact point for questions regarding the report	●	109	
	102-54	Claims of reporting in accordance with the GRI Standards	●	109	
	102-55	GRI content index	●	101-103	
	102-56	External assurance	●	99	

Management Approach					
	103-1	Explanation of the material topic and its Boundary	●	85	
	103-2	The management approach and its components	○	X	
	103-3	Evaluation of the management approach	○	X	

GRI 200 Economic Standard Series					
Economic Performance	201	Management Approach	●	3	
	201-1	Direct economic value generated and distributed	●	90	
	201-2	Financial implications and other risks and opportunities due to climate change	●	26	
	201-3	Defined benefit plan obligations and other retirement plans	●	X	Refer to the business report
	201-4	Financial assistance received from government	○	X	
Market Presence	202	Management Approach	○	X	
	202-1	Ratios of standard entry level wage by gender compared to local minimum wage	○	X	
	202-2	Proportion of senior management hired from the local community	○	X	

## GRI Index

GRI Standards			Status	Page	Comments
Indirect Economic Impacts	203	Management Approach	●	21, 41, 85, 88	
	203-1	Infrastructure investments and services supported	●	42-48	
	203-2	Significant indirect economic impacts	●	42-48	
Procurement Practices	204	Management Approach	●	76	
	204-1	Proportion of spending on local suppliers	○	X	
Anti-Corruption	205	Management Approach	●	7-9	
	205-1	Operations assessed for risks related to corruption	●	7-9	
	205-2	Communication and training about anti-corruption policies and procedures	●	7-9	
	205-3	Confirmed incidents of corruption and actions taken	○	X	
Anti-Competitive Behavior	206	Management Approach	●	7-9	
	206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	●	X	Refer to the business report
TAX	207	Management Approach	●	X	Refer to the company website
	207-1	Approach to tax	●	X	Refer to the company website
	207-2	Tax governance, control, and risk management	●	X	Refer to the company website
	207-3	Stakeholder engagement and management of concerns related to tax	●	X	Refer to the company website
	207-4	Country-by-country reporting	●	90	
GRI 300 Environmental Standards Series					
Materials	301	Management Approach	●	24	
	301-1	Materials used by weight or volume	○	X	
	301-2	Recycled input materials used	●	32, 94	
Energy	301-3	Reclaimed products and their packaging materials	●	94	
	302	Management Approach	●	24	
	302-1	Energy consumption within the organization	●	94	
	302-2	Energy consumption outside of the organization	○	X	
	302-3	Energy intensity	○	X	
	302-4	Reduction of energy consumption	●	27-28	
Water	302-5	Reductions in energy requirements of products and services	●	29	
	303	Management Approach	●	37-38	
	303-1	Interactions with water as a shared resource	●	38, 95-96	
	303-2	Management of water discharge-related impacts	●	95-96	
	303-3	Water withdrawal	●	38, 95-96	
	303-4	Water discharge	●	38, 95-96	
Biodiversity	303-5	Water consumption	●	38, 95-96	
	304	Management Approach	●	X	Refer to the company website

GRI Standards			Status	Page	Comments
Emissions	304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	●	X	Refer to the company website
	304-2	Significant impacts of activities, products, and services on biodiversity	●	39	
	304-3	Habitats protected or restored	●	39	
	304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	●	X	Refer to the company website
	305	Management Approach	●	27-31	
	305-1	Direct (Scope 1) GHG emissions	●	94	
	305-2	Energy indirect (Scope 2) GHG emissions	●	94	
Waste	305-3	Other indirect (Scope 3) GHG emissions	○		
	305-4	GHG emissions intensity	●	94	
	305-5	Reduction of GHG emissions	●	27-31	
	305-6	Emissions of ozone-depleting substances (ODS)	●	95	
	305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	●	95	
	306	Management Approach	●	36	
	306-1	Waste generation and significant waste-related impacts	●	36	
	306-2	Management of significant waste-related impacts	●	36	
	306-3	Waste generated	●	95	
	306-4	Waste diverted from disposal	●	95	
Environmental Compliance	306-5	Waste directed to disposal	●	95	
	307	Management Approach	●	7-9	
	307-1	Non-compliance with environmental laws and regulations	●	95	
Supplier Environmental Assessment	308	Management Approach	●	77-80, 82	
	308-1	New suppliers that were screened using environmental criteria	●	93	
	308-2	Negative environmental impacts in the supply chain and actions taken	●	77	
GRI 400 Social Standards Series					
Employment	401	Management Approach	●	59	
	401-1	New employee hires and employee turnover	●	91	
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	○	X	
Labor/Management Relations	401-3	Parental leave	●	92	
	402	Management Approach	●	63-64	
	402-1	Minimum notice periods regarding operational changes	○	X	
Occupational Health and Safety	403	Management Approach	●	69-72	
	403-1	Occupational health and safety management system	●	69-72	

## GRI Index

GRI Standards			Status	Page	Comments
Occupational Health and Safety continued	403-2	Hazard identification, risk assessment, and incident investigation	●	69-72	
	403-3	Occupational health services	●	69-72	
	403-4	Worker participation, consultation, and communication on occupational health and safety	●	69-72	
	403-5	Worker training on occupational health and safety	●	69-72	
	403-6	Promotion of worker health	●	69-72	
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	●	69-72	
	403-8	Workers covered by an occupational health and safety management system	●	69-72	
	403-9	Work-related injuries	●	92	
	403-10	Work-related ill health	○	X	
Training and Education	404	Management Approach	●	73	
	404-1	Average hours of training per year per employee	●	92	
	404-2	Programs for upgrading employee skills and transition assistance programs	●	73	
	404-3	Percentage of employees receiving regular performance and career development reviews	●	73, 92	
Diversity and Equal Opportunity	405	Management Approach	●	65-68	
	405-1	Diversity of governance bodies and employees	●	68	
	405-2	Ratio of basic salary and remuneration of women to men	●	65	We do not discriminate on any basis in all processes including promotion, compensation and disciplinary measures
Non-Discrimination	406	Management Approach	●	65	
	406-1	Incidents of discrimination and corrective actions taken	●	63-64	
Freedom of Association and Collective Bargaining	407	Management Approach	●	60-64	
	407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	●	60-64	
Child Labor	408	Management Approach	●	60	
	408-1	Operations and suppliers at significant risk for incidents of child labor	●	62	
Forced or Compulsory Labor	409	Management Approach	●	60	
	409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	●	62	
Security Practices	410	Management Approach	●	54	
	410-1	Security personnel trained in human rights policies or procedures	○	X	
Rights of Indigenous Peoples	411	Management Approach	○	X	
	411-1	Incidents of violations involving rights of indigenous peoples	○	X	

GRI Standards			Status	Page	Comments
Human Rights Assessment	412	Management Approach	●	60-62	
	412-1	Operations that have been subject to human rights reviews or impact assessments	●	62	
	412-2	Employee training on human rights policies or procedures	●	60-61	
	412-3	Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	○	X	
Local Communities	413	Management Approach	●	41	
	413-1	Operations with local community engagement, impact assessments, and development programs	●	42-45	
	413-2	Operations with significant actual and potential negative impacts on local communities	○	X	
Supplier Social Assessment	414	Management Approach	●	76-77	
	414-1	New suppliers that were screened using social criteria	●	93	
	414-2	Negative social impacts in the supply chain and actions taken	●	77-80	
Public Policy	415	Management Approach	●	7-9	
	415-1	Political contributions	●	X	Global Code of Conduct prohibits contribution to political parties
Customer Health and Safety	416	Management Approach	○	X	
	416-1	Assessment of the health and safety impacts of product and service categories	○	X	
	416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	●	X	Refer to the business report
Marketing and Labeling	417	Management Approach	●	X	Refer to the company website
	417-1	Requirements for product and service information and labeling	●	X	Refer to the company website
	417-2	Incidents of non-compliance concerning product and service information and labeling	○	X	
	417-3	Incidents of non-compliance concerning marketing communications	●	X	Refer to the business report
	418	Management Approach	●	50-51	
Customer	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	○	X	
Socioeconomic Compliance	419	Management Approach	●	7-9	
	419-1	Non-compliance with laws and regulations in the social and economic area	●	X	Refer to the business report

## TCFD Index

We disclose the following information based on the recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD) to share our track record of climate action with our stakeholders.

TCFD Recommendation		Related Contents	Page/ Reference
Governance	a) Describe the board's oversight of climate-related risks and opportunities.	Regulatory and supervisory developments related to climate change and the continued emergence of physical climate impacts directly affect our business operations and financial performance. Thus these climate change issues and our responses to address them are reported to the Board of Directors, our overarching decision-making body responsible for the oversight of our climate action and resource circulation management.	P.23 CDP : CC1.1a, CC1.1b
	b) Describe management's role in assessing and managing climate-related risks and opportunities.	The CEO is given the responsibility and authority to finalize company-wide measures, such as establishing climate change response strategies, developing relevant tasks, and implementing investments. The performance of our executive management is also assessed based on KPIs that include climate change-related metrics to ensure the substantive fulfillment of given roles. The CEO leads the Sustainability Council comprising the executives in charge of the major business areas and the consultative body consisting of the executives responsible for environment to establish and review the implementation status of relevant plans. The Environmental Management Task Force develops and oversees environmental management tasks including climate change responses. The EHS Council under each business unit monitors relevant issues at individual business sites and explores ways to resolve them. The Eco-Council advances strategies to develop eco-conscious products and reviews outcomes.	P.23 CDP : CC1.2a
Strategy	a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	<p>Risks and opportunities incurred by climate change affect not only products and services but also manufacturing processes, supply chains, R&amp;D, and other business activities. We regularly monitor the risks facing our business sites around the world in accordance with procedures and manuals established for different areas of environment and safety, climate change and energy, and compliance.</p> <p>To identify the financial impacts of these risks, we categorize them into conversion risks and physical risks and analyze opportunity factors as well. In the short term, we view emissions permit price increases, extreme weather events, and the requirement to introduce high-efficiency technologies as potential risks and emissions permit purchasing and reduced energy costs as opportunities. We project changing consumption patterns and expanded renewable energy use as medium-term opportunities and the physical impacts of climate change (warming temperatures, etc.) as long-term risks. We establish response measures for long-term risks based on the country-specific emissions mitigation plans pursuant to the Paris Agreement, emissions scenarios of the Intergovernmental Panel on Climate Change (IPCC), and Energy Technology Perspectives of the International Energy Agency (IEA).</p> <p>For more details, refer to the section entitled "Risks and Opportunity Analysis" on page 26 herein.</p>	P.23, P.25 CDP : CC2.2c, CC2.3a, CC2.4a, CC3.1c
	b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.	<p>As climate change continues to have adverse effects around the world, many countries are strengthening their relevant regulations. The costs related to natural disaster recovery and lost business opportunities are expected to rise in line with the aggravation of climate change. We continue to make investments in the areas of environment and safety and disaster-proof equipment to preempt the impacts of natural disasters as much as possible, which in turn will decrease our insurance premiums.</p> <p>As a company subject to Korea's emissions trading scheme, we project that our costs for responding to reinforced GHG emissions regulations and renewable energy purchasing will inevitably increase. In addition, failure to comply with global regulations and implement proper climate actions may compromise our brand value and adversely affect our sales.</p>	P.26 CDP : CC2.5, CC2.6
	c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	<p>Climate change-related risks are anticipated to have far-reaching effects through a set of highly complex channels. We strive to identify the socioeconomic impacts of climate change on our business through various scenarios, which are classified into aggressive action scenarios that require our global stakeholders to reach more ambitious targets and passive action scenarios that focus on maintaining the status quo.</p> <p>In accordance with the aggressive action scenarios, products with low energy efficiency ratings are projected to decrease in sales in the long term, while eco-conscious, high-efficiency products are expected to record continued sales growth. To remain prepared for such scenarios, we plan to make continued investments to develop ultra-low-power semiconductors and improve the energy efficiency of the representative models of the six main product categories. We will also take active measures to ensure GHG emissions mitigation and full conversion to renewable energy, while also promoting the energy efficiency enhancement of all of our products.</p>	P.26-31 CDP : CC3.1c, CC3.1d

