

Creating Solutions for **SUSTAINABLE TOMORROW**



SOLUM

About This Report

As a “Solution Provider for Sustainable Tomorrow,” SOLUM is publishing our first ESG Report in 2024 to practice ESG management that encompasses environment and humanity. This report contains the efforts and achievements of ESG management that SOLUM has been promoting since our establishment in 2015. Starting with this report, SOLUM will publish ESG Report every year to communicate with stakeholders more actively and transparently and to pursue ESG practices with integrity.

Reporting Standards and Principles

This report has been prepared in accordance with the Global Reporting Initiative (GRI) Standards 2021, the International Sustainability Disclosure Standard (ISSB), and has incorporated the standards of ISSB IFRS S1/S2 and the KSSB Disclosure Draft’s climate disclosure recommendations, which have become international standards, including the Sustainability Accounting Standards Board (SASB), for material issues of SOLUM. The financial information in this report has been prepared in accordance with K-IFRS.

Reporting Period

This report covers quantitative and qualitative performances between January 1, 2023, and December 31, 2023. As this report is our first report, some information contains activities from past, of which separate remarks were made in footnotes specifying the period of occurrence. For ESG-related performance (targets and indicators), we have included data from the last three years for information that can be identified and verified by following the recommendations of the third-party assurer, Korea Quality Foundation (KQF). The reporting and publication of ESG Report is conducted annually, in July.

Reporting Scope

This report contains quantitative data and qualitative performance of SOLUM’s Korean headquarters (Yongin-si, Gyeonggi Province) and major overseas production sites. Some areas with different scopes are noted in the footnotes.

Independent Assurance

This report has been reviewed in accordance with the international verification standard AA1000AS v3, and third-party verification has been performed by the Korea Quality Foundation. The assurance applied a Type 2 assurance level according to AA1000AS (v3), and the third-party assurance verification can be found on pages 104-105.

Publication Information

Department	ESG Impact Team
Address	357 Guseong-ro, Yongin-si, Gyeonggi Province 16914, Korea
Homepage	https://www.SOLUM-group.co.kr/
Contact us	Contact us on the homepage

Contents

04 Overview



OVERVIEW

- 05 CEO Message
- 06 ESG Management
- 07 ESG Governance
- 08 ESG Committee Message
- 09 ESG inside SOLUM
- 10 ESG Highlight

52 Social



SOCIAL

- 53 Talent Management and Training
- 56 Human Rights Management
- 58 Health and Safety Management
- 61 Product Stewardship
- 65 Responsible Supply Chain
- 68 Information Security
- 70 Social Contributions

11 Business



BUSINESS

- 12 About Us
- 14 Business Highlight
- 15 Smart & Sustainable Business

72 Governance



GOVERNANCE

- 73 Board Management
- 76 Compensation Policy
- 77 Shareholder Policy
- 78 Fair Trade
- 80 Jeong-Do Management (Ethics and Compliance)

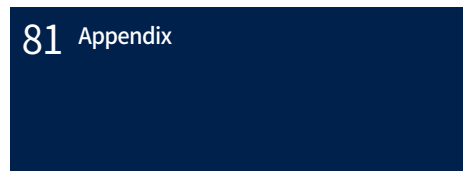
29 Sustainability



SUSTAINABILITY

- 30 Double Materiality Assessment
- 33 Management Approach
- 35 Stakeholder Communication
- 36 UN SDGs
- 37 ESG Intelligence System

81 Appendix



APPENDIX

- 82 ESG Data
- 92 ESG Index
- 97 ESG Policy
- 102 Awards and Membership
- 103 GHG Verification Opinion Statement
- 104 Third-party Verification Statement

38 Environmental



ENVIRONMENTAL

- 39 Environmental Management
- 42 Climate Action
- 50 Biodiversity Preservation

SOLUM's ESG Report has been created as an [Interactive PDF](#) that includes links to related pages and direct access to webpages.



Overview



05 CEO Message • 06 ESG Management • 07 ESG Governance
08 ESG Committee Message • 09 ESG inside SOLUM • 10 ESG Highlight

CEO Message



CEO **SungHo Jun**



Dear valued stakeholders of SOLUM,

We would like to thank you for your continued support and trust for SOLUM.

This year, SOLUM celebrates its 9th anniversary. Looking back, it has been a time of constant challenge, change, and innovation. We have become top global electronic component and smart solution sales company that leads the innovation of the industry with better products and faster services. Now, as our next new task, we are beginning a new chapter at SOLUM by marking 2023-2024 as our cornerstone for ESG management. To this end, we have established the ESG Committee, held an ESG Management Declaration, and integrated ESG vision and goals with corporate management goals. We will continue to move forward in this direction to ensure that our ESG management vision is not only a declaration but also creates tangible change.

First, we will upgrade our eco-friendly product portfolio and strive to reduce greenhouse gas emissions. Carbon neutrality is now a calling of the times, and we will expand the production of eco-friendly products that ensure energy reduction and efficiency so that our customers can contribute to the environment just by using our products. We will effectively reduce carbon emissions through ESL, SOLUM's flagship product that boasts low-power displays, and support energy conservation in everyday life by advancing our electric vehicle charging business and expanding our ESS product lineup. We will also make a full-scale transition to renewable energy by expanding solar facilities.

Second, we will take the lead in social contributions and shared growth based on a healthy corporate culture. SOLUM, which has always aimed for a fun and healthy workplace for all employees, will do our best to improve the human rights and quality of work and life of our employees. In addition, with sincere efforts for corporate social responsibility, we will promote various social contribution activities that can contribute to the development of local communities.

Third, we will internalize ESG management at the core of corporate culture by practicing Jeong-Do Management and transparently disclosing the results. In particular, we will not only passively comply with laws and corporate ethics, but actively practice Jeong-Do Management. As employees are also stock-owners of SOLUM, employees are part owners. With this sense of ownership, all employees will strictly comply with relevant laws and regulations in all aspects of management and sales, and sincerely internalize ESG through the activities of the ESG Committee and ESG Working Group. In addition, starting with this ESG Report, we will regularly disclose and transparently communicate SOLUM's concerns and efforts to fulfill our corporate social responsibility while not being idle on generating economic value such as sales and profits.

ESG management is not only the foundation and philosophy for a company to stand on, but it also is the engine for future growth. We look forward to our stakeholders' encouragement and support as we begin our new journey of "Creating Solutions for Sustainable Tomorrow."

Thank you.

ESG Management

ESG Vision and Goals

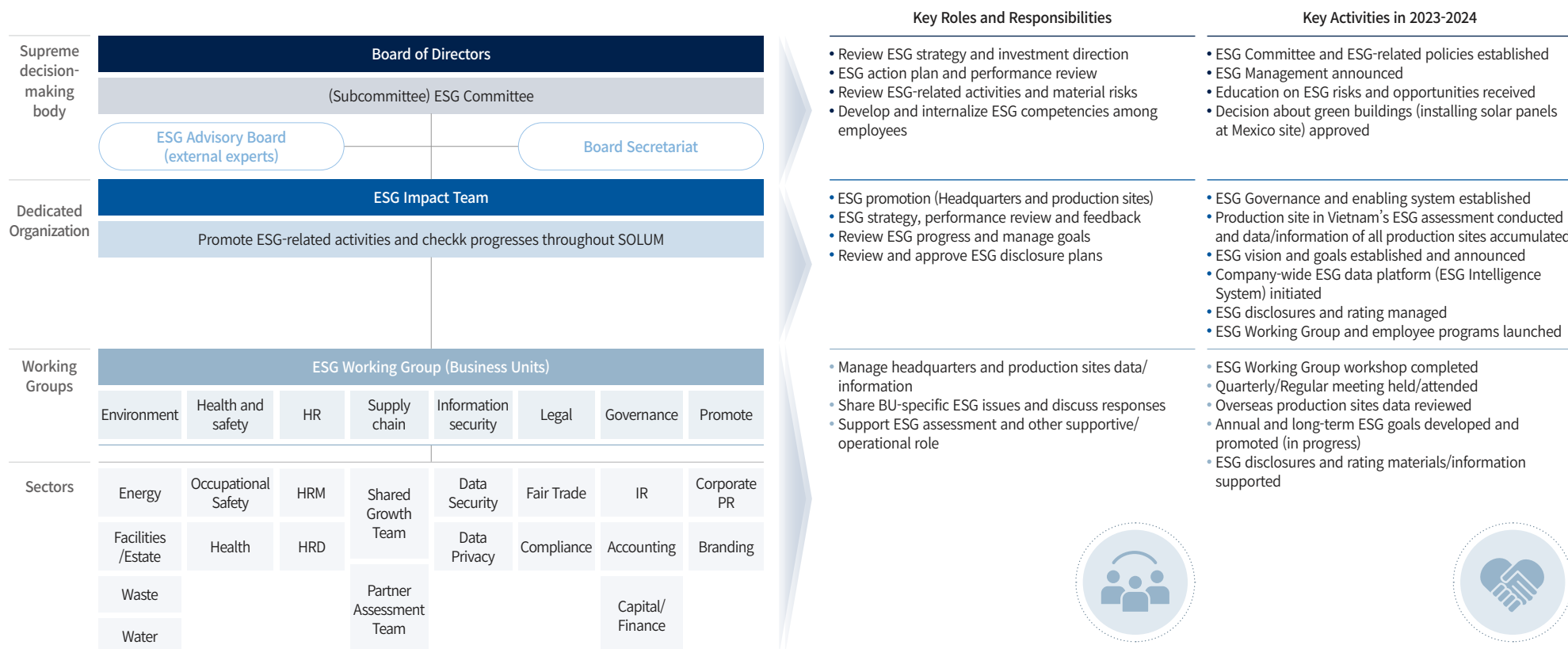


	Environmental		Social			Governance	
Goals							
Focused Area	1. Eco-friendly Workplace	2. Eco-friendly Product Portfolio	3. Happy Workplace	4. Social Value	5. Shared Growth	6. Jeong-Do Management	7. ESG Integration
Action Items	- Promoting GHG reduction activities - Building renewable energy installations - Improving energy and process efficiency	- Developing low-power products - Expanding green business (i.e., EV charging station)	- Enhancing employee experience - Enhancing family-friendly business	- Improving policy and performance for disability workforce - Driving social value creation through SOLUM products	- Managing human rights and environmental risks in the supply chain - Engaging in win-win with suppliers	- Continuing employee engagement - Strengthening compliance controls	- Expanding ESG Committee activities - Expanding ESG Working Group (E:LUM) programs and activities
Action Plan	- Build and systemize GHG emissions inventory - Scope1 and 2 calculations - Expand solar power generation and storage facilities at major production sites 30% improvement in productivity and quality	- Expand ESS product lineup - Feature ESL Solar Cell - Upgrade high-efficiency EV charging business - Managing product hazards such as RoHs and phthalates	- Improving employee transportation and housing, including relocating to a new building near metro station and providing housing and shuttle buses for employees - Offering job transfer-related training - Upgrading to the Ministry of Gender Equality and Family Affairs' Family-Friendly Business Certification	- Maintaining retention rate of workers with disabilities by partnering with universities that offer Higher Education for People with Disabilities - Identifying social contribution activities using our product	- Offering education and training for partner companies - Improving fair trade policies - Identifying and managing potential and existing ESG risks across the entire value chain	- Continuously engaging through monthly discussions and CEO message channel "Soldam" - Building a document centralization system - Strengthening global security policies	- Offering ESG Committee and ESG Working Group training/education - Semi-annual reporting (Committee, BOD) - Publishing ESG Report (annually)
Centralized System	Smart ESG Intelligence System						
	Customized System Development (Salesforce Net Zero + SOLUM System Integration)		Globally-operated ESG Management System (SOLUM Global ESG Platform)			Real-time Performance System (Dashboard & Status Monitoring)	

ESG Governance

ESG Enabler Group: ESG Committee within the Board, a dedicated ESG Impact Team, and ESG Working Group

In March 2024, SOLUM established the ESG Committee, which includes the CEO under the Board of Directors. The ESG Committee is actively involved in decision-making of ESG management activities, including practical ESG risk management and identification of opportunity factors. To strengthen board-centered ESG risk management, the ESG Committee and the Board will regularly review ESG risks and opportunity factors and be reported on and approve major issues to take responsibility of Board oversight and fiduciary duties. In addition, in the same year, SOLUM established ESG Working Group with the ESG Impact Team, a dedicated ESG organization, to establish specific ESG goals, review performance, and identify and implement improvement tasks. The members of the Working Group were asked to set each ESG progress goal and task, and reflect them in performance indicators (KPIs) to carry out ESG goals and action plans strategically. In addition, SOLUM has established ESG policies to ensure that the Board and employees fulfill their responsibilities and roles in ESG management. ESG-related training, workshops, and regular meetings for the ESG Committee, our Board, and the Working Group were provided.



ESG Committee Message



JoonKee Hong Chairperson / External Director

ESG management is an important management philosophy and activity that must be practiced for the sustainable growth of SOLUM

In recent years, investors are showing increased preferences to invest in companies with high standards for ESG management, and governments at home and abroad have strengthened ESG-related regulations and financial benefits. Therefore, if SOLUM actively promotes ESG management, it will be advantageous to attract investment and expand business opportunities. Above all, we believe that ESG management contributes to improving a company's brand image, enhancing customer satisfaction, and recruiting and satisfying good employees. This goes in line with the changing social values and the heightened expectations of customers and consumers. Ultimately, ESG management will lead to the improvement of SOLUM's corporate value.

In other words, it will be the foundation of sustainable management that will enable SOLUM to continue to grow and survive in the future. As SOLUM has started ESG management, it is time to actively engage management and establish an appropriate ESG management performance system. To this end, the ESG Committee aims to establish an ESG management strategy based on the company's vision and values, and prepare a concrete plan to implement it. In particular, we will actively support the setting of goals and indicators related to ESG management and establish an internal performance system to achieve them. We will collect and analyze the latest information on ESG management and continuously learn about new ESG-related laws and international standards so that we can identify the latest trends and reflect them in SOLUM's management activities and decision-making.

While management's commitment is important, employee participation is key to making ESG management a part of the SOLUM culture. The Committee will support the development of an exemplary ESG culture by raising awareness and engagement of management and employees through education and internal promotion of ESG management.



KyuYeon Lee External Director

The essence is that everyone at SOLUM share, understand, and cooperate with the declared ESG management goals

For ESG management to truly set ground, the essence is paying attention to and implementing the details in which I believe start with garnering our efforts to developing eco-friendly products that can improve energy efficiency, efficient use of resources, and recycling. In addition, it is very important to build an environment for ESG practices within the company, such as improving the working environment and establishing an ethical management foundation.

In addition, given that we operate not only domestic plants but also overseas plants in Vietnam, Mexico, and elsewhere, it will be important to improve the recruitment rate of people with disabilities, strengthen respect for human rights of various employees, and improve communication skills with various stakeholders in our supply chain. In addition, it is necessary to protect shareholder rights by establishing shareholder return policies and other measures, and to ensure ethical management by introducing a communication system to suggest internal ideas and complaints.

In this regard, it is necessary to recognize ESG management as a new company culture that must be nurtured steadily rather than treating it as a short-lived, trendy value. Above all, we hope that ESG management will spread within the company so that it is sincerely promoted in practice, not just in external form. Once the entire organization, as one team, comes together for ESG, I believe SOLUM will be able to grow as a modeled, trusted company by our customers and society.

ESG inside SOLUM

SOLUM ESG Working Group ‘E:LUM’

The people who make ESG at SOLUM

Solum’s ESG Working Group is called “E:LUM,” coined by combining the words “ESG” and “SOLUM.” The name SOLUM was created to reflect how the company is purposed to provide the solution model that our customers want, while the word ‘SOLUM’ in English refers to the soil or fertile ground on which something is based. At E:LUM, we believe that ESG is more than a corporate responsibility, it is our culture, and we will work together to explore ESG activities that can be practiced and experienced by our employees and to build the soil on which SOLUM’s ESG is realized.

- November 2023 - ESG Working Group launched and Workshop held	- November 2023 - E:LUM established goals and reviewed progress by BU	- November 2023 - Participated in ESG education offered by Korea Council of Listed Companies and Samsung Electronics Supplier Education, etc.	- December 2023 - Vietnam Production Site’s ESG Assessment conducted	- December 2023 - SOLUM ESG activities explored and initiated (in-house video campaign and CSR activities initiated)	- March 2024 - Double materiality assessment and stakeholder survey completed
---	--	--	---	---	--

ESG Promotion Team Message



Director JungHyun Jo
(HR Legal Team/ESG Impact Team)

ESG is at the root of SOLUM’s business identity

SOLUM’s business is closely connected to the principles of ESG. From our flagship ESL business to our EV charger business, our products are made by considering nature and environment. Our concern for nature-positivity and the ongoing global movement toward keeping this end are not two different ideas, and we believe the recent social transition provide new opportunities for SOLUM. The first step we took was to proactively consider environmental factors such as cutting carbon emissions at our production sites. SOLUM also established ESG Committee under the Board to approach ESG management as a value and principle-driven business rationale - from a grander, integrated approach (“a forest view”) by formulating ESG-related policies rather focusing on separate, individual items of ESG issues (“a tree view”). With policies and principles embedded into our ESG, we will encourage employees to participate in ESG activities and to work together toward a unified goal.

We will transparently disclose information to our stakeholders through our ESG Report and on websites and take the lead in developing a sustainable city through collaborating with the local community along with Yongin City, Gyeonggi Province. ESG is an integral part of who we are, and we will demonstrate our commitment through our actions.

ESG Highlight

Environmental

• GHG Inventory

- Calculated Scope 1 and 2 for headquarters and overseas production sites
- Established a roadmap for building an company-wide inventory



• Environmental Management Certification

- QC08000 Certification for Environmental Hazardous Substance Management System (China production site)
- Environmental Management System ISO14001 Certification (Vietnam, Mexico, China, India)



• Eco-friendly Facilities

- Installation of solar panels (Mexico production site)



Social

• Health and Safety Activities

- Obtained ISO45001 certification for Occupational health and safety management systems (Vietnam, Mexico, and China)
- Quarterly Occupational Safety and Health Committee meetings (4 times per year)



• Gyeonggi Family Friendly Workplace

- November 2022



• 0 Critical Incidents



Governance

• ESG Committee

- ESG Management Proclamation Ceremony



• ESG Working Group

- Developed BU KPIs for ESG progress



• ESG Policy Book

- CEO approval of ESG policies, including environmental management, human rights management, etc.



• Smart ESG Intelligence System

- Establishment of integrated management system for global business sites (production, sales) (scheduled to open by end of 2024)



• Named 'Excellent Company for Fair Trade'

- Recognized by the Chairman of the Fair Trade Commission





Business

About Us

The best strategic partner for business innovation

In September 2015, SOLUM spun off from Samsung Electro-Mechanics to focus on the power module business, tuner business, and ESL business as a new growth engine. We were listed on the KOSDAQ in February 2021 through an initial public offering and continue to grow with annual sales exceeding KRW 1 trillion through continuous R&D and technology. Recently, we established SOLUM Sensor and SOLUM Healthcare, and are expanding to eco-friendly energy and healthcare businesses, securing leading technologies. With the vision of 'Global No.1 Solution Provider,' SOLUM is constantly challenging our current status and solidify our position as the world's leading global electronic component and smart solution provider.

Company name	SOLUM Corporation, SOLUM CO., LTD.
Year Founded	July 2015
Main Location	6F, Building A, 257, Gukje-ro, Giheung-gu, Yongin-si, Gyeonggi Province, Republic of Korea
Main Businesses	Manufacturing of electronic products and components, ICT business.
Sales	1.951 trillion (As of end of 2023)

Company Founded 2015~2016

Spin-off from Samsung Electronics

- Company established (July 2015)
- Vietnam production site established (Feb. 2016)
- Spin off business units to focus on core business competencies
- Advanced technology development capabilities by establishing India R&D site (Apr. 2016)
- Spun off business units to focus on core business competencies
- Involved former Samsung Electronics' management employees for fast stabilization

Market Entry 2017~2018

Proprietary Technology in 3-in-1 Board

- Korea's first 3-in-1 Board design → develop → mass production
- Sales to Samsung Electronics began (2017)
- Vietnam's second production site built for mass production (Aug. 2018)
- Developed and mass-produced new products for new markets
- Expanded Vietnam sites to increase production capacity
- Improved quality management

Growth 2019~2020

Customized Region-based Production System

- Production site in India established (Sep. 2020)
- Mexico production site established (Nov. 2020)
- Reached KRW 1 trillion in sales (2020)
- Gained access to overseas markets by establishing regional production sites
- Reduced production costs through generic, inter-regional production allocations
- Diversified to new businesses such as ESL and 3-in-1 Board to securing growth

Stabilization 2021~present

Going public, taking the next step

- Listed on KOSPI (Feb. 2021)
- Successful development of ultra-thin sensor semiconductors (2022)
- Ranked #2 globally in ESL revenue (2023)
- Fast market expansion and R&D, winning KRW 1.9 trillion in sales since inception (2023)
- Re-allocation to new production site in Mexico (Jan. 2024)
- Earned UL Certification on power modules for EV Chargers (May 2024)
- Diversified customers and products
- Continued efforts for new business acquisition for future growth
- Stabilized existing business while restructuring for new growth through expanding into higher value-added business

POWER (PAST)

- TV Power / Tuner Adapter
- Server power



1983



2013



DISPLAY (PRESENT)

- Launch of ESL 'Newton'
- Digital Signage



2020



EV BUSINESS (FUTURE)

- EV Power Module / ESS+BMS
- EV Battery Packing ICCU



2023



2024

SOLUM

About Us

Global Network

Headquartered in Yongin, Gyeonggi Province, SOLUM operates production sites in Vietnam, China, India, and Mexico, with sales sites across 6 countries including the US, Europe, and Japan. SOLUM will continue to showcase leading technology through relentless change and innovation under the vision of 'Global No.1 Solution Provider,' strengthening partnerships with customers worldwide.

	1	Headquarters	South Korea (Yongin-si, Gyeonggi Province)
	4	Production Site	Vietnam, China, Mexico, India
	8	Sales Site	United States (East, West), Europe(Germany), Japan (Tokyo), Singapore, Thailand, Mexico and Middle East(Dubai)
	1	R&D	India
	3	Under Establishment / Planned	Australia, Brazil, Vietnam

Total Employees	Countries of Presence	Under Establishment / Planned
89% of the workforce is international	9 countries	3 regions



Vietnam Production Site



China Production Site



India Production Site



Mexico Production Site



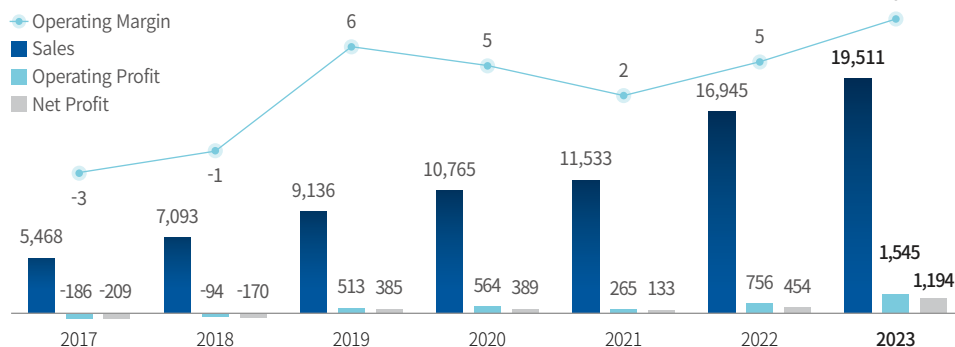
SOLUM Headquarters (Korea)

Business Highlight

Leading changes in industry and daily life, we create a better tomorrow

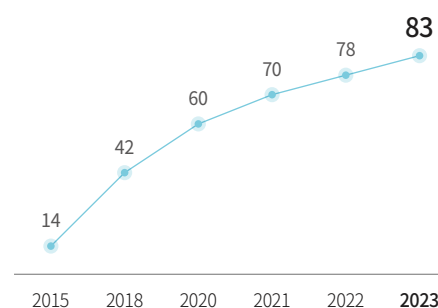
SOLUM is delivering exceptional customer experiences every day with more advanced technology and services. We lead the digital transformation in industrial environments with ESL (Electronic Shelf Label), and contribute to a complete journey from production to consumption of energy in daily life with sustainable power technologies such as EV chargers, power modules for chargers, and smart street lights. Additionally, starting from the TV 3-in-1 board in the display sector, we are expanding our services to head-up displays and customized displays for convenience and leisure. Furthermore, sensor and healthcare technologies will be a new competitive advantage for our company based on mutual synergy. SOLUM will continue to diligently discover and secure future technologies so that people and nature can coexist.

Key Achievements (Unit: KRW hundred million, %)

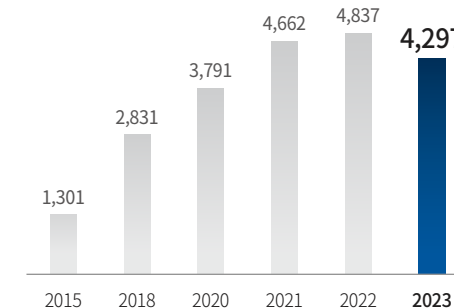


New Business Proportion (Units: %)

* New business: ESL, VS, IOT



Talent Recruitment (Unit: People)



Core Business

ESL



- A solution that displays various information on the E-Paper display screen with wireless communication technology

VS



- 3-in-1 (power, video board, tuner integrated into one board via wireless communication)
- Digital signage (Advertisement Display, Retail Display)

POWER



- Built-in modules supplying power to electronic products
- Adapters and other device power products
- EV Charger SMPS (Power Module for EV Chargers)

New Business

Sensors



- Successful in-house development of ultra-thin, high-sensitivity semiconductor sensors
- Expanding the Material Components Business through proximity sensors for TWS (True Wireless/Earphones)
- Offering various customized sensor solutions for wearable devices

Energy Solution



- EV Charger Power Module
- Reuse of secondary batteries utilizing BMS technology such as ESS and BSS
- Smart streetlights

Healthcare



- Expanding various healthcare platforms by integrating IoT technology
- Medical-use ESL solutions
- Expansion in the medical field with cancer diagnosis kits, etc.
- Healthcare devices integrated with IoT technology (EARX, Mindy)

Smart & Sustainable Business

Total Solution Provider

SOLUM continues to challenge itself to lead the global market as a provider of advanced electronic parts and smart solutions based on accumulated expertise and quality. Through continuous technological strength enhancement and innovation, we have supplied a variety of high-value-added advanced electronic parts and will add future-oriented technologies by expanding business into eco-friendly energy and healthcare in the near future.



Smart & Sustainable Business

Sustainability in our DNA

In the era of eco-friendliness, companies must fulfill the enhancement of energy efficiency and the expansion of renewable energy. Only by satisfying both can we fundamentally reduce the demand for energy. Accordingly, we have prioritized the energy efficiency and expansion of renewable energy in reshaping our eco-friendly product portfolio. SOLUM will continue to strengthen the environmental friendliness of products to achieve sustainable growth.

Energy Efficiency Biz

• ESL (Low-power Display)

With ESL, all businesses become more convenient.



ESL(Electronic Shelf Label) is a system that displays various information on E-Paper displays, and updates in real-time when changed information is entered through the communication network. Today, ESL can be applied to various fields from retail to logistics, smart factories, apparel, and healthcare. SOLUM offers both customized hardware and solutions simultaneously, from design to production, by having an ESL Total Value Range.

• EV Charger Biz

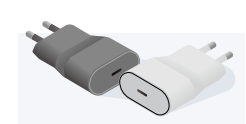
Leading the transition to eco-friendly mobility.



As the world moves toward 'Carbon Neutrality,' SOLUM is expanding business to the eco-friendly mobility sector, continuing research and development for convenient and safe transportation options that also consider the environment. SOLUM is introducing new offerings including power modules for EV chargers, BMS, and the recycled battery business, aiming to deliver even more valuable services to customers.

• Adapter

Small but fast and safe, no need to worry charging in a busy life.



As smartphones, laptops, tablets, wireless earphones, and smartwatches become everyday essentials, charging has become a part of daily routine. SOLUM's adapter provides a new charging experience with remarkable speed, wide compatibility, and safety in mind.

• Smart Streetlights

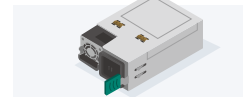
It illuminates daily lives and the upcoming eco-friendly future.



From the streets we walk every day to various industrial environments and cultural facilities we visit, lighting technology is permeating every corner of our lives. SOLUM provides the best lighting solutions suitable for various indoor and outdoor environments, continuously contemplating energy efficiency improvement, cost reduction, and sustainable environments, thereby adding beauty to spaces and vitality to industries.

• Standardized Server Power

Supports stable and efficient operation anytime, anywhere.



SOLUM's server power supplies support smooth connectivity in the accelerating digital era. From data centers to servers, routers, high-performance computers, and communication systems, it provides safe and reliable power across a wide range of applications. Born under automated manufacturing processes and rigorous quality control, the 'optimal server power supply' promises an optimal operational infrastructure with high output efficiency at 80 PLUS Platinum and Titanium levels.

• Smart Multi-Sensor

Going beyond simple detection and measurement to enrich life.



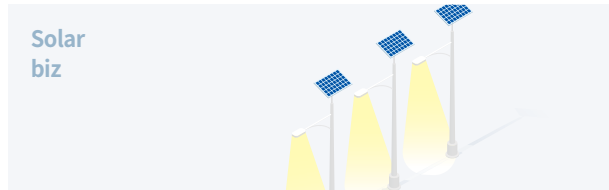
SOLUM's smart multi-sensors goes beyond detecting specific conditions or measuring values, offering user-customized solutions based on accurate data. With sensor technology that protects the environment and health, it enhances synergy across industries and expands global influence.

Renewable Energy Biz

Eco-friendly smart factory biz



Solar biz



ESS biz



Smart & Sustainable Business

Core Business Area Highlight

ESL (Electronic Shelf Label)

ESL is a solution that displays various information on E-Paper display screens via wireless communication technology. Moreover, ESL offers environmental value by replacing the paper price tags with communication technology, effectively reducing labor costs. SOLUM established an ESL Total Value Chain early on, covering design, manufacturing, production, and distribution, quickly growing into a leading company in the ESL sector, despite being a latecomer to the market. With superior technology compared to competitors, we have solidified our position in the global ESL industry. Today, our business domains are expanding from offline stores to smart factories and healthcare, with the final goal to embed AI technology and provide future-oriented ESL solutions.

Product Story

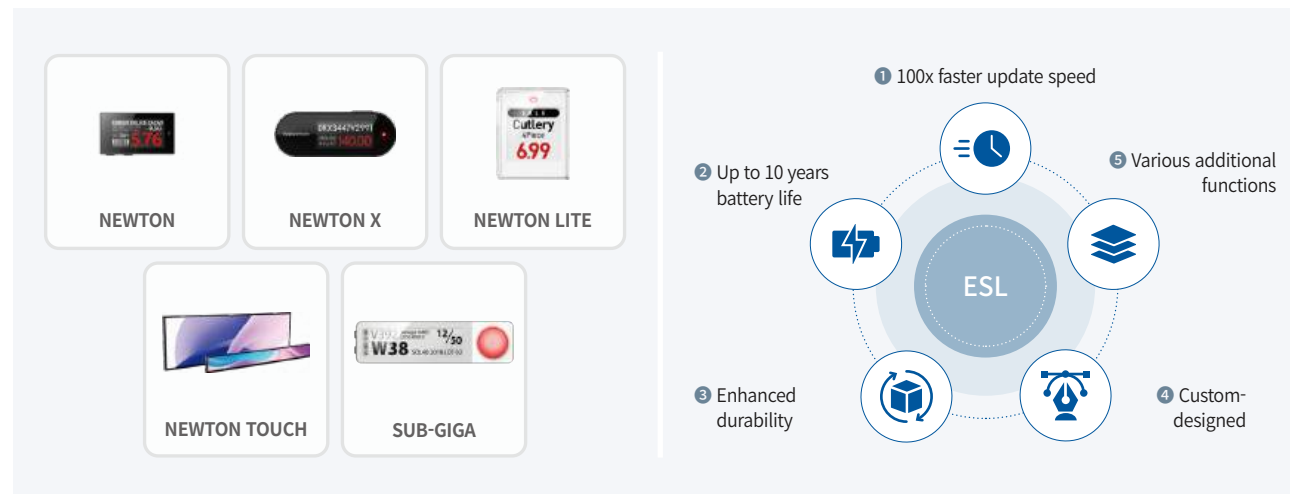
Providing New Value with Eco-friendly ESL

As a display device based on electronic paper, ESL not only saves costs on paper printing but also reduces the inconvenience and work hours spent in manually replacing price tags, making our technology a spotlight solution for streamlining offline stores. Furthermore, by replacing paper price tags, ESL is emerging as an excellent approach to practicing ESG management. Along with the ‘digital transformation’ trend in offline stores, ESL is quickly expanding market to large stores, supermarkets, health & beauty and fashion stores.

The most perfect ESL, the most sophisticated technology

With an effort to detect even the unexpressed needs of customers, SOLUM produced the new industry standard, SOLUM Newton after two years of research. While maintaining low power consumption, Newton applies proprietary wireless communication technology, boasting a communication speed more than 10 times faster than competitors, capable of updating the price information of 3,000 tags within 5 minutes, and offering a long battery life of 10 years. Additionally, it has enhanced durability with a built-in protective cover and provides IP67 rated waterproof and dustproof functions. Based on customer feedback and technical innovation, SOLUM ESL was selected as a ‘2023 Global Top Product’ by a certification system operated by the Ministry of Trade, Industry and Energy and by KOTRA (Korea Trade-Investment Promotion Agency).

ESL Line Up



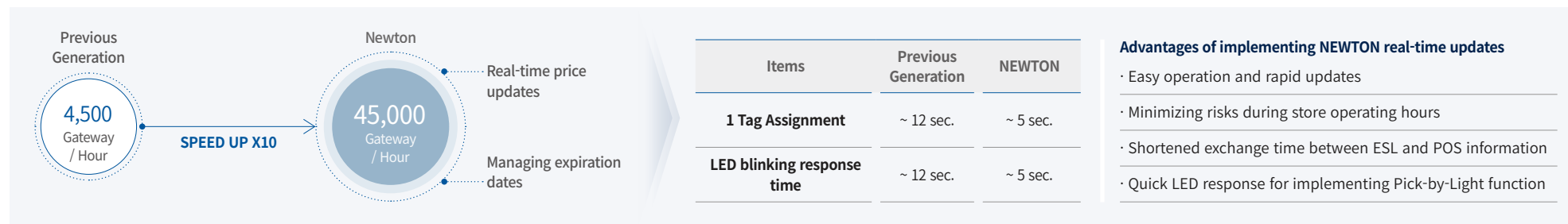
Smart & Sustainable Business

Core Business Area Highlight

ESL (Electronic Shelf Label)

Product Story

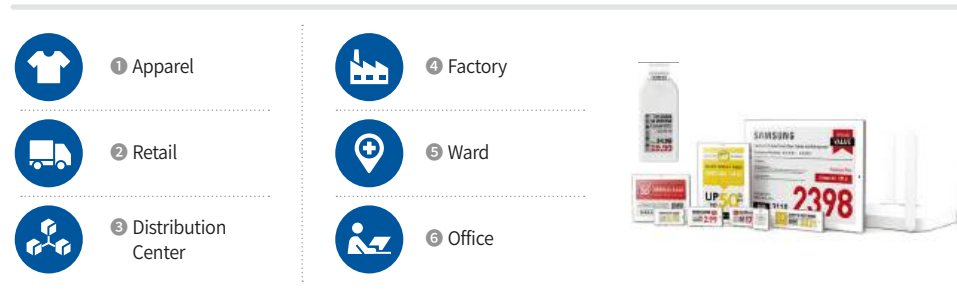
ESL Performance



Maximizing Customer Experience through ESL Solution

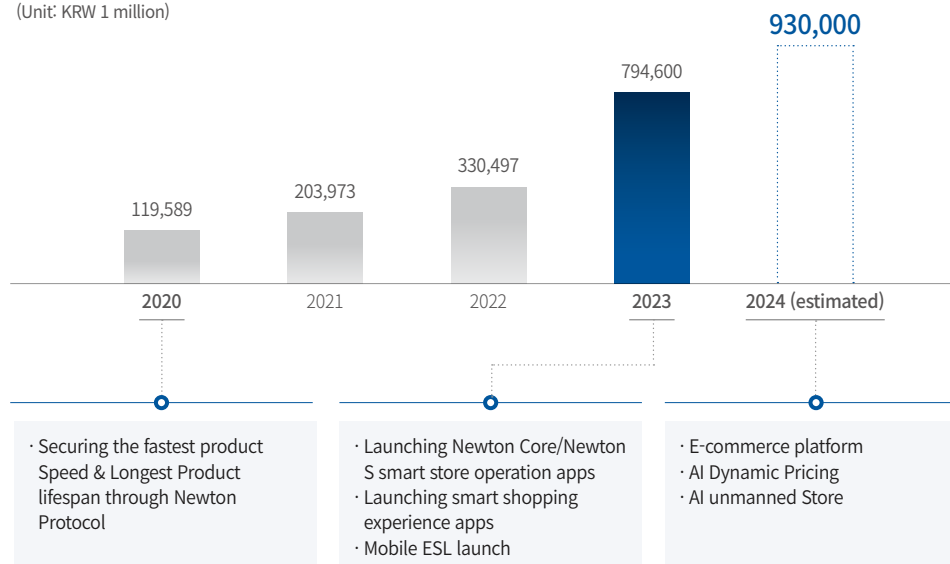
SOLUM is continuously striving to expand the product features of ESL based on customization to meet the diverse needs of customers. Recently, we have launched 4-color products, interactive and dual-screen products, and are expanding our business beyond simple electronic display functions to all display areas that require communication.

Different areas of ESL use



Annual ESL Sales Status and Key Driver

(Unit: KRW 1 million)



Smart & Sustainable Business

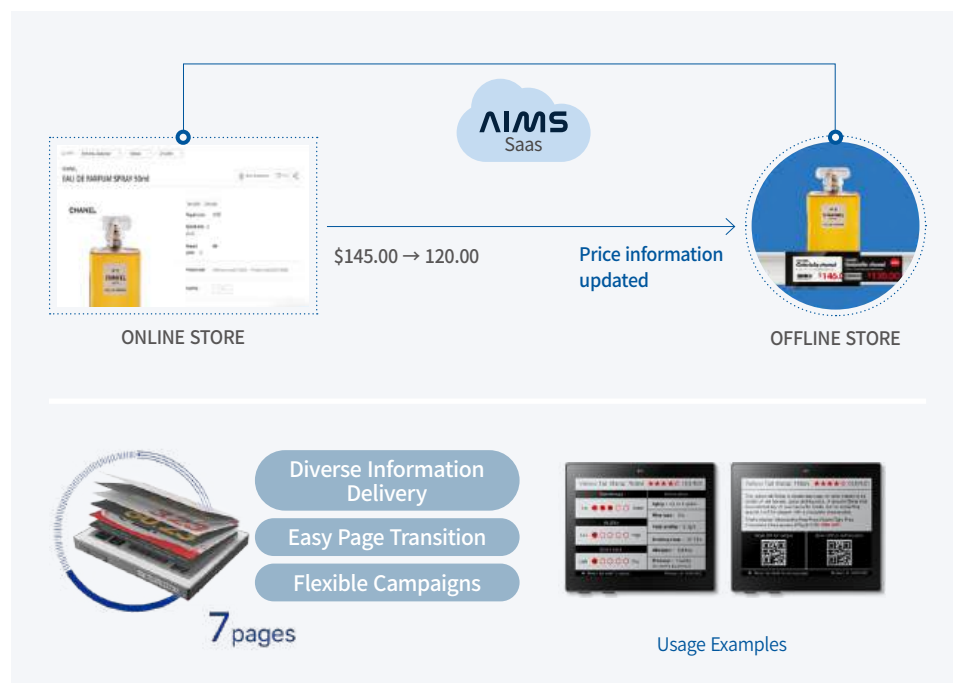
Core Business Area Highlight

ESL (Electronic Shelf Label)

Product Story

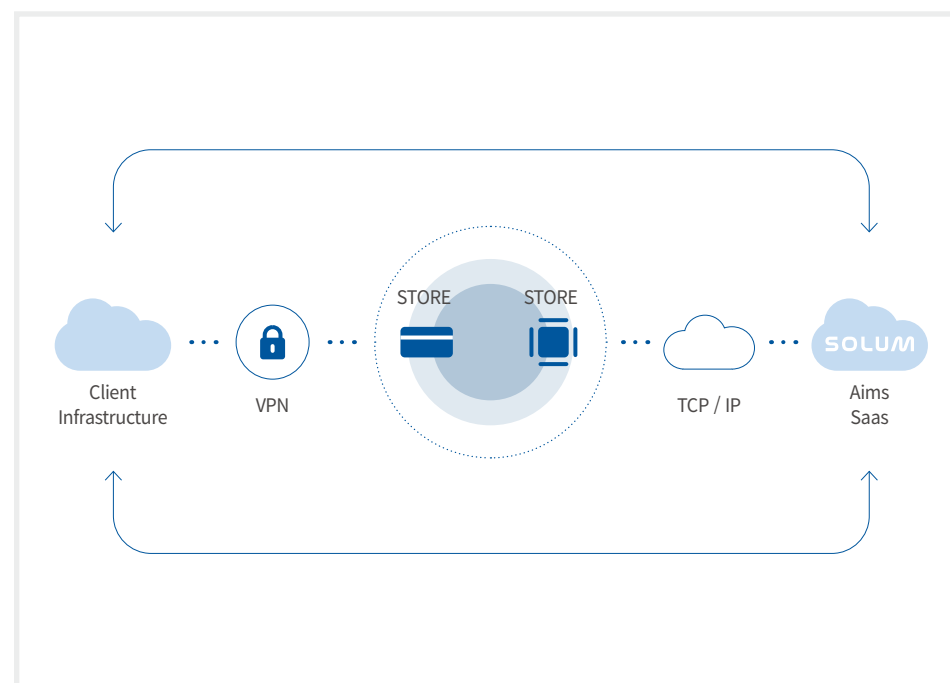
ESL REAL-TIME Synchronization Solution and NAVIGATION Solution

Based on SOLUM Aims SaaS, SOLUM enables real-time synchronization of ESL information to facilitate a differentiated user experience (UX). From the product pickup stage, we help our customers find the desired product through kiosks or dedicated applications in the store, and maximizes convenience throughout the customer journey by utilizing LED color options and the Page Flip feature to check product status and information.



SOLUM Aims SaaS (Software as a Service)

As ESL applications become more diverse, SOLUM strives to provide the most suitable solution for each customer. As an effort, SOLUM Aims SaaS, an optimized solution for efficiently operating the ESL business. It offers rapid expansion of business types to corporate clients and a diverse experience for customers visiting the store. It is designed to be user-friendly without specific infrastructure for cloud communication, compatible with all types of ERP programs, and operates exclusively through the standard SOLUM Newton Gateway, ensuring security from risks.



Smart & Sustainable Business

Core Business Area Highlight

E-Mobility Business

Since the implementation of the Paris Agreement in 2021, countries around the world have been establishing their carbon reduction targets (Nationally Determined Contributions: NDCs) to slow down global warming. Amidst growing global voices towards 'Carbon Neutrality,' SOLUM seeks to expand power technology capabilities, which we have developed over 50 years, into the eco-friendly mobility sector. As a start, we have introduced a 30 kW Power Module for electric car chargers in the market, which is the first in Korea to acquire both CE (European sales certification) and UL (U.S. sales certification). We also plan to obtain domestic and overseas sales certifications within the year for the 50 kW class being developed simultaneously with Air-cooled and Water-cooled systems and start mass production. Additionally, SOLUM is contributing to the development of high-quality domestic electric car chargers by entering the complete EV Charger business with global companies. SOLUM will continue to advance research and development for safe and eco-friendly transportations.

Product Story



30kW EV Charging Module



50kW EV Charging Module

Leading Change in EV Charging through Quality Innovation

SOLUM gains solid trust and high satisfaction from customers in the EV charging infrastructure market with fast charging speeds and outstanding competitiveness. Our Power Modules guarantee over 95% energy efficiency and consume less than 10-15W in standby, meeting the demands of the upcoming era of clean energy. Real-time remote monitoring allows for easier Power Module management, and supports the CCS Standard, making compatible with various electric vehicles, thus spearheading the advancement of the next-generation EV business.



Maximum output possible in 60°C



Fixed hardware ID



Simple connection and verification



Long lifespan/high ripple electrolytic capacitor applied

SOLUM's EV Charging Blended in Daily Lives

SOLUM's EV charging integrates into users' daily lives with a diverse product lineup. In addition to traditional standing charging stations, we have developed and produced wall-mounted, vehicle, and cart mobile charging stations to increase customer touchpoints. Furthermore, by considering sustainability at the product design stage, we have enhanced eco-friendliness by utilizing Recycled PET in Injection Molding.



AC Charger

- Accurate metering
- Practical design
- High temperature recovery
- Industrial compliance
- Extreme Voltage Range

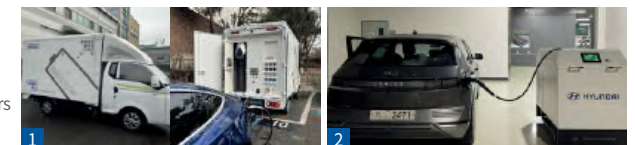


DC Charger

- Reliable product performance
- Simple design
- Intuitive and convenient use
- Ergonomic design for everyone
- Ease of product generation replacement

Mobile EV charging utilization appearance

SOLUM's Mobile EV Charger is a mobile charging station that is not restricted by space. It is currently being used at the headquarters and sites of various companies including Hyundai Motor, Ssangyong Motors, SK, and more.



1. Outdoor mobile (vehicle-type) EV chargers
2. Indoor Mobile (Cart) EV Charger

Smart & Sustainable Business

Core Business Area Highlight

EV Charger Solution Company

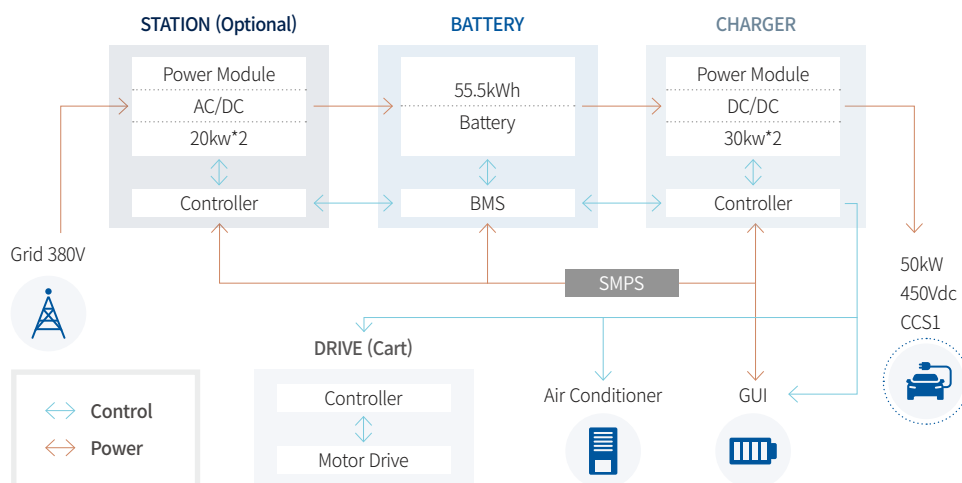
Aligned with the fast growth of the electric vehicle charging market, SOLUM is continuously discovering eco-friendly business areas that can be explored and integrated with our existing business. We invest in the rechargeable battery reuse business to improve environmental friendliness at every stage of development and production of EV chargers and power modules for electric vehicle charging stations, and recycle solar PV ESS or electric vehicle charger development through grade classification of already secured electric vehicle waste batteries, efforts are being made to establish sustainability throughout the entire life cycle of products.

Product Story

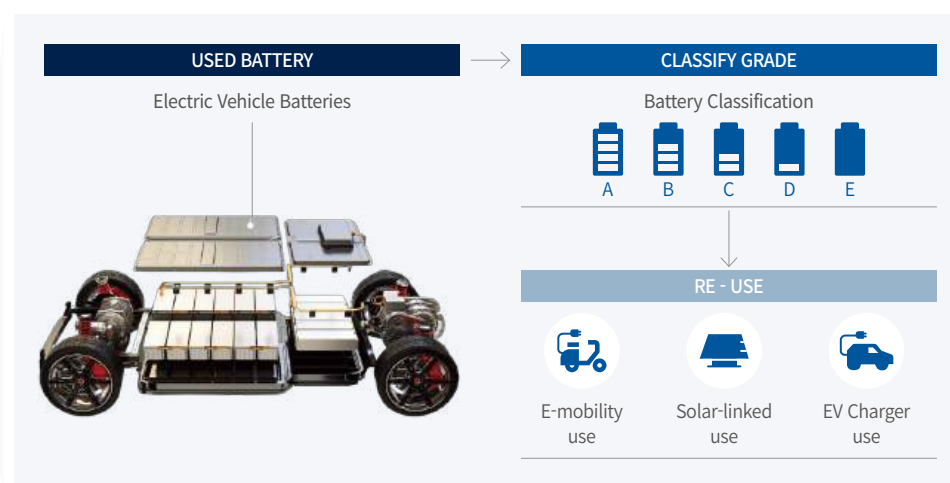
Systematic Improvement of Energy Efficiency through BMS

In addition to the development and production of power modules for EV charging, SOLUM is striving to diversify eco-friendly business portfolio by expanding our business area to Battery Management System (BMS) and Energy Storage System (ESS) for efficient secondary battery reuse. As SOLUM develops and sells various power product groups, we are enhancing management by systematizing energy use at every stage of secondary battery usage to ensure efficiency.

Mobile EV Charger Operating Process



BMS Rechargeable Battery Reuse Process



Smart & Sustainable Business

Core Business Area Highlight

Adapter

Charging has become an integral part of our daily lives, not only for smartphones, but also for laptops, tablets, wireless earphones, smart watches, and other electronic devices. SOLUM's adapters provide faster charging speeds and wider compatibility while prioritizing product stability. SOLUM will continue to strive to provide optimal product quality.

Product Story

Technological Competence in the Global Market

SOLUM has achieved charger miniaturization through high-density IC technology and optimal Trans design. We offer ultra-fast charging performance with our own technology, with smaller size, and greater convenience.

Heightened Product Responsibility

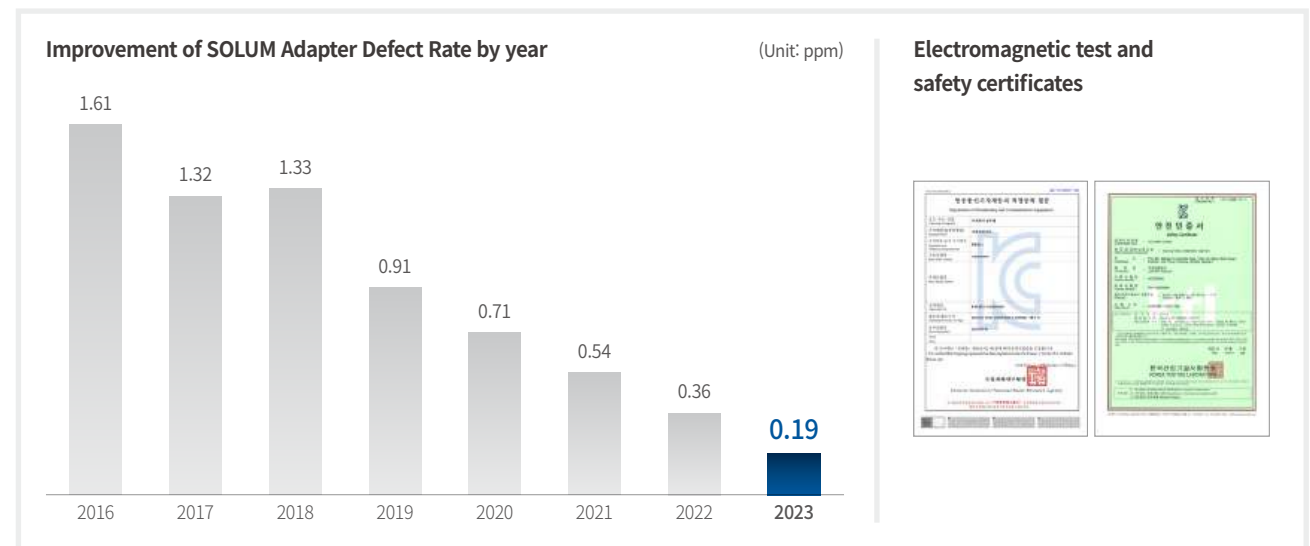
SOLUM has completed electromagnetic testing and safety certification for all charger product groups. In addition, by applying a heat minimization method, the heating problem during charging has been resolved, and by adding a third-generation semiconductor material, GaN (Gallium Nitride), we guarantee safe charging without loss. Furthermore, by establishing our own production facilities, SOLUM manufactures over 60 million charging adapters annually, boasting solid technology with a defect rate of only 0.00069%.



Charge 55%
in only 30 minutes



proprietary technology
Charger miniaturization



Smart & Sustainable Business

Core Business Area Highlight

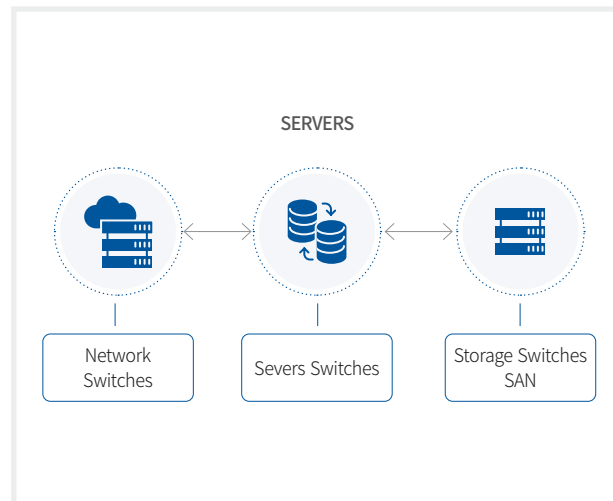
Server Power Supply

SOLUM's server power supply supports smooth connections in the accelerating digital age. From data centers to servers, routers, high-performance computers, and communication systems, we provide safe and reliable power for various applications. Produced under automated production processes and strict quality control, the 'optimal server power supply' promises the best operational infrastructure with high output efficiency levels such as 80 PLUS Platinum and Titanium.

Product Story

Server Power Applications

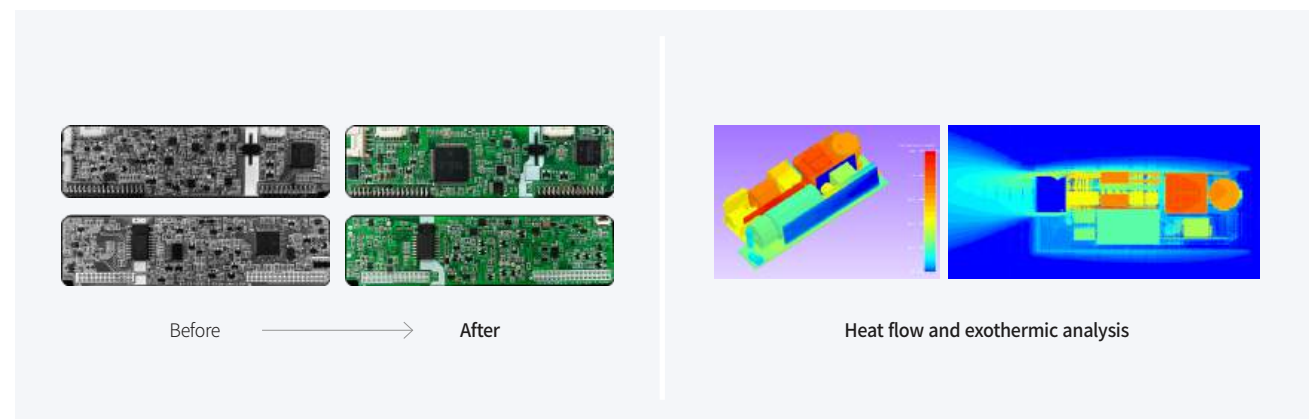
In addition to x86-based servers in data centers, SOLUM's server power supplies are also used in storage and network equipment, LTE and other cellular networks (Cellular Network) inside base stations of micro servers, and special computers used by national institutions and research centers.



Enhancing R&D Capabilities for a Sustainable Environment

SOLUM's server power supply offers a power density of 100W/in³, and high-performance servers are powered by server power supplies that maintain a small Form Factor while supplying high power. The company is continuously striving to improve power efficiency by simplifying MCU peripheral circuits with digital control and more.

Additionally, our proprietary intelligent design technology provides design flexibility in server power supply system structures. Furthermore, optimal heat dissipation design techniques based on thermofluidic properties of air guarantee operational environments. Reliability through an N+1 redundancy design with hot-swap capability ensures stable power during system maintenance, and the construction of spare server power supplies in business environments where data processing must continue prevents system failures.



Smart & Sustainable Business

Core Business Area Highlight

Server Power Supply

Product Story

SOLUM is committed to enhancing product eco-friendliness by saving energy, contributing to the reduction of the Total Cost of Ownership (TCO) of data centers by minimizing power waste with a performance of up to 96% power conversion efficiency. Our entire product range, including water-cooled power supplies for data centers, meets the stringent criteria of industry standards such as 80 PLUS Gold, Platinum, Titanium.

	80 PLUS GOLD	80 PLUS PLATINUM	80 PLUS TITANIUM
10% Load			90%
20% Load	88%	90%	94%
50% Load	92%	94%	96%
100% Load	88%	91%	91%

In addition, with features like PMBus® and PSMI protocols and advanced power management simplification, our products support standard PMBus communication, enabling real-time monitoring of system status for safe operational management. We offer optimal efficiency through individual power control when operating in parallel.

Power Supply Module Identification – Liquid Cooled, Intel Resources



Lighting Solution

In the streets where we walk every day, various industrial environments and cultural facilities, lighting technology permeates every aspect of our lives. SOLUM provides the best lighting solutions suitable for various indoor and outdoor environments, repeatedly considering energy efficiency improvement, cost reduction, and sustainability to enhance the beauty of spaces and invigorate industries.

Product Story

Accelerating a Sustainable Future with Smart Street Lights

SOLUM's lighting, based on advanced technology and experience, SOLUM's lighting is designed to deliver unmatched performance, efficiency, safety, and reliability while designed to reduce energy consumption and costs. Our smart streetlights are the perfect solution for modern cities, boasting maximum compatibility. They are easy to install anywhere and can implement various functions by integrating with sensors.



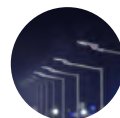
Traffic Management

Smart streetlights equipped with sensors detect the presence of vehicles and pedestrians, manage the brightness and timing of lights, and provide real-time data to help optimize traffic flow, reducing congestion and enhancing road safety.



Environmental Monitoring

Environmental sensors installed on smart streetlights can measure air quality, temperature, humidity, carbon dioxide, UV, and exhaust gas levels, helping to monitor urban pollution levels and improve the health and welfare of citizens.



Crime Prevention

Smart streetlights can increase brightness in high-crime areas to reduce residents' anxiety and contribute to crime reduction. Moreover, they provide brighter and more evenly distributed light, improving the overall quality of life for residents.

Smart & Sustainable Business

Core Business Area Highlight

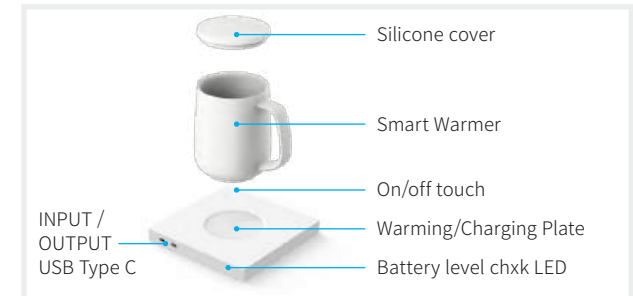
IoT Solution

SOLUM connects people with technology through various IoT solutions, creating new value. Offering customers a moment of resault, helping them not forget important items and people, and enabling a more convenient life based on real-time data collection. The rapid and accurate resolution of industrial and everyday challenges through SOLUM's IoT solutions positions us as a core business that leads digital transformation along with ESL.

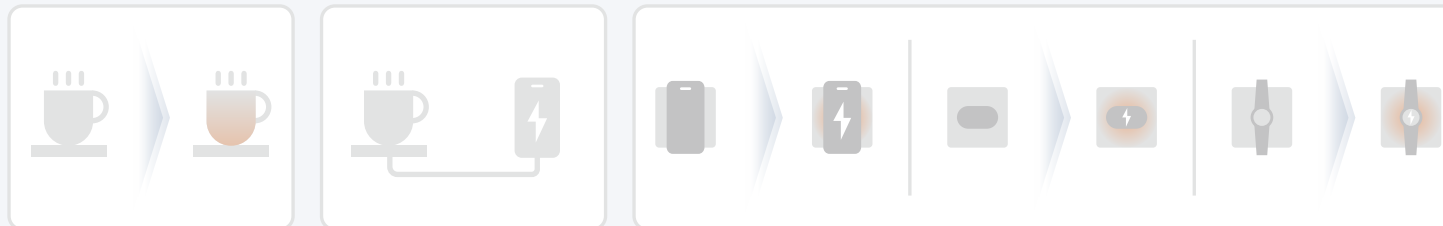
Product Story

Multifunctional Wireless Smart Warmer with Power Bank

SOLUM's Smart Warmer not only keeps beverages warm but also supports charging smartphones and various wearable devices. Unlike products that require USB plug-ins, our power bank enables up to 2 hours of use without recharging. The technological prowess SOLUM has built over a long time on safety is also evident. The product automatically detects devices on the pad and supplies energy appropriately during warming or charging, reducing the risk of burns or fire. The sleek cup design, free from messy charging cables, also helps transform the space's ambiance.



Warmer and Charging at Once, All-in-One Smart Solution



Smart Warmer

Smart Warmer + Portable Devices

Smartphone + Wireless Earbuds + Smart Watch

- Low Burn & Fire Hazard with Tx-Rx Design
- Up to 2 Hours of Wireless Use
- Maintains Optimal Temperature (60°C)
- Equipped with Smart Auto Function
- Enlarged Capacity Compared to 1st Generation (440ml)

Smart & Sustainable Business

Core Business Area Highlight

[IoT Solution](#)
[Product Story](#)

Trace (Asset Management Solution)

This year at MWC 2024, SOLUM introduced 'Trace' - a BLE communication-based tracker in sticker form, for the first time. Trace monitors the location and condition of products in real-time, enhancing asset and inventory management efficiency and significantly reducing costs. Trace is composed of three formats: sticker, slim, and coin types, making it flexible for application in various industrial environments. With up to 10 years of battery life without replacement, SOLUM's Trace offers high energy efficiency and is an effective solution for digitalizing asset and inventory management in factories, large supermarkets, hospitals, offices, and other areas.

Time and Space Unrestricted, Global Tracking

Trace helps users easily manage assets anywhere in the world without spatial constraints. When Trace is attached to goods that require location tracking, it enables real-time identification of the location and number of assets by product category or factory area, aiding workers in systematic asset management and significantly reducing the risk of loss.

SMART Tag

Smart tags are small electronic devices that can be pre-attached to keys, bags, or pets to help easily locate them, demonstrating potential for various uses. In fact, in April 2022, the effectiveness of smart tags was highlighted when they helped find a missing elderly person with dementia in a short time. Smart tags thoroughly protect the privacy of the owner while allowing real-time monitoring of movements, emerging as a smart solution that can protect important people, animals, and objects.



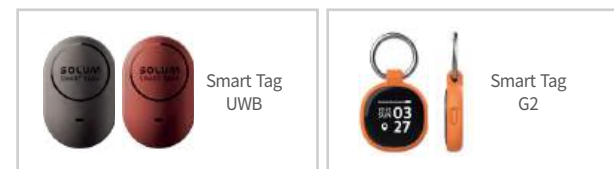
Sticker Tag

Slim Tag

Coin Tag



Global Tracking implementation screen presented



Smart Tag Line Up



Smart Tag Spec(detail)

Smart & Sustainable Business

Core Business Area Highlight

Display (Visual Solution)

The story of a brand filled only with text and images feels stereotypical. SOLUM's digital signage captures the attention of customers and delivers memorable messages effectively. High-quality digital signage that harmonizes with any space provides powerful performance even with low power consumption and helps customers immerse themselves completely.

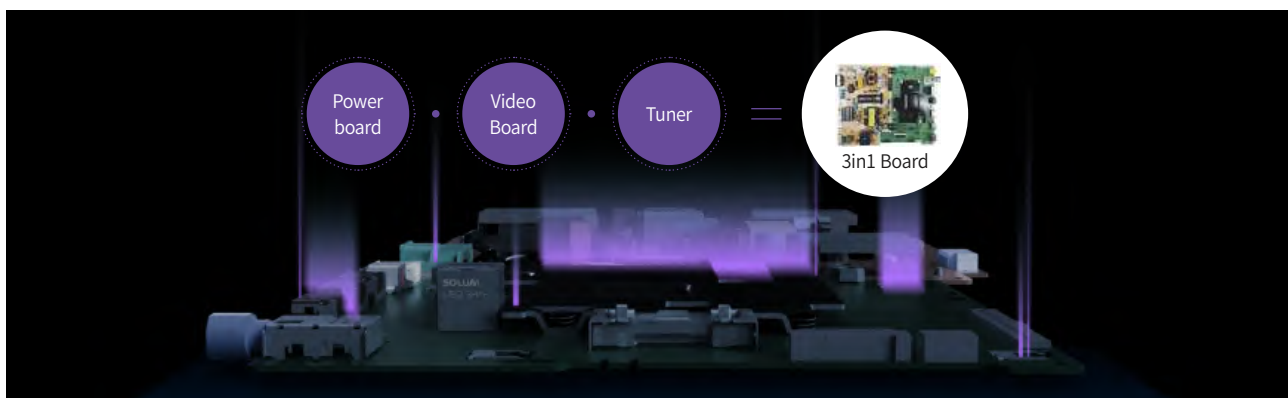
Product Story

SOLUM's Visual Solution Realizing Eco-friendly Values

SOLUM's digital signage is growing based on our unique 3-in-1 Board technology. Digital signage replaces the use of paper and guarantees a long product lifespan of up to 30,000 hours, making it a key area of focus for realizing future eco-friendly values. SOLUM provides eco-friendly visual solutions in various areas, including advertising displays used in elevator town boards, subway interior ads, and outdoor advertisements, as well as store displays used in department stores, restaurants, and cafes.

What is a 3-in-1 Board?

A 3-in-1 board combines three essential components of a typical display product: the video board, power board, and tuner into one board, offering cost-effectiveness, stable quality, and simple design implementation.



A Leader of Visual Solutions, SOLUM

Since commercialization in 2017, SOLUM's 3-in-1 Board has achieved a unique market share and grown into a cash cow business. Succeeding in diversifying our trading channels and expanding into global TV companies based on our own software staff and core technology of the 3-in-1 Board, we are currently expanding our products and trading lines through related technologies. SOLUM will become the ideal partner for various display and digital signage businesses through our differentiated 3-in-1 Board technology.

Smart & Sustainable Business

Core Business Area Highlight

Display (Visual Solution)

Product Story

The Ideal Partner in the Field of Digital Signage

Based on differentiated technology, SOLUM's digital signage is responsible for the entire process from product development to production and A/S. A strict quality system that minimizes product defect rates and accumulated know-how based on various display business references helps make SOLUM the perfect partner for customers. Furthermore, SOLUM's digital signage replaces paper use, guarantees a long product life of up to 30,000 hours, leading the way in realizing eco-friendly values.

Easy and Convenient Content Playback and Management (Content Management System: CMS)

CMS is an ultra-low power technology that boosts energy efficiency, offering various features including content settings and grouping, content searching, layout and information modification, and helps make the content more memorable for customers.

Advertisement Display



Elevator Townboard



Digital poster

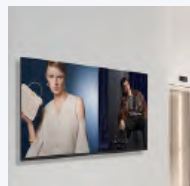

Subway Internal
Arrangement Board


outdoor advertising

Retail Display


Supermarkets,
hypermarkets


Cosmetics store



Department store



Restaurant, cafe

CMS DEVICE-linked Added Features

- Sensing of installation area conditions
- Elevator operational status information
- Presence detection information
- Targeted content playback (enhancing advertising/notice delivery effects)

Customization

- Regular upgrades to the operation status page
- Report feature enhancement
- Data structure optimization for DB efficiency

Content Playback Method Support Option

- Support for both download and streaming methods
- Installation communication environment and content
- Type selection available for playback methods



Sustainability

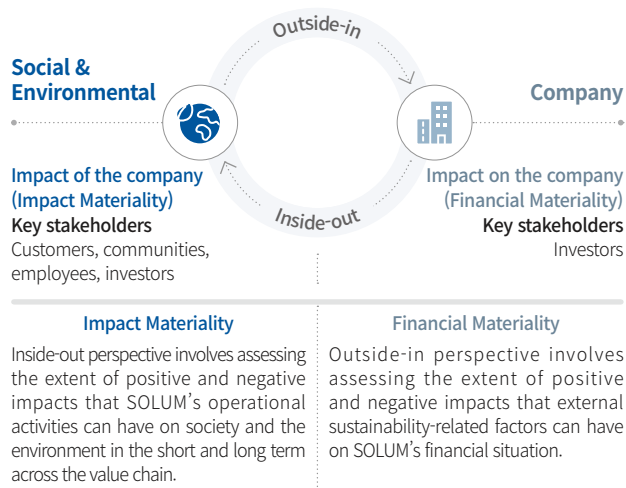
30 Double Materiality Assessment • 33 Management Approach • 35 Stakeholder Communication • 36 UN SDGs • 37 ESG Intelligence System

Double Materiality Assessment

Results of Double Materiality Assessment

SOLUM is diligently making company-wide efforts to establish a system to transparently communicate with stakeholders and systematically identify and manage issues related to sustainable management. SOLUM conducted the Double Materiality Assessment for the first time this year to closely analyze the financial impact caused by external business environment factors such as climate change and social value changes, aligning with the enhanced recommendations of the international sustainability disclosure standard. Through this process, SOLUM will manage and respond more faithfully to significant ESG issues that have been identified.

Double Materiality Assessment



Materiality assessment is a process for identifying ESG issues relevant to SOLUM, which involves selecting key issues that the company needs to focus on and manage. It is sometimes called importance assessment depending on the purpose. Double Materiality Assessment goes beyond a single materiality assessment by analyzing the impact of SOLUM's business activities on society/environment including multiple stakeholders (Inside-out perspective) as well as identifying the impact of external business environment factors such as climate change and societal value shifts on the company's finances from an investor's perspective (Outside-in perspective).

This year, for the first time, SOLUM conducted this Double Materiality Assessment in order to gather a wide range of opinions from stakeholders, including external stakeholder groups (clients, partner companies, government, and media organizations), and employees to transparently select ESG management items.

Double Materiality Assessment Process

Step 1. Internal and external environmental analysis and diagnosis

Analysis of industry classification and trends both domestically and internationally

· **Analysis of disclosure/announcement standards:**

Analysis of international initiatives and guidelines related to ESG based on industry classification according to GICS and SICs (GRI Standards, KCGS, MSCI, SASB, ESRS, ISSB, DJSI, etc., totaling 9 standards)

· **Benchmarking:** Reflection of key issues from companies with excellent sustainable management in the same and similar industries

· **Target:** Selection of a total of 11 companies, including overseas electronic component manufacturers, ICT businesses, and solution companies

· **Reference materials:** Sustainability Reports, Integrated Reports, Annual Reports, official websites, and IR materials of other companies

· **Internal materials analysis:** Analysis of Board of Directors and ESG Committee agendas, CEO messages, Annual Reports, Governance Reports, IR

· **Analysis of domestic and international media · media issues**

Survey period: 2023.01.01~2023.12.31)

· **Domestic media analysis:** Analysis of major domestic media articles and SOLUM-related intranet articles on products and Sustainable Management (ESG) based on Bigkinds news big data analysis system

· **International media analysis:** Analysis of articles related to SOLUM's products and Sustainable Management (ESG) exposed in major English-speaking media on the Google News platform.