## TCFD Index

TCFD Recommendation		Related Contents	Page/ Reference
Risk Management	a) Describe the organization's processes for identifying and assessing climate-related risks.	Our climate change-related risks concerning business operations, product planning, and industry trends are assessed regularly by related organizational units based on the environmental management frameworks of ISO 14001 and ISO 50001. Individual business sites are required to enter their GHG data (electricity, fuel, manufacturing process gases, etc.) into the EHS System, and we review their changes on a monthly basis and analyze the causes of such changes. Respective organizational units control GHG emissions in an integrated manner accordingly, and annual third-party audits are conducted to ensure the credibility and alignment of emissions data.	P.25 CDP : CC1.2a, CC2.2b
	b) Describe the organization's processes for managing climate-related risks.	To more effectively manage climate change-related risks, the company-wide organizational unit in charge of EHS monitors our energy consumption, GHG emissions, and renewable energy use as well as the physical impacts of climate change. Relevant issues already faced by or expected to affect our business sites around the world are discussed at the EHS Council of each business unit and other regularly convened consultative bodies to seek optimal solutions.  The Sustainability Council discusses relevant risks and opportunities from a company-wide perspective and makes necessary decisions. The Eco-Council examines climate change-induced business opportunities and shares the findings with pertinent business units for execution.	P.23 CDP : CC2.2d
	c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.	Semiconductor manufacturing requires a massive amount of power, and thus emissions permits and renewable energy prices are closely monitored and managed as factors that directly affect our business competitiveness. As the climate change-related regulations of individual countries influence our business activities and reputation, compliance with them is also managed within our company-wide risk management system.	P.25-26 CDP : CC2.2
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.	To more accurately assess and manage the risks and opportunities related to climate change, we monitor diverse metrics including the GHG emissions, per-unit GHG emissions , energy consumption, renewable energy use, and water consumption of individual business sites as well as the share of recycled materials in products, amount of e-waste collected, and average power consumption of individual products.	P.27-31, P94-95 CDP : CC11.3
	b) Disclose Scope 1 (direct emissions), Scope 2 (indirect emissions), and Scope 3 (miscellaneous indirect scope) greenhouse gas (GHG) emissions, and the related risks.	We disclose our Scope 1, 2, and 3 emissions via the Sustainability Report and CDP Report. Our direct emissions (Scope 1) in 2021 stand at 7.6 million tonnes and our indirect emissions (Scope 2) reflecting renewable energy use at 9.8 million tonnes.  For total GHG emissions and emissions of individual GHGs over the last three years, refer to page 94 herein.	P.31, P94 CDP : C6, C7
	c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.	To curtail our GHG emissions, we have continued to expand our use of renewable energy. In June 2018, we announced the plan to power our business sites in the US, Europe, and China with 100% renewable energy by 2020. We also released the plan to install solar and geothermal power generation facilities in the parking lots, rooftops, and new buildings of the Suwon, Hwaseong, and Pyeongtaek sites for the promotion of renewable energy use in Korea. We installed renewable energy facilities of 1.9MW in 2018 and 1.5MW in 2019 at the Suwon and Giheung sites, respectively. From 2018 to 2020, we established and implemented action plans optimized for individual regions, from solar power generator installation to REC purchasing, PPA adoption, and Green Pricing. As a result, our renewable energy use in 2020 increased nearly three-fold compared to 2018, and all the preset targets were reached. In 2021, our renewable energy use increased by 30% from 4,030GWh in 2020 to 5,278GWh.  To reduce manufacturing process gases and thereby achieve emissions mitigation by over 90%, we are striving to develop new catalysts to enhance gas disposal efficiency and expand gas disposal facilities. For reduced fossil fuel use, we will fully leverage waste heat to phase out LNG-fueled boilers.	P.28, P31 CDP : C4

# SASB Index

## HARDWARE

### Sustainability Disclosure Topics & 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	p. 50-53
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	p. 92
Product Lifecycle Management	TC-HW-410a.1	Percentage of products by revenue that contain IEC 62474 declarable substances	Samsung Electronics complies with national laws and global regulations (EU RoHS, REACH, etc.) and conducts rigorous pre-inspection and post-management of all parts and raw materials used in products. Please refer to p. 40 of the Sustainability Report for Samsung Electronics' efforts in managing hazardous substances.
	TC-HW-410a.2	Percentage of eligible products, by revenue, meeting the requirements for EPEAT registration or equivalent <sup>1)</sup>	<ul style="list-style-type: none"> <li>· Computers: 34%</li> <li>· Mobile Phones: 67%</li> <li>· Display: 18%</li> </ul>
	TC-HW-410a.3	Percentage of eligible products, by revenue, meeting ENERGY STAR® criteria <sup>1)</sup>	<ul style="list-style-type: none"> <li>· Audio Devices: 77%</li> <li>· Computers: 92%</li> </ul>
	TC-HW-410a.4	Weight of end-of-life products and e-waste recovered, percentage recycled	p. 35, p. 94
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	p. 93
	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	p. 78-79
Materials Sourcing	TC-HW-440a.1	Description of the management of risks associated with the use of critical materials	p. 83

1) Based on 2020 North American (The U.S., Canada) Revenue.

### Activity Metrics

Code	Topic	Page/Reference
TC-HW-000.A	Number of units by product category	2021 Business Report (II. Business Overview) p. 28-32
TC-HW-000.B	Surface Area and location of manufacturing facilities	p. 4
TC-HW-000.C	Percentage of production from owned facilities	2021 Business Report (II. Business Overview) p. 28-32



# SASB Index

## SEMICONDUCTORS

### Sustainability Disclosure Topics & Accounting Metrics

Topic	Code	Accounting Metric	Page/Reference
Greenhouse Gas Emissions	TC-SC-110a.1	(1) Gross global Scope 1 emissions, and (2) amount of total emissions from perfluorinated compounds	p. 31, p. 94
	TC-SC-110a.2	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	p. 27-31
Energy management in Manufacturing	TC-SC-130a.1	(1) Total energy consumed, (2) percentage grid electricity, (3) percentage renewable	p. 94
Water Management	TC-SC-140a.1	(1) Total water withdrawn, (2) total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	p. 37, p. 95-96
Waste Management	TC-SC-150a.1	Amount of hazardous waste from manufacturing, percentage recycled	p. 95
Employee Health & Safety	TC-SC-320a.1	Description of efforts to assess, monitor, and reduce exposure of employees to human health hazards	p. 69-72
	TC-SC-320a.2	Total amount of monetary losses as a result of legal proceedings associated with employee health and safety violations	2021 Business Report (XI. Other Information) p. 506-509
Recruiting & Managing a Global & Skilled Workforce	TC-SC-330a.1	Percentage of employees that are (1) foreign nationals and (2) located offshore	p. 91-92
Product Lifecycle Management	TC-SC-410a.1	Percentage of products by revenue that contain IEC 62474 declarable substances	Samsung Electronics complies with national laws and global regulations (EU RoHS, REACH, etc.) and conducts rigorous pre-inspection and post-management of all parts and raw materials used in products. Please refer to p. 40 of the Sustainability Report for Samsung Electronics' efforts in managing hazardous substances.
	TC-SC-410a.2	Processor energy efficiency at a system-level for: (1) servers, (2) desktops, and (3) laptops	N/A
Materials Sourcing	TC-SC-440a.1	Description of the management of risks associated with the use of critical materials	p. 83
IP Protection & Competitive Behavior	TC-SC-520a.1	Total amount of monetary losses as a result of legal proceedings associated with anti-competitive behavior regulations	2021 Business Report (XI. Other Information) p. 506

### Activity Metrics

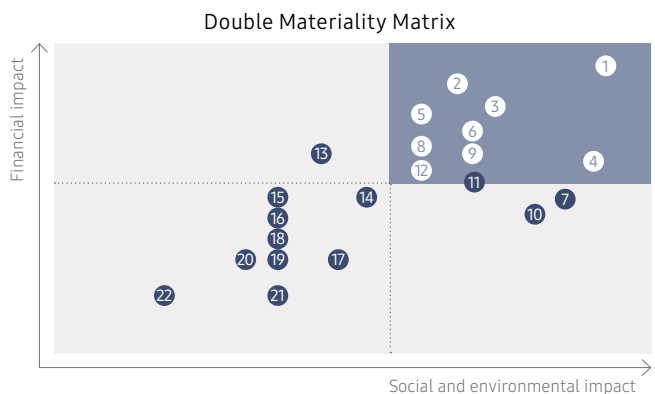
Code	Topic	Page/Reference
TC-SC-000.A	Total production	2021 Business Report (II. Business Overview) p. 28-32
TC-SC-000.B	Percentage of production from owned facilities	2021 Business Report (II. Business Overview) p. 28-32

## Materiality Assessment

We conduct materiality assessment annually to identify key interests of stakeholders and significant issues related to the business. We disclose those issues through our sustainability report for transparent communication with the stakeholders.

The Sustainability Report 2022 presents the notable findings from the double materiality assessment. Double materiality is a concept identified in the EU's Corporate Sustainability Reporting Directive (CSRD). Various sustainability-related global standards, including GRI, have reinforced their reporting requirements based on this concept. For the double materiality assessment, we first pool all of the major materiality issues, analyze the findings related to social and environmental materiality and financial materiality, and prioritize the issues accordingly.

Social and environmental impact refers to the degree of a company's business activities on society and the environment, and it is assessed by analyzing media reports in Korea and abroad as well as our scores on various global ESG standards. Financial impact refers to a company's ESG risks and opportunities, and possible degree of positive and negative impacts on its sustainability risks and opportunities and the degree of positive and negative impact that can have on the value of a company. It is assessed by identifying shareholders' and investors' concerns, analyzing costs and profits, and considering the opinions of investment and assessment institutions.



Pooling material issues	Assessing social and environmental materiality	Assessing financial materiality
<ul style="list-style-type: none"> <li>Created a comprehensive list of material issues including those already identified in the previous report and new global issues</li> <li>Identified 22 issues based on global sustainability standards (GRI, UN SDGs, TCFD, and SASB), domestic indicators (K-ESG and KCGS), and analysis of the latest industry trends</li> </ul>	<ul style="list-style-type: none"> <li>Assessing the social and environmental materiality of individual material issues through the quantification of the issues covered by the media for the last two years, our competitors' material issues, and analysis results based on various international ESG standards</li> <li>Analysis of media reports (25%)</li> <li>Analysis of competitors' issues (25%)</li> <li>Analysis of scoring based on international standards (50%)</li> </ul>	<ul style="list-style-type: none"> <li>Assessing the financial materiality of individual material issues based on the findings of the analysis of ESG information by key investment and assessment institutions, shareholders' and investors' issues, and internal cost and profit analysis</li> <li>Shareholders' and investors' issues (33%)</li> <li>Cost and profit analysis (33%)</li> <li>Analysis of ESG information disclosure by investment and assessment institutions (33%)</li> </ul>

Material issues	Major activities	Sections for reference
Compliance and ethics	<ul style="list-style-type: none"> <li>Placed the Compliance Team directly under the CEO to reinforce its independence</li> <li>Operated the Samsung Compliance Committee, an independent external monitoring organization</li> </ul>	Our Company (Compliance and Ethics)
Corporate governance	<ul style="list-style-type: none"> <li>Ensured the independence and diversity of the Board of Directors</li> </ul>	Our Company (Corporate Governance)
Climate action and energy management, circular economy, water resource management, and waste management	<ul style="list-style-type: none"> <li>Expanded the use of renewable energy</li> <li>Developed high energy-efficiency products</li> <li>Assessed and reduced water resource risks</li> <li>Introduced eco-conscious packaging for more products, designed products with higher repairability, and strived for zero waste to landfill</li> </ul>	Environment
Community development and corporate citizenship and stakeholder engagement	<ul style="list-style-type: none"> <li>Operated youth training programs to help foster creative problem-solving skills and capabilities in relation to future technologies</li> <li>Provided support for SMEs to build smart factories</li> </ul>	Empowering Communities
Privacy protection and data security and freedom of speech	<ul style="list-style-type: none"> <li>Enhanced privacy protection measures and operated the Samsung Privacy Site</li> <li>Updated our security development process and mobile security</li> </ul>	Digital Responsibility
Human rights management, diversity and inclusion, talent development and work-life balance of employees, and occupational safety and health	<ul style="list-style-type: none"> <li>Reinforced internal policies and employee training on labor and human rights</li> <li>Expanded our vision, policies, and programs concerning diversity</li> </ul>	Our Employee
Responsible sourcing and partner companies' labor practices	<ul style="list-style-type: none"> <li>Provided consulting for our partner companies on work environment monitoring and improvement and supported their EHS improvement activities</li> </ul>	Sustainable Supply Chain

- |  |  |  |
|--|--|--|
| <ul style="list-style-type: none"> <li>1 Climate action and energy management</li> <li>2 Human rights management</li> <li>3 Sustainable supply chain</li> <li>4 Talent development and work-life balance</li> <li>5 Circular economy</li> <li>6 Corporate governance</li> <li>7 Compliance and Ethics</li> <li>8 Occupational safety and health</li> </ul> | <ul style="list-style-type: none"> <li>9 Waste management</li> <li>10 Community development and corporate citizenship</li> <li>11 Water resource management</li> <li>12 Diversity and inclusion</li> <li>13 Privacy protection / data security and freedom of speech</li> <li>14 Product safety and quality</li> <li>15 Responsible marketing and customer relations management</li> </ul> | <ul style="list-style-type: none"> <li>16 Harmful substance management</li> <li>17 Accessibility</li> <li>18 stakeholder engagement</li> <li>19 Transparent information disclosure</li> <li>20 Responsible technology use</li> <li>21 Air pollution control</li> <li>22 Responsible Procurement</li> </ul> |
|--|--|--|

## Sustainability Value Creation

Since 2016, we have used the KPMG 'True Value' methodology to measure the positive and negative effects of our sustainable management activities and achievements in sustainable value creation. To convert our sustainable value creation activities to monetary value, we reviewed and selected measurement indices. Our sustainability value is composed of 1) financial, 2) socio-economic and 3) environmental values and each are expressed in positive (+) or negative (-) numerical values.

### Value Assessment Methods

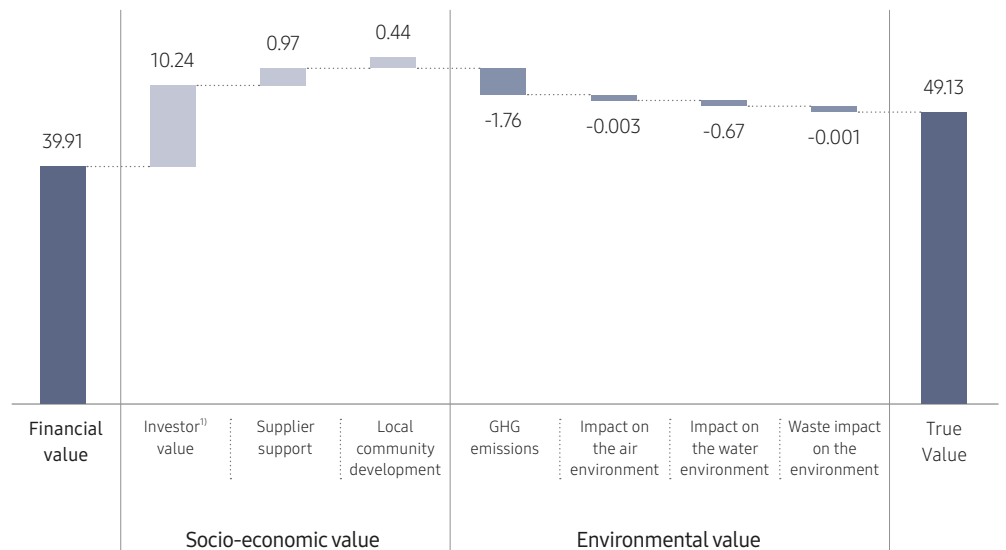
Categories		Types	Assessment Methods <sup>1)</sup>
Financial value		Benefits	Net income created over the past year
Socio-economic value	Investor value	Benefits	Dividends and interest paid to shareholders, investors, and creditors
	Supplier support	Benefits	Funding for the Win-Win Fund
	Local Community Development	Benefits	Donations to resolve local community issues
			ROI (118%) of investments in training projects <sup>2)</sup>
			ROI (250%) of investments in infrastructure establishment projects <sup>3)</sup>
			ROI (550%) of investments in hygiene facility development projects <sup>4)</sup>
Environmental value	GHG emissions from business sites	Costs	Social costs of GHG emissions <sup>5)</sup>
	Impact on the air environment	Costs	Social costs of air pollutants (NOx, SOx, and PM) emission <sup>6)</sup>
	Impact on the water environment	Costs	Social costs of water use based on the level of water scarcity of regions where our business sites are located <sup>7)</sup>
	Waste impact on the environment	Costs	Social costs of waste landfill, incineration, and recycling <sup>8)</sup>

- 1) The exchange rate is KRW 1,186 per USD and KRW 1,342 per euro as of December 31, 2021.
- 2) G. Psacharopoulos and H.A. Patrinos, Returns to investment in education: a further update (2004)
- 3) BCG, The cement sector: a strategic contributor to Europe's future
- 4) G. Hutton, Global costs and benefits of drinking-water supply and sanitation interventions to reach the MDG target and universal coverage (2012)
- 5) EPA, Technical update of the social cost of carbon for regulatory impact analysis (2013)
- 6) EEA, Revealing the cost of air pollution from industrial facilities in Europe (2011), Transportation Cost and Benefit Analysis II – Air Pollution Costs, Victoria Transport Policy Institute (2011)
- 7) TruCost PLC, Natural capital at risk: the top 100 externalities of business (2013)
- 8) A. Rabl, J. V. Spadaro and A. Zoughaib, Environmental impacts and costs of solid waste: a comparison of landfill and incineration (2009)

### Our Sustainability Values in 2021

Over the period from January 1 to December 31, 2021, we created sustainability management values equivalent to KRW 49.13 trillion. Among them, the financial value stands at KRW 39.91 trillion, a 34% increase from 2020 due to the rise in net income. We continually pursue the creation of socioeconomic and environmental values through diverse activities. We promote the development of local communities by providing training for future generations and support for SMEs and startups. We fully converted our business sites in the US, Europe, and China to 100% renewable energy use, while steadily expanding renewable energy use in Brazil, Mexico, etc. As a result, our socioeconomic and environmental values in 2021 are calculated to reach KRW 9.22 trillion.

### Our Sustainability Management Values in 2021 (Unit: KRW trillion)



- 1) Sustainability Value was calculated based on the figures in the Free Cash Flow Statements. 2021 Special dividends (KRW10.7 trillion) are not included in the investor values, since they were reflected in our Sustainability Values for 2020.

As an extension of our efforts to more accurately assess the values created by our sustainability activities, we have monitored the latest developments in research on social and environmental value assessment around the world. In this context, we plan to include wages and taxes in the assessment from 2023 onwards considering the significance of these two items and global trends.

→ Including wages and taxes, we estimate our sustainability values for 2021 at approximately KRW 98 trillion.

# About this report

This is our15<sup>th</sup> Sustainability Report, published in 2022 under the aim of transparently sharing our ESG performance and activities with our stakeholders.

## Reporting Standard

This report aligns with the Global Reporting Initiative (GRI) Standards: Core Option, which are global standards for sustainability reporting. This report also reflects the indicators of the Sustainable Development Goals (SDGs), Task Force on Climate-Related Financial Disclosures (TCFD), and Sustainability Accounting Standards Board (SASB).

## Covered Activities

This report covers the ESG activities of all of our business sites in Korea and abroad as well as all of our partner companies in our supply chain. Our financial performance is described based on K-IFRS, and our performance in relation to workplace environments is based on data collected from our 32 domestic and overseas production sites.

## Covered Period

This report illustrates our ESG performance and activities during the period of January 1-December 31, 2021. Information through May 2022 has also been used in some areas. Data for the last three years is provided to measure yearly changes in quantitative performance.

## Reporting Cycle

Once a year (previous period’s report published in June 2021)

## Third-Party Verification

EY Hanyoung Accounting Corp., an independent verification body, conducted a third-party verification to ensure confidence in the report-making process and information posted. The verification criteria are ISAE3000.

## Related Information

- Samsung Electronics website  
http://www.samsung.com/sec
- Sustainability  
http://www.samsung.com/sec/aboutsamsung/sustainability
- IR  
http://www.samsung.com/sec/ir
- Samsung Newsroom  
http://news.samsung.com/kr  
http://news.samsung.com/global

## Organizational Unit in Charge

- Samsung Electronics Corporate Sustainability Center
- Address: 129 Samseong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do (16677)
- Email: csr.partner@samsung.com

References
Annual Business Report 
Corporate Governance Report 
Responsible Minerals Report 
CDP Report 
Global Code of Conduct 
Guidelines on the Global Code of Conduct 

# Independent Limited Assurance Report to Samsung Electronics

We were engaged by Samsung Electronics to provide limited assurance on the 'Samsung Electronics Sustainability Report 2021' for the fiscal year of 2020, which is based on the information as of May 2021 (further 'the Report').

## Context and Scope

Our engagement was designed to provide limited assurance on whether the Report is presented fairly, in all material respects, in accordance with the Sustainability Reporting Standards of the Global Reporting Initiative (GRI). We do not provide any assurance on the achievability of the objectives, targets, and expectations of Samsung Electronics.

The scope of our engagement conforms to the KPMG Sustainability Assurance Manual™ (KSAM™), including the aspect of "materiality". With regards to financial data, our procedures were limited to verifying that they were correctly derived from audited financial statements. To obtain a thorough understanding of Samsung Electronics' financial results and position, the audited financial statements produced on March 09, 2021 should be referred to.

## Responsibilities

As stated in the 'Reporting Principles and Standard,' Samsung Electronics is responsible for all content within the Report in respect of the GRI Sustainability Reporting Standards. It is the responsibility of Samsung Electronics' management to establish and maintain appropriate performance management and internal control systems from which the reported sustainability information is derived.

Our responsibility is to perform a limited assurance engagement and to express a conclusion based on the work performed.

## Independence

In conducting our engagement, we have complied with the requirements of the International Federation of Accountants (IFAC) Code of Ethics for Professional Accountants, issued by the International Ethics Standards Board for Accountants. We do not engage in any and all activities that may influence our independence from Samsung Electronics. KPMG has systems and processes in place to monitor compliance with the Code, and to prevent conflicts regarding independence.

## Assurance Standards

We conducted our engagement based on the International Standard on Assurance Engagements (ISAE) 3000 Assurance Engagements other than Audits or Reviews of Historical Financial Information, issued by the International Auditing and Assurance Standards Board, and also AA1000AS. The standards require that we comply with applicable ethical requirements, including independence requirements, and that we plan and perform the engagement to obtain limited assurance about whether the Report is free from material misstatement.

## Limitations

A limited assurance engagement is substantially less in scope than a reasonable assurance engagement, and consequently does not enable us to obtain assurance on all significant matters that we may become aware of in a reasonable assurance engagement. Accordingly, we do not express a reasonable assurance conclusion.

This report has been prepared solely for Samsung Electronics in accordance with the terms of our engagement. We do not accept or assume responsibility to anyone other than Samsung Electronics for our work, or for the conclusions we have reached in the assurance report.

## Main Assurance Procedures

Our engagement was designed to provide limited assurance on whether the Report is presented fairly, in all material respects, in accordance with the reporting criteria. Procedures performed to obtain a limited level of assurance on a sustainability report consists of making inquiries, primarily of persons responsible for the preparation of information presented in the integrated report, and applying analytical and other evidence gathering procedures, as appropriate. These procedures included the following:

- Confirmation on whether the financial information presented in the Report was correctly derived from Samsung Electronics' audited financial statements
- Inquiries to gain an understanding of Samsung Electronics' processes for determining the material issues for key stakeholder groups
- Interviews with relevant staff at corporate and business unit levels responsible for providing the information in the Report

- Visits to the Company's headquarter in Suwon office to understand the systems and processes in place for managing and reporting the Sustainability Data
- Comparing the information presented in the Report to determine whether it is in line with our overall knowledge of, and experience with, Samsung Electronics' performance on non-financial value creation

## Opinion

· **Stakeholder Inclusiveness** Samsung Electronics operates communication channels with key stakeholders such as shareholders/investors, customers/dealers, employees, suppliers, local communities (environment/NGOs), local/central government and media. We are not aware of any key stakeholder group that has been excluded from dialogue in the Report.

· **Sustainability Context** Samsung Electronics has established a process to incorporate CSR in management's decision-making and the business management plans of relevant teams, thereby securing continuity. We confirmed that Samsung Electronics recognizes general business management and social responsibility management comprehensively and applies such understanding within the Report.

· **Materiality** Samsung Electronics conducts a materiality test in determining material issues. We are not aware of any material aspects concerning its sustainability performance which have been excluded from the Report.

· **Completeness** Samsung Electronics applies reporting scope, boundary, and temporal criteria. In terms of criteria mentioned above, we confirm that the Report is suitable for stakeholders to assess social responsibility performance.

Based on the procedures performed, as described above, nothing has come to our attention to indicate that the Report is not presented fairly, in all material respects, in accordance with the reporting criteria.



June 2021  
KPMG Samjong Accounting Corp.  
CEO Kim, Kyo Tai

A handwritten signature in black ink, reading 'Kyo Tai Kim'.

## Verification statement on Greenhouse Gas Emission



### Verification statement on 2020 Samsung Electronics Co., Ltd., Greenhouse Gas Emission

#### ■ Introduction

Korean Foundation for Quality (hereinafter 'KFQ') has been engaged by Samsung Electronics Co., Ltd. (hereinafter the 'Company') to independently verify its 2020 Greenhouse Gas Emission Report of domestic corporations and 26 overseas subsidiaries. It is the responsible of the Company to compile the Greenhouse Gas Emission Report according to the 'Guidelines for GHG emission reporting and certification of GHG emission trading scheme (Notification No. 2018-78 of Ministry of Trade, Industry and Energy)', 'GHG Protocol Scope 2 Guidance' and 'ISO 14064-1:2006' and KFQ has responsibility to conduct verification based on 'ISO 14064-3:2006' to provide verification opinion on compliance of the Report against verification criteria.

#### ■ Verification Scope

Through the verification process according to the 'ISO 14064-3:2006' KFQ could obtain reasonable basis to express following conclusion on the Greenhouse Gas Emission Report

(unit: kiloton CO2 eq)

Division	Total		Domestic	Overseas	
	Location based	Market based		Location based	Market based
Sub Total	17,579	14,806	12,532	5,047	2,274
Direct Emission (Scope 1)	5,726	5,726	4,679	1,048	1,048
Indirect Emission (Scope 2)	11,853	9,079	7,853	4,000	1,226

[2020 Samsung Electronics Co., Ltd., Greenhouse Gas Emission]

#### ■ Verification Opinion

Through the verification process according to the 'ISO 14064-3:2006', KFQ could obtain reasonable basis to express following conclusion on the Greenhouse Gas Emission Report.