Step 2. Issue Pooling

Deriving 17 issues from SOLUM by comprehensively reflecting the analysis of internal and external environmental situations and current status

Step 3. Double Materiality Assessment Survey

A survey based on Double Materiality was conducted targeting internal and external stakeholders of the company to select the most significant issue among the derived 17 issues.

· **Survey period:** 2024.03.18 ~ 2024.03.24

· **Survey method:** Online survey

· **Survey participants:** Total of 161

Number of primary stakeholders who participated in the survey

· **SOLUM employees and external stakeholders:** 155

· **External experts:** 6

Step 4. Prioritization

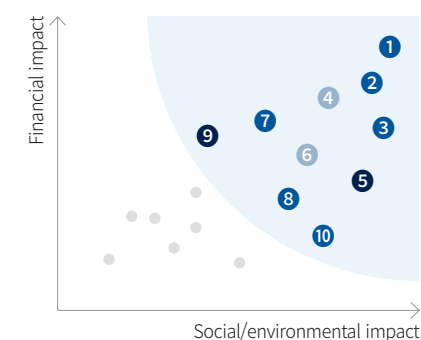
The ESG Impact Team and external experts formed a Focus Group to finalize the major topics.

· **SOLUM Focus Group:** 4

· **External Experts:** 3

Based on the results of the Double Materiality Assessment, the top 10 key issues for SOLUM this year were prioritized.

2024 Final Topics(Key Topic)



Ranking	division	Issue
1	S	Eco-Friendly Products and Business (Product Stewardship)
2	S	Information Security
3	S	Talent Management
4	G	Jeong-Do Management (Ethics and Compliance)
5	E	GHG Reduction Activities and Goals
6	G	Board Management
7	S	Human Rights Management
8	S	Occupational Safety and Health
9	E	Environmental Management
10	S	Sustainable/Responsible Supply Chain

Double Materiality Assessment

Results of Double Materiality Assessment

SOLUM has selected 10 major issues that have a significant impact on society, the environment, and the company's finance, based on key disclosure and assessment standards, analysis of domestic and international media, and employee surveys. The company will systematically manage the management and ESG risks of these ten major issues and explore opportunities to prepare for the future through ESG management.

											Impact			●: High	○: Mid	○: Low
Rank	Area	Issue	Impact Characteristics and Definitions		Social/environmental Impact (Inside → Out)		Financial Impact (Outside → In)		Double Materiality Impact	Stakeholders	Global Disclosure Frameworks and Initiation		Reporting Page			
											GRI	SASB				
①	Environmental	Eco-Friendly Products and Business (Product Stewardship)	Positive	Development of high-quality low-power, eco-friendly products enhancing product and corporate trust and customer satisfaction, reducing energy/power consumption for SOLUM and client companies, and contributing to the mitigation of climate change	Severity	●	Severity	○	●	· Client Companies · Partner Companies	416-1 416-2	TC-HW-230a.1 TC-HW-410a.1~4	17~28 61~64			
					Likelihood	○	Likelihood	○								
			Negative	Continued operation of fossil fuel-based businesses due to difficulties in developing eco-friendly products and businesses, leading to ongoing emission of air pollutants	Severity	○	Severity	○						Likelihood	○	
					Likelihood	○	Likelihood	○								
②	Social	Information Security	Positive	Strengthening of corporate and individual information security efforts, enhancing protection of corporate technological information and security capabilities, and improving protection levels and competitiveness for national core technologies	Severity	○	Severity	○	●	· Client Companies · Partner Companies · Share holders	418-1	TC-HW-230a.1	68~69			
					Likelihood	●	Likelihood	●								
			Negative	Spread of anxiety and related industry accidents due to leakage of customer personal information and key company technologies	Severity	○	Severity	●						Likelihood	●	
					Likelihood	○	Likelihood	●								
③	Social	Talent Management	Positive	Enhancement of employee competencies and corporate adaptability through internal training for talent development and job competence strengthening	Severity	○	Severity	○	●	· Employees	401-1, 2 404-1, 2, 3	-	53~55			
					Likelihood	○	Likelihood	●								
			Negative	Continuous failure to retain talent and reduced job creation effects due to poor talent management capabilities and low employee satisfaction	Severity	●	Severity	●						Likelihood	●	
					Likelihood	○	Likelihood	●								
④	Governance	Jeong-Do Management (Ethics and Compliance)	Positive	Establishment and implementation of Jeong-Do Management systems contribute to fostering a healthy corporate and societal atmosphere, achieving legitimate profits through enhanced integrity/transparency levels	Severity	○	Severity	●	○	· Client Companies · Government and media	205-1, 2, 3 206-1	-	78~80			
					Likelihood	○	Likelihood	○								
			Negative	Spread of internal and social unease due to inadequacies in the Jeong-Do Management system, leading to decreased internal and external corporate trust and damage to corporate image	Severity	●	Scale	●						Likelihood	○	
					Likelihood	○	Likelihood	○								

Double Materiality Assessment

Results of Double Materiality Assessment

Impact ●: High ●: Mid ○: Low

Rank	Area	Issue	Impact Characteristics and Definitions	Social/environmental Impact (Inside → Out)		Financial Impact (Outside → In)		Double Materiality Impact	Stakeholders	Global Disclosure Frameworks and Initiation		Reporting Page
										GRI	SASB	
5	Environmental	GHG Reduction Activities and Goals	Positive	Active efforts to reduce GHG contributing to achieving regional, national, and global climate change response goals	Severity	●	Severity	●	· Client Companies · Government and media	305-1, 2, 4	-	47~49
					Likelihood	○	Likelihood	○				
			Negative	Lack of effort towards reducing GHG emissions, leading to maintained or increased emission levels, adversely affecting global warming	Severity	●	Severity	●				
					Likelihood	○	Likelihood	○				
6	Governance	Board Management	Positive	Advanced board operation and establishment of a sound governance system through securing independence, transparency, expertise, and diversity of the board, contributing to positive shareholder engagement and value enhancement	Severity	○	Severity	○	· Employees · Shareholders	GRI 2-9~21	-	73~75
					Likelihood	●	Likelihood	●				
			Negative	Creation of a negative atmosphere due to inadequacies in a sound governance system, increased management risks from shareholder activities such as recommendations, and damage to shareholder value	Severity	●	Severity	●				
					Likelihood	○	Likelihood	○				
7	Social	Human Rights Management	Positive	Clear identification of the current status and conditions of human rights management among employees, ensuring the protection of their rights and dignity through consistent response and improvement	Severity	○	Severity	●	· Employees · Partner Companies	405-1 406-1	TC-HW-330a.1	56~57
					Likelihood	○	Likelihood	○				
			Negative	Degradation of the workplace environment satisfaction among employees due to failures in human rights management, resulting in increased workplace harassment/discrimination and human rights infringements within the organization	Severity	●	Scale	●				
					Likelihood	○	Likelihood	○				
8	Social	Occupational Safety and Health	Positive	Provision of a safe and pleasant working environment through enhanced safety and health management capabilities and safety culture awareness across the corporate value chain	Severity	●	Severity	●	· Employees · Partner Companies · Government and media	403-1~10	-	58~60
					Likelihood	●	Likelihood	●				
			Negative	Increase in legal/administrative risks due to safety and health accidents, and non-compliance with related laws/regulations	Severity	●	Scale	●				
					Likelihood	●	Likelihood	●				
9	Environmental	Environmental Management	Positive	Establishment of a successful environmental management system through proactive KPIs and policies for preemptive response to climate change and subsequent climate risks	Severity	●	Severity	●	· Employees · Client Companies · Shareholders	303-1~5 304-2, 4 306-1, 3~5	-	39~51
					Likelihood	○	Likelihood	○				
			Negative	Increased negative impacts such as environmental pollution and damage due to continued management activities opposing environmental conservation and inadequate response systems to climate risks	Severity	○	Scale	○				
					Likelihood	○	Likelihood	○				
10	Social	Sustainable/Responsible Supply Chain	Positive	Contribution to mutual growth and responsible supply chain management system establishment through support for enhancing labor rights/environmental/safety capabilities of supply chain (partner companies)	Severity	●	Severity	Positive	· Partner Companies · Client Companies · Government and media	308-1 414-1	TC-HW-440a.1 TC-HW-430a.1~2	65~67
					Likelihood	●	Likelihood	Positive				
			Negative	Increase in environmental and safety accidents and spread of social unease due to inadequate ESG risk management in the supply chain (partner companies)	Severity	●	Severity	Negative				
					Likelihood	●	Likelihood	Negative				

Management Approach

SOLUM aims to pursue sustainable growth of both the corporation and society by incorporating the results of the materiality assessment conducted with the first ESG Report publication into overall management and restructuring the ESG and strategic system. This ESG Report will transparently disclose comprehensive response activities for the top 10 key topics (Key Topics) selected, using as a communication channel with stakeholders and enhancing ESG management capabilities.

Rank	Issue	Rationale	Strategies and Plans	Activities and Achievements
1	Eco-Friendly products and businesses (product Stewardship)	In the case of B2B companies, there is a steady occurrence of needs for eco-friendly raw materials such as 100% transition to recycled materials centered around specific global clients. In the case of B2C, there is an increase in consumers (especially Generation MZ) pursuing eco-friendly/green consumption referred to as value consumption.	- Constructing an eco-friendly product portfolio - Energy Efficiency Biz, (such as ESL, EV chargers, Adapter, Smart Street Lighting, Power for Standardized Servers, Smart Multi-Sensor) - Renewable Energy Biz (such as eco-friendly factories, photovoltaics, ESS)	Collaboration with the Korea Electronics Technology Institute's Smart Energy/Machinery Research Headquarters to develop high-density design technology for TV power conversion devices → Applied to domestic production, generating sales of 21.2 billion won.
2	Information security	Due to the global digitalization and the adoption of AI technologies, the information security policies and management of companies have become crucial. Particularly for global trading companies, information security audits are being conducted as a mandatory procedure.	- Establish of 'Master Security Request List' reflecting customer information security audit requirements over the past five years - Substantial investment in information security solutions and infrastructure planned for 2024	- Establishment and restructuring of SOLUM-wide Information Security Committee directly under the CEO. - Implementation of a centralized document management system, expansion of investments in information security network infrastructure and solution license management solutions.
3	Talent management	Organizational talent management starts with new talent acquisition and continues through job-related education and training, performance-based competency evaluations and compensation systems, and improvements in other benefits, which lead to the retention of excellent talent. Securing excellent talent and enhancing employee capabilities are crucial to strengthen the core growth factors and competitiveness of SOLUM.	- Company-wide education system to be established and implemented - Starting in 2024, approximately 3,900 online learning courses to be provided through professional education service companies, expanding educational opportunities. - Plans to invite external experts for special lectures to contemplate new technology trends. - Enhancement of the language education system through in-house foreign language certification exams and second language education expansion.	- Establishment of a three-tier (Specialist-Expert-Master) growth development system to enhance employee growth and job expertise. - Operation of an employee referral system and job posting system. - Selected as a family-friendly certified company in Gyeonggi Province in 2022. - From 2023, operation of a sabbatical leave system for long-serving employees, granting 21 paid leave days for those with 7 years of service and one month of paid leave for 15 and 30 years of service respectively.
4	Jeong-Do Management (Ethics and Compliance)	Jeong-Do Management refers to the responsibility and duty of SOLUM to act in accordance with the expectations, standards, and values of stakeholders such as customers, employees, and investors, while generating profits. It encompasses compliance with laws and ethical management. Moreover, it implies the basic business philosophy of SOLUM that pursues cooperation and shared growth through fair trade with partner companies.	Selection and improvement of major compliance areas and key internal regulations, processes	- Establishment of a dedicated compliance department - Selection of five major compliance areas: general company, fair trade, anti-corruption, personnel, and information security. - Establishment of ethical regulations, employee code of conduct, and introduction of ethical management violation systems. - Revision of major governance regulations including board regulations and general shareholder meeting operation regulations. - Introduction of a flexible attendance system and personnel system reforms
5	GHG Reduction Activities and Goals	With the implementation of the Paris Agreement in 2021, 169 countries worldwide have established National GHG Reduction Goal (NDCs) to slow down global warming. Korea has set a reduction goal of 40%, and companies need to actively participate in reducing Green haus gases.	- System for calculating and managing Scope 3 emissions planned for 2025. - Advanced methodology and scope for product-specific carbon emission calculation based on an integrated GHG management system planned.	- Establishing a roadmap for GHG inventory construction - Completion of a comprehensive GHG management system to calculate emission data and status. - Calculation of Scope 1~2 GHG emissions for domestic business sites and subsidiaries completed. - Installation of photovoltaic power generation facilities at the Mexico production site

Management Approach

Rank	Issue	Rationale	Strategies and Plans	Activities and Achievements
6	Board Management	Under the new paradigm of ESG and Sustainable Management, it is emphasized that companies should make proper and sound decisions by thoroughly examining long-term growth and a sustainable future, establishing commendable governance. In fact, recent studies have shown that the sounder the corporate governance, the more positive the impact on corporate value enhancement. Consequently, the board of directors, as the institution responsible for the company's major operational decisions, is recommended to participate in the entire process including establishing mid- and long-term goals for ESG management, performance evaluation, and planning improvements, while fulfilling the supervisory duties of the board.	- Strengthening committee-centered activities - Realizing compliance and ethical governance - Mid-term goal to enhance board-centered responsibility management, introduction of a professional committee system for boosting independence and professionalism, establishment of regular board meetings, and enhancing communications and professionalism through specialized training - Long-term goal to establish board-centered responsibility management, continuous enhancement of the independence, diversity, and professionalism of the board. Solidifying the role of external directors as board chairs, avoiding uniformity	- Establishment of an ESG Committee within the board - Participation in ESG Committee education - Conducting an ESG management proclamation ceremony
7	Human Rights Management	Human Rights Management involves companies conducting business activities without infringing upon the rights of others, calling for stringent management and cultural formation for a discrimination-free business. Specific activities include declaring human rights policies, conducting human rights impact assessments, providing remedial procedures for victims, and including education. It is essential to communicate with stakeholders. Recent international norms including OECD, ILO, UN, and initiatives such as RBA, EcoVadis stringently assess the activities related to infringement and prevention of human rights management and post incident handling of grievances, recommending managing activities across the entire supply chain, including employees.	- By 2024, establishing a Declaration of Human Rights Management containing SOLUM's human rights management philosophy and principles - Including content on human rights sensitivity and prevention in ethical management training	- Establishment and posting of a Declaration of Human Rights Management reflecting guidelines from the UN Charter of Human Rights, UNGP, ILO, etc. - Establishment and posting of policies on diversity, fairness, and inclusivity
8	Occupational Safety and Health	Occupation Safety and Health are becoming increasingly important as essential elements of global standards prioritizing workers' life and health, including Korea's Serious Accident Punishment Law, emphasizing management and prevention of occupational safety and health across the entire value chain. Especially, it's crucial for businesses to manage and eliminate harmful and hazardous factors to protect life and property from industrial accidents and to prevent occupational diseases, ensuring workers can work in a safe and pleasant environment	- Systematizing employee health and safety management - System management of hazardous substances' ordering, incoming/outgoing, and inventory status - Quarterly departmental consultations to listen to opinions (checking for risk factors and difficulties)	- Completion of Occupational Safety and Health Management System (ISO45001) certification by the Mexico production subsidiary in 2023 - Commencement of development of 'Management System for Environmental Hazardous Substances (MADAMS)' - Establishment of Occupational Safety and Health Management Policy - Regular operation of the Occupational Safety and Health Committee - Operation of internal clubs (golf, futsal, badminton, etc., with 48% of all employees participating) - Regularly operating midday meetings by department to listen to opinions and take action
9	Environmental Management	Climate change, or "climate crisis," has been showing a continuous increase in the frequency of recurring disasters such as typhoons, heatwaves, and floods. American/European/International norms have proposed laws mandating the disclosure of financial damages caused by such climate changes. Consequently, companies are required to estimate the anticipated loss due to physical climate risks and disclose proactive management measures and recovery costs.	- Plan to promote energy conservation culture by posting energy saving status quarterly on groupware and in-house digital signage starting in 2024 - Targeting the acquisition of ISO 50001 (Energy Management System) and ISO 14067 (Carbon Footprint) certifications for the Vietnam production subsidiary in 2024	- All production sites obtained Environmental Management System (ISO14001) certification - Introduction of the Extended Producer Responsibility (EPR) system and payment of waste charges for some imported products - Promoting eco-friendly business culture (from 2023, switching to 'eco-friendly business cards' using recycled paper, introduction of paperless approval systems, etc.) - Establishment and posting of the Environmental Management Policy
10	Sustainable/Responsible Supply Chain	In the EU and member countries, laws such as the Corporate Sustainability Due Diligence Directive are being instituted. Not only national laws/regulations but also leading global corporations are demanding human rights and environmental audits not only for primary partner companies but increasingly for secondary ones as well to preempt reputation risks and civil litigation risks.	- Identification of key partner companies (head office and overseas production sites, etc.) - Establishment and operation of a supply chain ESG evaluation system - Set up self-assessment questions for partner companies online - Establishing and operating onsite inspection systems for high-risk partner companies	- Revision of Supplier Code of Conduct - Identification/Identification of key partner companies - Installation and inspection of conflict minerals or phthalate testing equipment at all business locations - Establishment of the 'Eco-labeling Process' for supply chain scrutiny and management system

Stakeholder Communication

SOLUM defines stakeholders as all organizations and individuals that have an impact on the company, including employees, customers, shareholders and investors, the local community, partner companies, and the media. To quickly and accurately understand the needs of each stakeholder, various communication channels are operated. In addition, SOLUM actively participates in domestic and international industry exhibitions, conferences, and forums to increase contact points with stakeholders. Prior to the full implementation of ESG management, SOLUM has actively reflected the opinions of stakeholders in the process of deriving key objectives and detailed strategic tasks. SOLUM will continue to monitor issues of high interest to stakeholders and transparently disclose activities and results related to sustainable management.

Stakeholders	Main Communication Channels	Stakeholder Expectations	SOLUM's Efforts
Employees 	· Labor-management council, labor union · Website · Dialogue with management (Communication channel of the representative: "SOLDAM") · Internal communication channels · Reporting system (Compliance, Ethics)	· Safe and healthy work environment · Education and career development · Employment and benefits · Labor relations · A great place to work	· Workplace environment management · Improvement of an organizational culture of trust and communication · Comprehensive health checks for all employees · Support for kindergarten/elementary/middle/high/college tuition for employees' children · Quarterly meetings of the Labor-management council · Operation of a fully flexible working hours system
Shareholders/Investors 	· General Meeting of Shareholders · Non-Deal Roadshows, investor meetings · Earnings announcements · IR Website · 'SOLUM e-Aleemi' mailing service	· Economic performance · Risk management · Information disclosure · ESG information (Environmental, Social, Governance)	· Announcement of management results and forecasts · Disclosure of corporate governance information · Gathering feedback from shareholders and investors
Clients 	· Customer satisfaction survey · SOLUM Website/Newsroom · Sustainability Website · Sales channels · Product Environmental Report	· Quality of products and services · Safe use of products · Environmental impact throughout the product lifecycle · Accuracy of product information · Transparent communication	· Strengthening the quality and safety management system · Provision of product information by country · Listening to and resolving customer VOC · Designating responsible officers for due diligence at corporate and business unit levels
Partners 	· Roundtable discussions · Website	· Fair Trade · Worker rights protection · Improvement in environmental and occupational health and safety · Environmental and social issues	· Financial and technical support · Management of GHG reduction · Responsibility management of working environment · Grievance reception and resolution
Local Community 	· Community service center · Website	· Local hiring, revitalization of the local economy, etc. · Indirect economic effects (investment, employment-derived effects) · Local community environmental protection · Donations, volunteering, and other community contributions	· Education and employment community contributions · Program implementation
Media 	· Press release · Website · Newsroom, etc.	· Key product information and business strategies · Eco-friendly strategies/ESG management performance · Future investment strategies	· CES and other global exhibitions/product announcements · Media day events · Interviews and planned promotions

UN SDGs

SOLUM has selected sustainability-related goals that are highly relevant to business characteristics, and we are promoting sustainable management activities for each specific goal, following the adoption of the “Sustainable Development Goals (SDGs)” by the international community during the UN General Assembly in September 2015, aimed at social development, environmental protection, inclusive economic growth, and human rights protection by 2030.

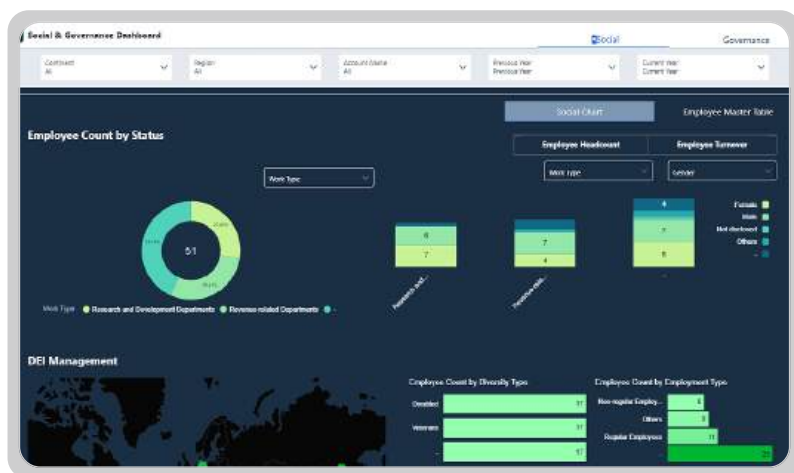
SDGs Goals	National Goals	Related Activities	Reporting Page
3. Ensure healthy lives and promote well-being for all at all ages 	· (3-7) Reduces deaths and diseases caused by climate and environmental pollution. · (3-8) Prepares for the low birthrate and aging population in South Korea. (OECD Better Life Index, Percentage of Elderly Population without Functional Limitation, etc)	· Management of pollutants and hazardous substances in workplaces and products · Creating economic value through employment · Establishing a culture conducive to employee satisfaction, etc.	6, 33, 39, 41, 53, 55, 60
4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all 	· (4-4) Significantly increases the number of youths and adults who possess necessary professional and vocational skills for employment, high-quality jobs, and entrepreneurial activities, in response to digitalization and technological changes.	· Employee education and training system (job, language, competency) · Discovering and nurturing talented individuals through industry-academic scholarship systems · Scholarship donation activities at excellent universities by Vietnam production sites	33, 53, 54
7. Ensure access to affordable, reliable, sustainable and modern energy for all 	· (7-3) Save energy and improve energy efficiency.	· Improving energy efficiency across all business sites (eco-friendly factories, etc) · Expanding the use of renewable energy	34, 42, 47, 48
8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all 	· (8-2) Strengthens policies for creating good jobs. · (8-4) Pay equal wages for work of equal value. · (8-6) Protects the rights of all workers and create a safe and healthy work environment	· Sustainable growth · Shared growth · Spread of a good workplace culture, etc	6, 34, 61, 66
9. Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation 	· (9-2) Pursues industrial diversity and secures industrial competitiveness through the foundation of sustainable corporate activities · (9-3) Builds technological capacity and promotes innovation to strengthen international competitiveness. · (9-4) Expands national research personnel and capital, and contributes to national economic growth through appropriate planning and execution of research. · (9-5) Pursues industrialization with high resource efficiency through environmentally friendly industrial activities and technological innovation.	· Continuation of core technology holdings and research and development · Diversification strategy into innovative business · Building an eco-friendly portfolio · Strengthening information security	17, 33, 48, 61, 68
11. Make cities and human settlements inclusive, safe, resilient and sustainable 	· (11-6) Reduces negative environmental impacts of cities such as air quality and waste management.	· Enhancing the eco-friendliness of urban environments through products such as EV charging, smart street lights	16, 19, 33, 48
13. Climate action 	· (13-1) Mitigates risks anticipated from climate change, and strengthens recovery and adaptation capabilities to natural disasters. · (13-3) Strengthens capacities for responding to climate change. · (13-4) Strives to keep the increase in global temperatures to below 2°C compared to pre-industrial levels, and further to limit the temperature rise to 1.5°C.	· Enhancing the eco-friendliness of urban environments through eco-friendly products, eco-friendly business sites	45~51

ESG Intelligence System

Building an ESG Intelligence System

SOLUM will collect and disclose scattered data across the company and execute overall ESG management based on the ESG system. This will enable SOLUM to practice ESG management more effectively and disclose reliable information externally. The ESG Intelligence System at SOLUM is based on the Salesforce solution. The ESG Impact Team has implemented the following functionalities to the system.

- 1 Data collection according to global indicator standards
- 2 Introducing data verification and internal approval process to ensure the reliability of external disclosure information
- 3 Centralized management of global subsidiary data by headquarters through the system
- 4 Introducing a regular ESG self-testing process to enhance the self-correcting function
- 5 Building an integrated system architecture with other systems including human resources system



SOLUM ESG Intelligence System's DEI Dashboard

ESG Intelligence System Enhancement Plan by Phase

In the second half of 2024, SOLUM plans to complete the construction of the ESG Intelligence System and, using the headquarters as the control tower, will collect and monitor ESG-related information from all production sites. Furthermore, in the Phase 2 stage, we will manage other domestic and foreign subsidiaries while using ESG data to design future strategies such as carbon reduction solutions based on “What-if” analysis.

ESG Intelligence System Enhancement Plan by Phase

Environment	Phase 1 • Management of Energy Usage and GHG Emissions in Assets (Fixed/Mobile)	• What-if Analysis • Carbon Reduction Plan Design • Energy Saving Measures Design • Supply Chain Management System Enhancement
	Phase 2 • Management of Electricity and Heating Usage	
	Phase 3 • Waste management • Air Pollutant Management • Water / Water Resources Management	
Social	• Talent Development • Human Rights Management (DEI) • Occupational Safety and Health • Community Engagement Management • Supply Chain Management	• System Integration Enhancement
Governance	• Decision-making Structure (Board/Committee) • Ethical/Compliance Management (Anti-Corruption/Risk)	• Ethics Compliance Management Index Enhancement



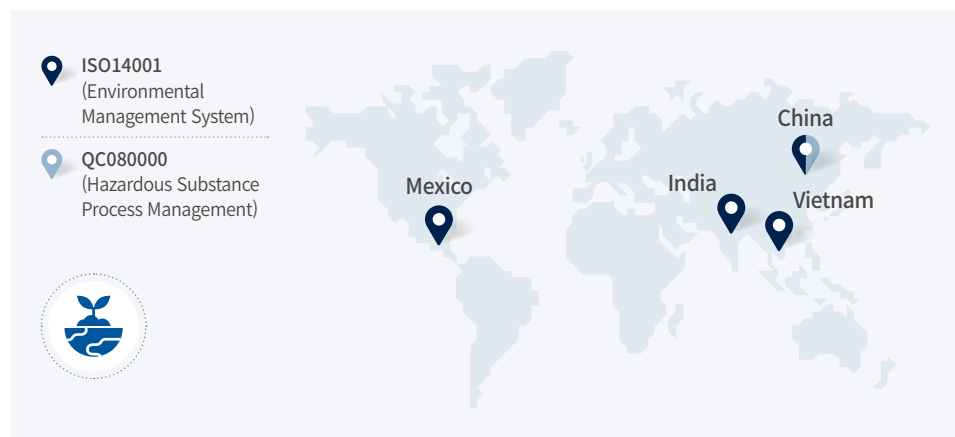
Environmental

Environmental Management

During production processes, hazardous chemicals are used, and air pollutants or water pollutants are made. Additionally, various environmental impact factors occur during water usage and waste management process. To prevent environmental hazards and slow pace of impact, governments around the world are establishing and revising new environmental regulations, requiring companies to establish environmental risk management systems to consistently reduce and manage the amount of usage and discharge levels. SOLUM is committed to obtaining major certifications, including the Environmental Management System (EMS), for all overseas production sites in response to the strengthening environmental regulations and the demands of our customers.

Environmental Compliance

To minimize the potential for environmental pollution from overseas production sites, SOLUM has actively adopted internationally recognized standards such as the ISO, and established an ESG certification roadmap to achieve ZERO violations of environmental regulations. EHS team is managing various environmental risks.



In the case of domestic sites, we do not own facilities that emit air pollutants or discharge wastewater, and the possibility of risks related to pollutants is extremely minimal. Although SOLUM's environmental pollution risks are not significant, we plan to operate the newly self-developed 'Management System for Environmental Hazardous Substances (MADAMS)'. This MADAMS is also planned to be incorporated into the supply chain assessment and management system, evaluating partner companies for compliance with 'Product Environmental Hazardous Substances' and only trading with certified partner companies.

All overseas production sites (Vietnam, China, Mexico, India) have adopted the standards of the Environmental Management System (ISO14001) to manage environmental risks that may arise at each location. Specifically, pollutants and waste generated during the product production process are managed by distinguishing the amount of generation, discharge, and treatment of each material.

Environmental Regulation Response Activities

Through the self-developed 'Management System for Environmental Hazardous Substances (MADAMS)', SOLUM plans to systematize and operate information and analysis data on hazardous substances used by partner companies in the supply chain. SOLUM has set achieving zero violations of environmental laws and promoting eco-friendly business operations and the development of renewable energy products as long-term goals.

Domestic sites do not generate high-impact environmental pollutants such as air pollutants and water pollutants, but we are managing the continuous monitoring and risk of waste, and complying with the Extended Producer Responsibility (EPR) system for packaging materials in imported products. Additionally, waste contribution calculation systems are being developed for more efficient risk management.

Air Pollutant Management

SOLUM's domestic sites do not own product manufacturing processes and thus do not have facilities that emit air pollutants. So we are not emitting significant air pollutants. Air pollutants emitted at overseas production sites during the manufacturing processes are managed at stricter levels than the legal emission standards of each country by installing reduction facilities.

To comply with the trend of stricter air pollutant emission standards across countries, we conduct regular inspections and monitoring to systematically manage air pollutant emissions.

Water Resources and Wastewater Management

SOLUM is ensuring the stabilization and more efficient use of water used in the product manufacturing process by tracking the amount of water used at overseas production sites, with plans to expand this tracking management to all production sites. In the case of sites in Korea, there are no operations in water-stressed areas since we do not have product manufacturing processes. Each overseas production site receives a stable water supply according to the conditions of their respective countries.

SOLUM's domestic sites do not have wastewater discharge facilities, therefore no water pollutants are discharged externally. This means the impact of SOLUM on the water quality of public waters such as rivers and streams is minimal. Overseas production sites emit water pollutants below the permissible discharge limits for each country. In the case of the Vietnam production site, the status of in-house wastewater treatment plant is being monitored, and water usage is regularly monitored and managed. The yearly sewage discharge amount of SOLUM's Vietnam production site is decreasing. Production sites in Mexico and China are not discharging wastewater.

SOLUM utilizes the World Resources Institute (WRI)'s 'Water Risk Atlas' to identify water risks, analyzing water stress indices in regions near major production sites. Results show that production site in China has the lowest risk level (Low), the one in Vietnam at a medium-high level (Medium-high), while the one in Mexico has been identified with the highest risk level (Extremely high). We will continuously pursue efficient water resource management.

Waste Reduction

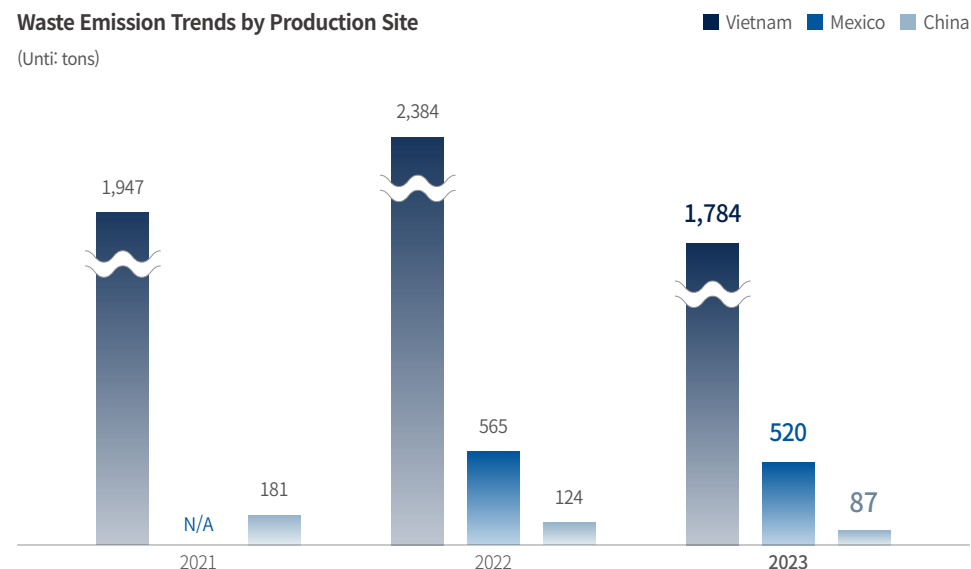
SOLUM is managing waste generated from domestic sites and overseas production sites systematically for sustainable development and the construction of a resource circulation system, prioritizing the recycling of recyclable waste and contributing to resource circulation.

In the case of domestic sites, we comply with recycling obligations by implementing the Extended Producer Responsibility (EPR) system according to laws on the promotion of saving and recycling of resources. Specifically, we determine whether manufactured or imported products are subject to recycling obligations, and recycling fees are paid to the recycling business association to fulfill the obligations. Additionally, waste charges are paid for certain imported products that pose potential waste management problems and are difficult to recycle.

For overseas production sites, waste types, amounts, and disposal methods generated locally are systematically managed, and in-house regulations are established to implement waste disposal processes. Production sites comply with local environmental standards that mandate emissions below certain limits. Specifically, the Vietnam production site selects waste disposal contractors based on strict internal regulations, monitors the monthly generation of waste, and oversees waste disposal methods and volumes.

Waste Emission Trends by Production Site

(Unit: tons)

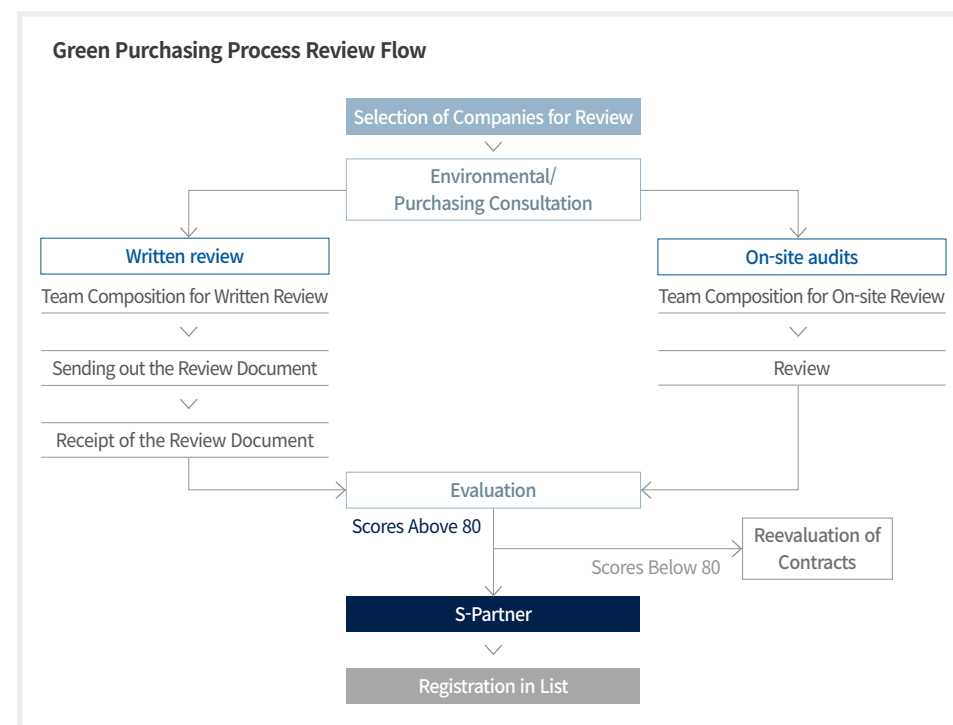
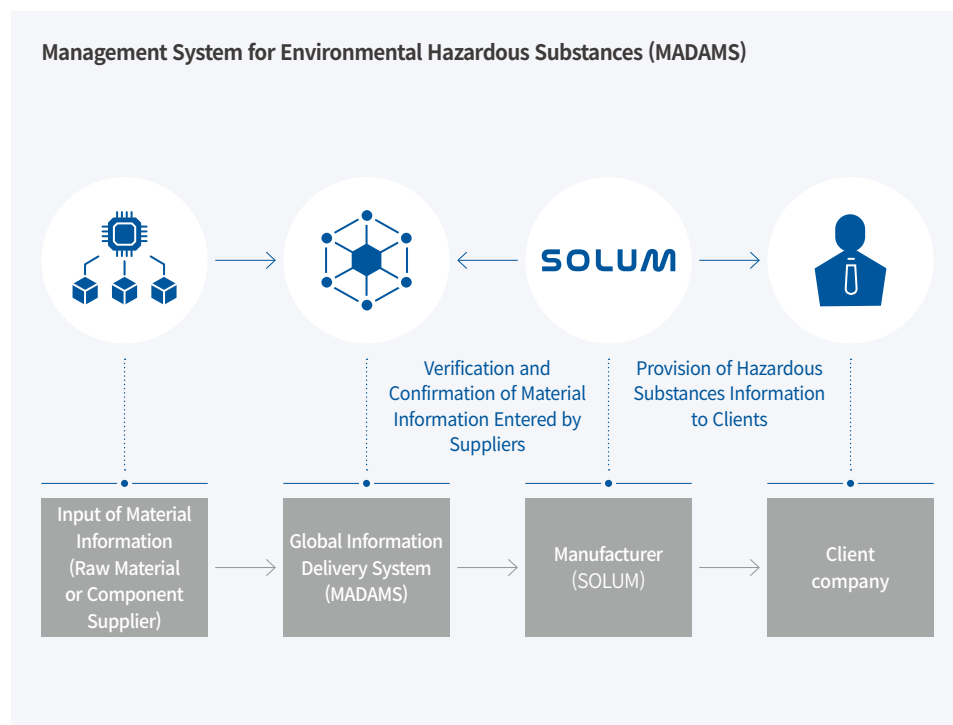


Management of Hazardous Substances in Products

SOLUM is developing eco-friendly technologies and products in line with global and domestic environmental standards, including the EU's RoHS directive and the REACH regulation, ensuring no regulated substances are used during the production process. Pretesting of components/materials (physical measurement/analysis of hazardous substances data) and a post-management system have been established. Additionally, installation of inspection equipment for conflict minerals or phthalates has taken place at all production sites to check new developments and production inputs/outputs. The policy also extends to partner companies, ensuring thorough management of hazardous substances in products and maintaining trade relationships only with approved partners.