- 1) 2020 Samsung Electronics Co., Ltd., Greenhouse Gas Emission Report was prepared against 'Samsung Electronics Co., Ltd., Greenhouse Gas Inventory Guideline' developed based on the 'Guidelines for GHG emission reporting and certification of GHG emission trading scheme', 'GHG Protocol Scope 2 Guidance' and 'ISO 14064-1:2006'
- 2) As a result of materiality assessment on 2020 domestic Greenhouse Gas Emission, material discrepancy is less than the criteria of 2.0% for the organization which emits more than 5,000,000 tCO2-eq/year in accordance with the requirements of the 'Guidelines of verification for Greenhouse gas emission trading scheme'.
- 3) For the 26 overseas subsidiaries, document review was conducted for entire 26 subsidiaries as well as Company self-assessment. The result of material discrepancy is less than 2.0%.
- 4) As reported Greenhouse Gas Emission purchased electricity, process emission by fluorinated gas use and LNG consumption take more than 99% of total emission. Activity data of these emission sources were checked through the objective evidence provided by supplier therefore KFQ could confirm that these activity data is valid itself.
- 5) The efficiency of process emission reduction technology that affects the calculation of greenhouse gas emissions has to reflect the values guaranteed by the government and third parties. However, the efficiency was calculated based on the Company's own methodology, and errors are not included in the verification opinion.  
For the overseas subsidiaries, each national net caloric value and electricity emission factor were preferentially used but net caloric value and IEA or CDM electricity emission factor were adopted from IPCC Guidelines or Korean Energy Law Enforcement Regulation in any change of these parameters or factors. Also, in case of buying credits(ex, RECs) in the market, the offset credit is applied to evaluate the emission and record separately in market base section.
- 6) Except unconsidered emission source in the 'Samsung Electronics Co., Ltd., Greenhouse Gas Inventory Guideline', material error, omission or insignificant issues was not found in 2020 Samsung Electronics Co., Ltd., Greenhouse Gas Emission Report.

June 16<sup>th</sup>, 2021

President & CEO Korean Foundation for Quality

Ji Young Song

*Ji Young Song*

# GRI Index

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	102-6	Markets served	●	4	
	102-7	Scale of the organization	●	3-4	
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	102-38	Annual total compensation ratio	○		
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	207-1	Approach to tax	●		Refer to the company website
	207-2	Tax governance, control, and risk management	●		Refer to the company website
	207-3	Stakeholder engagement and management of concerns related to tax	●		Refer to the company website
	207-4	Country-by-country reporting	●	77	
GRI 300 Environmental Standards Series					
Materials	301	Management Approach	●	23-24	
	301-1	Materials used by weight or volume	○		
	301-2	Recycled input materials used	●	31, 81	
	301-3	Reclaimed products and their packaging materials	●	81	
Energy	302	Management Approach	●	23-24	
	302-1	Energy consumption within the organization	●	81	
	302-2	Energy consumption outside of the organization	○		
	302-3	Energy intensity	●	81	
	302-4	Reduction of energy consumption	●	27-28	
	302-5	Reductions in energy requirements of products and services	●	29	
	302-6	Energy-related impacts	●		
Water	303	Management Approach	●	34-35	
	303-1	Interactions with water as a shared resource	●	35, 82-83	
	303-2	Management of water discharge-related impacts	●	82-83	
	303-3	Water withdrawal	●	35, 82-83	
	303-4	Water discharge	●	35, 82-83	
	303-5	Water consumption	●	35, 82-83	
Biodiversity	304	Management Approach	●		Refer to the company website

GRI Standards			Status	Page	Comments
Emissions	304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	●		Refer to the company website
	304-2	Significant impacts of activities, products, and services on biodiversity	●	36	
	304-3	Habitats protected or restored	●	36	
	304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	●		Refer to the company website
	305	Management Approach	●	25-30	
	305-1	Direct (Scope 1) GHG emissions	●	81	
	305-2	Energy indirect (Scope 2) GHG emissions	●	81	
Waste	305-3	Other indirect (Scope 3) GHG emissions	●	81	
	305-4	GHG emissions intensity	●	81	
	305-5	Reduction of GHG emissions	●	27-30	
	305-6	Emissions of ozone-depleting substances (ODS)	●	82	
	305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	●	82	
	306	Management Approach	●	34	
	306-1	Waste generation and significant waste-related impacts	●	34	
	306-2	Management of significant waste-related impacts	●	34	
	306-3	Waste generated	●	82	
	306-4	Waste diverted from disposal	●	82	
	306-5	Waste directed to disposal	●	82	
Environmental Compliance	307	Management Approach	●	7-9	
	307-1	Non-compliance with environmental laws and regulations	●	82	
Supplier Environmental Assessment	308	Management Approach	●	65, 70	
	308-1	New suppliers that were screened using environmental criteria	●	80	
	308-2	Negative environmental impacts in the supply chain and actions taken	●	66	
GRI 400 Social Standards Series					
Employment	401	Management Approach	●	62	
	401-1	New employee hires and employee turnover	●	78	
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	○		
Labor/Management Relations	401-3	Parental leave	●	79	
	402	Management Approach	●	54-55	
	402-1	Minimum notice periods regarding operational changes	○		
Occupational Health and Safety	403	Management Approach	●	59-61	
	403-1	Occupational health and safety management system	●	59-61	



## GRI Index

GRI Standards			Status	Page	Comments
Occupational Health and Safety continued	403-2	Hazard identification, risk assessment, and incident investigation	●	59-61	
	403-3	Occupational health services	●	59-61	
	403-4	Worker participation, consultation, and communication on occupational health and safety	●	59-61	
	403-5	Worker training on occupational health and safety	●	59-61	
	403-6	Promotion of worker health	●	59-61	
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	●	59-61	
	403-8	Workers covered by an occupational health and safety management system	●	59-61	
	403-9	Work-related injuries	●	79	
	403-10	Work-related ill health	○		
Training and Education	404	Management Approach	●	62	
	404-1	Average hours of training per year per employee	●	79	
	404-2	Programs for upgrading employee skills and transition assistance programs	●	62	
	404-3	Percentage of employees receiving regular performance and career development reviews	●	62, 79	
Diversity and Equal Opportunity	405	Management Approach	●	56-58	
	405-1	Diversity of governance bodies and employees	●	58	
	405-2	Ratio of basic salary and remuneration of women to men	●		We do not discriminate on any basis in all processes including promotion, compensation and disciplinary measures
Non-Discrimination	406	Management Approach	●	56	
	406-1	Incidents of discrimination and corrective actions taken	●	55	
Freedom of Association and Collective Bargaining	407	Management Approach	●	52-55	
	407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	●	52-55	
Child Labor	408	Management Approach	●	52	
	408-1	Operations and suppliers at significant risk for incidents of child labor	●	52-53	
Forced or Compulsory Labor	409	Management Approach	●	52	
	409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	●	52-53, 68	
Security Practices	410	Management Approach	○		
	410-1	Security personnel trained in human rights policies or procedures	○		
Rights of Indigenous Peoples	411	Management Approach	○		
	411-1	Incidents of violations involving rights of indigenous peoples	○		

GRI Standards			Status	Page	Comments
Human Rights Assessment	412	Management Approach	●	52-53	
	412-1	Operations that have been subject to human rights reviews or impact assessments	●	53	
	412-2	Employee training on human rights policies or procedures	●	52	
	412-3	Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	○		
Local Communities	413	Management Approach	●	37	
	413-1	Operations with local community engagement, impact assessments, and development programs	●	38-40	
	413-2	Operations with significant actual and potential negative impacts on local communities	○		
Supplier Social Assessment	414	Management Approach	●	65-66	
	414-1	New suppliers that were screened using social criteria	●	80	
	414-2	Negative social impacts in the supply chain and actions taken	●	68-69	
Public Policy	415	Management Approach	●	7-9	
	415-1	Political contributions	●		Global Code of Conduct prohibits contribution to political parties
Customer Health and Safety	416	Management Approach	○		
	416-1	Assessment of the health and safety impacts of product and service categories	○		
	416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	●		Refer to the business report
Marketing and Labeling	417	Management Approach	●		Refer to the company website
	417-1	Requirements for product and service information and labeling	●		Refer to the company website
	417-2	Incidents of non-compliance concerning product and service information and labeling	○		
	417-3	Incidents of non-compliance concerning marketing communications	●		Refer to the business report
	418	Management Approach	●	43-44	
Customer	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	○		
Socioeconomic Compliance	419	Management Approach	●	7-9	
	419-1	Non-compliance with laws and regulations in the social and economic area	●		Refer to the business report

## TCFD Index

TCFD Recommendations		Page/Reference
Governance	a) Describe the board's oversight of climate-related risks and opportunities	p. 25 CDP: CC1.1a, CC1.1b
	b) Describe management's role in assessing and managing climate-related risks and opportunities	p. 25 CDP: CC1.2a
Strategy	a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term	p. 25-26 CDP: CC2.2c, CC2.3a, CC2.4a, CC3.1c
	b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning	p. 26 CDP: CC2.5, CC2.6
	c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	p. 25 CDP: CC3.1c, CC3.1d
Risk Management	a) Describe the organization's processes for identifying and assessing climate-related risks	p. 25 CDP: CC1.2a, CC2.2b
	b) Describe the organization's processes for managing climate-related risks	p. 25 CDP: CC2.2d
	c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management	p. 25 CDP: CC2.2
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	p. 25-30 CDP: CC11.3
	b) Disclose Scope 1 (direct emissions), Scope 2 (indirect emissions), and Scope 3 (miscellaneous indirect scope) greenhouse gas (GHG) emissions, and the related risks	p. 30, p. 81 CDP: C6, C7
	c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets	p. 30 CDP: C4

# SASB Index

## HARDWARE

### Sustainability Disclosure Topics & 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	p. 43-46
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	p. 79
Product Lifecycle Management	TC-HW-410a.1	Percentage of products by revenue that contain IEC 62474 declarable substances	Samsung Electronics complies with national laws and global regulations (EU RoHS, REACH, etc.) and conducts rigorous pre-inspection and post-management of all parts and raw materials used in products. Please refer to p. 36 of the Sustainability Report for Samsung Electronics' efforts in managing hazardous substances.
	TC-HW-410a.2	Percentage of eligible products, by revenue, meeting the requirements for EPEAT registration or equivalent <sup>1)</sup>	· Computers 71.0% · Mobile Phones: 24.1%
	TC-HW-410a.3	Percentage of eligible products, by revenue, meeting ENERGY STAR® criteria <sup>1)</sup>	· Audio Devices: 93.7% · Computers: 92.4%
	TC-HW-410a.4	Weight of end-of-life products and e-waste recovered, percentage recycled	p. 33, p. 81
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	p. 80
	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	p. 69
Materials Sourcing	TC-HW-440a.1	Description of the management of risks associated with the use of critical materials	p. 71

<sup>1)</sup> Based on 2020 North American (The U.S., Canada) Revenue.

### Activity Metrics

Code	Topic	Page/Reference
TC-HW-000.A	Number of units by product category	2020 Business Report (II. Business Overview) p. 65-68
TC-HW-000.B	Surface Area and location of manufacturing facilities	p. 4
TC-HW-000.C	Percentage of production from owned facilities	2020 Business Report (II. Business Overview) p. 65-68

# SASB Index

## SEMICONDUCTORS

### Sustainability Disclosure Topics & Accounting Metrics

Topic	Code	Accounting Metric	Page/Reference
Greenhouse Gas Emissions	TC-SC-110a.1	(1) Gross global Scope 1 emissions, and (2) amount of total emissions from perfluorinated compounds	p. 30, p. 81
	TC-SC-110a.2	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	p. 25-30
Energy management in Manufacturing	TC-SC-130a.1	(1) Total energy consumed, (2) percentage grid electricity, (3) percentage renewable	p. 81
Water Management	TC-SC-140a.1	(1) Total water withdrawn, (2) total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	p. 35, p. 82-83
Waste Management	TC-SC-150a.1	Amount of hazardous waste from manufacturing, percentage recycled	p. 82
Employee Health & Safety	TC-SC-320a.1	Description of efforts to assess, monitor, and reduce exposure of employees to human health hazards	p. 59-61
	TC-SC-320a.2	Total amount of monetary losses as a result of legal proceedings associated with employee health and safety violations	2020 Business Report (XI. Other Information) p. 539-541
Recruiting & Managing a Global & Skilled Workforce	TC-SC-330a.1	Percentage of employees that are (1) foreign nationals and (2) located offshore	p. 78-79
Product Lifecycle Management	TC-SC-410a.1	Percentage of products by revenue that contain IEC 62474 declarable substances	Samsung Electronics complies with national laws and global regulations (EU RoHS, REACH, etc.) and conducts rigorous pre-inspection and post-management of all parts and raw materials used in products. Please refer to p. 36 of the Sustainability Report for Samsung Electronics' efforts in managing hazardous substances.
	TC-SC-410a.2	Processor energy efficiency at a system-level for: (1) servers, (2) desktops, and (3) laptops	N/A
Materials Sourcing	TC-SC-440a.1	Description of the management of risks associated with the use of critical materials	p. 71
IP Protection & Competitive Behavior	TC-SC-520a.1	Total amount of monetary losses as a result of legal proceedings associated with anti-competitive behavior regulations	2020 Business Report (XI. Other Information) p. 542

### Activity Metrics

Code	Topic	Page/Reference
TC-SC-000.A	Total production	2020 Business Report (II. Business Overview) p. 65-68
TC-SC-000.B	Percentage of production from owned facilities	2020 Business Report (II. Business Overview) p. 65-68

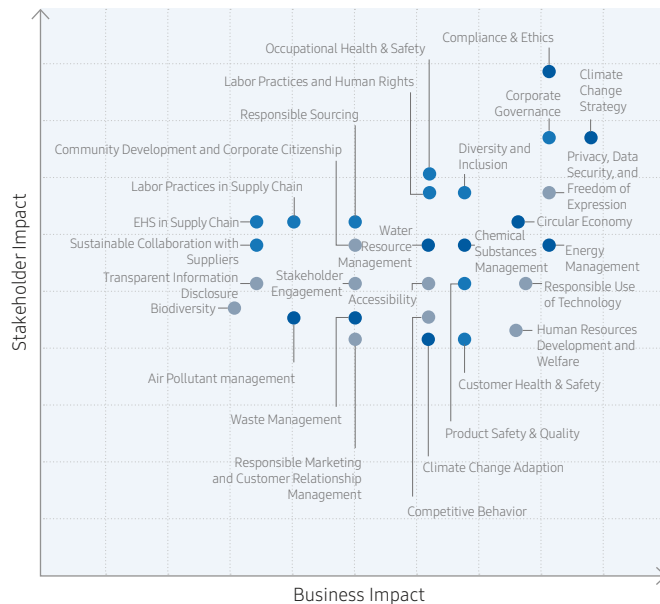
# Materiality Assessment

We identify sustainability issues that impact our business and actively respond as needed, sharing our progress with stakeholders in a transparent manner through our sustainability report.