Management System for Environmental Hazardous Substances (MADAMS) within the Supply Chain

SOLUM is evaluating the toxicity of components and raw materials with all partner companies of some products prior to the full operation of the Management System for Environmental Hazardous Substances (MADAMS), and plans to refine the scope of products managed through the system. A 'Green Purchasing Process' has been established for systematic sharing of material information and analysis data with partner companies. Accordingly, partner companies must submit data and product environmental certificates proving hazard information received from raw material suppliers. SOLUM assesses partner companies' compliance with 'Product Environmental Hazardous Substances' and grants certification only to approved partner companies, maintaining trade relationships with them. Moreover, SOLUM encourages environmental management engagement among partner companies to minimize the occurrence of hazardous substances within the supply chain.



Climate Action

Excessive use of fossil fuels and unmindful corporate activities such as environmental damage have backfired as today's climate crisis. A consensus on the seriousness of environmental issues has formed globally, and countries are strengthening environmental regulations to overcome these issues. As part of this trend, SOLUM is committed to fulfilling corporate responsibility toward the environment by establishing a Climate Action System and striving to minimize negative environmental impacts that may arise throughout product manufacturing and business operations. To this end, we established our governance to actively discuss risks and opportunities related to climate change in the ESG Committee and the Board of Directors. Through the EHS team, we analyze domestic and international trends and methodologies regarding climate change to establish future strategies and are working hard to address the global crisis through the expansion of eco-friendly businesses. Additionally, we are actively participating in climate change by installing renewable energy facilities at major production sites. Moreover, SOLUM views climate change not only as a risk but also as an opportunity and is actively engaged in activities such as expanding the eco-friendly product portfolio. Recognizing that environmental management is a major concern of key stakeholders, SOLUM plans to continue activities that meet the demands of many stakeholders.

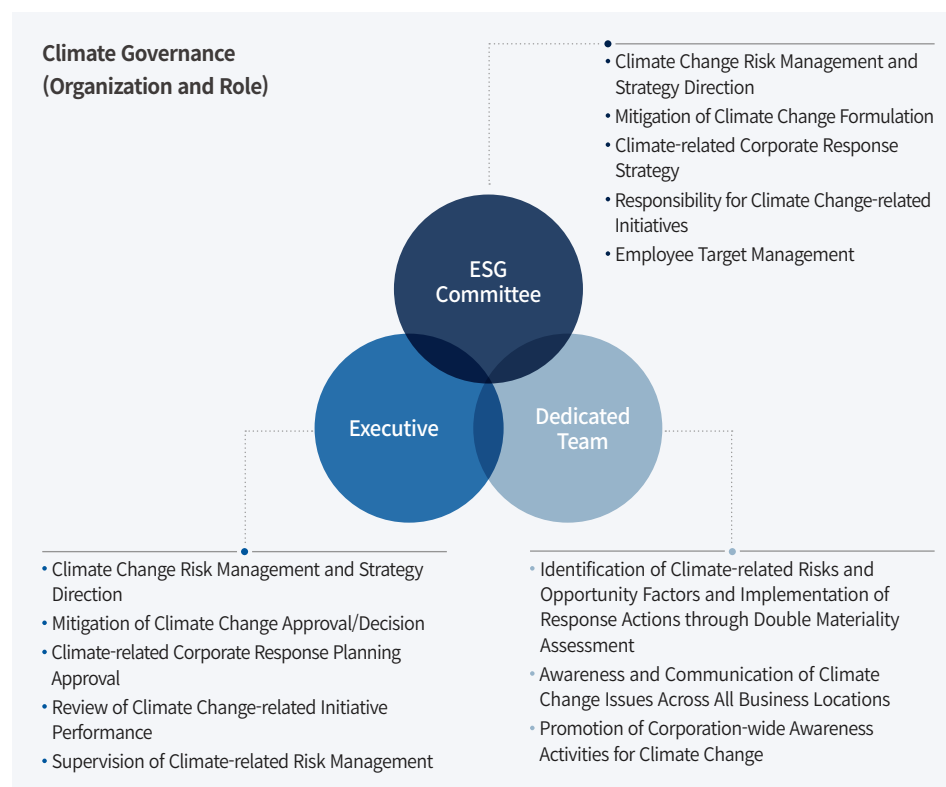
Climate Governance and Operational System

The Board-centered Decision-making System

SOLUM has established the ESG Committee within the Board of Directors in early 2024 to promote sustainable management and manage and supervise performance across all areas of ESG, including Climate Action. Considering the growing importance of ESG management, we have ensured the independence of the ESG Committee by appointing an external director as the Chairperson of the Committee, which is configured to have the same effect as the board resolution. The CEO is an active member of the ESG Committee, facilitating rapid decision-making and execution on relevant matters. The ESG Committee actively identifies climate risks and opportunities and reviews and decides on related business and investment directions.

Working Group Focused on Climate Action

SOLUM's ESG Impact Team, under the supervision of the ESG Committee, performs tasks related to energy saving, establishing climate action goals and strategies. Given the characteristics of major production sites located overseas, the ESG Impact Team and EHS Team see it as crucial at a corporate level to manage energy and greenhouse gas data and established the Greenhouse Gas Management System. The ESG Impact Team is in charge of systematically collecting and analyzing information such as site-specific energy use performance and establishing a greenhouse gas reduction strategy, and reporting and managing these findings to the ESG Committee.



Risk Management

In 2023, SOLUM conducted education on climate change, global warming, and biodiversity conservation among the ESG Working Group to identify short and long-term climate-related risks and opportunities. Also, in response to the standardizing requirements of climate disclosure, we are developing a response framework for the climate crisis. For this framework, we have derived an issue pool regarding climate change risk and opportunity factors based on the results of the global initiative and documents from international institutions, considering the urgency and importance of factors related to business, analyzing issues of overseas production sites, conducting interviews with related departments, and consulting with experts. SOLUM plans to implement and manage an assessment of the possibility and impact of various physical factors such as forward-looking policies, technology, market, reputation, and physical components on a biannual basis and will continue to refine financial and strategic response measures.

Definition of Climate Risk

Climate disclosure regulations, such as ISSB and KSSB, recommend identifying climate change risks using multiple climate change scenarios through a process that evaluates potential impacts on organizations and their resilience based on existing climate disclosure recommendations. SOLUM has identified the phenomena and levels of various climate change scenarios according to the international standards and acknowledges the need for a detailed identification and evaluation of potential impacts on future growth due to the highly uncertain nature of climate risks and other factors, considering various economic and climate scenarios.

What is Climate-related Risk

Climate-related risk refers to the risk that impacts a company's financial status caused by physical damage from extreme weather or business downturns during the transition to a low-carbon economy. There are two broad categories of climate-related risks: transition risks and physical risks.

- Transition Risks involve societal and business environment changes that occur during the implementation of carbon neutrality (or Net Zero), and addresses the following scenarios.

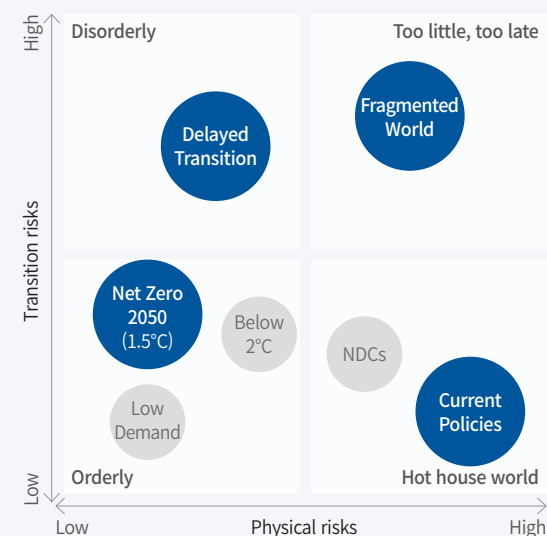
- Changes in policies and regulations
- Technological changes such as eco-friendly technologies and improvements in energy efficiency, accompanied by financial risks
- Changes in consumer behavior and preferences, and the resulting changes in demand/market

- Physical Risks are risks that arise when humanity fails to adequately respond causing increased, real physical natural hazards, and the physical risks are classified into chronic risks and acute risks.

- Chronic physical risks: temperature rise, precipitation, food shortage (crop failure), sea level rise
- Acute physical risks: heat waves, floods, typhoons, wildfires

Due to the frequency and magnitude of heatwaves and typhoons/floods, the damage experienced by companies varies greatly and is difficult to predict, hence the climate disclosure recommendations include advising companies to analyze and respond to various scenarios from a forward-looking perspective.

SOLUM used the tool provided by the Network for Greening the Financial System (hereinafter 'NGFS'), a global consortium between central banks and regulatory bodies. Established in 2017, it aims to manage climate and environmental-related financial risks and support the transition to a sustainable economy. In November 2023, NGFS introduced fourth scenario, reflecting the slowed carbon reduction performance globally from 2021-2025, reconstructing four scenarios with an increased focus on future transition risks. Additionally, it also presented, for the first time, estimates of the macroeconomic impacts of natural disasters such as heatwaves, droughts, typhoons, and floods, on a national basis. SOLUM utilized the NGFS scenarios in analyzing transition and physical risks throughout 2023-2024.



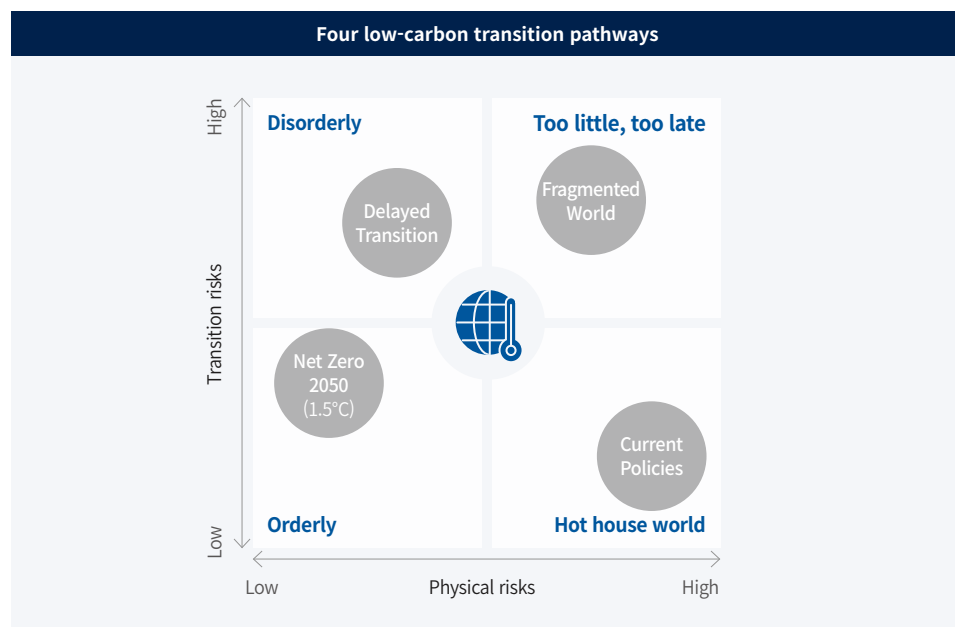
Comparison of NGFS Phase 3 vs. Phase 4 Scenarios

Category	Phase 3 (2022)	Phase 4 (2023)
Carbon Emission Reduction Path	Significant reduction in emissions possible between '21-'25	Significant reduction in emissions not possible between '21- '25
Carbon Pricing	Around \$700 level	Around \$1,200 ~ \$1,700 level
Impact of Natural Disasters	Not considered	Includes GDP losses due to natural disasters

Risk Identification through Scenario Analysis

SOLUM selected various climate change scenarios reported by credible domestic and international academic and research institutions, including the NGFS, IPCC, and IEA, to identify potential risks and opportunities. To analyze physical and transition risks, the initial scenarios were chosen using the NGFS Scenario Portal, ensuring the reliability of the selection process and methodology. Transition risks employed the NGFS Delayed Transition (1.6°C scenario) and Net Zero 2050 scenarios, while physical risks utilized NGFS Current Policies and Fragmented World scenarios. In addition, to gather information on physical risks for domestic business sites, we collected data on climate change projections for Yongin, Gyeonggi Province, where domestic business sites are located. This data, based on observations and scenarios provided by the Korea Meteorological Administration and local governments, was used to identify risks. These efforts reflect SOLUM's first attempt at climate action, and we will continually refine the future climate action framework.

NGFS Scenarios



Orderly	Disorderly	Hot House World	Too Little, Too Late
Climate policies are introduced from the current point (2023), leading to an orderly low-carbon transition, limiting both transition and physical risks	Delay in the introduction of climate policies until post-2030 leads to a disorderly low-carbon transition, limiting physical risks but increasing transition risks	Most countries do not make low-carbon transition efforts, leading to exacerbated climate change with low transition risks but significantly increased physical risks	Only certain advanced countries declare carbon neutrality goals and pursue climate responses, leaving others out, expanding both transition/ physical risks

Defining NGFS Scenarios

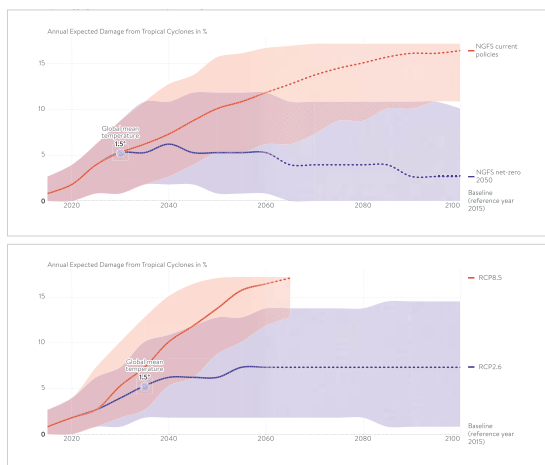
Category	Specific items	Description
Orderly	Low Demand (1.4°C rise)	Energy conservation and increased energy efficiency (electrification, wider distribution of renewable energy, etc.) resulting in a sharp decline in energy demand, with a view to achieving carbon neutrality by 2050
	Net Zero 2050 (1.4°C rise)	A path to achieve carbon neutrality by 2050 and to limit the global average temperature increase to below 1.5°C compared to pre-industrial levels (1850-1900)
Disorderly	Below 2°C (1.6°C rise)	A path to reduce greenhouse gas emissions by 80% by 2050 compared to current levels, limiting the global average temperature increase to below 2°C
	Delayed Transition (1.6°C rise)	A path where countries do not reduce their greenhouse gas emissions until 2030, but implement strong greenhouse gas reduction policies after 2030 to achieve the Paris Agreement targets (keeping the average temperature increase to below 2°C)
Hot House world	Nationally Determined Contributions (NDCs) (2.6°C rise)	A path where only the short-term climate policies (reduction goals for 2030) announced by countries are implemented
	Current Policies (3°C or more rise)	A path where no additional policies are introduced outside of the existing climate policies, leading to increased global warming
Too little, too late	Fragmented World (2.3°C rise)	A path where greenhouse gases are not reduced until 2030 worldwide, but only some countries (mainly developed countries) introduce climate policies after declaring a carbon neutrality target from 2030 onwards, while other countries (mainly developing countries) do not take climate action

Major Physical Risks by Production Site: Typhoons/Cyclones

SOLUM has used the NGFS Climate Impact Explorer (by Climate Analytics) to identify the risks associated with typhoons and cyclones for each major production site. Specifically, from the short-term perspective (~2030) to the long-term perspective (~2100), the potential damage under various scenarios has been assessed to systematically understand the extent to which our business activities are exposed to climate risk.



South Korea Headquarters

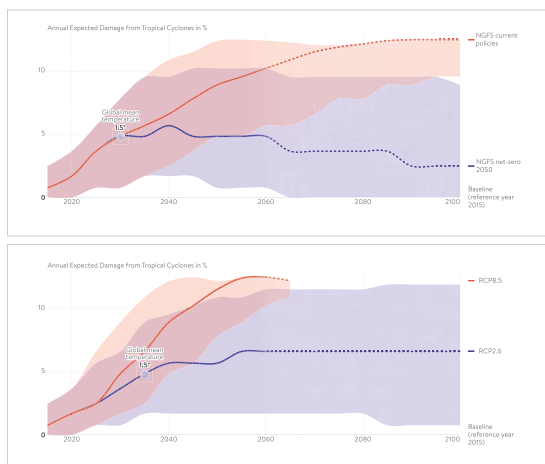


Source: <https://climate-impact-explorer.climateanalytics.org/>

Year	NGFS current policies		NGFS net-zero 2050		RCP 2.6		RCP 8.5		Analysis Results
	Temperature Rise	Damage Scale (%)	Temperature Rise	Damage Scale (%)	Temperature Rise	Damage Scale (%)	Temperature Rise	Damage Scale (%)	
2025	1.4	3.97	1.4	3.97	1.3	2.66	1.3	2.66	SOLUM Korea Headquarters, according to the NGFS scenarios, is projected to face a damage scale of at least 2.66% (NGFS net-zero 2050) to a maximum of 16.43% (NGFS Current Policies) by 2100, and according to the IPCC RCP scenarios, a minimum of 7.34% (RCP 2.6) to a maximum of 16.43% (RCP 8.5) damage scale due to typhoon and cyclone risks.
2030	1.5	5.27	1.5	5.27	1.4	3.97	1.5	5.27	
2040	1.7	7.34	1.6	6.23	1.6	6.23	1.9	10.10	
2050	1.9	10.10	1.5	5.27	1.6	6.23	2.3	13.75	
2060	2.1	11.84	1.5	5.27	1.7	7.34	2.8	16.43	
2080	2.5	15.10	1.4	3.97	1.7	7.34	3.8	-	
2100	2.8	16.43	1.3	2.66	1.7	7.34	4.9	-	



Vietnam Production Site



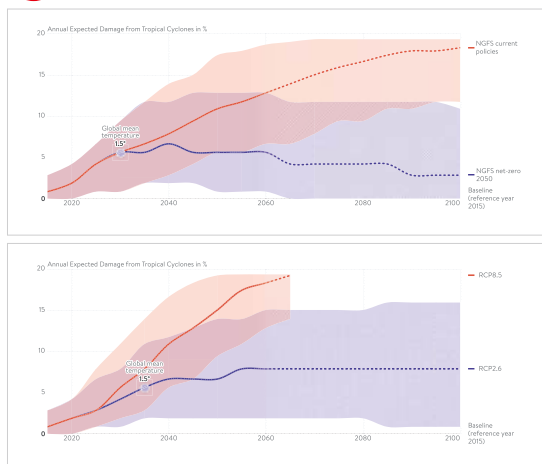
Source: <https://climate-impact-explorer.climateanalytics.org/>

Year	NGFS current policies		NGFS net-zero 2050		RCP 2.6		RCP 8.5		Analysis Results
	Temperature Rise	Damage Scale (%)	Temperature Rise	Damage Scale (%)	Temperature Rise	Damage Scale (%)	Temperature Rise	Damage Scale (%)	
2025	1.4	3.64	1.4	3.64	1.3	2.46	1.3	2.46	The Vietnam production site, according to the NGFS scenarios, is projected to face a damage scale of at least 2.46% (NGFS net-zero 2050) to a maximum of 12.44% (NGFS Current Policies) by 2100, and according to the IPCC RCP scenarios, a minimum of 6.6% (RCP 2.6) to a maximum of 12.44% (RCP 8.5) damage scale due to typhoon and cyclone risks.
2030	1.5	4.82	1.5	4.82	1.4	3.64	1.5	4.82	
2040	1.7	6.60	1.6	5.65	1.6	5.65	1.9	8.89	
2050	1.9	8.89	1.5	4.82	1.6	5.65	2.3	11.48	
2060	2.1	10.20	1.5	4.82	1.7	6.60	2.8	12.44	
2080	2.5	12.13	1.4	3.64	1.7	6.60	3.8	-	
2100	2.8	12.44	1.3	2.46	1.7	6.60	4.9	-	

Major Physical Risks by Production Site: Typhoons/Cyclones



China Production Site



Source: <https://climate-impact-explorer.climateanalytics.org/>

Year	NGFS current policies		NGFS net-zero 2050		RCP 2.6		RCP 8.5		Analysis Results
	Temperature Rise	Damage Scale (%)	Temperature Rise	Damage Scale (%)	Temperature Rise	Damage Scale (%)	Temperature Rise	Damage Scale (%)	
2025	1.4	4.22	1.4	4.22	1.3	2.82	1.3	2.82	The SOLUM China production site, following the NGFS scenarios, is projected to face a damage scale ranging from a minimum of 2.82% (NGFS net-zero 2050) to a maximum of 18.30% (NGFS Current Policies) by the year 2100. Under the IPCC RCP scenarios, the damage scale could range from a minimum of 7.86% (RCP 2.6) to a maximum of 18.30% (RCP 8.5), due to risks from typhoons and cyclones.
2030	1.5	5.62	1.5	5.62	1.4	4.22	1.5	5.62	
2040	1.7	7.86	1.6	6.65	1.6	6.65	1.9	10.90	
2050	1.9	10.90	1.5	5.62	1.6	6.65	2.3	15.04	
2060	2.1	12.85	1.5	5.62	1.7	7.86	2.8	18.30	
2080	2.5	16.65	1.4	4.22	1.7	7.86	3.8	-	
2100	2.8	18.30	1.3	2.82	1.7	7.86	4.9	-	



Mexico Production Site



Source: <https://climate-impact-explorer.climateanalytics.org/>

Year	NGFS current policies		NGFS net-zero 2050		RCP 2.6		RCP 8.5		Analysis Results
	Temperature Rise	Damage Scale (%)	Temperature Rise	Damage Scale (%)	Temperature Rise	Damage Scale (%)	Temperature Rise	Damage Scale (%)	
2025	1.4	27.65	1.4	27.65	1.3	17.84	1.3	17.84	The SOLUM Mexico production site, following the NGFS scenarios, is projected to face a damage scale ranging from a minimum of 17.84% (NGFS net-zero 2050) to a maximum of 208.7% (NGFS Current Policies) by the year 2100. Under the IPCC RCP scenarios, the damage scale could range from a minimum of 56.37% (RCP 2.6) to a maximum of 208.7% (RCP 8.5), due to risks from typhoons and cyclones.
2030	1.5	37.57	1.5	37.57	1.4	27.65	1.5	37.57	
2040	1.7	56.37	1.6	45.81	1.6	45.81	1.9	85.75	
2050	1.9	85.75	1.5	37.57	1.6	45.81	2.3	139.43	
2060	2.1	108.68	1.5	37.57	1.7	56.37	2.8	208.70	
2080	2.5	169.27	1.4	27.65	1.7	56.37	3.8	-	
2100	2.8	208.70	1.3	17.84	1.7	56.37	4.9	-	

Strategy

Greenhouse Gas and Energy Reduction Activities

① Expansion of Renewable Energy Facilities

SOLUM has introduced solar self-generation facilities at Mexico production site to reduce greenhouse gas emissions associated with electricity, which is a major energy source used during production. By consuming the renewable energy generated from solar power, we were able to reduce greenhouse gas emissions compared to using conventional power. We plan to further expand the use of renewable energy across domestic and overseas sites in the future.



Installation of Solar Power Generation Facilities
Mexico Production Site

Generation Capacity

500 kW



SOLUM's New Production Site in Mexico and Solar Panel Installations

② Development of Greenhouse Gas Reduction Strategy and Roadmap

Currently, major countries around the world are establishing their own national greenhouse gas reduction targets (NDC; Nationally Determined Contribution), and global corporations are also setting targets and strategies for carbon neutrality in response to the Climate Crisis. SOLUM is also in the process of developing a strategy to achieve carbon neutrality in line with these trends. At present, SOLUM, with the active cooperation of employees in each corporate entity, has identified energy sources and greenhouse gas emission sources, created an inventory by calculating emissions, and plans to build a greenhouse gas reduction strategy and roadmap for implementation, considering the mid-to-long-term greenhouse gas emission forecasts and reduction potential.

Greenhouse Gas Inventory and Reduction Roadmap

- Step 1**
Identification of greenhouse gas emission sources/energy sources for the headquarters and overseas production sites (Completed in 2023)
- Step 2**
Calculation of past three-year emissions for each greenhouse gas source at the headquarters and overseas production sites (To be completed in 2024)
- Step 3**
Discernment of reduction items for energy savings and greenhouse gas reductions based on the greenhouse gas inventory at each site (Planned)
- Step 4**
Validity review of the identified reduction measures through Step 3, adoption of feasible measures, and analysis of reduction potential for each adopted measure (Planned)
- Step 5**
Establishment of a mid-to-long-term greenhouse gas reduction strategy and roadmap, including offset utilization schemes such as carbon credits, considering the greenhouse gas forecasts and reduction volumes for each item set in Step 4 (Planned)

Strategy

③ Promotion of Energy Savings and Eco-friendly Practice Culture

The Vietnam production site, a major production site for SOLUM, is constantly promoting energy-saving activities as it consumes a significant amount of energy. Specifically, efforts such as shutting off air conditioning when no workers are present, adjusting the indoor temperature and humidity, switching off power to production equipment when not producing products are being carried out to minimize the increase in greenhouse gas emissions.

From 2023, domestic entities have switched to 'eco-friendly business cards' using recycled paper, adopted smart warmers, a paperless approval system, turning off PC monitors when away, and separate collection of recyclable materials, allowing employees to naturally practice ESG activities in their daily lives. Also, there are plans to gradually switch existing business vehicles to electric vehicles, and efforts to encourage employees' active energy conservation activities are announced through groupware and in-house digital signage.

④ Management of Carbon Emissions by Product

The Vietnam production site is calculating and managing carbon emissions for major production products and preparing to obtain carbon footprint certification. Plans include enhancing the methodology and scope of carbon emission calculations per product based on the Greenhouse Gas Management System in the future.

Eco-friendly Product Portfolio

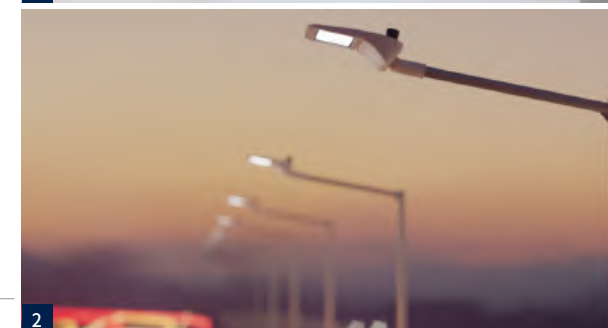
SOLUM is contributing to energy savings and greenhouse gas reductions in the community beyond our corporate boundaries through the production of eco-friendly products. By continuously developing and distributing products that ensure high Energy Efficiency and promote the use of Renewable Energy, we are leading the transition to clean energy.

SOLUM has expanded business into the eco-friendly mobility field by collaborating on the development of power control modules for EV chargers, producing power modules with more than 95% energy efficiency, and high-speed charging capabilities. Also, SOLUM's smart street lights, equipped with radar sensors and environmental sensors for monitoring temperature, humidity, and carbon dioxide, can automatically adjust the brightness of each power source considering the length of the day and weather, thus expecting up to 80% energy saving effects. SOLUM is also working on product developments that can use the energy produced by solar panels, store the excess in an Energy Storage System (ESS), and use it to charge electric vehicles or turn on/off lights in daily life. Thus, SOLUM aims to enable easy energy reduction activities through our products and is working to build a sustainable energy system through the composition of an eco-friendly product portfolio.

 Energy Efficiency Biz	· ESL · EV Charging Biz · Adapter · Smart Street Lights · Standard server power · Smart Multi Sensor
 Renewable Energy Biz	· Eco-friendly Factory Biz · Photovoltaics Biz · ESS Biz



1



2

1. Power Module for EV chargers
2. Smart Street Lights

Goals and Indicators

Greenhouse Gas Emission Management

SOLUM headquarters includes our own business, SOLUM Sensor, and SOLUM Healthcare, and has built an inventory through identifying the sources of greenhouse gas emissions for scope 1 and 2, and is managing the emissions. Additionally, the determination and management of greenhouse gas emissions have been extended to all domestic and overseas production sites. Each corporation undergoes third-party verification annually to ensure objectivity of the information, and this information is transparently disclosed to stakeholders through the ESG Report. SOLUM plans to establish a system for calculating and managing not only the scope 1 and 2 emissions of domestic and overseas sites but also the scope 3 emissions of major suppliers in the value chain.

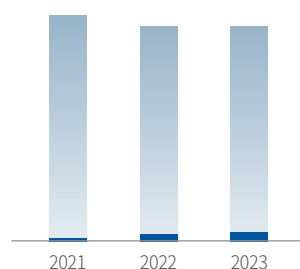
GHG Emissions of Domestic Headquarters and Subsidiaries

(Unit: tCO₂eq)

Category	3 years	2021	2022	2023
SOLUM	Total emissions	1,071.104	1,034.635	1,036.795
	Scope 1 emissions	39.391	69.091	81.988
	Scope 2 emissions	1,031.713	965.544	954.806
SOLUM Sensor	Total emissions	5.462	6.692	13.959
	Scope 1 emissions	0.053	0.045	0.055
	Scope 2 emissions	5.409	6.647	13.903
SOLUM Healthcare	Total emissions	0.641	5.229	6.325
	Scope 1 emissions	0.114	0.097	0.119
	Scope 2 emissions	0.527	5.132	6.206

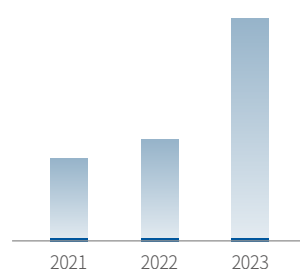
SOLUM headquarters

Scope 1 emissions
Scope 2 emissions



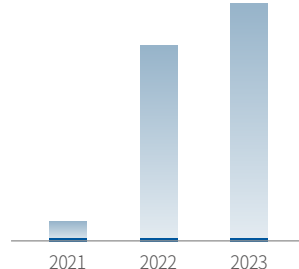
SOLUM Sensor

Scope 1 emissions
Scope 2 emissions



SOLUM Healthcare

Scope 1 emissions
Scope 2 emissions



Establishment of a GHG Management System

SOLUM's overseas production sites in Vietnam, China, Mexico, and India account for over 95% of the total corporate greenhouse gas emissions. Consequently, from 2024, SOLUM plans to introduce a greenhouse gas management system (ESG Intelligence System) that will enable real-time monitoring of greenhouse gas emissions and energy consumption not only domestically but also at overseas production sites. Through our ESG Intelligence System, we will systematically and efficiently manage related data including energy consumption for each domestic and overseas site, and these data and management indicators will be actively used in the implementation process of the greenhouse gas reduction strategies that SOLUM will establish later.

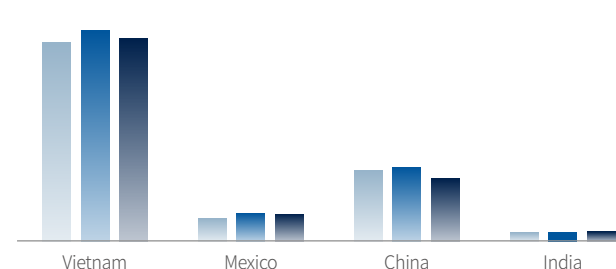
Major Overseas Production Sites' GHG Emissions

(Unit: tCO₂eq)

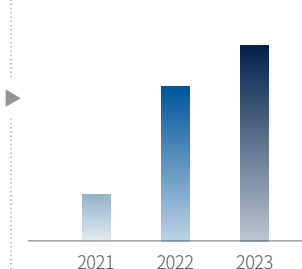
Category	3 years	2021	2022	2023
Vietnam	Total emissions	19,202.619	20,152.195	19,354.273
	Scope 1 emissions	424.870	577.545	472.186
	Scope 2 emissions	18,777.748	19,574.649	18,882.087
Mexico	Total emissions	1,662.307	2,142.891	2,095.836
	Scope 1 emissions	46.349	99.409	140.405
	Scope 2 emissions	1,615.959	2,043.482	1,955.430
China	Total emissions	6,162.846	6,355.503	5,498.217
	Scope 1 emissions	57.459	92.038	92.740
	Scope 2 emissions	6,105.388	6,263.465	5,405.477
India	Total emissions	367.935	982.656	1,224.967
	Scope 1 emissions	14.873	29.667	43.444
	Scope 2 emissions	353.062	952.989	1,181.523

GHG Emissions: Overseas Production Sites

2021 2022 2023



Detailed trend in India's GHG



Biodiversity Preservation

SOLUM is aware of the need to protect biodiversity for sustainable development and strives to ensure that our business activities do not compromise biodiversity. This year, we have taken the first step in biodiversity preservation efforts by identifying and understanding the status of endangered species near domestic sites. SOLUM plans to enact biodiversity and deforestation prevention policies in the future and, as part of biodiversity preservation activities at overseas sites, will check compliance with local and national legal requirements where sites are located in regions covered by international conventions (World Heritage areas, IUCN Category I-IV protected areas). We plan to cooperate actively with external specialized institutions and expert groups as necessary. SOLUM will devote more efforts to corporate-level employee participation in ecosystem conservation and habitat protection activities.

Definition of Biodiversity

Biodiversity refers to the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems (Article 2 of the Biodiversity Convention). In 2024, SOLUM identified species that need to be conserved in the Yongin area of Gyeonggi Province, and plans to expand and enhance management at the global business locations subsequently.



Species diversity

Species diversity primarily refers to the variety of living species of animals, plants, and microorganisms that are found in a particular region, generally referring to the diversity of species distributed within an area and their taxonomic diversity.



Ecosystem diversity

Ecosystem diversity refers to various ecosystems found in mountains, lakes, farmlands, and includes deserts, forests, wetlands, and involves the diversity of all living and non-living interactions within a particular ecosystem.



Genetic diversity

Genetic diversity refers to the genetic variation that occurs within a species, representing different groups within the same species or genetic variations among individuals within a single group.