We pool and review all relevant issues based on media reports, peer benchmarking, global standards and initiatives in sustainability management, and expert opinions. Based on a comprehensive analysis of the level of impact on our stakeholders from economic, social, and environmental perspectives as well as the business impact on Samsung Electronics, including revenues, costs and reputation, we identify and prioritize the most meaningful and relevant material issues.

Pooling Material Issues	Prioritization	Internal and External Expert Review
<ul style="list-style-type: none"> <li>Assemble a pool of relevant issues based on media reports articles, peer benchmarks, global standards and initiatives (UN SDGs, TCFD, GRI, SASB, WEF Sustainability Metrics, etc.)</li> <li>We identified 29 material issue through interviews with sustainability management experts and relevant departments within our company</li> </ul>	<ul style="list-style-type: none"> <li>Prioritize sustainability issues according to analysis of stakeholder and business impacts</li> </ul> <p><b>Stakeholder Impact</b></p> <ul style="list-style-type: none"> <li>Assess the economic, social, and environmental impact on stakeholders (customers, shareholders, investors, employees, suppliers, local communities, NGOs, industry organizations, industry experts, the government, the media, etc).</li> </ul> <p><b>Business Impact</b></p> <ul style="list-style-type: none"> <li>Assess of impact on Samsung Electronics, including its revenues, costs, reputation, etc.</li> </ul>	<ul style="list-style-type: none"> <li>Review by the company's senior management and Corporate Sustainability Center</li> <li>Review by external sustainability experts</li> </ul>

Materiality Assessment Matrix



Materiality Assessment Results

Material Issues	Major Activities	Relevant Section
Compliance, Ethics	<ul style="list-style-type: none"> <li>Enhanced the independence of the Corporate Compliance Team, which reports directly to the CEO since reorganization</li> <li>An independent expert group, Samsung Compliance Committee, in operation, overseeing the business</li> </ul>	Our Company (Compliance & Ethics)
Corporate Governance	<ul style="list-style-type: none"> <li>Independent Director appointed as the Chairman of the Board</li> </ul>	Our Company (Corporate Governance)
Climate Change Strategy, Energy Management, Circular Economy, Chemical Management	<ul style="list-style-type: none"> <li>100% renewable energy use in the US, Europe and China</li> <li>High energy-efficient product development</li> <li>Sustainable packing, designing of products easy to repair, zero waste to landfill</li> </ul>	Environment
Local Community Development, Corporate Citizenship, Stakeholder Engagement	<ul style="list-style-type: none"> <li>Education program for youth to help them learn future technology and grow creative problem-solving capabilities</li> <li>Assistance to small and medium enterprises with Smart Factory technology and fostering the growth of venture companies</li> </ul>	Empowering Communities
Responsible use of technology, Accessibility	<ul style="list-style-type: none"> <li>Consider accessibility from product development to launch</li> <li>Apply AI ethics policy to AI services</li> </ul>	Digital Responsibility
Diversity & Inclusion, Occupational Health & Safety, Labor and Human Rights	<ul style="list-style-type: none"> <li>Strengthen company policies and employee education on labor and human rights issues</li> <li>Expand the company's vision, policies and programs on diversity matters</li> </ul>	Our Employees
Responsible Sourcing, Supplier Labor Practices	<ul style="list-style-type: none"> <li>Provide consulting on work environment inspection and improvements for suppliers, support EHS improvement efforts</li> </ul>	Sustainable Supply Chain

## Sustainability Value Creation

Since 2016, we have used the KPMG 'True Value' methodology to measure the positive and negative effects of our sustainable management activities and achievements in sustainable value creation. To convert our sustainable value creation activities to monetary value, we reviewed and selected measurement indices. Our sustainability value is composed of 1) financial, 2) socio-economic and 3) environmental values and each are expressed in positive (+) or negative (-) numerical values. We will continue to closely monitor global trends in social economic value measurements and work to accurately assess our sustainability value creation.

### Value Measurement Method

Category	Type	Calculation Methodology <sup>1)</sup>
<b>Financial Value</b>	Benefit	Net income generated by the company during 2020 fiscal year
<b>Socio-economic Value</b>	Investor Value	Dividends and interest payments to investors and creditors
	Supplier Support	Win-Win funds
	Local Community Development	Donations for local communities Return on investment of education projects (118%) <sup>2)</sup> Return on investment of infrastructure projects (250%) <sup>3)</sup> Return on investment of sanitation facility projects (550%) <sup>4)</sup>
<b>Environmental Value</b>	Worksites GHG Emissions	The social cost related to GHG emission <sup>5)</sup>
	Environmental Impact on the Atmosphere	The social cost related to air pollutant (NOx, Sox, PM) emissions <sup>6)</sup>
	Environmental Impact on the Water System	The social cost related to water usage based on the level of water shortage at the location of the business <sup>7)</sup>
	Environmental Impact of Waste	The social cost related to waste landfill, incineration, recycling <sup>8)</sup>

1) Exchange rate based on rates as of December 31, 2020 (1 USD = 1,088 KRW; 1 EURO = 1,338 KRW).

2) G.Psacharopoulos and H.A. Patrinos, Returns to investment in education: a further update (2004).

3) BCG, The cement sector: a strategic contributor to Europe's future.

4) G. Hutton, Global costs and benefits of drinking-water supply and sanitation interventions to reach the MDG target and universal coverage (2012).

5) US EPA, Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide (2021).

6) EEA, Revealing the cost of air pollution from industrial facilities in Europe (2011).

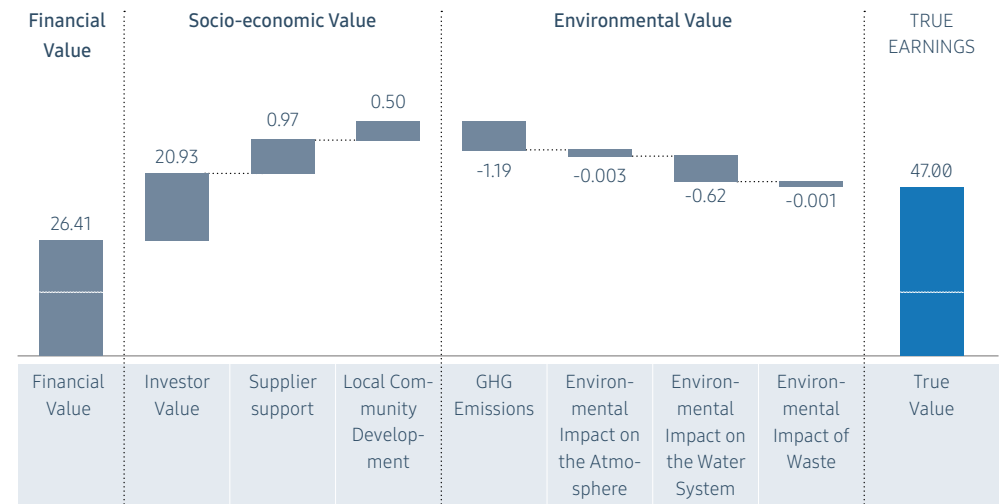
7) TruCost PLC, Natural capital at risk: the top 100 externalities of business (2013).

8) A. Rabl, J. V. Spadaro and A. Zoughaib, Environmental impacts and costs of solid waste: a comparison of landfill and incineration (2009).

### 2020 Value Creation Achievements

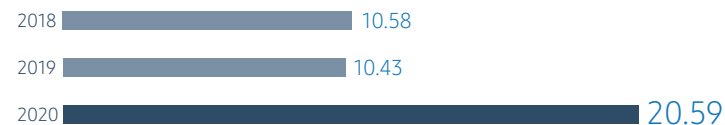
From January 1 to December 31 2020, the total value of sustainability management created by Samsung Electronics amounted to approximately KRW 47 trillion. The financial value was KRW 26.41 trillion, up 21% from 2019 due to increased net income. Under the CSR vision of "Together for Tomorrow! Enabling People" which pursues socio-economic value creation, we increased our support for future generations and consistently strengthened our partner collaboration programs to improve the competitiveness of our supply chain. Furthermore, we delivered on our commitment to 100% renewable energy in the United States, Europe and China to improve the environmental value. As a result, we generated a total socio-economic and environmental value of KRW 20.59 trillion<sup>1)</sup> in 2020.

### Sustainability Value Creation by Samsung Electronics in 2020 (Unit: trillion KRW)



1) Includes KRW 10.7 trillion special dividend payment for end of the fiscal year in 2020

### Socio-economic and Environmental Value Created by Samsung Electronics (Unit: trillion KRW)



## About This Report

Samsung Electronics publishes its 14th Sustainability Report in 2021 to transparently share and communicate its social, economic, and environmental value creation achievements with its various stakeholders.

### Reporting Standard

This report was prepared in accordance with the Core Options of the Global Reporting Initiative (GRI) standards. It also reflects indicators set by globally-accepted standards and initiatives – the UN Sustainable Development Goals (SDGs), Task Force on Climate-related Financial Disclosures (TCFD) and Sustainability Accounting Standards Board (SASB).

### Reporting Scope

This report covers all our global worksites and supply chains. Financial performance data is based upon consolidated K-IFRS accounting standards. Environmental performance of our worksites is based upon data collected from 36 global production subsidiaries.

### Reporting Period

This report covers social, economic, and environmental performance and activities from January 1, 2020 to December 31, 2020, and for some achievements in this report may include information dated to May 2021. Quantitative data for the latest three fiscal years are provided to allow for trend analysis over time.

### Reporting Cycle

Annual (last report published in June, 2020)

### Report Assurance

To ensure the reliability of the reporting process and information included in the report, Samjong KPMG, an independent external assurance provider conducted the assurance review. The review was conducted in accordance with International Standard on Assurance Engagements (ISAE) 3000 and AA1000AS Type II.

### For Further Information:

- Samsung Electronics Website  
<http://www.samsung.com/>
- Sustainability Website  
<https://www.samsung.com/uk/sustainability/overview/>
- IR Website  
<https://www.samsung.com/global/ir/>
- Samsung Electronics Newsroom  
<http://news.samsung.com/global>

### This report was prepared by:

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### Reference Materials

- Annual Business Report [↗](#)
- Corporate Governance Report [↗](#)
- Responsible Minerals Report [↗](#)
- CDP Report [↗](#)
- Global Code of Conduct [↗](#)

## Independent Assurance Report



### To the management of Samsung Electronics Co., Ltd.

Samsung Electronics Co., Ltd. (the "Company") requested an independent assurance engagement in regard to the following aspects of Samsung Electronics Sustainability Report 2020 (the "Report") to the Samil PricewaterhouseCoopers (the "We"). We have conducted an independent assurance.

### Scope and subject matter

The information for the year ended December 31, 2019 on which we provide limited assurance consists of:

- The Company's conclusion on meeting the principles of Inclusivity, Materiality and Responsiveness in the AA1000 AccountAbility Principles
- The information and data marked as the reporting level, stated in GRI(Global Reporting Initiative) Index (the pages 128 through 131) ("Sustainability Data") is prepared based on the reporting principles set out on GRI Standards with Core option and the reliability of sustainability data

We read the other information included in the Report and considered whether it was consistent with the Sustainability Data. We considered the implications for our report in the case that we became aware of any apparent misstatements or material inconsistencies with the sustainability Information. Our responsibilities do not extend to any other information.

### Assurance work performed

We conducted our engagement in accordance with ISAE 3000<sup>1)</sup> and AA1000AS<sup>2)</sup>

The term 'moderate assurance' used in AA1000AS (2008) is designed to be consistent with 'limited assurance' as articulated in ISAE 3000. Our assurance is a Type II assurance engagement as defined in the AA1000AS (2008).

1) International Standard on Assurance Engagements 3000 – 'Assurance Engagements other than Audits or Reviews of Historical Financial Information' issued by International Auditing and Assurance Standards Board

2) AA1000 Assurance Standard(2008), issued by AccountAbility

Our work involved the following activities:

1. Interviews with the personnel responsible for internal reporting and data collection to discuss their approaches to stakeholder inclusivity, materiality and responsiveness
2. Visits to the Company's headquarter in Suwon office to understand the systems and processes in place for managing and reporting the Sustainability Data
3. Review of samples of internal documents relevant to output from the risk assessment process, sustainability-related policies and standards, the sustainability materiality assessment matrix and other documents from stakeholder-engaged activities
4. Evaluating the design and implementation of key processes and controls for managing and reporting the Sustainability Data
5. Limited testing, through inquiry and analytical review procedures, of the preparation and collation of the Sustainability Data

### Independence

We comply with the International Federation of Accountants' Code of Ethics and do not perform any work affecting independent verification activities, including the writing of the Company's management system.

### Respective responsibilities of the management of the Company and Samil PricewaterhouseCoopers

Our responsibility is to provide a conclusion based on our assurance procedures.

The management of the Company is responsible for establishing reporting principles that meet the principles of Inclusivity, Materiality and Responsiveness in the AA1000APS, measuring performance based on the reporting principles, and reporting this performance in the Report.

This report, including the conclusion, has been prepared for the management of the Company as a body, to assist the management in reporting on the Company's Sustainability Data. We do not accept or assume responsibility to anyone other than the management of the Company as a body and the Company for our work or this report save where terms are expressly agreed and with our prior consent in writing.



### Inherent limitations

Non-financial performance information is subject to more inherent limitations than financial information, given the characteristics of the subject matter and the methods used for determining such information. Qualitative interpretations of relevance, materiality and the accuracy of data are subject to individual assumptions and judgments. A limited assurance engagement is less in scope than a reasonable assurance engagement under ISAE 3000. Consequently, the nature, timing and extent of procedures for gathering sufficient, appropriate evidence are deliberately limited relative to a reasonable assurance engagement. We do not provide a reasonable assurance engagement. In addition, this conclusion is limited to the management system specified in the limited assurance, and we are not responsible for any non-company personnel for the conclusions in the independent assurance report.

#### **In particular:**

- We did not attend any stakeholder-engaged activities. Therefore our conclusion is based on our discussions with the management and the staff of the Company, and our review of sampled documents provided to us by the Company.
- The scope of our work was restricted to 2019 performance only, as set out in the scope and subject matter section above. Information related to the year ended December 31, 2018 and earlier periods have not been subject to assurance by us.

### Conclusion

Based on the results of the assurance work performed, our conclusion is as follows

#### **On the AA1000APS principles**

- Inclusivity
  - The Company has collected concerns and opinion through stakeholder communication channels that include those of Customers, Shareholders, Investors, Employees, Suppliers, NGOs, Specialized Institutions, Governments and Media.
  - Nothing has come to our attention to suggest that material stakeholder groups were excluded from these channels.
- Materiality
  - The Company has identified most relevant and significant sustainability issues through process for identifying material issues.
  - Nothing has come to our attention to suggest that material issues were omitted in this process.
- Responsiveness
  - The Company has included in the Report its response to the material sustainability issues which are defined through process for identifying material issues.
  - Nothing has come to our attention to suggest that there were material deficiencies in the issue management system.

Nothing has come to our attention that causes us to believe that the Sustainability Data from a material point of view is not fairly stated, and is in accordance with the set out on GRI Standards with Core option.

### Recommendations

As a result of our work, we have provided the following recommendations to the management.

- The Company selected climate action, circular economy, labor & human rights, privacy & cybersecurity, corporate governance, and compliance under the theme of Priority to identify and respond to issues related to sustainable management which is related to the project and to communicate transparently with stakeholders on its performance.
- In the future, we recommend that the Company disclose the Company's long-term goals and strategies for sustainable management.

100, Hangang-daero, Yongsan-gu, Seoul  
 Samil PricewaterhouseCoopers  
 CEO, Young-Sik Kim

*Samil PricewaterhouseCoopers*

June 12, 2020

## Verification statement on 2019 Samsung Electronics Co., Ltd., Greenhouse Gas Emission



### Introduction

Korean Foundation for Quality (hereinafter 'KFQ') has been engaged by Samsung Electronics Co., Ltd.(hereinafter the 'Company') to independently verify its 2019 Greenhouse Gas Emission Report of domestic corporations and 26 overseas subsidiaries.

It is the responsibility of the Company to compile the Greenhouse Gas Emission Report according to the 'Guidelines for GHG emission reporting and certification of GHG emission trading scheme (Notification No. 2018-78 of Ministry of Trade, Industry and Energy)', 'GHG Protocol Scope 2 Guidance' and 'ISO 14064-1:2006' and KFQ has responsibility to conduct verification based on 'ISO 14064-3:2006' to provide verification opinion on compliance of the Report against verification criteria.

### Verification Scope

In this verification, domestic corporations and 26 overseas subsidiaries under operational control of Samsung Electronics Co., Ltd., and reported emission is including Scope 1 and Scope 2 emission.

### Verification Opinion

'Through the verification process according to the 'ISO 14064-3:2006', KFQ could obtain reasonable basis to express following conclusion on the Greenhouse Gas Emission Report.

- 1) 2019 Samsung Electronics Co., Ltd., Greenhouse Gas Emission Report was prepared against 'Samsung Electronics Co., Ltd., Greenhouse Gas Inventory Guideline' developed based on the 'Guidelines for GHG emission reporting and certification of GHG emission trading scheme', 'GHG Protocol Scope 2 Guidance' and 'ISO 14064-1:2006'.
- 2) As a result of materiality assessment on 2019 domestic Greenhouse Gas Emission, material discrepancy is less than the criteria of 2.0% for the organization which emits more than 5,000,000 tCO<sub>2</sub>eq/year in accordance with the requirements of the 'Guidelines of verification for Greenhouse gas emission trading scheme'.
- 3) For the 26 overseas subsidiaries, document review was conducted for entire 26 subsidiaries as well as Company self-assessment. The result of material discrepancy is less than 2.0%.
- 4) As reported Greenhouse Gas Emission purchased electricity, process emission by fluorinated gas use and LNG consumption take more than 99% of total emission. Activity data of these emission sources were checked through the objective evidence provided by supplier therefore KFQ could confirm that these activity data is valid itself.
- 5) However, verification opinion regarding to the relevant error caused by emission reduction efficiency of emission reduction technologies in process emission which affect Greenhouse Gas Emission was not considered. It is because of the efficiency has to be assessed and confirmed by the Government or related specialized agency but it was developed by Company according to the Company own methodology. For the overseas subsidiaries, each national net calorific value and electricity emission factor were preferentially used but net calorific value and electricity emission factor were adopted from IPCC Guidelines or Korean Energy Law Enforcement Regulation and IEA statistics respectively in case of nonexistence of it. Therefore, it is necessary to re-calculate Greenhouse Gas Emission in any change of these parameters or factors. Also, in case of buying credits (ex, RECs) in the market, the offset credit is applied to evaluate the emission and record separately in market base section.
- 6) Except unconsidered emission source in the 'Samsung Electronics Co., Ltd., Greenhouse Gas Inventory Guideline', material error, omission or insignificant issues was not found in 2019 Samsung Electronics Co., Ltd., Greenhouse Gas Emission Report.

2019 Samsung Electronics Co., Ltd., Greenhouse Gas Emission]

unit: thousand tonnes CO<sub>2</sub> eq

Report year		2019.1.1~2019.12.31				
Verification Scope		Domestic	Overseas		Total	
			Location	Market base	Location	Market base
GHG Emission	Sub Total	11,131	4,934	2,669	16,065	13,800
	Direct Emission (Scope 1)	3,986	1,081	1,081	5,067	5,067
	Indirect Emission (Scope 2)	7,145	3,853	1,588	10,998	8,733

President & CEO Korean Foundation for Quality  
Ji Young Song

*Ji Young Song*

May 6, 2020

## GRI Index

GRI Standards (2016)		Index Description	Status	Page	Comments
GRI 102 General Disclosures					
Organizational Profile	102-1	Name of the organization	●	About this report	
	102-2	Activities, brands, products, and services	●		Refer to the company website
	102-3	Location of headquarters	●	About this report	
	102-4	Location of operations	●	4-5	
	102-5	Ownership and legal form	●		Refer to the business report
	102-6	Markets served	●	4-5	
	102-7	Scale of the organization	●	113-114	
	102-8	Information on employees and other workers	●	114-115	
	102-9	Supply chain	●	4-5, 96	
	102-10	Significant changes to the organization and its supply chain	●		Refer to the business report
	102-11	Precautionary Principle or approach	●	110-111	
	102-12	External initiatives	●	33-34, 106	
	102-13	Membership of associations	●	106	
Strategy	102-14	Statement from senior decision-maker	●	2	
	102-15	Key impacts, risks, and opportunities	●	20-21	
Ethics and Integrity	102-16	Values, principles, standards, and norms of behavior	●		Refer to the company website
	102-17	Mechanisms for advice and concerns about ethics	●	111	
Governance	102-18	Governance structure	●	46-49	
	102-19	Delegating authority	●	110	
	102-20	Executive-level responsibility for economic, environmental, and social topics	●	46-49	
	102-21	Consulting stakeholders on economic, environmental, and social topics	●	106	
	102-22	Composition of the highest governance body and its committees	●	46-49	
	102-23	Chair of the highest governance body	●	47	
	102-24	Nominating and selecting the highest governance body	●	46-49	
	102-25	Conflicts of interest	●	47-48	
	102-26	Role of highest governance body in setting purpose, values, and strategy	●	46-49	
	102-27	Collective knowledge of highest governance body	●	46-49	
	102-28	Evaluating the highest governance body's performance	○		
	102-29	Identifying and managing economic, environmental, and social impacts	●	110	
	102-30	Effectiveness of risk management processes	●	110	
	102-31	Review of economic, environmental, and social topics	●	46-49	
	102-32	Highest governance body's role in sustainability reporting	●	20, 46-49	
	102-33	Communicating critical concerns	●	46-49	
	102-34	Nature and total number of critical concerns	●	20, 46-49	
	102-35	Remuneration policies	●		Refer to the business report
	102-36	Process for determining remuneration	●		Refer to the business report
	102-37	Stakeholders' involvement in remuneration	○		
	102-38	Annual total compensation ratio	○		
	102-39	Percentage increase in annual total compensation ratio	○		
Stakeholder engagement	102-40	List of stakeholder groups	●	106	
	102-41	Collective bargaining agreements	●	37	
	102-42	Identifying and selecting stakeholders	●	20-21, 106	
	102-43	Approach to stakeholder engagement	●	106	
	102-44	Key topics and concerns raised	●	106	
Reporting Practice	102-45	Entities included in the consolidated financial statements	●		Refer to the business report
	102-46	Defining report content and topic Boundaries	●	20-21	
	102-47	List of material topics	●	21	

GRI Standards (2016)		Index Description	Status	Page	Comments
Reporting Practice	102-48	Restatements of information	●	113-120	
	102-49	Changes in reporting	●		No significant changes during reporting period
	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	●	128-131	
	102-56	External assurance	●	123-124	
Management Approach					
	103-1	Explanation of the material topic and its Boundary	●	20-21	
	103-2	The management approach and its components	○		
	103-3	Evaluation of the management approach	○		
GRI 200 Economic Standard Series					
Economic Performance	201	Management Approach	●	20-21, 108-109	
	201-1	Direct economic value generated and distributed	●	113	
	201-2	Financial implications and other risks and opportunities due to climate change	●	23, 26	
	201-3	Defined benefit plan obligations and other retirement plans	●		Refer to the business report
	201-4	Financial assistance received from government	○		
Market Presence	202	Management Approach	○		
	202-1	Ratios of standard entry level wage by gender compared to local minimum wage	○		
	202-2	Proportion of senior management hired from the local community	○		
Indirect Economic Impacts	203	Management Approach	●	70-71	
	203-1	Infrastructure investments and services supported	●	72-75	
	203-2	Significant indirect economic impacts	●	108-109	
Procurement Practices	204	Management Approach	●	94-95	
	204-1	Proportion of spending on local suppliers	○		
Anti-Corruption	205	Management Approach	●	50-53, 111	
	205-1	Operations assessed for risks related to corruption	●	50-53, 111, 116	
	205-2	Communication and training about anti-corruption policies and procedures	●	50-53, 111, 116	
	205-3	Confirmed incidents of corruption and actions taken	○		
Anti-Competitive Behavior	206	Management Approach	●	50-53	
	206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	○		
GRI 300 Environmental Standards Series					
Materials	301	Management Approach	●	29, 62-63	
	301-1	Materials used by weight or volume	○		
	301-2	Recycled input materials used	●	119	
	301-3	Reclaimed products and their packaging materials	●	119	
Energy	302	Management Approach	●	22-23	
	302-1	Energy consumption within the organization	●	24, 120	
	302-2	Energy consumption outside of the organization	○		
	302-3	Energy intensity	●	120	
	302-4	Reduction of energy consumption	●	24	
	302-5	Reductions in energy requirements of products and services	●	119	