Status of Endangered Species in Yongin City (as of 2023)

Class I	Mammal: 1 species	· <i>Lutra lutra</i>
	Bird: 1 species	· <i>Haliaeetus albicilla</i>
Class II	Mammal: 1 species	· <i>Prionailurus bengalensis</i>
		· <i>Platalea leucorodia</i>
		· <i>Aegypius monachus</i>
		· <i>Gallicrex cinerea</i>
		· <i>Falco peregrinus</i>
		· <i>Accipiter soloensis</i>
	Bird: 11 species	· <i>Accipiter nisus</i>
		· <i>Falco subbuteo</i>
		· <i>Circus cyaneus</i>
		· <i>Accipiter gentilis</i>
	Insect: 1 Species	· <i>Cygnus cygnus</i>
		· <i>Charadrius placidus</i>
		· <i>Cybister (Cybister) chinensis</i>

Source: National Institute of Ecology

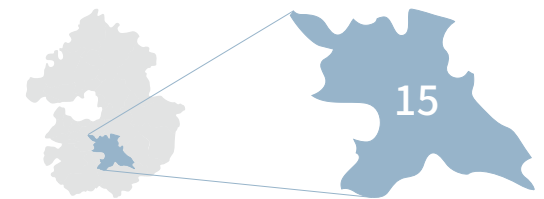
Endangered Wildlife Class I

Currently 68 species designated [Effective 2023. 3. 14.]

Species threatened with extinction due to natural or artificial threats, designated by environmental orders in consultation with the head of the relevant central administrative agency.

Source: Ministry of Environment Wildlife Management System

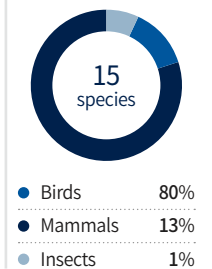
Yongin City, Gyeonggi Province



Endangered Wildlife Species Examples

Category	Count	Total
Mammals: 2 species	20 species	
Birds: 12 species	69 species	
Amphibians/Reptiles: 0 species	8 species	
Fish: 0 species	29 species	
Insects: 1 species	29 species	
Invertebrates: 0 species	32 species	
Terrestrial Plants: 0 species	92 species	
Algae: 0 species	2 species	
Higher Fungi: 0 species	1 species	

Endangered Wildlife Species Ratio



Endangered Wildlife Class II

Currently 214 species designated [Effective 2023. 3. 14.]

Species significantly reducing in population due to natural or artificial threats, with risk of becoming endangered in the near future if current threats are not removed or mitigated, designated by environmental orders in consultation with the head of the relevant central administrative agency.

Promotion of Biodiversity Preservation Activities across Global Business Sites

SOLUM recognizes the importance of coexistence between human advancement and natural capital. Accordingly, we are striving to establish a system that can monitor and manage the biodiversity risks and impacts on natural capital across our entire value chain, taking into consideration the characteristics of our industry. In accordance with the guidelines recommended by TNFD, we used the ENCORE tool to analyze the dependency and impact on biodiversity in major domestic and overseas production sites (Vietnam, Mexico, China) and their surrounding areas. The analysis identified that 3 out of the total 10 indicators that analyze the ecosystem dependency are highly relevant to the electronics equipment industry. Furthermore, 4 major factors affecting biodiversity have been identified in SOLUM's business activities, along with the related natural capital. Based on this information, key areas requiring priority management due to high biodiversity risks have been identified. Starting with this analysis, our headquarters and overseas production sites are committed to systematically managing the impacts on the ecosystems and diligently implementing improvement measures to mitigate them.

Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
Industry-Based Biodiversity Risk Analysis	Local Biodiversity Status Assessments	Biodiversity Risk Evaluation	Mitigation Measures by Site	Monitoring and Reporting
Utilizing the ENCORE tool, identification of biodiversity and natural capital Dependency and Impact, considering comprehensive industry characteristics	Scope of management and biodiversity status assessment in the region/country for the headquarters and major production sites * Scheduled for 2024 at the headquarters	Site-specific biodiversity risk analysis (planned)	Pursuit of mitigation activities to minimize biodiversity risks at domestic and abroad sites (planned)	Progress on monitoring efforts, reviewing, and establishing improvement measures (planned)

Encore's Industry-specific Natural Capital Dependency and Impact (Electronic Components)

Category	Dependency Activities	Related Indicators	Related Natural Capital (Assets)	Description
Dependency	Direct natural capital inputs for production activities	Groundwater Surface water	· Water	Medium Medium
	Direct impact mitigation	Dilution due to air and ecosystem	· Air · Water · Marine landscape	Low

Category	Impact Driver	Example of Related Production Activities	Related Natural Capital	Description
Impact Level	Water pollution	Leakage and absorption of chemicals and heavy metals into polluted water bodies	· Air	High
	Soil pollution	Waste absorbed and leaked into the soil during the target period	· Soil and sediment · Habitats	High
	Solid Waste	Category of solid waste by type of hazardous substances or treatment method	· Landforms · Minerals	Medium
	Noise pollution and light pollution	Site-specific business activities causing severe noise and light pollution	· Biological species · Water	Medium

Major Production Sites Hotspot Analysis

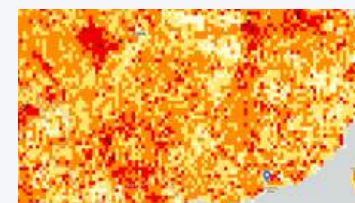
SOLUM has identified ecosystem risks associated with the depletion of natural capital at the locations of major production sites (Vietnam, Mexico, China). This has allowed for the identification of the density and degree of risk of hotspots where business activities are expected to have a high negative impact.



Vietnam Production Site



Mexico Production Site



China Production Site



Social

53	Talent Management and Training	•	56	Human Rights Management	•	58	Health and Safety Management	•	61	Product Stewardship
65	Responsible Supply Chain	•	68	Information Security	•	70	Social Contributions			

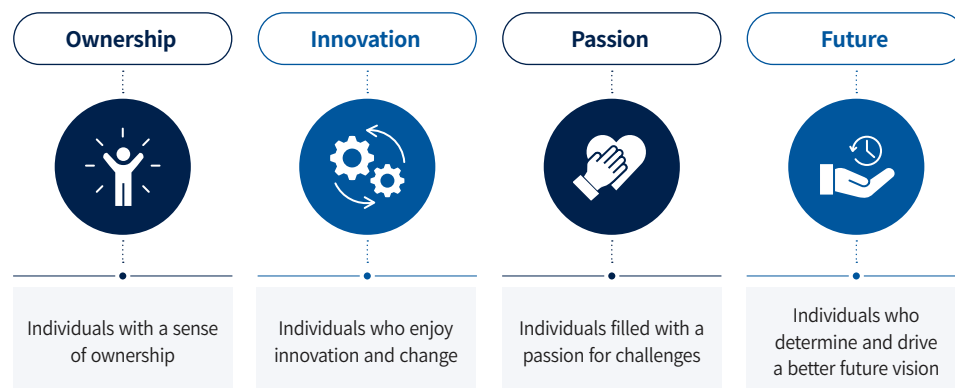
Talent Management and Training

Sustainability and trust must co-exist only when employees are happy and are granted the working environment to perform with excellent capabilities. SOLUM operates various HR systems to provide a positive work experience for employees and is committed to developing their capabilities by providing ample opportunities for education and training. SOLUM's fundamental policy for talent management and development is that "corporate growth stems from the development of individual employees, and the development of employees leads to corporate growth," which we aim to establish as a corporate culture through various policies and programs.

Talent Recruitment

SOLUM's Value

The ideal candidate for SOLUM is a person with a sense of ownership, who enjoys innovation and change, has passion for challenges, and determines and drives a better future vision. Believing that the greatest asset is human talent, SOLUM recruits individuals with excellent qualities and focuses on their growth.



Recruitment System

Excellent talent is the driving force behind SOLUM's new business initiatives and product development. SOLUM operates a continuous recruitment system, involving department heads and members in the interview process to assess the applicant's expertise and organizational fit. In addition to open recruitments for new graduate and experienced hires, SOLUM operates industry-academic scholarship systems, special research personnel systems, and employee referral systems.

1) Industry-Academic Scholarship and Special Research Personnel System

The industry-academic scholarship system targets graduate students in master's and doctoral courses, Special Research Personnel System for students who apply and engage in joint research activities with the company, with opportunities for employment at SOLUM after graduation. The special research personnel system allows master's graduates to fulfill military service obligations by working in a company-affiliated research institute, with SOLUM operating certified research institutes for this purpose.

2) Employee Referral System

SOLUM employees can refer acquaintances with the right capabilities for the company's positions. The referred individuals not only gain prior knowledge about the company and the job from current employees but also provide the HR department with high-quality candidates, increasing satisfaction with the system. Both the referrer and the newly hired employee receive incentives.

3) Job Posting System

To offer opportunities for growth through job rotation and experience in different fields, SOLUM conducts internal recruitment through a job posting system. Applicant information is kept strictly confidential during the recruitment process, and even department heads are not informed until the hiring decision is made.

Human Resources Evaluation

Reward and Welfare System

SOLUM's reward and welfare systems are applied equally to all employees. Employees undergo an annual human resources evaluation, and the results are reflected in individual salary. Employees assess their own performance and receive evaluations and feedback from their immediate and next-level supervisors. Apart from individual compensation, we also have a bonus system and performance-based incentive system based on management results.

- ① Operates statutory welfare benefits such as the retirement pension system (DB, DC) and social insurance.
- ② Supports personal pension plans for employees' future stability.
- ③ Provides spouse or direct ascendant professional health examinations.
- ④ Supports breakfast, lunch, dinner, and snacks.
- ⑤ Grants sabbatical leave for long-term employees.
- ⑥ Provides educational support for children (kindergarten to university).
- ⑦ Operates holiday gifts, birthday gift programs, group condo discount systems, condolence leave, condolence money, and group insurance policies.

Education and Training System

1) Job Training

SOLUM operates a job training program to enhance employees' job competencies and assist with personal career growth. Given the variety of job fields within the company (circuit design, S/W design, quality control, manufacturing management, sales, marketing, business management, design), SOLUM has entered into agreements with specialized external institutions (Korea University of Technology and Education, Ajou University, Korea Software Industry Association, Korea Information and Communication Technology Association, Korea Electronics Technology Institute, Korea Institute of Design Promotion, etc.) to provide educational opportunities. Additionally, employees freely take various online courses from the online specialized training company, Hunet.

2) Language Education

As SOLUM interacts with a diverse global clientele through branches in America, Europe, Mexico, China, Vietnam, Japan, and India, we place significant emphasis on language education for our employees. In addition to the in-house courses, it offers English and Vietnamese language training utilizing video calls and AI systems to support both online and offline learning.

3) Competency Training

SOLUM has established a competency training system to enhance employees' common skills such as leadership and self-management and continues to add depth to these courses. Through these courses, employees are expected to efficiently manage their careers and quickly adapt to their roles.

Capability Level	Mandatory Training	Regular Training					Specialized Training					Self-Learning
		Leadership/Business Common Skills					Job Capability					
		Required Competencies		Education Categories			Levels	Development	Quality/ Production/ Manufacturing	Purchasing/Logistics/ Sales/Marketing	Support	
LV3 (Over 8 years of experience) SM	· Sexual Harassment Prevention	· Change Awareness · Leading by Example	· Guidance of Others · Conflict Management		· New Managers (Teamwork, Leadership, Negotiation)	· Executive Leadership (Vision Sharing, Value Realization)	Advanced					
LV2 (3~8 years of experience) SE~SM	· Personal Information Protection · Safety and Health · Retirement Pension · Disability Awareness	· Strategic Thinking · Cost Concept	· Goal Management · Professionalism	· New Employee Orientation (Understanding Organization, Integration, Followership)	· Promotion Education (Professionalism, Goal Management)		Intermediate	· Development	· Quality · Production · Manufacturing	· Purchase · Logistics · Sales · Marketing	· Legal · Finance · Human Resources · Planning · Strategy	· Self-directed Learning
LV1 (0~3 years of experience) SS		· Self-Management · Reporting Skills	· Time management · Customer Awareness (Courtesy)				Beginner					

Organizational Culture

Creating a Great Place to Work

All employees at SOLUM use the single rank of 'Professional,' respected as experts and responsible persons of their assigned duties regardless of age or total career length. Family-friendly systems like the childcare leave system, reduced working hours for childcare, various familial leave benefits, and bereavement support funds back up the employer's efforts to balance work and family life. In 2022, SOLUM was designated as a family-friendly certified company in Gyeonggi Province.

SOLUM's employees can flexibly manage their commuting and daily working hours under the flexible working system, which sets a fixed total monthly working hour but allows individual schedule-based flexibility. This system enables parents with young children to start work after their children's school commences and also allows employees to leave early for personal schedules, contributing to high satisfaction with this HR policy.

Furthermore, since 2023, the sabbatical leave system has been providing opportunities for long-term employees to recharge and create precious memories with families, granting 21 days of paid leave to those with 7 years of tenure, and 30 days to those with 15 and 30 years of tenure, respectively. Additionally, SOLUM organizes various clubs such as futsal, bowling, tennis, table tennis, screen golf, and shooting, providing great opportunities for employees from different departments to fraternize naturally.

ESG-friendly Culture Creation & Support for Disabled Workers

SOLUM operates a rural experience program for employees in nearby villages for the purpose of interacting with the local community, and supports the employment of disabled individuals through a partnership with the Art Museum VERSI located in Yongin, Gyeonggi Province. SOLUM is making efforts to create an ESG-friendly culture by switching employee business cards to eco-friendly paper and running campaigns to turn off lights during lunchtime and other idle times.

Parenting and Family Care Support

SOLUM operates various family-friendly systems to allow employees to maintain a happy family life. We provide educational funds for children from kindergarten to university, and offer full financial support for the education of children with disabilities. SOLUM members actively utilize parental leave and reduced working hours for childcare systems regardless of gender, and adopt a fully flexible working system that allows employees to start work after taking their children to school or leave early according to personal schedules without feeling self-conscious. In addition, we operate a sabbatical leave system for long-term employees, granting 21 days of paid leave to employees with 7 years of service, and one month of paid leave to those with 15 and 30 years of service.

Performance and Compensation

Performance Management and Evaluation

SOLUM conducts an HR evaluation annually for all employees. Additionally, we run a 360-degree feedback system where employees evaluate their achievements once a year, based on which department heads make the final assessments. Based on this performance-based compensation system, individual salaries are determined, and top performers receive individual incentives. We motivate organizational development and personal performance improvement by paying bonuses based on the achievement of corporate management indicators and target profits, using a certain percentage of the economic value added (EVA) for the bonus fund.



Human Rights Management

SOLUM strives to protect the dignity and value of humans throughout all corporate activities and respects internationally recognized human rights standards. Particularly, the company is committed to creating a safe, diverse, and inclusive workplace by internalizing a horizontal and inclusive organizational culture through enhancing leadership and communication channels among employees. SOLUM practices HR and human rights management to ensure that all employees can work in an environment where safety, diversity, and fairness are guaranteed.

Human Rights Management Policy and Practice

Human Rights Management Basic Principles

SOLUM supports the international principles on human rights established by organizations such as the United Nations (UN) and the International Labor Organization (ILO), and complies with domestic laws reflecting these principles. In 2024, SOLUM established 14 articles of basic principles of human rights management, capturing the company's human rights management philosophy and principles. The company will strive to prevent any human rights violations for anyone associated with SOLUM.

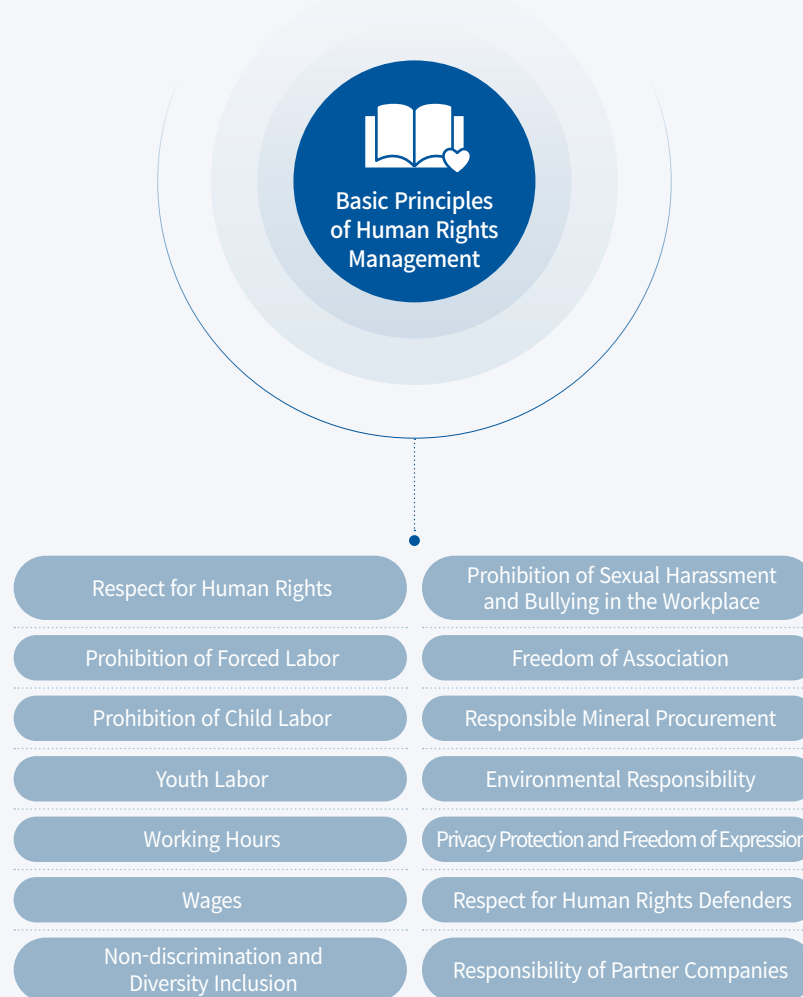
Human Rights Violation Handling Process

SOLUM operates channels that anyone associated with the company can use to report potential human rights violations, and the identity of the reporters is strictly protected. Issues raised are forwarded to the relevant departments, and solutions are developed through internal procedures and transparently communicated to the reporters.

Employee Awareness Training

To improve employee awareness of human rights, mandatory annual training, including workplace sexual harassment prevention and disability awareness, is conducted. Further ethical management training will include our heightened concern for human rights and prevention of human rights violations to strengthen awareness of human rights issues among all employees.

Human Rights Management Policy



Non-discrimination and Diversity Enhancement

SOLUM respects the diverse backgrounds and values of each employee, promoting organizational diversity and a flexible culture. Starting from the recruitment stage, the company honors the value of diversity and prohibits discrimination based on origin, race, nationality, gender, age, disability, etc. In 2024, diversity, equity, and inclusion (DEI) policies were established and shared with the headquarters and major global business locations to actively embrace and advance related policies. Each site ensures the stability of employees' lives by paying wages that exceed the minimum wage set by labor laws in their respective countries.

Commitment to Diversity, Equity, and Inclusion

- SOLUM believes that a culture based on diversity, equity, and inclusion values is a resource that perpetuates innovative spirit. Under the belief that employees are the top priority customers, the company has established a DEI policy to foster an organizational culture where diverse talents can have creative and challenging thoughts
- SOLUM does not discriminate against employees based on gender, race, ethnicity, nationality, cultural background, disability, age, individual sexual identity political or religious beliefs, or social status without rational reasons, and further promises to create working conditions that enable employees from diverse backgrounds to realize the values of diversity and inclusion. Furthermore, we strive to become a company that respects the diversity and inclusion of customers, partner companies, the local community and various stakeholders.



Labor Activities

Operation of the Harmony Consultative Council

SOLUM respects the right to collective bargaining, and the right to collective action in accordance with the Constitution, labor relations laws, and the ILO's basic principles. To foster active communication between labor and management, we operate a labor-management council called the 'Harmony Consultative Council' consisting of 4 representatives from both the workers' side and the company's side (total of 8 people). of the Harmony Consultative Council, and the 4 worker representatives are directly elected by employees to ensure representation. Through the Hamsung Consultative Council, we discuss various topics such as the company's future direction, personnel systems in depth, forming a trust-based labor-management relationship based on communication. The welfare benefits agreed upon at the Harmony Consultative Council are applied equally to all employees affiliated with SOLUM.

Operation of the Grievance System

SOLUM operates a lunch meeting twice a month, attended by HR managers, officers, and worker representatives (grievance handling members) from the Harmony Consultative Council. Through these meetings, conduct communication activities across all departments, promptly addressing various opinions on company policies and individual grievances received on-site. SOLUM listens to the grievances of employees and operates various grievance handling channels to address received grievances. We plan to expand communication channels in the future to better listen to employees' opinions through more diverse channels.



Implementation of the Grievance System through Lunch Meetings

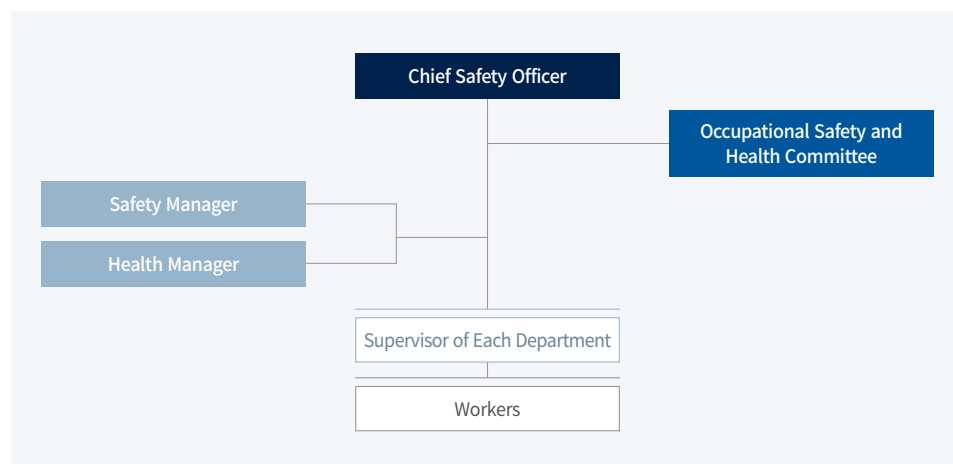
Health and Safety Management

SOLUM considers the safety and health of all stakeholders, including employees, as a fundamental element of corporate management. Particularly since January 27, 2022, with the enactment of the Serious Accident Punishment Law, corporate responsibility for safety and health has been strengthened, and it has become necessary for the CEO, as the management responsible, to ensure safety and health. SOLUM has established a safety and health management system with the CEO as the management in charge. Additionally, we are committed to creating a safe and healthy work environment by expanding investments related to safety and health, and rigorously implementing measures in accordance with relevant laws such as the Occupational Safety and Health Act.

Safety Management Governance

Safety Management Governance

SOLUM has established an Occupational Safety and Health Committee, which meets quarterly under the CEO (Chief Safety Officer under the Occupational Safety and Health Act). Safety managers and health managers are appointed as part of the safety and health staff to form a safety and health Committee. Safety managers and health managers regularly conduct risk assessments and detailed safety diagnostics to identify and promptly improve major safety and health risks, and also replace and repair major equipment on schedule. In addition, departmental supervisors are assigned to discover and improve potential safety issues within each department and take on the role of disseminating major issues throughout the company when special issues arise. Furthermore, we encourage voluntary safety and health management activities within each department, ensuring that safety and health management becomes entrenched in SOLUM's corporate culture.



Establishment of Health and Safety Management System

Health and Safety Management Policy

SOLUM is committed to providing a safe workplace where all team members can work without worry, prioritizing safety and health in all operations across every SOLUM entity. Under this policy, not only employees but also partner companies are supported and supervised to strictly comply with the policy.

SOLUM Health and Safety Management Policy

All employees at SOLUM recognize safety and health as their top responsibility and are committed to continuous improvement and practices to create a safe and comfortable working environment, thus preventing accidents and enhancing the quality of life. Based on this understanding, the following measures are fully implemented:

- ① Comply with safety and health regulations and pursue continuous improvement.
- ② Strive to establish a safety culture and create a healthy and safe working environment.
- ③ Actively support education and training to enhance the understanding of safety and health among all employees.
- ④ Actively participate in safety and health activities and diligently fulfill the responsibilities and duties assigned.
- ⑤ Communicate sincerely with stakeholders and adopt transparent information disclosure to fulfill corporate social responsibilities.

Occupational Safety and Health Management System Certification Acquisition

SOLUM has acquired the Occupational Safety and Health Management System (ISO 45001) certification for major production sites, equipping ourselves with an advanced health and safety management system.

Safety and Health Operation Management

Risk Assessment

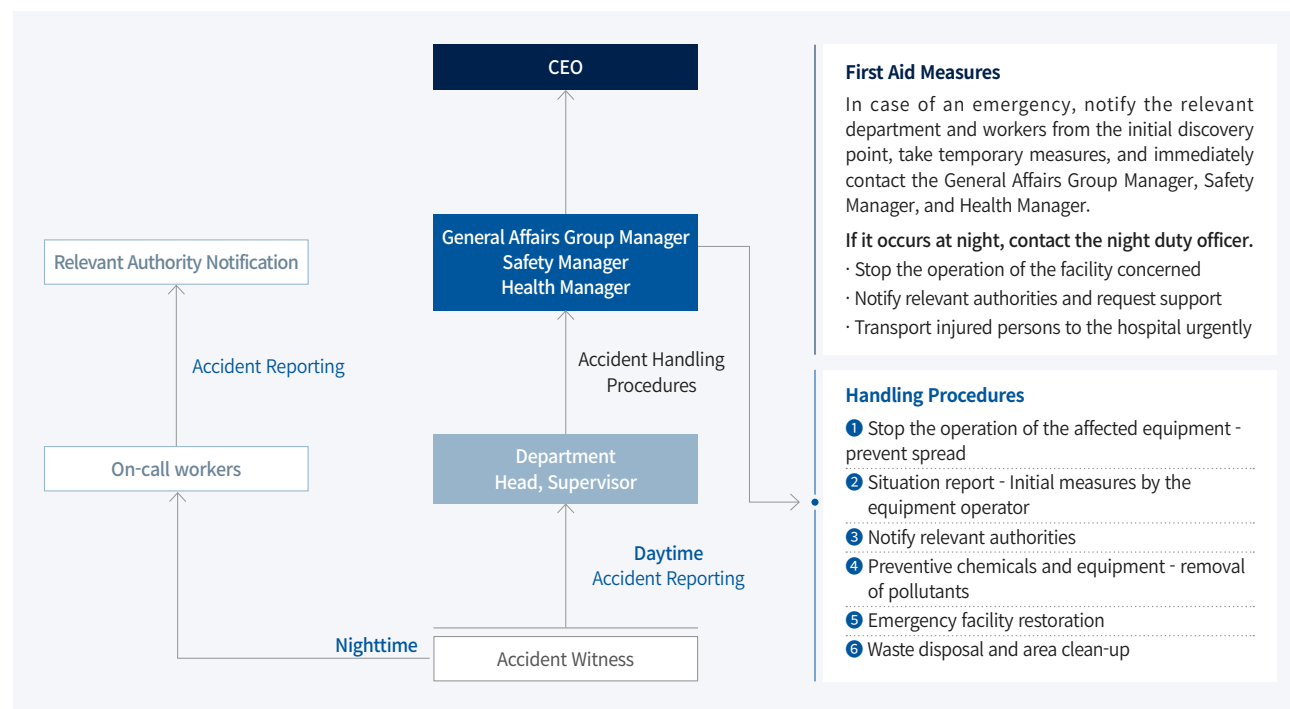
SOLUM has established standards and procedures regarding the methods, procedures, and timing of risk assessments to systematically identify hazardous and dangerous factors related to the business it conducts and to manage and improve them accordingly. Thus, SOLUM conducts regular risk assessments through contractors, as well as ad hoc risk assessments and departmental accident data collection. Furthermore, by checking the implementation of improvement measures based on the results of the risk assessments and accident data collection, and by allocating additional budgets and manpower when necessary, SOLUM makes efforts to ensure that the actual work environment is improved, not merely inspected.

Health and Safety Feedback Channels

SOLUM operates an Occupational Safety and Health Committee in accordance with the Occupational Safety and Health Act, listening to the health and safety opinions of SOLUM workers. Furthermore, an online safety reporting system is being implemented to provide all employees with a channel to continually express their opinions on health and safety. Through these channels, SOLUM immediately establishes improvement measures based on the feedback and checks their implementation, thus conducting health and safety management activities that workers can truly feel at the site.

Emergency Response System

SOLUM has established an emergency response system to prevent emergencies at all business sites and to protect lives and property efficiently in the event of an emergency, minimizing damage. The emergency response system thoroughly specifies the response measures required by the Serious Accident Punishment Law, including relief measures, additional damage prevention, work stoppage, and worker evacuation procedures. Additionally, to ensure that emergency measures are implemented as specified, emergency response drills are conducted semi-annually.



Partner Company Safety Environment 12-Item Checklist Evaluation

SOLUM has prepared a checklist comprising 12 detailed items, including chemical handling management, safety environment training history, and risk assessment, implementation and evaluates new partner companies based on this checklist. Only those scoring 80 points or above are contracted. This process ensures that partner companies capable of managing health and safety for their employees implement these activities and strengthens industrial accident prevention at SOLUM sites.

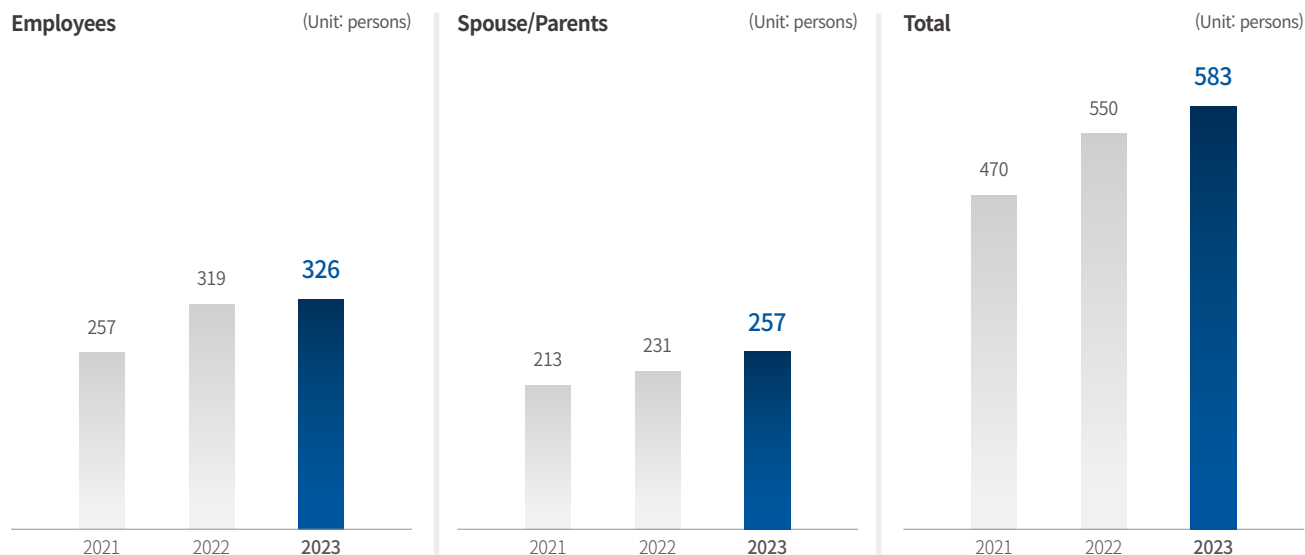
Health and Safety Culture Expansion

Health and Safety Training

SOLUM establishes an annual SHEE (Safety, Health, Environment, and Energy) training plan and conducts safety and health training not only for health and safety personnel and new hires but also for all employees, including emergency preparedness, material safety and health, and regular safety and health training. Training to enhance employees' safety and health awareness is also developed and implemented, including training on the use of safety equipment stationed on-site.

Employee Health Management

SOLUM provides regular health check-ups and group medical insurance to ensure a safe and healthy life for employees. Comprehensive health check-ups are supported biennially for those over 30 and annually for those over 40, helping employees and their spouses prevent occupational and other diseases. Group medical insurance supports medical expenses within insurance limits for inpatient and outpatient treatments. Additionally, SOLUM engages in voluntary health promotion through internal club activities.

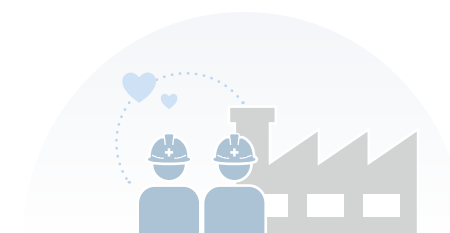


* From 2023, the comprehensive family health checkup will be expanded to include parents for support.

Overseas Production sites Safety Management

Health and Safety Training

SOLUM operates production sites in Vietnam, Mexico, India, and China, conducting product manufacturing. To thoroughly implement safety management systems and prevent various types of safety accidents that may occur during production, each production site operates its own health and safety organization. Based on this organization, we manage and improve health and safety practices according to the health and safety laws of each country, including managing harmful and hazardous factors in operations, conducting health and safety training, managing safety accident histories, and implementing various safety activities.



Product Stewardship

SOLUM adheres to the principle of product stewardship from the raw materials of partner companies to their own products, managing hazardous substances in products and evaluating the entire product cycle. Additionally, SOLUM proactively deals with domestic and overseas product environmental regulations through the operation of a management system for environmental hazardous substances, preventing the use of hazardous substances from the product development stage based on product hazardous substance management standards.

Product Safety

Safety in Product Design and Manufacturing Processes

SOLUM prioritizes safety standards and regulations in the design and manufacturing of products, identifying potential hazards and minimizing them through reliability testing at each development stage, including DV- PV-PR product safety validation.

Transparent Information on Potential Risks of the Product

To enable correct use and management of the product by consumers, SOLUM provides clear and easy-to-understand safety instructions and manuals.

Product Recall and Issue Resolution

In case a product defect or safety issue arises, SOLUM responds quickly to protect consumer safety. This involves having effective product recall and issue resolution processes and publicly guiding those protocols.

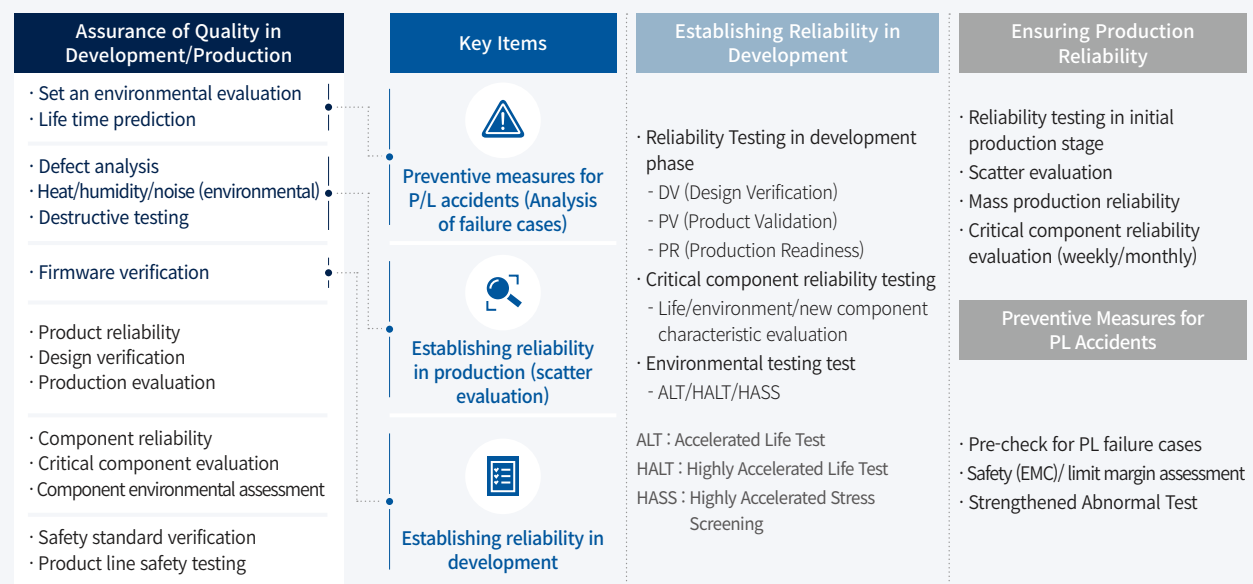
Enhancing Social Responsibility

By playing a crucial role in protecting consumer safety, SOLUM is able to strengthen social responsibility, adhering to high standards of product safety and prioritizing the health and safety of consumers. These measures aim to enhance product safety, practice social responsibility, and transparently reflect related information, thereby building trust with stakeholders.

Adherence to quality, environmental, and safety standards

- Abides by environmental regulations of various countries, international standards, and safety regulations of consumers and corporations, as well as internal regulations.
- SOLUM and partner companies recognize the importance of corporate social responsibility and do not purchase or use conflict minerals in their manufacturing processes.
- The partner companies acquire the conflict mineral template annually and manage it.
- Prioritizing the health and safety of consumers and employees.

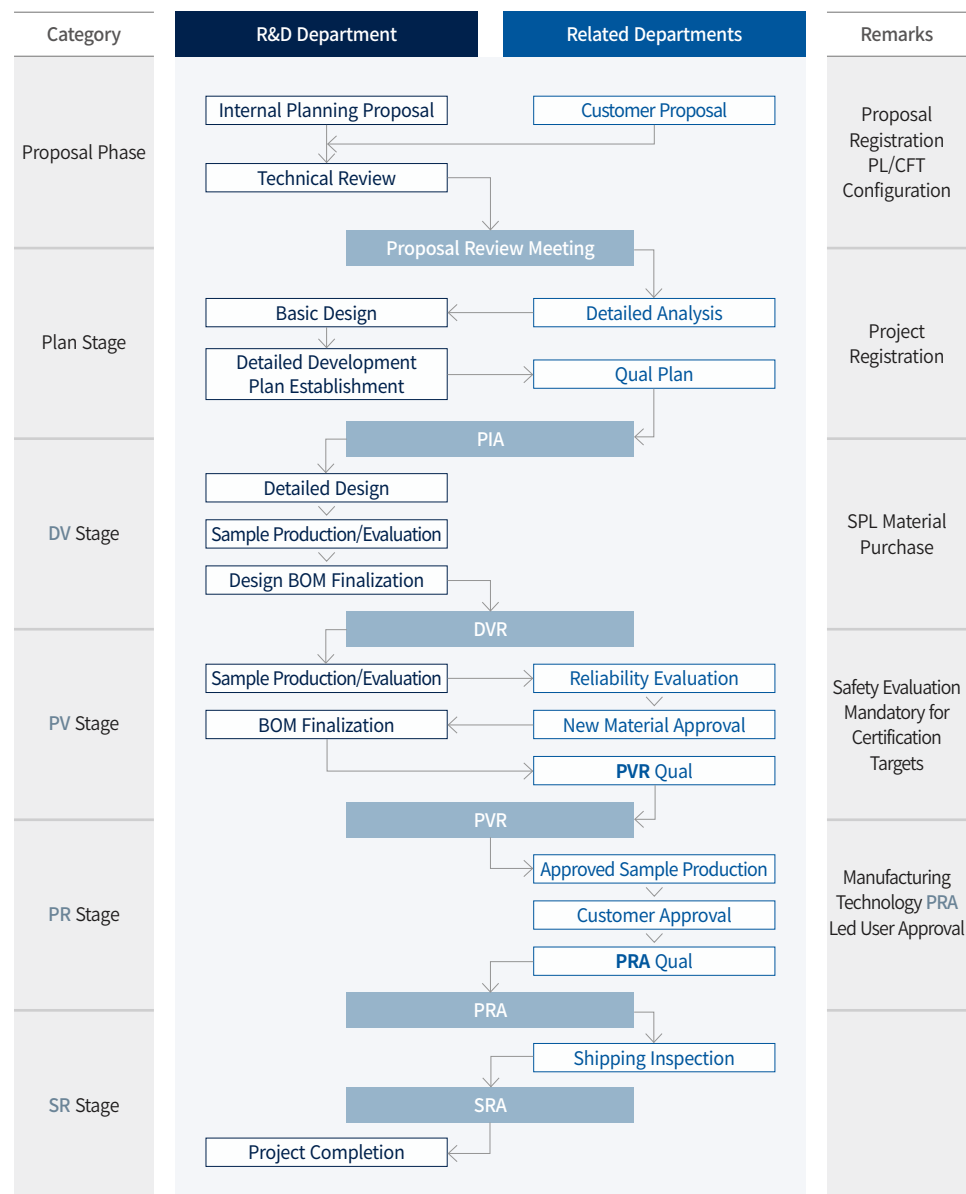
Production, quality control / quality control plan (development/production quality assurance)



Product Safety Management Process Map

Category	Input/material resources	Main Activities	Outputs	Authorized Officers	Applicable Formats	Cycle
Plan Establishment of evaluation criteria and planning	· Product Safety Analysis	· Comparison of Safety with Advanced Companies · Design FMEA Analysis · Claim, PL Incident Review · Reliability Test Analysis	· Design PLP Check List	Development PL	CHECK Chart	When Occurred
	· PL Implementation Plan (annual)	· Annual PL Implementation Plan Establishment · Business Team Plan	· Implementation Plan	Team Leader	Plan	Annual/ 1 Time
Do Conducting evaluation	· Manufacturing Process Safety Analysis (production stage)	· Critical Product Safety (PS) Process Designation and Operation · Site Work Standards Maintenance based on Design PLP Check List · Manufacturing Check List, Quality Check List Creation	· Manufacturing PLP Check List · Quality PLP Check List	Department Head	CHECK Chart	When Occurred
	· Critical Process Signage Management	· Designation of Critical Processes (as per Design, Manufacturing PLP Check Lists)	· Signboard Production (in accordance with regulations)	Department Head	Signboard	When Occurred
Check Implementation of improvement activities and corrective measures	· Implementation of Design PLP-check · Manufacturing PLP-check	· Confirmation conducted based on Design PLP Check List · Confirmation conducted based on Manufacturing PLP Check List	· Check Results (Design, Manufacturing)	Department Head	CHECK Result	When Occurred
	· PL system inspection	· PL System Inspection C/List Creation and Field Inspection	· Inspection Report	Team Leader	Inspection C/List	Quarterly
Act Application of penalties and post-management	· Improvement of PLP Verification issues	· Improvement of Issues Identified in PLP Results (Design, Manufacturing, Quality) · Validation of Improvement Results	· Check Results (Design, Manufacturing)	Department Head	CHECK Result	When Occurred
	· PL Incident Response Measures	· Field Inspection Investigation · Development and Application of Improvement Measures · PL Litigation Response	· Field verification · Survey · Report	CEO	PL Incident	When Occurred

Product Development Reliability Assurance: Detailed Flowchart by Milestone



Quality Management

Quality Management Policy

SOLUM is committed to producing and providing products of the highest quality that meet and exceed customer requirements and expectations. SOLUM establishes a custom quality management policy for each corporation, with all employees understanding and actively participating in quality management to achieve customer satisfaction.

Customer Requirement Understanding

SOLUM thoroughly understands customer requirements and expectations, systematically collects and analyzes VOC to improve products and services.



Quality Management System Establishment

All of SOLUM's overseas production sites manage quality at every stage of product and service, maintaining and managing a systematic approach with the acquisition of the Quality Management System (ISO9001).

Continuous Improvement

SOLUM continuously improves the quality of products and services by thoroughly understanding customer requirements and expectations, systematically collecting and analyzing their VOCs.

Education and Training

Annually, SOLUM provides training to enhance employees' quality awareness, adhering to the quality management process.

Technical Innovation and Improvement

Technical innovation enhances the performance and competitiveness of products and services, and R&D activities introduce new technologies and develop innovative products, which are central to competitiveness. SOLUM engages in various activities and measures to continuously improve the quality of products and services, enhance customer satisfaction, increase perceived quality reliability, and promote long-term growth.



Product Quality and Safety Management of Partner Company

SOLUM conducts market research to find suitable partner companies and evaluates their capabilities and reliability based on their capacity, financial health, competitive advantage, past performance, and reviews and feedback.

Management of Hazardous Substances

SOLUM's partner companies must establish complete and reduction plans for environmental hazardous substances and must periodically demonstrate management of these substances during parts delivery.

Selection and Contracting of Partner Companies

SOLUM signs a cooperation contract with selected partner companies and ensures a clear understanding of the contract contents, checking for issues. It defines contract conditions, obligations, payment terms, and confidentiality clearly.

Communication and Management

SOLUM shares clear goals and expectations for mutual cooperation, maintains communication with partner companies through regular meetings and updates, and quickly resolves any issues. Performance assessments and feedback are provided as needed.

Performance Evaluation and Improvement

SOLUM regularly evaluates the performance and process management of partner companies, guiding necessary improvements. These activities help maintain and continuously improve the relationship and processes with partner companies.

Technical Support and Training

SOLUM provides technical support and training that partner companies need, enhancing the cooperation relationship. Training and support are offered when introducing new systems or processes.

Supplier Evaluation Management Process

SOLUM ensures compliance with quality evaluation standards by partner companies.

Process Map (Partner Company Quality Assurance / Quality Performance Evaluation)

Category	Inputs/Resources	Main Activities	Output	Authorizing Officer	Application Form	Cycle
Plan Evaluation Standards and Plan Establishment	Quality Assurance Evaluation of Partner Company	- Thematic Regular Planning - Evaluation Scope and Target Selection - Division of Roles between Departments - Establishing Detailed Evaluation Schedule- Review and Approval - Poor Quality Partner Companies (D Grade)	- Regular Evaluation Sheet - Evaluation plan	Quality Manager		Annually or Upon Occurrence
	Quality Performance Evaluation	- Establishing Evaluation and Action Standards - Review and Approval - Evaluation System Development/Education	- uniERP Evaluation Program - Quality Performance Evaluation Standards	Quality Manager		As Needed
Do Conducting Evaluation	Quality Assurance Evaluation of Partner Company	- Evaluator Selection/Education - Understanding Content/Eye-Level Adjustment - Audit Visit to Partner Companies - Aggregation of Evaluation Results - Analysis and Reporting of Evaluation Results	- Evaluation Result (Sheet) - Evaluation Result Report - Current Status of Poor Partner Companies	Quality Manager	Quality Accident Report	Annually or Upon Occurrence
	Quality Performance Evaluation	- uniERP -R/3 Automatic Evaluation - Incoming Inspection Failure Rate - Defective Part Usage Rate - Quality Improvement Request Response Rate - Monthly Quality Evaluation Result Report - Verification and Analysis of Evaluation Results - Collection/Input Evaluation of Quality Data - Line Stop, Critical Defects - User Complaint/Claim - Reflecting Effort for Quality Improvement - Loss Cost Claim/Agreement	- Monthly Partner Company Evaluation Report - uniERP System Report - Current Status of Poor Partner Companies - Loss Cost Claim Document	Quality Manager		Monthly
Check Improvement Activities and Corrective Actions	Partner Company Quality Assurance Assessment	- Inducing Improvement of Nonconformities - Acquisition of Improvement Plans & Follow-Up - Establishing/Implementing Reevaluation Plans - Target Selection/Reevaluation Implementation - Penalty Application (if not improved)	- Reevaluation Plan - Reevaluation Result Report	Quality Manager		Annually or Upon Occurrence
	Quality Performance Evaluation	- Distribution of Quality Performance Evaluation Results (Quality Information Sharing System) - Corrective Actions for Poor Partner Companies - Sending Warning Letters/Process Inspection - Penalty Application Report	- Partner Company Evaluation Notification - Quality Warning Letter - Process Audit Result Report (Evaluation Sheet) - Penalty Application Report	Quality Manager	Penalty Application Report	Monthly
Act Penalty Application and Post-Management	Quality Assurance Evaluation of Partner Company	- Differentiated Management of Partner Companies - Organizing Poor Performers (Stop Orders) - Post-Penalty Application Management - Sending Warning Letters if Application Delayed	- Result Report of Post-Management of Poor Quality Partners - Warning Letter (In case of delay)	Quality Manager		Annually or Upon Occurrence
	Quality Performance Evaluation	- Post-Penalty Application Management - Action History of Poor Partner Companies - Penalty Release Report	- History of Actions for Poor Quality Partner Companies (Monthly, Cumulative) - Penalty Release Report	Quality Manager	Penalty Release Report	Monthly

Responsible Supply Chain

SOLUM has established an ESG policy to conduct sustainable business with partner companies by diagnosing risks in environment, human rights, and health and safety, and taking improvement measures. Specifically, major partner companies are required to improve risks that may arise during the purchase and procurement of raw materials in the supply chain. Additionally, SOLUM, centered around the ESG Committee, makes decisions on key issues related to the promotion of ESG and mutual growth of partner companies. To enhance the ESG expertise of partner companies, evaluations and training are conducted.

Partner Company's ESG Management

Partner Company's Code of Conduct

In 2021, SOLUM established the 'Supplier Code of Conduct' and revised it in early 2024 to reflect international community standards. This Code of Conduct includes basic norms from ILO, OCED, and RBA (Responsible Business Alliance). SOLUM mandates compliance with the 'Code of Conduct' to ensure that partner companies dealing with SOLUM build a safe working environment, respect and ensure the dignity of workers, and drive ethical and Eco-friendly business operations.

Building ESG Management System for Partner Companies

In 2024, SOLUM recognized the importance of ESG management for partner companies and established a company-wide plan for managing partner company ESGs. Based on this system, SOLUM plans to establish and self-diagnose the ESG policy of partner companies in the future and support monitoring and improvement measures. The purchasing department, being the main axis, aims to identify and improve risks that can occur throughout the supply chain and build a sustainable supply chain.



Partner Company ESG Risk and Assessment

Partner Company ESG Evaluation and Monitoring (Headquarters)

SOLUM evaluates ESG risks for major partner companies and plans to continuously advance these assessments. The process will involve partner companies conducting self-assessments, creating improvement plans for identified weak areas, taking necessary actions, and verifying improvements through a systematic process.



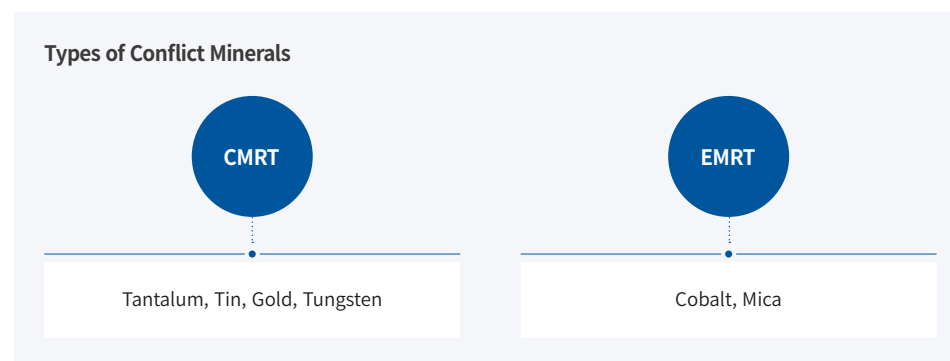
Partner Company ESG Evaluation and Monitoring (Vietnam Production Site)

SOLUM's Vietnam production site is among the top units for order items for major global customers like Samsung Electronics. With the increasing importance of supply chain due diligence regulations and the management responsibilities of global customers, the need for audits from the first to N-th tier partner companies has become critical. As a response, SOLUM has strengthened management system for major overseas partner companies and is conducting evaluations to identify, inspect, and manage actual ESG risks at the Vietnam production site.

The Vietnam production site has developed 35 EHS-related evaluation items based on the RBA for 14 major partner companies in Vietnam and is conducting on-site evaluations. These insights are shared with the headquarters, and by the end of 2023, the main office has visited the Vietnam production site to inspect and monitor the related contents and provided ESG education to the representatives and management of the partner companies. SOLUM plans to leverage international standards and global customer requirements to identify major risks and ensure the improvement and understanding of ESG risks and implementation levels for not only domestic but also overseas partner companies, aiming for mutual growth.

Responsible Sourcing

SOLUM has established Conflict Mineral Policy to fulfill our responsibilities to the international community. Regularly evaluating the status of conflict minerals from partner companies ensures that minerals related to armed groups in conflict areas are not included in SOLUM's products. If conflict minerals are found, their usage is restricted, and improvement actions are demanded.

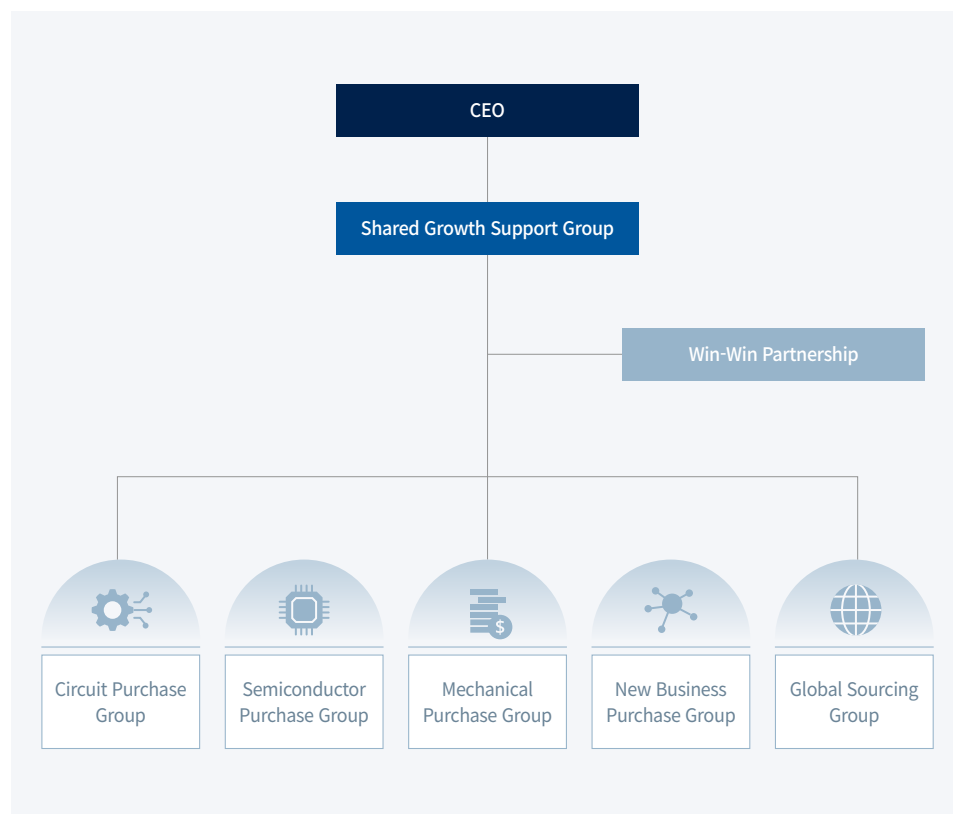


SOLUM will actively cooperate with partner companies and customers to prohibit the use of conflict minerals in line with international efforts, ensuring the protection of human rights in conflict areas and neighboring countries. Additionally, through due diligence and education, partner companies will be encouraged to voluntarily comply with conflict mineral regulations, and they will also be actively participating in other international regulations.



Shared Growth Policy and Support

SOLUM aims to enhance the self-sustainability and competitiveness of our partner companies from a long-term perspective rather than a one-time effort for mutual growth. To achieve this, the company operates a dedicated organization for mutual growth and win-win cooperation. To secure the financial stability of partner companies, SOLUM pays 100% in cash to all partner companies. This ensures visibility in raw materials and equipment for SOLUM, and stable cash flow for partner companies. Through these efforts, SOLUM strives for mutual growth and development with partner companies, recognized for three consecutive years with an “Excellent” rating in the Fair Trade Compliance Assessment conducted by the Fair Trade Commission.

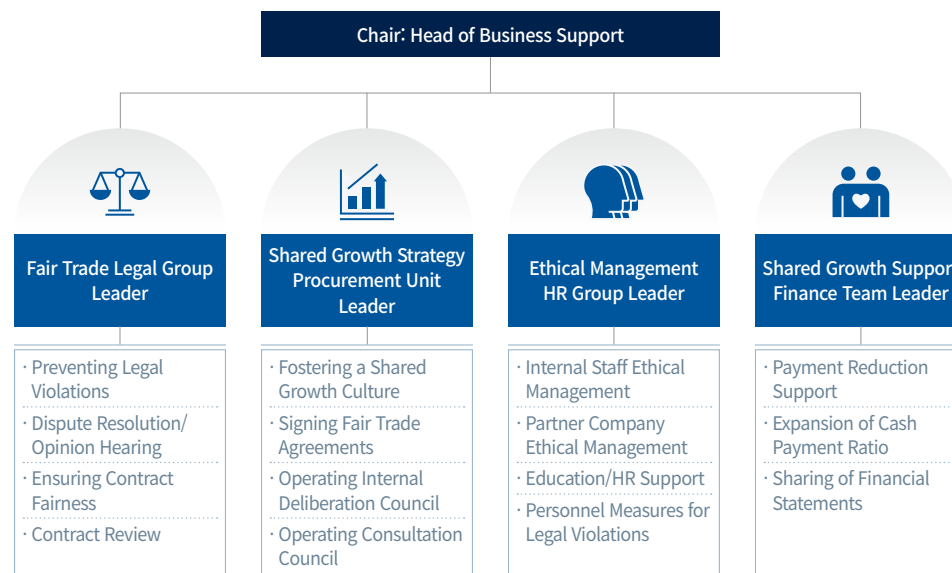


Shared Growth Support Programs

SOLUM provides a platform for partner companies to introduce new technologies and products through technology exchange meetings. Partner companies can secure opportunities to sell superior products, while SOLUM enhances the competitiveness of our products. SOLUM conducts biannual meetings with partner companies to discuss SOLUM’s management status and introduce new products, thereby fostering shared growth and enhancing competitiveness. Additionally, to prevent losses due to the rise in global raw material prices, SOLUM has signed agreements for the price linkage system with major partner companies, adjusting prices in accordance with raw material fluctuations.

Partner Company Grievance Handling

SOLUM has appointed the Head of Business Support as the Partner Company Grievance Committee Chair, addressing grievances related to fair trade, shared growth, ethical management, and support for shared growth. Partner companies can submit grievances at any time through the SOLUM website, and SOLUM promptly and actively supports the identified grievances.



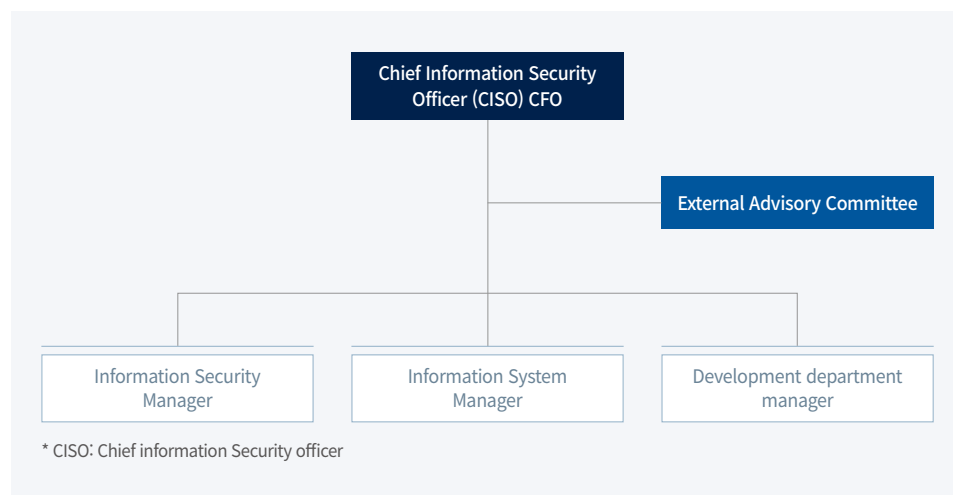
Information Security

SOLUM operates a one-stop information security system encompassing the establishment and revision of security policies, the adoption of the latest security solutions, the acquisition of relevant certifications, and incident monitoring and response, all centered around the SOLUM Information Security Committee, a company-wide consultation organization. In a rapidly changing business environment, we aim to protect valuable information of the company and customers from various forms of internal and external security threats and sustain our business operations.

Information Security Governance: SOLUM Information Security Commission

Most companies in the past limited information security activities to technical measures by specialized IT personnel. However, such a security approach based on technical measures alone has proven inadequate in protecting information assets and meeting high customer demands in the face of rapidly changing security threats.

To overcome these limitations, SOLUM established the CEO-led 'SOLUM Information Security Committee' involving employees from various departments such as Compliance · IT · General Affairs · Development. This Committee allows all SOLUM employees, from the CEO to the operational staff, to communicate as team members regarding security. SOLUM is continuously enhancing security capabilities every year for sustainable business operations.



Three Key Objectives of SOLUM Information Security

SOLUM has established and continually practices three key objectives of information security: ① Establishment of a secure physical security environment, ② Operation of information security policies through systems, ③ Continuous awareness enhancement.

First, Establishment of a Secure Physical Security Environment [Physical Protection Measures]

Building a secure physical security environment is the first step in protecting information assets. The company's work servers, where information assets are stored, are kept in a distinct IT control room. Access to the IT control room is restricted to authorized personnel only, and all access records to the servers are electronically recorded and kept. Additionally, used storage media are destroyed physically to remove any threats without reuse.

Second, Operation of Information Security Policies through Systems [Technical Protection Measures]

Even the most thorough information security policies cannot be operated without systems related to employees' work. SOLUM aims to implement all information security policies through systems, such as centralizing information assets, controlling external transfers through DRM and DLP, storage media controls, VPN access control, access rights management, document security grading, preservation and destruction of information assets, website control, capture blocking, watermarking, and log management.

Third, Continuous Awareness Enhancement [Administrative Protection Measures]

Information security is a shared responsibility between all employees and the company, not just the security department. Under this value, all employees are trained annually as Information security to understand and fulfill their roles and responsibilities. We also continuously spread specific case examples to enhance practical threat response capabilities in the workplace.

SOLUM Information Security Activities

Information Security Disclosure

Based on the Act on the Promotion of Information Security Industry, from 2023, SOLUM publicly discloses activities regarding investments, personnel, certifications, and activities required by the information security disclosure system. Details on the status of SOLUM's ongoing investments, personnel, certifications, and information security activities related to information technology and security can be accessed through the Korea Internet & Security Agency (KISA) Information Security Public Disclosure Comprehensive Portal.

[SOLUM Co., Ltd Information Security Status](#)

Major Information Security Certifications Acquired

SOLUM has acquired five internationally recognized certifications including SOC2, which assesses the appropriateness of internal controls established under standards set by the American Institute of Certified Public Accountants, ISO27001 for Information Security Management Systems, ISO27017 and CCM for cloud information security control regulations, and GDPR for the European General Data Protection Regulation.

Establishing a Global Level of Information Security System

Over the past five years, SOLUM analyzed the high-level security requirements demanded by major global clients, derived a Master Security Requests List, and revised the information security policy to reflect this list. We aim to establish an information security system that exceeds the levels required by global standards and are working to strengthen related activities.

Strengthening SOLUM Information Security

Investment in Information Security Infrastructure Solutions

SOLUM continues to invest in information security facilities and solutions to prepare for new security threats. We are expanding major network and security facilities in the new office building that will be occupied in the future, and particularly, we plan to strengthen the security infrastructure by having development organizations handling high-security tasks use independent network infrastructure. Additionally, we have introduced a document centralization security solution that meets internationally verified technologies, such as storage area segmentation according to information sensitivity, access control, two-factor authentication, document transmission and reception history management, and the international standard encryption algorithm ARIA. The security solution is planned to be completed in time for the occupation of the new office building.

Enhanced Pre-risk Review Activities

In the rapidly changing business environment, SOLUM is promoting new businesses in various fields. In order to ensure that these new businesses are continuously viable, it has become increasingly important to review risks and prepare countermeasures in advance. SOLUM's Information Security Committee is strengthening pre-review activities such as identifying regulatory risks related to the laws of the relevant country before launching new businesses like the global e-commerce online platform business, and establishing security policies for information assets collected through new businesses.

Strengthening Security of National Core Technology

As a holder of national core technology, SOLUM maintains a cooperative relationship with national regulatory agencies and strives to prevent the leakage of information assets externally. In particular, SOLUM works to identify national core technologies, assign elevated security levels and thoroughly investigate even simple suspicions of technology leakage to eliminate potential threats, thereby maintaining transparent and high-level security.

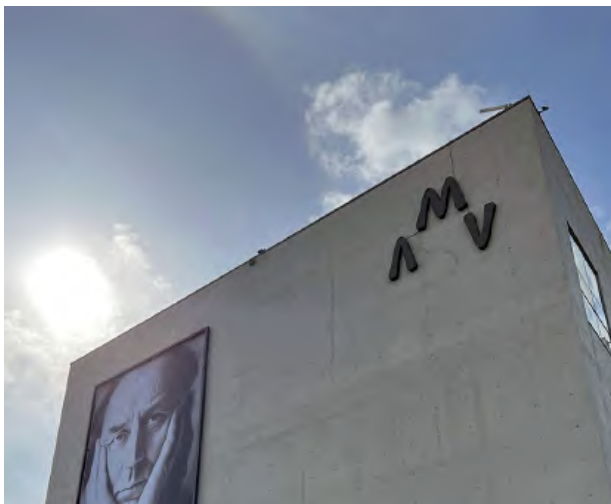


Social Contributions

SOLUM recognizes that the local community is an important stakeholder and aims to proactively solve social problems as a corporate citizen. In the process of solving social problems, we plan to discover new business opportunities and continue to expand our community contribution activities utilizing our products and technologies. Additionally, SOLUM members dedicate themselves to spreading warmth to communities in need, so that SOLUM's social contribution activities can create more social value and contribute to better lives for many.

Expanding Jobs for Disabled People in the Field of Culture and Art

Since 2023, SOLUM has been regularly sponsoring 'Art Museum VERSI (located in Yongin-si, Gyeonggi Province),' which supports the artistic and commercial activities of disabled people. The sponsorship funds are used to nurture disabled artists or provide a platform for amateur artists. The Art Museum VERSI offers free admission to SOLUM employees, allowing them to contribute to social value realization through art viewing.



Art Museum VERSI

Participant Interview



Pro YunHo Seong
NEW DEVICE
Development Group



Together with my wife, we visited the Art Museum VERSI where an exhibition of 'Repetition' by Austrian outsider artist Heinrich Reisenbauer was held. The more I explored the exhibition, the more I felt my dulled imagination come to life in the simple and repetitive drawings. It was a meaningful time to reflect on myself, thinking that various new things might exist even within our monotonous daily lives.



I watched the special exhibition <Street Painting: Spray point from the STREET> by artists Koma and Altime Cho. The artworks of familiar characters like Hello Kitty and Mickey Mouse expressed through graffiti and pop art sparked numerous conversations with my children after a long time. It was a comforting time for my tiresome routine, and I am thankful for providing cultural experiences to employees and lowering psychological barriers for the disabled.



Pro Sung Kim
EPS Group

Local Community Activities

One Company One Village Sisterhood

SOLUM has entered into a sisterhood relationship with 'Hakil Village' located in Yongin-si, Gyeonggi Province. The sister village offers employees opportunities to help with farm work and experience eco-friendly ecological farming to promote village development, while SOLUM leads mutual prosperity with agricultural communities through activities such as purchasing eco-friendly agricultural products at affordable prices. Additionally, SOLUM conducted first Hakil village experience on April 21, 2024, including activities like picking pine mushrooms cultivated in an eco-friendly manner and injeolmi (traditional rice cake) making with employees and their children. After the experience activities, the village provided homemade doenjang (soybean paste) and ganjang (soy sauce) as gifts to employees to support the village's economic activities and increase awareness of eco-friendly regional products. Future activities will expand to strawberry picking, sweet potato digging, and volunteer activities as needed.

Experience Activity Participant Impressions



I didn't know making injeolmi would be difficult, but after participating in the Injeolmi experience, I realized it wasn't easy, and I promised myself to try pounding it with a mallet next time.



Pro JooSeok Park
and his children
SES group



Pro SangMo Kim
and his children
EPS group



My first injeolmi (traditional rice cake) making experience was really fun. It was interesting to touch the bean powder with my hands and cover the rice cake with it. I would like to participate in other experiences in the future. I particularly look forward to the strawberry picking activity in the second half of the year.



SOLUM employees and children participating in the injeolmi-making experience



SOLUM employees and children participating in the mushroom picking experience



SOLUM employees and children commemorating the Hakil Village experience activities





Governance

73 Board Management • 76 Compensation Policy • 77 Shareholder Policy • 78 Fair Trade • 80 Jeong-Do Management (Ethics and Compliance)

Board Management

SOLUM is striving to establish a rational management decision-making system to ensure managerial transparency, soundness, and safety of the company, while aiming to enhance corporate value and maximize shareholder value. In particular, we disclose key elements related to governance, such as Bylaws and the Board Operation Regulations, to realize a healthy governance. The establishment and operation of corporate governance policies are handled in accordance with the principles and procedures set forth in the relevant regulations.

The Board Composition

As of the report submission date, SOLUM's board consists of five members, including the Chairman, with three internal directors and two external directors. The Chairman of the board, under the company's Board Operation Regulations, is the CEO and has the same voting rights as other directors. The voting rights of directors with special interests are restricted, ensuring the prevention of conflicts of interest. The board resolves essential matters related to the company's basic management policies and business progress, as stipulated by relevant laws or designated by the Bylaws or the General Meeting of Shareholders. External directors, with specialized knowledge in various fields, participate to ensure checks and balanced decision-making.

ESG Committee Members

Category	Name	Gender (Age)	Position	Appointment Date	Term End Date	Specialty	Key Experience
CEO	SungHo Jun 	Male (65)	The Board Chairman	2015.07.02	2027.03.30	Overall Management	· SOLUM CEO · Samsung Electro-Mechanics DM Vice President · Samsung Electronics CIS Head
Internal Director	WhiKwon Bhan	Male (58)	Director	2023.03.29	2026.03.29	Business Support	· SOLUM Business Support Director · SOLUM USA President · Samsung Electro-Mechanics LCR/DM Business Support Team Leader
Internal Director	DongKyun Ryu	Male (52)	Director	2022.03.29	2025.03.29	Power Business	· SOLUM Business Division Head · Samsung Electro-Mechanics Power Development Senior Researcher
External Director	JoonKee Hong 	Male (60)	Director	2019.03.29	2025.03.29	Corporate Management	· Kyungdong Navien CEO · Coway CEO
External Director	KyuYeon Lee 	Male (61)	Director	2019.03.29	2025.03.29	Legal Regulations	· KRX Managing Director · Adviser at Gwangjang Law Firm

The Board Operation Regulations

SOLUM has established regulations in Bylaws regarding the fundamental principles of company operations, installing and operating systems such as shareholder rights, General Meeting of Shareholders, the board, and committees. Amendments to the company's Bylaws can only be made by resolutions from the General Meeting of Shareholders, requiring more than two-thirds approval of the shares present and more than one-third of the total issued shares (special resolution conditions) as per the Commercial Act.

In accordance with Article 7 of the Board Operation Regulations, the board is divided into Regular Board Meetings and Special Board Meetings, held quarterly in principle but convened by the Chairman as needed. The Board matters include those related to the General Meeting of Shareholders, finance, directors, and other management matters, with frequent meetings held as per the Commercial Act's stipulations.

Additionally, under Article 27 of the Bylaws and Article 8 of the Board Operation Regulations, the Chairman convenes the board meetings, notifying each director at least one business day in advance by document, electronic document, fax, or orally. Directors can request the board's convening from the Chairman, providing the reason and agenda. If the Chairman refuses without valid reason, the requesting director can convene the board.

Per Article 28 of the Bylaws and Article 9 of the Board Operation Regulations, the board resolutions require a majority of directors in attendance and a majority approval among those present. The board allows some or all directors to participate remotely using simultaneous voice communication, treating them as present at the board. Directors with special interests are restricted from exercising voting rights institutionally.

Internal Committees

SOLUM prepared the grounds to establish the internal committees such as “Audit Committee”, “Management Committee”, “Executive Committee”, “Compensation Committee”, “External Directors Nomination Committee”, and “Audit Committee Nomination Committee”, “Risk Management Committee” through amended Bylaws at the 7th Regular General Meeting of Shareholders in march 2022. The detailed elements regarding the composition, authority, and operations of each committee are determined by the board. As of the ESG report submission date, the ESG Committee exists as a separate the board committee.

The Board Education

SOLUM plans and conducts educational programs across various fields to enhance the board members’ expertise and risk-related knowledge. Regular or occasional training essential for both internal and external directors’ job performance is provided on-site annually. Continuous participation in related workshops, such as those by the Korea Listed Companies Association, is encouraged.