## GRI Index

GRI Standards (2016)		Index Description	Status	Page	Comments
Water	303	Management Approach	●	56-57	
	303-1	Water withdrawal by source	●	59, 120	
	303-2	Water sources significantly affected by withdrawal of water	●	58	
	303-3	Water recycled and reused	●	59, 120	
Biodiversity	304	Management Approach	●	56-57	
	304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	●	61	
	304-2	Significant impacts of activities, products, and services on biodiversity	●	61	
	304-3	Habitats protected or restored	●	61	
	304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	●	61	
Emissions	305	Management Approach	●	22-23	
	305-1	Direct (Scope 1) GHG emissions	●	120	
	305-2	Energy indirect (Scope 2) GHG emissions	●	120	
	305-3	Other indirect (Scope 3) GHG emissions	●	120	
	305-4	GHG emissions intensity	●	120	
	305-5	Reduction of GHG emissions	●	24	
	305-6	Emissions of ozone-depleting substances (ODS)	●	121	
	305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	●	121	
Effluents and Waste	306	Management Approach	●	56-57	
	306-1	Water discharge by quality and destination	●	120	
	306-2	Waste by type and disposal method	●	121	
	306-3	Significant spills	●		No significant spills during reporting period
	306-4	Transport of hazardous waste	●		We comply with conventions on the border control of hazardous waste
	306-5	Water bodies affected by water discharges and/or runoff	●	61	
Environmental Compliance	307	Management Approach	●	51, 111	
Supplier	307-1	Non-compliance with environmental laws and regulations	●	121	
Environmental Assessment	308	Management Approach	●	96-97	
	308-1	New suppliers that were screened using environmental criteria	●	117	
	308-2	Negative environmental impacts in the supply chain and actions taken	●	97	

### GRI 400 Social Standards Series

Employment	401	Management Approach	●	84-85	
	401-1	New employee hires and employee turnover	●	114	
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	○		
	401-3	Parental leave	●	115	
Labor/ Management Relations	402	Management Approach	●	32-33	
	402-1	Minimum notice periods regarding operational changes	○		
Occupational Health and Safety	403	Management Approach	●	84-85, 90	
	403-1	Workers representation in formal joint management-worker health and safety committees	●	37	
	403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	●	116	
	403-3	Workers with high incidence or high risk of diseases related to their occupation	○		
	403-4	Health and safety topics covered in formal agreements with trade unions	○		
Training and Education	404	Management Approach	●	84, 86	
	404-1	Average hours of training per year per employee	●	115	
	404-2	Programs for upgrading employee skills and transition assistance programs	●	86	
	404-3	Percentage of employees receiving regular performance and career development reviews	●	86, 115	

GRI Standards (2016)		Index Description	Status	Page	Comments
Diversity and Equal Opportunity	405	Management Approach	●	84-86	
	405-1	Diversity of governance bodies and employees	●	115	
	405-2	Ratio of basic salary and remuneration of women to men	●		We do not discriminate on any basis in all processes including promotion, compensation and disciplinary measures
Non-Discrimination	406	Management Approach	●	33	
	406-1	Incidents of discrimination and corrective actions taken	●	38-39	
Freedom of Association and Collective Bargaining	407	Management Approach	○		
	407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	○		
Child Labor	408	Management Approach	●	34	
	408-1	Operations and suppliers at significant risk for incidents of child labor	●	35-36	
Forced or Compulsory Labor	409	Management Approach	●	34	
	409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	●	35-36	
Security Practices	410	Management Approach	○		
	410-1	Security personnel trained in human rights policies or procedures	○		
Rights of Indigenous Peoples	411	Management Approach	○		
	411-1	Incidents of violations involving rights of indigenous peoples	○		
Human Rights Assessment	412	Management Approach	●	33-34	
	412-1	Operations that have been subject to human rights reviews or impact assessments	●	35-36	
	412-2	Employee training on human rights policies or procedures	●	34	
	412-3	Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	○		
Local Communities	413	Management Approach	●	70-71	
	413-1	Operations with local community engagement, impact assessments, and development programs	●	72-75	
	413-2	Operations with significant actual and potential negative impacts on local communities	○		
Supplier Social Assessment	414	Management Approach	●	94-95	
	414-1	New suppliers that were screened using social criteria	●	117	
	414-2	Negative social impacts in the supply chain and actions taken	●	118	
Public Policy	415	Management Approach	●	50-53, 111	
	415-1	Political contributions	●		Code of Conduct prohibits contribution to political parties
Customer Health and Safety	416	Management Approach	○		
	416-1	Assessment of the health and safety impacts of product and service categories	○		
	416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	●		Refer to the business report
Marketing and Labeling	417	Management Approach	●	66	
	417-1	Requirements for product and service information and labeling	●	66	
	417-2	Incidents of non-compliance concerning product and service information and labeling	○		
	417-3	Incidents of non-compliance concerning marketing communications	○		Refer to the business report
Customer Privacy	418	Management Approach	●	41-42	
	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	●		No violations during reporting period
Socioeconomic Compliance	419	Management Approach	●	50-53, 111	
	419-1	Non-compliance with laws and regulations in the social and economic area	●		Refer to the business report

## TCFD Index

TCFD recommendation		Page/Reference
Governance	a) Describe the board's oversight of climate-related risks and opportunities	p 23 CDP- CC1.1a, CC1.1b.
	b) Describe management's role in assessing and managing climate-related risks and opportunities	p 23 CDP- CC1.2a
Strategy	a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term	p 23-25 CDP- CC2.2c, CC2.3a, CC2.4a, CC3.1c
	b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning	p 23-25 CDP- CC2.5, CC2.6
	c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	p 23 CDP- CC3.1c, CC3.1d
Risk Management	a) Describe the organization's processes for identifying and assessing climate-related risks	p 26 CDP- CC1.2a, CC2.2b
	b) Describe the organization's processes for managing climate-related risks	p 26 CDP- CC2.2d
	c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management	p 23, p26 CDP- CC2.2
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	p 23-26 CDP- CC11.3
	b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks	p 26, p120
	c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets	p 27 CDP- C4

## SASB Index

### Sustainability Disclosure Topics & Accounting Metrics

Code	Topic	Accounting Metric	Page/Reference
TC-HW-230a.1	Product Security	Description of approach to identifying and addressing data security risks in products	p 40-45
TC-HW-330a.1	Employee Diversity & Inclusion	Percentage of gender and racial/ethnic group representation for (1) management, (2) technical staff, and (3) all other employees	p 115
TC-HW-410a.1	Product Lifecycle Management	Percentage of products by revenue that contain IEC 62474 declarable substances	Samsung Electronics complies with national laws and global regulations(EU RoHS, REACH, etc.) and conducts rigorous pre-inspection and post-management of all parts and raw materials used in products. Please refer to P65, 92 and 93 of the Sustainability Report for Samsung Electronics' efforts in managing hazardous substances.
TC-HW-410a.2		Percentage of eligible products, by revenue, meeting the requirements for EPEAT registration or equivalent	Product types    % of sales of all EPEAT registered products ..... Mobile phones    64.4% ..... Computers        33.1%
TC-HW-410a.3		Percentage of eligible products, by revenue, meeting ENERGY STAR® criteria	Product types    % of sales of all ENERGY STAR® qualified products <sup>1)</sup> ..... Computers        92.3% ..... Audio devices    83.4%
TC-HW-410a.4		Weight of end-of-life products and e-waste recovered, percentage recycled	p 119
TC-HW-430a.1	Supply Chain Management	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	p 117-118
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	p 117-118
TC-HW-440a.1	Materials Sourcing	Description of the management of risks associated with the use of critical materials	p 102-103

Footnote:

1) Based on 2019 in North America (The United States, Canada)

### Activity Metric

Code	Topic	Page/Reference
TC-HW-000.A	Number of units produced by product category	2019 Business Report(Businesses Overview) p 64-66
TC-HW-000.B	Area of manufacturing facilities	p 4-5
TC-HW-000.C	Percentage of production from owned facilities	2019 Business Report(Businesses Overview) p 64-66



## Materiality Assessment

We identify sustainability issues that impact our business and share our progress with stakeholders in a transparent way through our sustainability report. We pool all relevant issues based on media reports, peer benchmarking, global standards and initiatives on sustainable management, and expert opinions, and then identify the most meaningful / relevant material issues through an expert review and discussion with related departments. In identifying the most important issues of 2020, we applied the sustainability management criteria for the technology and communications category specified by the Sustainability Accounting Standards Board (SASB) Materiality Map. Material issues were prioritized according to the economic, social, and environmental interests of stakeholders, as well as business impacts, such as revenue, costs, and reputation. The results of the materiality assessment are finalized after the review of experts in sustainable management and the Corporate Sustainability Management Office.

### Interviews with Sustainability Management Experts

In 2019, we communicated with ESG evaluation agencies, environmental research institutes, NGOs, impact investors and sustainability experts to introduce our approach to sustainability management issues, key activities and progress, and gather feedback from stakeholders. The opinions we gathered were reflected in the materiality assessment and will be considered when planning our sustainability management activities.

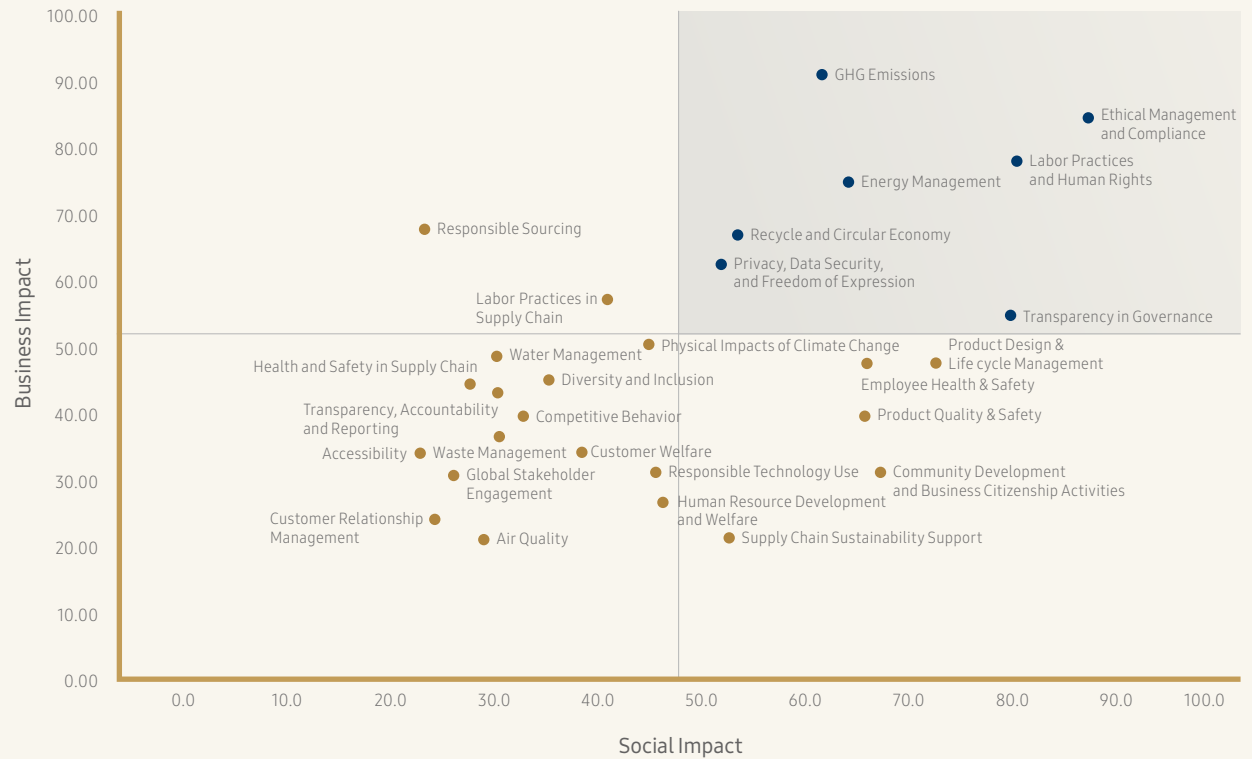
-Participants: Youngjae Ryu (Sustainvest), Eunkyung Lee (UN Global Compact Network Korea), Kyung Sun Chung (Root Impact), Dexter Galvin (CDP), Michael Rohwer (BSR), Robert Lederer (RBA)