Date	2024.3.7
Education Title	“ Corporate Strategy for ESG Risk and Opportunities ”
Education Content	ESG Trends and Regulatory Updates Case Studies of Leading Companies ESG Risk and Management Strategies ESG Opportunities and Response Strategies

Director Qualifications/Verification

Transparency, Professionalism, Diversity (attendance rates, authority, election process, etc.)

SOLUM’s board comprises five total directors, two of whom are independent and specialized external directors, accounting for 40% of the board, exceeding the legal requirement of at least one-quarter of the total number of directors. External directors enhance stable governance through balancing control over executive management’s execution of duties, while experts from diverse areas engage in detailed discussions to decide on resolutions. Directors are elected at the General Meeting of Shareholders, with confirmed eligibility per legal and Bylaws requirements for enhancing focused independence. Director qualifications do not restrict gender, region, etc.

The board makes decisions on significant management matters under the Board Operation Regulations, supporting thorough deliberation through robust information provision to all directors beforehand, enabling effective, prudent discussions and decisions independent of controlling shareholders. However, the CEO concurrently holding the board chair position and no distinct senior external directors are selected as per the Board Operation Regulations.

Director	Job Performance Details/Reasons of Appointment
SungHo Jun (CEO)	SungHo Jun, leveraging hands-on experience and expertise accumulated at Samsung Group companies, has a high understanding of manufacturing industry intricacies with superior expertise as a technology/research field expert, appointed as CEO.
WhiKwon Bhan (Internal Director)	WhiKwon Bhan, with diverse practical experience as Samsung Electro-Mechanics Business Support Team Leader, SOLUM USA President, SOLUM Financial Team Leader, and AICPA accounting/tax expert knowledge, appointed as an internal director.
DongKyun Ryu (Internal Director)	DongKyun Ryu, combining in-depth understanding and expertise in one of the company’s main products, power products, stemming from hands-on experience as a senior researcher in power product development at Samsung Electro-Mechanics, appointed as an internal director.
JoonKee Hong (External Director)	JoonKee Hong, CEO experience at Kyungdong Navien, signifies extensive, broad knowledge in corporate operations, deemed to contribute to strengthening corporate competitiveness and future growth, appointed as external director.
KyuYeon Lee (External Director)	KyuYeon Lee, with professional legal expertise and regulatory knowledge through roles such as KRX Managing Director and legal advisor, deemed to contribute to enhancing the board operations, shareholder protection, and corporate value, appointed as external director.

The Board Activities

The Board Meeting Details

For the disclosure period of 2023, SOLUM held a total of 51 board meetings (7 regular, 44 special), all of which passed resolutions. All the board members attended except for SungHo Jun missing one meeting. Notification day for agendas was set at one day before the meeting, with notifications on the prior business day if it was a holiday.

Activities in 2023

Date	Agenda Details	Approval Status
2023.01.27	· Report on the operation status of the internal control system by the CEO and internal accounting manager	Approval
	· Report on the internal control system operation evaluation by the auditor	
2023.02.06	· Approval of standalone financial statements for the 8th period	Approval
2023.02.13	· Approval of consolidated financial statements for the 8th period	Approval
2023.02.16	· Approval of facility investment for a new plant in Mexico for the American production site	Approval
2023.03.09	· Approval of granting stock options	Approval
	· Resolution to convene the 8th regular General Meeting of Shareholders	Approval
2023.06.27	· Approval of entering into the Blue Cove No. 3 contract	Approval
2023.12.11	· Approval of capital increase participation in subsidiary SOLUM Healthcare	Approval
	· Approval of capital increase participation in subsidiary SOLUM Sensor	Approval

The Board Meeting Attendance Rate (excluding attendance of other non-executive directors)



Average attendance rate

99.6%

Internal director attendance rate

99.3%

External director attendance rate

100%

The Board Review and Resolution Matters

Based on the Commercial Act, the board is the body that supervises directors' execution of duties, deliberating and resolving matters prescribed by laws or Bylaws, matters delegated by the General Meeting of Shareholders, basic company management policies, and critical business execution matters. Article 12 of the Board Operation Regulations stipulates the specific deliberation and resolution matters of the board, with key content as follows.

Key Approval Matters

Matters concerning General Meeting of Shareholders

- 1 Convening a General Meeting of Shareholders
- 2 Appointment of the chair for the General Meeting of Shareholders in the absence of the CEO
- 3 Approval of financial statements and business reports and requesting approval from the General Meeting of Shareholders
- 4 Amendments to bylaws
- 5 Total of 14 items including capital reduction

Matters concerning Finance

- 1 Issuance of stocks
- 2 Issuance of bonds/conversion bonds, issuance of bonds with warrants, etc.
- 3 Transfer of reserves to capital
- 4 Acquisition and disposition of treasury stocks
- 5 Total of 19 items including significant new facility investments, new or expanded facilities, plants

Matters concerning Directors

- 1 Appointment and dismissal of the CEO
- 2 Appointment and revocation of the duties and assignments of directors
- 3 Approval of transactions between directors and the company
- 4 Approval of directors' concurrent positions as officers of competing or affiliated companies

Other Management Matters

- 1 Installation, composition, operation, deletion of the board committees, and appointment and dismissal of those committees' members
- 2 Re-resolution of matters resolved by the board committees
- 3 Decisions regarding simplified mergers, simplified demergers, small-scale mergers, small-scale demergers
- 4 Contracts for technology introduction or transfer having significant impacts on the company's management or assets, mid-term cancellation of contracts
- 5 Other matters specified by laws or bylaws as items to be resolved by the board and other critical business matters judged by the CEO to require the board decision

Compensation Policy

SOLUM does not introduce individual evaluations for external directors to ensure free and critical expression and maintain teamwork. Furthermore, to uphold the independence of external directors, their evaluations are not reflected in their compensation. The compensation level for external directors is determined comprehensively by considering their responsibilities, risks, attendance at Board meetings, expertise on agenda items, and relevance to various business sectors. Compensation is provided as a fixed salary at an appropriate level.

Board Compensation Policy and Standards

According to Article 33 of the Bylaws, the remuneration limit for registered directors (3 inside directors, 2 external directors) and auditors is determined by resolution at the General Meeting of Shareholders. Within the approved remuneration limit, Remuneration is executed based on criteria set by the board considering the position and responsibilities. Currently, our external directors' compensation is given as a fixed salary at the industry average without any additional allowances or expenses. Travel expenses for attending Board meetings are included in the fixed compensation, and individual compensations such as stock options are not provided.

Category	Auditors and Registered Directors (excluding External Directors and Audit Committee Members)	External Directors	Auditors
Compensation Policy	• Salary: Compensation is determined considering the position, nature of delegated tasks, and performance according to the executive compensation regulations (Board resolution). • Lunar New Year/Chuseok Bonus: 100% of an amount equivalent to 1/14 of the annual salary is paid. • Performance Bonus: Based on the annual business performance considering sales and operating profit margin, a performance bonus may be provided. The payment limit of the performance bonus is determined by Board resolution based on the evaluation criteria.	• Salary: Compensation is determined considering the nature of delegated tasks according to the treatment regulations for external directors.	• Salary: Compensation is determined considering the position, nature of delegated tasks, and performance according to the executive compensation regulations (Board resolution).

Performance Evaluation and Compensation of External Directors

SOLUM currently does not perform evaluations based on individual performance for external directors. The results of such evaluations may undermine the independence of external directors; thus, no related regulations are established. However, the activities of the external directors are disclosed in regular reports, and if there is a need to decide on reappointment, factors such as business relevance, expertise, and accountability are comprehensively considered to determine reappointment candidates at the board and secure fairness by finalizing appointments at the General Meeting of Shareholders. Various methods for introducing evaluations that do not compromise the independence of external directors will be reviewed as per relevant regulations and guidelines in the future.



Shareholder Policy

SOLUM conducts dividends by resolution at the General Meeting of Shareholders in accordance with the Bylaws. We view dividends as a fundamental form of returning profits to shareholders and make decisions by comprehensively considering the company's profit scale, resources for future growth investments, and maintenance of a sound financial structure. While we have not yet made dividend payments due to reinvestment and other reasons, we will strive to enhance shareholder value by securing competitiveness in core businesses and generating stable revenue.

Shareholder Status (Including Minority Shareholders)

The largest shareholder of SOLUM is CEO SungHo Jun, with a shareholding ratio of 14.11%. As of the end of 2023, the total number of issued shares of the company stands at 50,005,551 shares. The status of shareholders holding more than 5% and minority shareholders is as follows. We ensure the equitable voting rights for shareholders in accordance with the Commercial Act and related laws.

Category	Shareholder			Shares Owned		
	Number of Minority Shareholders	Total Number of Shareholders	Ratio (%)	Number of Minority Shares	Total Number of Issued Shares	Ratio (%)
Minority Shareholders	52,022	52,033	99.98	34,534,353	50,005,551	69.06

Shareholder Return Policy and Future Plans

As part of SOLUM's shareholder return policy, approximately KRW 23 billion worth of treasury stock was acquired in three instances from 2021 to 2022, and the relevant information was sufficiently communicated to shareholders through the Financial Supervisory Service's electronic disclosure system (DART) upon decision. In addition, dividends are considered a fundamental form of shareholder return, and dividend decisions are made by considering the company's profit scale, resources for future growth investments, and maintenance of a sound financial structure. Although we have not yet paid dividends, we will continuously enhance shareholder return policy to increase shareholder value by considering various factors, including dividends and treasury stock purchases. Once decisions regarding dividends or treasury stock purchases are made, they will be transparently disclosed through the electronic disclosure system and the company website so that all shareholders can verify them. Moreover, we will fully inform shareholders about the shareholder return policy through various forms of IR, NDR, PR, and other communications.

Status of General Meetings of Shareholders

The company resolves important business matters at the General Meeting of Shareholders in accordance with laws and regulations, and Bylaws. For the exercise of shareholders' rights, detailed information such as the date, location, and agenda of the shareholders' general meeting is announced through the Financial Supervisory Service's Electronic Disclosure System (DART) two weeks prior to the meeting.

Date of Event		9th Term Regular General Meeting of Shareholders
Regular General Meeting Status		Conducted
Resolution Date		2024.03.07
Notice Date		2024.03.07
Date of General Meeting of Shareholders		2024.03.26
Period Between Announcement Date and Shareholders' General Meeting Date		19 days before General Meeting of Shareholders
Location		Head Office/Yongin City
Details on General Meeting of Shareholders, Notification		Notification sent, Website Announcement, Electronic Disclosure System
Notification for Foreign Shareholders	Implementation Status	Implemented
	Notification Method	Korea Securities Depository utilized for foreign shareholders voting rights
Details	Attendance of Board Members	5 out of 5 members attended
	Attendance of Audit Committee Members	Present
	Main Points of Shareholders' Remarks	Individual shareholder remarks on shareholder return policy

Fair Trade

SOLUM understands that fair trade within the global supply chain leads to sustainable mutual growth for partner companies, clients, and SOLUM. We aim to create a virtuous cycle of shared growth where the growth of partner companies leads to the advancement of SOLUM, and SOLUM's advancement results in client satisfaction. To achieve this, SOLUM has established a Fair Trade governance system and continuously pursues fair trade practices objectives.

Virtuous Cycle of Mutual Growth through Fair Trade



Proper Subcontracting Process

- ① Distribution of guidelines for desirable contract execution and issuance of written documents
- ② Establishment and distribution of subcontracting guidelines
- ③ Execution of standard subcontract agreements with the Fair Trade Commission (FTC)
- ④ Conclusion of standard agreements with the FTC for unit price increases

Process to Prevent Unfair Collusion

- ① Establishment and distribution of fair trade guidelines (Collusion Dos and Don'ts, Employee Guidelines, Collusion Checklist, etc.)
- ② Strict restriction on meetings with competitors and internal price exchange
- ③ Internal management according to the decision-making line at the time of price determination

Prohibition of Unfair Profits Among Affiliates

- ① Establishment and distribution of margin decision line for affiliate transactions
- ② Establishment and distribution of transaction guidelines among affiliates (Dos and Don'ts for transactions among affiliates, Basic guidelines, Checklist for important points, etc.)

Global Partners Day Event

SOLUM held a 'Global Partners Day' to promote shared growth through technological exchanges and enhancement of R&D capabilities with overseas partner companies. During this event, SOLUM shared our vision, major business roadmaps, and conducted departmental development meetings.

The event, first held in 2024, is planned to be conducted biennially. In inaugural year, SOLUM's global semiconductor partners for power and display components and E-Paper partners for ESL core components primarily participated. A total of 15 partner companies from the United States, Japan, Europe, Taiwan, and China attended, and we plan to gradually increase the number of participating partner companies.



Global Partners Day Event

Compliance and Fair Trade Education for Partners

SOLUM held a fair trade and compliance training session targeting partner companies in May 2024 to establish a culture of clean trade through education on fair trade and compliance. The training was attended by 17 partner companies who shared SOLUM's business status, discussed tasks for expanding the sales of partner companies, and introduced equipment technologies and their application cases for efficient factory operations. SOLUM plans to hold this event regularly twice a year and will continuously strive to grow together and establish a clean trading culture.



Forums and Training for Partner Company

Jeong-Do Management (Ethics and Compliance)

SOLUM has established various systems and formulated action plans to realize Jeong-Do Management (Ethics and Compliance) and practice fair management for diverse stakeholders. Moreover, we operate corporate ethics programs such as ethical education and reporting channels to ensure that all employees thoroughly comply with ethics management-related regulations and can self-check their compliance.

SOLUM's Compliance and Ethics Management Activities

SOLUM's Compliance Activities

- 2021. 3 Establishment of compliance function
- 2021. 7 Selection of five major compliance areas: general company affairs, fair trade, anti-corruption, HR, and information security
- 2021. 10 Conducting interviews with employees across the five major areas to pre-identify major vulnerabilities
- 2022. Establishment and distribution of ethics standards, revision of corporate card usage guidelines, establishment of the SOLUM Information Security Committee, improvement of information security vulnerabilities
- 2022. Distribution of regulations for the board, General Meeting of Shareholders operations, establishment of major governance structures
- 2023. Introduction of flexible working hours, reform of HR systems
- 2024. Expected appointment of a legal compliance officer



Establishment of Ethics-related Regulations

SOLUM revised anti-corruption and ethical regulations in 2022. Through the ethics standards, SOLUM established principles of Jeong-Do Management (Ethics and Compliance) for compliance, and through the Code of Conduct for SOLUM employees, set the ethical behavior standards that SOLUM employees must adhere to. SOLUM continues to practice Jeong-Do Management, preventing corruption and growing as a trustworthy company.

Operation of Ethical Management Violation Reporting System

The ethical management violation reporting system allows stakeholders, including SOLUM's employees, partner company employees, and client companies, to report violations and improve unethical behaviors to build an ethical corporate culture. SOLUM adheres to the principle of protecting whistleblowers, thoroughly investigates ethical violations, and implements corrective measures.

Reporting Ethical Management Violations

SOLUM practices corporate social responsibility.



Notice of Reporting

Stakeholders, including SOLUM employees, partner company employees, and clients, can report or suggest improvements regarding employees' misconduct or unethical practices.



Whistleblower Protection Principles

The whistleblower must report based on facts and under their real name, ensuring complete confidentiality to encourage reporting.



Reporting Targets

Violations of the Code of Ethics and execution guidelines

Illegal business conduct, internal mismanagement, accounting fraud, obstructing, concealing, or assisting the above violations, and other illegal or unethical activities.



Reporting Method

Email cjh0223@solu-m.com, sunil.ko@solu-m.com

Address 357 Guseong-ro, Yongin-si, Gyeonggi Province, Building A, 6th floor

Telephone Number 031-8006-7636, 031-8006-7701



Appendix

82	ESG Data	•	92	ESG Index	•	97	ESG Policy	•	102	Awards and Membership
103	GHG Verification Opinion Statement	•	104	Third-party Verification Statement						



ESG Data

Economic Performance Data

Consolidated Financial Statements

(Unit : KRW)

Separation	2021	2022	2023
[Current Assets]	547,400,118,223	855,701,311,202	653,057,000,914
Quick Assets	209,408,130,742	272,796,934,391	256,895,374,200
Inventories	327,848,517,029	567,491,895,393	267,942,214,783
Other Financial Assets	4,820,140,010	7,697,220,661	122,791,600,932
Other Current Assets	5,323,330,442	7,715,260,757	5,427,810,999
[Non-Current Assets]	163,545,990,618	178,600,728,888	285,587,553,470
Investments	-	-	12,877,000,000
Tangible Assets	118,926,407,117	134,037,399,346	227,297,769,151
Intangible Assets	14,951,663,028	12,710,305,088	13,339,638,073
Leased(Right-of-use) Assets	9,899,896,371	10,493,206,524	9,335,082,843
Other Non-Current Financial Assets	3,273,293,165	1,650,687,904	7,964,789,865
Other Non-Current Assets	16,494,730,937	19,709,130,026	14,773,273,538
Total Assets	710,946,108,841	1,034,302,040,090	938,644,554,384
[Current Liabilities]	401,555,784,850	679,009,558,651	505,168,682,791
[Non-Current Liabilities]	41,081,120,757	65,298,535,166	33,543,583,917
Total Liabilities	442,636,905,607	744,308,093,817	538,712,266,708
[Capitalization]	25,002,775,500	25,002,775,500	25,002,775,500
[Capital Surplus]	76,375,184,872	76,722,346,792	76,161,916,037
[Capital Adjustments]	(1,554,673,300)	(22,684,216,000)	(21,641,687,649)
[Accumulated Other Comprehensive Income]	(2,172,464,174)	(4,952,381,670)	(16,178,374,468)
[Retained Earnings]	170,382,984,164	216,895,837,094	336,855,462,862
Equity Attributable to Owners of Parent	268,033,807,062	290,984,361,716	400,200,092,282
Non-controlling Interests	275,396,172	(990,415,443)	(267,804,606)
Stockholders' Equity	268,309,203,234	289,993,946,273	399,932,287,676

Separation	2021	2022	2023
Sales	1,153,250,200,869	1,694,543,907,800	1,951,087,864,184
Operating Income (Loss)	26,516,420,146	75,604,636,414	154,515,562,835
Net Income (Loss)	13,323,648,038	45,444,083,487	119,406,604,562
Profit (Loss), Attributable to Owners of Parent	13,348,536,565	47,316,389,961	120,357,591,528
Profit (Loss), Attributable to Non-controlling Interests	(24,888,527)	(1,872,306,474)	(950,986,966)
Basic Earnings Per Share	274	954	2,464
Diluted Earnings Per Share	272	954	2,463
Number of Companies Included in the Consolidation	10	12	13

Environmental Performance Data

Energy Consumption¹⁾

Separation	Unit	Korea			Vietnam			Mexico			China			India		
		2021	2022	2023	2021	2022	2023	2021	2022	2023	2021	2022	2023	2021	2022	2023
Total Energy Consumption	TJ	22.3	21.5	21.6	100.1	106.3	100.9	20.1	26.0	25.5	40.4	42.0	36.4	2.0	5.2	6.6
Direct Energy Consumption Subtotal	TJ	0.6	1.0	1.2	6.5	8.7	6.8	0.7	1.4	2.0	0.9	1.5	1.5	0.2	0.4	0.6
Indirect Energy Consumption Subtotal	TJ	21.7	20.4	20.4	93.6	97.6	94.1	19.4	24.5	23.5	39.4	40.5	34.9	1.8	4.8	6.0
Energy Intensity²⁾	TJ/ KRW 100 million	0.004	0.002	0.002	0.016	0.010	0.010	0.124	0.127	0.099	0.011	0.012	0.018	0.029	0.007	0.006

1) Energy consumption indicators are based on the Headquarters and its subsidiaries in Korea(Gumi Warehouse, SOLUM Sensor, SOLUM Healthcare) and production sites in Vietnam, Mexico, China, and India.

2) Energy intensity = total energy consumption/revenue (revenue in each company's separate financial statements)

Greenhouse Gas Emissions¹⁾

Separation	Unit	Korea			Vietnam			Mexico			China			India		
		2021	2022	2023	2021	2022	2023	2021	2022	2023	2021	2022	2023	2021	2022	2023
Total Greenhouse Gas Emissions (Scope 1+2)	tCO ₂ eq	1,077.2	1,046.6	1,057.1	19,202.6	20,152.2	19,354.3	1,662.3	2,142.9	2,095.8	6,162.8	6,355.5	5,498.2	367.9	982.7	1,225.0
Direct Greenhouse Gas Emissions (Scope 1)	tCO ₂ eq	39.6	69.2	82.2	424.9	577.5	472.2	46.3	99.4	140.4	57.5	92.0	92.7	14.9	29.7	43.4
Indirect Greenhouse Gas Emissions (Scope 2) ²⁾	tCO ₂ eq	1,037.6	977.3	974.9	18,777.7	19,574.6	18,882.1	1,616.0	2,043.5	1,955.4	6,105.4	6,263.5	5,405.5	353.1	953.0	1,181.5
Greenhouse Gas Emissions Intensity³⁾	tCO ₂ eq/ KRW 100 million	0.173	0.112	0.110	3.104	1.989	1.990	10.315	10.483	8.155	1.705	1.791	2.671	5.352	1.344	1.146
Scope 1 Emissions Intensity	tCO ₂ eq/ KRW 100 million	0.006	0.007	0.009	0.069	0.057	0.049	0.288	0.486	0.546	0.016	0.026	0.045	0.216	0.041	0.041
Scope 2 Emissions Intensity	tCO ₂ eq/ KRW 100 million	0.167	0.105	0.101	3.035	1.932	1.942	10.027	9.996	7.609	1.689	1.765	2.626	5.136	1.303	1.105

1) Greenhouse gas emission indicators are based on the Headquarters and its subsidiaries in Korea (Gumi Warehouse, SOLUM Sensor, SOLUM Healthcare) and production sites in Vietnam, Mexico, China, and India.

2) When calculating indirect greenhouse gas emissions from electricity use, local electricity emission factors were applied.

3) Greenhouse gas emissions intensity = total Greenhouse gas emissions/revenue (revenue in each company's separate financial statements)

Environmental Performance Data

Air Pollutant Emissions Management¹⁾²⁾

Separation	Unit	Korea			Vietnam ³⁾			Mexico			China		
		2021	2022	2023	2021	2022	2023	2021	2022	2023	2021	2022	2023
Air Pollutant Emissions	kg, mg/Nm ³												
Nitrogen Oxides(NOx)	kg, mg/Nm ³	-	-	-	90	294	358	-	-	-	-	-	-
Sulfur Oxides(SOx)	kg, mg/Nm ³	-	-	-	35	136	172	-	-	-	-	-	-
Hazardous Air Pollutants(HAP)	kg, mg/Nm ³	-	-	-	3	0	9	-	-	-	-	-	-
Particulate Matter(PM)	kg, mg/Nm ³	-	-	-	235	430	546	-	-	-	-	-	-
Carbon Monoxide(CO)	kg, mg/Nm ³	-	-	-	72	276	298	-	-	-	-	-	-
Volatile Organic Compounds(VOCs)	kg, mg/Nm ³	-	-	-	-	-	-	2,264	2,357	2,062	230	271	256
Total Suspended Particulate(TSP)	kg, mg/Nm ³	-	-	-	-	-	-	707	536	1,393	-	-	-
Tin and its Compounds(Tin Compounds)	kg, mg/Nm ³	-	-	-	-	-	-	-	-	-	43	25	31

1) Air pollutant emissions management indicators are based on the Headquarters and its subsidiaries in Korea(Gumi Warehouse, SOLUM Sensor, SOLUM Healthcare) and production sites in Vietnam, Mexico, and China.

2) Based on air pollutants controlled by local laws in the country where each entity is located.

3) Air pollutant emissions are managed in mg/Nm3 at the Vietnam production site.

Water Management¹⁾

Separation	Unit	Korea			Vietnam ²⁾			Mexico			China		
		2021	2022	2023	2021	2022	2023	2021	2022	2023	2021	2022	2023
Total Water Withdrawal	ton	1,945	2,533	948	81,743	74,805	63,223	5,504	4,600	3,637	46,351	49,292	52,480
Water Withdrawal by Supply Source	ton	1,945	2,533	948	81,743	74,805	63,223	5,504	4,600	3,637	46,351	49,292	52,480
Surface water	ton	-	-	-	81,743	74,805	63,223	5,504	4,600	3,637	46,351	49,292	52,480
Water supply	ton	1,945	2,533	948	-	-	-	-	-	-	-	-	-
Total Water Discharge²⁾	ton	1,945	2,533	948	81,743	74,805	63,223	5,504	4,600	3,637	46,351	49,292	52,480

1) Water management indicators are based on the Headquarters and its subsidiaries in Korea(Gumi Warehouse, SOLUM Sensor, SOLUM Healthcare) and production sites in Vietnam, Mexico, and China.

2) The water used by each corporation is discharged as domestic sewage, and the discharge from the Vietnam production site partially includes domestic wastewater according to local regulations.



Environmental Performance Data

Waste Management¹⁾

Separation	Unit	Korea			Vietnam			Mexico ²⁾			China		
		2021	2022	2023	2021	2022	2023	2021	2022	2023	2021	2022	2023
Total Waste Generated	ton	28	35	24	1,947	2,384	1,784	N/A	565	520	181	124	87
Total Amount of General Waste Generated	ton	28	35	24	1,905	2,326	1,717	N/A	551	506	149	99	70
Landfill	ton	16	21	24	0	8	20	N/A	-	-	-	-	-
Incineration	ton	-	-	-	494	621	453	N/A	-	-	-	-	-
Recycling	ton	12	13	0	1,411	1,696	1,244	N/A	551	506	149	99	70
Others	ton	-	-	-	0.4	0.5	0.1	N/A	0	0	-	-	-
Total Amount of Hazardous Waste Generated	ton	-	-	-	43	58	67	N/A	14	14	32	25	17
Landfill	ton	-	-	-	-	-	-	N/A	N/A	N/A	5	5	1
Incineration	ton	-	-	-	43	58	67	N/A	N/A	N/A	27	20	16
Recycling	ton	-	-	-	-	-	-	N/A	N/A	N/A	-	-	-
Others	ton	-	-	-	-	-	-	N/A	N/A	N/A	-	-	-
Waste Recycling Rate	%	43.4	38.8	0	72.4	71.1	69.7	N/A	97.4	97.3	82.4	80.1	80.8

1) Waste management indicators are based on the Headquarters and its subsidiaries in Korea(Gumi Warehouse, SOLUM Sensor, SOLUM Healthcare) and production sites in Vietnam, Mexico, and China.

2) Mexico production site has aggregated data on waste generation since 2022.

Workplace Environmental Management¹⁾

Separation	Unit	Korea			Vietnam ²⁾			Mexico			China ²⁾		
		2021	2022	2023	2021	2022	2023	2021	2022	2023	2021	2022	2023
Investment in Environmental Safety	Million KRW	115	105	105	508	722	333	N/A	N/A	N/A	184	64	54
Number of Environmental Violations	Case	0	0	0	0	0	0	0	0	0	0	0	0
Environmental Management System (ISO 14001) Certification Status	Case	-	-	-	1	1	1	1	1	1	1	1	1
By manufacturing location													
Number of certified locations	Number	-	-	-	1	1	1	1	1	1	1	1	1
Percentage of environmental management system certification	%	-	-	-	100	100	100	100	100	100	100	100	100

1) Workplace environmental management indicators are based on the Headquarters and its subsidiaries in Korea(Gumi Warehouse, SOLUM Sensor, SOLUM Healthcare) and production sites in Vietnam, Mexico, and China.

2) Environmental safety investment of production sites in Vietnam and China were converted into KRW at the average exchange rate for each year (sales reference rate) published by Hana Bank.

Social Performance Data

Human Resources Management¹⁾²⁾

Separation	Unit	Korea			Vietnam			Mexico ³⁾			China		
		2021	2022	2023	2021	2022	2023	2021	2022	2023	2021	2022	2023
Total Employees (Full-time + Contractors)	Person	507	524	484	2,985	3,047	2,045	506	528	498	559	537	423
Number of Employees	Person	507	524	484	2,985	3,047	2,045	506	528	498	559	537	423
Male	Person	413	419	388	650	736	556	251	286	266	311	304	230
Female	Person	94	105	96	2,335	2,311	1,489	255	242	232	248	233	193
Number of Contractors	Person	2	10	12	0	0	0	0	0	0	6	0	0
Percentage of Full-time Employees	%	99.6	98.1	97.5	100	100	100	100	100	100	98.9	100	100
Percentage of Contractors	%	0.4	1.9	2.5	0	0	0	0	0	0	1.1	0	0
Total Number of Full-time Employees	Person	505	514	472	2,985	3,047	2,045	506	528	498	553	537	423
Male	Person	413	414	380	650	736	556	251	286	266	309	304	230
Female	Person	92	100	92	2,335	2,311	1,489	255	242	232	244	233	193
Total Number of Full-time Employees	Person	505	514	472	2,985	3,047	2,045	506	528	498	553	537	423
Number of full-time employees	Person	505	514	472	2,985	3,047	2,045	506	528	498	553	537	423
29 years old or younger	Person	88	91	69	1,635	1,592	938	189	209	210	221	226	152
Male	Person	51	58	44	426	463	297	94	108	108	142	148	91
Female	Person	37	33	25	1,209	1,129	641	95	101	102	79	78	61
30 to 49 years old or younger	Person	312	328	312	1,344	1,444	1,092	281	284	256	325	302	260
Male	Person	258	263	247	219	265	250	137	156	139	160	147	128
Female	Person	54	65	65	1,125	1,179	842	144	128	117	165	155	132
50 years of age or older	Person	105	95	91	6	11	15	36	35	32	7	9	11
Male	Person	104	93	89	5	8	9	20	22	19	7	9	11
Female	Person	1	2	2	1	3	6	16	13	13	0	0	0
Employees by Position	Person	507	524	484	2,985	3,047	2,045	506	528	498	559	537	423
Pro (staff)	Person	415	429	392	2,849	2,901	1,912	462	482	450	526	497	391
Manager (person in charge)	Person	65	65	65	135	145	132	43	45	47	33	40	32
Executive	Person	27	30	27	1	1	1	1	1	1	0	0	0

1) Human resource management indicators are based on the Headquarters in Korea and productions sites in Vietnam, Mexico, and China.

2) The number of employees is calculated as of the end of the current year based on internal HR standards.

3) Mexico production site is characterized by local workers leaving at the end of the year to spend time with their families and rejoining at the beginning of the year.

Social Performance Data

Human Resources Management¹⁾²⁾

Separation	Unit	Korea			Vietnam			Mexico ³⁾			China		
		2021	2022	2023	2021	2022	2023	2021	2022	2023	2021	2022	2023
Number of Voluntary Retirements	Person	75	86	48	1,541	2,251	1,796	1,737	1,111	857	1,137	1,382	650
Number of Voluntary Retirements	Person	75	86	48	1,541	2,251	1,796	1,737	1,111	857	1,137	1,382	650
Male	Person	64	64	37	265	464	431	798	643	520	794	918	405
Female	Person	11	22	11	1,276	1,787	1,365	939	468	337	343	464	245
Retirees by Age	Person	75	86	48	1,541	2,251	1,796	1,737	1,111	857	1,137	1,382	650
29 years old or younger	Person	16	18	12	953	1,325	990	833	487	443	670	794	422
30 to 49 years old or younger	Person	33	47	31	584	926	804	850	590	398	465	588	226
50 years of age or older	Person	26	21	5	4	0	2	54	34	16	2	0	2

1) Human resource management indicators are based on the Headquarters in Korea and productions sites in Vietnam, Mexico, and China.

2) The number of employees is calculated as of the end of the current year based on internal HR standards.

3) The Mexico production site is characterized by local workers leaving at the end of the year to spend time with their families and rejoining at the beginning of the year.

New Hires¹⁾

Separation	Unit	Korea			Vietnam			Mexico ²⁾			China		
		2021	2022	2023	2021	2022	2023	2021	2022	2023	2021	2022	2023
Number of New Hires by Age	Person	95	95	49	1,922	2,313	794	2,190	1,143	838	976	1,425	565
29 years old or younger	Person	12	37	9	1,225	1,461	515	1,014	511	449	586	852	380
Male	Person	2	25	3	218	430	183	487	306	272	415	585	218
Female	Person	10	12	6	1,007	1,031	332	527	205	177	171	267	162
30-49 years old or younger	Person	73	53	36	694	850	279	1,093	598	373	389	572	185
Male	Person	66	43	29	71	119	68	492	354	222	278	374	127
Female	Person	7	10	7	623	731	211	601	244	151	111	198	58
50 years of age or older	Person	10	5	4	3	2	0	83	34	16	1	1	0
Male	Person	9	5	4	3	1	0	41	28	12	1	1	0
Female	Person	1	0	0	0	1	0	42	6	4	0	0	0
Number of New Full-time Employees Hired	Person	93	87	45	1,922	2,313	794	2,190	1,143	838	976	1,425	565

1) The new hires indicators are based on the Headquarters in Korea and productions sites in Vietnam, Mexico, and China.

2) The Mexico production site is characterized by local workers leaving at the end of the year to spend time with their families and rejoining at the beginning of the year.



Social Performance Data

Talent Development¹⁾

Separation	Unit	Korea			Vietnam			Mexico ³⁾			China		
		2021	2022	2023	2021	2022	2023	2021	2022	2023	2021	2022	2023
Total Training Hours of Full-time Employees	Hour	9,336	8,939	8,315	7,139	9,479	4,769	10,220	5,260	3,675	30,077	41,380	21,225
Male	Hour	7,616	7,211	6,752	N/A	N/A	N/A	4,630	3,155	2,105	20,375	26,979	12,507
Female	Hour	1,720	1,728	1,563	N/A	N/A	N/A	5,590	2,105	1,570	9,702	14,402	8,718
Training Hours by Age	Hour	9,368	9,099	8,544	N/A	N/A	N/A	10,220	5,260	3,675	30,077	41,380	21,225
29 years old or younger	Hour	1,844	1,722	1,408	N/A	N/A	N/A	4,855	2,370	1,970	17,110	23,787	13,111
30 to 49 years old or younger	Hour	5,676	5,748	5,620	N/A	N/A	N/A	5,020	2,785	1,630	12,949	17,557	8,060
50 years of age or older	Hour	1,848	1,629	1,516	N/A	N/A	N/A	345	105	75	18	36	54
Training Hours by Position	Hour	9,368	9,099	8,544	N/A	N/A	N/A	10,220	5,260	3,675	30,077	41,380	21,225
Pro	Hour	7,704	7,502	6,964	N/A	N/A	N/A	10,220	5,260	3,675	29,807	40,924	20,923
Managers (part managers, group managers)	Hour	1,160	1,069	1,148	N/A	N/A	N/A	0	0	0	270	456	302
Executive	Hour	504	528	432	N/A	N/A	N/A	0	0	0	0	0	0
Mandatory Training Hours of Full-time Employees²⁾	Hour	8,080	8,224	7,552	N/A	N/A	N/A	0	0	0	26,832	36,912	16,088
Male	Hour	6,608	6,624	6,080	N/A	N/A	N/A	0	0	0	18,360	24,368	9,552
Female	Hour	1,472	1,600	1,472	N/A	N/A	N/A	0	0	0	8,472	12,544	6,536
Non-mandatory Training Hours of Full-time Employees	Hour	1,256	715	763	N/A	N/A	N/A	10,220	5,260	3,675	3,245	4,468	5,137
Average Training Hours per Person	Hour/Person	21.7	20.8	19.5	N/A	N/A	N/A	5	5	5	17.4	20.3	19.3

1) Talent development indicators are based on the Headquarters in Korea and productions sites in Vietnam, Mexico, and China.

2) Mandatory training hours include statutory safety and health training.

3) The Mexico production site does not have any mandatory training hours, and new hires are trained on-site.