Pooling material issues	Prioritization	Internal and external expert review
<ul style="list-style-type: none"> <li>Created a pool of material issues based on a comprehensive analysis of 1,600 news articles, peer benchmarks on 79 issues, and industry issues (UN SDGs, TCFD, GRI, SASB, WEF Sustainability Metrics, etc.)</li> <li>Selected 28 issues through interviews with sustainable management experts and relevant departments within our company</li> </ul>	<ul style="list-style-type: none"> <li>Prioritized sustainable management issues according to the analysis of social impact and business impact</li> <li><b>Social Impact</b> <ul style="list-style-type: none"> <li>Assessed economic, social, and environmental impacts to stakeholders (customers, shareholders, investors, employees, suppliers, local communities, NGOs, governments, and media)</li> </ul> </li> <li><b>Business Impact</b> <ul style="list-style-type: none"> <li>Assessed the impacts material issues on our revenue, costs, and reputation</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Reviewed by Samsung Electronics top management and Corporate Sustainability Management Office</li> <li>Material issues selected through external sustainability management expert interviews</li> </ul>

### Materiality Analysis Result

	Priority Areas	Details
01	<b>Climate Actions</b>	Global societies are cautioned that climate change is expected to deteriorate biodiversity, human health and food systems. Some regions are even warned that they may face unpredictable levels of crisis. Such crisis will have a significant impact on companies' activities and that global response is needed.
02	<b>Circular Economy</b>	As natural resources are depleted, sustainability becomes essential throughout the entire process of purchasing, developing, manufacturing, distributing, using and disposing of products. Therefore, it is necessary to move away from a linear economy that consumes and dispose resources after one-time use to a circular economy that empowers efficient use of resources by expanding the reuse of materials and recycling.
03	<b>Labor &amp; Human Rights</b>	The protection, respect and remedy of human rights are essential to the sustainable development of a global society. Companies must comply with international human rights guidelines and national laws throughout their management activities, establish relevant policies, and regularly assess the status of policy compliance and improvement activities.
04	<b>Privacy &amp; Cybersecurity</b>	As the damage and threats from various types of cyber attacks have increased in recent years, cybersecurity and privacy have become more important. Cybersecurity should be considered in the entire process from product development to production. Moreover, user's personal information must be thoroughly protected regardless of the purpose and method of use in various products and services in order to prevent the misuse of personal information.
05	<b>Corporate Governance</b>	For transparent and responsible management, the Board of Directors makes decisions on matters stipulated by laws or articles of incorporation, delegated matters from the general shareholders' meetings, and important matters related to the company's basic policy and business practice, while helping and supervising the executives' decisions.
06	<b>Compliance</b>	Compliance with laws and regulations is one of the most basic principles of business activities. In the case of global companies, compliance must be thoroughly followed to conduct business in accordance with the global norms and laws of each country where the business operates.

## Materiality Analysis Matrix



Sustainability Issues	Our Main Activities and Results in 2019	GRI Standards	UN SDGs
Energy management GSG management	<ul style="list-style-type: none"> <li>Achieved 92% in renewable energy use rate in the United States, China, and Europe (aim to reach 100% by the end of 2020)</li> <li>Received a 2019 Green Power Leadership Award for Excellence from the United States Environmental Protection Agency (EPA)</li> </ul>	GRI 302 Energy GRI 305 Emissions	 
Recycling and circular economy	<ul style="list-style-type: none"> <li>Expanded the use of sustainable materials including renewable plastics, bioplastics, and sustainably-sourced papers</li> <li>Expanded the application of modular design to products including BESPOKE Refrigerator and Cube Air Purifier</li> </ul>	GRI 301 Materials	 
Labor practice and human rights	<ul style="list-style-type: none"> <li>Held educational sessions on labor and human rights in hand with international organizations including the International Organization for Migration (IOM)</li> <li>Held stakeholder engagement forum in Vietnam to strengthen communication with our stakeholders</li> </ul>	GRI 402 Labor Relations GRI 407 Freedom of Association and Collective Bargaining GRI 408 Child Labor GRI 409 Forced or Compulsory Labor GRI 412 Human Rights Assessment	
Privacy, Cybersecurity and freedom of speech	<ul style="list-style-type: none"> <li>Developed and released the Samsung Data Protection Guidelines</li> <li>Samsung Knox platform 3.2 was rated "strong" in 27 out of 30 categories in Gartner's May 2019 report</li> </ul>	GRI 418 Customer Privacy	
Transparency in governance	<ul style="list-style-type: none"> <li>Appointed an Independent Director as the Chairman of the Board for the first time</li> </ul>	GRI 102 Governance	
Ethical management and compliance	<ul style="list-style-type: none"> <li>Enhanced the independence of the Corporate Compliance Team, which reports directly to the CEO since reorganization</li> <li>An independent expert group, Samsung Compliance Committee, was launched to oversee business</li> </ul>	GRI 419 Compliance	

## Sustainability Value Creation

Samsung Electronics has been using the KPMG 'True Value' methodology since 2016 to measure both the positive and negative effects of our sustainable management activities and achievements in sustainable value creation; we also use it as a guide to identify our next course of action. In order to convert our sustainable value creation activities into monetary value, we reviewed research and selected measurement indices. We also disclosed our measurement methodology in detail to enhance the credibility of our data.

Samsung Electronics' sustainability management value is composed of financial socio-economic and environmental values and each are calculated as positive (+) or negative (-). The financial value

is calculated from the net profit generated by Samsung Electronics during the past year. Socio-economic value is calculated by measuring the monetary value brought by company to major stakeholders including investors and suppliers, as well as the company's contributions to local community development. Environmental value is calculated by measuring GHG emissions, waste, recycling, and use of water, among others.

We are committed to improving accuracy in quantifying sustainable management activities by closely monitoring global trends in social and environmental value measurement. We will continue our efforts in accessing and managing our social and environmental activities from as many perspectives as possible.

### Value Measurement Method

Category	Type	Calculation methodology <sup>1)</sup>
Financial value	Benefits	Net income generated by the company during 2019 fiscal year
Socio-economic value	Investor value	Dividends and interest payments to investors and creditors
	Supplier support	Win-Win funds and incentives to suppliers
	Local community development	Donations for local communities Return on investment of education projects (118%) <sup>2)</sup> Return on investment of infrastructure projects (250%) <sup>3)</sup> Return on investment of sanitation facility projects (550%) <sup>4)</sup>
Environmental value	Workplace GHG emissions	The social cost related to GHG emissions <sup>5)</sup>
	Environmental impact on atmosphere	The social cost related to air pollutant (NOx, Sox, PM) emissions <sup>5)</sup>
	Environmental impact on water system	The social cost related to water usage based on the level of water shortage in the location of the business <sup>7)</sup>
	Environmental impact of waste	The social cost related to waste landfill/incineration/recycling <sup>8)</sup>

Footnotes:

1) Exchange rates are based on the rates as of Dec. 31, 2019 (1 USD = 1,158 KRW; 1 EURO = 1,297 KRW)

2) G.Psacharopoulos and H.A. Patrinos, Returns to investment in education: a further update (2004)

3) BCG, The cement sector: a strategic contributor to Europe's future

4) G. Hutton, Global costs and benefits of drinking-water supply and sanitation interventions to reach the MDG target and universal coverage (2012)

5) EPA, Technical update of the social cost of carbon for regulatory impact analysis (2013)

6) EEA, Revealing the cost of air pollution from industrial facilities in Europe (2011)

7) TruCost PLC, Natural capital at risk: the top 100 externalities of business (2013)

8) A. Rabl, J. V. Spadaro and A. Zoughaib, Environmental impacts and costs of solid waste: a comparison of landfill and incineration (2009)

### Calculation Method

#### Management Activities Investment

- Investments in CSR programs
- Environmental emissions data
- Investments to support our suppliers, etc.

Local communities' development (education)

KRW 142.4 billion

#### Monetary Value

- Research results from global research institutes
- Carbon price of corresponding country, etc.

Return on investments based on social benefits of education

118%

#### Economic, social and environmental impacts value

Socio-economic Value

KRW 168 billion

## 2019 Value Creation Achievements

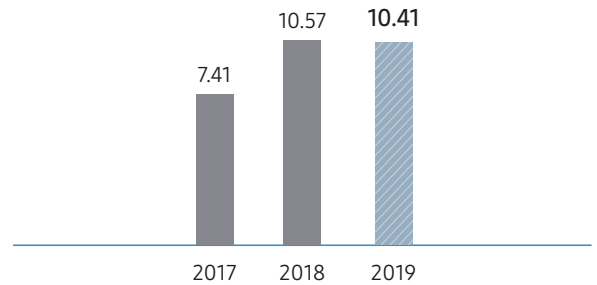
From January 1 to December 31, 2019, the total value of sustainable management created by Samsung Electronics amounts to approximately KRW 32.15 trillion. The financial value came out to be KRW 21.74 trillion, down by 51% from 2018 due to the decreased net income. Despite such conditions, based on our new CSR vision of 'Together for Tomorrow!' which pursues socio-economic value creation, we increased our support for future generations, and have continuously strengthened our partner collaboration programs for improving the competitiveness of the supply chain. Furthermore, we continued to expand the use of renewable energy since declaring our commitment to go 100% renewable energy in the United States, China and Europe to improve environmental value. As a result, we generated socio-economic and environmental value amounting to KRW 10.41 trillion in 2019 on par with that of 2018.

Footnote:

1) Changes of methodology used to calculate social contribution costs and GHG emissions caused the re-calculation of the sustainable management value over the past three years.

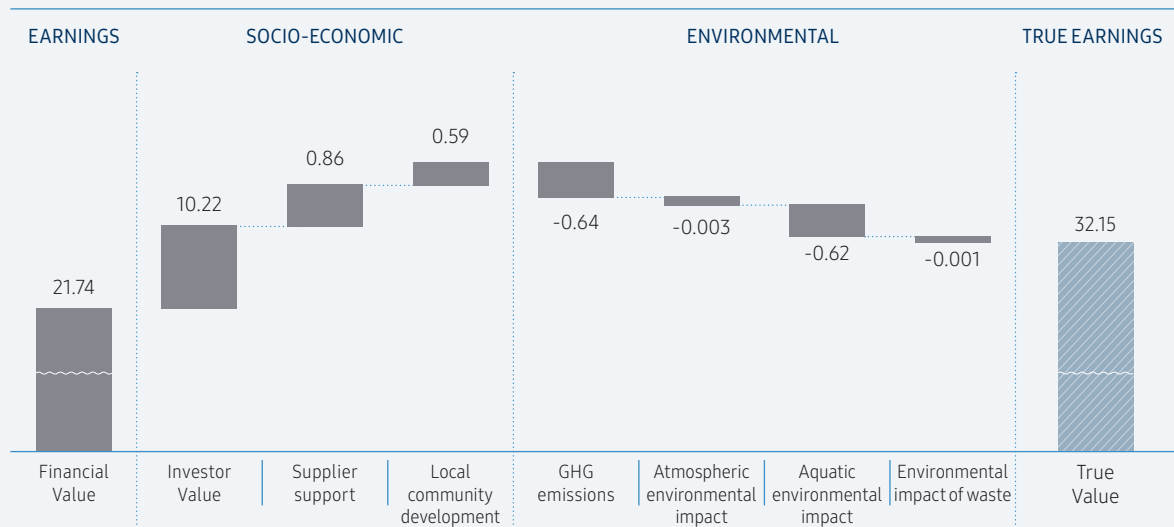
### Socio-economic and Environmental Value

Unit: trillion KRW



### 2019 True Value

Unit: trillion KRW



# A JOURNEY TOWARDS A SUSTAINABLE FUTURE

## About This Report

Samsung Electronics publishes the 13<sup>th</sup> Sustainability Report in 2020 to share its economic, social and environmental progress transparently with various stakeholders.

## Reporting Standards

This report was prepared in accordance with the Core Options of the Global Reporting Initiative (GRI) standards. It also reflected the indicators of the UN Sustainable Development Goals (SDGs), Task Force on Climate-related Financial Disclosures (TCFD) and Sustainability Accounting Standards Board (SASB).

## Reporting Scope

This report covers all our global worksites and supply chains. Financial performance data is based upon consolidated K-IFRS accounting standards. Environmental performance of our worksites is based upon data collected from 37 global production subsidiaries.

## Reporting Period

This report covers economic, social, and environmental performance and activities from January 1, 2019 to December 31, 2019, and for some achievements in this report may include information dated to May 2020. Quantitative data for the latest three fiscal years are provided to allow for trend analysis over time.

## Reporting Cycle

Annual (last report issued in June, 2019)

## Report Assurance

To ensure the reliability of the reporting process and information included in the report, Samsung Electronics engaged with Samil PwC, an independent external assurance provider to conduct the assurance review. The review was conducted in accordance with International Standard on Assurance Engagements (ISAE) 3000 and AA1000AS Type II.

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## FOR FURTHER DETAILS ON THIS REPORT

- Samsung Electronics Website : <http://www.samsung.com>
- Sustainability Website : <https://www.samsung.com/us/aboutsamsung/sustainability/strategy/>
- IR Website : <https://www.samsung.com/global/ir/>
- Samsung Electronics Newsroom : <http://news.samsung.com/kr>  
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