Social Performance Data

DEI¹⁾

Separation	Unit	Korea			Vietnam ³⁾			Mexico			China		
		2021	2022	2023	2021	2022	2023	2021	2022	2023	2021	2022	2023
Gender Diversity of Full-time Employees	%	100	100	100	100	100	100	100	100	100	100	100	100
Male	%	81.5	80.0	80.2	21.8	24.2	27.2	49.6	54.2	53.4	55.6	56.6	54.4
Female	%	18.5	20.0	19.8	78.2	75.9	72.8	50.4	45.8	46.6	44.4	43.4	45.6
Gender Diversity of Executive	%	100	100	100	N/A	N/A	N/A	100	100	100	0	0	0
Male	%	100	100	96.3	N/A	N/A	N/A	100	100	100	0	0	0
Female	%	0	0	3.7	N/A	N/A	N/A	0	0	0	0	0	0
Parental Leave Status													
Total Number of Employees Who Have Used Parental Leave	Person	11	6	2	177	129	131	15	18	24	0	18	13
Male	Person	7	4	1	0	0	0	11	8	12	0	11	6
Female	Person	4	2	1	177	129	131	4	10	12	0	7	7
Total Number of Employees Who Have Returned from Parental Leave ²⁾	Person	10	5	1	177	126	101	15	18	24	0	18	13
Male	Person	7	3	1	0	0	0	11	8	12	0	11	6
Female	Person	3	2	-	177	126	101	4	10	12	0	7	7
Total Parental Leave Return Rate	%	90.9	83.3	50.0	100	97.7	77.1	100	100	100	0	100	100
Male	%	100	75.0	100.0	0	0	0	100	100	100	0	100	100
Female	%	75	100.0	0.0	100	97.7	77.1	100	100	100	0	100	100
Hire of People with Disabilities (Direct Hire)													
Total Number of employees with Disabilities	Person	2	2	2	0	0	0	3	4	4	0	0	0
Male	Person	2	2	2	0	0	0	1	1	1	0	0	0
Female	Person	0	0	0	0	0	0	2	3	3	0	0	0
Employment Rate of Employees with Disabilities	%	0.4	0.4	0.4	0	0	0	0.6	0.8	0.8	0	0	0
Male	%	0.5	0.5	0.5	0	0	0	0.4	0.3	0.4	0	0	0
Female	%	0	0	0	0	0	0	0.8	1.2	1.3	0	0	0

1) DEI indicator is based on the Headquarters in Korea and productions sites in Vietnam, Mexico, and China.

2) Parental leave returnees are calculated based on the year they used parental leave, and female parental leave participants from headquarters in Korea in 2023 are on leave as of July 2024, the report's disclosure date.

3) Data was collected only from employees who self-identified their disability status in Vietnam production site.



Social Performance Data

Occupational Health and Safety¹⁾

Separation	Unit	Korea ²⁾			Vietnam			Mexico			China		
		2021	2022	2023	2021	2022	2023	2021	2022	2023	2021	2022	2023
Occupational Health and Safety Management System (ISO 45001)													
By manufacturing location													
Number of certified locations	Number	-	-	-	1	1	1	-	-	1	1	1	1
Percentage of occupational health and safety management system certification	%	-	-	-	100	100	100	-	-	100	100	100	100
Work-related Illness													
Number of Fatalities	Person	0	0	0	0	0	0	0	0	0	0	0	0
Number of Occurred Work-related Illness	Person	0	0	0	0	0	0	0	0	0	0	0	0
Occupational Illness Frequency Rate, OIFR	Incidents per million hours	0	0	0	0	0	0	0	0	0	0	0	0

1) Safety and Health indicators are based on the Headquarters in Korea and productions sites in Vietnam, Mexico, and China.

2) There is no production site among Korean subsidiaries.



Governance Performance Data

Strengthening Board-centric Governance¹⁾

Separation	Unit	2021	2022	2023
Board Operations				
Number of Board Meetings	Number	42	56	51
Average Board Attendance	%	100	100	98.0
Number of Board Meeting Agendas	Number	44	64	56
Number of External Director Dissents or Amendments	Number	0	1	0
Average Tenure	Month	37	47	49
Board Composition²⁾				
Total Headcount of Board Members	Person	4	4	5
Number of Inside Directors	Person	2	2	3
Number of External Directors (Non-Executive)	Person	2	2	2
Percentage of External Directors	%	50.0	50.0	40.0
Number of Female Directors	Person	0	0	0
Number of Other Non-executive Directors	Person	0	0	0
Number of Directors with Industry Expertise	Person	4	4	5
Board Expertise ³⁾	%	100	100	100

1) The indicator for strengthening board-centric governance is based on the Headquarters in Korea.

2) Directors are not limited by gender, geography, etc.

3) Board expertise = (number of directors with industry expertise ÷ total number of people on the board) × 100

Jeong-Do Management¹⁾

Separation	Unit	2021	2022	2023
Corruption Risk in the Workplace				
Number of Reported Violations of Ethics Management	Case	0	0	1
Number of Cases Handled	Case	0	0	1
Identified Corruption Cases and Actions	Case	0	0	0
Identified Disciplinary Cases and Actions	Case	0	0	0
Number of Cases where Contracts with Partner Companies were Terminated due to Reported Violations	Case	0	0	0
Number of Cases where Contracts with Partner Companies weren't Renewed due to Reported Violations	Case	0	0	1
Number of Sites with Corruption-risk ²⁾	Number	-	-	1
Percentage of Assessment of Sites with Corruption-risk	%	-	-	100
Discrimination and Harassment				
Number of Incidents Related to Discrimination and Harassment	Case	1	1	0
Number of Handled Incidents Related to Discrimination and Harassment	Case	1	1	0
Percentage of Incidents Handled	%	100	100	0
Legal Violations				
Number of Legal Violations	Case	0	0	0
Total Amount of Fine due to Legal Violations	KRW 100 million	0	0	0
Employee Grievances (Domestic)				
Number of Grievances Reported	Case	0	0	0
Response Rate for Reported Grievances	%	0	0	0

1) Jeong-Do management indicators are based on the Headquarters in Korea.

2) The number of sites with corruption-risk was calculated in 2023.

Information Security¹⁾

Separation	Unit	2021	2022	2023
Number of Information Security Trainings Held	Time	-	1	1
Total Amount of Investments in Information Security	KRW 100 million	-	1.49	4.08
Information Security Training Attendees	Person	-	413	400

1) Information security indicators are based on the Headquarters in Korea.



ESG Index

GRI Index

GRI Content Index

Statement of use	SOLUM has reported in accordance with the GRI Standards 2021 for the period January 1, 2023-December 31, 2023.
GRI 1 used	GRI 1 : Foundation 2021
Applicable GRI Sector Standard(s)	There are no applicable sector standards as of July 31, 2024.

Mandatory Reporting

Topics	Metrics	Disclosures	Reporting Page
GRI 2 : General Disclosures 2021	2-1	Organizational details	12~13
	2-2	Entities included in the organization's sustainability reporting	2, 12~13
	2-3	Reporting period, frequency and contact point	2
	2-4	Restatements of information	First report
	2-5	External assurance	104
	2-6	Activities, value chain and other business relationships	14~28
	2-7	Employees	86~87
	2-8	Workers who are not employees	86
	2-9	Governance structure and composition	73~75
	2-10	Nomination and selection of the highest governance body	73~74
	2-11	Chair of the highest governance body	73
	2-12	Role of the highest governance body in overseeing the management of impacts	7, 42
	2-13	Delegation of responsibility for managing impacts	7
	2-14	Role of the highest governance body in sustainability reporting	7
	2-15	Conflicts of interest	73~74
	2-16	Communication of critical concerns	7, 75
	2-17	Collective knowledge of the highest governance body	74

Topics	Metrics	Disclosures	Reporting Page
GRI 2 : General Disclosures 2021	2-18	Evaluation of the performance of the highest governance body	76
	2-19	Remuneration policies	76
	2-20	Process to determine remuneration	76
	2-21	Annual total compensation ratio	Confidential
	2-22	Statement on sustainable development strategy	5, 8
	2-23	Policy commitments	6, 39, 56, 58, 65, 68, 80, 97~101
	2-24	Embedding policy commitments	6, 39, 56, 58, 65, 68, 80
	2-25	Processes to remediate negative impacts	56~57, 59, 63, 67
	2-26	Mechanisms for seeking advice and raising concerns	80
	2-27	Compliance with laws and regulations	91
	2-28	Membership associations	102
	2-29	Approach to stakeholder engagement	35
GRI 3 : Material topics	2-30	Collective bargaining agreements	57
	3-1	Process to determine material topics	30
	3-2	List of material topics	31~32
	3-3	Management of material topics	31~34

Economic Performance(GRI 200)

Topics	Metrics	Disclosures	Reporting Page
GRI 201 : Economic Performance	201-1	Direct economic value generated and distributed	2023 Annual Report 37-233 82
	201-2	Financial implications and other risks and opportunities due to climate change	43~46
	201-3	Defined benefit plan obligations and other retirement plans	54
GRI 202 : Market Presence	202-1	Ratios of standard entry level wage by gender compared to local minimum wage	57
GRI 203 : Indirect Economic Impacts	203-1	Infrastructure investments and services supported	70~71
GRI 205 : Anti-corruption	205-1	Operations assessed for risks related to corruption	91
	205-2	Communication and training about anti-corruption policies and procedures	56, 78~79
	205-3	Confirmed incidents of corruption and actions taken	91
GRI 206 : Anti-competitive Behavior	206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	91

Environmental Performance(GRI 300)

Topics	Metrics	Disclosures	Reporting Page
GRI 302 : Energy	302-1	Energy consumption within the organization	48, 83
	302-3	Energy intensity	83
	302-5	Reductions in energy requirements of products and services	48
GRI 303 : Water and Effluents	303-1	Interactions with water as a shared resource	40
	303-2	Management of water discharge-related impacts	84
	303-3	Water withdrawal	84
	303-4	Water discharge	84
	303-5	Water consumption	84
GRI 304 : Biodiversity	304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	50~51
	304-2	Significant impacts of activities, products and services on biodiversity	50~51
	304-4	List species and national conservation list species with habitats in areas affected by operations	50
	305-1	Direct (Scope 1) GHG emissions	48~49, 83
GRI 305 : Emissions	305-2	Energy indirect (Scope 2) GHG emissions	48~49, 83
	305-4	GHG emissions intensity	83
	305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	84
GRI 306 : Waste	306-1	Waste generation and significant waste-related impacts	40
	306-3	Waste generated	85
	306-4	Waste diverted from disposal	85
	306-5	Waste directed to disposal	85
GRI 308 : Supplier Environmental Assessment	308-1	New suppliers that were screened using environmental criteria	65~66

Social Performance(GRI 400)

Topics	Metrics	Disclosures	Reporting Page
GRI 401: Employment	401-1	New employee hires and employee turnover	87
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	54~55
	401-3	Parental leave	89
GRI 403: Occupational Health and Safety	403-1	Occupational health and safety management system	58~59
	403-2	Hazard identification, risk assessment, and incident investigation	59
	403-3	Occupational health services	60
	403-4	Worker participation, consultation, and communication on occupational health and safety	58~59
	403-5	Worker training on occupational health and safety	60
	403-6	Promotion of worker health	60
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	58~59
	403-8	Workers covered by an occupational health and safety management system	58~59
	403-9	Work-related injuries	59~60, 90
	403-10	Work-related ill health	59~60, 90
GRI 404: Training and Education	404-1	Average hours of training per year per employee	88
	404-2	Programs for upgrading employee skills and transition assistance programs	54
	404-3	Percentage of employees receiving regular performance and career development reviews	55
GRI 405: Diversity and Equal Opportunity	405-1	Diversity of governance bodies and employees	73 91
GRI 406: Nondiscrimination	406-1	Incidents of discrimination and corrective actions taken	91
GRI 407: Freedom of Association and Collective Bargaining	407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	Not applicable
GRI 408: Child Labor	408-1	Operations and suppliers at significant risk for incidents of child labor	Not applicable

Topics	Metrics	Disclosures	Reporting Page
GRI 409: Forced or Compulsory Labor	409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	Not applicable
GRI 411: Rights of Indigenous Peoples	411-1	Incidents of violations involving rights of indigenous peoples	Not applicable
GRI 414: Supplier Social Assessment	414-1	New suppliers that were screened using social criteria	65~66
GRI 415: Public Policy	415-1	Political contributions	Not applicable
GRI 416: Customer Health and Safety	416-1	Assessment of the health and safety impacts of product and service categories	41, 61~62
	416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	Not applicable
GRI 418: Customer Privacy	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	Not applicable



SASB Index

Topics	Metrics	Disclosures	Reporting Page
Product Safety	TC-HW-230a.1	Description of approach to identifying and addressing data security risks in products	68–69
Employee Diversity & Inclusion	TC-HW-330a.1	Percentage of (1) gender and (2) diversity group representation for (a) executive management, (b) non-executive management, (c) technical employees and (d) all other employees	89
Product Lifecycle Management	TC-HW-410a.1	Percentage of products by revenue that contain IEC 62474 declarable substances	-
	TC-HW-410a.2	Percentage of eligible products, by revenue, meeting the requirements for EPEAT registration or equivalent	-
	TC-HW-410a.3	Percentage of eligible products, by revenue, certified to an energy efficiency certification	-
	TC-HW-410a.4	Weight of end-of-life products and e-waste recovered; percentage recycled	-
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	41
Materials Sourcing	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 nonconformances and (b) other nonconformances	-
	TC-HW-440a.1	Description of the management of risks associated with the use of critical materials	-

TCFD Index

Topics	Disclosures	Reporting Page
Governance	a) Describe the board's oversight of climate-related risks and opportunities.	7
	b) Describe the management's role in assessing and managing climate-related risks and opportunities	7
Strategy	a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	42–46
	b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.	42–46
	c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	42–48
Risk Management	a) Describe the organization's processes for identifying and assessing climate-related risks	42–44
	b) Describe the organization's processes for managing climate-related risks	47–51
	c) Describe how processes for identifying, assessing and managing climate-related risks are integrated into the organization's overall risk management	42–44
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	43–46
	b) Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 greenhouse gas emissions and the related risks	49
	c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets	42, 49

UN Global Compact

UN Global Compact 10 Principles		Reporting Page
Human rights	Principle 1. Businesses should support and respect the protection of internationally proclaimed human rights; and	56~60
	Principle 2. Ensuring that they are not complicit in human rights abuses.	
	Principle 3. Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining	
Labor rules	Principle 4. The elimination of all forms of forced and compulsory labor;	14~28, 39~41, 50~51
	Principle 5. The effective abolition of child labor; and	
	Principle 6. The elimination of discrimination in respect of employment and occupation.	
Environment	Principle 7. Businesses should support a precautionary approach to environmental challenges;	80
	Principle 8. Undertaking initiatives to promote greater environmental responsibility; and	
	Principle 9. Encouraging the development and diffusion of environmentally friendly technologies	
Anti-corruption	Principle 10. Businesses should work against corruption in all its forms, including extortion and bribery	

ESG Policy

Principles on Human Rights Management

Human rights are fundamental rights and freedoms inherent to all human beings. SOLUM seeks to incorporate the basic principle that human rights are for everyone in its values and business activities.

Commitment to Human Rights Respect

SOLUM's Basic Human Rights Principle (the "Principle") respect international human rights standards, including the International Bill of Human Rights (comprising the Universal Declaration of Human Rights, the International Covenant on Civil and Political Rights, and the International Covenant on Economic, Social and Cultural Rights), the UN Guiding Principles on Business and Human Rights (UNGPs), the International Labour Organization (ILO) Declaration on Fundamental Principles and Rights at Work, the OECD Guidelines for Multinational Enterprises, the UN Convention on the Rights of the Child, the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW), and the UN Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children. SOLUM is committed to respecting human rights by adhering to these international standards and complying with the local laws of the countries where SOLUM operates.

SOLUM recognizes that respecting human rights is crucial for adding value to its business and fulfilling its social responsibility as a corporate entity. By striving to respect human rights in all business activities, including products and services, SOLUM is committed to not infringe upon the human rights within its sphere of influence. SOLUM endeavors to avoid being implicated in or directly involved with human rights violations in its business activities. SOLUM particularly focuses on vulnerable groups such as migrant workers, young workers, and women who are at higher risk of human rights violations to protect the rights of individuals and groups. SOLUM also makes every effort to apply the same high standards to its suppliers and business partners. SOLUM is committed to continuously update and improve its approach to human rights.

The Principle applies to all stakeholders, including employees of SOLUM, temporary workers, employees of partner companies, customers, and community members. SOLUM requires its suppliers and business partners to manage their activities to prevent, mitigate, and resolve any negative impacts on human rights to the same or similar extent as SOLUM.

Basic Principles

SOLUM strives to manage the impact of its business activities on human rights. SOLUM recognizes that the priority areas of key human rights impact may change according to changes in the business environment or industry. Accordingly, reviews are conducted for these priority areas. Key human rights impact areas are determined through continuous engagement with internal and external stakeholders, self-assessments, third-party inspections, and evaluations.

① Respect for Human Rights

We respect all individuals as human beings and strive to prevent any acts that may constitute human rights violations.

② Prohibition of Forced Labor

We do not coerce labor against the free will of members through means of mental or physical coercion, including fees, costs, bonded labor, slavery, or human trafficking for retaining employment. We also do not retain personal documents of workers, such as government-issued IDs, passports, or work permits, as a condition of employment. Furthermore, there are no restrictions on movement or access to facilities such as restrooms, drinking water, external medical facilities, factories, dormitories, or other rest areas. This prohibition must also be adhered to by all partners, including contracting parties and manpower suppliers working with SOLUM.

③ Prohibition of Child Labor

We do not employ children under the age of 15 (or the stricter age limit stipulated by local laws if applicable) and this applies to all partner companies working with SOLUM. Our business operators within Korea and overseas, as well as those of our partner companies, must adhere to strict hiring procedures, including age verification for new hires, and any form of child labor is not acceptable. If a worker under the age of 15 is found, we will verify the condition of the worker and support their return to their place of residence or help them complete their mandatory education, based on the worker's wishes.

④ Employment of Minors

For the employment of minors under the age of 18 (including students, interns, trainees, and apprentices), we comply with the labor laws and regulations of the respective country and region. Under no circumstances should they be engaged in night shifts, overtime, or hazardous or harmful tasks. Additionally, the wages of minors must be at least equal to those of new employees performing similar tasks.

⑤ Working Hours

SOLUM complies with the ILO conventions regarding working hours. Regular working hours, overtime, break time, and holidays are defined in accordance with the stricter standards of either this policy, international standards, or the labor laws and regulations of the countries or regions where the workplace is located. Overtime work requires the voluntary consent of the workers and is compensated according to the standards set by the labor laws and regulations of the countries or region. Employees must be allowed at least one day off every seven days. All partner companies working with SOLUM must adhere to the Principle.

⑥ Wages

The wages of employees are set to exceed the legal minimum wage necessary for living, as stipulated by the labor laws and regulations of each country or region.

⑦ Non-Discrimination and Inclusion

SOLUM adopts a zero-tolerance policy towards all forms of discrimination. We do not discriminate based on gender, race, nationality, ethnicity, religion, pregnancy and marital status, political beliefs, gender identity, or regional origin, or any other reason. Discrimination in employment conditions including hiring, promotion, wages and compensation, benefits, work assignments, retirement, and dismissal, is strictly prohibited. We also strive to eradicate discrimination and foster a culture that respects diversity.

⑧ Prohibition of Sexual Harassment and Workplace Harassment

SOLUM prohibits all acts of sexual harassment and sexual violence that cause sexual humiliation in the workplace as well as any form of harassment that inflicts physical injury or emotional distress by exploiting superiority in position or relationship in the workplace. SOLUM is committed to preventing such incidents by conducting training on sexual harassment and workplace harassment prevention and establishing channels through which anyone can report such incidents. In the event of a reported case, we prioritize the protection of the victim and take appropriate disciplinary and remedial actions.

9 Freedom of Association

SOLUM guarantees the right to freedom of association and collective bargaining as stipulated by the labor laws of each country or region. We do not treat employees unfavorably or discriminate against them for joining, forming, or participating in labor unions and their activities therein.

10 Responsible Mineral Sourcing

SOLUM recognizes the serious issues of human rights violations and environmental pollution associated with mineral extraction. Therefore, we do not use minerals such as 3TG (tin, tungsten, tantalum, and gold), cobalt, or any other minerals that are directly or indirectly sourced from areas considered as high-risk or affected by conflict, including the Democratic Republic of Congo and its neighboring countries.

11 Environmental Responsibility

SOLUM recognizes that climate change is a serious environmental, economic, and social challenge and considers the right to a clean, healthy, and sustainable environment as a human right. SOLUM's environmental strategy aims to mitigate environmental risks associated with the operation and use of its products, to support a fair transition process and address risks faced by communities and individuals, such as waste disposal, water and air pollution by reducing emissions of pollutants and developing sustainable and innovative technologies and products.

12 Protection of Privacy and Freedom of Expression

SOLUM is committed to protecting employees, business partners, and consumers from unauthorized access, use, destruction, modification, or disclosure of personal information and data, for the protection of privacy and the freedom of expression. All of SOLUM's products and services are provided in compliance with principles of transparency, security, protection of privacy based on personal choice, and global privacy protection policies tailored to each country's regulations, thereby ensuring the optimal protection of consumer personal information.

13 Respect for Human Rights Advocates

SOLUM respects individuals, organizations, and institutions (the "Human Rights Advocates") who act to protect fundamental human rights and freedoms. We acknowledge the threats faced by Human Rights Advocates globally in the process of advocating, and do not tolerate any form of threat, intimidation, retaliation, or physical or mental assault against them. Furthermore, we collaborate with Human Rights Advocates to strive for the creation of a safe civil society.

14 Responsibility of Business Partners

SOLUM recognizes that many risks, especially severe violations, primarily occur at the lower tiers of the supply chain. As part of its efforts to manage these risks and collaborate with business partners, SOLUM applies an integrated labor environment management process to ensure and oversee the implementation of its Business Partner Code of Conduct. Priority is given to major business partners located in countries or regions with a high risk of human rights violations, focusing on core human rights risks such as forced labor and child labor, risks to migrant workers, safety and health standards, environmental concerns, and local wages and working hours laws.

The Principle will continuously be updated to incorporate industry best practices and the input from internal and external stakeholders. SOLUM requires that its employees, supply chain, and business partners comply with the highest standards of SOLUM's Principle. The management of SOLUM communicates these expectations to its employees and strives to ensure actions are in accordance with these standards.

SOLUM Environmental Management Policy

SOLUM is committed to contribute to the enrichment of human life and the preservation of the global environment. In accordance with its management principles of prioritizing a safe and healthful work place, and protecting the environment, we will dedicate to building a sustainable society. We are determined to develop and produce all products with utmost consideration for the safety of employees and customers, and for the protection of the environment. To this end, we solemnly declare that all employees become fully aware of and adhere to the following environmental management policy.

Basic principles

① Strengthening Global Environmental Management System

We adhere to Korean and international regulations and agreements related to the environment and energy, provide education and implement environmental management systems, and disclose our environmental management policy and performance to internal and external stakeholders.

② Practicing Product Life Cycle Responsibility

We purchase raw materials, parts, and packaging materials to minimize environmental impacts and practice product life cycle responsibility, thereby minimizing resource use and environmental impact at all value chain stages from product development, manufacturing, logistics, usage, and disposal.

③ Establishing Eco-friendly Production Processes

We continuously strive to reduce the use of chemicals, energy, and water resources by adopting optimal clean production technologies, promoting the reuse and recycling of wastewater and waste, and minimizing pollutant emissions.

④ Implementing Climate Change Policies

We recognize that the climate change crisis is a globally-shared challenge for the preservation of the global environment, we will strive to expand the use of renewable energy, reduce greenhouse gas emissions, and contribute to a low-carbon ecosystem.

SOLUM's values and commitment to environment, safety, and health apply to all our global work places and workforce. These principles will serve as the foundation for SOLUM's growth as a sustainable company and driving force for a better future for all of us.

In line with this policy, all employees of SOLUM shall make every effort to preserve a pleasant and prosperous environment. The responsible management shall fulfill the company's social responsibilities through green and eco-friendly management, encourage all employees to participate in the protection of environment and the prevention of pollution, thereby striving to ensure reliability and transparency in environmental management.

Occupational Health and Safety Management Policy

All employees of SOLUM recognize occupational health and safety as their foremost responsibility and strive continuously improve and implement measures to create a safe and comfortable working environment, thereby preventing accidents and enhancing the quality of life. Based on this recognition, we faithfully implement the following:

Basic principles

- 1 Comply with all relevant occupational health and safety regulations and continuously strive for improvement.
- 2 Work to establish a safety culture adhering to basic principles and create a healthy and safe working environment.
- 3 Actively support education and training to enhance all employees' understanding of occupational health and safety.
- 4 Encourage all employees to actively participate in occupational health and safety activities and diligently fulfill their responsibilities and duties.
- 5 Communicate sincerely with stakeholders and fulfill SOLUM's social responsibilities through transparent disclosure of information.

Awards and Membership

Awards

Fair Trade Agreement Award (Korea Fair Trade Commission)	Director Appointment Plaque of the Federation of Middle Market Enterprises of Korea (Federation of Middle Market Enterprises of Korea)	Selected as an IBK Best Partner (Industrial Bank of Korea)	Selected as a World-Class Candidate Enterprise (Ministry of Trade, Industry and Energy)	Awarded for the Electric Vehicle Charger Design (emove360 Exhibition 2023)	Fair Trade Agreement Award (Korea Fair Trade Commission)	Excellence Award for Outstanding Partner Company of the Year (Samsung Electronics Co., Ltd.)	Commendation from the Minister of Trade, Industry and Energy for Contributions to Trade Agreements at the Vietnam Production Site (Ministry of Trade, Industry and Energy)
2023.01.11.	2023.02.23.	2023.03.30.	2023.07.20.	2023.10.	2024.01.25.	2024.03.28.	2024.03.29.

Association Membership

Federation of Middle Market Enterprises of Korea	한국상장회사협의회 KOREA LISTED COMPANIES ASSOCIATION	월드클래스기업협회
대한산업안전협회 Korea Industrial Safety Association	K I T A	서울지방법원소속 변호사회
산업 전력전자학회 THE KOREAN INSTITUTE OF POWER ELECTRONICS	대한상공회의소 KOREA CHAMBER OF COMMERCE AND INDUSTRY	한국지능형사물인터넷협회 Korea Intelligent IoT Association

GHG Verification Opinion Statement

Verification Target

Korean Foundation for Quality (hereinafter 'KFQ') has conducted a verification of Scope 1, 2 Greenhouse Gas Emissions (hereinafter 'GHG emissions') of SOLUM domestic and overseas production sites (including affiliates) (hereinafter 'Company') for 2021-2023.

Verification Scope

KFQ's verification scope covered the operational control and organizational boundary(including subsidiaries) and the categories selected by the company between 2021-2023.

Verification Criteria

The verification process was based on [Rule for emission reporting and certification of greenhouse gas emission trading Scheme¹⁾, [2006 IPCC Guidelines for National Greenhouse Gas Inventories] and [ISO14064-1] for every applicable part.

1) Notification No. 2023-221 of Ministry of Environment

Level of Assurance

The Verification has been planned and conducted as the 'Rules for verification of operating the greenhouse gas emission trading scheme', and the level of assurance for verification shall be satisfied as limited level of assurance. And it was confirmed through an internal review whether the process before the verification was conducted effectively.

Verification Limitation

The verification shall contain the potential inherent limitation in the process of application of the verification criteria and methodology.

Verification Opinions

Regarding to the data of the Greenhouse Gas Emission Consumption from the report through the verification, KFQ provides our verification opinions as below;

- 1) GHG emissions for 2021-2023 of Company were properly calculated according to the verification standards.
- 2) The data and information used in the GHG emissions were appropriate, reasonable, and no significant errors or omissions that could affect verification statement were not found. The materiality assessment result of GHG emissions has met the agreed-upon criterion of less than 5%.
- 3) Thus, KFQ concludes that the GHG emissions of Company in 2021-2023 is correctly calculated and stated in accordance with 'Rule for emission reporting and certification of greenhouse gas emission trading Scheme'.

June 20th, 2024



National Institute of
Environmental Research



Ji Young Song

CEO Ji-Young Song
Korean Foundation for Quality

Appendix A. Summary of GHG Emission Results

Organization

SOLUM Co., Ltd. and its subsidiaries

Emission calculation period

January 1, 2021 to December 31, 2023

(Unit: tCO₂eq)

Division			Total		
			2021	2022	2023
SOLUM Co., Ltd.					
		Total (Scope 1, 2)	28,467	30,668	29,210
		Sum(Scope 1, 2)	1,058	1,013	1,013
SOLUM Domestic Business	Headquarters	Direct Emissions(Scope 1)	39.391	69.091	81.988
		Indirect Emissions(Scope 2)	1,018.503	944.070	931.438
		Sum(Scope 1, 2)	13	21	23
	Gumi	Direct Emissions(Scope 1)	0	0	0
		Indirect Emissions(Scope 2)	13.209	21.475	23.369
		Sum(Scope 1, 2)	19,203	20,152	19,354
SOLUM Overseas Business	SOLUM Vina Co., LTD	Direct Emissions(Scope 1)	424.870	577.545	472.186
		Indirect Emissions(Scope 2)	18,777.748	19,574.649	18,882.087
		Sum(Scope 1, 2)	1,662	2,143	2,096
	SOLUM ELECTRONICS MEXICANA, S.A. DE C.V.	Direct Emissions(Scope 1)	46.349	99.409	140.405
		Indirect Emissions(Scope 2)	1,615.959	2,043.482	1,955.430
		Sum(Scope 1, 2)	6,163	6,356	5,498
SOLUM Sensor Co., Ltd.	DONGGUAN SOLUM ELECTRONICS CO., LTD	Direct Emissions(Scope 1)	57.459	92.038	92.740
		Indirect Emissions(Scope 2)	6,105.388	6,263.465	5,405.477
		Sum(Scope 1, 2)	368	983	1,225
	SOLUM INDIA HIGHTECH PRIVATE LIMITED	Direct Emissions(Scope 1)	14.873	29.667	43.444
		Indirect Emissions(Scope 2)	353.062	952.989	1,181.523
		Sum(Scope 1, 2)	5	7	14
		Direct Emissions(Scope 1)	0.053	0.045	0.055
		Indirect Emissions(Scope 2)	5.409	6.647	13.903
		Sum(Scope 1, 2)	1	5	6
SOLUM Healthcare Co., Ltd.					
		Direct Emissions(Scope 1)	0.114	0.097	0.119
		Indirect Emissions(Scope 2)	0.527	5.132	6.206

* The total emission of SOLUM Corporation are aggregated by combining emissions from both domestic and overseas operations of SOLUM.

Third-party Verification Statement

Dear Stakeholders of SOLUM CO., LTD.

Korean Foundation for Quality (hereinafter 'KFQ') has been requested by SOLUM CO., LTD. (hereinafter 'SOLUM') to conduct an independent verification on the 「SOLUM 2024 ESG Report」 (hereinafter 'the Report'). KFQ has responsibility to provide an independent verification opinion against the criteria and scope of assurance as specified below. SOLUM has sole responsibility for the preparation of the Report.

Verification Criteria and Scope

- **Verification Criteria** : AA1000AS (v3) and AA1000AP (2018)
- **Verification Type** : Type 2 [Verification of compliance of four reporting principles (Inclusivity, Materiality, Responsiveness, Impact) and data reliability]
- **Verification Level** : Moderate [Verification based on limited evidence collected]
- **Verification boundary** : The reporting boundaries of SOLUM CO., LTD. as stated in the Report, the Headquarters and Gumi, some subsidiaries (SOLUM Sensor Co., Ltd and SOLUM Healthcare Co., Ltd.), and major overseas production sites
- **Verification Scope** : Compliance with the 4 reporting principles according to AA1000AP and the GRI Standards 2021 reporting requirements

※ GRI Standards (2021) Reporting Principles

- Universal Standards : Reporting in accordance with GRI Standards (2021), compliance with the following requirements

Requirements	Compliance	Requirements	Compliance
1. Reporting principles	○	6. Provide reasons for omission	○
2. General Disclosures	○	7. Publish a GRI content index	○
3. Determine material topics	○	8. Provide a statement of use	○
4. Report the disclosures in GRI 3: Material Topics 2021	○	9. Notify GRI	○
5. Report disclosures from the GRI Topic Standards for each material topic	○	-	-

- Topic Standards

Requirements	GRI Standards/Topic Disclosure
GRI Standards/ Topic Disclosure Reporting by material topic according to GRI Topic Standards	· GRI 205: Anti-Corruption
	· GRI 206: Anti-competitive Behavior
	· GRI 303: Water and Effluents
	· GRI 304: Biodiversity
	· GRI 305: Emissions
	· GRI 306: Waste
	· GRI 308: Supplier Environmental Assessment
	· GRI 401: Employment
	· GRI 403: Occupational Health and Safety
	· GRI 404: Training and Education
	· GRI 405: Diversity and Equal Opportunity
	· GRI 406: Non-discrimination
	· GRI 414: Supplier Social Assessment
	· GRI 416: Customer Health and Safety
	· GRI 418: Customer Privacy

Methodology

In order to assess the reliability of the sustainability performance in the Report against above mentioned criteria, the audit team reviewed sustainability-related processes, systems, internal control procedures, and available performance data. The documentation the audit team reviewed during the verification includes:

- **Non-financial information e.g.**, data provided by SOLUM, disclosed Business Reports, and information obtained from media and/or the internet; and
- **Financial information i.e.**, Data disclosed in the electronic disclosure system (dart.fss.or.kr) of the Financial Supervisory Service and data posted on the homepage but these contents are not included in the scope of verification.

The assessment was performed by document verification and interviewing the person in charge including on-site assessment. The validity of the materiality assessment procedure in the Report, the material issue selection considering stakeholders, data collecting & management, and validity of the report preparation procedures as well as the description in the Report were assessed, but external stakeholder interviews were not conducted. Afterwards, it was confirmed that some errors, inappropriate information, and misstatement found in the above steps were appropriately corrected before publishing the Report.

Competency and Independence

The audit team was consisted in accordance with KFQ's internal regulations. KFQ has no conflict of interest to the SOLUM business which could threaten the impartiality of verification, other than providing third-party verification services.

Limitations

The completeness and responsiveness of sustainability performance represented in the Report have inherent limitations due to its nature and the methodology used to determine, calculate and estimate its performance. In accordance with the terms of the contract, we assessed the information and evidence provided by the SOLUM. We did not perform any further assessment on raw data.

Findings and Conclusions

As a result of the verification, the Report was prepared in accordance with the requirements for 'in accordance with GRI standards 2021' and the audit team found reasonable objectives to guarantee the four reporting principles of AA1000AP (2018) and the AA1000AS (V3) Type 2 assurance level. We also found no significant errors or inadequacies in the Report regarding compliance with reporting principles.

· Inclusivity

SOLUM defined the six stakeholder groups (Employees, Shareholders/Investors, Customers, Partners, Community, Press) and heard their opinions through the communication channels considering the characteristics of each group for effective communication. The audit team could not find any major stakeholders that were omitted during this process, and it was confirmed that SOLUM is making efforts to reflect the collected opinions of stakeholders in its management strategy.

· Materiality

SOLUM derived a pool of 17 issues through analysis of internal & external environmental and current status, and selected the final 10 key issues through stakeholder surveys based on materiality assessments and listening to the opinions of the ESG team and external experts. In this process, SOLUM reviewed the positive/negative impacts that the SOLUM could have on the society/environment, as well as the financial impacts that the external environment could have on the SOLUM, in order to enhance the appropriateness of selecting material issues.

The audit team confirmed that the identified material issues were highlighted in this Report, and that the material issues identified in the materiality analysis process were reported in the Report without omission.

· Responsiveness

SOLUM consistently communicate with stakeholders to hear to their feedback and main interests. Nothing came to our attention to suggest that its responses and performances are inappropriately described in the Report.

· Impact

SOLUM selects and monitors material issues in consideration of their mutual relationship with the external and internal environment of the company, and reports the contents as much as possible. Nothing came to our attention to suggest that it does not properly assess and report impacts relating to material issues.

Recommendations for Improvement

KFQ recommends the following developmental approaches for internalize ESG management and to disclose the results of the report effectively.

- Starting with the publication of this year's first report, we look forward to SOLUM continuously disclosing its key ESG management strategies, activities, and performance
- We hope to strengthen the completeness and reliability of ESG data reporting by establishing internal data collection standards and making various efforts to interpret and analyze data, thereby enabling SOLUM's ESG management performance to be communicated more transparently to stakeholders.



June 2024

Seoul, South Korea

Jiyoung Song, CEO, Korean Foundation for Quality

Ji Young Song

SOLUM

Creating Solutions for **SUSTAINABLE TOMORROW**